



Societal triggers

.g. small family structures

■ The need for paramedics ■ Personell Situation ■ Educational Situation ■ Education in the "future" ■ Practice in the future

Overview

■ Goals

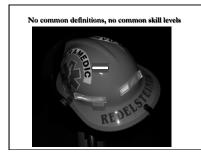
"Professions" in European **Emergency Medical Services**

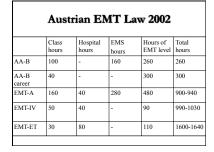
n > 10

- Emergency Nac

 Driver
 Attendant
 Anhulance Attendant
 Emergency Medical Technicians
 Reseue Assistants
 Paramedics
 Registered Paramedics
 Reseue Officers
 Registered Nurses
 Physicians
 Ambulance Physicians
 Emergency Physicians

Cave: no common terminology





and .	Berufag		Versorgungsniveau							
	Fahrer	RS EMT	RA NFS	NFS-K PMDC	RN	NA	FA NF	BLS	BLS	ALS
Belgien										
RTW	1				1					1
NEF					1	1				1
Dänemark										
RTW		1	1						1	
NEF					1	1				1
Deutschland										
KTW		1+1							1	
RTW		1	1						1	
NAW		1	1			1				1
NEF			1			1				1
England										
RTW		1		1						1
Griechenland										
RTW	1		1.>		<.1				1	
NAW	1		1->		<1	1				1
Kroatien										
RTW	1		1->		<-1				1	
NAW	1		1->		61					1
Österreich										
KTW		1+1							1	
RTW		1+1							1	
NAW		1	1			1				1
NEF			1			1				1

Land	Berufsc Fahrer	ruppe RS	Versorgungsnive							
	Fanrer	EMT	RA NFS	NFS-K PMDC	RN	NA	FA NF	Bro	AED	ALS
Polen										
RTW	1		1.>		<-1				1	
NAW	1		1->		<-1	1				1
Türkei										
RTW	1				1				1	
NAW	1				1	1				1
Schweiz										
RTW		- 1	1							1
Slowakei										
RTW	1		1.>		<-1				1	
NAW	1		1.>		<.1	1				1
Slowenien					-					-
RTW	1				1				1	
NAW	1				1	1				1
Spanien										
RTW	1				1				1	
NAW	1				1	1				1
Ungarn										
RTW	1			1						1
NAW	1			1	1					1

Condensed

- Ambulance Attendant
- Paramedic
- Nurse
- Medical Doctor
- MD with Emergency Specialization
- = highest training level that serves as a regular tier of EMS response

National Condensation

- Kosovo, Bosnia, Serbia
- NI, S≥, FIN, N
- ++ +* UK
- (A) Rescue Officer (A) The Imergency Physician H

Trends

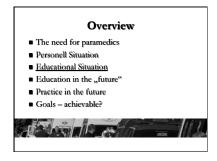
- Lack of MD, RN \Rightarrow Paramedicsystems
- Professional Migration East ⇒ West
- Increased Professionalisation leads to Reduction of Team Partner Training Degree
 RN, Registered Paramedics ⇒ Driver

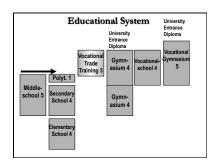
"Commonalities" of the professions

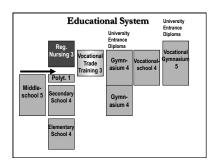
- High variation of quality
- ...also within singular service
- Nomenclatur / Terminology unprotected and unstandardized
- standards of treatment similar (on paper)

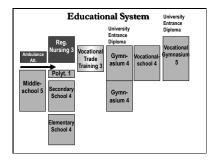
"Commonalities" of the professions

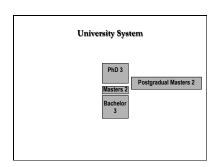
- ALS interventions not performed by the offically responsible persons
- \blacksquare legal scope of practice unfounded for "paramedical" professions $\:\:$ de facto ALS, de jure BLS \simeq
- Titel of profession, Type of training do not correlate with
- scope of practice
- amound of training

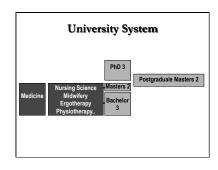


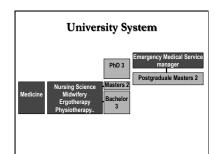


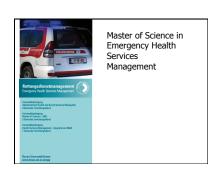


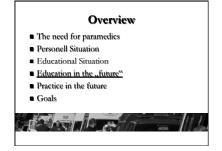












Make the field and profession attractive!

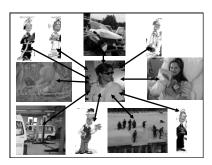


Checklist Training Standard for the future



- Broader and not only tasked oriented aquisation of knowledge

 → think and act in standards and variations
- Education and not only Employability
- Regular training model and not "Sidemodel"
- Permeability between health care professions



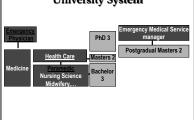
Duration of Training in Years

Medical Doctor	6
Socialworker	5
Midwife	3
Nurse	3
Firefighter	1
Psychologist	5
Race Car driver	?
Manager	6
Mechanic	3
"Paramedic"	32 years

Duration of Training in Years / 4

Medical Doctor	6
Socialworker	5
Midwife	3
Nurse	3
Firefighter	1
Psychologist	5
Race Car driver	5
Manager	6
Mechanic	3

University System



EMS Education on **Bachelor Level**

- Hungary > Bachelor
- Slovakia
- Czech
- Poland (§ = ?)
- United Kingdom
- Netherlands?
- Germany?
- Switzerland?

Overview

- The need for paramedics
- Personell Situation
- Educational Situation
- Education in the "future"
- Practice in the future
- Goals achievable?



EMS Hardware



- Road Ambulances European Standards

 CEN 1789 Vehicles + equipment

 CEN 1865 Stretchers + patient
 handling equipment

- Air Rescue Standards

 Jarops

 Austrian Standard ON S 4132

 Helicopters ON S 4130

 Definitions, Requirements,
 Equipment



Berlin, 2008:



Standardized care concepts?

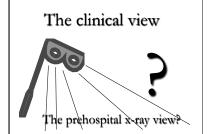
- ITLS/PHTLS ATLS
- ILCOR ERC ACLS
- AMLS
- EPLS, PLS,....
- MIRITVK

MIRIPCC

Multiple Institutionspecific Regional Individual Patient Care Concepts

- → sometimes great regional concepts

- ◆ common training?
 ◆ Common procedures?
 ◆ Comparable case # great enough?
- ◆ Supervising institution ?

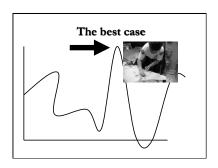


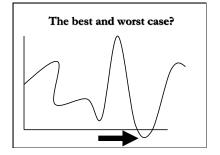
Foundation of clinical judgement

83 EMS Calls per MD p.a. in Germany 9,7% cancelled / no patients

28 % Trauma n = 21

Cave: Hospital ≠ Prehospital







Subtilling-furth Druckvetland												
Butscketesinnung												
Dannischulz												
Delibritation mil automatisserten Sefferflator (AEC)												
Outbrillation	-											
DKS Dektroom kieben												
EXIS Abieitungen solveiben und beurfellen	-											
Growthile	-											
Guedellubus seizen	All											
Homich Handgrif anweden						The second secon	-			_		
Herodrucknossage						Reflexe kontrolleren				٠		L
Hipenentiator begegner						Exposition durchfulters	-	٠				
Infektionstrangorf durzhführen						Rettung of our PKW mit Schouletrage Spireboard						
Inflavorien herschlien						Fluhigstellung von Srüchen mittels XY 5-theme						Ŀ
Infusionen verspreichen						Ruhigiliklung von Brüchen millels Vakayammahsitse						Ŀ
hyddones vaderales	-					Sauerstoffgabe aber Gesichtsmaske / Nasensonde			-			ь
Irgidiones verabreichen	-					Schooldekamplung durch Warenerhalt, Lagerung						
PRUBATOYERSATZ						Schoolcastand erkennen	At					т.
Intracestree Zugang schaffen	-					stable fertimisorang dyszkóznen						
Historian endstructeral	-					Stubilisiers au der Eddswirtschalte / Immebilisation	1.					15
Callvassesinvendung be Verbrennungen						Stursheim abrehmen						1
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Vagenspilling						Obersobe in Sobil	1:					H
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Vedkarrente sengtreichen	-	-		-		Sindure Zusang setzen	+-	÷	1	÷		H
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Medikamentenspray serabreichen						Virturating on Neuplanian	÷	÷	1	÷		н
Monitoring der Vitalfunktionen						Base- Gestedministen	+÷	÷	÷	÷		H
Narloss erieltin			ÁŽ.	A2		Zentralumosen Zusano settera	÷	÷	82	÷		н
Neugebonnens abnabeln						Zelkratieshous und genoue Fachstelon auswihlen	+-	÷	-	~		н
Neugeborener absaugen						Zuräur bei Huposhildere (Zubete) seben	+:			÷	÷	
Palpation der Weschleite	1	-		-		Zucker bei Hypogrykanne (Diabelini) geben						-
Paterilen bestackten						Tabelle & notfallmedicinische Malinahmen und Zu-						
Perfuser handhoben	-					Labete E nottatmed (crosche Mabrahnen und Zu-	xoung	1000	Desp	right)	Sec.	
Psychologische Pallentenbehoung, Pallentenführung												
Pulshrquerz überwachen												
Pylosymeter bedomen												
Pspileskostolie	-					Redelderier, Christoph (2001) Prilininische Notfallve Professionen, Ein Verdesch von in der erführselderstill	reargang	1000	- urbe	N/ZHA	Di/Ze	
Redistrputs testen						Professionen, Ein Vergesch von in der retungsdensti Berufsprucsen Popinssumsarbet an der St. Etispbeth	Ches Ve	w	ang eu	quan	2000	
Restriction von Erwachsenen						This and M. for Carried Services						
Ficanatolion von Kindon	-											

Skills - ?

- Release on scene after certain indications (e.g. Headache, thoracic pain,...)
- Death certificate
- General anaesthesia with RSI
- Chest tube
- Surgical Tracheotomy
- Central Venous Access

Overview

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Options for the Future

- Accept reduced level of care
- Telemedicine
- Higher integration of nursing and ambulance work
- Higher involvement of ?? Paramedics, nurses, family doctors as -> Gatekeepers
-

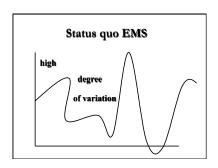
Institutionelle Systemkomponenten	Vorhanden?	systematisch
und wesentliche Prozesskomponenten		verwendet?
Leitstelle		
Eine (=1) integrale Notrufnummer		
Bei > 1 Nummer fachliche Abfrage und Informationstransfer ohne Zeitverlust möglich		
Annuleridentiklikation		
Echtzeitortung der Ressourcen		
Automatischer Einsatzmittelvorschlag		
Abfrage nach Notfallieitsymptomen		
Annulerberatung in Erster Hilfe		
Zuweisungshoheit für Kliniken und Betten		
Präklinisches System		
First Respondersysteme von Feuerwehr		
First Respondersysteme von Polizei		
First Respondersysteme von lokalen Gesundheitsfachkräften		
Prakinisches Personal in Advanced Life Support geschult und erfahren (Anamnese, Diagnostik, EKG Diagnostik, Medikamerte, Intubation,)		
Klinisches System		
Zentrale integrierte Notaufnahme		
Hoher Grad an positiver interdisziplinärer und professionsübergreifender klinischer Zusammenarbeit		

Tabelle 2: Musterhafte Tabelle zur Klassifizierung von Rettungsdienstsysteme

Redestance, Christoph (2009): Prilibrinoshe Notfalversorgung durch unbeschredliche Professionen. Sin Verglech von in der retungsberedlichen Versorgung eingesetzen Berufsgruppen Rigorosensabled an der St. Stisabeth Universität St. Gesundsbebesetz.

Needs and rights of patients

- O Do callers get phone instructions to deliver first aid ?
- O Do high priority patients get the closest and the appropriate ambulance?
- O Is care provided according to ERC, AMLS...guidelines?
- O Do patients get treatment against pain?
- O Are patients admitted to hospitals with simple illnesses / injuries due to lack of skilled prehospital screening?
- Are basic data such as response times
 measured and publicly available (Freedom of Information)
- ,,,,,, c



Emergency Paramedicine 2020+



- symbolCommon definitions
- Common indicator set/data for EMS Systems
- Harmonized provider training in EC
- Duty to register providersApplied minimumun standards of care



