Minnesota Workers' Compensation System Report, 2005

MINNESOTA DEPARTMENT OF
LABOR & INDUSTRY
POLICY DEVELOPMENT,
RESEARCH AND STATISTICS

Minnesota Workers' Compensation System Report, 2005

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Executive summary

In parallel with nationwide trends, Minnesota's workers' compensation system experienced major reductions in benefit payments and system cost in the early 1990s. Since the mid-1990s, total benefits have been fairly stable relative to payroll. This has reflected the combined effects of a decreasing claim rate and increasing benefits per claim, particularly medical benefits.

This report, part of an annual series, presents data from 1997 through 2005 about several aspects of Minnesota's workers' compensation system — claims, benefits and costs; vocational rehabilitation; and disputes and dispute resolution. The purpose of the report is to describe statistically the current status and direction of workers' compensation in Minnesota and to offer explanations where possible for recent developments. The report also presents workers' compensation medical cost data from a major insurer to provide insight into current medical cost issues.

The report's major findings:

- The claim rate fell continually from 1997 to 2004, but leveled off between 2004 and 2005.
- After reaching a low-point in 2000, workers' compensation system cost relative to payroll was somewhat higher in 2005 than in 1997.
- Indemnity and medical benefits per claim — especially medical benefits — are up sharply (adjusting for wage growth).
- Relative to payroll, medical benefits have risen since 1997 while indemnity benefits have fallen slightly, reflecting the net effect of the falling claim rate and increasing benefits per claim. Total benefits relative to payroll are up slightly since 1997.
- The increase in indemnity benefits is due primarily to increasing benefit duration and increases in the frequency and amounts of stipulated benefits.
- The vocational rehabilitation participation rate rose between 1997 and 2005.
- The dispute rate rose between 1997 and 2005.
- According to data from a large insurer:
  - The service groups contributing the largest amounts to the recent increases in medical costs were outpatient hospital facility services, radiology and drugs.
  - For radiology and surgery, the cost increases were driven primarily by a shift toward more expensive services.
  - All service groups and provider types not subject to the fee schedule showed significant increases in cost per unit of service, while those subject to the fee schedule did not.
  - Facility providers showed a more rapid increase in cost per claim and contributed more to the overall cost increase than did nonfacility providers.

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(continued)

Figures

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Introduction

During the early and middle 1990s, through cost-control measures by employers and insurers and law changes in most states, workers' compensation benefits and costs fell nationwide. In Minnesota, a combination of employer and insurer efforts and law changes in 1992 and 1995 produced major cost reductions in the first half of the 1990s, followed by a period of stability in the second half of the decade. Since the late 1990s, a decreasing claim rate has counteracted increases in benefits per claim (particularly medical benefits) to bring about continued stability in cost relative to payroll.

This report, part of an annual series, presents data from 1997 through 2005 about several aspects of Minnesota's workers' compensation system — claims, benefits and costs; vocational rehabilitation; and disputes and dispute resolution. Its primary purpose is to describe statistically the current status and direction of workers' compensation in Minnesota. The report also presents workers' compensation medical cost data from a major insurer to provide insight into current medical cost issues.

Chapter 2 presents overall claim, benefit and cost data. Chapter 3 provides more detailed data about indemnity (cash) benefit trends. Chapters 4 and 5 provide statistics about vocational rehabilitation and about disputes and dispute resolution. Chapter 6 presents workers' compensation medical cost trends for a large insurer.

Appendix A contains a glossary with descriptions of, among other things, the major types of benefits. Appendix B summarizes portions of the 2000 law changes relevant to trends in this report. Appendix C describes data sources and estimation procedures.

The following points should be kept in mind throughout the report:

Developed statistics — Most statistics in this report are presented by injury year or insurance policy year.[1] An issue with such data is that the originally reported numbers for more recent years are not mature because of longer claims and reporting lags. In this report, all injury year and policy year data is "developed" to a uniform maturity to produce statistics that are comparable over time. The technique uses "development factors" (projection factors) based on observed data for older claims.[2] ***The injury year (and policy year) statistics are projections of what the actual numbers will be when all claims are complete and all data reported. Therefore, the statistics for any given injury year (especially for more recent years) are subject to change when more recent data becomes available. When revisions occur, however, the trends generally show little change from the prior versions.***

Adjustment of cost data for wage growth — Several figures in the report present costs over time. As wages and prices grow, a given cost in dollar terms represents a progressively smaller economic burden from one year to the next. If the total cost of indemnity and medical benefits grows at the same rate as wages, there is no net change in cost as a percentage of payroll. Therefore, all costs (except those costs expressed relative to payroll) are adjusted for average wage growth. The adjusted trends reflect the extent to which cost growth exceeds (or falls short of) average wage growth.[3]

[1] Definitions in Appendix A. Some insurance data is by accident year, which is equivalent to injury year.

[2] See Appendix C for more detail.

[3] See Appendix C for computational details.

2

Claims, benefits and costs: overview

This chapter presents overall indicators of the status and direction of Minnesota's workers' compensation system.

Major findings

- The number of paid claims dropped 31 percent relative to the number of full-time-equivalent (FTE) workers from 1997 to 2005 (Figure 2.1).
- The total cost of Minnesota's workers' compensation system relative to payroll was 6 percent higher in 2005 than in 1997 (Figure 2.2).
- Adjusted for average wage growth, average indemnity benefits per insured claim rose 37 percent from 1997 to 2004 (the most recent year available); average medical benefits per claim rose 60 percent (Figure 2.4).
- Relative to payroll, indemnity benefits fell 5 percent from 1997 to 2005, while medical benefits rose 17 percent (Figure 2.6). The trends in benefits relative to payroll are the net result of a falling claim rate and increasing benefits per claim.
- Pure premium rates in 2007 were down 22 percent from 1997 and 9 percent from 1998 (Figure 2.8).

Background

The following basic information is necessary for understanding the figures in this chapter. See Appendix A for more detail.

Workers' compensation benefits and claim types

Workers' compensation provides three basic types of benefits:

- ***Indemnity benefits*** compensate the injured or ill worker (or dependents) for wage loss, permanent functional impairment or death.
- ***Medical benefits*** consist of reasonable and necessary medical services and supplies related to the injury or illness.
- ***Vocational rehabilitation benefits*** consist of a variety of services to help eligible injured workers return to work. These benefits are counted as indemnity benefits in insurance data but are counted separately in DLI data. They are considered separately in Chapter 5.

Claims with indemnity benefits are called ***indemnity claims****;* these claims typically have medical benefits also. The remainder of claims are called ***medical-only claims*** because they only have medical benefits.

Insurance arrangements

Employers cover themselves for workers' compensation in one of three ways. The most common is to purchase insurance in the "voluntary market," so named because an insurer may choose whether to insure any particular employer. Employers unable to insure in the voluntary market may insure through the Assigned Risk Plan, the insurance program of last resort administered by the Department of Commerce. Employers meeting certain financial requirements may self-insure.

Rate-setting

Minnesota is an open-rating state for workers' compensation, meaning rates are set by insurance companies rather than by a central authority. In determining their rates, insurance companies start with "pure premium rates" (also known as "loss costs"). These rates represent expected losses (indemnity and medical) per $100 of payroll for some 600 payroll classifications. The Minnesota Workers' Compensation Insurers Association (MWCIA) — Minnesota's workers' compensation data service organization and rating bureau — calculates the pure premium rates every year from insurers' most recent pure premium and losses. Insurance companies add their own expenses to the pure premium rates and make other modifications in determining their own rates.

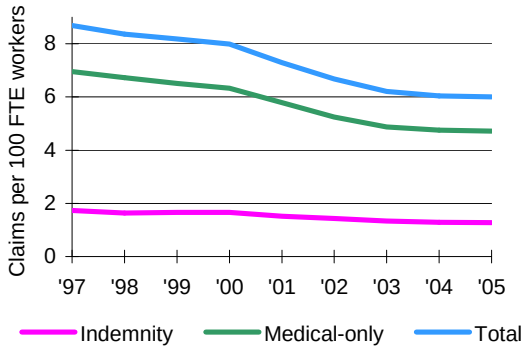
Since the pure premium rates are calculated from prior data, a lag of two to three years exists between benefit trends and pure premium rate changes.

Claim rates

Claim rates declined continually from 1997 to 2004, but leveled off between 2004 and 2005.

- In 2005, there were:
  - 6.0 paid claims per 100 FTE workers, down 25 percent from 2000;
  - 1.3 paid indemnity claims per 100 FTE workers, down 23 percent from 2000; and
  - 4.7 paid medical-only claims per 100 FTE workers, down 25 percent from 2000.
- The overall paid claim rate for 2005 was down 31 percent from 1997.
- Since 1997, indemnity claims have made up 20 to 21 percent of all paid claims, while medical-only claims have constituted the remaining 79 to 80 percent.

Figure 2.1 Paid claims per 100 full-time-equivalent workers, injury years 1997-2005 [1]



Injury year	Indemnity claims	Medical-only claims	Total claims
1997	1.73	7.0	8.7
2000	1.65	6.3	8.0
2002	1.43	5.3	6.7
2003	1.34	4.9	6.2
2004	1.29	4.7	6.0
2005	1.28	4.7	6.0

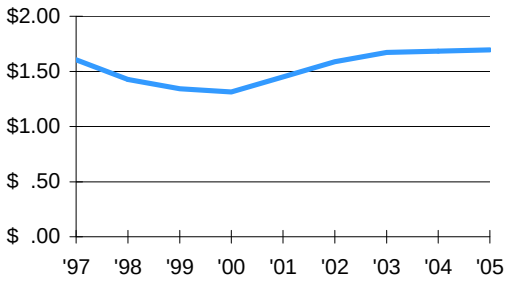
1. Developed statistics from DLI data and other sources (see Appendix C).

System cost

The total cost of Minnesota's workers' compensation system increased relative to payroll from its low point in 2000, but was stable from 2003 to 2005.

- From 2000 to 2003, total system cost rose from $1.31 per $100 of payroll to $1.67, a 27-percent increase.
- The 2005 value was 6 percent higher than 1997.
- The total cost of workers' compensation in 2005 was an estimated $1.6 billion.
- These figures reflect benefits (indemnity, medical and vocational rehabilitation) plus other costs such as claim adjustment, litigation, and taxes and assessments. The figures are computed primarily from actual premium for insured employers (adjusted for costs under deductible limits) and experience-modified pure premium for self-insured employers (see Appendix C).

Figure 2.2 System cost per $100 of payroll, 1997-2005 [1]



	Cost per $100 of payroll
1997	$1.61
2000	1.31
2002	1.59
2003 [2]	1.67
2004 [2]	1.68
2005 [2]	1.70

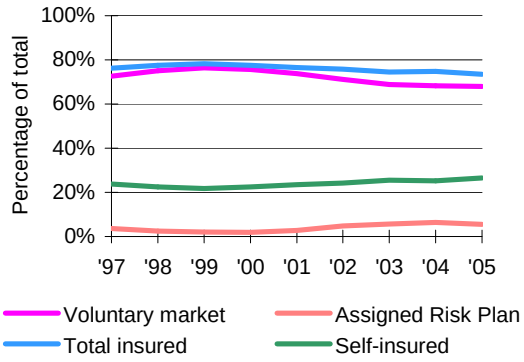
1. Data from several sources (see Appendix C). Includes insured and self-insured employers.
2. Preliminary.

Insurance arrangements

The voluntary market lost market share from 1999 through 2005.[4]

- The voluntary market share of paid indemnity claims was 68 percent in 2005, down from 76 percent in 1999.
- The self-insured share increased from 22 percent in 1999 to 27 percent in 2005.
- The Assigned Risk Plan share increased from 2 percent in 1999 and 2000 to approximately 6 percent for 2003 to 2005.
- These shifts are at least partly due to changes in insurance costs shown in Figure 2.2. Rate increases in the voluntary market tend to cause shifts from the voluntary market to both the Assigned Risk Plan and self-insurance, while rate decreases cause shifts in the opposite direction.

Figure 2.3 Market shares of different insurance arrangements as measured by paid indemnity claims, injury years 1997-2005 [1]



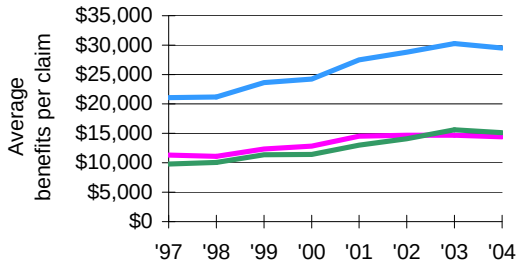
Injury year	Voluntary market	Assigned Risk Plan	Total insured	Self-insured
1997	72.6%	3.6%	76.2%	23.8%
1999	76.3	2.0	78.3	21.7
2002	71.1	4.7	75.9	24.1
2003	68.8	5.6	74.5	25.5
2004	68.3	6.4	74.7	25.3
2005	68.0	5.5	73.5	26.5

1. Data from DLI.

[4] When market share is measured by pure premium (not shown here), the trends are similar.

Figure 2.4 Average indemnity and medical benefits per insured claim, adjusted for wage growth, policy years 1997-2004 [1]

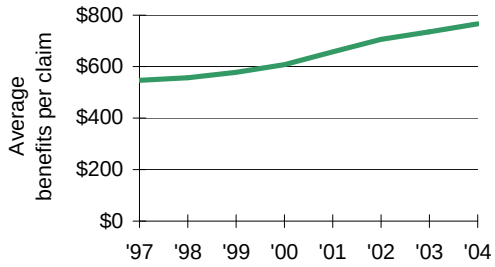
A: Indemnity claims



Policy year	Indemnity benefits	Medical benefits	Total benefits
1997	$11,300	$ 9,800	$21,100
2001	14,500	13,000	27,500
2002	14,700	14,100	28,800
2003	14,700	15,600	30,300
2004	14,400	15,100	29,500

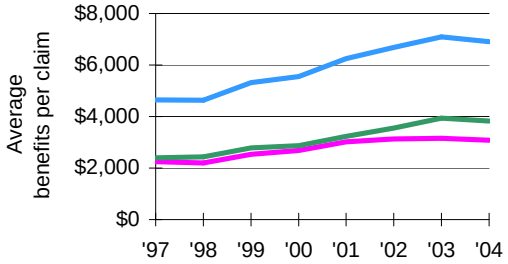
Indemnity Medical Total

B: Medical-only claims



Policy year		Medical benefits	Total benefits
1997		$547	$547
2001		657	657
2002		705	705
2003		736	736
2004		767	767

C: All claims



Policy year	Indemnity benefits	Medical benefits	Total benefits
1997	$2,250	$2,390	$4,650
2001	3,020	3,230	6,250
2002	3,130	3,550	6,680
2003	3,160	3,940	7,100
2004	3,080	3,820	6,900

Indemnity Medical Total

1. Developed statistics from MWCIA data (see Appendix C). Includes the voluntary market and Assigned Risk Plan; excludes self-insured employers. Benefits are adjusted for average wage growth between the respective year and 2005. 2004 is the most recent year available.

Benefits per claim

Adjusted for wage growth, average medical benefits per insured claim rose rapidly from 1997 through 2003 but leveled off between 2003 and 2004. Indemnity benefits per claim increased through 2001 but were stable from that year through 2004.

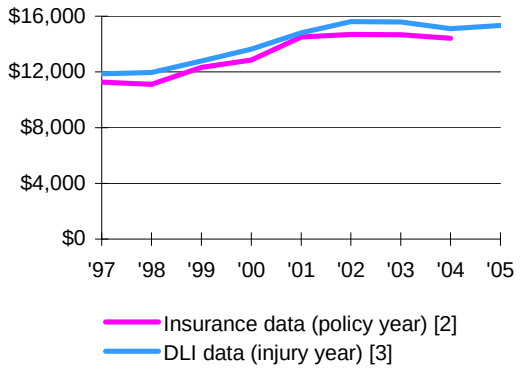
- For all claims combined, in 2004 relative to 1997:
  - ➢ average indemnity benefits were up 37 percent;
  - ➢ average medical benefits were up 60 percent; and
  - ➢ average total benefits were up 49 percent.

Indemnity benefits per indemnity claim: insurance and DLI data

According to DLI data, a two-to-three-year period of stability in average indemnity benefits per indemnity claim began in 2002 and continued through 2005. The DLI data broadly corroborates the insurance data for earlier years (the insurance data is not yet available for 2005).

- Adjusting for wage growth, both the DLI and insurance data show increases in average indemnity benefits per claim through 2001 or 2002 and a leveling off thereafter.

Figure 2.5 Average indemnity benefits per indemnity claim, adjusted for wage growth, 1997-2005: insurance and DLI data [1]



Policy or injury year	Insurance data [2]	DLI data [3]
1997	$11,300	$11,900
2001	14,500	14,800
2002	14,700	15,600
2003	14,700	15,600
2004	14,400	15,100
2005	[4]	15,300

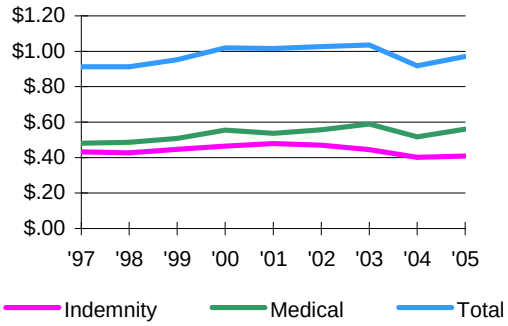
1. Benefits are adjusted for average wage growth between the respective year and 2005.
2. From Figure 2.4. Excludes self-insured employers, supplementary benefits and second-injury claims. Includes the Assigned Risk Plan and vocational rehabilitation benefits.
3. Developed statistics (see Appendix C). Includes self-insured employers, the Assigned Risk Plan, supplementary benefits and second-injury claims. Excludes vocational rehabilitation benefits.
4. Not yet available.

Benefits relative to payroll

Medical benefits rose relative to payroll from 1997 to 2003 but fell back somewhat between 2003 and 2005. Indemnity benefits rose relative to payroll through 2001 and then fell through 2004.

- From 1997 to 2005, relative to payroll:
  - indemnity benefits fell 5 percent;[5]
  - medical benefits rose 17 percent; and
  - total benefits rose 6 percent.
- These changes are the net result of a decreasing claim rate (Figure 2.1) and higher costs per claim (Figures 2.4, 2.5).

Figure 2.6 Benefits per $100 of payroll in the voluntary market, accident years 1997-2005 [1]



Accident year	Indemnity benefits	Medical benefits	Total benefits
1997	$.43	$.48	$ .91
2000	.46	.55	1.02
2001	.48	.54	1.02
2002	.47	.56	1.03
2003	.45	.59	1.04
2004	.40	.52	.92
2005	.41	.56	.97

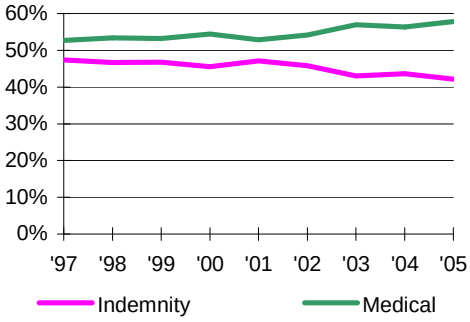
1. Developed statistics from MWCIA data (see Appendix C). Excludes self-insured employers, the Assigned Risk Plan, and supplementary and second-injury benefits.

Indemnity and medical shares

The medical share of total benefits rose between 1997 and 2005. The increase occurred primarily during the latter part of the period.

- Reflecting the data in Figure 2.6, medical benefits accounted for 58 percent of total benefits in 2005, up from 53 percent in 1997.
- Indemnity benefits now account for 42 percent of total benefits.

Figure 2.7 Indemnity and medical benefit percentages in the voluntary market, accident years 1997-2005 [1]



Accident year	Indemnity benefits	Medical benefits
1997	47.3%	52.7%
2000	45.6	54.4
2001	47.1	52.9
2002	45.8	54.2
2003	43.0	57.0
2004	43.7	56.3
2005	42.2	57.8

1. Developed statistics from MWCIA data (see Appendix C). Excludes self-insured employers, the Assigned Risk Plan, and supplementary and second-injury benefits.

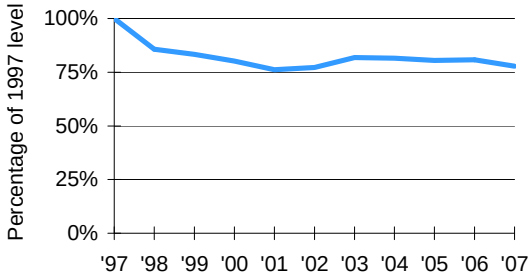
[5] The indemnity benefit trend in Figure 2.6, from insurance data, is corroborated by DLI data.

Pure premium rates

After a large decrease in 1998, pure premium rates have drifted downward slightly.

- Pure premium rates in 2007 were down 22 percent from 1997 and 9 percent from 1998. They were two percent above their low-point in 2001.[6]
- Pure premium rates are ultimately driven by the trend in benefits relative to payroll (Figure 2.6). However, this occurs with a lag of two to three years because the pure premium rates for any period are derived from prior premium and loss experience.[7]
- Insurers in the voluntary market consider the pure premium rates, along with other factors, in determining their own rates, which in turn affect total system cost (Figure 2.2).

Figure 2.8 Average pure premium rate as percentage of 1997 level, 1997-2007 [1]



Effective year	Percentage of 1997
1997	100.0%
1998	85.7
2001	76.1
2003	81.7
2004	81.5
2005	80.5
2006	80.8
2007	77.9

1. Data from the MWCIA. Pure premium rates represent expected indemnity and medical losses per $100 of covered payroll in the voluntary market.

[6] A "percent increase" means the proportionate increase in the initial percentage, not the number of percentage points of increase. For example, an increase from 10 percent to 15 percent is a 50-percent increase.

[7] Changes in pure premium rates directly following law changes also include estimated effects of those law changes.

3

Claims, benefits and costs: detail

This chapter presents additional data about claims, benefits and costs. Most of the data provides further detail about the indemnity claim and benefit information in Chapter 2. Some of the data relates to costs of special benefit programs and state agency administrative functions.

Major findings

- The average duration of total disability benefits was 24 percent higher in 2005 than in 1997. Average temporary partial disability (TPD) benefit duration was 13 percent higher (Figure 3.3).
- Average indemnity benefits per indemnity claim (adjusted for wage growth) rose 29 percent between 1997 and 2005 (Figure 3.6).[8] This is primarily attributable to:
  - the increase in total disability duration; and
  - increases in the frequency and average amount of stipulated benefits (Figures 3.2, 3.5).
- State agency administrative costs in 2005 amounted to about 3.3 cents per $100 of covered payroll. This figure has fallen since 1997 (Figure 3.8).

Background

The following basic information is necessary for understanding the figures in this chapter. See Appendix A for more detail.

Benefit types

- ***Temporary total disability (TTD)*** — A weekly wage-replacement benefit paid to an employee who is temporarily unable to work because of a work-related injury or illness, equal to two-thirds of pre-injury earnings subject to a weekly minimum and maximum and a duration limit. TTD ends when the employee returns to work (among other reasons).
- ***Temporary partial disability (TPD)*** — A weekly wage-replacement benefit paid to an employee who has returned to work at less than his or her pre-injury earnings, generally equal to two-thirds of the difference between current earnings and pre-injury earnings subject to weekly maximum and total duration provisions.
- ***Permanent partial disability (PPD)*** — A benefit that compensates for permanent functional impairment resulting from a work-related injury or illness. The benefit is based on the employee's impairment rating and is unrelated to wages.
- ***Permanent total disability (PTD)*** — A weekly wage-replacement benefit paid to an employee who sustains one of the severe work-related injuries specified in law or who, because of a work-related injury or illness in combination with other factors, is permanently unable to secure gainful employment (subject to a permanent impairment rating threshold).
- ***Stipulated benefits*** — Indemnity and/or medical benefits specified in a claim settlement — "stipulation for settlement" — among the parties to a claim. A stipulation usually occurs in a dispute, and stipulated benefits are usually paid in a lump sum.

[8] These figures are somewhat different from comparable figures in Chapter 2, because they are from a different data source (DLI vs. insurance industry) and they include self-insured employers.

- ***Total disability*** — In most figures in this chapter — those presenting DLI data — the term "total disability" refers to the combination of TTD and PTD benefits, because the DLI data does not distinguish between these two benefit types.

Counting claims and benefits: insurance data and department data

The first figure in this chapter uses insurance data (from the MWCIA); all other figures use DLI data.

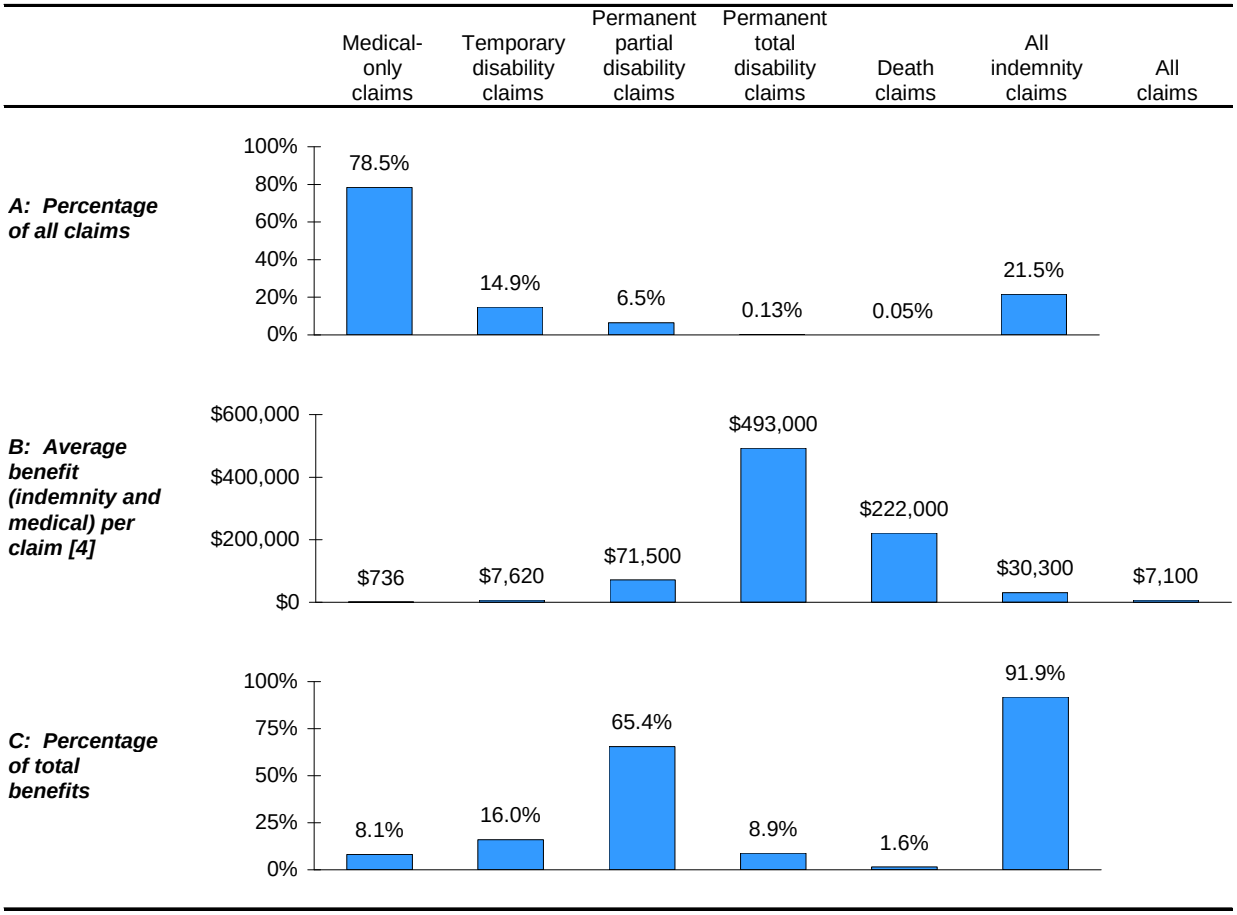
In the insurance data, claims and benefits are categorized by "claim type," defined according to the most severe type of benefit on the claim. In increasing severity, the benefit types are medical, temporary disability (TTD or TPD), PPD, PTD and death. For example, a claim with medical, TTD and PPD payments is a PPD claim. PPD claims also include claims with temporary disability benefits lasting more than one year and claims with stipulated settlements. All benefits on a claim are counted in the one claim-type category into which the claim falls.

In the DLI data, by contrast, each claim may be counted in more than one category, depending on the types of benefits paid. For example, the same claim may be counted among claims with total disability benefits and among claims with PPD benefits.

Costs supported by Special Compensation Fund assessment

DLI, through its Special Compensation Fund (SCF), levies an annual assessment on insurers (including self-insurers) to finance (1) costs in DLI and other state agencies to administer the workers' compensation system and (2) certain benefits for which DLI is responsible. Primary among these benefits are supplementary benefits and second-injury benefits. Although these programs have been eliminated, benefits must still be paid on old claims (see Appendices B and C). Insurers add the assessment amount to the premium charged to employers, and this is included in total workers' compensation system cost (Figure 2.2).

Figure 3.1 Benefits by claim type for insured claims, policy year 2003 [1]



1. Developed statistics from MWCIA data (see Appendix C). 2003 is the most recent year available.
2. Because of annual fluctuations, data for PTD and death claims are averaged over 2001-2003 (see Appendix C).
3. Indemnity claims consist of all claim types other than medical-only.
4. Benefit amounts in panel B are adjusted for overall wage growth between 2003 and 2005.

Benefits by claim type

Each claim type (in the insurance data) contributes to total benefits paid depending on its relative frequency and average benefit. PPD claims account for the majority of total benefits.

(As indicated above, in the insurance data, the benefits for each claim type include all types of benefits paid on that type of claim. PPD claims, for example, may include medical, TTD and TPD benefits in addition to PPD benefits.)

- PPD claims accounted for 65 percent of total benefits in 2003 (panel C in figure) through a combination of low frequency (panel A) and higher-than-average benefits per claim (panel B).
- Other claim types contributed smaller amounts to total benefits because of very low frequency (PTD and death claims) or very low average benefits (medical-only claims).
- Indemnity claims were 22 percent of all paid claims, but accounted for 92 percent of total benefits because they have far higher benefits on average than medical-only claims ($30,300 vs. $736).
- The percentages and relative benefit amounts in the figure have been fairly stable during the past several years.

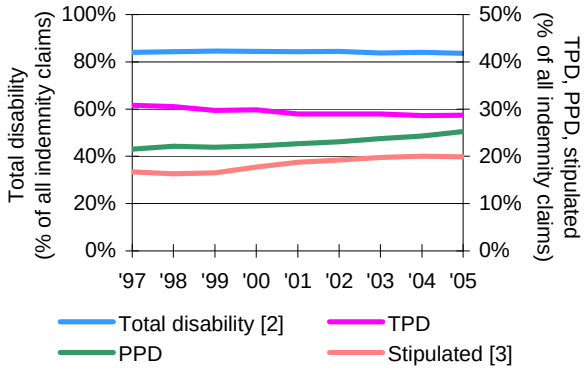
Claims by benefit type

Since 1997, as a proportion of all paid indemnity claims, claims with PPD benefits and claims with stipulated benefits have increased, claims with TPD benefits have decreased and claims with total disability benefits have been stable.

- From 1997 to 2005:
  - the percentage of claims with PPD benefits rose about 4 percentage points;
  - the percentage of claims with stipulated benefits rose about 3 percentage points; and
  - the percentage of claims with TPD benefits fell 2 percentage points.

- The increase in the percentage of claims with stipulated benefits is related to a similar increase in the dispute rate (Figure 7.1).

Figure 3.2 Percentages of paid indemnity claims with selected types of benefits, injury years 1997-2005 [1]



Injury year	Total disab.[2]	TPD	PPD	Stipu-lated [3]
1997	84.1%	30.8%	21.5%	16.7%
1999	84.5	29.7	21.9	16.5
2001	84.3	29.0	22.7	18.8
2002	84.5	29.0	23.0	19.2
2003	83.7	28.9	23.7	19.8
2004	84.0	28.6	24.3	20.1
2005	83.7	28.7	25.2	19.9

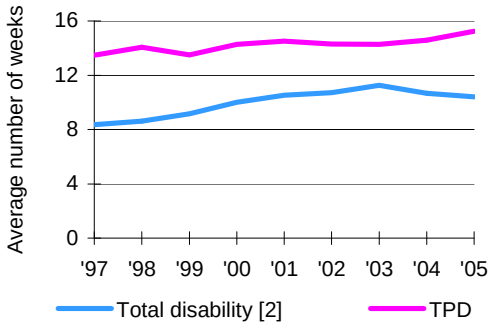
1. Developed statistics from DLI data (see Appendix C). An indemnity claim may have more than one type of benefit paid. Therefore, the sum of the figures for the different benefit types is greater than 100 percent.
2. Total disability includes TTD and PTD.
3. Includes indemnity and medical components.

Benefit duration

The average durations of total disability benefits and TPD benefits have increased since 1997.

- Total disability duration rose 34 percent from 1997 to 2003 but fell from 2003 to 2005. The 2005 average of 10.4 weeks was still 24 percent above 1997.
- TPD duration rose from an average of 13.5 weeks in 1997 to 15.2 weeks in 2005, a 13-percent increase.
- These trends in duration affect indemnity cost per claim (Figures 2.4, 2.5, 3.5, 3.6). As a result, they also affect pure premium rates and system cost (Figures 2.2, 2.8).

Figure 3.3 Average duration of wage-replacement benefits, injury years 1997-2005 [1]



Injury year	Total disab.[2]	TPD
1997	8.4	13.5
1999	9.2	13.5
2001	10.5	14.5
2002	10.7	14.3
2003	11.2	14.3
2004	10.7	14.6
2005	10.4	15.2

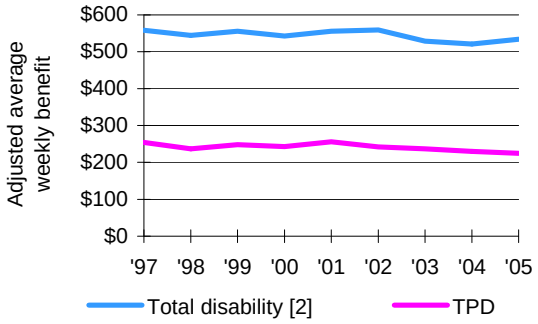
1. Developed statistics from DLI data (see Appendix C).
2. Total disability includes TTD and PTD.

Weekly benefits

Average weekly total disability and TPD benefits were fairly stable from 1997 through 2002 after adjusting for average wage growth. However, they have drifted downward since 2002.

- Adjusted average weekly total disability benefits were 4 percent lower in 2005 than in 1997; average weekly TPD benefits were down 11 percent.
- The average pre-injury wage of injured workers (which affects average weekly benefits) fell 3.5 percent relative to the statewide average weekly wage from 1997 to 2005. This explains most of the decline in adjusted average total disability benefits, and part of the decline in average weekly TPD benefits.

Figure 3.4 Average weekly wage-replacement benefits, adjusted for wage growth, injury years 1997-2005 [1]



Injury year	Total disab. [2]	TPD
1997	$558	$254
1999	555	248
2001	556	256
2002	559	242
2003	529	237
2004	521	229
2005	534	225

1. Developed statistics from DLI data (see Appendix C). Benefit amounts are adjusted for average wage growth between the respective year and 2005.
2. Total disability includes TTD and PTD.

Average indemnity benefits by type

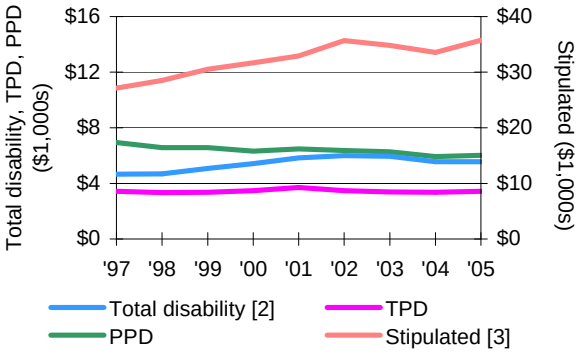
Adjusting for average wage growth, average benefit amounts (per claim with the given benefit type) showed different trends from 1997 to 2005: average total disability benefits and average stipulated benefits increased, average PPD benefits fell, and average TPD benefits showed little change.

- From 1997 to 2005, after adjusting for average wage growth:
  - ➢ average total disability benefits rose 19 percent;
  - ➢ average TPD benefits remained the same;
  - ➢ average PPD benefits fell 13 percent; and
  - ➢ average stipulated benefits rose 32 percent.

- The trends in average total disability and TPD benefits are driven by the trends in average weekly benefits and average benefit duration. The increase in average total disability benefits occurred from 1997 to 2002, when the average duration of these benefits was increasing rapidly (Figure 3.3). The flat trend in average TPD benefits occurred because an increase in average weekly benefits was offset by a decrease in duration (Figures 3.3 and 3.4).

- With one exception, adjusted average PPD benefits have fallen continually since 1997. The exception, in 2001, reflected the PPD benefit increase in the 2000 law change (see Appendix B). Adjusted average PPD benefits fell during the remainder of the period, primarily because the PPD benefit schedule is fixed, apart from statutory increases. Under the fixed schedule, PPD benefits become smaller relative to rising wages, which is reflected in the adjusted average benefits.

Figure 3.5 Average indemnity benefit by type per claim with the given benefit type, adjusted for wage growth, injury years 1997-2005 [1]



Injury year	Total disability [2]	TPD	PPD	Stipulated [3]
1997	$4,670	$3,420	$6,930	$27,150
1999	5,080	3,350	6,580	30,530
2001	5,850	3,710	6,490	32,920
2002	5,990	3,460	6,370	35,690
2003	5,950	3,380	6,280	34,820
2004	5,570	3,350	5,930	33,540
2005	5,550	3,430	6,030	35,770

1. Developed statistics from DLI data (see Appendix C). Benefit amounts are adjusted for average wage growth between the respective year and 2005.
2. Total disability includes TTD and PTD.
3. Includes indemnity and medical components.

Indemnity benefits per indemnity claim

Adjusting for average wage growth, average indemnity benefits per indemnity claim rose between 1997 and 2002, but leveled off from 2002 to 2005. The 1997 to 2002 increase resulted from an increase in total disability and stipulated benefits per claim. The increase in total disability benefits per claim in turn resulted from increased duration.

Note: Figure 3.6 differs from Figure 3.5 in that it shows the average benefit of each type *per indemnity claim,* rather than *per claim with the respective type of benefit.* Figure 3.6 reflects the percentage of indemnity claims with each benefit type (Figure 3.2) and the average benefit amount per claim with the respective benefit type (Figure 3.5).

- Adjusting for average wage growth, indemnity benefits per indemnity claim were 29 percent higher in 2005 than in 1997. These numbers (last column of Figure 3.6) are the DLI numbers in Figure 2.5.

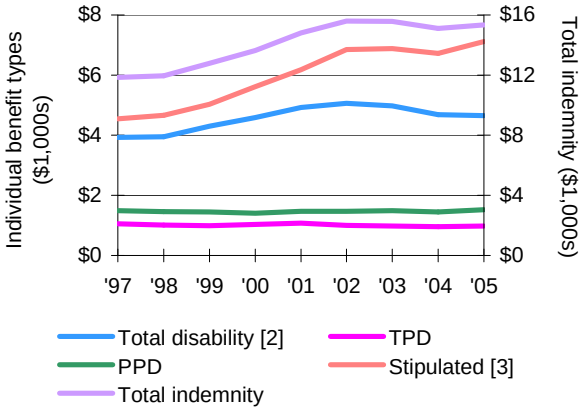
- The increase in indemnity benefits per claim took place from 1997 to 2002 and resulted from increases in total disability benefits and stipulated benefits.

  - The increase in total disability benefits per indemnity claim resulted from an increase in duration (Figure 3.3). (The percentage of indemnity claims with total disability benefits was stable (Figure 3.2).)
  - The increase in stipulated benefits per indemnity claim resulted from an increase in average stipulated benefit amounts (Figure 3.5) and an increase in the proportion of claims with these benefits (Figure 3.2).

- In 2005, total disability and stipulated benefits per indemnity claim were several times as large as TPD and PPD benefits per indemnity claim.

- As a proportion of total indemnity benefits, stipulated benefits increased from 38 percent in 1997 to 46 percent in 2005.

Figure 3.6 Average indemnity benefit by type per paid indemnity claim, adjusted for wage growth, injury years 1997-2005 [1]



Injury year	Total disabilty [2]	TPD	PPD	Stipulated [3]	Total indemnity [4]
1997	$3,930	$1,050	$1,490	$4,540	$11,860
1999	4,300	990	1,440	5,040	12,790
2001	4,930	1,070	1,470	6,180	14,810
2002	5,060	1,000	1,470	6,850	15,600
2003	4,980	980	1,490	6,880	15,580
2004	4,680	960	1,440	6,730	15,120
2005	4,650	980	1,520	7,120	15,340

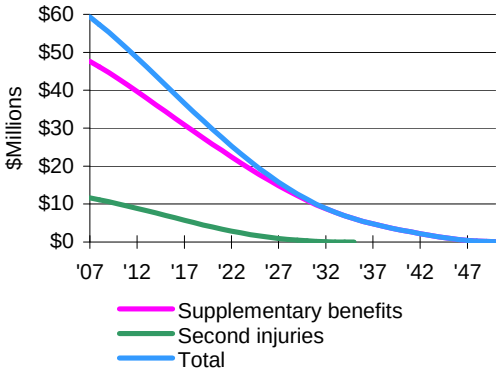
1. Developed statistics from DLI data (see Appendix C). Benefit amounts are adjusted for average wage growth between the respective year and 2005.
2. Total disability includes TTD and PTD.
3. Includes indemnity and medical components.
4. Because some benefit types are not shown, total indemnity benefits are greater than the sum of the benefit types shown.

Supplementary benefit and second-injury costs

DLI produces an annual projection of supplementary benefit and second-injury reimbursement costs as they would exist without future settlement activity. The total annual cost is projected to fall in half by 2020 and to disappear by 2050.

- The total projected cost for 2007, $59 million, is about 3.6 percent of total workers' compensation system cost.
- The 2007 cost consists of roughly $48 million for supplementary benefits and $12 million for second injuries.
- Without settlements, supplementary benefit claims are projected to continue until 2050 and second-injury claims until 2032.
- Claim settlements will reduce future projections of these liabilities. Settlements amounted to about $4 million in fiscal year 2006.

Figure 3.7 Projected cost of supplementary benefit and second-injury reimbursement claims, fiscal claim-receipt years 2007-2050 [1]



Fiscal year of claim receipt	Projected amount claimed ($millions) Supplementary benefits	Second injuries	Total
2007	$47.6	$11.7	$59.3
2010	43.1	10.0	53.1
2020	25.7	3.9	29.7
2030	11.0	.3	11.3
2050	.0	.0	.0

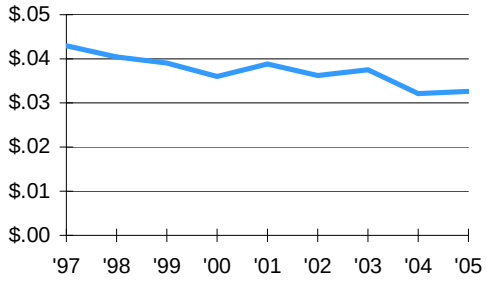
1. Projected from DLI data, assuming no future settlement activity. See Appendix C.

State agency administrative cost

State agency administrative cost has fallen as a proportion of workers' compensation covered payroll during the past several years.

- In fiscal year 2005, state agency administrative cost (see note in figure) came to 3.3 cents per $100 of payroll.
- Administrative cost for 2005 was about $30 million, or about 1.9 percent of total workers' compensation system cost.

Figure 3.8 Net state agency administrative cost per $100 of payroll, fiscal years 1997-2005 [1]



Fiscal year	Admin. cost per $100 of payroll
1997	$.043
2000	.036
2001	.039
2002	.036
2003	.038
2004	.032
2005	.033

1. Includes costs of workers' compensation functions in DLI, the Office of Administrative Hearings, the Workers' Compensation Court of Appeals and the Department of Commerce, as well as the cost of Minnesota's OSHA program. Excludes costs of benefit payments reimbursed by the Special Compensation Fund (such as supplementary and second-injury benefits). Costs are net of fees for service. Data from DLI, MWCIA and WCRA.

4

Vocational rehabilitation

This chapter provides data about vocational rehabilitation (VR) services in Minnesota's workers' compensation system.

Major findings

- Participation in vocational rehabilitation rose from 15 percent of paid indemnity claimants in 1997 to 22 percent for 2003, but fell back to 20 percent in 2005. A projected 5,370 claimants injured in 2005 will receive VR services (Figure 4.1).
- The average cost of VR services per participant was $6,500 in 2005, 23 percent higher than in 1998, after adjusting for average wage growth. The total cost of VR services for 2005, $35 million, was about 2.2 percent of workers' compensation system cost (Figure 4.2).
- The average time from injury to the start of VR services decreased 17 percent from injury year 1998 to 2005; average service duration was steady from 2002 to 2005 (Figures 4.3, 4.4).
- The percentage of VR participants with a job at plan closure decreased from 72 percent for injury year 1998 to 64 percent in 2005. This was primarily attributable to a decrease in the percentage finding work (usually a different type of job) with a different employer (Figures 4.5, 4.6).
- The average VR participant returning to work received a wage about the same as their pre-injury wage, but this varied widely among individuals (Figure 4.7).
- For VR participants injured in 2005, about 56 percent of plan closures are projected to result from plan completion; another 42 percent are projected to result from settlement or agreement of the parties (Figure 4.8).

Background

Vocational rehabilitation is the third type of workers' compensation benefit, supplementing medical and indemnity benefits. VR services are provided to injured workers who need help in returning to work because of their injuries and whose employers are unable to offer them suitable employment.

VR services include:

- vocational evaluation;
- counseling;
- job analysis;
- job modification;
- job development;
- job placement;
- vocational testing;
- transferable skills analysis;
- job-seeking skills training;
- retraining; and
- arrangement of on-the-job training.

Except for retraining, these services are delivered by qualified rehabilitation consultants (QRCs) and job-placement vendors. These providers are registered with DLI and must follow professional conduct standards specified in Minnesota Rules.

QRCs work mostly in private-sector VR firms, and may also provide services to non-workers' compensation clients. (Some VR firms also have job-placement staff.) Some QRCs are employed by insurers and self-insured employers. Injured workers may also choose to receive services from DLI's Vocational Rehabilitation unit, which also provides VR services to injured

workers whose claims are involved in primary liability disputes.

QRCs determine whether injured workers are eligible for VR services, develop VR plans for those determined eligible and coordinate service delivery under those plans. Eligibility is determined in a VR consultation, which is typically done within certain timelines or if requested by the employee, employer or DLI.

VR plan costs are generated by hourly charges for services by QRCs and vendors and the costs for certain services, such as retraining and vocational testing. Annual increases in hourly charges are limited to the lesser of the increase in the statewide average weekly wage or 2 percent.

Data sources and time period covered

The data in this chapter comes from VR documents filed with DLI for claims with VR activity. Injured workers may receive services from multiple VR service providers, each of whom may file VR service plans. The duration and cost of VR services reported in this chapter are the combined values from all plans involved with a particular claim. For brevity, combined plans are referred to simply as plans. The service outcomes are the outcomes of the most recent plan closure. Outcomes are not included if the claim has an open VR plan.

All trend statistics in this chapter are by injury year, and are therefore developed as described in Appendix C. This represents a transition from earlier reports; previously, only the VR participation and cost trends were by year of injury. ***The change from a plan-closure-year basis to an injury-year basis for the remaining trends causes a change in the values of the statistics, but usually not in the directions of the trends.***

Since the VR system experienced major changes in the early and middle 1990s, most figures in this chapter begin with injury year 1998 rather than 1997.

Participation

The VR participation rate increased steadily from 1997 to 2003 but declined from 2003 to 2005.

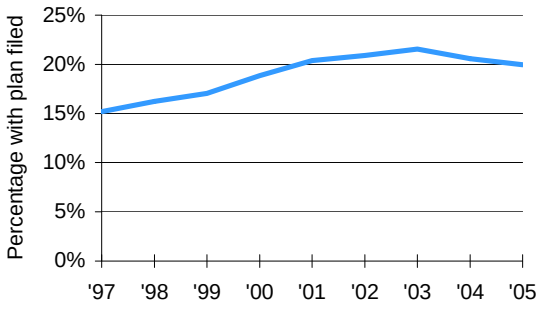
- The participation rate increased from 15 percent in 1997 to 22 percent in 2003, but fell back to 20 percent in 2005, about the same rate as in 2001.
- The participation rate varies directly with the amount of time the worker has been off the job. For workers injured between 2001 and 2004, the proportion receiving VR services was:
  - 10 percent for workers with fewer than three months of TTD benefits;
  - 64 percent for workers with three to six months of TTD benefits;
  - 86 percent for workers with six to 12 months of TTD benefits; and
  - 92 percent for workers with more than 12 months of TTD benefits.
- About 5,370 workers injured in 2005 are expected to receive VR services. (Some of these people have not yet begun services.)

Cost

Adjusted for average wage growth, the average cost of VR services rose steeply between injury years 1998 and 2005.

- Average service cost per participant for 2005 was $6,500, 23 percent higher than in 1998. Median cost rose 22 percent during the same period.
- Average VR service cost per indemnity claim was $1,340 in 2005, a 57-percent increase from 1998. This was the combined effect of a higher participation rate (Figure 4.1) and a higher average cost per plan (Figure 4.2).
- The estimated total cost of VR for 2005 was $34.9 million, about 2.2 percent of total workers' compensation system cost.

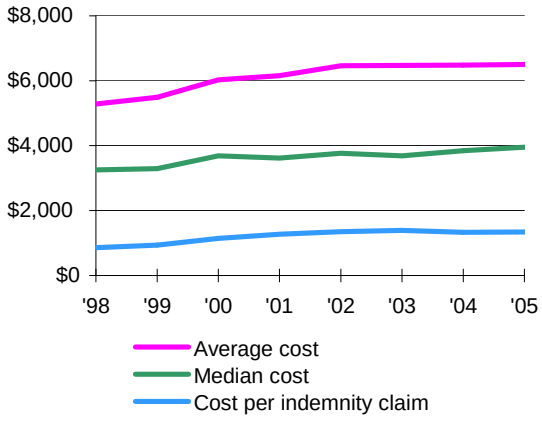
Figure 4.1 Percentage of paid indemnity claims with a VR plan filed, injury years 1997-2005 [1]



Injury year	Percentage with plan
1997	15.2%
2001	20.4
2002	20.9
2003	21.6
2004	20.6
2005	20.0

1. Data from DLI. Statistics are developed (see Appendix C).

Figure 4.2 VR service costs, adjusted for wage growth, injury years 1998-2005 [1]



Injury year	Average cost	Median cost	Cost per indemnity claim
1998	$5,280	$3,250	$ 860
2001	6,160	3,620	1,270
2002	6,460	3,770	1,350
2003	6,470	3,690	1,390
2004	6,480	3,840	1,330
2005	6,500	3,960	1,340

1. Developed statistics from DLI data (see Appendix C). Costs are adjusted for average wage growth between the respective year and 2005.

Timing of services[9]

The success of VR is closely linked to prompt service provision. The average time from injury to the start of VR services decreased between 1998 and 2001 but was steady from 2001 to 2005. The median time also fell.

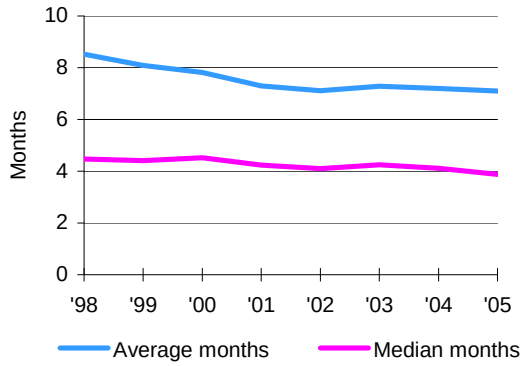
- The average time from injury to the start of VR services was 7.1 months for injury year 2005, down 17 percent from 1998. The median time was down 13 percent during the same period.
- Among plans closed in 2005, about one-third of VR service starts were within three months of the date of injury.
- Among VR participants whose plans closed in 2005, those who started receiving VR services more than one year after their injury, as compared to those starting within six months of injury, had:
  - higher VR costs by 21 percent ($8,010 vs. $6,640);[10]
  - longer VR service durations by 15 percent (14.6 months vs. 12.7 months); and
  - reduced chances of returning to work with their pre-injury employer (32 percent vs. 48 percent).

Service duration

VR service duration was steady between 2002 and 2005.

- Average service duration for 2005 was 12.6 months; median duration was 8.2 months.
- Among plan closures in 2005, average service duration was lowest for participants returning to work with their pre-injury employer (nine months), higher for those going to a different employer (16 months) and highest for those whose plans closed before they returned to work (17 months).

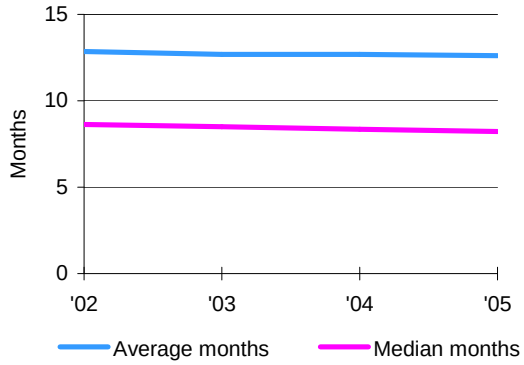
Figure 4.3 Time from injury to start of VR services, injury years 1998-2005 [1]



Injury year	Average months	Median months
1998	8.5	4.5
2001	7.3	4.2
2002	7.1	4.1
2003	7.3	4.2
2004	7.2	4.1
2005	7.1	3.9

1. Developed statistics from DLI data (see Appendix C).

Figure 4.4 VR service duration, injury years 2002-2005 [1]



Injury year	Average months	Median months
2002	12.8	8.6
2003	12.7	8.5
2004	12.7	8.4
2005	12.6	8.2

1. Developed statistics from DLI data (see Appendix C). Years prior to 2002 are not shown because of data-quality issues. See Appendix C for a discussion of differences between the trends shown here and those in the same figure in last year's report, which were by plan-closure year.

[9] For the sake of consistency with other figures in this report, Figures 4.3 and 4.4 are now by injury year rather than by VR plan-closure year as in the past.

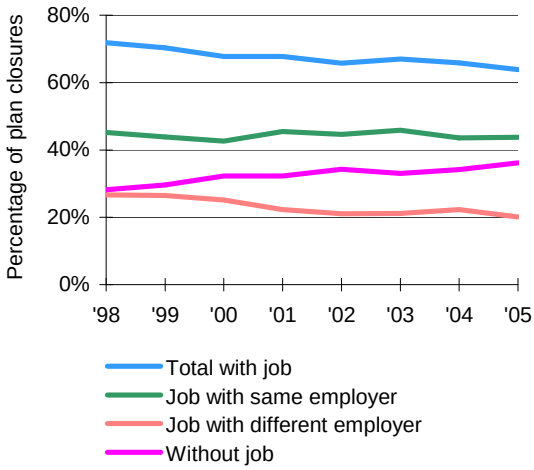
[10] These figures are limited to private service-providers.

Return-to-work status: same vs. different employer

A key measure of VR performance is whether the injured workers receiving VR services return to work when the VR plans are closed. Return to work is affected by many factors, including the job market, injury severity, availability of job modifications and claim litigation. The percentage of VR participants with a job at plan closure decreased between 1998 and 2005.

- The percentage of VR participants with a job at plan closure was 64 percent in 2005, down from 72 percent in 1998.
  - ➢ This decrease was primarily attributable to a decrease in participants with a job at a different employer, from 27 percent in 1998 to 20 percent in 2005.
  - ➢ The percentage with a job at the same employer was down slightly, from 45 percent in 1998 to 44 percent in 2005.
- Among plan closures in 2005, the average cost of VR services for participants returning to work with their pre-injury employer ($3,860) was less than half the cost for those going to a different employer ($10,250) and for those not returning to work ($9,130).[11]

Figure 4.5 Return-to-work status: same vs. different employer, injury years 1998-2005 [1]



Injury year	With job: Same employer	With job: Different employer	With job: Total with job	Without job
1998	45.2%	26.6%	71.8%	28.2%
2001	45.4	22.3	67.7	32.3
2002	44.6	21.1	65.7	34.3
2003	45.8	21.2	67.0	33.0
2004	43.6	22.3	65.8	34.2
2005	43.7	20.1	63.8	36.2

1. Developed statistics from DLI data (see Appendix C).

[11] These figures are limited to private service-providers.

Return-to-work status: type of job

Another way of viewing return-to-work status among VR participants is to consider the type of job for those employed at plan closure. The percentage of participants finding the same type of job as their pre-injury job showed little net change during the period examined, while the percentage finding a different type of job fell significantly.

- From 1998 to 2005, the percentage of participants finding a different type of job than their pre-injury job decreased from 31 percent to 23 percent.

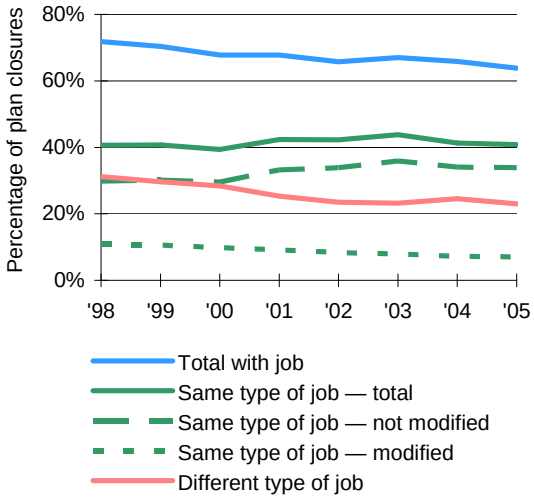
- The decreasing percentage of participants finding a *different type of job* seems to explain the decreasing percentage of finding employment, and in this respect is similar to the decreasing percentage of participants going to a *different employer* (Figure 4.5).

  - The trends in placements *with a different employer* (Figure 4.5) and placements *in a different type of job* (Figure 4.6) are similar because most placements with a different employer are in a different type of job, while most placements with the pre-injury employer are in the same type of job (with or without modifications).

- Most placements into the same type of job as the pre-injury job involve no job modifications, and this became increasingly true between 1998 and 2005.

- Among plan closures in 2005, the average cost of VR services for injured workers returning to the same type of job *without modifications* was $3,260, about one-third the cost for injured workers returning to a different type of job ($9,680). The average service cost for injured workers returning to the same type of job *with modifications* was $5,450.[12]

Figure 4.6 Return-to-work status: type of job, plan-closure years 1998-2005 [1]



Injury year	With job				
	Same type of job			Different type of job	Total with job
	Not Modifed	Modifed	Total		
1998	29.8%	10.8%	40.6%	31.2%	71.8%
2001	33.3	9.1	42.4	25.4	67.7
2002	33.9	8.4	42.2	23.5	65.7
2003	35.9	7.9	43.8	23.2	67.0
2004	34.1	7.2	41.3	24.5	65.8
2005	33.9	7.0	40.9	23.0	63.8

1. Developed statistics from DLI data (see Appendix C).

[12] These figures are limited to private service-providers.

Return-to-work wages

The average return-to-work (RTW) wage of VR participants is about the same as their pre-injury wage. However, it varies widely depending on the type of return-to-work job.

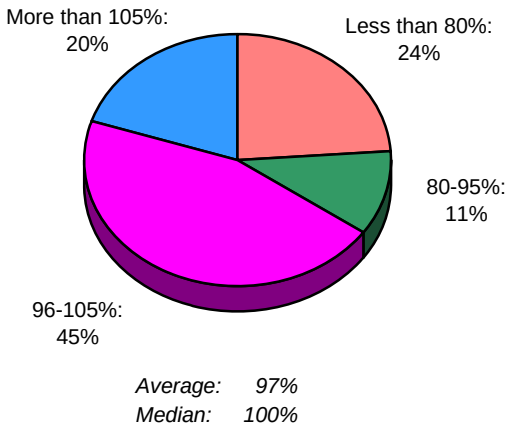
- In 2005, 65 percent of VR participants returning to work earned at least 96 percent of their pre-injury wage, but 24 percent earned less than 80 percent of their pre-injury wage.
- For workers having to find work with a different employer, average RTW wage increased from 90 percent of their pre-injury wage in 1998 to 94 percent in 2000, but fell back to 86 percent by 2005.
- For plan closures in 2005, the average RTW wage ratio was:
  - higher for participants who returned to their pre-injury employer (103 percent) than for those who went to a different employer (86 percent); and
  - higher for VR plans of fewer than six months (102 percent) than for longer service durations (e.g., 85 percent for plans longer than 18 months).

Reasons for plan closure

A majority of plans close because they are completed, but the percentage closing for this reason fell between 1998 and 2005.

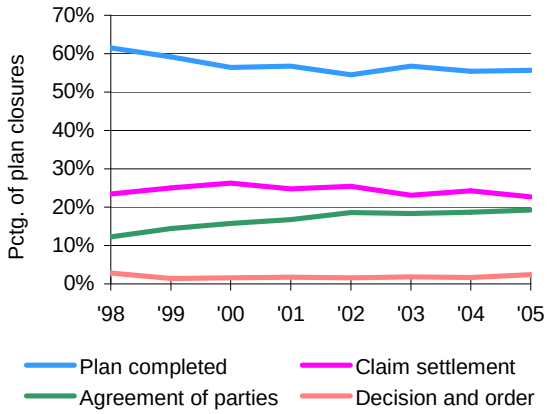
- The proportion of plans closed because of plan completion fell from 62 percent in injury year 1998 to 56 percent in 2005. Most of the decrease occurred between 1998 and 2000.
- The proportion of plans closed by agreement of the parties rose from 12 percent in 1998 to 18 or 19 percent for 2002 to 2005.
- Plan completion almost always involves a return to work. For plans closed for reasons other than completion in 2005, participants returned to work only 26 percent of the time.
- Plan costs vary by type of closure: among closures involving private QRCs in 2005, completed plans averaged $4,770; settlements, $11,330; decision and orders, $9,150; and agreements, $7,990.

Figure 4.7 Ratio of return-to-work wage to pre-injury wage for participants returning to work, plan-closure year 2005 [1]



1. Data from DLI.

Figure 4.8 Reason for plan closure, injury years 1998-2005 [1]



Plan-closure year	Plan completed	Claim settlement	Agreement of parties	Decision and order
1998	61.5%	23.5%	12.2%	2.8%
2001	56.8	24.7	16.7	1.8
2002	54.5	25.4	18.6	1.6
2003	56.7	23.1	18.3	1.8
2004	55.4	24.3	18.7	1.6
2005	55.7	22.7	19.2	2.4

1. Developed statistics from DLI data (see Appendix C).

5

Disputes and dispute resolution

This chapter presents data about workers' compensation disputes and dispute resolution.

Major findings

- The overall dispute rate increased from 15.1 percent of filed indemnity claims in 1997 to 17.8 percent in 2005, an 18-percent increase (Figure 5.1).[13]
- The rate of denial of filed indemnity claims was 15.9 percent in 2005, essentially the same level as in 1997 (Figure 5.2).
- For wage-loss claims filed in 2006, the proportion with "prompt first action" (payment initiation or denial within the legal time limit) was 87 percent, an increase from 81 percent in 1997 (Figure 5.3).
- At the Benefit Management and Resolution unit of the Department of Labor and Industry:
  - Dispute certification activity rose 54 percent from 1999 to 2005, in parallel with an increase in dispute certification requests (Figures 5.5 and 5.6).
  - Resolutions by agreement of the parties (usually through informal intervention) fell from 86 percent of the total in 1999 to 79 percent in 2005. Resolutions by decision and order (usually following an administrative conference) increased from 14 percent to 21 percent (Figure 5.10).
- At the Office of Administrative Hearings, the numbers of settlement conferences, discontinuance conferences, and medical and rehabilitation conferences have fallen since 2001.[14] Hearings have increased since 2001, but are below their 1997 level (Figure 5.11).
- At the Workers' Compensation Court of Appeals, the number of cases received fell by nearly half from 1997 to 2006 (Figure 5.12).
- The percentage of paid indemnity claims with claimant attorney fees rose from 14.4 percent in 1997 to 16.9 percent in 2005, a 17-percent increase (Figure 5.13).

Background

The following basic information is necessary for understanding the figures in this chapter. See Appendix A for more detail.

Types of disputes

Disputes in Minnesota's workers' compensation system generally occur over five types of issues:[15]

- denial of primary liability;
- eligibility for and amount of monetary benefits;
- discontinuance of wage-loss benefits;
- medical issues; and
- rehabilitation issues.

Dispute-resolution process

Depending on the nature of the dispute and the wishes of the parties, dispute resolution may be facilitated by a dispute-resolution specialist in the Benefit Management and Resolution (BMR) unit of the Department of Labor and Industry or by a judge in the Office of Administrative

[13] See note 6 on p. 9.

[14] Data is not available before 2001.

[15] Disputes also occur about miscellaneous other types of issues, such as attorney fees, which are not considered in this report.

Hearings (OAH). Decisions from BMR can be appealed to OAH; decisions from OAH can be appealed to the Workers' Compensation Court of Appeals (WCCA) and then to the Minnesota Supreme Court.

BMR and OAH carry out a variety of dispute-resolution activities:

DLI Benefit Management and Resolution section activities

Informal intervention — A process in which BMR provides information or assistance to prevent a potential dispute, or communicates with the parties to resolve a dispute and/or determine whether a dispute should be certified. A resolution through intervention may occur either during or after the dispute certification process. The goal is to avoid a longer, more formal and costly process.

Dispute certification — A process required by statute for a medical or rehabilitation dispute, in which BMR must certify a dispute exists and that informal intervention did not resolve the dispute before an attorney may charge for services. BMR specialists attempt to resolve the dispute informally during the certification process.

Mediation — If the parties agree to participate, a BMR specialist conducts a mediation to seek agreement on the issues. Mediation agreements are usually recorded in an "award on agreement." Any type of dispute is eligible for mediation.

Administrative conference and decision and order — An administrative conference is an expedited, informal proceeding where the parties present and discuss viewpoints in a dispute. BMR conducts administrative conferences on rehabilitation issues and on medical issues involving $7,500 or less where the issues are presented on a *Rehabilitation Request* or a *Medial Request* form.[16] The BMR specialist usually attempts to bring the parties to agreement during the conference. If agreement is not achieved, the specialist issues a "decision and order." If BMR believes a dispute under its jurisdiction does not require a conference, it may issue a "nonconference decision and order."

Office of Administrative Hearings activities

Settlement conference — OAH conducts settlement conferences in litigated cases to achieve a negotiated settlement, where possible, without a formal hearing.

Administrative conference — Where the dispute filer has requested a conference, OAH conducts administrative conferences on discontinuance disputes and on medical disputes involving more than $7,500. The OAH judge conducting the conference issues a "decision and order."

Formal hearing — OAH conducts formal hearings on disputes presented on claim petitions (see "claim petition disputes" below) and on other petitions where resolution through a settlement conference is not possible. OAH also conducts hearings on some discontinuance disputes (see "discontinuance disputes" below), disputes referred by BMR because they do not seem amenable to less formal resolution, and disputes about miscellaneous issues such as attorney fees. OAH also conducts hearings *de novo* when requested by a party that disagrees with an administrative-conference or nonconference decision and order.

Counting disputes

Four "dispute" categories are used in this report:

Claim petition disputes — Disputes about primary liability and indemnity benefit issues are typically filed on a claim petition, which triggers a formal hearing or settlement conference at OAH. Some medical and vocational rehabilitation disputes are also filed on claim petitions.

Discontinuance disputes — Discontinuance disputes are most often initiated when the claimant requests an administrative conference (usually by phone) in response to the insurer's declared intention to discontinue temporary total or temporary partial benefits. These disputes may also be presented on the claimant's *Objection to Discontinuance* form or the insurer's petition to discontinue benefits, either of which leads to a hearing at OAH.

[16] This threshold was increased from $1,500 by the 2005 Legislature. Issues may also be referred to OAH for other reasons, such as if a request involves surgery or primary liability, litigation is pending at OAH or the issues are unusually complex.

Medical request disputes — Medical disputes are usually filed on a *Medical Request* form, which triggers an administrative conference at BMR or OAH after BMR certifies the dispute.

Rehabilitation request disputes — Vocational rehabilitation disputes are usually filed on a *Rehabilitation Request* form, which leads to an administrative conference at BMR after BMR certifies the dispute.

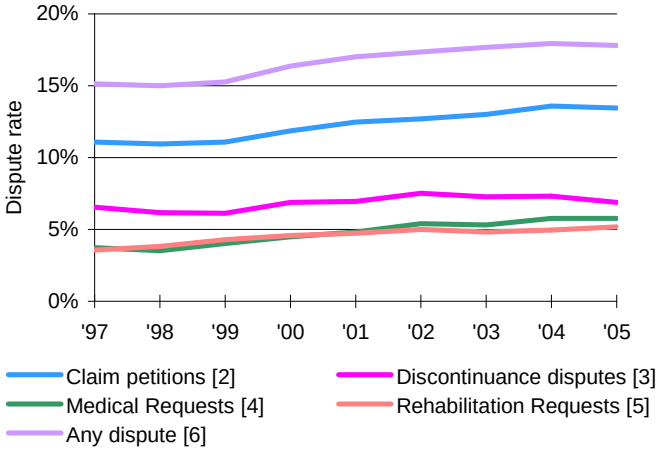
Many disputes, especially those handled by BMR through informal intervention, are not counted in these categories.

Dispute rates

After a period of stability from 1997 to 1999, the dispute rate rose sharply from 1999 to 2004 but leveled off between 2004 and 2005.

- The overall dispute rate increased from 15.1 percent in 1999 to 17.8 percent in 2005, an 18-percent increase.[17] During the same period:
  - ➢ the rate of claim petitions rose 2.3 percentage points (21 percent);
  - ➢ the rate of discontinuance disputes rose 0.4 point (5 percent);
  - ➢ the rate of Medical Requests rose 2.1 points (55 percent); and
  - ➢ the rate of Rehabilitation Requests rose 1.6 points (45 percent).

Figure 5.1 Incidence of disputes, injury years 1997-2005 [1]

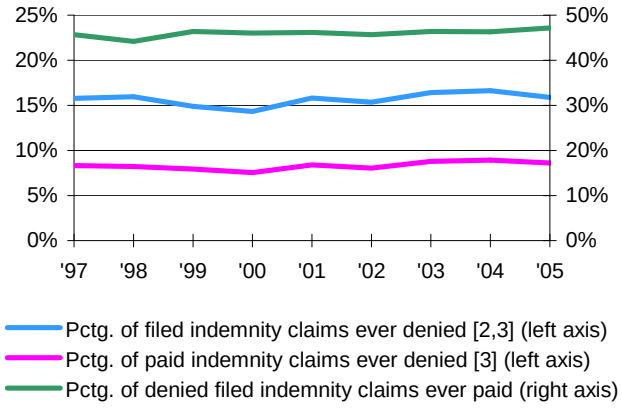


Injury year	Dispute rate				
	Claim petitions [2]	Discon-tinuance disputes [3]	Medical Requests [4]	Rehabili-tation Requests [5]	Any dispute [6]
1997	11.1%	6.5%	3.7%	3.6%	15.1%
1999	11.1	6.1	4.0	4.3	15.3
2001	12.5	6.9	4.8	4.7	17.0
2002	12.7	7.5	5.4	5.0	17.3
2003	13.0	7.3	5.3	4.8	17.7
2004	13.6	7.3	5.8	5.0	17.9
2005	13.4	6.9	5.8	5.2	17.8

1. Developed statistics from DLI data (see Appendix C).
2. Percentage of filed indemnity claims with claim petitions. (Filed indemnity claims are claims for indemnity benefits, whether ultimately paid or not.)
3. Percentage of paid wage-loss claims with discontinuance disputes.
4. Percentage of paid indemnity claims with Medical Requests.
5. Percentage of paid indemnity claims with Rehabilitation Requests.
6. Percentage of filed indemnity claims with any disputes.

[17] See note 6 on p. 9.

Figure 5.2 Indemnity claim denial rates, injury years 1997-2005 [1]



Injury year	Filed indemnity claims [2] Total	Filed indemnity claims [2] Pctg. ever denied [3]	Paid indemnity claims Total	Paid indemnity claims Pctg. ever denied [3]	Pctg. of denied filed indemnity claims ever paid
1997	38,900	15.8%	33,600	8.4%	45.7%
2000	39,700	14.3	34,600	7.6	46.0
2001	36,600	15.8	31,700	8.4	46.2
2002	33,900	15.4	29,600	8.0	45.6
2003	31,700	16.4	27,500	8.8	46.4
2004	31,000	16.6	26,700	8.9	46.3
2005	30,900	15.9	26,900	8.6	47.1

1. Developed statistics from DLI data.
2. Filed indemnity claims are claims for indemnity benefits, including claims paid and claims never paid.
3. Denied claims include claims denied and never paid, claims denied but eventually paid and claims initially paid but later denied.

Denials

Denials of primary liability are of interest because they frequently generate disputes. The denial rate was about the same in 2005 as in 1997, although it varied during the period.

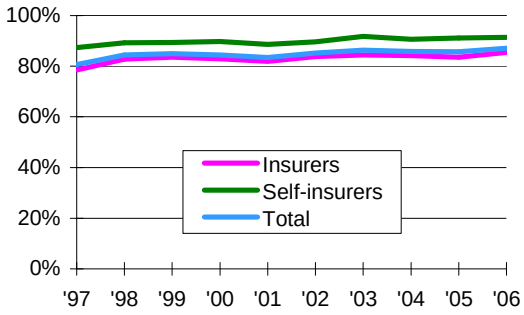
- The rate of denial of filed indemnity claims was 15.9 percent in 1998, essentially the same level as in 1997. The rate reached a low point of 14.3 percent in 2000 and a high point of 16.6 percent in 2004.
- The proportion of paid indemnity claims that had also been denied has been roughly 8 to 9 percent since 1997, with a low point of 7.6 percent in 2000. (These include cases denied and then paid or paid and then denied.)
- Among filed indemnity claims with denials, the proportion ever paid has ranged from 44 to 47 percent.

Prompt first action

Insurers must either begin payment on a wage-loss claim or deny the claim within 14 days of when the employer has knowledge of the injury.[18] This "prompt first action" is important not only for the sake of the injured worker, but also because disputes are less likely if the insurer responds promptly to the claim. The prompt-first-action rate has increased since 1997.[19]

- The fiscal year 2006 prompt-first-action rate was 87 percent, a six-percentage-point increase from 1997.
- The prompt-first-action rate is higher for self-insurers than for insurers.

Figure 5.3 Percentage of lost-time claims with prompt first action, fiscal claim-receipt years 1997-2006 [1]



Fiscal year of claim receipt	Insurers	Self-insurers	Total
1997	78.5%	87.3%	80.7%
2002	83.8	89.6	85.2
2003	84.5	91.8	86.4
2004	84.2	90.7	85.9
2005	83.6	91.2	85.7
2006	85.5	91.4	87.1

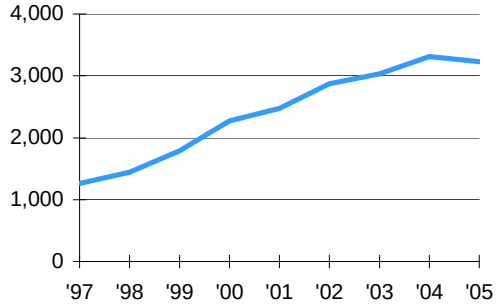
1. Computed from DLI data by DLI Benefit Management and Resolution. See DLI Benefit Management and Resolution, *2006 Prompt First Action Report.* Fiscal claim-receipt year means the fiscal year in which DLI received the claim. Fiscal years are from July 1 through June 30; for example, July 1, 2005 through June 30, 2006 is fiscal year 2006.

Dispute certification requests

The absolute numbers of disputes and of dispute certification requests are important for understanding data to be presented in Figures 5.6-5.12 about the volume of dispute resolution activity at BMR, the Office of Administrative Hearings and the Workers' Compensation Court of Appeals.

- The number of dispute certification requests grew from about 1,300 in 1997 to 3,300 in 2004, but tapered off slightly in 2005.
- These requests constitute only part of the demand for dispute certification at BMR, because many Medical and Rehabilitation Requests are not preceded by certification requests, but the dispute certification process still occurs in those cases.

Figure 5.4 Dispute certification requests filed, calendar years 1997-2005 [1]



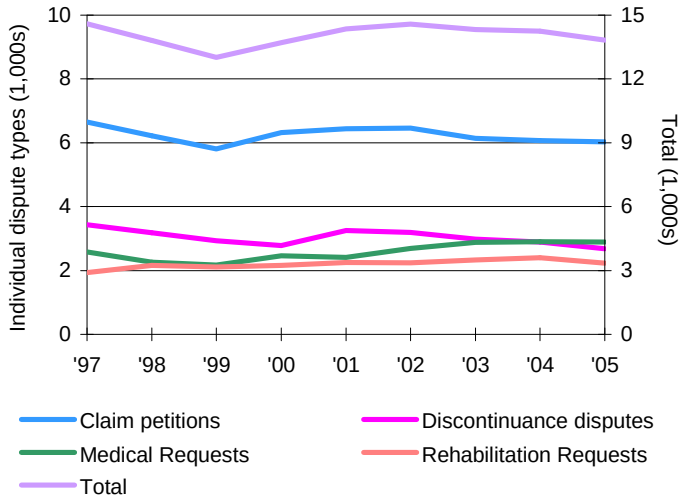
Calender year	Requests filed
1997	1,260
2001	2,480
2002	2,870
2003	3,030
2004	3,310
2005	3,230

1. Data from DLI. Numbers rounded to the nearest 10.

[18] Minnesota Statutes §176.221.

[19] To improve system performance, BMR publishes the annual *Prompt First Action Report* about the prompt-first-action performance of individual insurers and self-insurers and of the overall system.

Figure 5.5 Disputes filed, calendar years 1997-2005 [1]



Calendar year filed	Claim petitions		Discontinuance disputes		Medical Requests		Rehabilitation Requests		Total [2]
	Number	Pctg. of total	Number	Pctg. of total	Number	Pctg. of total	Number	Pctg. of total	
1997	6,650	46%	3,430	24%	2,580	18%	1,940	13%	14,590
2001	6,440	45	3,250	23	2,410	17	2,250	16	14,350
2002	6,460	44	3,190	22	2,690	18	2,240	15	14,580
2003	6,140	43	2,980	21	2,880	20	2,330	16	14,320
2004	6,070	43	2,890	20	2,900	20	2,400	17	14,250
2005	6,030	44	2,680	19	2,890	21	2,230	16	13,830

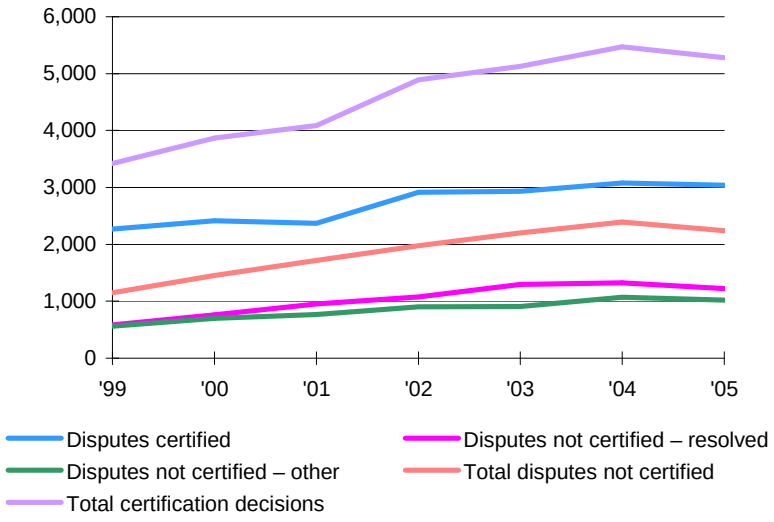
1. Data from DLI. Numbers rounded to nearest 10.
2. Total of those dispute types shown here.

Disputes filed

The numbers of claim petitions and of discontinuance disputes fell between 1997 and 2005; the numbers of Medical and Rehabilitation Requests increased; the total number of these disputes fell.

- From 1997 to 2005:
  - Claim petitions fell nine percent;
  - discontinuance disputes fell 22 percent;
  - Medical Requests rose 12 percent;
  - Rehabilitation Requests rose 15 percent; and
  - the total number of these disputes fell five percent.
- In 2005, claim petitions accounted for 44 percent of all disputes filed. Of the remainder, discontinuance disputes and Medical Requests were about equally numerous while Rehabilitation Requests were somewhat less common.
- These trends are the net result of higher dispute rates (Figure 5.1) and falling numbers of claims (Figure 5.2).

Figure 5.6 Dispute certification activity at DLI Benefit Management and Resolution, calendar years 1999-2005 [1]



Calendar year	Disputes certified		Disputes not certified						Total certification decisions
			Resolved		Other reasons		Total not certified		
	Number	Pctg. of total	Number	Pctg. of total	Number	Pctg. of total	Number	Pctg. of total	
1999	2,270	66%	590	17%	570	17%	1,150	34%	3,420
2000	2,410	62	760	20	700	18	1,450	38	3,870
2001	2,370	58	950	23	770	19	1,720	42	4,090
2002	2,920	60	1,080	22	900	18	1,980	40	4,890
2003	2,930	57	1,300	25	910	18	2,200	43	5,130
2004	3,080	56	1,320	24	1,070	20	2,390	44	5,470
2005	3,040	58	1,220	23	1,020	19	2,240	42	5,280

1. Data from DLI. Data not available before 1999. Numbers rounded to nearest 10.

Dispute certification

Dispute certification activity at BMR increased from 1999 to 2005.

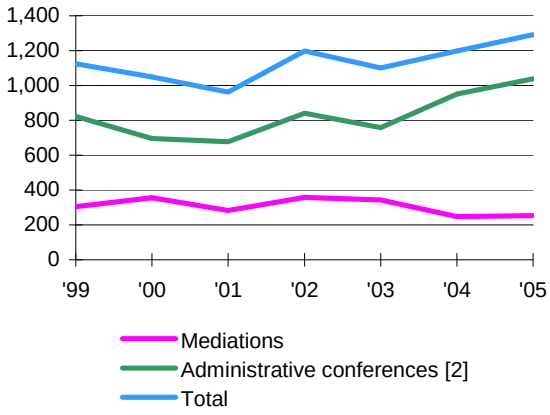
- BMR produced 5,280 certification decisions in 2005, an increase of 54 percent from 1999.
  - ➢ This parallels the increase in certification requests in Figure 5.4.
  - ➢ The number of certification decisions is greater than the number of certification requests in Figure 5.4 because many Medical and Rehabilitation Requests are not preceded by certification requests, but dispute certification still occurs in those cases.
- Between 1999 and 2005, the percentage of disputes certified fell from 66 percent to 58 percent. Most of this change occurred between 1999 and 2001, and it was attributable primarily to an increase in the percentage of disputes not certified because they were resolved.
- Among the disputes not certified, the percentage resolved rose from 51 percent in 1999 to 54 percent in 2005. In the remaining cases not certified, no dispute was found to exist.

Mediations and administrative conferences at DLI

Since 1999, the number of administrative conferences at BMR has increased, while the number of mediations has decreased.

- From 1999 to 2005:
  - Administrative conferences rose by 220;
  - mediations fell by 50; and
  - total conferences and mediations increased by 160.[20]
- The increase in total conferences and mediations is to be expected in view of the increase in Medical and Rehabilitation Requests during the same period (Figure 5.5).
- BMR increased its emphasis on mediation in 2006 and 2007, and so the relative number of mediations is expected to increase.

Figure 5.7 Mediations and administrative conferences at DLI Benefit Management and Resolution, calendar years 1999-2005 [1]



Calendar year	Mediations	Administrative conferences [2]	Total
1999	300	820	1,130
2001	280	680	960
2002	360	840	1,200
2003	340	760	1,100
2004	250	950	1,200
2005	250	1,040	1,290

1. Data from DLI. Data not available before 1999. Numbers rounded to nearest 10.
2. Includes conferences where agreement was reached.

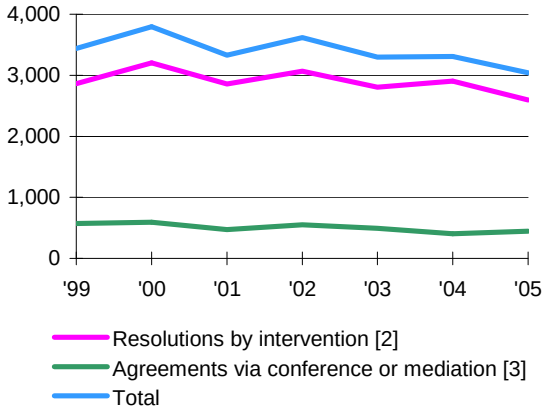
[20] Numbers do not add because of rounding.

Resolutions by agreement at DLI

The number of resolutions by agreement at BMR has declined since 1999.

- From 1999 to 2005:
  - Resolutions by intervention fell by 270;
  - agreements via mediation or administrative conference fell by 120; and
  - total resolutions by agreement fell by 400.[21]
- Resolutions by intervention accounted for 85 percent of the total resolutions by agreement in 2005.

Figure 5.8 Resolutions by agreement at DLI Benefit Management and Resolution, calendar years 1999-2005 [1]



Calendar year	Resolutions by intervention [2]	Agreements via mediation or conference [3]	Total
1999	2,860	570	3,440
2001	2,860	470	3,330
2002	3,070	550	3,620
2003	2,810	490	3,300
2004	2,900	410	3,310
2005	2,590	450	3,040

1. Data from DLI. Data not available before 1999. Numbers rounded to nearest 10.
2. These are instances in which a BMR specialist, through phone or walk-in contact or correspondence, resolved a dispute prior to a mediation or conference. Many of these resolutions occur through the dispute certification process.
3. These include mediation awards and other agreements.

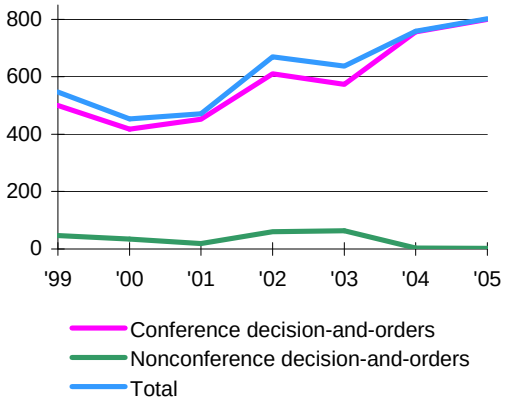
[21] Numbers do not add because of rounding.

Resolutions by decision and order at DLI

The number of resolutions by decision and order at BMR has increased since 1999.

- From 1999 to 2005, the total number of decision-and-orders increased from 550 to 800.
- The vast majority of decision-and-orders are via conference.
- The trend in conference decision-and-orders parallels the trend in administrative conferences (Figure 5.8).

Figure 5.9 Resolutions by decision and order at DLI Benefit Management and Resolution, calendar years 1999-2005 [1]



Calendar year	Conference decision-and-orders	Non-conference decision-and-orders	Total
1999	500	50	550
2001	450	20	470
2002	610	60	670
2003	570	60	640
2004	760	[2]	760
2005	800	[2]	800

1. Data from DLI. Data not available before 1999. Numbers rounded to nearest 10.
2. Fewer than five cases.

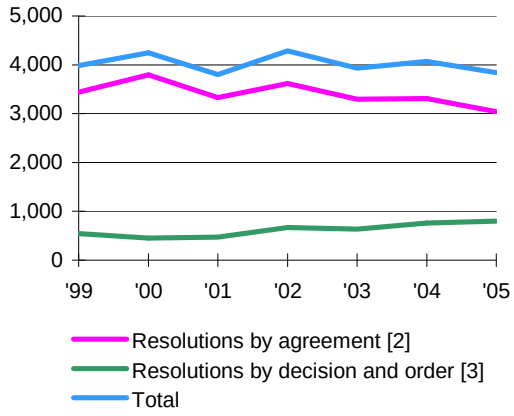
Total resolutions at DLI

The total number of resolutions at BMR has stayed about the same since 1999. Resolutions by agreement have fallen while resolutions by decision and order have increased.

- From 1999 to 2005:
  - Total resolutions by agreement fell by 400 (12 percent);
  - total resolutions by decision and order rose by 250 (47 percent); and
  - total resolutions fell by 150 (4 percent).

- Resolutions by agreement accounted for 79 percent of all resolutions in 2005, down from 86 percent in 1999. As indicated in Figure 5.8, most resolutions by agreement are by intervention in disputes before they reach mediation or conference.

Figure 5.10 Total resolutions at DLI Benefit Management and Resolution, calendar years 1999-2005 [1]



Calendar year	Resolutions by agreement [2]		Resolutions by decision and order [3]		Total
	Number	Pctg.	Number	Pctg.	
1999	3,440	86%	550	14%	3,990
2001	3,330	88	470	12	3,800
2002	3,620	84	670	16	4,290
2003	3,300	84	640	16	3,940
2004	3,310	81	760	19	4,070
2005	3,040	79	800	21	3,840

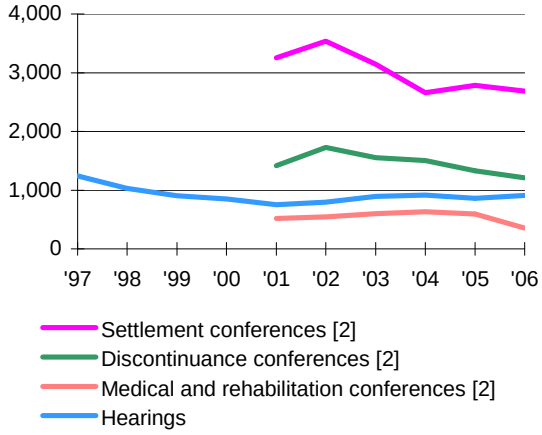
1. Data from DLI. Data not available before 1999. Number rounded to nearest 10.
2. From Figure 5.9.
3. From Figure 5.10.

Dispute resolution at OAH

At OAH, the numbers of settlement conferences, discontinuance conferences, and medical and rehabilitation conferences have fallen since 2001. Hearings have increased since that time, but are below their 1997 level.

- From 2001 to 2006:
  - Settlement conferences fell by about 570 (17 percent);
  - discontinuance conferences fell by 200 (14 percent);
  - medical and rehabilitation conferences fell by 160 (31 percent); and
  - hearings increased by 160 (21 percent).
- Hearings in 2006 were down by about 330 from 1997 (27 percent).
- These trends roughly follow the dispute trends in Figure 5.5.[22]

Figure 5.11 Dispute resolution activity at the Office of Administrative Hearings, fiscal years 1997-2006 [1]



Fiscal year	Settlement conferences [2]	Discontinuance conferences [2]	Medical and rehab conferences [2]	Hearings
1997				1,240
2001	3,254	1,415	516	753
2002	3,537	1,726	544	795
2003	3,143	1,551	601	895
2004	2,661	1,506	633	914
2005	2,784	1,328	595	860
2006	2,687	1,211	356	910

1. Data from OAH.
2. Not available before 2001.

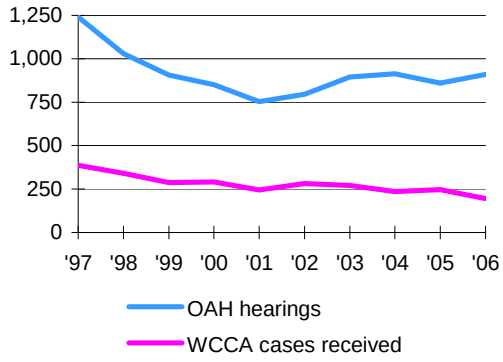
[22]Claim petitions and hearings both fell between 1997 and 2005; discontinuance disputes (most of which involve requests for conference) and discontinuance conferences both fell between 2001 and 2005; total Medical and Rehabilitation Requests and medical and rehabilitation conferences rose between 2001 and 2005. The relationship between Medical and Rehabilitation Requests and OAH conferences is ambiguous because many medical conferences and most rehabilitation conferences occur at BMR. The relationship between settlement conferences and disputes is also ambiguous because these conferences involve all dispute types.

OAH hearings and WCCA cases

Both OAH hearings and cases received at WCCA have declined since 1997.

- The number of cases received at WCCA fell by about half from 1997 to 2006, from 386 to 196.
- The number of cases received at WCCA also fell as a percentage of the number of OAH hearings, from 31 percent in 1997 to 22 percent in 2006. This indicates a reduced appeal rate.

Figure 5.12 Hearings at the Office of Administrative Hearings and cases received at the Workers' Compensation Court of Appeals, fiscal years 1997-2006 [1]



Fiscal year	OAH hearings [2]	WCCA cases received [3]	WCCA cases as percentage of OAH hearings
1997	1,240	386	31%
2001	753	245	33
2002	795	282	35
2003	895	271	30
2004	914	236	26
2005	860	247	29
2006	910	196	22

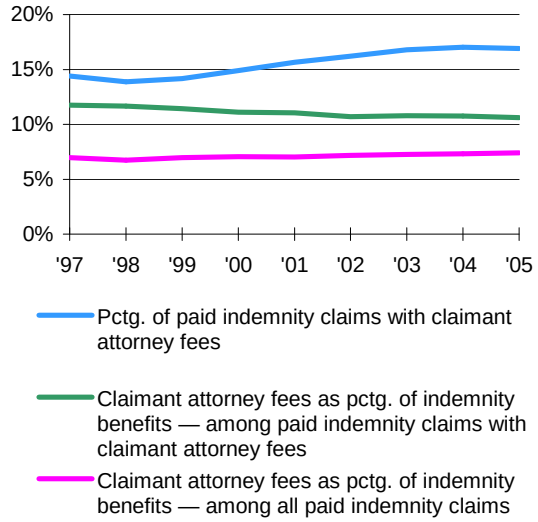
1. Data from OAH and WCCA.
2. From Figure 5.12.
3. Includes cases with and without hearings. Both types of cases are usually disposed of by decisions but sometimes by settlement. Statistics are unavailable about the number of hearings at WCCA. Currently, about 75 percent of cases received have hearings. This percentage has risen over time.

Claimant attorney involvement

Claimant attorney involvement has increased since 1997.

- From 1997 to 2005, the percentage of paid indemnity claims with claimant attorney fees[23] rose from 14.4 percent to 16.9 percent, a 17-percent increase.[24] This parallels a similar increase in the dispute rate (Figure 5.1).
- Among paid indemnity claims with claimant attorney fees, the ratio of attorney fees to indemnity benefits fell from 11.8 percent to 10.6 percent during the same period.
- Among all paid indemnity claims, claimant attorney fees accounted for about seven percent of indemnity benefits during the period shown.
- Total claimant attorney fees are estimated at $31 million for injury year 2005. This represents 1.9 percent of total workers' compensation system cost for that year.

Figure 5.13 Claimant attorney fees paid with respect to indemnity benefits, injury years 1997-2005 [1]



Injury year	Percentage of paid indemnity claims with claimant attorney fees	Claimant attorney fees as percentage of indemnity benefits: Among paid indemnity claims with claimant attorney fees	Claimant attorney fees as percentage of indemnity benefits: Among all paid indemnity claims
1997	14.4%	11.8%	7.0%
2001	15.6	11.0	7.0
2002	16.2	10.7	7.2
2003	16.8	10.8	7.3
2004	17.0	10.8	7.3
2005	16.9	10.6	7.4

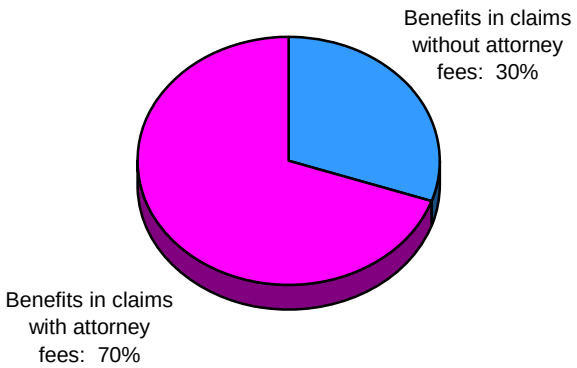
1. Developed statistics from DLI data. Includes claimant attorney fees determined as a percentage of indemnity benefits plus additional amounts awarded to the claimant attorney upon application to a judge. See Appendix C.

Indemnity benefits affected by claimant attorney involvement

Claims with claimant attorney involvement accounted for 70 percent of all indemnity benefits for injury year 2005.

- This is even though these claims accounted for only 17 percent of all paid indemnity claims (Figure 5.13).
- The reason is that claims with attorney involvement had an average of $64,000 in indemnity benefits as opposed to $15,000 for all paid indemnity claims.

Figure 5.14 Indemnity benefits in paid indemnity claims with and without claimant attorney fees, injury year 2005 [1]



1. Data from DLI.

[23] See note 1 in figure.
[24] See note 6 on p. 9.

6

Medical cost detail for a large insurer

An important finding from Chapter 2 is that between policy years 1997 and 2004, average medical benefits per insured claim grew 60 percent after adjusting for wage growth. This chapter presents additional statistics about medical costs. DLI Policy Development, Research and Statistics (PDRS) computed these statistics from detailed Minnesota workers' compensation medical cost data from a large insurer. The experience of this insurer is not necessarily a close representation of Minnesota's overall workers' compensation system. For example, possibly because of active cost-control measures taken by this insurer (see p. 48), its medical cost increases have been less than those of the overall system. However, this insurer has still experienced large cost increases for some types of services and providers, and its experience should provide insight into many of the factors driving the state's workers' compensation medical costs.

This year's report retains the service-group categorization used in prior reports, but also presents an analysis by provider group.

Major findings

The following findings emerge from this insurer's data for injury years 1997 to 2005:

From the analysis by service group:

- After adjusting for average wage growth, per-claim expenditures increased 77 percent for outpatient facility services, 64 percent for drugs and 45 percent for radiology (Figure 6.3).
- Of the $486 increase in total medical cost per claim, outpatient facility services accounted for $147 (29 percent), radiology $81 (16 percent) and drugs $67 (13 percent) (Figure 6.3).
- For all service groups except "other services," the cost increase came primarily from an increasing average cost per claim with the service, as opposed to an increasing proportion of claims receiving the service (Figure 6.4).
- For radiology and surgery, an increasingly expensive service mix was responsible for most of the increase in cost per claim with service — 31 percentage points of the 34-percent increase for radiology and all of the 14-percent increase for surgery (Figure 6.5).
- All service groups and provider types not subject to the fee schedule[25] showed significant increases in cost per unit of service, while those subject to the fee schedule did not (Figure 6.5).

From the analysis by provider group:

- After adjusting for average wage growth, per-claim expenditures increased 34 percent for facility providers as opposed to 22 percent for nonfacility providers (Figure 6.7).
- In-state facility providers contributed $267 (55 percent) of the overall increase of $486 per claim, as opposed to $226 (47 percent) for in-state nonfacility providers (Figure 6.7).[26]
- The average cost of outpatient hospital services fell 6 percent for large hospitals but increased 41 percent for small hospitals. This almost completely accounted for the different increases in per-claim expenditures for large- and small-hospital services — 17 percent for

[25] The term "fee schedule" in this report excludes the pharmacy reimbursement formula.

[26] These two percentages add up to more than 100 percent because out-of-state providers showed a slight decrease.

large hospitals vs. 54 percent for small hospitals (Figures 6.7 and 6.8).

- Cost per claim increased 37 percent for services not covered by the fee schedule as opposed to 11 percent for covered services. Most of this difference arose because the cost of service per claim with service rose 26 percent for services not covered by the fee schedule as compared with 9 percent for covered services (Figures 6.7 and 6.8).

Background

Current cost-control mechanisms

The current mechanisms for controlling medical costs in Minnesota's workers' compensation system came about largely in the 1992 law changes and in rules following those changes. The three most important cost-control mechanisms (apart from procedures established by individual insurers) are the medical fee schedule, treatment parameters and the authorization to use certified managed care organizations.

Fee schedule — The fee schedule sets reimbursement limits for a range of medical services in nonhospital and outpatient-large-hospital settings.[27] The schedule covers evaluation and management, surgery, radiology, pathology and laboratory services, physical medicine and rehabilitation, chiropractic manipulations and "other medicine."[28] It is a "relative value" schedule. It uses "relative value units" (RVUs) from Medicare adapted for Minnesota. The reimbursement limit for each service is the product of the RVU for that service and a "conversion factor" (CF) indicating the amount of allowable reimbursement per RVU. By law, the CF is adjusted each year by no more than the percent increase in the statewide average weekly wage (SAWW). From 1993 through 2001, the CF was adjusted by the percent increase in the SAWW; beginning in 2002, it has been adjusted by the percent change in the producer price index for physicians.[29]

A separate formula applies to reimbursement of pharmacy charges for nonhospital providers and for large hospitals in outpatient settings.[30] *The term "fee schedule" in this report excludes the pharmacy reimbursement formula.*

Generally, nonhospital services not covered by the fee schedule or pharmacy formula are reimbursed at 85 percent of the provider's "usual and customary charge" (U&C) for the service. All large-hospital inpatient services and those large-hospital outpatient services not covered by the schedule or pharmacy formula are also reimbursed at 85 percent of U&C. All small-hospital services are reimbursed at 100 percent of U&C. For services not covered by the fee schedule or pharmacy formula where the provider is not a small hospital, insurers may instead pay 85 percent of "prevailing charge." Prevailing charge must be computed from charges of similar in-state providers for the same service according to standards in rule.

Treatment parameters — The treatment parameters are guidelines for the treatment of low back pain, neck pain, thoracic back pain and upper extremity disorders. They cover diagnosis (including diagnostic imaging procedures), conservative (nonsurgical) treatment, surgical treatment, inpatient hospitalization and chronic

[27] Large hospitals are those with more than 100 licensed beds.

[28] "Other medicine" includes certain services not in the above categories but with Current Procedural Terminology (CPT) codes (trademark of the American Medical Association). These include, among others, immunization, psychiatry, ophthalmology, cardiovascular and pulmonary tests and procedures, and neurology and neuromuscular tests and procedures.

[29] The fee schedule distinguishes among four provider groups: medical/surgical, physical medicine, pathology and laboratory, and chiropractic. Through Sept. 30, 2005, the RVUs for these groups were scaled relative to one another to bring about reimbursement levels mandated by the 1992 legislature. Effective Oct. 1, 2005, this is achieved instead through different conversion factors for the four groups.

[30] With two exceptions, the maximum reimbursement for drugs in nonhospital and outpatient large-hospital settings is the average wholesale price (AWP) plus a $5.14 dispensing fee (not to exceed the provider's retail price or usual and customary charge). Under a 2005 law change, insurers and self-insurers may negotiate rates with a pharmacy network through which the injured worker must fill prescriptions if the network includes a pharmacy within 15 miles of his or her home. Under a rule change effective April 2006, if electronic billing and payment occur according to standards, the maximum reimbursement in nonhospital and outpatient large-hospital settings is the lowest of 88 percent of AWP plus a $3.65 dispensing fee, the allowable reimbursement under the medical assistance program plus a $3.65 dispensing fee, or the provider's usual and customary charge.

management.[31] The rules allow for treatments outside of the parameters if circumstances warrant. Insurers may deny payment for medical services outside of the parameters.[32]

Certified managed care organizations (CMCOs) — Employers and insurers may require workers (with certain exceptions) to obtain medical care for work injuries from providers in a CMCO network. CMCOs are certified by DLI on the basis of statutory criteria. Currently, there are three CMCOs in Minnesota.

Research data

The research data, from a large insurer, includes details about claimant characteristics, injury diagnosis, and medical treatment and cost.

A comparison of the research data with DLI claims data (representing the overall population of claims) shows a general similarity between the two with regard to broad industry group, claimant gender and age, and type of injury. However, compared to the overall population of claims, the research data has somewhat higher proportions of men, younger workers and claims in the construction and retail sectors. Some of these differences disappear when self-insured claims (in the overall claim population) are removed from the comparison.[33]

Analytical approach

To analyze the major contributing factors to medical cost and to medical cost increases, this study first employs a service categorization and then a provider categorization.

The following categories are used in the analysis by service group:

- evaluation and management (e.g., office visits, consultations, emergency room visits, visits with hospital patient);
- surgery;
- anesthesia;
- radiology;
- pathology and laboratory services;
- chiropractic manipulations;
- physical medicine;[34]
- drugs (prescription and nonprescription drugs for use at home or in patient-care settings);
- equipment and supplies;
- inpatient hospital facility services (those not included in the above categories);
- outpatient facility services (those not included in the above categories); and
- other services.[35]

Inpatient hospital facility services and outpatient facility services are limited to services not listed separately, such as the use of the facility itself. Although other services listed may sometimes be provided by the facility (as opposed to an outside provider performing the service in the facility), they are not "facility services" *per se*. Outpatient facilities include hospital outpatient facilities and ambulatory surgical centers (ASCs).

Each service group encompasses all services of the indicated type regardless of provider. For most service groups, the analysis considers relevant subcategories usually relating to provider type. For service groups included in the fee schedule, providers are split into those subject to the schedule and those not. Providers subject to the schedule include all nonhospital providers (including ASCs) other than nursing homes, plus large hospitals where the service is provided in an outpatient setting. Providers not subject to the schedule include small hospitals, large hospitals where the service is provided in an inpatient setting and nursing homes. For drugs, providers are divided into those subject to the drug reimbursement formula and those not.[36]

For service groups not covered by the fee schedule, the analysis distinguishes between facility and nonfacility providers, where facilities include hospitals and ASCs. For outpatient facility services, hospitals and ASCs are considered separately. For inpatient hospital facility services, the analysis distinguishes between overnight room and other services.

[31] The parameters concerning chronic management and some imaging procedures apply to all injuries.

[32] Medical providers may appeal a denial of payment.

[33] Details available upon request from DLI PDRS.

[34] Includes physical therapy and occupational therapy regardless of provider. Osteopathic manipulations are included in "other services."

[35] Includes "other medicine" (see note 28) and several miscellaneous services such as transportation and dentistry. "Other medicine" and "other services" were treated as separate categories in last year's report, but are now combined.

[36] See note 30.

The following categories are used in the analysis by provider group:

- In-state nonfacility providers;
- in-state facility providers; and
- out-of-state providers.

In-state and out-of-state providers are distinguished because the latter are not subject to Minnesota workers' compensation cost-control provisions. Facility providers are divided into large and small hospitals (and further into inpatient vs. outpatient settings), ASCs and nursing homes. Services provided by nonfacility providers and in large-hospital outpatient settings are further divided into those covered by the fee schedule and those not.

The analysis presents data by year of injury for injury years 1997 to 2005 (the most recent year in the research data).[37] It uses 1997 as the base year because 1997 is the earliest year in a period of relatively low medical costs in both the overall insurance data and the research data.

As elsewhere in the report, the statistics are presented at a uniform maturity so as to be comparable over time. In this chapter, the statistics are presented at an average maturity of five years after the date of injury (see Appendix C).

Because the composition of claims changes over time with respect to gender, age and injury type, all statistics are adjusted for changes in these factors. In addition, as throughout the report, trends in cost per claim are adjusted for average wage growth.[38] Because of these adjustments, the statistics in this chapter show how medical cost and service utilization would have changed during the period examined if gender, age and injury type had remained constant, and they show the degree to which costs have increased faster than general wage growth. Thus, the statistics do not exactly represent trends in actual cost and utilization. Instead, they represent trends due to factors other than changing gender, age and injury type and, where costs are concerned, trends relative to general wage growth.

Terminology

The cost numbers in this chapter do not represent full medical cost for the claims in question, because the numbers are based on payments only, as opposed to payments plus reserves, and the numbers are developed only to a moderate maturity (five years). However, this chapter uses the term "medical cost" for consistency with the remainder of the report.

Throughout the analysis, a distinction is made between the average cost of a type of service *for claims with that service* and the average cost of the service *for all claims*. The latter is important for understanding the contribution of the service group to total medical cost. It is the product of the percentage of claims with the service and the average cost of the service for claims with the service. For convenience, the discussion refers to the average cost of a service for all claims as the cost of the service "per total claim." The same distinction and terminology are used in the analysis by provider group.

[37] See definition of injury year data in Appendix A.

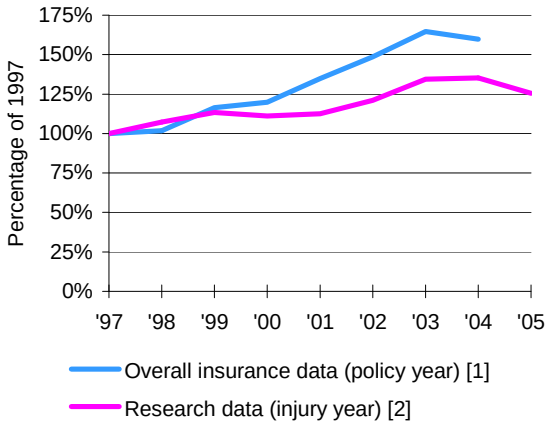
[38] See "Adjustment of cost data for wage growth" in Chapter 1 for rationale. See Appendix C for computational details.

Overall medical cost trend in research data

Average workers' compensation medical cost per claim was lower and grew more slowly in the research data than in the overall insurance data (Figure 6.1).

- In the overall insurance data, average medical cost per claim grew by 60 percent from 1997 to 2004; in the research data it grew by 35 percent during the same period.
- Average medical cost in the research data fell between 2004 and 2005. Allowing for this, the research data showed a 25-percent increase from 1997 to 2005.
- For two reasons, the comparison between the research data and the overall insurance data should be viewed with caution:
  - ➢ The research data reflects payments only, while the overall insurance data reflects payments plus reserves set aside by insurers to cover expected future costs of the claims concerned. This adds to the average cost per claim in the overall insurance data, and could affect the rate of change in cost per claim in the overall insurance data as well.
  - ➢ As previously indicated, the trends in the research data are statistically adjusted to remove the effects of changes in age, gender and injury mix over time; this is not true of the overall insurance data. If, for example, an aging claimant population tends to increase average medical cost, this would be reflected in the overall insurance data but not in the research data.

Figure 6.1 Average medical cost per claim: overall insurance data and research data, 1997-2005



Policy or injury year	Overall insurance data (policy year) [1]		Research data (injury year) [2]	
	Amount per claim	Pctg. of 1997	Amount per claim	Pctg. of 1997
1997	$2,390	100.0%	$1,910	100.0%
1998	2,440	101.8	2,050	107.4
1999	2,790	116.4	2,160	113.3
2000	2,870	119.8	2,120	111.1
2001	3,230	134.9	2,150	112.4
2002	3,550	148.6	2,310	121.0
2003	3,940	164.6	2,570	134.3
2004	3,820	159.8	2,580	135.2
2005	[3]	[3]	2,400	125.5

1. From Figure 2.4.
2. Developed statistics computed from data from a large insurer with fixed weights for gender, age and type of injury. Costs are adjusted for average wage growth between the respective year and 2005. (See text.)
3. Not yet available.

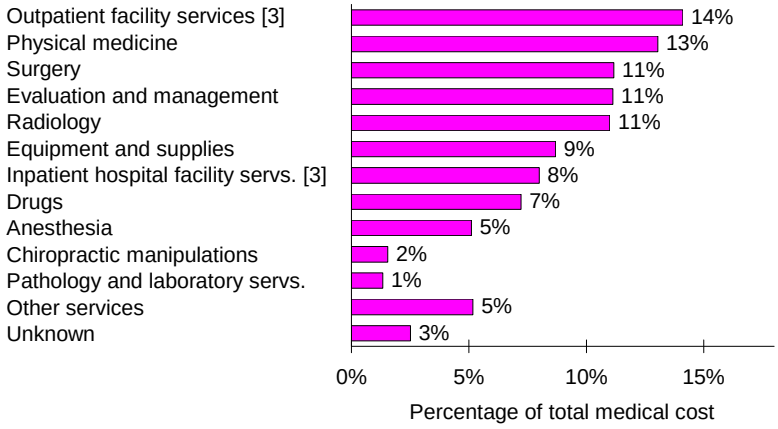
Service group analysis: current cost distribution

The cost of each service group per total claim is the product of (1) the percentage of claims with that type of service and (2) the average cost of that service per claim with the service.

The largest components of total medical cost for injury year 2005 were outpatient facility services and physical medicine (Figure 6.2).

- Outpatient facility services accounted for 14 percent of total medical cost for 2005, followed by physical medicine, with 13 percent of the total.
- The most prevalent types of service (according to the percentage of claims with the service) were evaluation and management (84 percent of claims), drugs (46 percent) and radiology (43 percent).
- The types of service with the greatest average cost (per claim with the service) were inpatient hospital facility services ($10,830), anesthesia ($1,940) and physical medicine ($1,240).
- For some service groups, the cost per claim with service varies widely by provider type. This may occur because of differences in quantity of service per claim, complexity of service or cost per unit of service.
  - ➢ Notably, outpatient facility services cost $3,750 per claim with service for ASCs, compared to $800 for outpatient hospital facilities. Determining

Figure 6.2 Medical cost per claim by service group, injury year 2005 [1]



Service group [2]	Pctg. of claims w/ service	Cost per claim w/ service	Cost per total claim	Pctg. of total cost
Outpatient facility services [3]	33%	$1,040	$340	14%
Outpatient hospital facilities	*31*	*800*	*250*	*10*
Ambulatory surgical centers	*2*	*3,750*	*90*	*4*
Physical medicine	25	1,240	310	13
Providers subject to fee sched. —				
Nonchiropractic providers	*16*	*1,240*	*200*	*8*
Chiropractic providers	*8*	*330*	*30*	*1*
Providers not subj. to fee sched.	*5*	*1,790*	*90*	*4*
Surgery	32	850	270	11
Providers subject to fee schedule	*30*	*850*	*250*	*11*
Providers not subj. to fee schedule	*2*	*610*	*10*	*0.6*
Evaluation and management	84	320	270	11
Providers subject to fee schedule	*81*	*310*	*250*	*11*
Providers not subj. to fee schedule	*6*	*260*	*20*	*0.6*
Radiology	43	610	260	11
Providers subject to fee schedule	*41*	*450*	*180*	*8*
Providers not subj. to fee schedule	*9*	*890*	*80*	*3*
Equipment and supplies	32	650	210	9
Nonfacility providers	*20*	*280*	*60*	*2*
Facility providers	*17*	*880*	*150*	*6*
Inpatient hospital facility services [3]	2	10,830	190	8
Overnight room [4]	*2*	*3,710*	*60*	*3*
Other	*2*	*7,360*	*130*	*5*
Drugs	46	370	170	7
Providers subj. to reimb. formula [5]	*41*	*300*	*120*	*5*
Providers not subj. to formula [5]	*9*	*540*	*50*	*2*
Anesthesia	6	1,940	120	5
Nonfacility providers	*6*	*1,270*	*70*	*3*
Facility providers	*4*	*1,180*	*50*	*2*
Chiropractic manipulations	9	400	40	2
Pathology and laboratory services	8	370	30	1
Other services	23	530	120	5
Unknown	21	280	60	3
Total	100%	$2,400	$2,400	100%

1. Computed from data from a large insurer (see Appendix C).
2. See text (p. 42) for additional detail about service groups and subcategories.
3. The costs of "facility services" shown here are only for use of the facility and do not include costs of other services (e.g., evaluation and management, radiology, anesthesia) provided by the facilities concerned, and are therefore less than the costs attributed to facility providers in Figure 6.6.
4. Excludes intensive care unit.
5. See note 30 in text.

the meaning of this difference requires further analysis.[39]

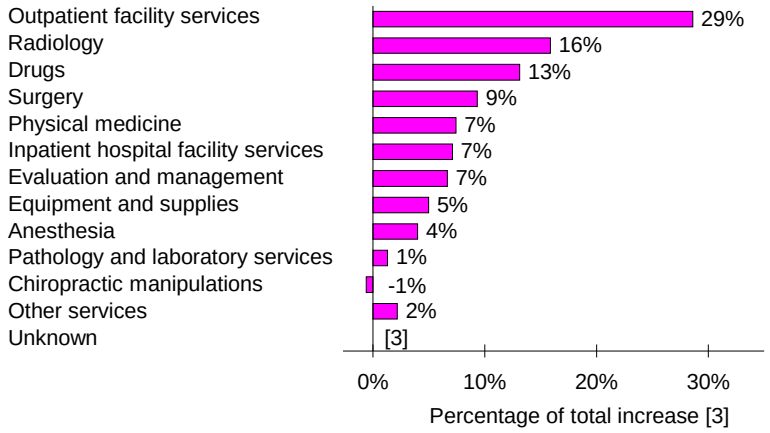
Service group analysis: major contributors to cost increase

Outpatient facility services and drugs showed the largest *percent increases* in cost per total claim from 1997 to 2005. Outpatient facility services and radiology contributed the largest *amounts* to the overall increase in cost per total claim (Figure 6.3).

- After adjusting for average wage growth, expenditures per total claim increased 77 percent for outpatient facility services, 64 percent for drugs and 45 percent for radiology.

- Of the $486 increase in total medical cost per claim, outpatient facility services accounted for $147 (29 percent), radiology $81 (16 percent) and drugs $67 (13 percent). These contributions to the increase in cost per total claim depend on both the *percent increase* in the cost of the service per total claim (column one of Figure 6.3) and the *percentage of total cost* accounted for by the service in 1997, the base year of the analysis period (the 2005 percentage of total cost is in column four of Figure 6.2).

Figure 6.3 Contributions of service groups to overall change in total medical cost per total claim between injury years 1997 and 2005 [1]



Service group [2]	Percent change in cost per total claim	Amount of change in cost per total claim	Percentage of total cost increase [3]
Outpatient facility services	77%	$147	29%
Outpatient hospital facilities	*42*	*74*	*14*
Ambulatory surgical centers	*446*	*73*	*14*
Radiology	45	81	16
Providers subject to fee schedule	*37*	*50*	*10*
Providers not subject to fee schedule	*67*	*32*	*6*
Drugs	64	67	13
Providers subj. to reimb. formula [4]	*85*	*57*	*11*
Providers not subject to formula [4]	*27*	*11*	*2*
Surgery	22	48	9
Providers subject to fee schedule	*24*	*49*	*10*
Providers not subj. to fee schedule	*-9*	*-1*	*0*
Physical medicine	14	38	7
Providers subject to fee sched. —			
Nonchiropractic providers	*9*	*17*	*3*
Chiropractic providers	*-10*	*-3*	*-1*
Providers not subject to fee schedule	*38*	*24*	*5*
Inpatient hospital facility services	24	36	7
Overnight room [5]	*-2*	*-1*	*0*
Other	*41*	*38*	*7*
Evaluation and management	15	34	7
Providers subject to fee schedule	*18*	*37*	*7*
Providers not subject to fee schedule	*-18*	*-3*	*-1*
Equipment and supplies	14	26	5
Nonfacility providers	*20*	*9*	*2*
Facility providers	*12*	*16*	*3*
Anesthesia	20	20	4
Nonfacility providers	*35*	*19*	*4*
Facility providers	*3*	*2*	*0*
Pathology and laboratory services	27	7	1
Chiropractic manipulations	-8	-3	-1
Other services	10	11	2
Unknown	-31	-27	[3]
Total	25%	$486	100%

1. Developed statistics computed from data from a large insurer with fixed weights for gender, age and type of injury. Costs are adjusted for average wage growth between 1997 and 2005. (See Appendix C.)
2. See text (p. 42) for more detail about service groups and provider subcategories.
3. The percent contribution to the total cost change is computed over services with reported (known) type.
4. See note 30 in text.
5. Excludes intensive care unit.

[39] Part of the difference may relate to the complexity of the surgical procedures. For example, 37 percent of the procedures at outpatient hospital facilities were simple wound repairs, as opposed to less than one percent at ASCs.

- Under outpatient facility services, cost per total claim increased 446 percent for ASCs as opposed to 42 percent for outpatient hospital facilities.[40] However, because ASCs accounted for a relatively small portion of cost within this service group (Figure 6.2), the two provider subgroups each contributed roughly 14 percent of the overall cost increase.

- For radiology, cost per total claim increased 67 percent for providers not subject to the fee schedule as opposed to 37 percent for providers subject to the fee schedule.

- For drugs, cost per total claim increased 85 percent for providers subject to the reimbursement formula as opposed to 27 percent for providers not subject to the formula. As noted below, this difference at least partly reflects cost-control measures taken by the insurer concerned with respect to facility providers.[41]

Service group analysis: sources of cost change per total claim

The change in the cost of a type of service per total claim (column 1 of Figure 6.3) can be expressed as the product of two components: (1) the change in the percentage of claims with that service and (2) the change in the average cost of the service for claims with the service (the latter is analyzed more fully below). Figure 6.4 presents these statistics in summary form; Figure 6.4-A, at the end of this chapter, shows the associated annual trends.

The relative importance of the two components in explaining the change in the cost of a service per total claim varies with the service group and with the provider subcategory within the service group.

- For all service groups except "other services," combining provider types, the predominant factor was the change in the average cost of the service for claims with the service.
  - For radiology, for example, the 45-percent increase in cost per total claim resulted from an 8-percent increase in the percentage of claims with radiology and a 34-percent increase in the average cost of radiology per claim with that service.
  - For physical medicine, inpatient hospital facility services, and equipment and supplies, the percentage of claims with service decreased but this was counteracted by a larger percent increase in the cost of the service per claim with service, causing an increase in the cost of the service per total claim.

- Significant variation occurs by provider type.
  - Within outpatient facility services, ASCs showed a far larger increase than did outpatient hospital facilities in the percentage of claims with service (267 percent vs. 21 percent) and in the cost of service per claim with service (49 vs. 18 percent). The large percent increase in the percentage of claims with ASC facility services occurred primarily because only 0.6 percent of claims had ASC facility services in 1997.[42]
  - Within drugs, providers subject to the reimbursement formula showed significantly larger increases than did providers not subject to the formula in the percentage of claims with drugs and in the cost of drugs for claims where they were used (see note 42 and discussion immediately below).

- These figures are substantially influenced by cost-control measures taken in recent years by the insurer concerned. As shown in Figure 6.4-A (at the end of this chapter), the cost of service per claim with service either turned sharply downward or halted a rapid increase in injury year 2004 or 2005 for outpatient facility services, radiology (noncovered providers), drugs (providers not subject to reimbursement formula), physical medicine (noncovered providers), inpatient hospital

[40] As shown in Figure 6.4, the increase for ASCs resulted primarily from an increase in the proportion of claims using ASCs.

[41] As previously indicated, the pharmacy reimbursement formula applies to nonhospital providers and large-hospitals in outpatient settings. Providers not subject to the formula consist of large hospitals in inpatient settings and small hospitals.

[42] The 2-percent figure for 2005 (Figure 6.2) is a rounded version of the more exact number, 2.4 percent, which is 269 percent greater than the 1997 figure of 0.6 percent.

Figure 6.4 Components of change in cost per total claim by service group between injury years 1997 and 2005 [1]

Service group [2]	Change in percentage of claims with service	Change in cost of service per claim with service	Change in cost of service per total claim [3]
Outpatient facility services (29%)	24%	42%	77%
Outpatient hospital facilities (14%)	*21%*	*18%*	*42%*
Ambulatory surgical centers (14%)	*267% [8]*	*49%*	*446% [8]*
Radiology (16%)	8%	34%	45%
Providers subject to fee schedule (10%)	*9%*	*26%*	*37%*
Providers not subj. to fee sched. (6%)	*9%*	*53%*	*67%*
Drugs (13%)	24%	32%	64%
Provs subj to reimb formula (11%) [4]	*27%*	*46%*	*85%*
Provs not subj to reimb formula (2%) [4]	*11%*	*15%*	*27%*
Surgery (9%) [5]	7%	14%	22%
Physical medicine (7%)	-4%	18%	14%
Providers subject to fee sched. —			
Nonchiropractic providers (3%)	*0%*	*9%*	*9%*
Chiropractic providers (-1%)	*-11%*	*0%*	*-10%*
Providers not subj. to fee sched. (5%)	*-3%*	43%	*38%*
Inpatient hospital facility services (7%)	-10%	37%	24%
Overnight room (0%) [6]	*-9%*	*8%*	*-2%*
Other (7%)	*-6%*	*50%*	*41%*
Evaluation and management (7%) [7]	2%	13%	15%
Equipment and supplies (5%)	-21%	45%	14%
Nonfacility providers (2%)	*-25%*	*59%*	*20%*
Facility providers (3%)	*-15%*	*32%*	*12%*
Anesthesia (4%)	0%	20%	20%
Nonfacility providers (4%)	*3%*	*31%*	*35%*
Facility providers (0%)	*-4%*	*8%*	*3%*
Pathology and laboratory servs. (1%)	1%	25%	27%
Chiropractic manipulations (-1%)	-7%	-1%	-8%
Other services (2%)	56%	-30%	10%
Total (100%)	0%	25%	25%

1. Developed statistics computed from data from a large insurer with fixed weights for gender, age and type of injury. Costs are adjusted for average wage growth between 1997 and 2005. (See Appendix C.)
2. See text (p. 42) for more detail about service groups and provider subcategories. Percent contribution to overall cost increase per total claim (from Figure 6.3) is in parentheses.
3. Equal to the "product" of the first two columns. Technically, col. 3 = (1 + col. 1) x (1 + col. 2) - 1. An approximation (when the percentages are small) is that column 3 is roughly equal to the sum of the first two columns.
4. See note 30 in text.
5. Provider groups are not shown under surgery because providers not subject to the fee schedule in this group accounted for only 0.6 percent of total medical cost in 2005 (Figure 6.2).
6. Excludes intensive care unit.
7. Provider groups are not shown under evaluation and management because providers not subject to the fee schedule in this group accounted for only 0.6 percent of total medical cost in 2005 (Figure 6.2).
8. A bar is not shown here because its length is out of the range for other services and subcategories.

facility services (other than overnight room), anesthesia (facility providers), and equipment and supplies. In addition, the percentage of claims with service turned downward for inpatient hospital facility services (overnight room andother) and anesthesia (facility and nonfacility providers). Around the time of these changes, the insurer concerned initiated or expanded several cost-control measures for facility providers, including bill review, use of networks and application of prevailing charge.[43]

[43] As previously indicated, prevailing charge may be used for non-fee-scheduled services with providers other than small hospitals. Data for applying prevailing charge has only recently become commercially available.

Service group analysis: sources of cost change per claim with service

The change in the average cost of a service per claim with that service (second column of bars in Figure 6.4) is the product of the changes in (1) average units of service per claim with the service, (2) average cost per unit (for a given service mix) and (3) the expensiveness of the service mix. Changes in average service costs were divided into these components for those service groups for which it was feasible (see Appendix C). Figure 6.5 shows the results; Figure 6.5-A presents the associated annual trends.

A note on service mix: Each service group encompasses a range of particular services that vary widely in cost because of complexity, skill demands, and use of time and other resources. The expensiveness of the service mix measures the degree to which the services provided tend to be the more costly ones within the group.[44]

- For radiology and surgery, an increasingly expensive service mix was responsible for most of the increase in cost per claim with service — 31 percentage points of the 34-percent increase for radiology and all of the 14-percent increase for surgery. (For both groups, the increase was also bolstered by an increase in units of service per claim but counteracted by a decrease in cost per unit of service.)

- For physical medicine, increases in units of service per claim and in cost per unit of service made roughly equal contributions to the 18-percent increase in cost per claim with service.

- For inpatient hospital rooms, a 38-percent increase in unit cost (cost per night) was partly counteracted by a 22-percent decrease in average units per claim, for a net 8-percent increase in cost per claim with service.

- For evaluation and management (E&M) overall, about half of the 13-percent increase in cost per claim with service came from a more expensive service mix.

  - Major variation occurred within E&M. New-patient office visits per claim with any E&M service fell by 34 percent, while the other three E&M subgroups showed increases of 10 to 30 percent in their frequency per claim with E&M service.[45] In absolute terms, new-patient office visits decreased by about the same frequency as established-patient visits increased.[46] Since reimbursement limits are lower for established-patient visits than for new-patient visits, this change may have resulted from increased compliance with rules for coding the two types of visits.
  - The 6-percent increase in service mix expensiveness for E&M overall reflects changes in service mix both within and across the four subgroups. Office consultations are the most expensive of the four subgroups, followed by emergency department visits, new-patient office visits and established-patient office visits.[47] Thus, the increased use of consultations and emergency department visits tends to increase the expensiveness of the overall E&M service mix, while the shift from new-patient to established-patient office visits tends to decrease it.

- Significant variation occurred by provider type.

  - For radiology, while both provider types showed a large shift toward a more expensive service mix and a slight increase in average units of service, providers subject to the fee schedule showed a 10-percent decrease in cost per unit of service while providers not subject to the fee schedule showed an increase of the same magnitude. This almost completely accounted for the different percent increases in cost per claim with service for the two provider groups.[48]

[44] See note 4 in Figure 6.5.

[45] See note 9 in Figure 6.5.

[46] The percent change for established-patient visits is smaller than for new-patient visits because of higher initial frequency for established-patient visits.

[47] This is based on computations of the data.

[48] (1 – .10) / (1 + .10) is roughly equal to (1 + .26) / (1 + .53).

Figure 6.5 Components of change in cost per claim with service, for selected service groups between injury years 1997 and 2006 [1]

Service group [2]	Change in units of service per claim with service	Change in cost per unit of service [3]	Change in expensiveness of service mix [4]	Change in cost of service per claim with service [5]
Radiology	7%	-5%	31%	34%
Providers subject to fee schedule	*6%*	*-10%*	*32%*	*26%*
Providers not subject to fee schedule	*8%*	*10%*	*29%*	*53%*
Surgery [6]	7%	-6%	14%	14%
Physical medicine	8%	7%	2%	18%
Providers subject to fee schedule —				
Nonchiropractic providers	*11%*	*-5%*	*4%*	*9%*
Chiropractic providers	*-2%*	*0%*	*3%*	*0%*
Providers not subject to fee schedule	*8%*	*30%*	*2%*	*43%*
Inpatient hospital overnight room [7]	-22%	38%	0%	8%
Evaluation and management [8]	3%	3%	6%	13%
Office visits (new patient) [9]	*-34%*	*4%*	*1%*	*-30%*
Office visits (established patient) [9]	*10%*	*4%*	*9%*	*23%*
Office consultations [9]	*30%*	*-1%*	*1%*	*30%*
Emergency department visits [9]	*22%*	*1%*	*11%*	*37%*
Anesthesia	-5%	26%	0%	20%
Nonfacility providers	*4%*	*20%*	*5%*	*31%*
Facility providers	*-25%*	*41%*	*2%*	*8%*
Chiropractic manipulations [10]	11%	-9%	-2%	-1%

1. Developed statistics computed from data from a large insurer. Results are adjusted to reflect a fixed distribution of claims by gender, age and type of injury over time. Costs are adjusted for average wage growth between 1997 and 2005. (See Appendix C.)
2. See text (p. 42) for additional detail about service groups and subcategories.
3. Computed for a fixed service mix within the service group (see Appendix C).
4. The "expensiveness of the service mix" is the average cost per unit of service for the overall service group as affected by changes in the service mix within the group, holding constant the cost per unit of particular services (see Appendix C).
5. Equal to the "product" of the first three columns. Technically, col. 4 = (1 + col. 1) x (1 + col. 2) x (1 + col. 3) - 1. An approximation (when the percentages are small) is that column 4 is roughly equal to the sum of the first three columns.
6. Provider groups are not shown under surgery because providers not subject to the fee schedule in this group accounted for only 0.6 percent of total medical cost in 2005 (Figure 6.2).
7. Excludes intensive care unit. Service mix for this category pertains to the mix between private and semiprivate rooms.
8. Provider groups are not shown under evaluation and management because providers not subject to the fee schedule in this group accounted for only 0.6 percent of total medical cost in 2005 (Figure 6.2).
9. For the four subgroups under evaluation and management, units of service per claim with service and cost per claim with service (and the associated changes) are expressed relative to the number of claims with any evaluation and management services.
10. The changes for chiropractic manipulations refer to 1998 to 2005 because service coding changes prevent comparisons before 1998.

  - All services and provider types not subject to the fee schedule showed significant increases in cost per unit of service, while those subject to the fee schedule did not.

- Among the services and provider types shown in Figure 6.5, those not subject to the fee schedule were anesthesia (all provider types) and overnight hospital rooms in addition to those radiology and physical medicine providers not subject to the schedule. The increases in cost per unit for these groups ranged from 10 to 41 percent after adjusting for average wage growth.

- By contrast, those service and provider groups subject to the fee schedule (the remaining ones in the figure) showed decreases, no change or small increases in average unit cost. At least part of the reason for this lies with the conversion factor, which converts the RVUs in the fee schedule to maximum payment amounts per unit of service. Until Oct. 1, 2002, DLI increased the conversion factor annually by the percent change in the SAWW, the maximum allowed by law. Beginning Oct. 1, 2002, DLI began increasing the conversion factor according to the producer price index for physicians' services, which has increased more slowly than the SAWW.[49] This has tended to produce decreases in cost per unit in Figure 6.5 because the changes shown are relative to changes in the SAWW.[50]

[49] This index is published by the U.S. Bureau of Labor Statistics.

[50] Another possible factor is that DLI introduced new RVUs effective Jan. 1, 2001. Determining the effect of this will require further analysis.

Provider group analysis: current cost distribution

The average cost for each provider group per total claim is the product of (1) the percentage of claims involving that type of provider and (2) the average cost for that type of provider per claim with that type of provider.

Nonfacility providers accounted for a somewhat larger share of total medical cost for injury year 2005 than did facility providers. A majority of costs were not covered by the medical fee schedule (Figure 6.6).

- In-state nonfacility providers (e.g., doctors' offices, clinics, nonhospital pharmacies, equipment vendors) accounted for 52 percent of total medical cost for 2005, in-state facility providers 44 percent, and out-of-state providers 4 percent.

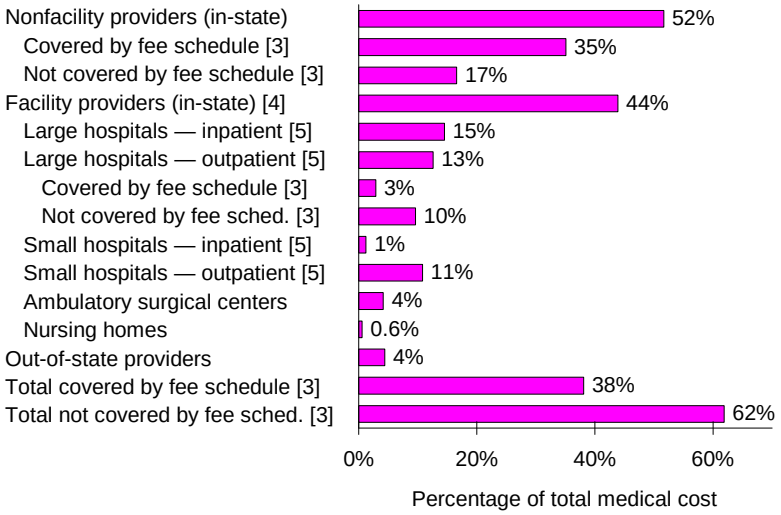
- Within the facility category, large hospitals accounted for 27 percent of total cost, small hospitals 12 percent and ambulatory surgical centers (ASCs) 4 percent.

  - Large-hospital costs were split roughly evenly between inpatient and outpatient services, while small-hospital costs were mostly for outpatient services.

- About 38 percent of all costs were covered by the fee schedule.

  - Most costs involving nonfacility providers were covered by the fee schedule; for large-hospital outpatient services, the opposite

Figure 6.6 Medical cost per claim by provider group, injury year 2005 [1]



Provider group [2]	Pctg. of claims w/ service	Cost per claim w/ service	Cost per total claim	Pctg. of total cost
In-state providers	99%	$2,310	$2,290	96%
Nonfacility providers	95	1,300	1,240	52
Covered by fee schedule [3]	93	900	840	35
Not covered by fee schedule [3]	52	760	400	17
Facility providers [4]	40	2,640	1,050	44
Hospitals [5]	38	2,440	940	39
Large hospitals	24	2,670	650	27
Inpatient	2	21,940	350	15
Outpatient	24	1,270	300	13
Covered by fee schedule [3]	15	460	70	3
Not cov'd by fee sched. [3]	21	1,100	230	10
Small hospitals	16	1,860	290	12
Inpatient	0.2	17,180	30	1
Outpatient	15	1,670	260	11
Ambulatory surgical centers	3	3,940	100	4
Nursing homes	0.4	3,100	10	0.6
Out-of-state providers	6	1,690	110	4
Total covered by fee schedule [3]	94	970	910	38
Total not covered by fee sched. [3]	74	2,000	1,480	62
Total	100%	$2,400	$2,400	100%

1. Computed from data from a large insurer (see Appendix C).
2. See text (p. 43) for additional detail about provider groups and subcategories.
3. All drugs, including those covered by the pharmacy reimbursment formula, are counted as not covered by the fee schedule. That is, the "covered" category is limited to services with maximum fees determined by relative value units and a conversion factor.
4. The costs attributed to facility providers here include both "facility services" (i.e., use of the facility) and other services (e.g., evaluation and management, radiology, anesthesia) provided by the facilities, and are therefore greater than the costs of facility services shown in Figure 6.2.

was true. While large-hospital outpatient services are subject to the fee schedule, only a minority of these services (counting by cost) are actually in the schedule. Many of these services, instead, are "facility services."

Provider group analysis: major contributors to cost increase

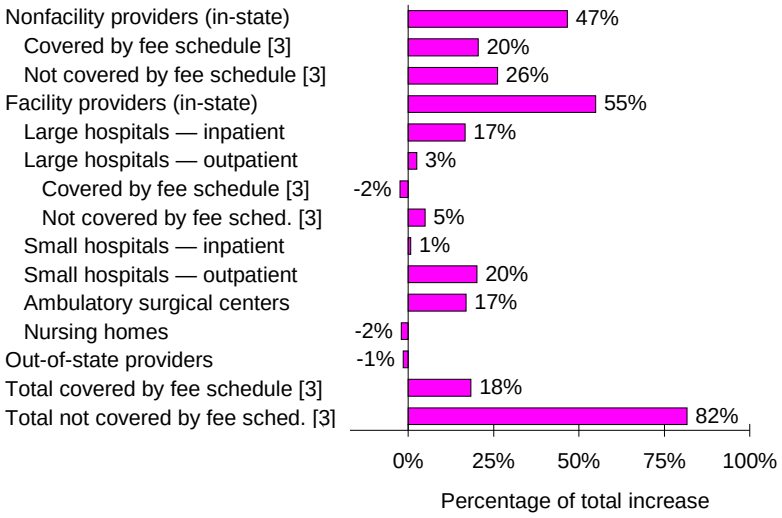
Facility providers showed a larger percent increase in cost per total claim than did nonfacility providers from 1997 to 2005, and accounted for a larger share of the overall cost increase. Similarly, services not covered by the fee schedule showed a larger percent increase in cost per total claim than did covered services, and accounted for a far larger share of the overall cost increase (Figure 6.7).

- After adjusting for average wage growth, cost per total claim increased 34 percent for facility providers from 1997 to 2005 as opposed to 22 percent for nonfacility providers. Consequently, facility providers contributed $267 (55 percent) of the overall increase of $486, while nonfacility providers contributed $226 (47 percent).[51]

  - Among facility providers, only three

[51] The contribution of facility providers to the overall cost increase relative to that of nonfacility providers was dampened by the fact that facility providers accounted for 41 percent of total cost in 1997, the base year of the analysis period, less than the 53 percent for nonfacility providers.

Figure 6.7 Contributions of provider groups to overall change in total medical cost per claim between injury years 1997 and 2005 [1]



Provider group [2]	Percent change in cost per total claim	Amount of change in cost per total claim	Percentage of total cost increase [3]
In-state providers	27%	$493	101%
Nonfacility providers	22	226	47
Covered by fee schedule [3]	13	100	20
Not covered by fee sched. [3]	47	127	26
Facility providers	34	267	55
Hospitals	26	194	40
Large hospitals	17	93	19
Inpatient	30	81	17
Outpatient	4	12	3
Covered by fee schedule [3]	-14	-12	-2
Not covered by fee sched. [3]	12	24	5
Small hospitals	54	101	21
Inpatient	13	3	0.7
Outpatient	61	98	20
Ambulatory surgical centers	469	82	17
Nursing homes	-41	-10	-2
Out-of-state providers	-6	-7	-1
Total covered by fee schedule [3]	11	89	18
Total not covered by fee sched. [3]	37	397	82
Total	25%	$486	100%

1. Computed from data from a large insurer (see Appendix C).
2. See text (p. 43) for additional detail about provider groups and subcategories.
3. All drugs, including those covered by the pharmacy reimbursment formula, are counted as not covered by the fee schedule. That is, the "covered" category is limited to services with maximum fees determined by relative value units and a conversion factor.

Figure 6.8 Components of change in cost per total claim by provider group between injury years 1997 and 2005 [1]

Provider group [2]	Change in percentage of claims with service	Change in cost of service per claim with service	Change in cost of service per total claim [3]
Nonfacility providers (in-state) (47%)	3%	19%	22%
Covered by fee schedule (20%) [4]	3%	10%	13%
Not covered by fee sched. (26%) [4]	7%	38%	47%
Facility providers (in-state) (55%)	15%	16%	34%
Hospitals (40%)	13%	11%	26%
Large hospitals (19%)	13%	3%	17%
Inpatient (17%)	-6%	39%	30%
Outpatient (3%)	11%	-6%	4%
Covered by fee sched. (-2%) [4]	-5%	-10%	-14%
Not cov'd by fee sched. (5%) [4]	11%	1%	12%
Small hospitals (21%)	14%	35%	54%
Inpatient (1%)	-14%	31%	13%
Outpatient (20%)	14%	41%	61%
Ambulatory surgical centers (17%)	231% [5]	72%	469% [5]
Out-of-state providers (-1%)	8%	-13%	-6%
Total covered by fee schedule (18%) [4]	2%	9%	11%
Total not cov'd by fee sched. (82%) [4]	9%	26%	37%
Total (100%)	0%	25%	25%

1. Developed statistics computed from data from a large insurer with fixed weights for gender, age and type of injury. Costs are adjusted for average wage growth between 1997 and 2005. (See Appendix C.)
2. See text (p. 43) for additional detail about provider groups and subcategories. Percent contribution to overall cost increase per total claim (from Figure 6.6) is in parentheses. Nursing homes are excluded because they accounted for only 0.6 percent of total medical cost for 2005 and a negative two percent of the total medical cost increase (Figures 6.6 and 6.7).
3. Equal to the "product" of the first two columns. Technically, col. 3 = (1 + col. 1) x (1 + col. 2) - 1. An approximation (when the percentages are small) is that column 3 is roughly equal to the sum of the first two columns.
4. All drugs, including those covered by the pharmacy reimbursment formula, are counted as not covered by the fee schedule. That is, the "covered" category is limited to services with maximum fees determined by relative value units and a conversion factor.
5. A bar is not shown here because its length is out of the range for other services and subcategories.

types showed larger percent increases per total claim than the overall increase of 25 percent. These were ASCs (469-percent increase), small hospitals (outpatient services) (61-percent increase) and large hospitals (inpatient services) (30-percent increase). Because of the very large increase for ASCs, those providers contributed 17 percent of the overall increase in medical cost even though they accounted for only 0.9 percent of total cost in 1997. (As shown in the next figure, most of this increase came from an increase in the frequency of use of ASCs.)

- For services covered by the fee schedule, cost per total claim increased 11 percent during the analysis period, well below the overall increase of 25 percent. By contrast, services not covered by the fee schedule showed a cost increase of 37 percent. Given this, and the fact that services not covered by the fee schedule accounted for 57 percent of total cost in 1997, these services contributed 82 percent of the overall cost increase ($397 of the overall increase of $486 per claim), as opposed to 18 percent for covered services.

Provider group analysis: sources of cost change per total claim

The change in cost per total claim related to a particular provider type (column 1 of Figure 6.7) can be expressed as the product of two components: (1) the change in the percentage of claims with services from that provider type and (2) the change in the average cost for that type of provider per claim with that type of provider. Figure 6.8 presents these statistics in summary form; Figure 6.8-A, at the end of the chapter, shows the associated annual trends.

The relative importance of the two components of change varies with the provider group.

- For nonfacility providers, most of the 22-percent increase in cost per total claim came from an increase in the average cost of service per claim with service from that provider type. For facility providers, the 34-percent increase in cost per total claim was about evenly split between the two components of increase.

- Within facility providers, the 26-percent overall increase for hospital costs came about equally from the two components. For ASCs, by contrast, the 469-percent overall increase came primarily from a 231-percent increase in the percentage of claims with ASC services. However, a large component also came from a 72-percent increase in the average cost of ASC services per claim with these services.

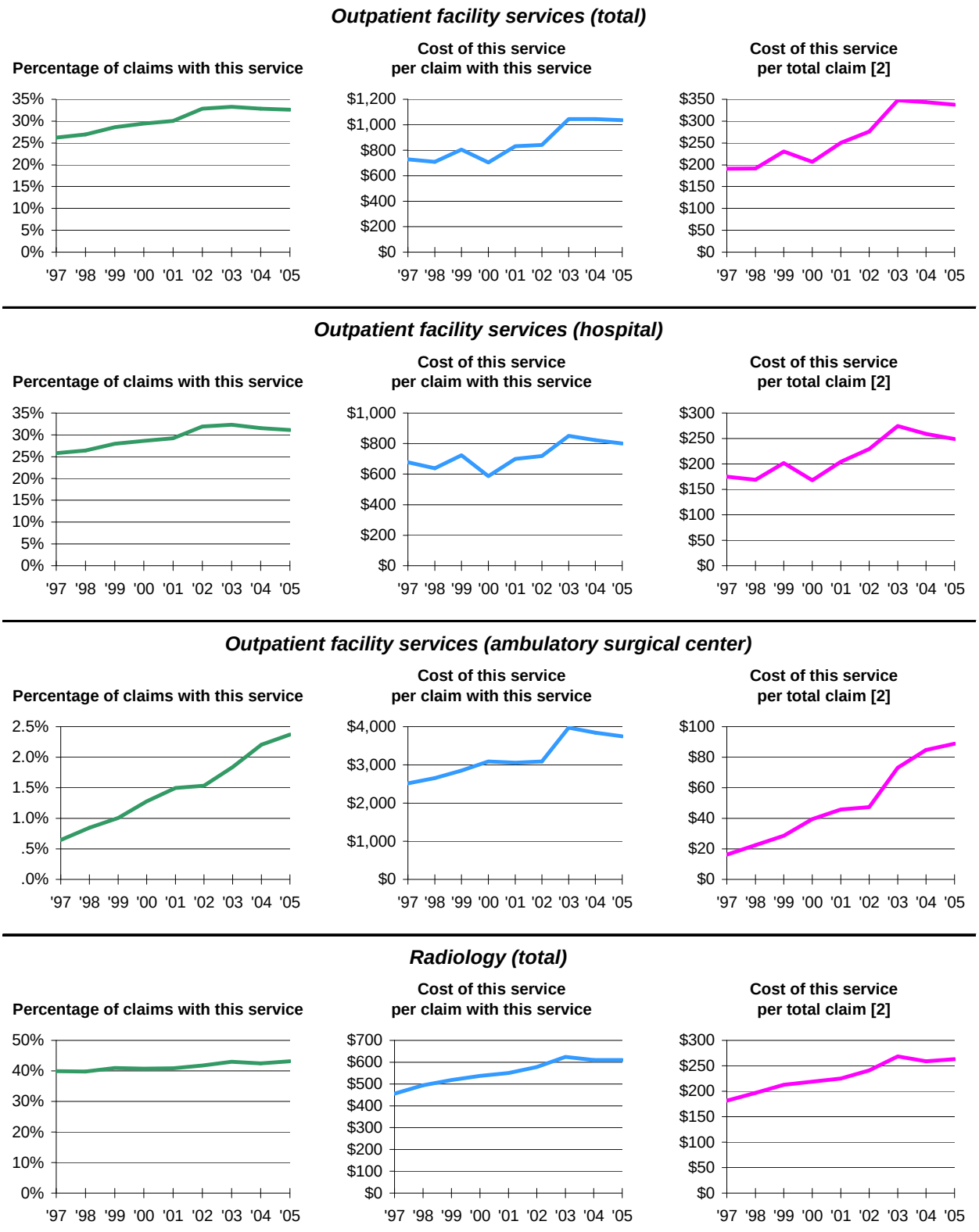
- The experience of large and small hospitals differed.

  - For large hospitals, most of the increase in cost per total claim came from an increase in the percentage of claims with services from this type of hospital. For small hospitals, the opposite was true.
  - This can be viewed another way. Large and small hospitals showed nearly equal increases in the percentage of claims using their services (13 and 14 percent, respectively). The two hospital types also showed roughly similar increases in the cost of inpatient services per claim with those services (39 and 31 percent, respectively). The big difference was in the cost of outpatient services per claim with service, which fell six percent for large hospitals but increased 41 percent for small hospitals. Because of this difference, for inpatient and outpatient services combined, the cost of service per claim with service increased just three percent for large hospitals but 35 percent for small hospitals.

- Experience was different for services covered by the fee schedule and those not. As previously indicated, costs increased 37 percent for services not covered by the fee schedule as opposed to 11 percent for covered services. Most of this difference arose from the fact that the cost of service per claim with service rose 26 percent for services covered by the fee schedule as compared with 9 percent for other services.

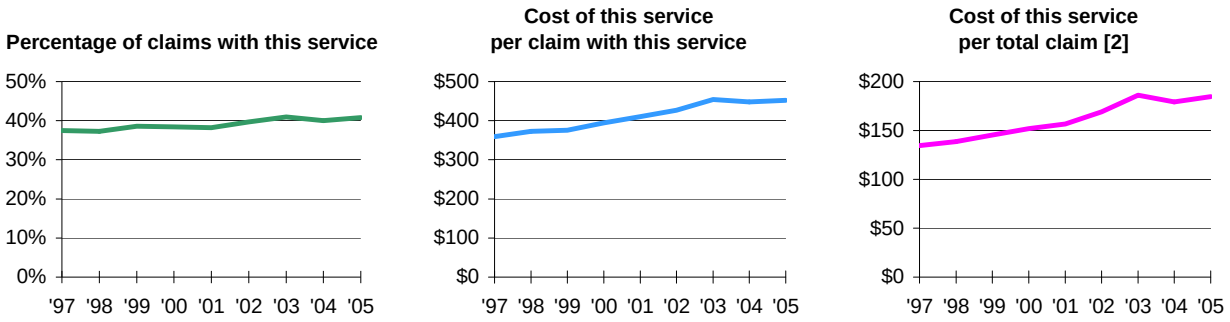
- As previously indicated, the medical cost figures are substantially influenced by cost-control measures taken in recent years by the insurer concerned. In the provider-group classification, as shown in Figure 6.8-A (at the end of the chapter), the cost of service per claim with service turned sharply downward in 2005 for large hospitals and in 2004 for small hospitals. Around the time of these changes, the insurer concerned initiated or expanded several cost-control measures for facility providers, including bill review, use of networks and application of prevailing charge.

Figure 6.4A Components of medical cost per total claim by service group, injury years 1997-2005 [1]

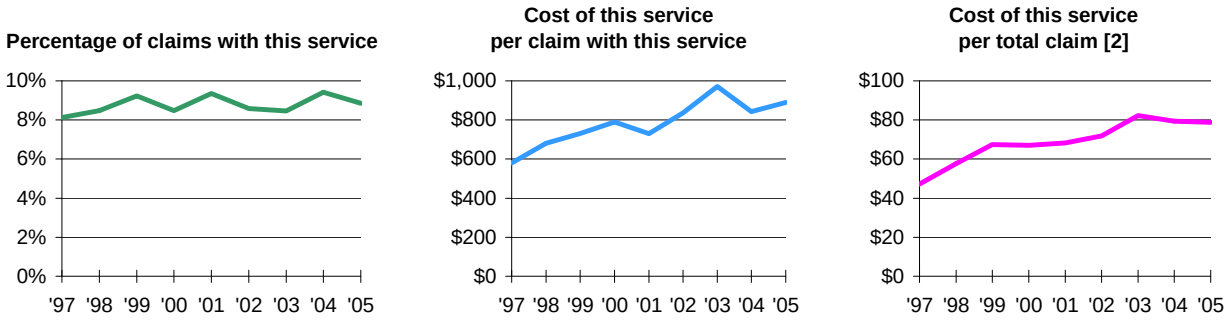


(Notes at end of figure.)

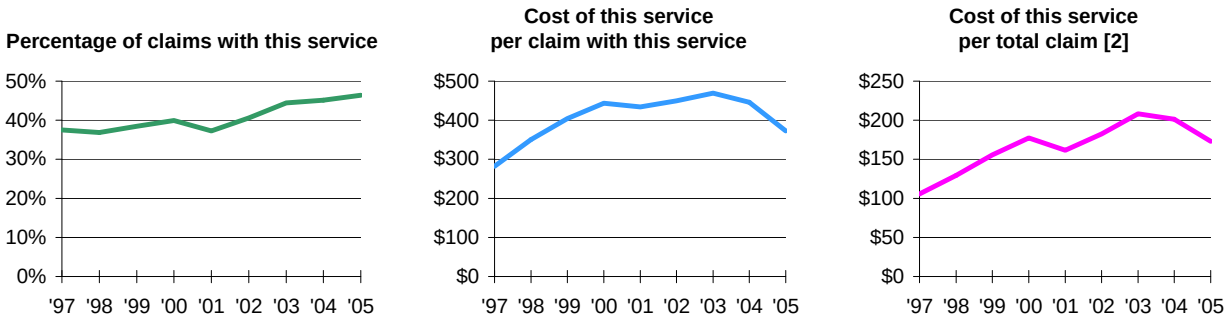
Radiology (covered providers)



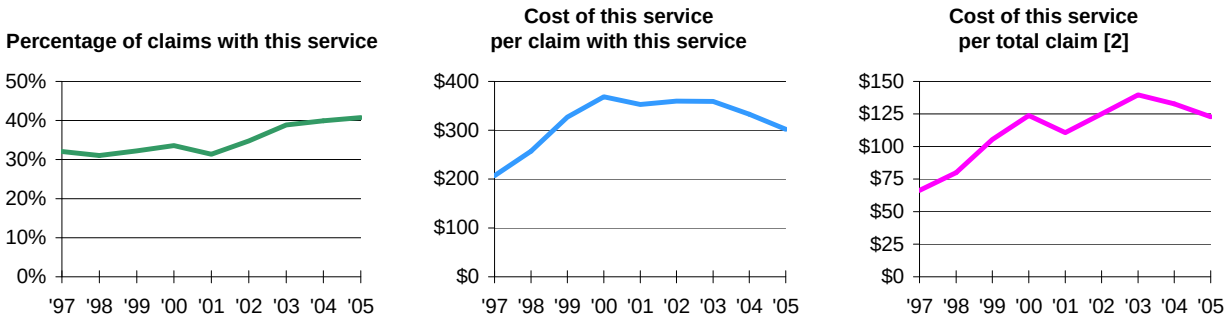
Radiology (noncovered providers)



Drugs (total)

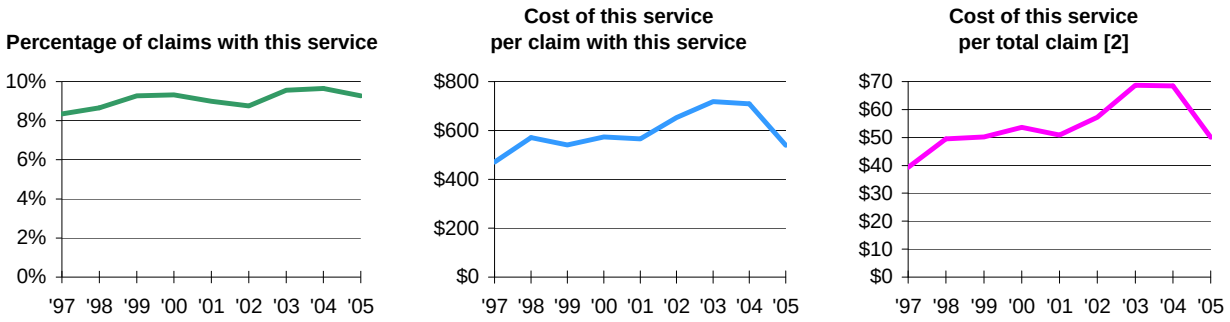


Drugs (providers subject to reimbursement formula [3])

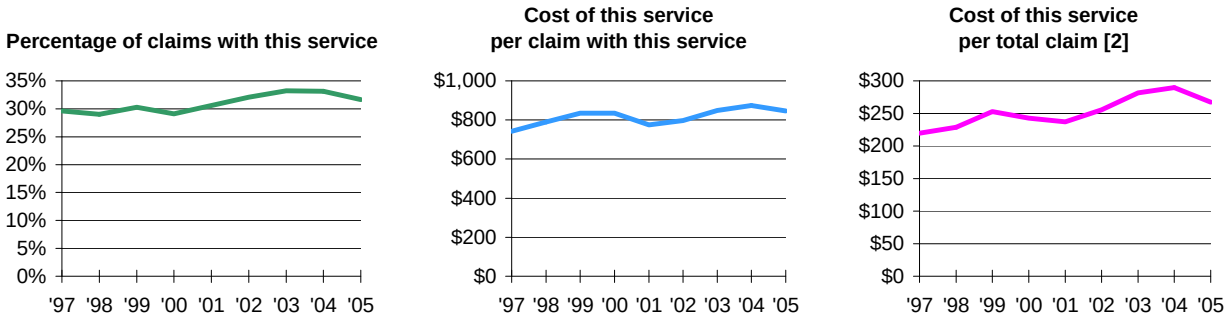


(Notes at end of figure.)

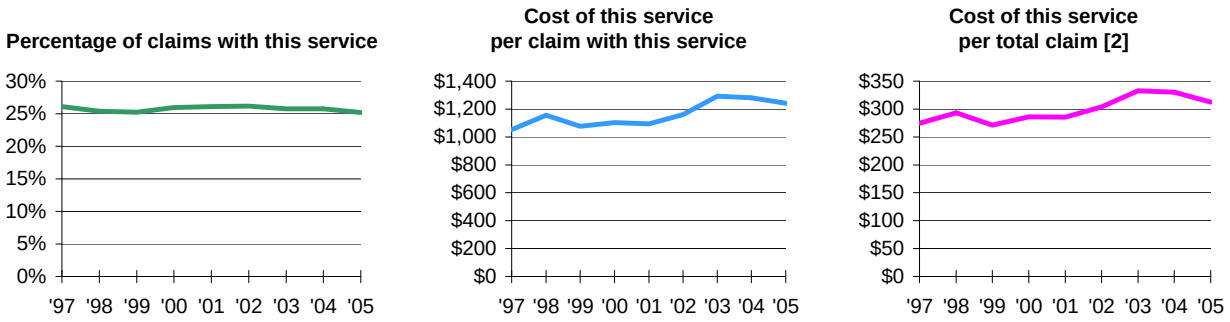
Drugs (providers not subject to reimbursement formula [3])



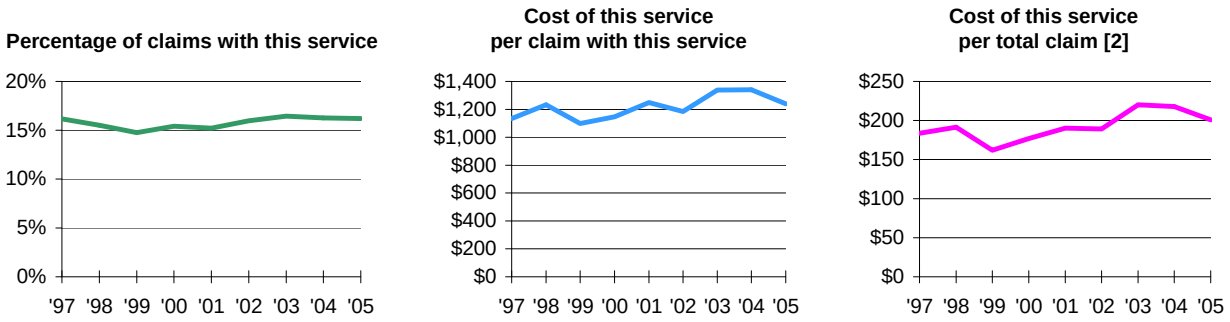
Surgery (total) [4]



Physical medicine (total)

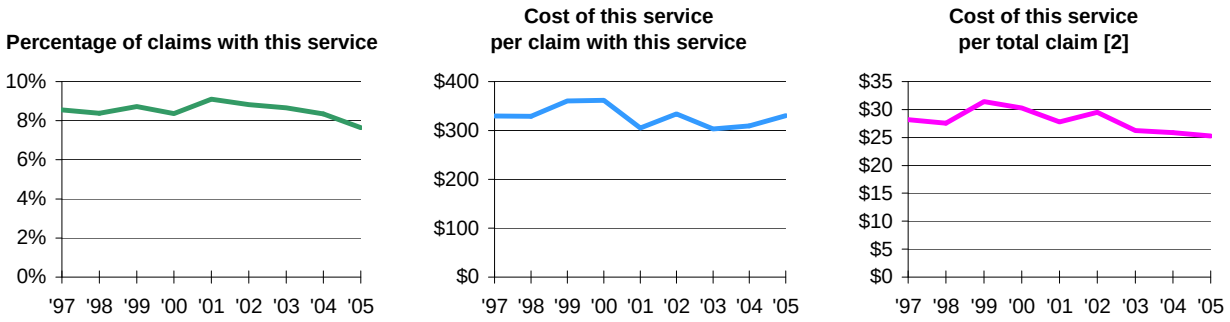


Physical medicine (covered providers — except chiropractors)

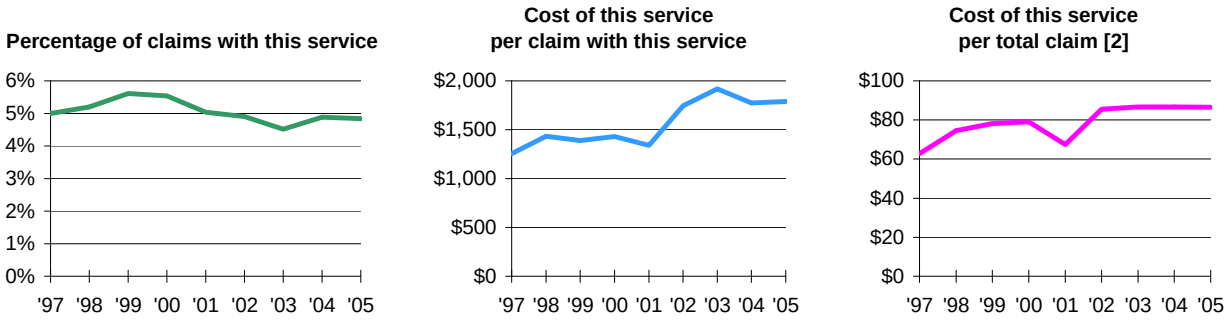


(Notes at end of figure.)

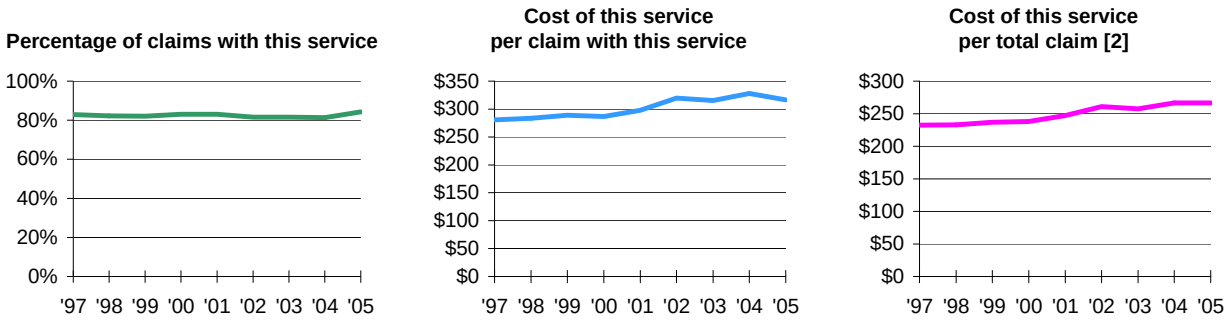
Physical medicine (covered by schedule — chiropractic providers)



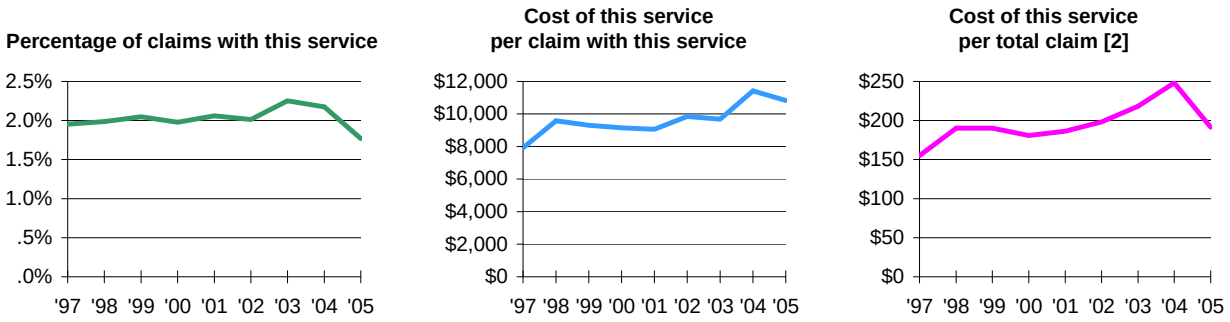
Physical medicine (noncovered providers)



Evaluation and management (total) [5]

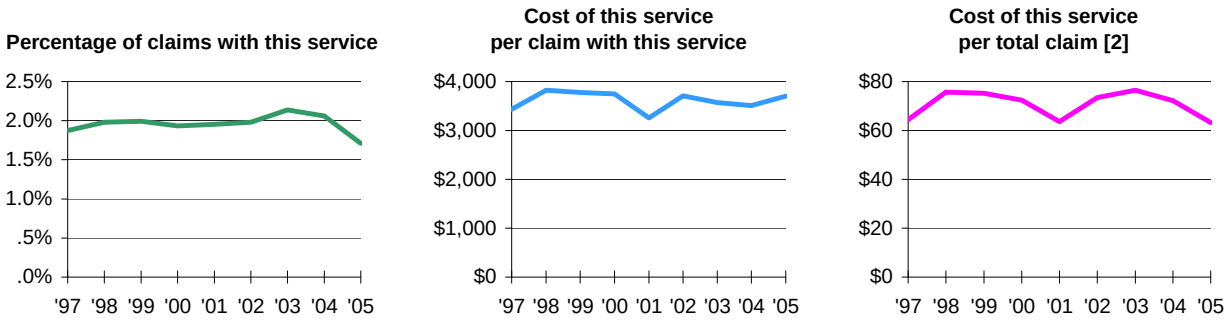


Inpatient hospital facility services (total)

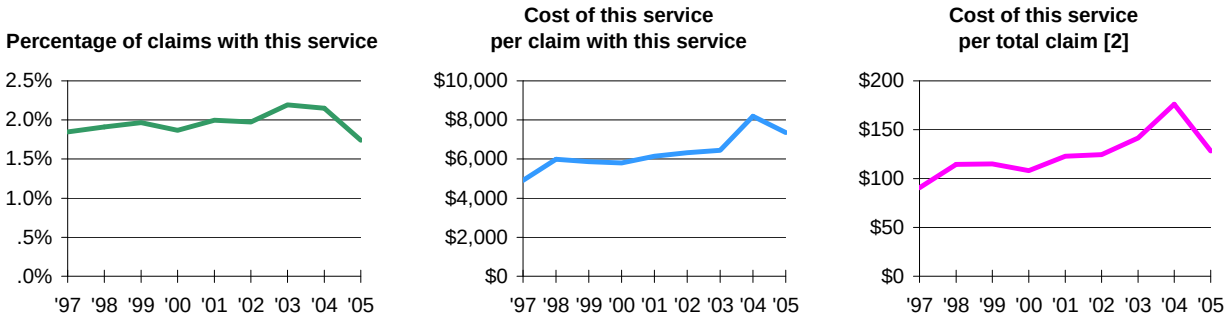


(Notes at end of figure.)

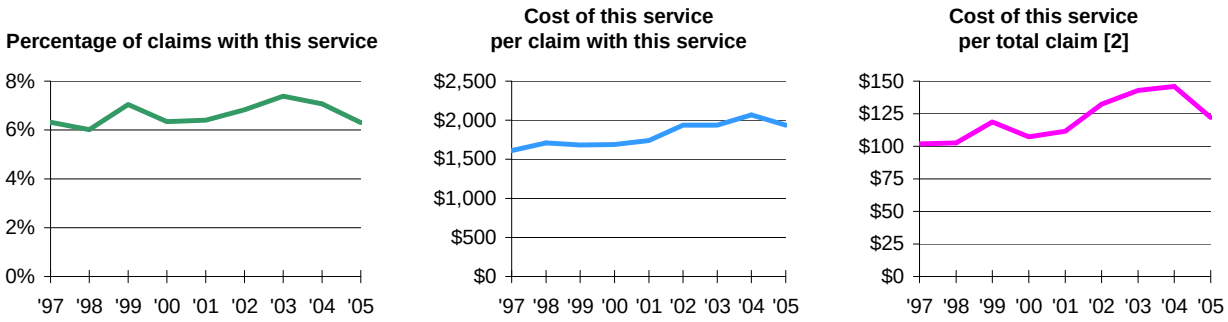
Inpatient hospital facility services (overnight room) [6]



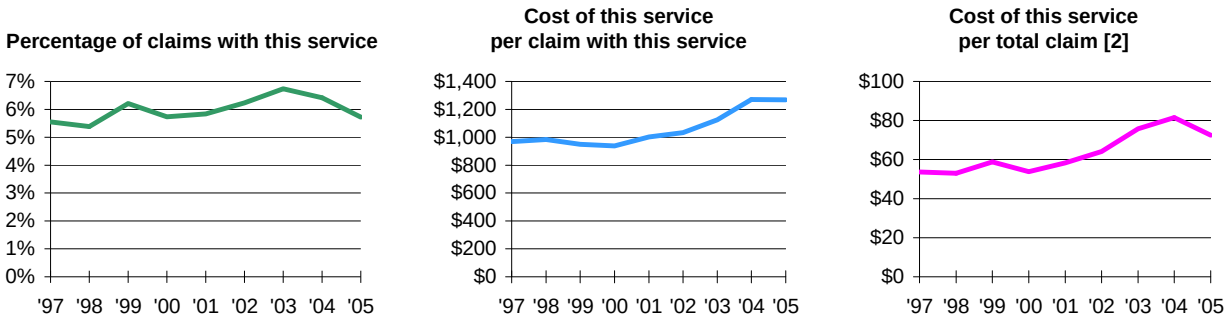
Inpatient hospital facility services (other)



Anesthesia (total)

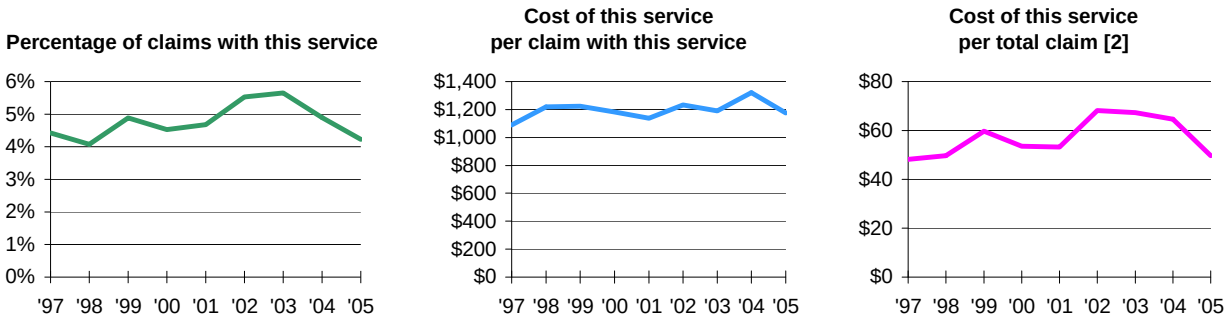


Anesthesia (nonfacility providers)

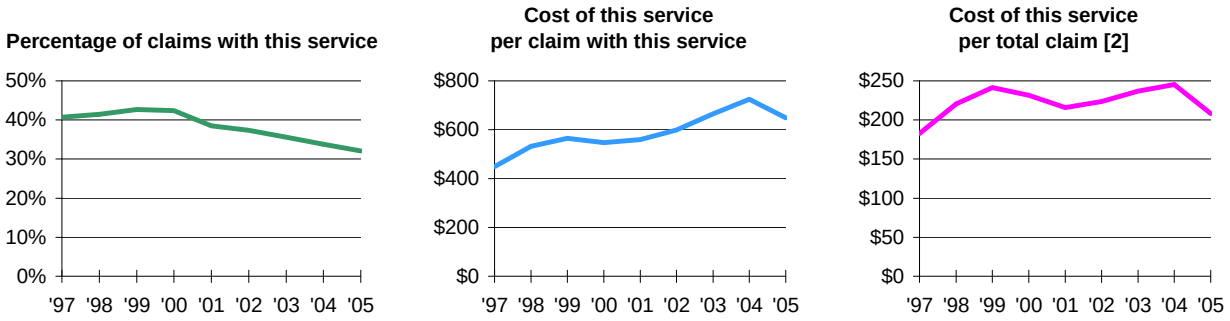


(Notes at end of figure.)

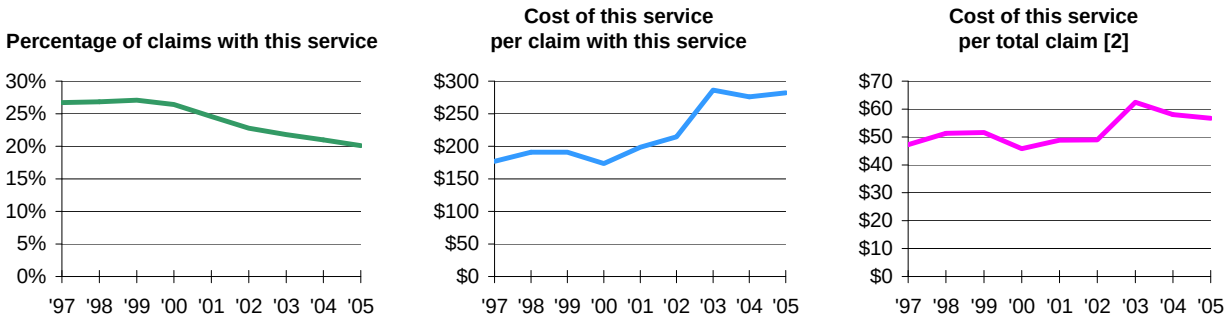
Anesthesia (facility providers)



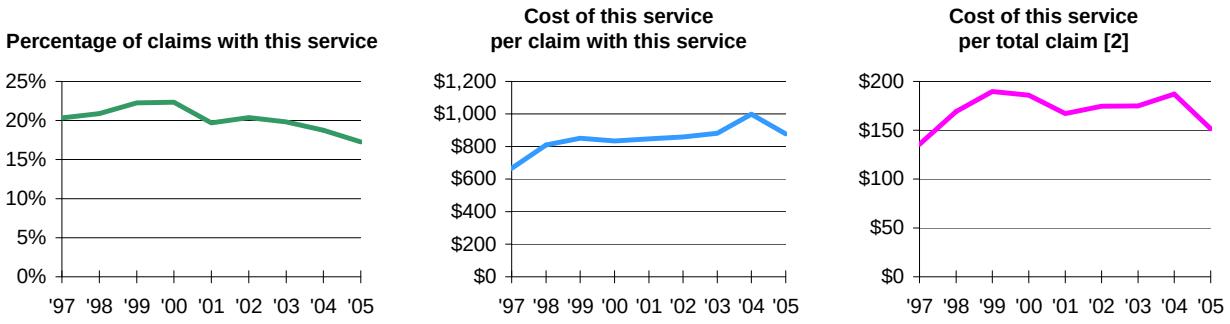
Equipment and supplies (total)



Equipment and supplies (nonfacility providers)



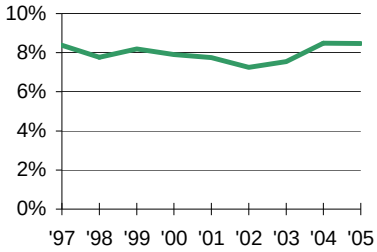
Equipment and supplies (facility providers)



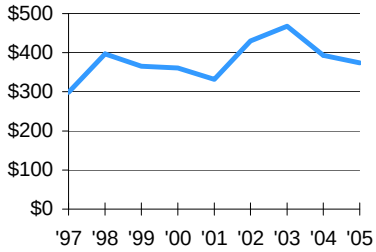
(Notes at end of figure.)

Pathology and laboratory services

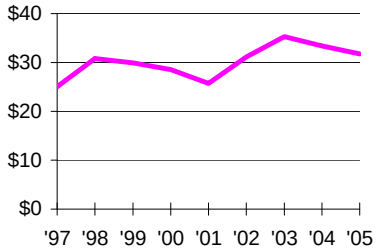
Percentage of claims with this service



Cost of this service per claim with this service

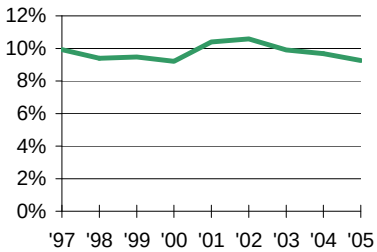


Cost of this service per total claim [2]

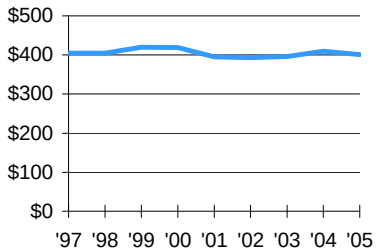


Chiropractic manipulations

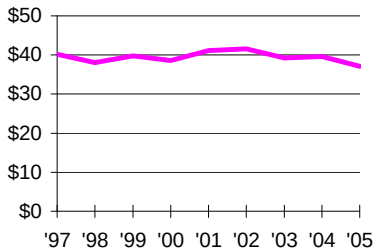
Percentage of claims with this service



Cost of this service per claim with this service

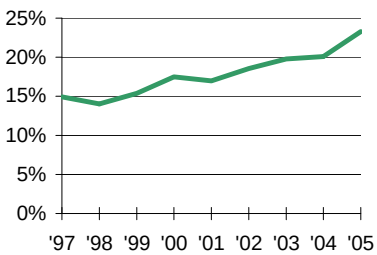


Cost of this service per total claim [2]

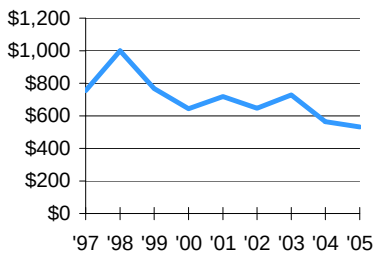


Other services

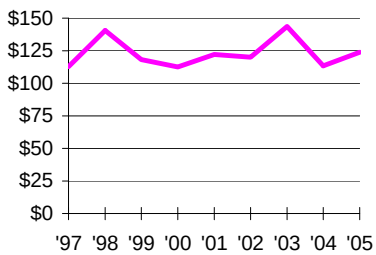
Percentage of claims with this service



Cost of this service per claim with this service

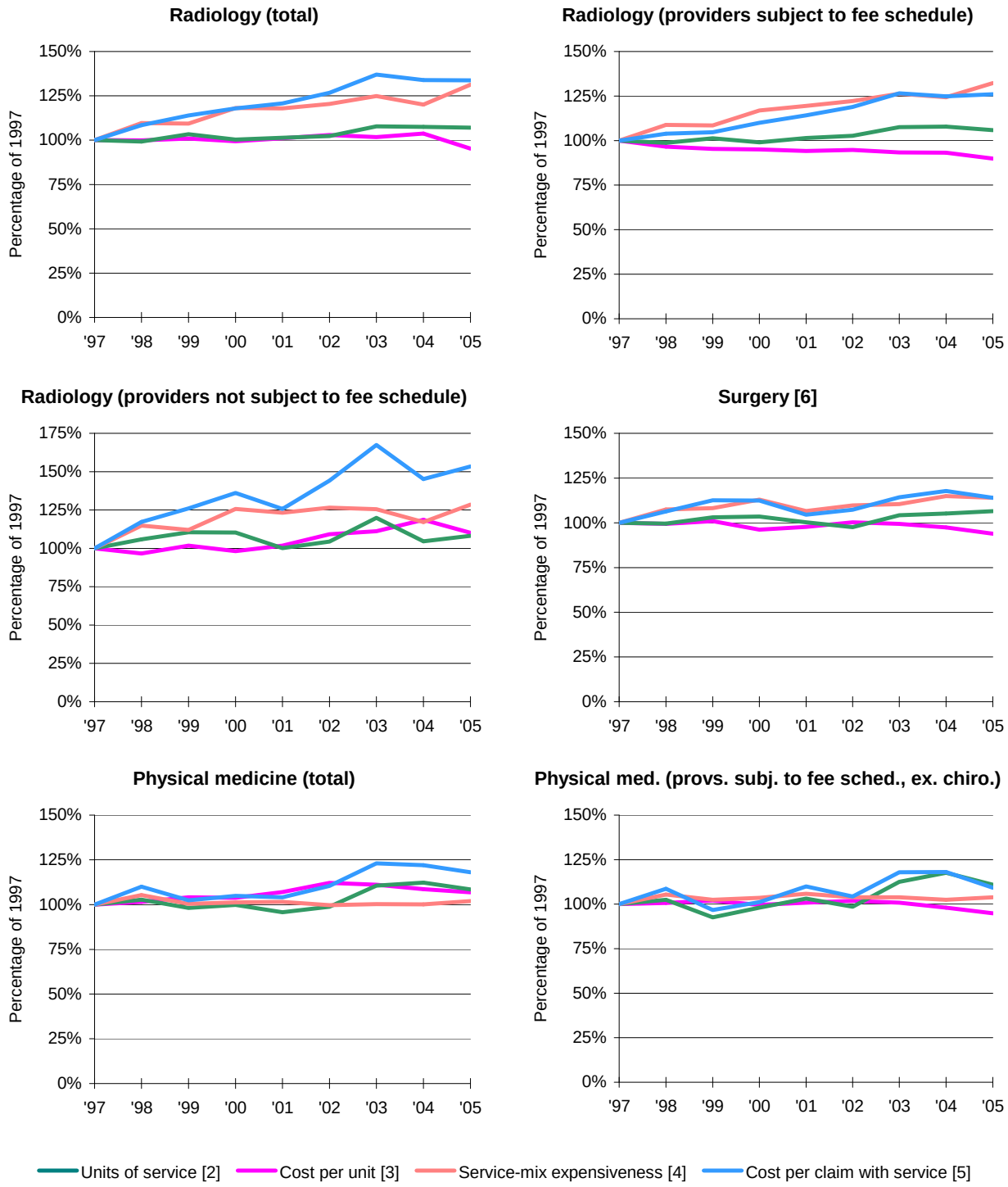


Cost of this service per total claim [2]



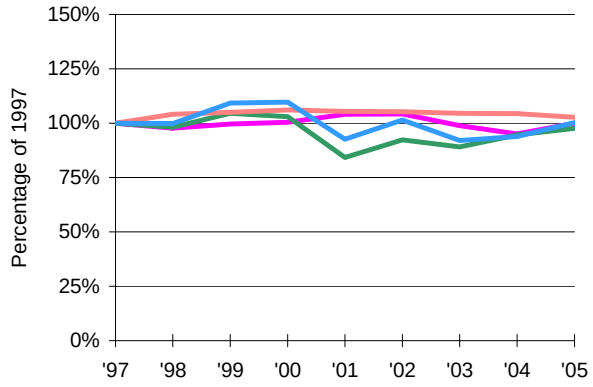
1. Developed statistics computed from data from a large insurer with fixed weights for gender, age and type of injury. Costs are adjusted for average wage growth between the respective year and 2005. (See Appendix C.) Service categories are shown in the same order as in Figures 6.3 and 6.4. See Chapter 6 for explanation of service categories and provider groups.
2. Equal to the product of the first two trends for each service group.
3. See note 30 in text.
4. Provider groups are not shown for surgery because providers in this service group that were not subject to the fee schedule accounted for only 0.6 percent of total medical cost in 2005 (Figure 6.2).
5. Provider groups are not shown for evaluation and managment because providers in this service group that were not subject to the fee schedule accounted for only 0.6 percent of total medical cost in 2005 (Figure 6.2).
6. Excludes intensive care unit.

Figure 6.5A Quantity, unit-cost and service-mix indices, injury years 1997-2005 [1]

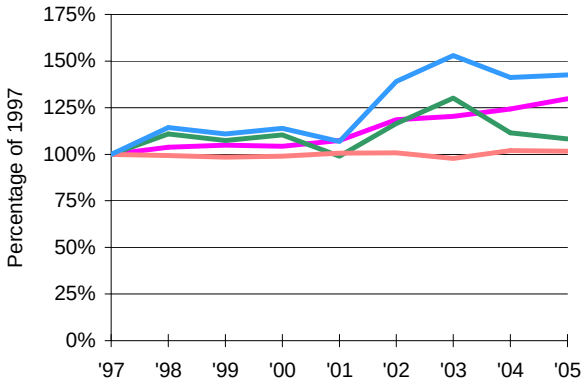


(Notes at end of figure.)

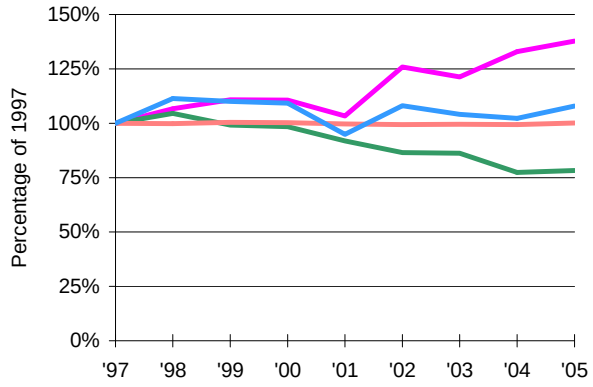
Physical medicine (chiropractic providers)



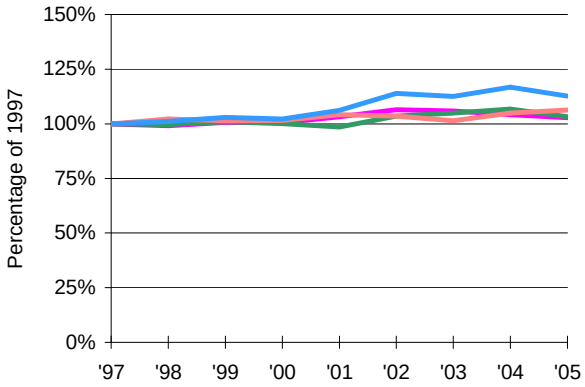
Physical med. (provs. not subj. to fee sched.)



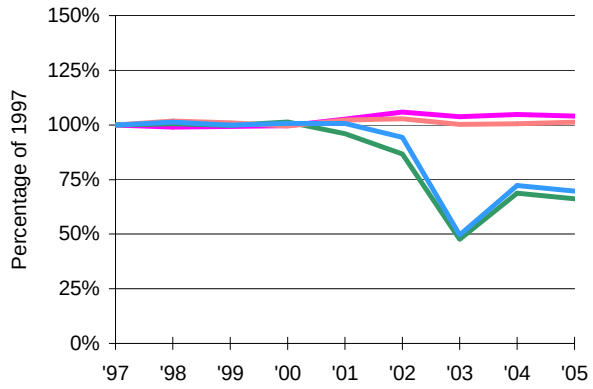
Inpatient hospital overnight room [7]



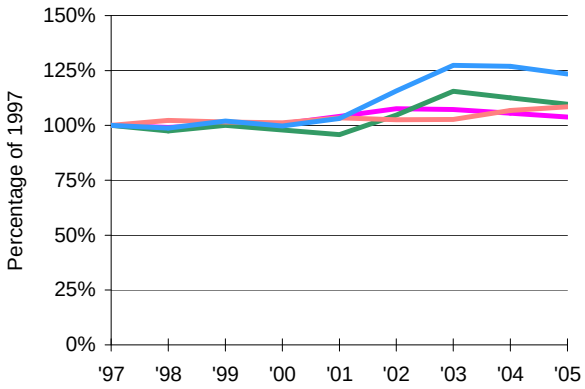
Evaluation and management (total) [8]



Eval. and mgmt. (office visits — new patient) [9]

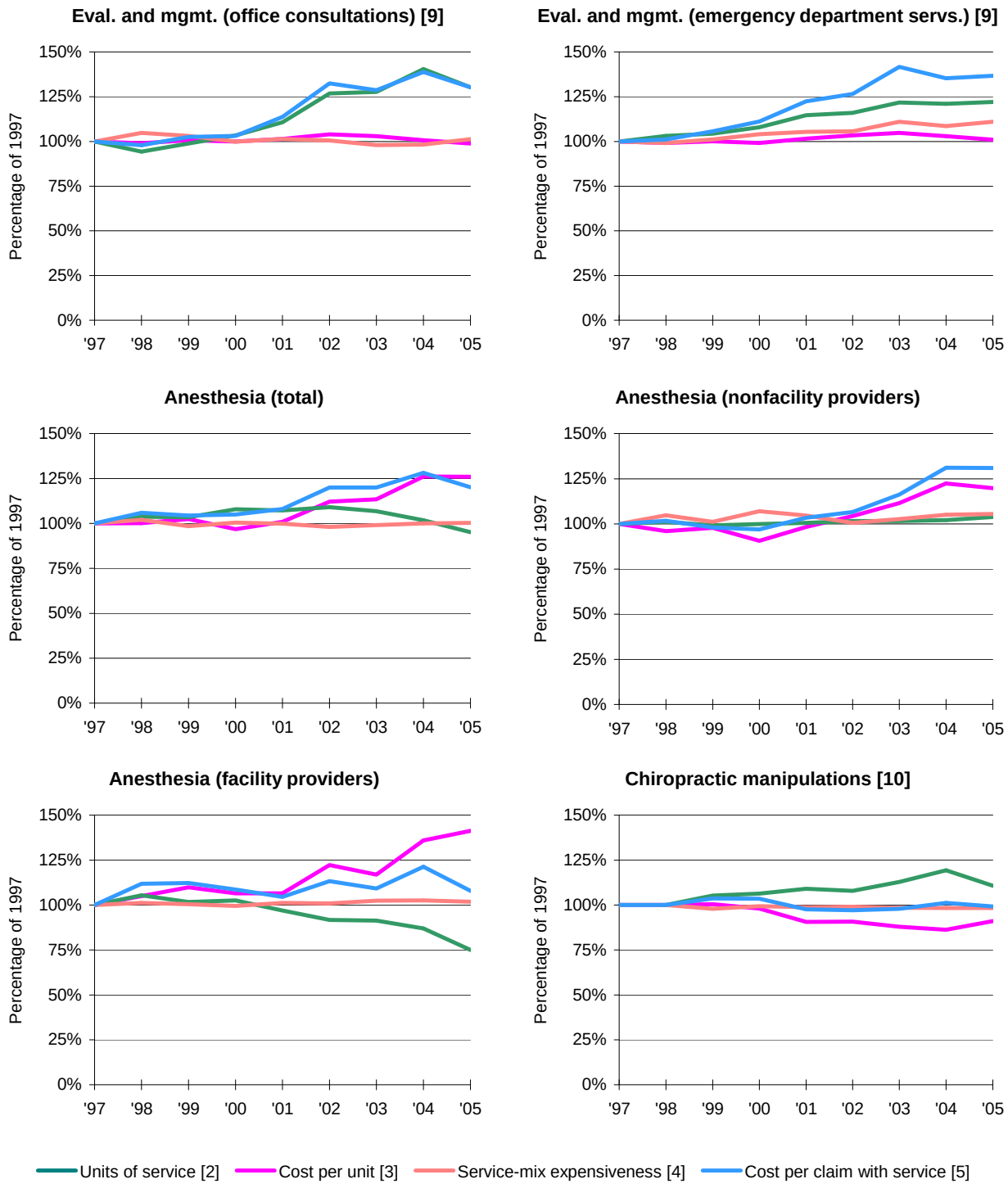


Eval. and mgmt. (office visits — estab. patient) [9]



Units of service [2] Cost per unit [3] Service-mix expensiveness [4] Cost per claim with service [5]

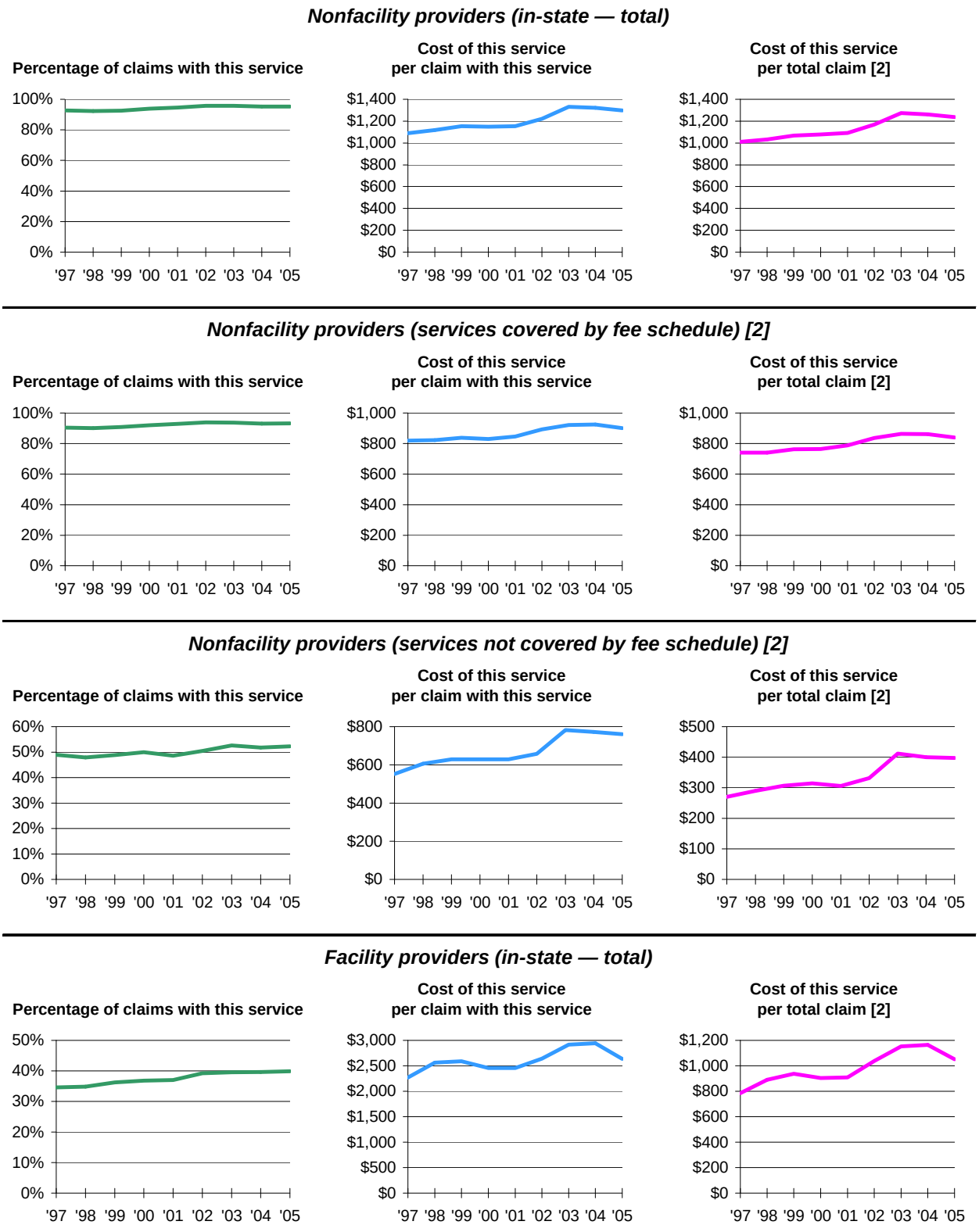
(Notes at end of figure.)



(Notes at end of figure.)

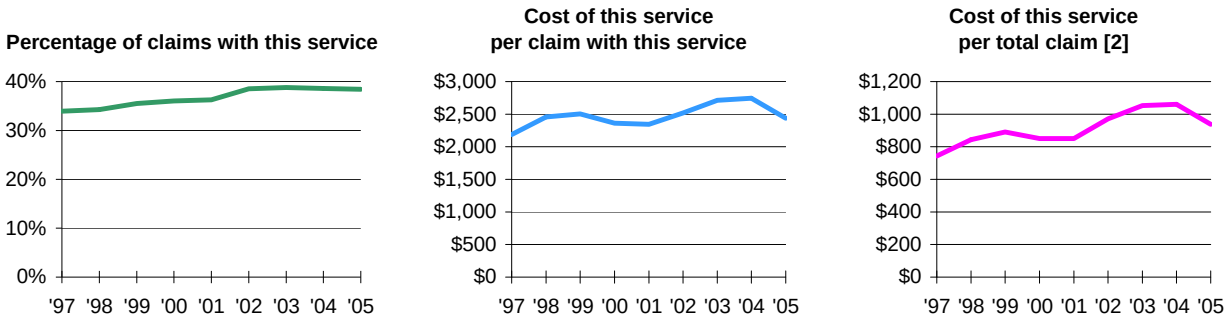
1. Developed statistics computed from data from a large insurer with fixed weights for gender, age and type of injury. Service groups are shown in the same order as in Figure 6.5. Only some service groups are represented because the service codes (for individual types of service within the group) do not allow the computation of these indices for all service groups. (See Appendix C.)
2. Units of service per claim with service.
3. Average cost per unit of service, holding constant the service mix within the service group. Adjusted for average wage growth. (See Appendix C.)
4. Average cost per unit of service as affected by changes in the service mix within the service group, holding constant the average costs of particular types of service (see Appendix C).
5. Cost of the service per claim with service, adjusted for average wage growth (see Appendix C). Equal to the product of the indices of units of service, cost per unit and service mix expensiveness. An approximation (when the percent changes are small) is that the percent change in the cost of the service per claim with the service is roughly equal to the sum of the percent changes in the three component indices.
6. Provider groups (nonfacility and facility providers) are not shown for surgery because facility providers of this service group accounted for only 0.6 percent of total medical cost in 2005 (Figure 6.2).
7. Excludes intensive care unit. Service mix for this category pertains to the mix between private and semiprivate rooms.
8. Provider groups (providers subject and not subject to fee schedule) are not shown for evaluation and managment because providers of this service group that were not subject to the fee schedule accounted for only 0.6 percent of total medical cost in 2005 (Figure 6.2).
9. For the four subgroups under evaluation and management, units of service and cost per claim with service are expressed relative to the number of claims with any evaluation and management services.
10. The indices for chiropractic manipulations begin with 1998 because service-coding changes prevent comparisons with earlier years.

Figure 6.8A **Components of medical cost per total claim by provider group, injury years 1997-2005 [1]**

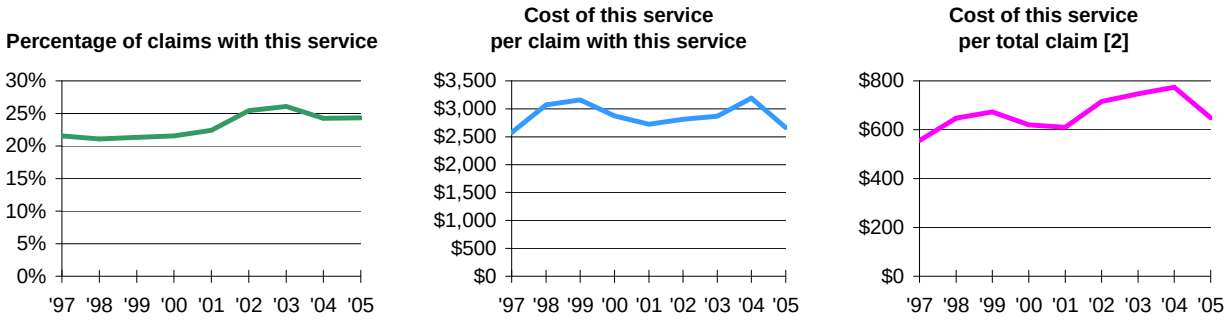


(Notes at end of figure.)

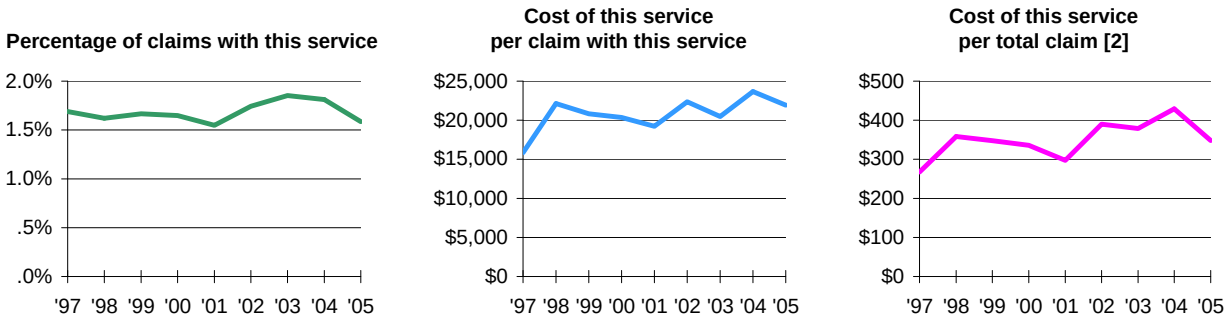
Hospitals (total)



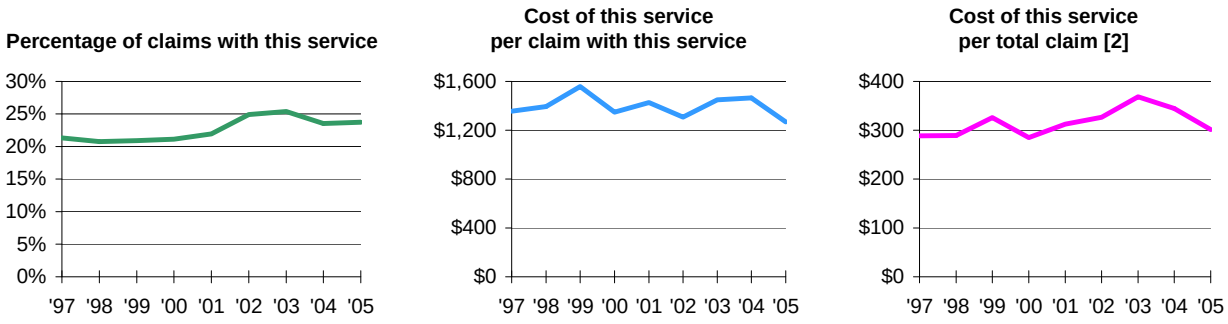
Large hospitals



Large hospitals (inpatient services)

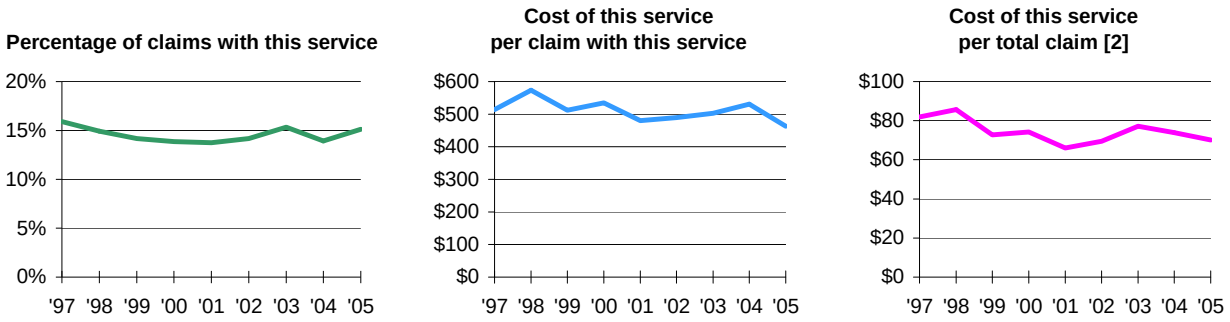


Large hospitals (outpatient services — total)

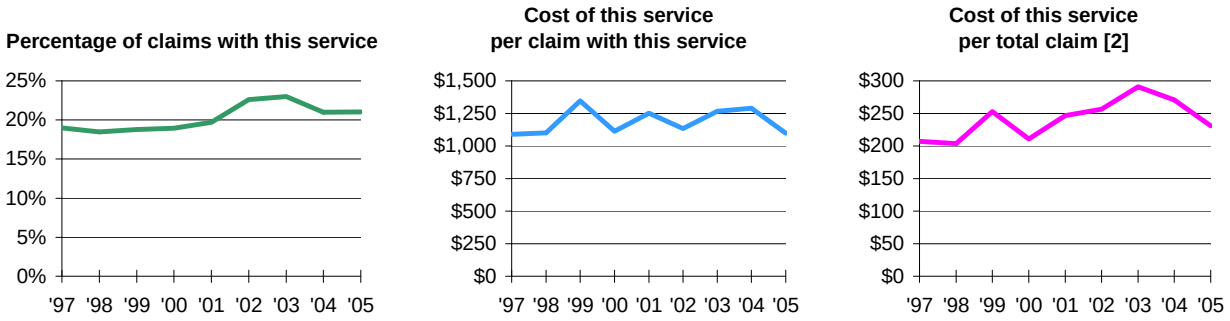


(Notes at end of figure.)

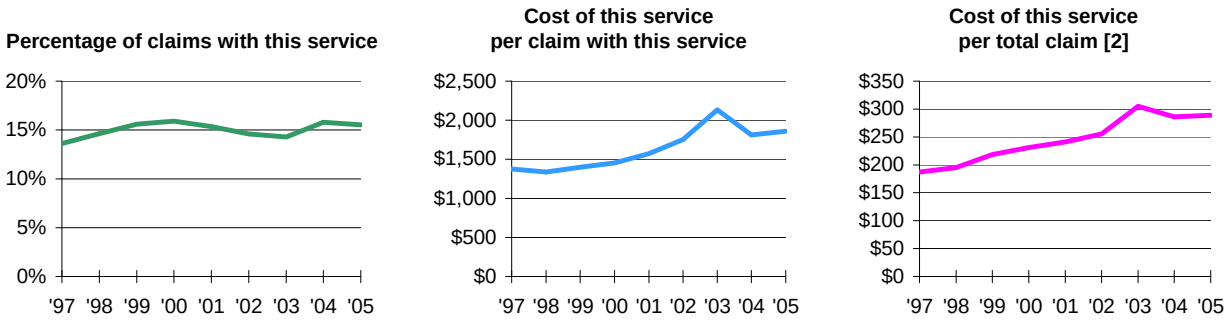
Large hospitals (outpatient services covered by fee schedule [2])



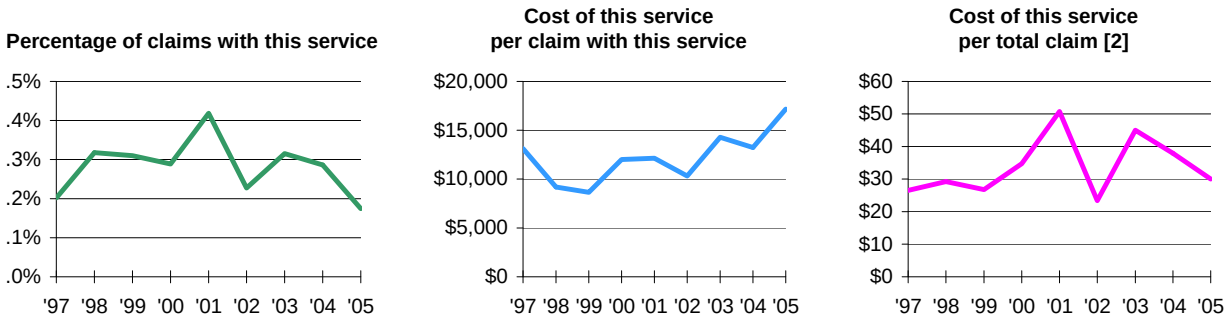
Large hospitals (outpatient services not covered by fee schedule [2])



Small hospitals



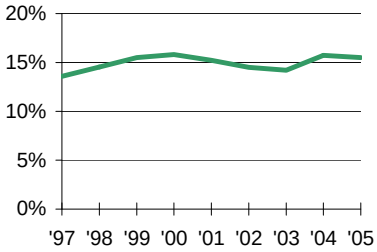
Small hospitals (inpatient services)



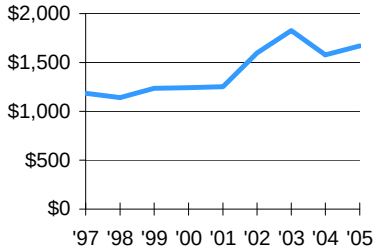
(Notes at end of figure.)

Small hospitals (outpatient services)

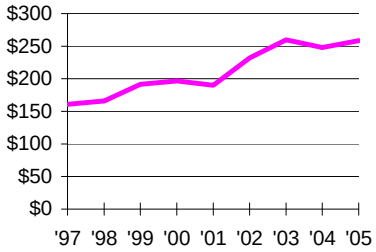
Percentage of claims with this service



Cost of this service per claim with this service

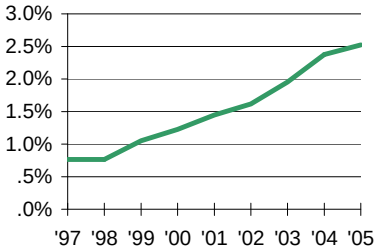


Cost of this service per total claim [2]

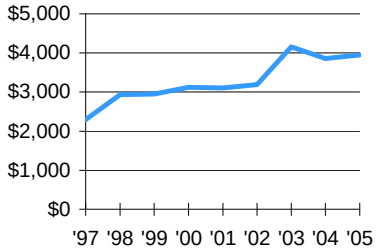


Ambulatory surgical centers

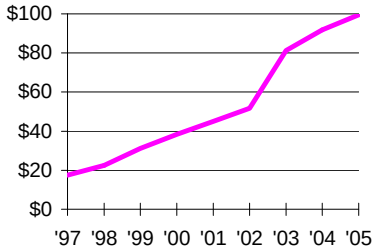
Percentage of claims with this service



Cost of this service per claim with this service

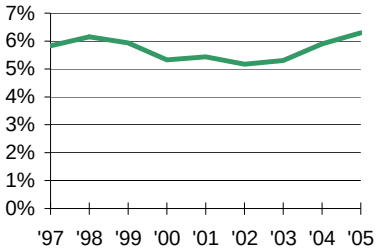


Cost of this service per total claim [2]

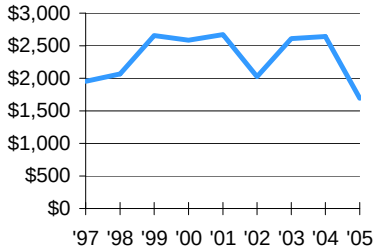


Out-of-state providers

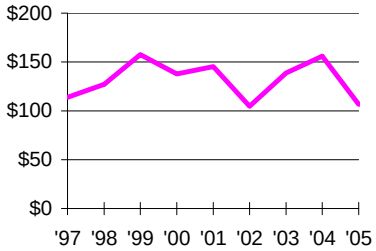
Percentage of claims with this service



Cost of this service per claim with this service

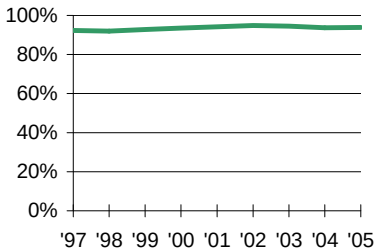


Cost of this service per total claim [2]

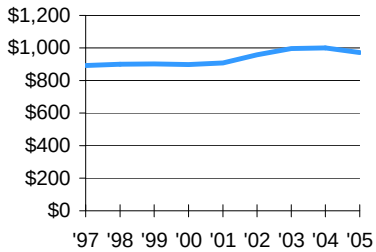


Total covered by fee schedule [2]

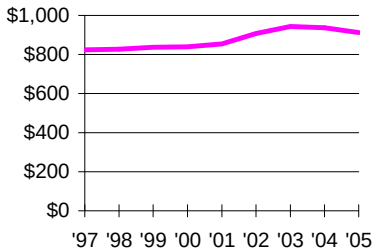
Percentage of claims with this service



Cost of this service per claim with this service



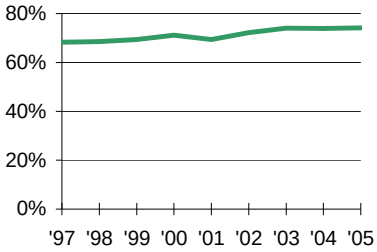
Cost of this service per total claim [2]



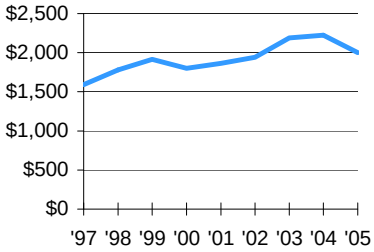
(Notes at end of figure.)

Total not covered by fee schedule [2]

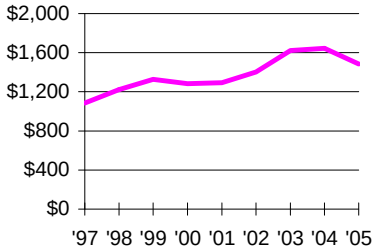
Percentage of claims with this service



Cost of this service per claim with this service



Cost of this service per total claim [2]



1. Developed statistics computed from data from a large insurer with fixed weights for gender, age and type of injury. Costs are adjusted for average wage growth between the respective year and 2005. (See Appendix C.) Service categories are shown in the same order as in Figures 6.7 and 6.8. See Chapter 6 for explanation of service categories and provider groups.
2. Equal to the product of the first two trends for each provider group.

Appendix A

Glossary

Accident year — The year in which the accident or condition occurred giving rise to the injury or illness. In accident year data, all claims and costs are tied to the year in which the accident occurred. Accident year, used with insurance data, is equivalent to injury year, used with Department of Labor and Industry data.

Administrative conference —An expedited, informal proceeding where parties present and discuss viewpoints in a dispute. If agreement is not achieved, a "decision and order" is issued which is binding unless a dispute party requests a formal hearing. Administrative conferences are conducted on medical issues presented on a *Medical Request,* vocational rehabilitation issues presented on a *Rehabilitation Request,* and on discontinuance disputes presented by a claimant's request for an administrative conference. Currently, medical conferences are conducted at the Department of Labor and Industry's Benefit Management and Resolution (BMR) unit if the disputed amount is $7,500 or less;[52] otherwise they are conducted at the Office of Administrative Hearings (OAH). However, BMR may refer a medical dispute of $7,500 or less to OAH if it involves surgery or highly complex issues or litigation is pending at OAH. Rehabilitation conferences are usually conducted at BMR, though sometimes at OAH. Discontinuance conferences are conducted at OAH.

Assigned Risk Plan (ARP) — Minnesota's workers' compensation insurer of last resort, which insures employers unable to insure themselves in the voluntary market. The ARP is necessary because all non-exempt employers are required to have workers' compensation insurance or self-insure. The Department of Commerce operates the ARP through contracts with private companies for administrative services. The Department of Commerce sets the ARP premium rates, which are different from the voluntary market rates.

Benefit Management and Resolution (BMR) — A unit in the Department of Labor and Industry that provides information and clarification about workers' compensation statutes, rules and procedures; carries out a variety of dispute-prevention activities; conducts informal dispute-resolution activities, including mediations; and holds administrative conferences about some issues. See "administrative conference."

Claim petition — A form by which the injured worker contests a denial of primary liability or requests an award of indemnity, medical or rehabilitation benefits. In response to a claim petition, the Office of Administrative Hearings generally schedules a settlement conference or formal hearing.

Cost-of-living adjustment — An annual adjustment of temporary total disability, temporary partial disability, permanent total disability or dependents' benefits computed from the annual change in the statewide average weekly wage (SAWW). The percent adjustment is equal to the proportion by which the SAWW in effect at the time of the adjustment differs from the SAWW in effect one year earlier, not to exceed a statutory limit. For injuries on or after Oct. 1, 1995, the cost-of-living adjustment is limited to 2 percent a year and delayed until the fourth anniversary of the injury.

Dependents' benefits — Benefits paid to dependents of a worker who has died from a work-related injury or illness. These benefits are equal to a percentage of the worker's gross pre-injury wage and are paid for a specified period of time, depending on the dependents concerned.

[52] See note 3.

Developed statistics — Estimates of what claim statistics (e.g., number of claims, average claim cost, dispute rate, vocational rehabilitation participation rate) will be at a given claim maturity. Developed statistics are relevant for accident year, policy year and injury year data. They are obtained by applying development factors, based on historical rates of development of the statistic in question, to tabulated numbers.

Development — The change over time in a claim statistic (e.g., number or cost of claims) for a particular accident year, policy year or injury year. The reported numbers develop both because of the time necessary for claims to mature and, in the case of Department of Labor and Industry data, because of reporting lags.

Discontinuance dispute — A dispute about the discontinuance of wage-loss benefits, most often initiated when the claimant requests an administrative conference (usually by phone) in response to the insurer's declared intention to discontinue temporary total or temporary partial benefits. The conference is conducted at the Office of Administrative Hearings (OAH). A discontinuance dispute may also be presented on the claimant's *Objection to Discontinuance* or the insurer's petition to discontinue benefits, either of which triggers a hearing at OAH.

Discontinuance of wage-loss benefits — The insurer may propose to discontinue wage-loss benefits (temporary total, temporary partial or permanent total disability) if it believes one of the legal conditions for discontinuance have been met. See "Notice of Intention to Discontinue," "Request for Administrative Conference," "Objection to Discontinuance" and "petition to discontinue benefits."

Dispute certification — A process required by statute in which, in a medical or rehabilitation dispute, the Department of Labor and Industry's Benefit Management and Resolution (BMR) unit must certify that a dispute exists and that informal intervention did not resolve the dispute before an attorney may charge for services. BMR specialists attempt to resolve the dispute informally during the certification process.

Experience modification factor — A factor computed by an insurer to modify an employer's premium on the basis of the employer's recent loss experience relative to the overall experience for all employers in the same payroll class. For statistical reliability reasons, the "mod" more closely reflects the employer's own experience for larger employers than for smaller employers.

Full-time-equivalent (FTE) covered employment — An estimate of the number of full-time employees who would work the same number of hours during a year as the actual workers' compensation covered employees, some of whom work part-time or overtime. It is used in computing workers' compensation claims incidence rates.

Hearing — A formal proceeding on a disputed issue or issues in a workers' compensation claim, conducted at the Office of Administrative Hearings (OAH), after which the judge issues a decision that is binding unless appealed. OAH conducts formal hearings on disputes presented on claim petitions and other petitions where resolution through a settlement conference is not possible. OAH also conducts hearings on some discontinuance disputes (those where there is an Objection to Discontinuance or a petition to discontinue benefits), disputes referred by The Department of Labor and Industry's Benefit Management and Resolution unit because they do not seem amenable to less formal resolution, and disputes over miscellaneous issues such as attorney fees. Finally, OAH conducts hearings *de novo* when a party disagrees with an administrative-conference or nonconference decision and order from either BMR or OAH.

Indemnity benefit — A benefit to the injured or ill worker or survivors to compensate for wage loss, functional impairment or death. Indemnity benefits include temporary total disability, temporary partial disability, permanent partial disability and permanent total disability benefits; supplementary benefits; dependents' benefits; and, in insurance industry accounting, vocational rehabilitation benefits.

Indemnity claim — A claim with paid indemnity benefits. Most indemnity claims involve more than three days of total or partial disability, since this is the threshold for qualifying for temporary total or temporary partial disability benefits, which are paid on most of these claims. Indemnity claims typically include medical costs in addition to indemnity costs.

Injury year — The year in which the injury occurred or the illness began. In injury year data, all claims, costs and other statistics are tied to the year in which the injury occurred. Injury year, used with Department of Labor and Industry data, is essentially equivalent to accident year, used with insurance data.

Intervention — An instance in which the Department of Labor and Industry's Benefit Management and Resolution unit provides information or assistance to prevent a potential dispute, or communicates with the parties to resolve a dispute and/or determine whether a dispute should be certified. A dispute resolution through intervention may occur either during or after the dispute certification process. (This is different from the intervention process in which an interested person or entity not originally involved in the dispute becomes a party to the dispute.)

Mediation — A voluntary, informal proceeding conducted by The Department of Labor and Industry's Benefit Management and Resolution unit to facilitate agreement among the parties in a dispute. If agreement is reached, its terms are formally recorded. A mediation occurs when one party requests it and the others agree to participate. This often takes place after attempts at resolution by phone and correspondence have failed.

Medical cost — The cost of medical services and supplies provided to the injured or ill worker, including payments to providers and certain reimbursements to the worker. Workers' compensation covers all reasonable and necessary medical costs related to the injury or illness, subject to a maximum-fee schedule.

Medical-only claim — A claim with paid medical costs and no indemnity benefits.

Medical dispute — A dispute about a medical issue, such as choice of providers, nature and timing of treatments or appropriate payments to providers.

Medical Request — A form by which a party to a medical dispute requests assistance from DLI in resolving the dispute. The request may lead to mediation or other efforts toward informal resolution by The Department of Labor and Industry's Benefit Management and Resolution (BMR) unit or to an administrative conference at BMR or the Office of Administrative Hearings (see administrative conference).

Minnesota Workers' Compensation Insurers Association (MWCIA) — Minnesota's workers' compensation data service organization (DSO). State law specifies the duties of the DSO and the Department of Commerce designates the entity to be the DSO. Among other activities, the MWCIA collects data about claims, premium and losses from insurers, and annually produces pure premium rates.

Nonconference decision and order — A decision issued by The Department of Labor and Industry's Benefit Management and Resolution unit, without an administrative conference, in a dispute for which it has administrative conference authority (see "administrative conference"), when it has sufficient information without conducting a conference. The decision is binding unless a dispute party requests a formal hearing.

Notice of Intention to Discontinue (NOID) — A form by which the insurer informs the worker of its intention to discontinue temporary total disability or temporary partial disability benefits. In contrast with a petition to discontinue benefits, the NOID brings about benefit termination if the worker does not contest it.

Objection to Discontinuance — A form by which the injured worker requests a formal hearing to contest a discontinuance of wage-loss benefits (temporary total, temporary partial or permanent total disability) proposed by the insurer by means of a Notice of Intention to Discontinue or a petition to discontinue benefits. The hearing is conducted at the Office of Administrative Hearings.

Office of Administrative Hearings (OAH) — An executive branch body that conducts hearings in administrative law cases. One section is responsible for workers' compensation cases; it conducts administrative conferences, settlement conferences and hearings.

Permanent partial disability (PPD) — A benefit that compensates for permanent functional impairment resulting from a work-related injury or illness. The benefit is based on the worker's impairment rating, which is a percentage of

whole-body impairment determined on the basis of health care providers' assessments according to a rating schedule in rules. The PPD benefit is calculated under a schedule specified in law, which assigns a benefit amount per rating point with higher ratings receiving proportionately higher benefits. The scheduled amounts per rating point were fixed for injuries from 1984 through September 2000, but were raised in the 2000 law change for injuries on or after Oct. 1, 2000. The PPD benefit is paid after temporary total disability (TTD) benefits have ended. For injuries from October 1995 through September 2000, it is paid at the same rate and intervals as TTD until the overall amount is exhausted. For injuries on or after Oct. 1, 2000, the PPD benefit may be paid as a lump sum, computed with a discount rate not to exceed 5 percent.

Permanent total disability (PTD) — A wage-replacement benefit paid if the worker sustains a severe work-related injury specified in law. Also paid if the worker, because of a work-related injury or illness in combination with other factors, is permanently unable to secure gainful employment, provided that, for injuries on or after Oct. 1, 1995, the worker has a PPD rating of at least 13 to 17 percent, depending on age and education. The benefit is equal to two-thirds of the worker's gross pre-injury wage, subject to minimum and maximum weekly amounts, and is paid at the same intervals as wages were paid before the injury. For injuries on or after Oct. 1, 1995, benefits end at age 67 under a rebuttable presumption of retirement. Also for injuries on or after Oct. 1, 1995, weekly benefits are subject to a minimum of 65 percent of the SAWW. The maximum weekly benefit amount is indicated in Appendix B. Cost-of-living adjustments are described in this appendix.

Petition to discontinue benefits — A document by which the insurer requests a formal hearing to allow a discontinuance of wage-loss benefits (temporary total disability (TTD), temporary partial disability (TPD) or permanent total disability (PTD)). The hearing is conducted at the Office of Administrative Hearings for TTD or TPD benefits or at the Workers' Compensation Court of Appeals for PTD benefits.

Policy year — The year of initiation of the insurance policy covering the accident or condition that caused the injury or illness. In policy year data, all claims and costs are tied to the year in which the applicable policy took effect. Since policy periods often include portions of two calendar years, the data for a policy year includes claims and costs for injuries occurring in two different calendar years.

Primary liability — The overall liability of the insurer for any costs associated with a claim once the injury is determined to be compensable. An insurer may deny primary liability (deny that the injury is compensable) if it has reason to believe the injury did not arise out of and in the course of employment or is not covered under Minnesota's workers' compensation law.

Pure premium — A measure of expected losses, equal to the sum, over all insurance classes, of payroll times the class-specific pure premium rates, adjusted for individual employers' prior loss experience. It is different from (and somewhat lower than) the actual premium charged to employers, because actual premium includes other insurance company costs plus taxes and assessments.

Pure premium rates — Rates of expected indemnity and medical losses a year per $100 of covered payroll, also referred to as "loss costs." Pure premium rates are determined annually by the Minnesota Workers' Compensation Insurers Association for approximately 560 insurance classes in the voluntary market. They are based on insurer "experience" and statutory benefit changes. "Experience" refers to actual losses relative to pure premium for the most recent report periods. The pure premium rates are published with documentation in the annual *Minnesota Ratemaking Report* subject to approval by the Department of Commerce.

Rehabilitation Request — A form by which a party to a vocational rehabilitation dispute requests assistance from DLI in resolving the dispute. The request may lead to mediation or other efforts toward informal resolution by The Department of Labor and Industry's Benefit Management and Resolution (BMR) unit or to an administrative conference, usually at BMR but occasionally at the Office of Administrative Hearings.

Request for Administrative Conference — A form by which the injured worker requests an administrative conference to contest a

discontinuance of wage-loss benefits (temporary total, temporary partial or permanent total disability) proposed by the insurer on the *Notice of Intention to Discontinue.* Requests for a discontinuance conference are usually done by phone.

Reserves — Funds that an insurer or self-insurer sets aside to pay expected future claim costs.

Second-injury claim — A claim for which the insurer (or self-insured employer) is entitled to reimbursement from the Special Compensation Fund because the injury was a subsequent (or "second") injury for the worker concerned. The 1992 law eliminated reimbursement (to insurers) of second-injury claims for subsequent injuries occurring on or after July 1, 1992.

Self-insurance — A mode of workers' compensation insurance in which an employer or employer group insures itself or its members. To do so, the employer or employer group must meet financial requirements and be approved by the Department of Commerce.

Settlement conference — A proceeding at the Office of Administrative Hearings to resolve issues when it appears possible to do so without a formal hearing. If a settlement is reached, it typically includes an agreement by the claimant to release the employer and insurer from future liability for the claim other than for medical treatment.

Special Compensation Fund (SCF) — A fund within the Department of Labor and Industry (DLI) that, among other things, pays uninsured claims and reimburses insurers (including self-insured employers) for supplementary and second-injury benefit payments. (The supplementary benefit and second-injury provisions only apply to older claims, because they were eliminated by the law changes of 1995 and 1992, respectively.) Revenues come primarily from an assessment on insurers and self-insured employers. The SCF also funds the operations of DLI, the workers' compensation portion of the Office of Administrative Hearings, the Workers' Compensation Court of Appeals and workers' compensation functions in the Department of Commerce.

Statewide average weekly wage (SAWW) — The average wage used by insurers and the Department of Labor and Industry (DLI) to adjust certain workers' compensation benefits. This report uses the SAWW to adjust average benefit amounts for different years so they are all expressed in constant (2005) wage dollars. The SAWW, from the Department of Employment and Economic Development, is the average weekly wage of nonfederal workers covered under unemployment insurance.

Stipulated benefits — Indemnity and medical benefits specified in a "stipulation for settlement," which states the terms of settlement of a claim among the affected parties. A stipulation usually occurs in the context of a dispute, but not always. The stipulation may be incorporated into a mediation agreement, or may be reached in a settlement conference or associated preparatory activities, in which case it must be approved by a workers' compensation judge. Stipulated benefits are usually paid in a lump sum.

Supplementary benefits — Additional benefits paid to certain workers receiving temporary total disability (TTD) or permanent total disability (PTD) benefits for injuries prior to October 1995. These benefits are equal to the difference between 65 percent of the statewide average weekly wage and the TTD or PTD benefit. The Special Compensation Fund reimburses insurers (and self-insured employers) for supplementary benefit payments. Supplementary benefits were repealed for injuries on or after Oct. 1, 1995.

Temporary partial disability (TPD) — A wage-replacement benefit paid if the worker is employed with earnings that are reduced because of a work-related injury or illness. (The benefit is not payable for the first three calendar days of total or partial disability unless the disability lasts, continuously or intermittently, for at least 10 days.) The benefit is equal to two thirds of the difference between the worker's gross pre-injury wage and his or her gross current wage, subject to a maximum weekly amount, and is paid at the same intervals as wages were paid before the injury. For injuries on or after Oct. 1, 1992, TPD benefits are limited to a total of 225 weeks and to the first 450 weeks after the injury (with an exception for approved retraining). The maximum weekly benefit amount is indicated in Appendix B. An additional limit is that the weekly TPD benefit plus the employee's weekly wage earned while

receiving TPD benefits may not exceed 500 percent of the SAWW. Cost-of-living adjustments are described in this appendix.

Temporary total disability (TTD) — A wage-replacement benefit paid if the worker is unable to work because of a work-related injury or illness. (The benefit is not payable for the first three calendar days of total or partial disability unless the disability lasts, continuously or intermittently, for at least 10 days.) The benefit is equal to two thirds of the worker's gross pre-injury wage, subject to minimum and maximum weekly amounts, and is paid at the same intervals as wages were paid before the injury. Currently, TTD stops if the employee returns to work; the employee withdraws from the labor market; the employee fails to diligently search for work within his or her physical restrictions; the employee is released to work without physical restrictions from the injury; the employee refuses an appropriate offer of employment; 90 days have passed after the employee has reached maximum medical improvement or completed an approved retraining plan; the employee fails to cooperate with an approved vocational rehabilitation plan or with certain procedures in the development of such a plan; or 104 weeks of TTD have been paid (with an exception for approved retraining). Minimum and maximum weekly benefit provisions are described in Appendix B. Cost-of-living adjustments are described in this appendix.

Vocational rehabilitation (VR) dispute — A dispute about a VR issue, such as whether the employee should be evaluated for VR eligibility, whether he or she is eligible, whether certain VR plan provisions are appropriate or whether the employee is cooperating with the plan.

Vocational rehabilitation plan — A plan for vocational rehabilitation services developed by a qualified rehabilitation consultant (QRC) in consultation with the employee and the employer and/or insurer. The plan is developed after the QRC determines the injured worker to be eligible for rehabilitation services, and is filed with the Department of Labor and Industry and provided to the affected parties. The plan indicates the vocational goal, the services necessary to achieve the goal and their expected duration and cost.

Voluntary market — The workers' compensation insurance market associated with policies issued voluntarily by insurers. Insurers may choose whether to insure a particular employer. See "Assigned Risk Plan."

Workers' Compensation Court of Appeals (WCCA) — An executive branch body that hears appeals of workers' compensation decisions from the Office of Administrative Hearings. WCCA decisions may be appealed to the Minnesota Supreme Court.

Workers' Compensation Reinsurance Association (WCRA) — A nonprofit entity created by law to provide reinsurance to workers' compensation insurers (including self-insurers) in Minnesota. Every workers' compensation insurer must purchase "excess of loss" reinsurance (reinsurance for losses above a specified limit per event) from the WCRA. Insurers may obtain other forms of reinsurance (such as aggregate coverage for total losses above a specified amount) through other means.

Written premium — The entire "bottom-line" premium for insurance policies initiated in a given year, regardless of when the premium comes due and is paid. Written premium is "bottom-line" in that it reflects all premium modifications in the pricing of the policies.

Appendix B

2000 workers' compensation law change

This appendix summarizes those components of the 2000 workers' compensation law change relevant to trends presented in this report.

The following provisions took effect for injuries on or after Oct. 1, 2000:

Temporary total disability (TTD) minimum benefit — The minimum weekly TTD benefit was raised from $104 to $130, not to exceed the employee's pre-injury wage.

Temporary total disability (TTD), temporary partial disability (TPD) and permanent total disability (PTD) maximum benefit — The maximum weekly TTD, TPD and PTD benefit was raised from $615 to $750.

Permanent partial disability (PPD) benefits — Benefit amounts were raised for all impairment ratings. In addition, the PPD award may be paid as a lump sum, computed with a discount rate not to exceed five percent. Previously, PPD benefits were only payable in installments at the same interval and amount as the employee's temporary total disability (TTD) benefits.

Death cases — A $60,000 minimum total benefit was established for dependency benefits. In death cases with no dependents, a $60,000 payment to the estate of the deceased was established and the $25,000 payment to the Special Compensation Fund was eliminated. The burial allowance was increased from $7,500 to $15,000.

Appendix C

Data sources and estimation procedures

This appendix describes data sources and estimation procedures for those figures where additional detail is needed. Two general procedures are used throughout the report — "development" of statistics to incorporate the effects of claim maturation beyond the most current data and adjustment of benefit and cost data for wage growth to achieve comparability over time. After a general description of these procedures, additional detail for individual figures is provided as necessary. See Appendix A for definitions of terms.

Developed statistics — Many statistics in this report are by accident year or policy year (insurance data) or by injury year (Department of Labor and Industry (DLI) data) (see Appendix A for definitions). For any given accident, policy or injury year, these statistics grow, or "develop," over time because of claim maturation and reporting lags. This affects a range of statistics, including claims, costs, dispute rates, attorney fees and others. Statistics from the DLI database develop constantly as the data is updated from insurer reports received daily. With the insurance data, insurers submit annual reports to the Minnesota Workers' Compensation Insurers Association (MWCIA) giving updates about prior accident and policy years along with initial data about the most recent year. If the DLI and insurance statistics were reported without adjustment, time series data would give invalid comparisons, because the statistics would be progressively less mature from one year to the next.

The MWCIA uses a standard insurance industry technique to produce "developed statistics." In this technique, the reported numbers are adjusted to reflect expected development between the current report and future reports. The adjustment uses "development factors" derived from historical rates of growth (from one report to the next) in the statistic in question. The result is a series of statistics developed to a constant maturity, e.g., to a "fifth-report" or "eighth-report" basis. The developed insurance statistics in this report are computed by the DLI Policy Development, Research and Statistics (PDRS) unit using tabulated numbers and associated development factors from the MWCIA.

PDRS has adapted this technique to DLI data. It tabulates statistics at regular intervals from the DLI database, computes development factors representing historical development for given injury years and then derives developed statistics by applying the development factors to the most recent tabulated statistics. In this manner, the annual numbers in any given time series are developed to a constant maturity, e.g., a 22-year maturity for the claim and cost statistics in Chapters 2 and 3 because the DLI database extends back to injury year 1983 for claim and cost data. An example: In Figure 2.1, the developed number of indemnity claims for injury year 2005 (in the numerator of the indemnity claim rate) is 26,900 (rounded to the nearest hundred). This is equal to the tabulated number as of Oct. 1, 2006, 24,159 times the appropriate development factor, 1.1133.

All developed statistics are estimates, and are, therefore, revised each year in light of the most current data.

Adjustment of cost data for wage growth — For reasons explained in Chapter 1, all costs in this report (except those expressed relative to payroll) are adjusted for average wage growth. The cost number for each year is multiplied by the ratio of the 2005 statewide average weekly wage (SAWW) to the SAWW for that year, using the SAWW reflecting wages paid during the respective year. Thus, the numbers for all

years represent costs expressed in 2005 wage-dollars.

Figure 2.1 — The developed number of paid indemnity claims for each year is calculated from the DLI database. The annual number of medical-only claims is estimated by applying the ratio of medical-only to indemnity claims for insured employers to the total number of indemnity claims. (The ratio is unavailable for self-insured employers.) The MWCIA, through special tabulations, provides this ratio by injury year for compatibility with the injury-year indemnity claims numbers.

The number of full-time-equivalent (FTE) workers covered by workers' compensation is estimated as total nonfederal unemployment insurance (UI) covered employment from the Department of Employment and Economic Development (DEED) times average annual hours per employee (from the annual Survey of Occupational Injuries and Illnesses, conducted jointly by the U.S. Bureau of Labor Statistics and state labor departments) divided by 2,000 (annual hours per full-time worker). Nonfederal UI-covered employment is used because there is no data about workers'-compensation-covered employment.

Figure 2.2 — For insured employers, total cost is computed as written premium adjusted for deductible credits, minus paid policy dividends. Written premium and paid dividends for the voluntary market are obtained from the Department of Commerce. Written premium for the Assigned Risk Plan (ARP) is obtained from the Park Glen National Insurance Company, the plan administrator. (There are no policy dividends in the ARP.)

Written premium is adjusted upward by the amount of premium credits granted with respect to policy deductibles, to reflect that portion of cost for insured employers that falls below deductible limits. Premium credit data through policy year (PY) 2004 is available from the MWCIA. The 2005 figure is estimated by applying the ratio of premium credits to written premium for 2004 to the 2005 premium figure. When the actual amount becomes available for 2005, that year's total cost figure will be revised.

For self-insured employers, the primary component of estimated total cost is pure premium from the Minnesota Workers' Compensation Reinsurance Association (WCRA). A second component is administrative cost, estimated as 10 percent of pure premium. The final component is the total assessment paid to the Special Compensation Fund (SCF), net of the portion used to pay claims from defaulted self-insurers, since this is already reflected in pure premium.

Total workers' compensation covered payroll is computed as the sum of insured payroll, from the MWCIA, and self-insured payroll, from the WCRA. Insured payroll was not yet available for 2005. This figure was extrapolated from actual figures using the trend in nonfederal UI-covered payroll (from DEED) and the trend in the relative insured and self-insured shares of total pure premium (from the WCRA).

Figure 2.3 — Market-share percentages are taken from undeveloped counts of paid indemnity claims from the DLI database. Using undeveloped rather than developed claim counts has little effect on the percentages, because the number of indemnity claims develops at nearly the same rate for the different insurance arrangements.

Figure 2.4 — Claim and loss data is from the MWCIA's *2007 Minnesota Ratemaking Report.* This data comes from insurance company reports about claim and loss experience for individual policies for the voluntary market and the ARP. The reported losses include paid losses plus case-specific reserves. Data is developed to a fifth-report basis using the development factors in the *Ratemaking Report,* which produces statistics at an average maturity of 5.5 years from the injury date; the statistics are then adjusted for average wage growth.

Figures 2.6 and 2.7 — Following the procedure in the MWCIA's ratemaking report, Figures 2.6 and 2.7 are based on "paid plus case reserve" losses. The data is from financial reports to the MWCIA by voluntary market insurers only. "Paid plus case reserve" losses are developed to a uniform maturity of eight years (an "eighth-report basis") using the selected development factors in the 2007 ratemaking report. Payroll data for Figure 2.6 is from insurer reports about policy experience.

Figure 3.1 — Statistics are derived in the same manner as for Figure 2.4, with one modification. Figure 3.1 presents data by claim type. For permanent total disability (PTD) and death cases, the number of claims and their average cost fluctuate widely from one policy year to the next because of small numbers of cases. Therefore, to produce more meaningful comparisons among claim types, PTD and death claims and losses were estimated by applying respective percentages of claims and losses (relative to the total) during the most recent three years to total claims and losses for 2003.

Figures 3.2, 3.6 and 5.14 — These figures include statistics about claims with stipulated benefits and with attorney fees. A modified procedure was used to compute these statistics, for the following reason:

In computing developed statistics, historical rates of development are used to project relatively immature data for recent injury years to a greater level of maturity than it has yet attained. The accuracy of the projection depends on the extent to which the immature data for these years will actually develop to the same degree as projected. In general, there is more room for error where relatively little actual development has occurred and the developed statistics contain relatively large projected components.

This is the case with developed statistics relating to stipulated benefits and claimant attorney fees for recent injury years. Data about these items is usually not established until fairly late in a claim, most commonly after a settlement conference or hearing has occurred at the Office of Administrative Hearings (OAH). Consequently, insurers report this data at a later point in the claim than they do most other data. This may impair the reliability of the associated developed statistics for recent injury years.

Therefore, a modified procedure was used to compute these statistics. In particular, the percentages of claims with stipulated benefits and with claimant attorney fees for the two most recent injury years (2004 and 2005) was projected from their 2003 values using the growth rate in the percentage of claims with disputes. The latter percentage was used for this projection because the percentages of claims with stipulated benefits and attorney fees closely follow the percentage of claims with disputes.

Figures 6.1 to 6.7, 6.4-A, 6.5-A and 6.8-A — The statistics in these figures were calculated from detailed claim data supplied by a large insurer. To remove the effects of changing claim composition with respect to gender, age and injury type, the statistics in these figures were computed as fixed-weight averages over gender, age and injury groups.[53] In this technique, the first step is to compute each statistic (e.g., the percentage of claims with evaluation and management services) for each year for each of several groups defined by gender, age and injury type.[54] Then the statistic for each year is computed as the average of that statistic over the gender, age and injury groups, using fixed weights for these different groups. This means the weight given to each group is the same for each year, so that changes in the relative sizes of the groups have no effect on the statistics. In these computations, the fixed weights were equal to the percentages of claims in the respective groups for the whole analysis period.

The statistics in these figures and appendices were computed by injury year at an average maturity of somewhat more than five years after the date of injury. Specifically, for the claims that arise in each year, medical services and costs were counted through Nov. 10 of the fifth year following the year of injury. For injury years 2002 to 2005, data of this maturity was not yet available.[55] Therefore, the figures for those years were projected to the same level of maturity as for previous years, using development factors computed from earlier injury years.

[53] Changing claim composition is an issue not only because it occurs in the general population of claims. It is particularly an issue in this instance because of possible changes in the employer clientele of the insurer supplying the data.

[54] The age groups were 14-29, 30-39, 40-49 and 50+. The injury groups were musculoskeletal injuries of the back, musculoskeletal injuries of limbs, other musculoskeletal injuries, rheumatic and orthopedic injuries, internal and late-effect injuries, burns, contusion and crushing injuries, disease, fractures, lacerations and amputations, multiple injuries and complex injuries (the last two categories involve different combinations of the other categories). There were 96 weighting groups (2 gender x 4 age x 12 injury type).

[55] DLI received the data in December 2006.

One challenge in analyzing this data is the presence of a few very high-cost claims which, if simply left in the data, would introduce random fluctuations in the trends that would obscure the underlying tendencies that are of interest. This issue was dealt with in three steps. First, a small number of very high-cost claims were removed from the data using a service-group-specific cost threshold adjusted for cost growth over time.[56] Second, all calculations were performed on the data remaining after removing these claims. Third, the removed claims were recombined with the aggregate results from the second step, by distributing their numbers and costs by year, service group, and provider group, according to the numbers of claims and average claim cost by service and provider group by year in the pared-down data. This way, the high-cost claims are reflected in the results, but effectively as a layer of risk on top of the numbers that would result from the pared-down database alone.

For selected service groups, the change in the average cost of the service group per claim with services in the group was decomposed into (1) the change in average number of units of service per claim, (2) the change in average cost per unit of service (with a fixed service mix) and (3) the change in expensiveness of the service mix (Figures 6.5 and 6.5-A). This was only done for selected service groups because it requires well-defined codes for all types of service within the group, which was not the situation for all service groups. The first of the three components is self-explanatory. The last two were calculated as follows:

Change in average cost per unit of service (fixed service mix) — For each pair of adjacent years, the average cost per unit of service was computed for each year using *the average payment per unit for each type of service for the year in question* along with *the average service mix for the two years combined*.[57] The index of change for the two-year interval was then computed as the percent change between the two years in average cost per unit so computed. Thus, this index reflects only changes in the costs of particular services, not changes in service mix.

Change in expensiveness of service mix — For each pair of adjacent years, the average cost per unit of service was computed for each year using the service mix for the year in question along with the average payment per unit for each type service for the two years combined.[58] The index of change for the two-year interval was then computed as the percent change between the two years in average cost per unit so computed. Thus, this index reflects only changes in service mix, not changes in the costs of particular services.

[56] The threshold was 1.5 times the cost of the 10th-most-expensive claim by service category, combining claims from all years and adjusting cost by average cost growth within the service category.

[57] This is a simplified version of the computation. More detail is available upon request.

[58] This is a simplified version of the computation. More detail is available upon request.