Objectives

1. List the methods of activating an air medical resource
2. Describe the role of a Landing Zone Officer
3. Review the key elements of preparing and controlling a safe LZ
4. Discuss the best methods of communicating with the aircraft
5. Identify the hazards to you, your patients and the air crews
Objectives

6. Protecting the Landing Zone
7. Continuity of care – Review patient preparation and report needs
Air Ambulance Utilization

- An Air Ambulance will decrease transport time to definitive care
- An Air Ambulance will provide critical care capabilities on-scene and during transport
- An Air Ambulance provides support in multiple casualty incidents (MCI)
Activation

• Local Dispatch “911”
  - For Air Ambulance Scene Response

• Direct Notification
  - For Hospital Interfacility Request

• Air Rescue Notification
  - For Air National Guard call…
    800-452-0311
  - For U.S. Coast Guard call…
    866-284-6958
Launch Information

Location of the Scene

• Latitude and Longitude GPS Coordinates (minutes & seconds)
• Cross Streets or Roads
• Closest City/Town
• Address of Location
• Well-Known Landmarks
Launch Information

• EMS radio frequency number and call sign (including any PL tones)
• Hazardous Material Involvement
• Local Weather Conditions
Landing Zone Officers

Landing Zone Officer Duties:

- Provides a coordinated interface with Incident/Scene Command.
- Responsibility of the Landing Zone Officer includes the following roles:
  - Site selection
  - Site Preparation
  - Site Protection
  - Site Control
  - Air to ground communication
Landing Zone Preparation

A. 100’ X 100’ is ideal
   1. This will accommodate all area EMS rotorcraft
   2. Pilot in command has discretion over landing zone

B. Minimal Slope or as flat as possible

C. Clean surface area
   1. Remove debris and wet down dusty areas if possible

D. Choose landing zones with a clear approach and departure path into the wind.

E. Assure the LZ officer has the right radio frequency and PL tone for contacting the approaching aircraft.
Landing Zone Preparation

F. Designate a Landing Zone Officer
G. Mark LZ
   1. Cones best for daytime
   2. Strobes best for nighttime
   3. CAUTION when using flares for fire hazard
H. Do not allow pedestrians, animals or vehicle traffic into the LZ area
Pilots like to take advantage of the winds for lift when safe to do so.
Landing Zone Preparation – Marking

- Wind
- Strobes/Cones

Consider lying the cones down with a flashlight placed inside them for night operations.

Pilot may request to turn off strobes.
Walk the LZ to look for hidden debris that may fly up in rotor wash.
Night-time Landings

• Turn off flashing white lights for helicopter approach
• Pilot may request other lights off
• Use spotlights to mark obstacles and poles with overhead wires
• Don’t shine lights directly at the helicopter
Communicating with the Aircraft

- Direct radio contact is the best
  - EMS helicopters have pre-programmed frequencies that are not easily changed.
  - Provide dispatch with a radio frequency that the helicopter can contact the Landing Zone on.
  - The ideal radio frequency has no other radio traffic other than air to ground communications.
Communication with the Aircraft

- The Pilot will attempt direct air to ground radio contact when the helicopter is 5 to 10 minutes out.
- Advise the Pilot when you hear the helicopter
- Advise the Pilot when you see the helicopter
- Don’t assume the helicopter crew can see you just because you can see them
Communicating with the Aircraft

- When guiding the aircraft to your location and you have the ship in sight, use clock face based directional terms.
- Nose of the aircraft is always at 12 o’clock.
Direct the Helicopter Back to you

“MedStar, I’m at your 5 o’clock. You need to turn right.”

“Life Flight, I’m at your 8 o’clock. You need to turn left.”
Communicating with the Aircraft

- Strive for direct communication – Relayed information **ALWAYS** loses something in translation!

- Hand signals aren’t generally recommended – There are too many “languages”…

- With concise, simple and clear language, you can avoid giving confusing or conflicting directions to the helicopter…

- Wait to give landing zone instructions / hazards when the helicopter has you in sight
Identify Hazards to Those on the Ground and in the Air

- Hazards
- Obstructions
- Terrain
- Surface
- Animals
- Wind/weather

Pneumonic HOTSAW is useful in remembering these hazards.
Identify Hazards to Those on the Ground and in the Air

- **Hazard**

There are many hazards to watch out for in any given LZ.
Debris can blow up and circle through the rotor system or blow towards ground personnel…

Identify Hazards to Those on the Ground and in the Air
Rotor Wash Hazard
Obstructions
Obstructions

What you see....

What we see....
Obstructions

Wires easy to see from ground...

...hard to see from the air
Terrain

HELIКОPTER LOADING & UNLOADING PROCEDURES

DANGER
CAUTION

FACE UP SLOPE

HAZARD AREA

FACE UP SLOPE

HELIКОPTER LOADING & UNLOADING PROCEDURES
Surface
Animals

Yes, animals include people!
Wind / Weather
Final Approach Communication

When Helicopter is on Final approach

- Reserve radio traffic for safety-related communication only

If immediate hazard is seen say, “Abort landing!”
Final Approach

• Once the aircraft is on final approach the LZ Officer should vacate the immediate area.
• Move to a safe vantage point to watch for hazards.
• Limited communication on short and final approach.
• Pilot has discretion on safety of landing zone
Night Vision Goggles

• NVG **ENHANCES** safety at night by multiplying available light up to 10,000 times.
  - Do NOT shine lights toward the aircraft
  - If possible, limit the number of vehicles with rotating strobes on while aircraft is landing or taking off - Overhead lights have a tendency to washout lights used to mark a landing zone, such as small strobe lights, chem lights, etc.
Night Vision Goggles

What they don’t do:

• Allow us to fly in fog, freezing rain or heavy snow
• Change our current weather minimums
Landing Zone Protection

After the Ship has Landed

• Keep your eyes everywhere for signs of vehicles or pedestrians approaching the LZ whenever the rotor is spinning.
• Prevent ANYONE from approaching the aircraft until receiving a definite signal from the flight crew.
• Stay outside rotor perimeter and never approach the aircraft without crew direction.
• Even after shutdown, control/guide vehicle operation near the aircraft.
• Assign a tail rotor guard if possible.
Tail Rotor – The Threat Even Experienced People Forget
All styles can be damaged by loose objects, trees and high brush and present a hazard to ground personnel!
Continuity of Care

• The air crew should **always** seek out the primary caregiver of the patient that’s to be flown – Give a brief, concise report just as you would over the radio to an E.R.

• If possible, provide a copy of the patient’s identification and vital signs to the air crew.
Loading the Patient

• You may be asked to assist the flight crew with loading the patient
• Follow flight crew directions
• Some helicopters are side-loading, some are rear-loading
• Some programs may load while the helicopter is running
• Noisy Environment making communications difficult
Loading the Patient
After the aircraft is closed up and starting:

- Keep an eye open for signs of doors or access covers open, or straps hanging out.
- Keep a radio in hand to advise pilot of any new hazards that appear.
- Keep radio channel open until aircraft is out of sight.
Hard Landing Protocol

• In case of a helicopter accident-Keep Safe!
  – Protect yourself and others from flying debris
  – Do NOT approach the aircraft until all moving parts have come to a stop
  – Advise your dispatch to contact the flight program
  – Call for additional assistance as needed
    • Additional Fire Unit(s)
    • Additional Medical Aid Unit(s)
    • Additional Air Ambulance Resources
It’s a Team Effort!

Your information and assistance on the ground is critical to the success of our mission.

Thank you for all you do in the aide of landing our crews safely!
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