



Airway Competency FAQs

The following questions were asked during the webinar: *Recommendation on Airway Competency*, which was held in September 2013.

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The Recommendation

Q: What constitutes an attempt at airway management? Is this only the skill of endotracheal intubation? Is it any airway intervention beyond applying oxygen? Beyond an OPA or NPA?

A: The attempt is more than endotracheal intubation. An attempt for airway management is from the initial assessment impression to the entire array of basic and advanced airways management skills and procedures.

Team Approach to Airway Competency

Q: In the team-based care environment, one person may actually do the intubation, but the entire team is responsible for the care and management of the airway. How should we consider this in establishing competency recommendations?

A: In a team approach it is vital that everyone involved with patient care participates. Though one person may perform a skill, all members must be cognizant of the patient condition – including the airway status and its management.

The person performing the skill should receive credit for the airway competency measurement. Additional measures can also be determined by the Medical Director.

Documentation

Q: We currently debrief students after scenarios. During debriefing we discuss what went well or needs improvement. How do we document the student's progress in critical thinking?

A: This can be accomplished many ways. The fact you're doing a debriefing is a great first step! Start with evaluating the student's assessment, followed by the process of differential diagnosis, formulation of a treatment plan and reassessment. You can develop your own evaluation instrument including these criteria or there are a few you may find online. In class, use case studies and discuss the same criteria. Be creative!

Q: So as a clinical coordinator for my paramedic program, I must document "50 airway attempts across all age groups" for each of the paramedic students (student name, date, patient age, etc.). This will be a NIGHTMARE of skill documentation you are generating with this. Any suggestions?

A: First, remember not all 50 encounters must occur in the clinical setting! Many will be in the lab. In fact, a substantial amount of encounters will likely happen in the lab. Develop a simplistic form to quickly assess the airway. Also, the experiences are across ALL age groups, for a grand total of 50.

In 2016 the NREMT Paramedic Psychomotor Competency Portfolio will be required. To request a copy, contact the National Registry at www.nremt.org.

Q: Can you provide examples of how to evaluate "critical thinking" with regard to airway management during lab events?

A: We need to move away from the formative skill check off lists and broaden it to **how** one arrives at a differential diagnosis. Look at the situation and assess the best approach to management of the airway. If that approach does not work, then what is another approach? In addition to Plans A and B, need to have Plans C and D.

The student needs multiple plans if one fails. The student needs to be constantly thinking of alternative airway management plans to develop critical thinking.

Give your students case studies and discuss in class before going to the lab. Talk about what the student could have done differently. What went well? What did not go well?

Q: Does CoAEMSP recommend a reporting platform to track these competencies?

A: No. Programs often use home-grown spreadsheets as well as commercial software packages.

Q: Do you foresee the elimination of the checklist as a testing tool and instead, the educator uses a progressive mentality over the course of the class?

A: No. Checklists have their place in the formative phase of education, but they will not be the only tool. As a student progresses, they will need to be tracked and measurement instruments can be adjusted to their degree of difficulty.

Q: We use CUSUM (cumulative sum) analysis to assess competence. What failure rate is acceptable?

A: CoAEMSP will not recommend a specific CUSUM score. If you choose to use CUSUM, the Program's Advisory Committee and Medical Director should determine the recommended score for your program.

American Society of Anesthesiologists (ASA) Resolution

Dr. Murray Kalish, the ASA representative to the CoAEMSP and the ASA Committee on Critical Care Medicine, drafted a resolution that will be presented to the ASA House of Delegates in October 2013 encouraging anesthesiologists to support the Paramedic practice of airway management in hospitals and anesthesiology programs.

Q: What does this resolution say exactly and how is it going to be enforced?

A: The language of the resolution will be disclosed after it is passed by the ASA House of Delegates, at which time it will become ASA policy. The ASA cannot make anesthesiology do it; however, the resolution will give support to EMS programs.

Q: When will the vote occur?

A: October 16, 2013, during the ASA's House of Delegates

Q: Do you think the resolution will really make a difference? No matter what we have tried, anesthesiologists are still concerned with litigation.

A: We certainly hope so. As with many things it is a collective approach and we hope it helps.

Q: We offered to put the students on our malpractice insurance and they denied us. Will the new resolution if passed fix this problem?

A: We cannot dictate to clinical sites whether they accept students or not. By placing this resolution in the hands of the ASA, we hope anesthesiologists will re-consider student attendance.

Q: Unless there is a financial incentive, what makes Dr. Kalish feel that because a national organization says, "let students into your OR," will actually have any real change on non-academic centers?

A: We believe there is an incentive of investing in the future of healthcare providers that reaches beyond finances. Perhaps the individuals in question will need EMS care someday and would like to have competent providers.

The Anesthesiology communities have trained providers for years, all without financial incentives.

Q: Our program does not have problems with access to live patients in the OR; however, anesthesiologists and CRNAs typically restrict students to only the best suited candidates for students to intubate and never are they allowed to intubate pediatric patients. Will the proposed resolution help with this?

A: It is our hope; however, it is difficult to say. The program must communicate the level of training students receive prior to coming to the OR (i.e. lecture, lab, sim lab, etc) in order to strengthen their case. The proposed resolution will not and cannot dictate which patients and/or airways the students can participate. Hopefully as the anesthesiologists become more comfortable with these students, this will be expanded.

Q: Do we think that once the vote is passed this would have a profound impact on clinical sites?

A: We are hopeful there will be some impact because it will have the backing of the ASA.

Q: How much weight will this recommendation hold with hospitals and anesthesiologists?

A: Because it is coming from their national organization, we hope it will hold a lot of weight.

Q: How can we track this resolution? Can we assist in any way?

A: If you know any anesthesiologists who are in the ASA House of Delegates, call and encourage them to pass it. The members of the Critical Care Medicine Committee are backing the resolution.

Q: Does the ASA resolution statement address legal liability? That is the issue with access to intubation experiences. Anesthesiologists do not want the liability (or to pay for the insurance related to that liability).

A: No, does not address liability. The issue with airway management, there are alternative devices being used in the OR. There are competitors in the OR, too, all competing for management of the airway experiences.

Q: Can the resolution when passed be posted on the CoAEMSP website?

A: Yes, absolutely!

Combination by any Other Name is Still a Combination

The paramedic student should be successful in any combination of live patients, high definition fidelity simulations, low fidelity simulations, or cadaver labs in all age brackets (neonate, infant, pediatric, and adults).

Q: Does this include BLS airways (OPA NPA, etc.)?

A: Absolutely. The entire scope of airway management.

Q: Does this mean that we can use patient simulators instead of live patients for intubation? How many simulations equals a live intubation for CoAEMSP reporting?

A: For some of the encounters, yes. There is no guideline. We hope programs will research this and compare their results to their student and employer surveys to add to the body of evidence for further recommendations.

Q: I assume your definition of airway management includes, at a minimum, an unconscious patient? I cannot receive airway management credit with a conscious patient who is able to manage their own airway? (i.e., I cannot obtain one of my magic 50 by simply inserting nasal airways into everyone?)

A: Yes. Students should have an adequate mix of encounters with varied pathophysiology and acutities.

Q: Do you see glide scopes becoming common practice in the pre-hospital setting?

A: This is hard to say. They have a significant cost, but the clinical results thus far are impressive.

Q: How do you view simulated airway management experiences compared to "live tissue"?

A: Based on research, simulation is a viable alternative to live patients. It can take a very long time to find a live difficult airway; however, in a simulation lab that can be achieved much faster.

Q: Is there a ratio that should be followed as far as live vs. simulated intubations?

A: There is no ratio, but a combination. Thus far there is no prescriptive number. Again, we encourage our programs to research this to determine future ranges.

Q: What about the incorporation of more advanced airways, i.e., ventilator usage for airway management?

A: This is a great idea – especially for programs whose students will be using such equipment during field ride-along experiences, internship, and future employment.

Q: Low and high definition simulation has been discussed; how would a cadaver lab be used to meet the recommendations?

A: It would be just another tool in the toolbox. Cadaver labs could be used to fulfill a portion of the 50 required airway encounters.

Q: We have two hospital OR departments that allow our students to intubate and bag same day surgery patients, but more and more patients are getting LMA's instead of ETT which is making it difficult to meet our requirements for intubation. We do not allow the students to count LMA's - we require 7 successful ETT Intubations during this rotation. Can they use the LMA's to count toward the 50? And are we still trying to for the gold standard of ETT or if they use King or Combitubes does this meet the airway competency you describe?

A: They can use any method they want, including LMAs. There is no prescriptive number of intubations; it is a combination of ALL.

Q: Is the benchmark of 50 specifically intubations or a combination of ALL airway interventions, BLS and ALS combined?

A: Combination of ALL combined. ALS is important, but BLS is vital, too. Needs to be across various ages. Does not need to be narrow and prescriptive.

Q: Is there a percentage of the 50 intubations that are suggested as being on live patients vs. simulation?

A: No. The goal is airway management competency and the literature does not yet support any percentages of live patients vs. simulation.

Q: Does it have to be high fidelity simulation?

A: No. Although there is great value in high fidelity simulation, you can meet the requirements through any combination of low fidelity simulation, cadaver labs or live patient encounters.

Q: What is the thought on using cadaver lab versus animal lab or mortuary patients as alternatives to live intubations and simulation?

A: Students are better off with cadaver labs. Based on the three (3) surveys the CoAEMSP conducted during the formulation of the airway competency, there were strong feelings among the programs to stay away from the animal labs.

Q: Could part of the combination of methods be case studies in addition to simulated and live patients to assess when to use certain management techniques along with how to use them?

A: No. You want to integrate the cognitive and psychomotor processes while doing the actual skills. Case studies however, are an excellent way to build the critical thinking in preparation toward airway management.

Q: We are experiencing an increased use of LMAs in the OR. This is cutting into the students' experience, or lack of, with regards to intubating with an ET. As a result, it may be very difficult for our students to get 50 intubations.

A: For specific skills such as BVM, ET, etc., students must demonstrate competency. In doing so, you may incorporate these into the scenarios if you choose.

We are **not** recommending 50 intubations. We **are** recommending a total of 50 airway management encounters, some of which may include endotracheal intubation.

Best Practices

Q: My medical director instructed me to have an airway day, in which we all do airway practice. I could generate 50 that way pretty simply. Is that acceptable?

A: Wow! What a great idea! Everything is set up. People are evaluating their skills.

Q: What are some best practices programs are using or planning to use in reaching the benchmark of 50?

A: The primary way is through simulation. There is not a magic number. Some students will gain competency with 30, while another student may take 60. The goal is to demonstrate the student is progressing toward competency and eventually becomes competent.

Q: Any thoughts on integrative cognitive/psychomotor/clinical education versus sequential clinical education?

A: The CoAEMSP Board of Directors would like to see the field internship serve as a capstone after the other components have been completed.

Q: With the emphasis on airway proficiency, paramedic education programs that are expected to achieve these goals are dependent upon outside entities (hospitals, operating rooms, anesthesiologists, EMS agencies, etc.) of which the Program has no direct control. What mechanism exists to encourage, if not require, healthcare institutions to participate fully in paramedic education?

A: The recommendation provides other options for individuals who cannot get the live patient experience. Medical studies demonstrate the use of simulators. The importance is that the person is progressing.

Q: Any recommendations for inclusion of alternative or subordinate techniques (e.g., digital intubation, video-assisted, lighted stylette, RSI, etc.)?

A: The more tools you have and the more practice the better. Realize some of your students may not work in your area and thus will need knowledge of additional tools. Do not limit yourself only to the techniques you learned as a student.

Q: Would tracking the student lab contacts for airway in a clinical skill program like Platinum Planner or FISDAP be acceptable?

A: Absolutely, but they are not required if you choose to use an alternative, non-proprietary system.

Q: The Anesthesia Departments at our local hospitals love EMS and want us in their facilities. Our problem is at the hospital end - the risk managers don't want us doing intubations even with a track record of NO incidents. Any ideas how to deal with risk managers?

A: Educate the risk managers on what you need to do and why you need to do it. Schedule a meeting with the risk manager and bring with you a supporting anesthesiologist. Share with them the curriculum and what has been done in lab. Demonstrate what the students have done in advance of entering the OR. Also take along a copy of your liability insurance and mention your long-standing successful history. Invite the risk manager to be a part of your advisory committee.

Q: In my region, we are competing with medical colleges, interns, flight crews, schools of anesthesiology. What recommendations do you have to facilitate my students get at least an opportunity to see at least some live intubations?

A: Some thoughts on this are to make friends with the hospital administration and at least one influential anesthesiologist. Invite both of these individuals to serve on your EMS advisory committee. Explaining in detail the curriculum and preparation the students complete prior to attending clinical may help your case as well. Clearly stating student clinical objectives and malpractice coverage are also a good idea.

Q: How many intubations do you recommend a Paramedic achieve in a controlled OR setting?

A: Great question. There is no definitive magic number. Students have achieved competency without live encounters and students have achieved competency with many live encounters. *Note:* if you do not require any live encounters, you must clearly show how students are achieving competency without them.

- Q:** Are there evaluation instruments being utilized to assess critical decision making in regards to airway management?
- A:** There are a few instruments on the internet; however, none of them that we know of have been shown to have a direct result on EMS competency.
- Q:** We have access to two Electro-Convulsive Therapy (ECT) labs. During these clinical rotations, students perform BVM with other airway devices on approximately 15-20 patients per day. These ECT labs may be available to other schools in other areas of the country as well. The issues with ORs seem to be one of communication. What has helped us is having frequent meetings with OR directors and staff. Showing our skill sheets, showing insurance documents and introducing our medical director to them. Also giving them monthly schedules of students attending helps tremendously.
- A:** Excellent! Thanks for sharing!
- Q:** While standards are based on aggregate performance, sooner or later each provider must be able to perform skills associated with the role. Skills competencies are interdependent on the preceptor's ability to evaluate performance. What role will preceptor training play in this process?
- A:** When trained properly, preceptors can always have a positive impact on student learning. By the time a student reaches that phase of education he or she should have had his or her skills validated. That said, a preceptor can offer additional guidance in technique if necessary and/or recommend remediation.
- Q:** What issues or barriers have you observed within the clinical settings?
- A:** The main barrier is access. The use of LMAs. Also, more competitors (residents, anesthesiologist assistants, CRNAs). Liability. Invite the anesthesiologists to join the program's Advisory Committee, to the classroom to see how the paramedic students are being trained, to guest lecture to the class. Ask your medical director to reach out to the skeptics.

The Research

- Q:** You mentioned the recommendations came from research. Is there a list of studies?
- A:** Yes. Visit the CoAEMSP website: <http://www.coaemsp.org>
- Q:** Is there somewhere that some of your research is posted so that someone who is a program director can review what has been done across the country? This could be useful for us to improve our own programs and do this differently...if we see that changes should be made in different areas.
- A:** Yes. The bibliography is available on our website [here](#).
- Q:** A study between integrated and sequential has been conducted, which showed integrated is better. (The study was conducted by Gregg Margolis, et al.) and showed integrated as better.
- A:** Thanks!
- Q:** Has there been any research looking at the psychology of being in an OR with a live patient versus a simulation manikin that the student knows they cannot "kill" the patient?
- A:** Not to our knowledge. You may have a premise for a great study! When you do the simulations, set the stage that these are real patients.

Q: This guideline is spectacular, and hopefully it will lead to guidance on other skills for programs. My only concern is that it falls short from an evidence-based standpoint. There is very strong evidence favoring waveform capnography over other means of confirming placement, like colorimetric methods, yet the guideline does not suggest that all or some very significant number of these should use waveform capnography or simulated waveform capnography to train individuals. Another example is the suggestion of misting in the tube as one method for confirmation - literature has completely disproven the accuracy of this method and it should be specifically discouraged.

A: Capnography and visualization are the gold standard. Misting was taken out of the original CoAEMSP recommendation.

Additional Comments

Q: In our State, our Office of Emergency Medical Services sets the requirement of 10 live intubations during the student's clinical internship, **not** the individual training institutions. Students are struggling to get these 10 intubations with the increased use of LMAs. Will the CoAEMSP recommendation supersede the State's standards?

A: No, the State Rules and Regulations always supersede the CoAEMSP.

Q: For the patient with a complicated airway, who cannot be intubated; what are your thoughts on Paramedics being trained to perform surgical cricothyrotomy?

A: This is a skill that may be taught to paramedics. Like any other skill or procedure, it must be approved by the Program's Advisory Committee and Medical Director. Often, permission to perform invasive skills such as cricothyrotomy is dictated by state, regional, and/or local guidelines. Check with such prior to implementing in a program.

Q: Do you have recommendations to help paramedics maintain their skills once the student starts employment?

A: The use of simulation. Ask anesthesia for opportunities to manage the airway as well.

Q: We know there is controversy regarding advanced airway management performed in the field and some talk about sticking to BVM and oral airway. What are your thoughts?

A: There are conflicting studies with many variables to consider. More research is needed to determine their overall value. Until then, advanced airways are still part of the curriculum and need to be included in paramedic education.

Q: Can we have a letter from Dr. Kalish saying how awesome paramedic students are and they don't damage airways so that we can give them to ORs?

A: I have never ever had a paramedic student knock out a patient's tooth. I have had some anesthesia residents do it.

Q: Our program has begun to use the "eureka point" regarding IV placement competency, how do you feel about this regarding airway management competency?

A: The Eureka Point developed by Dr. Wilson is a sound measure that is acceptable to use in showing competency.

Q: Some programs are no longer teaching needle or surgical emergency crics. What are CoAEMSP's and NREMT's stance on this procedure?

A: It is regional; there is no specific stance. If you live in an area that allows it and expects it, then it needs to be in the training. It is one more tool in the tool box to use. Look at the scope of practice for the State. The NREMT bases its exams on the Practice Analysis done every five (5) years.

Q: Does CoAEMSP foresee this becoming a Standard? As a recommendation only, advisory committees still have the ability to set the parameters for competency and thus set the bar very low and that does not help further the success of the students.

A: The CoAEMSP does not foresee the recommendation becoming a Standard at this point. There is no push and there has been no discussion about making it a Standard.

Defining competency for the students is set by the Advisory Committee and the Medical Director. The Program will need to demonstrate its students are competent in airway management. As evidence is provided, the CoAEMSP will provide guidance based on that evidence.

Q: For the difficult airway, the airway management protocol should still include surgical cricothyrotomy. We need to include this in our arsenal for airway management.

A: As stated earlier, this is a skill that may be taught to paramedics. Like any other skill or procedure, it must be approved by the Program's Advisory Committee and Medical Director. Often, permission to perform invasive skills such as cricothyrotomy is dictated by state, regional, and/or local guidelines. Check with such prior to implementing in a program.

Q: What impact do you anticipate of video laryngoscopy on numbers of airway management attempts needed to reach initial competence?

A: There is not a number, but a combination of all these tools. You will want to use the whole range of methods. There is not a number for any one of the approaches.

Q: The American Board of Anesthesiology (ABA) has instituted a Maintenance of Competence (MOC) program for recertification. Do you anticipate EMS ever getting to a high stakes simulated environment for certification?

A: This will be determined by the NREMT. It is not out of the realm of possibility.

Q: I am in a rural region and it is important to keep the advanced airway in the paramedic scope. Is there any chance at the national level this will go away?

A: There are no plans to remove intubation at this point. We will follow the science.

Q: How is CoAEMSP working with NREMT to integrate this recommendation into their exam?

A: We are working hand-in-hand to ensure the two (2) entities are consistent amongst both organizations.

Q: We are located within a relatively large metro area and our average paramedic student needs over 10 hours of time in an OR to obtain just two intubation attempts. Not only is a function of access, but also one of time. I also have data from our state... Experienced providers are successful at intubation 66% of the time. Our students average over an 80% success rate. I understand that this is a recommendation, but my concern is that, in my experience, the CoAEMSP modifies the "standards" through its interpretations of the standards and, as a program director, I shoulder the burden with the site evaluators to explain why this recommendation is not being followed. What assurance do we have that this recommendation will not become a CoAEMSP interpretation of the standard to which we will be held?

A: This is a recommendation only and based on the current science in medicine that has been published. The intention is to offer programs options in demonstrating student competency in airway management. Recommendations are simply ways a program may meet the Standards. Programs are free to deviate from such recommendations as long as they can show how they arrived at their own way of determining competency in their students. Any such deviation needs to have documented Advisory Committee and Medical Director approval.