

Medical Benefit Delivery in California Workers' Compensation: Changes in Network Utilization and Reimbursement

Accident Years 2004 – 2010

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EXECUTIVE SUMMARY

Senate Bill 899, the workers' compensation reform legislation enacted by state lawmakers in 2004, introduced Medical Provider Networks (MPNs) into the California workers' compensation system. This reform allowed claims administrators to establish MPNs for employers that provide group health care to their employees. Under an MPN, network providers render all reasonably required medical treatment to an injured employee for the life of a claim unless the employee has pre-designated a personal treating physician.

Over the last five years, several studies have measured key aspects of workers' compensation medical benefit delivery -- including network utilization rates -- following the initiation of MPNs in January 2005. In this study, which updates those earlier analyses, the authors used the CWC 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 three major sections of the Official Medical Fee Schedule (OMFS): Evaluation and Management; Surgery (excluding injections); and Physical Therapy. Each medical "service" on a claim was identified through a unique combination of the billing provider tax ID number, fee schedule section, and the date of service.

BACKGROUND

Findings From the Initial Studies

In February 2008, 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 network providers across the entire 5-year span of the study, as well as the use of MPN providers following the introduction of MPNs 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, Medicine, Physical Therapy, and Chiropractic Manipulation) and found significant growth in the use of networks within each of these areas. Because MPNs allowed claims administrators 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 of analysis by fee schedule section showed that in all six 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 report published at the end of 2008 extended the timeline of medical network analysis through December 2007.² 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. A third report, published in May 2010, added claims with dates of injury through the first quarter of 2009 and extended the timeline of the analysis through June of that year.³ That study showed that network providers accounted for 73 percent of all first-year services on AY 2008 claims.

Key Findings from the Current Study

This report again updates the data and extends the timeline of analysis through September 2010, revealing 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 51 percent of physician-based first-year services in AY 2004 to 75 percent of first-year services in AY 2009.
- 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 64 percent. After MPNs became operational in 2005, that rate began to grow, and by AY 2009, network providers accounted for nearly 83 percent of injured employees' first-year E&M services.
- 3) **Surgery:** The network utilization rate for first-year surgery services grew from almost 55 percent of the services in AY 2004 to more than 74 percent of the services in AY 2009 – a relative increase of 33.5 percent -- primarily driven by the increased use of networks after the first 30 days.
- 4) **Physical Therapy:** The network utilization rate for first-year physical therapy services jumped from 40 percent in AY 2004 to 54 percent in AY 2005 -- the first year of MPNs -- then continued to increase slowly but steadily, rising to more than 63 percent by AY 2009.

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.

3 Ireland, J., Swedlow, A. Research Update: Medical Provider Network Utilization in California Workers' Compensation, CWCI May 2010

DATA AND METHODS

The authors used the CWCI Industry Claims Information System⁴ (ICIS) database to derive first-year medical service data for a large sample of pre- and post-MPN services across major sections of the Official Medical Fee Schedule.⁵ This analysis measures changes in the percentage of injured employee outpatient treatment by network providers (the network utilization rate) by timeframe and by type of medical service. The study examines provider-based medical treatment data on claims from AY 2004 through the third quarter of AY 2010, with “services” identified through a unique combination of billing provider tax ID number, fee schedule section, and date of service. The analysis generates the following:

- Network utilization rates for services within the first 30 days of injury
- Network utilization rates for services after the first 30 days of injury
- Overall network utilization rates for the final pre-MPN accident year (2004), each of the five post-MPN accident years (AY 2005 – 2009), and the first three quarters of AY 2010; and
- Network utilization rates for services in the Evaluation and Management, Surgery (excluding injections) and Physical Therapy sections of the Official Medical Fee Schedule for the final pre-MPN accident year (2004), each of the five post-MPN accident years (AY 2005 – 2009), and the first three quarters of AY 2010.

Claim Sample

For this analysis, the authors compiled medical transaction data from claims filed by 1,062,014 California injured employees with January 2004 through September 2010 dates of injury. These claims involved more than 15.7 million medical services for outpatient, provider-based medical treatment, resulting in \$2.17 billion in payments.

To assure comparable treatment utilization data from each accident year, services for each claim were truncated at 12 months post date of injury,⁶ so 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 service was rendered within the first 30 days after injury or more than 30 days after injury.)

Network Identification

The authors compiled the dataset of medical services from claims information submitted by national and regional workers’ compensation insurance carriers and large self-insured organizations. There were 11 participating insurance carriers used in the data collection for this analysis, and these insurers accounted for about half of the California workers’ compensation insurance market in calendar year 2009. Each data contributing organization used a PPO network in 2004, as well as an MPN in years 2005 through 2010.

⁴ 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 nearly 5 million workplace injuries with dates of injury between 1993 and 2010 (v12B).

⁵ California Labor Code 5307.1.

⁶ Because medical visit data in the data set was current through December 2010, the 2010 sample of claims for visits within 30 days of injury was limited to claims with dates of injury from January 1 to September, 2010. The sample of claims for visits within one year of injury was limited to claims with dates of injury before January 1, 2010.

RESULTS

Services Within 30 Days of Injury and Post 30 Days of Injury

One of the key reform components brought about through the introduction of Medical Provider Networks in California workers' compensation was the extension of payor control over medical treatment. As mentioned previously, before MPNs, a claims administrator's ability to channel injured employees 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, if an employer uses an MPN, the claims administrator can direct the care of injured employees, other than those who have a predesignated personal physician, for the life of their claims.

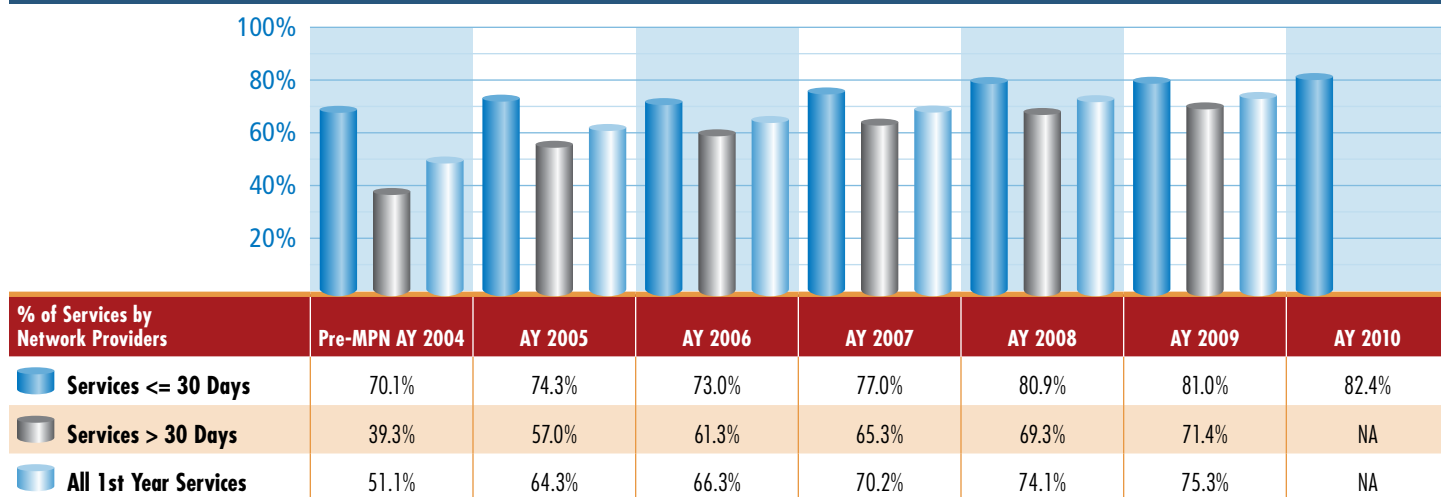
Changes in Network Utilization

Exhibit 1A compares the pre- and post-MPN network utilization rates for first-year physician-based services⁷ from the AY 2004 – 2010 claim sample. Network utilization for AY 2004 reflects services rendered by PPOs, while network utilization for AY 2005 – 2010 reflect the use of either PPOs or MPNs. Exhibit 1A 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.

The aggregate results compiled from 13 service categories in the study show that overall, the use of network providers to treat injured employees in the first year after injury increased sharply over the study period, climbing from about 51 percent of the services for AY 2004 claims to just over 75 percent of the services for AY 2009 claims.

The AY 2004 and AY 2005 data shown in Exhibit 1A also reveal that most of the early increase in network utilization resulted from greater use of networks for services beyond the first month, which tracks with the findings of the earlier Institute analyses. The network utilization rate for post-30 day services grew from 39.3 percent in AY 2004 to 57.0 percent in AY 2005, a relative increase of 45.0 percent. Meanwhile, the network utilization rate for services within the first 30 days of injury grew by a relatively small 6.0 percent over the same one-year time period, increasing from 70.1 percent in AY 2004 to 74.3 percent in AY 2005.

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



⁷ Labor code Section 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.

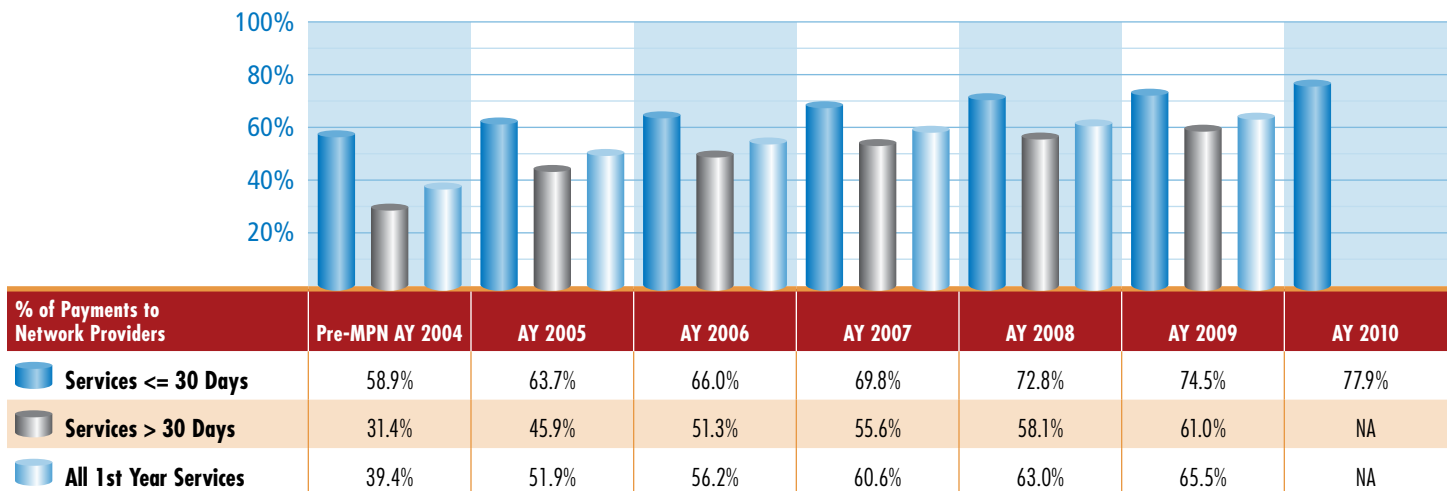
Exhibit 1B shows the proportion of dollars paid for first-year services that were made to network providers for each of the seven accident years studied. The payment results are also broken out for services rendered within and beyond 30 days of the injury date.

Percentage changes in network payments between 2004 and 2010 are consistent with the growth pattern for network utilization. Overall, payments to network providers climbed from 39.4 percent of all reimbursements for first-year services on AY 2004 claims to 65.5 percent of the total paid for first-year services on AY 2009 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 31.4 percent of the payments for AY

2004 services that took place more than a month after injury, but that percentage climbed to 45.9 percent in AY 2005, then steadily increased to 61.0 percent in AY 2009. In contrast, networks already accounted for almost 59 percent of all payments for services within the first 30 days of injury in AY 2004, but that proportion grew to almost 64 percent in AY 2005, then continued up to 77.9 percent in AY 2010.

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

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



NETWORK UTILIZATION AND REIMBURSEMENT BY FEE SCHEDULE SECTION

The most recent post-MPN data on first-year treatment of injured employees (Q1 – Q3 AY 2010 claims) show that network providers now account for 82 percent of services for physician-based visits within the first month of injury, and 71 percent of services beyond the first 30 days. The overall result is that three of every four first-year physician service visits by injured employees are now with a network provider. However, the use of networks varies by type of service. To gauge the extent to which networks are being used for a select set of high-volume and/or high-cost workers' compensation medical services, and to assess how that has changed since the introduction of MPNs, the authors calculated the AY 2004 – AY 2010 network utilization rates for three treatment categories – Evaluation and Management; Physical Therapy; and Surgery. The following sections compare the pre- and post-MPN network utilization rates and track changes in the proportion of payments to networks for each of these treatment categories.

Evaluation & Management

Most Evaluation & Management (E&M) services are office visits for new and established patients. They involve everything from minor to severe medical problems, and also include Emergency Department visits, consultations, and team conferences. Exhibit 2A shows the network utilization rates for E&M services during the first 12 months after the date of injury for AY 2004 through AY 2010 claims.

Network utilization for E&M services rendered to injured employees during the first 30 days following an injury has been consistently high. Exhibit 2A shows that for E&M services within 30 days of the injury date, the network utilization rate gradually increased from 75.9 percent for AY 2004 claims to 83.6 percent for claims from the first three quarters of AY 2010.

The use of networks for E&M services after the first 30 days showed more significant growth, climbing from 52.0 percent in AY 2004 to 68.6 percent once MPNs began operations in AY 2005, then continuing up to 82.9 percent in AY 2009 – 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 64.0 percent in AY 2004 to 82.7 percent in AY 2009 – a relative increase of 29.2 percent.

Exhibit 2A. Network Utilization Rates: 1st Year Services – Evaluation & Management

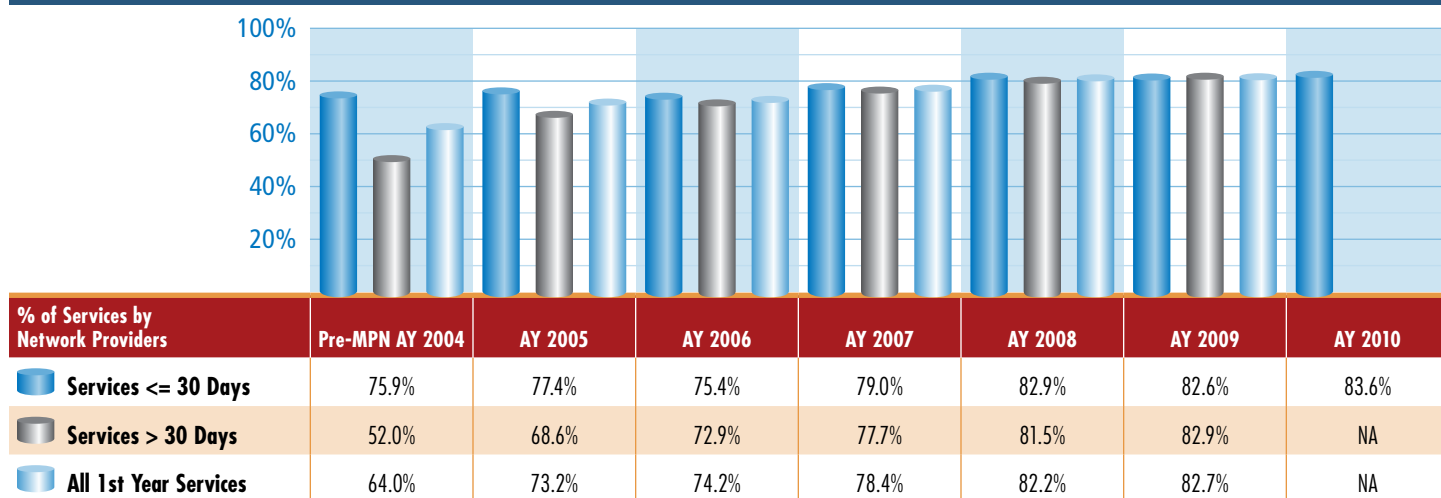
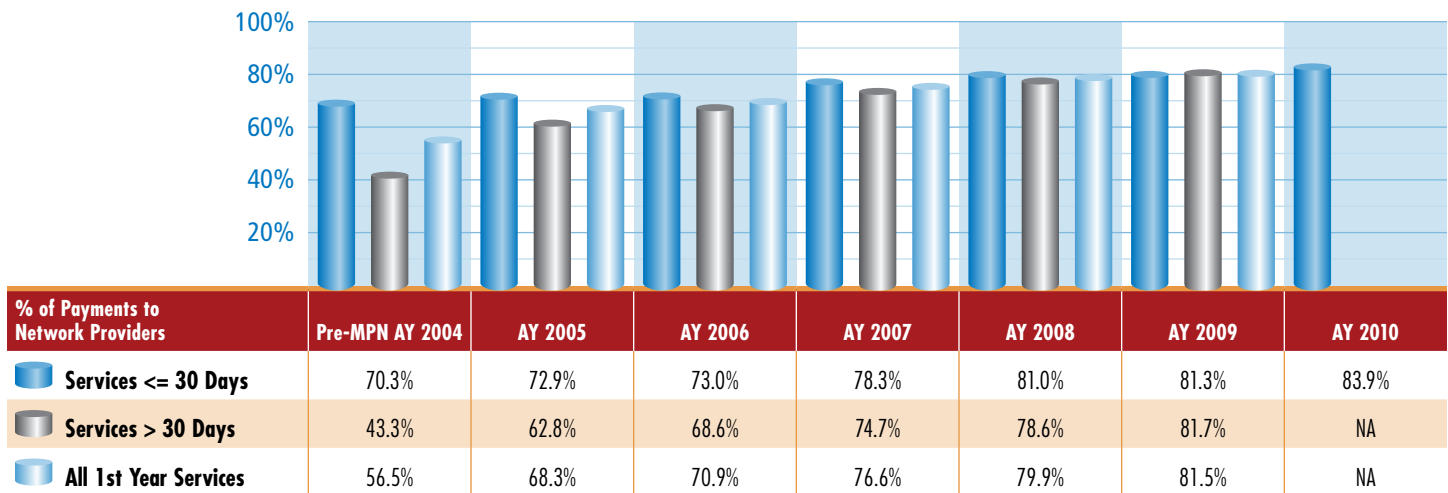


Exhibit 2B tracks the changes in the proportion of evaluation and management payments to networks over the same period. E&M payment patterns to network providers were similar to the service patterns, but the relative percentages were consistently lower except for services within 30 days of injury in AY 2010. This suggests that network providers are paid less on a per-service basis, which likely reflects discounts 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, with each successive year, the difference between the percentage of first-year services by network providers and the percentage of first-year payments to network providers narrowed. For example, for AY

2004 claims, the percent of first-year E&M services rendered by network providers (Exhibit 2A) was 7.5 percentage points higher than the percent of first-year medical payments to network providers (64.0 percent versus 56.5 percent), but by AY 2009, that spread had narrowed to only 1.2 percentage points (82.7 percent versus 81.5 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 network providers increased from 56.5 percent of the total amount paid for first-year E&M services in AY 2004 to 81.5 percent of total first-year E&M reimbursements in AY 2009; a relative increase of 44.2 percent.

Exhibit 2B. Percent of 1st Year Service Payments to Network Providers – Evaluation & Management



Surgery

The study included the wide range of services found in the Surgery section of the Official Medical Fee Schedule, except for surgical injections. Exhibit 3A shows the network utilization rates for surgical services.

Immediately after MPNs were initiated, the network utilization rate for Surgery services increased from 55.8 percent in AY 2004 to 65.2 percent in AY 2005, a relative increase of 16.8 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 30.1 relative increase from 42.9 to 55.8 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 71.4 percent in AY 2009. Thus, the overall network utilization rate for first-year surgery services grew from just over half of the services in AY 2004 to 74.5 percent in AY 2009 – a relative increase of 33.5 percent -- primarily driven by the increased use of networks after the first 30 days, much of which occurred in the first year following the introduction of MPNs.

Exhibit 3A. Network Utilization Rates 1st Year Services -- Surgery

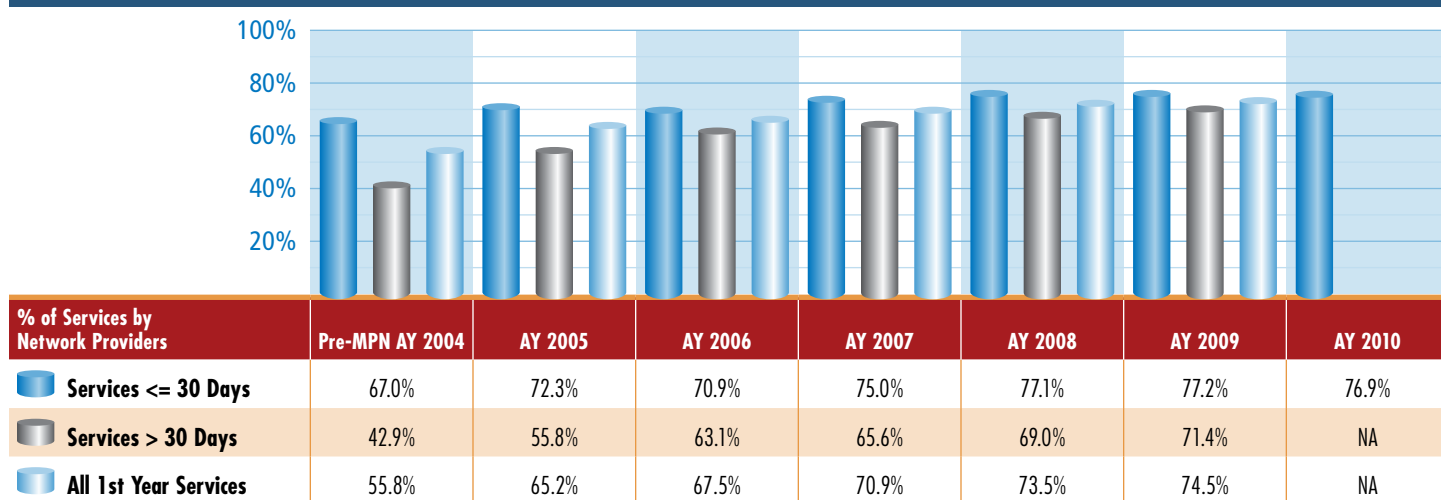
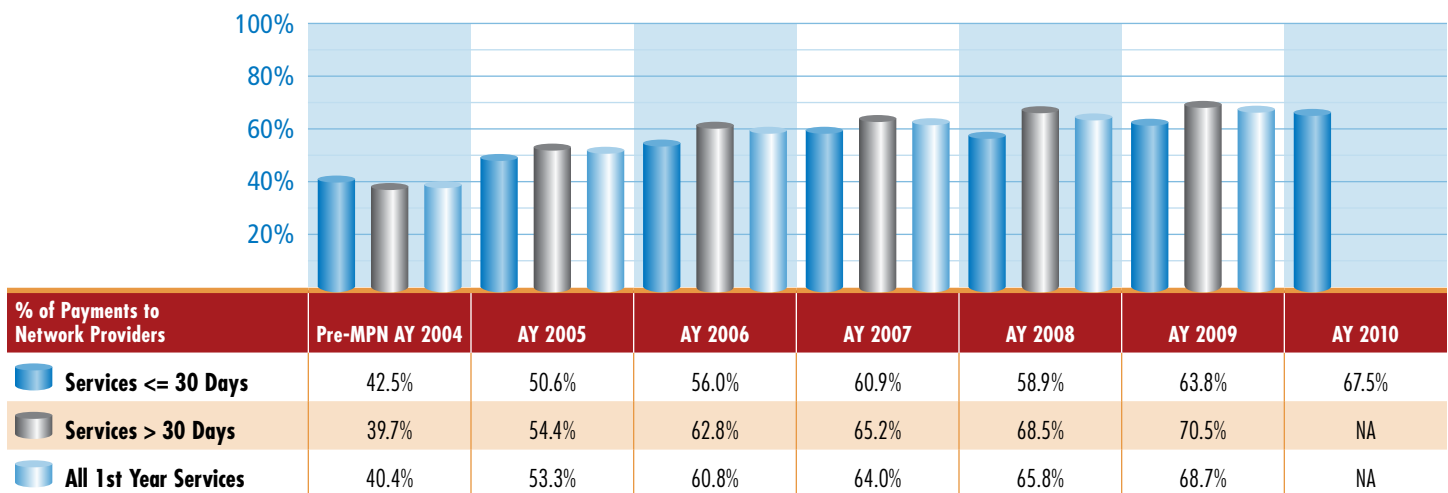


Exhibit 3B shows the changes in the proportion of surgery payments to network providers.

Between AY 2004 and AY 2010, 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 was far greater than the growth in the network utilization rate for these services. As noted in Exhibit 3A, the network utilization rate for surgical services within 30 days of injury increased from 67.0 percent in AY 2004 to 76.9 percent in AY 2010 (+15 percent), while Exhibit 3B shows that the percentage of payments to network providers for those services increased from 42.5 percent in AY 2004 to 67.5 percent in AY 2010 (+59 percent).

As a result, the relative difference between the percentage of services and the percentage of payments to networks 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 38 percent -- far greater than the 14 percent difference noted for E&M services. By AY 2009 however, 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 significantly, falling to 8 percent. In contrast, the network utilization rate for E&M services was only 1 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 15 percent.

Exhibit 3B. Percent of 1st Year Service Payments to Network Providers -- Surgery



Physical Therapy

Physical Therapy (PT) is the most frequently used 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 4A shows the network utilization rates for physical therapy for claims from AY 2004 through AY 2010.

Immediately after MPNs began operating in 2005, the utilization of network providers for physical therapy services increased, with networks accounting for 70.4 percent of first-

month PT services in AY 2005, then continuing up to 78.8 percent of the first-month services by AY 2010. As with other fee schedule sections, much sharper increases were noted in the network utilization rate for PT services beyond 30 days post injury, which climbed from 34.3 percent in AY 2004 to 49.2 percent after the opening of MPNs in AY 2005, then climbed steadily to 58.9 percent by AY 2009.

Overall, the percentage of total first-year PT services by network providers increased from 40.4 percent of the AY 2004 services to 54.3 percent of the AY 2005 services (a relative increase of 34.4 percent), then continued to increase to 63.2 percent of the AY 2009 services – a relative increase of 56 percent over the span of the study.

Exhibit 4A. Network Utilization Rates 1st Year Services, Physical Therapy

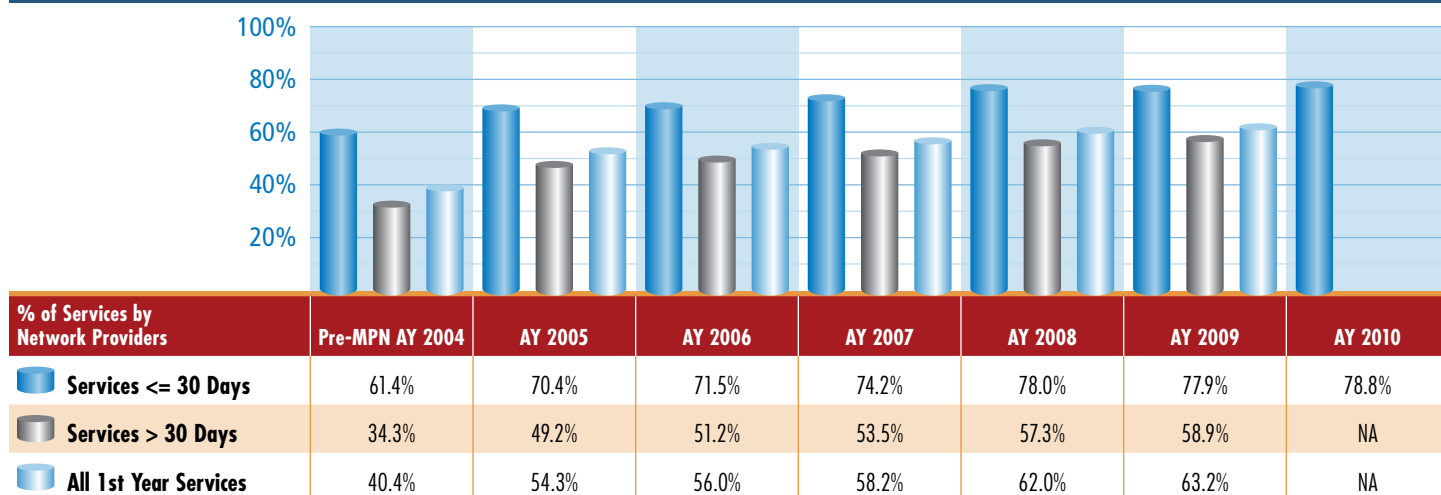


Exhibit 4B shows the growing proportion of first-year physical therapy payments to network providers from accident year 2004 through AY 2010.

Network providers received 76.4 percent of the total amount paid for PT services within 30 days of injury in AY 2009, 55.0 percent of the total paid for PT services beyond the first 30 days, and 59.9 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, with the most significant increase occurring immediately after MPNs were introduced in AY 2005, with the uptrend continuing through AY 2009.

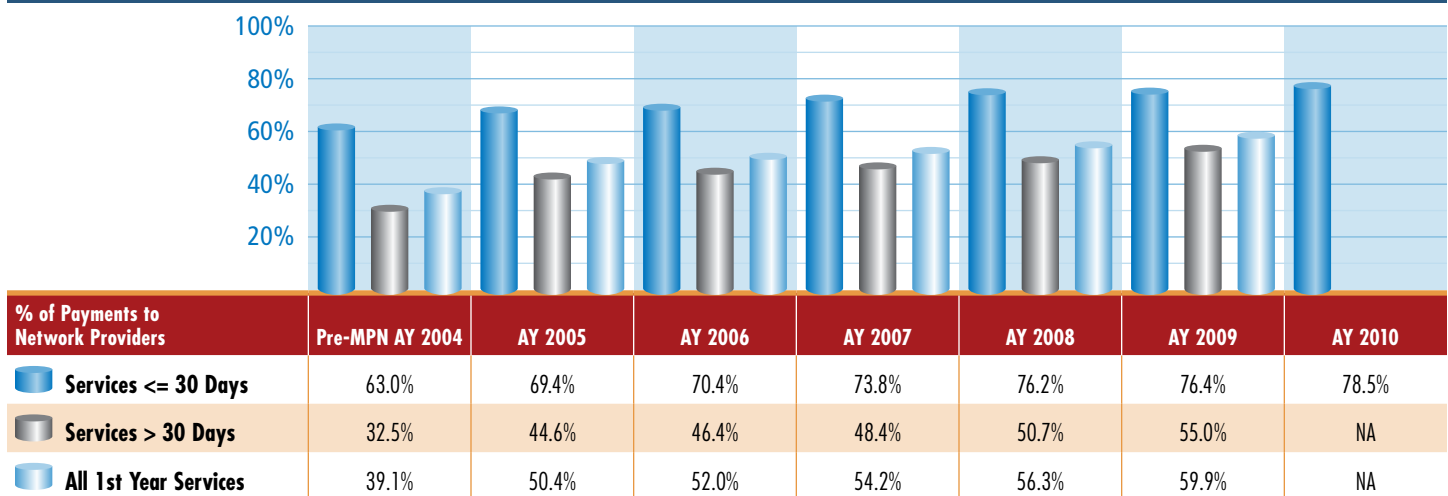
The relative difference between the percentage of physical therapy services delivered by network providers and the percentage of physical therapy dollars paid to network providers (a gap of 3 percent in AY 2004 and 6 percent in AY 2009) is narrower than the comparable difference noted for all medical services (30 percent in AY 2004 and 15 percent in AY 2009). However, unlike surgery, evaluation and management and all medical services, between AY 2004 and AY 2009, the spread between the network utilization rate for PT services and the percentage of PT payments to network providers remained virtually constant. This suggests that physical therapy services in the post-MPN era are still as likely to be discounted as they were prior to the introduction of MPNs.

SUMMARY

Since medical provider networks (MPNs) were first initiated into the California workers' compensation system in 2005, the use of networks to render treatment to injured employees has continued to increase in all observed areas of provider-based outpatient medical treatment. Given that MPNs extended the claims administrator's 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 initially that is where the networks had 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 employees. This suggests the continuing maturation of the MPN program, with more comprehensive and careful direction of injured employees to network providers and an increased likelihood that a network provider will render treatment beginning with the first visit following an injury.

Exhibit 4B. Percent of 1st Year Service Payments to Network Providers – Physical Therapy



ABOUT CWCI

The California Workers' Compensation Institute, incorporated in 1964, is a private, non-profit 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.



California Workers' Compensation Institute

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