



**STUDY OF ACCESS TO MEDICAL TREATMENT FOR INJURED WORKERS  
YEAR 2 FINAL REPORT  
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## EXECUTIVE SUMMARY

### 1. Introduction

Berkeley Research Group, LLC (“BRG”) prepared this report for the Department of Industrial Relations, Division of Workers’ Compensation (“DWC”). The report presents findings for Year 2 of BRG’s study of access to medical care by injured workers under the workers’ compensation system regulated by the State of California. DWC must complete an annual study of access to medical treatment for injured workers as required by Labor Code Section 5307.2. The objectives of the annual study are to determine whether injured workers have adequate access to care and healthcare related products and to recommend methods to support continued access.

This report presents study findings based on data extracted from the Workers’ Compensation Information (WCIS). The WCIS data set used in the study consists of approximately 50 million medical bills submitted for the years 2007 through 2012. These data were used to assess injured workers’ access to medical care primarily by assessing provider participation, utilization of services, and types of services provided.

### 2. Summary of Findings

Analyses of the WCIS data revealed the following key findings:

- The number of injured workers who received medical services in the workers compensation system decreased 28 percent from an estimated 696,700 in 2007 to 499,687 in 2012.
- The number of providers treating injured workers decreased 21 percent from 78,661 in 2007 to 62,390 2012 with some regional variation.
- The number of medical bills submitted decreased from 10,679,807 in 2007 to 8,360,442 in 2012, with some regional variation. The number of bills submitted by out-of-state providers increased 46 percent.
- The number of services billed increased 11 percent from 2007 to 2012, with large increases in certain services such as lab tests.
- The number of drugs billed increased 55 percent, including substantial increases in narcotic pain medications.
- Back injury diagnoses increased but the number of back injury diagnoses appearing on inpatient hospital bills decreased. Diagnoses related to injuries to other body parts increased.

- Total billed charges were virtually unchanged (1 percent decrease) despite decreases in the number of injured workers, providers and medical bills submitted. As a result, the average charge per bill increased 26 percent.
- Total payments decreased 24 percent but due to decreases in the number of injured workers and the number of medical bills, the average payment per worker increased nearly 6 percent and the average payment per bill increased 5 percent.

As described in the Year 1 report, access criteria used by health planners and health care payers were reviewed in detail to assess their appropriateness for DWC. They were categorized as follows:

- Provider availability,
- Experience of injured workers who sought care, and
- Injured worker satisfaction with their access to care.

This Year 2 report focuses on the provider availability as a key measure of access. The study's findings suggest that *overall* provider availability remained relatively unchanged from 2007 to 2012. Although the actual number of providers treating injured workers declined, the number of injured workers who sought medical services in the workers compensation system declined by a similar proportion. As a result, the ratio of injured workers to providers remained relatively constant. It is possible, however, that availability of certain specialists has changed as the number of providers by specialty were not identified in this Year 2 study.

Although providers submitted fewer medical bills, they billed for more services, particularly lab tests and drugs. Although back injury diagnoses were consistently the most common on medical bills, certain types of back injury diagnoses declined and diagnoses relating to injuries to other parts of the body increased, which may explain some of the changes in the services provided. At the time of this analysis, most DWC fees had not changed since 2007. Therefore, increases in average payments were primarily due to decreases in the number of injured workers and the number of medical bills rather than increases in the number of services billed.

### **3. Recommendations for Future Studies**

An additional study of injured workers' access to medical care in California will be completed in 2014 and will investigate some access issues in greater detail. Additional analyses recommended for consideration are discussed in the paragraphs that follow.

**Changes in the types of providers treating injured workers.** Although patterns in the number of bills submitted revealed certain shifts in the types of providers and specialists caring for injured workers, additional analysis of changes in the number of providers of each type and specialty would also be

useful in determining whether there may be deficiencies in access to certain types of providers or specialists.

**Additional investigation regarding inpatient services and costs.** Although the injuries and services associated with inpatient hospital stays were identified, additional analysis is recommended to ensure accuracy and to better understand the reasons for relatively long lengths of stay compared to other populations. In addition, inpatient hospital bills appear to account for large portion of payments but it is not clear what types of services are driving these high payments. Additional analyses of the services, including surgical procedures are recommended.

**Investigate the specific services being billed by certain provider types and specialists.** This study showed a marked increase in the number of lab tests, prescription drugs issued and certain other procedures while there were decreases in other services such as chiropractic care. Office visits and certain physical therapy procedures were relatively unchanged. At the same time, the number of medical bills submitted by certain provider types such as pain medicine physicians, out of state labs and pharmacists increased. It would be useful to understand more about the exact services for which specific specialists are billing.

## 1. INTRODUCTION

### 1.1 Overview

This report, prepared by Berkeley Research Group, LLC (“BRG”) for the Department of Industrial Relations, Division of Workers’ Compensation (“DWC”) presents findings for Year 2 of BRG’s study of access to medical care by injured workers under the workers’ compensation system regulated by the State of California.

DWC is required to complete an annual study of access to medical treatment for injured workers. The requirement is included in Labor Code Section 5307.2, which was enacted by Senate Bill 228 (Chapter 639, Statutes of 2003). The study objectives are to determine whether injured workers have adequate access to care and healthcare related products and to recommend methods to support continued access.

Prior studies of access to medical care for injured workers were conducted in 2006 by the University of California at Los Angeles and in 2008 by the University of Washington. In both studies, surveys of injured workers were conducted to determine whether workers were able to obtain appropriate care and whether they were satisfied with the care they received within the workers’ compensation health care system. A survey of injured workers was also completed in Year 1 of this study. In addition, medical billing data submitted by workers’ compensation carriers to the State of California Workers’ Compensation Information System (“WCIS”) were also analyzed to examine issues such as physician participation in the workers’ compensation system and regional differences in frequencies and types of claims. In Year 2 of the study, analyses focused exclusively on the WCIS data, including more detailed analyses of utilization, specific services provided and provider participation.

### 1.2 Methodology and Data Issues

As noted, this report is based on medical billing data as submitted by claims administrators and included in the WCIS. The WCIS data set used in the study consists of approximately 50 million medical bills submitted for the years 2007 through 2012. Duplicate bills (those with the same bill identification number) were removed.

#### 1.2.1 Regional Categories

Data were organized by region of the state to better understand geographic differences in access. Regional assignment is based on the zip code of the provider rendering the service. The following regions were used:

- San Francisco Bay Area – Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties
- Central Coast – Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz, and Ventura Counties
- Central Valley – Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare Counties
- Eastern Sierra Foothills – Alpine, Amador, Calaveras, El Dorado, Inyo, Mariposa, Mono, Nevada, Placer, and Tuolumne Counties
- Inland Empire – Imperial, Orange, Riverside, and San Bernardino Counties
- Los Angeles – Los Angeles County
- North State Shasta – Del Norte, Humboldt, Lake, Lassen, Mendocino, Modoc, Plumas, Shasta, Sierra, Siskiyou and Trinity Counties
- Sacramento Valley – Sacramento and Yolo Counties
- Sacramento Valley North – Butte, Colusa, Glenn, Sutter, Tehama and Yuba Counties
- San Diego – San Diego County
- Out-of-State

This regional classification allows comparisons across regions of the state and urban and rural areas, as well as comparisons to services provided by out-of-state providers. Although there are differences in population density among the regions, all but three regions include a Metropolitan Statistical Area of significant size. The three regions that are designated as rural include the Eastern Sierra Foothills, North State Shasta and Sacramento Valley North regions.

### ***1.2.2 Provider Type and Physician Specialty Categories***

Each medical bill in the WCIS dataset contains a code that identifies the provider that delivered the service. This code was linked to a taxonomy published by Washington Publishing that contains detailed descriptions for each code.<sup>1</sup> Using the taxonomy descriptions, each provider was further categorized using three “levels.” Level 1 classifies physician specialties and some non-physician specialties (referred to as “Specialty”). Physicians and some non-physician providers are identified by specialty and sub-specialty. Facilities are also identified according to their specific type, i.e., acute care hospital, rehabilitation hospital, etc. Level 2 further classifies the specialties into more general provider types (referred to as “Provider Type”), and Level 3 classifies provider types into broad categories of generalists, specialists, facilities and supplies. Examples of these levels are shown below.

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<sup>1</sup> See Washington Publishing Company, Healthcare Provider Taxonomy Code Set, <http://www.wpc-edi.com/reference/>.

**Example 1:**

<b>Provider Description:</b>	Allopathic & Osteopathic Physicians : Family Medicine : Adult Medicine
<b>Level 1</b>	Physicians: Family Medicine [SPECIALTY]
<b>Level 2</b>	General/Internal/Family/Pediatric Medicine [PROVIDER TYPE]
<b>Level 3</b>	General Practitioner

**Example 2:**

<b>Provider Description:</b>	Allopathic & Osteopathic Physicians : Orthopaedic Surgery : Foot and Ankle Surgery
<b>Level 1</b>	Physician: Orthopedics [SPECIALTY]
<b>Level 2</b>	Specialist - Orthopedics, Physical Medicine and Rehabilitation and Occupational Medicine [PROVIDER TYPE]
<b>Level 3</b>	Specialist

**Example 3:**

<b>Provider Description:</b>	Hospitals : General Acute Care Hospital : Critical Access
<b>Level 1</b>	Hospital: General Acute Care [SPECIALTY]
<b>Level 2</b>	Hospital [PROVIDER TYPE]
<b>Level 3</b>	Facility

The provider descriptions are those provided in the taxonomy file. Levels 1 through 3 were created based on typical categorizations used by commercial insurers in developing fee schedules for their provider networks. General practitioners include physicians in family practice, general practice, internal medicine and preventive medicine, as well as clinics and other group practices. Specialists include anesthesiology and pain management, orthopedics, surgery and non-hospital based physicians including cardiology, neurology and pulmonology.

## 2. MEASUREMENT OF ACCESS TO MEDICAL CARE

### 2.1 Review of Access Criteria

As described in the Year 1 report<sup>2</sup>, access criteria used by health planners and health care payers were reviewed in detail to assess their appropriateness for DWC. Access measures were categorized as follows:

- Provider availability,
- Experience of injured workers who sought care, and
- Injured worker satisfaction with their access to care.

The Year 1 analysis and previous studies determined that the experience of workers who sought care, including injured worker satisfaction with access to care has remained relatively constant over the past several years. For this reason, it was determined that it would be more beneficial to focus on learning more about access to care from the WCIS data rather than conduct another survey. For this reason, injured worker experience with care and satisfaction were not assessed in the Year 2 analysis. Instead, access to care in this report is measured by provider availability, including the number of providers that submitted medical bills, the number of medical submitted across different provider types and/or specialties, as well as the types of injuries treated and types of services provided. In addition, payment issues that may have had an impact on provider availability, and therefore access to care, are addressed.

### 2.2 Research Questions

In Year 2 of the study, research questions were developed to address the issue of access to medical treatment for injured workers, as measured by *provider availability*. The analysis of provider availability, focuses on the following measures:

- Provider participation (number of providers submitting bills and number of bills submitted); and
- Utilization of services (injuries treated and services provided);
- Payment issues (trends in payments per service and payments per worker).

Provider participation identifies the number of providers who treated injured workers, the number of medical bills submitted across different provider types and specialists, trends over time and geographic variation. Utilization of services includes the number and types of injuries, as well as the types of

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<sup>2</sup>Miller, H. et. al. "2013 Study of Access to Medical Treatment for Injured Workers: Final Report." April 5, 2013

services provided, types of providers delivering services, and changes in volume and type of services over time.

Research questions regarding payment issues seek to address the issue of payment levels (per bills and per worker), how they may differ between the workers' compensation population and the general patient population, and how they may have changed over time. Specific research questions in each of the three categories are listed below. Although most of the questions were addressed, at least in part, time and data limitations prevented a full response to all questions. These issues are described subsequently.

## **I. Provider Participation**

- a. How are specialists defined? How are general practitioners defined?
- b. How has the number of providers treating injured workers changed from 2007 to 2012?
- c. How has the number of medical bills per injured worker seeking medical services changed from 2007 to 2012?
- d. How has participation in the workers' compensation program, as measured by the number of medical bills submitted, changed by type of provider, including type of specialist?
- e. Is there a pattern in participation (as measured by the number of medical bills submitted) by type of specialist?
- f. Have certain types of specialists entered or exited from the market for workers' compensation care (as measured by the number of bills submitted)?
- g. Are there specific specialists that treat an especially high volume of workers' compensation patients? How has their volume changed over time?
- h. Are there differences in the distribution of specialists by region of the State? How is this distribution changing?

## **II. Utilization of Services**

- a. How have services provided to injured workers changed?
- b. Are there differences in types of services provided when injured workers are treated by specialists and general practitioners?
- c. Are there differences in the volume of services provided when injured workers are treated by specialists and general practitioners?
- d. What volume of services is provided at different types of facilities? Has the volume changed over time? Have the services changed over time? How does the volume and service mix compare across different types of facilities? Has this changed over time?
- e. What proportion of injured workers is admitted for inpatient care versus being treated on an outpatient basis? How does this compare to other populations? Note that outpatient services will include those provided in ambulatory surgery centers (ASCs).

Freestanding ASCs can be separately identified; however, hospital-owned ASCs may not have individual facility codes to identify them.

- f. Has the proportion of inpatient vs. outpatient services (including those provided in ASCs) changed over time?
- g. For workers admitted for inpatient stays, what are the most common injuries (by diagnosis code)? Have the types of injuries changed over time?
- h. What is the average length of hospital stay by type of injury and how has this changed over time?
- i. What proportion of inpatients has surgical procedures and how has this changed over time? What procedures are more common versus less common for a certain diagnosis or certain injury?
- j. How have types of outpatient services provided changed over time by type of injury?
- k. Has the type and volume of drugs prescribed changed by type of injury? What types of procedures or services are more common versus less common for a certain diagnosis or certain injury?
- l. Has the type and volume of durable medical equipment prescribed changed by type of injury?

### **III. Payment Issues**

- a. What are the payment rates for services provided to injured workers and how have they changed?
- b. How have payments per medical bill changed?
- c. How have payments per injured worker changed?
- d. How do provider workers' compensation provider payment rates compare to rates paid by other payers for the same services?
- e. Can the impact of specific changes in provider payment rates on the types and volume of services be measured?

Findings related to research questions are presented in the chapters that follow. Provider participation is addressed first, followed by utilization of services and payment issues. As noted, findings address most of the research questions but data limitations and time constraints prevented a complete response in the following cases:

- Additional data analyses will be required to more completely answer some questions regarding the utilization of inpatient versus outpatient care. Although inpatient medical bills were identified, the structure of the data files and time constraints limited the analysis of inpatient services. Additional efforts are required to link all of the services attributable to these bills.
- Additional investigation will be required to accurately link specific services and drugs to injury and diagnosis codes. Because the diagnosis code field is often not populated and appears to be

inaccurately populated in some cases, analyses regarding patterns of services to treat specific injuries were not completed.

- While facility types were identified, additional analysis will be required to distinguish services billed by facilities as compared to services billed by professionals. For this reason, analyses regarding the specific types of facilities where services were provided were not completed.
- Although most payment issues are addressed, detailed comparisons of payment rates to other payers are being completed in an independent study and therefore are not addressed in this report.

### 3. PROVIDER PARTICIPATION

#### 3.1 Introduction

In this study, provider participation in the workers compensation system is measured by assessing changes in three variables over the study period (2007 to 2012):

- Number of injured workers;
- Number and type/specialty of providers submitting medical bills; and
- Number of medical bills submitted by provider type and specialty.

Taken together, these factors present an indication of whether injured workers who sought care in the workers compensation system have access to the providers and services they need to recover from their injuries and return to work. Each of these variables is discussed in the sections that follow.

#### 3.2 Number of Injured Workers

According to WCIS data, the number of injured workers who received services in the workers compensation system declined 28 percent during the study period (Table 3.1).<sup>3</sup> This analysis is based on the number of unique patient identification numbers<sup>4</sup> that can be linked to medical bills that appear in the WCIS data.

**Table 3.1**  
**Number of Unique Injured Workers**  
**2007 – 2012**

Year	Injured Workers		
	Number	Change	% Change
<b>2007</b>	696,700	---	---
<b>2008</b>	680,504	(16,196)	-2.3%
<b>2009</b>	623,304	(57,200)	-8.4%
<b>2010</b>	547,850	(75,454)	-12.1%
<b>2011</b>	520,419	(27,431)	-5.0%
<b>2012</b>	499,687	(20,732)	-4.0%
<b>2007-2012</b>	---	(197,013)	-28.3%

<sup>3</sup> The number of injured workers in the analysis includes workers appearing in the medical bill primary files as well as the “orphan” files for each year. However, due to time constraints, the actual number of workers in these files could not be identified and instead had to be estimated. The number of injured workers in the orphan files was estimated based on the proportion of medical bills in these files relative to the total number of medical bills each year. These estimates were then added to the actual number of injured workers appearing in the primary medical bill files.

<sup>4</sup> Social security numbers that appear in the WCIS data are “scrambled” or “masked.”

### 3.3 Number and Type of Providers Submitting Medical Bills

The number of providers that submitted medical bills for injured workers during the 2007 to 2012 study period is presented in this section, as well as a comparison of the number of providers to the number of injured workers who medical received services.

#### 3.3.1 Total Providers Submitting Medical Bills

As shown in Table 3.2, the total number of unique providers (in-state and out-of-state) reported in the WCIS declined 21 percent from 2007 to 2012. The number of providers decreased between two percent and five percent per year until 2012, when the number of providers dropped nine percent from 2011. The Bay Area had the largest overall decrease (28 percent) while the Inland Empire Region had the smallest overall decrease (16 percent). The number of providers in the Los Angeles region, which had the largest number of providers, declined 18 percent over the 2007-2012 period. Out-of-state providers decreased 21 percent during the same period.

**Table 3.2\***  
**Number of Unique Providers Submitting Medical Bills for 2007 – 2012**  
**All Regions and Out-of-State**

Region	2007	2008	2009	2010	2011	2012	% Change 2007-2012
BAY AREA	11,240	10,520	9,852	9,255	8,540	8,073	-28.2%
CENTRAL COAST	4,598	4,451	4,305	4,160	3,850	3,688	-19.8%
CENTRAL VALLEY	5,678	5,435	5,196	5,074	4,698	4,528	-20.3%
EASTERN SIERRA FOOTHILLS	1,699	1,597	1,494	1,490	1,380	1,338	-21.2%
INLAND EMPIRE	11,410	11,084	10,578	10,140	9,685	9,557	-16.2%
LOS ANGELES	16,802	16,549	15,565	14,886	14,101	13,799	-17.9%
NORTH STATE-SHASTA	1,799	1,772	1,655	1,575	1,481	1,396	-22.4%
SACRAMENTO VALLEY	2,476	2,338	2,214	2,248	2,251	1,903	-23.1%
SACRAMENTO VALLEY NORTH	975	905	867	864	784	765	-21.5%
SAN DIEGO	4,158	4,146	3,801	3,574	3,389	3,314	-20.3%
OUT-OF-STATE	17,826	16,803	16,032	16,911	18,123	14,029	-21.3%
<b>Total</b>	<b>78,661</b>	<b>75,600</b>	<b>71,559</b>	<b>70,177</b>	<b>68,282</b>	<b>62,390</b>	<b>-20.7%</b>

\*Sorted by region name.

As presented in Table 3.3, the number of providers decreased during the study period but the number of injured workers decreased at a greater rate. The number of providers decreased almost 21 percent from 2007 to 2012 while the number of injured workers decreased 28 percent during the same period. As a result, the ratio of injured workers to providers declined from 8.9 in 2007 to 8.0 in 2012, a change of almost 10 percent.

**Table 3.3  
Ratio of Injured Workers to Providers  
2007 – 2012**

Year	Number of Providers	Percent Change	Estimated Injured Workers	Percent Change	Ratio of Workers to Providers	Percent Change
2007	78,661	---	696,700	---	8.9	---
2008	75,600	-3.9%	680,504	-2.3%	9.0	1.6%
2009	71,559	-5.3%	623,304	-8.4%	8.7	-3.2%
2010	70,177	-1.9%	547,850	-12.1%	7.8	-10.4%
2011	68,282	-2.7%	520,419	-5.0%	7.6	-2.4%
2012	62,390	-8.6%	499,687	-4.0%	8.0	5.1%
<b>2007-2012</b>	<b>(16,271)</b>	<b>-20.7%</b>	<b>(197,012)</b>	<b>-28.3%</b>	<b>(0.9)</b>	<b>-9.6%</b>

### 3.4 Number of Bills Submitted by Provider Type and Specialty

The number of providers submitting medical bills for injured workers by provider type and specialty was calculated for each year, with special focus on high volume providers. These analyses are described in the sections that follow.

#### 3.4.1 Total Number of Medical Bills Submitted

As described in the Year 1 report, the number of medical bills submitted was relatively constant from 2007 to 2010. Total bills increased by just 1.2 percent between 2007 and 2010 (the number of bills declined in 2008, but increased in 2009 and 2010). However, the number of bills declined substantially from 2010 to 2011 (11 percent) and from 2011 to 2012 (13 percent).

As shown in Table 3.4, with the exception of a few increases in some years, the number of bills in each region has been steadily declining since 2007, with much larger decreases from 2010 to 2011 when the number of bills declined between 9 and 23 percent in every region, and from 2011 to 2012, when the number of bills declined between 8 and 16 percent across the regions. The greatest declines in medical bills submitted over the entire time period from 2007 to 2012 occurred in the San Francisco Bay Area, the Central Coast and San Diego. The volume of medical bills declined at lower rates in Los Angeles, the Inland Empire region and Sacramento Valley North (between 10 and 13 percent). At the same time, the number of bills submitted by out-of-state providers has been steadily increasing since 2007, for a total increase of 46 percent between 2007 and 2012.

**Table 3.4\***  
**Number of Medical Bills Submitted and Percent Change for 2007 – 2012**  
**All Regions and Out-of-State**

Region	2007	2008	2009	2010	2011	2012	Percent Change 2007 to 2011
Bay Area	1,602,267	1,544,022	1,467,253	1,491,737	1,254,938	1,058,069	-34.0%
Central Coast	546,923	512,024	498,360	499,957	426,540	376,072	-31.2%
Central Valley	750,591	792,109	789,847	780,841	632,186	571,722	-23.8%
Eastern Sierra Foothills	110,391	107,529	111,724	110,838	91,039	79,476	-28.0%
Inland Empire	2,060,519	1,949,125	1,970,203	2,089,166	1,841,315	1,651,902	-19.8%
Los Angeles	3,916,612	3,704,344	3,774,257	3,944,351	3,474,990	3,065,260	-21.7%
North State	127,386	122,521	127,024	127,601	102,148	89,599	-29.7%
Sacramento Valley	355,913	336,466	335,667	333,784	292,822	246,396	-30.8%
Sacramento Valley (N.)	67,657	70,154	67,289	64,783	58,668	53,853	-20.4%
San Diego	638,354	613,872	654,211	617,451	478,111	431,990	-32.3%
Out-of-State	503,195	517,163	616,545	748,546	896,594	736,103	46.3%
<b>Total</b>	<b>10,679,807</b>	<b>10,269,329</b>	<b>10,412,380</b>	<b>10,809,055</b>	<b>9,549,351</b>	<b>8,360,442</b>	<b>-21.7%</b>

\*Sorted by region name.

While the number of providers as well as the number of medical bills submitted decreased over 20 percent from 2007 to 2012, the average number of bills submitted per provider was virtually identical in 2007 and 2012 (Table 3.5). It is important to note that the average number of bills per provider increased between 2008 and 2009 and between 2009 and 2010 before falling again in 2011. There is also substantial variation in this measure across regions.

Table 3.5 shows that the regions with the highest numbers of providers also had the highest average number of bills submitted per provider. Providers in the densely populated Los Angeles region, for example, which had nearly 14,000 providers serving injured workers in 2012, submitted an average of 222 bills per provider that year. In contrast, the Eastern Sierra Foothills region, which is a rural area, had only 1,338 providers in 2012. These providers submitted an average of 59 bills or approximately one-fourth of the Los Angeles average. Although all regions except one had declines in the average number of bills submitted per provider, the decreases ranged from 4 percent in the Central Valley and Inland Empire to 15 percent in San Diego. The average number of bills per provider increased one percent in the Sacramento Valley North region. At the same time, the average number of bills per provider for out-of-state providers increased by 86 percent.

**Table 3.5\***  
**Average Number of Medical Bills Submitted Per Provider for 2007 – 2012**  
**All Regions and Out-of-State**

Region	2007	2008	2009	2010	2011	2012	Change 2007-2012	Percent Change
Bay Area	143	147	149	161	147	131	-11	-8.1%
Central Coast	119	115	116	120	111	102	-17	-14.3%
Central Valley	132	146	152	154	135	126	-6	-4.5%
Eastern Sierra Foothills	65	67	75	74	66	59	-6	-8.6%
Inland Empire	181	176	186	206	190	173	-8	-4.3%
Los Angeles	233	224	242	265	246	222	-11	-4.7%
North State	71	69	77	81	69	64	-7	-9.4%
Sacramento Valley	144	144	152	148	130	129	-14	-9.9%
Sacramento Valley (N.)	69	78	78	75	75	70	1	1.4%
San Diego	154	148	172	173	141	130	-23	-15.1%
Out-of-State	28	31	38	44	49	52	24	85.9%
<b>Total</b>	<b>136</b>	<b>136</b>	<b>146</b>	<b>154</b>	<b>140</b>	<b>134</b>	<b>-2</b>	<b>-1.3%</b>

\*Sorted by region name.

As shown in Table 3.6, the number of bills submitted per worker shows a similar pattern to the number of bills submitted per provider. In fact, the number of bills increased from 2008 to 2009 and from 2009 to 2010, even though the number of injured workers showed the largest declines in those years.

**Table 3.6**  
**Average Number of Medical Bills Submitted Per Worker**  
**2007 – 2012**

Year	Number of Bills	Percent Change	Estimated Injured Workers	Percent Change	Average Number of Bills Per Worker	Percent Change
<b>2007</b>	10,679,807	---	696,700	---	15.3	---
<b>2008</b>	10,269,329	-3.8%	680,504	-2.3%	15.1	-1.6%
<b>2009</b>	10,412,380	1.4%	623,304	-8.4%	16.7	10.7%
<b>2010</b>	10,809,055	3.8%	547,850	-12.1%	19.7	18.1%
<b>2011</b>	9,567,652	-11.5%	520,419	-5.0%	18.4	-6.8%
<b>2012</b>	8,360,442	-12.6%	499,687	-4.0%	16.7	-9.0%
<b>2007-2012</b>	<b>(2,319,365)</b>	<b>-21.7%</b>	<b>(197,012)</b>	<b>-28.3%</b>	<b>1.4</b>	<b>9.1%</b>

### **3.4.2 Number of Medical Bills Submitted by Provider Type**

In the following analysis, injured workers' medical bills have been categorized by Provider Type (Level 2) as described previously in Section 1.2.2. As expected, the number of bills submitted general practitioners, orthopedic physicians/physical medicine and rehabilitation physicians/occupational medicine physicians, and physical and occupational therapists were highest in 2012. The largest portion

of bills (28 percent) was submitted by general practice physicians. Physicians specializing in orthopedics, physical medicine and rehabilitation, and occupational medicine submitted 12 percent of bills, and physical and occupational therapists submitted 10 percent. The volume of bills submitted by non-physician or midlevel practitioners increased to 16 percent in 2012 compared to 8 percent in 2007.

Although general practitioners (includes general practice, internal medicine and family practice) submitted the highest proportion of bills, the number of bills submitted by these providers decreased by 45 percent from 2007 to 2012, from 4.3 million to 2.4 million. The number of bills submitted by orthopedic and physical medicine and rehabilitation/occupational medicine physicians also decreased by almost 26 percent during the time period and there was a 17 percent decrease in the number of bills submitted by physical and occupational therapists. At the same time, the number of bills submitted by agencies, nursing/custodial care facilities and laboratories increased dramatically in percentage terms but the overall volume of bills submitted by these provider types is still relatively low. Agencies include primarily home health and case management organizations, while nursing/custodial care facilities include primarily skilled nursing facilities (SNFs). Among other provider types, the volume of bills submitted by anesthesiologists and pain management physicians increased 26 percent and more dramatically, the number of bills submitted by non-physician or midlevel practitioners increased by 55 percent. This category includes physician assistants and nurse practitioners as well as pharmacists. This finding is shown in Table 3.7a.

**Table 3.7a\***  
**Number of Bills Submitted by Provider Type and Change from 2007 to 2012**  
**In-State and Out-of-State**

Provider Type	2007		2012		2007 to 2012	
	Number of Bills	Percent of Total	Number of Bills	Percent of Total	Number of Bills	Percent Change
Lab	22,082	0.2%	136,363	1.6%	114,281	517.5%
Agencies	7,033	0.1%	29,992	0.4%	22,959	326.4%
Nursing and Custodial Care Facilities	753	0.0%	2,171	0.0%	1,418	188.3%
Specialist - Other Non-Hospital Based Physician	80,544	0.8%	130,128	1.6%	49,584	61.6%
Non-Physician or Midlevel Practitioner	855,971	8.0%	1,328,036	15.9%	472,065	55.1%
Managed Care Organization	1,628	0.0%	2,407	0.0%	779	47.9%
Specialist - Anesthesiology and Pain Management	98,954	0.9%	124,641	1.5%	25,687	26.0%
Dentistry	7,167	0.1%	8,906	0.1%	1,739	24.3%
Ambulatory Surgical Center	47,937	0.4%	54,994	0.7%	7,057	14.7%
Specialist – Podiatrist	34,349	0.3%	37,458	0.4%	3,109	9.1%
Specialist - Mental Health	202,178	1.9%	217,456	2.6%	15,278	7.6%
Specialist – Surgery	70,357	0.7%	69,453	0.8%	-904	-1.3%
Chiropractic	516,689	4.8%	490,457	5.9%	-26,232	-5.1%
Pharmacy	271,368	2.5%	236,869	2.8%	-34,499	-12.7%
Specialist - Other Hospital-Based Physician	223,002	2.1%	194,186	2.3%	-28,816	-12.9%
Group Practice	315,618	3.0%	270,831	3.2%	-44,787	-14.2%
Physical Therapy/Occupational Therapy	1,041,509	9.8%	866,434	10.4%	-175,075	-16.8%
Specialist – Radiology	219,863	2.1%	181,196	2.2%	-38,667	-17.6%
Medical Supplies	377,498	3.5%	303,833	3.6%	-73,665	-19.5%
Transportation	37,856	0.4%	28,756	0.3%	-9,100	-24.0%
Specialist - Orthopedics, Physical Medicine and Rehabilitation, and Occupational Medicine	1,368,171	12.8%	1,013,603	12.1%	-354,568	-25.9%
Hospital	260,749	2.4%	180,296	2.2%	-80,453	-30.9%
General/Internal/Family/Pediatric Medicine	4,303,597	40.3%	2,367,661	28.3%	-1,935,936	-45.0%
Ambulatory Health Care Facilities	248,628	2.3%	69,478	0.8%	-179,150	-72.1%
<i>Provider Type Missing</i>	<i>66,298</i>	<i>0.6%</i>	<i>14,837</i>	<i>0.2%</i>	<i>-51,461</i>	<i>-77.6%</i>
<b>TOTAL</b>	<b>10,679,799</b>	<b>100%</b>	<b>8,360,442</b>	<b>100%</b>	<b>-2,319,357</b>	<b>-21.7%</b>

\*Sorted by percent change.

For in-state providers, there were large decreases in the number of medical bills between 2007 and 2012 among most of the high volume provider types, such as general practice physicians (45 percent), orthopedic/physical medicine and rehabilitation/occupational medicine physicians (27 percent) and physical and occupational therapists (27 percent). However, the number of bills submitted by non-physician or midlevel practitioners increased 36 percent during the time period. In addition, the number

of bills submitted by other non-hospital based physicians increased 66 percent. This finding is shown in Table 3.7b.

**Table 3.7b\***  
**Number of Bills Submitted by Provider Type and Change from 2007 to 2012**  
**In-State Providers Only**

Provider Type	2007		2012		2007 to 2012	
	Number of Bills	Percent of Total	Number of Bills	Percent of Total	Number of Bills	Percent Change
Lab	18,860	0.2%	113,961	1.5%	95,101	504.2%
Agencies	4,159	0.0%	19,578	0.3%	15,419	370.7%
Nursing and Custodial Care Facilities	683	0.0%	2,028	0.0%	1,345	196.9%
Managed Care Organization	1,313	0.0%	2,335	0.0%	1,022	77.8%
Specialist - Other Non-Hospital Based Physician	76,120	0.7%	126,261	1.7%	50,141	65.9%
Non-Physician or Midlevel Practitioner	790,176	7.8%	1,075,854	14.1%	285,678	36.2%
Specialist - Anesthesiology and Pain Management	95,195	0.9%	121,490	1.6%	26,295	27.6%
Ambulatory Surgical Center	46,474	0.5%	54,092	0.7%	7,618	16.4%
Dentistry	6,708	0.1%	7,586	0.1%	878	13.1%
Specialist - Podiatrist	33,712	0.3%	36,877	0.5%	3,165	9.4%
Specialist - Mental Health	196,969	1.9%	212,271	2.8%	15,302	7.8%
Pharmacy	195,310	1.9%	208,132	2.7%	12,822	6.6%
Specialist - Surgery	68,980	0.7%	67,900	0.9%	-1,080	-1.6%
Chiropractic	506,734	5.0%	471,388	6.2%	-35,346	-7.0%
Specialist - Radiology	207,988	2.0%	166,836	2.2%	-41,152	-19.8%
Medical Supplies	292,394	2.9%	233,101	3.1%	-59,293	-20.3%
Specialist - Other Hospital-Based Physician	204,905	2.0%	162,670	2.1%	-42,235	-20.6%
Group Practice	311,466	3.1%	247,053	3.2%	-64,413	-20.7%
Specialist - Orthopedics, Physical Medicine and Rehabilitation, and Occupational Medicine	1,335,966	13.1%	977,011	12.8%	-358,955	-26.9%
Physical Therapy/Occupational Therapy	1,020,243	10.0%	741,932	9.7%	-278,311	-27.3%
Hospital	254,438	2.5%	171,467	2.2%	-82,971	-32.6%
General/Internal/Family/Pediatric Medicine	4,173,158	41.0%	2,308,560	30.3%	-1,864,598	-44.7%
Transportation	29,747	0.3%	15,053	0.2%	-14,694	-49.4%
Ambulatory Health Care Facilities	243,646	2.4%	66,270	0.9%	-177,376	-72.8%
<i>Provider Type Missing</i>	61,262	0.6%	14,633	0.2%	-46,629	-76.1%
<b>TOTAL</b>	<b>10,176,606</b>	<b>100%</b>	<b>7,624,339</b>	<b>100%</b>	<b>-2,552,267</b>	<b>-25.1%</b>

\*Sorted by percent change.

The specific provider types with decreases in the number of bills submitted between 2007 and 2012 are relatively consistent across individual regions of the State and are generally in alignment with the statewide pattern of increases and decreases. General practitioners show consistently large *decreases*

in the number of bills across all regions while non-physician and midlevel practitioners consistently show large *increases*. Some high volume provider types such as chiropractors show increases in some regions and decreases in others. This finding is shown in Table 3.7c.

**Table 3.7c\***  
**Highest Volume Provider Types**  
**Percent Change in Medical Bills Submitted by Region**  
**2007 – 2012**

Region	General Practice	Non-Physician or MidLevel	Ortho/PMR/ Occupational Medicine	PT/OT	Chiropractor
Bay Area	-44%	21%	-41%	-32%	-40%
Central Coast	-55%	34%	-23%	-13%	-50%
Central Valley	-47%	54%	-9%	-19%	-16%
E Sierra Foothills	-56%	70%	-27%	-10%	-16%
Inland Empire	-34%	33%	-22%	-22%	12%
Los Angeles	-45%	34%	-29%	-31%	8%
North State	-66%	164%	-19%	11%	-20%
Sacramento Valley	-51%	76%	-4%	-14%	-25%
Sacramento Valley N	-52%	75%	-3%	-21%	-6%
San Diego	-50%	37%	-25%	-43%	0%

\*Sorted by region name.

At the same time that the number of bills decreased for many in-state provider types, the number of bills submitted by the same out-of-state provider types increased. Similar to in-state, the number of bills submitted by out-of-state general practitioners *decreased* by a large percentage and the number of bills submitted by non-physician and midlevel practitioners *increased* dramatically. However, the number of bills submitted by out-of-state chiropractors, other hospital-based physicians and physical and occupational therapists, which showed decreases within California, *increased* among out-of-state providers. Out-of-state provider types with the largest increases in the number of bills submitted from 2007 to 2012 are shown in Table 3.7d.

**Table 3.7d\***  
**Number of Bills Submitted by Provider Type and Change from 2007 to 2012**  
**Out-of-State Providers Only**

Provider Type	2007		2012		2007 to 2012	
	Number of Bills	Percent of Total	Number of Bills	Percent of Total	Number of Bills	Percent Change
Lab	3,222	0.6%	22,402	3.0%	19,180	595.3%
Physical Therapy/Occupational Therapy	21,266	4.2%	124,502	16.9%	103,236	485.5%
Group Practice	4,152	0.8%	23,778	3.2%	19,626	472.7%
Non-Physician or Midlevel Practitioner	65,795	13.1%	252,182	34.3%	186,387	283.3%
Agencies	2,874	0.6%	10,414	1.4%	7,540	262.4%
Dentistry	459	0.1%	1,320	0.2%	861	187.6%
Nursing and Custodial Care Facilities	70	0.0%	143	0.0%	73	104.3%
Chiropractic	9,955	2.0%	19,069	2.6%	9,114	91.6%
Specialist - Other Hospital-Based Physician	18,097	3.6%	31,516	4.3%	13,419	74.2%
Transportation	8,109	1.6%	13,703	1.9%	5,594	69.0%
Hospital	6,311	1.3%	8,829	1.2%	2,518	39.9%
Specialist - Radiology	11,875	2.4%	14,360	2.0%	2,485	20.9%
Specialist - Orthopedics, Physical Medicine and Rehabilitation, and Occupational Medicine	32,205	6.4%	36,592	5.0%	4,387	13.6%
Specialist - Surgery	1,377	0.3%	1,553	0.2%	176	12.8%
Specialist - Mental Health	5,209	1.0%	5,185	0.7%	-24	-0.5%
Specialist - Podiatrist	637	0.1%	581	0.1%	-56	-8.8%
Specialist - Other Non-Hospital Based Physician	4,424	0.9%	3,867	0.5%	-557	-12.6%
Specialist - Anesthesiology and Pain Management	3,759	0.7%	3,151	0.4%	-608	-16.2%
Medical Supplies	85,104	16.9%	70,732	9.6%	-14,372	-16.9%
Ambulatory Health Care Facilities	4,982	1.0%	3,208	0.4%	-1,774	-35.6%
Ambulatory Surgical Center	1,463	0.3%	902	0.1%	-561	-38.3%
General/Internal/Family/Pediatric Medicine	130,439	25.9%	59,101	8.0%	-71,338	-54.7%
Pharmacy	76,058	15.1%	28,737	3.9%	-47,321	-62.2%
Managed Care Organization	315	0.1%	72	0.0%	-243	-77.1%
<i>Provider Type Missing</i>	<i>5,036</i>	<i>1.0%</i>	<i>204</i>	<i>0.0%</i>	<i>-4,832</i>	<i>-95.9%</i>
<b>TOTAL</b>	<b>503,193</b>	<b>100%</b>	<b>736,103</b>	<b>100%</b>	<b>232,910</b>	<b>46.3%</b>

\*Sorted by percent change.

### **3.4.3 Number of Medical Bills Submitted by Specialty**

When physicians and certain non-physician practitioners are further classified into specialties and subspecialties (Level 1 – Specialty, as described in Section 1.2.2), similar patterns emerge in the number of medical bills submitted. Physicians in general practice had the highest number of bills submitted in 2012, while physical therapists, chiropractors and physicians specializing in orthopedics also submitted

high numbers of bills. The remaining specialties each submitted less than five percent of bills, with the vast majority submitting less than one percent of all medical bills. Although some specialties submitted low numbers of bills, there is representation across a variety of provider types and specialties indicating that there are a variety of specialists participating in the workers' compensation program. On the other hand, the number of bills submitted by providers in general practice and in specialties that have historically treated large numbers of injured workers decreased.

There were several shifts among specialties that submitted at least 30,000 bills in 2012. For example, the number of bills submitted by general practice physicians and physical medicine and rehabilitation physicians declined by more than 50 percent from 2007 to 2012. In addition, the number of bills submitted by emergency medicine physicians decreased by 46 percent. At the same time, the number of bills submitted by some specialties increased dramatically, including pain medicine physicians (192 percent). Other provider specialties with large increases in the number of bills submitted include clinical laboratories (517 percent), pathologists (118 percent) and pharmacists (56 percent). This finding is shown in Table 3.8a.

**Table 3.8a**  
**Number of Bills Submitted by High Volume Specialists\* and Change from 2007 to 2012**  
**All Regions and Out-of-State**

Specialty	2007		2012		2007 – 2012
	Number of Bills	Percent of Total	Number of Bills	Percent of Total	Percent Change
Lab: Clinical Lab	22,072	0.2%	136,207	1.6%	517.1%
Physician: Pain Medicine	23,825	0.2%	69,609	0.8%	192.2%
Physician: Pathology	55,026	0.5%	119,895	1.4%	117.9%
Provider: Other	331,370	3.1%	709,801	8.5%	114.2%
Pharmacist	221,510	2.1%	344,687	4.1%	55.6%
Psychologist	65,264	0.6%	98,238	1.2%	50.5%
Physician: Anesthesiology	98,954	0.9%	124,641	1.5%	26.0%
Physician: Internal Medicine	126,322	1.2%	157,358	1.9%	24.6%
Group Practice: Single Specialty	45,576	0.4%	53,310	0.6%	17.0%
Physician: Family Medicine	126,707	1.2%	147,428	1.8%	16.4%
Ambulatory Surgical Center	47,937	0.4%	54,994	0.7%	14.7%
Podiatrist	34,349	0.3%	37,458	0.4%	9.1%
Nurse	29,295	0.3%	31,788	0.4%	8.5%
Physician: Psychiatry and Neurology	96,954	0.9%	96,614	1.2%	-0.4%
Physician: Orthopedics	687,313	6.4%	674,579	8.1%	-1.9%
Chiropractor	516,689	4.8%	490,457	5.9%	-5.1%
Physical Therapist	811,371	7.6%	740,392	8.9%	-8.7%
Physician: Preventive Medicine	453,175	4.2%	408,085	4.9%	-9.9%
Occupational Therapist	105,773	1.0%	95,165	1.1%	-10.0%
Suppliers: DME	341,342	3.2%	297,269	3.6%	-12.9%
Hospital: General Acute Care	166,196	1.6%	144,740	1.7%	-12.9%
Suppliers : Pharmacy	266,908	2.5%	230,644	2.8%	-13.6%
Physician Assistant	166,921	1.6%	143,593	1.7%	-14.0%
Physician: Diagnostic Radiology	219,218	2.1%	178,954	2.1%	-18.4%
Group Practice or Clinic: Multispecialty	270,042	2.5%	217,521	2.6%	-19.4%
Technologists, Technicians and Other Technical Service Providers	65,213	0.6%	39,951	0.5%	-38.7%
Physician: Other	57,239	0.5%	32,376	0.4%	-43.4%
Physician: Emergency Medicine	138,288	1.3%	74,161	0.9%	-46.4%
Physician: Physical Medicine and Rehabilitation	680,858	6.4%	339,024	4.1%	-50.2%
Physician: General Practice	3,595,655	33.7%	1,654,047	19.8%	-54.0%
Hospital: Other	94,553	0.9%	35,556	0.4%	-62.4%
Occupational Medicine Clinic	124,365	1.2%	30,877	0.4%	-75.2%
Clinic Other	233,561	2.2%	32,688	0.4%	-86.0%

\*Submitted > 30,000 medical bills in 2012. Sorted by percent change.

Similar to the in-state analysis by provider type, analysis by specialty also shows consistency across in-state regions and patterns that align with statewide increases and decreases. For example, the number of bills submitted by general practice physicians, physical therapists and physicians specializing in physical medicine and rehabilitation consistently decreased across most regions. At the same time, the number of bills submitted by pain medicine physicians, clinical labs and pathologists consistently increased across most regions. The highest volume specialties and changes in the number of bills submitted are shown in Table 3.8b.

**Table 3.8b**  
**Number of Bills Submitted by High Volume Specialists\* and Change from 2007 to 2012**  
**In-State Providers Only**

Specialty	2007		2012		2007 – 2012
	Number of Bills	Percent of Total	Number of Bills	Percent of Total	Percent Change
Lab: Clinical Lab	18,851	0.2%	113,810	1.5%	503.7%
Physician: Pain Medicine	22,938	0.2%	68,258	0.9%	197.6%
Provider: Other	321,874	3.2%	681,577	8.9%	111.8%
Physician: Pathology	44,549	0.4%	91,760	1.2%	106.0%
Psychologist	64,231	0.6%	96,415	1.3%	50.1%
Physician: Anesthesiology	95,195	0.9%	121,490	1.6%	27.6%
Physician: Internal Medicine	121,409	1.2%	153,239	2.0%	26.2%
Ambulatory Surgical Center	46,474	0.5%	54,092	0.7%	16.4%
Physician: Family Medicine	124,694	1.2%	144,891	1.9%	16.2%
Nurse	28,338	0.3%	31,106	0.4%	9.8%
Podiatrist	33,712	0.3%	36,877	0.5%	9.4%
Group Practice: Single Specialty	44,534	0.4%	47,177	0.6%	5.9%
Suppliers : Pharmacy	194,193	1.9%	202,066	2.7%	4.1%
Physician: Psychiatry and Neurology	94,897	0.9%	94,144	1.2%	-0.8%
Physician: Orthopedics	678,131	6.7%	665,919	8.7%	-1.8%
Chiropractor	506,734	5.0%	471,388	6.2%	-7.0%
Physician: Preventive Medicine	445,596	4.4%	398,697	5.2%	-10.5%
Suppliers: DME	258,230	2.5%	227,158	3.0%	-12.0%
Physician Assistant	165,494	1.6%	142,519	1.9%	-13.9%
Hospital: General Acute Care	162,318	1.6%	137,616	1.8%	-15.2%
Physical Therapist	793,109	7.8%	637,775	8.4%	-19.6%
Physician: Diagnostic Radiology	207,349	2.0%	164,614	2.2%	-20.6%
Pharmacist	174,135	1.7%	136,137	1.8%	-21.8%
Group Practice or Clinic: Multispecialty	266,932	2.6%	199,876	2.6%	-25.1%
Occupational Therapist	103,290	1.0%	73,554	1.0%	-28.8%
Physician: Other	53,213	0.5%	31,728	0.4%	-40.4%
Physician: Emergency Medicine	131,936	1.3%	70,802	0.9%	-46.3%
Physician: Physical Medicine and Rehabilitation	657,835	6.5%	311,092	4.1%	-52.7%
Physician: General Practice	3,479,868	34.2%	1,611,041	21.1%	-53.7%
Hospital: Other	92,120	0.9%	33,851	0.4%	-63.3%
Occupational Medicine Clinic	123,844	1.2%	30,603	0.4%	-75.3%
Clinic Other	229,155	2.3%	30,797	0.4%	-86.6%

\*Submitted > 30,000 medical bills in 2012. Sorted by percent change.

In contrast to in-state providers, there are more out-of-state specialties with increases in the number of medical bills submitted over the 2007 to 2012 time period, despite an overall decrease in the number of

out-of-state providers. Out-of-state pharmacists, physical therapists, clinical labs, occupational therapists and single specialty group practices all showed increases in the number of bills of 300 percent or more. This finding is shown in Table 3.8c.

**Table 3.8c**  
**Number of Bills Submitted by High Volume Specialists\* and Change from 2007 to 2012**  
**Out-of-State Providers**

Specialty	2007		2012		2007 – 2012
	Number of Bills	Percent of Total	Number of Bills	Percent of Total	Percent Change
Occupational Therapist	2,483	0.5%	21,611	2.9%	770.4%
Lab: Clinical Lab	3,221	0.6%	22,397	3.0%	595.3%
Group Practice: Single Specialty	1,042	0.2%	6,133	0.8%	488.6%
Group Practice or Clinic: Multispecialty	3,110	0.6%	17,645	2.4%	467.4%
Physical Therapist	18,262	3.6%	102,617	13.9%	461.9%
Pharmacist	47,375	9.4%	208,550	28.3%	340.2%
Agencies	2,874	0.6%	10,414	1.4%	262.4%
Provider: Other	9,496	1.9%	28,224	3.8%	197.2%
Technologists, Technicians and Other Technical Service Providers	3,810	0.8%	10,445	1.4%	174.1%
Physician: Pathology	10,477	2.1%	28,135	3.8%	168.5%
Transportation: Other	4,196	0.8%	10,991	1.5%	161.9%
Chiropractor	9,955	2.0%	19,069	2.6%	91.6%
Hospital: General Acute Care	3,878	0.8%	7,124	1.0%	83.7%
Physician: Preventive Medicine	7,579	1.5%	9,388	1.3%	23.9%
Physician: Physical Medicine and Rehabilitation	23,023	4.6%	27,932	3.8%	21.3%
Physician: Diagnostic Radiology	11,869	2.4%	14,340	1.9%	20.8%
Physician: Orthopedics	9,182	1.8%	8,660	1.2%	-5.7%
Suppliers: DME	83,112	16.5%	70,111	9.5%	-15.6%
Suppliers : Pharmacy	72,715	14.5%	28,578	3.9%	-60.7%
Physician: General Practice	115,787	23.0%	43,006	5.8%	-62.9%

\*Submitted > 10,000 medical bills in 2012. Sorted by percent change.

### **3.4.4 Number of Medical Bills Submitted by High Volume Providers**

High volume providers are defined as those who have the largest share of patients in each of the ten in-state regions and out-of-state. Although the top 10 highest volume providers comprise about one percent or less of the total providers submitting bills in each region, the concentration of medical bills submitted by these providers is substantial and varies by region. For example, the ten highest volume providers in the Central Valley accounted for 18 percent of all medical bills submitted in 2012 while the ten highest volume providers in the Sacramento Valley North region accounted for 44 percent of

medical bills in that region. The concentration of medical bills among high volume providers does not appear to be driven by geographic location (urban or rural) or the number of providers. Sacramento Valley North is a rural region with less than 800 providers submitting bills in 2012 while the Central Valley is an urban region that includes the cities of Fresno and Bakersfield and has more than 4,000 providers participating in the workers' compensation program. Overall, the top 10 providers across all regions account for less than one percent of all providers submitting bills but account for 27 percent of all medical bills submitted. The top 10 highest volume out-of-state providers account for 38 percent of out-of-state bills submitted. This finding is shown in Table 3.9a.

**Table 3.9a\***  
**Change Number of Medical Bills Submitted 2007 – 2012**  
**Top 10 Highest Volume Providers By Region and Out-of-State**

Region	2007 Bills	2012 Bills	Difference	Percent Change	Top 10 as Percent of All Providers	Top 10 Providers Percent of All Bills
Bay Area	299,662	256,849	-42,813	-14%	0.12%	24%
Central Coast	116,710	92,818	-23,892	-20%	0.27%	25%
Central Valley	126,189	101,616	-24,573	-19%	0.22%	18%
Eastern Sierra Foothills	27,790	24,691	-3,099	-11%	0.75%	31%
Inland Empire	558,546	370,196	-188,350	-34%	0.10%	22%
Los Angeles	1,133,844	613,960	-519,884	-46%	0.07%	20%
North State	28,694	20,041	-8,653	-30%	0.72%	22%
Sacramento Valley	101,599	83,319	-18,280	-18%	0.53%	34%
Sacramento Valley (N.)	23,261	23,777	516	2%	1.31%	44%
San Diego	234,419	144,221	-90,198	-38%	0.30%	33%
<b>Subtotal – High Volume CA Providers</b>	<b>2,650,714</b>	<b>1,731,488</b>	<b>-919,226</b>	<b>-35%</b>	<b>0.44%</b>	<b>27%</b>
<b>Out-of-State High Volume Providers</b>	<b>143,659</b>	<b>277,915</b>	<b>134,256</b>	<b>93%</b>	<b>0.07%</b>	<b>38%</b>
<b>Total – All High Volume Providers</b>	<b>2,794,373</b>	<b>2,009,403</b>	<b>-784,970</b>	<b>-28%</b>	<b>0.41%</b>	<b>27%</b>

\*Sorted by region name.

Among the top 10 highest volume providers in all 10 California regions (100 providers), 69 submitted fewer bills in 2012 than in 2007 while 31 providers submitted more bills in 2012 than 2007. For most providers, the number of bills submitted has been trending downward each year since 2007. Sixteen providers submitted at least 50 percent fewer bills in 2012 than in 2007. These providers are located in a variety of regions (except the Bay Area and Central Valley) and across a variety of specialties, as shown in Table 3.9b.

**Table 3.9b\***  
**High Volume Providers with > 50 % Decrease in Number of Medical Bills Submitted**  
**2007 – 2012**

Provider	Region	Provider Type	2007	2008	2009	2010	2011	2012	% Change 2007-2012
A	Los Angeles	Pharmacist	64,173	58,908	45,123	22,106	6,708	163	-100%
B	North State Shasta	Occupational Medicine	8,391	7,566	7,685	7,757	2,122	3	-100%
C	Los Angeles	Occupational Medicine	37,759	48,709	74,550	65,520	1,434	189	-99%
D	Sacramento Valley	DME and Medical Supplies	7,638	8,830	9,537	8,583	4,889	219	-97%
E	Eastern Sierra Foothills	Physical Therapy	1,979	1,778	1,876	2,273	1,872	418	-79%
F	Los Angeles	General Practice	62,518	71,637	65,870	57,944	20,176	14,988	-76%
G	Los Angeles	Diagnostic Radiology	64,594	55,026	45,107	20,327	17,036	19,567	-70%
H	Central Coast	Physician Assistant	9,191	5,427	4,521	5,922	4,375	3,553	-61%
I	Inland Empire	Chiropractic	68,549	33,979	15,355	19,463	22,190	26,558	-61%
J	San Diego	Occupational Medicine	20,580	9,712	11,286	12,769	9,100	8,479	-59%
K	Central Coast	General Practice	9,878	8,560	6,290	2,867	2,944	4,102	-58%
L	Sacramento Valley North	Clinical Nurse Specialist	4,803	3,958	3,604	3,386	2,440	2,188	-54%
M	Eastern Sierra Foothills	Orthopedics	2,133	2,092	1,584	1,242	1,135	1,001	-53%
N	Los Angeles	Other Specialist	180,302	186,761	169,234	162,378	149,674	84,631	-53%
O	Central Coast	General Practice	30,784	24,589	11,799	22,250	18,067	15,000	-51%
P	North State Shasta	Physical Therapy	3,035	3,020	3,118	2,380	2,204	1,509	-50%

\*Sorted by percent change.

### 3.5 Discussion

The number of injured workers receiving medical services in the California workers compensation system and the number of providers treating these injured workers, as well as the number of medical bills submitted decreased during the period from 2007 to 2012. These declines appear to be driven by a number of factors. However, it is important to note that there has been a nationwide downward trend in the number of workers' compensation claims that began in 1991. Expert sources differ on the specific reasons for the decline. The National Council on Compensation Insurance (NCCI) attributes the declines to several factors, including advances in automation and technology, an aging (and hence, more

experienced) workforce, and greater emphasis on workplace safety.<sup>5</sup> However, the Commission on Health and Safety and Workers' Compensation (CHSWC) found that an increase in older workers did not necessarily correlate with fewer workplace injuries, at least for women. As stated in a 2011 report, "[w]e find that after controlling for the types of jobs and the hours worked, injury risk through the age of 64 only declines for men, while the risk for women stays constant or increases gradually with age."<sup>6</sup>

During the study period, dramatic increases in unemployment in California from 2008 to 2010 likely played the most prominent role in the decrease in the number of injured workers, particularly the steep declines that occurred between 2008 and 2009 and 2009 and 2010. Studies have shown that as unemployment rises, the number of workers' compensation claims (and hence, medical bills) falls. As explained in a white paper published by Zurich Insurance, "[h]istory tends to repeat itself and what has happened in previous recessions is holding true for this one [2008] as well. The most visible impact for employers is the reduction of premium due to lower payrolls, and the correlation of these reduced payrolls with the frequency of claims. Fewer employees, not surprisingly, translate into fewer claims."<sup>7</sup> While the unemployment rate in California in January 2008 was only 5.9 percent, by the end of the year it had risen to 9.2 percent and continued to increase through the end of 2010 to 12.2 percent. Since then, unemployment rates have gradually decreased.<sup>8</sup> Unemployment increases in California during the 2008 to 2010 time period were particularly dramatic for the construction industry, which has had historically high rates of worker injuries relative to other industries. Construction employment declined by 40 percent between 2006 and 2010 in California, and had only rebounded by about 5 percent by 2012. In addition, manufacturing, another industry that also has had relatively high rates of worker injuries, experienced a 17 percent decline in employment between 2006 and 2010.<sup>9</sup>

The decrease in the number of providers submitting bills to the workers' compensation program and the decrease in the number of medical bills submitted during the study period are very similar (21 and 22 percent, respectively). As a result, the average numbers of bills submitted per provider were nearly identical in 2007 and 2012. As described previously, this Year 2 report is designed to measure injured workers' access to medical services by assessing overall provider availability, and this chapter has focused on provider participation in the workers compensation program as one component of provider availability. The study's findings suggest that while provider participation has decreased (as reflected in

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<sup>5</sup>National Council on Compensation Insurance. *Workers' Compensation Claim Frequency Continues to Decline in 2009*. September 2010. P.1.

<sup>6</sup>Commission on Health and Safety and Workers' Compensation. *Working Safer or Just Working Longer? The Impact of an Aging Workforce on Occupational Injury and Illness Costs*. January 2011. P.1.

<sup>7</sup>*Recession, Recovery and Workers' Compensation Claims*. White Paper published by Zurich, 2010. P.1. Available at: <http://www.zurichna.com/internet/zna/SiteCollectionDocuments/en/media/whitepapers/Zurich-M-Recession-workers-comp.pdf>.

<sup>8</sup>Historical Civilian Labor Force. Employment Development Department. State of California.

<sup>9</sup>Industry Employment and Labor Force. Employment Development Department. State of California.

fewer providers submitting bills and fewer bills submitted), these decreases appear to have occurred in response to fewer injured workers requiring treatment. The number of injured workers receiving medical services decreased 28 percent and the ratio of providers to injured workers receiving medical services was nearly unchanged. Therefore, the findings suggest that one component of access, provider participation relative to the number of injured workers, did not change during the study period. Furthermore, the number of bills submitted per injured worker increased even as the number of providers and the number of workers declined. In addition, the number of total bills increased between 2008 and 2009 and 2009 and 2010, when the largest declines in the number of injured workers occurred, and even as the number of providers was also decreasing. Although it is difficult to determine the causes of these increases, it is possible that providers billed for more services. Analyses of the services provided, which is presented in the next chapter, appears to confirm this finding.

This assessment is also bolstered by analyses showing that the number of medical bills declined proportionately across many provider types and geographic regions, including providers that have historically treated large numbers of injured workers, such as general practitioners and physical therapists. Although there were marked declines in the number of bills submitted by some provider types, such as general practitioners, and large increases in bills submitted by other provider types, such as labs and pharmacies, there is still wide representation across a variety of provider types and specialties. Some shifts in the specific providers caring for injured workers may be explained in part by changes in the types of injuries sustained, as well as services provided over the time period (which will be discussed in Chapter 4 of this report), but it is more likely that declines in the number of providers and the number of bills submitted are the result of fewer workers being injured during the study period due to higher unemployment.

The increase in the number of bills submitted by out-of-state providers appears to be caused by two factors. First, there was an increase in drugs and supplies ordered from out-of-state providers during the study period. As discussed previously, the top 10 highest volume out-of-state providers accounted for 38 percent of all out-of-state bills in 2012. Of these, three are pharmacies or pharmacists and three are medical suppliers. Second, there appears to be an increase in the use of national workers' compensation networks and management companies. These organizations provide referral services, utilization management and reimbursement services for employers. Under these arrangements, injured workers receive treatment from providers in California but the services are billed by a central billing office of a workers' compensation management company based in another state. Although it is difficult to identify the number of out-of-state medical bills that are attributable to these organizations, among the top 10 highest volume out-of-state providers, four appear to be national networks or management companies. As a result, a large proportion of the bills that appear to be attributable to out-of-state providers may actually be for services delivered by in-state providers. Furthermore, some

of the shifts in provider types and specialists caring for injured workers may be explained by the use of these organizations. For example, some high volume provider types such as chiropractors show increases in the number of bills submitted in some regions, decreases in other regions, and a large increase in out-of-state bills. Physical therapists also show similar patterns. These changes may be due to these providers joining national workers' compensation networks, particularly in certain parts of the state.

#### 4. UTILIZATION OF SERVICES

##### 4.1 Medical Services Billed

As discussed previously, fewer injured workers appear to be the primary cause of the decline in the number of medical bills submitted from 2007 to 2012. However, while the number of medical bills submitted *decreased* substantially during this time frame, the number of services billed *increased*. There were 5.2 million procedures/services (HCPCS codes) billed in 2007. As shown in Table 4.1, this increased to nearly 7.3 million codes in 2010, when the number of medical bills was at its highest level. Although the number of codes decreased to 5.7 million by 2012, it still represents a net increase of nearly 600,000 codes or 11 percent over the number of codes billed in 2007.

**Table 4.1**  
**Total HCPCS Codes Billed**  
**2007 – 2012**

Year	Total HCPCS Codes Billed	Percent Change
<b>2007</b>	5,163,419	---
<b>2008</b>	5,526,165	7.0%
<b>2009</b>	6,227,138	12.7%
<b>2010</b>	7,294,550	17.1%
<b>2011</b>	6,632,824	-9.1%
<b>2012</b>	5,739,334	-13.5%
<b>Change</b>	<b>575,915</b>	<b>11.2%</b>

In terms of specific services billed, increases in the number of certain laboratory tests were particularly dramatic. Two tests, HCPCS 82570 – assay of urine creatinine, which is a kidney function test, and 83925-assay of opiates, which is a drug screening test, increased over 1,000 percent. Another drug screening test (G0431) was not billed at all in 2007 but the code appeared over 40,000 times on bills in 2012. Urinalysis (81002) also increased by almost 500 percent. Other services such as reimbursable chart notes also increased substantially during the period. CPT 99081 (reimbursable PR-2 chart notes) increased over 143 percent. This is a special CPT code used by the workers’ compensation program to reimburse providers for certain reports that are required by the State of California. According to the California Code of Regulations, an injured worker’s “primary treating physician” is required to submit reports in narrative format (using specific guidelines) or complete the “Primary Treating Physician’s Report” form (DWC Form PR-2), which is reimbursed under CPT 99081.<sup>10</sup> It is important to note, however, that despite the relatively large increase in the number of CPT codes billed for these reports,

<sup>10</sup> California Code of Regulations, Title 8, Section 9785.

this requirement is not new and as of this report writing, the payment rate for this code had not changed since 2007.

While the volume of codes for lab tests and reports increased dramatically, other high volume medical procedures increased by much smaller percentages or decreased during the same time period. For example, CPT 97014 (electric stimulation therapy), one of the highest volume procedures (182,001 codes billed in 2012) increased only three percent from 2007 to 2012, and 98940 (chiropractic manipulation) decreased by more than 30 percent. Two physical therapy codes, 97026 (infrared therapy) and 97250 (myofascial release) had relatively large increases (71 and 75 percent, respectively). Data on the frequency with which codes are billed are shown in Table 4.2.

**Table 4.2\***  
**Changes in Highest Volume CPT Codes**  
**2007 – 2012**

<b>HCPCS Code</b>	<b>Description</b>	<b>2007 Code Count</b>	<b>Percent of All Codes</b>	<b>2012 Code Count</b>	<b>Percent of All Codes</b>	<b>% Change 2007-2012</b>
83925	Assay of opiates	3,096	0.1%	44,469	0.8%	1336.3%
82570	Assay of urine creatinine	4,393	0.1%	54,469	0.9%	1139.9%
81002	Urinalysis nonauto w/o scope	5,702	0.1%	33,124	0.6%	480.9%
99081	Reimbursable PR-2 chart notes	83,202	1.6%	202,609	3.5%	143.5%
G0431	Drug screen multiple class	0	0.0%	40,813	0.7%	100.0%
97250	Myofascial release	32,095	0.6%	56,061	1.0%	74.7%
97026	Infrared therapy	38,951	0.8%	66,521	1.2%	70.8%
99358	Prolong service w/o contact	92,849	1.8%	118,194	2.1%	27.3%
95851	Range of motion measurements	40,685	0.8%	43,486	0.8%	6.9%
97014	Electric stimulation therapy	176,803	3.4%	182,001	3.2%	2.9%
99215	Office/outpatient visit established patient, 40 minutes	70,404	1.4%	71,476	1.2%	1.5%
99080	Special reports or forms	164,174	3.2%	165,205	2.9%	0.6%
97110	Therapeutic exercises	176,612	3.4%	176,633	3.1%	0.0%
99204	Office/outpatient visit new patient, 45 minutes	81,898	1.6%	81,253	1.4%	-0.8%
99244	Office consultation Level 4, 60 minutes	33,078	0.6%	32,452	0.6%	-1.9%
99245	Office consultation Level 5, 60 minutes	33,312	0.6%	32,603	0.6%	-2.1%
99214	Office/outpatient visit established patient, 25 minutes	257,200	5.0%	246,898	4.3%	-4.0%
A4556	Electrodes, pair	112,558	2.2%	106,027	1.8%	-5.8%
85025	Complete cbc w/auto diff wbc	35,429	0.7%	30,329	0.5%	-14.4%
99203	Office/outpatient visit new patient, 30 minutes	75,781	1.5%	63,338	1.1%	-16.4%
99199	Special service/proc/report	50,237	1.0%	41,654	0.7%	-17.1%
99070	Special supplies phys/qhp	152,439	3.0%	122,161	2.1%	-19.9%
99213	Office/outpatient visit established patient, 15 minutes	273,998	5.3%	210,234	3.7%	-23.3%
98940	Chiropractic manipulation 1-2 regions	51,028	1.0%	35,445	0.6%	-30.5%
99212	Office/outpatient visit established patient, 10 minutes	47,822	0.9%	29,891	0.5%	-37.5%
	All Other CPT/HCPCS Codes	3,069,673	59.5%	3,451,988	60.1%	12.5%
	<b>TOTAL</b>	<b>5,163,419</b>	<b>100%</b>	<b>5,739,334</b>	<b>100%</b>	<b>11.2%</b>

\*Sorted by percent change.

## 4.2 Drugs Billed

As the number of medical services provided increased between 2007 and 2012, the number of drugs prescribed, as measured by the number of National Drug Codes (NDCs) billed, also increased.<sup>11</sup> In 2007, a total of 417,772 NDC codes were billed while 647,129 NDC codes were billed in 2012 (a 55 percent increase). The number of prescriptions reached a high of 773,306 in 2011. The highest volume drug prescribed across all years (11.5 percent of all drugs billed in 2012) was hydrocodone-acetaminophen, which is sold in generic form and also under such brand names as Vicodin. Hydrocodone is a narcotic pain-reliever. The number of bills for hydrocodone-acetaminophen increased nearly 38 percent from 2007 to 2012. The number of bills for other narcotic pain medications such as APAP-hydrocodone (another form of hydrocodone and acetaminophen), oxycodone, oxycontin and tramadol also increased. For example, the number of bills for oxycontin increased by 677 percent and tramadol increased by 164 percent. Tramadol is a synthetic pain reliever.<sup>12</sup> Other commonly prescribed drugs include ibuprofen and naproxen (both non-steroidal anti-inflammatory drugs or NSAIDs) and the number of bills for these drugs also increased. Only three high volume drugs (carisoprodol, acetaminophen-codeine and compound drugs) decreased in volume during the study period. These data are shown in Table 4.3.

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<sup>11</sup>NDC codes were categorized into their respective generic drug names using the National Drug Code directory published by the Food and Drug Administration (FDA).

<sup>12</sup>Available at [www.medicinenet.com](http://www.medicinenet.com).

**Table 4.3\***  
**Changes in Highest Volume Drugs Billed**  
**2007 – 2012**

Drug Name	2007		2012		Percent Change 2007 - 2012
	Number of NDCs Billed	Percent of Total	Number of NDCs Billed	Percent of Total	
OXYCONTIN	656	0.2%	5,097	0.8%	677.0%
ZOLPIDEM TARTRATE	3,834	0.9%	14,052	2.2%	266.5%
TIZANIDINE	3,049	0.7%	11,116	1.7%	264.6%
OMEPRAZOLE	6,630	1.6%	22,822	3.5%	244.2%
BUPROPION	1,962	0.5%	5,372	0.8%	173.8%
TRAMADOL	10,372	2.5%	27,428	4.2%	164.4%
CYMBALTA	4,036	1.0%	10,099	1.6%	150.2%
AMITRIPTYLINE	2,424	0.6%	5,537	0.9%	128.4%
TRAZODONE	2,375	0.6%	4,955	0.8%	108.6%
OXYCODONE- ACETAMINOPHEN	5,726	1.4%	11,875	1.8%	107.4%
GABAPENTIN	9,774	2.3%	19,137	2.9%	95.8%
CYCLOBENZAPRINE	10,174	2.4%	19,125	2.9%	88.0%
NABUMETONE	2,613	0.6%	4,807	0.7%	84.0%
DICLOFENAC SODIUM	3,205	0.8%	5,698	0.9%	77.8%
ALPRAZOLAM	3,557	0.9%	6,311	1.0%	77.4%
NAPROXEN	13,315	3.2%	20,839	3.2%	56.5%
LIDODERM	6,701	1.6%	9,849	1.5%	47.0%
HYDROCODONE- ACETAMINOPHEN	54,324	13.0%	74,705	11.5%	37.5%
IBUPROFEN	20,049	4.8%	26,776	4.1%	33.6%
APAP/HYDROCODONE	6,091	1.5%	8,084	1.2%	32.7%
CELEBREX	8,001	1.9%	10,486	1.6%	31.1%
KETOPROFEN	5,577	1.3%	6,787	1.0%	21.7%
ACETAMINOPHEN- CODEINE	5,653	1.4%	5,400	0.8%	-4.5%
COMPOUND DRUGS	25,568	6.1%	23,182	3.6%	-9.3%
CARISOPRODOL	17,862	4.3%	15,749	2.4%	-11.8%
<b>Subtotal</b>	<b>233,528</b>	<b>55.9%</b>	<b>375,288</b>	<b>57.8%</b>	
<b>All Others</b>	<b>184,244</b>	<b>44.1%</b>	<b>273,841</b>	<b>42.2%</b>	
<b>Total</b>	<b>417,772</b>	<b>100%</b>	<b>649,129</b>	<b>100%</b>	<b>55.4%</b>

\*Sorted by percent change.

### 4.3 Proportion of Inpatient Versus Outpatient Services

According to the WCIS data, 4.4 percent of medical bills were for inpatient services in 2012 compared to 4.0 percent in 2007. The proportion of inpatient medical bills declined to a low of 3.5 percent in 2009 before increasing in subsequent years. Although inpatient services consistently accounted for a small portion of medical bills during the study period, they accounted for nearly 33 percent of total billed charges and 20 percent of total payments in 2007, and these portions steadily increased each year to 42 percent of total billed charges and 33 percent of total payments in 2012. In comparison to other California populations, inpatient hospital payments as a percentage of total medical payments are higher for workers' compensation patients. For example, inpatient hospital payments for injured workers in California represented 30.5 percent of total medical payments in 2011 compared to 24 percent for the U.S. Medicare population<sup>13</sup> and 14.6 percent for the Medicaid population<sup>14</sup> in the same year. Inpatient data are presented in Table 4.4.

**Table 4.4**  
**Inpatient Medical Bills, Billed Charges and Payments**  
**2007 – 2012**

	2007	2008	2009	2010	2011	2012
<b>Inpatient Hospital Bills</b>	426,676	368,213	368,538	457,293	409,044	367,285
<b>Percent of Total Medical Bills</b>	4.0%	3.6%	3.5%	4.2%	4.3%	4.4%
<b>Inpatient Hospital Billed Charges</b>	\$2,976,015,435	\$2,850,923,250	\$3,248,684,051	\$3,582,938,105	\$3,529,691,013	\$3,765,068,990
<b>Percent of Total Billed Charges</b>	32.7%	33.7%	35.9%	36.7%	39.8%	41.8%
<b>Inpatient Hospital Payments</b>	\$543,321,023	\$586,689,552	\$610,859,846	\$683,188,217	\$682,966,198	\$689,978,933
<b>Percent of Total Medical Payments</b>	19.6%	19.5%	24.8%	27.5%	30.5%	33.0%

The average length of stay for injured workers admitted to the hospital is similar to that of the Medicare population (Table 4.5). However, in contrast to Medicare, for which the average length of stay has been decreasing for more than a decade, inpatient hospital stays for injured workers in California increased

<sup>13</sup>Medicare Payment Advisory Commission. *A Data Book: Health Care Spending and the Medicare Program*. June 2012. P.11.

<sup>14</sup>Kaiser Family Foundation. *The Medicaid Program at a Glance*. March 2014.

from 2007 to 2012.<sup>15</sup> The average length of stay for the non-Medicare population (which includes patients covered by Medicaid and commercial insurance) is lower than the average length of stay for the Medicare population as well as the workers’ compensation population, but has remained relatively unchanged since 1999.<sup>16</sup>

**Table 4.5**  
**Inpatient Hospital Average Length of Stay<sup>1</sup>**  
**California Workers’ Compensation Population Compared to Other Populations**  
**2007 – 2012**

Year	California Workers’ Compensation Population	Medicare	Non-Medicare <sup>2</sup>
2007	4.45	4.91	3.91
2008	4.09	4.89	3.95
2009	4.14	4.78	3.96
2010	4.56	4.67	3.93
2011	4.83	---	---
2012	4.98	---	---

<sup>1</sup>2010 is the most recent data available for Medicare and Non-Medicare.

<sup>2</sup>Includes patients covered by Medicaid and commercial insurance.

#### 4.4 Changes in the Type of Injuries

As expected, back injuries were the most common injuries identified on workers’ compensation medical bills (based on ICD-9 diagnosis code), comprising more than one-third (approximately 35 percent) of all injuries in 2012. However, the overall nature of worker injuries shifted during the study period. The top 20 highest volume diagnosis code categories are shown in Table 4.6. The ICD-9 category 847 (sprains and strains of other and unspecified part of back) increased from about 12 percent of all injuries in 2007 to 14 percent of all injuries in 2012, while other types of back injuries, including ICD-9 category 722, intervertebral disc disorders, which includes disc displacement and degeneration injuries, declined from about 10 percent all injuries in 2007 to 7 percent in 2012. In addition, some injuries relating to other parts of the body such as arm, shoulder, wrist and hand increased.

<sup>15</sup>Outlier lengths of stay (>365 days) were excluded from the calculations.

<sup>16</sup>Medicare Payment Advisory Commission. *A Data Book: Health Care Spending and the Medicare Program*. June 2012. P.68.

**Table 4.6\***  
**Highest Volume Diagnosis Codes Billed**  
**2007 – 2012**

ICD-9 Category	Description	2007 Percent of Codes Billed	2012 Percent of Codes Billed
847	Sprains and strains of other and unspecified parts of back	11.8%	14.1%
724	Other and unspecified disorders of back	8.5%	8.2%
722	Intervertebral disc disorders	9.9%	7.3%
719	Other and unspecified disorders of joint	5.1%	5.8%
959	Injury other and unspecified	8.5%	5.7%
726	Peripheral enthesopathies and allied syndromes	4.6%	4.9%
840	Sprains and strains of shoulder and upper arm	3.9%	4.8%
723	Other disorders of cervical region	3.0%	3.0%
727	Other disorders of synovium tendon and bursa	2.3%	2.9%
842	Sprains and strains of wrist and hand	2.1%	2.9%
354	Mononeuritis of upper limb and mononeuritis multiplex	3.0%	2.7%
844	Sprains and strains of knee and leg	2.0%	2.6%
845	Sprains and strains of ankle and foot	1.8%	2.0%
846	Sprains and strains of sacroiliac region	2.7%	2.0%
729	Other disorders of soft tissues	1.9%	1.9%
883	Open wound of finger(s)	2.2%	1.8%
924	Contusion of lower limb and of other and unspecified site	1.6%	1.8%
715	Osteoarthritis and allied disorders	1.9%	1.6%
923	Contusion of upper limb	1.2%	1.4%
836	Dislocation of the knee	1.2%	1.3%
	<b>Subtotal</b>	<b>79.2%</b>	<b>78.7%</b>
	<b>All Others</b>	<b>21.8%</b>	<b>22.3%</b>
	<b>Total Codes</b>	<b>100%</b>	<b>100%</b>

\*Sorted by percent of codes billed in 2012. Shaded indicates an increase from 2007 to 2012.

The most common injuries identified in inpatient bills are similar to those appearing on all bills, i.e., back injuries were the most common injuries requiring inpatient hospitalization. Almost one-fourth (23 percent) of inpatient hospital bills were for back injuries in 2012, up from about 19 percent in 2007. In addition, while injuries to other parts of the body appear to have increased overall (as shown previously in Table 4.6) they appear to be treated less frequently on an inpatient basis. The volume of most non-back related diagnoses appearing on inpatient bills decreased from 2007 to 2012. At the same time, there is greater variation in the types of injuries appearing on inpatient bills. As shown in Table 4.7, the 20 highest volume diagnosis codes accounted for only 54 percent of injuries on inpatient bills in 2012 but accounted for nearly 79 percent of injuries on all bills that year.

**Table 4.7\***  
**Highest Volume Diagnosis Codes Billed – Inpatient Only**  
**2007 – 2012**

ICD-9 Category	Description	2007 Percent of Codes Billed	2012 Percent of Codes Billed
724	Other and unspecified disorders of back	6.5%	8.0%
722	Intervertebral disc disorders	5.9%	7.7%
959	Injury other and unspecified	5.9%	4.9%
V57.1	Care involving other physical therapy	5.7%	4.9%
847	Sprains and strains of other and unspecified parts of back	4.1%	4.2%
719	Other and unspecified disorders of joint	3.5%	3.6%
726	Peripheral enthesopathies and allied syndromes	3.5%	3.2%
354	Mononeuritis of upper limb and mononeuritis multiplex	2.6%	2.2%
723	Other disorders of cervical region	1.7%	2.2%
883	Open wound of finger(s)	2.8%	2.1%
840	Sprains and strains of shoulder and upper arm	2.4%	2.0%
729	Other disorders of soft tissues	1.3%	1.9%
727	Other disorders of synovium tendon and bursa	1.9%	1.7%
717	Internal derangement of knee	1.5%	1.4%
V57.21	Encounter for occupational therapy	1.5%	1.2%
836	Dislocation of the knee	1.2%	1.1%
924	Contusion of lower limb and of other and unspecified site	1.2%	0.8%
V54.89	Other orthopedic aftercare	1.1%	0.5%
V67.59	Other follow-up examination	1.5%	0.4%
V58.89	Unspecified aftercare	1.1%	0.2%
	<b>Subtotal</b>	<b>56.9%</b>	<b>54.2%</b>
	<b>All Others</b>	<b>43.1%</b>	<b>45.8%</b>
	<b>Total Codes</b>	<b>100%</b>	<b>100%</b>

\*Sorted by percent of codes billed in 2012. Shaded indicates an increase from 2007 to 2012.

#### 4.5 Discussion

As discussed in Chapter 3, the number of injured workers decreased between 2007 and 2012, resulting in fewer medical bills submitted. In addition, the number of providers submitting bills also decreased. At the same time, the number of services billed and the number of drug prescriptions increased. A very small portion of services (4.4 percent of bills in 2012) were provided on an inpatient basis, but these services accounted for a large proportion of medical payments (33 percent). It is possible that improved coding during the time period contributed to the increase in services billed, particularly for items such as required workers' compensation reports (CPT 99081-reimbursable PR-2 chart notes). Reasons for improved coding are difficult to identify but in general, providers have focused more

attention on coding accuracy and compliance over the past five to ten years as both public and private payers, especially the Medicare program, have increased efforts to reduce fraud and abuse. However, dramatic increases in the number of lab tests, particularly drug screens, may reflect potential concerns among employers and providers about drug dependencies, particularly narcotic dependencies among injured workers.

The increase in the number of drugs billed, particularly narcotic pain medications, suggests a trend toward increased medication therapy to treat injuries. As shown in Chapter 3, the number of medical bills submitted by pain medicine physicians increased during the study period. At the same time that the number of narcotic and/or opiate prescriptions increased, however, the number of lab procedures to test for these drugs also increased. It is difficult to determine whether the two patterns of increase are linked, but evidence suggesting increased medication therapy is bolstered by data from the 2013 update of the Workers' Compensation Prescription Drug Study published by the National Council on Compensation Insurance (NCCI), which shows an increase in the prescription drug cost portion of workers' compensation claims across the U.S. from 2007 to 2012. Study authors attribute the increase to increased utilization rather than higher drug prices. In addition, narcotics utilization among workers' compensation populations nationwide increased over this time period. The NCCI study shows that California's total prescription drug cost per claim is high relative to other states. However, despite the increase in narcotics prescriptions identified in the WCS data, the NCCI study also shows that California's narcotics costs are less than 23 percent of total prescription costs per workers' compensation claim.<sup>17</sup>

Other services that increased dramatically in volume during the study period include two physical therapy codes, 97026 (infrared therapy) and 97250 (myofascial release). Although myofascial release is thought to have originated in the 1980's, some recent studies demonstrating effectiveness for the treatment of pain have resulted in increased use of these techniques (including foam rolling, trigger point therapy and Rolfing) in the past five to ten years.<sup>18</sup> Infrared therapy is one of several heat modalities used in physical therapy and is used to treat pain. At the same time that utilization of these modalities increased, chiropractic manipulation decreased during the study period and other forms of physical therapy such as electrical stimulation and therapeutic exercises showed little or no change in utilization. While it is beyond the scope of this study to assess the reasons for changes in the use of specific treatments or modalities or shifts in practice patterns, these findings suggest that such shifts may be occurring.

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<sup>17</sup>Lipton, B., Colón, D. and Robertson, J., "Workers' Compensation Prescription Drug Study: 2013 Update." National Council on Compensation Insurance. September 2013.

<sup>18</sup>Beardsley, C. "Does research support the use of foam rolling?" *Strength and Conditioning Research*. October 1, 2013.

Study findings also suggest that other shifts in the types of services, as well as increased use of medication therapy have occurred, which may or may not be the result of subtle changes in the types of injuries sustained by workers. Data from the WCIS suggest that back injuries continue to be the most common injuries suffered, and result in more inpatient admissions than other types of injuries. However, the data also show fewer disc displacement and degeneration diagnoses. At the same time, the data show increases in injuries to limbs and joints (for example, sprains and strains of shoulder, arm, wrist and hand). Although it is difficult to determine the reasons for these apparent shifts in types of injuries, it is possible that changes in types of employment could have occurred, for example fewer construction jobs and more service jobs requiring repetitive computer and/or keyboard work. The California Employment Development Department reported a 40 percent decline in construction jobs between 2007 and 2010, with very little recovery by 2012, whereas professional and business services declined only eight percent between 2007 and 2010 and had rebounded to almost pre-recession levels by 2012.<sup>19</sup>

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<sup>19</sup>Industry Employment and Labor Force. Employment Development Department. State of California.

## 5. PAYMENT ISSUES

### 5.1 Overview

Despite a 22 percent decrease in the number of medical bills between 2007 and 2012, total billed charges were virtually unchanged. Total billed charges were \$9.1 billion in 2007 and decreased only one percent to \$9.0 billion in 2012 (Table 5.1). As a result, there was a 26 percent increase in the average amount charged per medical bill from 2007 to 2012. At the same time, total payments decreased 24 percent. Between 24 and 31 percent of bills were denied or had zero paid for each year during the period 2007 to 2012. Among paid bills, average payment per bill increased five percent, although there was some variation from year to year. In a similar way, the average medical payment per injured worker also increased 5.7 percent between 2007 and 2012. Because billed charges increased at a faster rate than payments, the proportion of charges paid on average declined substantially from nearly 41 percent in 2007 to 34 percent in 2012.

**Table 5.1**  
**Total and Average Charges and Payments**  
**2007 – 2012**

	2007	2008	2009	2010	2011	2012
<b>Total Charges</b>	\$9,105,227,716	\$8,461,174,347	\$9,059,993,854	\$9,751,828,582	\$8,876,549,402	\$9,010,175,710
<b>Average Charge Per Bill</b>	\$852.56	\$823.93	\$870.12	\$902.19	\$927.77	\$1,077.72
<b>Total Paid</b>	\$2,752,961,880	\$2,992,833,642	\$2,448,560,392	\$2,471,429,535	\$2,233,510,222	\$2,087,625,712
<b>Average Paid Per Bill*</b>	\$346.76	\$379.58	\$312.15	\$317.78	\$329.63	\$364.09
<b>Payment to Charge Ratio</b>	40.7%	46.1%	35.9%	35.2%	35.5%	33.8%
<b>Average Paid Per Worker</b>	\$3,951.43	\$4,397.97	\$3,928.35	\$4,511.14	\$4,291.75	\$4,177.87

\*Only bills with paid amounts > 0.

### 5.2 Payments by Service and Comparisons to Other Payers

The highest volume CPT codes billed by providers (which account for approximately 40 percent of all services billed) are relatively low-intensity and low cost (Table 5.2). Average payments for all of these codes are less than \$200 and some are less than \$50. The fee schedule for physician services that was applicable during the study period was last updated in 2007.

**Table 5.2\***  
**Average Payments for 25 Highest Volume CPT Codes**

HCPCS Code	Description	2007	2008	2009	2010	2011	2012
99199	Special service/proc/report	\$391.46	\$256.00	\$267.05	\$360.60	\$404.86	\$222.46
99245	Office consultation Level 5, 60 minutes	\$214.97	\$215.58	\$214.14	\$211.97	\$204.54	\$196.18
G0431	Drug screen multiple class	N/A	\$187.03	\$643.50	\$138.14	\$191.00	\$167.86
99244	Office consultation Level 4, 60 minutes	\$166.07	\$168.44	\$169.25	\$170.92	\$168.75	\$165.68
99204	Office/outpatient visit new patient, 45 minutes	\$129.70	\$133.57	\$134.44	\$135.17	\$134.86	\$133.95
99215	Office/outpatient visit established patient, 40 minutes	\$119.11	\$119.88	\$116.28	\$114.26	\$111.01	\$109.00
99203	Office/outpatient visit new patient, 30 minutes	\$92.13	\$95.39	\$95.91	\$96.13	\$96.42	\$95.90
99214	Office/outpatient visit established patient, 25 minutes	\$83.12	\$84.68	\$83.84	\$83.32	\$83.16	\$83.11
83925	Assay of opiates	\$43.82	\$48.12	\$66.16	\$64.68	\$56.84	\$78.78
99080	Special reports or forms	\$70.95	\$78.09	\$75.42	\$73.88	\$74.28	\$76.46
99358	Prolong service w/o contact	\$73.50	\$76.64	\$75.52	\$74.06	\$70.97	\$75.19
99070	Special supplies phys/qhp	\$49.10	\$69.93	\$84.63	\$85.02	\$86.35	\$72.27
99213	Office/outpatient visit established patient, 15 minutes	\$53.75	\$54.45	\$54.15	\$54.18	\$54.30	\$54.13
95851	Range of motion measurements	\$45.54	\$44.28	\$45.17	\$44.52	\$45.68	\$44.75
A4556	Electrodes, pair	\$40.77	\$46.04	\$44.11	\$45.81	\$47.31	\$43.37
99212	Office/outpatient visit established patient, 10 minutes	\$40.33	\$40.85	\$40.68	\$40.65	\$40.60	\$40.43
97250	Myofascial release	\$37.47	\$37.16	\$37.64	\$37.77	\$37.66	\$37.39
98940	Chiropractic manipulation 1-2 regions	\$28.93	\$28.58	\$28.11	\$27.64	\$27.30	\$26.95
97110	Therapeutic exercises	\$27.18	\$26.36	\$26.13	\$25.78	\$25.82	\$25.41
85025	Complete cbc w/auto diff wbc	\$11.87	\$11.44	\$12.14	\$11.83	\$11.74	\$11.68
99081	Reimbursable PR-2 chart notes	\$11.11	\$11.03	\$11.12	\$10.98	\$11.02	\$10.89
97014	Electric stimulation therapy	\$9.14	\$8.95	\$8.87	\$8.68	\$8.64	\$8.60
82570	Assay of urine creatinine	\$8.48	\$8.49	\$8.98	\$9.24	\$8.61	\$8.50
97026	Infrared therapy	\$7.54	\$7.44	\$7.44	\$7.31	\$7.24	\$7.31
81002	Urinalysis nonauto w/o scope	\$4.15	\$4.13	\$4.33	\$4.40	\$4.39	\$4.33

\*Sorted by 2012 payment highest to lowest.

Because a detailed assessment of workers' compensation payment rates compared to other payers is currently being addressed in an independent study, only comparisons to Medicare and Medi-Cal are presented in this report. During the time period of the study, physicians and other professionals were reimbursed based on a fee schedule while lab and supplies were reimbursed at 120 percent of the Medicare fee. As shown in Table 5.3, DWC fees were 180 percent of Medi-Cal fees on average for the top 25 highest volume codes. Compared to Medicare, DWC fees were 110

percent of the average Medicare fee for the 25 highest volume codes, but there was substantial variation across individual codes.

**Table 5.3\***  
**DWC Fees Compared to Medi-Cal and Medicare**

HCPCS Code	DWC Fee	Medi-Cal	Percent of Medi-Cal	Medicare				Percent of Medicare
				San Francisco County	Other Northern CA Counties	Los Angeles County	Other Southern CA Counties	
99245	\$238.79	\$102.20	234%	---	---	---	---	---
99244	\$184.86	\$81.40	227%	---	---	---	---	---
G0431	\$123.59	\$81.86	151%	\$102.99	\$102.99	\$102.99	\$102.99	120%
99215	\$110.50	\$57.20	193%	\$165.55	\$144.84	\$150.52	\$144.84	73%
99204	\$109.65	\$68.90	159%	\$188.07	\$165.06	\$171.63	\$165.06	64%
99203	\$76.50	\$57.20	134%	\$125.10	\$108.60	\$113.23	\$108.60	67%
99214	\$72.25	\$37.50	193%	\$124.07	\$108.06	\$112.43	\$108.06	64%
99213	\$47.60	\$24.00	198%	\$84.30	\$73.15	\$76.19	\$73.15	62%
97250	\$44.28	---	---	---	---	---	---	---
99212	\$42.02	\$18.10	232%	\$52.01	\$44.43	\$46.47	\$44.43	90%
98940	\$36.22	\$16.72	217%	\$29.87	\$26.41	\$27.31	\$26.41	132%
99358	\$35.34	\$42.20	84%	---	---	---	---	---
97110	\$33.21	\$10.96	303%	\$36.96	\$32.12	\$33.37	\$32.12	99%
83925	\$33.07	\$21.51	154%	\$27.56	\$27.56	\$27.56	\$27.56	120%
95851	\$18.70	\$14.86	126%	\$22.68	\$19.06	\$20.00	\$19.06	93%
97014	\$18.45	\$11.14	166%	---	---	---	---	---
97026	\$18.45	\$9.84	188%	\$6.99	\$5.97	\$6.26	\$5.97	293%
A4556	\$13.31	\$8.26	161%	\$11.09	\$11.09	\$11.09	\$11.09	120%
85025	\$13.22	\$8.59	154%	\$11.02	\$11.02	\$11.02	\$11.02	120%
99081	\$11.69	---	---	---	---	---	---	---
82570	\$8.80	\$5.32	165%	\$7.33	\$7.33	\$7.33	\$7.33	120%
81002	\$4.34	\$2.83	153%	\$3.62	\$3.62	\$3.62	\$3.62	120%
99080	BR*	---	---	---	---	---	---	---
99070	BR	\$0.00	---	---	---	---	---	---
99199	BR	---	---	---	---	---	---	---
<b>Average</b>			<b>180%</b>					<b>110%</b>

\*2013 Medi-Cal Fees and 2012 Medicare Fees. Medi-Cal fees have been virtually unchanged since 2001.

\*BR = By Report.

\*Sorted by DWC fee highest to lowest.

### 5.3 Discussion

Although the number of injured workers and the number of medical bills declined during the study period, total billed charges were virtually unchanged, resulting in a substantial increase in the average charges per bill and per worker. In addition, based on the increase in the number of services shown in Chapter 4, it appears that there was also an increase in the number of services billed during the time

period, which may have contributed to the increase in the average charges per bill. At the same time, payments increased at a much lower rate.

In terms of fee levels, it should be understood that all references and comparisons to DWC fees apply to the fee schedule that was in place from 2007 to 2012. The DWC fee schedule has since been updated and is now based on the Resource Based Relative Value Scale (RBRVS) published by the Center for Medicare and Medicaid Services (CMS). In addition, DWC has now adopted many Medicare payment policies and bundling rules. At the time of the study, DWC fees compared favorably to Medi-Cal fees. For the 25 highest volume codes, DWC fees were 180 percent of Medi-Cal fees on average. However, according to the California Health Care Foundation (CHCF), Medi-Cal fees for physician services rank near the bottom among state Medicaid programs. The CHCF sponsored a study conducted by the Urban Institute which found that Medi-Cal fees were 83 percent of the Medicaid national average in 2008 and ranked 47th overall among states when adjusted for geographic differences in the cost of providing medical care.<sup>20</sup> The code for “prolonged service without direct face-to-face contact,” CPT 99358, is the only code for which the Medi-Cal fee was lower than the DWC fee during the time period of the study. Medicare does not reimburse separately for this code and instead considers this service to be bundled with other Evaluation and Management (E&M) codes. In addition, most commercial payers do not reimburse providers separately for this code.

DWC fees were 110 percent of the average Medicare fee for the 25 highest volume codes during the study period, but it is difficult to compare Medicare and DWC payment for specific codes because they were based on different payment methodologies at the time. Although it appears that several services were reimbursed by DWC at rates at or below Medicare, different payment approaches used at the time are primarily responsible for these differences. Medicare bundles a number of services into Evaluation and Management (E&M) code reimbursement, as do many commercial payers, resulting in higher payments for some E&M codes (such as office visits) and no payment for others. All but two of the codes for which DWC paid less than were E&M codes (99214, 99213, 99204, 99215, 99203 and 99212 are E&M codes). Because Medicare changed its reimbursement of Evaluation and Management (E&M) codes policy, it did not reimburse for the same office and consultation codes used by DWC during the study period. As discussed, DWC has since revised its payment policies to align with many of Medicare’s bundling requirements regarding E& M codes

The decline in the number of providers participating in the workers’ compensation program, as well as the decline in the number of medical bills submitted appears to be primarily caused by the decrease in the number of injured workers. For this reason, access to care as measured by provider participation, is

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<sup>20</sup>Zuckerman, S, Williams, A. and Stockley, K., “Medi-Cal Physician and Dentist Fees: A Comparison to Other Medicaid Programs and Medicare.” Urban Institute, 2008.

relatively unchanged. However, it is possible that lower workers compensation payment rates during the study period relative to other payers may have discouraged some provider participation if other providers increased their rates while DWC did not. This may affect access to care over the long term, especially if the number of injured workers increases. Additional comparisons to commercial payer fees will help to better determine whether reimbursement may potentially have an impact on long term provider availability in the workers' compensation program.

## 6. SUMMARY OF FINDINGS AND RECOMMENDATIONS FOR FUTURE STUDIES

### 6.1 Summary of Findings

Studies of injured workers' access to medical care in California were conducted in 2006, 2008, 2012 and 2013. The first three studies included a survey of injured workers that investigated their satisfaction with the care they received. Although there are some differences in the survey methods in each study, all concluded that a substantial majority of injured workers (approximately 85 percent) were satisfied or very satisfied with their care.

The 2013 study focused exclusively on analyses of WCIS data from 2007 to 2012. These analyses revealed that both the number of injured workers and the number of providers caring for injured workers declined steadily during the study period. As a result, the number of medical bills submitted also decreased; the decreases were especially dramatic between 2010 and 2011 and 2011 and 2012. Although the number of providers treating injured workers decreased, access to medical care appears to remain relatively unchanged, as measured by the ratio of workers to providers. It is difficult to determine whether this level of access is adequate due to a lack of standard ratios for workers compensation programs. Medicare and most state Medicaid programs have minimum requirements for provider networks (i.e., number of primary care physicians per enrollee).

Although providers submitted fewer medical bills, they billed for more services, particularly lab tests and drugs. The nature of worker injuries also shifted somewhat. Although back injury diagnoses were consistently the most common, certain types of back injury diagnoses declined and diagnoses relating to injuries to other parts of the body increased.

### 6.2 Recommendations for Future Studies

An additional study of access to medical care by injured workers in California will be completed in 2014. This study will continue to address the issues addressed in the 2012 and 2013 studies. In addition, there are additional issues that can be addressed. These issues, which arose during the course of the 2012 and 2013 studies, are listed below.

**Changes in the types of providers treating injured workers.** This study found that the total aggregate number of providers caring for injured workers consistently declined across the State of California from 2007 to 2012. Although patterns in the number of bills submitted by specific provider types and specialties revealed potential shifts in the types of providers and specialists caring for injured workers, additional analysis of changes in the number of providers of each type and specialty (to supplement the analysis of the number of bills by provider type and specialty) would also be useful in determining

whether there may be deficiencies in access to certain types of providers and/or certain types of specialists.

**Additional investigation regarding inpatient services and costs.** Although injuries and services associated with inpatient hospital stays were identified, additional analysis is recommended to ensure accuracy and to better understand the reasons for relatively long lengths of stay compared to other populations. In addition, inpatient hospital bills appear to account for large portion of payments but it is not clear what types of services are driving these high payments.

**Investigate the specific services being billed by certain provider types and specialists.** This study showed a marked increase in the number of lab tests, drugs and certain other procedures while there were decreases in other services such as chiropractic care. Office visits and certain physical therapy procedures were relatively unchanged. At the same time, the number of medical bills submitted by certain provider types such as pain medicine physicians, out of state labs and pharmacists increased. It would be useful to understand more about the exact services for which specific specialists are billing.

**APPENDIX A  
DETAILED DATA TABLES**

**Table A.1a**  
**Number of Bills Submitted by Provider Type and Change from 2007 to 2012**  
**In-State and Out-of-State**

Provider Type	2007	2008		2009		2010		2011		2012		2007-2012
	Frequency	Frequency	% Change	Frequency	% Change	Frequency	% Change	Frequency	% Change	Frequency	% Change	% Change
Lab	22,082	24,947	13.0%	31,704	27.1%	46,822	47.7%	80,004	70.9%	136,363	70.4%	517.5%
Agencies	7,033	9,162	30.3%	10,151	10.8%	14,619	44.0%	28,425	94.4%	29,992	5.5%	326.4%
Nursing and Custodial Care Facilities	753	1,291	71.4%	1,495	15.8%	1,816	21.5%	2,198	21.0%	2,171	-1.2%	188.3%
Specialist - Other Non-Hospital Based Physician	80,544	109,619	36.1%	126,582	15.5%	156,142	23.4%	145,362	-6.9%	130,128	-10.5%	61.6%
Non-Physician or Midlevel Practitioner	855,971	1,210,217	41.4%	1,243,708	2.8%	1,495,658	20.3%	1,546,741	3.4%	1,328,036	-14.1%	55.1%
Managed Care Organization	1,628	3,085	89.5%	942	-69.5%	706	-25.1%	775	9.8%	2,407	210.6%	47.9%
Specialist - Anesthesiology and Pain Management	98,954	103,574	4.7%	112,502	8.6%	133,954	19.1%	121,825	-9.1%	124,641	2.3%	26.0%
Dentistry	7,167	8,177	14.1%	9,091	11.2%	10,109	11.2%	9,268	-8.3%	8,906	-3.9%	24.3%
Ambulatory Surgical Center	47,937	52,750	10.0%	57,173	8.4%	61,900	8.3%	59,142	-4.5%	54,994	-7.0%	14.7%
Specialist - Podiatrist	34,349	37,058	7.9%	38,398	3.6%	44,589	16.1%	42,548	-4.6%	37,458	-12.0%	9.1%
Specialist - Mental Health	202,178	232,838	15.2%	252,117	8.3%	269,619	6.9%	224,302	-16.8%	217,456	-3.1%	7.6%
Specialist - Surgery	70,357	70,762	0.6%	73,127	3.3%	83,213	13.8%	72,702	-12.6%	69,453	-4.5%	-1.3%
Chiropractic	516,689	517,899	0.2%	541,448	4.5%	647,146	19.5%	576,424	-10.9%	490,457	-14.9%	-5.1%
Pharmacy	271,368	307,791	13.4%	333,258	8.3%	325,701	-2.3%	291,756	-10.4%	236,869	-18.8%	-12.7%
Specialist - Other Hospital-Based Physician	223,002	159,382	-28.5%	143,869	-9.7%	182,033	26.5%	189,326	4.0%	194,186	2.6%	-12.9%
Group Practice	315,618	387,993	22.9%	433,497	11.7%	383,906	-11.4%	333,122	-13.2%	270,831	-18.7%	-14.2%
Physical Therapy/Occupational Therapy	1,041,509	941,777	-9.6%	958,198	1.7%	955,081	-0.3%	925,610	-3.1%	866,434	-6.4%	-16.8%
Specialist - Radiology	219,863	227,746	3.6%	227,931	0.1%	230,937	1.3%	200,058	-13.4%	181,196	-9.4%	-17.6%
Medical Supplies	377,498	356,186	-5.6%	376,515	5.7%	438,153	16.4%	398,885	-9.0%	303,833	-23.8%	-19.5%
Transportation	37,856	41,061	8.5%	34,621	-15.7%	28,112	-18.8%	30,344	7.9%	28,756	-5.2%	-24.0%
Specialist - Orthopedics, Physical Medicine and Rehabilitation and Occupational Medicine	1,368,171	1,305,618	-4.6%	1,300,976	-0.4%	1,477,727	13.6%	1,253,900	-15.1%	1,013,603	-19.2%	-25.9%
Hospital	260,749	234,751	-10.0%	222,490	-5.2%	213,558	-4.0%	188,611	-11.7%	180,296	-4.4%	-30.9%
General/Internal/Family/Pediatric Medicine	4,303,597	3,625,465	-15.8%	3,655,573	0.8%	3,446,402	-5.7%	2,725,508	-20.9%	2,367,661	-13.1%	-45.0%
Ambulatory Health Care Facilities	248,628	234,183	-5.8%	190,782	-18.5%	145,569	-23.7%	115,260	-20.8%	69,478	-39.7%	-72.1%
<i>Provider Type Missing</i>	66,298	65,989	-0.5%	36,224	-45.1%	15,575	-57.0%	5,556	-64.3%	14,837	167.0%	-77.6%
<b>Totals</b>	<b>10,679,799</b>	<b>10,269,321</b>	<b>-3.8%</b>	<b>10,412,372</b>	<b>1.4%</b>	<b>10,809,047</b>	<b>3.8%</b>	<b>9,567,652</b>	<b>-11.5%</b>	<b>8,360,442</b>	<b>-12.6%</b>	<b>-21.7%</b>

**Table A.1b**  
**Number of Bills Submitted by Provider Type and Change from 2007 to 2012**  
**In-State Providers Only**

Provider Type	2007	2008		2009		2010		2011		2012		2007-2012
	Frequency	Frequency	% Change	Frequency	% Change	Frequency	% Change	Frequency	% Change	Frequency	% Change	% Change
Lab	18,860	20,382	8.1%	23,499	15.3%	36,885	57.0%	63,750	72.8%	113,961	78.8%	504.2%
Agencies	4,159	5,723	37.6%	6,073	6.1%	9,229	52.0%	18,537	100.9%	19,578	5.6%	370.7%
Nursing and Custodial Care Facilities	683	1,200	75.7%	1,385	15.4%	1,704	23.0%	2,031	19.2%	2,028	-0.1%	196.9%
Managed Care Organization	1,313	879	-33.1%	867	-1.4%	634	-26.9%	696	9.8%	2,335	235.5%	77.8%
Specialist - Other Non-Hospital Based Physician	76,120	106,143	39.4%	122,049	15.0%	151,619	24.2%	139,079	-8.3%	126,261	-9.2%	65.9%
Non-Physician or Midlevel Practitioner	790,176	1,115,368	41.2%	1,091,837	-2.1%	1,246,491	14.2%	1,232,730	-1.1%	1,075,854	-12.7%	36.2%
Specialist - Anesthesiology and Pain Management	95,195	100,062	5.1%	108,838	8.8%	129,231	18.7%	116,782	-9.6%	121,490	4.0%	27.6%
Ambulatory Surgical Center	46,474	51,840	11.5%	56,285	8.6%	60,523	7.5%	57,750	-4.6%	54,092	-6.3%	16.4%
Dentistry	6,708	7,457	11.2%	7,937	6.4%	8,607	8.4%	7,531	-12.5%	7,586	0.7%	13.1%
Specialist - Podiatrist	33,712	36,548	8.4%	37,766	3.3%	43,815	16.0%	41,350	-5.6%	36,877	-10.8%	9.4%
Specialist - Mental Health	196,969	226,897	15.2%	245,656	8.3%	262,917	7.0%	217,919	-17.1%	212,271	-2.6%	7.8%
Pharmacy	195,310	216,699	11.0%	250,313	15.5%	270,738	8.2%	258,125	-4.7%	208,132	-19.4%	6.6%
Specialist - Surgery	68,980	69,492	0.7%	71,688	3.2%	81,564	13.8%	71,122	-12.8%	67,900	-4.5%	-1.6%
Chiropractic	506,734	507,622	0.2%	529,400	4.3%	632,044	19.4%	552,663	-12.6%	471,388	-14.7%	-7.0%
Specialist - Radiology	207,988	214,816	3.3%	213,848	-0.5%	216,753	1.4%	184,407	-14.9%	166,836	-9.5%	-19.8%
Medical Supplies	292,394	285,098	-2.5%	304,002	6.6%	352,320	15.9%	308,924	-12.3%	233,101	-24.5%	-20.3%
Specialist - Other Hospital-Based Physician	204,905	137,769	-32.8%	118,565	-13.9%	147,795	24.7%	153,080	3.6%	162,670	6.3%	-20.6%
Group Practice	311,466	382,652	22.9%	424,221	10.9%	371,256	-12.5%	311,489	-16.1%	247,053	-20.7%	-20.7%
Specialist - Orthopedics, Physical Medicine and Rehabilitation and Occupational Medicine	1,335,966	1,272,370	-4.8%	1,255,132	-1.4%	1,408,406	12.2%	1,191,944	-15.4%	977,011	-18.0%	-26.9%
Physical Therapy/Occupational Therapy	1,020,243	922,496	-9.6%	920,657	-0.2%	900,906	-2.1%	809,063	-10.2%	741,932	-8.3%	-27.3%
Hospital	254,438	228,707	-10.1%	216,392	-5.4%	206,938	-4.4%	179,703	-13.2%	171,467	-4.6%	-32.6%
General/Internal/Family/Pediatric Medicine	4,173,158	3,521,163	-15.6%	3,542,295	0.6%	3,345,260	-5.6%	2,625,759	-21.5%	2,308,560	-12.1%	-44.7%
Transportation	29,747	32,577	9.5%	28,538	-12.4%	18,703	-34.5%	14,436	-22.8%	15,053	4.3%	-49.4%
Ambulatory Health Care Facilities	243,646	229,417	-5.8%	186,546	-18.7%	141,692	-24.0%	111,861	-21.1%	66,270	-40.8%	-72.8%
<i>Provider Type Missing</i>	61,262	58,785	-4.0%	32,043	-45.5%	14,472	-54.8%	2,673	-81.5%	14,633	447.4%	-76.1%
<b>Totals</b>	<b>10,176,606</b>	<b>9,752,162</b>	<b>-4.2%</b>	<b>9,795,832</b>	<b>0.4%</b>	<b>10,060,502</b>	<b>2.7%</b>	<b>8,673,404</b>	<b>-13.8%</b>	<b>7,624,339</b>	<b>-12.1%</b>	<b>-25.1%</b>

**Table A.1c  
Number of Bills Submitted by Provider Type and Change from 2007 to 2012  
Out-of-State Providers Only**

Provider Type	2007	2008		2009		2010		2011		2012		2007-2012
	Frequency	Frequency	% Change	Frequency	% Change	Frequency	% Change	Frequency	% Change	Frequency	% Change	% Change
Lab	3,222	4,565	41.7%	8,205	79.7%	9,937	21.1%	16,254	63.6%	22,402	37.8%	595.3%
Physical Therapy/Occupational Therapy	21,266	19,281	-9.3%	37,541	94.7%	54,175	44.3%	116,547	115.1%	124,502	6.8%	485.5%
Group Practice	4,152	5,341	28.6%	9,276	73.7%	12,650	36.4%	21,633	71.0%	23,778	9.9%	472.7%
Non-Physician or Midlevel Practitioner	65,795	94,849	44.2%	151,871	60.1%	249,167	64.1%	314,011	26.0%	252,182	-19.7%	283.3%
Agencies	2,874	3,439	19.7%	4,078	18.6%	5,390	32.2%	9,888	83.5%	10,414	5.3%	262.4%
Dentistry	459	720	56.9%	1,154	60.3%	1,502	30.2%	1,737	15.6%	1,320	-24.0%	187.6%
Nursing and Custodial Care Facilities	70	91	30.0%	110	20.9%	112	1.8%	167	49.1%	143	-14.4%	104.3%
Chiropractic	9,955	10,277	3.2%	12,048	17.2%	15,102	25.3%	23,761	57.3%	19,069	-19.7%	91.6%
Specialist - Other Hospital-Based Physician	18,097	21,613	19.4%	25,304	17.1%	34,238	35.3%	36,246	5.9%	31,516	-13.0%	74.2%
Transportation	8,109	8,484	4.6%	6,083	-28.3%	9,409	54.7%	15,908	69.1%	13,703	-13.9%	69.0%
Hospital	6,311	6,044	-4.2%	6,098	0.9%	6,620	8.6%	8,908	34.6%	8,829	-0.9%	39.9%
Specialist - Radiology	11,875	12,930	8.9%	14,083	8.9%	14,184	0.7%	15,651	10.3%	14,360	-8.2%	20.9%
Specialist - Orthopedics, Physical and Occupational Medicine	32,205	33,248	3.2%	45,844	37.9%	69,321	51.2%	61,956	-10.6%	36,592	-40.9%	13.6%
Specialist - Surgery	1,377	1,270	-7.8%	1,439	13.3%	1,649	14.6%	1,580	-4.2%	1,553	-1.7%	12.8%
Specialist - Mental Health	5,209	5,941	14.1%	6,461	8.8%	6,702	3.7%	6,383	-4.8%	5,185	-18.8%	-0.5%
Specialist - Podiatrist	637	510	-19.9%	632	23.9%	774	22.5%	1,198	54.8%	581	-51.5%	-8.8%
Specialist - Other Non-Hospital Based Physician	4,424	3,476	-21.4%	4,533	30.4%	4,523	-0.2%	6,283	38.9%	3,867	-38.5%	-12.6%
Specialist - Anesthesiology and Pain Management	3,759	3,512	-6.6%	3,664	4.3%	4,723	28.9%	5,043	6.8%	3,151	-37.5%	-16.2%
Medical Supplies	85,104	71,088	-16.5%	72,513	2.0%	85,833	18.4%	89,961	4.8%	70,732	-21.4%	-16.9%
Ambulatory Health Care Facilities	4,982	4,766	-4.3%	4,236	-11.1%	3,877	-8.5%	3,399	-12.3%	3,208	-5.6%	-35.6%
Ambulatory Surgical Center	1,463	910	-37.8%	888	-2.4%	1,377	55.1%	1,392	1.1%	902	-35.2%	-38.3%
General/Internal/Family/Pediatric Medicine	130,439	104,302	-20.0%	113,278	8.6%	101,142	-10.7%	99,749	-1.4%	59,101	-40.8%	-54.7%
Pharmacy	76,058	91,092	19.8%	82,945	-8.9%	54,963	-33.7%	33,631	-38.8%	28,737	-14.6%	-62.2%
Managed Care Organization	315	2,206	600.3%	75	-96.6%	72	-4.0%	79	9.7%	72	-8.9%	-77.1%
<i>Provider Type Missing</i>	5,036	7,204	43.1%	4,181	-42.0%	1,103	-73.6%	2,883	161.4%	204	-92.9%	-95.9%
<b>Totals</b>	<b>503,193</b>	<b>517,159</b>	<b>2.8%</b>	<b>616,540</b>	<b>19.2%</b>	<b>748,545</b>	<b>21.4%</b>	<b>894,248</b>	<b>19.5%</b>	<b>736,103</b>	<b>-17.7%</b>	<b>46.3%</b>

**Table A.2a**  
**Number of Bills Submitted by Specialty Type and Change from 2007 to 2012**  
**In-State and Out-of-State**

Specialty	2007	2008		2009		2010		2011		2012		2007-2012
	Frequency	Frequency	% Change	% Change								
Suppliers : Pharmacy : Community/Retail Pharmacy	89	375	321.3%	491	30.9%	1,704	247.0%	2,817	65.3%	4,120	46.3%	4529.2%
Lab: Other	10	26	160.0%	62	138.5%	165	166.1%	160	-3.0%	156	-2.5%	1460.0%
Physician: Interventional and Therapeutic Radiology	196	385	96.4%	411	6.8%	511	24.3%	725	41.9%	1,936	167.0%	887.8%
Suppliers : Pharmacy : Compounding Pharmacy	105	360	242.9%	310	-13.9%	898	189.7%	1,346	49.9%	901	-33.1%	758.1%
Lab: Clinical Lab	22,072	24,921	12.9%	31,642	27.0%	46,657	47.5%	79,844	71.1%	136,207	70.6%	517.1%
Clinical Nurse Specialist	5,295	15,108	185.3%	14,689	-2.8%	19,505	32.8%	25,014	28.2%	23,008	-8.0%	334.5%
Agencies	7,033	9,162	30.3%	10,151	10.8%	14,619	44.0%	28,425	94.4%	29,992	5.5%	326.4%
Suppliers: Prosthetic/Orthotic Supplier	264	336	27.3%	1,033	207.4%	2,123	105.5%	2,369	11.6%	1,065	-55.0%	303.4%
Ambulatory Health Facilities: Clinic Imaging	4,550	6,470	42.2%	6,769	4.6%	5,269	-22.2%	11,608	120.3%	16,428	41.5%	261.1%
Skilling Nursing Facility	546	914	67.4%	1,178	28.9%	1,463	24.2%	1,972	34.8%	1,915	-2.9%	250.7%
Suppliers : Pharmacy : Managed Care Organization Pharmacy	2	8	300.0%	10	25.0%	3	-70.0%	1	-66.7%	7	600.0%	250.0%
Physician: Pain Medicine	23,825	31,858	33.7%	44,675	40.2%	63,001	41.0%	66,980	6.3%	69,609	3.9%	192.2%
Residential Treatment Facilities	15	8	-46.7%	29	262.5%	79	172.4%	45	-43.0%	35	-22.2%	133.3%
Physician: Pathology	55,026	54,131	-1.6%	59,269	9.5%	87,051	46.9%	105,629	21.3%	119,895	13.5%	117.9%
Provider: Other	331,370	644,481	94.5%	662,754	2.8%	832,061	25.5%	849,164	2.1%	709,801	-16.4%	114.2%
Physician: Nuclear Medicine	3,465	5,610	61.9%	4,698	-16.3%	3,998	-14.9%	3,594	-10.1%	7,180	99.8%	107.2%
Certified Registered Nurse Anesthetist	2,528	2,516	-0.5%	2,292	-8.9%	3,755	63.8%	4,225	12.5%	4,928	16.6%	94.9%
Ambulatory Health Facilities: Physical Therapy Clinic	10,517	21,379	103.3%	27,998	31.0%	27,685	-1.1%	25,500	-7.9%	20,362	-20.1%	93.6%
Transportation: Other	8,337	6,769	-18.8%	6,038	-10.8%	10,949	81.3%	15,796	44.3%	15,213	-3.7%	82.5%
Physician: Plastic Surgery	6,541	6,796	3.9%	8,264	21.6%	12,092	46.3%	12,513	3.5%	11,479	-8.3%	75.5%
Suppliers : Pharmacy : Home Infusion Therapy Pharmacy	32	30	-6.3%	11	-63.3%	35	218.2%	15	-57.1%	52	246.7%	62.5%
Pharmacist	221,510	258,139	16.5%	306,631	18.8%	349,467	14.0%	390,225	11.7%	344,687	-11.7%	55.6%
Psychologist	65,264	85,825	31.5%	105,924	23.4%	128,739	21.5%	106,856	-17.0%	98,238	-8.1%	50.5%
Suppliers : Pharmacy : Clinic Pharmacy	236	476	101.7%	680	42.9%	754	10.9%	2,116	180.6%	355	-83.2%	50.4%
Managed Care Organization	1,628	3,085	89.5%	942	-69.5%	706	-25.1%	775	9.8%	2,407	210.6%	47.9%
Social Worker	1,121	1,459	30.2%	1,786	22.4%	1,708	-4.4%	1,700	-0.5%	1,649	-3.0%	47.1%

Specialty	2007	2008		2009		2010		2011		2012		2007-2012
	Frequency	Frequency	% Change	% Change								
Dentist - Other	212	228	7.5%	293	28.5%	241	-17.7%	203	-15.8%	298	46.8%	40.6%
Dentist - General	6,516	7,564	16.1%	8,508	12.5%	9,498	11.6%	8,635	-9.1%	8,433	-2.3%	29.4%
Physician: Anesthesiology	98,954	103,574	4.7%	112,502	8.6%	133,954	19.1%	121,825	-9.1%	124,641	2.3%	26.0%
Physician: Internal Medicine	126,322	155,339	23.0%	135,259	-12.9%	163,920	21.2%	156,773	-4.4%	157,358	0.4%	24.6%
Group Practice: Single Specialty	45,576	59,355	30.2%	57,750	-2.7%	60,192	4.2%	40,777	-32.3%	53,310	30.7%	17.0%
Physician: Family Medicine	126,707	132,710	4.7%	133,728	0.8%	167,583	25.3%	158,512	-5.4%	147,428	-7.0%	16.4%
Nursing and Custodial Care Facilities: Other	192	369	92.2%	288	-22.0%	274	-4.9%	181	-33.9%	221	22.1%	15.1%
Ambulatory Surgical Center	47,937	52,750	10.0%	57,173	8.4%	61,900	8.3%	59,142	-4.5%	54,994	-7.0%	14.7%
Nurse Practitioner	16,161	15,388	-4.8%	13,052	-15.2%	16,329	25.1%	16,267	-0.4%	18,442	13.4%	14.1%
Physician: Surgery Other	16,473	16,091	-2.3%	17,269	7.3%	18,936	9.7%	17,457	-7.8%	18,063	3.5%	9.7%
Podiatrist	34,349	37,058	7.9%	38,398	3.6%	44,589	16.1%	42,548	-4.6%	37,458	-12.0%	9.1%
Nurse	29,295	29,003	-1.0%	26,756	-7.7%	34,387	28.5%	32,713	-4.9%	31,788	-2.8%	8.5%
Physician: Psychiatry and Neurology	96,954	107,165	10.5%	111,283	3.8%	115,446	3.7%	99,770	-13.6%	96,614	-3.2%	-0.4%
Physician: Orthopedics	687,313	667,607	-2.9%	713,680	6.9%	812,543	13.9%	752,088	-7.4%	674,579	-10.3%	-1.9%
Physician: Neurosurgery	17,295	16,165	-6.5%	16,994	5.1%	20,116	18.4%	19,252	-4.3%	16,431	-14.7%	-5.0%
Chiropractor	516,689	517,899	0.2%	541,448	4.5%	647,146	19.5%	576,424	-10.9%	490,457	-14.9%	-5.1%
Physician: Allergy & Immunology	3,777	5,455	44.4%	3,901	-28.5%	3,552	-8.9%	3,163	-11.0%	3,559	12.5%	-5.8%
Respiratory, Developmental, Rehabilitative and Restorative Service Providers: Physical Therapist	811,371	780,143	-3.8%	820,874	5.2%	801,212	-2.4%	793,655	-0.9%	740,392	-6.7%	-8.7%
Physician: Preventive Medicine	453,175	436,214	-3.7%	491,594	12.7%	529,016	7.6%	394,162	-25.5%	408,085	3.5%	-9.9%
Respiratory, Developmental, Rehabilitative and Restorative Service Providers: Occupational Therapist	105,773	99,661	-5.8%	96,802	-2.9%	114,740	18.5%	93,164	-18.8%	95,165	2.1%	-10.0%
Behavioral Health: Other	2,843	2,825	-0.6%	2,598	-8.0%	2,274	-12.5%	2,513	10.5%	2,516	0.1%	-11.5%
Physician: Dermatology	6,076	5,694	-6.3%	5,584	-1.9%	5,111	-8.5%	4,711	-7.8%	5,359	13.8%	-11.8%
Hospital: General Acute Care	166,196	173,106	4.2%	168,974	-2.4%	160,535	-5.0%	147,150	-8.3%	144,740	-1.6%	-12.9%
Suppliers: DME	341,342	318,826	-6.6%	344,860	8.2%	406,001	17.7%	374,067	-7.9%	297,269	-20.5%	-12.9%
Suppliers : Pharmacy	266,908	304,254	14.0%	330,600	8.7%	320,661	-3.0%	283,914	-11.5%	230,644	-18.8%	-13.6%
Physician Assistant	166,921	153,042	-8.3%	140,240	-8.4%	164,193	17.1%	159,368	-2.9%	143,593	-9.9%	-14.0%
Respiratory, Developmental, Rehabilitative and Restorative Service Providers: Other	9,328	15,834	69.7%	15,317	-3.3%	12,558	-18.0%	10,217	-18.6%	7,684	-24.8%	-17.6%
Physician: Diagnostic Radiology	219,218	227,048	3.6%	227,192	0.1%	229,915	1.2%	198,982	-13.5%	178,954	-10.1%	-18.4%
Physician: Ophthalmology	7,311	8,032	9.9%	7,574	-5.7%	7,640	0.9%	7,017	-8.2%	5,926	-15.5%	-18.9%

Specialty	2007	2008		2009		2010		2011		2012		2007-2012
	Frequency	Frequency	% Change	Frequency	% Change	Frequency	% Change	Frequency	% Change	Frequency	% Change	% Change
Group Practice or Clinic: Multispecialty	270,042	328,638	21.7%	375,747	14.3%	323,714	-13.8%	292,345	-9.7%	217,521	-25.6%	-19.4%
Physician: General Surgery	30,048	31,710	5.5%	30,600	-3.5%	32,069	4.8%	23,480	-26.8%	23,480	0.0%	-21.9%
Speech, Language and Hearing Service Provider	4,333	4,343	0.2%	4,189	-3.5%	4,391	4.8%	4,026	-8.3%	3,316	-17.6%	-23.5%
Physician: Urology	4,505	5,060	12.3%	4,336	-14.3%	4,324	-0.3%	3,496	-19.1%	3,345	-4.3%	-25.7%
Physician: Obstetrics and Gynecology	761	620	-18.5%	374	-39.7%	1,000	167.4%	859	-14.1%	556	-35.3%	-26.9%
Physician: Otolaryngology	3,273	3,024	-7.6%	3,350	10.8%	3,012	-10.1%	2,458	-18.4%	2,348	-4.5%	-28.3%
Physician: Radiation Oncology	449	313	-30.3%	328	4.8%	511	55.8%	351	-31.3%	306	-12.8%	-31.8%
Technologists, Technicians and Other Technical Service Providers	65,213	66,912	2.6%	51,495	-23.0%	53,408	3.7%	54,588	2.2%	39,951	-26.8%	-38.7%
Physician: Other	57,239	49,994	-12.7%	57,644	15.3%	68,739	19.2%	53,556	-22.1%	32,376	-39.5%	-43.4%
Physician: Emergency Medicine	138,288	99,523	-28.0%	79,046	-20.6%	90,747	14.8%	83,225	-8.3%	74,161	-10.9%	-46.4%
Marriage and Family Therapist	35,996	35,564	-1.2%	30,526	-14.2%	21,452	-29.7%	13,463	-37.2%	18,439	37.0%	-48.8%
Physician: Physical Medicine and Rehabilitation	680,858	638,011	-6.3%	587,296	-7.9%	665,184	13.3%	501,812	-24.6%	339,024	-32.4%	-50.2%
Physician: General Practice	3,595,655	2,900,116	-19.3%	2,894,157	-0.2%	2,584,809	-10.7%	2,015,342	-22.0%	1,654,047	-17.9%	-54.0%
Transportation: Ambulance	29,519	34,292	16.2%	28,583	-16.6%	17,163	-40.0%	14,548	-15.2%	13,543	-6.9%	-54.1%
Physician: Pediatrics	1,738	1,086	-37.5%	835	-23.1%	1,074	28.6%	719	-33.1%	743	3.3%	-57.2%
Dentist - Oral Surgery	439	385	-12.3%	290	-24.7%	370	27.6%	430	16.2%	175	-59.3%	-60.1%
Hospital: Other	94,553	61,645	-34.8%	53,516	-13.2%	53,023	-0.9%	41,461	-21.8%	35,556	-14.2%	-62.4%
Ambulatory Health Care Facilities: Occupational Medicine Clinic	124,365	61,973	-50.2%	40,522	-34.6%	39,129	-3.4%	38,791	-0.9%	30,877	-20.4%	-75.2%
Midlevel Practitioner: Other	4,017	5,451	35.7%	6,293	15.4%	5,604	-10.9%	934	-83.3%	838	-10.3%	-79.1%
Suppliers : Pharmacy : Mail Order Pharmacy	3,996	2,252	-43.6%	1,042	-53.7%	1,306	25.3%	931	-28.7%	648	-30.4%	-83.8%
Suppliers: Other	35,892	37,024	3.2%	30,622	-17.3%	30,029	-1.9%	22,449	-25.2%	5,499	-75.5%	-84.7%
Ambulatory Health Facilities: Clinic Other	233,561	206,334	-11.7%	156,015	-24.4%	112,615	-27.8%	78,152	-30.6%	32,688	-58.2%	-86.0%
Suppliers : Pharmacy : Specialty Pharmacy	0	26		111	326.9%	339	205.4%	477	40.7%	115	-75.9%	NA
Suppliers : Pharmacy : Long Term Care Pharmacy	0	10		3	-70.0%	1	-66.7%	139	13800.0%	27	-80.6%	NA
<i>Provider Specialty Missing</i>	66,298	65,989	-0.5%	36,224	-45.1%	15,575	-57.0%	5,556	-64.3%	14,837	167.0%	-77.6%
<b>Totals</b>	<b>10,679,799</b>	<b>10,269,321</b>	<b>-3.8%</b>	<b>10,412,372</b>	<b>1.4%</b>	<b>10,809,047</b>	<b>3.8%</b>	<b>9,567,652</b>	<b>-11.5%</b>	<b>8,360,442</b>	<b>-12.6%</b>	<b>-21.7%</b>

**Table A.2b**  
**Number of Bills Submitted by Specialty Type and Change from 2007 to 2012**  
**In-State Providers Only**

Specialty	2007	2008		2009		2010		2011		2012		2007-2012
	Frequency	Frequency	% Change	% Change								
Suppliers : Pharmacy : Community/Retail Pharmacy	87	363	317.2%	480	32.2%	1,688	251.7%	2,793	65.5%	4,075	45.9%	4583.9%
Lab: Other	9	24	166.7%	56	133.3%	147	162.5%	155	5.4%	151	-2.6%	1577.8%
Physician: Interventional and Therapeutic Radiology	196	385	96.4%	406	5.5%	509	25.4%	723	42.0%	1,925	166.3%	882.1%
Suppliers : Pharmacy : Compounding Pharmacy	92	340	269.6%	309	-9.1%	898	190.6%	1,346	49.9%	900	-33.1%	878.3%
Lab: Clinical Lab	18,851	20,358	8.0%	23,443	15.2%	36,738	56.7%	63,595	73.1%	113,810	79.0%	503.7%
Suppliers: Prosthetic/Orthotic Supplier	218	321	47.2%	1,007	213.7%	2,074	106.0%	2,341	12.9%	1,033	-55.9%	373.9%
Agencies	4,159	5,723	37.6%	6,073	6.1%	9,229	52.0%	18,537	100.9%	19,578	5.6%	370.7%
Clinical Nurse Specialist	5,234	14,885	184.4%	14,420	-3.1%	19,203	33.2%	24,728	28.8%	22,586	-8.7%	331.5%
Skilling Nursing Facility	481	831	72.8%	1,073	29.1%	1,360	26.7%	1,810	33.1%	1,777	-1.8%	269.4%
Ambulatory Health Facilities: Clinic Imaging	4,404	6,296	43.0%	6,572	4.4%	5,035	-23.4%	11,334	125.1%	16,088	41.9%	265.3%
Suppliers : Pharmacy : Managed Care Organization Pharmacy	2	8	300.0%	10	25.0%	3	-70.0%	0	-100.0%	7		250.0%
Physician: Pain Medicine	22,938	30,715	33.9%	43,248	40.8%	61,176	41.5%	65,198	6.6%	68,258	4.7%	197.6%
Suppliers : Pharmacy : Home Infusion Therapy Pharmacy	20	24	20.0%	6	-75.0%	26	333.3%	14	-46.2%	51	264.3%	155.0%
Residential Treatment Facilities	15	4	-73.3%	29	625.0%	79	172.4%	43	-45.6%	34	-20.9%	126.7%
Provider: Other	321,874	622,645	93.4%	636,377	2.2%	798,270	25.4%	813,994	2.0%	681,577	-16.3%	111.8%
Physician: Pathology	44,549	36,500	-18.1%	38,573	5.7%	58,262	51.0%	75,375	29.4%	91,760	21.7%	106.0%
Ambulatory Health Facilities: Physical Therapy Clinic	10,087	20,430	102.5%	26,196	28.2%	26,432	0.9%	24,737	-6.4%	19,385	-21.6%	92.2%
Certified Registered Nurse Anesthetist	2,427	2,397	-1.2%	2,158	-10.0%	3,565	65.2%	4,051	13.6%	4,626	14.2%	90.6%
Managed Care Organization	1,313	879	-33.1%	867	-1.4%	634	-26.9%	696	9.8%	2,335	235.5%	77.8%
Physician: Plastic Surgery	6,485	6,742	4.0%	8,174	21.2%	12,005	46.9%	12,431	3.5%	11,406	-8.2%	75.9%
Physician: Nuclear Medicine	3,426	5,508	60.8%	4,138	-24.9%	3,352	-19.0%	2,940	-12.3%	5,753	95.7%	67.9%
Suppliers : Pharmacy : Clinic Pharmacy	234	465	98.7%	628	35.1%	754	20.1%	2,107	179.4%	352	-83.3%	50.4%
Psychologist	64,231	84,377	31.4%	104,132	23.4%	126,651	21.6%	104,295	-17.7%	96,415	-7.6%	50.1%
Social Worker	1,042	1,362	30.7%	1,697	24.6%	1,588	-6.4%	1,532	-3.5%	1,555	1.5%	49.2%
Dentist - Other	205	222	8.3%	284	27.9%	224	-21.1%	189	-15.6%	276	46.0%	34.6%
Physician: Anesthesiology	95,195	100,062	5.1%	108,838	8.8%	129,231	18.7%	116,782	-9.6%	121,490	4.0%	27.6%

Specialty	2007	2008		2009		2010		2011		2012		2007-2012
	Frequency	Frequency	% Change	% Change								
Physician: Internal Medicine	121,409	148,317	22.2%	129,106	-13.0%	158,496	22.8%	152,397	-3.8%	153,239	0.6%	26.2%
Dentist - General	6,081	6,864	12.9%	7,379	7.5%	8,032	8.8%	6,938	-13.6%	7,154	3.1%	17.6%
Ambulatory Surgical Center	46,474	51,840	11.5%	56,285	8.6%	60,523	7.5%	57,750	-4.6%	54,092	-6.3%	16.4%
Physician: Family Medicine	124,694	130,939	5.0%	131,792	0.7%	164,564	24.9%	155,498	-5.5%	144,891	-6.8%	16.2%
Nursing and Custodial Care Facilities: Other	187	365	95.2%	283	-22.5%	265	-6.4%	178	-32.8%	217	21.9%	16.0%
Nurse Practitioner	15,891	14,936	-6.0%	12,391	-17.0%	15,261	23.2%	14,780	-3.2%	17,756	20.1%	11.7%
Nurse	28,338	27,975	-1.3%	25,831	-7.7%	33,346	29.1%	31,896	-4.3%	31,106	-2.5%	9.8%
Podiatrist	33,712	36,548	8.4%	37,766	3.3%	43,815	16.0%	41,350	-5.6%	36,877	-10.8%	9.4%
Physician: Surgery Other	16,266	15,916	-2.2%	17,074	7.3%	18,598	8.9%	17,085	-8.1%	17,655	3.3%	8.5%
Group Practice: Single Specialty	44,534	57,629	29.4%	55,674	-3.4%	57,874	4.0%	36,498	-36.9%	47,177	29.3%	5.9%
Suppliers : Pharmacy	194,193	214,794	10.6%	247,913	15.4%	265,948	7.3%	250,473	-5.8%	202,066	-19.3%	4.1%
Transportation: Other	4,141	2,872	-30.6%	3,151	9.7%	4,251	34.9%	3,347	-21.3%	4,222	26.1%	2.0%
Physician: Psychiatry and Neurology	94,897	104,952	10.6%	108,508	3.4%	112,119	3.3%	96,913	-13.6%	94,144	-2.9%	-0.8%
Physician: Orthopedics	678,131	660,026	-2.7%	704,864	6.8%	799,321	13.4%	733,284	-8.3%	665,919	-9.2%	-1.8%
Physician: Allergy & Immunology	3,607	5,164	43.2%	3,782	-26.8%	3,485	-7.9%	3,099	-11.1%	3,486	12.5%	-3.4%
Physician: Neurosurgery	16,937	15,778	-6.8%	16,522	4.7%	19,529	18.2%	18,651	-4.5%	15,980	-14.3%	-5.7%
Chiropractor	506,734	507,622	0.2%	529,400	4.3%	632,044	19.4%	552,663	-12.6%	471,388	-14.7%	-7.0%
Physician: Preventive Medicine	445,596	429,070	-3.7%	483,225	12.6%	520,880	7.8%	382,007	-26.7%	398,697	4.4%	-10.5%
Physician: Dermatology	5,942	5,533	-6.9%	5,447	-1.6%	4,961	-8.9%	4,623	-6.8%	5,258	13.7%	-11.5%
Suppliers: DME	258,230	250,152	-3.1%	275,867	10.3%	322,191	16.8%	286,850	-11.0%	227,158	-20.8%	-12.0%
Behavioral Health: Other	2,791	2,770	-0.8%	2,536	-8.4%	2,184	-13.9%	2,309	5.7%	2,434	5.4%	-12.8%
Physician Assistant	165,494	152,142	-8.1%	139,195	-8.5%	162,665	16.9%	155,074	-4.7%	142,519	-8.1%	-13.9%
Hospital: General Acute Care	162,318	168,635	3.9%	164,232	-2.6%	155,173	-5.5%	140,082	-9.7%	137,616	-1.8%	-15.2%
Physician: Ophthalmology	7,084	7,811	10.3%	7,361	-5.8%	7,449	1.2%	6,782	-9.0%	5,788	-14.7%	-18.3%
Respiratory, Developmental, Rehabilitative and Restorative Service Providers: Other	7,567	11,012	45.5%	10,658	-3.2%	9,543	-10.5%	8,032	-15.8%	6,135	-23.6%	-18.9%
Respiratory, Developmental, Rehabilitative and Restorative Service Providers: Physical Therapist	793,109	763,973	-3.7%	786,530	3.0%	753,657	-4.2%	689,407	-8.5%	637,775	-7.5%	-19.6%
Physician: Diagnostic Radiology	207,349	214,127	3.3%	213,120	-0.5%	215,746	1.2%	183,338	-15.0%	164,614	-10.2%	-20.6%
Suppliers : Pharmacy : Mail Order Pharmacy	682	669	-1.9%	854	27.7%	1,081	26.6%	776	-28.2%	539	-30.5%	-21.0%
Pharmacist	174,135	200,823	15.3%	198,554	-1.1%	153,765	-22.6%	133,763	-13.0%	136,137	1.8%	-21.8%
Physician: General Surgery	29,292	31,056	6.0%	29,918	-3.7%	31,432	5.1%	22,955	-27.0%	22,859	-0.4%	-22.0%
Speech, Language and Hearing Service Provider	3,968	4,092	3.1%	3,931	-3.9%	4,140	5.3%	3,807	-8.0%	3,084	-19.0%	-22.3%
Physician: Obstetrics and Gynecology	707	592	-16.3%	370	-37.5%	993	168.4%	814	-18.0%	537	-34.0%	-24.0%

Specialty	2007	2008		2009		2010		2011		2012		2007-2012
	Frequency	Frequency	% Change	Frequency	% Change	Frequency	% Change	Frequency	% Change	Frequency	% Change	% Change
Group Practice or Clinic: Multispecialty	266,932	325,023	21.8%	368,547	13.4%	313,382	-15.0%	274,991	-12.3%	199,876	-27.3%	-25.1%
Physician: Urology	4,425	4,963	12.2%	4,223	-14.9%	4,209	-0.3%	3,411	-19.0%	3,270	-4.1%	-26.1%
Physician: Otolaryngology	3,198	2,941	-8.0%	3,262	10.9%	2,931	-10.1%	2,390	-18.5%	2,291	-4.1%	-28.4%
Respiratory, Developmental, Rehabilitative and Restorative Service Providers: Occupational Therapist	103,290	96,879	-6.2%	94,056	-2.9%	108,499	15.4%	81,165	-25.2%	73,554	-9.4%	-28.8%
Physician: Radiation Oncology	443	304	-31.4%	322	5.9%	498	54.7%	346	-30.5%	297	-14.2%	-33.0%
Physician: Other	53,213	48,360	-9.1%	55,501	14.8%	67,281	21.2%	50,291	-25.3%	31,728	-36.9%	-40.4%
Physician: Emergency Medicine	131,936	95,825	-27.4%	74,709	-22.0%	85,315	14.2%	77,236	-9.5%	70,802	-8.3%	-46.3%
Marriage and Family Therapist	34,008	33,436	-1.7%	28,783	-13.9%	20,375	-29.2%	12,870	-36.8%	17,723	37.7%	-47.9%
Technologists, Technicians and Other Technical Service Providers	61,403	59,249	-3.5%	42,250	-28.7%	41,309	-2.2%	41,688	0.9%	29,506	-29.2%	-51.9%
Physician: Physical Medicine and Rehabilitation	657,835	612,344	-6.9%	550,268	-10.1%	609,085	10.7%	458,660	-24.7%	311,092	-32.2%	-52.7%
Physician: General Practice	3,479,868	2,811,811	-19.2%	2,797,374	-0.5%	2,500,278	-10.6%	1,935,162	-22.6%	1,611,041	-16.7%	-53.7%
Physician: Pediatrics	1,591	1,026	-35.5%	798	-22.2%	1,042	30.6%	695	-33.3%	692	-0.4%	-56.5%
Transportation: Ambulance	25,606	29,705	16.0%	25,387	-14.5%	14,452	-43.1%	11,089	-23.3%	10,831	-2.3%	-57.7%
Dentist - Oral Surgery	422	371	-12.1%	274	-26.1%	351	28.1%	404	15.1%	156	-61.4%	-63.0%
Hospital: Other	92,120	60,072	-34.8%	52,160	-13.2%	51,765	-0.8%	39,621	-23.5%	33,851	-14.6%	-63.3%
Ambulatory Health Care Facilities: Occupational Medicine Clinic	123,844	61,644	-50.2%	40,071	-35.0%	38,750	-3.3%	38,491	-0.7%	30,603	-20.5%	-75.3%
Midlevel Practitioner: Other	3,845	5,212	35.6%	6,072	16.5%	5,424	-10.7%	917	-83.1%	822	-10.4%	-78.6%
Suppliers: Other	33,946	34,625	2.0%	27,128	-21.7%	28,055	3.4%	19,733	-29.7%	4,910	-75.1%	-85.5%
Ambulatory Health Facilities: Clinic Other	229,155	202,691	-11.5%	153,778	-24.1%	110,225	-28.3%	75,790	-31.2%	30,797	-59.4%	-86.6%
Suppliers : Pharmacy : Specialty Pharmacy	0	26	100.0%	110	323.1%	339	208.2%	477	40.7%	115	-75.9%	NA
Suppliers : Pharmacy : Long Term Care Pharmacy	0	10	100.0%	3	-70.0%	1	-66.7%	139	13800.0%	27	-80.6%	NA
Provider Specialty Missing	61,262	58,785	-4.0%	32,043	-45.5%	14,472	-54.8%	2,673	-81.5%	14,633	447.4%	-76.1%
<b>Totals</b>	<b>10,176,606</b>	<b>9,752,162</b>	<b>-4.2%</b>	<b>9,795,832</b>	<b>0.4%</b>	<b>10,060,502</b>	<b>2.7%</b>	<b>8,673,404</b>	<b>-13.8%</b>	<b>7,624,339</b>	<b>-12.1%</b>	<b>-25.1%</b>

**Table A.2c**  
**Number of Bills Submitted by Specialty Type and Change from 2007 to 2012**  
**Out-of-State Providers**

Specialty	2007	2008		2009		2010		2011		2012		2007-2012
	Frequency	Frequency	% Change	% Change								
Pharmacist	47,375	57,316	21.0%	108,077	88.6%	195,702	81.1%	256,462	31.0%	208,550	-18.7%	340.2%
Respiratory, Developmental, Rehabilitative and Restorative Service Providers: Physical Therapist	18,262	16,170	-11.5%	34,344	112.4%	47,555	38.5%	104,248	119.2%	102,617	-1.6%	461.9%
Suppliers: DME	83,112	68,674	-17.4%	68,993	0.5%	83,810	21.5%	87,217	4.1%	70,111	-19.6%	-15.6%
Physician: General Practice	115,787	88,305	-23.7%	96,783	9.6%	84,531	-12.7%	80,180	-5.1%	43,006	-46.4%	-62.9%
Suppliers : Pharmacy	72,715	89,460	23.0%	82,687	-7.6%	54,713	-33.8%	33,441	-38.9%	28,578	-14.5%	-60.7%
Provider: Other	9,496	21,836	129.9%	26,377	20.8%	33,791	28.1%	35,170	4.1%	28,224	-19.7%	197.2%
Physician: Pathology	10,477	17,631	68.3%	20,696	17.4%	28,789	39.1%	30,254	5.1%	28,135	-7.0%	168.5%
Physician: Physical Medicine and Rehabilitation	23,023	25,667	11.5%	37,028	44.3%	56,099	51.5%	43,152	-23.1%	27,932	-35.3%	21.3%
Lab: Clinical Lab	3,221	4,563	41.7%	8,199	79.7%	9,919	21.0%	16,249	63.8%	22,397	37.8%	595.3%
Respiratory, Developmental, Rehabilitative and Restorative Service Providers: Occupational Therapist	2,483	2,782	12.0%	2,746	-1.3%	6,241	127.3%	11,999	92.3%	21,611	80.1%	770.4%
Chiropractor	9,955	10,277	3.2%	12,048	17.2%	15,102	25.3%	23,761	57.3%	19,069	-19.7%	91.6%
Group Practice or Clinic: Multispecialty	3,110	3,615	16.2%	7,200	99.2%	10,332	43.5%	17,354	68.0%	17,645	1.7%	467.4%
Physician: Diagnostic Radiology	11,869	12,921	8.9%	14,072	8.9%	14,169	0.7%	15,644	10.4%	14,340	-8.3%	20.8%
Transportation: Other	4,196	3,897	-7.1%	2,887	-25.9%	6,698	132.0%	12,449	85.9%	10,991	-11.7%	161.9%
Technologists, Technicians and Other Technical Service Providers	3,810	7,663	101.1%	9,245	20.6%	12,099	30.9%	12,900	6.6%	10,445	-19.0%	174.1%
Agencies	2,874	3,439	19.7%	4,078	18.6%	5,390	32.2%	9,888	83.5%	10,414	5.3%	262.4%
Physician: Preventive Medicine	7,579	7,144	-5.7%	8,369	17.1%	8,136	-2.8%	12,155	49.4%	9,388	-22.8%	23.9%
Physician: Orthopedics	9,182	7,581	-17.4%	8,816	16.3%	13,222	50.0%	18,804	42.2%	8,660	-53.9%	-5.7%
Hospital: General Acute Care	3,878	4,471	15.3%	4,742	6.1%	5,362	13.1%	7,068	31.8%	7,124	0.8%	83.7%
Group Practice: Single Specialty	1,042	1,726	65.6%	2,076	20.3%	2,318	11.7%	4,279	84.6%	6,133	43.3%	488.6%
Physician: Internal Medicine	4,913	7,022	42.9%	6,153	-12.4%	5,424	-11.8%	4,376	-19.3%	4,119	-5.9%	-16.2%
Physician: Emergency Medicine	6,352	3,698	-41.8%	4,337	17.3%	5,432	25.2%	5,989	10.3%	3,359	-43.9%	-47.1%
Physician: Anesthesiology	3,759	3,512	-6.6%	3,664	4.3%	4,723	28.9%	5,043	6.8%	3,151	-37.5%	-16.2%
Transportation: Ambulance	3,913	4,587	17.2%	3,196	-30.3%	2,711	-15.2%	3,459	27.6%	2,712	-21.6%	-30.7%
Physician: Family Medicine	2,013	1,771	-12.0%	1,936	9.3%	3,019	55.9%	3,014	-0.2%	2,537	-15.8%	26.0%
Physician: Psychiatry and Neurology	2,057	2,213	7.6%	2,775	25.4%	3,327	19.9%	2,857	-14.1%	2,470	-13.5%	20.1%
Ambulatory Health Facilities: Clinic Other	4,406	3,643	-17.3%	2,237	-38.6%	2,390	6.8%	2,362	-1.2%	1,891	-19.9%	-57.1%

Specialty	2007	2008		2009		2010		2011		2012		2007-2012
	Frequency	Frequency	% Change	% Change								
Psychologist	1,033	1,448	40.2%	1,792	23.8%	2,088	16.5%	2,561	22.7%	1,823	-28.8%	76.5%
Hospital: Other	2,433	1,573	-35.3%	1,356	-13.8%	1,258	-7.2%	1,840	46.3%	1,705	-7.3%	-29.9%
Respiratory, Developmental, Rehabilitative and Restorative Service Providers: Other	1,761	4,822	173.8%	4,659	-3.4%	3,015	-35.3%	2,185	-27.5%	1,549	-29.1%	-12.0%
Physician: Nuclear Medicine	39	102	161.5%	560	449.0%	646	15.4%	654	1.2%	1,427	118.2%	3559.0%
Physician: Pain Medicine	887	1,143	28.9%	1,427	24.8%	1,825	27.9%	1,782	-2.4%	1,351	-24.2%	52.3%
Dentist - General	435	700	60.9%	1,129	61.3%	1,466	29.8%	1,697	15.8%	1,279	-24.6%	194.0%
Physician Assistant	1,427	900	-36.9%	1,045	16.1%	1,528	46.2%	4,294	181.0%	1,074	-75.0%	-24.7%
Ambulatory Health Facilities: Physical Therapy Clinic	430	949	120.7%	1,802	89.9%	1,253	-30.5%	763	-39.1%	977	28.0%	127.2%
Ambulatory Surgical Center	1,463	910	-37.8%	888	-2.4%	1,377	55.1%	1,392	1.1%	902	-35.2%	-38.3%
Marriage and Family Therapist	1,988	2,128	7.0%	1,743	-18.1%	1,077	-38.2%	593	-44.9%	716	20.7%	-64.0%
Nurse Practitioner	270	452	67.4%	661	46.2%	1,068	61.6%	1,487	39.2%	686	-53.9%	154.1%
Nurse	957	1,028	7.4%	925	-10.0%	1,041	12.5%	817	-21.5%	682	-16.5%	-28.7%
Physician: Other	4,026	1,634	-59.4%	2,143	31.2%	1,458	-32.0%	3,265	123.9%	648	-80.2%	-83.9%
Physician: General Surgery	756	654	-13.5%	682	4.3%	637	-6.6%	525	-17.6%	621	18.3%	-17.9%
Suppliers: Other	1,946	2,399	23.3%	3,494	45.6%	1,974	-43.5%	2,716	37.6%	589	-78.3%	-69.7%
Podiatrist	637	510	-19.9%	632	23.9%	774	22.5%	1,198	54.8%	581	-51.5%	-8.8%
Physician: Neurosurgery	358	387	8.1%	472	22.0%	587	24.4%	601	2.4%	451	-25.0%	26.0%
Clinical Nurse Specialist	61	223	265.6%	269	20.6%	302	12.3%	286	-5.3%	422	47.6%	591.8%
Physician: Surgery Other	207	175	-15.5%	195	11.4%	338	73.3%	372	10.1%	408	9.7%	97.1%
Ambulatory Health Facilities: Clinic Imaging	146	174	19.2%	197	13.2%	234	18.8%	274	17.1%	340	24.1%	132.9%
Certified Registered Nurse Anesthetist	101	119	17.8%	134	12.6%	190	41.8%	174	-8.4%	302	73.6%	199.0%
Ambulatory Health Care Facilities: Occupational Medicine Clinic	521	329	-36.9%	451	37.1%	379	-16.0%	300	-20.8%	274	-8.7%	-47.4%
Speech, Language and Hearing Service Provider	365	251	-31.2%	258	2.8%	251	-2.7%	219	-12.7%	232	5.9%	-36.4%
Physician: Ophthalmology	227	221	-2.6%	213	-3.6%	191	-10.3%	235	23.0%	138	-41.3%	-39.2%
Skilling Nursing Facility	65	83	27.7%	105	26.5%	103	-1.9%	162	57.3%	138	-14.8%	112.3%
Suppliers : Pharmacy : Mail Order Pharmacy	3,314	1,583	-52.2%	188	-88.1%	225	19.7%	155	-31.1%	109	-29.7%	-96.7%
Physician: Dermatology	134	161	20.1%	137	-14.9%	150	9.5%	88	-41.3%	101	14.8%	-24.6%
Social Worker	79	97	22.8%	89	-8.2%	120	34.8%	168	40.0%	94	-44.0%	19.0%
Behavioral Health: Other	52	55	5.8%	62	12.7%	90	45.2%	204	126.7%	82	-59.8%	57.7%
Physician: Urology	80	97	21.3%	113	16.5%	115	1.8%	85	-26.1%	75	-11.8%	-6.3%
Physician: Allergy & Immunology	170	291	71.2%	119	-59.1%	67	-43.7%	64	-4.5%	73	14.1%	-57.1%
Physician: Plastic Surgery	56	54	-3.6%	90	66.7%	87	-3.3%	82	-5.7%	73	-11.0%	30.4%

Specialty	2007	2008		2009		2010		2011		2012		2007-2012
	Frequency	Frequency	% Change	Frequency	% Change	Frequency	% Change	Frequency	% Change	Frequency	% Change	% Change
Managed Care Organization	315	2,206	600.3%	75	-96.6%	72	-4.0%	79	9.7%	72	-8.9%	-77.1%
Physician: Otolaryngology	75	83	10.7%	88	6.0%	81	-8.0%	68	-16.0%	57	-16.2%	-24.0%
Physician: Pediatrics	147	60	-59.2%	37	-38.3%	32	-13.5%	24	-25.0%	51	112.5%	-65.3%
Suppliers : Pharmacy : Community/Retail Pharmacy	2	12	500.0%	11	-8.3%	16	45.5%	24	50.0%	45	87.5%	2150.0%
Suppliers: Prosthetic/Orthotic Supplier	46	15	-67.4%	26	73.3%	49	88.5%	28	-42.9%	32	14.3%	-30.4%
Dentist - Other	7	6	-14.3%	9	50.0%	17	88.9%	14	-17.6%	22	57.1%	214.3%
Dentist - Oral Surgery	17	14	-17.6%	16	14.3%	19	18.8%	26	36.8%	19	-26.9%	11.8%
Physician: Obstetrics and Gynecology	54	28	-48.1%	4	-85.7%	7	75.0%	45	542.9%	19	-57.8%	-64.8%
Midlevel Practitioner: Other	172	239	39.0%	221	-7.5%	180	-18.6%	17	-90.6%	16	-5.9%	-90.7%
Physician: Interventional and Therapeutic Radiology	0	0		5		2	-60.0%	2	0.0%	11	450.0%	
Physician: Radiation Oncology	6	9	50.0%	6	-33.3%	13	116.7%	5	-61.5%	9	80.0%	50.0%
Lab: Other	1	2	100.0%	6	200.0%	18	200.0%	5	-72.2%	5	0.0%	400.0%
Nursing and Custodial Care Facilities: Other	5	4	-20.0%	5	25.0%	9	80.0%	3	-66.7%	4	33.3%	-20.0%
Suppliers : Pharmacy : Clinic Pharmacy	2	11	450.0%	52	372.7%	0	-100.0%	9	NA	3	-66.7%	50.0%
Residential Treatment Facilities	0	4		0	-100.0%	0	NA	2	NA	1	-50.0%	NA
Suppliers : Pharmacy : Compounding Pharmacy	13	20	53.8%	1	-95.0%	0	-100.0%	0	NA	1	100.0%	-92.3%
Suppliers : Pharmacy : Home Infusion Therapy Pharmacy	12	6	-50.0%	5	-16.7%	9	80.0%	1	-88.9%	1	0.0%	-91.7%
Suppliers : Pharmacy : Long Term Care Pharmacy	0	0	NA	0	NA	0	NA	0	0.0%	0	0.0%	NA
Suppliers : Pharmacy : Managed Care Organization Pharmacy	0	0	NA	0	NA	0	NA	1	100.0%	0	-100.0%	NA
Suppliers : Pharmacy : Specialty Pharmacy	0	0	NA	1	100.0%	0	-100.0%	0	NA	0	0.0%	NA
<i>Provider Specialty Missing</i>	5,036	7,204	43.1%	4,181	-42.0%	1,103	-73.6%	2,883	161.4%	204	-92.9%	-95.9%
<b>Totals</b>	<b>503,193</b>	<b>517,159</b>	<b>2.8%</b>	<b>616,540</b>	<b>19.2%</b>	<b>748,545</b>	<b>21.4%</b>	<b>894,248</b>	<b>19.5%</b>	<b>736,103</b>	<b>-17.7%</b>	<b>46.3%</b>

**Table A.3**  
**Change Number of Medical Bills Submitted 2007 to 2012**  
**Top 10 Highest Volume Providers By Region and Out-of-State**

<b>Region</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Bay Area	299,662	312,276	321,300	333,717	280,515	256,849
Central Coast	116,710	114,981	108,521	114,229	96,721	92,818
Central Valley	126,189	142,831	147,151	151,259	120,084	101,616
Eastern Sierra Foothills	27,790	31,350	33,694	34,246	28,537	24,691
Inland Empire	558,546	482,058	536,242	566,626	489,708	370,196
Los Angeles	1,133,844	1,074,770	1,120,725	1,110,282	887,668	613,960
North State	28,694	29,253	33,222	34,067	24,633	20,041
Sacramento Valley	101,599	113,177	116,140	120,515	103,444	83,319
Sacramento Valley North	23,261	29,139	28,261	28,166	25,568	23,777
San Diego	234,419	231,959	277,304	248,274	172,440	144,221
<b>Subtotal - California</b>	<b>2,650,714</b>	<b>2,561,794</b>	<b>2,722,560</b>	<b>2,741,381</b>	<b>2,229,318</b>	<b>1,731,488</b>
<b>Out of State</b>	<b>143,659</b>	<b>215,173</b>	<b>291,611</b>	<b>296,627</b>	<b>336,291</b>	<b>277,915</b>
<b>TOTAL</b>	<b>2,794,373</b>	<b>2,776,967</b>	<b>3,014,171</b>	<b>3,038,008</b>	<b>2,565,609</b>	<b>2,009,403</b>

**Table A.4  
Changes in Highest Volume CPT Codes  
2007 – 2012**

HCPCS	HCPCS Description	2007		2008		2009		2010		2011		2012		2007-2012 % change
		Frequency	% of Total											
83925	Assay of opiates	3,096	0.1%	6,350	0.1%	10,653	0.2%	19,533	0.3%	32,963	0.5%	44,469	0.8%	1336.3%
82570	Assay of urine creatinine	4,393	0.1%	7,045	0.1%	16,916	0.3%	37,809	0.5%	55,818	0.8%	54,469	0.9%	1139.9%
81002	Urinalysis nonauto w/o scope	5,702	0.1%	7,744	0.1%	11,158	0.2%	22,532	0.3%	34,852	0.5%	33,124	0.6%	480.9%
99081	Reimbursable PR-2 chart notes	83,202	1.6%	134,752	2.4%	222,852	3.6%	312,029	4.3%	236,816	3.6%	202,609	3.5%	143.5%
97250	Myofascial release	32,095	0.6%	30,597	0.6%	35,043	0.6%	53,372	0.7%	65,787	1.0%	56,061	1.0%	74.7%
97026	Infrared therapy	38,951	0.8%	43,264	0.8%	47,787	0.8%	87,046	1.2%	78,746	1.2%	66,521	1.2%	70.8%
99358	Prolong service w/o contact	92,849	1.8%	108,440	2.0%	125,230	2.0%	150,669	2.1%	139,408	2.1%	118,194	2.1%	27.3%
95851	Range of motion measurements	40,685	0.8%	45,699	0.8%	51,267	0.8%	60,090	0.8%	52,289	0.8%	43,486	0.8%	6.9%
97014	Electric stimulation therapy	176,803	3.4%	175,481	3.2%	185,444	3.0%	283,466	3.9%	231,540	3.5%	182,001	3.2%	2.9%
99215	Office/outpatient visit established patient, 40 minutes	70,404	1.4%	68,931	1.2%	88,309	1.4%	99,856	1.4%	89,295	1.3%	71,476	1.2%	1.5%
99080	Special reports or forms	164,174	3.2%	181,342	3.3%	207,187	3.3%	238,769	3.3%	202,843	3.1%	165,205	2.9%	0.6%
97110	Therapeutic exercises	176,612	3.4%	181,318	3.3%	190,549	3.1%	281,649	3.9%	224,262	3.4%	176,633	3.1%	0.0%
99204	Office/outpatient visit new patient, 45 minutes	81,898	1.6%	80,741	1.5%	89,808	1.4%	107,934	1.5%	101,340	1.5%	81,253	1.4%	-0.8%
99244	Office consultation Level 4, 60 minutes	33,078	0.6%	36,857	0.7%	41,820	0.7%	44,090	0.6%	39,137	0.6%	32,452	0.6%	-1.9%
99245	Office consultation Level 5, 60 minutes	33,312	0.6%	34,608	0.6%	43,260	0.7%	44,867	0.6%	39,513	0.6%	32,603	0.6%	-2.1%
99214	Office/outpatient visit established patient, 25 minutes	257,200	5.0%	255,232	4.6%	289,645	4.7%	365,065	5.0%	313,406	4.7%	246,898	4.3%	-4.0%
A4556	Electrodes, pair	112,558	2.2%	114,098	2.1%	122,534	2.0%	143,183	2.0%	139,312	2.1%	106,027	1.8%	-5.8%
85025	Complete cbc w/auto diff wbc	35,429	0.7%	37,310	0.7%	41,239	0.7%	40,597	0.6%	36,912	0.6%	30,329	0.5%	-14.4%
99203	Office/outpatient visit new patient, 30 minutes	75,781	1.5%	77,884	1.4%	77,418	1.2%	81,306	1.1%	76,634	1.2%	63,338	1.1%	-16.4%
99199	Special service/proc/report	50,237	1.0%	51,695	0.9%	47,374	0.8%	49,547	0.7%	41,436	0.6%	41,654	0.7%	-17.1%

HCPCS	HCPCS Description	2007		2008		2009		2010		2011		2012		2007-2012
		Frequency	% of Total	% change										
99070	Special supplies phys/qhp	152,439	3.0%	169,664	3.1%	159,534	2.6%	163,729	2.2%	149,916	2.3%	122,161	2.1%	-19.9%
99213	Office/outpatient visit established patient, 15 minutes	273,998	5.3%	296,863	5.4%	273,950	4.4%	316,527	4.3%	260,468	3.9%	210,234	3.7%	-23.3%
98940	Chiropractic manipulation 1-2 regions	51,028	1.0%	49,465	0.9%	46,121	0.7%	55,344	0.8%	44,068	0.7%	35,445	0.6%	-30.5%
99212	Office/outpatient visit established patient, 10 minutes	47,822	0.9%	47,932	0.9%	44,931	0.7%	46,834	0.6%	38,395	0.6%	29,891	0.5%	-37.5%
G0431	Drug screen multiple class	0	0.0%	7	0.0%	19	0.0%	3,132	0.0%	19,442	0.3%	40,813	0.7%	NA
	<b>Subtotal</b>	2,093,746	40.5%	2,243,312	40.6%	2,470,029	39.7%	3,105,843	42.6%	2,725,156	41.1%	2,246,533	39.1%	7.3%
	<b>Other Codes</b>	3,069,673	59.5%	3,282,846	59.4%	3,757,090	60.3%	4,185,575	57.4%	3,888,226	58.6%	3,451,988	60.1%	12.5%
	<b>TOTAL</b>	<b>5,163,419</b>	<b>100.0%</b>	<b>5,526,165</b>	<b>100.0%</b>	<b>6,227,138</b>	<b>100.0%</b>	<b>7,294,550</b>	<b>100.0%</b>	<b>6,632,824</b>	<b>100.0%</b>	<b>5,739,334</b>	<b>100.0%</b>	<b>11.2%</b>

**Table A.5**  
**Changes in Highest Volume Drugs Billed**  
**2007 – 2012**

Drug Name	2007		2008		2009		2010		2011		2012		2007-2012
	Frequency	% of Total	% change										
OXYCONTIN	656	0.2%	2,742	0.5%	4,593	0.8%	6,287	0.9%	6,701	0.9%	5,097	0.8%	677.0%
ZOLPIDEM TARTRATE	3,834	0.9%	9,560	1.9%	10,651	1.8%	14,410	2.1%	19,351	2.5%	14,052	2.2%	266.5%
TIZANIDINE	3,049	0.7%	4,494	0.9%	6,960	1.2%	8,505	1.2%	11,655	1.5%	11,116	1.7%	264.6%
OMEPRAZOLE	6,630	1.6%	10,827	2.2%	16,641	2.8%	20,715	3.0%	27,750	3.6%	22,822	3.5%	244.2%
BUPROPION	1,962	0.5%	2,745	0.5%	3,772	0.6%	6,981	1.0%	6,879	0.9%	5,372	0.8%	173.8%
TRAMADOL	10,372	2.5%	12,676	2.5%	15,852	2.6%	22,698	3.2%	30,613	4.0%	27,428	4.2%	164.4%
CYMBALTA	4,036	1.0%	5,783	1.2%	9,045	1.5%	9,917	1.4%	10,938	1.4%	10,099	1.6%	150.2%
AMITRIPTYLINE	2,424	0.6%	2,416	0.5%	3,373	0.6%	5,430	0.8%	4,809	0.6%	5,537	0.9%	128.4%
TRAZODONE	2,375	0.6%	2,705	0.5%	3,403	0.6%	6,332	0.9%	5,225	0.7%	4,955	0.8%	108.6%
OXYCODONE-ACETAMINOPHEN	5,726	1.4%	6,264	1.3%	7,828	1.3%	13,876	2.0%	13,155	1.7%	11,875	1.8%	107.4%
GABAPENTIN	9,774	2.3%	18,004	3.6%	18,550	3.1%	20,559	2.9%	20,880	2.7%	19,137	2.9%	95.8%
CYCLOBENZAPRINE	10,174	2.4%	16,324	3.3%	19,761	3.3%	20,055	2.9%	20,585	2.7%	19,125	2.9%	88.0%
NABUMETONE	2,613	0.6%	3,095	0.6%	3,631	0.6%	4,308	0.6%	5,925	0.8%	4,807	0.7%	84.0%
DICLOFENAC SODIUM	3,205	0.8%	4,316	0.9%	5,187	0.9%	5,947	0.8%	7,342	0.9%	5,698	0.9%	77.8%
ALPRAZOLAM	3,557	0.9%	4,402	0.9%	5,067	0.8%	8,458	1.2%	7,924	1.0%	6,311	1.0%	77.4%
NAPROXEN	13,315	3.2%	15,173	3.0%	18,373	3.0%	20,517	2.9%	28,515	3.7%	20,839	3.2%	56.5%
LIDODERM	6,701	1.6%	7,466	1.5%	9,535	1.6%	11,211	1.6%	13,209	1.7%	9,849	1.5%	47.0%
HYDROCODONE-ACETAMINOPHEN	54,324	13.0%	66,470	13.3%	88,090	14.6%	103,159	14.7%	101,099	13.1%	74,705	11.5%	37.5%
IBUPROFEN	20,049	4.8%	20,090	4.0%	24,505	4.1%	28,169	4.0%	32,134	4.2%	26,776	4.1%	33.6%
APAP/HYDROCODONE	6,091	1.5%	6,222	1.2%	3,440	0.6%	1,417	0.2%	10,298	1.3%	8,084	1.2%	32.7%
CELEBREX	8,001	1.9%	9,399	1.9%	12,416	2.1%	12,953	1.9%	12,760	1.7%	10,486	1.6%	31.1%
KETOPROFEN	5,577	1.3%	9,770	1.9%	5,064	0.8%	5,146	0.7%	5,479	0.7%	6,787	1.0%	21.7%
ACETAMINOPHEN-CODEINE	5,653	1.4%	4,903	1.0%	5,917	1.0%	7,989	1.1%	9,198	1.2%	5,400	0.8%	-4.5%
COMPOUND DRUGS	25,568	6.1%	34,027	6.8%	27,839	4.6%	24,203	3.5%	27,596	3.6%	23,182	3.6%	-9.3%
CARISOPRODOL	17,862	4.3%	17,019	3.4%	19,490	3.2%	22,532	3.2%	22,566	2.9%	15,749	2.4%	-11.8%
<b>Subtotal</b>	<b>233,528</b>	<b>55.9%</b>	<b>296,892</b>	<b>59.3%</b>	<b>348,983</b>	<b>57.9%</b>	<b>411,774</b>	<b>58.8%</b>	<b>462,586</b>	<b>59.8%</b>	<b>375,288</b>	<b>57.8%</b>	
<b>All Other Drugs</b>	<b>184,244</b>	<b>44.1%</b>	<b>204,176</b>	<b>40.7%</b>	<b>254,112</b>	<b>42.1%</b>	<b>288,126</b>	<b>41.2%</b>	<b>310,720</b>	<b>40.2%</b>	<b>273,841</b>	<b>42.2%</b>	
<b>TOTAL</b>	<b>417,772</b>	<b>100.0%</b>	<b>501,068</b>	<b>100.0%</b>	<b>603,095</b>	<b>100.0%</b>	<b>699,900</b>	<b>100.0%</b>	<b>773,306</b>	<b>100.0%</b>	<b>649,129</b>	<b>100.0%</b>	<b>55.4%</b>

**Table A.6  
Highest Volume Diagnosis Codes Billed  
2007 – 2012**

Diagnosis Category	Diagnosis Category Description	2007	2008	2009	2010	2011
		% of Total				
847	Sprains and strains of other and unspecified parts of back	11.8%	10.69%	12.16%	14.84%	15.33%
724	Other and unspecified disorders of back	8.5%	8.21%	8.84%	7.86%	7.69%
722	Intervertebral disc disorders	9.9%	9.42%	9.95%	8.12%	7.49%
719	Other and unspecified disorders of joint	5.1%	4.65%	5.37%	5.43%	5.56%
959	Injury other and unspecified	8.5%	15.30%	6.53%	5.44%	4.74%
726	Peripheral enthesopathies and allied syndromes	4.6%	4.37%	5.15%	5.25%	5.28%
840	Sprains and strains of shoulder and upper arm	3.9%	3.69%	4.31%	5.08%	5.22%
723	Other disorders of cervical region	3.0%	2.86%	3.09%	2.87%	2.97%
727	Other disorders of synovium tendon and bursa	2.3%	2.33%	2.72%	3.01%	3.21%
842	Sprains and strains of wrist and hand	2.1%	1.91%	2.26%	2.97%	3.27%
354	Mononeuritis of upper limb and mononeuritis multiplex	3.0%	2.68%	2.95%	2.73%	2.92%
844	Sprains and strains of knee and leg	2.0%	2.00%	2.36%	2.85%	2.69%
845	Sprains and strains of ankle and foot	1.8%	1.48%	1.71%	2.02%	1.99%
846	Sprains and strains of sacroiliac region	2.7%	2.24%	2.34%	2.61%	2.42%
729	Other disorders of soft tissues	1.9%	1.70%	1.81%	1.85%	1.83%
883	Open wound of finger(s)	2.2%	1.72%	1.66%	1.69%	1.76%
924	Contusion of lower limb and of other and unspecified site	1.6%	1.37%	1.50%	1.90%	1.79%
715	Osteoarthritis and allied disorders	1.9%	1.93%	2.08%	1.60%	1.43%
923	Contusion of upper limb	1.2%	1.14%	1.21%	1.53%	1.43%
836	Dislocation of the knee	1.2%	1.42%	1.43%	1.31%	1.31%
717	Internal derangement of knee	1.4%	1.37%	1.44%	1.26%	1.22%
721	Spondylosis and allied disorders	0.9%	0.90%	1.05%	0.91%	0.86%
841	Sprains and strains of elbow and forearm	0.5%	0.45%	0.53%	0.72%	0.80%
922	Contusion of trunk	0.6%	0.52%	0.56%	0.67%	0.63%
338	Pain not elsewhere classified	0.2%	0.31%	0.40%	0.41%	0.48%
882	Open wound of hand except finger(s) alone	0.7%	0.54%	0.56%	0.55%	0.55%
718	Other derangement of joint	0.5%	0.55%	0.59%	0.57%	0.52%
780	General symptoms	0.6%	0.60%	0.67%	0.52%	0.48%
816	Fracture of one or more phalanges of hand	0.6%	0.58%	0.54%	0.58%	0.56%
728	Disorders of muscle ligament and fascia	0.6%	0.50%	0.52%	0.49%	0.47%
786	Symptoms involving respiratory system and other chest symptoms	0.5%	0.47%	0.52%	0.40%	0.39%

Diagnosis Category	Diagnosis Category Description	2007	2008	2009	2010	2011
		% of Total				
848	Other and ill-defined sprains and strains	0.4%	0.39%	0.40%	0.46%	0.42%
V57.21	Encounter for occupational therapy	0.3%	0.30%	0.34%	0.32%	0.37%
V72.83	Other specified pre-operative examination	0.3%	0.35%	0.40%	0.31%	0.39%
813	Fracture of radius and ulna	0.5%	0.52%	0.51%	0.52%	0.49%
920	Contusion of face, scalp and neck except eye(s)	0.4%	0.36%	0.39%	0.48%	0.45%
401	Essential hypertension	0.5%	0.46%	0.47%	0.33%	0.36%
873	Open wound of head	0.4%	0.32%	0.33%	0.32%	0.35%
V15	Other personal history presenting hazards to health	0.2%	0.22%	0.29%	0.34%	0.37%
784	Symptoms involving head and neck	0.4%	0.31%	0.33%	0.33%	0.35%
843	Sprains and strains of hip and thigh	0.3%	0.27%	0.32%	0.36%	0.37%
550	Inguinal hernia	0.3%	0.31%	0.33%	0.29%	0.35%
927	Crushing injury of upper limb	0.4%	0.36%	0.34%	0.39%	0.39%
799	Other ill-defined and unknown causes of morbidity and mortality	0.5%	0.55%	0.45%	0.25%	0.29%
824	Fracture of ankle	0.4%	0.33%	0.36%	0.33%	0.33%
881	Open wound of elbow forearm and wrist	0.4%	0.26%	0.23%	0.25%	0.25%
996	Complications peculiar to certain specified procedures	0.3%	0.30%	0.34%	0.23%	0.26%
789	Other symptoms involving abdomen and pelvis	0.2%	0.23%	0.25%	0.24%	0.23%
311	Depressive disorder not elsewhere classified	0.3%	0.28%	0.43%	0.44%	0.41%
V72.84	Preoperative examination unspecified	0.2%	0.20%	0.24%	0.18%	0.22%
337	Disorders of the autonomic nervous system	0.5%	0.44%	0.45%	0.30%	0.26%
682	Other cellulitis and abscess	0.3%	0.27%	0.24%	0.26%	0.21%
999	Complications of medical care not elsewhere classified	0.7%	0.72%	0.76%	0.49%	0.47%
854	Intracranial injury of other and unspecified nature	0.1%	0.14%	0.16%	0.14%	0.19%
782	Symptoms involving skin and other integumentary tissue	0.2%	0.18%	0.18%	0.16%	0.20%
V45.89	Other post-procedural status	0.3%	0.28%	0.40%	0.27%	0.21%
V54.89	Other orthopedic aftercare	0.3%	0.18%	0.19%	0.15%	0.17%
V58.83	Encounter for therapeutic drug monitoring	0.0%	0.06%	0.07%	0.06%	0.10%
V57.89	Care involving other specified rehabilitation procedure	0.1%	0.11%	0.14%	0.09%	0.13%
891	Open wound of knee leg (except thigh) and ankle	0.2%	0.16%	0.14%	0.14%	0.14%
850	Concussion	0.1%	0.12%	0.15%	0.16%	0.17%
720	Ankylosing spondylitis and other inflammatory spondylopathies	0.1%	0.11%	0.13%	0.10%	0.12%
V67.59	Other follow-up examination	0.4%	0.22%	0.19%	0.11%	0.14%
918	Superficial injury of eye and adnexa	0.2%	0.14%	0.15%	0.15%	0.13%
V58.78	Aftercare following surgery of the musculoskeletal system, NEC	0.1%	0.09%	0.12%	0.10%	0.12%
998	Other complications of procedures not elsewhere classified	0.1%	0.13%	0.17%	0.12%	0.11%

Diagnosis Category	Diagnosis Category Description	2007	2008	2009	2010	2011
		% of Total				
886	Traumatic amputation of other finger(s) (complete) (partial)	0.2%	0.18%	0.18%	0.16%	0.15%
V71.89	Observation and evaluation for other specified suspected conditions	0.0%	0.02%	0.02%	0.02%	0.25%
V72.81	Preoperative cardiovascular examination	0.1%	0.11%	0.12%	0.09%	0.12%
814	Fracture of carpal bones	0.1%	0.13%	0.15%	0.15%	0.15%
756	Other congenital muscle anomalies	0.2%	0.16%	0.16%	0.13%	0.12%
738	Other acquired musculoskeletal deformity	0.1%	0.11%	0.13%	0.11%	0.09%
812	Fracture of humerus	0.1%	0.12%	0.11%	0.15%	0.13%
802	Fracture of face bones	0.1%	0.08%	0.08%	0.09%	0.08%
V54.81	Aftercare following joint replacement	0.0%	0.06%	0.07%	0.06%	0.06%
V58.32	Encounter for removal of sutures	0.1%	0.09%	0.07%	0.06%	0.07%
V54.19	Aftercare for healing traumatic fracture of other bone	0.0%	0.04%	0.05%	0.05%	0.08%
V58.89	Unspecified aftercare	0.3%	0.11%	0.08%	0.07%	0.06%
V67.09	Follow-up examination, following other surgery	0.1%	0.06%	0.07%	0.05%	0.05%
730	Osteomyelitis periostitis and other infections involving bone	0.1%	0.05%	0.06%	0.05%	0.05%
V58.30	Encounter for change or removal of nonsurgical wound dressing	0.0%	0.04%	0.03%	0.02%	0.02%
V58.31	Encounter for change or removal of surgical wound dressing	0.0%	0.03%	0.02%	0.02%	0.02%
853	Other and unspecified intracranial hemorrhage following injury	0.0%	0.01%	0.01%	0.01%	0.01%
725	Polymyalgia rheumatic	0.0%	0.00%	0.00%	0.00%	0.00%

**Table A.7  
Highest Volume Diagnosis Codes Billed – Inpatient Only  
2007 – 2012**

Diagnosis Category	Diagnosis Category Description	2007	2008	2009	2010	2011	2012
		% of Total					
724	Other and unspecified disorders of back	6.5%	7.3%	7.4%	7.5%	7.8%	8.0%
959	Injury other and unspecified	5.9%	7.4%	5.0%	6.9%	5.4%	4.9%
722	Intervertebral disc disorders	5.9%	6.5%	7.0%	7.4%	7.8%	7.7%
V57.1	Care involving other physical therapy	5.7%	4.3%	5.1%	4.2%	4.3%	4.9%
847	Sprains and strains of other and unspecified parts of back	4.1%	3.9%	3.9%	5.9%	4.9%	4.2%
726	Peripheral enthesopathies and allied syndromes	3.5%	3.3%	3.9%	4.0%	3.6%	3.2%
719	Other and unspecified disorders of joint	3.5%	3.4%	3.7%	3.8%	3.6%	3.6%
883	Open wound of finger(s)	2.8%	2.7%	2.4%	1.8%	2.1%	2.1%
354	Mononeuritis of upper limb and mononeuritis multiplex	2.6%	2.6%	2.7%	2.7%	2.4%	2.2%
840	Sprains and strains of shoulder and upper arm	2.4%	2.3%	2.2%	2.4%	2.1%	2.0%
727	Other disorders of synovium tendon and bursa	1.9%	1.9%	1.9%	1.8%	1.7%	1.7%
723	Other disorders of cervical region	1.7%	1.8%	2.1%	2.2%	2.3%	2.2%
V67.59	Other follow-up examination	1.5%	1.0%	0.7%	0.5%	0.5%	0.4%
V57.21	Encounter for occupational therapy	1.5%	1.4%	1.4%	1.1%	1.2%	1.2%
717	Internal derangement of knee	1.5%	1.5%	1.7%	1.5%	1.4%	1.4%
729	Other disorders of soft tissues	1.3%	1.4%	1.4%	2.2%	2.0%	1.9%
836	Dislocation of the knee	1.2%	1.4%	1.3%	1.1%	1.1%	1.1%
924	Contusion of lower limb and of other and unspecified site	1.2%	1.1%	1.1%	0.9%	0.8%	0.8%
V58.89	Unspecified aftercare	1.1%	0.4%	0.3%	0.2%	0.2%	0.2%
V54.89	Other orthopedic aftercare	1.1%	0.6%	0.5%	0.5%	0.5%	0.5%
715	Osteoarthritis and allied disorders	1.1%	1.2%	1.5%	1.4%	1.5%	1.7%
845	Sprains and strains of ankle and foot	1.1%	1.1%	1.1%	0.9%	0.9%	0.8%
V72.83	Other specified pre-operative examination	1.1%	1.3%	1.3%	1.0%	1.1%	0.9%
842	Sprains and strains of wrist and hand	1.1%	1.0%	1.0%	1.0%	1.0%	0.8%
844	Sprains and strains of knee and leg	1.0%	1.2%	1.1%	1.1%	0.9%	0.9%
923	Contusion of upper limb	1.0%	1.0%	0.9%	0.7%	0.7%	0.6%
721	Spondylosis and allied disorders	1.0%	1.0%	1.1%	1.3%	1.5%	1.7%
882	Open wound of hand except finger(s) alone	0.9%	0.9%	0.8%	0.6%	0.6%	0.6%
816	Fracture of one or more phalanges of hand	0.8%	0.8%	0.7%	0.6%	0.6%	0.6%
550	Inguinal hernia	0.8%	0.8%	0.7%	0.6%	0.6%	0.6%
846	Sprains and strains of sacroiliac region	0.7%	0.7%	0.7%	0.9%	0.6%	0.5%

Diagnosis Category	Diagnosis Category Description	2007	2008	2009	2010	2011	2012
		% of Total					
873	Open wound of head	0.7%	0.7%	0.6%	0.5%	0.5%	0.6%
996	Complications peculiar to certain specified procedures	0.7%	0.7%	0.8%	0.6%	0.7%	0.8%
718	Other derangement of joint	0.7%	0.8%	0.8%	0.7%	0.7%	0.8%
813	Fracture of radius and ulna	0.7%	0.7%	0.6%	0.6%	0.5%	0.6%
780	General symptoms	0.6%	0.6%	0.6%	0.7%	0.7%	0.7%
922	Contusion of trunk	0.5%	0.5%	0.5%	0.4%	0.4%	0.4%
786	Symptoms involving respiratory system and other chest symptoms	0.5%	0.6%	0.6%	0.5%	0.6%	0.7%
881	Open wound of elbow forearm and wrist	0.5%	0.5%	0.4%	0.3%	0.3%	0.4%
682	Other cellulitis and abscess	0.5%	0.5%	0.4%	0.3%	0.3%	0.4%
V57.89	Care involving other specified rehabilitation procedure	0.5%	0.5%	0.6%	0.5%	0.5%	0.6%
920	Contusion of face, scalp and neck except eye(s)	0.5%	0.4%	0.4%	0.3%	0.3%	0.3%
V72.84	Preoperative examination unspecified	0.4%	0.5%	0.5%	0.4%	0.5%	0.6%
337	Disorders of the autonomic nervous system	0.4%	0.4%	0.5%	0.4%	0.4%	0.4%
824	Fracture of ankle	0.4%	0.4%	0.4%	0.3%	0.3%	0.4%
927	Crushing injury of upper limb	0.4%	0.4%	0.4%	0.3%	0.3%	0.3%
784	Symptoms involving head and neck	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%
338	Pain not elsewhere classified	0.4%	0.6%	0.6%	0.6%	0.8%	0.9%
799	Other ill-defined and unknown causes of morbidity and mortality	0.4%	0.4%	0.1%	0.2%	0.2%	0.2%
V58.32	Encounter for removal of sutures	0.4%	0.4%	0.3%	0.3%	0.3%	0.2%
886	Traumatic amputation of other finger(s) (complete) (partial)	0.3%	0.4%	0.3%	0.2%	0.2%	0.2%
789	Other symptoms involving abdomen and pelvis	0.3%	0.4%	0.4%	0.4%	0.4%	0.5%
891	Open wound of knee leg (except thigh) and ankle	0.3%	0.3%	0.2%	0.2%	0.2%	0.3%
998	Other complications of procedures not elsewhere classified	0.3%	0.3%	0.4%	0.3%	0.3%	0.4%
401	Essential hypertension	0.3%	0.3%	0.2%	0.3%	0.4%	0.4%
848	Other and ill-defined sprains and strains	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%
850	Concussion	0.3%	0.3%	0.3%	0.2%	0.3%	0.3%
918	Superficial injury of eye and adnexa	0.2%	0.2%	0.2%	0.1%	0.1%	0.2%
V15	Other personal history presenting hazards to health	0.2%	0.2%	0.2%	0.3%	0.4%	0.3%
728	Disorders of muscle ligament and fascia	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
841	Sprains and strains of elbow and forearm	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
854	Intracranial injury of other and unspecified nature	0.2%	0.3%	0.4%	0.4%	0.6%	0.6%
999	Complications of medical care not elsewhere classified	0.2%	0.3%	0.3%	0.2%	0.1%	0.1%
782	Symptoms involving skin and other integumentary tissue	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
V58.30	Encounter for change or removal of nonsurgical wound dressing	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%
V58.78	Aftercare following surgery of the musculoskeletal system, NEC	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%

Diagnosis Category	Diagnosis Category Description	2007	2008	2009	2010	2011	2012
		% of Total					
V67.09	Follow-up examination, following other surgery	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
V72.81	Preoperative cardiovascular examination	0.2%	0.3%	0.2%	0.3%	0.3%	0.3%
V45.89	Other post-procedural status	0.2%	0.1%	0.2%	0.2%	0.2%	0.1%
802	Fracture of face bones	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%
V54.19	Aftercare for healing traumatic fracture of other bone	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%
738	Other acquired musculoskeletal deformity	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%
812	Fracture of humerus	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%
814	Fracture of carpal bones	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
720	Ankylosing spondylitis and other inflammatory spondylopathies	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%
311	Depressive disorder not elsewhere classified	0.1%	0.1%	0.2%	0.5%	0.4%	0.2%
843	Sprains and strains of hip and thigh	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%
V58.83	Encounter for therapeutic drug monitoring	0.1%	0.2%	0.2%	0.2%	0.3%	0.2%
756	Other congenital muscle anomalies	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
V54.81	Aftercare following joint replacement	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%
V58.31	Encounter for change or removal of surgical wound dressing	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%
730	Osteomyelitis periostitis and other infections involving bone	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%
V71.89	Observation and evaluation for other specified suspected conditions	0.1%	0.1%	0.1%	0.0%	1.0%	0.3%
853	Other and unspecified intracranial hemorrhage following injury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
725	Polymyalgia rheumatic	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%