



STOKES COUNTY EMERGENCY SERVICES

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SUBJECT: Portable Mechanical Ventilators for EMS

October 1, 2020

Mr. Oakley,

I hope this finds you well and I want to take this opportunity to thank you for your outstanding and continued support of our exemplary EMS agency. By national comparison Stokes County EMS is considered a small, rural EMS agency, which actually further illuminates it as a high-performance agency providing advanced procedures and medications unavailable in most urban, population-dense areas.

In medicine we are taught that the airway is the most important aspect of patient care, without it you have no means of saving a life. Our agency undergoes extensive training in advanced airway techniques and use of monitoring equipment available in emergency departments and intensive care units. I am grateful to both you and the board of commissioners for providing us the funding to keep our airway armamentarium at the most advanced level. The recent approval, providing us the funding to improve our airway equipment with the GlideScope Go®, puts our agency at the tip of the spear in terms of capability and will increase our ability to safely provide care to the citizens and visitors of Stokes County.

However, one aspect of our current airway equipment options is in need of update. Currently we carry a very simplistic mechanical ventilator which is not up to date with current standards of ventilation and due to its configuration could actually impart harm. All of our serious and critically ill patients are transported to either Winston-Salem or Greensboro based facilities, requiring transport times of 30 to 45 minutes. Mechanical ventilation devices are necessary to free our providers from manual ventilation with a bag-valve-mask device. Providing manual ventilations for this period of time has been proven in the scientific literature to increase the risk of over-ventilation of patients, which may result in blood pressure instability and also neurological damage due to over-oxygenation. This also requires more than one provider, sometimes up to three, to attend a patient placing a burden on our system and potentially our first responders.

R. Darrell Nelson, MD, FACEP

Medical Director

Stokes County Emergency Medical Services

We have an opportunity to replace the current outdated fleet of simplistic ventilators with state of the art, military specified ventilators that are compact, battlefield tested, offer a simple provider-ventilator interface, and also capable of providing Non-Invasive Positive Pressure Ventilation (NIPPV) (aka: CPAP and BiPAP). The NIPPV features combined with mechanical ventilation further streamlines our approach to airway management by combining multiple modalities that are typically delivered by multiple devices. The proposed *Zoll Z Vent* ventilator provides a variety of commonly used modes of ventilation used in the prehospital setting and functions with both pediatric and adult patients. We have researched the current mechanical ventilator models available on the market for prehospital use and the *Zoll Z Vent* meets all of our specifications and is offered at a reasonable cost for a mechanical ventilator.

Warm regards,

 , MD, FACEP, FAEMS

R. Darrell Nelson, MD, FACEP
Medical Director
Stokes County Emergency Medical Services