



Effective Health Care Continuous Peripheral Nerve Block For Total Knee Arthroplasty Nomination Summary Document

Results of Topic Selection Process & Next Steps

- Continuous peripheral nerve block for post-operative pain after total knee arthroplasty will be considered for refinement as a systematic review once two related in-process AHRQ reports are completed, so as to avoid redundancy and determine the most effective focus for this report.
- When key questions for the two related in-process AHRQ reports have been drafted, they will be posted on the AHRQ Web site and open for public comment. To sign up for notification when this and other Effective Health Care (EHC) Program topics are posted for public comment, please go to <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/>.

Topic Description

Nominator: Organization

Nomination Summary: The nominator would like a comparative effectiveness review of continuous peripheral nerve block (CPNB) versus intravenous or oral drug therapy to treat postoperative pain and improve recovery outcomes such as early mobilization and hospital length of stay after total knee arthroplasty (TKA).

Population(s): Patients undergoing TKA

Intervention(s): CPNB for post-operative pain

Comparator(s): Oral or IV drug therapy for post-operative pain

Outcome(s): Decreased need for opioid pain management, decreased opioid-related side effects, earlier mobilization, increased ability to effectively participate in physical therapy, decreased length of hospital stay, improved pain management

Key Questions from Nominator:

1. For patients undergoing TKA surgical procedures, what is the comparative effectiveness of a CPNB versus intravenous or oral drug therapy to treat postoperative pain and improve recovery outcomes such as earlier mobilization and length of stay?

Considerations

- The topic meets all EHC Program selection criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)

- Total Knee Arthroplasty (TKA) is a common procedure in the United States. Recovery and rehabilitation from TKA can be a long and painful process. Various methods are employed peri- and post-operatively to manage pain and accelerate mobility after TKA. A frequently used method of post-operative pain control following TKA is the use of drug therapy, often relying on opioids. Opioids have significant negative side effects, which can delay ambulation that is important for rehabilitation after TKA and may increase risk of falls and other central nervous system complications. The use of CPNBs peri-operatively for TKA (and other procedures) appears to offer enhanced pain control and reduced use of opioids. This could accelerate rehabilitation via earlier ambulation. There appears to be wide variation in the use of CPNBs, with some hospitals using them routinely for TKA and others not using them at all. Surgeon preference appears to be a driving factor. Although multimodal approaches are preferred, there does not appear to be a clear gold standard in the treatment of postoperative pain after TKA. Limited clinical practice guidelines on the topic exist.
- Two AHRQ reviews with some overlap with this topic are currently in progress. Physical therapy for knee pain secondary to osteoarthritis is currently in refinement in preparation for a systematic review. In addition, a review of the comparative effectiveness of pain management interventions for hip fracture is also in progress. After these two reports are completed, this topic may be considered for a new systematic review on the use of post-operative pain management strategies after TKA. If this topic moves forward, the review will likely address other strategies of pain management in addition to CPNBs. The use of these strategies for other procedures such as hip replacement will also be considered.