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Update 12 - COVID-19 – From Office of the Medical Director 27 MAR2020 1600

To All EMS Personnel in the EMS System for Metropolitan Oklahoma City & Tulsa

Key Content:

- **Clinical Care Standards – Respiratory Illness-Related Actions**
- **Interfaces with Nursing Homes, Shelters, & Hospital Emergency Departments**
- **Educational Resource – COVID-19 - CIDRAP**

This is a focused communication. Please read closely, factoring your credentialed scope of practice within our EMS system and adjust clinical care accordingly to preserve, promote, and improve the safety and well-being of you, your EMS professional colleagues, and your patients. Remember, this is a time that we are literally writing the “textbook” of best available clinical care and operations hour by hour.

Clinical Care Standards – Respiratory Illness-Related Actions

Patient Prescribed Inhalers

We are accustomed to leaving all patient medications in the patient’s home, workplace, or vehicle that we encounter the patient. We have historically done this to help the patient avoid any unintentional loss of medication in transport and/or at hospital. We need you to change this usual and customary practice immediately. Until otherwise notified, bring all inhalers and spacers - if the patient utilizes a spacer tube with their inhaler(s) – with the patient to hospital. In many circumstances, hospitals are running low on respiratory medications and can safely utilize the patient’s home medications as part of their treatment plan.

Inhalers may be used in place of nebulized therapy both during our EMS care of the patient pre-hospital as well as in hospital. The following chart converts the number of puffs of a metered dose inhaler to mg for albuterol:

2 puffs = 1.25 mg nebulized
4 puffs = 2.5 mg nebulized
8 puffs = 5 mg nebulized
16 puffs = 10 mg nebulized

The additional advantage of metered dose inhaler albuterol is with a good mouth seal on the inhaler or spacer tube, there should be less aerosolized “spray” of potential viral particles from the patient. Remember that any use of inhalers or nebulizers can induce cough and you should be positioned to the side or rear of the patient during such therapies. Minimize, frankly avoiding if possible, use of inhalers or nebulizers in confined spaces, such as within the ambulance.

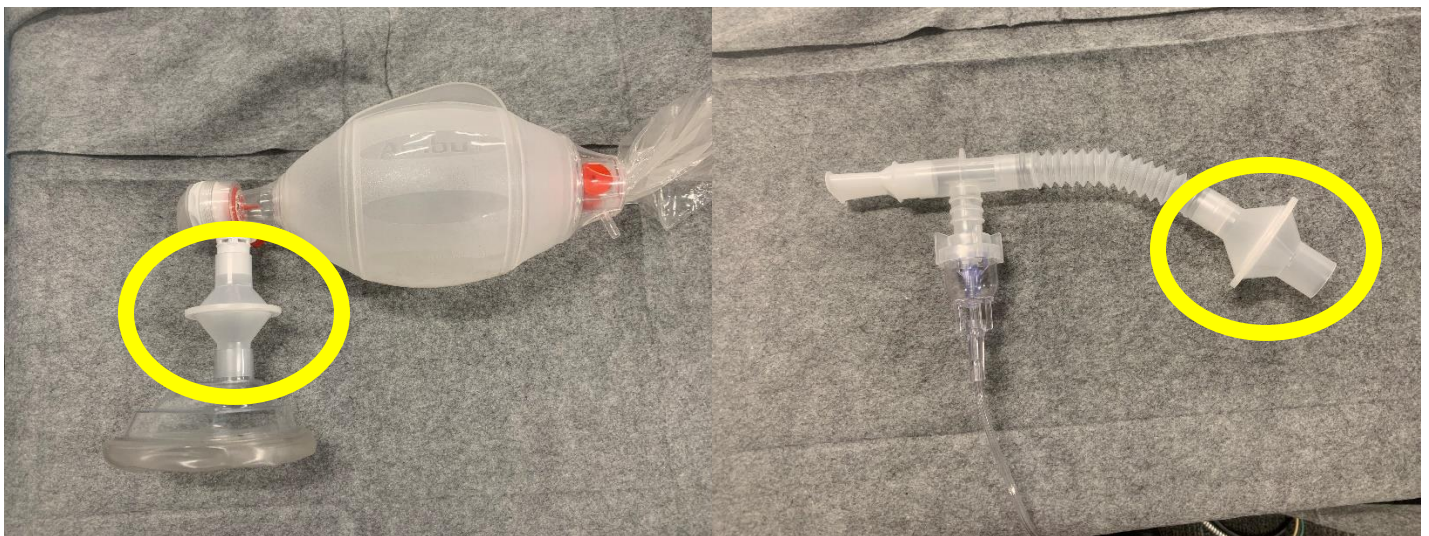
Continue to minimize use of nebulizers if at all clinically able and safe for the patient.

Patients on Home Ventilators

While a very small percentage of patients we encounter are on home ventilators, this represents a particularly vulnerable set of patients in this era of COVID-19, caused by the SARS-CoV-2 coronavirus. You already know the implications for the challenges ahead in scientifically estimated need for ventilators compared to typical availabilities of ventilators within the metropolitan Oklahoma City and Tulsa areas. Any home ventilator that size permits, bring that patient's home ventilator with them to hospital. Likely, during hospital care, that will prove the patient's ventilator used. There may be home ventilators of a size that logistics do not permit transport in an EMS system vehicle. If so, simply inform the treatment team at hospital that all best efforts were expended in bringing such device.

Filter Vents on Mechanical Ventilators – used in ventilator or NIPPV mode – in bag-valve-mask/airway circuits and on nebulizers.

Utilize filter vents when at all possible to reduce possible viral load in any respiratory treatment circuit. EMSA materials management has recently ordered what was termed a significant quantity of these. Correct usage involves three on the mechanical ventilator as detailed per EMSA Clinical Services training recently. See also pictures below for placement in BVM and on nebulizer tubes:



The manufacturer specifies 99.7% viral particle filtering and 99.9% bacterial particle filtering with these devices. We are currently awaiting in writing a response from the manufacturer to confirm they believe based upon the known size of the SARS-CoV-2 intact virus that it is filtered or “caught” by the filter to avoid it in the exhalation stream. We do believe these filters will increase your safety when working with patients requiring airway management.

Interfaces with Nursing Homes, Shelters, and Hospital Emergency Departments

This is an incredibly dynamic time. Just as we are continuously evaluating measures that we can take for your safety while delivering excellent clinical care to patients, so are our partner facilities. We anticipate, and frankly expect, growing cooperation from nursing homes and shelters in moving ambulance transport patients to entry/exit doors or even outside, weather permitting. Realize that there will continue to be some patient conditions that prevent the best of intents for facility staff to meet this expectation. Work courteously with staff and notify your operational supervisor of issues you may encounter. Collectively, we will make honest efforts to follow-up with facilities to see what additional cooperation can be gained. Please also remember that care capabilities within the typical nursing home is quite limited

and there will be times you may question the clinical need for ambulance transport. Please advocate for your patient to the professionalism you are known for bringing to our communities.

Emergency Department operations will undoubtedly change in the days and weeks ahead, in some cases, dramatically visibly. Communicate effectively with hospital staff and if you are encountering new procedures for patient transfer of care that you have not be detailed on by your agency education leads, notify your operational supervisor so that we all can be as up to date as possible on the dynamics at any particular hospital in our service area.

Educational Resource – COVID-19 – CIDRAP

By now many of you are aware of my profound respect for an incredibly gifted epidemiologist at the University of Minnesota, Dr. Michael Osterholm. I encourage you to invest 46 minutes of time in listening to the first episode of The Osterholm Report – COVID-19 – How We Got Here (release date 24 MAR)

You can access it at this link: <http://www.cidrap.umn.edu/covid-19/podcasts-webinars/episode-1-how-we-got-here>

A key takeaway from this frank, scientifically based discussion is this:

“Testing today has become a very desired activity. Where ‘I want to know. I want to know my status.’ And I understand intuitively why people would say that... One of the things we’re going to have to realize is that all this testing we have promised is about to fall far, far short of what anybody has suggested would be available. Why? Because even though commercial testing is coming up today, the reagents we need to actually run these tests are in very short supply and we’re running out. And so, I believe in 2-3 weeks, we are going to start seeing major shortages of any kind of testing at all. We already have states in this country where they can’t do testing using the public health labs because they’ve run out of reagents and that is happening every day more and more often in labs around the country. Even the commercial labs are now warning that they may have real challenge. Where does this reagent come from? In many cases, it comes from China, which has been under basic lockdown. And from a manufacturing standpoint, that’s the real challenge.” – Michael Osterholm, PhD, MPH

In anticipated Update 13 from the Office of the Medical Director – scheduled for release early next week, we will discuss return to work recommendations and limitations and how we are currently using and anticipate continuing to use a “non-testing” strategy. While I am sobered at Dr. Osterholm’s comments, I trust the accuracy of his prediction and we are prepared to continue safely without the ability to obtain and use viral testing as part of our own health evaluations.

I believe you owe it to yourself to be as best educated, relevant to your duties in EMS, as you can be, using resources I carefully vet before recommending.

The “curve” in our world is concerning. This will prove a marathon of a response by our EMS system and we truly need each one of you reading this update. Your talents and your heart to serve are key in seeing our communities through a particularly serious challenge – one that none of us has ever seen before.

I am proud of you. I am humbled and honored to serve alongside you. Remain resolute. I promise you that I will remain steady to the needed tasks and with steely resolve. I’m now off to an evening and weekend full of Emergency Department duty. Let’s be careful out there.

Dr. Goodloe