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Danish out-of-hospital cardiac arrest registry

Submission date 21/12/2016	**Recruitment status** Recruiting	☐ Prospectively registered
		☐ Protocol
Registration date 28/12/2016	**Overall study status** Ongoing	☐ Statistical analysis plan
		☒ Results
Last Edited 14/08/2019	**Condition category** Circulatory System	☐ Individual participant data

Plain English summary of protocol

Background and study aims

A cardiac arrest is a serious medical condition in which the heart suddenly stops beating and is a major cause of death in people across all age groups. An out-of-hospital cardiac arrest (OHCA) is where this happens when a person is not in hospital, and is the most common type of cardiac arrest. Sufferers usually require rapid resuscitation in order to restart their heart and improve chances of survival. Despite best efforts, survival rates are low. In many cases, time from spotting that a person is having a cardiac arrest to the arrival of emergency medical services (EMS) is long, leaving bystanders in a critical position to potentially save a person's life by starting resuscitation themselves. However, only a minority of cardiac arrests receive this. The Danish Cardiac Arrest Registry is a nationwide initiative to monitor and examine trends in survival and treatment of cardiac arrest in Denmark in order to improve overall prognosis and outcome in cardiac arrest victims. The aim of this study is to examine survival after out-of-hospital cardiac arrest in Denmark on a nationwide scale.

Who can participate?

All persons in Denmark suffering from an OHCA where a bystander or EMS tries to resuscitate them.

What does the study involve?

Data on all out-of-hospital cardiac arrest are collected by using pre-specified form filled out by ambulance personnel and paramedics arriving at the scene of cardiac arrest and initiating resuscitation attempts. Data are entered in electronic database and linked to the Danish Death Registry so that patient survival at 30 days can be recorded.

What are the possible benefits and risks of participating?

There are no benefits or risks to participants

Where is the study run from?

1. Copenhagen University Hospital Herlev and Gentofte (Denmark)
2. Five Prehospital Emergency Medical Services (Denmark)
3. The Institute of Health, Science and Technology, Aalborg University (Denmark)

When is the study starting and how long is it expected to run for?

January 2001 to December 2035

Who is funding the study?
The Tryg Foundation (Denmark)

Who is the main contact?
Professor Christian Torp-Pedersen

Contact information

Type(s)
Scientific

Contact name
Prof Christian Torp-Pedersen

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9000

Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
N/A

Study information

Scientific Title
The Danish Cardiac Arrest Registry

Study objectives
The aim of this study is to examine survival after out-of-hospital cardiac arrest in Denmark on a nationwide scale.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Ethics approval is not required for retrospective registry studies in Denmark.

Study design

Retrospective epidemiological registry study

Primary study design
Observational

Secondary study design
Epidemiological study

Study setting(s)
Other

Study type(s)
Treatment

Participant information sheet
No participant information sheet available

Health condition(s) or problem(s) studied
Out-of-hospital cardiac arrests

Interventions
The Danish Cardiac Arrest Registry is a collaboration between the five regional Prehospital Emergency Medical Services in Denmark. Data is collected prospectively by paramedics and ambulance personnel as part of the emergency medical services documentation of effort to improve the quality of cardiac arrest treatment in Denmark.

Data on all out-of-hospital cardiac arrest are collected by using pre-specified form filled out by ambulance personnel and paramedics arriving at the scene of cardiac arrest and initiating resuscitation attempts. Data are entered in electronic database and linked to the Danish Death Registry to monitor 30-day survival.

Intervention Type
Other

Primary outcome measure
30-day survival after out-of-hospital cardiac arrest is measured by linking data to the Danish National Death Registry, where all deaths are registered within 14 days of occurrence.

Secondary outcome measures
1. Initiation of CPR by laypersons, defibrillation by AED’s is measured using a pre-specified form filled out by ambulance personnel and paramedics
2. Return of spontaneous circulation (ROSC) on arrival at hospital is measured using a pre-specified form filled out by ambulance personnel and paramedics

Overall study start date
01/01/2001

Completion date
31/12/2035

Eligibility

Key inclusion criteria
All persons in Denmark suffering from out-of-hospital cardiac arrest where resuscitation efforts are initiated either by bystanders (with activation of the EMS system) or by EMS personnel.

Participant type(s)
All

Age group
All

Sex
Both

Target number of participants
Currently there are approximately 50 thousand individuals in the registry and there are approximately additionally 3.600 new individuals registered each year. There is no upper limit of participants as registration is continuous.

Key exclusion criteria
Cases with obvious late signs of death (e.g. rigor mortis) for which resuscitative efforts are not initiated

Date of first enrolment
01/01/2001

Date of final enrolment
31/12/2035

Locations

Countries of recruitment
Denmark

Study participating centre
Copenhagen University Hospital Herlev and Gentofte
Department of Cardiology
Kildegaardsvej 28
Hellerup
Denmark
2900

Study participating centre
The Prehospital Emergency Medical Services, The Capital Region of Denmark
Telegrafvej 5

Ballerup
Denmark
2750

Study participating centre
The Institute of Health, Science and Technology, Aalborg University
Søndre Skovvej 15
Aalborg
Denmark
9000

Sponsor information

Organisation
The Tryg Foundation

Sponsor details
Hummeltoftevej 49
Virum
Denmark
2830

Sponsor type
Charity

Website
trygfonden.dk

ROR
https://ror.org/02rcazp29

Funder(s)

Funder type
Charity

Funder Name
The Tryg Foundation

Results and Publications

Publication and dissemination plan

There are already numerous publications and the registry is a continuous source of data for new studies. There are publications in JAMA, Circulation, Resuscitation, European Heart Journal based on data from the registry. An overall report of the registry is published each year (in Danish) by the Danish Resuscitation Council and can be downloaded at http://genoplivning.dk/wp-content/uploads/2016/05/Rapport-fra-Dansk-Hjertestopregister-2001-2014.pdf.

Intention to publish date

31/12/2035

Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are/will be available upon request from Professor Christian Torp-Pedersen at Aalborg University, Faculty of Health, Science and Technology, Søndre Skovvej 15, 9000 Aalborg, Denmark. His e-mail is ctp@heart.dk and telephone +45 99403802

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	05/05/2015	14/08/2019	Yes	No