

Life-saving work

Blue Rhino faces increased demand during COVID-19 pandemic

Flashback to the spring of 2020 and, around the world, the first surge of the COVID-19 pandemic was in full swing. The number of those needing to be hospitalized with the virus was rising. During this time, Cook began to see a significant increase in the demand for our Blue Rhino products, which are used to perform percutaneous dilational tracheotomies (PDTs).

Karol Lagodzki, a global product manager for Critical Care airway products, credits the work that Cook's manufacturing teams have done in keeping up with the demand for these products.

"It is very important that Cook be able to, and the industry be able to, provide these products, because they are literally life-saving products for these patients," Karol said. "They are providing these products to patients, a good percentage of whom would not survive without having that tracheostomy tube placed in them."

Karol explained that if you look at the year-over-year sales for the Blue Rhino, as of December 2020, the product was seeing a 40% increase in demand over a 12-month period. However, he said that there were weeks in April and May of 2020 that Cook was seeing a 200% increase in demand. This means that the demand was three times what it normally would be.



▲ Blue Rhino G2-Multi Percutaneous Tracheostomy Introducer tray.

A closer look at the tracheotomy

In a tracheotomy, a doctor cuts a hole, called a tracheostomy, in a patient's neck and inserts a tube to help the patient breathe.¹ The use of tracheotomies isn't specific to the COVID-19 pandemic. The origins of the procedure are ancient, but the technique for performing a tracheotomy reached a significant milestone in 1909, when Chevalier Jackson published a number of recommendations to make the procedure safer and less likely to result in mortality.^{2,3}

Over the last 30 years, Cook has been a pioneer in further innovating PDT and airway-management products, beginning with their partnership with **Dr. Pasquale Ciaglia**. When he looked at the surgical tracheotomy, Dr. Ciaglia was concerned with the potential complications that could arise from the procedure. He partnered with Cook Medical to invent a minimally invasive PDT procedure. The tracheostomy introducer set that came out of this partnership, which was introduced in 1987, was the

predecessor to the Blue Rhino. It included a series of dilators, which were intended to be used sequentially to create an opening in the airway so that the tracheostomy tube could be inserted.

This set later evolved into the single-dilator approach that is used today with the Blue Rhino Percutaneous Tracheostomy Introducer. Today's Blue Rhino G2-Multi introducer dilator is shaped with a gradual taper for single-stage dilation. The product comes in a variety of kit configurations to accommodate physicians' preferences, enabling them to perform tracheotomies at the bedside in the ICU.

PDT has become one of the most commonly performed procedures in intensive care units (ICU) across the globe^{2,4} and the single-dilation technique provided by the Blue Rhino has become the preferred method of performing PDT by many physicians.^{5,6}

Because PDT uses the Seldinger technique, it is a less invasive option compared to the surgical technique.



▲ Blue Rhino Percutaneous Tracheostomy Introducer

This allows for the procedure to be performed by surgeons and other trained clinicians at the patient's bedside,⁴ which also eliminates the need to transport critically ill patients to the operating room (OR).

The importance of PDT and COVID-19

In some cases, if a patient is unable to fight off the COVID-19 infection, the virus can travel to their lungs and cause acute respiratory distress syndrome (ARDS). This condition lessens the lungs' ability to provide enough oxygen to the patient's vital organs. If the patient reaches this point, they are often placed on a mechanical ventilator, which forces air into their lungs when they are unable to get enough air on their own.⁷

While some patients only need to be on the ventilator for a short amount of time, others require it for longer, possibly even a few weeks. In this case, a tracheostomy may be needed to help wean a patient off a ventilator after long-term use.⁷

This is where the advantages of the Blue Rhino and the use of the Seldinger technique come into play in the fight against COVID-19. Karol



▲ Karol Lagodzki

explained that while Cook does not sell tracheostomy tubes, we do sell the insertion devices for these tubes, and without the insertion devices a tracheostomy tube cannot be placed unless a patient is taken to the OR.

As stated above, being able to place the tracheostomy tube at the bedside can be beneficial, as it eliminates the need to move a patient who is critically ill with COVID-19 to the OR for a surgical tracheotomy. In addition, Karol explained that if a patient has to be taken to the OR for a surgical tracheotomy, you are automatically looking at the use of many more care providers, such as anesthesiologists, surgeons, nurses, techs, and so on. These care providers and the ORs have been a limited resource throughout the life of the pandemic.

"There are only so many operating rooms," Karol said. "The volume of patients is such that there aren't enough operating rooms and surgeons to go around.

"At the bedside you can do the procedure with, on average, about three people: one person doing the procedure, another person holding the scope, and a third person monitoring and providing some local pain control," Karol continued.

On January 11, 2021, Cook Medical announced that the Blue Rhino G2-Multi Percutaneous Tracheostomy Introducer sets and trays are commercially available to physicians in the United States, Canada, and

Europe. This product is a new iteration of the Ciaglia Blue Rhino product family and is designed to fit a wide range of tracheostomy tube sizes.

The new loading dilators in the Blue Rhino G2-Multi Percutaneous Tracheostomy Introducer sets and trays have been designed to fit with Medtronic's newest line of tracheostomy tubes for most adult sizes: the Shiley™ Adult Flexible Tracheostomy Tube with TaperGuard™ Cuff, Disposable Inner Cannula and the Shiley™ Adult Flexible Evac Tracheostomy Tube with TaperGuard™ Cuff and subglottic secretion management. Each set and tray comes with a range of loading dilators to help physicians find the right fit for the patient.

To learn more, visit [CookMedical.com/BlueRhinoMulti](https://www.cookmedical.com/BlueRhinoMulti).

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Sources

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