Pediatric Nursing - A Case-Based Approach 2nd edition Tagher Solutions Manual

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Suggested Answers to Assignments, Chapter 2, Mollie Sanders: Asthma

Written Assignment(s)	Learning Objective(s)
1. Students' answers should include the following: • Possible triggers for asthma include respiratory infections, allergens, irritants, exercise, and cold air. • In the stoplight asthma action plan, the intervention for the green zone is the administration of maintenance medications (which might include leukotriene receptor antagonists, anti-inflammatories, and/or long-acting bronchodilators). Interventions for the yellow zone might include the addition of oral corticosteroids and/or administration of quick-relief medications (such as a short-acting bronchodilator). Interventions for the red zone include seeking emergency care and administration of quick-relief medications (such as short-acting bronchodilators).	6

Group Assignment(s)	Learning Objective(s)
1. Students' responses should include an argument for or against the use of asthma action plans in the clinical setting. Pros include a clear algorithm for decision making, prompt recognition of changes from baseline respiratory status, and improved communication between the healthcare providers and caregivers. Cons include increased rates of hospitalization, higher costs,	7

Group Assignment(s)	Learning Objective(s)
and greater medication usage.	
2. Students' drawings should include airway inflammation, airflow obstruction, and airway hyperresponsiveness. Additionally, the students should show mast cells, epithelial cells, macrophages, and eosinophils in their drawings. The differences in the pediatric respiratory system include smaller lung capacity, higher branching of the mainstem bronchus, more cartilage in the trachea, smaller or narrower airways, smaller bronchioles, and fewer alveoli.	3, 5

Clinical Assignment(s)	Learning Objective(s)
1. Students' responses should include the following: • School nurses are responsible for implementing asthma action plans for all students who have asthma. • School nurses should have a peak flow meter and should be able to demonstrate appropriate use to students with asthma. • School nurses are responsible for identifying when students are in respiratory distress and for recognizing when the student should be transferred to the emergency department. • School nurses are responsible for administering medications, including inhalers. They should be able to observe patients as they use their inhaler and should intervene to reteach when necessary.	4, 8

Web Assignment(s)	Learning Objective(s)
1. Students' responses should include the following: • Developmental milestones for middle-aged children include increased independence, thinking about the future, focusing on friendships and teamwork, and a desire to be liked by peers. Middle-aged children also show rapid development of mental skills, demonstrate empathy, and learn ways to talk about thoughts and feelings. • Possible anticipatory guidance points include using a booster seat, wearing a helmet, using protective gear while playing sports, developing a fire plan, increasing awareness of street safety, increasing awareness of water safety, increasing awareness of firearm safety, and monitoring for bullying.	1, 2

Assignments, Chapter 2, Mollie Sanders: Asthma

Written Assignment(s)	Learning Objective(s)
1. Develop an asthma action plan for a 9-year-old child. Identify possible asthma triggers, interventions, and appropriate medications based on peak flow meter performance.	6

Group Assignment(s)	Learning Objective(s)
1. Break into two groups and research the pros and cons of utilizing asthma action plans. Stage a debate, where half of the class represents the "use asthma action plan" viewpoint and the other half represents the "no asthma action plan" viewpoint.	7
2. Break into groups of two to three students and work together to draw out the pathophysiological changes that occur with asthma. Discuss how these changes, combined with the pediatric respiratory system, can quickly lead to respiratory distress.	3, 5

Clinical Assignment(s)	Learning Objective(s)
1. Shadow a school nurse and observe the treatment of students with asthma. Write a paper describing how the	4, 8

Clinical Assignment(s)	Learning Objective(s)
school nurse impacts asthma control in the school-age population.	

Web Assignment(s)	Learning Objective(s)
1. Visit the Centers for Disease Control and Prevention website on middle childhood at: https://www.cdc.gov/ncbddd/childdevelopment/positiveparenting/middle.html • Review the developmental milestones for middle childhood and write a paragraph describing how these milestones could be assessed in an 8-year-old child. • Develop a teaching plan for the caregivers of an 8-year-old child. Include at least three anticipatory guidance points in the teaching plan.	1, 2

Answers to Think Critically Questions, Chapter 2, Mollie Sanders: Asthma

1. Airway inflammation, airflow obstruction (bronchospasm), and airway hyperresponsiveness occur when a patient comes into contact with an asthma trigger. Hypersecretion of mucus, bronchial swelling, and airway muscle constriction occur. The child cannot inhale or exhale fully and has air trapping. Airway inflammation and constriction can result in symptoms such as wheezing, coughing, chest tightness, and shortness of breath.

2. Common triggers of asthma in the home include: pet dander, dust, smoke, plants, and mold. Discuss removing carpet from bedrooms and keeping toys clean to reduce dust accumulation. Pets should be kept out of bedrooms. Avoid smoking in, around, or near the child and their living area. Smoke on clothes can trigger asthma, so even if caregivers smoke outside, this can still trigger an attack. Houseplants should be avoided. Keep homes in good repair and avoid standing water or damp areas where mold can grow.

3. Albuterol is a bronchodilator and is used to help open up constricted airways. Methylprednisolone is a corticosteroid and is used to help reduce inflammation in the airways. During an acute asthma exacerbation, both constriction and inflammation are present, restricting adequate air entry in to the lungs.

4. Assessment findings in a child who has worsening asthma include: feeling tightness in the chest or being unable to breathe, decreased aeration to the lung fields, increased wheezing, increased coughing, increased need for oxygen, increased tachypnea with short, shallow breaths. A changing neurological status from awake and alert to sleepy and lethargic is also an indicator of worsening gas exchange. A change in the child's position (sitting upright, leaning forward) can also indicate distress.

5. A peak flow meter is used to help monitor lung function. It measures how well air moves in and out of the lungs, particularly the amount and rate of air flowing out of the lungs. It is not used to diagnose asthma or to determine how severe asthma is. Peak flow meters can be used for short-term and long-term monitoring.

Suggested Answers to Case Study, Chapter 2, Mollie Sanders: Asthma

Note: The answers presented here are for a supplemental case study to this chapter and feature different individual(s) than the case study in the chapter.

1. The nurse would expect to see the following assessment findings:
    - Intercostal retractions
    - Prolonged expiratory phase
    - Shortness of breath
    - Wheezing
    - Dyspnea
    - Increased respiratory rate
    - Cough
    - Low oxygen saturation levels

2. Possible asthma triggers in this case include the following:
    - Recent respiratory infection (bronchitis)
    - Exposure to pet dander and furred animals
    - Exposure to tobacco smoke
    - Possible third-hand exposure to cleaning products from her mother's clothing
    - Exercise
    - Cold weather

3. The nurse would plan to implement the following treatments for asthma:
    - Administration of bronchodilators(given as nebulizers or inhalers), corticosteroids, and/or leukotriene receptor antagonists
    - Administration of supplemental oxygen (as needed)
    - Monitoring closely for signs of respiratory distress

4. Warning signs of respiratory decompensation include the following:
    - Feeling of "tightness" in the chest
    - Feeling of being "unable to breathe"
    - Decreased aeration to lung field
    - Increased wheezing
    - Increased coughing
    - Increased need for oxygen
    - Increased lethargy
    - Increased tachypnea with short, shallow breaths

Case Study, Chapter 2, Mollie Sanders: Asthma

Note: The case study presented here is a supplemental case to this chapter and features different individual(s).

The nurse is caring for Ella Smith, a 10-year-old child who is being admitted to the pediatric respiratory unit with an asthma exacerbation. While asking the admission questions, the nurse learns that Ella lives at home with her mother (who smokes tobacco and works as a housekeeper) and her 15-year-old brother. Ella has two pet dogs and one pet cat. The nurse reviews Ella's home medications and learns that Ella was started on antibiotics for bronchitis last week. The nurse asks Ella when she noticed her asthma getting worse, and Ella states, "I was playing soccer in the cold today, and I had to stop because I couldn't catch my breath. Even after taking my inhaler, my chest still felt very tight." After completing the admission questions, the nurse begins her admission assessment. (Learning Objectives: 4, 5, 6, 7, 8)

1. What findings would the nurse expect to see when assessing Ella?
2. What possible asthma triggers did the nurse identify when asking the admission questions?
3. What treatments would the nurse plan to implement for Ella?
4. What warning signs should the nurse monitor Ella for to identify respiratory decompensation?

Suggested Answers to Discussion Topics, Chapter 2, Mollie Sanders: Asthma

Discussion Topics	Learning Objective(s)
1a. Students' answers should include the following: • Hospitalization affects psychological development and possibly creates a delay in meeting Erikson stage of initiative vs. guilt. • Hospitalization affects social development because children are not able to interact with their friends and peers. • Children can often feel afraid, frightened, and anxious. They might regress or cry to express these feelings. 1b. Students' answers should include the following: • Nurses can use pediatric-appropriate medical equipment such as colored oxygen delivery devices, characters on stethoscopes, colorful stickers on the walls, and pediatric-sized equipment. • Nurses should sit down next to the patients so that they seem less intimidating. 1c. Students' answers should include the following: • The nurse could offer crayons and paper, crafts, paint, movies, puzzles, games, or books.	1, 8
2a. Students' answers should include the following: • Caregivers likely experience guilt and might question whether they could have done something to prevent the hospitalization. • Caregivers likely experience fear of the unknown and are worried about what will happen to their child. • Caregivers might worry about finances, including how they will pay for the hospitalization and how they will cover the lost income from staying with their child. • Nurses can offer emotional support and communicate therapeutically with caregivers. Incorporating caregivers into care planning and including social work or care coordination could also improve family experiences. 2b. Students' answers should include the following: • This child is presenting with symptoms of moderate and severe respiratory distress. The moderate respiratory distress symptoms include: increased respiratory rate, moderate retractions, nasal flaring, and forward posture. • The cyanosis is a symptom of severe respiratory distress.	4, 7
3a. Students' answers should include the following: • Respiratory therapy will be working closely with this patient to adjust the nebulizer treatments and oxygen levels. They will also complete focused respiratory assessments to determine the level of respiratory distress. • Case management will likely work with this patient due to their frequent admissions. Case management can work with	2, 8

Discussion Topics	Learning Objective(s)
the child and caregiver to develop a plan to prevent frequent readmissions. • The physicians and advanced practice providers are part of the multidisciplinary team and are responsible for assessing the patient and ordering appropriate interventions. 3b. Students' answers should include the following: • Multidisciplinary rounding is a great way to enhance communication among the care team. All disciplines round together to discuss the patient's case, identify any needs, and adjust treatment plans. • Documentation is also essential for coordination of care. Thorough documentation, and review of the documentation, allows care team members to stay updated on the patient. 3c. Students' answers should include the following: • Before being discharged, the nurse should review asthma triggers, asthma medications, use of inhaler and/or spacer, use of peak flow meter, when to call the provider, and a plan for returning to school.	

Discussion Topics, Chapter 2, Mollie Sanders: Asthma

Discussion Topics	Learning Objective(s)
1. A 7-year-old child is admitted to the hospital with an asthma exacerbation. The child is tearful and anxious, and reports fear of the new environment. a. What impact can hospitalization have on school-age children? b. How can you adapt your practice to make the hospital environment more welcoming for this child? c. What are some developmentally appropriate activities that you can plan for this child?	1, 8
2. An 8-year-old child presents to the emergency department with respiratory distress. The child is leaning forward, gasping for air, and appears mildly cyanotic. The caregiver is tearful and pacing around the room. a. What effect does hospitalization have on the caregiver? What strategies can you use to mitigate this effect? b. With what level of respiratory distress is this child presenting? What treatments will you immediately implement?	4, 7
3. A 10-year-old is admitted to the hospital with asthma exacerbation. This is the child's fourth admission for asthma exacerbation in the past month. The child has been stabilized with continuous nebulizer treatments. a. Identify some multidisciplinary team members who might work with the nurse to care for this patient. b. How can the nurse ensure communication among the members of the care team? c. What teaching points should the nurse cover before the patient is discharged?	2, 8