

Pulmonary Embolism: also referred to as a “PE”

- **What is a Pulmonary Embolism?**

Pulmonary embolism is a blockage in one of the pulmonary arteries in your lungs most likely caused by blood clots. These blood clots most often form in leg veins, but can also start in the arm veins or in the right side of the heart. Because these clots block blood flow to the lungs, pulmonary embolism can be life-threatening [3,5].

- **What are the symptoms of Pulmonary Embolism?**

The most common symptom of a pulmonary embolism is shortness of breath and may be gradual or sudden [11].

Other symptoms of a pulmonary embolism include:

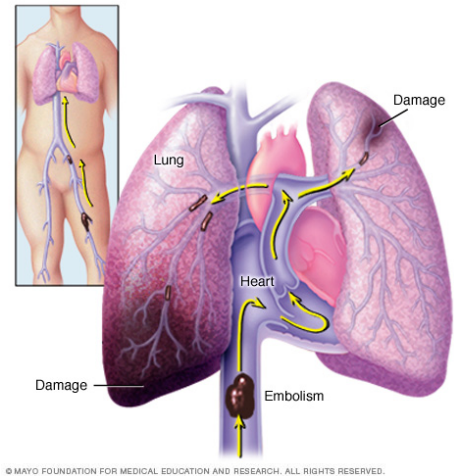
- anxiety
- clammy or bluish skin
- chest pain that may extend into your arm, jaw, neck, and shoulder
- fainting
- irregular heartbeat
- lightheadedness
- rapid breathing
- rapid heartbeat
- restlessness
- spitting up blood
- weak pulse

- **What is the cost of Pulmonary Embolism?**

Studies have estimated that more than one million people in the United States are affected by pulmonary embolism per year, with 100,000 to 200,000 of these events being fatal (5,9). “Up to 25% of patients with pulmonary embolus may experience sudden death, in which the patient collapses, stops breathing, and their heart stops beating (cardiac arrest) without prior symptoms [5]. “

- **What tests are used to diagnose Pulmonary Embolism?**

- Computed tomography (CT) scan
- Lung scan
- Blood tests (including the D-dimer test)
- Pulmonary angiogram
- Ultrasound of the leg -- helps to identify blood clots in patients who cannot have an X-ray due to dye allergies or who are too sick to leave their hospital room
- Magnetic resonance imaging (MRI) of the legs or lungs



- **What is the treatment for Pulmonary Embolism?**

Blood thinners (anticoagulants) and/or Clot dissolving (thrombolytics) medications
According to the [Mayo Clinic](#), the following surgical procedures could be used to treat Pulmonary Embolism [3].

- **vein filter:** Your doctor will make a small incision, then use a thin wire to install a small filter in your inferior vena cava. The vena cava is the main vein that leads from your legs to the right side of your heart. The filter prevents blood clots from traveling from your legs to your lungs.
- **clot removal:** A thin tube called a catheter will suction large clots out of your artery. It isn't an entirely effective method because of the difficulty involved, so it's not always a preferred method of treatment.
- **open surgery:** Doctors use open surgery only in emergency situations when a person is in shock or medications aren't working to break up the clot.

- **What does the Pulmonary Embolism (PE) mean to Hospitals?**

Pulmonary Embolism (PE) is common in the United States and leads to $\geq 100,000$ deaths each year [7].

"The third most common cardiovascular disease after heart attack and stroke" (Society for Vascular Surgery) [4] and the second leading cause of sudden death, behind coronary artery disease according to Benjamin Wedro, MD, FACEP, FAAEM [5].

- **How can Zipit help?**

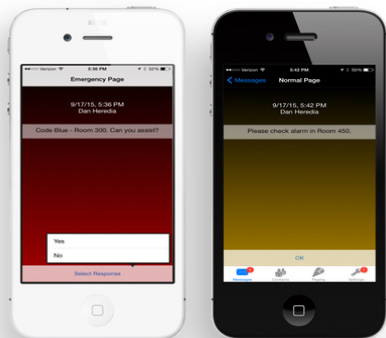
- A. Positive Diagnostic Tests

Many hospitals have implemented EMR based tools - **Zipit can integrate with these tools** and communicate positive test results immediately to clinicians for timely intervention.

- B. Timely intervention of the "PERT Team (Pulmonary Embolism Response Team)"

Zipit can simultaneously notify a multidisciplinary group to meet the patient at the time of occurrence.

Members of this cross-specialty PE team include: Echo tech, Cardiologist, pulmonologist, and cardiac surgery, not to mention nursing supervisors and other ancillary team members.



Facts:

90%-95% of cases present to the ED so Initiation of the "PE team" can improve patient outcomes. One-third (about 33%) of people with DVT/PE will have a recurrence within 10 years.

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