ATI Real Life Student Packet
N201 Nursing Care of Special Populations
2024

Student Name: _Destiny K._

ATI Scenario: _Cystic Fibrosis inpatient_

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

The pancreas plays a role in the GI system regarding digestive enzymes. The food starts with physical & chemical breakdown into absorbable material. It begins in the mouth, where food is chewed, mechanically broken down, and mixed with salvia. Saliva contains amylase, which breaks down starches to maltose. The food then moves down to the esophagus, to the stomach, and into the small intestine. In the small intestine, the physical presence and chemical nature of chyme stimulate motility and secretion. Enzymes are secreted from the pancreas, bile from the liver, and enzymes of the small intestine. In this system, the pancreas secretes Amylase (breaks starches to disaccharides), chymotrypsin (protein digestion), lipase (fat digestion), and trypsinogen (protein digestion).
Respiratory – this system is divided into two parts upper and lower respiratory tracts. The upper tracts include the nose (Turbinate increases the surface of the nasal mucosa that warms and moistens the air that enters), mouth, pharynx (Connected to the nasal cavity, is a tubular passageway that is divided into the nasopharynx, oropharynx, and laryngopharynx – allows are to move down to the epiglottis), epiglottis (A small flap behind the tongue that closes of the larynx during swallowing to prevent liquids and solids from entering the lungs), larynx (Vocal cords and allows air to pass through the opening between the vocal cords - Glottis), and trachea (Divides into the right and left mainstem bronchi at the carina and is a cylindrical tube). Pass the carina is where the lower respiratory tract begins -> bronchi (mainstem bronchi subdivide several times to form the lobar, segmental, and subsegmental bronchi), bronchioles (Further division of the bronchi form this, most distant bronchioles are the respiratory bronchioles, they are encircled by smooth muscles that constrict and dilate), alveolar ducts, and alveoli (Primary site of gas exchange). All lower airway structures are

NCLEX IV *(7)*: Reduction of Risk

Pathophysiology of Disease

By discovering the cystic fibrosis transmembrane conductance regulator (CFTR) gene, researchers have determined that this is a multisystem disease.
CF – A condition that is characterized by exocrine or mucus-producing gland dysfunction that produces multisystem involvement, specifically the pulmonary and digestive systems. Children with CF demonstrate decreased pancreatic secretions of bicarbonate and chloride and an increase in sodium and chloride in both saliva and sweat (Sweat abnormality is present from birth throughout life and is unrelated to the severity of this disease. The primary factor that is responsible for the manifestations of this disease is the mechanical obstruction caused by the increased viscosity of mucous gland secretions (instead of thin, free-flowing the mucous glands produce thick mucoproteins that accumulate and dilate them).
In the pancreas, thick secretions block the ducts leading to pancreatic fibrosis caused by cystic dilation. The blockage prevents essential pancreatic enzymes from reaching the duodenum, resulting in impairment in the digestion and absorption of nutrients. Malabsorption results in bulky stools that are frothy from undigested fats.
Pulmonary complications are present in almost all CF patients. Symptoms are produced by the stagnation of mucus in the airway. The abnormal thickness of secretions is difficult to pass and gradually obstructs the bronchi and bronchioles. The stagnation of mucus is the perfect breeding ground for bacteria and recurrent infections cause progressive damage to the airway.

found in the lungs besides the mainstem bronchi. The trachea and bronchi act as the pathway of air to conduct gas exchange to and from the alveoli.		

To Be Completed Before the Simulation

Anticipated Patient Problem: Ineffective airway clearance

Goal 1: Pt. will maintain a patent airway as evidenced by normal breath sounds and an O2 saturation of 95-100% 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?
Auscultate and note lung sounds at least 2 times per care day.	Encourage the use of an incentive spirometer q1 hr.
Assess the ability to effectively excrete mucous independently at the beginning of the care day.	Involve respiratory therapy for chest physiotherapy q 4 hrs, prn
Assess oxygen saturation q 4 hrs, prn	Position the pt. in an upright position to promote full lung expansion when O2 is below 95%
Assess sputum color at least once per care day.	Notify the provider if the color is yellow or green colored.
Assess for adequate hydration at the beginning of the care day	Encourage the intake of fluids and educate on the effects it has on thinning mucous q 2 hrs
Assess mental status and loc q 4 hrs, prn	Apply O2 during episodes of significant hypoxia

Goal 2: Pt. will be able to demonstrate techniques to facilitate clearance of mucous during my time of care.

To Be Completed Before the Simulation

Anticipated Patient Problem: Risk for infection

Goal 1: Pt. temperature will remain between 36 -37 degrees Celsius, with an HR of 60-100 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 for an elevation in temperature, tachycardia q 4hrs, prn	Educate on the importance of proper hand hygiene since already at an increased risk once per care day
Assess sputum the quality of sputum being coughed up q 2 hrs	Implement contact and isolation precautions dependent on the results of the culture
Assess the ability to effectively clear sputum at the beginning of the care day.	Encourage exercise as tolerated at least 2 times per care day.
Assess WBC q 8 hrs, prn	Administer an antibiotic as ordered.
Assess characteristics of cough 2 times per care day	Encourage adequate fluids to prevent stasis of mucus q 3 hrs, prn
Assess nutritional status at the beginning of the care day	Educate on the importance of the intake of adequate protein and calorie-rich foods to support immune response at least once per careday

Goal 2: Pt. WBC will be between 5000 -10000/mm3 by the time of discharge.

To Be Completed During the Simulation: I used the times I came across it

Actual Patient Problem #1: Ineffective airway clearance (1)
Goal: Gary's O2 will remain at or above 95% on RA during my time of care. Met: ☐ Unmet:☐
Goal: Pt. will be able to cough up some mucous by the end of my care day. Met: ☐ Unmet:☐

Actual Patient Problem #2: Risk for infection (2)
Goal: Pt. temperature will remain between 36 -37 degrees Celsius and HR between 60- 100 by the end of my care day. Met: ☐ Unmet:☐
Goal: Pt. will not experience green-colored sputum during my time of care. Met: ☐ Unmet:☐

Additional Patient Problems:
#3 Imbalanced nutrition: less than body requirement (3)
#4
#5
#6

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	0840	Non-productive cough, and wheezes present in posterior and anterior lung fields upon auscultation, RR 26, O2 95% on RA	0920	Administration of albuterol 0.83% unit complete by respiratory therapy and chest physiotherapy complete	0923	A lot of mucus plugs present, still coughing but not effective, and a decreased amount of wheezing present on auscultation.
2	0840	WBC is 19, Temp. 37.9 c, HR 96, BP 106/67, positive Burkholderia cepacia	0845	Contact precautions and isolation precautions started.	0905	Gary and his parents understood the importance of these precautions and no one else was showing signs of infection.
			0850	Administered Tobramycin 90mg IV bolus	0855	IV infusion has ended and another IV infusion was ordered.
			0900	Administer Gentamicin 130mg IV bolus	0910	Infusion is running at 220ml/hr into the PICC line with drops successfully dropping, RR 24/ BP 110/64, HR 94, Temp 37.9
2	0850	Provider ordered Zosyn but Gary is allergic to cephalosporins	0855	Provider placed piperacillin tazobactam on hold	0900	Zosyn was not given, no allergic reaction, another antibiotic given
3	Late	PEF tube in place	0929	Administered the	0934	Request real food

	entry (0917) 0840	for feeding due to inadequate weight maintenance		enteral feeding pancreaze		and wants it as soon as possible
1	0923	Reported that at home he skips his treatments	0924	Educated on the importance of doing the treatments on a regular basis	0947	The simulation ended without showing an understanding of needing to complete the treatment.
2	0932	Reports that sputum is green in color	0933	Obtain a sputum culture	0947	The simulation did not have results present
3	0934	Requesting real food	0936	Administered pancrelipase 6 capsules	0942	Gary ate his dinner after successfully taking the medication

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

WBC 19, Radiology -> bilateral peri bronchial thickening noted with a mild lower lobe opacity

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

Signs and Symptoms

Wheezing, below-average growth (61 in) and weight (95lbs) for his age, not having an appetite.

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

Contributing Risk Factors

Both parents have the abnormal gene

NCLEX IV *(7)*: Reduction of Risk

Therapeutic Procedures

Non-surgical

Chest physiotherapy

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)

Respiratory infection -Burkholderia cepacia

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

Medication Management

Albuterol, Enteral feedings, Pancrelipase, Gentamicin, tobramycin

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

Non-Pharmacologic Care Measures

HOB remains in an upright position and fluids remain on the bedside table within reach, deep breathing

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

What stressors did the client experience?

Parents -> worried about the chances of a second child having cystic fibrosis,
Being hospitalized again

Client/Family Education

Document 3 teaches topics specific to this client.

- The need to do treatments at home regularly
- The need to eat a high-calorie, high-protein, and well-balanced meal.
- Taking the pancrelipase 10 min before meals to help with the absorption of nutrients

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

Multidisciplinary Team Involvement

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

Nurse, provider, respiratory therapist, Dietitian, AP

Patient Resources

Peer groups to find kids his age that deal with the same thing, physiotherapy equipment if they do not already have it.

Reflection Questions

Directions: Write a reflection including the following:

1. What was your biggest "takeaway" from participating in the care of this client?
   __The biggest takeaway from participating in the care of this client is that not only is the client affected by this but also the parents. The reason I say this is because they are the ones who come to the hospital whenever their child is admitted. They also have to deal with the fact that they can pass this on to another child when they choose to have another. __

2. What was something that surprised you in the care of this patient?
   One thing that surprised me in the care of this patient is that he received enteral feeding but also was allowed to eat regular food. I did not understand but now makes sense since his body hasn't been absorbing the needed nutrients the enteral feeding allows for the essential nutrients to be absorbed effectively.

3. What is something you would do differently with the care of this client?
   Something that I would have done differently with the care of this client is go back in and educate about the need to do treatments at home after the respiratory therapist educated them on it and potentially get another lab draw to see if there was any change in the white blood cells.

4. How will this simulation experience impact your nursing practice?
   _This simulation experience impacted my nursing practice by stressing the importance of involving other people on the care team. This is because if we had never reached out to the respiratory therapist then the wheezing would have gotten worse. Also, we always need to cross-check medications with the allergies the patients have because if not then we could throw a pt. Into anaphylaxis. _

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

   _The pt. was able to put his emotions into perspective for the nurse to understand. He was also able to put the situation of the event into his own words without the help or input of his parents. He was able to adapt to needing to be in the hospital as this is not his first time and he could use some of the same strategies to get through this stay as he did the last time which shows he is building resilience. His growth and weight are below average for his age range and he is more lining up with someone who is a few years younger than him. This 15-year-old male is in his middle adolescent stage of life. _