

Addressing the Opioid Epidemic: Using Multi-Modal Pain Management Strategies to Improve Outcomes & Reduce Costs

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The statistics are alarming. An estimated 91 people die from opioid overdose each day while 1,000 more are treated in emergency rooms.^{i, ii}

And with nearly one in 10 post-surgery patients still using opioids 12 months after surgery, the pipeline of addicts continues to grow with every new prescription.

As the opioid crisis escalates, hospitals and physicians are increasingly seeking alternative ways to help patients manage pain throughout their hospital stay and beyond. A radical shift from the 1990s, when pain became known as the “fifth vital sign” and opioid use skyrocketed, multi-modal pain management (MMPM) programs reduce the use of narcotics and offer patients faster recovery with fewer side effects. Implementing MMPM pathways in the hospital setting – especially in high-impact DRGs – can also reduce lengths of stay, prevent unnecessary readmissions and ER visits, and decrease post-surgical complications, which drive down unreimbursed charges.

This white paper explores the benefits of a multi-modal pain management approach and outlines key considerations for hospitals interested in operationalizing these strategies.

A SHIFT IN THINKING

Opioids such as morphine, oxycodone and fentanyl have



long been considered the standard of care for managing pain, yet they also come with a host of undesirable side effects. Aside from the fact that even a one-day opioid prescription has a 6 percent risk of use a year later, opioids cause constipation, nausea, dizziness and drowsiness – all factors that can slow or complicate recovery from surgery or other procedures.ⁱⁱⁱ

These powerful narcotics also carry risks such as respiratory depression, which may lead to serious complications or even death. While rare, opioid-related complications can have significant financial consequences for hospitals, increasing unreimbursed charges by an estimated \$7 million per year.^{iv}

To combat these issues, many hospitals are turning to multi-modal methods to address pain while reserving opioids as a last line of defense. It's an approach supported by The Centers for Medicare and Medicaid Services, which recently announced it will no longer use pain control as a barometer of patient satisfaction, instead focusing HCAHPS survey questions on communication about pain.

Multi-modal pain management aims to reduce or eliminate the use of opioids by combining two or more non-narcotic analgesic agents or techniques to provide pain relief. A variety of medications can be used along with methods such as nerve blocks, spinal anesthesia or numbing agents that work together to target – and even prevent – pain.

Because this approach uses multiple mechanisms to attack pain at different receptors, it can be even more effective than opioids while eliminating many of the side effects and risks.

As a result, patients experience better pain control and less nausea, constipation and drowsiness, which allow them to become more engaged in the recovery process. This often leads to shorter lengths of stay, greater patient satisfaction and fewer readmissions or ER visits following discharge.

A multi-modal approach may also improve outcomes. According to an Advisory Board analysis, decreasing the use of opioids reduces complications by 36 percent.^v

REDUCING OPIOIDS IN THE O.R.

While the benefits of using alternatives to opioids after surgery are clear, there is also a growing movement to reduce the use of opioids in the operating room.

New research suggests that administering opioids during surgery may actually enhance a patient's sensitivity to pain, thereby increasing the risk of opioid dependence post-surgery. Known as opioid-induced hyperalgesia, the condition occurs when patients are exposed to high doses of opioids without a significant amount of pain. Surgical patients who are given opioids while already under anesthesia may be especially susceptible to this condition.

Increasingly, anesthesiologists are relying on many of the same multi-modal techniques to manage pain during surgery. Opioid-free anesthesia (OFA) allows patients who have never taken narcotics to remain "opioid naïve" while reducing the need for an opioid prescription following discharge.

In addition to contributing to a faster recovery, opioid-sparing programs like these can dramatically reduce the supply of opioids in the community – a critical need as the average patient consumes only a third of their opioid prescription, leaving the rest susceptible to diversion.

DESIGNING A MULTI-MODAL PAIN MANAGEMENT PROGRAM

With the growing awareness around the dangers of opioids, more hospitals are looking to implement multi-modal pain management programs. However, adopting enterprise-wide MMPM protocols can be challenging given the widespread use of narcotics across various departments and specialties.

The following strategies may be helpful in overcoming common obstacles.

- **Build Consensus.** The first – and often most critical – step in creating a multi-modal pain management program is getting everyone to share the same vision. To begin, hospitals should identify clinical and administrative champions who can use their relationships to secure buy-in from other clinicians and nursing leaders. Hospital leaders must then assess the current state of opioid use, identifying benchmarks that can be used to gauge progress and aligning stakeholders around realistic goals for improvement. Many hospitals also designate a nursing educator to collect and monitor data following the program's launch.
- **Target High-Value DRGs.** While nearly all patients can benefit from reduced opioid use, some DRGs offer immediate returns. For example, major small and large bowel procedures have been shown to produce the most significant savings due to the high rate of complications. By decreasing opioid use, the average 250-bed facility can reduce unreimbursed charges by more than \$1 million per year. Other procedures that benefit from a multi-modal approach include abdominal surgeries, gynecological procedures, spinal surgeries and joint replacement.^{vi}
- **Reduce variation through standardized clinical pathways.** Hardwiring care protocols for selected procedures is one way hospitals can begin to reduce opioid use. For example, many facilities have implemented Enhanced Recovery After Surgery (ERAS) programs to help patients recover from surgery more quickly. These programs often include standardized multi-modal pain medication order sets to reduce the use of opioids while also emphasizing early movement and greater education around pain

management expectations. When coupled with training for clinical staff throughout the hospital, these programs have generated significant reductions in length of stay and opioid-related complications.

The use of evidence-based multi-modal medication order sets takes the guesswork out of pain management while increasing adherence to an opioid-sparing program. This is important because The Advisory Board's research shows hospitals incorporating multi-modal regimens without reducing opioid use proportionately does not realize the same cost-saving benefits and outcome improvements as those that do, underscoring the need for a disciplined approach.

- **Lean on experienced partners.** Hospitals that partner with a physician group with experience creating ERAS and MPPM programs will have access to clinical leaders' expertise in successfully deploying these clinical initiatives, as well as a resource library of protocols, best practice guidelines and other resources including skill labs to teach new blocks and regional techniques. While there is no "rubber stamp" approach for integrating multi-modal pain control practices with existing clinical pathways, experienced

partners like TeamHealth are accustomed to adapting elements of successful programs to fit the unique needs of a hospital and its medical staff.

MEASURABLE RESULTS

While multi-modal and opioid-sparing programs are gaining traction in hospitals around the country, many have already found success. Consider these examples:

All Saints Hospital: After implementing an ERAS program targeting elective colorectal surgery patients, the Racine, Wisconsin-based hospital saw a 375 percent reduction in the use of opioids post-operatively. Pain scores also dropped by 50 percent in the two days following surgery and patients returned to ambulation one day sooner. As a result, the hospital reduced its average length of stay by one day.

The program produced similar results with hip fracture patients – reducing the use of pain medication by 77 percent within the first 12 hours following surgery. Post-operative pain scores also fell by 51 percent within the same timeframe.



Legacy Good Samaritan Medical Center: A similar ERAS program targeting elective colorectal surgery patients at Legacy Good Samaritan in Portland, Oregon, reduced length of stay by two days, producing an estimated cost savings of \$4,200 per patient without any increase in the rate of post-operative complications or 30-day readmissions.

Select Physicians Surgery Center: As more surgeries shift to the outpatient setting, Tampa, Florida-based TeamHealth anesthesiologist David Samuels, M.D., has developed a program called Non-Opioid Perioperative Engagement (NOPE!™). In addition to limiting opioid use following surgery, Dr. Samuels has eliminated the use of fentanyl in more than 2,000 patients undergoing procedures ranging from tonsillectomy to complex facial plastics, nasal/sinus procedures and middle ear surgery. Patients and surgeons have declared satisfaction with the anesthesia protocol, and only 36 percent of patients have requested oral opioids in the post-acute care unit — and they are going home with significantly fewer numbers of opioid pills. Additionally, shorter post-acute care unit stays have been observed and patients experience less nausea and vomiting following surgery — reducing the risk of unnecessary ER visits or hospital readmission. The NOPE!™ approach is being utilized in a Non-Opioid Stewardship Initiative™ which educates surgeons to write prescriptions for fewer postoperative opioids, patients to safely store and destroy any extra opioid pills and the community to take advantage of pill take-back days. The program is designed to significantly decrease the ambulatory surgery center's opioid footprint.

CONCLUSION

Adopting multi-modal pain management and opioid-sparing practices not only improves clinical outcomes, but also offers significant financial benefits to hospitals by reducing lengths of stay and preventing costly complications. Equally important is the effect this clinical practice can have on society. By keeping patients

opioid naïve and reducing the total number of narcotics available for misuse, hospitals and physicians can have a meaningful impact on our nation's drug crisis.

If you would like more information, please contact our Business Development team today at **800.818.1498** or business_development@teamhealth.com for more information.

ⁱ CDC. Wide-ranging online data for epidemiologic research (WONDER). Atlanta, GA: CDC, National Center for Health Statistics; 2016. <http://wonder.cdc.gov>

ⁱⁱ Substance Abuse and Mental Health Services Administration. Highlights of the 2011 Drug Abuse Warning Network (DAWN) findings on drug-related emergency department visits; 2013 www.samhsa.gov/data/2k13/DAWN127/sr127-DAWN-highlights.htm

ⁱⁱⁱ Shah A, Hayes CJ, Martin BC. Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use – United States, 2006-2015. *MMWR Morb Mortal Wkly Rep* 2017;66-265-269. DOI: <http://dx.doi.org/10.15585/mmwr.mm6610a1>

^{iv} The Advisory Board Company. Cost and Quality Impact of Multi-Modal Pain Regimens (2014) <https://www.advisory.com/research/physician-executive-council/white-papers/2014/cost-and-quality-impact-of-multi-modal-pain-regimens>

^v Ibid.

^{vi} Ibid.



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