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Tuberculosis is one of the oldest diseases known to man and one of the leading causes of infections and death to adults in the world. The countries with the highest rate of TB are Russia, China, India, Sub-Saharan and Pakistan. Traveling to these countries puts you at higher risk. People with compromised immune systems are at the highest risk. TB is highly contagious and spread by droplets from sneezing, coughing or laughing. Droplets that are inhaled must travel down to the lungs and attach itself. However, TB can stay inactive and the person will not be contagious until their immune system becomes weak and the bacteria activates. Once activated symptoms can show up within a few weeks. Symptoms usually begin with a productive cough that lasts several weeks and produces yellow or green sputum. Coughing up blood, weight loss, fever, chills, nighttime sweating and malaise are all symptoms. The earlier treatment begins the better the prognosis.

COPD, chronic obstructive pulmonary disease is two different types of pulmonary diseases emphysema and bronchitis. Early intervention is key to living with COPD. Changes in the air passages of those with COPD are clogged passages due to excess mucus, inflammation or thickening of the airway passages, damaged alveolar walls and alveolar walls and air passageways losing their elasticity. With emphysema, the damage is to the alveolar walls. They lose their shape losing surface area. In bronchitis, the airways are clogged with mucus or phlegm due to chronic inflammation. COPD is caused by inhaling pollutants such as first and secondhand smoke, fumes, chemicals, and dust in workplaces. Smoking is the number one cause. COPD is generally treated with smoking cessation, medications to treat symptoms such as bronchodilators, inhaled steroids, as well as other anti-inflammatory drugs.

Obstructive sleep apnea is when you stop breathing while sleeping due to an obstruction caused by fat storage in back of the throat. During the blockage, O_2 begins to drop, the brain wakes up and opens the airway back up then once asleep the O_2 drops again. Things that make it worse are sleeping supine, REM sleep. Risk factors are being male, obesity, race, nasal obstruction, and genetic factors and age.

Pneumonia is a condition when the alveolar sacks become filled with puss or fluid making it difficult to breath. Most healthy persons get over pneumonia quickly without complications. However people that are under the age of 2, over the age of 65, regular smokers and those with weakened immune systems have a more difficult time. Pneumonia is classified by the location of the pneumonia and how it was acquired. Signs and symptoms can vary but usually include coughing with or without sputum, chest pain, muscle pain, n/v , diarrhea cyanosis and wheezing. Sputum tests and chest x rays are used to diagnose. Treatments include antibiotics, antiviral if its viral.

Chest tubes are inserted into the pleural space to remove air or fluid. It can also be inserted into the mediastinum space to drain fluid from around the heart after cardiac surgery. Reasons for needing a chest tube are pneumothorax, pleural effusion, hemothorax, empyema, and chylothorax. Types of drainage systems are wet suction and dry suction. Wet suction has 3 chambers, a drainage chamber, a wet seal chamber and a suction control chamber as well as an air leak monitor. Wet suction is regulated by the height of the water. You will be able to hear suctioning and see bubbles. Dry suction used a dry suction monitor bello that balances the wall suction. There is no water attached to it. Dry suction has higher suction options than the wet suction. If you have a patient with a chest tube its very important to monitor the patients respiratory status very closely, the monitor itself and how to trouble shoot if something goes wrong. A few things to remember are that the drainage system must be kept below the patient. Connections should always be sealed and draining and document all drainage very carefully.