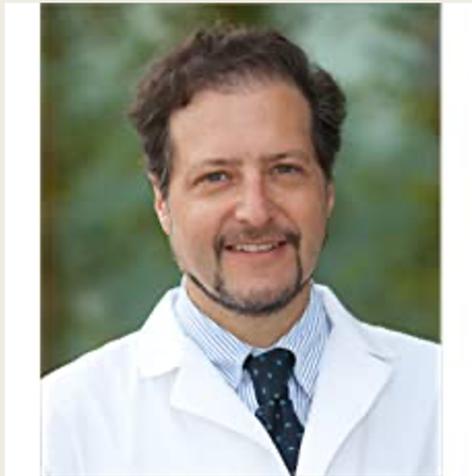




LAST WEEK:

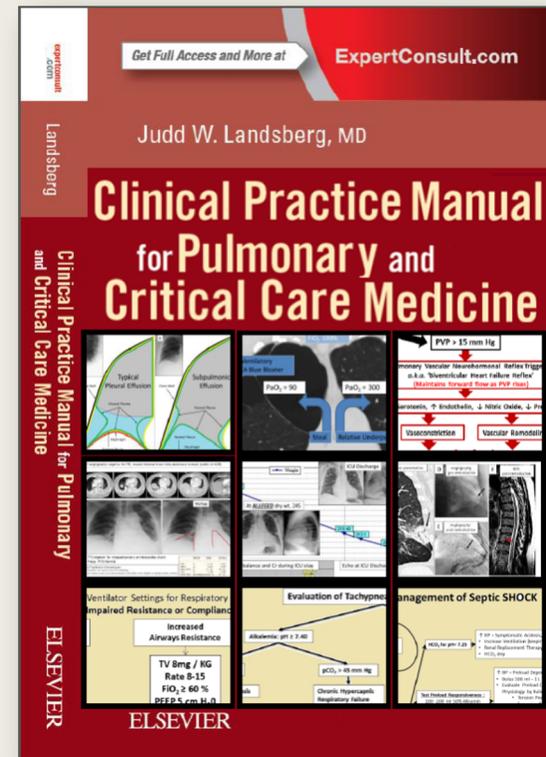
*OXYGENATION
& VENTILATION*

Oxygenation Review



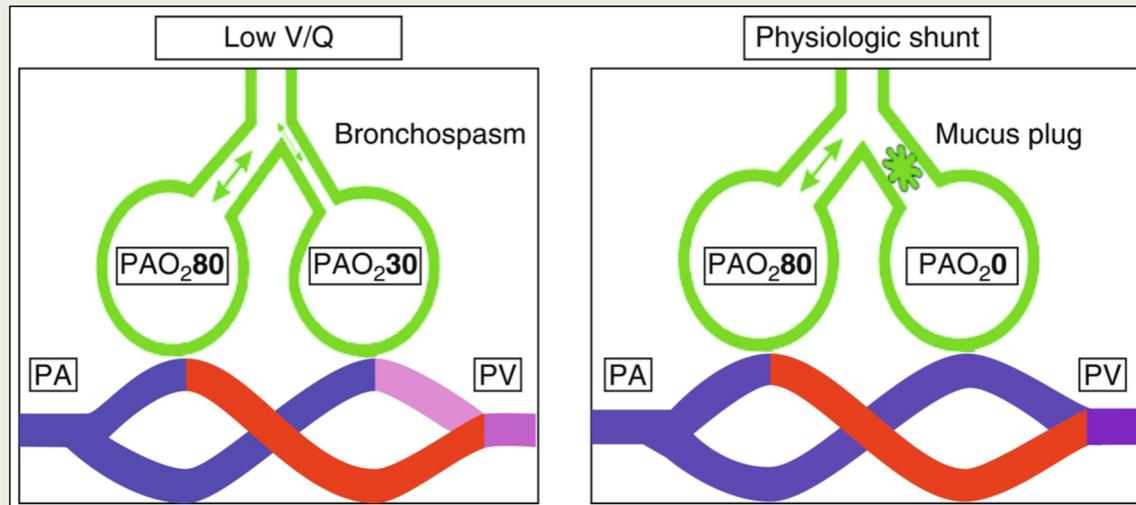
Judd W. Landsberg MD

Clinical Professor of Medicine, UCSD SoM
Section Chief for PCCM, Medical Director for
Respiratory Therapy, VA Medical Center, La
Jolla



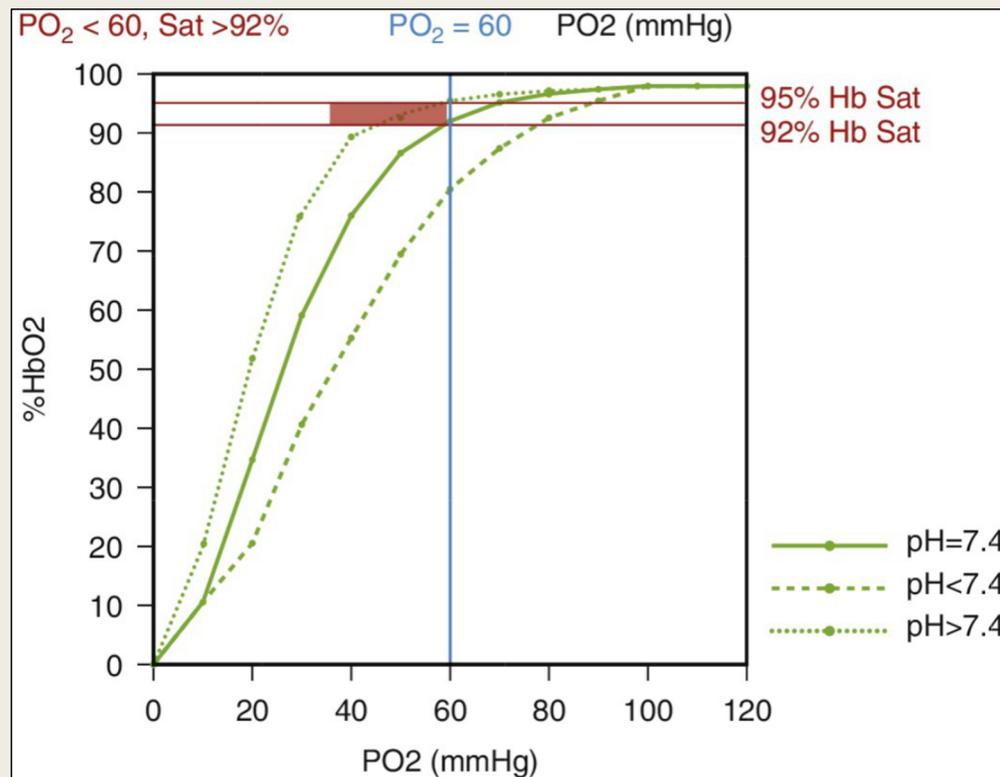
Find on Facebook:
Landsberg Manual

CONFUSING Hypoxia and Hypoxemia

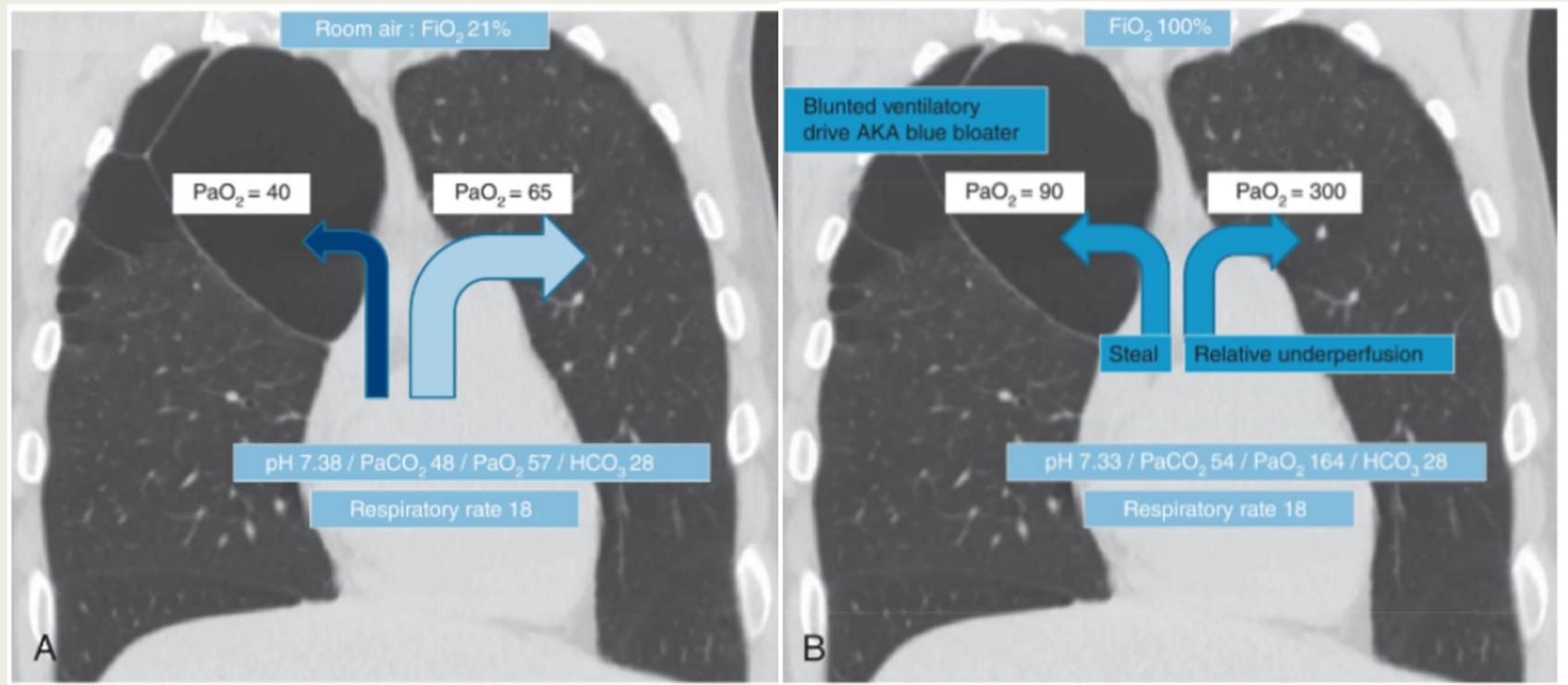


*Hypoxemia is **NOT** a common cause of Dyspnea*

Targeting an O_2 sat of 92% (via Pulse Oximetry) is **TOO LOW** to ensure a $PaO_2 \geq 60$ mm Hg



O_2 **DOES NOT** suppress ventilation



Ventilation and ARDS



Atul Malhotra, MD

Former President, ATS (2015-16)
Peter C. Farrell Presidential Chair and
Professor of Respiratory Medicine
Research Chief, Pulmonary Critical Care Sleep
Medicine and Physiology UC San Diego



VENTILATION WITH LOWER TIDAL VOLUMES AS COMPARED WITH TRADITIONAL TIDAL VOLUMES FOR ACUTE LUNG INJURY AND THE ACUTE RESPIRATORY DISTRESS SYNDROME

THE ACUTE RESPIRATORY DISTRESS SYNDROME NETWORK*

Low tidal volume mechanical ventilation is standard of care in ARDS

Low driving pressure is useful but not in isolation

Tidal volume = V_t
Resistance = $(PIP - P_{plat}) / \text{flow}$
Compliance = $V_t / (P_{plat} - PEEP)$
Driving Pressure = $V_t / \text{compliance}$

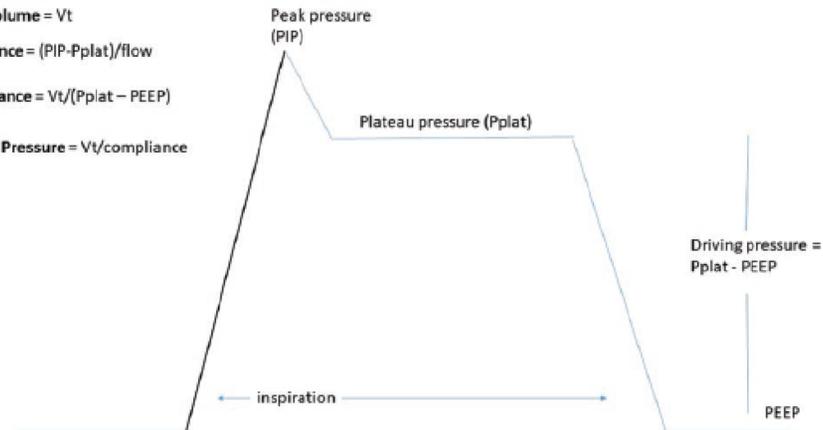
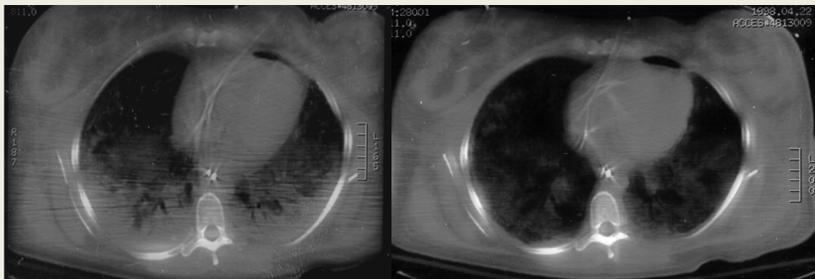


Fig. 1. A schematic diagram of an inspiratory waveform delivered during typical volume cycled ventilation. P_{plat} is based on an end-inspiratory hold. The driving pressure can be seen as the difference between the P_{plat} and the PEEP, but can also be calculated as the ratio of

Patients with COVID ARDS are quite recruitable in some cases



Prone positioning has mortality benefit in ARDS with LTV

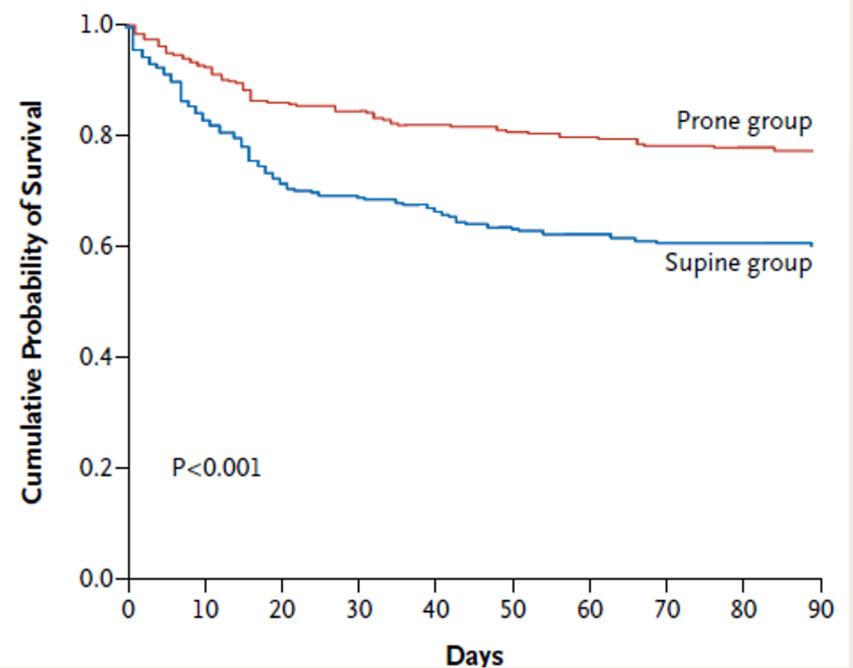
The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812

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VOL. 368 NO. 23

Prone Positioning in Severe Acute Respiratory Distress Syndrome



Recommendation:

25. For adults with COVID-19 and acute hypoxemic respiratory failure despite conventional oxygen therapy, we suggest using HFNC over conventional oxygen therapy (weak recommendation, low quality evidence).

“I am now comfortable using HFNC and NIV in Covid patients with the providers have adequate protection” – Dr Malhotra

The New York Times
Small Chloroquine Study Halted Over Risk of Fatal Heart Complications

There are no proven therapies for COVID-19

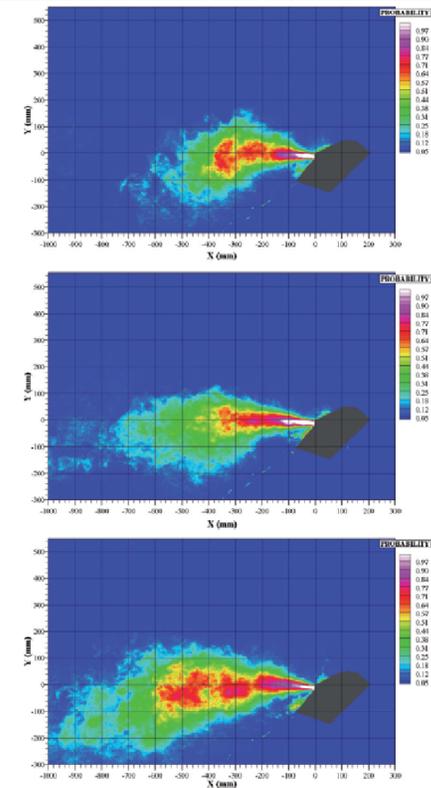


Figure 3 Exhaled air dispersion distances during application of oxygen at 1 L/min (top image), 3 L/min (middle image) and 5 L/min (bottom image) to the human-patient simulator with mild lung injury in the larger isolation room with more efficient air exchange.

Thank you for joining us



**Novel Coronavirus (COVID-19):
The ATS Response**