Infrastructure and resources

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Case report from Poland

Author conficts of interests

- No affiliation with Polish government at time being;
- but
- working in MoH at the beginning of transformation process

Why did we start the proces?

- We wanted to provide better healthcare to our citizens.

What problems did we have at the beginnig?

- General feeling that the system is not working but NO DATA to prove that.
- There were ambulance services providing transportation, outpatient services as well as PCP services out of office hours
- Hospitals were working in „acute service mode”

Where did we start from?

- Three kind of ambulances :
- R (reanimation level)
- W (wypadkowy – accident response level)
- O (ogólnolekarski – primary care level)

„R” ambulance

- Anesthesiologist
- Nurse
- EMT-basic (sanitariusz)
- Driver

„W”(A&E) ambulance

- Physician (preferably someone with experience in trauma)
- EMT –basic (sanitariusz)
- Driver

„O”(PCP) ambulance

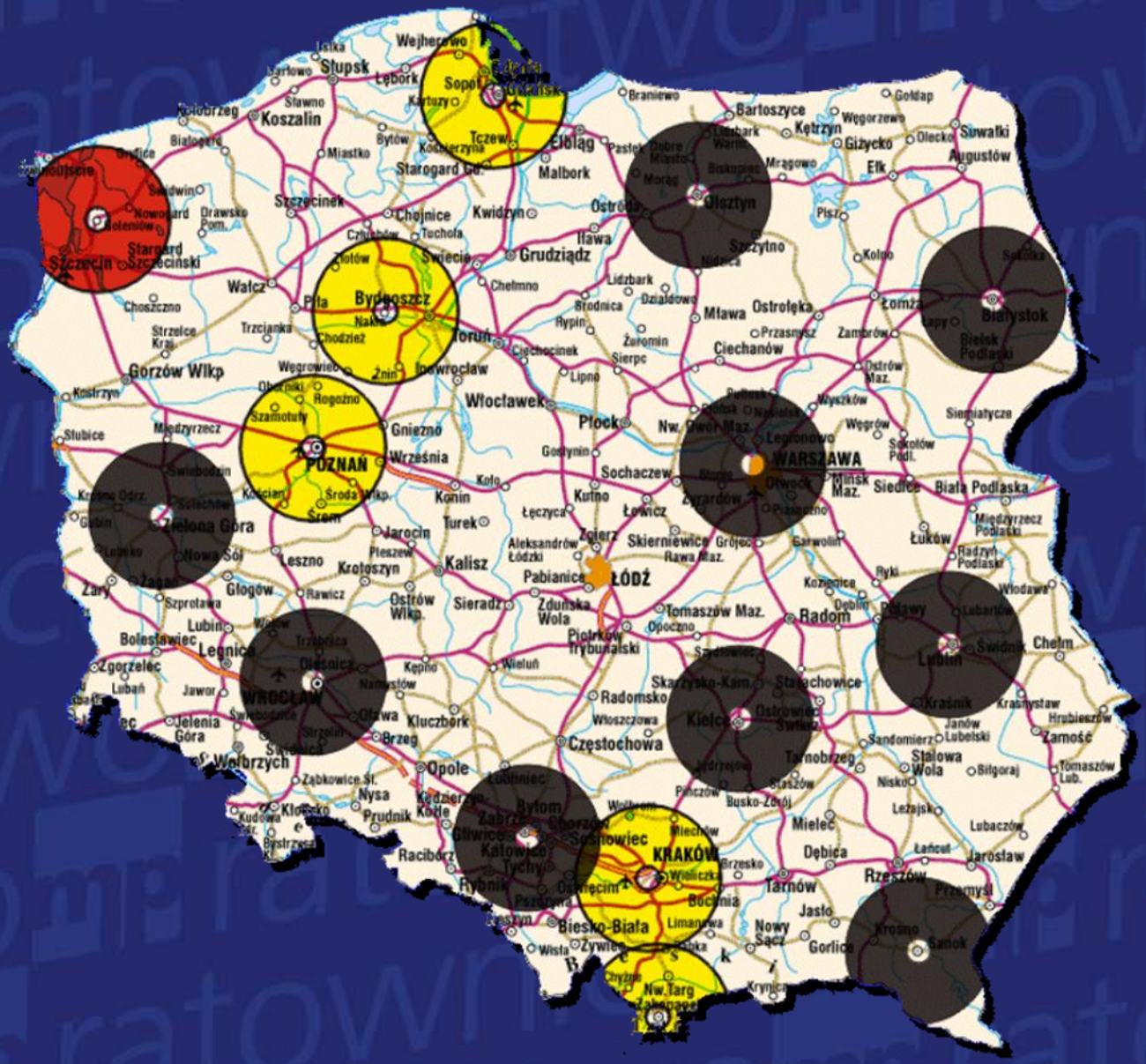
- Physician
- Driver

Air Medical evacuation/transport

mp ratownictwo

irm instytut ratownictwa medycznego

1999



A&E missions on regular basisi

A@E missions from time to time

Transportation between hospitals

mp ratownictwo

irm instytut ratownictwa medycznego

We’ve audited flying services…

And have ignored results of audit and recomendations

What advice did we have from audit agency

- Country does not need HEMS services nationwide, but only(possibly) in selected areas… (Mountain rescue)
- If we want to build HEMS we should integrate military SAR services to lower costs of the entire system.

Medical equipment in Mi 2

2001- where did we start?

- Ambulances: 789
- Helicopters :14
- Airplanes: 2

2018- what do we have now?

Ambulances: 1543-

- 617 S type
- 926 P type

Helicopters : 22

Airplanes: 1

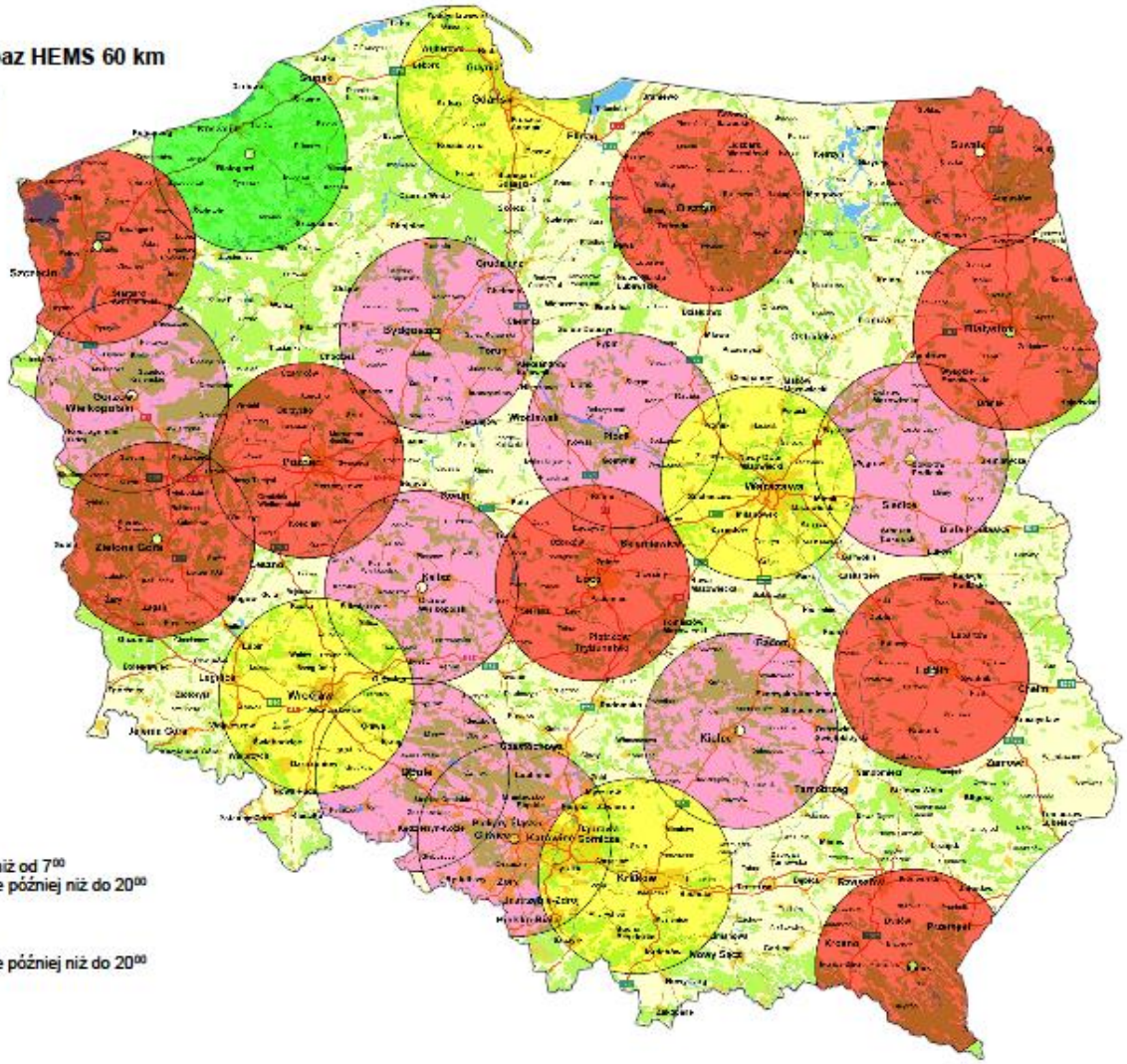
New transportation aircraft

And it’s interior

HEMS

2018

Rejony operacyjne baz HEMS 60 km
oraz czasy dyżurów
od 01.08.2018 roku



- dyżur 24 h
- dyżur od 7^{00} do 20^{00}
- dyżur od wschodu lecz nie wcześniej niż od 7^{00} do 45' przed zachodem słońca lecz nie później niż do 20^{00}
- baza sezonowa dyżur od 7^{00} do 45' przed zachodem słońca lecz nie później niż do 20^{00}

HEMS calls

- 2017 r. – 9942 patients rescued/transported
- It means 1,2 patient/daily on each helicopter

HEMS costs

- New helicopters : 615 000 000 PLN (2008 and 2014)
- Yearly budget 131 000 000 PLN

- It means that each patient rescued by HEMS costs 13 170 PLN (6 000 BGN)

Dispatch centers

- 2001: 321 - almost one in each powiat (county)
- 2018 : 42
- 2028: 18
- All dispatch centers are operating on the SWD software (

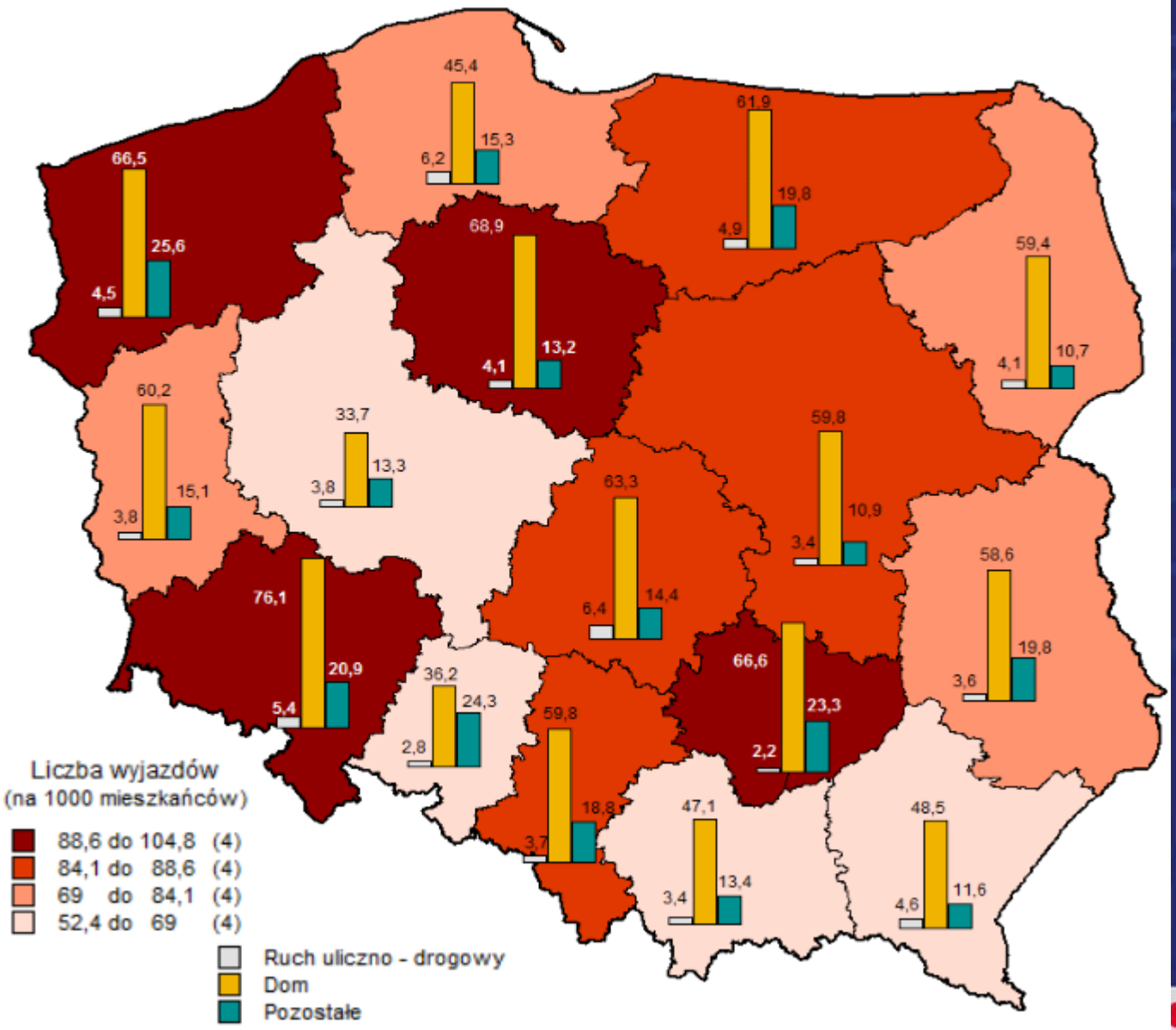
Calls received:

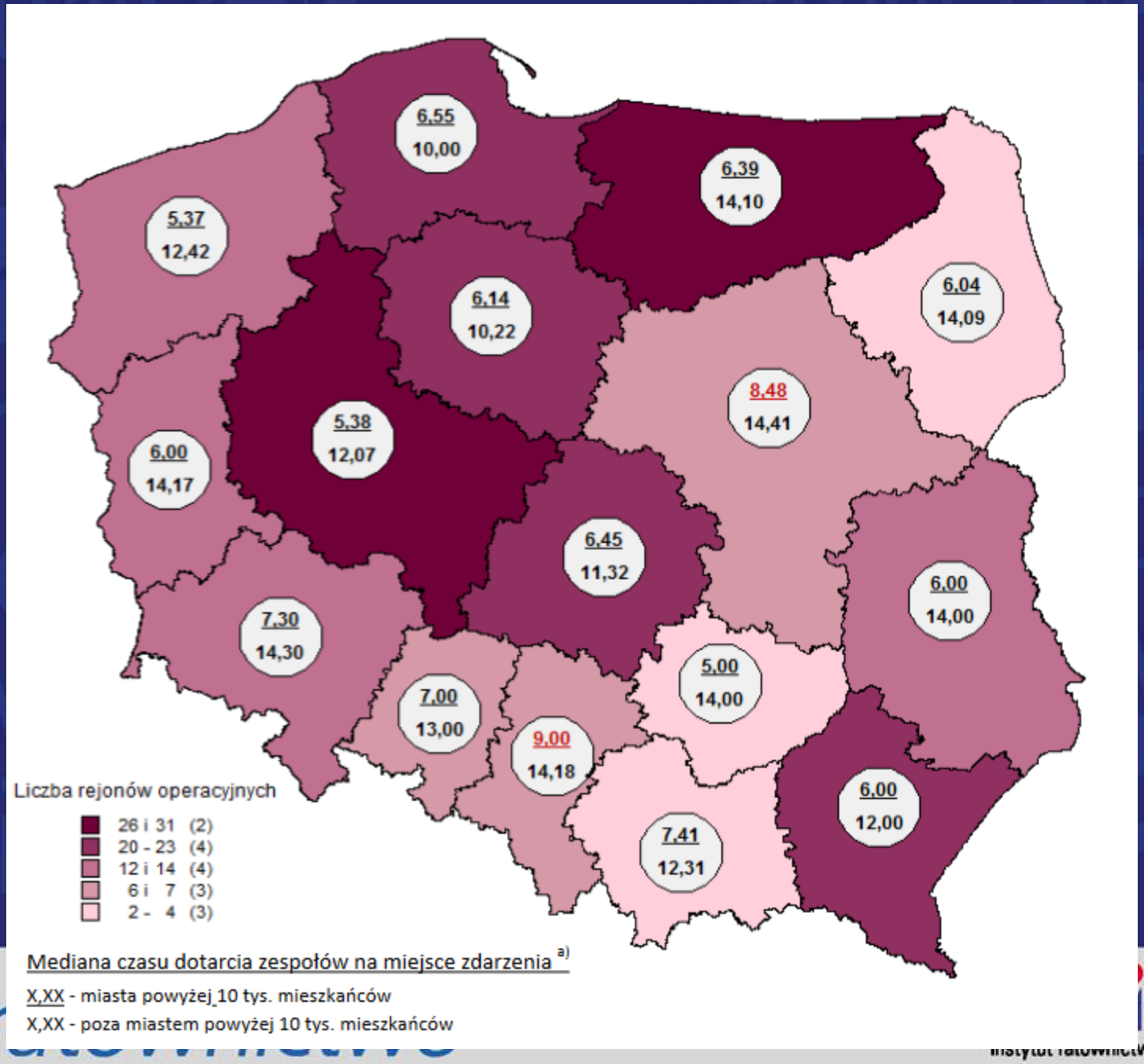
- 2017: 7 270 000 annually
- 2001: No data

Calls accepted

- 2017: 3 358 000 annually (4% rise each year) (more then 50% of incoming calls accepted)
- Each ambulance is dispatched to 5-6 calls daily
- It means that one rescued /transported patient costs 650 PLN (300 BGN)
- 2001 no data

Mapa 2. Wyjazdy zespołów ratownictwa medycznego na miejsce zdarzenia na 1 tys. ludności




6,55
10,00
6,39
14,10
5,37
12,42
6,14
10,22
6,04
14,09
8,48
14,41
5,38
12,07
6,00
14,17
6,45
11,32
6,00
14,00
7,30
14,30
5,00
14,00
7,00
13,00
9,00
14,18
6,00
12,00
7,41
12,31
Liczba rejonów operacyjnych
26 i 31 (2)
20 - 23 (4)
12 i 14 (4)
6 i 7 (3)
2 - 4 (3)
Mediana czasu dotarcia zespołów na miejsce zdarzenia a)
X,XX - miasta powyżej 10 tys. mieszkańców
X,XX - poza miastem powyżej 10 tys. mieszkańców

Crew

- 2014:
- Paramedics: 11 000
- Emergency nurses: 1800
- Physicians : 2000

Crew

- Each year we have shrinking nb of physicians willing to work in ambulances and almost no new EM residents
- Nb of emergency physicians in Poland: we have 360 licensed EM physicians, but only 210 actually working in EM

Competences

- Paramedics: 2 years post graduate scool or 3 years university degree
- trauma as well as medical emergencies
- Detailed list of procedures and medications which can be given without supervision.

Competences

- Physicians: 5 years specialty in EM
- Up to year 2020 almost everyone accepted.

Victory or failure?

- We have build very expensive system to provide medical security for our citizens.
- We’ve had to build paralel system for PCP (one physician for 50 000 of population)
- But we have almost all calls accepted.

Is paramedic based system better?

- From perspective there was no choice as we are struggling with shrinking nb of physicians willing to work in prehospital emergency care and even now 20 % of „S” ambulances do not have any physician onboard, and almost none have EM physician onboard.

Questions?

Summary

- Building system cost/efficiency index needs to be taken into account
- To provide quality assurance you need data
- having only one level of competency in the system is costly (only Paramedics, no EMT-Basic and Intermediate levels)