KITTITAS COUNTY EMERGENCY MEDICAL SERVICES
COUNTY OPERATING PROCEDURES

COP #3: AIR AMBULANCE SERVICES – ACTIVATION & UTILIZATION (Rev. 2023)

1. PURPOSE:

To provide guidance for the activation and utilization of air ambulance services for expeditious transport of critically ill or injured patients to the most appropriate medical treatment facility.

To be consistent with regional and state regulations and guidance documents, while addressing specific local needs and challenges.

2. SCOPE:

Emergency Medical Services (EMS) use Patient Care Procedures (PCPs), County Operating Procedures, and protocols to identify the need for and initiate activation of air ambulance services. This procedure applies to all licensed and trauma verified aid and/or ambulance services and relevant health care partners within Kittitas County.

This procedure:

a. Defines the criteria for alerting, requesting, and transporting patients by an air ambulance.
b. Provides guidelines for EMS personnel initiating the request for an air ambulance response to the scene or designated landing zone.
c. Promotes safe and consistent practices for emergency personnel and air ambulance personnel for managing landing zones for aircraft.

3. GENERAL PROCEDURES:

a. For scene transport to be efficacious and optimize patient outcome, the air ambulance service response should take significantly less time (greater than 20 minutes time savings) than it takes to travel by ground to the closest appropriate medical treatment facility. If this is not the case, strong consideration should be given to activating the air ambulance service from the scene and rendezvousing in route to the most appropriate medical treatment facility, or meeting at the local hospital for immediate intervention if appropriate. This decision should be made in conjunction with local medical control. This is particularly important for head injured and hypotensive patients.
    i. Due to the central location of Kittitas County in the state, ground ambulance transport may be faster than air ambulance service transport to the most appropriate medical treatment facility, unless there are extenuating circumstances at the scene (i.e. prolonged extrication, transport time, traffic delays, extraction from wilderness environment, and/or adverse weather conditions).
    ii. Careful consideration shall be used by EMS providers when activating air ambulance service to assure the risks and benefits of air ambulance service

transport for the patient have been considered. Air medical services should be considered when the need for a higher level of medical care is needed in route, indication for blood products per protocol, and/or a reduction of transport time to definitive care would result by at least 20 minutes.

b. Any public safety personnel, medical or nonmedical, may call to request on-scene air transport when it appears necessary. This may include law enforcement, EMS providers, fire personnel or other first responders. Medical facilities can call air ambulance services as needed.
c. Responders should involve dispatch to contact and activate air ambulance service to maintain system safety and integrity. Early activation for an air ambulance service should be initiated if dispatch information indicates a high likelihood of need. The responder should:
    i. Provide the location using latitude and then longitude.
    ii. Identify the frequency for operation.
    iii. Identify the point of contact at the scene.
    iv. The first arriving on-scene EMS personnel with the highest level of certification should determine whether air ambulance should continue or be canceled.
d. The dispatch agency will provide the air ambulance service with the location, the radio frequency, and point of contact on the scene. The dispatch agency will notify ground crews that an air ambulance has been activated and provide updates as more information is available from the air ambulance service.
e. Air ambulance service will provide the requesting dispatch agency an estimated time of arrival (ETA), location of closest available air ambulance service, type of air transport, and "when lifted".
    i. While in route, the flight crew will contact the incident commander, the ground EMS crew or medical control if appropriate, to obtain preliminary patient information and confirm the estimated time of arrival (ETA) to the scene or facility.
    ii. The flight crew will transport the patient per the State of Washington Trauma, Cardiac, and Stroke Triage Destination Procedures by identifying the most appropriate medical treatment facility if not provided (arranged?) by the incident commander, ground EMS crew, or medical control.
    iii. Air ambulance service will notify the local dispatch agency when activated by a mechanism or organization outside the emergency dispatch system in order for the incident to be under the emergency response system.
f. Decisions regarding the transport method (ground verses air) and destination for the patient will be made on scene in collaboration with EMS, incident command (IC), medical control, and air medical personnel if applicable. Destination changes made after patient is in route should be communicated to the ground crew and family, when appropriate.
    i. The destination may change if any of the following occur:
        - Hospital diverts an ambulance (includes ground or air ambulance) to another appropriate medical treatment facility.

- Patient / family preference is considered if the patient's condition and needs can be met by the preferred receiving facility and transport to that facility does not adversely impact community access to emergency medical services due to reduced EMS resources.
- Adverse weather precludes air transport to the destination.

g. In addition to standard patient care reporting requirements by the EMS provider in charge of patient care, names of the EMS personnel on-scene and the receiving air ambulance service personnel should be included whenever possible. In addition, the rationale for transporting the patient by air or ground to an appropriate medical treatment facility other than the closest medical treatment facility shall be included.

4. ACTIVATION CRITERIA / EXCEPTIOINS / EXCLUSIONS / SAFETY:

Air medical transport activation is to be considered for the following:

TRAUMA:

- Vital Signs & Level of Consciousness
  - Glasgow Coma Scale (GCS) less than or equal to 13
  - Patient was unconscious and not yet returned to GCS of 15
  - Respiratory rate less than 10 or greater than 29 breaths per minute or need for ventilator support (<20/min in infant ages < 1 year)
  - BP less than 90 mmHg or clinical signs of shock
- Anatomy of Injury
  - Penetrating injury to the head, neck, torso (chest/abdomen), groin and proximal extremity (above the knee or elbow)
  - Chest wall instability or deformity (i.e., flail chest)
  - Extremity
    - Two or more proximal long bone fractures
    - Crushed, degloved, mangled, or pulseless extremity
    - Amputation of extremity (proximal to wrist or ankle)
- Burns:
  - Burns second-degree > 20 percent
    - Burns third-degree >10 percent
    - Facial or airway burns with or without inhalation injury
    - Third-degree burns involving the eyes, neck, hands, feet or groin
    - High voltage electrical burns
- Open or depressed skull fracture
- Paralysis / spinal cord injury with deficits
- Suspected pelvic fracture
- Multi-system trauma (three or more anatomic body regions injured)

Mechanism of Injury & Evidence of High-Energy Impact:

- Falls
  - Adults: > 20 ft. (1 story = 10 ft.)
  - Children: ≥ 10 ft. or 2-3 times height of child

- High-risk auto crash
    - Intrusion, including roof >12 inches occupant site; > 18 inches any site
    - Ejection from vehicle (partial or complete)
    - Death in the same vehicle
    - Sudden or severe deceleration
    - Vehicle telemetry data (if available) consistent with a high-risk injury
- Auto vs. pedestrian/bicyclist thrown, run over, or with significant (>20 mph) impact
- Motorcycle crash > 20 mph
- Anticipated prolonged extrication: greater than 20 minutes with significant injury.
- Multiple casualty incidents

Special Patient or System Considerations:

- Older Adults
    - Risk or injury or death after age 55 years
    - Systolic BP < 110 may represent shock after age 65
    - Low impact mechanisms ((i.e., ground level fall) may result in severe injury
- Children should be triaged preferentially to pediatric capable trauma center
- Anticoagulants and bleeding disorders - Patients with head injury are at high risk for rapid deterioration
- Burn patients without other trauma mechanism, triage to burn facility
- Pregnancy > 20 weeks
- EMS provider judgement
- Blood Products – To ensure the timely and safe delivery of blood products if needed for prehospital patients meeting criteria for transfusion per local protocol. Air ambulance service personnel may accompany the ground ambulance crew if transport by ground is faster than transferring the patient to the air ambulance service during a rendezvous, or similar reason that is in the best interest of patient care. The air ambulance service personnel are responsible for the blood products and administration. When the situation allows and is in the best interest of patient care, blood products may be obtained from the local hospital and administered by ALS personnel per protocol.

NON-TRAUMA:

- Patient with cardiac disease and is experiencing a progressively deteriorating course, is unstable, and/or requires measures not available in route by ground (i.e., ALS level care, cardiac catheterization, thrombolytic therapy.)
- Patient is experiencing a severe neurological illness requiring neurosurgical or other intervention during transport that is not available in route by ground. (CVA, uncontrolled seizures, etc.)

EXCEPTIONS:

Some patients that do not meet the above indications for air transport may still be candidates for air transport under the following circumstances:

- Long distance transport of critical patients (more than 2 hours by ground)
- Remote locations with isolated injury patients that could create a prolonged painful transport (i.e., logging injury).
- Search & Rescue situations.
- Situations where a ground CCT unit will not be available for an extended time period.
- Situations where resources at the sending facility and/or scene are severely limited.
- Lack of available ground transport or may deplete local resources for extended period.
- Lack of availability of specialty or critical care personnel to accompany patient.
- Road conditions which may extend ground transport times (e.g. icy roads, flooding, remote locations, heavy traffic, etc.)
- EMS regional or state-approved procedure or protocol identifies need for on-scene air transport.

EXCLUSIONS:

Patients for whom air ambulance service transport may be contraindicated include:

- Hazardous materials
- Highly infectious disease (such as Ebola)
- Adverse weather conditions
- Patient weight (aircraft dependent)
- Patients who have been pronounced dead. (The need for or potential for cardiopulmonary resuscitation is not a contraindication for air transport.)
- Obstetrical patients in advanced active labor and in whom an imminent and /or precipitous delivery can be expected.
- Patients with actual or potential for violent or self-destructive behavior that cannot be adequately and safely restrained or controlled using chemical or physical restraints.
- A patient in traumatic full arrest if another critically injured patient requires air transport and is determined to have a greater chance of surviving with rapid transport by air.

Air ambulance services should be contacted to assist in determining whether they can transport should a situation that falls within one of the following categories be present at the scene of an emergency.

SAFETY and LANDING ZONES recommendations:

- Select a location for the landing zone that is at least 100 feet by 100 feet (generally the length of a basketball court and double the width). The pilot of the aircraft is the decision maker about landing zones.
- Assure that the landing zone location is free of loose debris.
- Assure that the approach and departure paths are free of obstructions, and identify to the pilot hazards such as wires, poles, antennae, trees, etc.
- Provide air medical services with the latitude and longitude of the landing zone. Avoid using nomenclature such as “Zone 1”. See Kittitas County Air Ambulance Service Landing Zones list.
- Mark night landing zone with lights. Cones may be used if secured or held down. Do not use flares.

- Establish security for the landing zone for safety and privacy.
- Avoid pointing spotlights and high beams toward the aircraft. Bright lights (such as scene lights) should be dimmed as helicopter approaches.
- Do not approach the helicopter unless escorted by an aircrew member.
- Do not approach the tail of the aircraft.
- Loading and unloading procedures will be conducted under the direction of aircrew.
- Always use situational awareness while operating around aircraft.
- Kittitas County Air Ambulance Service Landing Zone list:
    - There is a list of predetermined Helicopter Landing Zones for Kittitas County approved by the KC EMS/TC Council and screened by air ambulance service pilots including ETA, area location description, longitude, latitude, and landmarks. See link in appendices.
    - EMS personnel need to specify preferred location. More than one landing zone option may need to be provided.
    - The Kittitas Valley Healthcare landing pad can be used as an approved landing zone for air ambulance service helicopter rendezvous and the emergency room (ED) may be bypassed if:
        - Arrival time of the air ambulance service helicopter is before or near the arrival of the ground ambulance to the facility; and
        - Patient's condition is stable enough to warrant bypassing ED evaluation.
        - ED Staff should be notified of intentions.

Links to WA Guidance Documents:

- WA State Air Medical Plan Air Ambulance Service Plan (wa.gov)
- Prehospital Trauma Triage Destination Procedure https://www.doh.wa.gov/Portals/1/Documents/Pubs/530143.pdf
- Prehospital Cardiac Triage Destination Procedure https://www.doh.wa.gov/Portals/1/Documents/Pubs/346050.pdf
- Prehospital Stroke Triage Destination Procedure https://www.doh.wa.gov/Portals/1/Documents/Pubs/530182.pdf

Links to County Documents: Home (kittitascountyems.org)

- Kittitas County Air Ambulance Service Landing Zones

Submitted by:	**Change/Action:**	**Date:**	**Type of Change:**
KCEMS/TCC	Original	11/7/1996	□ Major □ Minor
KCEMS/TCC	Amended	05/18/2015	□ Major □ Minor
KCEMS/TCC	Minor revision	01/2018	□ Major ■ Minor
KCEMS/TCC	Amended - DOH approved	06/2023	■ Major □ Minor