

Respiratory System Case Study

Tim's Case: Ominous Signs?

OVERVIEW:

Four-year-old Tim has developed some strange new physical health symptoms. Alone, none seem too concerning, but together they must be taken seriously. Can you determine whether Tim is facing a benign or serious illness? Can you help develop a treatment plan to help him?

GOALS:

1. Identify **objective** data to gather in order to make a diagnosis.
2. Create an aligned, thoughtful, and evidence-based **plan**.

ROLE:

You are a team working at a comprehensive pediatrics primary care clinic. Some of the roles on your team include: a Pathologist, Geneticist, General Pediatrician, Physician Assistant (PA), Nurse, a Respiratory Therapist, and a Child Psychiatrist.

OBJECTIVE:

Obj. 14.6: Identify the structures, functions, and pathophysiology of the respiratory system.

DELIVERABLE:

- 1) SOAP Note
- 2) Post-Assessment Questions

ASSESSMENT CRITERIA:

Objective & Assessment Sections: 1) one or more tests or labs is run in order to provide evidence for/against a diagnosis; 2) test or lab to collect objective data is explained clearly and results are interpreted logically

Plan Sections: 1) comprehensive (includes physical, social & mental health); 2) aligned to facts of the case; 3) evidence-based; 4) addresses short- & long-term



Case Study Steps:

- _____ 1. Review the coversheet information. Assign team roles.
- _____ 2.. Read the case information and fill out the SOAP note.
- _____ 3. Research possible conditions or diseases.
- _____ 4. Determine one or more lab/tests to gather objective data.
- _____ 5. Complete the Assessment and Plan for the patient.
- _____ 6. Complete the *Post-Assessment Questions*.

Health Care Provider Roles:

Determine the role of each team member. Then work together to determine what focus area you will be in charge of in Tim's case.

Team Member	Role	Specific Focus Areas

Case Information:

Jane brings in her four-year-old named Tim to a comprehensive pediatrics clinic in order to assess his health status. Jane reports that Tim is very curious and smart and gets along socially with other children. Jane says that Tim's preschool teacher suggested she take him into the doctor for a health screening, because she has noticed his stools looking oily when he uses the bathroom.

Patient History:

Tim's mother Jane is a former drug user and has no family in the area. For these reasons, along with the socioeconomic status of his household (below the poverty line), Tim had a difficult first few years of life. However, recently his mom got help from social services and has been drug-free for six months. They are living in a new rental home and Tim is adjusting well to his new living situation, but is still struggling at school. He recently had several accidents and so they temporarily put him in pull-up diapers. He has also shown to be hesitant in engaging in physical activity and seems more tired and exhausted than a typical four-year-old should be.

Measurements & Vital Signs

Age: 4.5 yrs

Height: 3 ft. 7 inch

Weight: 32 lbs.

Pulse: 108 bpm

Respiratory Rate: 30 breaths/min

Temperature: 99.1 degrees F

Blood pressure: 100/55 mmHg

Physical Exam:

General appearance: Good-natured, active, secure

Ear, Nose & Throat: Runny nose. Ears do not show sign of infection

Abdominal: Normal; no pain reported upon touching

Neuro: Normal

Respiratory: Cracking/wheezing sounds; slight cough

Cardio: Normal

Nails: Nails normal in color but nail beds are slightly curved

SOAP Note

Subjective:	
Signs & Symptoms	
Allergies	
Medications	
Past medical history	
Last oral intake	
Events leading to injury or illness	
Frequency	
Associated Symptoms	
Radiation	
Character	
Onset	
Location	
Duration	
Exacerbating Factors	
Relieving Factors	

Objective:

Measurements	
Vital Signs	
Exam Results	
Lab Results	

Research:

Team Member	Possible Diseases	Notes

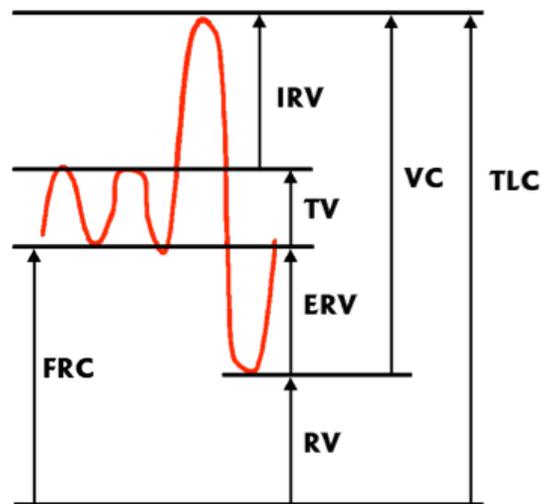
Assessment:**Summary****Differential Diagnoses****Final Diagnosis***Claim (Diagnosis):**Evidence:**Reasoning:***Plan:****Steps of Plan**

(Consider mental, social and physical health; short- and long-term needs, and follow-up care required)

Post-Assessment Questions:

1. What does a spirometer measure? How does it work? Who would it be used on?

2. Explain the diagram on the right. What does each component represent?



3. What are the main functions of the respiratory system? Which are currently or may be in the future compromised in Tim?

4. Describe normal developmental changes in the respiratory system?

5. Name & describe a few of the most common respiratory illnesses to affected children and teenagers.