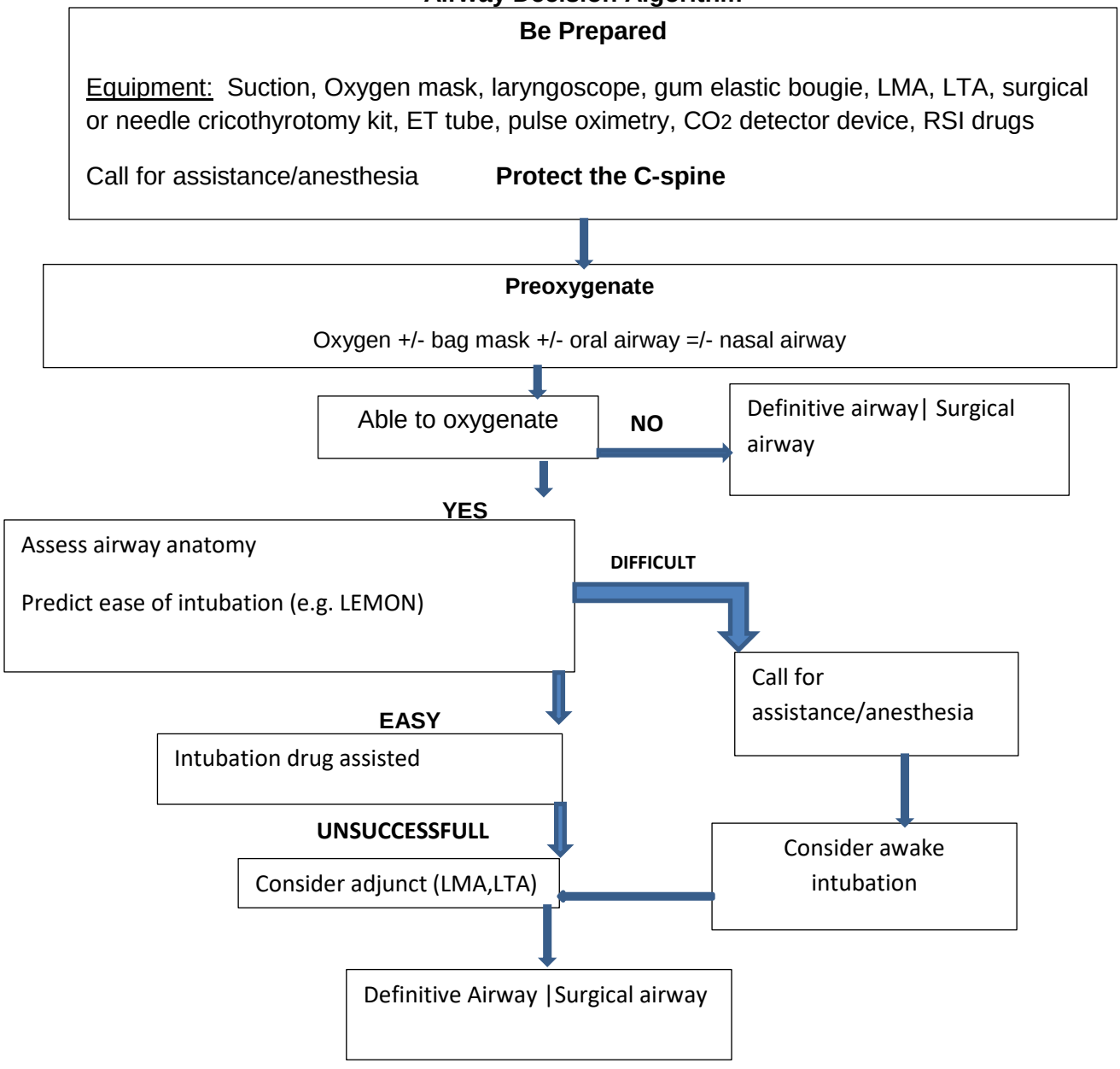
ED protocol #2

Guidelines of Initial Management of Injured Patient in Resuscitation

PRIMARY ASSESSMENT: **AIRWAY**

Airway Decision Algorithm



Trauma service reviewed 01/04/2024/AP

Factors that indicate potential difficulties with airway maneuvers include:

- C-spine injury
- Severe arthritis of the c-spine
- Significant maxillofacial or mandibular trauma
- Limited mouth opening
- Obesity
- Anatomical variations (e.g., receding chin, overbite, and a short, muscular neck)
- Pediatric patients

Breathing and Ventilation

Adequately assess for jugular venous distention, position of the trachea, chest wall excursion, expose the patient's neck and chest

Injuries significantly impair ventilation and require immediate intervention:

- Tension pneumothorax
- Massive hemothorax
- Open pneumothorax
- Tracheal or bronchial injuries

Circulation with Hemorrhage Control

Major sources of internal hemorrhage are:

- Chest
- Abdomen
- Retro-peritoneum
- Pelvis
- Long bones

Source of bleeding is identified physical examination and imaging: Chest x-ray, pelvic x-ray, FAST.

Immediate management may include chest decompression, application of pelvic binder and/or extremity splints.

Definitive bleeding control with appropriate replacement of intravascular volume.

Disability – Neurologic Evaluation

Rapid neurologic evaluation:

- Establish the patient's level of consciousness/Glasgow Coma Scale
- Pupillary size and reaction – identifies the presence of lateralizing signs and spinal cord injury level

Prevention of secondary brain injury by maintaining adequate oxygenation and perfusion are the main goal of initial management.

Exposure and Environmental Control

Completely undress the patient. Cover the patient with warm blanket or an external warming device

Secondary Survey

History

- Allergies
- Medications currently used
- Past illnesses/Pregnancy
- Last meal
- Events/environment related to the injury

Physical examination - Head to toe assessment

<u>Head exam:</u>

- Visual acuity
- Pupillary size
- Hemorrhage of the conjunctiva and/or fundi
- Penetrating injury
- Contact lenses
- Dislocation of the lens
- Ocular entrapment

<u>Cervical Spine and Neck</u>

- Patient with maxillofacial or head trauma should be presumed to have a cervical spine injury.

- *The absence of neurologic deficits does not exclude injury to the cervical spine, and such injury should be presumed until evaluation of the cervical spine is completed.*

Chest

Visual evaluation and palpation of the entire rib cage, including clavicles, ribs and sternum.

Auscultation of the lungs and heart.

Chest x-ray to confirm presence of hemothorax or simple pneumothorax.

Abdomen and Pelvis

A normal initial examination of the abdomen does not exclude a significant intraabdominal injury. Serial exam and close observation are important in managing blunt trauma to the abdomen.

Pelvic fractures can be suspected by identification of ecchymosis over the iliac wings, pubis, labia, or scrotum. Pain on palpation of the pelvic ring is an important finding in alert patient

Perineum, Rectum, and Vagina'

Perineum should be examined for contusions, hematomas, lacerations, and urethral bleeding

Rectal examination to assess for the presence of blood within the bowel lumen, integrity of the rectal wall, and quality of the sphincter tone.

Musculoskeletal System

Extremities should be inspected for contusions and deformities. Palpation of the bones and examination for tenderness and abnormal movement aids in the identification of occult fractures

Pulses should be palpated

Note: The primary and secondary survey are repeated frequently to identify any change in the patient's status that indicates the need for additional intervention

Adjuncts to the Secondary Survey

- Specialized diagnostic tests maybe performed during the secondary survey to identify specific injuries

- Reference:
  ATLS 10th edition: Initial Assessment Chapter 1, Page 5