

RESEARCH UPDATE

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Medical Provider Network Utilization in California Workers' Compensation

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Senate Bill 899, the workers' compensation reform legislation signed by Governor Schwarzenegger in April 2004, introduced Medical Provider Networks (MPNs) into the California workers' compensation system. This reform allowed employers that offer group health care to their employees to establish an MPN which, unless an employee had pre-designated a personal treating physician, gave the employer control over the injured employee's medical treatment for the life of the claim.

Over the last four years, several CWCI studies have measured key aspects of workers' compensation medical benefit delivery -- including network utilization rates -- following the introduction of MPNs in January 2005. In this study, which follows up on that earlier work, the authors used the CWCI Industry Claims Information System (ICIS) database to derive first-year medical service data for a large sample of pre- and post-MPN services, then measured the changes in the network utilization rates both overall, and for services broken out across six major sections of the Official Medical Fee Schedule (OMFS). The current analysis extends the timeline through June 2009 and reveals continued growth in network utilization for all observed areas of medical service within the California workers' compensation system.

BACKGROUND

Findings From the Initial Studies

In February 2008, the California Workers' Compensation Institute (CWCI) published an analysis of medical network utilization that documented the increased use of network providers in California workers' compensation from 2002 through 2006, measuring both the use of Preferred Provider Organization networks across the entire 5-year span of the study, as well as the use of MPNs following their introduction in January 2005.¹ Specifically, that analysis showed that the overall network utilization rate in California workers' compensation increased from 32 percent of first-year outpatient medical care services for accident year (AY) 2002 claims to just under half of the first-year services on AY 2004 claims; then continued to grow following the introduction of MPNs, climbing to nearly 62 percent of first-year outpatient services on AY 2005 claims – nearly double the level noted just two years earlier.

The February 2008 study also tracked network utilization for medical services in six key sections of the Official Medical Fee Schedule (Evaluation and Management, Surgery excluding injections, Radiology, the Medicine Section, Physical Therapy, and Chiropractic Manipulation) and found significant growth in the use of networks within each of these areas. Because MPNs allowed employers to extend their medical control from the pre-reform 30-day timeframe to the life of the claim, the authors also measured changes in the proportion of visits to network providers within and beyond 30 days of injury. The results showed that in all six fee schedule categories, the increase in network utilization was greatest for services beyond the first 30 days post-injury, suggesting a strong link between the growth in network services during the first year of treatment and the expansion of medical control afforded by MPNs. However, because MPNs were still relatively new, and the earlier analysis only included data on claims with injury dates through mid-2006, the issue was marked for future study as more developed data became available.

A second Institute report² published in December 2008 extended the timeline of medical network analysis through December 2007. That study revealed that the growth in the network utilization rate for first-year physician-based treatment had continued to expand, accounting for 63 percent of all first-year services on AY 2006 claims.

1 Swedlow, A., Ireland, J. Analysis of California Workers' Compensation Reforms Part 3: Medical Provider Networks and Medical Benefit Delivery. CWCI February 2008.

2 Swedlow, A., Ireland, J. Analysis of California Workers' Compensation Reforms Part 2: Medical Provider Networks and Medical Benefit Delivery AY 2002 – 2007 Experience. CWCI December 2008.

Key Findings from the Current Study

This report extends the timeline of analysis through June 2009 and reveals continued growth in network utilization within the California workers' compensation system in the following areas:

- 1) **Workers' compensation medical care overall:** The use of network providers increased from 47 percent of physician-based first-year services in AY 2004 to 73 percent of first-year services in AY 2008.
- 2) **Evaluation and Management:** Among claims from AY 2004 (the last year prior to the introduction of workers' compensation MPNs), the network utilization rate for first-year evaluation and management services was 61 percent. After MPNs became operational in 2005, that rate continued to grow, and by AY 2008, network providers accounted for nearly 81 percent of injured workers' first-year E&M services.
- 3) **Surgery:** The network utilization rate for first-year surgery services grew from just over half of the services in AY 2004 to more than 72 percent of the services in AY 2008 – a relative increase of 38.5 percent -- primarily driven by the increased use of networks after the first 30 days.
- 4) **Radiology:** Networks accounted for just under half of all first-year radiology services prior to the introduction of MPNs in 2005, after which the network utilization rate for radiology services increased steadily, climbing to nearly 70 percent in AY 2008.
- 5) **Medicine Section Services:** First-year Medicine Section services showed a network utilization pattern very similar to that of Radiology, growing from 44 percent in AY 2004 to nearly 69 percent in AY 2008.
- 6) **Physical Therapy:** The network utilization rate for first-year physical therapy services jumped from 36 percent in AY 2004 to 52 percent in AY 2005 -- the first year of the MPN program -- then continued to increase slowly but steadily after MPNs were introduced, rising to more than 60 percent by AY 2008.
- 7) **Chiropractic Manipulation:** MPNs are required to have chiropractors in their networks. As a result, the network utilization rate for first-year chiropractic care increased sharply immediately after MPNs became operational, rising from just under 12 percent in AY 2004 to more than 52 percent in AY 2005 and to 60 percent by AY 2008.

Recent changes in network utilization rates for services covered in additional fee schedule categories are noted in the appendix of this report. The appendix includes network utilization data for Anesthesiology; Clinical Laboratory and Pathology; Special Services (including reports and service provision outside standard office hours or locations); Orthotics/Prosthetics; Medical Supplies and Durable Medical Equipment; Medical/Legal Reports; and Other Miscellaneous Services (including copy services and non-emergency transportation).

DATA AND METHODS

The authors used the CWCI Industry Claims Information System³ (ICIS) database to derive first-year medical service data for a large sample of pre- and post-MPN services across the major sections of the Official Medical Fee Schedule.⁴ This analysis measures changes in the percentage of workers' compensation physician-based medical services by network providers (the network utilization rate) by timeframe and by type of medical service. The study examines medical data on claims from AY 2004 through the first quarter of AY 2009, with "services" identified through a unique combination of billing provider tax ID number, fee schedule section, and date of service. The analysis shows the overall network utilization rates for services within and beyond the first 30 days of injury for one pre-MPN accident year (2004) and five post-MPN accident years (AY 2005 – 2008 and the first quarter of AY 2009). The results are also broken out for services in the six major fee schedule categories.

Claim Sample

For this analysis, the authors compiled medical transaction data from 14 national and regional workers' compensation insurers who together accounted for 60 percent of the California workers' compensation insurance market in calendar year 2008. Each data contributing organization used a PPO network in 2004, as well as an MPN in years 2005 through 2009. The claims sample consisted of 891,918 California work injury claims with January 2004 through March 2009 dates of injury. These claims involved more than 12.6 million medical services for physician-based medical treatment. Exhibit 1 shows the distribution of claims and associated medical services and payments across the six accident years used in the analysis.

Exhibit 1: Distribution of Claims, Services & Payments – Network Study Sample

Year of Injury	Number of Claims	Percent of Claims	Number of Services	Percent of Services	Medical Service Payments	Percent of Payments
2004 (pre-MPN)	215,225	24.1%	3,305,315	26.1%	\$358,708,664	22.1%
2005	190,012	21.3%	2,637,343	20.8%	\$336,280,790	20.7%
2006	168,850	18.9%	2,266,027	17.9%	\$316,919,461	19.5%
2007	159,126	17.8%	2,308,379	18.2%	\$330,301,912	20.3%
2008	135,974	15.2%	1,921,123	15.2%	\$256,770,565	15.8%
1st Quarter 2009	22,731	2.5%	234,598	1.9%	\$27,516,617	1.7%
Totals	891,918	100.0%	12,672,785	100.0%	\$1,626,498,009	100.0%

³ ICIS is a proprietary database maintained by the California Workers' Compensation Institute that contains detailed information, including employer and employee characteristics, medical service information, and benefit and other administrative cost information on more than 3 million workplace injuries with dates of injury between 1993 and 2009 (v11A).

⁴ Labor Code 5307.1.

To assure that the data for each of the six accident years was comparable, services for each claim were truncated at 12 months post date of injury.⁵ Thus, as in the authors' earlier network utilization analyses, all of the data in this study reflects first-year treatment experience. The medical service data also were grouped into four categories based on network versus non-network providers and service date (whether the treatment was rendered within the first 30 days after injury or more than 30 days after injury.)

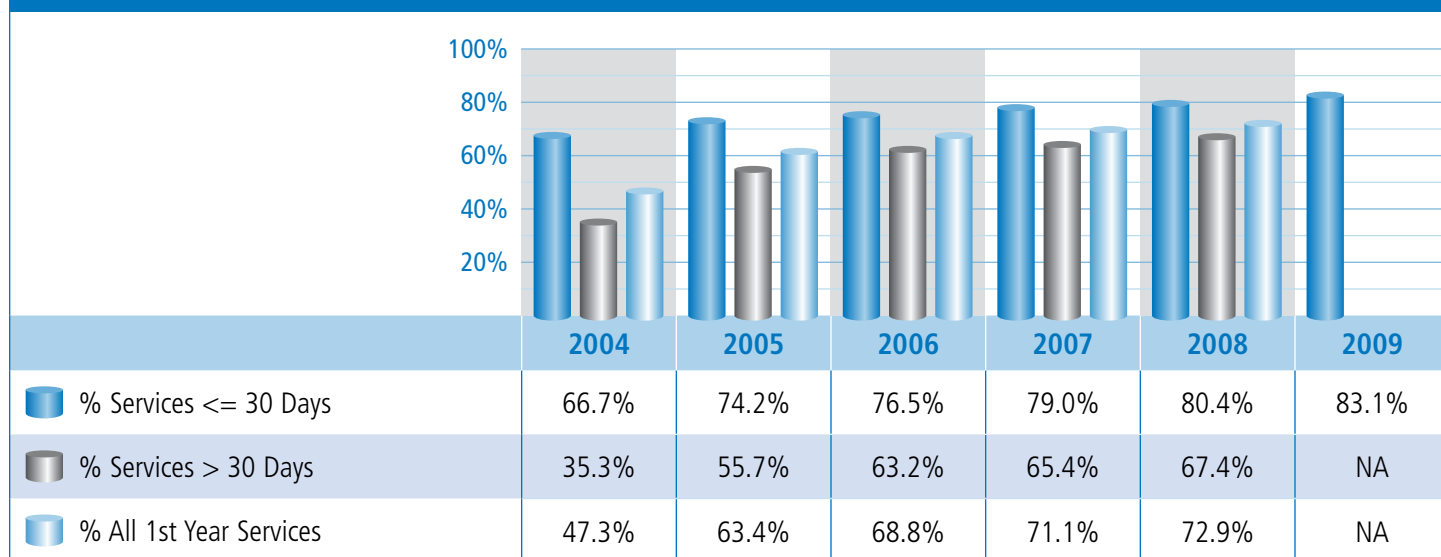
⁵ Because medical visit data in the data set was current through June 2009, the 2009 sample of claims for visits within 30 days of injury was limited to claims with dates of injury from January 1 to March, 2009. The sample of claims for visits within one year of injury was limited to claims with dates of injury before July 1, 2008.

RESULTS

Changes in Network Utilization

Exhibit 2A compares the pre-MPN network utilization rate for first-year physician-based services⁶ from the AY 2004 – 2009 claim sample. The network utilization rate for AY 2004 reflects services rendered by PPOs, while the network utilization rates for AY 2005 – 2009 reflect the use of either PPOs or MPNs, which first began operating in January 2005. As mentioned previously, before MPNs, a payor's ability to channel patients to physicians was limited to the first 30 days post injury (or up to 180 days for Health Care Organizations, which were used infrequently), but under SB 899, payors with MPNs are able to direct care for the life of the claim, so Exhibit 2A also breaks out the results based on when the services were rendered, showing the proportion of services that took place within and beyond 30 days of the injury date.

**Exhibit 2A: Network Utilization Rates:
1st- Year – All Services***



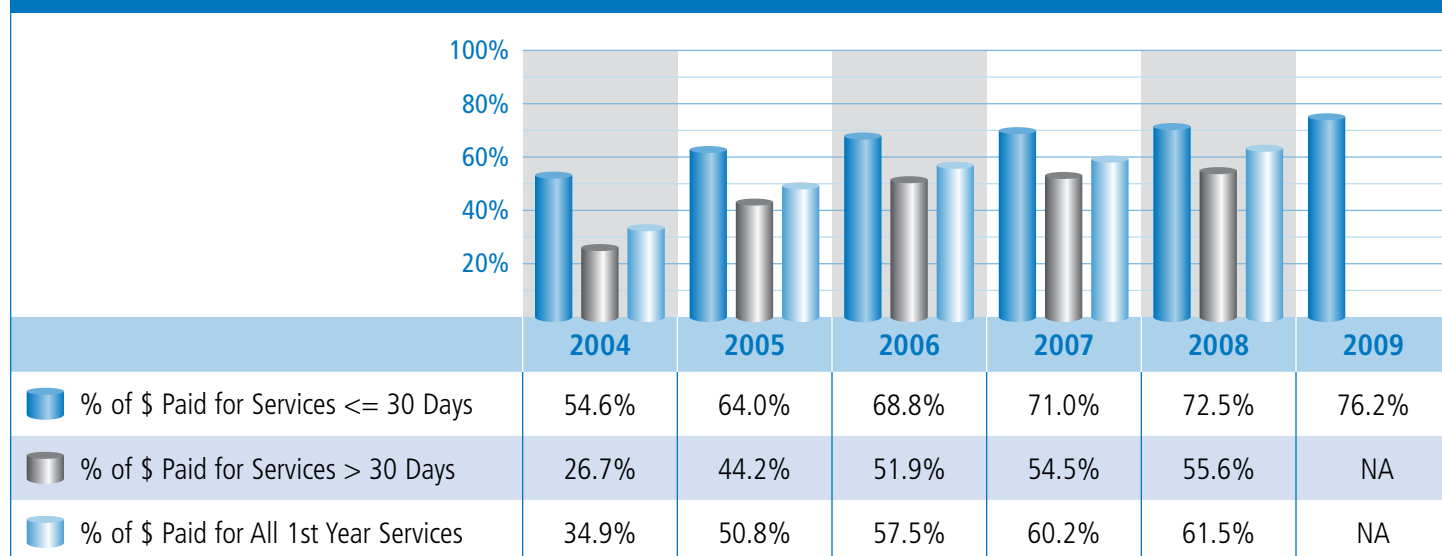
* "All services" includes evaluation and management, anesthesiology, surgery, medicine, laboratory/pathology, radiology, physical medicine, chiropractic, special services, orthotics/prosthetics, pharmacy & DME, medical-legal reports, and "other miscellaneous services."

Results for all services (including those in the appendix) show that overall, use of network providers in the first year after injury rose from 47.3 percent of the services for AY 2004 claims to 72.9 percent of the services for AY 2008 claims. The AY 2004 and AY 2005 data (Exhibit 2A) also reveal that most of the early increase in network utilization resulted from greater use of networks for services beyond the first month. The network utilization rate for post-30 day services grew from 35.3 percent in AY 2004 to 55.7 percent in AY 2005, a relative increase of 57.8 percent. In comparison, the network utilization rate for services in the first 30 days of injury grew by only 11.2 percent over the same one-year span, climbing from 66.7 percent in AY 2004 to 74.2 percent in AY 2005.

⁶ Labor code 3209.3. Definition of a "physician" includes physicians and surgeons holding an M.D. or D.O. degree, psychologists, acupuncturists, optometrists, dentists, podiatrists, and chiropractic practitioners licensed by California state law and within the scope of their practice as defined by California state law.

Exhibit 2B shows the proportion of dollars paid for first-year medical services that were made to network providers for each of the six accident years studied. The payment results also are broken out for services rendered within and beyond 30 days of the injury date.

Exhibit 2B: Percent of 1st Year Service Payments to Network Providers – All Services



Percentage changes in network payments between 2004 and 2009 are consistent with the growth pattern for network utilization. Overall, payments to network providers climbed from about one third of all reimbursements for first-year services on AY 2004 claims to 61.5 percent of the total paid for first-year services on AY 2008 claims. Once again, in the first year of the MPN era, that increase was primarily driven by the growing use of network providers for services beyond the first 30 days. Networks accounted for just over one quarter of the payments for AY 2004 services that took place more than a month after injury, but that percentage climbed to 44.2 percent in AY 2005, then steadily increased to 55.6 percent in AY 2008. In contrast, networks already accounted for 55.6 percent of all payments for services within the first 30 days of injury in AY 2004, but that proportion grew to 64.0 percent in AY 2005, then continued up to 76.2 percent in the first quarter of AY 2009.

The percentages of payments to network providers are consistently below the corresponding network utilization rates based on service volume. This pattern could be explained by discounts frequently offered by network providers, but may also be a result of changes in the mix of services provided.

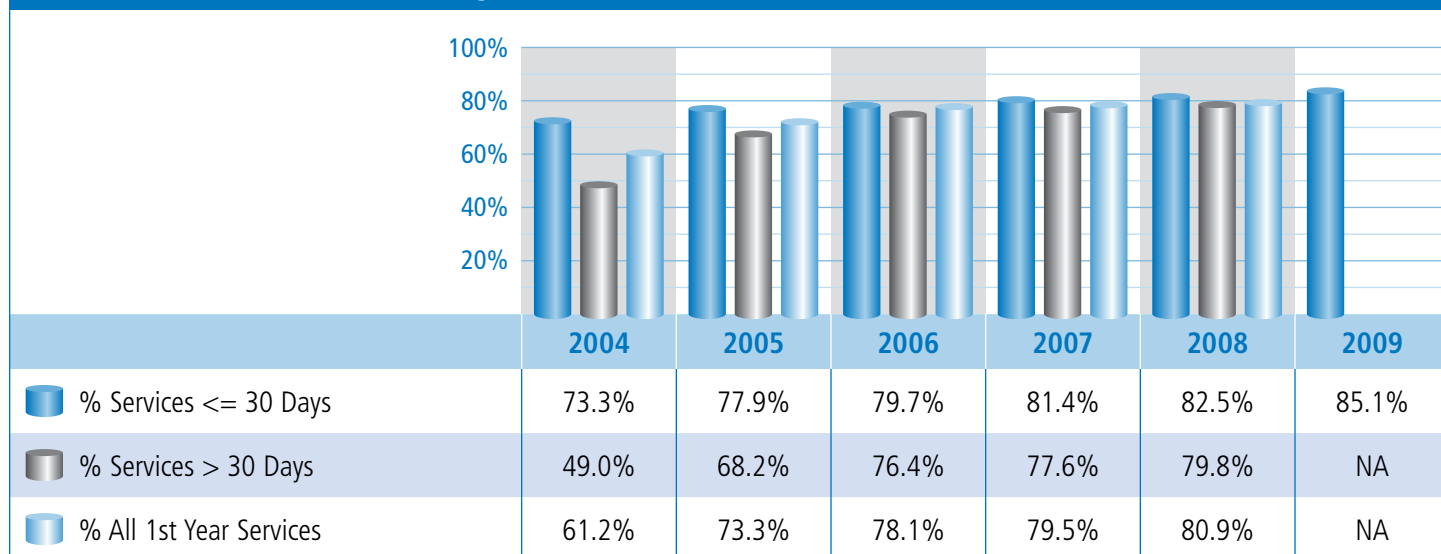
NETWORK UTILIZATION AND REIMBURSEMENT BY FEE SCHEDULE SECTION

The most recent post-MPN network utilization data show that network providers now account for more than 80 percent of all physician-based medical services within the first month of injury, and almost two out of three services beyond 30 days, which translates to a first-year network utilization rate of 72.9 percent. However, the use of networks varies by type of service. To gauge the extent to which networks are used for various services, and how that has changed since the introduction of MPNs, the authors calculated the network utilization rates for the six treatment categories highlighted in the study (and seven additional categories included in the appendix) across each of the six accident years. The following sections compare the pre- and post-MPN network utilization rates for first-year medical services as well as changes in the proportion of payments to networks by OMFS category.

Evaluation & Management

Most Evaluation & Management services are office visits for new and established patients. They involve everything from minor to severe medical problems, and include Emergency Department visits, team conferences and physician phone calls. Exhibit 3A shows the network utilization rates for first-year E&M services.

**Exhibit 3A: Network Utilization Rates:
1st Year Services – Evaluation & Management**

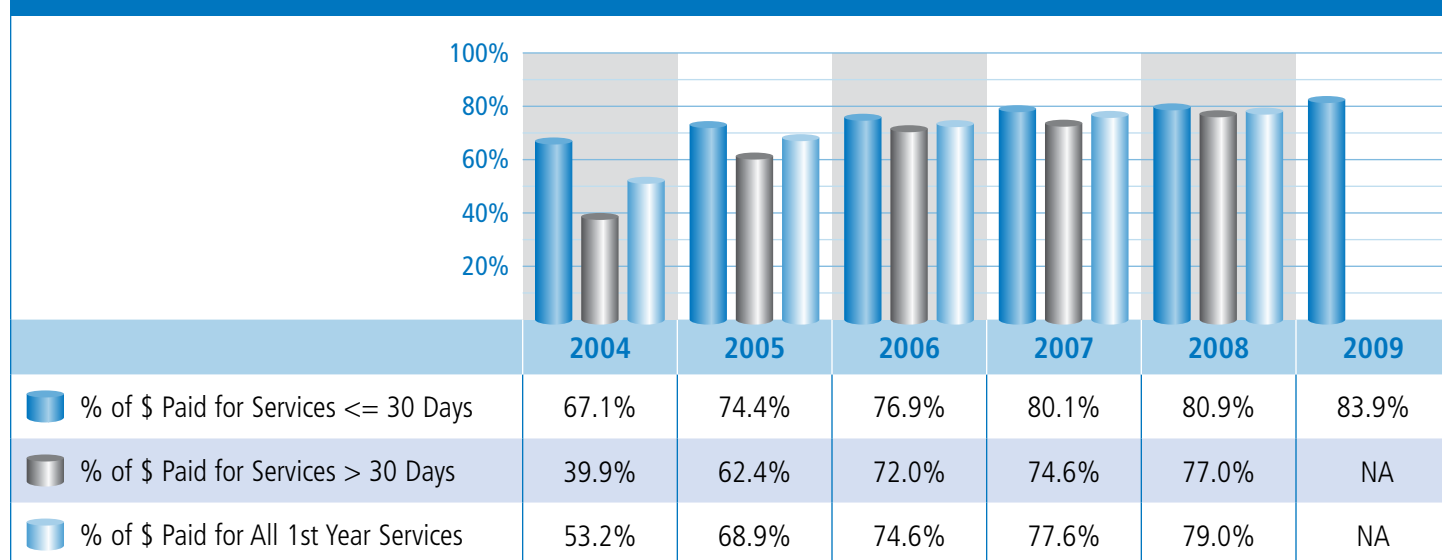


Network utilization for E&M services during the first 30 days has been consistently high. Exhibit 3A shows that for E&M services within 30 days of the injury date, the network utilization rate gradually but steadily increased from 73.3 percent in AY 2004 to 85.1 percent in the first quarter of AY 2009. The most pronounced increase occurred between AY 2004 and AY 2005 -- the first year after MPNs were introduced, when network utilization rose from 73.3 to 77.9 percent, a relative increase of 6.3 percent.

The use of networks for E&M services after the first 30 days showed more significant growth, climbing from 49.0 percent in AY 2004 to 68.2 percent once MPNs began operations in AY 2005, then continuing up to 79.8 percent in AY 2008 – almost the same level as services within 30 days of injury. As a result, the overall network utilization rate for first-year E&M services grew from 61.2 percent in AY 2004 to 80.9 percent in AY 2008 – a relative increase of 32 percent.

Exhibit 3B tracks the changes in the proportion of evaluation and management payments to networks over the same period.

Exhibit 3B: Percent of 1st Year Service Payments to Network Providers – Evaluation & Management

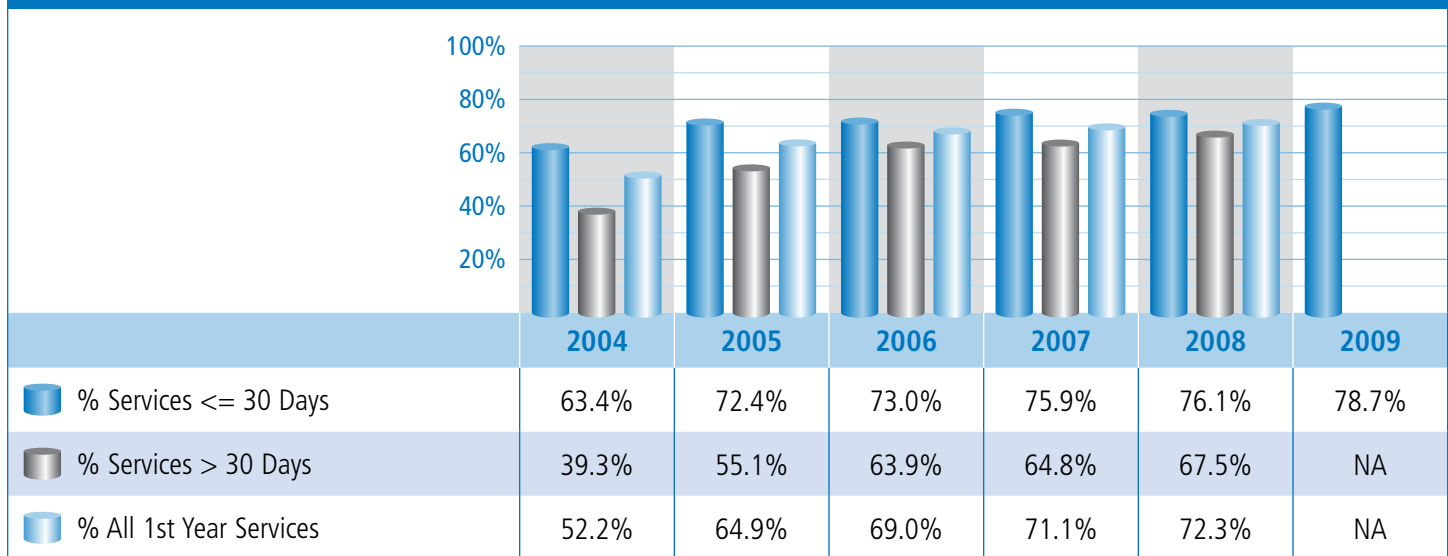


E&M payment patterns to network providers were similar to the service patterns, but the relative percentages were consistently lower. This suggests that network providers are paid less on a per service basis, which likely reflects discounts often accepted by network providers, although these results also could be impacted by changes in the mix of E&M services across the different accident years. Also note, as the years progress, the difference between the percentage of first-year services to a network provider and the percentage of first-year payments to networks narrowed. For example, the percent of first-year E&M services to networks was 8 percentage points higher than the percent of first-year payments in AY 2004 (61.2 percent versus 53.2 percent), but only 1.9 percentage points higher by AY 2008 (80.9 percent versus 79.0 percent). This suggests that the mix of services either became increasingly similar over the study period, or that network provider discounts have decreased. Overall, payments to networks increased from 53.2 percent of the total amount paid for first-year E&M services in AY 2004 to 79.0 percent of total first-year E&M reimbursements in AY 2008; a relative increase of 48.5 percent.

Surgery

The study included a wide range of services found in the Surgery section of the Official Medical Fee Schedule, though surgical injections were excluded from the study sample. Exhibit 4A shows the network utilization rates for surgical services.

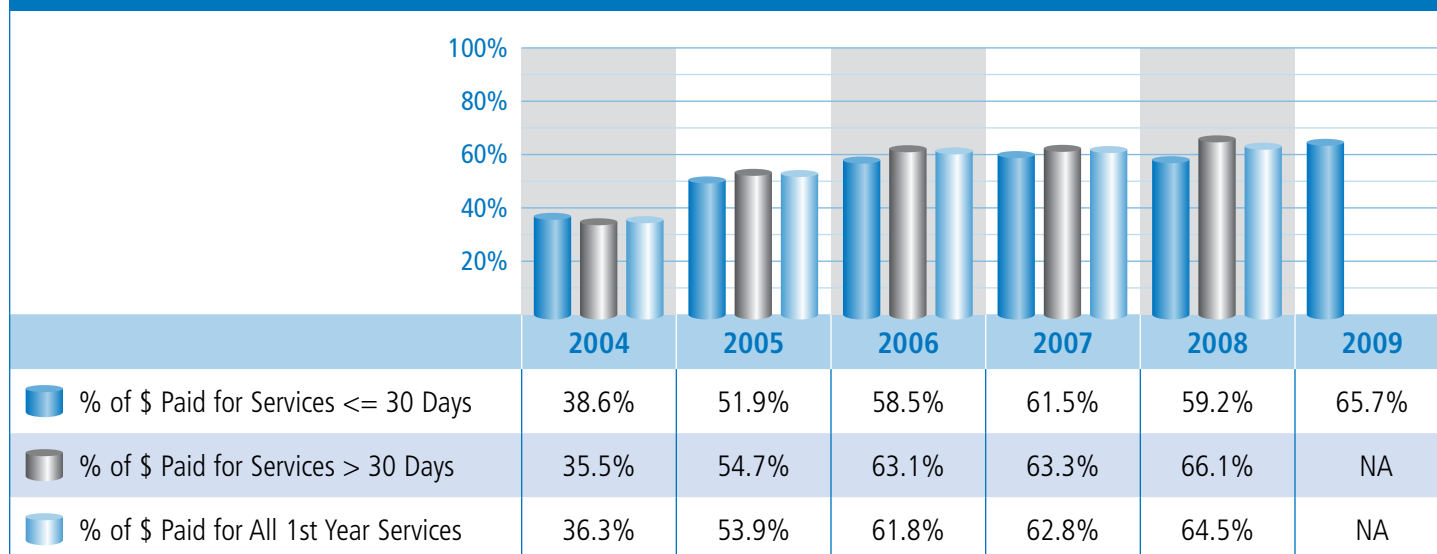
Exhibit 4A: Network Utilization Rates
1st Year Services -- Surgery



Immediately after MPNs took effect, the network utilization rate for Surgery services increased from 52.2 percent in AY 2004 to 64.9 percent in AY 2005, a relative increase of 24.3 percent. The use of networks for surgery services after the first 30 days showed the most significant increase from AY 2004 to AY 2005, a 40.2 relative increase from 39.3 to 55.1 percent. Since AY 2005, network utilization for workers' compensation surgery services beyond the first 30 days has continued to increase, climbing to a new high of 67.5 percent in AY 2008. Thus, the overall network utilization rate for first-year surgery services grew from just over half of the services in AY 2004 to 72.3 percent in AY 2008 – a relative increase of 38.5 percent -- primarily driven by the increased use of networks after the first 30 days.

Exhibit 4B shows the changes in the proportion of surgery payments to network providers.

Exhibit 4B: Percent of 1st Year Service Payments to Network Providers -- Surgery



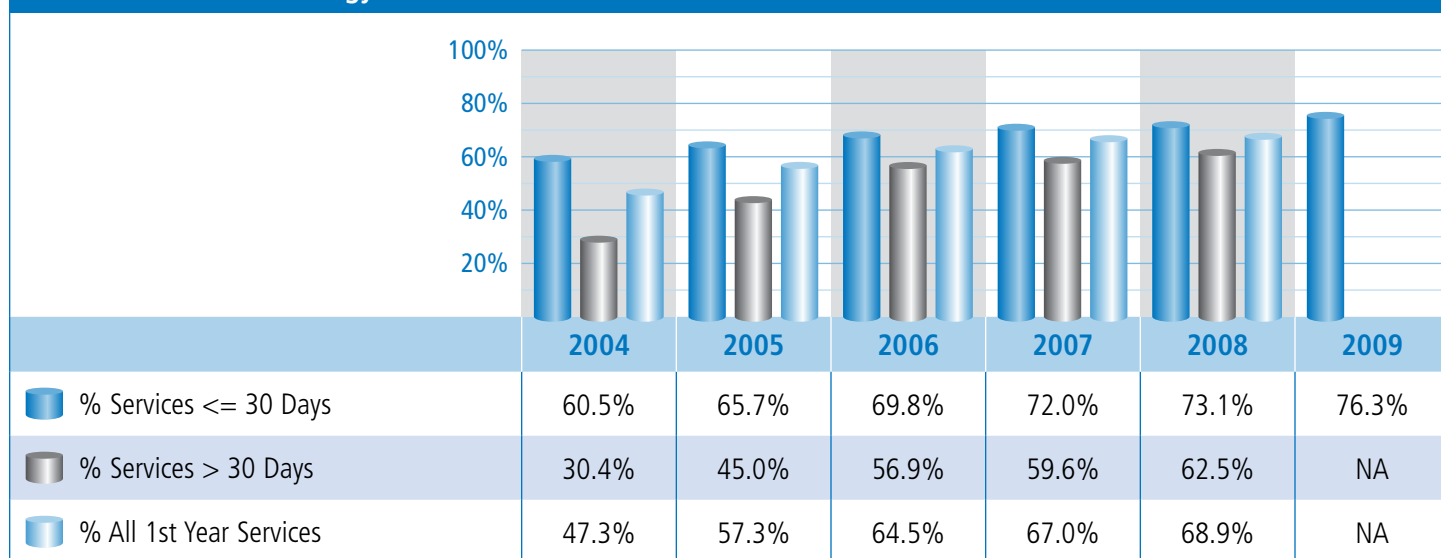
Between AY 2004 and the first quarter of AY 2009, networks accounted for a growing share of the total dollars paid for surgery services after 30 days of injury, which tracks with the growth noted in the network utilization rate during that period. However, the growth in the percentage of payments to networks for surgery services within 30 days far exceeded the growth in the network utilization rate for these services. As noted in Exhibit 4B, the network utilization rate for surgical services within 30 days of injury increased from 63.4 percent in AY 2004 to 78.7 percent in AY 2009 (+24 percent), while the percentage of payments to network providers for those services increased from 38.6 percent in AY 2004 to 65.7 percent in AY 2009 (+70 percent).

As a result, the relative difference between the percentage of services and the percentage of payments to network providers changed dramatically. In AY 2004, the spread between the network utilization rate for surgery services and the percentage of surgery payments to network providers was 43.8 percent -- far greater than the 15.0 percent difference noted for E&M services and the 35.5 percent difference noted for all medical treatment. By AY 2008, the gap between the network utilization rate for surgery services and the percentage of the total amount paid for those services that went to network providers had narrowed from 43.8 percent to 12.1 percent. In contrast, the network utilization rate for E&M services was only 2.4 percent greater than the percentage of payments for those services, and the spread between the network utilization rate for all workers' compensation medical treatment services and the proportion of all payments that went to networks was 18.5 percent.

Radiology

Radiology services include medical imaging technologies such as x-rays, CT scans, and MRIs used to diagnose and treat injuries. Exhibit 5A shows the network utilization rates for radiology services from AY 2004 through the first quarter of AY 2009.

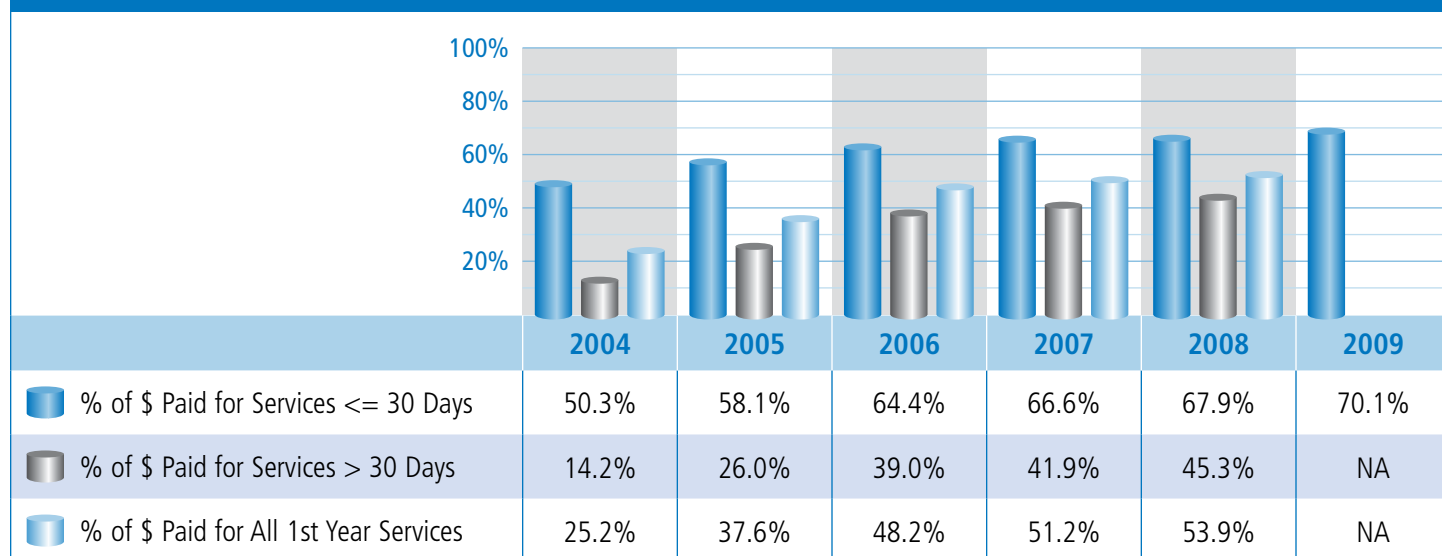
**Exhibit 5A: Network Utilization Rates:
1st Year Services -- Radiology**



The network utilization rate for radiology services in the first 30 days following an injury showed a gradual but steady increase after the introduction of MPNs. From AY 2004 through 2009, network utilization for radiology services increased at an average annual rate of 4.8 percent. The biggest jump in network utilization for radiology occurred in the first year after MPNs became operational, as the rate climbed from 60.5 percent in AY 2004 to 65.7 percent in AY 2005; a relative increase of 8.6 percent. In contrast, the use of networks for radiology after the first 30 days climbed from less than one third of the services to 45.0 percent of the services once the MPNs began to operate in 2005 (a relative increase of 48.3 percent), then continued to increase each year, with networks accounting for 62.5 percent of the radiology services beyond the first 30 days in AY 2008, more than double the rate noted for the pre-MPN claims from AY 2004. Likewise, the network utilization rate for all first-year radiology services showed a substantial increase in the first year of the MPN, increasing from 47.3 percent of services to 57.3 percent of services, a relative increase of 21.1 percent, then continued up to nearly 69 percent in the most recent data from the first quarter of AY 2009.

Exhibit 5B tracks the changes in the percentage of payments to networks for first-year radiology services across the pre- and post-MPN periods.

Exhibit 5B: Percent of 1st Year Service Payments to Network Providers -- Radiology

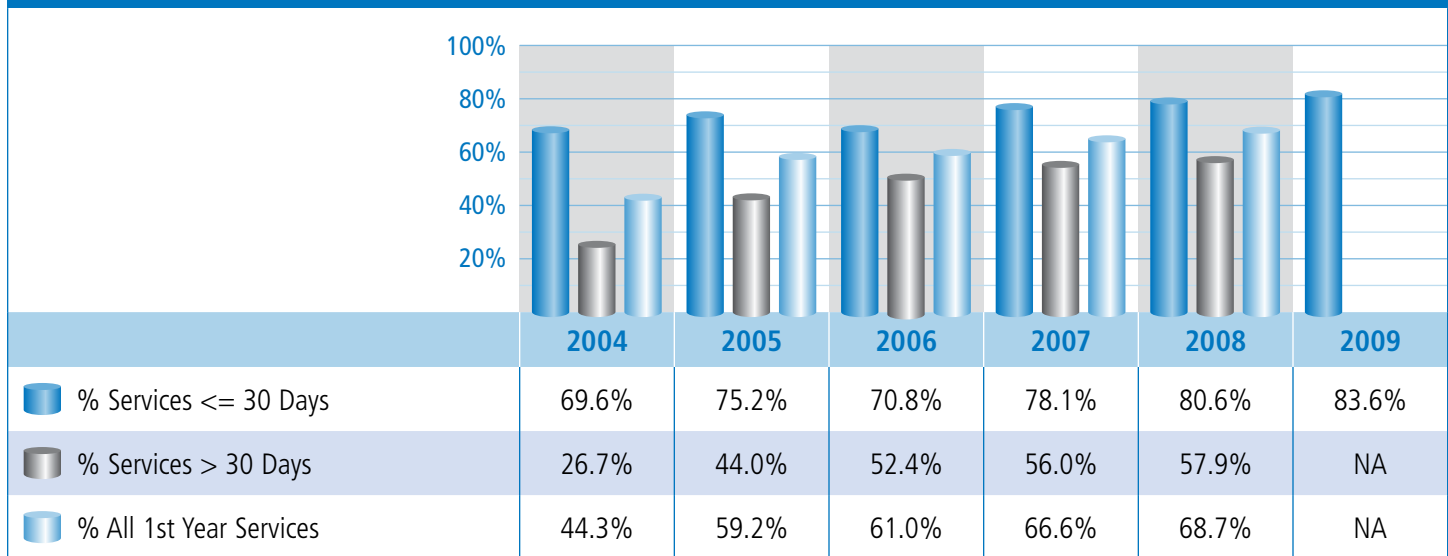


Steady increases were noted in both the network utilization rate for radiology and in the percentage of the total amount paid for radiology that went to network providers, though as with surgical services, the increase in the percentage of radiology dollars paid to network providers was less than the growth in the network utilization rate for these services. For example, in AY 2004, network providers accounted for 47.3 percent of all first-year radiology services, but 25.2 percent of the total amount paid for such services. Although this observed difference gradually moderated throughout the study period, the difference was still substantial in AY 2008 when network providers accounted for 68.9 percent of all first-year radiology services, but 53.9 percent of the payments.

Medicine Section Services

The Medicine Section of the Official Medical Fee Schedule includes a wide range of services used to diagnose and treat injured workers, including psychotherapy, nerve conduction testing, biofeedback, electrocardiograms, medication management, pulmonary evaluation, eye exams, hearing testing, muscle testing and speech therapy. Exhibit 6A shows the progression of network utilization rates for Medicine Section services.

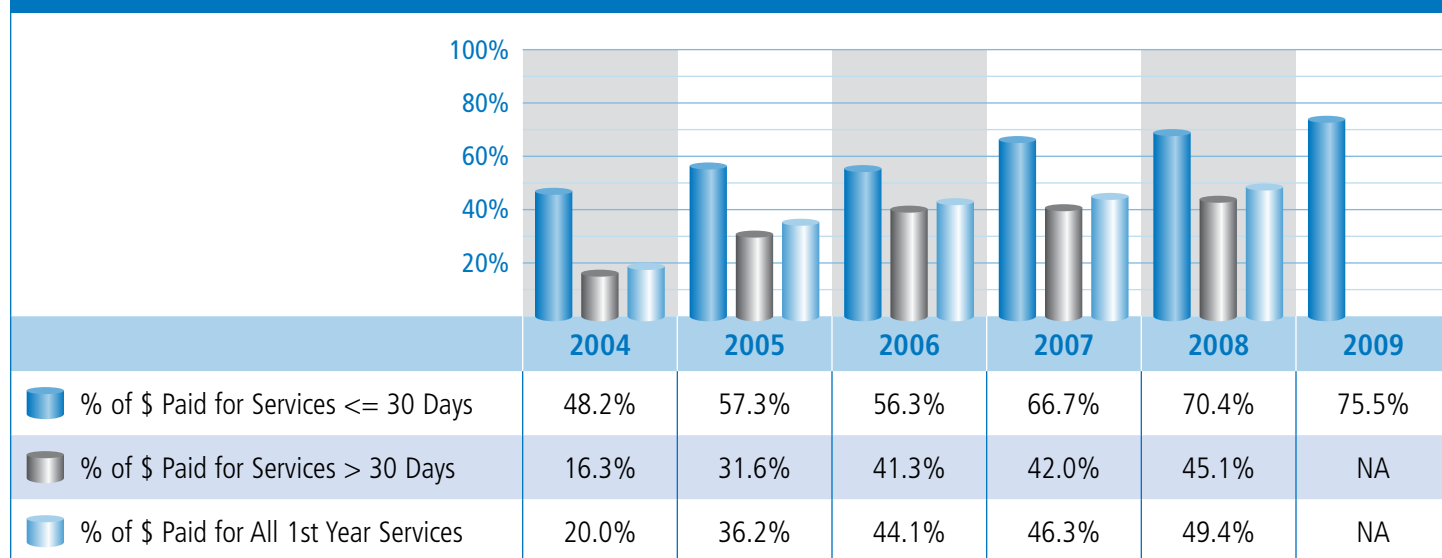
Exhibit 6A: Network Utilization Rates
1st Year Services -- Medicine Section



The network utilization rate for Medicine Section services within the first 30 days of injury increased immediately after MPNs became operative in AY 2005, then receded in AY 2006. Since then, however, that rate has shown a pattern of gradual increases similar to the Radiology fee section. On the other hand, the network utilization rate for Medicine section services after the first 30 days nearly doubled from 26.7 percent of the services in AY 2004 to 52.4 percent of the services in AY 2006, and has continued to trend up slowly since then, climbing to just under 58 percent in AY 2008. This big increase in the network utilization rate for post-30 day services fueled the overall increase in the network utilization rate for first-year Medicine Section services, which jumped from 44.3 percent in AY 2004 to 68.7 percent in AY 2008 – a relative increase of 55.1 percent across the 5-year period, more than half of which occurred between 2004 and 2005 -- the first year MPNs were introduced.

Exhibit 6B shows the changes in the percentage of payments for first-year Medicine Section services across the entire span of the study.

Exhibit 6B: Percent of 1st Year Service Payments to Network Providers – Medicine Section

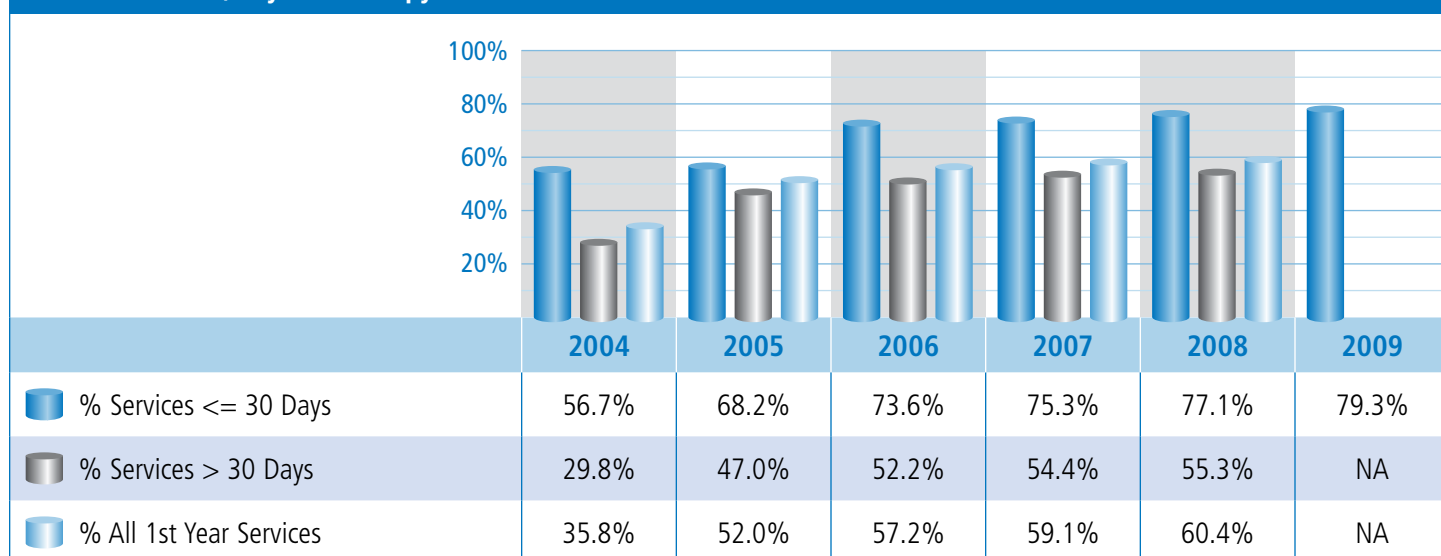


The trend in network payments for Medicine Section services moved in the same direction as the utilization trend, though again, the percentage increases in the network utilization rate were less. The proportion of Medicine Section dollars flowing to network providers climbed sharply following the introduction of the MPNs in 2005, led by a growing percentage of payments for Medicine Section services rendered after the first 30 days, where the network providers' share nearly doubled from 16.3 percent in AY 2004 to 31.6 percent in AY 2005, before continuing up to 45.1 percent by AY 2008. This, in turn, drove up the overall percentage of first-year Medicine Section payments to network providers, which increased from 20.0 percent in AY 2004 to 49.4 percent by AY 2008.

Physical Therapy

Physical Therapy (PT) is the most common medical service in California workers' compensation, though prior studies have documented significant reductions in the use of these services since the implementation of the 2004 reforms, which included not only MPNs, but utilization review requirements, the adoption of a medical treatment utilization schedule, and 24-visit caps on physical therapy and chiropractic care. Exhibit 7A shows the network utilization rates for Physical Therapy for claims from AY 2004 through the first quarter of AY 2009.

Exhibit 7A: Network Utilization Rates
1st Year Services, Physical Therapy

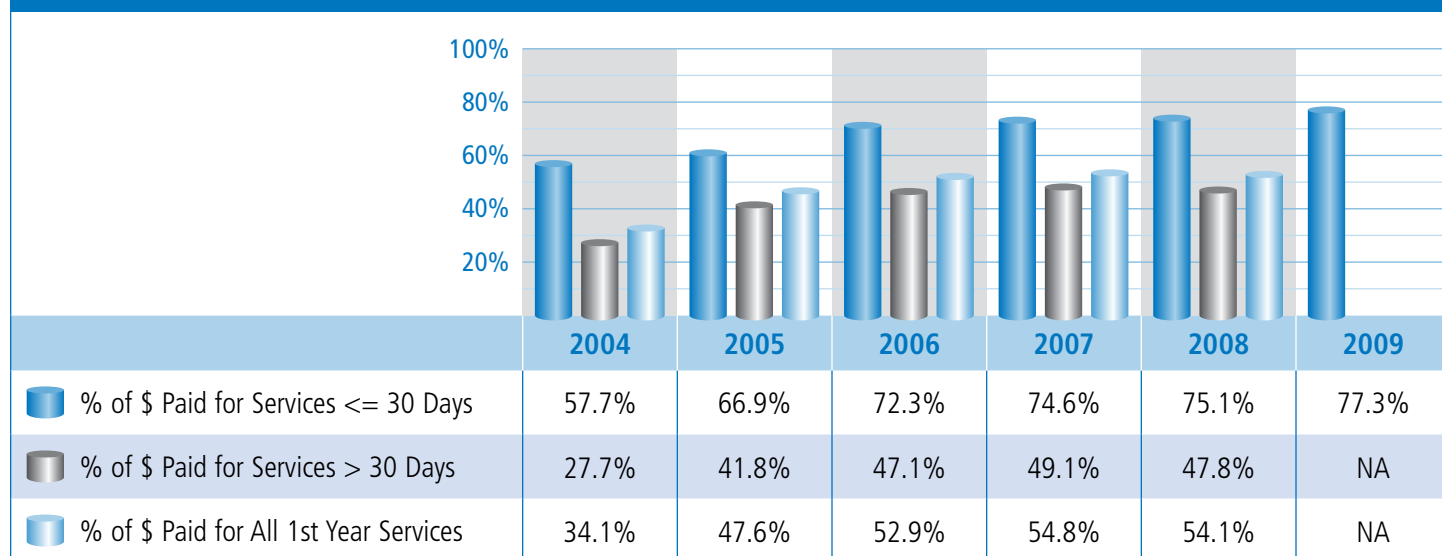


Immediately after MPNs began operating in 2005, the utilization of network providers for physical therapy services increased, with networks accounting for 2 out of 3 first-month PT services in AY 2005, and almost 80 percent of the first-month services by AY 2009. As with other fee sections, much sharper increases were noted in network utilization rate for PT services beyond 30 days post injury, which climbed from 29.8 percent in AY 2004 to 47.0 percent after the opening of MPNs in AY 2005, then continued up to 55.3 percent by AY 2008.

Overall, the percentage of total first-year PT services by network providers increased from 35.8 percent of the AY 2004 services to 52.0 percent of the AY 2005 services (a relative increase of 45.2 percent), then continued to increase to 60.4 percent of the AY 2008 services – a relative increase of 68.7 percent over the span of the study.

Exhibit 7B shows the growing proportion of first-year physical therapy payments to network providers from accident year 2004 through the first quarter of AY 2009.

Exhibit 7B: Percent of 1st Year Service Payments to Network Providers – Physical Therapy



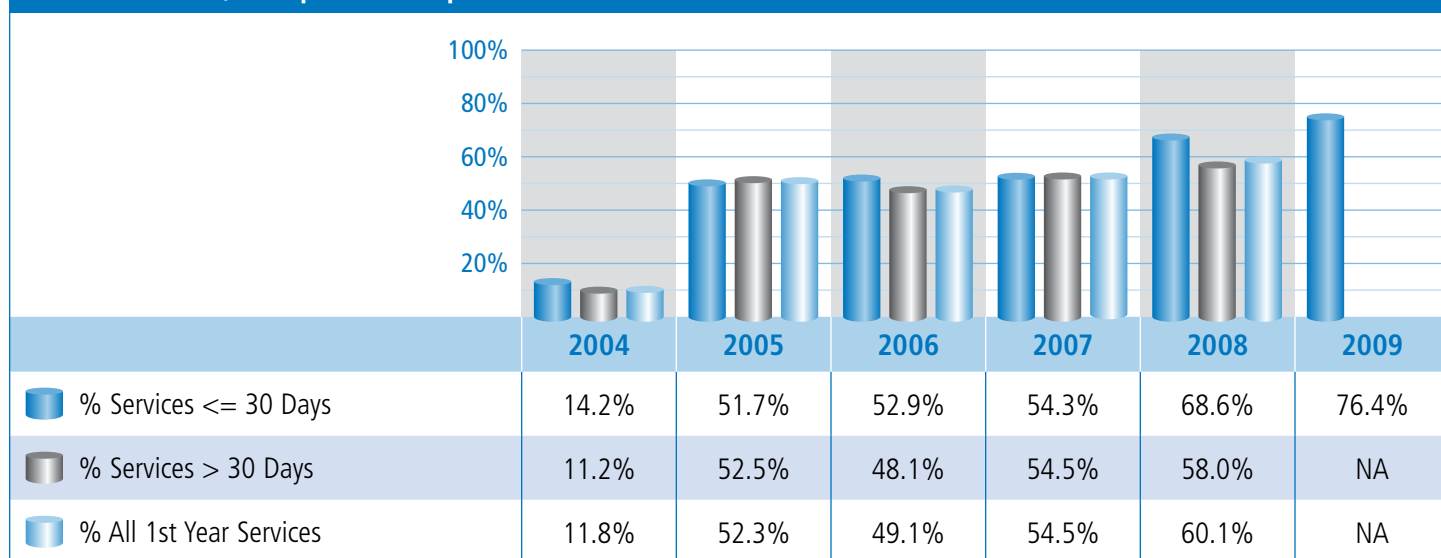
Network providers received 75.1 percent of the total amount paid for PT services within 30 days of injury in AY 2008, 47.8 percent of the total paid for PT services beyond the first 30 days, and 54.1 percent of the total paid for all PT services in the first year following injury. The growing proportion of physical therapy payments to network providers is similar to the network utilization pattern for these services. The most significant increase occurred immediately after MPNs were introduced in AY 2005, with the uptrend continuing in AY 2006, then leveling off in 2007 and 2008.

The relative difference between the percentage of physical therapy services and the percentage of physical therapy dollars paid to network providers (a gap of 5 percent in AY 2004 and 12 percent in AY 2008) is narrower than the comparable difference noted for all medical services (36 percent in AY 2004 and 19 percent in AY 2008). However unlike surgery, evaluation and management and all medical services, between AY 2004 and AY 2008, the spread between the network utilization rate for PT services and the percentage of PT payments to network providers widened. This suggests that physical therapy services in the post-MPN era are more likely to be discounted than they were prior to the introduction of MPNs.

Chiropractic Manipulation

Concerns regarding the over-utilization of chiropractic care in treating injured workers led state lawmakers to include a 24-visit cap on chiropractic treatment in SB 899. Prior CWCI studies showed that this, along with the introduction of MPNs and the other medical reforms included in the 2004 reform bill, led to dramatic reductions in the average number of chiropractic manipulation services. The authors' initial MPN analyses noted that prior to the introduction of MPNs, only a small percentage of chiropractic manipulation services involved network providers.⁷ That percentage increased sharply after MPNs began operations in 2005 because MPN regulations adopted by the state following enactment of SB 899 required the networks to provide access to a number of medical specialists, including chiropractors. Exhibit 8A displays the results of this study, showing the updated figures on pre- and post-MPN network utilization rates for chiropractic manipulation.

**Exhibit 8A: Network Utilization Rates
1st Year Services, Chiropractic Manipulation**

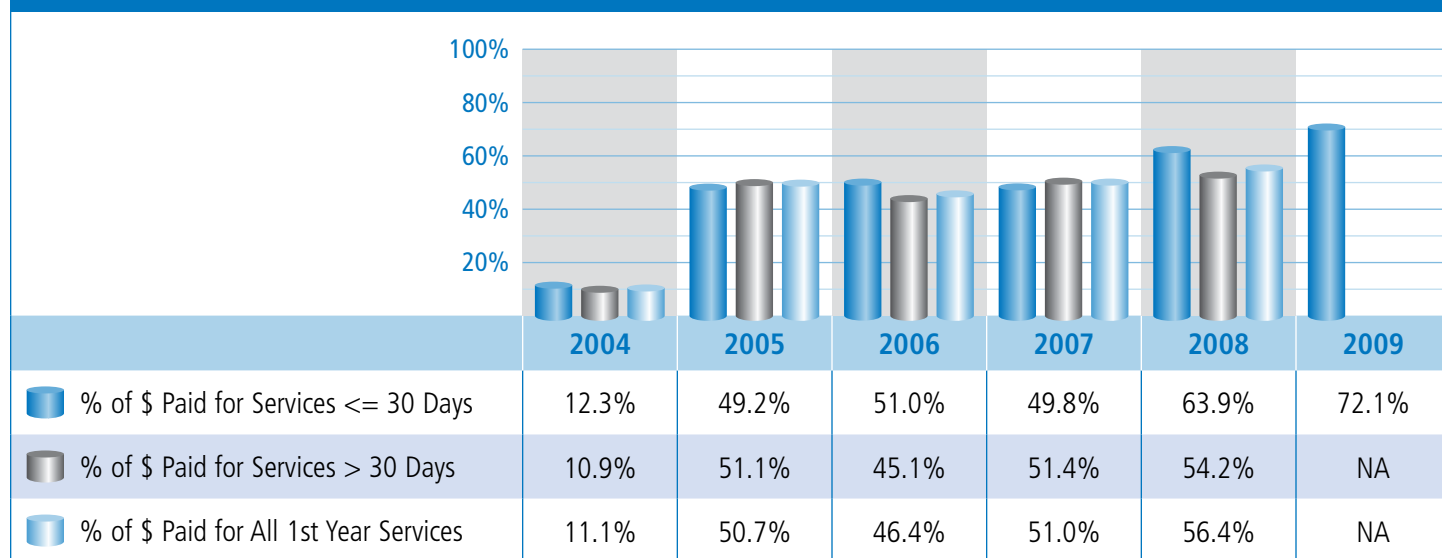


In AY 2004, the year prior to the introduction of MPNs, network providers accounted for only 14.2 percent of the chiropractic manipulation services within the first 30 days of an injury. That proportion jumped to more than half of all services in AY 2005 -- the first year that MPNs were available. Likewise the pre-MPN network utilization rate for chiropractic manipulation services after the first 30 days was a relatively low 11.2 percent, but jumped to more than half of all post-30 day services in AY 2005. In AY 2005 and AY 2006, the percentage of chiropractic visits to network providers remained fairly stable, hovering around 50 percent, but then edged up slightly in AY 2007 before taking a sharp jump once again in AY 2008, climbing to 68.6 percent of services within 30 days of injury and to 58.0 percent of first year services after 30 days. The early returns from the first quarter of AY 2009 indicate that this recent uptrend in network utilization may be continuing.

⁷ Swedlow, A., Ireland, J. Analysis of California Workers' Compensation Reforms Part 3: Medical Provider Networks and Medical Benefit Delivery, page 9. CWCI February 2008.

Exhibit 8B notes the changes in the proportion of first-year chiropractic manipulation payments to networks across the pre- and post-MPN periods.

Exhibit 8B: Percent of 1st Year Service Payments to Network Providers, Chiropractic Manipulation



In a pattern similar to physical medicine, payments to network providers for first-year chiropractic manipulation services tracked with the changes in network utilization across each of the years and each of the service time frames. The proportion of payments for first-month chiropractic manipulation services that went to network providers jumped from 12.3 percent in AY 2004 to nearly half of the payments in AY 2005 (49.2 percent), then stabilized through AY 2007 before increasing to 63.9 percent in AY 2008 and to 72.1 percent in the first quarter of AY 2009. The growth in the network providers' share of chiropractic manipulation payments for services after the first 30 days, as well as their increasing share of all first-year chiropractic manipulation payments, was equally dramatic, increasing from around 11 percent of total reimbursements in AY 2004 to more than half of the payments after MPNs took effect in AY 2005, dipping slightly in AY 2006, before heading back up in AY 2007 and AY 2008.

SUMMARY

Since medical provider networks (MPNs) were first introduced into the California workers' compensation system in 2005, the use of networks to render treatment to injured workers has continued to increase in all observed areas of provider-based outpatient medical treatment. Given that MPNs extended employer medical control from 30 days to the life of the claim, the use of networks for treatment beyond 30 days from the date of injury clearly offered the greatest opportunities to affect the course of treatment and produce savings, and as in the author's earlier studies, the results of this analysis confirm that is where the networks are having the greatest impact.

However, this analysis also documents ongoing increases in the network utilization rates for services within the first 30 days of injury, both overall and for specific types of services rendered to injured workers. This may indicate a continuing maturation of the MPN program, with more comprehensive and careful direction of injured workers to network providers and an increased likelihood that a network provider will render treatment beginning with the first visit following an injury.

The issue of network utilization has been of interest to occupational and non-occupational public policy stakeholders for many years.^{8,9} In an effort to better understand the relationship between network use and other key outcomes, a forthcoming study will build upon the findings from this analysis and earlier studies by measuring the association between network use and key claim outcomes, including total claim cost, likelihood of attorney involvement and return to work.

8 Johnson, W.G., M.L. Baldwin, and S.C. Marcus. The impact of workers' compensation networks on medical costs and disability benefits. Cambridge, MA: Workers Compensation Research Institute. 1999.

9 Swedlow A., Gardner L, Provider Experience in the California Workers' Compensation System and Volume-Based Outcomes – Does "Practice Make Perfect?" Research Note. CWCI. Jan 2003

Appendix – Network Utilization and Payment Tables for Additional Fee Schedule Sections

**Exhibit 9A: Network Utilization Rates
1st Year Anesthesiology**

	2004	2005	2006	2007	2008	2009
% Services <= 30 Days	47.1%	39.4%	21.6%	19.3%	23.9%	23.2%
% Services > 30 Days	11.6%	13.4%	16.1%	20.2%	22.5%	NA
% All 1st Year Services	26.2%	23.7%	17.8%	19.9%	22.9%	NA

**Exhibit 9B: Percent of Payments to Network Providers
1st Year Anesthesiology**

	2004	2005	2006	2007	2008	2009
% of \$ Paid for Services <= 30 Days	12.7%	14.3%	15.1%	21.4%	25.1%	27.6%
% of \$ Paid for Services > 30 Days	7.9%	9.8%	15.1%	20.5%	23.8%	NA
% of \$ Paid for All 1st Year Services	9.4%	11.3%	15.1%	20.8%	24.2%	NA

**Exhibit 10A: Network Utilization Rates
1st Year Clinical Laboratory/Pathology**

	2004	2005	2006	2007	2008	2009
% Services <= 30 Days	63.3%	68.7%	69.1%	71.0%	69.5%	70.7%
% Services > 30 Days	44.9%	54.2%	57.5%	58.7%	58.0%	NA
% All 1st Year Services	52.4%	60.6%	62.7%	64.3%	63.2%	NA

**Exhibit 10B: Percent of Payments to Network Providers
1st Year Clinical Laboratory/Pathology**

	2004	2005	2006	2007	2008	2009
% of \$ Paid for Services <= 30 Days	55.9%	62.3%	65.4%	67.0%	66.4%	64.1%
% of \$ Paid for Services > 30 Days	32.2%	43.1%	46.1%	46.4%	41.7%	NA
% of \$ Paid for All 1st Year Services	40.1%	50.8%	54.7%	55.1%	50.3%	NA

**Exhibit 11A: Network Utilization Rates
1st Year Special Services**

	2004	2005	2006	2007	2008	2009
% Services <= 30 Days	74.6%	79.1%	82.3%	84.4%	86.5%	88.8%
% Services > 30 Days	42.6%	65.3%	75.8%	76.9%	79.6%	NA
% All 1st Year Services	53.6%	70.4%	78.2%	79.7%	82.0%	NA

**Exhibit 11B: Percent of Payments to Network Providers
1st Year Special Services**

	2004	2005	2006	2007	2008	2009
% of \$ Paid for Services <= 30 Days	52.6%	68.5%	75.9%	76.5%	78.8%	82.2%
% of \$ Paid for Services > 30 Days	28.4%	49.0%	56.8%	63.9%	66.1%	NA
% of \$ Paid for All 1st Year Services	34.6%	54.1%	61.6%	67.3%	69.3%	NA

**Exhibit 12A: Network Utilization Rates
1st Year Orthotics/Prosthetics**

	2004	2005	2006	2007	2008	2009
% Services <= 30 Days	76.6%	81.0%	78.4%	82.9%	83.3%	86.1%
% Services > 30 Days	37.9%	54.5%	62.3%	64.9%	65.5%	NA
% All 1st Year Services	61.9%	72.0%	72.6%	76.9%	76.9%	NA

**Exhibit 12B: Percent of Payments to Network Providers
1st Year Orthotics/Prosthetics**

	2004	2005	2006	2007	2008	2009
% of \$ Paid for Services <= 30 Days	62.5%	70.8%	71.0%	76.0%	76.7%	80.4%
% of \$ Paid for Services > 30 Days	18.1%	27.9%	33.6%	39.3%	36.8%	NA
% of \$ Paid for All 1st Year Services	33.2%	46.7%	47.9%	53.8%	53.5%	NA

Exhibit 13A: Network Utilization Rates
1st Year Medical Supplies & Durable Medical Equipment

	2004	2005	2006	2007	2008	2009
% Services <= 30 Days	73.3%	81.2%	80.1%	85.1%	85.3%	87.1%
% Services > 30 Days	28.9%	41.7%	49.0%	51.7%	52.5%	NA
% All 1st Year Services	52.6%	65.9%	68.2%	72.3%	73.2%	NA

Exhibit 13B: Percent of Payments to Network Providers
1st Year Medical Supplies & Durable Medical Equipment

	2004	2005	2006	2007	2008	2009
% of \$ Paid for Services <= 30 Days	50.3%	58.5%	83.0%	58.2%	69.5%	74.4%
% of \$ Paid for Services > 30 Days	5.8%	8.9%	15.3%	43.2%	18.3%	NA
% of \$ Paid for All 1st Year Services	12.1%	18.1%	37.6%	50.1%	27.8%	NA

Exhibit 14A: Network Utilization Rates
1st Year Medical-Legal Reports

	2004	2005	2006	2007	2008	2009
% Services <= 30 Days	85.5%	79.2%	59.3%	68.3%	67.6%	78.3%
% Services > 30 Days	18.0%	23.8%	26.2%	26.0%	25.7%	NA
% All 1st Year Services	18.0%	23.8%	26.4%	26.1%	25.9%	NA

Exhibit 14B: Percent of Payments to Network Providers
1st Year Medical-Legal Reports

	2004	2005	2006	2007	2008	2009
% of \$ Paid for Services <= 30 Days	12.6%	18.8%	38.1%	25.6%	28.0%	17.1%
% of \$ Paid for Services > 30 Days	16.9%	22.0%	23.4%	25.3%	23.9%	NA
% of \$ Paid for All 1st Year Services	16.9%	22.0%	23.6%	25.3%	24.1%	NA

**Exhibit 15A: Network Utilization Rates
1st Year Miscellaneous Services**

	2004	2005	2006	2007	2008	2009
% Services <= 30 Days	50.6%	55.4%	54.8%	72.2%	71.0%	71.0%
% Services > 30 Days	20.6%	14.0%	22.0%	49.8%	44.8%	NA
% All 1st Year Services	28.9%	21.3%	29.6%	57.1%	52.6%	NA

**Exhibit 15B: Percent of Payments to Network Providers
1st Year Miscellaneous Services**

	2004	2005	2006	2007	2008	2009
% of \$ Paid for Services <= 30 Days	37.1%	53.5%	53.6%	64.5%	62.2%	49.7%
% of \$ Paid for Services > 30 Days	26.9%	17.5%	30.2%	42.5%	37.5%	NA
% of \$ Paid for All 1st Year Services	29.3%	22.5%	34.9%	48.1%	41.9%	NA

ABOUT CWCI

The **California Workers' Compensation Institute**, incorporated in 1964, is a private, nonprofit organization of insurers and self-insured employers conducting and communicating research and analyses to improve the California workers' compensation system. Institute members include insurers that collectively write more than 87 percent of California workers' compensation direct written premium, as well as many of the largest public and private self-insured employers in the state.



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