




 **A Consensus-Based Recommendation for Oxygenation Targets in Critically Injured Patients**



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MAJ USA MC
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  **Conflicts of Interest**



None.

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I do not accept any commercial funding.

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  **Disclaimer**

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Thanks to all our expert participants! (some in audience now)



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Methods

Ethics
 » Submitted proposal to University of Colorado IRB → exempt survey determination

Survey
 » Surveys on REDCap (Research Electronic Data Capture)
 » Multi-stage Delphi consensus process
 » Invited selected experts both military and civilian with experience in operational medicine, critical care, trauma, emergency medicine, and prehospital medicine to participate

Performed systematic review of available literature → provided to the expert participants

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Expert Participants

LTC Tyson Becker	Jason Haukoos	LTC Ethan Miles
Jason Brainard	David Huang	Ernest Moore
COL Kevin Chung	Juan-Pablo Idrovo	Craig Newgard
Mitchell Cohen	COL Sean Keenan	LTC Timothy Nunez
Brian Cotton	Akram Khan	COL (ret) John Oh
Pratik Doshi	LTCol Philip Mason	LTC Ted Redmon
Franklin Guyette	Robert McIntyre	LTC Jamie Reitsburg
Todd Rice	LTCol Stephen Rush	Martin Schreiber
Wesley Self	Jason Sperry	CDR Joshua Tobin
CDR Benjamin Walrath	Henry Wang	LTC Ramey Wilson
Franklin Wright		



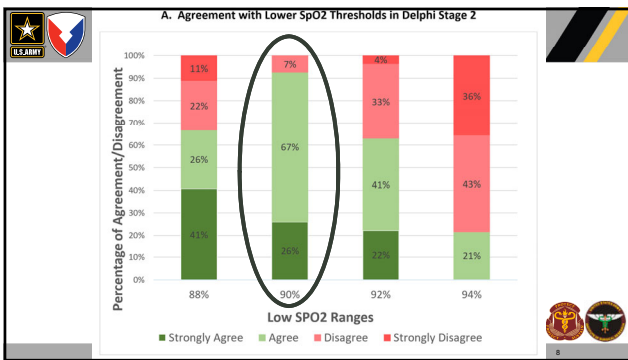

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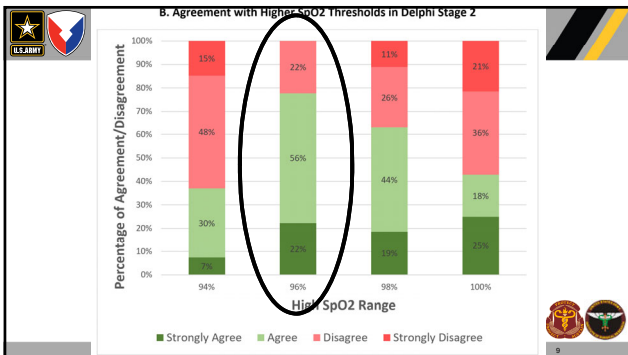
Results

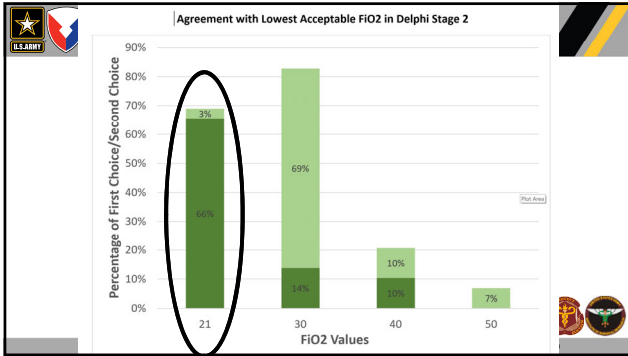
Of the 31 invited experts, 26 completed the first round, 28 completed the second round, 27 completed the final round; all participated in at least one round

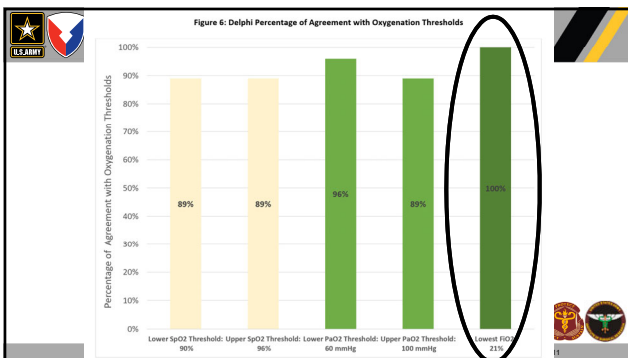
- » Round 1 → narrowed the potential SpO2 range to 88-100% and PaO2 to 60-300mmHg
 - » Only 20% noted changes based on presence of TBI or hemorrhagic shock
- » Round 2 → narrowed to 90-96% and 60-100mmHg targets
 - » Lowest acceptable FiO2 21% (ambient air)
- » Round 3 → 89% accepted the limits at 90-96% and upper limit of 100mmHg, 96% accepted lower at 60mmHg
 - » All accepted lowest FiO2 at 21%
 - » 33% recommended higher oxygenation for TBI and 11% for hemorrhagic shock
 - » Resource limited setting most recommended lower target of 88%

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Conclusions

Consensus-based standard for oxygenation targets in critically injured patients

- SpO2 90-96% (88-96% with resource-limitations)
- PaO2 60-100 mmHg
- Lowest acceptable FIO2 21%
- Adjustments for TBI, burns, major hemorrhage, etc. likely not needed



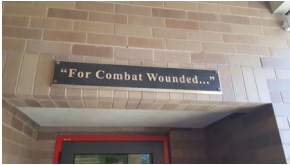
Expert consensus → prospective, clinical validation needed

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 **The End**

Questions?
Comments?
Feedback?

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