

AIR MED

WORLD CONGRESS



Dr. Fabio Martorana
Mountain HEMS
Association

Multifunctionality of the cabin



Which helicopter ?

Multifunctionality of the cabin

No easy answer, many variables to consider such as:

- Territory conformation
- Distances
- Distribution of hospitals
- Staff composition
- Economic factors
-



Multi functionality of the cabin

- The ideal machine does not exist
- Costs and their reduction represent a major aspect when choosing a machine
- Many helicopter services perform a variety of missions:
 - hems
 - sar
 - interfacility
 - law enforcement
 - fire fighting
 -

Multifunctionality of the cabin

A possible solution:

- Multiple purpose helicopters in terms of flight performances;
- Interiors that can be reconfigured according to specific needs, together with better decisional algorithms to decide which patients will benefit the most from the dispatching of helicopters.

Multifunctionality of the cabin

From a doctor's point of view:

- not much can be found in the international literature about ergonomics of the patient compartment;
- although things have started a new course in recent years, helicopter interiors have usually been supplied by manufacturers as a package allowing only minimum changes which led to.....
- the user having to somehow adapt/conform to the machine.

The key word is: **COMPROMISE**

Multifunctionality of the cabin

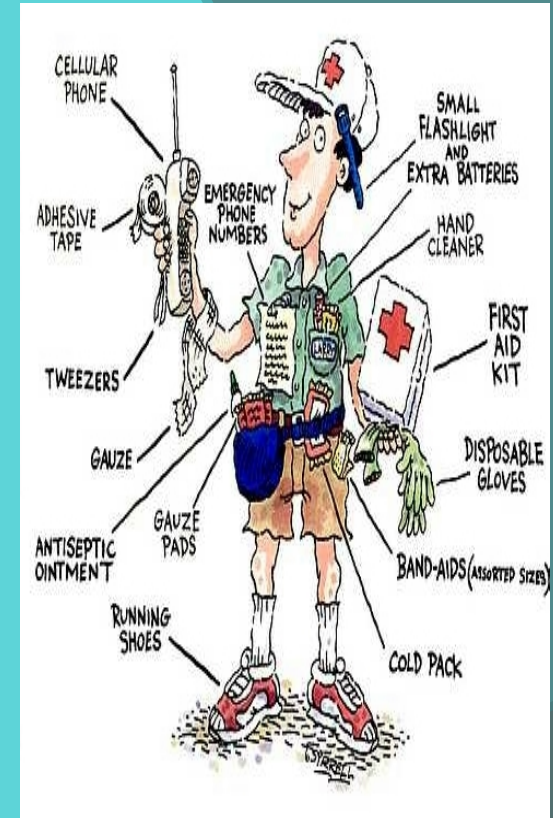
Relevant questions:

- how much is the medical staff willing to compromise in terms of what can be safely done inside the helicopter ?
- is it perhaps time for the medical community to take on a more active role in cooperating with manufacturers when it comes to interior designing and definition of cabin spaces ?

Multifunctionality of the cabin

How can a helicopter cabin be rendered doctor friendly (and patient friendly as a consequence) ?

- out-of-hospital emergency medicine is largely about sustaining the patient's vitals (the ABCDE);
- a few life-saving manoeuvres are the cornerstones of emergency medical interventions:
 - endotracheal intubation for airway control and ventilation
 - CPR
 - drainage of cardiac tamponade, hypertensive pneumothorax and massive hemothorax
 - control of hemorrhages and support of circulation
 - spinal column immobilization



Multifunctionality of the cabin

Ideally, life-saving procedures should be performed on the scene and the patient stabilized prior to moving him/her on the helicopter, however:

- configuration of the cabin should allow for the same procedures to be performed in flight in “scoop and run” situations (e.g. difficult terrain, adverse weather conditions) or in case of unforeseen emergencies (e.g. neurological deterioration, cardiac arrest);
- alternatives to the aforementioned manoeuvres should always be at hand for rescue circumstances and again internal spaces should be adequate;
- in interfacility transport the patient is often accompanied by cumbersome monitoring equipment: the patient compartment should provide for adequate positioning and utilization of such equipment.

Thank You !!!