

4 Video Reflection

1) Tuberculosis is an infectious disease caused by the bacteria *Mycobacterium tuberculosis*. It is an infection that begins in the lung tissue and can find its way to other parts of the body, including brain, kidney and bones. It is one of the oldest diseases known to man, and is one of the leading cause of infection and death in adults. A remarkable one third of the world's whole population is infected with TB. We saw a decline in TB numbers until around the mid 1980's when HIV first popped up on the scene and also when drug-resistant strains of *M. tuberculosis* first became known. TB is also the leading cause of mortality in patients with HIV infection. Although there is a steady decline in cases in the US, we do not think that it is going to be possible to eradicate the disease completely. There is a vaccine that is available for the disease, and it is called the *Bacille Calmette-Guerin Vaccine*. It is a live strain of *Mycobacterium bovis*. The vaccine is given to infants in parts of the world with a high prevalence of TB - Africa, Western Pacific, Southeast Asia, ect. TB is spread from person to person by airborne droplets expectorated when breathing, talking, singing, sneezing, and coughing. Airborne droplets can last in the air from minutes to hours. The other person inhales the bacteria and then becomes infected.

2) COPD - Chronic Obstructive Pulmonary Disease, is a term that is used for two different lung diseases, which hinder breathing by limiting airflow and becoming severe over time. According the Center for Disease Control CDC - COPD is the 4th leading cause of death in the US. In the US over 24 million people are affected by COPD and a majority don't even know they have it. Early screening is key to diagnosing someone with COPD before major loss of lung function occurs. Emphysema and Chronic bronchitis are the two lung diseases in the category of COPD. With emphysema damage is done to the alveolar walls. This reduces the total surface area for gaseous exchange to happen. In the case of Chronic Bronchitis the lining of the air passages are clogged with mucous or phlegm due to chronic inflammation. Smoking is the most common cause of COPD. Emphysema is "pink puffer" and Chronic bronchitis is "blue bloater". The damage is irreversible.

3) There are a few types of pneumonia 1) Hospital Acquired Pneumonia HAP 2) Community Acquired Pneumonia CAP 3) Ventilator Associated Pneumonia VAP. There is also a chance of a pt acquiring aspiration pneumonia. This is when fluid or maybe even some solids get into the respiratory tract and cause bacteria to grow. Bacteria are the main causes of pneumonia in adults and is commonly caused by *streptococcus pneumonia*. Sputum and blood test will be done to identify the organism. But a chest-ray is the main diagnostic tool for this disease. Antibiotics should be given within 6hrs of the diagnosis of pneumonia.

4) Chest tubes are tubes that are placed in the plural space to remove air/fluids to help re-expand the lungs. The reasons why a pt might need a chest tube is from a pneumothorax- which is where the lung collapses. There is also something called a pleural effusion which is where there is fluid in the pleural cavity. Hemothorax - is when blood enters the pleural space, either from trauma or from a disease like TB. There are two different types of Chest tube systems, there are Wet and Dry. The Wet suction is regulated by the height of water in the

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suction control chamber, you will hear and see bubbling. The Dry wall suction has no water control chamber but is controlled by the suction monitor below. When a pt has chest tubes, respiratory assessments are very important. The drainage system itself needs to be below the incision site. If the tube happens to come out of the pt, we need to tape 3 sides and let one side be uncovered so the lung can ventilate.