Appendix VI: Glossary

ACP Anesthesia care provider, either an anesthesiologist and a nurse anesthetist.

ACLS Advanced Cardiac Life Support

ATLS Advanced Trauma Life Support

Airway Management includes maintaining a patent airway in conscious and unconscious patients by means of head tilt, jaw thrust, and tracheal intubation. In unconscious patients, the airway is protected against aspiration of regurgitated stomach contents (see below) by use of an inflatable cuff on the tracheal tube.

Anesthesia State of unconsciousness induced by intravenous or inhaled drugs.

Anesthesia Bag A 3L rubber bag included in the patient ventilating circuit that can be manually compressed to provide patient ventilation.

Anesthesia Record A written document that records patient vital signs, every 5 min, and documents the timing of anesthetic and surgical interventions and any drugs and fluids given. It describes any unusual patient responses or events.

Anesthesia Care Providers physicians (Attending or faculty, Fellow or Resident-in-Training) or nurses (Certified Registered Nurse Anesthetists).

Anesthesia Quality Assurance (AQA) A process of peer review designed to capture all occurrences, some of which result in harm or a poor outcome.

Aspiration Passage of regurgitated stomach contents into the trachea because laryngeal reflexes are obtunded due to anesthesia, muscle paralysis or unconsciousness.

Auscultate To listen to, using a stethoscope applied over the heart, lungs or abdomen.

CRNA Certified Registered Nurse Anesthetist.

Cricoid Pressure Digital pressure applied with thumb and index finger over the cricoid cartilage situated just below the larynx in the neck. This pressure prevents regurgitation of stomach contents when anesthesia is induced in emergency circumstances in patients with full stomachs.

Disconnect Alarm An auditory alarm that sounds when the ventilating circuit between the anesthesia machine or mechanical ventilator becomes disconnected from the patient s airway.

Elective Intubation The airway is electively intubated, usually with the patient adequately investigated and comprehensively monitored.

Emergency intubation In this study, defined as an intubation required within 10 min of the patient s arrival into the trauma center. Emergency intubations are considered more risky than elective intubation because less is known about the patient s status.

End-Tidal CO_2 ($ETCO_2$) The value of CO_2 concentration at the end of exhalation. $ETCO_2$ approximates the arterial CO_2. A value of $ETCO_2$ greater than 30 mmHg for 5 consecutive breaths confirms that the tracheal tube is in the trachea not the esophagus.

EOA Esophageal obturator airway

Esophageal Intubation The accidental passage of a tracheal tube into the esophagus. If undetected this will cause lack of oxygen in the circulation. Detection of esophageal intubation is made by auscultation of the chest and abdomen and a failure to detect $ETCO_2$ for 5 breaths.

Esophageal Obturator Airway (EOA) A device that can be used in unconscious patients to occlude the esophagus and prevent regurgitation of stomach contents. By application of a mask over the face the lungs are ventilated. A tracheal tube should be placed and its cuff inflated to prevent aspiration into the lungs before removal of EOA. The advantage of the EOA over tracheal intubation is that it is passed blindly and requires little skill to place. The EOA is usually used in the field.

$ETCO_2$ End-tidal carbon dioxide.

ET tube Endotracheal tube.

Extubation The removal of a tube from the trachea. It can be intentional, as at the end of anesthesia, or accidental in a semi-conscious patient.

In-line Neck Stabilization In trauma patients with suspected neck injuries, the neck is stabilized by an assistant during intubation to minimize potentiation of a neck injury

Intravenous Access Cannulae placed into the veins that allows administration of fluids and blood

Intubation Passage of a tracheal tube through the upper airway (nose or mouth) and larynx into the trachea.

Level One Trauma Anesthesia Simulation (LOTAS) Group A group of anesthesia care providers who have met regularly for six years to answer research questions from videotaped trauma anesthesia care

Manual Ventilation Ventilation achieved by compression of an anesthesia bag or self-inflating resuscitator bag

Mechanical Ventilator A device that is interfaced to the patient by means of a cuffed tracheal tube and allows positive pressure mechanical ventilation.

Muscle Paralysis Paralysis of neurotransmission by pharmacological use of drugs such as curare.

Oxygen Saturation (SpO_2) The percent O_2 saturation of hemoglobin in peripheral arterial blood. This value is monitored on a beat-by-beat basis by use of a pulse oximeter (see below).

Post-Trauma Questionnaire (PTQ) A research questionnaire completed by the anesthesia care provider(s) after each videotaped case

Pre-Oxygenation a technique to increase the O_2 reserves of a patient before induction of anesthesia. Breathing 100% O_2 through a close fitting face mask provides a reservoir of O_2 in the lungs to minimize the likelihood of the patient developing hypoxemia.

Pressure Support A form of mechanical ventilatory assistance that is activated by initiation of an inspiratory effort by the patient.

Pulse Oximeter Estimates the beat-to-beat O_2 saturation of peripheral arterial blood by a probe attached to the patient.

Resuscitator Bag A self inflating bag that is attached to a face mask or tracheal tube. Compression of the bag is used to provide oxygenation and ventilation.

SME Subject matter expert.

Tracheal Intubation Passage of a cuffed tracheal tube through the upper airway (nose or mouth)between the vocal cords and into the trachea.

Tracheal Tube Cuff An inflatable cuff that seals the airway to prevent aspiration and allow positive-pressure mechanical ventilation.

Ventilator Tubing Is the long flexible corrugated tubing used to make the connection between a patient's airway and a mechanical ventilator or anesthesia machine.