The Benefits of an Automatic Resuscitator Over Manual

In this feature, Respiratory Therapy interviews clinicians and healthcare providers about the actual application of specific products and therapies. Participating in the interview is Robert Kohler EMT-P, Stamford Emergency Medical Service.

Respiratory Therapy: What are the reasons for choosing an automatic resuscitator (like the VORTRAN GO2VENT) over manual (eg bag-valve-mask)?

Robert Kohler: All the various respiratory functions in the body are dependent on a narrow range of pH in which they can operate. Ventilation has a profound effect on the pH of the blood stream. Although in the field we don’t know what the exact pH is, if we automate the ventilation process we will provide a stable value the body’s buffer system can map to and compensate for if necessary.

Resuscitation is a two-person function. You the practitioner and the patient. While you don’t know the patients pH the patients buffer system does. Give the patient a consistent target which cannot be achieved through the use of a BVM and let their own buffer system do the rest.

Whether it is the GO2VENT or some other automated process, automation is the key. The GO2VENT is brilliantly simple in its design. It uses less oxygen than a BVM and it is lightweight, inexpensive and durable. With minimal training it is very easy to deliver effective, consistent ventilations across the wide variety of situations found in the pre-hospital environment. Furthermore it is just as easy to disconnect from the system and go back to a BVM should you run out of oxygen, as it requires no special adaptors.

RT: What makes the VORTRAN GO2VENT unique for EMS providers?
RK: The compact size, weight and durability of the GO2VENT are exceptional for the capability it provides. The GO2VENT has brought a new level of care to the street.

RT: How has the VORTRAN GO2VENT changed your ability to resuscitate patients?
RK: Yes and realize resuscitation in the pre-hospital environment is much different than in hospital. To put it bluntly, it is chaotic at best. Remember the GO2VENT is used when a patient is literally fighting for their life and needs to be sedated in order to properly be ventilated. The GO2VENT offers the option of one less pair of hands needing direction from you the Paramedic. Just set it and GO! Now you can step back and look at the bigger picture. The patient!

RT: The VORTRAN GO2VENT has been stockpiled in many disaster preparedness services, how would you recommend they utilize them?
RK: In short, any time a Bag Valve Mask would be used it should be replaced with a GO2VENT. The GO2VENT can even be configured to continue ventilation in an MRI!

RT: What are the risks and benefits of using the VORTRAN GO2VENT?
RK: Minimal risk that I can see, certainly nothing you would not have using a BVM. The benefits I explained earlier.

RT: When setting up the VORTRAN GO2VENT, what are some of the common mistakes?
RK: Initially starting the GO2VENT with too much oxygen is the biggest one. You should start using only 10 liters per min. Secondly people don’t wait and let the vent work. You should back out the rate knob a half turn at a time over about 10 seconds until ventilation starts. Understandably this is an eternity when your patient has stopped breathing in the back of your ambulance but given the chance your patient will fare better.

RT: In your experience as trainer/educator for EMS, what is the biggest challenge in adapting the VORTRAN GO2VENT?
RK: The management style of the service it is used in. There are few Paramedics both young and old that embrace change. If management does not believe in the science and encourage its use through policy there is little hope that Paramedics will pick it up on their own.

RT: What areas of improvement are needed regarding EMS emergency ventilation?
RK: Realize Ventilation is the prime directive. Your job is to make sure this patient continues to breathe and breathe effectively.

RT: What recommendations would you make to any EMS services that are not utilizing automatic resuscitation?
RK: Reevaluate their priority’s and realize we once used to use MAST trousers and Long Spine Boards on the ambulance but things have changed.