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Postoperative: Transfusion Reaction
Instructor Information

Patient Name: Garcia, Manuel
Simulation Developer(s): Melissa Brickner, Bridgett Everett, Debra A. Mosley, Beverly Snyder-Desalles, and Judy Young

Scenario Purpose:

- Assist nursing staff with managing the care for the patient experiencing a transfusion reaction

Learner(s):

- Registered Nurses (RN), Licensed Practical Nurses (LPN) (depending on facility protocols)
- Others as desired, depending on facility protocols
- Recommend no more than 6 learners (3 of which can be observers)

Time Requirements:

- Setup: 5 minutes
- Scenario: 25 minutes
- Debrief: 25 minutes
- Reset/Breakdown: 5 minutes

Confederates:

- Dr. Moore

Scenario Prologue:

- Seventy seven (77) year old male four (4) hours status post colon resection for removal of a sigmoid colon mass. He underwent a colon resection for a sigmoid mass removal 4 hours ago by Dr. Moore. He tolerated the procedure well. Vital signs are stable and he is on 2 liters of oxygen via nasal cannula. He has a midline abdominal incision with a dry sterile dressing. Bowel sounds are hypoactive. He has an 18 gauge IV in his right antecubital with Lactated Ringers at 125 mL/hr. His Foley is draining clear yellow urine. His complete blood count came back with a hemoglobin of 6.8 mg/dL and hematocrit of 21 mg/dL. Dr. Moore ordered two (2) units of packed red blood cells (PRBC). Consent was on the chart and the first unit was started 20 minutes ago.

The simulation begins when the learner(s) enter the room

Patient Information:

- General: Sleepy but arousable
- Weight/Height: 75kg (165lbs) 172.7cm (68in)
- Vital Signs: BP 96/60, Temp 97.3, HR 100, RR 22, O2 Sat 95%
- Pain: 6/10 surgical incision
- Neurological: Sleepy but arousable
- Respiratory: Eupneic
- Cardiac: Unremarkable
- Gastrointestinal: Bowel sounds hypoactive. Left lower abdomen incision with dry, sterile dressing
- Genitourinary: Foley intact draining clear, yellow urine
- Musculoskeletal: Unremarkable
- Skin: Pale; right subclavian central line with blood infusing; left lower abdomen incision with dry, sterile dressing
- Past Medical History: Hypertension, hemorrhoids, constipation, and rectal bleeding
- Past Surgical History: Hemorrhoidectomy

Medications:

- Lisinopril 2.5 mg one time a day
- Docusate Sodium 100 mg one time a day

Allergies:

- Sulfa
Learning Objectives

Patient Name: Manuel Garcia

Simulation Developer(s): Melissa Brickner, Bridgett Everett, Debra A. Mosley, Beverly Snyder-Desalles, and Judy Young

Scenario Purpose:
- Assist nursing staff members with the initiating and managing Heparin infusion therapy

Scenario Purpose:
- Assist nursing staff with managing the care for the patient experiencing a suspected transfusion reaction

Pre-Session Activities:
- Complete training on blood transfusion administration and potential adverse reactions
- Review policies and protocols on the management of care for the patient experiencing an adverse transfusion reaction

Potential Systems Explored:
- What facility specific policies or protocols exist for management of care for the patient experiencing an adverse transfusion reaction?
- What tools are available to prioritize the assessment and care of the patient experiencing an adverse transfusion reaction?
- What risk factors and complications are important to consider when caring for the patient experiencing an adverse transfusion reaction?
- What facility specific documentation is required when caring for the patient experiencing an adverse transfusion reaction?

Scenario Specific Learning Objectives (Knowledge, Skills, and Attitudes = K/S/A):

**The learner will apply ICARE principles throughout the scenario**

1. Learning Objective 1: Complete a prioritized focused assessment on the patient experiencing a transfusion reaction
   a. **S-** Perform hand hygiene
   b. **S-** Put on PPE
   c. **S-** Assess surgical site and abdomen
   d. **S-** Verify blood product with patient information
   e. **K-** Recognize improvement in the patient’s status

Learning Objective 2: Implement appropriate measures per facility specific protocol to manage care for the patient experiencing a transfusion reaction
   a. **K-** Correlates changes in vital signs, back pain, and hematuria as a possible hemolytic reaction
   b. **S-** Follows suspected transfusion reaction protocol
   c. **S-** Disconnects blood and hang normal saline with new tubing at 30 mL per hour
   d. **S-** Packages blood/tubing with required documents and send to lab/blood bank per protocol
   e. **S-** Obtains/request lab specimens per protocol

Learning Objective 3: Communicate effectively when managing the care of the patient experiencing a transfusion reaction
Simulations for Clinical Excellence in Nursing Services

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a. S- Initiates/requests call to healthcare provider immediately (Blood bank/lab, manager per protocol)
   A- Demonstrates a sense of urgency with a controlled demeanor
b. S- Provides patient education regarding adverse transfusion reaction care at the appropriate time and at a level the patient can understand
c. S- Performs ISBAR communication
d. S- Completes required documentation

Debriefing Overview:
- Ask the learner(s) how they feel after the scenario
- Have the learner(s) provide a summary of the scenario from a healthcare provider/clinical reasoning point of view
- Discuss the scenario and ask the learners what the main issues were from their perspective
- Ask what was managed well and why.
- Ask what they would want to change and why.
- For areas requiring direct feedback, provide relevant knowledge by stating “I noticed you [behavior]...” Suggest the behavior they might want to portray next time and provide a rationale. “Can you share with us?”
- Indicate closing of the debriefing but provide learners with an opportunity to voice one or two take-aways that will help them in future practice
- Lastly, ask for any outstanding issues before closing the debrief

Critical Actions/Debriefing Points:
1. Perform hand hygiene; put on PPE
2. Assess surgical site
3. Obtain vital signs
4. Verify blood product with patient information
5. Correlate changes in vital signs, back pain, and hematuria as a possible hemolytic reaction
6. Follow transfusion reaction protocol
7. Stop the transfusion
8. Initiate/request call to healthcare provider immediately (Blood bank/lab, manager per protocol)
9. Disconnect blood and hang normal saline with new tubing at 30 mL per hour
10. Package blood/tubing with required documents and send to lab/blood bank per protocol
11. Obtain/request lab specimens per protocol
12. Recognize improvement in the patient’s status
13. Perform ISBAR communication
14. Complete facility specific documentation
Simulation Set-Up

**Patient Name:** Manuel Garcia  
**Simulation Developer(s):** Melissa Brickner, Bridgett Everett, Debra A. Mosley, Beverly Snyder-Desalles, and Judy Young

**Room Set-up:**
- Set up like an inpatient room

**Patient Preparation:**
- The patient will be in the bed wearing a hospital gown
- Central line in right upper chest
- One unit of blood infusing via Y tubing with filter and normal saline (Use IV pump if facility policy) **See supplemental blood bank band and label**
- Patient’s skin is pale
- Oxygen is flowing and on patient at 2 L via nasal cannula
- Right lower quadrant surgical dressing
- Foley bag with clear yellow urine (clear, yellow urine and the will be blood tinged urine when the patient complains of back pain) **Simulated blood will need to be placed in bladder fluid reservoir**
- The leads to the monitor are on the patient
- Monitoring Device (3 Wave Form)
  - Sinus tachycardia
  - Vitals: Sp02: 95% BP: 96/60; Temp: 97.3; HR: 100; RR: 22

**Have the following equipment/supplies available:**
- Gloves
- Facility specific bag for post transfusion specimens
- Red top lab tube with blood **see labels**
- Purple top lab tube with blood **see labels**
- Urine in specimen container (blood-tinged) **see labels**
- Oxygen source (tank or outlet)
- Oxygen delivery equipment (bag valve mask (BVM), nasal cannula, non-rebreather)
- Telephone
- Bedside table

**Medications:**
- Heparin infusion
  - **Calibration will be required if using radiofrequency identification (RFID)**

Note: 5.8 Simpad software update is required to load scenarios  

Scenarios may be used with Laerdal or LLEAP software

**Scenario Supplements:**
- Confederate scripts
- Confederate and learner name tags
- Patient identification band for manikin
- Blood bank ID band for mannequin
**Initial State:**
- Mental Status: Alert and oriented
- SpO2: 95% on 2L O2 via nasal cannula
- BP: 96/60
- Temp: 97.3
- HR: 100
- RR: 22
- Urine: Clear yellow in Foley bag
- Pain level: 6/10 Abdominal incision
- Skin: Pale
- Abdomen: Tender; midline abdominal dressing intact; colostomy with bag intact

**Did not...**
- ...assess abdomen; colostomy; abdominal dressing; blood transfusion
- The patient states “The tape is pulling on my skin on my abdomen/chest.”

**Did not...**
- ...recognize temperature, back pain and hematuria as a hemolytic reaction
- The patient states “What’s wrong with my back and my urine? I had colon surgery!”

**Status Change**
- Mental Status: Anxious
- SpO2: 94% on 2L O2 via nasal cannula
- BP: 90/50
- Temp: 99.1
- HR: 130
- RR: 24
- Urine: Blood-tinged in Foley bag
- Pain level: 9/10 Flank and back pain
- Skin: Flushed

**Did not...**
- ...follow transfusion reaction protocol
- The patient’s vital signs will become increasingly anxious and the blood pressure will continue to drop

**Status Change**
- Mental Status: Calm
- SpO2: 94% on 2L O2 via nasal cannula
- BP: 108/72
- Temp: 98.1
- HR: 80
- RR: 20
- Urine: Clear yellow
- Pain level: 5/10 abdominal incision
- Skin: Pink

**Recognize improvement in the patient’s status**
- Dr. Moore arrives
- Performs ISBAR communication
- The patient states “I am feeling a lot better for some reason. What happened?”
- Completes facility specific transfusion reaction documentation

**Actions/Debriefing Points:**
- Perform hand hygiene; put on PPE
- Performs focused assessment (abdominal incision/dressing and colostomy)
- Obtains baseline vital signs and baseline assessment
- Correlates pallor with the low hemoglobin
- Verifies patient information and compares with blood product
- Patient states “I don’t feel right. My back is killing me! I feel like I am going to die!”
- Recognizes changes in vital signs, back pain, and hematuria as a possible hemolytic reaction
- Explains transfusion protocol and goals to the patient
- Follows transfusion reaction protocol
- Stops transfusion
- Obtains vital signs
- Initiates/requests call to healthcare provider immediately (Blood bank/lab, management per protocol)
- Disconnects blood and hangs normal saline at 30 mL per hour with new tubing
- Packages blood/tubing with required documents and sends to lab/blood bank per protocol
- Obtains/requests lab specimens per protocol
- **Status Change**
- Mental Status: Calm
- SpO2: 94% on 2L O2 via nasal cannula
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Postoperative: Transfusion Reaction

Seventy seven (77) year old male admitted with a bowel obstruction status post removal of a cancerous sigmoid colon mass and colostomy placement three (3) days ago. The patient has already received his first dose of chemotherapy via a right subclavian central line. His Foley is draining clear, yellow urine. Ostomy bag is in place with a small amount of brownish, mucoid drainage. Left lower abdomen abdominal dressing is intact. He complete blood count came back with a hemoglobin of 6.8 mg/dL and hematocrit of 21 mg/dL. Dr. Moore has ordered two (2) units of packed red blood cells (PRBC). Consent was on the chart and he first unit was started 15 minutes ago.

- Performs hand hygiene
- Puts on PPE
- Performs focused assessment (abdominal incision/dressing and colostomy)
- Obtains baseline vital signs and baseline assessment
- Correlates pallor with the low hemoglobin
- Verifies patient information and compares with blood product
- Patient states “I don’t feel right. My back is killing me! I feel like I am going to die!”
- Recognizes changes in vital signs, back pain, and hematuria as a possible hemolytic reaction
- Explains transfusion protocol and goals to the patient
- Follows transfusion reaction protocol
- Stops transfusion
- Obtains vital signs
- Initiates/requests call to healthcare provider immediately (Blood bank/lab, management per protocol)
- Disconnects blood and hangs normal saline at 30 mL per hour with new tubing
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- **Status Change**
- Mental Status: Calm
- SpO2: 94% on 2L O2 via nasal cannula
- BP: 108/72
- Temp: 98.1
- HR: 80
- RR: 20
- Urine: Clear yellow
- Pain level: 5/10 abdominal incision
- Skin: Pink

Critical Actions/Debriefing Points:
- Perform hand hygiene; put on PPE
- Perform focused assessment; obtains vital signs
- Correlate pallor with the low hemoglobin result
- Verifies patient information and compares with blood product
- Recognizes changes in vital signs, back pain, and hematuria as a possible hemolytic reaction
- Follows transfusion reaction protocol
- Stops the transfusion
- Obtains vital signs
- Initiates/requests call to healthcare provider immediately (Blood bank/lab, management per protocol)
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**Confederate**

Change in physiology

Red border incorrect action
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Confederate Scripts

Name Tags and Donor Blood Label

Patient Identification Band and Blood Bank Band

Transfusion Reaction Investigation Example

Post Transfusion Reaction Specimen Labels
Confederate Scripts

Manual Garcia (Patient)

Medical/Surgical History: Asthma, osteomyelitis of the right tibia positive for staphylococcus aureus. Tonsillectomy with adenoidectomy, s/p open reduction of a fracture of the right tibia related to motor vehicle accident

Medications: Multivitamin daily and Ipratropium bromide inhaler 2 puffs 3 times a day

Allergies: Sulfa

• If the learner does not assess the patient’s abdomen; colostomy; abdominal dressing; blood transfusion, the patient will state “The tape is pulling on my skin on my abdomen/chest.”

• Patient states “I don’t feel right. My back is killing me! I feel like I am going to die!”

• If the learner does not recognize temperature, back pain and hematuria as a hemolytic reaction
  The patient will state “What’s wrong with my back and my urine? I had colon surgery!”

_______________________________________________________________________________

Dr. Moore

• Dr. Moore will arrive after transfusion reaction specimens are collected

• The learner(s) will provide ISBAR communication

• The patient will state “I am feeling a lot better for some reason. What happened?”
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Confederate Name Tags and Donor Blood Label

Blood Label

Garcia, Manuel
SS# 123-45-6789
Type: A Positive
Unit # 63278
Expires: Tomorrow
Volume: 220 mL

Baseline vital signs: BP 97/60; Temp 97.3; HR 100; Resp 22; SpO2: 95%

Verified: Nurse #1 James Harris, RN    #2 Mable Scott, RN

Started: 15 minutes ago    Complete: _______________
Patient

Garcia, Manuel SS # 123-45-6789 Type: A Positive Unit # 63278

Identification Band and Blood Bank Band

Dr. G. Moore
Age 77
000-00-0000
Allergic: Sulfa

Blood Bank
Nurses Notes

Date: Today
Patient Name: Manuel Garcia
Mode of Arrival: Personally owned vehicle
Accompanied by: Self
Chief Complaint: Colon resection for a sigmoid mass removal 4 hours ago by Dr. Moore. He tolerated the procedure well. Vital signs are stable and he is on 2 liters of oxygen via nasal cannula. He has a midline abdominal incision with a dry sterile dressing. Bowel sounds are hypoactive. He has an 18 gauge IV in his right antecubital with Lactated Ringers at 125 mL/hr. His Foley is draining clear yellow urine. His complete blood count came back with a hemoglobin of 6.8 mg/dL and hematocrit of 21 mg/dL. Dr. Moore ordered two (2) units of packed red blood cells (PRBC).

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- Respiratory: Eupneic
- Cardiac: Unremarkable
- Gastrointestinal: Bowel sounds hypoactive. Left lower abdomen incision with dry, sterile dressing
- Genitourinary: Foley intact draining clear, yellow urine
- Musculoskeletal: unremarkable
- Skin: Pale; right subclavian central line with blood infusing; left lower abdomen incision with dry, sterile dressing
- Past Medical History: Hypertension, hemorrhoids, constipation, and rectal bleeding
- Past Surgical History: Hemorrhoidectomy

SCREEN FOR ABUSE/NEGLECT: N/A
Does the patient show any evidence of abuse? No
Does the patient feel safe in his/her current living arrangements? Yes
Suicidal or Homicidal Ideation in the past two weeks? No
Is the patient currently enrolled in primary care? Yes

Diagnostic Procedures Ordered:
- ( ) X-Ray
- ( ) Labs
- ( ) None
- ( ) EKG
- ( ) Head CT without contrast
- ( ) Other

Triage Classification: Emergency Severity Index
Patient Disposition: Medical-Surgical Unit
Signed by: /DM/

Transfusion Reaction Investigation Example

IF THERE IS A SUSPECTED TRANSFUSION REACTION:
1. Discontinue transfusion IMMEDIATELY.
2. Immediately verify the patient and blood component identification.
6. Obtain a properly labeled pink top tube blood specimen and send it to the Blood Bank immediately.
<table>
<thead>
<tr>
<th><strong>Post Transfusion Reaction Donor Bag, tubing and IV Fluid Label</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Garcia, Manuel</td>
</tr>
<tr>
<td>SS# 123-45-6789</td>
</tr>
<tr>
<td><strong>Type:</strong> A Positive</td>
</tr>
<tr>
<td><strong>Unit #:</strong> 63278</td>
</tr>
<tr>
<td><strong>Expires:</strong> Tomorrow</td>
</tr>
<tr>
<td><strong>Volume:</strong> 220 mL</td>
</tr>
</tbody>
</table>

Vital signs: BP _____; Temp _____; HR _____; Resp ____; SpO2: _____

Nurse: ___________________________  Date/Time: ________________

STAT Complete urinalysis.

<table>
<thead>
<tr>
<th><strong>Post Transfusion Reaction Blood Specimen Label (Pink top)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Garcia, Manuel</td>
</tr>
<tr>
<td>SS# 123-45-6789</td>
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</tbody>
</table>

Nurse: ___________________________  Date/Time: ________________

<table>
<thead>
<tr>
<th><strong>Post Transfusion Reaction Urine Specimen Label</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Garcia, Manuel</td>
</tr>
<tr>
<td>SS# 123-45-6789</td>
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</table>

Nurse: ___________________________  Date/Time: ________________

STAT Complete urinalysis.

References


