

PEDIATRIC PAIN MANAGEMENT

VIDEO FAMILY MEMBER INCLUDED

Estimated Time: 30 minutes • Debriefing Time: 30 minutes



Scan to Begin



Patient Name: Paula C. Adams

SCENARIO OVERVIEW

Paula C. Adams is a 7-year-old female who presented to the Emergency Department with severe abdominal pain that worsened over the last 24 hours. Paula's mother stated they were in a car accident yesterday in which she was rear-ended by another car. Paula was seat-belted in the back seat. She stated Paula had no complaints immediately following the accident, but was "achy" last night so she gave her some Tylenol. This morning the pain was worse. She is allergic to Amoxicillin, but has no other health issues. The student(s) will choose between Tylenol and Morphine to treat Paula's pain. Therapeutic communication with Paula and her mom is key to this scenario.

This is Level 1B: This simulation includes **QR Code: Mom**. These are videos of the patient's mom that can be used when an actor is not available.

LEARNING OBJECTIVES

1. Obtain vital signs and interpret for a pediatric patient
2. Perform a focused health history on the patient's chief complaint
3. Perform a focused pediatric pain assessment
4. Perform a focused abdominal assessment
5. Recognize and respond to abnormal findings
6. Safely administer enteral medications
7. Document accurately
8. Demonstrate appropriate therapeutic communication

CURRICULUM MAPPING

WTCS NURSING PROGRAM OUTCOMES

- Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts
- Provide patient centered care by utilizing the nursing process across diverse populations and health care settings
- Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance and participation in system effectiveness
- Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making
- Lead the multidisciplinary health care team to provide effective patient care throughout the lifespan
- Use information and technology to communicate, manage data, mitigate error, and support decision-making

NURSING FUNDAMENTALS

- Use appropriate communication techniques
- Use the nursing process

- Adapt nursing practice to meet the needs of diverse patients in a variety of settings
- Maintain a safe, effective care environment

BASIC SKILLS

- Perform a general survey assessment
- Measure blood pressure and other vital signs
- Perform a basic abdominal assessment
- Perform mathematical calculations related to clinical practice
- Administer medications via the enteral route

PHARMACOLOGY

- Apply components of the nursing process to the administration of analgesic and musculoskeletal system drugs

SIMULATION LEARNING ENVIRONMENT & SET-UP

ENVIRONMENT

Inside room: Patient lying in bed, a mannequin/picture to simulate the patient's mom in a chair at the patient's bedside with **QR Code: Mom** attached

Inside or outside room: Hand sanitizer and/or sink

Outside room: Computer or form(s) for documentation

PATIENT PROFILE

Name: Paula C. Adams

Weight: 25 kg (55 lbs)

DOB: 06/17/20XX

Code Status: Full code

Age: 7

Admitting Diagnosis: Abdominal pain following a car crash (V43.62XA)

MR#: 0104

Medical History: None

Gender: Female

Allergies: Amoxicillin (hives)

Height: 123 cm (48 inches)

EQUIPMENT/SUPPLIES/SETTINGS

Patient

- Hospital gown
- No moulage
- ID band present with QR code
- Allergy band with Amoxicillin on it

Monitor Settings

- No monitor
- Simulator vitals: BP 112/74, P 122, RR 20, O2 97% on RA, T 37.1C (98.8), Pain: 6/10

Supplies

- General

- Phone
- Pediatric pain scale (**QR Code: Pain Scale** is a pediatric FACES pain scale that is available if your facility does not have one.)
- Optional:
 - Teddy bear/doll
 - iPhone/iPad or something to play music, watch movies or play videos
- Medications (realistic labels are available by scanning the QR code)
 - Acetaminophen Suppository – 325 mg
 - Morphine Suppository – 10 mg

QR CODES

<p>START</p> 	<p>PATIENT</p> 	<p>REPORT</p> 	<p>PATIENT ID</p> 
<p>ABDOMEN</p> 	<p>PAIN SCALE</p> 	<p>ACETAMINOPHEN SUPPOSITORY</p> 	<p>MORPHINE SUPPOSITORY</p> 
<p>MOM</p> 			

TEACHING PLAN

PREBRIEF

The facilitator should lead this portion of the simulation. The following steps will guide you through Prebrief.

- Scan the **QR Code: “Scan to Begin”** while students are in Prebrief.
- “Meet Your Patient” (on iPad) and explain how the iPad works in the simulated learning environment including:
 - Explain how to use the iPad scanner and QR codes. Remind students that there are multiple QR codes in the simulation, but they should only scan them if they think it will provide data necessary for their assessment and evaluation of the patient.
 - For some scenarios, it may be helpful to tell students where the QR Code are located. For others, you may want students to “find” the QR Codes during their assessments. This is your choice.
 - As the facilitator, you should be aware that throughout the simulation some QR codes are necessary to the programming of the iPad content. Directions for which QR codes are required (to be scanned) in each state are listed under each state of the documentation below. The QR codes are also in **BOLD** type.
 - Level Up tab – This tab “tells” the content in the iPad to change to what is needed for the next state of a simulation. It is used a few times in this scenario after the provider is notified to display new orders (those just given over the phone) and lab results, etc...
 - Medication QR Codes – The student(s) must scan **QR Code: Patient ID** prior to scanning any medication. That scan is valid for 2 minutes and then it “times out.” The student(s) will need to scan **QR Code: Patient ID** again to give more medications.
 - MAR Hyperlinks – On the MAR all medications are underlined and hyperlinked to DailyMed, which is a medication reference housed by the National Library of Medicine. Students can click on these links during the simulation for up-to-date medication content, labels, and package insert information.

- Discuss the simulation “Learning Objective(s)” (on iPad) as well as any other Prebrief materials
- Get “Report” on iPad
 - Possible Facilitator Questions
 - What is clinically significant in this shift-to-shift report?
 - What focused assessments to you plan to complete based on report?
 - How will you modify your approach for a pediatric patient?
 - What are your priorities for this patient?
- View “Patient” video on iPad
 - Possible Facilitator Questions:
 - What verbal and behavioral cues do you notice regarding Paula’s pain and coping status?
- Advance to the “Patient Profile” screen (on iPad). This will act as a simulated patient chart.
- Students can view the tabbed content on the iPad (see below) prior to entering the patient’s room and throughout the simulation as needed.
 - You should give student some time (5 minutes) to review this content now, prior to entering the patient’s room.

H&P

Name: Paula C. Adams

MR#: 0104

DOB: 06/17/20XX

Date of Admission: Today

CHIEF COMPLAINT: Abdominal pain

HISTORY OF PRESENT ILLNESS: Car accident victim.

PAST MEDICAL/SURGICAL HISTORY: Gestational age at birth 40 3/7 weeks following a normal spontaneous delivery. Normal developmental progress. Up to date immunizations.

MEDICATIONS: None

ALLERGIES: Amoxicillin (hives)

SOCIAL HISTORY: Normal

FAMILY MEDICAL HISTORY: Non-contributory

REVIEW OF SYSTEMS:

Obtained from patient and patient's mother

GENERAL: 48 inches tall. 55 lbs (25 kg). Current state of health described as good. Patient states she feels "achy" everywhere but mostly in her abdomen.

INTEGUMENT: Denies itching, dryness, rashes, pigmentation changes. Describes some minimal chest and abdominal bruising where the seat belt was located.

HEAD: Denies injury, change in level of consciousness, or headaches.

EYES: Denies change in vision. Does not wear glasses.

EARS: Denies hearing loss, tinnitus, vertigo, or ear pain.

NOSE: Denies nasal discharge, or epistaxis.

THROAT: Denies bleeding gums, mouth pain, oral cavity sores or growths, difficulty swallowing, sore throat, or hoarseness.

ENDOCRINE: Normal growth.

RESPIRATORY: Denies hemoptysis, productive cough, shortness of breath or wheezing. Denies history of pulmonary disease or disorders.

CARDIOVASCULAR: Denies chest pain or pressure. Patient states the bruised area hurts when touched. Denies history of cardiac disease or disorders.

GASTROINTESTINAL: Denies nausea or vomiting. Denies changes in stools. Patient complains of abdominal pain which is worse when touched.

GENTOURINARY: Denies changes in urinary habits. Denies hematuria or pain during urination.

MUSCULOSKELETAL: Normal ROM, Denies pain in back, hips legs, or arms.

HEMATOPOIETIC: Denies easy bruising or bleeding. Denies anemia or prolonged bleeding. Denies history of previous transfusions or blood dyscrasias.

NERVOUS SYSTEM: Denies dizziness, syncope, vertigo, or weakness.

PHYSICAL EXAMINATION:

VITALS: HR 110, RR 22, BP 108/70, Temp 37, O2 99% on RA, Pain 6/10

HEENT: Normal

NEURO: Alert and oriented x3, PERRLA

CARDIAC: Normal. Chest has some minimal bruising where the shoulder part of a seat belt would be. Somewhat tender when palpated.

RESPIRATORY: Clear

GI: Abdomen soft. Bruised and tender when palpated. Bruising pattern is similar to a “seat belt sign.” FAST abdominal scan is grossly negative for fluid or free air. Normal bowel sounds. LBM 1 day ago.

GU: Last void this morning.

EXTREMITIES: Motor and sensation intact.

ASSESSMENT:


1. Car accident approximately 24 hours ago
2. Moderate abdominal and minimal chest bruising evident – seat belt sign.
3. Abdominal pain

RECOMMENDATIONS/PLAN:

1. Tylenol and Morphine PRN
2. NPO
3. VS every hour
4. CT Scan of Abdomen STAT

Electronically Signed – Dr. Paulson


ORDERS


Orders

Date	Time	Order
Today	now	NPO
		Vitals Q1 hour
		Bedside ultrasound using FAST protocol
		CT Scan of Abdomen STAT
		Tylenol suppository - 325 mg Q4-6 prn for pain
		Morphine Sulfate suppository - 10 mg Q3-4 prn for pain
		Call with changes in vitals, increased pain, increased abdominal girth, and/or increased abdominal rigidity ----- Dr. Paulson

[Continue >](#)

MAR


MAR

Patient Name: Paula C. Adams
DOB:06/17/20XX Weight(kg):25
MR#: 0104
Provider: Dr. Paulson
Allergies: Amoxicillin (hives)

Order	Sch. Time	Dose
<u>Acetaminophen</u> Suppository 325 mg Q4-6 prn		
<u>Morphine Sulfate</u> Suppository 10 mg Q3-4 prn		

[Continue >](#)

DAILY RECORD

Vitals**DATE: Today****30 minutes ago****BP: 110/76****P: 102****RR: 20**

T: 37.1°C

O2: 97% on RA

Pain: 6/10

VITALS

The iPad shows the “enterable” vitals screen.

PROGRESS NOTES

No reports available.

LABS-DIAGNOSTICS

No reports available.

IMAGING

Abdominal CT Scan with contrast pending.

LEVEL 1

The iPad reads, “The iPad is set to Level 1.”

SCANNER

Use this to scan available QR Codes.

EXIT

The iPad reads, “Are you sure you want to exit? All data will be lost.”

- If “No” is selected, the iPad will return to the tabbed content.
- If “Yes” is selected, the iPad will let the student(s) exit and prompt them to complete an embedded 3-5 minute survey.

STATE 1

PATIENT ASSESSMENT

- Patient Overview
 - Patient is whiny and mildly complaining of abdominal pain.
- Expected Student Behaviors
 - Perform appropriate hand hygiene
 - Introduce themselves
 - Verify the patient (can scan **QR Code: Patient ID**)
 - Perform a focused pain assessment (Scan **QR Code: Pain Scale**)
 - This will display the pediatric FACES pain scale.
 - Accurately obtain vitals
 - These are tied to the iPad programming and must be entered on the iPad correctly in order for the iPad content to advance to Level 2.
 - BP 112/74 (within 4 either way)
 - P 122 (within 3 either way)
 - RR 20 (within 2 either way)
 - O2 97% (no limits)
 - T 37.1C (no limits)
 - Pain: 6/10
 - Perform a focused abdominal assessment: abdominal “seat belt” bruising (Scan **QR Code: Abdomen**)
 - Recognize and respond to abnormal findings
 - Communicate therapeutically to the patient and her mom. Scan **QR Code: Mom** to view videos of mother (see details below).
- Technician Prompts
 - Patient is very whiny, even lightly crying occasionally because her “belly” hurts.

- Patient responses can include:
 - “My belly hurts.”
 - “Why can’t I go home?”
 - “I don’t want my mom to leave me here!”
- Possible Facilitator Questions
 - Analyze the vital signs: are they within normal limits for her age?
 - Normal vitals for an 7-year-old female: HR 70-110; RR 16-22; BP 102-115/60-74
 - How will you assess Paula’s pain?
 - Explain how to use the FACES scale.
 - Why is it important to use a valid, reliable, consistent tool in pain assessment?
 - What nonverbal indicators of pain do you notice?
 - What behavioral indicators of pain do you notice?
 - What questions will you ask to assess pain experience history from the parent?
 - “What word does your child use to describe pain?”
 - “Does your child tell you or others when they are in pain?”
 - “How does your child usually react to pain?”
 - “What usually works best to take away your child’s pain?”
 - Analyze the findings from your physical assessment: do you have any concerns?
 - How often should the patient be reassessed/monitored? Why?
- Tabbed iPad Prompts & Content
 - **QR Code: Mom**
 - The first scan will show a video of the mom explaining what happened in the car accident.
 - The second scan is a video of the mom stating, “I don’t understand your questions. I think I gave you everything you need.”

- This video repeats each time the mom is scanned in Level 1.
- Facilitator Note: If students ask detailed questions about the Paula's pain experience history, you can give them the answers below (perhaps even provide a printed version) stating that Paula's mom answered the questions earlier:
 - "What word does your child use to describe pain?"
 - Answer: "Owie."
 - "Does your child tell you or others when they are in pain?"
 - Answer: "Yes."
 - "How does your child usually react to pain?"
 - Answer: "She is "very dramatic" and gets really whiny."
 - "What usually works best to take away your child's pain?"
 - Answer: "Tylenol."
 - "Has Paula ever had a rectal suppository?"
 - Answer: "Never."
- If the medications are scanned in this state, the student(s) will see a message on the iPad that reads, "Medication Unavailable. Complete patient assessment prior to medication administration."
- After the student(s) enter vitals into the iPad correctly and scan **QR Code: Abdomen**, the Level 1 tab will automatically change to a Level 2 tab (students are not prompted about this).

LEVEL 1 / 2

- When the Level 1 tab is tapped, the iPad reads, "The iPad is set to Level 1."
- After the student(s) enter vitals into the iPad correctly and scan **QR Code: Abdomen**, the Level 1 tab will automatically change to a Level 2 tab (students are not prompted about this).
- When the Level 2 tab is tapped, the iPad reads, "The iPad is set to Level 2."


STATE 2

MEDICATION ADMINISTRATION

- Patient Overview
 - Paula begins to really complain about her “belly” pain. She rates her pain at an 8/10 or equivalent on a pediatric FACES pain scale. She does not like the idea of having medication “put in her butt.” This makes her anxious, but she will relax a little and allow students to proceed after proper therapeutic communication. The Abdominal CT Scan results have returned under the Imaging tab (students are not prompted about this but should know to watch for the results.)
- Expected Student Behaviors
 - Appropriately assess pain (Scan **QR Code: Pain Scale**)
 - Review Abdominal CT Scan under the Imaging tab prior to medication administration.
 - After appropriately assessing pain and viewing the CT Scan results, decide whether to administer:
 - Acetaminophen Suppository (Scan **QR Code: Acetaminophen Suppository**) or Morphine Suppository (Scan **QR Code: Morphine Suppository**)
 - Student(s) must scan **QR Code: Patient ID** prior to medication administration.
 - If not scanned, the iPad will read, “ERROR: No patient information available.”
 - Communicate therapeutically to the patient and her mom
 - Document appropriately
- Technician Prompts
 - The patient is half whining and half crying. Seems slightly short of breath because of the pain.
 - Patient responses can include:
 - “It hurts really bad!”
 - “What do I need that for? I don’t want pills in my butt!”

- “Can’t I just take some syrup? I will even try to swallow pills if you don’t put that medicine in my butt.”
- “I’m not sure about that.”
- Possible Facilitator Questions
 - Why should oral medications not be administered before the CT scan results are back?
 - Will you administer the suppository medications as ordered? Why or why not?
 - Facilitator note: at this point you can discuss how other medications are safely to be used before CT results are back such as Fentanyl intranasal; Morphine IV; and Toradol IV. Since these were not included on the orders, it would require calling the health care provider for different pain medications.
 - What non-pharmacological interventions can be implemented to provide comfort to a school-aged child such as Paula? (Answer: repositioning; “splinting” the injured area; parental touch; breathing techniques; distractions like video games, music, watching a movie; using a favorite doll or toy).
 - How will you address Paula’s mom’s concerns?
- Tabbed iPad Prompts & Content
 - **QR Code: Mom**
 - Each time the mom is scanned in this level, the iPad plays a video of the mom stating, “Aren’t you going to do anything for her?”

IMAGING

Imaging		
		
Patient Name	DOB	MR#
<i>Paula C. Adams</i>	<i>6/17/20XX</i>	<i>0104</i>
Allergies	Height (cm)	Admission Weight (kg)
<i>Amoxicillin</i>	<i>123</i>	<i>25</i>
Imaging Report		
<p>DESCRIPTION: CT scan of the abdomen with contrast to evaluate abdominal pain following blunt trauma.</p> <p>EXAM: CT scan of the abdomen with contrast.</p> <p>REASON FOR EXAM: Abdominal pain.</p> <p>COMPARISON EXAM: None.</p> <p>TECHNIQUE: Multiple axial contrast-enhanced images of the abdomen were obtained.</p> <p>DISCUSSION: The liver, gallbladder, pancreas, spleen, adrenal glands, and kidneys are within normal limits. There is no bowel wall thickening. No evidence of small or large bowel obstruction. No pockets of focal fluid or free air noted.</p> <p>IMPRESSION: Findings are grossly normal. Results discussed with Dr. Paulson.</p>		

LEVEL 2

The Level 2 tab automatically disappears after either **QR Code: Acetaminophen Suppository** or **QR Code: Morphine Suppository** is scanned.

EXIT

After either **QR Code: Acetaminophen Suppository** or **QR Code: Morphine Suppository** is scanned, the exit tab changes and the iPad reads, “Scenario objectives have been met. Are you sure you want to exit the game?”

- If “No” is selected, the iPad will return to the tabbed content.
- If “Yes” is selected, the iPad will let the student(s) exit and prompt them to complete an embedded 3-5 minute survey.

DEBRIEF

Nothing needed from the iPad.

QUESTIONS

1. How did you feel this scenario went?
2. What were the main issues you had to deal with when caring for Paula?
3. Review understanding of learning objective: obtain vital signs and interpret for a pediatric patient.
 - a. What vital signs are within normal range for an 7-year-old female?
 - b. Interpret Paula's vital signs: were they in range? What could be affecting Paula's vital signs at this time?
4. Review understanding of learning objectives: Perform a focused health history on the patient's chief complaint and perform a focused pediatric pain assessment
 - a. How does assessing pain differ from the pediatric population to the adult population?
 - b. What pieces of data were significant in Paula's health history?
5. Review understanding of learning objective: perform a focused abdominal assessment.
 - a. What concerns did you find during your initial assessment and evaluation?
6. Review understanding of learning objective: recognize and respond to abnormal findings.
 - a. What abnormal findings did you find in the vital signs and/or physical assessment? How did you respond to these findings?
7. Review understanding of learning objective: safely administer enteral medications.
 - a. Did you have any concerns about administering the medications that were ordered at this time? Why or why not?
 - b. If you administered medication, which medication did you choose? Why?
 - c. Describe the patient education you provided about the medication to Paula and/or her parent. How did your explanation differ from the pediatric population to the adult population?
 - d. Would you change anything about how you administered the medication?

8. Review understanding of learning objective: document accurately.
 - a. What is important to document about your focused assessments and interventions?
9. Review understanding of learning objective: demonstrate appropriate therapeutic communication
 - a. What “cues” did you notice that indicated therapeutic communication was needed with Paula? Her mom?
 - b. Describe any differences you used in how you communicated with Paula verses how you communicated with her mom.
 - c. Were your communication techniques effective?
 - d. If you could “do over,” how would you change your therapeutic communication with Paula and/or her mom?
10. Tie the scenario back to the nursing process in a large group discussion. Concept mapping can be used to facilitate discussion.
 - a. List 3 priority nursing problems you identified for Paula.
 - b. Create a patient centered goal for each nursing problem you identified.
 - c. Discuss focused assessments for each nursing problem.
 - d. Discuss nursing interventions for each nursing diagnosis.
 - e. Re-evaluate the simulation in terms of the nursing process; what was actually accomplished? What could be improved in the future?
11. Summary/Take away Points
 - a. “Today you cared for a pediatric patient who was experiencing abdominal pain after being in a motor vehicle accident. What is one thing you learned from participating in this scenario that you will take with you into your nursing practice?” (Each student must share something different from what the others’ share.)

Note: Debriefing technique is based on INASCL Standard for Debriefing and NLN Theory Based Debriefing by Dreifuerst.

SURVEY

Print this page and provide to students.

Students, please complete a brief (2-3 minute) survey regarding your experience with this ARISE simulation. There are two options:

1. Use **QR Code: Survey**

- a. Note: You will need to download a QR Code reader/scanner onto your own device (smartphone or tablet). There are multiple free scanner apps available for both Android and Apple devices from the app store.
- b. This QR Code will not work in the ARIS app.



2. Copy and paste the following survey link into your browser.

- a. https://ircvtc.co1.qualtrics.com/SE/?SID=SV_6Mwfv98ShBfRnBX

CREDITS

Medication information from National Library of Medicine: Daily Med at
<http://dailymed.nlm.nih.gov/dailymed/>

Pictures from Shutterstock.com

Wong-Baker FACES pain scale used with permission from the Wong-Baker FACES Foundation.

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