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

Student Name: ____Rita Thompson_____

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
There are 2 lungs. The right lung consists of three lobes and the left lung consists of two lobes. Through the process of breathing, air enters through the oral and nasal cavity which then connects into the pharynx. The pharynx then divides into the esophagus, where food enters, and the larynx, where air enters (known as your voice box). The larynx then connects to the trachea, which is a rigid structure with cartilage. The trachea then splits into two bronchi which split continuously until there is no cartilage. When there is no cartilage, the bronchi are then referred to as bronchioles. Next, the bronchioles then divide into small air sacs called alveoli. Alveoli have very thin membranes and passes with blood vessels. The alveoli play an important role of producing surfactant which keeps the lungs from collapsing. Surfactant is caused by breathing and we could not live without it. Within the body, arteries carry deoxygenated blood from the right ventricle and veins carry oxygenated blood to the left atrium, this plays an important role with respirations. The lungs occupy the entire thoracic cavity except for the mediastinum. The apex and base of lungs may also be referred within the respiratory system. The apex of the lungs is referred to as the narrow, superior portion of each lung. The base of the lung is the area where the lung is resting on the diaphragm. The ribs and sternum play the role of protecting the lungs and heart. The diaphragm is a major muscle of respiration.

NCLEX IV *(7)*: Reduction of Risk

Pathophysiology of Disease
Cystic fibrosis is defined as a generalized dysfunction of exocrine glands that produce mucus. It is an autosomal recessive disorder- child inherits defective gene from both parents with an increased viscosity of mucous gland secretions (in pancreas and lungs) that causes obstructions. There is also an increase in electrolytes in sweat & saliva (up to 2X the amount) (sodium and chloride). As well as, changes in saliva (dry mouth) and changes in the autonomic nervous system. The first sign of CF is meconium ileus, which is thick, excess mucousy stool which then blocks the lumen of the small intestine resulting in a small bowel obstruction. Within the respiratory system a client with CF can exhibit thick pooled bronchial secretions, emphysema (overinflated alveoli), atelectasis (collapsed lung), clubbed fingers, distended chests, dry non-productive cough, and secondary infections. Within the gastrointestinal system a client with CF can exhibit decreased enzymes to digest fat, protein, carbs, stools are large, bulky, loose, foul odor, malnutrition, weight loss/poor weight gain, and a deficiency of fat-soluble vitamins. Within the reproductive system, a client with CF can have a NaCl level 2-5X elevated and decreased fertility. Within the endocrine system, a client with CF can have decreased production of insulin in late stages and a higher risk of diabetes.

During inspiration (air coming into the lungs) the chest expands, rib cage elevates, diaphragm depresses, and the lungs stretch to a larger thoracic volume. During expiration (out of the lungs) the chest is depressed, the lateral dimension is reduced, the rib cage descends, the diaphragm elevates, then letting air out.		

To Be Completed Before the Simulation

Anticipated Patient Problem: impaired gas exchange

Goal 1: will maintain optimal gas exchange as evidenced by having an SpO2 over 93% 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?
Assess O2 q2h	Administer O2
Assess resp rate q2h	Maintain HOB @ 45%
Assess breath sounds q4h	Administer breathing treatments
Assess depth and quality of breaths q2h	Administer Dornase alfa
Assess Hr q4h	Encourage cough and deep breathing exercises
	Encourage CPT

Goal 2: lungs will be clear during my time of care

To Be Completed Before the Simulation

Anticipated Patient Problem: impaired nutrition: less than body requirements

Goal 1: will have a BMI appropriate for age and gender 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?
Assess nutritional status q shift	Provide small frequent meals
Assess appetite q shift	Offer meal replacement shakes
Assess food likes and dislikes during my time of care	Ensure meals are satisfying for the pt
Assess vitamin intake during my time of care	Provide supplements as needed
	Educate on what a well balanced meal looks like
	Provide quiet meal times

Goal 2: will have 6 smaller meals a day, instead of larger meals during my time of care

To Be Completed During the Simulation:

Actual Patient Problem: impaired gas exchange
Goal: Child will have SpO2 above 93% during my time of care
Met: ☐ Unmet:☐
Goal: Lungs will remain clear during my time of care
Met: ☐ Unmet:☐

Actual Patient Problem: impaired nutrition less than body requirements
Goal: Child will have a BMI appropriate for age and gender during my time of care
Met: ☐ Unmet:☐
Goal: Child will eat 6 smaller meals a day during my time of care
Met: ☐ Unmet:☐

Additional Patient Problems: Deficient knowledge, Anxiety

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
1	D1, 0900h	Reported cough that wouldn't go away and got worse when she laid down	0900	Sweat test done and home health referral. Home health nurse Molly to visit and explain diagnosis	0200h	Positive sweat test and home health visit scheduled
2	D2, 1000h	Asked about birth info and health history. Found out she was born at a low birth weight 6lbs 7oz	1030	Follow up visit scheduled to go over diet	1030	Parents pen to scheduling visit and getting more info
1	D2, 1000h	Good lung sounds, course crackles in lungs, coughing everyday by pt, pt stated sometimes hard to breath when she has to run	D3, 1010h	Education on cystic fibrosis with family	1015h	Family acknowledges understanding of cystic fibrosis
2	D4, 1000h	Child is a picky eater, doesn't eat a lot of meat according to parents, child says she doesn't eat a lot	1010h	Education on benefits of eating smaller meals and goes over the foods she likes and dislikes	1015h	Family and child acknowledges the need to eat smaller meals

		of foods				
1	D5, 1500	Increased cough	1505h	Educated on importance of percussion, vibration, and postural drainage 4x/day	1510h	Verbalized understanding
1,2	D7, 1500h	Parents concerned about other health concerns that go with cystic fibrosis	1515	Asked about any other concerns the parents had to make sure all concerns are met	1520	Parents state all information are helpful and they are confident with all the information they have

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

Crackles, decreased appetite, cough that worsens with laying supine and running

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

Contributing Risk Factors

Underweight, history of frequent colds, productive cough

Therapeutic Procedures

Non-surgical

CPT

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)

Malnourishment

Non adherence to treatments

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

Medication Management

-Pancrelipase (Creon) 3 capsules PO with meals, 1-2 PO with snacks
-Aithromycin (Zithromax) 5 mg/kg/day PO at 1200
-Dornase alfa (Pulmozyme) 2.5mg via nebulizer daily
-Levalbuterol (Xopenex) 2.5mg via nebulizer QID
-Vitamin E 400 International Units PO daily
-Multivitamin 2 tablets PO daily

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

Non-Pharmacologic Care Measures

Resp chest physiotherapy

Mucus clearance device

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

Stressors the client experienced?

-Not being able to take the pills well

-having to leave her friends to do treatments

-being worried about not being able to play sports

Client/Family Education

Document 3 teaching topics specific for this client.

- educated on Creon med administration
- educated on how to slow down when getting SOB with activities
- educated on chest physiotherapy

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

Multidisciplinary Team Involvement

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

Home health nurse, school nurse, coach, pharmacy, parents

Patient Resources

Peer 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 from this was learning about cystic fibrosis. I realized that being active in sports is still possible with cystic fibrosis, which I didn't realize before. Also, I learned about how important the family is in the continuation of care and learning about the condition. Having the family involved can help or worsen a situation when there is a chronic condition.
   _____
   _____
   _____

2. What was something that surprised you in the care of this patient?
   __Something that surprised me in the care of this patient was how she was interested in her condition and wanted to learn all about it. I think most kids may not truly have an interest in their health and actually learning about what they need to do to care for themselves.
   _____
   _____
   _____

3. What is something you would do differently with the care of this client?
   The only thing I would do differently with this client would be making sure she had more support and resources to help her learn about and deal with her condition._____
   _____
   _____

4. How will this simulation experience impact your nursing practice?
   _This sim experience will impact my nursing experience because it helped me see more nursing care when dealing with kids. It showed me ways to engage with the child such as letting her play with the stethoscope, having her involved in the conversations and spending a lot of time with her and her family, making them more comfortable. _____

5. Discuss norms or deviations of growth and development that was experienced during the simulation, including developmental stage.
   ___The child is 10 years old, she is school aged and in the concrete operational stage according to Piaget. According to Erikson she is in the industry vs. inferiority stage. I believe she was in this stage because she developed confidence in learning about her condition. According to Kohlberg she is in the law-and-order orientation, she is respecting parental control, she follows the rules and returned home when she was supposed to. _____