

CARDIOVASCULAR REGISTERS IN EUROPE: RESULTS FROM EUROCISS PROJECT

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BACKGROUND

The EUROCISS project (European Cardiovascular Indicators Surveillance Set) is part of the Health Monitoring Programme of the European Commission and has been implemented to develop health indicators and recommendations for monitoring cardiovascular diseases (CVDs). The objectives of the first phase of the project included: (1) identify CVDs of importance in public health; (2) identify specific indicators for assessing morbidity; (3) develop recommendations for collection and harmonization of data.

OBJECTIVE

One of the main goals of the second phase of the project is to list the population-based registers existing in the 18 member countries, describe their methods and discuss their comparability.

METHODS

Using a questionnaire, the following information on acute myocardial infarction (AMI) population-based registers were collected: disease population characteristics (geographical area, temporal duration, age range), methods (case definition, ICD codes), procedures (record linkage and validation methods); morbidity indicators (attack rate, incidence, case fatality rate).

RESULTS

Out of 16 countries with available data up to now, 6 have no AMI population-based registers. 10 countries have regional AMI population-based registers; 4 of them have a national AMI register as well. These registers differ from each other for ICD codes used in the definition of fatal and non fatal event, age range, record linkage, years covered and validation procedures. These differences make attack rate and incidence difficult to compare.



Participating Countries

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REGIONAL Myocardial Infarction Registers: population characteristics

Country	Years	Age range	Population x 1000	Available from
Belgium Charleroi Ghent	1988-2002	26-88 26-74 (Ghent)	100 142 (Ghent)	School of Public Health
Belgium Brugge	1988-2002	26-74	161	University of Ghent
Northern Denmark	1973-2001	55-86+	484	Aarhus University
Finland	1985-2002	All	192	KTL
France	1986-2004	56-74	1,600	INSERM U262
Germany	1986-2002	26-74	407	GBF - KORA
Italy	1985-89	56-74	2,280	Institute Health
Norway	1972-2002	All	1,000	National Institute of Statistics
Poland	1983-85	56-84	220	n.s.
Spain	1986-1992	56-74	420	Institute of Health Studies
Northern Sweden	1927-2001	56-74	222	Nat. Board of Health and Welfare

REGIONAL Myocardial Infarction Registers: case definition

Country	ICD version	Mortality ICD codes(*)	HDR ICD codes(*)	Linkage Mortality / HDR	Validation
Belgium	IX, X	210-214, 228, T88, T89	210-214, 228, I11.CA, CABG	Name, date of birth	MG/ICA
Northern Denmark	VIII-X	210	210	100	-
Finland	X	210-214, 228, T88, T89	210-214, 228, I11.CA, CABG	100	MG/ICA, telephone
France	IX, X	210-214, T88, T89	210-214, 228	Name, date of birth	MG/ICA
Germany	X	210-214, 228, T88, T89	210-214, I11.CA, CABG	Name, date of birth	MG/ICA, telephone
Italy	IX	210-214, T88	210-214	Name, date of birth	MG/ICA
Norway	X	210	210, I11.CA, CABG	100	MG/ICA, telephone
Poland	X	210-214, 228, T88, T89	210-214	-	MG/ICA
Spain	IX	210-214, 228, T88, T89	210-214	Name, date of birth	MG/ICA
Northern Sweden - MG/ICA	X	210, 211	210, 211	100	MG/ICA

(*) all codes are presented in the ICD-9 revision to facilitate the comparison
PTCA: Percutaneous Transluminal Coronary Angioplasty
CABG: Coronary Artery By-pass Graft

NATIONAL Myocardial Infarction Registers: population characteristics

Country	Years	Age range	Population (x 1000)	Accessibility
Denmark	1973-2001	35-89	517	Nat. Inst. of Pub. Health
Finland	1987-2002	All	5,200	KTL
Iceland	1987-2002	25-74	270	Nat. Inst. Public Health
Sweden	1987-2001	All	5,177	Swedish Heart Association

NATIONAL Myocardial Infarction Registers: case definition

Country	ICD version	Mortality ICD codes(*)	HDR ICD codes(*)	Linkage Mortality / HDR	Validation
Denmark	VIII, X	210-214, T88	210, I11.CA, CABG	10	MG/ICA
Finland	X	210-214, 228, T88	210-214, 228, I11.CA, CABG	10	MG/ICA, telephone
Iceland	IX, X	210-214, 228, T88, T89	210-214, 211, I11.CA, CABG	10	MG/ICA
Sweden	IX, X	210	210	10	Recommended National Urographic Contrast telephone

(*) all codes are presented in the ICD-9 revision to facilitate the comparison
PTCA: Percutaneous Transluminal Coronary Angioplasty
CABG: Coronary Artery By-pass Graft

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CONCLUSIONS

Register data are difficult to compare across countries cause differences on standardization, case definition, completeness, proper linkage, common diagnostic criteria and validation procedures. According to changing diagnostic criteria, Registers on Acute Coronary Syndromes (ACS) should be implemented. When population-based registers cover representative areas of the country, they provide the best indicators for AMI/ACS, such as attack rate, incidence and case fatality. Given the high burden of AMI/ACS, efforts are needed for implementing registers in all European countries.

