

# *Trends Impacting Today's Surgical Spine Cases >*



# Trends in Surgical Spine Key Indicators >

There continues to be an upward trend in the number of people who have spine related symptoms for which they seek medical care. Although relatively few of these patients require surgical intervention, the impact of these cases on the musculoskeletal service line is substantial. In 2012, surgical spine cases accounted for 23% of the inpatient and 9% of the outpatient musculoskeletal cases in the Accelero Health Partners hospital database. Even more compelling is that these cases accounted for 37% of the total musculoskeletal case contribution margin and 15% of the total outpatient musculoskeletal case contribution margin.

The data for this analysis was compiled by Accelero Health Partners to compare the changes in surgical spine cases performed in calendar year 2012 and previous years. The data includes over 45,000 inpatient and outpatient surgical spine cases. Outpatient spine surgery data included those cases performed at hospital-based ambulatory surgery centers and those with less than a 24 hour stay coded as an outpatient case.

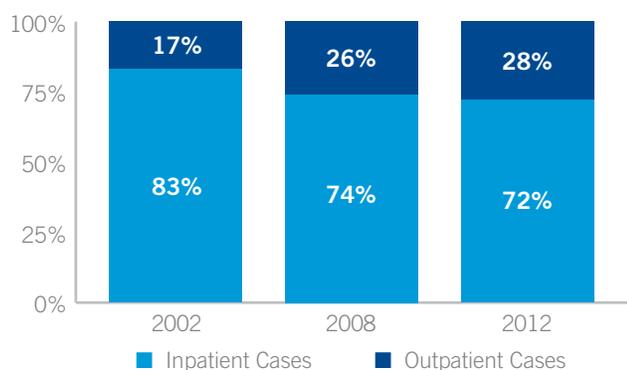


FIGURE 1 | Change in case type and setting for spine surgery.

## CHANGES IN SETTING

FIGURE 1 compares the change in case type and setting for spine surgery between 2002 and 2012. The majority of change from inpatient to outpatient spine procedures occurred between 2002 and 2008. This was primarily due to non-fusion cases and cervical fusion cases on patients mostly under the age of 65 being performed in outpatient instead of inpatient settings. While there continues to be a migration to outpatient as a procedure setting for spine, the movement between 2008 and 2012 has been slowed.

Based on this information, it is critical for hospitals to create an efficient perioperative experience for spine surgeons knowing that in some cases, these surgical procedures can be performed at non-hospital ambulatory surgery centers.

## KEY FINANCIAL INDICATORS

Overall, the contribution margin for surgical spine cases is healthy but varies substantially based on the procedure type. A comparison of the key financial indicators – net revenue (NR), variable cost (VC) and contribution margin (CM) – for major groupings of spine procedures demonstrates that the highest margin is for lumbar fusion cases because the net revenue per case is significantly greater than the variable cost per case (FIGURE 2). Inpatient cervical fusion procedures has the second highest contribution margin followed by inpatient back/neck procedures except spinal fusion (largely discectomies).

It is important to understand the financial implications of the migration of some surgical spine procedures to an outpatient setting. There is a significant difference between inpatient non-fusion contribution margin per case and outpatient spine surgery margin per case (mainly non-fusion cases). The reimbursement for the inpatient non-fusion is higher than outpatient spine surgery cases. This difference in net revenue per case outpaces the higher variable cost per case for the inpatient non-fusion cases vs. outpatient surgical spine cases.

Based on payment trends, the contribution margin per case can decrease considerably when an inpatient non-fusion procedure is done in an outpatient setting.

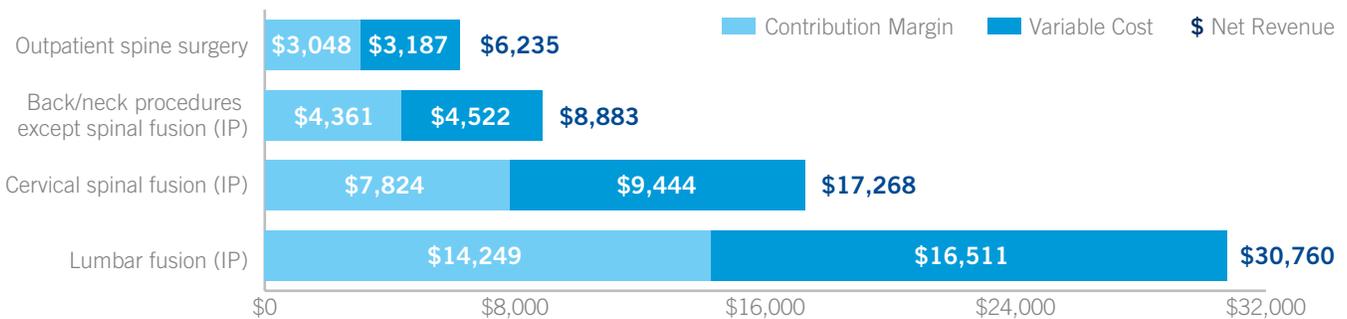


FIGURE 2 | Comparison of key financial indicators for major groupings of spine procedures.

## INPATIENT CARE TRENDS

Over the past ten years, inpatient surgical spine cases have followed the trend of most of the other inpatient musculoskeletal surgical procedures with regard to an overall decrease in the hospital length of stay.

FIGURE 3 demonstrates the average length of stay change in the database for the major inpatient surgical spine groupings.

The continued decrease in average length of stay provides further support for the need to have organized inpatient pathways for common surgical procedures with targeted lengths of stay that are clinically appropriate and financially positive. To achieve success in the management of inpatient surgical spine patients, patient education with regard to their role in the care process and their understanding of the hospital stay and discharge process will continue to increase in importance.

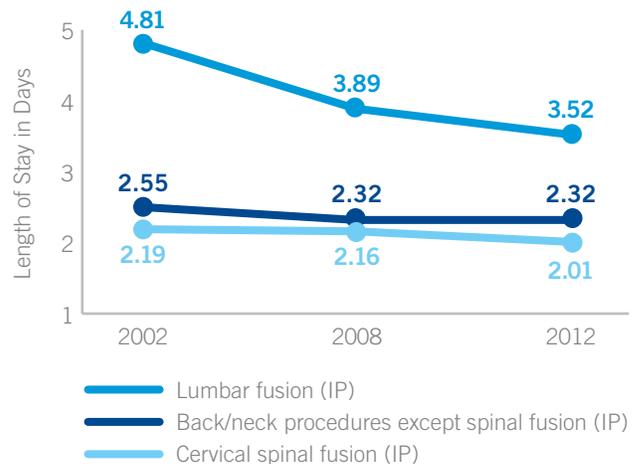


FIGURE 3 | Trends in length of stay for surgical spine cases.

## PATIENT PROFILE

FIGURE 4 below demonstrates the age distribution of the major categories of spine surgery. Overall, the age of the surgical spine patient is more diverse and significantly younger than that of the joint replacement patient. The highest volume for surgical spine patients comes from the 45-64 year old age group. As expected, the outpatient category has the youngest age demographic with 86% of the patients being 64 or younger. The inpatient non-fusion patients has the oldest demographic with 42% of the patients being 65 or older. This older demographic is largely represented by decompression surgeries for spinal stenosis.

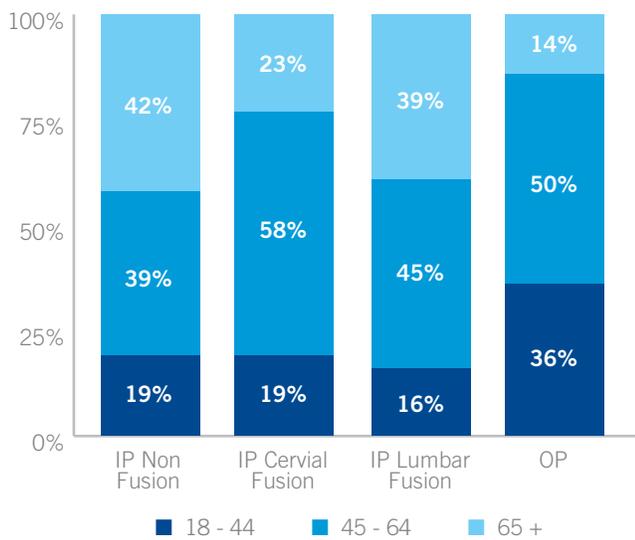


FIGURE 4 | Age distribution of the major categories of spine surgery.

Several insights need to be considered when creating a marketing plan for a hospital spine program. The demographics for spine surgery is broad, requiring the hospital to market to a broad range of age groups. This requires a direct-to-consumer program to educate potential patients about spine care and the hospital's services. These programs are usually better attended by older individuals, so the focus should be in areas such as spinal stenosis and spine arthritis along with the impact of osteoporosis on the spine.

The primary care physician is usually the first person the patient contacts when experiencing back or neck pain. Most of these patients receive significant care and undergo many tests before they are considered a candidate for surgery. Therefore, a substantial amount of the marketing budget should be used to educate primary care physicians with regard to the hospital's spine care offerings and incorporate them into the treatment process.

## FOR MORE INFORMATION

Accelero Health Partners works with its hospital partners to create sustainable service line competitive advantages. Organizations have benefited from our in-depth operational experience gained from working with over 300 health care facilities across the country. For more information about our services, please contact us at [www.accelerohealth.com](http://www.accelerohealth.com) or by phone at 724-799-8210.