



FOR ENTRY-LEVEL BSN UNDERGRADUATE STUDENTS

Blood Transfusion Simulation Case Study

Ernie Lindain Jr

NUR 7060: Clinical Teaching Strategies

Dr. Phillips



PRESENTATION OVERVIEW

Background and rationale

Educational framework

Participant preparation

Simulation objectives

Roles and patient information

Simulation progression +
expected interventions

Debriefing and evaluation

Summary and recommendations

Background and rationale

Blood transfusion is a high-risk nursing intervention that requires strict adherence to safety protocols. Simulation supports the development of clinical judgment, patient safety behaviors, and decision-making in novice learners

(CONNOR ET AL., 2022; OERMANN ET AL., 2023).



Educational Framework

Simulation design is informed by evidence-based teaching strategies and recognition of diverse student learning styles to enhance engagement and knowledge retention.

(DEGAGNE & OERMANN, 2025; LAMIRI ET AL., 2020)

Target Audience (Student Selection)

This simulation case is designed for entry-level (Fundamentals) BSN undergraduate nursing students in their first clinical semester.

Participant preparation



Student selection and prerequisites



Assigned readings



Prebriefing and orientation



Review of institutional blood transfusion policies (DEGAGNE & OERMANN, 2025).



Prebriefing

Prebriefing establishes psychological safety, clarifies expectations, and prepares students for simulation-based learning. Effective prebriefing is essential to optimize learner outcomes

(OERMANN ET AL., 2023).



Patient overview

Mr. John Ramirez is a 68-year-old male admitted with symptomatic anemia secondary to gastrointestinal bleeding.

HEMOGLOBIN:
6.9 g/dL

ORDER:
Transfuse 1 unit of packed red
blood cells

Simulation objectives

Upon completion of this simulation, students will be able to:

- ☐ Verify blood products using two patient identifiers
- ☐ Perform baseline and ongoing transfusion assessments
- ☐ Initiate blood transfusion per institutional protocol
- ☐ Recognize signs of transfusion reactions
- ☐ Implement appropriate nursing interventions

(CONNOR ET AL., 2022).

Participant roles



Primary Nurse

Conducts patient assessment, reviews MD orders and initiates transfusion



Secondary Nurse

Verifies blood product with primary nurse and assists with monitoring



Clinical Educator/ Charge Nurse

Provides instruction, cues and ensures patient safety

(OERMANN ET AL., 2023).

Participant expectations

Students are expected to adhere to transfusion protocol, including reviewing orders, assessing patient, and checking vital signs. They should also communicate effectively, demonstrate professionalism, and engage in reflective debriefing upon completion.

(DEGAGNE & OERMANN, 2025).

Simulation progression

PHASE 1

**Pre-transfusion
verification**

PHASE 2

**Active transfusion
monitoring**

PHASE 3

**Recognition and
management of
transfusion reactions**

Simulation progression

PHASE 1

PHASE 2

PHASE 3

Pre-transfusion verification

Students verify MD orders, confirm consent, obtain baseline assessments, and perform two-nurse blood verification to promote patient safety. Oermann et al. (2023) highlight the importance of teaching students to anchor decisions in evidence-based frameworks.

Simulation progression

PHASE 1

PHASE 2

PHASE 3

Transfusion initiation

Students initiate transfusion per protocol, remain with the patient during the initial monitoring period, and assess for early signs of adverse reactions

(CONNOR ET AL., 2022).

Simulation progression

PHASE 1

PHASE 2

PHASE 3

Transfusion reaction

The patient develops fever, chills, back pain, and anxiety. Early recognition of signs and symptoms and intervention are critical to preventing harm (MCCANCE ET AL., 2023).

DeGagne and Oermann (2025) highlight nurse educators playing a pivotal role in reflective practice and professional growth.

Expected nursing interventions following transfusion reaction

Students should stop the transfusion, reassess the patient, notify the provider and blood bank, and document findings in accordance with **safety indicators** (GERICH ET AL., 2022).

Participant preparation



Facilitate structured reflection on student performance



Promote development of clinical judgment and decision-making



Reinforce patient safety principles related to blood transfusion



Support transfer of simulation learning to clinical practice

(OERMANN ET AL., 2023; CONNOR ET AL., 2022)



Debriefing phases

Reaction Phase

Students verbalize initial thoughts and responses

Faculty normalizes stress and uncertainty common in simulation

Analysis Phase

Review patient cues indicating
a transfusion reaction

Examine priority of nursing interventions

Summary Phase

Discuss adherence to transfusion protocols and safety standards

Evaluate communication and teamwork

Identify key learning points

Discuss application of transfusion safety principles in clinical practice

Sample Debriefing Questions

What assessment findings indicated a transfusion reaction?

How did communication influence patient outcomes?

Which nursing actions were most critical to patient safety?

How can this experience improve future clinical practice?

Evaluation

☐ Evaluation includes formative and summative methods such as faculty observation, performance checklists, and self-reflection to assess learning outcomes (GERICH ET AL., 2022).

☐ Measure achievement of simulation learning objectives

☐ Assess development of clinical judgment and safety behaviors

☐ Identify areas for improvement in transfusion-related care

EVALUATION



Evaluation includes formative and summative methods such as faculty observation, performance checklists, and self-reflection to assess learning outcomes (Gerich et al., 2022).



Measure achievement of simulation learning objectives



Assess development of clinical judgment and safety behaviors



Identify areas for improvement in transfusion-related care
(Oermann et al., 2023)

Evaluation Methods

Evaluation Methods

Faculty observation using a standardized performance checklist

Assessment of clinical judgment, aligning with simulation objectives

Student self-reflection, promoting metacognition and learning

Peer feedback during debriefing discussions

Evaluation Criteria

Accurate patient identification and blood verification

Timely recognition of transfusion reaction symptoms

Appropriate implementation of nursing interventions

Effective communication and teamwork

Compliance with institutional policies and patient safety standards

(GERICH ET AL., 2022)

Recommendations

Future improvements include increasing case study complexity, reviewing electronic health record documentation, and reinforcing safety indicators.

(Gerich et al., 2022; DeGagne & Oermann, 2025).

Recommendations for Faculty

Repeat simulation with alternative transfusion reaction scenarios

Increase scenario complexity as students progress in the curriculum

Incorporate electronic documentation to reflect clinical practice

Use evaluation data to guide future instruction (DeGagne & Oermann, 2025)

Recommendations for Students

Review blood transfusion protocols and reaction management regularly

Strengthen assessment and early recognition skills

Practice structured communication techniques (e.g., SBAR)



Summary

Simulation-based education enhances transfusion safety, clinical judgment, and student readiness, aligning evidence-based teaching strategies with learner needs

(CONNOR ET AL., 2022; LAMIRI ET AL., 2020).

References

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