

# RESTORING AIRWAYS, ONE PATIENT AT A TIME

## SUMMARY

One of the most daunting and challenging procedures in rural Emergency Departments involve restoring patient airways when breathing is obstructed. Whether it is via intubations (rare) or cricothyrotomies (extremely rare), these cases can be stressful and cause deep feelings of uncertainty and anxiety, especially if the local physician or provider has limited experience performing the procedure. But, thanks to Avel eCare's telemedicine program, these rural clinicians are no longer alone. Through an innovative two-way audio and video technology platform, Avel's expert team of board-certified physicians and emergency medicine-trained nurses are available at a push of a button to assist with the most difficult of situations, including restoring airways.

## DIFFICULT AIRWAYS

Starting in 2007, Avel eCare began providing Emergency telemedicine services to rural and underserved hospitals. As the service line footprint grew and the Avel Emergency medicine team partnered with more facilities and local care teams, they became aware of certain procedures and situations in which telemedicine helps tip the scales and improves patient outcomes, including restoring difficult airways.

Since Avel's ER doctors help conduct these procedures on a daily basis, they are a valuable resource for those local physicians and providers who, due to the remote community where they practice, don't see near the same volume of intubations or, in the rare case, cricothyrotomies. And the results speak volumes – Avel maintains a 95% success rate helping local providers restore airways.

## LAST DITCH EFFORT

The cumulation of these efforts is best illustrated by a recent case taking place in a critical access hospital serving a small, rural community. The family medicine provider at the hospital is responsible for providing both outpatient family practice services and covering the Emergency Room. On average in a given year, the physician and team of CRNAs conduct between twenty and twenty-five intubations of which the physician performs one to two themselves.

In February of 2022, a patient with multiple comorbidities who was struggling to breathe presented to this hospital's Emergency Room. The patient had a large neck abscess and, given the clinical situation and predicted difficult airway, a successful traditional intubation was highly unlikely.

At this point, the physician picked up the phone and dialed Avel eCare. Given the complexity of the patient's condition, the local team wanted to consult with Avel eCare's Emergency team. Dr. Luke Van Oeveren, a board-certified and experienced Emergency physician at Avel eCare, took the call.

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After further assessment and an unsuccessful intubation attempt, both Avel and the local team decided the patient was going to need a cricothyrotomy, a procedure which requires the physician to make an incision in the neck and manually insert a breathing tube into the trachea. The local physician informed the Avel team they had never performed this procedure on a patient before, adding a heightened degree of stress and difficulty.

Together, the bedside physician and Dr. Van Oeveren reviewed the details of the case and discussed the potential techniques to use during the procedure. Ultimately, the local physician chose the bougie-guided technique and, with Dr. Van Oeveren supporting from a wall-mounted monitor, performed the procedure. Given the patient's condition, there was some initial difficulty finding the airway but, thanks to the local physician's past training – including participating in **Avel eCare's Airway Course\*** – they were able to successfully complete the procedure.

### \*Avel eCare's Airway Course

Each year for the past eight years, Avel eCare has hosted an Avel eCare Airway course where hundreds of clinicians from rural and remote health care facilities come to Sioux Falls for an intensive, two day training sessions. These engaging trainings are led by content experts Dr. Calvin Brown (Difficult Airway Course faculty), Dr. Luke Van Oeveren, Dr. Kelly Rhone, Dr. Katie DeJong and several more Avel ER physicians. Attendees learn best practices to successfully restore airways and were able to apply their learning in hands-on, interactive training sessions with pig tracheas. The local physician attended this Airway Course in 2021, a course they credit as helping provide the techniques and hands-on experience they needed when performing the cricothyrotomy in February of 2022.



Avel eCare ER physicians lead hands-on, interactive demonstrations during the annual Avel airway course

Once the patient was stabilized, air transport transferred the individual to a larger hospital for follow up treatment and care. After a stressful period lasting multiple hours, the local physician and team, Dr. Van Oeveren, and the Avel clinicians were able to finally rest.

## NOT ON AN ISLAND

Ultimately, this case represents the difference telemedicine can make for physicians and clinicians in rural communities. With Avel as a clinician-to-clinician partner, these medical professionals are no longer alone. They have access to an expert team that is available at a moment's notice to provide assistance and support when and where it is needed.

The local physician sums it up perfectly: "The nice thing about rural medicine is that **we don't practice alone anymore**. We have backup. We have support no matter what – even if we just need advice because it is four in the morning, we haven't slept in a while, and perhaps it's something we should know but just can't remember given those circumstances. Especially during times of extreme high stress or rarely done procedures, having backup makes all the difference."

## ABOUT AVEL ECARE

Avel eCare is a nationally recognized, joint commission accredited telemedicine care provider offering one of the largest and most comprehensive virtual health networks in the world.

Based in Sioux Falls, South Dakota, Avel operates a multi-specialty telemedicine network, partnering with more than 650 health care systems, rural hospitals, outpatient clinics, long-term care facilities, school districts, prisons, skilled nursing facilities and law enforcement agencies across the country.

During the past three decades, Avel has developed eight distinct telehealth services. They are: Behavioral Health, Critical Care, Emergency, Hospitalist, Pharmacy, Specialty Care, Senior Care and School Health. These service lines also support special programs such as Virtual Crisis care and Virtual EMS support, and were launched in direct response to needs expressed by Avel customers – physicians, nurses, clinicians, and communities.