

RESEARCH SUMMARY

Video versus Direct Laryngoscopy for Tracheal Intubation of Critically Ill Adults

Prekker ME et al. DOI: 10.1056/NEJMoa2301601

CLINICAL PROBLEM

The use of video laryngoscopy for tracheal intubation in critically ill adults has increased over time, but whether outcomes are better with this approach than with direct laryngoscopy is uncertain.

CLINICAL TRIAL

Design: A pragmatic, multicenter, unblinded, randomized trial was conducted to assess whether video laryngoscopy would result in a higher incidence of successful intubation on the first attempt than direct laryngoscopy among critically ill adults in an emergency department (ED) or intensive care unit (ICU).

Intervention: 1417 patients undergoing orotracheal intubation in an ED or ICU at 17 sites in the United States were assigned to undergo intubation with a video laryngoscope or a direct laryngoscope. The primary outcome was successful intubation on the first attempt. The secondary outcome was the occurrence of severe complications — severe hypoxemia, severe hypotension, new or increased use of vasopressors, cardiac arrest, or death — during intubation.

RESULTS

Efficacy: Successful intubation on the first attempt occurred significantly more often with video laryngoscopy than with direct laryngoscopy.

Safety: The percentage of patients with severe complications during intubation was similar in the two groups.

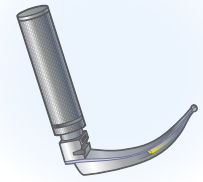
LIMITATIONS AND REMAINING QUESTIONS

- Operators chose the brand of video laryngoscope and the shape of the blade, so the results cannot be used to determine the brand or blade shape that leads to better outcomes.
- Nearly all the operators were emergency medicine residents or critical care fellows who had performed <250 previous tracheal intubations; the results may not apply to more-experienced operators.
- The findings are not generalizable to tracheal intubations performed in the operating room.

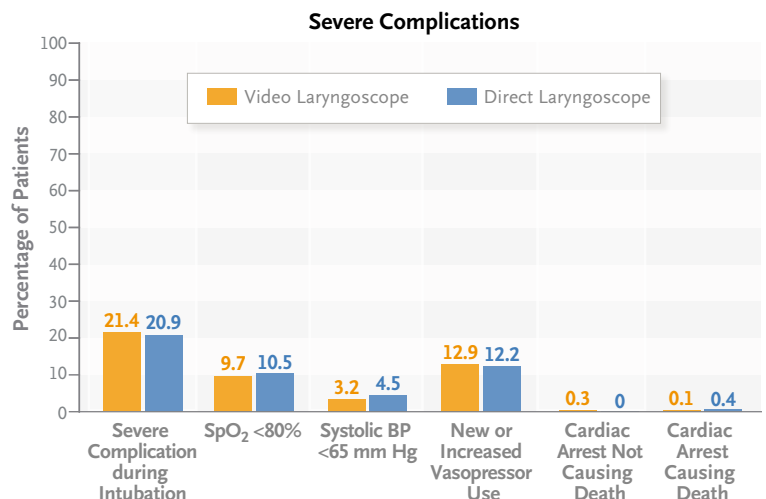
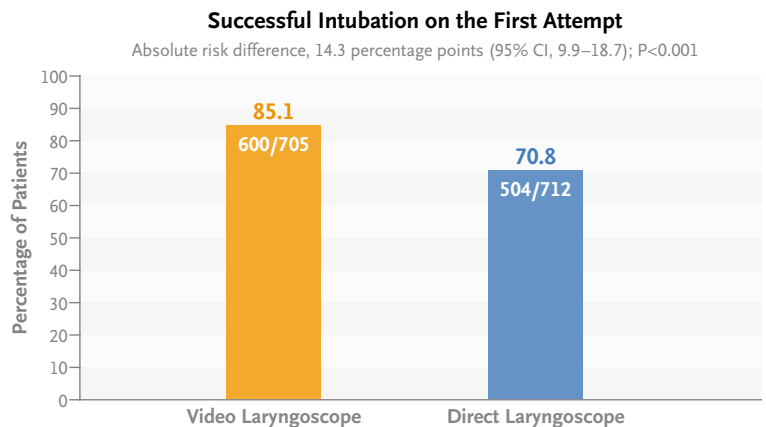
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Video Laryngoscope
(N=705)



Direct Laryngoscope
(N=712)



CONCLUSIONS

Among critically ill adults undergoing tracheal intubation in an ED or ICU, the use of a video laryngoscope resulted in a higher incidence of successful intubation on the first attempt than the use of a direct laryngoscope.