Nurse Education: Utilizing Acetaminophen and NSAIDs to Reduce Postoperative Opioid Consumption After Orthopedic Surgery

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Background

● 2016 - Health and Human Services reported 42,000 deaths from opioid overdose
● Orthopedic surgeons contribute ~ 7.7% to total amount of opioids prescribed
● Enhanced Recovery After Surgery (ERAS) - utilizes multimodal pain management protocol capable of decreasing opioid use through around-the-clock (ATC) acetaminophen and NSAIDs
● Pain management education for PACU nurses - less reliance on opioids

Literature Review

● Four main themes: prescribing habits of physicians, multimodal analgesia, education for patients after orthopedic surgery, and nursing education

Purpose and Aims

● Assess PACU nurses’ attitudes towards adopting a new evidence-based practice (EBP)
● Identify gaps in knowledge regarding understanding of the ERAS pain management protocol
● Formulate an educational intervention based on gaps identified

Methods

● Design: Descriptive cross-sectional design with educational intervention development
● Setting: Single, acute-care hospital in Orange County, California
● Sample: A convenience sample of 14 PACU registered nurses
● Implementation: Evidence Based Practice Attitude Scale (EBPAS), demographic survey, and 3 qualitative questions to identify ERAS knowledge gaps with overall response rate of 41%

Framework: IOWA Theoretical Model

● Ensures better evaluation and understanding of successes and failures when implementing an evidence based practice change
● Eight steps include, triggering issue/opportunity identification, the priority of the topic assessment, team formation, body of evidence assembly/appraisal/synthesis, sufficiency of evidence determination, practice change pilot/ implementation, and evaluation

Results

*EBPAS scoring: a score >2 indicated positive attitudes <2 indicated negative attitudes

● Attitude Subscales Results

  - Nurses more open to change if given necessary knowledge/skills to support change and if there expectation to use change in routine practice
  - More positive attitudes: Younger females nurse of White ethnic origin with greater educational attainment and less work experience

Themes Emerged from Qualitative Questions about ERAS Pain Management Protocol:

● Ineffective: Protocol ineffective, perception it did not reduce amount of postop narcotics
● Able to decrease the use of narcotics: Non-opioid analgesics capable of effectively reducing postop narcotics
● Able to provide effective pain management: Non-opioid analgesics effective in managing pain when combined with narcotics and/or light spinal anesthesia
● Able to hasten patients’ recovery: Protocol results in less recovery time and faster discharge

Primary Knowledge Gap

● Subset of nurses perceived ERAS as ineffective to reduce opioid consumption

Discussion

● Attitude assessment provides better understanding on how healthcare providers respond to change
● Provided valuable metrics to target PACU nurses’ educational needs
● Educating nurses may translate to enhanced knowledge and compliance with ERAS and decrease in opioid use
● Age, gender, ethnicity, level of education, and years of work experience can influence nurses’ attitudes
● Consideration of demographic variables when adopting ERAS may improve methods to engage nurses who revealed negative attitudes toward ERAS

Educational Intervention

● Addresses identified knowledge gaps, particularly regarding nurses who perceived ERAS as ineffective
● PowerPoint - discusses opioid epidemic, importance and efficacy of non-opioid alternatives and how they may reduce opioid consumption, and overall efficacy of ERAS pain protocol

Conclusion

● PACU nurses are essential members of the perioperative team due to uniquely close patient relationship
● Supporting nurses doubtful of ERAS protocol efficacy through knowledge enhancing education may empower them to accept ERAS which can decrease opioid use
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