Introduction: How to proceed following inadvertent esophageal intubation and what to do with the misplaced endotracheal tube is controversial and not specifically addressed in the ASA difficult airway algorithm. Following esophageal intubation, it is often routine and instinctive practice to remove the endotracheal tube prior to manual bag-mask ventilation or proceeding with securing the airway. During this time, the patient is at risk for aspiration. Subsequent definitive airway management may be difficult and delay may lead to hypoxia. A simple and effective strategy was developed to manually ventilate the patient with an air cushioned face mask while leaving the endotracheal tube in the esophagus to provide a conduit for stomach content suction prior to definitive endotracheal intubation. The current report describes this technique and summarizes situations in which it has been employed.

Methods: Institutional Ethics Board approval was obtained to describe cases using this technique. Following inadvertent esophageal intubation, the endotracheal tube connector is replaced with the standard nasogastric tube double tapered connector or a Medi-Vac® 5 in 1 straight polypropylene tubing connector and this is hooked up to suction tubing to evacuate stomach contents. Next a transparent air cushioned facemask (Westmed®) is applied while bending the endotracheal tube down the left side of the face and manual bag–mask ventilation started. After adequate oxygenation, the airway can be secured with other options with minimal aspiration risk.

Results: This method makes it easy to maintain an adequate seal and provide patient ventilation with the facemask, while allowing for continuous suction of stomach contents. It has been used successfully in morbidly obese patients with full stomachs and a difficult airway case involving a cervical spinal fracture and bowel obstruction. In the latter, ventilation was easily managed and the airway secured with the aid of a GlideScope®. Another option would have been to pass the esophageal endotracheal tube through the port of a bubble endoscopy mask (VBM Medizintechnik GmbH). Performance of blind nasal intubation following inadvertent esophageal intubation was also facilitated by using this technique since the presence of the esophageal endotracheal tube provided anterior direction to the nasal tube.

Discussion: Although simple, the above method allows effective ventilation in many patients while providing a conduit for the suction of gastric contents. It may be a useful and inexpensive bridging technique in difficult airway management. The option to perform a blind nasal intubation is also made more feasible since intubation of the trachea is easier with esophageal occlusion. Whether to leave the endotracheal tube in the esophagus or remove it should be specifically addressed in difficult airway management algorithms.