ATI Real Life Student Packet
N201 Nursing Care of Special Populations
2023

Student Name: MaryHelen Wauters
ATI Scenario: Cystic Fibrosis Community Care

To Be Completed Before the Simulation

Blue boxes should be completed using textbook information. What do you expect to find? This information should be collected before you start the ATI simulation

Medical Diagnosis: Cystic Fibrosis

NCLEX IV *(8)*: Physiological Integrity/Physiological Adaptation

Anatomy and Physiology
Normal Structures

- air comes in through nose & mouth
- passes through larynx to trachea
- trachea branches into Right & left bronchi → bronchioles → alveolar ducts → alveoli
- alveoli & Bronchioles are where gas exchange takes place.
- fine capilary beds allow for exchange of CO_2 & O_2.
- Because alveoli are unstable, surfactant is produced to keep them free from collapse. when there is not enough surfactant, atelectasis happens
- mucus normally moved out by cilia and expelled w/ cough

NCLEX IV *(7)*: Reduction of Risk

Pathophysiology of Disease

- autosomal recessive disease
- characterized by altered transport of Na^+ & Cl^- in & out of cells (epithelial)
- primarily affects lungs, GI (Pancreas & biliary tract) and reproductive tract
- CFTR protein regulates sodium & chloride movement in & out of epithelial cells.
- mutation in CFTR protein results in thick mucus in airway, GI, liver and Pancreas. Creates mucus plugs causing scaring & can result in organ failure
- High concentration of sodium & Chloride in sweat results from ↓ reabsorption in sweat duct.
- usually seen in airway that causes lung tissue obstruction & lung tissue
- cilia motility ↓ allowing mucous to adhere to airway
- causes chronic airway infections causing antibiotic resistance.
- pulmonary inflamation associated w/ chronic infection & narrowing of lumen of airway
- over time, lung tissue / pulmonary vasculority remodeling because of local hypoxia
- pulmonary hypertension, enlarged pulmonary arteries, cor pulmonale present
- pneumothorax can occur
- hemoptysis can range from scant to major bleeding = death
- pancreatic insufficiency caused by mucous plugs resulting in atrophy & progressive fibrotic cysts
- pancreatic exocrine function may be lost resulting in fat malabsorption & protein malabsorption → Chronic inflamatory cytokines
- can have type I or II DM
- may have pancreatitis, gallstones or cirrhosis of liver

Pathophysiology Continued

- may develop portal hypertension or Distal intestinal obstruction syndrome
- may appear to have small bowel obstruction but is result of malabsorption
  exocrine dysfunction, under or overdosing of pancreatic enzyme replacement
  Chronic dehydration, and swallowing mucus

To Be Completed Before the Simulation

Anticipated Patient Problem: Imbalanced nutrition: less than body requirements

Goal 1: Pt will not lose weight during my time of care

Goal 2: Pt will consume 75% of meals during my time of care

Relevant Assessments (Prework) What assessments pertain to your patient's problem? Include timeframes	**Multidisciplinary Team Intervention** (Prework) What will you do if your assessment is abnormal?
% of meals eaten PRN and after each meal/snack	Provide high protein small meals
Daily weight	consult dietitian for further recommendations
Monitor serum albumin level PRN	↑ protein supplement
Monitor WBC level (because infection can cause ↓ appetite) PRN	Treat infection as ordered by provider (cbdx)
monitor blood glucose PRN	Treat based on glycemic protocol
Check bony prominences q2hr	turn q 2 hrs to prevent pressure injury

To Be Completed Before the Simulation

Anticipated Patient Problem: Impaired airway clearance

Goal 1: Pt will maintain open airway with effective cough during my time of care

Goal 2: Pt will maintain O2 sat ≥ 90% during my time of care

Relevant Assessments (Prework) What assessments pertain to your patient's problem? Include timeframes	**Multidisciplinary Team Intervention** (Prework) What will you do if your assessment is abnormal?
Continuous O2 sat ≥ 90%	administer supplemental O2 via nasal canula or non rebreather mask
Skin color q 2-4 hrs & PRN (for signs of hypoxia, pallor, cyanosis)	Consult respiratory / provider
Sputum color and amount and consistency PRN	report hemoptysis to provider or send to lab if ordered
Chest shape for appropriate expansion or Rule out pneumothorax q4 or PRN	Consult provider if suspected pneumothorax or accessory muscle use apply O2 to supplement
Breath sounds q 4 or PRN	Physiotherapy to move mucus in lungs
LOC q4hr or PRN	Place in semi fowlers / raise HoB

Module Report

Tutorial: **Real Life RN Nursing Care of Children 4.0**

Module: **Cystic Fibrosis Community Care**

Individual Name: **Mary Helen Waltjen**

Institution: **Margaret H Rollins SON at Beebe Medical Center**

Program Type: **Diploma**

Standard Use Time and Score

	Date/Time	Time Use	Score
Cystic Fibrosis Community Care	10/12/2023 12:37:40 PM	36 min	Satisfactory

Reasoning Scenario Details
Cystic Fibrosis Community Care - Use on 10/12/2023 12:02:04 PM

Reasoning Scenario Performance Related to Outcomes:

*See Score Explanation and Interpretation below for additional details.

Body Function	Strong	Satisfactory	Needs Improvement
Cardiac Output and Tissue Perfusion	100%		
Cognition and Sensation	100%		
Excretion	100%		
Ingestion, Digestion, Absorption & Elimination	100%		
Mobility	100%		
Oxygenation	77.8%	22.2%	

NCLEX RN	Strong	Satisfactory	Needs Improvement
Health Promotion and Maintenance RN 2013	100%		
RN Management of Care	50%	50%	
RN Health Promotion and Maintenance	100%		
RN Psychosocial Integrity	100%		
RN Pharmacological and Parenteral Therapies	75%	25%	

RN Reduction of Risk Potential	100%		
RN Physiological Adaptation	100%		

QSEN	Strong	Satisfactory	Needs Improvement
Safety	50%	50%	
Patient-Centered Care	100%		
Evidence Based Practice	80%	20%	
Quality Improvement	100%		

Individual Report – Score Explanation and Interpretation

Reasoning Scenario Information:

Reasoning Scenario Information provides the date, time and duration of use, along with the score earned for each attempt. A Reasoning Scenario Performance score of Strong, Satisfactory, or Needs Improvement is provided for each attempt. This information is also provided for the Optimal Decision Mode if it has been enabled.

Reasoning Scenario Performance Scores:

Strong	Exhibits optimal reasoning that results in positive outcomes in the care of clients and resolution of problems.
Satisfactory	Exhibits reasoning that results in mildly helpful or neutral outcomes in the care of clients and resolution of problems.
Needs Improvement	Exhibits reasoning that results in harmful or detrimental outcomes in the care of clients and resolution of problems.

Reasoning Scenario Performance Related to Outcomes:

A clinical reasoning performance score related to each outcome is provided. Outcomes associated with student responses are listed in the report. The number across from each outcome indicates the percentage of responses associated with the level of performance of that outcome.

NCLEX® Client Need Categories:

Management of Care	Providing integrated, cost-effective care to clients by coordinating, supervising, and/or collaborating with members of the multi-disciplinary health care team.
Safety and Infection Control	Incorporating preventative safety measures in the provision of client care that provides for the health and well-being of clients, significant others, and members of the health care team.
Health Promotion and Maintenance	Providing and directing nursing care that encourages prevention and early detection of illness, as well as the promotion of health.
Psychosocial Integrity	Promoting mental, emotional, and social well-being of clients and significant others through the provision of nursing care.
Basic Care and Comfort	Promoting comfort while helping clients perform activities of daily living.
Pharmacological and Parenteral Therapies	Providing and directing administration of medication, including parenteral therapy.
Reduction of Risk Potential	Providing nursing care that decreases the risk of clients developing health-related complications.

Physiological Adaptation	Providing and directing nursing care for clients experiencing physical illness.

Quality and Safety Education for Nurses (QSEN)

Safety	The minimization of risk factors that could cause injury or harm while promoting quality care and maintaining a secure environment for clients, self, and others.
Patient-Centered Care	The provision of caring and compassionate, culturally sensitive care that is based on a client's physiological, psychological, sociological, spiritual, and cultural needs, preferences, and values
Evidence Based Practice	The use of current knowledge from research and other credible sources, upon which clinical judgment and client care are based.
Informatics	The use of information technology as a communication and information gathering tool that supports clinical decision making and scientifically based nursing practice.
Quality Improvement	Care related and organizational processes that involve the development and implementation of a plan to improve health care services and better meet the needs of clients.
Teamwork and Collaboration	The delivery of client care in partnership with multidisciplinary members of the health care team, to achieve continuity of care and positive client outcomes.

Body Function

Cardiac Output and Tissue Perfusion	The anatomical structures (heart, blood vessels, and blood) and body functions that support adequate cardiac output and perfusion of body tissues.
Cognition and Sensation	The anatomical structures (brain, central and peripheral nervous systems, eyes and ears) and body functions that support perception, interpretation, and response to internal and external stimuli.
Excretion	The anatomical structures (kidney, ureters, and bladder) and body functions that support filtration and excretion of liquid wastes, regulate fluid and electrolyte and acid-base balance.
Immunity	The anatomic structures (spleen, thymus, bone marrow, and lymphatic system) and body functions related to inflammation, immunity, and cell growth.
Ingestion, Digestion, Absorption and Elimination	The anatomical structures (mouth, esophagus, stomach, gall bladder, liver, small and large bowel, and rectum) and body functions that support ingestion, digestion, and absorption of food and elimination of solid wastes from the body.
Integument	The anatomical structures (skin, hair, and nails) and body functions related to protecting the inner organs from the external environment and injury.
Mobility	The anatomical structures (bones, joints, and muscles) and body functions that support the body and provide its movement.

Oxygenation	The anatomical structures (nose, pharynx, larynx, trachea, and lungs) and body functions that support adequate oxygenation of tissues and removal of carbon dioxide.
Regulation and Metabolism	The anatomical structures (pituitary, thyroid, parathyroid, pancreas, and adrenal glands) and body functions that regulate the body's internal environment.
Reproduction	The anatomical structures (breasts, ovaries, fallopian tubes, uterus, vagina, vulva, testicles, prostate, scrotum, and penis) and body functions that support reproductive functions.

Decision Log

Information related to each question answered in a scenario attempt is listed in the report. A brief description of the scenario, question, selected option and rationale for that option are provided for each question answered. The words "Optimal Decision" appear next to the question when the most optimal option was selected.

The rationale for each selected option may be used to guide remediation. A variety of learning resources may be used in the review process, including related ATI Review Modules.

To Be Completed During the Simulation:

Actual Patient Problem: Impaired airway clearance
Goal: CS will maintain O2 Sat ≥ 90% during my care — Met: ☑ Unmet: ☐
Goal: CS will maintain clear sputum airway with effective cough during my care — Met: ☑ Unmet: ☐
Actual Patient Problem: Imbalance nutrition: less than body requirements
Goal: CS will not lose any weight during my care — Met: ☑ Unmet: ☐
Goal: CS will consume 150% of bodily requirement calories each day during my care — Met: ☑ Unmet: ☐

Additional Patient Problems:
③ deficient knowledge ④ readiness for enhanced learning ⑤ ineffective coping.

Below will be your notes, add more lines as needed. **Relevant Assessments:** Indicate pertinent assessment findings. **Multidisciplinary Team Intervention:** What interventions were done in response to your abnormal assessments? **Reassessment/Evaluation:** What was your patient's response to the intervention?

	Patient Problem	Time	Relevant Assessments	Time	Multidisciplinary Team Intervention	Time	Reassessment/ Evaluation
day1	1,3	1015	coarse crackles in lungs, lots of question	1030	scheduled another appt. to go over more CF info	1030	scheduled for 10am to go over CF info want to tell class/teachers
Day2	3,4	10:00	Questions about CF (diet, and who to tell)	1020	Provided handouts w/info for family and friends	1040	scheduled next visit to discuss diet
day3	2,3,4	1020	concerned about diet and intake	10 30	Educated about daily calorie requirement and small meals	1050	made list of foods she liked/dian like to ensure calorie requirement
day4	2,3,4	1340	" Cream is hard to swallow	1350	educated about adding to apple sauce	1400	"I like applesauce"
day5	1,3,4	1430	"I am coughing even more" Yellow sputum noted	1430	disscussed/educated on percussion/vibration and postural drainage	1445	We will do everything possible to keep courtney healthy"
day6	1,5	1440	"Do I have to do my therapy today?" flat affect noted	1500	educated about consistent physiotherapy and maintaining health	1510	completed physiotherapy before dinner

To Be Completed After the Simulation

The orange boxes should be filled out with your simulation patient's actual results, assessments, medications, and recommendations

NCLEX IV *(7)*: Reduction of Risk

Actual Labs/ Diagnostics

Sweat test - (+)

NCLEX II *(3)*: Health Promotion and Maintenance

Signs and Symptoms

- coughing upon exertion
- loose, frothy stools (multiple times daily
- wheezing throughout day
- productive cough

NCLEX II *(3)*: Health Promotion and Maintenance

Contributing Risk Factors

NCLEX IV *(7)*: Reduction of Risk

Therapeutic Procedures

Non-surgical

physiotherapy

proper nutrition

Surgical

Prevention of Complications

(Any complications associated with the client's disease process? If not what are some complications you anticipate)

- frequent respiratory infections
- malnutrition (frothy stools)
- may have reproductive difficulties later
- GI disruption

NCLEX IV *(6)*: Pharmacological and Parenteral Therapies

Medication Management

Pancrelipase: PO 3 caps @ meals
Azithromycin: 160mg PO QMon
Pornase: 2.5mg nebulizer daily
Levalbuterol: 2.5mg nebulizer 4x/day
vitamin E 400 IU PO Daily
multivitamin 2 tabs PO daily

NCLEX IV *(5)*: Basic Care and Comfort

Non-Pharmacologic Care Measures

- Physiotherapy 45 mins daily
- Mucus clearance device
- Sports | Softball

NCLEX III *(4)*: Psychosocial/Holistic Care Needs

Stressors the client experienced?

- family
- what to tell school/friends
- wants to keep playing sports
- adjustment to new diagnosis and maintenance of disease

Client/Family Education

Document 3 teaching topics specific for this client.

- CF & implications on body systems
- Calorie requirements daily
- Physiotherapy & postural drainage

NCLEX I *(1)*: Safe and Effective Care Environment

Multidisciplinary Team Involvement

(Which other disciplines were involved in caring for this client?)

- Pulmonologist
- MD
- Coaches
- Teachers
- School nurse

Patient Resources

- support group

Reflection Paper

Directions: Write reflection including the following:

1. What was your biggest "take away" from participating in the care of this client?

   My biggest take away would be that maintaining as much independence and self care as possible especially for a young child is a must. I know all too often we try to do things for our clients to make it easier for them, but we also need to encourage them to do things for themselves to keep their self-esteem strong and them functioning.

2. What was something that surprised you in the care of this patient?

   I knew that patients with CF needed more calories (like COPD patients) but I had no idea it was 150%. To me that seems more than expected. I understand with the body fighting off infection and trying to cough they require more calories to sustain life.

3. What is something you would do differently with the care of this client?

   I think something I would do different would be getting the nutrition piece figured out sooner. So much of Coutney's time is going to be fighting infection and coughing so fueling her body with the necessary and appropriate food and fuel is critical. It also seemed to be a large point of stress for mom and dad. If the nutrition piece was in place sooner, she may have started to feel a bit better sooner.

4. How will this simulation impact your nursing practice?

   Moving forward, I will ensure that my patients feel like they have the necessary tools to make choices about their care and that the family feels like they have the tools to take care of their family member. So much of nursing is a holistic approach and it is a caring for not just the patient but also those who will be on the front line taking care of the patient at home day in and day out.

5. Discuss norms or deviations of growth and development that was experienced during the simulation, including developmental stage.

   Much of what I saw in this was a normal way of a 10 year old interacting with her world. There was some instances of overbearing parents but they eventually came around and let Courtney make

choices for herself (ie who she told about her diagnosis). I also think they did a good job allowing and involving the coach in the conversation. Giving her a safe place to still be a kid rather than a sick kid is so important. I know that parents want to keep their child safe and a new diagnosis is hard on everyone. I think mom and dad did a great job supporting Courtney and that she wanted to still be a "normal" kid who could play sports (with education to her coach about limitations)