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CASE REPORT

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NCLEX Rapid Review: Minding the Mucosa, A Stomatitis Recap

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ABSTRACT

The simulation case "Minding the Mucosa, A Stomatitis Recap" is designed for entry-level professional nursing students to enhance their skills in managing chemotherapy-induced stomatitis. The primary learning objectives are for learners to educate and explain the diagnosis of stomatitis to the client and to implement and verbalize at least one evidence-based nursing intervention for its management. The clinical scenario involves a 21-year-old male patient, Mr. Jimothy Carter, who, following chemotherapy for Acute Myeloid Leukemia, presents with severe oral pain and is diagnosed with stomatitis. Learners must assess the patient's pain and oral mucosa, provide education on stomatitis, and recommend appropriate interventions such as maintaining good oral hygiene, adopting a bland diet, and using topical anesthetics or systemic opioids for pain management. This case is particularly useful in a curriculum for developing competencies in patient assessment, communication, evidence-based practice, and promoting self-care management in patients with low health literacy.

Keywords Oncology; Stomatitis

CASE OVERVIEW

Mr. Carter was diagnosed with Acute Myeloid Leukemia (AML) 3 months ago and is currently receiving chemotherapy. He presents for an outpatient oncology follow-up visit and is diagnosed with stomatitis.

LEARNING OBJECTIVES

1. By the end of the simulation, learners will provide education and explain the diagnosis of stomatitis to the client.
2. By the end of the simulation, learners will implement and verbalize at least one evidence-based nursing interventions to manage stomatitis.

CLINICAL PRESENTATION

Name	Jimothy Carter
Age	21
Sex	Male
Race / ethnicity	White Non-Hispanic

Chief complaint. "My mouth hurts so much that I don't even want to eat or drink anymore. I'm worried something isn't right."

History of present illness. Mr. Carter was diagnosed with Acute Myeloid Leukemia (AML) and is currently receiving chemotherapy. He completed his most recent chemotherapy cycle 10 days ago. The provider has diagnosed stomatitis at this follow-up visit.

Past medical history. None

Past surgical history. None

Past psychiatric history. None

Social history. None

Medications. Chemotherapy regimen per oncology protocol

Allergies. Penicillin (rash)

SIMULATED CHARACTER

Name. Jimothy Carter

Demographics. Young male client, with not health history prior to the diagnosis of AML.

Personality and mood. Anxious and in pain, he could also be a little rude as he doesn't feel well.
Ask questions about "stomatitis"
Make him sound embarrassed and sad when he asks for clarification about the diagnosis.
When learners identify interventions ask questions. If the learner identifies "bland diet" as an intervention, ask for specific examples. If the learner identifies "mouthwash" as specifically what kind. After every intervention, follow up with a question asking for more specific information about it.

Identity, purpose and background. Low health literacy, doesn't understand that chemotherapy is causing the *stomatitis*

Simulation behaviour. Show distress, maybe even irritation, increased mouth pain if learner doesn not assess the mouth or pain.
The learner should share the physicain's diagnosis of "stomatitis" and then provide education to let the client know what it is and then provide at least one nursing intervention.
If the leaner doesn't share, the patient should ask by the end of minute one indicating, "the doctor said I have something called stomatitis, I was too embarassed to admit I didn't know what that meant, can help me understand what that means?"

Opening line

> "My mouth has been absolutely miserable this past week. It hurts to eat, drink, and sometimes even talk. Every bite feels like it's rubbing against open sores, and even water burns. The doctor told me I have something called stomatitis, and honestly, I was too embarrassed to ask what that meant. I know I probably should have, but there was so much information at the appointment, and I just nodded along. Now I'm worried because the pain seems to be getting worse, and I'm not sure what's happening. Can you help me understand what stomatitis is, and what I can do about it?

Procedures and actions available to the learner

Action	Result added to the chart	How the character responds
Assess Pain	10/10	"My pain is a 10 out of 10. I know I need to eat, but every bite hurts. I'm worried because I feel weaker every day."
Assess oral mucosa	Red, swollen oral mucosa with open ulcerations	"My tongue feels swollen, and I have sores throughout my mouth. My gums even bleed when I brush my teeth, and to make matters worse, food just doesn't taste the same anymore."

DEBRIEFING DIMENSIONS

Provide Client Education (narrative)

Ability to correctly explain what stomatitis is to the client.

"Stomatitis (inflammation of the oral mucosa) often develops a few days after the onset of chemotherapy and may persist for 2 or more weeks after treatment has ceased. Inflammation can progress to denudation and ulceration, and is often complicated by infection. Pain can be severe, inhibiting eating,
speaking, and swallowing."

Reference: Burchum, J. R., Rosenthal, L. D., & Lehne, R. A. (2019). Lehne's pharmacology for nursing care (10th edition.). Elsevier.

Nursing Interventions for stomatitis (narrative)

Ability to correctly identify and explain one evidence-based intervention for stomatitis. "Management includes good oral hygiene and a bland diet. Topical antifungal drugs may be needed to control Candida albicans infection. For a patient with mild stomatitis, pain can be managed with a mouthwash
containing a topical anesthetic (e.g., lidocaine) plus an antihistamine (e.g., diphenhydramine). For patients with severe stomatitis, a systemic opioid is needed for pain. In some cases, stomatitis is so severe that chemotherapy has to be interrupted. For patients being treated for hematologic malignancies, palifermin [Kepivance] can decrease the severity of stomatitis"

"recommend lifestyle changes such as avoiding hard, acidic, and salty foods along with alcohol and carbonated beverages"

Reference: Burchum, J. R., Rosenthal, L. D., & Lehne, R. A. (2019). Lehne's pharmacology for nursing care (10th edition.). Elsevier.

COMPETENCY ALIGNMENT: AACN ESSENTIALS 2021

Progression level. 1 - Entry

The simulation case is designed for learners at the entry-level professional nursing education stage, focusing on fundamental skills such as assessment, communication, and evidence-based interventions for managing chemotherapy-induced stomatitis.

Domain 2: Person-Centered Care

Code	Competency	Rationale
2.3	Integrate assessment skills in practice.	Learners are required to accurately identify signs and symptoms of chemotherapy-induced stomatitis during patient assessment, demonstrating integration of assessment skills.
2.4	Diagnose actual or potential health problems and needs.	The case involves diagnosing stomatitis as a complication of chemotherapy, which is an actual health problem that needs to be addressed.
2.5	Develop a plan of care.	Learners must implement and verbalize evidence-based nursing interventions to manage stomatitis, which involves developing a plan of care.
2.8	Promote self-care management.	The case involves educating a patient with low health literacy about managing stomatitis, promoting self-care management.

Domain 4: Scholarship for the Nursing Discipline

Code	Competency	Rationale
4.2	Integrate best evidence into nursing practice.	Learners are expected to implement evidence-based interventions for managing stomatitis, integrating best evidence into practice.

Domain 5: Quality and Safety

Code	Competency	Rationale
5.2	Contribute to a culture of patient safety.	By implementing evidence-based interventions for stomatitis, learners contribute to patient safety by preventing further complications.

Domain 6: Interprofessional Partnerships

Code	Competency	Rationale
6.1	Communicate in a manner that facilitates a partnership approach to quality care delivery.	Effective communication with the patient is necessary to ensure understanding and adherence to the care plan, especially given the patient's low health literacy.

SIMULATION FORMAT

Platform	Figment Clinic
Format	Clinical encounter simulation with a full patient record
Synthesised voice	cedar
Case first authored	August 2026

The interactive version of this case runs on the Figment Clinic platform. This article is the archival record of its content at the time of publication.

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