

Appendix B Michaela Bleggi, Ashlon Eubank, Michelle Buttler, Caitlin Brewer, and Mica Mangibin Question Development Tool

1. What is the problem?

- There is a large misconception in health care that children do not need as much pain management as adults after a procedure. While a child may not be able to express their pain in the same way as an adult, they are affected as much, if not more, by under-addressed pain. Due to this, children aged three to five are not receiving adequate pain management during the immediate postoperative period. Nurses need to be more knowledgeable about the wide variety of pain management techniques.

2. Why is the problem important and relevant? What would happen if it were not addressed?

- Children are not sufficiently treated for their pain following a procedure due to a lack of assessments during the postoperative period. This, combined with the subjectivity of pain, makes pain identification and management difficult during the postoperative period. Health care providers are often hesitant about prescribing opioids due to side effects; parents may be worried about the addictive nature of certain pain medications.
- In pediatric patients with undertreated pain, patient outcomes are significantly lower. Undertreated or unmanaged pain can result in anxiety and behavioral problems immediately after surgery and in the future. In addition, pain can cause physiological changes such as increased blood pressure, increased pulse, and decreased respiratory rate and oxygen saturation. Pediatric pain following a procedure can also cause stress within the family, which in turn causes increased stress for the patient.
- If postoperative pain is not addressed in a timely manner, it may lead to chronic pain, which will ultimately cause the patient to return for more treatment, thereby increasing healthcare costs and measures not only for the caregiver but also the hospital.

3. What is the current practice?

- Wong-Baker FACES scale is used for identification of pain.

Wong-Baker FACES® Pain Rating Scale



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- The following methods are used for treatment of pain:
 - Pharmacological:
 - More off label analgesics than there are FDA approved for pediatric
 - Mild pain

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- Ibuprofen
 - Paracetamol
- Moderate to severe pain
 - Morphine
 - Meperidine
 - Fentanyl
 - Remifentanyl
- Non pharmacological
 - Distraction
 - Yelling “ouch” as loud or soft as the pain
 - Play games
 - Singing
 - Humor
 - Reading
 - Relaxation
 - “Go limp as a rag doll”
 - Helps child relax body when they might not know what “relax” means
 - Comfortable position
 - Holding the child and comfort with “mommy is here.”
 - Allow to keep eyes open
 - Guided imagery
 - Positive self-talk
 - Thought stopping
 - Behavioral contracting (positive reinforcement)
 - Giving stickers

4. How was the problem identified? *(Check all that apply)*

- | | |
|---|--|
| <input type="checkbox"/> Safety and risk-management concerns <input type="checkbox"/> Quality concerns (efficiency, effectiveness, timeliness, equity, patient-centeredness) <input type="checkbox"/> Unsatisfactory patient, staff, or organizational outcomes | <input type="checkbox"/> Variations in practice within the setting <input type="checkbox"/> Variations in practice compared to community standard <input type="checkbox"/> Current practice that has not been validated <input type="checkbox"/> Financial concerns |
|---|--|

5. What are the PICO components?

- P** – (Patient, population, or problem) Pediatric postoperative patients age 3-7
- I** – (Intervention) Nonpharmacologic approach: distraction/diversion
- C** – (Comparison with other interventions, if foreground question) Pharmacologic approach: heavy opioid use immediately after surgery
- O** – (Outcomes are qualitative or quantitative measures to determine the success of change) Decreased level of pain measured by faces pain scale and behavioral assessment

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6. Initial EBP question ☐ Background ☒ Foreground

In pediatric patients aged three to five, how do distraction techniques compared to opioid use affect reported pain levels during the postoperative period?

7. List possible search terms, databases to search, and search strategies.

- Population: Pediatric Patients aged 3-5
 - Pre-school
 - Post-operative
 - Juvenile
 - Young children
 - Perioperative
 - Pediatric
- Intervention: Distraction techniques
 - Nonpharmacologic pain management
 - Deep breathing
 - Bubbles
 - Play
 - Singing
 - Cognitive
 - Behavioral
- Comparison: Opioids
 - Medication
 - Analgesics
 - FDA approved pediatric analgesics
 - PCA pump
 - NSAIDs
- Outcomes: Pain level
 - Pain relief
 - Discomfort level
 - Pain management
 - Maintenance
 - Decreased anxiety
 - Pain alleviation
 - Improved behavioral outcomes
 - Hurting

Hockenberry, M. J., Wilson, D., Rodgers, C. (2017). *Essentials of Pediatric Nursing*. St. Louis, MO: Elsevier.

Databases:

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- Clinical Pharmacology
- Medline
- PubMed Central
- TAMU Nursing LibGuide
- Cumulative Index to Nursing and Allied Health Literature (CINAHL)

8. What evidence must be gathered? *(Check all that apply)*

- ☐ Publications (e.g., EBSCOHost, PubMed, CINAHL, Embase)
- ☐ Standards (regulatory, professional, community)
- ☐ Guidelines
- ☐ Organizational data (e.g., QI, financial data, local clinical expertise, patient/family preferences)
- ☐ Position statements

9. Revised EBP question

(Revisions in the EBP question may not be evident until after the initial evidence review; the revision can be in the background question or a change from the background to a foreground question)

In pediatric patients aged three to five, how do distraction techniques, compared to opioid use, affect reported pain levels zero to forty-eight hours after a procedure?

10. Outcome measurement plan

| What will we measure? <i>(structure, process, outcome measure)</i> | How will we measure it? <i>(metrics are expressed as rate or percent)</i> | How often will we measure it? <i>(frequency)</i> | Where will we obtain the data? | Who will collect the data? | To whom will we report the data? |
|---|--|--|--------------------------------|----------------------------|----------------------------------|
| Pain level | Wong-Baker FACES scale pain ratings | 1st hour: every 15 minutes Once every hour over next 48 hours | Recovery unit of a hospital | The assigned nurse | The unit manager |
| Parent satisfaction | | | | | |

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|----------------------|--|--|--|--|--|
| Hospital stay length | | | | | |
|----------------------|--|--|--|--|--|

Directions for Use of the Question Development Tool

Purpose

This form is used to develop an answerable EBP question and to guide the team in the evidence search process. The question, search terms, search strategy, and sources of evidence can be revised as the EBP team refines the EBP question.

What is the problem, and why is it important?

Indicate why the project was undertaken. What led the team to seek evidence? Ensure that the problem statement defines the actual problem and does not include a solution. Whenever possible, quantify the extent of the problem. Validate the final problem description with practicing staff. It is important for the inter-professional team to take the time together to reflect, gather information, observe current practice, listen to clinicians, visualize how the process can be different or improved, and probe the problem description in order to develop a shared understanding of the problem.

What is the current practice?

Define the current practice as it relates to the problem. Think about current policies and procedures. Observe practices. What do you see?

How was the problem identified?

Check all the statements that apply.

What are the PICO components?

- P** (patient, population, problem) e.g., age, sex, setting, ethnicity, condition, disease, type of patient, or population
- I** (intervention) e.g., treatment, medication, education, diagnostic test, or best practice(s)
- C** (comparison with other interventions or current practice for foreground questions; is not applicable for background questions, which identify best practice)
- O** (outcomes) stated in measurable terms; may be a structure, a process, or an outcome

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measure based on the desired change (e.g., decrease in falls, decrease in length of stay, increase in patient satisfaction)

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Initial EBP question

A starting question (usually a background question) that is often refined and adjusted as the team searches through the literature:

- *Background* questions are broad and are used when the team has little knowledge, experience, or expertise in the area of interest. Background questions are often used to identify best practices.
- *Foreground* questions are focused, with specific comparisons of two or more ideas or interventions. Foreground questions provide specific bodies of evidence related to the EBP question. Foreground questions often flow from an initial background question and literature review.

List possible search terms, databases to search, and search strategies.

Using PICO components and the initial EBP question, list search terms. Terms can be added or adjusted throughout the evidence search. Document the search terms, search strategy, and databases queried in sufficient detail for replication.

What evidence must be gathered?

Check the types of evidence the team will gather based on the PICO and initial EBP question.

Revised EBP question

Often, the question that you start with may not be the final EBP question. Background questions can be refined or changed to a foreground question based on the evidence review. Foreground questions are focused questions that include specific comparisons and produce a narrower range of evidence.

Measurement plan

Measures can be added or changed as the review of the literature is completed and the translation planning begins:

- A *measure* is an amount or a degree of something, such as number of falls with injury. Each measure must be converted to a metric, which is calculated before and after implementing the change.
- Metrics let you know whether the change was successful. They have a numerator and a denominator and are typically expressed as rates or percent. For example, a metric for the measure falls-with-injury would be the number of falls with injury (numerator) divided by 1,000 patient days (denominator). Other examples of metrics include the number of direct care RNs (numerator) on a unit divided by the total number of direct care staff (denominator); the number of medication errors divided by 1,000 orders.