



Air Care & Mobile Care

Flight RN Preflight Quick Reference

- Burns
- Cardiac Emergencies
- Environmental Emergencies
- Metabolic & Endocrine Emergencies
- Neonatal Emergencies
- Neurologic Emergencies
- High Risk Obstetrics
- Pediatric Emergencies
- Respiratory Emergencies
- Multiple Trauma
- Toxicology Emergencies



Air Care & Mobile Care

BURNS

Preflight:

- Take burn needle electrodes and cables (aircraft cabinet) with you to the scene or hospital with report of extensive burn injury.
- Assure that the scene is safe (ie; away from HAZMAT hot zone, fire under control, electrical source cut off...etc).
- Stop the burning! Remove all clothing and jewelry on burned areas.
- Provide high flow oxygenation for any burn patient with potential for inhalation injuries, facial burns, and/or respiratory compromise. Consider intubation early. There is no additional risk involved in using Succylcholine for RSI with patients who have suffered burn injuries less than 24 hours old. If the burn is > 24 hours old, there is a potential for hyperkalemia and Rocuronium would be the RSI agent of choice.
- Get history of events including; time and cause of burn, exposure time, ? enclosed space, exposure to toxic smoke, loss of consciousness, additional injuries, therapy given, and patient's PMH/allergies/meds.
- Provide for adequate fluid resuscitation using approved burn formula, adjust to maintain adequate urine output (request foley from referring hospital PTA, if not already in place). *Parkland Burn Formula = $4\text{cc} \times \text{Kg} \times \% \text{TBSA}$ (2nd or 3rd degree). LR preferred IV solution. The most common error in this regard is over-resuscitation; the patient will not die of burn shock in the first hour.
- Make sure chemical burn patient has undergone proper decontamination prior to transport.
- Replace any wet dressings and sheets with clean, dry sheets (for patients with > 10% TBSA Burn). Keep the patient warm during transport.
- Prepare / monitor for potential cardiac dysrhythmias in patients who have suffered lightning / electrical burn injuries.
- Provide for adequate pain control with narcotic analgesics, as needed.

- Consider the need for fasciotomies / escharotomies of the patient's limbs with neurovascular compromise and/or the chest if ventilation capabilities are compromised.

- **See Clinical Policies Re: Care of Burn Patient @**

ACMC Policies @ aircareandmobilecare.com (staffonly PW staff.login)

- Burns
- Preparing for the transport of the burn patient



Air Care & Mobile Care

CARDIAC EMERGENCIES

Preflight:

- Turn on and test cardiac monitor / defibrillator during shift equipment check.
- Dispatch often requests referring unit to draw up (and label) IV infusion medications in 30-60ml syringes. This can be used on either triple channel or Gemstar syringe pumps and helps decrease ground time.

- Note patient's baseline: cardiac monitor pattern, arrhythmias, 12 lead EKG, V/S, meds given PTA, current IV infusions, additional therapy given, as well as, the patient's PMH, Allergies & Meds.

- Use chest pain scale before and after narcotic analgesia (document findings).

- Place Zoll pads on all cardiac patients with history of arrhythmias / bradycardia, or added risk for developing them (ie; Acute Inferior Wall MI). You may use standard electrodes and have pads ready on stable cardiac patients. If need arises to place pads on during flight, the sternal-apex position may be used instead of the usual anterior-posterior position (for Defib. Only / not Pacing)

- Duplicate transcutaneous / transvenous pacer settings prior to switching the patient over. Note patient's intrinsic rhythm when pacing interrupted. *Consider sedating any patient being paced, providing that the patient is not hypotensive.

- Consider invasive monitoring when transporting a patient with a swan ganz catheter or arterial line. Secure any invasive line well prior to moving and evaluate waveform for evidence of misplacement (RV or PCW waveform, increased arrhythmias...etc).

- Defibrillation and Pacing **is** allowed during flight. Maintain all precautions when defibrillating patient, hands free defibrillation pads are preferred over paddles for ease of use and safety. Pediatric pads are to be used on children under 15 Kg (approx. 4yo). The anterior pad should not come in contact with the posterior pad.

- Plan to take the Black bag with you during transfer of an unstable patient from the helipad to the receiving unit. Always maintain the patient on the cardiac monitor during all aspects of transport, and assure that you have adequate battery life
- (especially after multiple defibrillation attempts, during pacing...etc).

- Consider initiating and/or maintaining the hypothermia protocol for S/P arrest patients with ROSC and neurologic deficit providing the receiving hospital is able to maintain said protocol.
- Air Care will soon be able to transport patients on a IABP using APMC's transport IABP and the EC145's securing mount.
- **See Clinical Policies Re: Cardiac Emergencies @**
APMC Policies @ aircareandmobilecare.com (staffonly PW staff.login)
 - Acute Coronary Syndrome
 - Cardiac Emergencies – adult dysrhythmias
 - Cardiac Emergencies – pediatric dysrhythmias
 - Heart failure – acute decompensated – pulmonary edema
 - Transcutaneous cardiac pacing



Air Care & Mobile Care

ENVIRONMENTAL EMERGENCY

Preflight:

- If responding to a HAZMAT incident, assure that the aircraft LZ will be in a safe location (ie; upwind, appropriate distance from hot zone...etc).
- We DO NOT transport HAZMAT patients in the helicopter (decontamination of the aircraft can take up to 4 weeks). Our flight team may accompany the EMS crew in the life squad, provided that the patient has been properly decontaminated and does not pose a risk to the medical crew.
- Our program may on occasion be asked to do searches. We DO NOT however, perform rescue procedures.
- If the environmental emergency involves an animal, reptile, or insect; assure that the perpetrator is correctly restrained to assure flight team safety (i.e.; the bull is removed, the venomous snake is killed or contained, etc..).
- Attempt to get a good history of the event from the referring life squad or hospital personnel, such as;
 - type of environment patient found in (enclosed space, water, temperature)
 - length of exposure
 - any loss of consciousness
 - apparent cause of injury
- When caring for the hypothermic patient take precautions to avoid the risk of a VF/VT arrest. (careful movement of patient, appropriate re-warming techniques...etc).
- Attempt to improve / maintain the hypo(hyper)thermic patient's temperature by removing wet clothing & dressings, applying blankets, ice/cold packs, and changing aircraft cabin temperature.
- Carefully consider all history, known down time, body temperature, etc. before cessation of resuscitation and pronouncement of the hypothermic patient at a scene.
- **See Clinical Policies Re: Environmental Emergencies @**
ACMC Policies @ aircareandmobilecare.com (staffonly PW staff.login)



Air Care & Mobile Care

MEDICAL / SURGICAL EMERGENCIES (METABOLIC / ENDOCRINE)

Preflight:

- Consider bringing alternate medications from referring hospital (or TUH) that you may need but do not carry on the helicopter (ie; Insulin infusion...etc).
- Determine need for IV pumps, blood products, and / or cardiac monitor with defib/pacing capabilities.

- Bring all appropriate labs and diagnostic reports from the referring hospital. You may want to recheck a glucose in flight.

- Consider need for ventilatory support, hemodynamic support, and temperature regulation.

- Keep in mind that if you are giving someone insulin, you are lowering their potassium (insulin facilitates the movement of potassium from extracellular to intracellular).

- Emergency treatment of hyperkalemia:
 - Calcium Gluconate - (for membrane stabilization). (10%) 10ml, IV over 10 min. Onset immediate. Duration 30-60 min. Complication Hypercalemia.
 - Hypertonic (3%) sodium chloride – (for membrane stabilization). 50ml IVP. Onset immediate. Duration unknown. Complication volume overload / hypertonicity.
 - Insulin - (for redistribution). 10 units IVP, with 25-40 g dextrose (50% solution). Onset 20 mins. Duration 4-6 hrs. Complication hypoglycemia.
 - Albuterol – (for redistribution). 20 mg in 4 ml. normal saline solution, nebulized over 10 mins. Onset 30 mins. Duration 2 hrs. Complications tachycardia.
 - Lasix – (for elimination). 40-80 mg IV. Onset 15 mins. Duration 2-3 hrs. Complication Volume depletion.
 - Sodium bicarbonate – (for elimination) 150 mmol/L IV. Onset hours. Duration variable. Complications metabolic alkalosis, volume overload.
- Kayexalate
Hemodialysis

- See Clinical Policies for Medical / Surgical Emergencies

ACMC Policies @ aircareandmobilecare.com (staffonly PW staff.login)

- Aortic Aneurysm – thoracic or abdominal
- Aortic dissection
- GI bleeding



Air Care & Mobile Care

NEONATAL EMERGENCIES

Preflight:

- During any OB transport, anticipate for an unexpected delivery and subsequent neonatal resuscitation. Keep the pediatric bag readily available during every leg of the transport. Plan to extensively review and stay familiar with the contents of this bag, as well as the NRP recommendations for neonatal resuscitation.
- At this time, we **DO NOT** transport Neonates! This can be defined as any infant (premature or term) less than 28 days old that has not been discharged from the hospital. The reason that we must train and prepare for a neonatal resuscitation is due to the fact that we do transport high-risk OB patients. We will however transport the pediatric transport team from CHMC in our helicopter with their isolette and resuscitation equipment.
- If you are presented with a delivery situation in flight, consider the following Neonatal Resuscitation priorities:
 - Establish & maintain a patent airway (positioning, suctioning, BVM vent, intubation and ventilation with 100% O2).
 - Intubate & suction with the meconium aspirator, if necessary.
 - Evaluate heart rate and perfusion. Perform CPR if HR does not increase above 80 with PPV and 100% O2.
 - Administer IV fluids / medications if the neonate does not respond to CPR and PPV. *Epinephrine – increases HR and contractility.
Narcan – reverses respiratory depression secondary to maternal narcotic administration.
Glucose(D10W) – corrects hypoglycemia.
IV(Umb cath) / I.O. – volume resuscitate with 10ml/ Kg crystalloid IVF.
 - Attempt to prevent / maintain heat loss by drying the baby thoroughly, covering the neonate’s head with the cap, placing the infant in the bubble bag provided, and increasing the cabin temperature.
- Guidelines to estimating the neonate’s weight / resuscitation needs include:

	WT	ETT	Epi (IV/ETT)	IV bolus
PREEMIE	1 Kg	2.5	0.1 ml / 0.3 ml	10 ml
30-36 WEEKS	2 Kg	3.0	0.2 ml / 0.6 ml	20 ml
TERM (> 36 wks)	3 Kg	3.5	0.3 ml / 0.9 ml	30 ml

- **See Clinical Policies for Neonatal Emergencies @**
ACMC Policies @ aircareandmobilecare.com (staffonly PW staff.login)



Air Care & Mobile Care

NEUROLOGIC EMERGENCIES

Preflight:

- Remember to bring IV pumps and the ventilator / tubing per patient report
- Use personal protective equipment when transporting a patient with potential for infectious disease (ie; bacterial meningitis...etc).

- When getting report from the referring MD/Nrs and performing initial assessment: Get baseline neuro exam, GCS, pupillary exam, V/S including ETCO₂, CS films / CT scan, Glucose level, treatment and medications given.

- Consider intubating your patient early with signs and symptoms of worsening neuro exam, as well as, for failure to protect their airway, poor oxygenation, or clinical course.

- Consider administering seizure prophylaxis when a patient is chemically paralyzed and has exhibited seizure activity or has an increased risk of seizures.

- Obtain a baseline blood glucose level on any patient exhibiting altered mental status (GCS < 15) and treat, as needed.

- If the patient is agitated and/or combative during transport, provide for sedation / analgesia, as needed, once concerns for hypoxia has been ruled out. If you chemically paralyze and sedate intubated patients, consider dosing paralytic according to remaining transport time. Once chemical paralysis is completed assure that the patient has adequate analgesia and sedation.

- Place bilateral soft wrist restraints on the patient in case the sedation lightens in flight. With this, frequently perform circulation checks.

- If the patient becomes combative during flight and is difficult to control, they may possess an immediate danger to the safety of everyone on the aircraft. You may need to request the pilot land the aircraft ASAP.

- If the patient is combative, yet there is no clinical indication for RSI and intubation, consider ground transportation of the patient with the flight team accompanying EMS.

- Ensure pre-transport stabilization of the trauma patient's spine if the patient has spinal tenderness, altered neuro exam, or distracting injuries with a stiff C Collar, Cervical Immobilization Device, and a backboard.

- Elevate the neuro patient's HOB 30 degrees and maintain a midline head position, if there is no concern for CS injury. You may raise the HOB of the stretcher and tilt the patient into a reverse trendelenburg position if the patient is immobilized.
- The goal is to maintain the patient's ETCO₂@ 35mmHg to optimize ICP for TBI / Neuro patients. Increase the patient's ventilatory rate to achieve an ETCO₂ goal of 30mmHg only with signs and symptoms of impending herniation (coma + blown pupil, coma + blown pupils, or coma + clear-cut posturing). Along with "therapeutic hyperventilation" when presented with S&S of impending herniation, **also** plan to administer a bolus of hypertonic (3%) normal saline 500 ml for adults or 8ml/Kg for Peds.
- When transporting the intubated neuro patient, it is considered the standard of care to use of the transport ventilator. When we hand-bag patients for the entirety of the flight, we inadvertently tend to hyperventilate the patient. Hypocapnia has been shown to negatively impact mortality.
- **See Clinical Policies Re: Neurologic Emergencies @**
ACMC Policies @ aircareandmobilecare.com (staffonly PW staff.login)
 - Intracranial hemorrhage
 - Spinal cord injury
 - Status epilepticus
 - Traumatic brain injury



Air Care & Mobile Care

HIGH RISK OBSTETRIC

Preflight:

- Prepare for an unexpected delivery, take the pediatric bag on all legs of the flight.
- Get a good history from the referring personnel, including:
 - Mom's PMH/allergies/meds, prenatal care, EDC, gravida / para, number of fetuses expected.
 - Last exam, cervical dilatation / effacement, frequency and duration of contractions, FHT patterns, vaginal bleeding, PROM.
 - Additional risks, history of trauma, toxemia, PROM, meconium present...etc
- Never do a digital / speculum exam on a patient with suspected placenta previa.
- When caring for an OB patient with a history of trauma, mark fundal height, evaluate for vaginal or uterine bleeding, contractions, pain, ? doppler FHT.
- Our job is to assure in every way possible that the patient will not deliver in flight. If delivery is eminent, stay at the hospital / scene and help prepare the referring personnel for delivery. You may want to request that they call for backup (OB/Neonatal team).
- If after delivery of the head, the shoulder becomes impacted (shoulder dystocia), you may try a McRoberts maneuver = sharply flex the mother's legs upon her abdomen.
- Position the OB patient in a left lateral position, maintain O2, IVF, much TLC, and plan to take the patient directly to L&D / triage at TUH.
- **See Clinical Policies Re: High Risk Obstetric Emergencies @**
ACMC Policies @ aircareandmobilecare.com (staffonly PW staff.login)
 - Neonatal delivery at referring facility
 - Neonate emergency delivery
 - Third trimester bleeding
 - Transfer of high-risk OB patients



Air Care & Mobile Care

PEDIATRIC (TRAUMA / MEDICAL EMERGENCIES)

Preflight:

- The infant / child must be properly secured. The stretcher cannot properly secure a child under 40lbs. Depending on age and diagnosis, consider using the Pedi Mate (10-40lbs & able to sit up) or pediatric immobilizer (under 40Kg).
- Request that the age of any pediatric patient be obtained and forwarded to the medical crew, from the dispatcher or faculty physician, on the flight out. This will allow you to calculate any resuscitation meds / equipment that you may use on the patient (ie; ETT size, defib. joules, IV fluid bolus amount @ 20ml/Kg, RSI and/or additional meds...etc).
- Consider using the pedi. immobilizer on intubated patients (under 40Kg) with CID pads, to prevent the child's head from moving from side-to-side or flexing/extending with resultant accidental extubation risk.
- Always utilize ETCO2 value/waveform to assure that the child's ETT is in the trachea on initial assessment. BBS can be easily transmitted and improper ETT placement can be easily missed. The depth of the ETT should also be assessed by listening to bilateral breath sounds and/or CXR evaluation. The depth of the ETT should be approx. 3X the size of the ETT.
- Any uncuffed pediatric ETT should be properly secured with benzoin and adhesive tape after confirming and noting the tube depth. All cuffed pediatric ETT's should have their cuff pressure measured and adjusted to 20-25mmHg.
- Consider placing an N/G or O/G tube in any pediatric patient that has received BVM ventilation for more than a couple of minutes or with signs of abdominal distension.
- Prepare for any child (especially with signs of a TBI) to vomit during transport. Have suction ready, prepare to logroll the child, and consider premedication of Zofran.
- Temperature regulation is extremely important in the pediatric population due to their larger body surface area and decreased heat conservation mechanisms. Properly cover with sheets / blankets and prevent air flow with windows closed and A/C vents off.

- Use personal protection equipment when transporting a pediatric patient with potential for communicable diseases, especially when managing the patient's airway.
- Consider taking a parent (especially with a toddler to school aged child) along on the helicopter. Pre-plan the "possibility" of bringing a parent along with the pilot and physician. This will allow the pilot to consider weights and balances, seating needs...etc.
- If the parent is to accompany the child and weights are not an issue, evaluate the best seating arrangement. The rear facing seat behind the pilot will allow the child to see their parent and is a safer location since they are not near critical controls in the cockpit and are away from the pilot. If the child is "critical" and resuscitation efforts are needed, assure that the parent is emotionally stable before considering the copilot seat.
- **See Clinical Policies for Pediatric Emergencies @**
ACMC Policies @ aircareandmobilecare.com (staffonly PW staff.login)
 - Pediatric cuff pressure measurement
 - Pediatric immobilization



Air Care & Mobile Care

RESPIRATORY EMERGENCIES

Preflight:

- Consider requesting a critical care respiratory therapist (with sophisticated ventilator capabilities) from TUH to accompany you on the inter-hospital transfer of a complex ventilator patient.
 - It is recommended that you take the portable suction to the scene of a MVC when the victim is still entrapped, especially when pre-hospital report relays potential for airway control. *Reminder – on board suction functional only after aircraft is up on generator power (Use portable suction prior to / or after aircraft shuts down if suction needed).
 - It is recommended that you take the “back-up intubation cell” (from critical care bag), as well as an additional IV set up, with your equipment when responding to a multi-casualty scene. This will allow for dual intubation capabilities, provided that the flight team feels secure with the procedure independently. *Reminder: you will need to add any medication that you will anticipate using into the back-up intubation bag (ie; sux., induction agent...etc). The patients should be in close proximity with each other and / or radio contact maintained so that the assessment and plan of action is discussed with the MD / RNP prior to the Flight Nurse administering RSI meds.
 - When transporting an intubated patient, plan to take the ventilator into the hospital with you. It is easier, and advantageous to patient care, to place the transport ventilator on the patient in the hospital, preferably a few minutes prior to departure so that you have the opportunity to “trial” how the patient will tolerate the ventilatory changes.
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- Use personal protection equipment when transporting patient with signs and symptoms of, or risk for communicable diseases (TB, Bacterial Meningitis, etc). It may also be recommended to mask the patient.
 - Note baseline breath sounds, respiratory rate and effort, adventitious sounds, use of accessory muscles, SpO₂, CO₂, ABG's, O₂ and vent settings.
 - Consider intubating patients early for problems with oxygenation and/or ventilation, it is very difficult to intubate in flight! Additional reasons to intubate include; need for airway protection, ICP control, anticipated clinical course, and patient / crew safety D/T combative patient.
 - Assess for difficulty of ventilating and/or intubating every patient prior to attempting Any airway procedures, discuss your plan with your partner, and prepare a rescue device (including the bougie), per the chance one is needed.

- a. Ventilation (MOAN) **M**ask seal, **O**bese, **A**ge >55, **N**o teeth, **S**tiff lungs.
 - b. Intubation (LEMON) **L**ook @ head + neck, **E**valuate 3-3-2, **M**allampati, **O**bstruction, **N**eck mobility.
 - c. Supraglottic airway (RODS) **R**estrictive mouth opening, **O**bstruction, **D**istorted airway, **S**tiff lungs.
- *Know that Obese / Pedi / OB patients will de-saturate quickly during attempt!
Place the patient on “passive oxygenation” prior to your attempt by placing them on a nasal cannula at 10-15 Lpm of oxygen.

- Always use the ETCO₂ detector or capnography as part of your assessment tools when evaluating the correct placement of an ETT. If the patient is pulseless and undergoing good CPR, the ETCO₂ should still read at or above 10mmHg with proper ETT placement. Monitor capnography during transport, maintaining a physiologic range of 35-40. In situations where there are signs of impending herniation, the ventilatory rate and/or TV should be adjusted to drop the ETCO₂ to a goal of 30mmHg.
- Remember exhaled ETCO₂ undershoots paCO₂ by 4-5mmHg. The ETCO₂ value is representative of hypoventilation if high but may not indicate hyperventilation if low (often due to altered perfusion and metabolism).
- When ventilating an Asthmatic / COPD patient you may need to increase the expiratory time and set a lower respiratory rate to prevent Auto PEEP. A shark fin type waveform on the ETCO₂ monitor is frequently seen with bronchospasm.
- Consider using PEEP on patients currently on PEEP or with signs & symptoms of hypoxia, pulmonary edema, COPD, etc Use PEEP judiciously when the patient is hypotensive in order to prevent increased intrathoracic pressure and diminished cardiac output, further worsening the hypotension.
- Consider use of a noninvasive CPAP (or BiPAP) mask on patients with CHF/Pulmonary edema with mild/moderate distress. Plan to trial this mode for a few minutes prior to departure. If the patient’s oxygenation or ventilation status begins to decompensate, promptly prepare to intubate the patient.
- Always remove the ambu bag from the patient’s ETT prior to moving the patient. This prevents unnecessary traction on the tube, causing accidental extubation.
- Use multiple assessment parameters during flight (no auditory assessment available). I.E; Patient’s clinical status, color, chest wall expansion, compliance to ventilation, hemodynamics, SpO₂, ETCO₂ ...etc
- Re-assess chest trauma patients (especially if intubated and receiving PP ventilation) frequently for signs & symptoms of developing a pneumothorax / tension pneumothorax. If tension pneumothorax is showing signs & symptoms of re-developing after needle decompression is performed, consider re-needling using a 10ga angiocath or performing a finger thoracostomy.

- It is recognized as the standard of care to utilize a portable ventilator during transport / flight to maintain a consistent ventilatory rate & tidal volume, as well as, freeing up hands for resuscitation needs. Typical vent settings, include; 100% FiO₂, TV (6-8cc/Kg), Rate of 10-12 / minute. PEEP of 5 cmH₂O. Adjustments are made depending on patient condition. Consider slowly weaning your patient's administered FiO₂ to a goal of 94% SpO₂ (minimal 40% FiO₂ if intubated and on vent) to prevent the risk of hyperoxemia.
- You may need to set DKA patient's ventilatory rate in the 30's or ↑ in order to maintain their compensatory respiratory alkalosis requirements. These are one of the few patient's that you want to BVM ventilate during RSI. They do not tolerate even momentary hypoventilation.
- Our new Impact 731 Series ventilator is indicated for use with infants (5 Kg) to adults. The 2 standard ventilator circuits cover the range of patients from infant through adult. The pediatric/adult circuit is for patients 20 kg through adult, with a minimum tidal volume of 200 ml. The infant/pediatric circuit is for patients 5 through 30 kg, for a maximum tidal of 300 ml.
- Remember to give appropriate sedation / analgesia to any patient that is intubated and ventilated / chemically paralyzed.
- Use needle cricothyrotomy if a surgical airway is needed on pediatric patients < 10yo. TTJV set-up can be utilized on patients from 5-10 yo (dial down pressure regulator to 30psi). I:E ratio is 1:3. If the patient is < 5yo, provide ventilation through needle cric. using an ambu bag at a ratio of 1:1. *Must have a patent upper airway for passive exhalation.
- Consider requesting (Faculty -- Surgery) transport of patients with penetrating chest trauma directly to the OR.
- **See Clinical Policies Re: Respiratory Emergencies @**
- **ACMC Policies @ aircareandmobilecare.com (staffonly PW staff.login)**
 - Asthma exacerbation
 - COPD exacerbations
 - Pulmonary embolus



Air Care & Mobile Care

MULTIPLE TRAUMA

Preflight:

- Take 2 units of O neg (or pos) PRBC's in cooler with ice (temp dots on & checked). Assure IV fluid warmer functional / blanket on aircraft in cooler weather.
- Consider taking portable suction to MVC scene if patient is still entrapped or outside of life squad.
- The flight nurse sits in the front seat of the aircraft when flying out to a scene.
- Safety first, last, and always! Observe for all potential hazards especially during landing / take offs at a scene and make pilot aware of any concern.
- Consider “expedited load” on situations where rapid transport time is critical to patient’s outcome.
- In multi-casualty scenes with 2 Air Care helicopters requested (second team dispatched later), consider splitting up the team if initial team has each evaluated and started care on different patients (ie; 2nd MD – 1st RN, 2nd RN – 1st MD). This will allow 1 medical team member to already “know” the patient and help expedite the report & transport. Obtain approval from PIC especially with weight differences of crew members.
- During initial report, the flight team should attempt to get the following information from the referring lifesquad / hospital: Mechanism of injury, entrapment time, same vehicle death, ? restraint / helmet, ejection, loss of consciousness, assessment and treatment given PTA. This may help predict patterns of injury, as well as, provides the receiving hospital with crucial history of the trauma event.
- Attempt to control the patient’s heat loss by removing all wet clothing or bandages, applying blankets, and increasing cabin temperature as needed. Consider the infusion of warm IV fluids, as needed.
- Always consider placing 2nd (and sometimes 1st) IV in flight to minimize ground time.
- Prioritize using the T-POD binder when transporting patients with the potential for pelvic fractures (pelvic pain, obvious injury to the pelvis, unexplained hemodynamic instability).

- Care of Amputated part, includes; Rinse the amputated part (with sterile saline, if possible) wrap in saline-soaked gauze and place in dry plastic bag. Place entire bag on ice or into ice water bath. Do not place amputated part directly on ice. * Elevate stump of amputated part and cover with normal saline-soaked dressing if possible.
- When caring for a patient with uncontrolled external hemorrhage, control bleeding with; direct pressure, elevation, a pressure dressing, compression of proximal arterial supply, use of the CAT (tourniquet) for arterial bleeding of an extremity not otherwise readily controlled, or packing the wound with combat gauze (see competency).
- The flight team may consider “permissive hypotension” with penetrating trauma, providing fluid / blood resuscitation to maintain mentation.
- Consider requesting transfer directly to the OR with penetrating trauma and hemodynamic instability.
- The flight team may make the decision to pronounce the patient dead and not transport the traumatic arrest (or other cardiopulmonary arrest) patient. ALS care should be performed in most cases and the referring personnel should concur with the decision.
- **See Clinical Policies for Multiple Trauma Patients @**
ACMC Policies @ aircareandmobilecare.com (staffonly PW staff.login)
 - Amputations
 - Arterial Insufficiency Limb
 - OR direct transfer to
 - Traumatized patient



Air Care & Mobile Care

TOXICOLOGY

Preflight:

- Consider taking any specific medications, not available on the helicopter, with you (ie; antidote recommended for agent induced) or request that the referring hospital attempt to have the medication available. *Keep in mind that in most sick toxicology patients, supporting ABC's is more critical than a specific antidote.
- Consult with faculty physician and/or contact poison control @ #636-5111 for questions regarding a specific agent.

- Classic Toxidromes Include:
 - Opioid (coma, resp. depression, miosis, hypotension, bradycardia)
 - Cholinergic (defecation, urination, miosis, bradycardia, bronchorrhea, emesis, lacrimation, salivation)
 - Sympathomimetic (hypertension, tachycardia, hyperpyrexia, mydriasis, anxiety or delirium, diaphoresis)
 - Anticholinergic (red as a beet, dry as a stone, blind as a bat, mad as a hatter, hot as hell, seizing like a squirrel)

- When transporting an intentional OD patient, even if the patient is currently alert and cooperative, place the patient in soft restraints and keep RSI/sedation readily available. *Remember – your priority should always be SAFETY for both your flight crew and your patient.

- If the OD patient refuses transport, consider the patient's capacity to make medical decisions. Also keep partially empty pill bottles, potential weapons, etc out of their reach.

- Back to basics: Blood glucose. Knee-jerk, toxicology or otherwise: Acute mental status change = FSBS.

- If the patient has increased aspiration risk (ie; diminishing level of consciousness, full stomach...etc) consider:
 - definitive airway control, early
 - Zofran prophylaxis
 - N/G placement
 - Keep suction readily available

- When caring for a patient that has a chemical exposure to their skin, assure that the patient has been properly decontaminated before putting the patient in an enclosed

aircraft and potentially adversely affecting the crew. *We DO NOT transport HAZMAT patients in the helicopter.

- **See Clinical Policies for Toxicologic Emergencies @**
ACMC Policies @ aircareandmobilecare.com (staffonly PW staff.login)