Intubation Protection Devices

1. Dr. Naveen Vanga

TSA Member Dr. Naveen Vanga has created a protective device that has been used and is applicable for PUI & COVID positive patients. Dr. Vanga is Director of Anesthesia Simulation and Education Director of Neuroanesthesia at The University of Texas Health Science Center at Houston. Direct questions to his assistant Alia at Alia.Merchant@uth.tmc.edu or 713-500-668.
2. Dr. Earl Bueno

Dr. Earl Bueno, President of the Connecticut State Society of Anesthesiologists and Chief of Anesthesiology at Waterbury Hospital, shared what they’ve been using in his hospital. Here’s a diagram that we used initially for guidance (this was shared from an unknown source). We made 3 so far and had 2 donated to our hospital. These builds wouldn’t be possible without Dr. Bob McDonald (Intensivist/Pulmonologist and Chief of Staff, Waterbury Hospital) and Waterbury Hospital’s maintenance team.
We deviated from the design in our 1st two builds. Rather than two cut outs, we used a rectangular cutout for the hands.

Using saran wrap from the hospital cafeteria, we wrapped the opening and cut slits for the hands. Our measurements are width 20”, height 23”, length 18” on top and 12” on the bottom to taper to fit shoulders. Cut out for arms 12” x 4” with rounded edges. The plexiglass pieces (3/8” thick) were scraps from the construction of emergency negative pressure rooms. These are a bit heavy because of the thickness, so try to use thinner material if possible.

Below are pictures demonstrating the intubation boxes, our anesthesia “intubation cart” including protocols for donning and doffing, and our prototype PVC “negative pressure” tent setup utilizing suction to move air away from the intubater. Holes are drilled on the upper PVC toward the feet to move air in that direction. Suction is connected to an adaptor on the right hand side. The wrap is to be tucked around the patient and under the bed to create seal.

We have ordered clear plastic:
https://www.homedepot.com/p/HDX-10-ft-x-100-ft-Clear-4-mil-Plastic-Sheeting-CFHD0410C/204711635
Please feel free to share this with your colleagues. More photos can be found at https://www.facebook.com/earl.bueno.

3. Dr. Michael Hawryschuk

Dr. Michael Hawryschuk, President-Elect for The Ohio Society of Anesthesiologists, shared these pictures of a rig that he built and they are trialing at the University of Cincinnati. From Dr. Hawryschuk: Here are some pics of a rig that I built and we are trialing at the University of Cincinnati. Lightweight and cheap to construct ($30-$40), fully adjustable. The key is finding a clear plastic drape that you are happy with. You can incorporate a HEPA vac as you see fit. Can be used on the OR table, above or below the pad. Can be used on a patient bed. It can be left in place or removed after Intubation. Plenty of opportunities to customize. I am happy to provide my design drawings and parts list to anyone interested.
4. Rafal Subernat

We have already made intubation boxes at Eastern Maine Medical Center. Prototype picture below. We are also working with UMaine on another box that would have negative pressure with a filter attached to stay with each patient in our ICUs.