Putting Pain Stewardship Into Practice

Optimizing acute pain management within your institution

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Discussion topics

Section 1 | Unmet needs, multimodal analgesia, and guidelines

Section 2 | Designing and advancing your program

Section 3 | Implementation and measurement

Appendix

Section 1

Unmet needs, multimodal analgesia, and guidelines

The state of acute pain management

Opioids are often used as the foundational agents in acute pain management protocols[1-3]

- In a 2014 research database of more than 2.8 million inpatients treated with IV analgesia for operative and nonoperative pain, **73%** received IV opioid monotherapy, and less than **27%** received multimodal analgesia (MMA)[2]
- Of patients reporting postoperative pain in multiple surveys published from 1995 to 2014[4-6]:

44% to 51% reported **moderate pain**

8% to 22% reported **extreme pain**

- Opioid-related adverse drug events can impact length of stay and cost[7,8]

Today, numerous state and federal programs, as well as hospital associations, support efforts to decrease opioid abuse and dependence.[9-13]

References: 1. Thorson D et al; Institute for Clinical Systems Improvement (ICSI). https://www.icsi.org/_asset/dyp5wm/Opioids.pdf. Published January 2014. Accessed December 7, 2016. **2.** Data on file. Mallinckrodt Hospital Products, Inc. **3.** Singla NK et al. *Am J Ther.* 2015;22(1):2-10. **4.** Warfield CA et al. *Anesthesiology.* 1995;83(5):1090-1094. **5.** Apfelbaum JL et al. *Anesth Analg.* 2003;97(2):534-540. **6.** Gan TJ et al. *Curr Med Res Opin.* 2014;30(1):149-160. **7.** Pizzi LT et al. *Pharmacotherapy.* 2012;32(6):502-514. **8.** Oderda GM et al. *J Pain Palliat Care Pharmacother.* 2013;27(1):62-70. **9.** Franklin G et al. *Am J Public Health.* 2015;105(3):463-469. **10.** Johnson H et al. *MMWR Morb Mortal Wkly Rep.* 2014;63(26):569-574. **11.** Joint Policy Working Group. http://www.mass.gov/eohhs/docs/dph/quality/drugcontrol/best-practices/best-practices-workgroup-report.pdf. Published August 27, 2014. Accessed December 6, 2016. **12.** Arizona Criminal Justice Commission. http://www.azcjc.gov/acjc.web/rx/readmore.aspx. Accessed December 6, 2016. **13.** Massachusetts Health & Hospital Association. http://www.mhalink.org/AM/Template.cfm?Section=MHA_News1&template=/CM/ContentDisplay.cfm&ContentID=48802. Published February 5, 2015. Accessed January 17, 2017.

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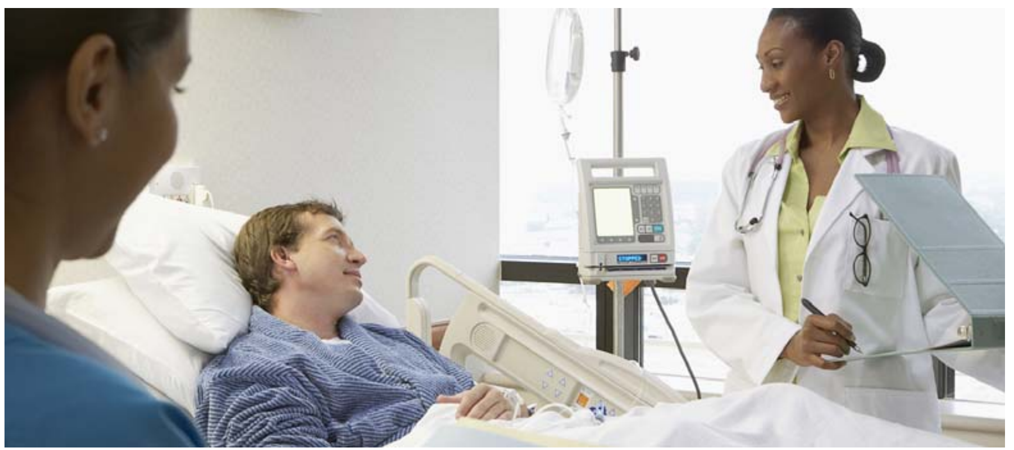
Consider a balanced approach: multimodal analgesia

MMA is believed to contribute to:

- ✓ Reduced doses of opioids[1-4]
- ✓ Reduced risk of ORADEs[3-6]
- ✓ Shorter length of stay[7]
- ✓ Less pain during rest and activity[8,9]
- ✓ Improved patient satisfaction[10]



MMA, multimodal analgesia; ORADE, opioid-related adverse drug event.

References: **1.** Jo CH et al. *Eur J Orthop Surg Traumatol*. 2014;24(3):315-322. **2.** Mathiesen O et al. *Eur Spine J*. 2013;22(9):2089-2096. **3.** Kehlet H et al. *Anesth Analg.* 1993;77(5):1048-1056. **4.** White PF. *Curr Opin Investig Drugs.* 2008;9(1):76-82. **5.** Garimella V et al. *Clin Colon Rectal Surg.* 2013;26(3):191-196. **6.** Mann C et al. *Anesthesiology.* 2000;92(2):433-441. **7.** Michelson JD et al. *Foot Ankle Int.* 2013;34(11):1526-1534. **8.** Fu PL et al. *J Int Med Res.* 2010;38(4):1404-1412. **9.** Sivrikoz N et al. *Ağri*. 2014;26(1):23-28. **10.** Skinner HB. *Am J Orthop*. 2004;33(suppl 5):5-9.

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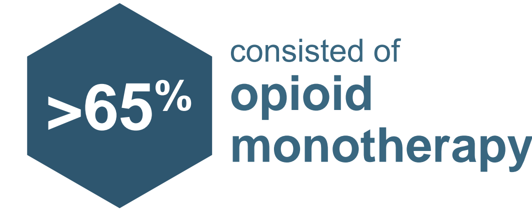
MMA: Supported by multiple associations and guidelines

Organizations recommending an MMA approach to acute pain management[1-12]

- Agency for Healthcare Research and Quality
- American Academy of Orthopaedic Surgeons
- American College of Surgeons
- American Geriatrics Society
- American Heart Association
- American Society for Pain Management Nursing
- American Society of Anesthesiologists
- American Society of PeriAnesthesia Nurses
- Enhanced Recovery After Surgery Society
- Society of Critical Care Medicine
- Society of Hospital Medicine
- The Joint Commission

MMA remains underutilized

In a 2014 analysis of inpatient surgical procedures, IV analgesic regimens consisted primarily of opioid monotherapy and were multimodal less than 35% of the time[13]



MMA, multimodal analgesia.

References: **1.** Wells N et al. Improving the quality of care through pain assessment and management. In: Hughes RG, ed. *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. Rockville, MD: Agency for Healthcare Research and Quality; 2008:chap17. **2.** American Academy of Orthopaedic Surgeons Work Group. http://www.aaos.org/Research/guidelines/HipFxGuideline_rev.pdf. Published September 5, 2014. Accessed December 7, 2016. **3.** Mohanty S et al. https://www.facs.org/~/media/files/quality%20programs/geriatric/acs%20nsqip%20geriatric%202016%20guidelines.ashx. Accessed December 7, 2016. **4.** Shah S et al; The American Geriatrics Society. http://www.americangeriatrics.org/gsr/anesthesiology/pain_management.pdf. Accessed December 7, 2016. **5.** Antman EM et al. *Circulation*. 2007;115(12):1634-1642. **6.** Jarzyna D et al. *Pain Manag Nurs*. 2011;12(3):118-145. **7.** American Society of Anesthesiologists Task Force on Acute Pain Management. *Anesthesiology*. 2012;116(2):248-273. **8.** American Society of PeriAnesthesia Nurses. *J Perianesth Nurs*. 2003;18(4):232-236. **9.** Gustafsson UO et al. *World J Surg*. 2013;37:259-284. **10.** Barr J et al. *Crit Care Med*. 2013;41(1):263-306. **11.** Frederickson TW et al, eds. *Reducing Adverse Drug Events Related to Opioids Implementation Guide*. Philadelphia, PA: Society of Hospital Medicine; 2015. **12.** The Joint Commission. *Sentinel Event Alert.* 2012;49:1-5. http://www.jointcommission.org/assets/1/18/SEA_49_opioids_8_2_12_final.pdf. Accessed December 7, 2016. **13.** Data on file. Mallinckrodt Hospital Products, Inc.

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Pain management and patient satisfaction

Effective pain control and patient satisfaction are highly correlated[1]

In Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) postdischarge patient surveys:

- Patients evaluate the quality of various aspects of hospital care, including pain management[2]
- Results show a strong correlation between patient reports of "always" receiving good pain control and high global satisfaction with the hospital[1]
- Results also show a strong relationship between effective pain management and other HCAHPS measures[1]

References: 1. CMS. http://www.hcahpsonline.org/Files/HCAHPS_Fact_Sheet_June_2015.pdf. Published June 2015. Accessed December 8, 2016. **2.** Gupta A et al. *J Pain Res*. 2009;2:157-164.

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The basics of multimodal analgesia

MMA combines 2 or more analgesic agents or techniques that use different mechanisms to provide better pain relief with less opioids[1,2]

- By combining different analgesics, MMA can optimize efficacy with a lower dose of each respective agent and may also reduce the risk for dose-related adverse events[3]

Intervening at various points along the pain pathway[3-6]

- Perception of pain involves both the peripheral and central nervous systems, and different types of analgesics can intervene at different levels of this signal transduction:
  - Cortical level (opioids, α_2-agonists, acetaminophen, NMDA antagonists)
  - Spinal cord level (local anesthetics, opioids, α_2-agonists, NMDA antagonists)
  - Peripheral level (local anesthetics, NSAIDs, COXIBs)

COXIB, cyclooxygenase-2–specific inhibitor; MMA, multimodal analgesia; NMDA, *N*-methyl-D-aspartate.

References: 1. The Joint Commission. *Sentinel Event Alert.* 2012;49:1-5. http://www.jointcommission.org/assets/1/18/SEA_49_opioids_8_2_12_final.pdf. Accessed December 8, 2016. **2.** American Society of Anesthesiologists Task Force on Acute Pain Management. *Anesthesiology*. 2012;116(2):248-273. **3.** Kehlet H et al. *Anesth Analg.* 1993;77(5):1048-1056. **4.** Gottschalk A et al. *Am Fam Physician.* 2001;63(10):1979-1984. **5.** Anderson BJ. *Pediatr Anesth.* 2008;18(10):915-921. **6.** Joshi GP. *Anesthesiol Clin North America*. 2005;23(1):185-202.

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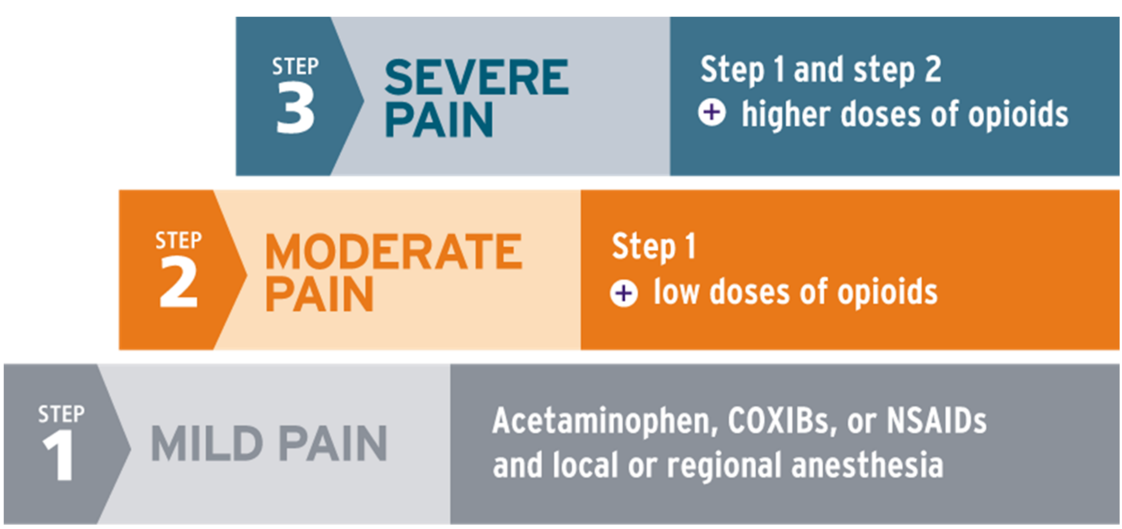
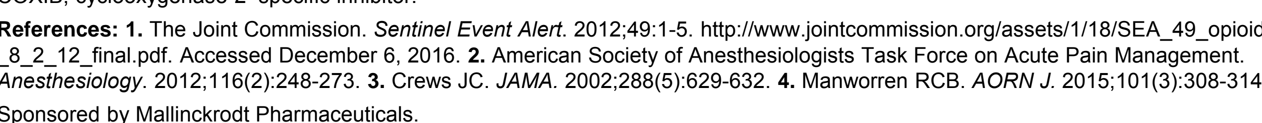
The basics of multimodal analgesia (continued)

When used in combination with opioids, non-opioid treatments may reduce the dose of opioids required to effectively manage pain[1]

Schedule non-opioid analgesics first, adding opioids for moderate to severe pain[2-4]




COXIB, cyclooxygenase-2–specific inhibitor.

References: 1. The Joint Commission. *Sentinel Event Alert*. 2012;49:1-5. http://www.jointcommission.org/assets/1/18/SEA_49_opioids_8_2_12_final.pdf. Accessed December 6, 2016. **2.** American Society of Anesthesiologists Task Force on Acute Pain Management. *Anesthesiology*. 2012;116(2):248-273. **3.** Crews JC. *JAMA*. 2002;288(5):629-632. **4.** Manworren RCB. *AORN J*. 2015;101(3):308-314.

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Recommended analgesic guidelines

Recommendations from a variety of organizations for the management of acute pain:

- **Establish a multimodal analgesic foundation for the management of acute surgical pain[1,2]**
  - Unless contraindicated, administer non-opioids using a continuous, around-the-clock dosing regimen; consider regional techniques with local anesthetic infiltration of the surgical wound[1,2]
  - Administer opioids as needed to patients with increasing pain levels following non-opioid administration[2]
- **Incorporate appropriate non-pharmacologic interventions[3]**
- **Screen patients for risk factors for postoperative nausea and vomiting (PONV), respiratory depression, and obstructive sleep apnea, preventing when possible[3-5]**
- **Monitor patients and systematically assess for PONV, quality of respiration, and level of sedation[3,4]**

References: 1. American Society of Anesthesiologists Task Force on Acute Pain Management. *Anesthesiology*. 2012;116(2):248-273. **2.** Crews JC. *JAMA.* 2002;288(5):629-632. **3.** The Joint Commission. *Sentinel Event Alert.* 2012;49:1-5. http://www.jointcommission.org/assets/1/18/SEA_49_opioids_8_2_12_final.pdf. Accessed December 8, 2016. **4.** American Society of PeriAnesthesia Nurses. *J Perianesth Nurs*. 2006;21(4):230-250. **5.** American Society of Anesthesiologists Task Force on Acute Pain Management. *Anesthesiology*. 2014;120(2):1-19.

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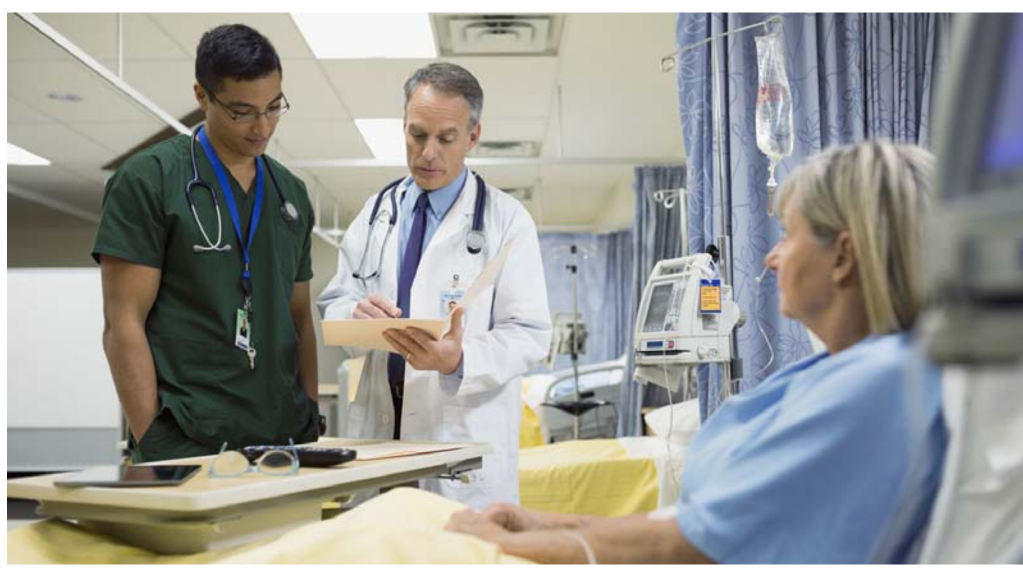
Recommended analgesic guidelines (continued)

- **Do not routinely start patients on opioid monotherapy[1-3]**
- **Avoid rapid dose escalation of opioid analgesics to meet an arbitrary pain rating[1]**
- **Ensure adequate gastric function before converting patients from IV to oral medications[4,5]**



References: 1. The Joint Commission. *Sentinel Event Alert.* 2012;49:1-5. http://www.jointcommission.org/assets/1/18/SEA_49_opioids_8_2_12_final.pdf. Accessed December 8, 2016. **2.** American Society of Anesthesiologists Task Force on Acute Pain Management. *Anesthesiology*. 2012;116(2):248-273. **3.** Crews JC. *JAMA*. 2002;288(5):629-632. **4.** Kuper KM. Intravenous to oral therapy conversion. In Murdaugh LB, ed: *Competence Assessment Tools for Health-System Pharmacies*. 4th ed. Bethesda, MD: American Society of Health-System Pharmacists; 2008:347-360. **5.** Barr J et al. *Crit Care Med.* 2013;41(1):263-306.

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Section 2

Designing and advancing your program

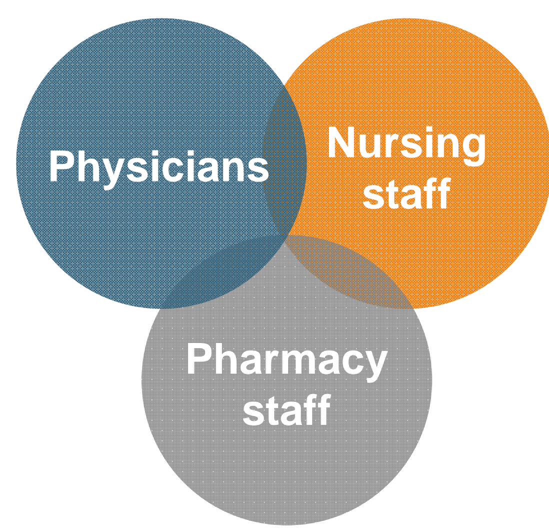
Getting started

Assemble the right team

An interdisciplinary team can help with[1]:

- Setting comprehensive goals
- Achieving organization-wide acceptance
- Coordinating implementation of MMA protocols across the institution

The core team should include those directly involved in pain management and quality improvement[1]



The team may be expanded to include:

- Administrative and clinical senior leadership[2]
- Quality and safety directors
- Palliative care specialists[1]
- Therapists[1]
- Psychologists[1]

MMA, multimodal analgesia.

References: 1. Anderson WG et al, eds. *Improving Pain Management for Hospitalized Medical Patients: A Society of Hospital Medicine Implementation Guide.* http://tools.hospitalmedicine.org/resource_rooms/imp_guides/Pain_Management/pain.html. Accessed June 22, 2016. **2.** Frederickson TW et al, eds. *Reducing Adverse Drug Events Related to Opioids Implementation Guide*. Philadelphia, PA: Society of Hospital Medicine; 2015.

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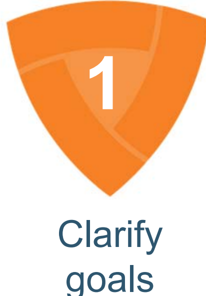
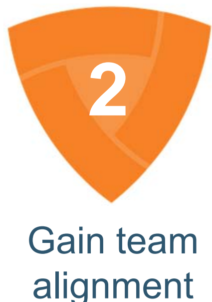
Getting started

Develop a project charter in order to[1]:

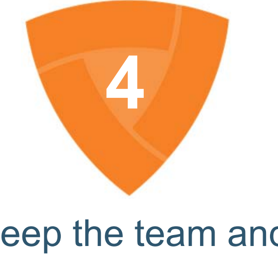


Clarify goals



Gain team alignment

Set deadlines and checkpoints



Keep the team and project on track

Project charter elements may include[1]:

- Project name
- Statement of purpose
- Goals/aims of quality improvement project
- Affected services/departments
- Executive sponsors
- Team leader
- Project manager
- Team members
- Reporting structure and approvals for medical staff, committee, and administration
- Deliverables and timeline

Reference: 1. Frederickson TW et al, eds. *Reducing Adverse Drug Events Related to Opioids Implementation Guide*. Philadelphia, PA: Society of Hospital Medicine; 2015.

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Getting started

Gain stakeholder support[1]

The playing field

Hospitals are large, multifaceted organizations[1]

- Pain management involves departments and functions throughout the institution[1]
- Transforming pain-management protocols requires broad acceptance and adaptation[2]
- Significant organizational buy-in is essential[1]

The plan

How to achieve buy-in[1]

- Identify and recruit key stakeholders
- Organize larger meetings of additional stakeholders
  - Share your team's goals
  - Gather valuable input
- Enlist sponsors: executives who can help drive the initiative at all levels of your organization

References: 1. Anderson WG et al, eds. *Improving Pain Management for Hospitalized Medical Patients: A Society of Hospital Medicine Implementation Guide.* http://tools.hospitalmedicine.org/resource_rooms/imp_guides/Pain_Management/pain.html. Accessed June 22, 2016. **2.** Frederickson TW et al, eds. *Reducing Adverse Drug Events Related to Opioids Implementation Guide*. Philadelphia, PA: Society of Hospital Medicine; 2015.

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Assess current pain management landscape[1]

Evaluate existing institutional protocols, including:

Tools and approaches used to assess pain[1]

Frequency of pain assessment[1]

Method and frequency of monitoring patient response to opioids (analgesic effect and adverse events) and screening of patients for risk factors for adverse events[1]

Reassessment of pain after an intervention[1]

Protocols for patient-controlled analgesia[1] as well as regional techniques and other invasive methods for pain control

Recommendations for use of opioids[1]

Processes for consulting specialists in pharmacy, pain management, and/or palliative care for certain patients[1]

Medications and other pain management interventions included in order sets[1]

Reference: 1. Anderson WG et al, eds. *Improving Pain Management for Hospitalized Medical Patients: A Society of Hospital Medicine Implementation Guide.* http://tools.hospitalmedicine.org/resource_rooms/imp_guides/Pain_Management/pain.html. Accessed June 22, 2016.

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Identify available data sources

Pain management data may be obtained from[1]:

- Completed HCAHPS surveys
- Hospital audits assessing pain management protocols
- Administrative data (eg, length of stay, readmissions)
- Reviews of electronic medical records, cases, and charts
  - Patients with complex pain issues
  - Types of pain (eg, acute, chronic)
  - Patients receiving opioids
  - Patients experiencing adverse drug events

This audit can:

- Identify patient segments served—and underserved—by existing protocols
- Recognize existing tools and data that can be used in your new program
- Uncover opportunities in pain management

HCAHPS, Hospital Consumer Assessment of Healthcare Providers and Systems.

Reference: 1. Anderson WG et al, eds. *Improving Pain Management for Hospitalized Medical Patients: A Society of Hospital Medicine Implementation Guide.* http://tools.hospitalmedicine.org/resource_rooms/imp_guides/Pain_Management/pain.html. Accessed June 22, 2016.

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Defining program metrics[1]

Establish pain-management metrics based on structure, process, and outcomes

Structural measures

- Staff competency in screening and basic pain management
- Computer-based order guardrails and best-practice alerts
- Pain management policies
- Access to timely specialist consultations and other pain resources

Reference: 1. Anderson WG et al, eds. *Improving Pain Management for Hospitalized Medical Patients: A Society of Hospital Medicine Implementation Guide.* http://tools.hospitalmedicine.org/resource_rooms/imp_guides/Pain_Management/pain.html. Accessed June 22, 2016.

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Defining program metrics[1] (continued)

Establish pain-management metrics based on structure, process, and outcomes (continued)

Process measures

- Patient and family education/engagement
- Documentation (pain screening, assessments, diagnoses, etc)
- Frequency of pain assessment and documentation
- Percentage of patients who receive medication or other intervention after a recorded moderate or severe pain score
- Time to reassessment of pain after an indicated intervention
- Drug utilization reviews
- Appropriate use of medication prior to pain-inducing activities

Reference: 1. Anderson WG et al, eds. *Improving Pain Management for Hospitalized Medical Patients: A Society of Hospital Medicine Implementation Guide.* http://tools.hospitalmedicine.org/resource_rooms/imp_guides/Pain_Management/pain.html. Accessed June 22, 2016.

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Defining program metrics[1] (continued)

Establish pain-management metrics based on structure, process, and outcomes (continued)

Outcome measures

- Incidence of opioid-related adverse drug events
- Utilization
  - Length of stay
  - Readmissions
- Patient satisfaction scores

Basic steps for ongoing assessment

- Identify problems or opportunities for improvement
- Assess available data sources
- Identify outcomes and obtain baseline measurements
- Evaluate results after implementing intervention

Reference: 1. Anderson WG et al, eds. *Improving Pain Management for Hospitalized Medical Patients: A Society of Hospital Medicine Implementation Guide.* http://tools.hospitalmedicine.org/resource_rooms/imp_guides/Pain_Management/pain.html. Accessed June 22, 2016.

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Section 3

Implementation and measurement

Putting your plan into action

Implement and monitor your program

Make attention to pain a matter of routine

- **Incorporate into hospital policy** appropriate pain assessment tools and approaches, treatments, and reassessments[1]
- **Create templates** for recording comprehensive pain assessments in the electronic medical record[1]
- Assess each patient's pain and medication needs through **hourly nursing rounds**[1]
- Structure team rounds so that **physicians inquire about pain** and adverse events on a daily basis[1]
- **Create alerts** for physicians when a patient is admitted who has uncontrolled pain or is receiving long-term opioid therapy[1]
- Consider implementation of **automatic consults** by pain, pharmacy, or palliative care staff for patients with uncontrolled pain[1]
- Add episodes of **uncontrolled pain** to rounding reports
- Perform audits **to assess compliance**[1]

Reference: 1. Anderson WG et al, eds. *Improving Pain Management for Hospitalized Medical Patients: A Society of Hospital Medicine Implementation Guide.* http://tools.hospitalmedicine.org/resource_rooms/imp_guides/Pain_Management/pain.html. Accessed June 22, 2016.

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Driving quality throughout the institution[1]

Institutional recommendations

- Ensure the appropriate assessment, management, and reassessment of acute pain through systematized protocols
- Promote interdisciplinary care planning that actively engages the patient in goal-oriented pain care with MMA
- Foster engagement and coordination across disciplines by clearly defining roles and responsibilities related to pain management
- Provide clinical staff with opportunities for continuing education in pain management

Consider improvement opportunities involving order sets, including:

- Scheduled non-opioids for mild pain
- Different order sets with different PCA doses based on opioid tolerance (eg, low dose for opioid-naïve patients)

MMA, multimodal analgesia; PCA, patient-controlled analgesia.

Reference: 1. Anderson WG et al, eds. *Improving Pain Management for Hospitalized Medical Patients: A Society of Hospital Medicine Implementation Guide.* http://tools.hospitalmedicine.org/resource_rooms/imp_guides/Pain_Management/pain.html. Accessed June 22, 2016.

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Optimize your results through education

Foster ongoing education for patients and families

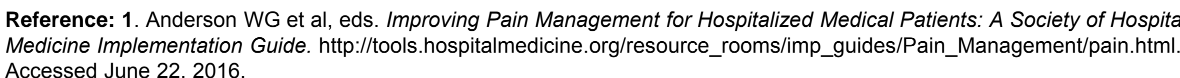
Build a library of educational materials for patients and their families[1]

- The Pain Stewardship Program offers a helpful brochure for patients to help them understand and participate in the management of their own acute pain

Compile a list of printed, telephonic, and online pain resources for patients and families[1]

Create templates to record each patient's pain management plan[1]

- Goals
- Treatments
- Expectations



Reference: 1. Anderson WG et al, eds. *Improving Pain Management for Hospitalized Medical Patients: A Society of Hospital Medicine Implementation Guide.* http://tools.hospitalmedicine.org/resource_rooms/imp_guides/Pain_Management/pain.html. Accessed June 22, 2016.

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Talking about pain management with patients

Strategies for effective communication

Strategy	Suggested phrase
Validate their pain and related emotions.[1]	"I know you're in pain and you're worried. We'll do our best to manage your pain and address your fears."[1]
Review the data objectively with the patient.[1]	"I see that you can sleep and function better than before."[1]
Set clear boundaries in response to requests for opioid doses that are not indicated.[1]	"Our hospital follows the standard of using non-opioids first and using opioids only as needed for more severe pain."[2-4]
Avoid arguing[1] and be supportive.	"It sounds like you have more questions, and I would be happy to find someone to provide you with more information about this."
Be straightforward.[1]	"I'm concerned about the impact this medication might have on you."[1]
Don't "give up on" the patient; commit to non-opioid treatments.[1]	"I hear you. Let's try to manage the pain with other treatments."[1]
Review goals of pain care.[1]	"I'd like to talk to you about options and goals for managing your pain."[1]

References: 1. Anderson WG et al, eds. *Improving Pain Management for Hospitalized Medical Patients: A Society of Hospital Medicine Implementation Guide.* http://tools.hospitalmedicine.org/resource_rooms/imp_guides/Pain_Management/pain.html. Accessed June 22, 2016. **2.** American Society of Anesthesiologists Task Force on Acute Pain Management. *Anesthesiology*. 2012;116(2):248-273. **3.** Crews JC. *JAMA*. 2002;288(5):629-632. **4.** Manworren RCB. *AORN J.* 2015;101(3):308-314.

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Quality improvement in pain management is a continuous process[1]

Provide ongoing learning opportunities for hospital staff[1]

- Use regular faculty meetings, grand rounds, and case review sessions as learning opportunities for improving pain management
- Schedule sessions to provide continuing education
- Compile a list of pain resources to provide easy reference for providers

Incorporate regular checkpoints to continue monitoring, evaluating, and optimizing your program[1]

Reference: 1. Anderson WG et al, eds. *Improving Pain Management for Hospitalized Medical Patients: A Society of Hospital Medicine Implementation Guide.* http://tools.hospitalmedicine.org/resource_rooms/imp_guides/Pain_Management/pain.html. Accessed June 22, 2016.

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Appendix

Resources

- Learner’s and teacher’s guides for internal medicine: http://www.professorebm.com
- Course focused on improving communication about pain management: http://healthcarecomm.org/training/faculty-courses/difficult-clinician-patient-relationships
- Prescription Drug Monitoring Program Training and Technical Assistance Center: http://www.pdmpassist.org/content/state-pdmp-websites
- Institute for Healthcare Improvement: http://www.ihi.org/Pages/default.aspx
- Providers’ Clinical Support System: view webinars and models of clinical support systems for opioid therapies at http://pcss-o.org
- Overview and training tools on safe opioid prescribing in chronic pain (Boston University): http://www.opioidprescribing.com/overview
- Pain Management module (University of Wisconsin): free module designed for residents at http://projects.hsl.wisc.edu/GME/PainManagement