PAIN MANAGEMENT PROGRAMS:  
A Review of the Literature  
Executive Summary

Clinical Question: For hospitalized adults, what is the quantity, quality, and consistency of the evidence for pain management programs (PMP) in the acute care setting?

Conclusions: The review findings consistently support the Joint Commission (2001) recommendations for pain management, which includes a dedicated and collaborative interdisciplinary team,2 active participation by the patient/family,2 proactive and individualized pain management,2 and an organizational approach that outlines clear roles and responsibilities.2 Embedding pain management awareness into organization structures promotes patient/clinician knowledge, enhances institutional processes, and ultimately contributes to pain control outcomes.4 However, clinical practice changes and improved patient outcomes also requires pain management strategies that are targeted at the clinician and patient level.2 Program success rests on the dedication and accountability of the entire interprofessional team, including the patient.3-5, 10-13 Team members have a clear understanding of their own roles, knowledge, beliefs, and attitudes about pain and are aware of what treatments they tend to endorse.1, 2, 4, 5, 12

Key Summary of the Evidence:
• Commitment is required on an organizational, professional, and interpersonal level;10 this commitment involves educational,8 clinical,8, 10 and systems support,8, 10, 12 in addition to time and money1, 4, 12
• The goals of PMPs include patient comfort,8 increased awareness,4, 11, 13 overcoming institutional barriers related to adoption of PMP standards,8 and basic understanding of pain management8 by clinicians and patients alike8, 13
• PMP components include a framework or model3, 8, 9, 12 an educational program for patient/family and staff,1-5, 7, 8, 11, 12 a pain management plan, policy, and procedures,1, 3-11 and online tools/resources,1, 3, 5, 7 as operationalized by a dedicated interprofessional team3-5, 10-13
• PMP management and education consists of 4 areas: PAIN: Preparation, Assessment, Intervention, Normalization4
• Pain management educational programs for clinicians should include the following components:2, 5, 7, 8, 11, 13

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• Clinical mentors,2 pain champions,4, 11 and pain management experts12 such as pain resource nurses3, 4, 11 are critical to the transfer of knowledge from the classroom to the clinical setting1, 3, 4, 12
• Nonpharmacologic approaches involve independent nursing and patient interventions7, 8, 11, 13 and include reduced unit noise,11 exercise,13 music,11 reading,11 television,11 heat/cold application,13 massage,13 relaxation techniques,13 biofeedback,13 and TENS13
• A renewed focus is needed in the prescribing, assessment, intervention, monitoring, management evaluation, and documentation of patient related pain1, 2, 5-8. (See City of Hope, Pain Assessment Tools, available at http://prc.coh.org/pain_assessment.asp)

Recommendations: Pain is a universal human experience. Pain management must be viewed as an organizational issue, rather than a problem between patients and nurses.12 The following evidence-based recommendations are offered for clinical leaders to consider during the development, implementation, monitoring, and evaluation of a comprehensive pain management program.
• Use an evidence-based model3, 8, 9, 12 and a collaborative interdisciplinary approach3-5, 10-13 to establish a PMP,4 as led by patients, nurses, physicians, and pharmacists4, 7, 10, 12
• Ensure the goals of pain management3, 5, 8, 13 are met by placing patients and families at the center of the healthcare vision10 and embed patient pain experiences, beliefs, attitudes, and knowledge into the PMP2, 5-8, 11-13
• Create evidence-based PMP education for patients and nurses with multiple teaching modalities, time to change knowledge, beliefs, or attitudes, and that integrates easily accessed resources with clinician work load1-3, 5, 7, 8, 11, 13
• Assist patients to take control of their pain treatment7 and effectively communicate their pain by teaching them how to assess their pain, when to report it, and how to give feedback regarding effectiveness of customized pain strategies2
• Calculate accurate cost estimates of a PMP4, 12 by evaluating education costs, analgesic cost, clinician hours, length of stay,13 and other types of patient-related outcomes,4 including the humanitarian aspects of pain management12

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- Design and implement evidence-based pain management protocols\(^4\) and medication order sets\(^5\),\(^7\) while also incorporating nonpharmacologic approaches as independent nursing and patient interventions\(^8\),\(^9\),\(^11\),\(^13\)
- Streamline the documentation components of pain assessment, intervention, monitoring, management, and evaluation and, if possible, electronically link with the MAR\(^4\),\(^8\)
- Ensure the PMP remains sensitive to changes in organizational structures, financial investments, clinical supports, staffing changes, and patient care delivery systems\(^1\),\(^8\),\(^9\),\(^10\),\(^12\)

Pain Management Programs: Other Considerations

**Challenges:** There are considerable challenges to the design and implementation of PMPs that must be addressed in order to ensure program success. The most frequently articulated challenges include negative and uncaring attitudes about patients in pain, staff resistance, workload issues, and lack of available expert clinicians, time, and pain management knowledge\(^4\),\(^5\),\(^8\),\(^12\). Clinicians may not be convinced to change their practice until the pain principle is demonstrated in the patient care setting\(^12\). Assessment and document issues associated with pain management are real; clinicians, particularly nurses, often feel burdened by the entire documentation process and may look for “work-arounds” to deal with this perceived burden\(^12\). Documented work may not be a true reflection of the full scope of nursing and patient care.\(^12\) If pain is truly to be considered the fifth vital sign\(^3\), systems and technology must be designed to fully describe it. Nurse managers are key in addressing these challenges; their presence, support, and communication regarding pain management provides comfort and assists staff in coping with practice change and risk taking.\(^10\)

**Patient Education:** Pain management education is complex.\(^12\) Patient education and pain management must be customized to fit specific patient populations, particularly for the frail elderly (See Frail Elderly Pain Management Algorithm; Phelan, 2010), surgical, and nonsurgical patients.\(^5\),\(^6\),\(^8\),\(^9\),\(^11\),\(^13\) Patients may strive to be “good” patients and not complain about pain.\(^12\) Surgical patients may believe experiencing pain is necessary after surgery\(^13\) or is an indication that the illness is worsening.\(^2\) Highly educated young patients may prefer more active participation in pain management than older and lower educated patients\(^7\), who tend to perceive more barriers to pain management.\(^12\) Printed materials should not be the sole method of educating patients and families; brochures and pamphlets should be paired with live interaction with clinicians, audiovisual materials, and group discussions.\(^5\) In general, many adult patients have gaps in information and have a fear of addiction,\(^2\),\(^7\) fear of side effects,\(^7\) and a lack of knowledge regarding administered medication.\(^7\)

Regardless of the patient population, all PMP education programs must involve the patient, the family, and the patient pain experience\(^5\),\(^8\),\(^9\),\(^11\),\(^13\)

**Review Limitations:** Although some authors recommend physicians, nurses, pharmacists receive the same education,\(^12\) uptake regarding pain management from education programs may differ between professional groups.\(^11\) Research findings pre/post PMP and education show conflicting results regarding improvement in nurse attitudes for pain,\(^12\) pain assessment,\(^8\) pain ratings,\(^12\) knowledge of basic pain principles,\(^12\) narcotic dosing,\(^1\) assessment of adverse analgesia effects,\(^8\) and chronic versus acute pain interventions.\(^1\),\(^8\) Surprising, while staff pain badges heightened awareness and initiated conversations about pain, unit signage did not.\(^11\) There are also conflicting research results for the patient’s pain experience after the implementation of PMP, with one study demonstrating little improvement in pain severity, interference with function, use of nonpharmacologic interventions, or pain relief.\(^7\) One study revealed that, while the overall pain management process improved, other patient care aspects deteriorated, including care coordination, possibly due to the complexity of pain management.\(^6\) Only one article from 1997 discussed the relationship between managed pain in the acute care setting and how much it costs.\(^12\) Three articles from the 1990s should be viewed with caution,\(^9\),\(^12\),\(^13\) as some pain interventions during that decade are now considered outmoded (i.e. single injection versus PCA pump). Although clinicians must keep these conflicting findings in mind, the implementation of high quality PMPs has improved both pain management and pain relief in patients, with high acceptance by nurses, physicians, and patients.\(^1\),\(^3\),\(^9\),\(^11\)

**Future Research:** Many questions remain regarding pain and its management. Future research could address whether patient and caregiver beliefs change over the course of an illness,\(^7\) test different implementation methods with various lengths of educational programs\(^1\),\(^7\) and examine nonpharmacologic techniques as independent nursing interventions.\(^7\) Other research studies could explore cost analysis, cost-effectiveness, the impact of staffing levels, documentation systems, analgesic routes, and noninvasive analgesic delivery.\(^6\),\(^8\)
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Topic Summary


1. GOAL3, 5, 8, 13
   a. Patient comfort8
   b. Basic understanding of pain management8
   c. Reducing barriers to adoption of standards related to pain assessment, intervention, and documentation8
   d. Increased professional and public awareness of pain management13

2. Organizational Supports8, 10, 12
   a. Time and fiscal commitment is required on an organizational, professional, and interpersonal level10
      i. Administrative support for time for project leads12
   b. Educational Support: Improving nurse/physician knowledge, beliefs, and attitudes8
   c. Clinical Support:8, 10
      i. Ongoing feedback and reinforcement of pain management protocols8
      ii. Support for frequently arising problems10
      iii. Communication by and presence and support of nurse manager contributes a great deal to staff comfort with change and risk taking and is a critical link between team and staff10
   d. Systems Support: Accessible resources and timely, pertinent documentation8
   e. Fiscal Support: (1997 dollars) $2100.00 in salary/benefits for staff members and instructors; $1000.00 personnel time for program planning12
      i. Savings if 1 patient per unit spends 1 less day in hospital from better pain management12
      ii. Costs minimal compared to cost savings12
      iii. Humanitarian aspects of improved pain management12

3. Pain Management Plan, Acute Pain Service1, 5, 6, 8-10
   a. Evidence-based order sets2, 5
   b. Acute pain management (surgical and nonsurgical)1, 2, 5, 13
      i. Epidurals5
      ii. Intraspinal opioids13
      iii. Patient Controlled Analgesia (PCA) pumps5, 13
      iv. Peripheral nerve blocks and catheters5, 13
      v. Regional analgesia techniques5
   c. Chronic pain management13
   d. Cancer pain management13
   e. Recuperative pain management13
   f. Non-pharmacological approaches7, 8, 11, 13
      i. Application of cold/heat13
      ii. Biofeedback techniques13
      iii. Exercise13
      iv. Massage13
      v. Music11
      vi. Reading11
      vii. Relaxation techniques13
      viii. Television11
      ix. TENS13

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4. Multidisciplinary/Interprofessional Dedicated Team\(^2\sim5, 7, 10\sim13\)
   a. Administrative personnel\(^12\)
   b. Anesthesiologist\(^5, 8, 12, 13\)
   c. Anesthetists\(^10\)
   d. Clinical nurse specialist\(^12\)
   e. Nurses certified in pain management\(^5\)
   f. Pain champion\(^4, 11\)
   g. Pain management director\(^12, 13\)
   h. Pain resource nurse\(^3, 4, 11\)
   i. Patient care assistants\(^3\)
   j. Pharmacists\(^3, 4, 10, 12\)
      i. Unit based\(^3\)
   k. Physicians\(^2, 7, 10\sim13\)
   l. Social worker\(^13\)
   m. Staff nurses\(^1\sim5, 7\sim13\)
   n. Surgeons\(^2, 8, 10, 12, 13\)
   o. Unit secretaries\(^3\)

5. Clinician Mentors\(^2\)
   a. Charge nurses, clinical nurse specialists, nurse educators\(^2\)
   b. Integration of evidence-based guidelines into new nurse/medical staff orientation sessions\(^2\)
   c. Staff meetings and nursing rounds\(^2\)

6. Patient Experience Regarding Pain\(^5, 13\)
   a. Consultation and management\(^13\) from surgery to discharge\(^5\)
   b. Individualized to each patient’s need\(^5\)
   c. Consistency in clinical care\(^5\)

7. Patient Education\(^2, 5\)
   a. Education materials for pain management distributed at preadmission clinic and on surgical units\(^2\)
   b. Teach patients/families and address their beliefs related to pain management (listening, acknowledging and discussing their beliefs)\(^2\)
      i. Dispel belief that pain is a normal part of surgical recovery\(^2\)
   c. Engage patients in their pain management and clarify their role, i.e., coaching patients on how to participate, to assess, and manage their pain\(^2\)
   d. Discharge booklets outlining after surgery expectations and detailed pain medication summary\(^5\)
   e. Helpline to answer pain management questions after discharge\(^5\)

8. Staff Education\(^1\sim5, 7, 8, 11\sim13\)
   a. Physicians, nurses, pharmacists receive the same education\(^12\) Conflicting evidence
   b. Uptake regarding pain management from education program may differ between professional groups\(^11\) Conflicting evidence
   c. Education can be divided into 4 content areas: PAIN: Preparation, Assessment, Intervention, and Normalization\(^4\)
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d. Staff orientation1-8, 12
   i. Pain goals5
   ii. Pain management principles5
   iii. Assessment1, 3-8, 11, 12 (See City of Hope, Pain Assessment Tools, available at http://prc.coh.org/pain_assessment.asp)
   iv. Listening skills5
   v. Analgesic approaches5
   vi. Evidence-based medication orders2, 5
   vii. Benefits of regional anesthesia5
   viii. Dosing and mixing of medications5
   ix. Local anesthetics5
   x. Epidural side effects5
   xi. Multi-modal approaches5
   xii. Coagulation issues5
e. Educational Program Length1, 2, 5, 11, 12
   i. Short periods of time to teach pain content11, 12 (i.e., 10 minutes, 12 15 minutes, 12 45 minutes, 12 60 hour sessions11, 12)
      1. Separate sessions for medical, nursing, and allied health staff5, 11
      2. Three 30 minute face to face in-service sessions with nurses over a 4 week period11
      3. Multiple in-services with up to date knowledge on pain issues5
      4. Rounding2
   ii. 2 day in-service educational program1, 2
   iii. Five 8 hour days to teach pain resource nurses about appropriate pain management12
f. Teaching Module1-3, 7, 8, 11-13 (with integrated regulatory standards and hospital policy/procedures)3
   i. Pain physiology7
   ii. Pain as fifth vital sign3, 7
   iii. Frequently used terms: Addiction, dependence, tolerance, acute pain, chronic pain3
   iv. Basic pain management principles3
   v. Pharmacological interventions3
   vi. Nonpharmacological interventions7, 8, 11, 13
   vii. Misconceptions regarding pain3
   viii. Characterizing patient’s pain (quality, radiation, severity, diurnal relationships, comfort measures, provocative factors)3
   ix. Skills: Assessment, side effects, peak and duration of drug effects, equianalgesic conversions, use of analgesic adjuvants12
   x. Postoperative pain assessment, treatment, and pain documentation1
   xi. Role playing,1 case methodology,1 drama theatre,1 scenario analysis,1 case studies3, 7, staff discussion7
   xii. Exploration of clinical knowledge, beliefs, and attitudes related to pain management2
      1. Critical thinking using precise language, development of a knowledge base, use of practical method for decision making, recognition of influence of value systems on decision making12

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9. **Knowledge Transfer to Clinical Setting**¹, ³, ⁴, ¹²
   a. Test competency and skills mastery in classroom setting¹²
   b. Content mastery: Using and incorporating information in practice¹²
      i. Design a strategy that assists nurses to actively transfer their knowledge to practice⁴
      ii. Nurses often not convinced until pain principle is demonstrated on the unit¹²
      iii. Pain rounds with charge nurse and pharmacist³

10. **Tools/Resources**¹⁻³, ⁵, ⁷, ⁸, ¹¹, ¹³
       i. 10 point numerical rating scale (NRS)¹⁻⁷
       ii. Pain scale rating pain tolerance vs numerical scale⁵
    b. Pain Management Pocket Cards/Guides¹⁻³, ⁸
       i. Common drug agents used,³, ⁸ duration of action, equianalgesic dosage conversion, PCA dosing considerations³
       ii. Assessment prompts⁸ and tools such as verbal rating scale, visual analog, faces pain scale³
       iii. Postoperative Pain Assessment and Management pocket guide¹
    c. Handbook: Clinician’s Guide to Pain Service⁵
       i. Orientation sessions⁸
       ii. Clinical preceptorships⁸
       iii. Case study analysis⁸
       iv. Regular pain management audits⁸
    d. Evidence-based Guidelines²⁻⁷, ¹¹, ¹³ (available on units)²⁻⁷
       i. Available non-drug treatments⁷, ⁸, ¹¹, ¹³ with guidelines for use¹³
       ii. AHCPR clinical practice guidelines on acute pain management¹³
       iii. Guideline for assessment and management of pain in older person in acute care setting¹¹
    e. Comprehensive evidence-based medication order sets²⁻⁵ (See #11 below for more detail)
    f. Pain Policy and Protocols³⁻⁵, ⁷, ¹¹
       i. Clinical protocol as a decision aid based on the evidence¹¹
    g. Simple communication tool (communication resource for staff; reference for patients)⁵
       i. Pain brochures⁵
       ii. Patient Bill of Rights for Pain Management⁵
    h. White board for pain goals, pain plan, and medications⁵
    i. Progress tracking instrument⁵
    j. Pain report with adjunct therapies³
    k. Staff badges (Pain? Let me know)¹¹ (See Example Staff Badges, Phelan, C., 2010)
    l. Ward poster/signage specific to pain,¹¹ such as postoperative pain management²
    m. Compact Disk with research articles and information addressing program issues¹

11. **Evidence-based Medication Orders**²⁻⁵
    a. Comprehensive analgesic plan and side effect management⁵
    b. Morphine as drug of choice, with option of adding NSAID²
    c. Specific dose indicated with no dosage range²
    d. Route appropriate to patient needs²
    e. OTC pain medication administration²

12. **Web Based Resources** to support team with evidence-based knowledge, updated documents⁷
13. Operational Frameworks/Models
   a. Kurt Lewin’s Change Theory: 3 Stages
      i. Unfreezing: accepting need for change
      ii. Recognizing: moving to a new level after the status quo
      iii. Refreezing: Integrating newly acquired knowledge and behaviors into current practice
   c. Logic Model: link program components with outcomes
   d. The Joint Commission ten-step model for monitoring and evaluation process
   e. Physiological Model: Gate Control Theory
   f. Social Learning Theory: Bandura

Implementation Processes and Strategies
1. Patient/Family Relationships
   a. Respect patient’s expertise
      i. Discuss options, tradeoffs, preferences, including what has worked previously
      ii. Develop pain goals and a pain plan
   b. Keep patient informed
      i. Use white board to keep pain goal + plan visible
      ii. Use white board for next scheduled medication
   c. Explain purpose of pain scale
   d. Track progress

2. Process for Engaging Staff in Pain Management
   a. Attend comprehensive training in pain management
   b. Consider experience learning techniques
   c. Develop pain protocols
   d. Understand and implement pain management policy
      i. Anticipate and proactively plan for pain management, rather than reacting to it
      ii. RNs assess problems, plan actions, implement actions, and evaluate effect of actions to maximize comfort and minimize side effects
      iii. Conduct regular pain assessment for all patients both at rest and with movement
      iv. Continuous measurement with Visual Analog Scale or Numeric Rating Scale (NRS)
      v. Assess for maximum pain intensity levels less than 3 at rest within 1 hour after treatment for acute pain
      vi. Document pain intervention
      vii. Physicians encouraged to prescribe scheduled analgesic plus on-demand analgesic
   d. Recognize barriers, including attitudes
   e. Utilize a simple communication tool (communication resource for staff; reference for patients)
   f. Ensure consistent and reliable accessibility via daily rounds, multiple visits with patient, and 24/7 clinician availability
   g. Seek daily guidance with nurse experts
   h. Participate in daily and/or weekly pain rounds on units
3. Evaluation Processes for Sustainability of Improvements\textsuperscript{1-3, 6-8, 10-13}
   a. Documentation of pain\textsuperscript{1}
      i. Pre and Post intervention audits of patient charts\textsuperscript{1, 11}
   b. Pre and post audit of patients charts\textsuperscript{11}
      i. Pain report as an indicator of improvements in nursing pain assessment\textsuperscript{3}
   c. Beliefs and attitudes of staff about pain management\textsuperscript{2}
      i. Questionnaire/survey to test knowledge of pain and attitudes towards it management\textsuperscript{1}
   d. Physicians management of patient pain\textsuperscript{2}
      i. Analgesia type, frequency, route, dosage\textsuperscript{2}
      ii. Surgeon analgesic ordering practices\textsuperscript{8}
      iii. Monthly audit and feedback on use of evidence-based orders\textsuperscript{2}
   e. Patient Pain Questionnaires/Surveys
      i. Patient pain ratings level\textsuperscript{2}
      ii. Pain satisfaction with pain treatment\textsuperscript{2, 11}
   f. Patient Interviews Regarding Pain\textsuperscript{11}
      i. Interviews with patients regarding efficacy of educational program (experiences)\textsuperscript{11}
      ii. Interviews with patients regarding efficacy of educational program (satisfaction related to pain management)\textsuperscript{11}
   g. Patient Pain Satisfaction Survey\textsuperscript{11}
      i. Pain impact on activities\textsuperscript{2}
      ii. Pain experience, interference with function, pain treatment, communication, participation, demographic variables\textsuperscript{7}
      iii. 40-item Picker Patient Experience questionnaire (PPE-40)\textsuperscript{6}
      iv. SF-36 Health Survey\textsuperscript{6}
      v. American Pain Society Patient Outcome Questionnaire (APS-POQ 1995)\textsuperscript{2}
      vi. Perceptions of older people regarding pain and pain management\textsuperscript{11}
      vii. Telephone questionnaire survey (attitudes of U.S. adults regarding postoperative pain)\textsuperscript{13}
   h. Nurse and Physician Questionnaires\textsuperscript{7, 10, 12, 13}
      i. Demographic data, assessed nurse/MD experience and practices in pain assessment, pain treatment, pain management routines, Internet search habits, quality of pain management on wards\textsuperscript{7}
      ii. Staff satisfaction with pain management program\textsuperscript{10}
      iii. Basic Pain Skills Inventory (BPSI)\textsuperscript{12}
      iv. Index of Attitudes About Pain Management (IAAPM)\textsuperscript{12}
      v. Telephone questionnaire survey for physicians regarding current and future pain management programs and related topics (Examined prevalence/types of programs, program initiation/duration, primary goals, services/components, staff, AHCPR guidelines)\textsuperscript{13}
      vi. Hospital LOS\textsuperscript{13}
      vii. Adverse postoperative effects of pain\textsuperscript{13}
      viii. Controlling nonsurgical pain\textsuperscript{13}
      ix. Effective pain management as a quality assurance measure\textsuperscript{13}
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i. Staff Interviews/Focus Groups
   i. Interviews regarding efficacy of educational program and attitudes towards program immediately following the sessions
   ii. Staff focus group interviews post educational session to gauge overall perception/effectiveness of the targeting pain approach
   iii. Pain assessment by nursing staff
   iv. Uptake regarding pain management educational campaign

   a. Assigning responsibility
   b. Delineating score of care
   c. Identifying aspects of care
   d. Identifying indicators
   e. Establishing thresholds
   f. Collecting and organizing data
   g. Evaluating, taking actions to solve problems, assessing actions, and documenting improvement
   h. Communicating relevant information to the organization-wide QA program (See APS Pain Management Quality Assurance Plan, by Pasero, C. L. & Hubbard, L., 1991)

Pain Management Program Outcomes
1. Organizational Supports
   a. Implementation of a collaborative quality improvement program at the hospital level improved both pain management and pain relief in patients
      i. Overall pain management process improved
   b. Embedding pain management awareness into organization structures promotes knowledge integration, enhances organizational processes, and impacts patient pain control outcomes
   c. Most important consideration in establishing a PMP is the development of a process to continuously monitor and evaluate the quality of care provided
   d. Demands placed on the system somewhat diminished staff satisfaction with program
   e. Challenges of a pain resource nurse program included negative uncaring attitudes about patients in pain, staff resistance, workload issues, and lack of available physicians, time, and pain management knowledge
   f. Interdisciplinary team realized nurse autonomy was critical to program success
   g. Ward signage failed to attract attention

2. Patient Beliefs/Attitudes/Knowledge
   a. Over half of postsurgical patients still believed that people become addicted to pain medication easily
   b. Surgical patients with evidence based orders were less likely to believe that good patients avoid talking about pain
      i. Patients may have a need to be “good” patients and not complain about pain
   c. Surgical patients with evidence based orders believed that experience of pain is a sign that illness has become worse
   d. Patient expressed a lack of information, fear of addiction, fear of side effects, caution with medication, and a lack of knowledge regarding the medication they received
   e. Older, less educated, lower income more likely to perceive barriers to pain management

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f. 77% of adults believe it is necessary to experience some pain after surgery.

g. 57% of adults having surgery expressed concern regarding pain after surgery as their primary fear
experience before surgery.

3. Clinician Beliefs/Attitudes/Knowledge

a. Multidisciplinary team members must clarify their own attitudes/beliefs about pain management and be
aware of what treatments they endorse.

b. Nurses improved their knowledge and attitudes in pain management.
   i. Better understanding about nature of pain complaints.
   ii. Beliefs changed.
   iii. Positive changes in staff attitudes and beliefs, with positive benefits of a turnaround and
reinforcing refreezing behaviors.

Conflicting evidence

\[\text{Nurses struggled with level of clinical decision making required.}\]

\[\text{Statistically significance difference, but not clinically meaningful difference, in nurses’ knowledge on}\]
\[\text{BPSD (pretest and posttest scores were low).}\]

Conflicting evidence

\[\text{i. No improvement on attitudes about pain management, although both pre and posttest attitudes}\]
\[\text{were positive.}\]

\[\text{Examples: Overmedicate patients; patients exaggerate pain severity; domain of physicians not}\]
\[\text{nurses.}\]

4. Pain Management Education: Patient

a. Printed material alone is probably not sufficient to inform patients.
   i. Should be completed by face to face interaction with clinicians, audiovisual materials and group
   discussions.

b. Younger and higher educated patients seemed to prefer a more active participation role in their pain
management than did older and low educational patients.

c. Involve patient and family in educational program.

5. Pain Management Education: Clinician

a. No statistically significant relationship between nurses’ level of education and years of experience with
their scores in the questionnaire before or after program implementation.

b. Nurses still had incorrect answers for questionnaire post educational program.
   i. 43% believed there is a maximum dose of morphine.
   ii. 32% thought patients having chronic pain do not need higher doses that acute patients need.
   iii. 35% thought doses of narcotics should be decreased if they caused euphoria.

c. Nurses participating in educational programs increased their knowledge of pain and
   i. Changed their pain management routines.
   ii. Changed their search habits for pain related websites on the internet.

d. Education for the entire multidisciplinary team is preferable but difficult.

e. No non-pharmacological approaches noted prior to or after educational program.

f. Uptake regarding pain management from the education campaign was different between professional
   groups.

g. Staff requesting self-directed learning packages and case-based scenarios.

h. Statistically significance difference, but not clinically meaningful difference, in nurses’ knowledge on
   BPSD (pretest and posttest scores were low).

i. No nurse achieved the Mastery learning level on the pre or posttest.

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6. **Pain Management and Pain Relief: Patient Outcomes**
   a. Pain assessment tools more often used, pain more often assessed and hospital staff did more often all
      what they could to relieve pain
      i. Significant improvement in patient pain relief with only 2.3% reporting no pain relief during
         hospital stay
   b. Non-decreasing pain levels may reflect inadequate and ineffective pain treatment

7. **Patient Pain Experience**
   a. US National Average of Patient Satisfaction: Utilizing the Retaining Patient Satisfaction Survey
      Process, 79% of patients reported pain well controlled in comparison to U.S. national average of 71%
   b. Prevalence of pain experience higher if patient has surgery
   c. Pain management program did not improve patient’s experience of pain severity, interference with
      function, use of nonpharmacologic methods, or pain relief
      *Conflicting evidence*
   d. Patient expressed lack of information
   e. Behaviors related to pain and delirium for frail elderly postoperative patients
      i. Agitation, confusion, restlessness, resistance to care less common in surgical patients after the
         implementation of a postoperative pain management program
   f. Positive response by patients/staff to use of staff badges (“allows you to talk about it.”)
   g. Slight improvement in assessment/management of postoperative pain in older persons
      i. Majority of patients were satisfied with their pain management
      ii. One third of patients did not have to ask for pain medication
      iii. Half of patient waited less than 10 minutes after request
   h. High degree of satisfaction with staff care and attention to pain
      i. Patient used self-initiated non-pharmacological approaches, such as music, television, and reading, to
         manage their pain
   j. Many variables can influence survey of patient pain and greatly influenced by patients themselves
   k. 77% of adults reported pain after surgery, with 80% experiencing moderate to extreme pain

8. **Pain Assessment and Documentation**
   a. Process of postoperative pain management recorded in a comprehensive manner significantly improved
   b. Significant improvement for pain management in nonsurgical patients was related to both pain treatment
      and regular use of pain assessment tools that nurses used to guide timely administration of painkillers
   c. Assessment of pain at rest and pain with movement with pain rating scales increased after intervention
   d. Pain assessed as worst pain and Pain with movement best predicted interference with function
   e. Number of patients assessed with pain rating scales increased after intervention
   f. Nurses pain assessment
      *Conflicting evidence*
      i. Significant change in documentation of pain behaviors for cognitively impaired patients ONLY
      ii. No change in:
         1. Assessment of pain
         2. Interventions used for chronic pain
         3. Assessment of indicators reflective of adverse effects of analgesia
      iii. Marginal improvement in pain assessment documentation
   g. Pain control: Not possible to determine level of pain control due to lack of documentation
   h. Increase in pain assessment and documentation of pain by nursing staff
   i. Slight improvement in assessment/management of pain in older persons

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j. Increase in pain assessment, with improvement in documentation of pain by nursing staff\textsuperscript{11}

k. Statistically significance difference, \textit{but not clinically meaningful difference}, in nurses’ knowledge on BPSD (pretest and posttest scores were low)\textsuperscript{12} \textit{Conflicting evidence}
   i. No improvement in patient pain ratings\textsuperscript{12}

l. Other Documentation Issues\textsuperscript{12}
   i. Practitioners feel burdened by the charting process\textsuperscript{12}
   ii. Staff nurses look for short, easy methods to record information\textsuperscript{12}
   iii. Written work may not reflect full scope of change in practice\textsuperscript{12}

9. Prescriptive Practices\textsuperscript{2, 7, 8, 11}
   a. Surgical patients with evidence based orders\textsuperscript{2}
      i. Had lower pain scores and fewer disturbances in sleep, walking, and general activities\textsuperscript{2}
      ii. Reported severe pain during physiotherapy, activity, and after refusal of pain medication\textsuperscript{2}
         1. Dosage of evidence-based order may not have been sufficient in some patients\textsuperscript{2}
   b. Nurses and physicians stated that general analgesia was under-prescribed\textsuperscript{7}
   c. Surgeon analgesic ordering practices: total prescribing practices increased significantly, with significant decreases in undesirable analgesics of Meperidine, IM Morphine, and Darvon\textsuperscript{8}
   d. Two fold increase in the prescription of oral analgesics, largely nursing initiated\textsuperscript{11}
   e. Slight improvement in assessment/management of postoperative pain in older persons\textsuperscript{11}
      i. Increase in prescription of simple analgesics\textsuperscript{11}
   f. Few nurses and MDs initiated nonpharmacologic treatments\textsuperscript{7}

10. Clinician Satisfaction\textsuperscript{10-12}
   a. Demands placed on system somewhat diminished staff satisfaction with program\textsuperscript{10}
   b. Positive response by patients/staff to use of staff badges (“allows you to talk about it.”)\textsuperscript{11}
   c. Staff requesting self-directed learning packages and case-based scenarios\textsuperscript{11}
   d. Practitioners feel burdened by the charting process\textsuperscript{12}
PAIN MANAGEMENT PROGRAMS:
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References


Evidence Search Strategies: A literature review on the selected clinical question was conducted in June 2015 to determine the quantity, quality and consistency of the evidence. This review examined the evidence for pain management programs in the adult acute care setting. A review of the research evidence from 1990 to 2015 was conducted via electronic databases (PubMed, CINAHL [Cumulative Index of Allied Health Literature]), Cochrane Library, and the Agency of Healthcare Research and Quality) using the search terms of “pain management”, “pain management program”, “acute care”, “adults”, and “hospital” either alone, mixed, or in combination.

This review yielded 23 relevant hits and, after eliminating 6 duplicates, 17 articles were selected for inclusion. After careful examination, 4 articles were eliminated as they did not answer the clinical question, did not involve pain management programs, or targeted inappropriate patient populations and/or institutional settings. One additional integrative review was obtained, for a total of 13 items of evidence that pertained to the clinical area of inquiry. The articles were ranked using the Academy of Evidence Based Practice Evidence Leveling System (See Page 17).

The evidence consisted of 5 quasi-experimental studies, 2 descriptive studies, 1 mixed methods, 1 case study, 1 integrative review, 1 consensus of experts, and 2 quality improvement projects. Result limitations include the inability to generalizable to all practice settings due to methodological issues such as small sample size and nonrandom sample technique. Three articles from the 1990s should be viewed with caution, as some pain interventions during that decade are now considered outmoded (i.e. single injection versus PCA pump). Additional limitations include the lack of accurate cost savings and a multitude of diverse interventions for pain management program design, implementation, and evaluation. There is little mention of pharmacy involvement in the pain management programs, although the multidisciplinary interprofessional approach is emphasized. However, the information presented in this review provides the best available evidence to date for clinicians in the design, implementation, and evaluation of a pain management program.
PAIN MANAGEMENT PROGRAMS: 
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Electronic Database Search Methodology
Date: June 1, 2015

Search topic/clinical question: For hospitalized adults, what is the quantity, quality, and consistency of the evidence for pain management programs in the acute care setting?

Inclusion Criteria: Acute care, adults, pain management programs
Exclusion Criteria: Pediatric, Maternal Child Health, Labor and Delivery, Palliative Care, Hospice, SNF, Nursing Home, Emergency Department; Programs other than pain management; nurse attitudes, knowledge, and beliefs not part of a pain management program

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<th>Total References Identified (hits)</th>
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#Controlled vocabulary (subject terms, MESH terms, tagged terms specific to database)
*Use the first database as the main comparison for subsequent database searches and identifying duplicate articles

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## PAIN MANAGEMENT PROGRAMS:
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### Reference/Contextual Links

**Citation:** Cuenca, E., Crawford, C., & Academy of Evidence Based Practice. (2012). Pain Resource Nurse Programs: An Integrative Review of the Evidence. *Kaiser Permanente Southern California Regional Nursing Research Program*

### Total Articles Included in Literature Review: Database (12) + Contextual Links (1) = 13

<table>
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<tr>
<th>Population and/or Patient(s)</th>
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<th>Comparison Intervention (Often current practice)</th>
<th>Outcome</th>
<th>Time Period (If Applicable; Optional)</th>
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<td>P: Adult hospitalized patients in the acute care setting</td>
<td>I: Pain management programs</td>
<td>C: Current practice</td>
<td>O: Management and alleviation of pain</td>
<td>T: Hospitalization experience</td>
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**Final Clinical Question:** For hospitalized adults, what is the quantity, quality, and consistency of the evidence for pain management program in the adult acute care setting?

### Searchable Question

- **Key Search Terms:** Pain management + program + acute care + hospital + adults
- **Inclusion Criteria:** Acute care setting; adult hospitalized patients; pain management programs
- **Exclusion Criteria:** Pediatric, Maternal Child Health, Labor and Delivery, Palliative Care, Hospice, SNF, Nursing Home, Emergency Department; Programs other than pain management; nurse attitudes, knowledge, and beliefs not part of a pain management program
- **Limitors** (Open year or year ranges, age ranges, and language, etc.): 1990 to 2015 or Open
- **Databases:** PubMed, CINAHL, Cochrane Library
- **Professional Organizations:** AHRQ
### Academy of Evidence Based Practice

#### Academy of EBP© Evidence Leveling System (ELS)

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<td>B</td>
<td>Well-designed controlled studies, both randomized and nonrandomized, prospective or retrospective studies, and integrative reviews with results that consistently support a specific action, intervention, or treatment</td>
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<td>C</td>
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<td>Peer-reviewed professional organizational standards, with clinical studies to support recommendations</td>
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<td>Laws and Regulations (local, state, federal; licensing boards; accreditation bodies, etc.)</td>
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</table>

**Total** 13

*A large sample has adequate power to detect the observed effect with confidence (as seen in significant Confidence Intervals). A small sample may lack confidence in the power of the desired effect (Polit & Beck, 2008)*

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*Adapted from AACN Evidence Leveling System (2009) and Canadian Medical Association & Centre for Evidence-Based Medicine, Levels of the Evidence (2001)*

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