

# Erfahrungen im 24h Betrieb in der Luftrettung



## Die Rega in Kürze

**Schweizer NGO & NPO**

**Gründung** am 27.04.1952

**Jahresumsatz** 139 Mio. CHF

**Gönner** ca. 2'450'000

### Flotte

3 Challenger CL-604

17 Hubschrauber

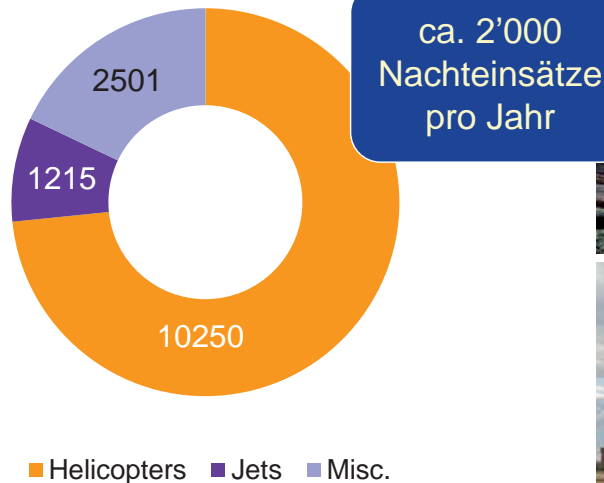
6 EC 145

11 AW-109SP DaVinci



# Competences

## Einsätze 2012



# Vorteile der Luftrettung

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## Impact of a physician-staffed helicopter on a regional trauma system: a prospective, controlled, observational study

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**Introduction:** This study aims to compare the trauma system before and after implementing a physician-staffed helicopter emergency medical service (PS-HEMS). Our hypothesis was that PS-HEMS would reduce time from injury to definitive care for severely injured patients.

**Methods:** This was a prospective, controlled, observational study, involving seven local hospitals and one level I trauma

the trauma centre resulting in a reduction of secondary transfers from 50% before to 34% after implementation ( $P = 0.04$ ). Median delay for definitive care for severely injured patients was 218 min before and 90 min after implementation ( $P < 0.01$ ). The 30-day mortality was reduced from 29% (16/56) before to 14% (21/147) after PS-HEMS ( $P = 0.02$ ). Logistic regression showed PS-HEMS had an odds ratio (OR) for survival of 6.9 compared with ground

## Vorteile der Luftrettung

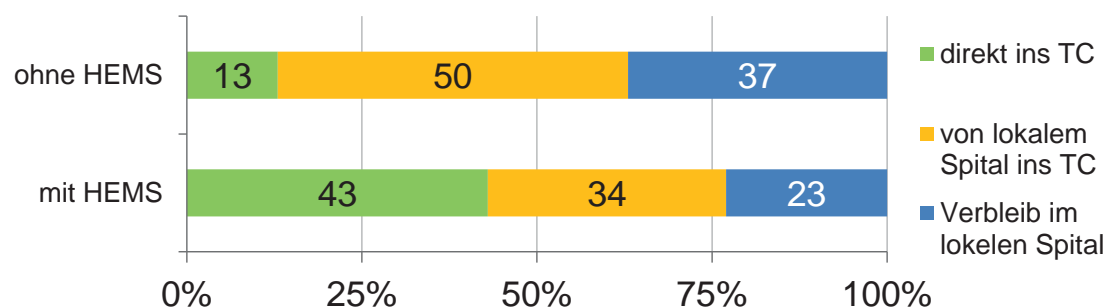
- Patienten: 1,766
- ISS >15: 204 (56 vor / 148 nach der Implementierung)
- 6.4% unerwartete Überlebende nach Implementierung

EMS system		ISS	NISS	Head AIS>3	PH ETI	Mort. <30d	Total Mort.
without PS-HEMS	n=56	25	33	23	8	16	18/448
		17-45	17-50	41.1%	14.4%	29%	4%
with PS-HEMS	n=148	25	29	47	34	21	29/1318
		16-43	17-57	31.8%	23.0%	14% *	2.2% *

(Hesselfeldt R, Steinmetz J, Jans H et al., 2013)

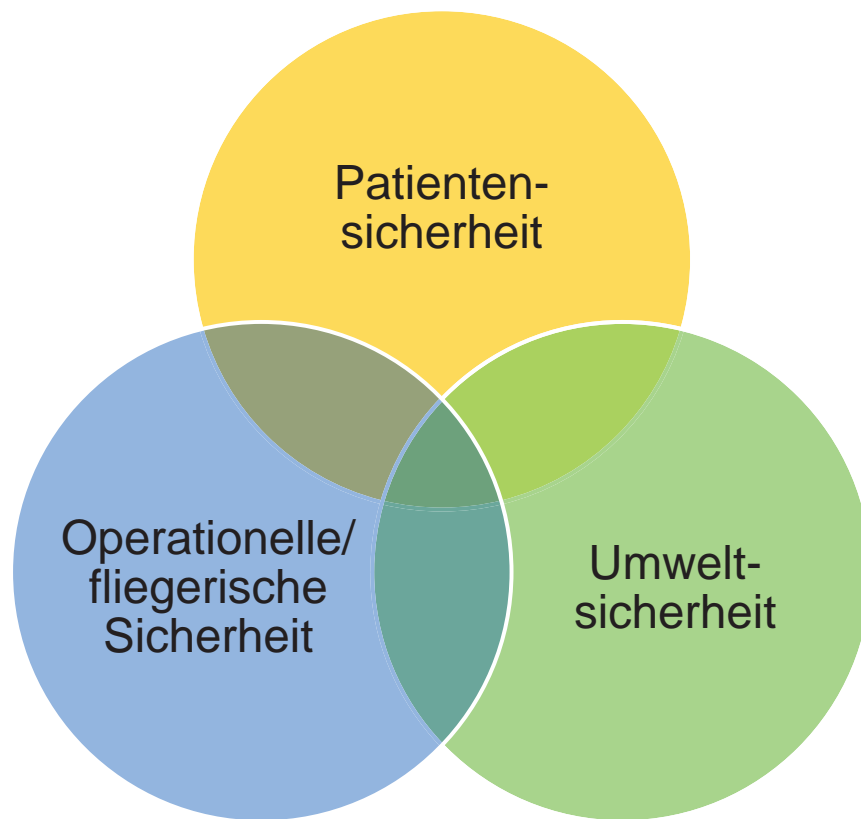
## Vorteile der Luftrettung

Rettungsdienstsystem		Zeit Alarm – lokales Spital	Zeit Alarm – Trauma Centre	Zeit Alarm – TC (NAW / RTW)
ohne -HEMS	n=56	52 min.	218 min.	218 min.
		21-103	54-832	54-832
mit HEMS	n=148	60 min.	90 min.*	219 min.
		24-96	57-458	59-925



(Hesselfeldt R, Steinmetz J, Jans H et al., 2013)

# Sicherheitsdimensionen



# Fliegerisch-technische Risiken bei Nachteisätzen





# Alle Rega Helikopters verfügen über NVG





## Laserangriffe



# Human factor Risiken

**Just Culture (konstruktiv - non-punitive Fehlerkultur)  
Operations Manual (OM)  
Safety Management System (SMS)**

**Fatigue Risk  
Management  
Systems (FRMS)**

**Aeromedical Crew  
Resource  
Management (ACRM)**

## Übermüdung

- Dienstzeiten
- Umgebungs-  
bedingungen
- Einsatzarten (Nacht,  
NVG, Winde, Gebirge)

## Psychologische Risiken

- Risikowahrnehmung
- Entscheidungsfindung
- Verarbeitung  
belastender  
Ereignisse
- Sozialleben



**Vielen Dank für Ihr Interesse**