

ATI Real Life Student Packet  
N201 Nursing Care of Special Populations  
2022

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ATI Scenario: Cystic Fibrosis

**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

Normal pulmonary function - Normal breathing, air passes through the mouth or nose, down the trachea through the bronchi, that branches into each lung and breakdown into smaller branches called bronchioles. At the end of the bronchioles are small air sacs, called alveoli. On the outside of the alveoli are capillaries that exchange gas between the lungs and the body. The alveoli expand to bring in oxygen to oxygenate blood for circulation, through capillaries the oxygenated blood is exchanged with CO<sub>2</sub> from the blood to be expelled through exhaling.

**NCLEX IV (7): Reduction of Risk**

Pathophysiology of Disease

Cystic Fibrosis is an autosomal recessive genetic disorder that causes abnormalities in the secretory glands that produce mucus and sweat and mostly affects the lungs, pancreas, liver, intestines, and sex organs. It is a mutated gene for protein cystic fibrosis transmembrane conductance regulator (CFTR). It is characterized by altered transport of sodium and chloride ions in and out of epithelial cells, the high concentrations of sodium and chloride in the sweat of the patient with CF results from decreased chloride reabsorption in the sweat duct. The mucus that is produced in the body becomes thick and sticky. Instead of lubricating the lungs it clogs the airways in the lungs and the ducts in the pancreas and liver, causing scarring in the organs and resulting in organ failure. CF can lead to other disease such as diabetes and osteoporosis.

**Anticipated Patient Problems, Goals, & Interventions Based on Medical Diagnosis**

\*\* This worksheet should be completed before you begin the ATI simulation.

**Problem #1:** Ineffective Airway Clearance

Patient Goals:

1. Client will be proficient in using effective airway clearance therapies to clear secretions daily, as evidenced by decreased work of breathing and improved pulmonary function during my time of care. \_\_\_\_\_

2. Client will maintain clear, open airway as evidenced by normal breath sounds, normal rate and depth of respirations, and an airway free of secretions, with an effective cough during my time of care. \_\_\_\_\_

Assessments:

- Assess respiratory rate, work of breathing, use of accessory muscles, and presence of retractions, q4hrs or PRN. Auscultate lungs for adventitious sounds, q4hrs. Assess for barriers to ongoing airway clearance, q4hrs or PRN. \_\_\_\_\_

Interventions (In priority order):

1. Administer mucolytics as ordered throughout shift. \_\_\_\_\_
2. Administer bronchodilators as ordered throughout shift. \_\_\_\_\_
3. Encourage a frequent and effective cough-particularly around airway clearance therapy (ACT), q4hrs or PRN. \_\_\_\_\_
4. Administer pain medications as ordered throughout shift. \_\_\_\_\_
5. Encourage client participation and planning care and therapy to maintain proper airway clearance, by having client give suggestions and demonstrate techniques, twice a shift. \_\_\_\_\_
6. Provide opportunities for exercise and physical therapy, twice a shift. \_\_\_\_\_

**Problem #2:** Imbalance Nutrition: Less than Body Requirements

Patient Goals:

1. Client will maintain adequate nutritional status or demonstrate weight gain on a trajectory to adequate nutritional status during my time of care. \_\_\_\_\_

2. Client will be free of signs/symptoms of malabsorption during my time of care as evidenced by electrolyte serum blood tests. \_\_\_\_\_

Assessments:

- Monitor daily weights for adequate weight gain and maintenance. Assess abdomen for bloating, fullness, bowel sounds, or palpable stool mass, q4hrs. Monitor stool patterns for frequency, odor, consistency, and the presence of oil or greasy look, PRN. Monitor for excessive thirst, urination, and hunger, q4hrs. \_\_\_\_\_

Interventions (In priority order):

1. Administer pancreatic enzymes before all meals and snacks containing fat or protein as ordered throughout shift. \_\_\_\_\_
2. Administer all fat-soluble vitamins with meals and enzymes as ordered throughout shift. \_\_\_\_\_
3. Encourage liberal hydration and high fiber intake q2hrs or PRN throughout shift. \_\_\_\_\_
4. Educate client on the need for a high protein and calorie diet, with client verbalizing meal and food suggestions, qshift. \_\_\_\_\_
5. Encourage the liberal use of salt or salty food intake, qshift or PRN. \_\_\_\_\_
6. Educate client on community resources available such as dietician and support groups, qshift. \_\_\_\_\_

**To Be Completed During the Simulation****Nursing Notes**

Time	I or E	Notes	Specify NDx #
Day 1 - 1000	E	Client mom explains pregnancy was normal, delivered two weeks early, client weighed 6lbs 7oz, breastfed for almost a year, doesn't get sick often, is a picky eater, doesn't seem to want to eat much-----ML	2,4
1015	I	Performed assessment on heart and lungs-----ML	1
1015	E	Heart sounds normal, coarse crackles heard in lungs-----ML	1
1020	E	Client indicates coughs a lot after softball and runs a lot, states hard time breathing especially after running a lot-----ML	1,3
1025	I	Encouraged further explanation of client being a "picky eater" -----ML	2
	E	Client father states client hardly eats anything, states she is skinny, only likes cheese and crackers and chocolate milk, hard time getting her to eat any meat, since starting softball has had more difficulty breathing----ML	2
1040	I	Offered opportunity to ask additional questions-----ML	4
1055	E	Client's mother stated she has ton of questions about activities, diet, medications, treatments, and information on cystic fibrosis-----ML	4
1100	I	Scheduled next appointment to further education-----ML	4
1100	E	Appointment time set-----ML	4
Day 2 - 1000	I	Reinforced topics covered in previous meeting-----ML	4
1015	E	Client's mother stated confused, received too most information at clinic at one time and couldn't absorb it, worried kids will treat her differently-----ML	4
1020	I	Advised decision on what to share with others about client disease should be family decision, but school nurse should be made aware in case there are any school related incidences-----ML	4
1025	E	Client father agrees important to let others who are caring for client know about her health status-----ML	4
1030	I	Educated on physical effects of cystic fibrosis on the body, effects of the disease on the pancreas causing higher levels of chloride in sweat----ML	1,4
1040	E	Client asked "So why is it hard for me to breathe?"-----ML	1,2,4
1045	I	Educated on fact body makes mucus thick and it gets stuck in air passages of your lungs. Emphasized the importance of taking medication and respiratory treatments on a regular basis. Offered handouts-----ML	1,4
1055	E	Family verbalized understanding, expressed biggest concern is client's diet-----ML	1,2,4
1100	I	Scheduled next appointment and plan for medication education-----ML	4
Day 3 - 1530	E	Client looking forward to days discussion-----ML	4

1535	I	Advised would be discussing diet and medication-----ML	2,4
1540	E	Client indicated know she takes vitamins in the morning, but the Creon she takes with meals is hard to swallow-----ML	2,4
1545	I	Offered suggestion to open capsule and sprinkle in some applesauce-ML	2,4
1545	E	Client stated likes applesauce and stated that will work great., Client mom wants to further discuss diet-----ML	2,4
1550	I	Educated on importance of taking Creon with meals and snacks, with activity and playing softball will need more calories-----ML	2,4
1555	E	Client states “I’m not hungry. I don’t like lots of food”.-----ML	2,4
1610	I	Educated on diet and proper foods to eat, frequency-----ML	2,4
1620	E	Client enthusiastic and eager to participate and make list of foods she does like and ones she dislikes, client’s parent verbally indicate they understand diet and Creon, have questions on medications-----ML	2,4
Day 4 - 1530	I	Educated on medications, offered opportunity to ask questions-----ML	1,4
1545	E	Client mother verbally stated she understands medication-----ML	
1545	E	Client indicated that when she coughs up sputum it’s yellowish-----ML	1
1550	I	Educated on percussion, vibration, and postural drainage when experiencing an increase in cough-----ML	1
1605	E	Client states gets tired from all the pounding and coughing, client mom states it takes a long to do-----ML	1
1605	I	Explained importance of continuing treatment to help prevent respiratory problems-----ML	1
1620	E	Client mother verbalized they would do everything possible to help client stay healthy-----ML	1,4
1625	I	Recapped today’s meeting, offered opportunity to ask questions-----ML	1,4
1630	E	Client’s parents stated they currently have no questions-----ML	4
Day 5 - 1530	E	Client stated that at game prior day played really hard and got tired from running, coach makes them run at practice and she coughs afterwards. Client father stated concern on whether client will be able to continue sports and remain healthy, also included coach would be stopping by as well-----ML	1,3
1535	I	Made clarification on medication education provided-----ML	1,4
1540	E	Client mom verbally acknowledge information-----ML	1,4
1545	I	Explained and educated client can continue softball, but needs to pay attention to her body and what it is telling her, if too difficult to breathe need to take a break for a period of time, activity and exercise are important	1,3,4
1600	E	Client excited to be able to play, parents agree they want her to play and have fun-----ML	1,3,4
1605	I	Educated on the positives of sports and pulmonary hygiene-----ML	1,3,4
1615	E	Coach stated was good for him to hear and to know this information, and that he can modify her warm-up activity plan-----ML	1,3,4

1615	I	Advised client to inform when she is having difficulty breathing, referred coach to contact school nurse to for further information on disease, Educated on possible health complications from cystic fibrosis-----ML	3,4
1620	E	Client mother stated it's overwhelming to consider, client comes in upset because had to come home to complete therapy-----ML	4
1620	I	Explained importance to stick to therapy plan, wrapped up education, offered opportunity to ask any questions-----ML	4
Day 6 - 1730	E	Client mom states they understand what they need to know about cystic fibrosis-----ML	4
1745	I	Offered handouts on community support groups for parents, explained if further question could reach out to home health office or their primary doctor-----ML	4
1815	E	Client mother stated they would definitely be attending meetings-----ML	4

Initials/ Signature ML/MLittleton, SNB\_\_\_\_\_

**Actual Patient Problems & Goals**

\*\* This worksheet should be completed after you complete the ATI simulation.

Problem #1: Ineffective Airway Clearance \_\_\_\_\_

Patient Goals:

1. Client will demonstrate understanding of proper sequence and form for percussion, vibration, and postural drainage and when it is necessary \_\_\_\_\_ Met X  
Unmet
2. Client will verbalize understanding of the importance of frequent and effective coughing with each visit.  
\_\_\_\_\_ Met X Unmet

Problem #2: Imbalance nutrition: Less than body requirements \_\_\_\_\_

Patient Goals:

1. Client will verbalize understanding of importance of taking vitamins and pancreatic enzymes \_\_\_\_\_ Met X  
Unmet
2. Client will participate in meal planning by creating lists of foods they like and foods they need to include.  
\_\_\_\_\_ Met X Unmet

Problem #3: Risk for activity intolerance \_\_\_\_\_

Patient Goals:

1. Client will verbally state understanding of when activity participation needs to be stopped due to pulmonary difficulty \_\_\_\_\_ Met X  
Unmet
2. Client will participate in modified activity as necessary due to pulmonary function restrictions. \_\_\_\_\_ Met X  
Unmet

Problem #4: Readiness for enhanced knowledge \_\_\_\_\_

Patient Goals:

1. Client will express desire and interest in furthering disease education with each encounter. \_\_\_\_\_ Met X  
Unmet
2. Client will participate in education and further planning of disease maintenance daily. \_\_\_\_\_ Met X  
Unmet

Problem #5: \_\_\_\_\_

Patient Goals:

1. \_\_\_\_\_ Met   
Unmet
2. \_\_\_\_\_ Met   
Unmet

Patient Resources: School-age children support groups, community support groups for parents, Home Health Nurse, school nurse, primary physician \_\_\_\_\_

Patient Teaching: Disease overview, diet, physical activity, pulmonary therapy, medication knowledge and important of taking all medications as prescribed \_\_\_\_\_

**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 – productive  
Coarse lung crackles  
Wheezing heard throughout  
Hyperactive bowels, loose frothy stools (multiple per day)

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

Contributing Risk Factors  
  
Not following health maintenance program prescribed

Therapeutic Procedures  
Non-surgical  
Percussion, vibration, and postural drainage  
Mucus clearance device  
Diet  
Surgical

**NCLEX IV (7): Reduction of Risk**

Prevention of Complications  
(Any complications associated with the client's disease process? If not what are some complications you anticipate)  
Dietary habits  
Activity related respiratory complications

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

Medication Management  
  
Creon  
Multivitamins  
Levalbuterol  
Azithromycin  
Dornase alfa  
Vitamin E

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

Non-Pharmacologic Care Measures  
  
Percussion, vibration, & postural drainage (Respiratory chest physiotherapy), exercise & physical activity  
Mucus clearance device

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

Stressors the client experienced?  
  
Strenuous physical activity  
Not knowing limitations and signs

**Client/Family Education**

Document 3 teaching topics specific for this client.  
•Overall disease education  
  
•Diet  
  
•Percussion, vibration, & postural drainage  
  
•Medication education

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

Multidisciplinary Team Involvement  
(Which other disciplines were involved in caring for this client?)  
  
Home health nurse, primary physician, school nurse, coach, parents, community support groups

**Reflection Paper**

Directions: Write a 1-page reflection paper for each patient using Times New Roman, 12 pt. font and double-spaced. Include the following:

1. Describe an “Aha” moment you experienced during this learning experience.
2. What were the most important aspects of this simulation and what did you learn?
3. How will this simulation experience impact your nursing practice?

My “Aha” moment would be realizing that I did not know as much about cystic fibrosis as I thought I did.

Although I grew up with a friend, who I was extremely close to, who struggled with cystic fibrosis complications the entire time I knew her. She suffered a lot of complications and spent a lot of time in and out of the hospital, so I did not really get to see her properly manage her disease and did not actually understand what was involved in proper management and maintenance of the disease. I always thought that dealing with this disease would mean a lifetime or being in and out of the hospital. I have learned through this experience that this disease is manageable and that is possible to live with disease and function as normal as pulmonary function allows. Until my research for this experience, I did not realize that clients were living with cystic fibrosis as long as they were living. My friend only lived until her early 20’s and she had a double lung transplant which did allow her to live as long as she did. SO the fact that is possible for CF clients to live on average into their mid to late 30’s is wonderful.

The simulation was a good learning experience for me. It gave me a clearer understanding of the disease and how it can affect all aspects of a life and a family’s life. I have a better understanding of how to manage the disease and how to properly educate a client. Not just educate a client on cystic fibrosis but with any disease. Although, as a nurse disease pathology, management, and medication management are part of routine information for us, it is very overwhelming for clients, especially when it is presented all at once. I liked the way the home health nurse made multiple visits and kept each visit concentrated on certain areas of the disease. I felt like this made it easier for the client and her family to digest the information and have the opportunity. Watching this simulation and watching how the nurse interacted with the client and her family has made me rethink the way I teach my own clients. I will breakdown my teachings into smaller portions and allow time for them to absorb it and think of questions to ask then or at the next meeting. I will start each new education

session with a recap of the previous session to make sure they understand the subject I have covered. I also agreed with making sure the client, although she was 10 years old, was always present for education sessions. Having her participate in her care will really help her be able to manage her disease.