

When should an EMT administer medications?

In a straw poll with some of our clinical instructors, one of the most common questions you are receiving is about medication administration, specifically when can an EMT administer a medication. I have heard this same question from students and while I wish there was a simple answer, there is not. This is the same for our ALS colleagues, medications fall into many different places in the patient assessment flow chart, some very high in the primary assessment and some wait until treatment. I am reminded of a call for a patient, who my partner and I were dispatched to for anxiety. Upon arrival, the patient was lying on the floor of a local restaurant, unconscious with stridorous respirations. My partner, an EMT and paramedic student at the time, grabbed the nonrebreather mask and worked to get the oxygen going. Based on seeing the patient's difficulty breathing and the patient's husband who met us at the ambulance saying his wife was allergic to peppers which she likely consumed at the brunch buffet, I drew up and administered intramuscular epinephrine to treat the suspected anaphylaxis. After we were able to support the patient's airway and breathing, we moved on to starting an IV and administering Benadryl, magnesium sulfate, and a fluid bolus. This was an example where it was very easy for my partner and I to recognize the medical emergency and initiate treatment. Some medications, like epinephrine, have very few or no contraindications and treat airway, breathing, or circulation emergencies, thus they are administered very early in the patient assessment process. Other medications require us to obtain more information, further into our assessment, and thus are not administered until the treatment phase of the assessment. Because of this, it doesn't surprise me that our initial education students struggle with the concept, as do our paramedic students. Thus, I thought it might be helpful to detail some of the different ways you can address this concept with students.

When I get these questions, the first thing I say to students is, when you have determined the patient meets the indications and does not have any contraindications, that is when you can administer the medication. I then proceed to detail some examples. For example, epinephrine simply requires the presence of upper airway swelling caused by anaphylaxis and there are no contraindications so as soon as I recognize the condition, I can proceed with the safety check and administration. Contrary to that, and what I also share with students, nitroglycerine administration requires me to assess a few more things as there are several contraindications. It requires me to obtain a blood pressure and evaluate the patient's other medications for the use of a phosphodiesterase inhibitors. Thus, I really can't administer nitroglycerine to my patient until after I completed the entire patient assessment. After that short explanation to students, I restate my initial premise which is medication administration can take place as soon as you have determined the patient meets the indications and does not meet the contraindications.

I also share with the students; medication administration occurs under the pretense that I have the medication readily available. Either the patient has the medication, or my service has the medication. If I don't have the medication, then I am unable to administer it and thus it is a moot point. Additionally, anytime we are administering a

medication, we should be doing a medication check and I try to always remind the student as such.

I want to acknowledge this can be a difficult question to answer because not all services operate the same. During a recent team meeting, we discussed this very topic. Em and Sara shared in LA County, most BLS agencies do not carry any of the EMT medications and thus rely on the patient having the medicine. This really surprised me because where I am from and Ryan shared as well, our ambulances carried all the EMT medications, and we had standing orders for our EMTs to administer any of the medications without the need for medical direction. As a group of forward-thinking EMS providers, we have an opportunity to continue moving the system forward. As such, aspirin provides a well-documented, lifesaving benefit to patients suffering a heart attack which has been proven again and again. Additionally, it is inexpensive with minimal side effects. I really struggle to come up with reasons why agencies would not carry it nor allow their providers to administer it in the prehospital setting. However, education drives clinical practice and thus we have hope for the future!

This model of education, where we provide students the parameters for their learning, and allow them exploration to develop critical thinking skills is called deliberate practice. This model of education can be summed up by saying, practice as you play. And this is our goal in education, provide the students with the knowledge of the medication, including the indications and contraindications, and let the student use their critical thinking skills to decide when to administer a medication. This is the best model for didactic education currently and why we elect to employ it in the classroom.

At the end of the day, this topic requires a bit of explanation, not just a quick acronym or mnemonic, which can frustrate those looking for a quick answer however that is our educator's bread and butter. We can break down the complicated with reasonable insights and explanation to improve knowledge. I hope this insight is helpful in your teaching. If there are other topics which you find difficult in the classroom, please send them my direction to be included in future articles!