Common Pulmonary Disorders

	ARF	Pulmonary Embolism	ARDS
Patho	body cannot meet O2 needs or CO2 removal needs. O2 ~50 and CO2 ~50 . d/t CNS depression, neuro injury, COPD, status asthmaticus	blockage of pulmonary artery from thrombus of deep veins. r/f: venous stasis from obesity, immobility, coagulopathy, malignancy, a-fib, hx DVT, vessel damage d/t trauma, sepsis, artherosclerosis, ortho surgery, gen surgery	massive inflammatory response of the lungs that ↑ permeablity of alveolar membrane → fluid in interstitial space → fluid in alveoli r/f: chest trauma, shock, O2 toxicity, inhalation of noxious fumes/fluids, pneumonia, sepsis, fat embolus, aspiration
S/S	arterial hypoxemia = ↑ RR, ↑ HR, dyspnea, agitation, ↑ WOB hypercapnia: lethargy, ↓ LOC, ↓ RR, low Vt	***sudden onset*** dyspnea, apprehension, syncope, hemoptysis, tachypnea, diaphoresis, chest pain, cough	***early***: restlessness, change in LOC, ↑ RR with normal lung sounds, dyspnea, respiratory alkalosis, hypoxemia, ↑ WOB, ↑ HR, ↑ temp, normal or only patchy white infiltrates on CXR, increased PIP if on a vent ***late:*** low PaO2 despite ↑O2, severe dyspnea and WOB, hypercapnia, metabolic acidosis, crackles and rhonchi, CXR bilateral infiltrates, increased PIP, decreased FRC, cyanosis, pallor
Dx	ABG, CXR, CBC	ABG, US, spiral CT, V/Q scan, pulmonary angiogram	CXR, ABGs
Tx	aggressive O2 therapy, ↑ RR and depth, mechanical ventilation	LMWH, low-dose unfractioned heparin, TEDS/SCDS, pain control with narcs and NSAIDS, thrombolytic therapy, IVC filter, surgical embolectomy give O2 immediately!!!	-early identification of pts at risk! -treat the underlying cause -intubate and mechanical ventilation (pressure control w/ PIP < 25, small TV, goal of FiO2 < 70% with a PaO2 of 60-70)
Care	suction, assess resp. status, sedatives for anxiety/pain, NMB, corticosteroids, infection, HOB up, monitor ABGs and SaO2	frequent assessment respiratory status high-Fowler's monitor ABGs, SaO2 monitor VS maintain IV access administer anticoags & fibrinolytics	-HOB 30-degrees -exquisite oral care q 2-4 hours -hydrate pt, prevent hypovolemia (need t keep CO up) -nutritional support (NG tube if possible) -prevent complications...wash hands, prevent pressure ulcers and stress ulcers, prevent DVT, prevent VAP, ROM, monitor for signs of infection, provide psychosocial support to family.
Compl	↓ CO, fluid retention, hypotension, barotrauma	respiratory failure death	cardiac dysrythmias (d/t hypoxemia, O2 toxicity, renal failure, thrombocytopenia, GI bleed, sepsis, DIC), lung fibrosis, death

	Pneumo/hemo thorax	Pleural effusion	Pneumonia	Status asthmaticus
Patho	air or blood in pleural space that prohibits complete lung expansion. can be closed or open. d/t trauma to chest wall or pulmonary illness. r/f: emphysema, AIDS, asthma, cystic fibrosis, TB, sarcoidosis, cancer, smoking, fx rib, GSW, blunt force	accumulation of fluid in pleural space d/t ↑ systematic hydrostatic pressure (i.e. CHF), ↓ capillary oncotic pressure (i.e. liver or renal failure), ↑ capillary permeability (infections or trauma), impaired lymphatic fxn (obstruction or tumor)	inflammatory process triggered by infection or aspiration. result is edema and exudate in alveoli. r/f: older age, recent exposure to flu, smoking, chronic lung disease, aspiratin, mechanical ventilation, impaired ability to mobilize secretions, immunocompromised.	acute bronchospasm that intensifies. this is a severe and life-threatening complication of asthma
S/S	moderate: tachypnea, dyspnea, sudden sharp pain, assymetrical chest wall expansion, diminished or absent breath sounds. severe (tension): JVD, mediastinal shift, tracheal deviation, cyanosis *(see thoracic disorders table)*	restricted lung expansion, dyspnea, dry, non-productive cough, ↓ tactile fremitus *(see thoracic disorders table)*	fever, dyspnea, tachypnea, pleuritic chest pain, sputum, crackles, coughing, dull percussion, poor SaO2 ↓PaO2 and ↑ PaCO2 CXR shows consolidation	respiratory distress, wheezing, pulses paradoxus > 25 mmHg, ↓ LOC, diminished or absent BS, inability to speak, ABG shows resp alkalosis d/t hyperventilation...later leads to hypoxemia, respiratory and metabolic acidosis
Dx	CXR, ABG	CXR, thoracentesis (assess fluid)	CXR, SaO2, CBC, WBC-diff, sputum culture, ABGs	ABGs, pulmonary fxn tests show <40% predicted or FEV1 < 20%
Tx	thoracotomy, VATS, chest tube	treat underlying cuase, thoracentesis (assess fluid), closed-chest drainage w/ suction recurrent: pleurodesis or pleurectomy	abx, bronchodilators, corticosteroids, immunizations heated and humidifed O2	support oxygenation/ventilation. bronchodilators, corticosteroids, O2, intubation
Care		respiratory assessment, monitor tube system, HOB up, DB/IS, administer Abx	high-Fowler's, C/DB, suctioning assess respiratory status, VS & sputum	pt teaching, high-Fowlers, C/DB, frequent respiratory assessments
Compl	tension pneumothorax→mediastinal shift, decreased CO, hypotension, tissue hypoxia, etc...		ARF, bacteremia	cor pulmonale (right heart failure), pneumothorax, hypoxemia, respiratory or cardiac arrest

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