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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

 Green Text Confederate

 Red Text Physiology Change

## 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 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*  
*S- Follows suspected transfusion reaction protocol*
- b. *S- Disconnects blood and hang normal saline with new tubing at 30 mL per hour*
- c. *S- Packages blood/tubing with required documents and send to lab/blood bank per protocol*
- d. *S- Disconnects blood and hang normal saline with new tubing at 30 mL per hour*
- e. *S- Packages blood/tubing with required documents and send to lab/blood bank per protocol*
- f. *S- Obtains/requests lab specimens per protocol*

**Learning Objective 3:** Communicate effectively when managing the care of the patient experiencing a transfusion reaction

- 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

**(High Fidelity Mannequin)**

**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: SpO2: 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

(<http://cdn.laerdal.com/downloads/f4343/simpad-upgrade.vs2>)

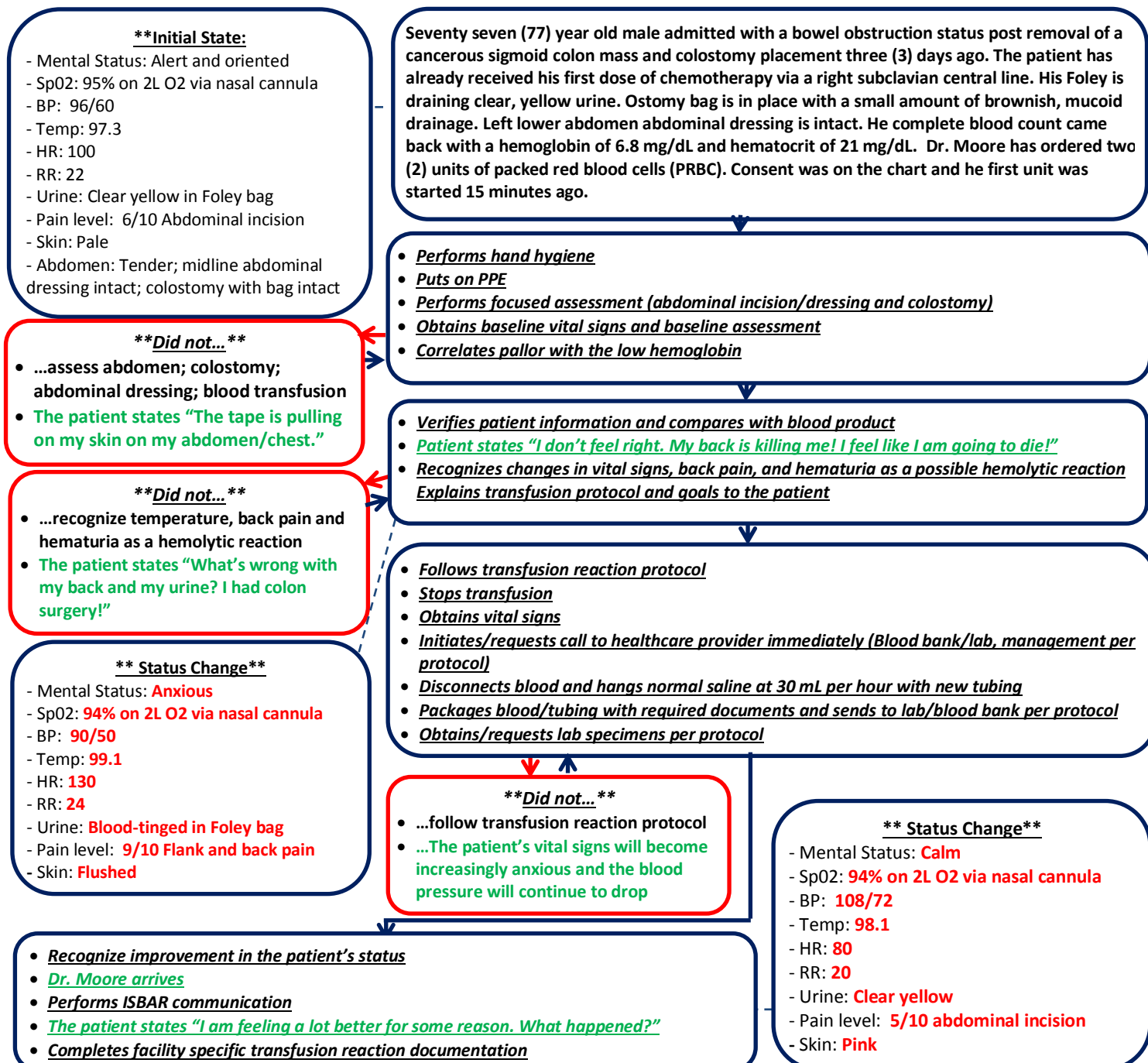
Scenarios may be used with Laerdal or LLEAP software

### Scenario Supplements:

- Confederate scripts
- Confederate and learner name tags
- Patient identification band for manikin
- Blood bank ID band for mannequin

- Blood bank label for blood donor bag
- Post Transfusion Reaction Specimen Labels
- Patient chart (facility specific)
- ZZ test patient/Demo patient in CPRS (if desired)

### Flowchart



**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, manager per protocol)
- Disconnects blood and hangs normal saline with new tubing at 30 mL per hour
- Packages blood/tubing with required documents and send to lab/blood bank per protocol



Confederate

Change in physiology

Red border incorrect action



## 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!"

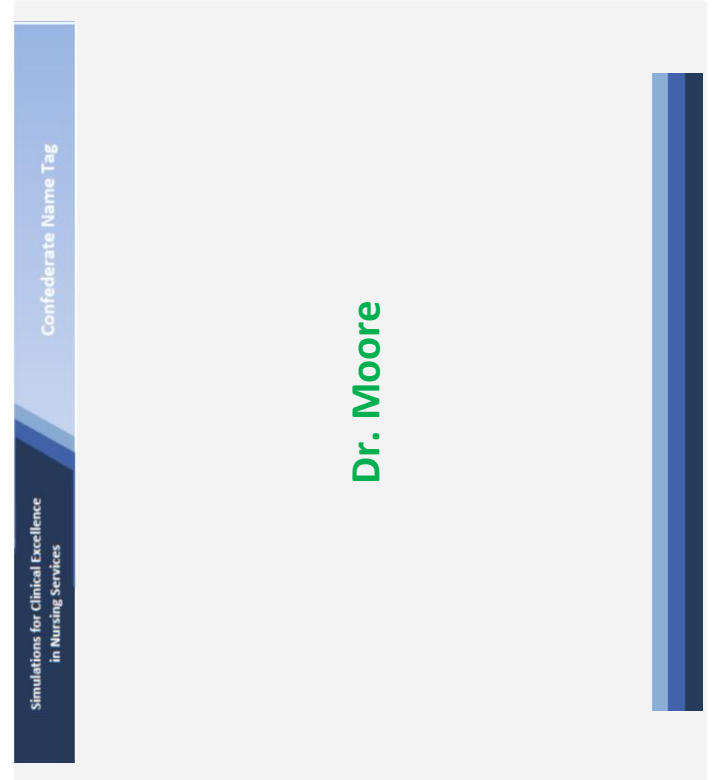
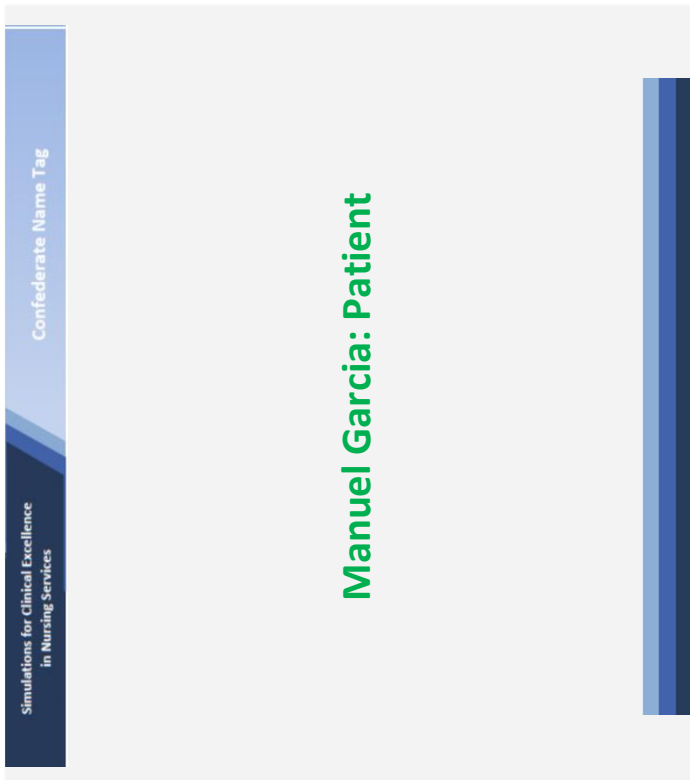
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### Dr. Moore

- 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?"



### Confederate Name Tags and Donor Blood Label



### Blood Label

**Garcia, Manuel**

**SS#** 123-45-6789

**Type:** A Positive

**Unit #** 63278

**Expires:** Tomorrow

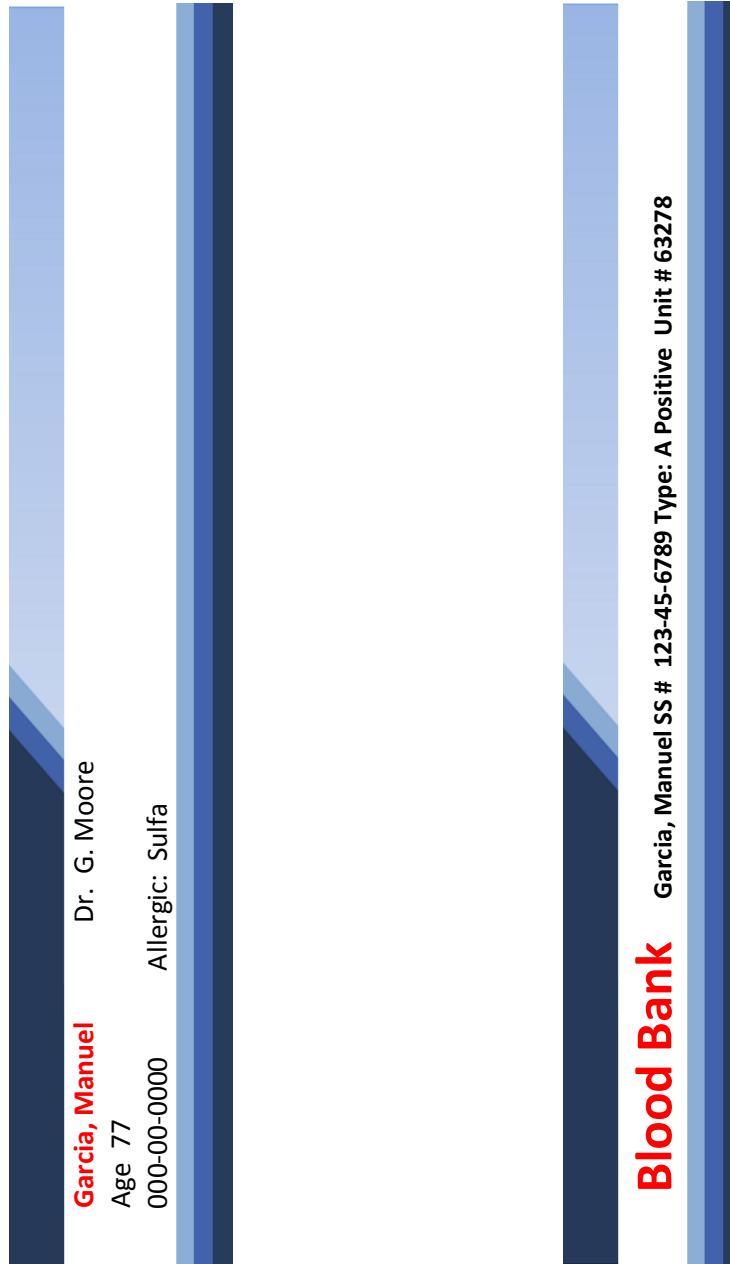
**Volume:** 220 mL

**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



Identification Band and Blood Bank Band

### Nurses Notes

**Date:** Today

**Patient Name:** Manuel Garcia

**Mode of Arrival:** Personally owned vehicle

**Accompanied by:** Self

Insert picture of patient  
here

**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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- **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

**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



## TRANSFUSION REACTION INVESTIGATION

**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.

**Post Transfusion Reaction Donor Bag, tubing and IV Fluid Label**

**Garcia, Manuel**

**SS# 123-45-6789**

**Type: A Positive**

**Unit # 63278**

**Expires: Tomorrow**

**Volume: 220 mL**

**STAT Complete urinalysis.**

**Vital signs:** BP \_\_\_\_\_; Temp \_\_\_\_\_; HR \_\_\_\_\_; Resp \_\_\_\_\_; SpO2: \_\_\_\_\_

**Nurse:** \_\_\_\_\_ **Date/Time:** \_\_\_\_\_

**Post Transfusion Reaction Blood Specimen Label (Pink top)**

**Garcia, Manuel**

**SS# 123-45-6789**

**Nurse:** \_\_\_\_\_ **Date/Time:** \_\_\_\_\_

**Post Transfusion Reaction Urine Specimen Label**

**Garcia, Manuel**

**SS# 123-45-6789**

**Nurse:** \_\_\_\_\_ **Date/Time:** \_\_\_\_\_

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