

# PAIN MANAGEMENT BEST PRACTICES OF TOP PERFORMING HOSPITALS

Cathy Trame<sup>†</sup>, MS, CNS, RN, Past Director of Perioperative Pain Services, Kettering Health Network, and Premier Health Partners

## INTRODUCTION

Today's transparency of hospital and physician performance is driving aggressive administrative management of healthcare outcomes. Consumers can easily access volumes of what was previously considered discreet information via public websites. Procedure volume, patient satisfaction ratings, and numeric scores related to complication rates can fuel consumer decisions for physician and healthcare facility preference. Professional reputation, often previously proliferated by word of mouth, can now be validated as positive or negative via concrete data sources, chat rooms, and social media websites.

**New bundled payments compound the dollars withheld, creating an environment of strategic urgency to survive the economic cyclone**

Most importantly, the Centers for Medicare & Medicaid Services (CMS) has been withholding an increasing percentage of healthcare reimbursement, based on these same variables, combined with measures of efficiency. Additional penalties imposed by CMS related to new bundled payments compound the dollars withheld, creating an environment of strategic urgency to survive the economic cyclone. Healthcare providers and facilities are being forced to examine and re-evaluate existing practices in order to maintain essential services. Changes to current analgesic practices may be the single-most impactful strategy to impose control over this tumultuous environment.

## PUBLIC INFORMATION

Common websites that potential customers may access include:

- **Consumer Reports** - includes rating 0-100 on hospital safety, patient experience, patient outcomes, readmission rates.
- **Hospital Compare Government Website** - includes value-based purchasing scores and penalties, patient experience, patient outcomes, readmission rates
- **U.S. News and Health Reports** - includes death rates, patient safety, and hospital reputation
- **Healthgrades** - includes physician and hospital safety ratings 0-5, includes consumer ratings

While these websites provide easily accessible information, some in the industry have raised questions about whether hospitals' reputations mirror the quality of care provided.<sup>1</sup> Interestingly enough, a study conducted at Massachusetts General Hospital found correlations between superior Facebook ratings for hospitals and Hospital Compare data from CMS - the research found that hospitals with lower rates of 30-day unplanned readmissions have higher ratings on Facebook than hospitals with higher readmission rates.<sup>2</sup> Regardless of accuracy or reliability of the website data, consumers are regularly accessing these sites to make healthcare choices.

## PERFORMANCE IMPACT

Value-based purchasing (VBP) has had a major financial impact on participating hospitals across the country. In 2016, 1,235 hospitals received penalties as a result of deficiencies in the defined categories: clinical process of care, patient experience of care, outcomes, and efficiency.<sup>3</sup> CMS penalties now reflect 2% withheld for VBP.<sup>4</sup>

## Regardless of accuracy or reliability of the website data, consumers are regularly accessing these sites (social media) to make healthcare choices.

In 2016, mandatory bundled payments were initiated for joint replacements – and efficiency and spend were retrospectively analyzed to determine if costs were reasonable in comparison to like facilities. According to CMS, the model holds participating hospitals financially accountable for the quality and cost in an episode of care,<sup>5</sup> compounding the economic burden of cost reduction in hospitals. Once again, this data is publicly available, affording consumer scrutiny for best value for healthcare services.

So how do analgesic practices positively impact the categories of VBP, readmission rates, and bundled payments? One of the most obvious categories is patient experience. A 2014 analysis of 2,395 U.S. hospitals revealed that patient pain perception improved by 3.07% between 2008 and 2012.<sup>6</sup> According to the Practice Guidelines for Acute Pain Management in the Perioperative Setting (ASA), anesthesiologists should employ multimodal therapy when possible.<sup>7</sup> When pain is well controlled, patients are more mobile and cough and deep breathe better, reducing risks such as deep vein thrombosis and pneumonia related to immobility. When compared to single-injection peripheral nerve blocks, continuous peripheral nerve blocks (CPNBs) have been shown to decrease overall opioid use, deliver better patient satisfaction scores, and improve pain control.<sup>8</sup> Pain control can play an integral role in length-of-stay (LOS) reductions – one study showed that the mean LOS decreased from 76.6 hours to 56.1 hours after implementing an enhanced-recovery-after-surgery (ERAS) pathway, which included CPNBs.<sup>9</sup> Finally, pain symptoms are among the top reasons for an emergency room visit,<sup>10</sup> potentially impacting the overall bundled costs in the 90-day bundle timeframe.

### MODEL FACILITIES FOR BEST PRACTICE

Hospitals that have embraced the use of multimodal analgesia in combination with continuous regional blocks have realized superior outcomes for all of the CMS categories discussed:

- Dr. Auyong, from Virginia Mason Medical Center in Seattle, Washington, described statistically significant reductions in LOS, reductions in nausea, improved ambulation distance, and reduction in readmission rates by >50%, with a multimodal analgesic regimen employing the use of continuous regional blocks for total knee replacements. In addition to continuous regional blocks, the regimen included a total knee arthroplasty education class, an at-home care companion, medications (transdermal scopolamine patches and intravenous dexamethasone), spinal anesthesia, fluid management, tranexamic acid utilization, physical therapy, and post-op oral analgesics.<sup>9</sup>
- Dr. Frenk<sup>††</sup>, at Stamford Hospital in Stamford, Connecticut, demonstrated similar results with the use of continuous paravertebral blocks and gabapentin for mastectomy patients; LOS was reduced, as well as overall opioid consumption.<sup>11</sup>
- Continuous regional fascia iliaca blocks with multimodal analgesia for hip fracture patients reduced LOS, decreased overall opioid consumption, and reduced pain scores at Miami Valley Hospital in Dayton, Ohio, as described by Dr. Dulaney-Cripe.<sup>12</sup> A poster presentation by Kettering Health Network (Kettering, Ohio), highlighted at the 2015 American Society for Pain Management Nursing National Conference, reported a 25% reduction in readmission rates for hip fracture patients that received continuous fascia iliaca compartment blocks – in combination with a protocolized clinical pathway.<sup>13</sup>
- Dr. Truitt<sup>†††</sup> at Methodist Dallas Medical Center realized a three-day reduction in LOS for rib fracture patients that received a continuous infusion of local anesthetic via paraspinous catheters.<sup>14</sup>
- A large meta-analysis comparing continuous nerve blocks to single-shot nerve blocks has demonstrated decreased nausea, reduction in opioid use, decreased LOS, and improved patient satisfaction, all with statistical levels of significance.<sup>8</sup>
- Dr. Duncan at Mayo Clinic in Rochester, Minnesota, additionally described the economic benefits of a clinical pathway incorporating continuous nerve blocks for total knee arthroplasty. The study revealed that this pathway provides a significant reduction in the estimated total direct medical costs.<sup>15</sup>

## SUMMARY

In conclusion, the use of multimodal analgesia incorporating continuous regional blocks offers superiority when compared to traditional analgesic practices of the past. The research included in this piece focuses on the LOS, patient satisfaction and opioid consumption benefits of continuous regional analgesia – but new studies are emerging that measure readmission rates under this pain management approach, revealing

significant reductions in that arena, as well.<sup>7</sup> Progressive healthcare facilities are actively employing the use of this strategy to improve reimbursement associated with value-based purchasing.

*† Cathy Trame is an employee of Avanos Medical, Inc. and a former Director of Perioperative Pain Services, Kettering Health Network and Premier Health Partners.*

1. Adamopoulos H. Searching for the Best Hospitals: Does a Great Reputation Mean High-Quality Care? Becker's Hospital Review. 2014 March 28. Available from: <http://www.beckershospitalreview.com/hospital-management-administration/searching-for-the-best-hospitals-does-a-great-reputation-mean-high-quality-care.html>
2. Glover M, Khalilzadeh O, Choy G, Prabhakar AM, Pandharipande PV, Gazelle GS. Hospital Evaluations by Social Media: A Comparative Analysis of Facebook Ratings among Performance Outliers. J Gen Intern Med. 2015 Oct;30(10):1440-6.
3. Advisory Board Daily Briefing [Internet]. Washington DC. Advisory Board. c2016. Map: Which hospitals will get value-based purchasing bonuses—and penalties; 2015 Oct 27. [cited 2016 Aug 11]; [about 1 screen]. Available from: <https://www.advisory.com/daily-briefing/2015/10/27/which-hospitals-will-get-vbp-bonuses-and-penalties>
4. Whitman E. Fewer hospitals earn Medicare bonuses under value-based purchasing [Internet]. Modern Healthcare; 2016 [cited 2016 Dec 4]. Available from: <http://www.modernhealthcare.com/article/20161101/NEWS/161109986>
5. CMS.gov [Internet]. Baltimore, Maryland. Comprehensive Care for Joint Replacement Model; 2016 Aug 23. [cited 2016 Aug 31]; [about 2 screens]. Available from: <https://innovation.cms.gov/initiatives/CJR>
6. Gupta A, Lee L, Mojica J, Nairizi A, George S. Patient Perception of Pain Care in the United States: A 5-Year Comparative Analysis of Hospital Consumer Assessment of Health Care Providers and Systems. Pain Physician Journal. 2014 Sept/Oct;17:369-377.
7. American Society of Anesthesiologists Task Force on Acute Pain Management.. Practice guidelines for acute pain management in the perioperative setting: an updated report by the American Society of Anesthesiologists Task Force on Acute Pain Management. Anesthesiology. 2012 Feb;116(2):248-73.
8. Bingham AE, Fu R, Horn JL, Abrahams MS. Continuous peripheral nerve block compared with single-injection peripheral nerve block: a systematic review and meta-analysis of randomized controlled trials. Reg Anesth Pain Med. 2012; 37(6):583-594.
9. Auyong DB, Allen CJ, Pahang JA, Clabeaux JJ, MacDonald KM, Hanson NA. Reduced length of hospitalization in primary total knee arthroplasty patients using an updated enhanced recovery after orthopedic surgery (ERAS) pathway. J Arthroplasty. 2015;30(10):1705-1709.
10. The Centers for Disease Control and Prevention [Internet]. Washington DC: National Hospital Ambulatory Medical Care Survey; c2011 [cited 2016 Dec 11]. Ambulatory and Hospital Care Statistics Branch; [about 39 screens]. Available from: [http://www.cdc.gov/nchs/data/ahcd/nhamcs\\_emergency/2011\\_ed\\_web\\_tables.pdf](http://www.cdc.gov/nchs/data/ahcd/nhamcs_emergency/2011_ed_web_tables.pdf)
11. Frenk V, Cheng Z, Pass H, Bishop J, Bowling T. Multimodality perioperative analgesia reduces narcotic use and hospital stay in mastectomy patients. Poster session presented at: American Society of Regional Anesthesia and Acute Pain Medicine's 14th Annual Meeting; 2015 Nov 19-21; Miami, Fla.
12. Dulaney-Cripe E, Hadaway S, Bauman R, et al. A Continuous Infusion Fascia Iliaca Compartment Block in Hip Fracture Patients: A Pilot Study. Journal of Clinical Medicine Research. 2012;4(1):45-48.
13. Litmer J, Brooks S, McIntyre K, Weber L. Kettering Health Network Hip Fracture Block Program. Poster session presented at: American Society for Pain Management Nursing 25th Annual Conference; 2015 Sept 16-19; Atlanta, Ga.
14. Truitt MS, Murry J, Amos J, Lorenzo M, Mangram A, Dunn E, et al. Continuous intercostal nerve blockade for rib fractures: ready for primetime? J Trauma. 2011Dec;71(6):1548-52.
15. Duncan CM, Hall Long K, Warner DO, Hebl JR. The economic implications of a multimodal analgesic regimen for patients undergoing major orthopedic surgery: a comparative study of direct costs. Reg Anesth Pain Med. 2009 Jul-Aug;34(4):301-7.

*†† Vlad Frenk, MD has a consulting/speaking/financial relationship with Avanos Medical, Inc.*

*††† Michael Truitt, MD has a consulting/speaking/financial relationship with Avanos Medical, Inc.*

There are inherent risks in all medical devices. Please refer to the product labeling for **Indications, Cautions, Warnings and Contraindications**. Failure to follow the product labeling could directly impact patient safety. Physician is responsible for prescribing and administering medications per instructions provided by the drug manufacturer. Refer to [www.avanospainmanagement.com](http://www.avanospainmanagement.com) for additional product safety Technical Bulletins.