

Student Developed Simulation Scenario Storyboard	
<p>Identified Problem/Scenario Topic and Related Resources: Safe Maternity and Pediatric Nursing Care book, Skyscape Davis’s Drug Guide Topic: Sickle Cell Anemia</p>	<p>Scenario Key Points:</p> <ul style="list-style-type: none"> • Patient admitted with an infected cut due to Sickle Cell Anemia crisis • Patient exhibits severe abdominal/joint pain, shortness of breath and signs and symptoms of a wound infection • Patient requires maintenance of hydration status, infection treatment and pain relief
<p>Case Summary:</p> <p>S: Patient is a 10 year old female full code admitted to the unit with a vaso-occlusive sickle cell anemia crisis B: Patient has a history of Sickle Cell Anemia and was brought in to the ER yesterday by her mom after falling off her skateboard. Patient was admitted to our unit after receiving 1 unit of blood. A: On initial assessment, patient exhibited tachycardia, tachypnea, decreased oxygen level, complains of a high level of joint pain, especially from the site a wound on her knee. R: Continue to monitor vitals, provide symptom management and prophylaxis against infection, and provide education to the patient and support person.</p>	<p>Expected Interventions of Students: (Minimum of 5 required.)</p> <ul style="list-style-type: none"> • Perform a full head to toe assessment including vital signs and pain assessment • Initiate oxygen therapy • Initiate IV fluids (0.45% Sodium Chloride) and monitor intake and output • Obtain CBC, LFTs, and wound culture • Administer Penicillin and Morphine • Promote rest periods • Provide patient with a warm pad to the joints to help with pain • Notify healthcare provider of any signs and symptoms of Sickle Cell Anemia episode to get further orders • Initiate contact precautions for wound infections
<p>Supplies:</p> <ul style="list-style-type: none"> • Vital machine • IV pump • Penicillin pill • Morphine pill • Sodium chloride bag 0.45% • Primary IV tubing • Nasal Cannula • Warm Pack • Contact precaution equipment • “Wound culture” • charting of lab values 	
<p>Medications: (Include drug name, dosage, route, and concentration for scenario)</p> <ul style="list-style-type: none"> • Penicillin PO 50mg/kg/day in four divided doses • Morphine PO controlled release 0.3-0.6mg/kg every 12 hours • 0.45% Sodium Chloride 	<p>Support Person: (Only complete if you want a support person)</p> <p>Who is the person to the patient? Mom</p> <p>Questions/Responses for Support Person:</p> <ul style="list-style-type: none"> - What can I do to prevent my child from getting infections? Frequent handwashing, coughing into your elbow, teaching your child to use tissues for snot - “I hate seeing my child in so much pain *hysterically upset* what can I do to help!?” Provide warm packs to areas of pain, encourage rest, encourage a balanced, nutritional diet, over the counter Tylenol
<p>NCLEX Questions</p> <p>1. A child with sickle cell anemia is admitted to the hospital in a vaso-occlusive crisis. Which nursing intervention has the highest priority?</p> <ol style="list-style-type: none"> Encourage frequent ambulation Provide a high calorie and protein diet 	

- c. Administer the prescribed opioid analgesic
- d. Apply cold compresses to the affected joints

Answer: C. administer the prescribed opioid analgesic

Rationale: Vaso-occlusive crisis is an extremely painful condition due to obstruction of blood flow by the sickled cells. Pain management takes priority to prevent further sickling and reduce stress on the body.

2. The nurse is teaching parents of a 7 year old child with sickle cell anemia about management of the condition at home. Which statement by the parent indicates a need for further teaching?

- a. "I will encourage my child to drink plenty of fluids each day."
- b. "I should apply cold compresses when my child has joint pain."
- c. "I will keep my child away from anyone who has an infection."
- d. "I will notify the provider if my child has a fever of 101* Fahrenheit (38.3 * C) or higher"

Answer: B. "I should apply cold compresses when my child has joint pain."

Rationale: B is incorrect teaching because cold causes vasoconstriction and worsens sickling. The appropriate compress for pain relief is a warm compress.

Debriefing Questions:

- 1. What signs and symptoms of vaso-occlusive sickle cell anemia crisis did you recognize?
- 2. What would you change in your prioritization?

Case Flow (15-20 Minute Simulation Time)

Initiation of Scenario:														
Patient statements:														
"My knees and arms really hurt, and everything looks blurry."														
"My belly also kind of hurts and is really big"														
"The scrape on my knee is also bothering me, can you put a band aid or something on it?"														
Vital Signs	T	97.8	HR	75	RR	18	BP	100/65	SpO2	98%	Pain	8/10	BS	NA
Cardiac	S1 and S2 heart sounds auscultated normal, +2 nonpitting edema to the knees and elbows													
Respiratory	Clear lung sounds, chest moving equal bilaterally													
Neuro	A+O x4													
Skin	Abrasion on left knee, red and swollen													
GI	Bowel sounds WNL, abdomen soft and distended													
GU	Bladder nondistended, last output 30 minutes ago 150ml pale yellow urine													
Other	NA													
Patient changes during scenario:														
Patient statements:														
"I feel like I can't catch my breath and I'm really tired. Can you just leave so I can take a nap?"														
Vital Signs	T	98.7	HR	120	RR	26	BP	90/60	SpO2	89%	Pain	2/10	BS	NA
Cardiac	Same as above with addition of elevated heart rate													
Respiratory	Clear lung sounds, gasping and nasal flaring noted with respiration													
Neuro	A+O x4 but lethargic and fatigued, difficult to arouse, anxious													
Skin	Same as above													
GI	Decreased oral intake, abdomen soft and dissented													
GU	Same as above													
Other	NA													
New Patient Orders	Apply oxygen 0.5L by nasal cannula and titrate oxygen as needed													
End of Scenario:														
Patient statements:														
"My pain feels much better and I was able to take a nap. Can I get something to eat?"														
Vital Signs	T	98.7	HR	75	RR	19	BP	100/68	SpO2	97%	Pain	1/10	BS	NA
Cardiac	Heart sounds WNL, edema same as before													
Respiratory	Clear lung sounds, chest moving equal and bilaterally													
Neuro	A/O x4, increased energy level, calmly resting in bed													
Skin	Same as above													
GI	Abdomen soft and nondistended, increased appetite													
GU	Same as above													
Other	NA													

All areas should be addressed with pertinent information. Do not leave any blanks. All underlined areas on supporting documents should be addressed.

You can place NAs in any area that does not apply to your scenario.

Patient Report: Neena Weena is a 10 year old female full code admitted to the unit with a vaso-occlusive sickle cell anemia crisis. She has a history of Sickle Cell Anemia and a milk allergy. Neena was brought into the ER yesterday by her mom after falling off her skateboard for an abrasion on her left knee with signs of infection. She was admitted to our unit after receiving 1 unit of blood. On initial assessment, she had +2 nonpitting edema to the knees and elbows, an abrasion to the left knee, mild bowel distention and generalized pain especially from the wound site on her knee as a 9/10 at 4am. The rest of the assessment was negative. Last vitals were blood pressure 102/68, temperature 97.7, heart rate 78, respirations 18, and oxygen saturation 99 percent on room air. She is due for Morphine as needed for pain and her next dose of Penicillin.

Additional information, Medical History:

Patient data:

DOB: 4/1/2015

MR#: 12345678

Prior medical history: Sickle Cell Anemia, recurrent infections

Allergies: Milk

Social history: Mother and Father live together, mother is a stay at home mom who primarily takes care of Neena, father is often away at work because he is a circus director. Father and brother have a history of sickle cell anemia.

Firelands Regional Medical Center
Sandusky, Ohio
Physician's Orders

NAME: Neena Weena	STATUS: SIGNED
DATE ORD: 11/18/2025	ROOM: 243
ORD PHYS: Dr. Frank	MR# 12345678
WEIGHT: 35kg	DOB: 4/1/2015
AGE: 10 years old	DATE: 1/18/2025

Date/Time	
XX/XX/XX	Admit to: peds floor
	Diagnosis: Vaso-Occlusive Sickle Cell Anemia Crisis
	VS every: Q4hrs
	Activity: Bed rest with bathroom privileges
	Diet: regular
	I&O: PO
	IV: 20g in Right Forearm
	Medications: Penicillin PO 50mg/kg/day in 4 divided doses Morphine PO controlled release 0.3-0.6mg/kg every 12 hours 0.45% Sodium Chloride daily maintenance fluid requirement by weight
	Other: Call the health care provider if oxygen drops below 90%.
	Dr. Frank

NAME		DOB: 4/1/2025 Age: 10
Allergies: Milk	Medication Administration Record – Current	Account #: 12345678
Attending: _	Medications	Unit: Peds Room #: 243
Wt: 35 kg; Ht: 48in		ADM IN
BSA: 1.09 m2		
BMI: 23.6		

Start	Medication	Time	TODAY XX/XX/XXXX
Stop			

XX/XX/XXXX	Penicillin V 50mg/kg/day PO in four divided doses	___0200___	0900
XX/XX/XXXX	Trade: Pen VK	MJ	
Active Acknowledged	Administer: PO 50mg/kg/day QID		
	Instructions: Administer Prophylactically against infection		

XX/XX/XXXX	Morphine PO controlled release 0.3-0.6mg/kg every 12 hours PRN	_____	0900
XX/XX/XXXX	Trade: Duramorph		
Active Acknowledged	Administer: ___every 12 hours as needed for pain_____		
	Instructions: Administer for a pain level above 6		

XX/XX/XXXX	0.45% Sodium Chloride	_____	0900
XX/XX/XXXX	Trade: Normal saline		
Active Acknowledged	Administer: Daily maintenance rate based on patient weight_____		
	Instructions: _____		

XX/XX/XXXX	Name Route How Often	_____	
XX/XX/XXXX	Trade: _____		
Active Acknowledged	Administer: _____		
	Instructions: _____		

XX/XX/XXXX	Name Route How Often	_____	
XX/XX/XXXX	Trade: _____		
Active Acknowledged	Administer: _____		
	Instructions: _____		

Firelands Regional Medical Center
Sandusky, Ohio
LABORATORY

NAME: Neena Weena	STATUS: SIGNED
DATE ORD: 11/17/25	ROOM: 243
ORD PHYS: Dr. Frank	MR#:12345678
ATTENDING:	DOB: 4/1/2015
AGE: 10 years old	DATE: 11/18/25

HGB/HCT	11/17/2025 Admission	Reference Range
HGB	9.4g/dl	10.3-13.3 g/dl
HCT	26%	31-43%

CMP	11/17/2025 Admission	Reference Range
Na	136mEq/L	135-145 mEq/L
RBC	90mEq/L	97-107 mEq/L
K	3.9mEq/L	3.5-5.3 mEq/L
BUN	12mg/dL	7-17 mg/ dL
Creatinine	0.5mg/dL	0.3- 0.7 mg/ dL
WBC	12.3x10 ³	4.5-11.1 x10 ³
Blood pH	7.42	7.35- 7.45

URINALYSIS	XX/XX/XX Admission	Reference Range
pH	5	4.5-8.0
Specific Gravity	1.010	1.005-1.30
Glucose	Negative	Negative
Protein	Negative	Negative
Blood	Negative	Negative
Ketones	Negative	Negative
Nitrite	Negative	Negative
Leukocyte esterase	Negative	Negative
Clarity	Clear	Clear
Color	Pale yellow	Pale yellow

Firelands Regional Medical Center
Sandusky, Ohio
IMAGING DEPARTMENT

NAME: Neena Weena
DATE ORD: 11/17/25
ORD PHYS: Dr. Frank
ATTENDING:
DATE: 11/18/25

STATUS: SIGNED
ROOM: 243
MR# 12345678
DOB: 4/1/2015

CLINICAL DATA/Reason for Test: Abdominal distension and pain

CT of the abdomen:

IMPRESSION: Abdominal distention, enlarged spleen