

Rebecca Bell, MD, MPH  
Pediatric Critical Care, UVM Children's Hospital  
Assistant Professor, UVM College of Medicine  
[Rebecca.bell@uvmhealth.org](mailto:Rebecca.bell@uvmhealth.org)

### Testimony: H.287 – An act relating to ways used for vehicular travel

I am a Pediatric Critical Care physician at the University of Vermont Medical Center. I work as an attending in the Pediatric Intensive Care Unit (PICU) and take care of infants, children and adolescents who are critically ill or injured. In June of 2015, I took care of Cameron Crogan after his tragic accident. Both he and his mother have given me permission to discuss details of his case.

My colleagues and I take care of many children who are critically injured. Because these injuries are often severe and life threatening, we take every opportunity to work with the family, community and state when able to prevent future similar injuries. Some injuries are the result of a complex interplay of many contributing factors that may be difficult to predict and prevent in the future. Other injuries, like Cameron's, have a singular cause and steps can be taken to prevent future cases.

I am providing details of Cameron's case to demonstrate how important it is that we do everything we can to prevent future cases.

Cameron suffered a clothesline injury to the neck when he struck a chain while riding his dirt bike. This type of blunt injury related to deceleration forces caused a complete transection of his trachea and a 75% disruption of his esophagus. His airway managed to stay approximated while he was brought to North Country Hospital where he was noted to have expanding pockets of air and blood in his neck. The team managed to pass a breathing tube through both the upper and lower part of his trachea and he was transported to UVMHC. There, he underwent emergency surgery with two teams of surgeons: Pediatric Trauma Surgery and Otolaryngology. The trachea was repaired with a stent placed as well as placement of a tracheostomy tube. The esophagus was repaired using a piece of neck muscle as a patch. A tube was placed in his stomach for feeding since he would not be able to eat.

Cameron spent a month in the hospital. Initially he required a ventilator attached to the tracheostomy tube to breathe for him. He had to be on multiple pain and sedation infusions in order to allow the repairs to heal. He was able to be allowed to wake earlier than most children with this type of injury due to his maturity and composure beyond his years. He learned he could not eat and had to be fed through the tube in his stomach. He was told that his dream of one day playing soccer for UVM would not be possible. He watched his middle school classmates graduate via videoconferencing from his PICU bed.

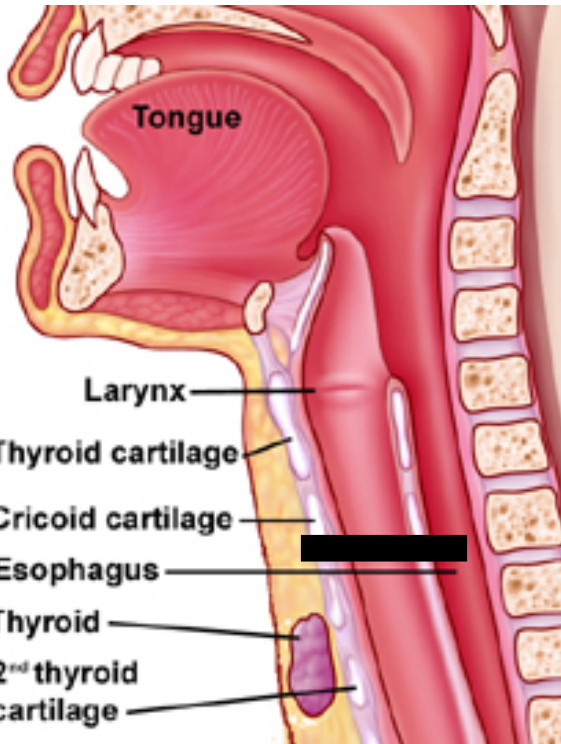
He required more procedures to remove the airway stent and to work on his airway. Since leaving the hospital he has had countless more procedures, many in Cincinnati, OH with a renowned airway specialist. The nerves that move his vocal cords appear to be permanently damaged. As a teenager he

has had to make some difficult decisions regarding procedures affecting his ability to eat, speak and breathe. The damage he sustained in this accident will continue to significantly affect his life.

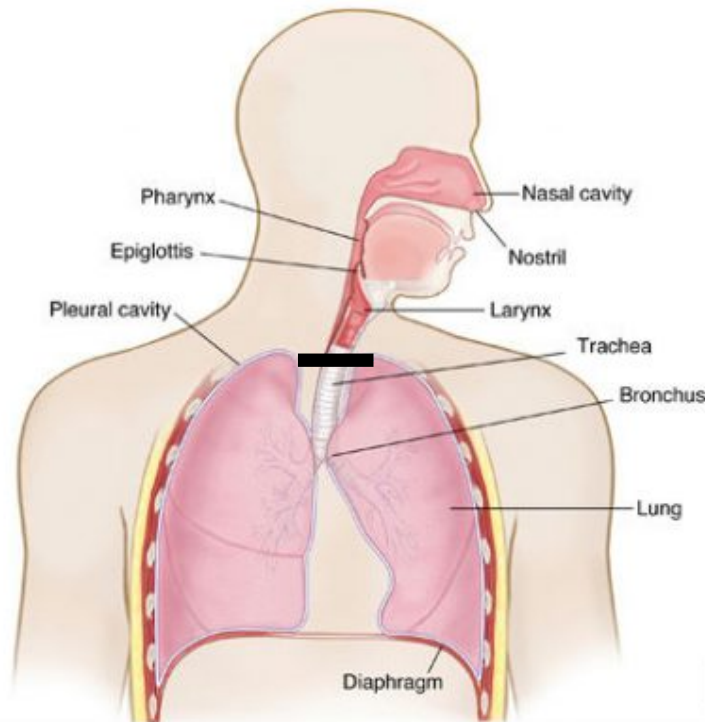
In addition to the physical complications Cameron has had to endure, there have been other complications as well. He missed more than half of his freshman year of high school and a significant part of sophomore year. It is important not to overlook the impact that missed school, inability to participate in desired activities, and social anxiety caused by these types of injuries can have. This too, has lifelong ramifications for a child.

Complete tracheal transection due to blunt injury is an uncommon but catastrophic event. Mortality rates are estimated at around 40% but exact numbers are difficult to come by as many will die before reaching the hospital. Those who do arrive at the hospital require a skilled team of surgeons and airway specialists to secure an airway and repair the injury immediately in the operating room. Those who survive face lifelong physical and emotional complications.

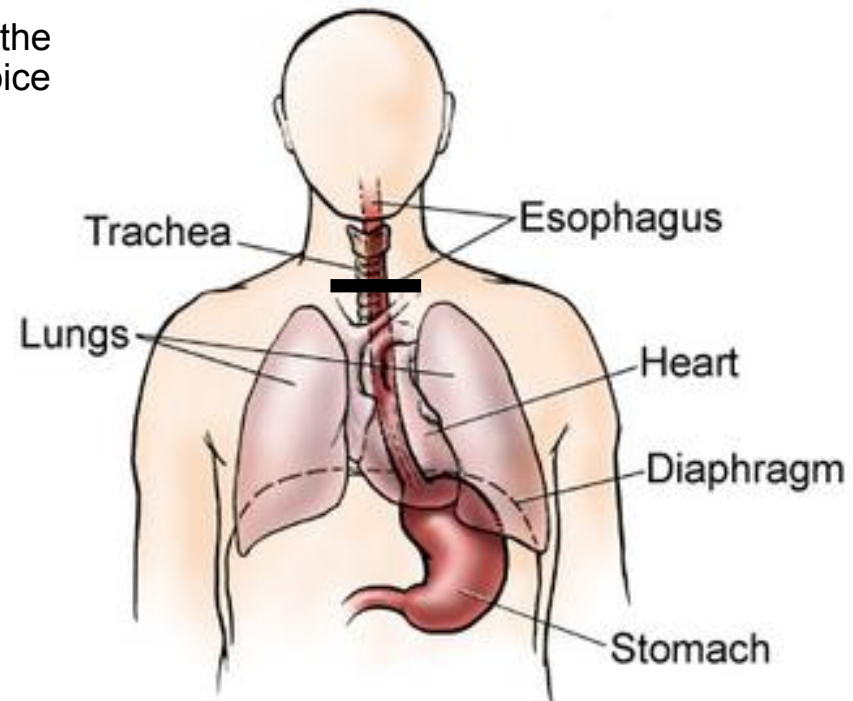
The devastation of these types of injuries cannot be overemphasized. We as a community need to do everything we can to prevent future cases. I urge you to support H.287.



Side view of complete transection of trachea and 75% transection of esophagus.

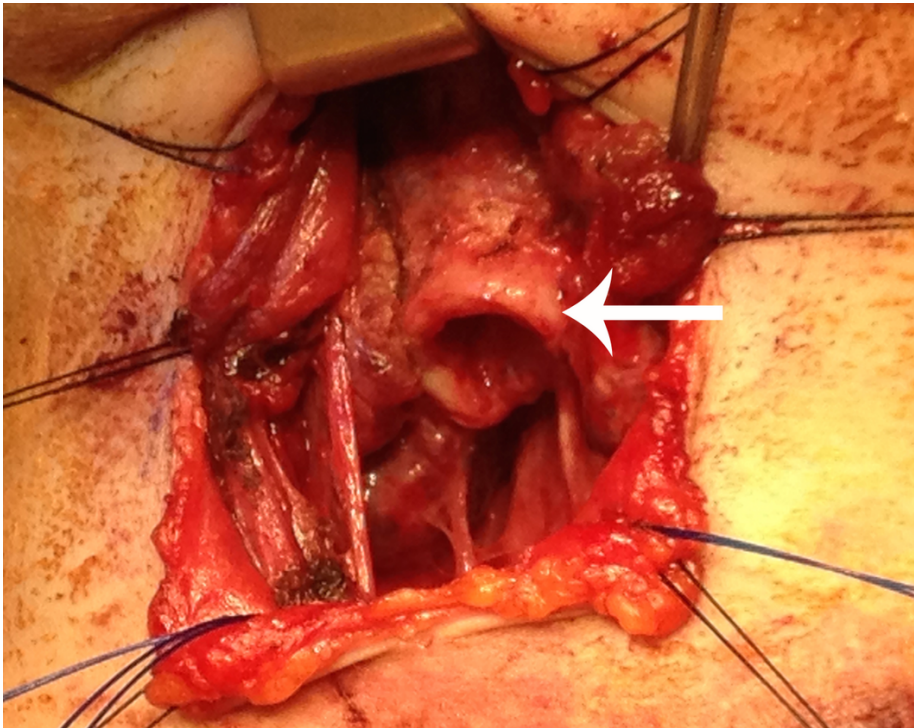


Transection of trachea: the only connection from voice box to lungs.

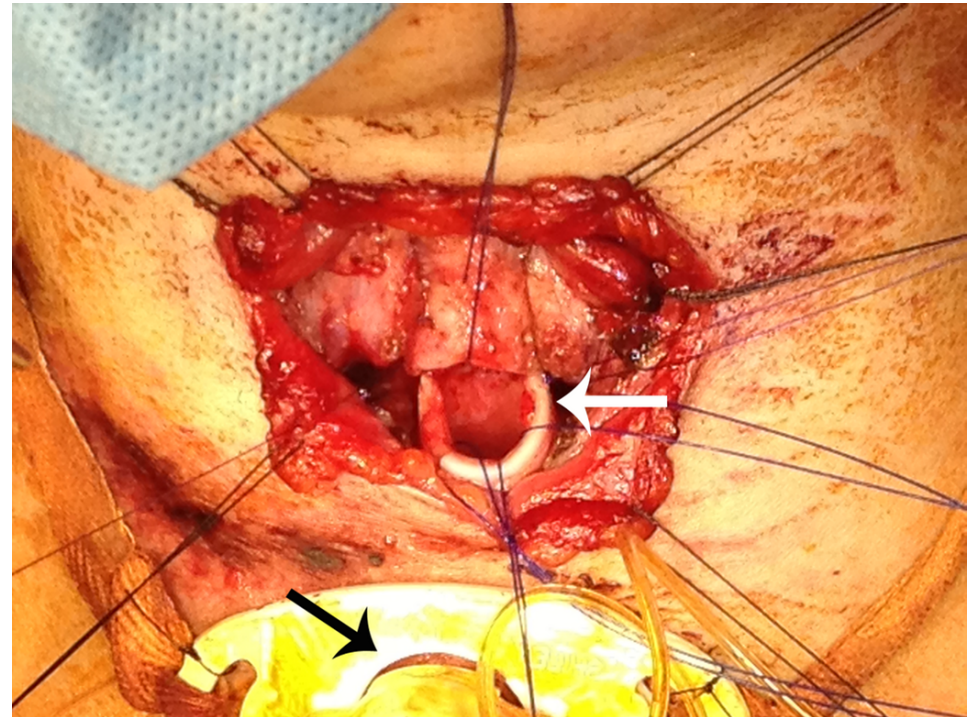


Transection of esophagus: the only connection from mouth to stomach

## Airway management in laryngotracheal injuries from blunt neck trauma in children



Open neck exploration showing proximal tracheal segment (white arrow).



Open neck exploration showing distal tracheal segment (white arrow) and tracheostomy (black arrow).

12 year old boy sustained a clothesline injury to his neck from a steel cable while riding a dirt bike.