

## Comparative Effectiveness Review Disposition of Comments Report

Research Review Title: Prehospital Airway Management: A Systematic Review

Draft report available for public comment from December 2020 to January 2021.

**Research Review Citation:** Carney N, Cheney T, Totten AM, Jungbauer R, Neth MR, Weeks C, Davis-O'Reilly C, Fu R, Yu Y, Chou R, Daya M. Prehospital Airway Management: A Systematic Review. Comparative Effectiveness Review No. 243. (Prepared by the Pacific Northwest Evidence-based Practice Center under Contract No. 290-2015-00009-I.) AHRQ Publication No. 21-EHC023. Rockville, MD: Agency for Healthcare Research and Quality; June 2021.DOI: <u>10.23970/AHRQEPCCER243</u> Posted final reports are located on the Effective Health Care Program search page.

## **Comments to Draft Report**

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Comments on draft reports and the authors' responses to the comments are posted for public viewing on the website approximately 3 months after the final report is published. Comments are not edited for spelling, grammar, or other content errors. Each comment is listed with the name and affiliation of the commentator, if this information is provided. Commentators are not required to provide their names or affiliations in order to submit suggestions or comments.

This document includes the responses by the authors of the report to comments that were submitted for this draft report. The responses to comments in this disposition report are those of the authors, who are responsible for its contents, and do not necessarily represent the views of the Agency for Healthcare Research and Quality.

## Summary of Peer Reviewer Comments and Author Response

This research review underwent peer review before the draft report was posted for public comment on the EHC website.

We received comments from three peer reviewers on the draft report of Prehospital Airway Management: A Systematic Review. We made individual edits where indicated for clarity or spelling. The following more substantive changes were also made in response to peer reviewer comments:

1. Reduced the length and complexity of the report by transferring information from text to tables where possible.

2. Recategorized studies with participants of mixed ages. If a study had 10 percent or fewer pediatric patients in the sample, we categorized the study as "adult." Studies with more than 10 percent pediatrics, and those for which the age distribution was not specified, were categorized as "mixed-age." We revised our meta-analyses with the new groupings for the final report.

3. Expanded our discussion of ventilation in the Evidence Summary, and in the Applicability, Implications for Clinical Practice, and Limitations sections of the main report. Added a paragraph on confounding effects of ventilation. Emphasized need for waveform capnography to confirm successful ventilation.

4. Changed the emphasis of the overall findings from "The overall findings suggest that there are no differences in patient-oriented outcomes between the three methods of airway management . . ." to "Overall, there is limited evidence to suggest difference in patient-oriented outcomes . . ."

5. Added emphasis to the need for pediatric airway management research.

6. Edited paragraph in Discussion section to incorporate minimize unintentional inherent bias regarding aspiration protection and intubation.

7. Defined use of the term "supraglottic airway" as follows: We use the term "supraglottic airway" to indicate the various "extraglottic airway" methods. While "extraglottic airway" may be more technically correct, due to its more common use in the literature, this report uses the term "supraglottic airway" to classify advanced airway devices that are placed outside of the trachea to facilitate oxygenation and ventilation.



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #1	Abstract	The abstract states: "BVM resulted in better outcomes for trauma patients and better neurological function in patient samples of all ages." Does this translate to a recommendation that BVM should be the preferred airway for all types of trauma patients, whatever their injuries and their resultant respiratory status? Does this also mean that intubation of patients with a GCS of less than 8 is no longer necessary or recommended?	Thank you for your comments and review. In response to the question, "Does this translate to a recommendation that BVM should be the preferred airway for all types of trauma patients, whatever their injuries and their resultant respiratory status? Does this also mean that intubation of patients with a GCS of less than 8 is no longer necessary or recommended?" No, it does not translate into a recommendation. AHRQ reports, including our report may be used for guidelines development; we make conclusions based on the available evidence, but not recommendations



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #2	Evidence Summary	The best way to sum this up is to repeat your phraseAll three airway management types have a role in prehospital care and the preferred airway depends on setting, patient age and type, and available provider expertise and equipment. Training is the key. Incompetent providers will sway the way devices are used and ultimately the pt outcome. All of these pts are extremely sick. It's so variable. You could intubate someone perfectlyand they can still die. But you can intubate someone perfectly and absolutely save their life. You cannot argue that a definitive airway does not protect from aspiration. As an ALS provider of 18 years, both on ground and flight, the number of times of I used a SGA I could show on one hand. I intubate, as much as possible. But I train constantly. Intubation is a key skill and is necessary in a paramedic's scope of practice. But they need training. What would you want for your family member? What if you have an incompetent provider who now feels that even BVM isn't necessary. You will lower the bar in the profession, lower the bar for survival, and lower the bar for training. All 3 devices have a place in EMS. Don't remove anything. Options are good. Every service is different. Some services with short transport times, may benefit from SGA and load n go. Absolutely. Others, with rural and expansive wilderness transport, may need intubation with a mechanical vent.	Thank you for your comment and review.



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #3	Evidence Summary	I think this is an extremely helpful analysis to EMTs in the field as well as emergency room physicians. It shows the most import factor is to secure an airway, with any of these three techniques that would be safe for the patient. This provides assurance to these lifesaving individuals that they will not be scrutinized for their heroic efforts, whatever those efforts entail. Thank you for this valuable adjunct to the emergent airway literature.	Thank you for your comment and review.
Public Reviewer #4	Evidence Summary	Evidence presented including that from the 90's has multiple confounders that were initially thought to be neutral. the evidence is applied to patient scenarios regardless of system variables like rural v s urban down time etc. especially given poor resuscitation data to begin with. Additionally the skill of airway management is not divided between practice levels and many states still have and for a majority of the study period it included EMT Intermediate. It also did not take into account video based ETI which is emerging as a best practice.	We addressed these concerns to the extent that was allowed by the available literature. Video vs. direct laryngsocopy is analyzed in Key Question 4. Practice level is categorized and listed in the forest plots from meta- analyses, as well as in study characteristics (Appendix E)



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #5	Evidence Summary	For full transparency, was the study using the BVM in conjunction with a basic adjunct such as an oral or nasal pharyngeal airway used or just the basic E/C technique to assure a proper seal and was one person or two person used for the BVM.	We found that studies did not always provide information on use of airway adjuncts. This is mentioned in the Discussion section, "Studies did not always clearly identify whether other devices (e.g., OPA and NPA) were used in conjunction with BVM, nor describe how BVM was actually performed (e.g., by one- vs. two-person technique)." We attempted to capture as much detail on the intervention as possible (Appendix F "Outcomes Evidence Table"). Methods need to be improved in future studies.



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #6	Evidence Summary	The document is well crafted and addressed critically important topic of prehospital airway management. The document appropriately highlights the lack of highest quality evidence regarding airway management options. The document notes in multiple key questions the specific insufficiency of evidence regarding airway management options for pediatric patients. Pediatric advanced airway management is both lower in frequency and higher in risk compared to adult airway management. The PEPP steering committee would like to see more prominent mention of the need for more pediatric airway management research in the summary statements or conclusions.	Noted and edited accordingly.



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #7	Introduction	I would challenge the case made in the final sentence in the first paragraph. We need to be getting our patients to the most appropriate point of entry in this matter. There are medical and trauma cases where it may be simpler and less risky to transport a critical patient to the proximal non- specialty center for the ER team to secure an airway through ETI/RSI/cricothyrotomy. However, the non- airway aspects of the patient's condition may be compromised as there is now delay in transport to the specialty center. For instance, the patient with a serious traumatic head injury that is brought to a lower level/non-trauma center for airway management that now requires interfacility transfer (IFT) to higher level of care, thus a.) putting higher costs for transfer on the healthcare system and patient, and b.) delaying time-sensitive treatment (neurosurgery, critical care, etc.). The same concept goes for cardiac arrest patient in ROSC or refractory V-fib who would benefit from a cardiac or advanced cardiac center over proximal transport to a non- specialty point of entry that now requires IFT.	The final sentence being address is: "The primary objective in the prehospital setting is to ensure adequate oxygenation and ventilation until the transfer of patient care to an emergency department (ED) or hospital." Response: Hypoxia kills and so stopping at a facility to secure the airway and provide ventilation still seems to be a primary objective.



Public	Introduction	The complications in ETI can go beyond the	The San Diego RSI study
Reviewer #7		procedure at a basic scope and include other	compared TBI patients who
		aspects of care. This includes the San Diego RSI	were intubated with a
		study (Davis DP, Hoyt DB, Ochs M, et al. The Effect	historical control of patients
		of Paramedic Rapid Sequence Intubation on	who were not intubated by
		Outcome in Patients with Severe Traumatic Brain	EMS. The authors of that
		Injury. J Trauma. 2003;54:444-453.). I did not see	study did not provide any
		this study in the meta-analysis, so it could be	details as to if and how the
		considered for the Methods and Results section. 3.)	airway was managed in the
		We need to consider systems when it comes to	historical controls and so
		airway management. If you have a paramedic-	the study was not included
		saturated system, inevitably the frequency of ETI	in this SR which was
		placement by provider is going to decrease and with	geared towards
		it the success of ETI placement. This was	comparisons of airway
		demonstrated by Wang (Wang, HE, Kupas DF,	techniques or modifications
		Hostler D, et al. Procedural experience with out of	of each technique. The
		hospital endotracheal intubation. Crit Care Med.	rescue airway used in that
		2005;33(8):1718-1721.), Garza (Garza AG, Gratton	trial was the Combitube
		MC, Coontz D, et al. Effect of Paramedic Experience	and that device is no longer
		on Orotracheal Intubation Rates. J Emerg Med.	used today. The study did
		2003;25(3):251-256.), and many other studies (), as	show that RSI was
		well as in other aspects of the medical profession	associated with
		(Adam MA, Thomas S, Youngwirth L, et al. Is There	unrecognized hypoxia
		a Minimum Number of Thyroidectomies a Surgeon	events, inadvertent
		Should Perform to Optimize Patient Outcomes? Ann	hyperventilation and
		Surg 2017;265(2):402-407.	prolonged scene times.
		Fix ML, Enslow MS, Blankenship JF, et al.	
		Emergency medicine resident anesthesia training in	Refer to Appendix D for
		a private vs. academic setting. J Emerg Med.	excluded studies.
		2013;44(3):676–681.	
		Maruthappu M, Gilbert BJ, El-Harasis MA, et al. The	
		influence of volume and experience on individual	
		surgical performance: A systematic review. Ann	
		Surg. 2015;261(4):642–647.). When considering	
		who performs skills like ETI, RSI, and	
		cricothyrotomy, perhaps it is prudent not only to	
		allow a certain provider level to perform these	
		interventions, but even sub-credential/certify	

Source: <u>https://effectivehealthcare.ahrq.gov/products/prehospital-airway-management/research</u>



Commentator & Affiliation	Section	Comment	Response
		providers within a certification cohort for a skill rather than broadly allow it. Perhaps systems need to depart from the "single-tier, all ALS;" and integrate EMTs into their model. Maybe we need to integrate a new higher level of paramedic into ground EMS https://www.emsairway.com/2020/08/13/optimal- prehospital-airway-management-depends-on-ems- system-efficiency/	
Public Reviewer #3	Introduction	Fine	Thank you for your comment and review.
Public Reviewer #5	Introduction	Would it be important to denote that out of the four levels of providers (EMR, EMT, AEMT, Paramedic) primarily only paramedics perform ETI?	The included studies encompassed many different EMS systems with vast variation in which provider can administer which approach. As such, we organized our provider categories around those who can perform ETI and those who cannot. The four provider levels were updated recently and only refer to (most of) the USA. Other countries and advanced provider levels (RN, physician) would not fall under these categories.



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #7	Methods	When it comes to the study design, it is prudent to consider making RSI its own entity versus ETI. I know it was considered in KQ4, but what about KQ2 and 3? The systems that perform RSI tend to invest more resources and oversight into airway management as a bundle of care vs those systems that do not. There are limitations in this manner, especially study sample size, but when attempting to answer questions 2-4 you may find that the RSI cohorts within the ETI variable may have better outcomes and less complications vs BVM and SGA. I would further predict that SGA and BVM outcomes in those systems that do RSI/RSA (rapid sequence airway where an SGA is placed after sedation and paralysis) would have greater success and survival as well as lower complications vs those systems that do not.	This project was a about a comparison of airway methods. KQ4 was added to permit evaluation of variations of each method not just RSI but other options such as VL vs. DL, Gum elastic bougie etc.
Public Reviewer #3	Methods	Fine	Thank you for your comment and review.
Public Reviewer #5	Methods	No comment, it was clear and concise.	Thank you for your comment and review.



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #3	Results	Please see the attached table from the paper. 50% of the studies were on out-of-hospital cardiac arrest patients; 17% were trauma; and 28% were "Mixed Emergency Types." These different types of emergencies were all included in the review. The generalized statements, however, do not discriminate between prehospital airway management for an OOHCA patient, a moderate TBI patient, a trauma patient with maxillofacial injuries and respiratory distress, and a patient with a severe asthma attack. Does that mean that there should be no difference in how airway management is approached between these different types of patient?	We further revised our stratification to arrive at the most granular presentation of the available data. Further discrimination would not provide useful information.
Public Reviewer #1	Results	Looking at prehospital airway management from a "Zero Preventable Deaths" perspective, a recent study by LaGrone et al from one Level 1 Trauma Center (Harborview Medical Center in Seattle) reported 2,659 trauma deaths from 2005 to 2014. Seventy-seven of those deaths were associated with an error. Twenty-four of those deaths were associated with airway management - 10 were related to "Unsuccessful intubation and delayed surgical airway" while 14 were related to "Failure to secure or protect airway/aspiration." A caveat in looking at this data is that the errors that were associated with the deaths did not necessarily occur in the prehospital phase of care.	Thank you for your comments and review.



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #1	Results	Unless contraindicated, airway adjuncts such as NPAs and OPAs are typically used during BVM ventilation to assist in maintaining a patent airway. One 2012 study (Yamada) demonstrated improved outcomes when BVM was accompanied by NPA or OPA use. Was BVM in the studies discussed in the draft review paper uniformly accompanied by NPA or OPA use?	We found that studies did not always provide information on use of airway adjuncts. This is mentioned in the Discussion section, "Studies did not always clearly identify whether other devices (e.g., OPA and NPA) were used in conjunction with BVM, nor describe how BVM was actually performed (e.g., by one- vs. two-person technique). " We attempted to capture as much detail on the intervention as possible (Appendix F "Outcomes Evidence Table").
Public Reviewer #1	Results	No comment.	Thank you for your comment and review.



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #5	Results	Please see the attached table from the paper. 50% of the studies were on out-of-hospital cardiac arrest patients; 17% were trauma; and 28% were "Mixed Emergency Types." These different types of emergencies were all included in the review. The generalized statements, however, do not discriminate between prehospital airway management for an OOHCA patient, a moderate TBI patient, a trauma patient with maxillofacial injuries and respiratory distress, and a patient with a severe asthma attack. Does that mean that there should be no difference in how airway management is approached between these different types of patient?	We further revised our stratification to arrive at the most granular presentation of the available data. Further discrimination would not provide useful information.
Public Reviewer #5	Discussion and Conclusions	No comment.	Thank you for your comment and review.
Public Reviewer #3	Discussion and Conclusions	Discussion much better than the results in digestibility.	Thank you for your comment and review.



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #6	Discussion and Conclusions	The key question on BVM suggests a benefit from a two-rescuer team to maintain a good seal. In many settings, EMS may not have two trained rescuers to manage the airway and a key benefit of SGA or ETI may be to allow a single rescuer to provide effective ventilation. In addition, we note that the rarity of pediatric airway management presents challenge for both initial training opportunities and skill maintenance.	One vs two-person concern was mentioned in the KQ1 Discussion. "Studies did not always clearly identify whether other devices (e.g., OPA and NPA) were used in conjunction with BVM, nor describe how BVM was actually performed (e.g., by one- vs. two-person technique). " Future Research section includes "Clarify technique used in BVM studies (one person or two person)." and was further revised in the final report "Clarify technique used in BVM studies (one person or two person, proper mask seal, airway adjuncts)."
Public Reviewer #5	Appendix	No comments.	Thank you for your comment and review.
Public Reviewer #3	General	It was a little convoluted. I think these reports are necessary, but a report that is only 7 to 10 pages and a summery should accompany this for the medical and lay audiences to digest in a timely fashion. No one will read this behemoth, even though it has to happen and is important.	Thank you for your comment. The report does include an abstract and evidence summary (about 5 pages) in addition to the longer main text. We will be publishing a paper in Prehospital Emergency Care concurrent with the posting of the report.

Source: <u>https://effectivehealthcare.ahrq.gov/products/prehospital-airway-management/research</u> Published Online: June 14, 2021



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #8	General	I would like to have seen the analysis split between EMT (Basic Life Support) and Paramedic (Advanced Life Support) skills. For example, what would the efficacy of a supraglottic airway performed by an EMT versus a paramedic with regards to both placement and use. This is an important point for rural EMS and semi-urban areas where resources are limited. I would also have liked to see the same split with regards to waveform capnography to confirm successful ventilation with each device. Recommendations on how EMT skills can be on par with Paramedic skills in inserting and using supraglottic airways and collecting waveform capnography would inform future training programs and save lives.	Thank you for your comments and review. We agree. The limitations of the literature precluded this level of analysis.



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #7	General	Consider paramedic education also. Under the 2015 CoAEMSP standards, a paramedic can graduate paramedic certification training without ever performing a live ETI. Is this a discrepancy to consider? CoAEMSP Interpretations of the CAAHEP 2015 Standards and Guidelines for the Accreditation of Educational Programs in the EMS Professions. (n.d.) In Committee on Accreditation for the EMS Professions. Retrieved February 1, 2020, from https://coaemsp.org/?mdocs-file=918.	Added to discussion Section (Provider Training, Expertise, and Skills Maintenance). "Paramedic training programs vary considerably in the US in terms of number of hours, patient contact time, and live procedures. The opportunity for live training has diminished as has the need for use of advanced airways since non-invasive ventilation is now an option for patients with hypoxemic and hypercarbic respiratory failure. This is an unfortunate reality faced by many training programs who have turned to other options such as cadaver and simulation settings to teach and verify skills prior to graduation. Our findings highlight the fact that good training programs need to teach a variety of skills related to airway management with the ultimate goal being oxygenation and ventilation."



Commentator & Affiliation	Section	Comment	Response
Public Review #1	General	I did a search for the word "aspiration" in the draft of this review paper using the Adobe search feature - not found. Also searched for "TBI," "Traumatic Brain Injury," oxygen saturation," and O2 sat." Also not found.	Patients with traumatic brain injury were included in the "trauma" category. Oxygen saturation is included in the oxygenation/ventilation outcomes, which were qualitatively summarized for all Key Questions. Results from individual studies are detailed in Appendix F as well.



Public	General	Thank you for the opportunity to comment on this	We further revised our
Reviewer #9		report. We recognize that it is very difficult to draw	stratification to arrive at the
		any conclusions when you are attempting to review	most granular presentation
		literature from such a large body of evidence and	of the available data.
		covering such a broad time period. Airway methods,	Further discrimination
		training, technique, and technology have all changed	would not provide useful
		markedly since 1990. Further, it is extremely difficult	information.
		to isolate the airway factor in the complex	
		prehospital environment, and even positive results	
		are subject to well-known bias. For example, 50% of	
		the studies were on out-of-hospital cardiac arrest	
		patients; 17% were trauma; and 28% were "Mixed	
		Emergency Types." These different types of	
		emergencies were all included in the review. The	
		generalized statements, however, do not	
		discriminate between prehospital airway	
		management for an OOHCA patient, a moderate TBI	
		patient, a trauma patient with maxillofacial injuries	
		and respiratory distress, and a patient with a severe	
		asthma attack. Does that mean that there should be	
		no difference in how airway management is	
		approached between these different types of	
		patient? Perhaps a narrower focus would have	
		allowed for more definitive conclusions, but perhaps	
		not. Importantly, this document supports the need for	
		continued education on critical thinking and	
		considering the continuum of care, as most patients	
		can be ventilated effectively with proper BVM	
		ventilation techniques and BLS adjuncts until ETI	
		can be accomplished by properly trained individuals	
		certified to perform the procedure and the early use	
		of a BIAD does not necessarily improve outcomes.	
		The most important statement in this paper is that it	
		is possible that all three airway management types	
		have a role in prehospital care and that the preferred	
		airway depends on the setting, the patient age and	
		type, the available provider expertise and equipment.	
		Having different methods available may be important	

Source: <u>https://effectivehealthcare.ahrq.gov/products/prehospital-airway-management/research</u>



Commentator & Affiliation	Section	Comment	Response
		because sometimes the circumstances call for a particular strategy and one particular method may be better than another in certain situations. We support the need for additional research in this complex area.	
Public Reviewer #6	General	The critical deficiency of good evidence regarding airway management options for pediatrics should be more prominently stated.	This was corrected in our final report.



Commentator & Affiliation	Section	Comment	Response
Affiliation Public Reviewer #6	Section General	Comment The document is well crafted and addressed critically important topic of prehospital airway management. The document appropriately highlights the lack of highest quality evidence regarding airway management options. The document notes in multiple key questions the specific insufficiency of evidence regarding airway management options for pediatric patients. Pediatric advanced airway management is both lower in frequency and higher in risk compared to adult airway management. The PEPP steering committee would like to see more prominent mention of the need for more pediatric airway management research in the summary statements or conclusions	Response The final report emphasizes the need for more research in pediatric populations. One vs two-person concern was mentioned in the KQ1 Discussion. "Studies did not always clearly identify whether other devices (e.g., OPA and NPA) were used in conjunction with BVM, nor describe how BVM was actually performed (e.g., by one- vs. two-person technique).
		The key question on BVM suggests a benefit from a two-rescuer team to maintain a good seal. In many settings, EMS may not have two trained rescuers to manage the airway and a key benefit of SGA or ETI may be to allow a single rescuer to provide effective ventilation. In addition, we note that the rarity of pediatric airway management presents challenge for both initial training opportunities and skill maintenance. Thank you for the opportunity to review this impressive work.	Future Research section includes "Clarify technique used in BVM studies (one person or two person)." and was further revised in the final report "Clarify technique used in BVM studies (one person or two person, proper mask seal, airway adjuncts)."



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #10	General	Overall, this paper supports the practice of airway selection based on the specific clinical situation. As you discussed in the paper, the evidence is of inherently limited quality and statistical strength. This paper supports the prehospital providers choice of airway management as long as oxygenation and ventilation are adequate. We believe that medics should continue to have a variety of tools at their disposal and to be empowered to select them using their clinical judgment. It should be made clear in your discussion and conclusion that there is insufficient strength of evidence to drive agency-level protocols that limit airway management options for medics.	It is difficult to drive agency level protocols from this systematic review since those are the responsibility of the EMS medical director. We hope that EMS medical directors will use the information from this AHRQ review to enhance the evidence basis of EMS practice with more high quality studies related to airway management.
Public Reviewer #5	General	All in all very clear and concise document. Thank you for the chance to review and provide comment on. Nice job by the researchers and authors of this review.	Thank you for your comment and review.
Public Reviewer #9	Did you find this report unnecessarily difficult to read?	No	Thank you for your comment and review.
Public Reviewer #6	Did you find this report unnecessarily difficult to read?	No	Thank you for your comment and review.



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #3	Did you find this report unnecessarily difficult to read?	It was a little convoluted. I think these reports are necessary, but a report that is only 7 to 10 pages and a summary should accompany this for the medical and lay audiences to digest in a timely fashion. No one will read this behemoth, even though it has to happen and is important.	Thank you for your comment. The report does include an abstract and evidence summary (about 5 pages) in addition to the longer main text. We will be publishing a paper in Prehospital Emergency Care concurrent with the posting of the report.
Public Reviewer #7	Did you find this report unnecessarily difficult to read?	No	Thank you for your comment and review.
Public Reviewer #5	Did you find this report unnecessarily difficult to read?	No it wasn't a difficult read.	Thank you for your comment and review.
Public Reviewer #9	Could you find and understand the results and conclusions?	Yes	Thank you for your comment and review.
Public Reviewer #6	Does this report describe both the problem and the evidence in a way that you could understand?	Yes	Thank you for your comment and review.



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #3	Does this report describe both the problem and the evidence in a way that you could understand?	It was a little convoluted. I think these reports are necessary, but a report that is only 7 to 10 pages and a summary should accompany this for the medical and lay audiences to digest in a timely fashion. No one will read this behemoth, even though it has to happen and is important.	Thank you for your comment. The report does include an abstract and evidence summary (about 5 pages) in addition to the longer main text. We will be publishing a paper in Prehospital Emergency Care concurrent with the posting of the report.
Public Reviewer #7	Does this report describe both the problem and the evidence in a way that you could understand?	Yes. The manuscript is detailed, but is super thorough when considering the past three decades of airway studies to consider in a meta-analysis.	Thank you for your comment and review.
Public Reviewer #5	Does this report describe both the problem and evidence in a way that you could understand?	Yes very clear and concise.	Thank you for your comment and review.
Public Reviewer #6	Could you find and understand the results and conclusions?	Yes	Thank you for your comment and review.



Commentator & Affiliation	Section	Comment	Response
Public Reviewer #3	Could you find and understand the results and conclusions?	It was a little convoluted. I think these reports are necessary, but a report that is only 7 to 10 pages and a summery should accompany this for the medical and lay audiences to digest in a timely fashion. No one will read this behemoth, even though it has to happen and is important.	Thank you for your comment. The report does include an abstract and evidence summary (about 5 pages) in addition to the longer main text. We will be publishing a paper in Prehospital Emergency Care concurrent with the posting of the report.
Public Reviewer #7	Could you find and understand the results and conclusions?	Yes	Thank you for your comment and review.
Public Reviewer #5	Could you find and understanding the results and conclusions?	Yes and the explanations were thorough.	Thank you for your comment and review.
Public Reviewer #5	References	No comment.	Thank you for your comment and review.
Public Reviewer #5	Abbreviations and Acronyms	All made very clear and easy to understand.	Thank you for your comment and review.