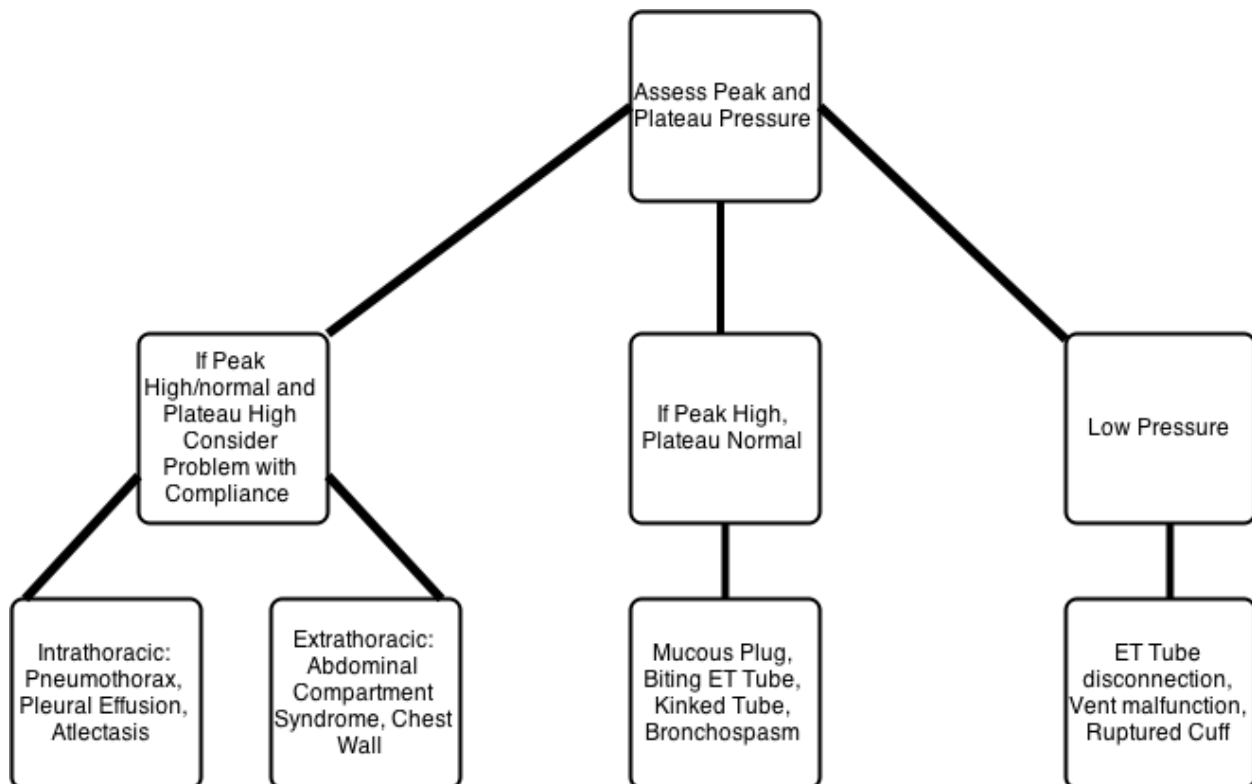


### The Ventilator Alarm

In a busy Emergency Department, physicians are bombarded with alarms and a multitude of tasks. We often become numb to the yelling, the noise, beeping from the various monitors on our patients. However, one alarm that we simply can't ignore is the alarm coming from the ventilator. I will submit a stepwise algorithmic approach to the ventilator alarm for the ED clinician in regards to evaluation of the pressure alarm on the ventilator.

It is important to note the difference between Peak Pressure and Plateau Pressures and how they are attained. In assist control, volume control mode, the Peak Pressure is the airway pressure at the end of lung inflation and represents the amount of pressure needed to overcome the resistive and elastic forces in the lungs and chest wall. Plateau Pressure eliminates the resistive component of peak airway pressure—this is accomplished by the “inspiratory hold” maneuver. This plateau pressure tells the observer what the airway pressures are at the alveoli.

Knowing the above definitions, it is important to evaluate both when the ventilator alarm sounds. Assuming the patient **IS NOT** currently crashing where one would need to consider the **DOPES mnemonic (Displaced ET Tube/Cuff, Obstructed Tube, Pneumothorax, Equipment malfunction, Stacking)**, one can follow a stepwise algorithm for the evaluation of peak and plateau pressure in these patients.



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