

Alarm and Dispatch centres in Scandinavia – different organisations, different staffing, but the same quality?



REGION

Capital Region
of Denmark

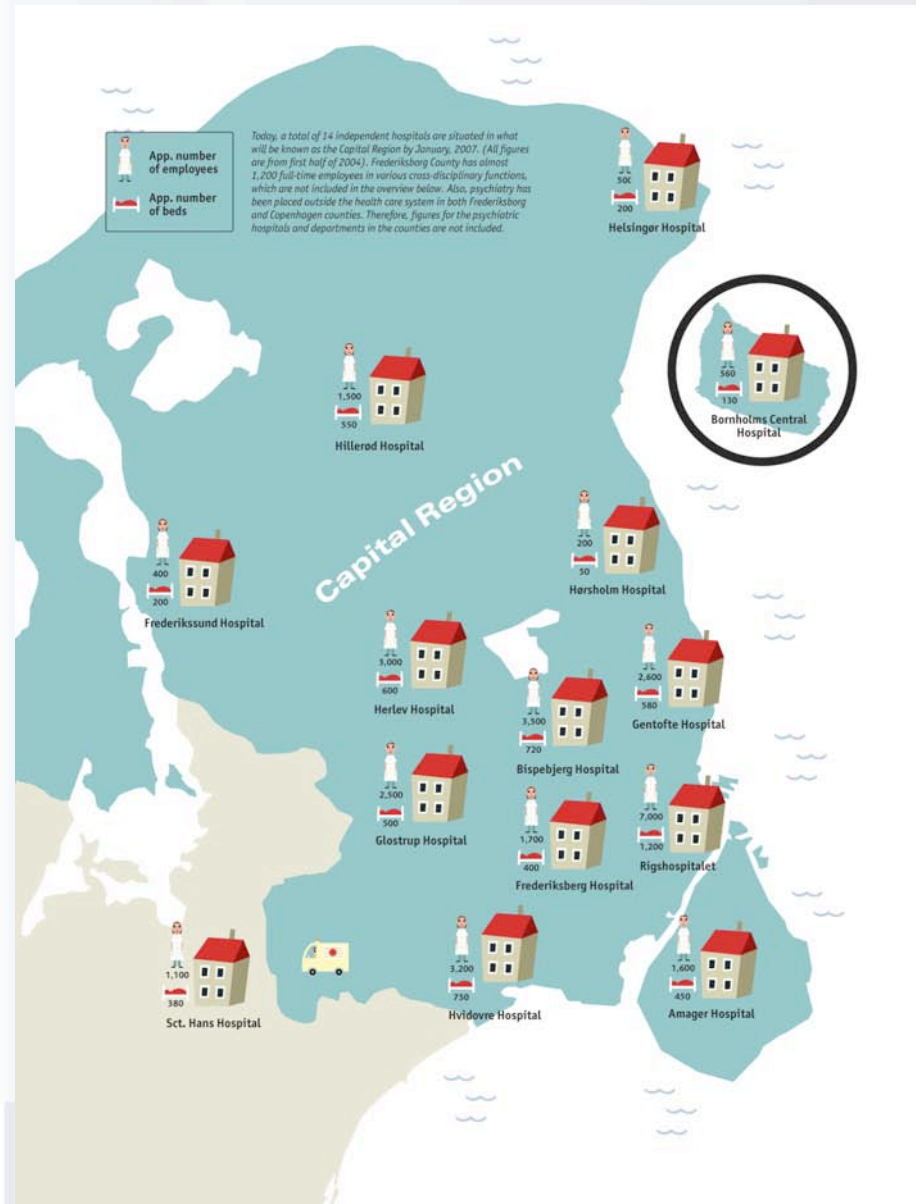


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- 1.6 million inhabitants**
- 12 Hospitals**
- EMS with physicians**
- 10 Emergency Departments**
- 1 Trauma center**
- 2 Dispatch centres**

Disclosure:

**Unrestricted Grant for Emergency
Medical Dispatch meeting at Utstein
from the Laerdal Foundation**

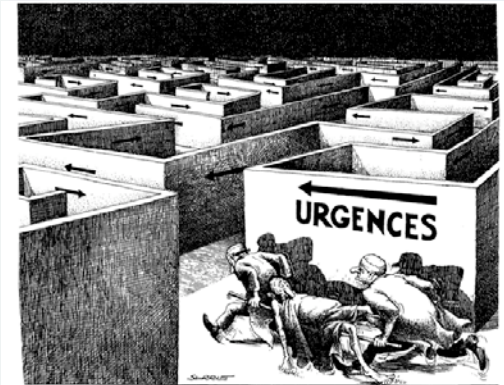
Objectives

EMD is the gatekeeper to emergency medical care

Emergency Medical Dispatch in Europe

Emergency Medical Dispatch in Scandinavia

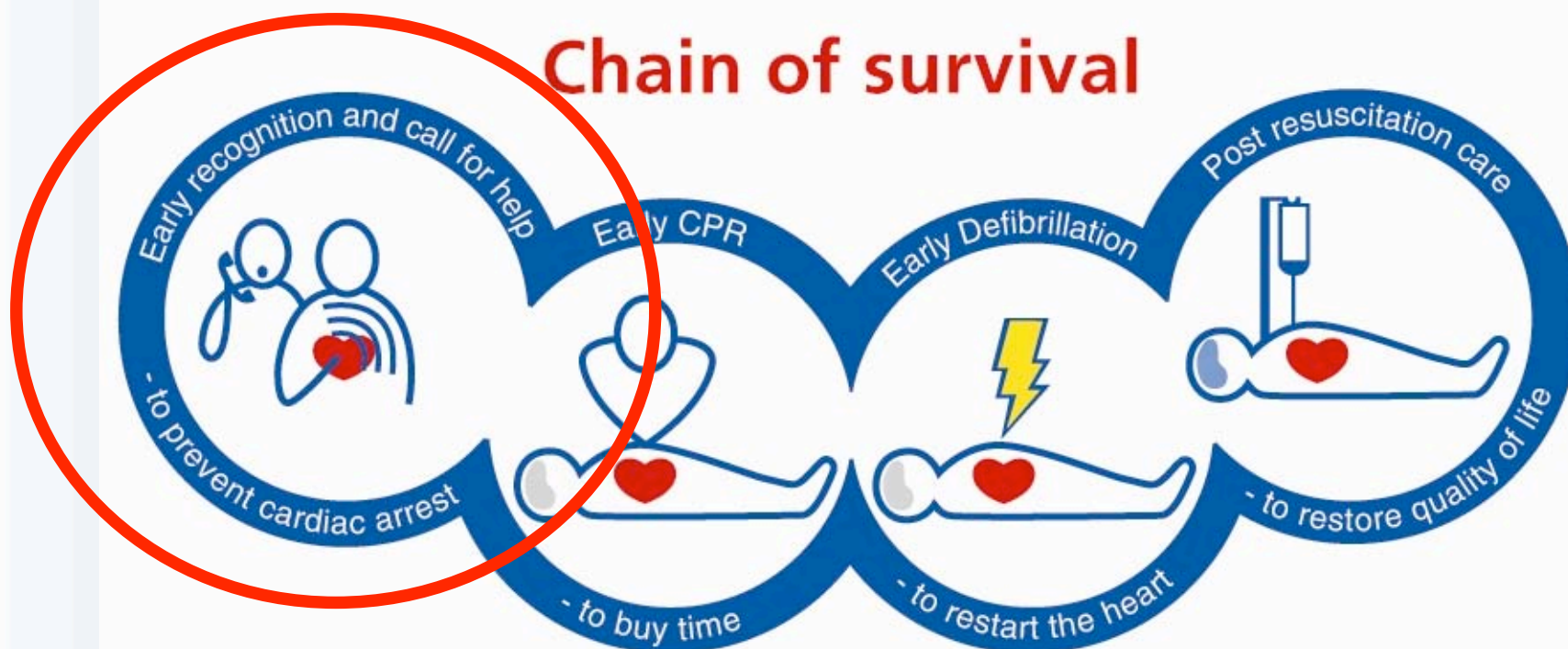
**What is the challenges - the importance of
dispatch process, organisation and controlling the
gatekeeper**



Emergency Medical Services in Europe: Various options, limitations in resources

The common goal:

- the right medical response
- to the right patient
- in the right time

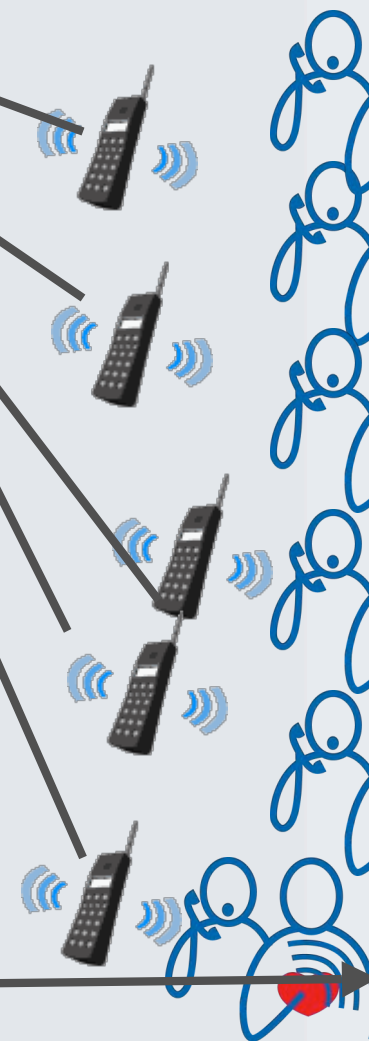
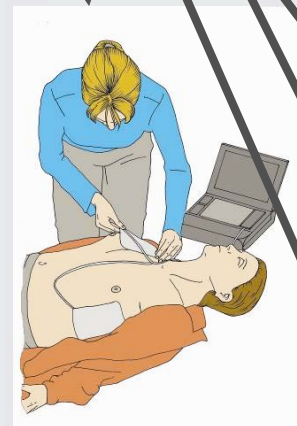


**Access, Calling, Receiving, Evaluate, Prioritise,
Response, On-line Help..**

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Patient outcome



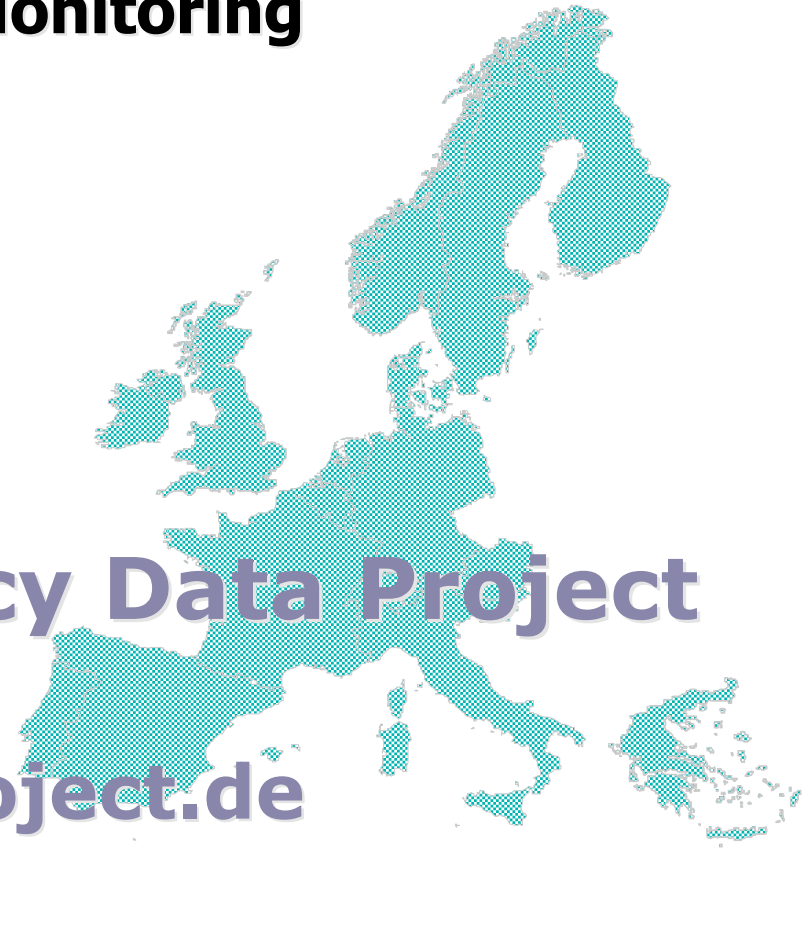
Survival Rate?

Response time

European Benchmarking & Health Monitoring

European Emergency Data Project

www.eed-project.de





European Emergency Data (EED) Project

An EMS Data-based Health Surveillance System

The Steering Committee of the EED project

Dr. Thomas Krafft (Germany)

Dr. Luis Garcia-Castrillo (Spain)

Dr. Iain Robertson-Steel (United Kingdom)

Dr. Mathias Fischer (Germany)

Dr. Freddy K. Lippert (Denmark)

Dr. Jerry Overton (US)





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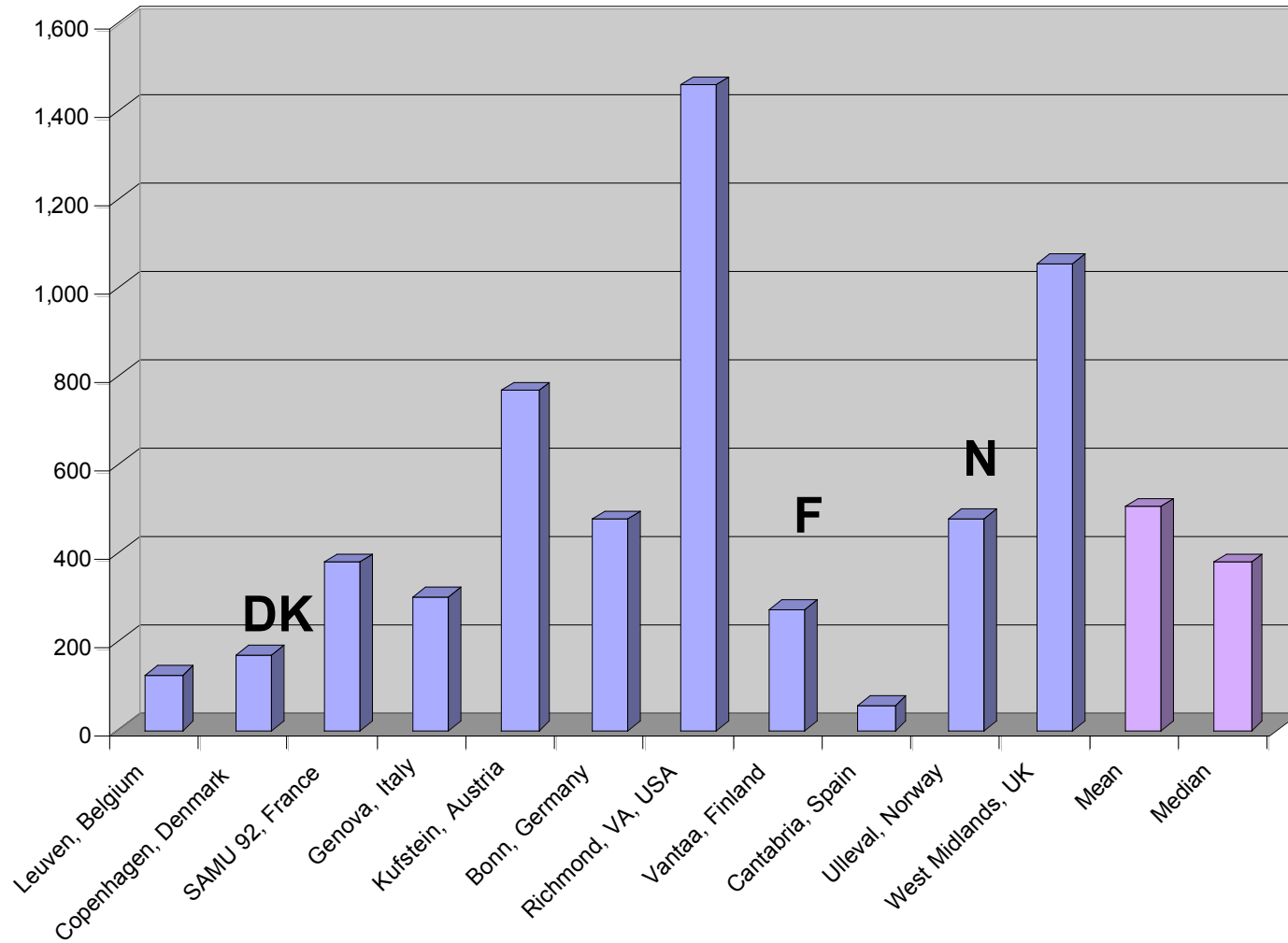
Participants and working group of the EED project

15 countries represented
Regional representations

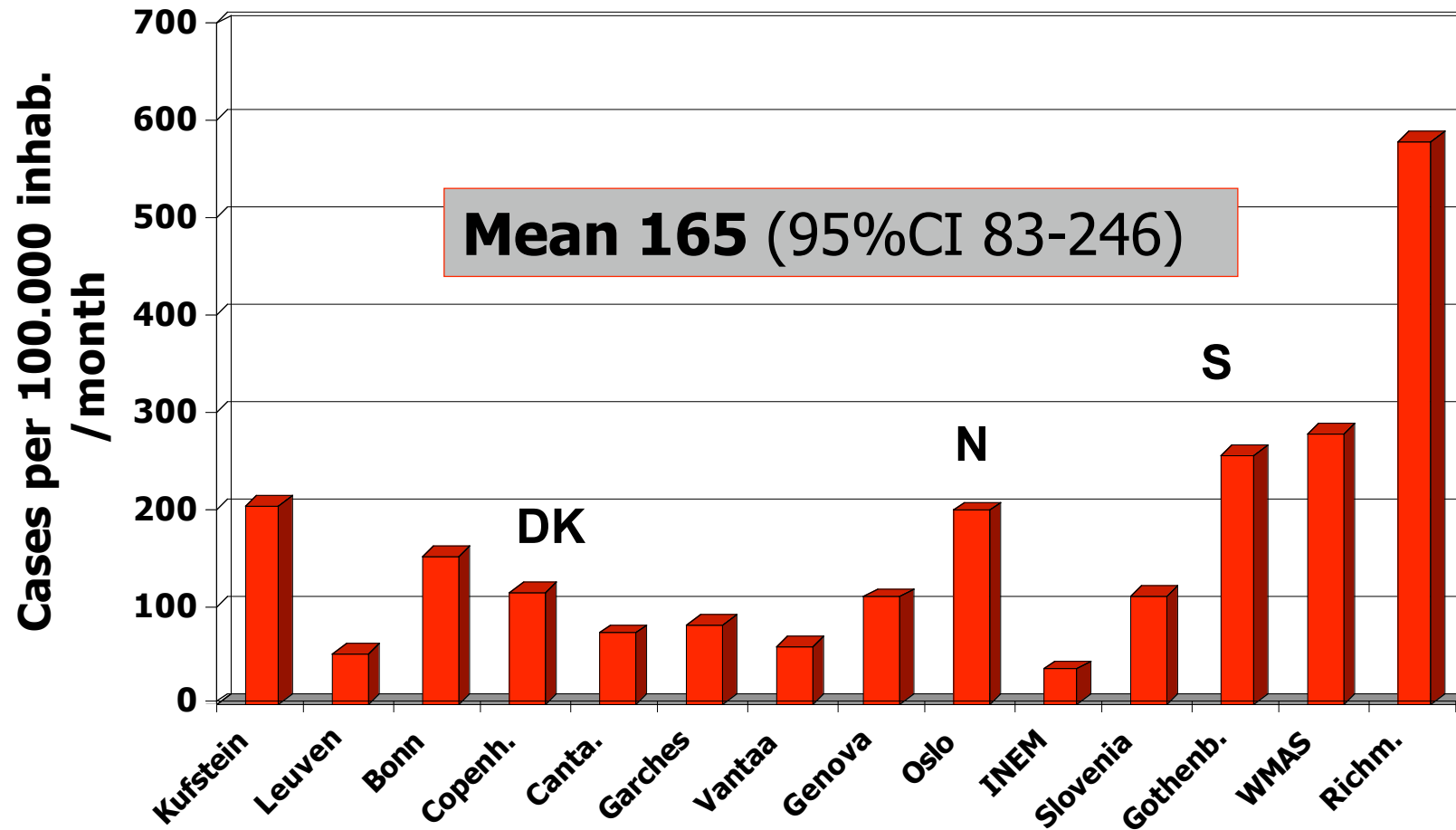
European Emergency Data (EED) Project

Emergency transport per 10.000 population

Emergency Transports Per 10,000 Population



European Emergency Data (EED) Project Rate of Highest Priority Response per 100.000 inhabitants per month



Responses Resulting In "Refusals" or "No Transports"

System	Percentage of Refusals or No Transports
Leuven, Belgium	2%
Copenhagen, Denmark	6%
SAMU 92, France	5%
Genova, Italy	15%
Kufstein, Austria	no data
Bonn, Germany	8%
Richmond, VA, USA	23%
Vantaa, Finland	26%
Cantabria, Spain	22%
Ullevål, Norway	2%
West Midlands, UK	6%
Mean	12%
Median	7%

From 112-call to Emergency Medical response

112-call



112 center Dispatching



Medical response

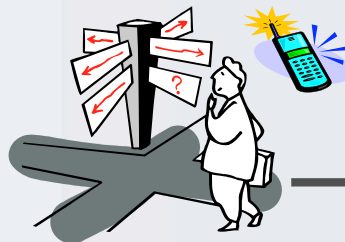
**Call, Direct Access, Receiving, Evaluate, Prioritise,
On-line Help and generating a Response..**

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Emergency Department



General Practitioner



112 - Alarmcenter



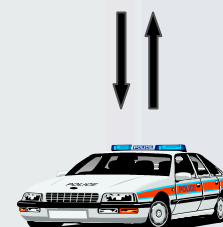
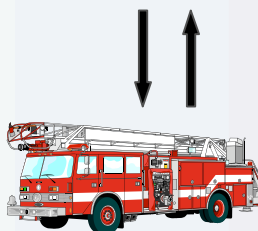
Rescue, fire brigade



Medical Dispatch



Police



From 112-call to Emergency Medical response

112-call



112 center



Unit dispatch



Medical response

**Call, Direct Access, Receiving, Evaluate, Prioritise,
On-line Help and generating a Response..**

Scandinavia

- **Geography**
- **Demographics**
- **Health Care Systems**

Scandinavia – Access to Emergency Care?

- **112 / 113**
- **Easy access to emergency care**

Scandinavia - Dispatch Systems?

Organization and ownership

- Health Care Regions
- Rescue Services
- Police
- Integration with health care

Medical Control and responsibility?

- **No medical control**
- **Full medical control and responsibility**

Dispatcher and education?

- **“Call-taker”, Dispatcher**
- **112-operator**
- **Health Care personnel?**
- **Medical back-up?**

EMD – Staff

- Background?
- Education, skills, and knowledge defined?
- Continuously in-service education and training?
- Re-certification?

EMD – Dispatch process

- Based on accepted guidelines?
- The prioritization process uses written guidelines that determine both response level and urgency
- The guidelines are approved by medical director
- The guidelines are actually used for each service request?

Protocols – criteria based protocols?

- “Norsk Index”
- “Svensk Index”
- “Finish index”
- Local protocol in Denmark

Diversity in dispatch

EMS-System	Emerg Call No.	Triage Tools	Dispatcher Life Support	Dispatch Personnel
Bonn (D)	112	Local standard	Not standard	Paramedic & fire brigade
Cantabria (E)	112 & 061	MPDS	Yes	Supervised by EP (4 week education)
Copenhagen (DK)	112	Local standard	?	Police
Garches (F)	112 & 15	available	Yes	Supervised by physician
Genoa (I)	112 & 118	Not available	Yes	?
Gothenburg (S)	112	Swedish Index	telephone CPR	EMT
Helsinki (FIN)	112	CBD	Yes	EMT/Paramedic/EP
Kufstein (A)	112 & 144	MPDS	Yes	EMT/Emergency Medical Dispatcher
Leuven (B)	112	Decision Tree	Not available	?
West Midlands (UK)	112 & 999	MPDS	Yes	EMT/Paramedic
Richmond (USA)	911	MPDS	yes	Paramedic

EMD – Access, Call-taking, response

- **Location/address of the incident**
- **Pre-arrival instructions**
- **Identification of the responding vehicle**

On-line help – Telephone CPR?

- **Identifying Cardiac Arrest?**
- **Providing telephone CPR**

Quality improvement?

- **Documentation of dispatch process**
- **Feedback to the dispatcher**
- **Audit process**

Summary

- **Emergency Medical Dispatch is a gatekeeper to EMS and ED in Scandinavia**
- **Same population and EMS principles**
- **(Major) differences in organisations and process**
- **EMD is related to health care in Norway, Finland and Sweden, but not in Denmark**
- **Quality and benchmarking - unknown**
- **Medical Research in EMD in progress in Scandinavia**