



PROFICIENCY & PROFESSIONALISM

HEMS – always a track record?

- 1. EHAC & HEMS Philosophy in Europe**
- 2. Medical & Economical Benefits of Modern HEMS**
- 3. European HEMS Market Principles**
- 4. EHAC Principles**
- 5. Good Governance: Corporate Responsibility**
- 6. ACRM**

HEMS has a name in Europe:



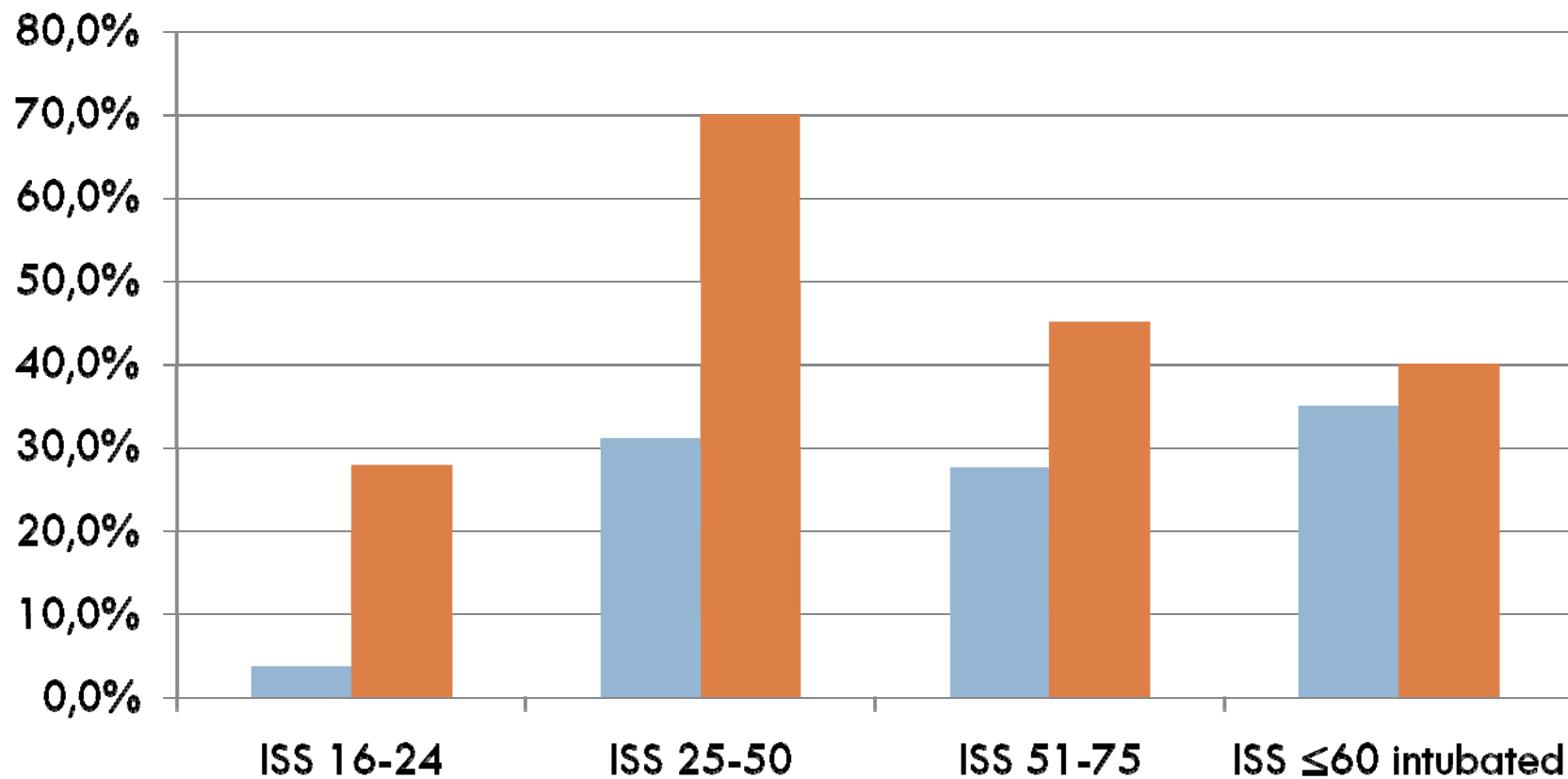
EHAC is the European umbrella organisation in all matters of **HEMS**



Efficiency of HEMS



Lethality HEMS patients vs. ground-EMS patients



ISS= Injury Severity Score
Frink et al., 2007

■ HEMS ■ EMS

Efficiency: Operational benefits



Method for Arriving at Cost per Patient

Category	Ground	Helicopter
Total annual requests	1,000	1,000
Missed due to weather	50	250
Missed due to being in use	50	100
Missed due to maintenance	50	50
Total annual missions completed	850	600
Annual system cost (\$)	3,804,000	1,686,500
Cost per completed mission (\$)	4,475	2,811

Bruhn, Williams, & Afghababian, 1993

Efficiency: Operational benefits



Annual Costs of Operating Ground vs. Air Ambulance Systems

Operating Category	Ground (6 vehicles) (in dollars)	Helicopter (1 vehicle) (in dollars)
Office utilities, base	39,600	39,600
Office rent and utilities, other sites	assumed donated	none needed
Medical supplies, new	240,000	40,000
Medical supplies, disposable	12,000	12,000
Non-medical supplies	33,500	5,600
Maintenance	72,000	12,000
Unexpected costs	18,000	18,000
Insurance	28,800	included in lease
Vehicle fuel	24,500	92,300
Training (centralized)	6,000	3,000
Vehicle lease	45,600	975,000
Total operating costs	520,000	1,197,500
Staff Costs Salary and Benefits		
Nurses (5 full-time equivalent [FTE] per vehicle)	1,290,000	215,000
Paramedics (5 FTE per vehicle)	984,000	164,000
Driver/Pilot (5 FTE per vehicle)	900,000	included in lease
Clinical operations director	50,000	50,000
Medical director	25,000	25,000
Office staff (part time)	35,000	35,000
Total staff cost	3,284,000	489,000
Total Annual cost	3,804,000	1,686,500

Bruhn, Williams, & Afghababian, 1993

Europe's HEMS Market: Market of Aeromedical Services



- Non-transparent market
 - ▣ Different operator models
 - ▣ Different health systems with different refinancing models
 - ▣ Different (H)EMS regulation (even within a country)
- New market with high growth rates
- Growth niches
 - ▣ Specialisation
 - ▣ Increase A/C utilisation by USP
- Tenders to ensure quality and safety as well as operational and financial predictability

Europe's HEMS Market: Mission & Strategic objectives



- Huge provision of highly qualified aeromedical services
- Standardised operating procedures
- Reliable partners
- Cost-efficient operational demand
- Long-term collaboration with stakeholders

EHAC Principles



Air rescue services provided by EHAC members are defined by:

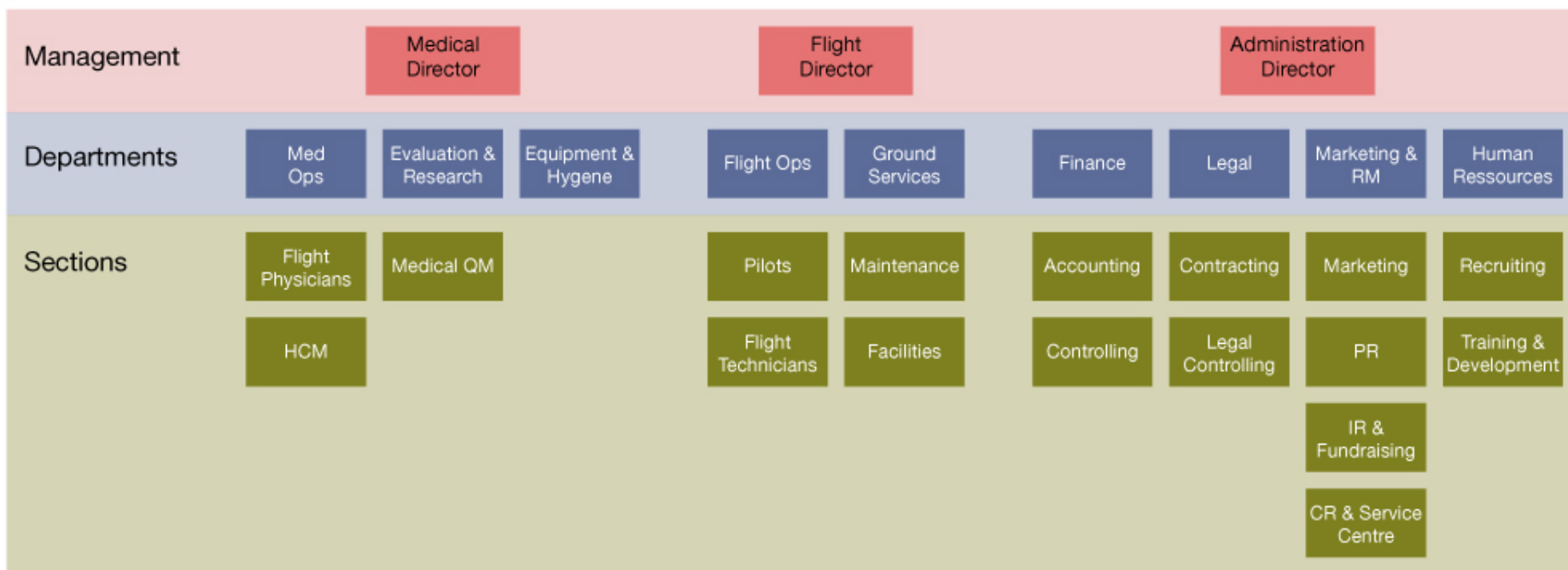
- safe rescue missions in every environment
- professional and skilled medical personnel
- a high standard of medical intervention on scene and during transfer
- exemplary maintenance of documentation and adherence to written policies of the service.
- appropriate use of new technology

Good Governance by Operators



- Corporate responsibility
 - ▣ Flight Operations Manual
 - ▣ Medical Operations Manual
 - ▣ Supervision
- Organisational structure
 - ▣ Defined responsibilities
 - ▣ Integrated specialisation
 - ▣ Efficient controlling
 - ▣ Safety culture / SMS

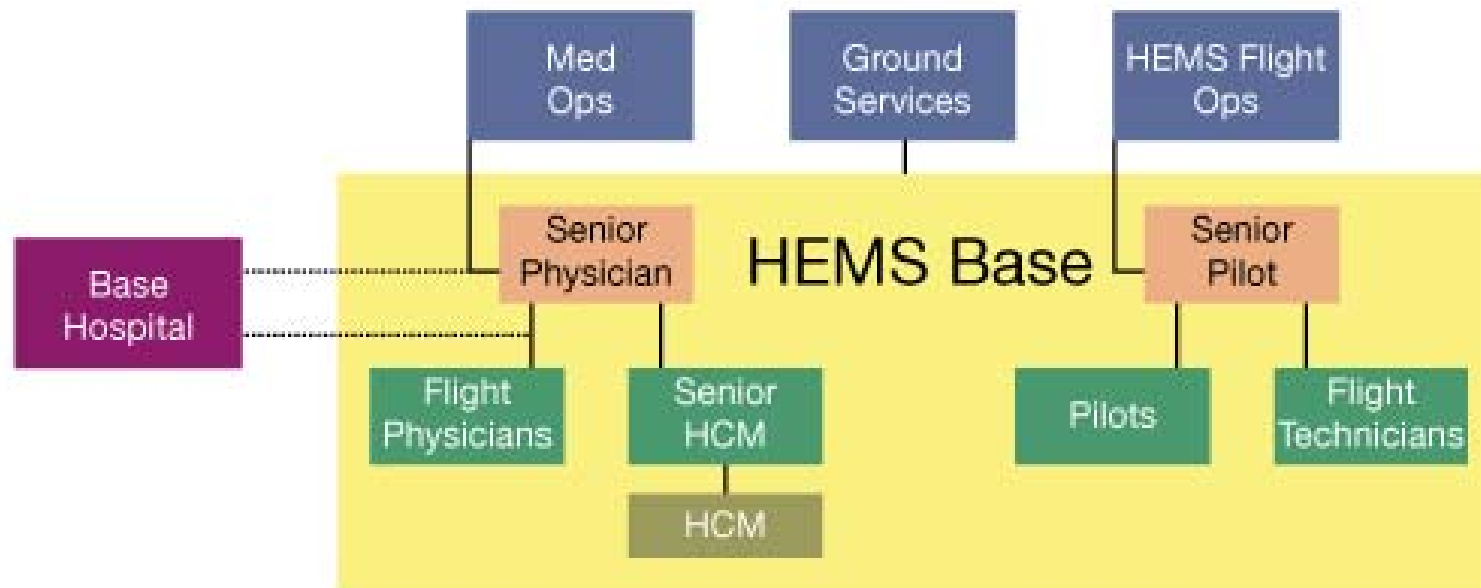
Organisational Structure



Organisational Structure



A HEMS base as functional unit is co-managed by different departments. In the case of disagreement between the departments the management board has to decide after attending to the different parties.



Goals



- **Providing guidelines** for air rescue programs
- **Supporting** management, medical directors and HEMS crew in decision making and allocation of resources within the organization
- Supporting air rescue providers in **political discussions**
- Defining the criteria for **bench marking** between systems
- **Improving the quality of medical care** within every service

EHAC SOP's

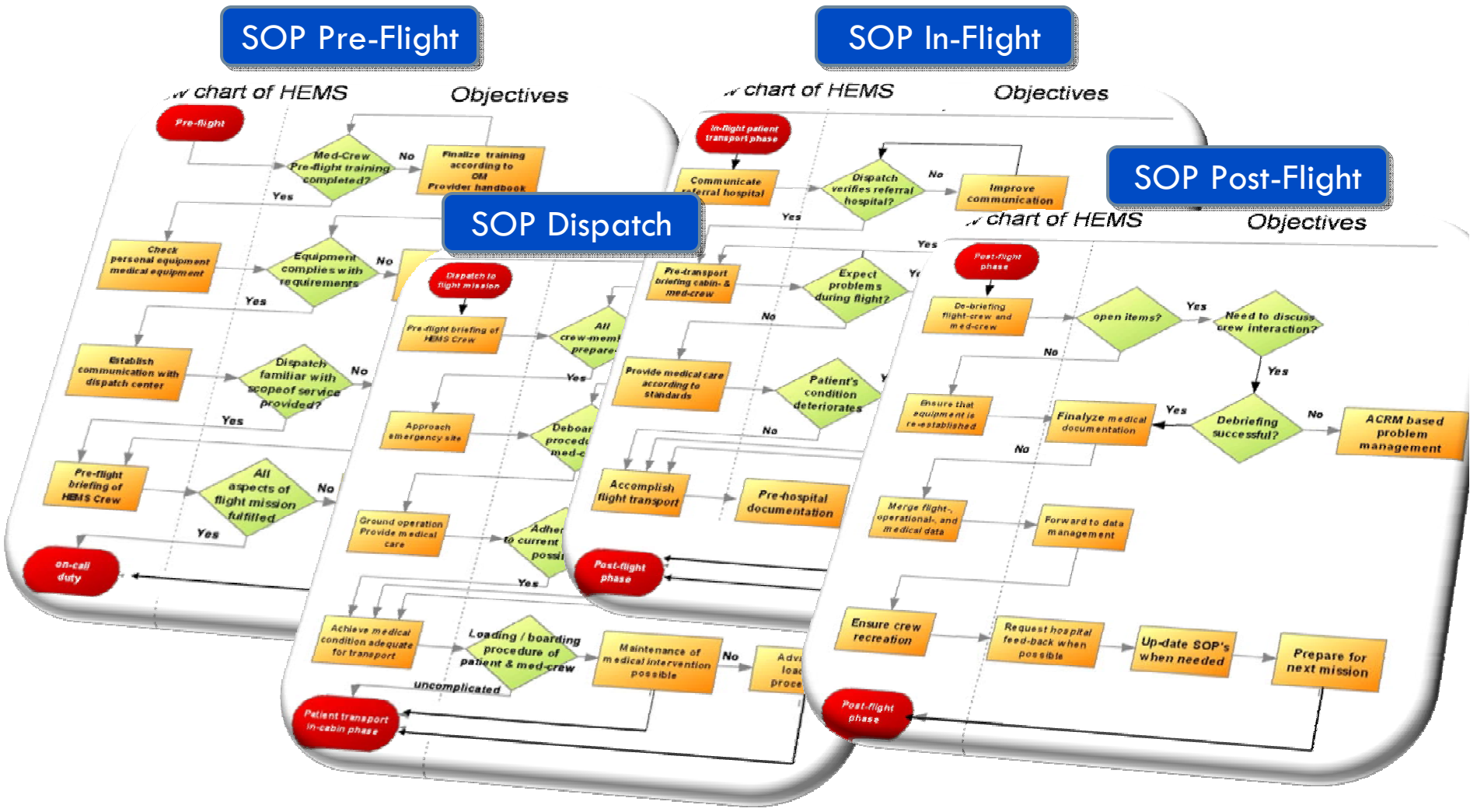


SOP Pre-Flight

SOP In-Flight

SOP Post-Flight

SOP Dispatch



Aero-Medical Crew Resource Management™ (ACRM™)



- **Training** (including CRM) as mean of qualification
 - ▣ Holistic team building & development
 - ▣ Patient safety
- **Quality factor** for Operators
- **Platform**
 - ▣ Exchange ideas of participants
 - ▣ Exchange ideas of trainer teams
- Definition as **standard** on European level
 - ▣ EHAC is certifying authority



THANK YOU