



Challenges Faced by Registries

EuReCa

Jan-Thorsten Gräsner

Institute for Emergency Medicine

University Medical Center Schleswig-Holstein, Kiel, Germany



Challenges Faced by Registries

EuReCa

**Jan-Thorsten Gräsner / Ingvild Tjelmeland / Siobhan Masterson /
Johan Herlitz / Rolf Lefering**



The EuReCa Family





Deutsches Reanimationsregister



Bosnia-Herzegovina



Finland



Greece



Malta



Portugal



EuReZ-SK

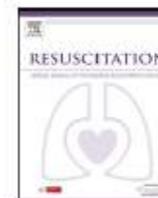


Participating countries not having a registry or logo yet are represented by their country name.



Contents lists available at ScienceDirect

Resuscitation

journal homepage: www.elsevier.com/locate/resuscitation

Clinical paper

Quality management in resuscitation – Towards a European Cardiac Arrest Registry (EuReCa)[☆]J.T. Gräsner^{a,*}, J. Herlitz^b, R.W. Koster^c, F. Rosell-Ortiz^d, L. Stamatakis^e, L. Bossaert^f^a Department of Anesthesiology and Intensive Care Medicine, University Hospital Schleswig-Holstein, Schwannenweg 21, 24105 Kiel, Germany^b Division of Cardiology, Sahlgrenska University Hospital, SE-413 45 Göteborg, Sweden^c afd. Cardiologie, Kamer F3-239, Academisch Medisch Centrum, Meibergdreef 9, 1105 AZ Amsterdam, The Netherlands^d Empresa Pública de Emergencias (Public Utility for Health Emergencies), Sanitarias, Almería, Spain^e Department of Emergency Medicine CHU Tivoli, ULB, La Louvière, Belgium^f University of Antwerp, Faculty of Medicine Universitetisplein 1, B2610 Antwerp, Belgium

ARTICLE INFO

Article history:

Received 1 December 2010

Received in revised form 20 February 2011

Accepted 23 February 2011

Available online xxx

Keywords:

Resuscitation
Cardiac arrest
Registry
Register

ABSTRACT

Background: Knowledge about the epidemiology of cardiac arrest in Europe is inadequate.**Aim:** To describe the first attempt to build up a Common European Registry of out-of-hospital cardiac arrest, called EuReCa.**Methods:** After approaching key persons in participating countries of the European Resuscitation Council, five countries or areas within countries (Belgium, Germany, Andalusia, North Holland, Sweden) agreed to participate. A standardized questionnaire including 28 items, that identified various aspects of resuscitation, was developed to explore the nature of the regional/national registries. This comprises inclusion criteria, data sources, and core data, as well as technical details of the structure of the databases.**Results:** The participating registers represent a population of 35 million inhabitants in Europe. During 2008, 12,446 cardiac arrests were recorded. The structure as well as the level of complexity varied



- EuReCa
 - Project started by the European Resuscitation Council in 2007
 - Goal: A European wide registry for collecting and analysing data from OHCA in Europe
 - One Headquarter , several satellites
 - Every registry is following / using the Utstein definition
 -



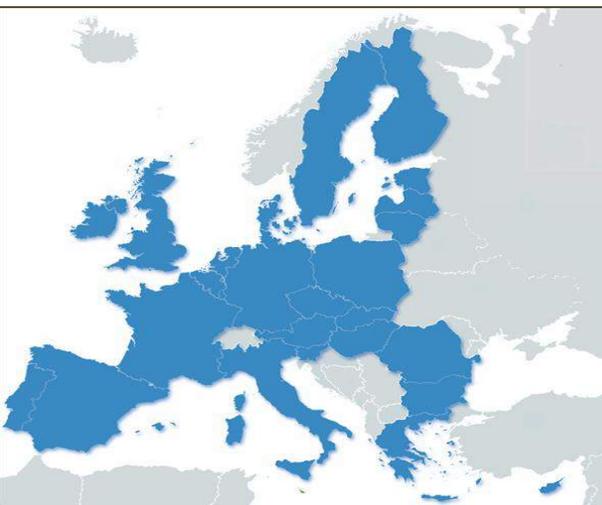
- EuReCa
 - Project started by the European Resuscitation Council in 2007
 - Goal: A European wide registry for collecting and analysing data from OHCA in Europe
 - One Headquarter , several satellites
 - Every registry is following / using the Utstein definition
 - Sounds not very complicated



Low hanging fruits

CARDIAC ARREST IN EUROPE: *the denominator*

- Europe according to EU 27 countries 499 mil
- Political definition (CE-WHO) 47 (53?) countries 830 mil
- Geographical definition 47 (53?) countries 730 mil





27

Iceland

Finland

Norway

Sweden

NORTH SEA

Denmark

Ireland

Great Britain

Netherlands

Poland

Germany

ATLANTIC OCEAN

Luxembourg

Czech Republic

Slovakia

France

Switzerland

Austria

Hungary

Romania

Slovenia

Croatia

Serbia

Portugal

Spain

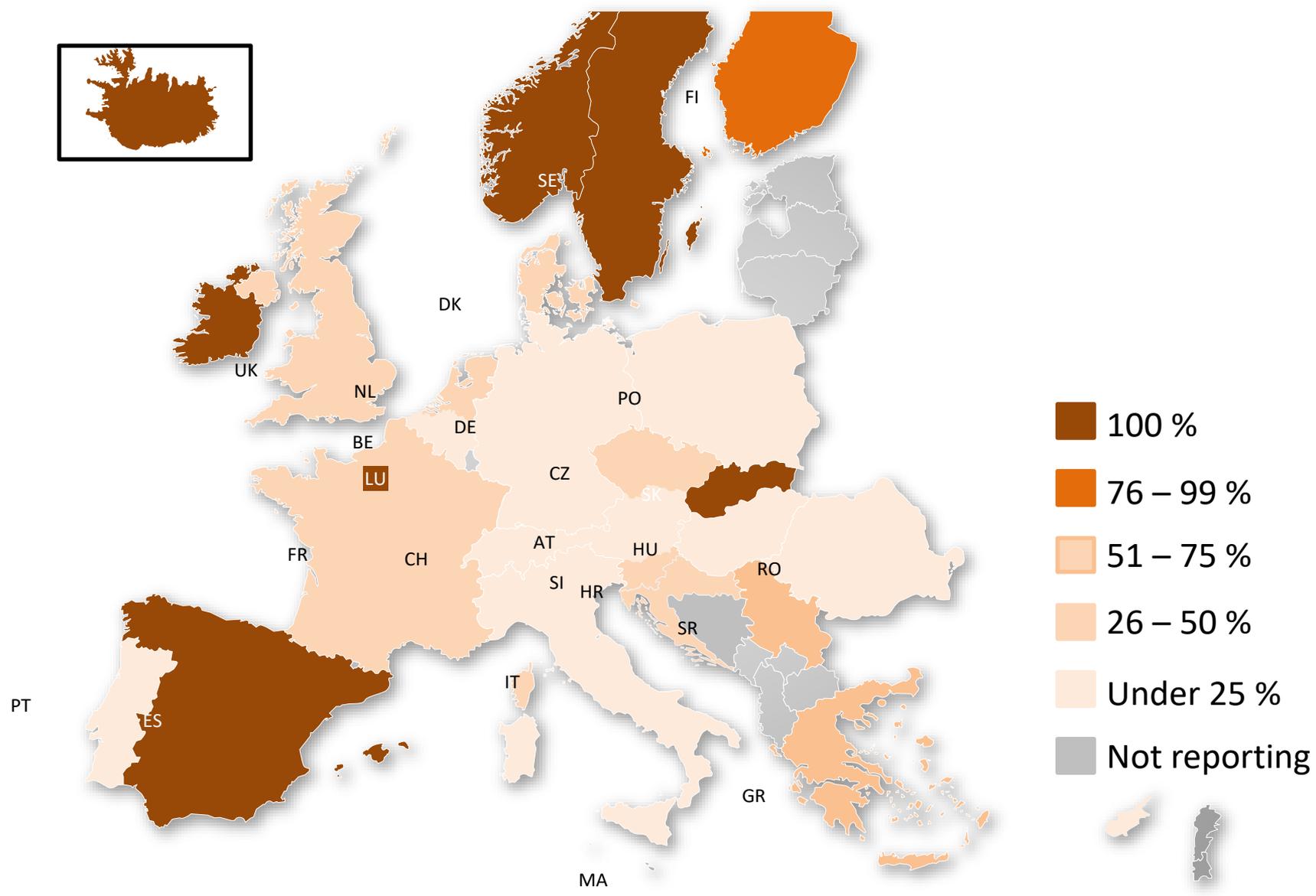
Italy

Greece

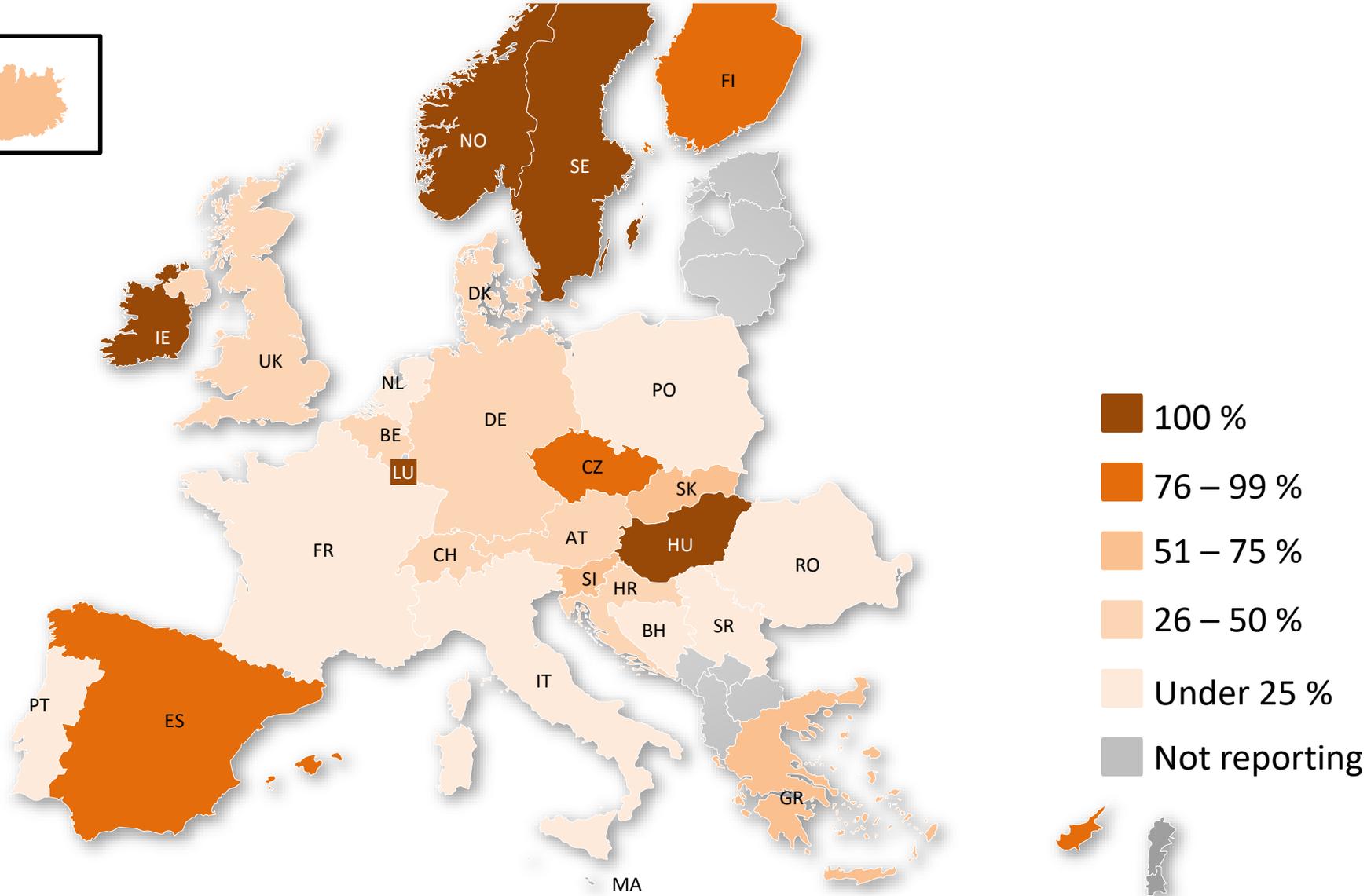
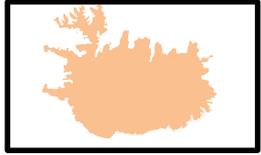
MEDITERRANEAN SEA

Cyprus

- EuReCa
 - Project started by the European Resuscitation Council in 2007
 - Goal: A European wide registry for collecting and analysing data from OHCA in Europe
 - ~~– One Headquarter , several satellites~~
 - ~~– Every registry is following / using the Utstein definition~~
 - ~~– Sounds not very complicated~~



Population covered for EuReCa ONE



Population covered for EuReCa TWO

Situation in Europe

- 27 (29) existing “registries”
- 100% coverage <-> Hot spots
- Regulated by law <-> voluntary
- 27 (29) different approaches, wishes, goals within every registry
- 27 (29) local/national heroes

Situation in Europe

- 27 (29) different languages
- 27 (29) more or less same definition of the Utstein variables
- 27 (29) different technical systems to collect data
- 27 (29) different organisations and collaborations
- 27 (29) different ways of financing the registry

Situation in Europe

- 1 wish: Collaboration within this group
- 1 goal: Learn from each other
- 1 network: To work together
- 2 European wide studies
 - EuReCa ONE
 - EuReCa TWO





ELSEVIER

Contents lists available at [ScienceDirect](#)

Resuscitation

journal homepage: www.elsevier.com/locate/resuscitation



Clinical paper

EuReCa ONE—27 Nations, ONE Europe, ONE Registry A prospective one month analysis of out-of-hospital cardiac arrest outcomes in 27 countries in Europe[☆]



Jan-Thorsten Gräsner^{a,b,*}, Rolf Lefering^c, Rudolph W. Koster^d, Siobhán Masterson^e,
Bernd W. Böttiger^f, Johan Herlitz^g, Jan Wnent^{a,b}, Ingvild B.M. Tjelmeland^h,
Fernando Rosell Ortizⁱ, Holger Maurer^j, Michael Baubin^k, Pierre Mols^l,
Irzal Hadžibegović^m, Marios Ioannidesⁿ, Roman Škulec^o, Mads Wissenberg^p, Ari Salo^q,
Hervé Hubert^r, Nikolaos I. Nikolaou^s, Gerda Lóczi^t, Hildigunnur Svavarsdóttir^u,
Federico Semeraro^v, Peter J. Wright^w, Carlo Clarens^x, Ruud Pijls^y, Grzegorz Cebula^z,
Vitor Gouveia Correia^{aa}, Diana Cimpoesu^{ab}, Violetta Raffay^{ac}, Stefan Trenkler^{ad},
Andrej Markota^{ae}, Anneli Strömsöe^{af}, Roman Burkart^{ag}, Gavin D. Perkins^{ah},
Leo L. Bossaert^{ai}, on behalf of EuReCa ONE Collaborators¹

10.852



New development in research

EuReCa TWO





EuReCA
TWO European Registry
of Cardiac arrest



EuReCA
European Registry
of Cardiac arrest



**EUROPEAN
RESUSCITATION
COUNCIL**

Deutsches
Reanimations-
register



191.618.319

These inclusion criteria include all patients who receive resuscitation (chest compression and/or defibrillation of any type)

- By the EMS
- Before the arrival of the EMS with continued resuscitation by the EMS
- Before the arrival of the EMS, that is immediately stopped (for any reason) when the EMS arrives
- Patients who achieve ROSC before the arrival of the EMS



EuReCA
TWO European Registry
of Cardiac arrest



EuReCA
European Registry
of Cardiac arrest



**EUROPEAN
RESUSCITATION
COUNCIL**



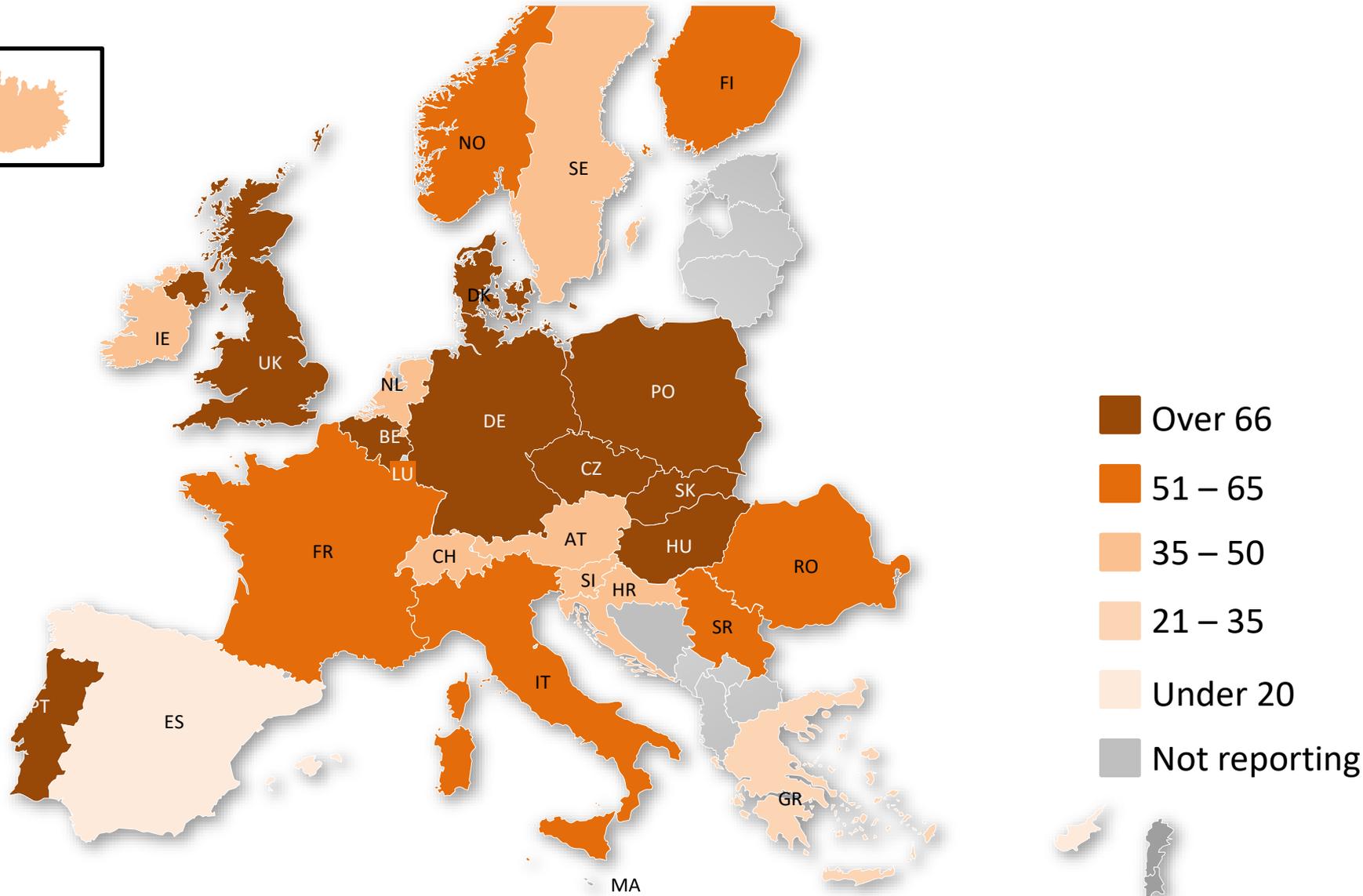
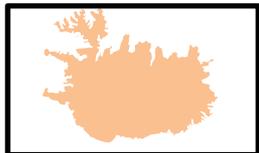
38.585

About the study

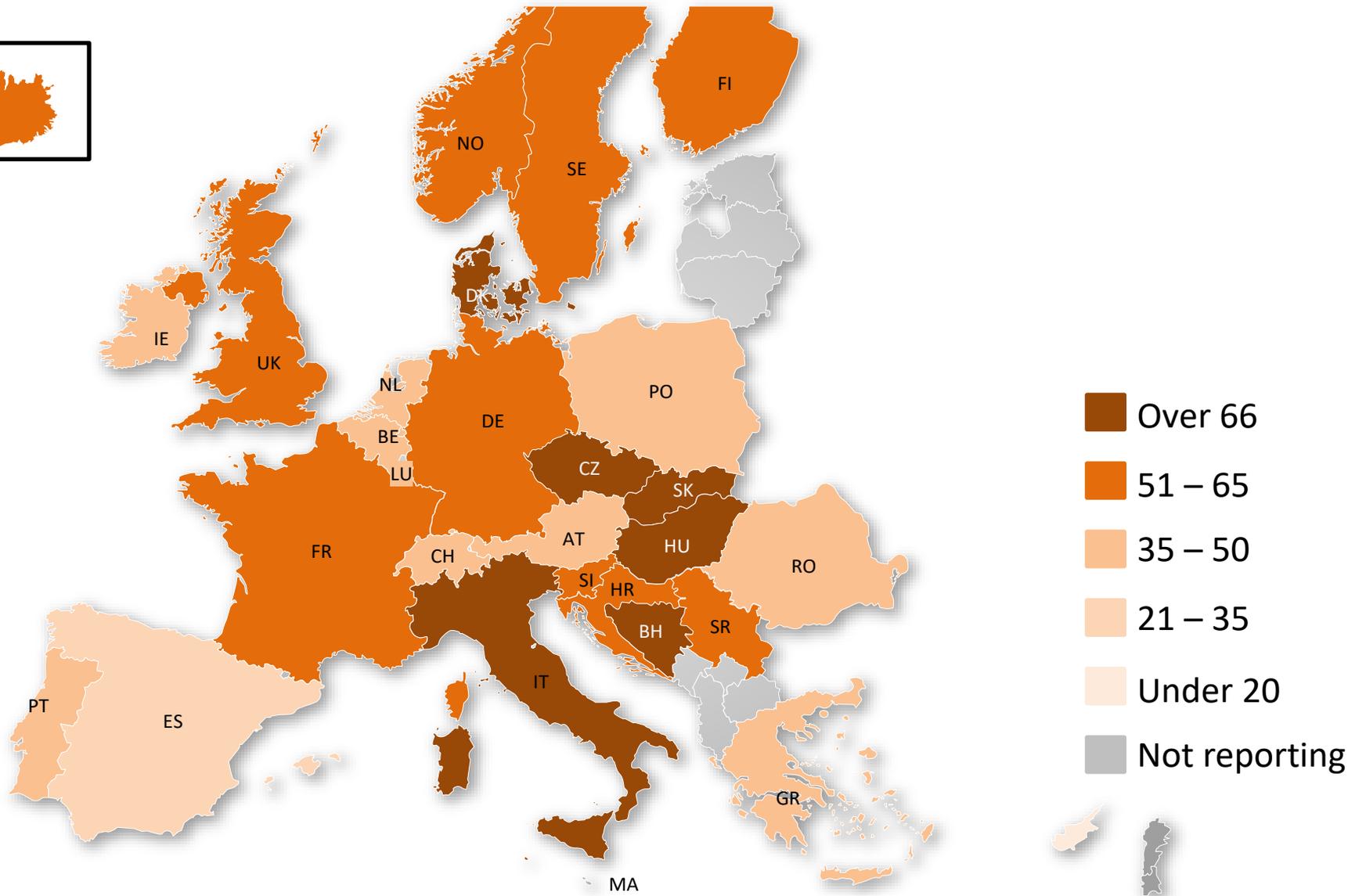
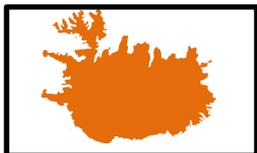
Aims:

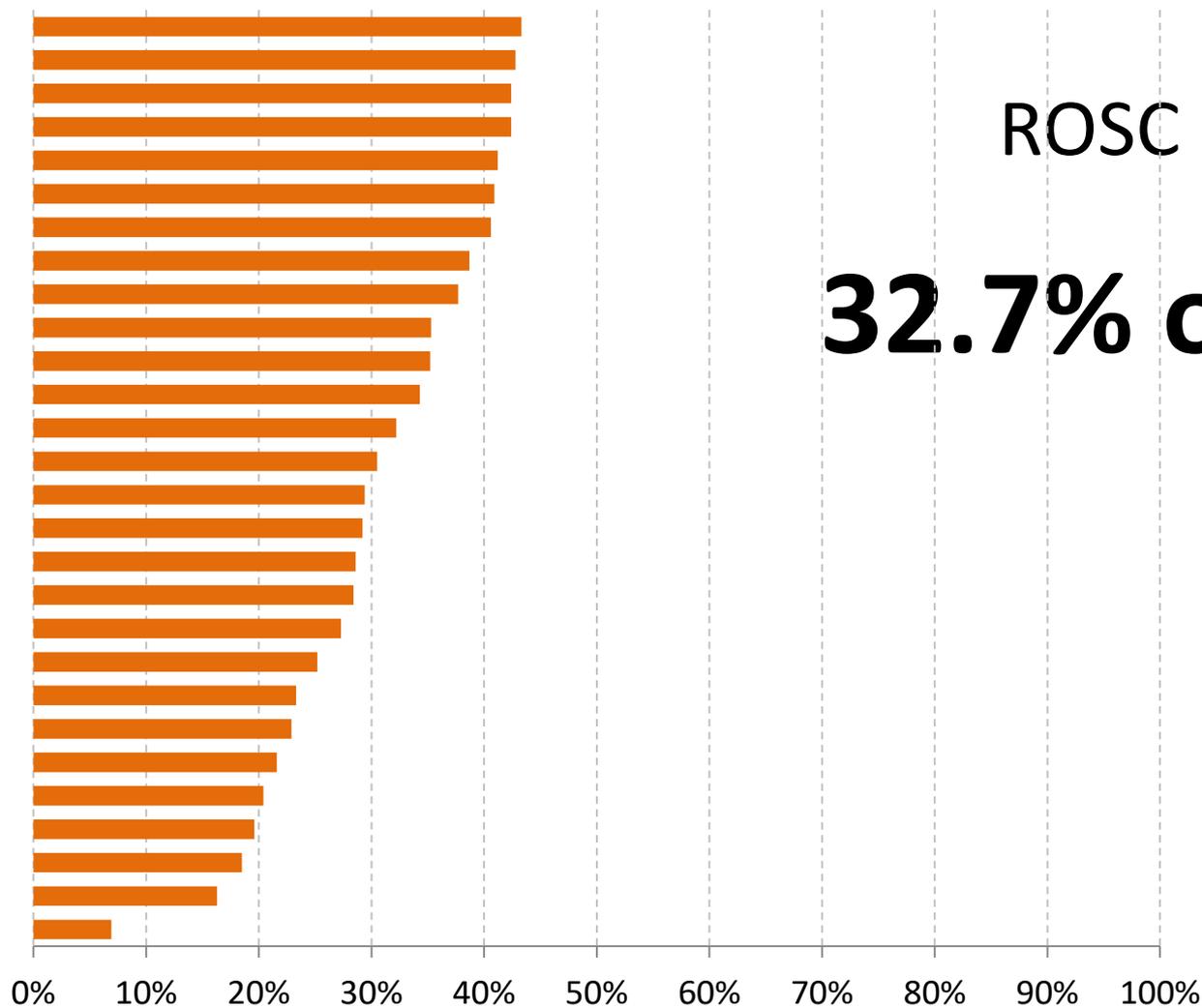
- ✓ Expand the ***EuReCa network***
- Find the incidence and outcome for out-of-hospital cardiac arrest (OHCA) in Europe
- Improve the understanding of the role, age, and gender profile of ***bystanders*** in OHCA in Europe
- Generate estimates of European ***OHCA incidence and outcome*** for patient subgroups that make up a small proportion of overall cases at national level e.g. traumatic aetiology, patients transferred to hospital with ongoing CPR.

Incidence EuReCa ONE



Incidence EuReCa TWO





ROSC rate

32.7% overall

n = 25,077

94 cases (0.4%) had missing data regarding ROSC



EuReCa
TWO European Registry
of Cardiac arrest



EuReCa
European Registry
of Cardiac arrest



**EUROPEAN
RESUSCITATION
COUNCIL**

Deutsches
Reanimations-
register



ROSC in EuReCa ONE
28.6%



EuReCA
TWO European Registry
of Cardiac arrest



EuReCA
European Registry
of Cardiac arrest



**EUROPEAN
RESUSCITATION
COUNCIL**



Deutsches
Reanimations-
register

To be discussed

- 27 (29) nation wide data collection in Europe
- Differences
 - In EMS System
 - In Culture
 - In Performance
 - In Documentation



Challenges Faced by Registries

EuReCa

**Jan-Thorsten Gräsner / Ingvild Tjelmeland / Siobhan Masterson /
Johan Herlitz / Rolf Lefering**