

Figure 1: Data flow in a population-based register

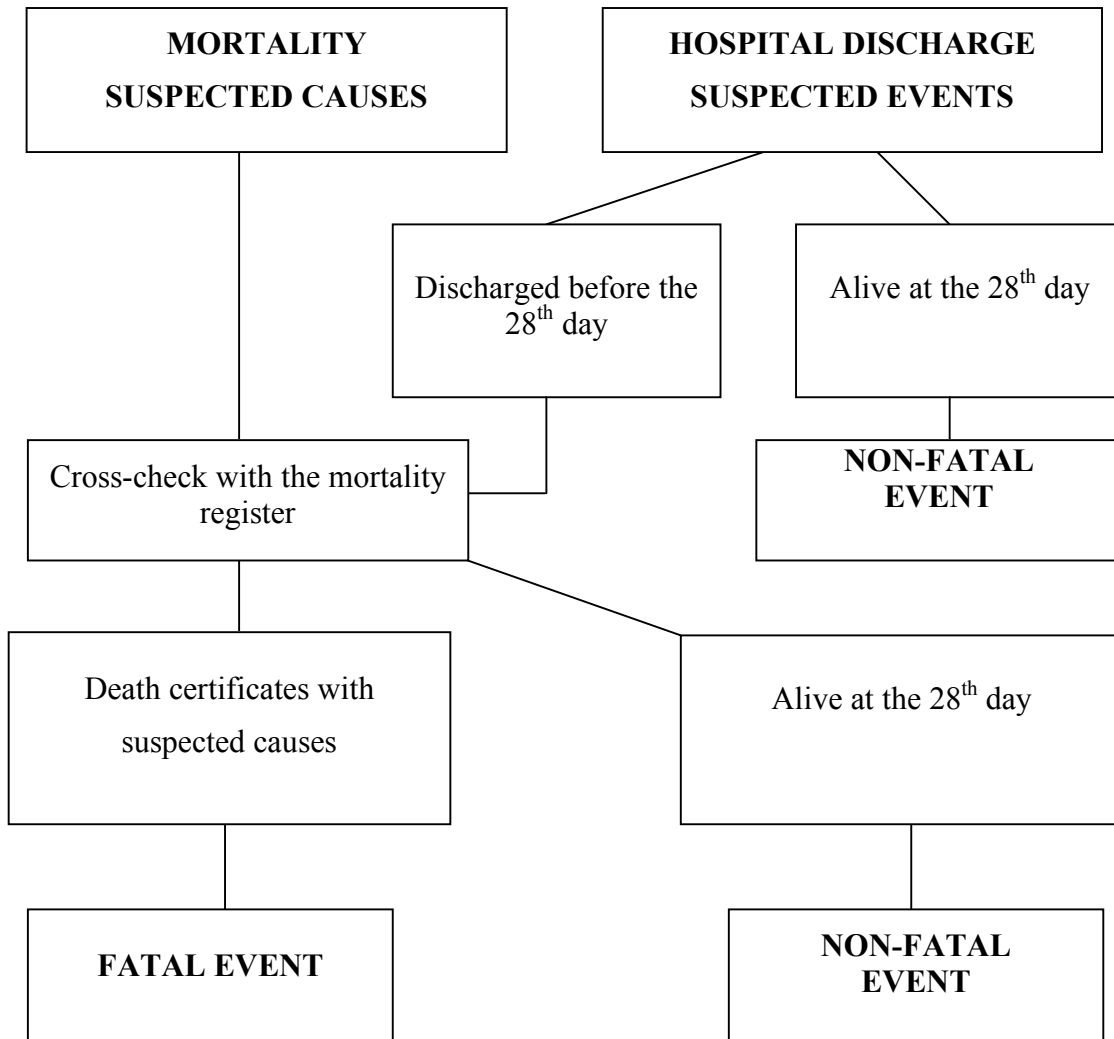


Table 1a –WHO: HFA -DB

"Morbidity" available years and source

	FIRST		LAST		SOURCES
	Rate	Year	Rate	Year	
<i>Hospital discharges: circulatory system disease / 100 000</i>					
AUSTRIA	3087.2	1989	4009.3	2003	
BELGIUM	1766.8	1992	2070.8	2003	Ministry of Social Affairs, Public Health and the Environment
CZECH	2358.8	1981	3634.8	2004	Institute of Health Information and Statistics of CR (IHIS CR)
DENMARK	2185.1	1987	2412.7	2004	National Patient Registry, Ministry of Health. Only patients discharged from public hospitals are included. From 1994 Denmark started using ICD-10
FINLAND	3259.5	1987	3670.4	2004	Hospital Discharge Register, Stakes. From 1998 Stakes Care Register
FRANCE	2219.1	1993	2218.3	2003	
GERMANY	2629.2	1993	3237.1	2003	Federal Statistical Office, Hospital statistics - diagnostic data of the hospital patients. From the reporting year 2000, for the first time, data have been collected according to ICD-10. Day cases are not included.
GREECE	777.7	1970	2196.1	1999	
HUNGARY	2798.9	1992	4288.0	2004	Center for Health Care Information (GYOGYINFOK)
ICELAND	1939.5	1989	1797.3	2003	The Directorate of Health / Ministry of Health and Social Security.
IRELAND	1424.4	1994	1437.5	2004	Hospital in-Patient Enquiry. Figures refer to discharges and not to individual people. Data refer to discharges from publicly funded acute hospitals and (from 2003) to two private hospitals.
ITALY	1807.5	1982	2552.1	2002	Data on discharges are obtained by a sample survey referred to discharges over the first week in each month of the year. Under the hypothesis of uniform distribution of the discharges in the whole month, an estimation of annual discharges is obtained multiplying the sample data by a coefficient (4,35 = average number of weeks in month). Source until 1996: ISTAT. Source from 1997: Data derived from S.D.O. (Scheda di Dimissione Ospedaliera) and refer to all public and private hospitals. Source: Ministry of Health.
LUXEMBOURG	2481.0	1998	2433.2	2003	Total number of patients admitted in all hospitals during the given calendar year with the principal discharge diagnosis falling into the appropriate WHO defined chapter of ICD-10. Source since 1998: Rapport general de l'IGSS. Annual report of the General Inspection of Social Security.
NETHERLANDS	1419.7	1990	1549.2	2004	Dutch Centre for Health Care Information: National Medical Registry.
NORWAY	1992.1	1991	2477.2	2004	
POLAND	1343.5	1980	2483.7	2003	
PORTUGAL	714.5	1991	1247.6	2004	November 2001: Only the acute hospitals that belong to the National Health Service (NHS) on the mainland are included. The data from the hospitals located in the autonomous regions of Azores and Madeira, and the private hospitals are not included.
SPAIN	675.9	1986	1412.6	2003	Total number of patients discharged from all hospitals during the given calendar year with the principal diagnosis falling into the group of Chapter II of ICD-9MC. Source: National Statistics Institute. Hospital Morbidity Survey.
SWEDEN	2815.3	1987	2481.0	2004	ICD-9: 390-459. Source: Hospital Discharge Register, NBHW
UNITED KINGDOM	1475.6	1996	1452.2	2003	1. covers UK National Health Service hospitals only; 2. financial year (01-04 to 31-03) basis, e.g. 1996-97 presented for 1996; 3. excludes one-day cases i.e. when admission and discharge date the same; 4. based on diagnosis recorded at discharge
EU members before May 2004	2001.3	1991	2277.8	2003	
EU members since May 2004	1662.1	1980	3009.0	2004	

Table 1b - WHO: HFA - DB

"Hospital discharges: ischaemic heart disease / 100 000" available years and source

	FIRST		LAST		SOURCES
	Rate	Year	Rate	Year	
<i>Hospital discharges: ischaemic heart disease / 100 000</i>					
AUSTRIA	723.1	1989	991.9	2003	
BELGIUM	544.3	1992	733.4	2003	Ministry of Social Affairs, Public Health and the Environment
CZECH	1091.5	1981	1070.9	2004	Institute of Health Information and Statistics of CR (IHIS CR)
DENMARK	704.6	1987	794.4	2004	National Patient Registry, Ministry of Health. Only patients discharged from public hospitals are included. From 1994 Denmark started using ICD-10
FINLAND	1094.1	1987	1091.3	2004	Hospital Discharge Register, Stakes. From 1998 Stakes Care Register
FRANCE	489.8	1993	513.4	2003	
GERMANY	798.7	1993	959.8	2003	Federal Statistical Office, Hospital statistics - diagnostic data of the hospital patients. From the reporting year 2000, for the first time, data have been collected according to ICD-10. Day cases are not included.
GREECE	190.8	1970	751.9	1999	
HUNGARY	838.5	1994	833.9	2004	Center for Health Care Information (GYOGYINFOK)
ICELAND	812.0	1989	726.7	2003	The Directorate of Health / Ministry of Health and Social Security.
IRELAND	455.4	1994	464.0	2004	Hospital in-Patient Enquiry. Figures refer to discharges and not to individual people. Data refer to discharges from publicly funded acute hospitals and (from 2003) to two private hospitals.
ITALY	343.8	1982	606.4	2002	Data on discharges are obtained by a sample survey referred to discharges over the first week in each month of the year. Under the hypothesis of uniform distribution of the discharges in the whole month, an estimation of annual discharges is obtained multiplying the sample data by a coefficient (4.35 = average number of weeks in month). Source until 1996: ISTAT. Source until 1996: ISTAT. Source from 1997: Data derived from S.D.O. (Scheda di Dimissione Ospedaliera) and refer to all public and private hospitals.
LUXEMBOURG	758.9	1998	930.6	2003	Source: Rapport general de l'IGSS. Annual report of the General Inspection of Social Security.
NETHERLANDS	545.6	1990	555.3	2004	Dutch Centre for Health Care Information: National Medical Registry.
NORWAY	860.5	1991	969.8	2004	
POLAND	331.9	1980	945.9	2003	
PORTUGAL	205.7	1994	285.3	2004	November 2001: Only the acute hospitals that belong to the National Health Service (NHS) on the mainland are included. The data from the hospitals located in the autonomous regions of Azores and Madeira, and the private hospitals are not included.
SPAIN	160.7	1986	362.2	2003	Total number of patients discharged from all hospitals during the given calendar year with the principal diagnosis falling into the group of Chapter II of ICD-9MC. Source: National Statistics Institute. Hospital Morbidity Survey.
SWEDEN	866.1	1987	818.1	2004	ICD-9: 390-459. Source: Hospital Discharge Register, NBHW
UNITED KINGDOM	535.4	1996	532.5	2003	1. covers UK National Health Service hospitals only; 2. financial year (01-04 to 31-03) basis, e.g. 1996-97 presented for 1996; 3. excludes one-day cases i.e. when admission and discharge date the same; 4. based on diagnosis recorded at discharge
EU members before May 2004	582.1	1992	648.9	2003	
EU members since May 2004	590.4	1981	973.8	2004	

Table 1c - WHO: HFA - DB

"Hospital discharges: cerebrovascular disease / 100 000" available years and source

	FIRST		LAST		SOURCES
	Rate	Year	Rate	Year	
<i>Hospital discharges: cerebrovascular disease / 100 000</i>					
AUSTRIA	620.8	1989	617.3	2003	
BELGIUM	119.1	1992	392.1	2003	Ministry of Social Affairs, Public Health and the Environment
CZECH	492.9	1981	626.2	2004	Institute of Health Information and Statistics of CR (IHIS CR)
DENMARK	418.98	1987	395.5	2004	National Patient Registry, National Board of Health. From 1994 Denmark started using ICD-10.
FINLAND	643.97	1987	632.6	2004	In 1996 the change to ICD-10 classification occurred and in Finland it appears that the ICD-9 codes 430-438 and the ICD-10 codes I60-I69 do not totally correspond to each other. Source: Hospital
FRANCE	279.3	1993	212.7	2003	
GERMANY	441.03	1993	453.2	2003	Federal Statistical Office, Hospital statistics - diagnostic data of the hospital patients. From the reporting year 2000, for the first time, data have been collected according to ICD-10.
GREECE	117.11	1970	387.4	1999	
HUNGARY	601.3	1994	1192.8	2004	Center for Health Care Information (GYOGYINFOK)
ICELAND	242.2	1989	251.3	2003	The Directorate of Health / Ministry of Health and Social Security.
IRELAND	225.52	1994	251.4	2004	Source: Hospital in-Patient Enquiry. Figures refer to discharges and not to individual people. Data refer to discharges from publicly funded acute hospitals and (from 2003) to two private hospitals.
ITALY	369.34	1984	502.8	2002	ISTAT - Data on discharges are obtained by a sample survey referred to discharges over the first week in each month of the year. Under the hypothesis of uniform distribution of discharges in the whole month, an estimation of annual discharges is obtained multiplying the sample data by a coefficient (4.35 = average number of weeks in a month); January 2001, Ministry of Health: information derives from S.D.O. (Scheda di Dimissione Ospedaliera) and refers to all public and private hospitals
LUXEMBOURG	207.55	1998	164	2003	
NETHERLANDS	175.3	1990	213.3	2004	Dutch Centre for Health Care Information: National Medical Registry
NORWAY	292.06	1991	344.2	2004	
POLAND	130.0	1980	365.6	2003	
PORTUGAL	287.48	1994	336.2	2004	November 2001: Only the acute hospitals that belong to the National Health Service (NHS) on the mainland are included. The data from the hospitals located in the autonomous regions of Azores and Madeira, and the private hospitals are not included.
SPAIN	104.78	1986	267.8	2003	December 2001: Total number of patients discharged from all hospitals during the given calendar year with the principal diagnosis falling into the group of Chapter VII of ICD-9-MC. Source: National Statistics Institute. Hospital Morbidity Survey
SWEDEN	617.17	1987	418.4	2004	ICD-9: 390-459. Source: Hospital Discharge Register, NBHW
UNITED KINGDOM	210.94	1996	224.9	2003	1. covers UK National Health Service hospitals only; 2. financial year (01-04 to 31-03) basis, e.g. 1996-97 presented for 1996; 3. excludes one-day cases i.e. when admission and discharge date the same; 4. based on
EU members before May 2004	333.4	1992	351.4	2003	
EU members since May 2004	245.6	1981	462.9	2004	

Table 2 : Table summarising EU population involved in the MONICA Project for Coronary events (Quality Assessment of Coronary Event Registration Data in the WHO MONICA Project)

Country	Population	Years of Study	ICD Version Used (*)	Finding Methods (**)
Belgium	Charleroi	1983 - 1992	9	H
	Ghent	1983 - 1992	9	H
	Luxembourg	1985 - 1991	9	M
Czech Republic	Czech Republic	1984 - 1993	9	M
Denmark	Glostrup	1982 - 1991	8	C
Finland	Kuopio Province	1983 - 1992	8, 9 (1987)	H
	North Karelia	1983 - 1992	8, 9 (1987)	H
	Turku/Loimaa	1983 - 1992	8, 9 (1987)	H
France	Lille	1985 - 1994	9	M
	Strasbourg	1985 - 1993	9	C
	Toulouse	1985 - 1993	9	C
Germany	Augsburg	1985 - 1994	9	H
	Bremen	1985 - 1992	9	C
	East Germany (***)	1984 - 1993	9	M
	Rhein-Neckar Region	1984 - 1988	9	H
Hungary	Budapest	1982 - 1989	9	H
	Pecs	1984 - 1989	9	H
Iceland	Iceland	1981 - 1994	9	C
Italy	Area Brianza	1985 - 1994	9	H
	Friuli	1984 - 1993	9	C
Poland	Tarnobrzeg Voivodship	1984 - 1993	9	C
	Warsaw	1984 - 1994	9	C
Spain	Catalonia	1985 - 1994	9	C
Sweden	Gothenburg	1984 - 1994	8	H
	Northern Sweden	1985 - 1995	8, 9 (1987)	C
UK	Belfast	1983 - 1993	9	M
	Glasgow	1985 - 1994	9	C

(*) ICD version used indicates the version of the International Classification of Diseases. 8, 9 (1987) means that version 8 was used until 1986, and version 9 was used thereafter.

(**) "H" indicates hot pursuit, non-fatal events identified mainly at hospital admission; "C", cold pursuit, non-fatal events identified from hospital discharge; and "M", mixed pursuit, the combination of hot and cold pursuit.

(***) More fatal and non-fatal events are to be added.

Table 3 : Table summarising EU population involved in the MONICA Project for Stroke (Quality Assessment of Stroke Event Registration Data in the WHO MONICA Project)

Country	Population	Years of Study	ICD Version Used (*)	Finding Methods (**)
Denmark	Glostrup	1982 - 1991	8 (1987)	C
Finland	Kuopio Province	1983 - 1992	8, 9 (1987)	M
	North Karelia	1982 - 1991	8, 9 (1987)	M
	Turku/Loimaa	1983 - 1992	8, 9 (1987)	M
Germany	Halle County	1984 - 1988	9	M
	Karl-Marx Stadt	1985 - 1989	9	M
	Rest of DDR	1984 - 1989	9	M
	Rhein-Neckar Region	1984 - 1987	9	M
Hungary	Budapest	1983 - 1989	9	H
	Pecs	1984 - 1989	9	H
Italy	Friuli	1984 - 1993	9	C
Poland	Warsaw	1984 - 1994	9	C
Sweden	Gothenburg	1984 - 1994	8, 9 (1987)	M
	Northern Sweden	1985 - 1994	8, 9 (1987)	C

(*) ICD version used indicates the version of the International Classification of Diseases. 8, 9 (1987) means that version 8 was used until 1986, and version 9 was used thereafter.

(**) "H" indicates hot pursuit, non-fatal events identified mainly at hospital admission; "C", cold pursuit, non-fatal events identified from hospital discharge; and "M", mixed pursuit, the combination of hot and cold pursuit.

(***) More fatal and non-fatal events are to be added.

TABLE 4 2003

DISEASE: ISCHAEMIC HEART DISEASE, ACUTE MYOCARDIAL INFARCTION,
SOURCE: HOSPITAL DISCHARGE RECORDS (HDR) CEREBROVASCULAR ACCIDENTS, HEART FAILURE, PTCA, CABG

COUNTRY	Disease				Area	DRG	ICD	1°-last years	Age range	Population			Coverage %	Mortal. linkage	Indicators				In hospital Case fatality	Access data	Valid
	IHD	AMI	CVA	HF						Nat.	Men x1000	Women x1000			Total x1000	Hosp rate	N° pats admitt.	N° stays			
Austria	✓	✓	✓	✓	✓	-	IX	1997 →	all	3,941	4,170	8,111	100	-					✓	Statist. Austria	-
Belgium	✓	✓	✓	✓	✓	-	IX	1995 →	all	5,018	5,245	10,263	100	-	✓	✓	✓	✓	✓	Minist. Health	-
Denmark	✓	✓	✓	✓	✓	✓	VIII,X	1978 →	all	2,654	2,714	5,368	100	ID	✓	✓	✓	✓	✓	Nat. Board Health	✓
Finland	-	✓	✓	-	✓	✓	X	1982 →	all	2,500	2,500	5,000	100	ID					✓	KTL, Stakes *	✓
France	✓	✓	✓	✓	✓	✓	X	1997 →	all	all	all	60,000	100	-					✓	Minist. Health	✓
Germany	✓	✓	✓	✓	✓	-	X	1993 →	all	all	all	80,000	99.9	-	✓	-	-	-	✓	Minist. Health	-
Italy	✓	✓	✓	✓	✓	✓	IX	1998 →	all	28,000	29,000	57,000	95	-					-	Minist. Health	-
The Netherlands	✓	✓	✓	✓	>120 hosp	-	IX	1978-2000	all	all	all	16,000	99	DOB, sex, zipcode					✓	Web site	-
Norway	✓	✓	✓	✓	✓	✓	X	1990-2000	all	all	all	4,400	100	-	-	yearly	yearly	✓	✓	Statist. Norway	-
Portugal	✓	✓	✓	✓	✓	✓	IX	1993-2000	all	4,570	4,919	9,490	90	-					✓	Dir.Gen Saude	✓
Spain (**)	✓	✓	✓	✓	✓	✓	IX	1977-1998	all	all	all	39,413	100	-		✓	✓	✓	-	Ist.Nat. Estadist	✓
Sweden	✓	✓	✓	✓	✓	✓	X	1987 →	all	4390	4490	8880	100	ID	✓	-	-	-	✓	NBHW #	✓
UK - England	✓	✓	✓	✓	✓	-	X	1989-2002	all	all	all	all	90-95	-	-	✓	✓	✓	✓	Dept of Health	-
UK - Scotland	✓	✓	✓	✓	✓	-	X	1962-2002	all	all	all	all	100	DOB, sex zipcode	-	✓	✓	✓	✓	NHS Scotland	✓

(*) National Centre of Welfare and Health

TABLE 4a 2006

DISEASE: ACUTE MYOCARDIAL INFARCTION (410), ACUTE CORONARY SYNDROME (410,411),

SOURCE: HOSPITAL DISCHARGE RECORDS (HDR)

CEREBROVASCULAR DISEASE (430-438), ALL ISCHAEMIC HEART DISEASE (410-414), HEART FAILURE (438)

COUNTRY	Estimated coverage		Estimated % of discharges	ICD version		1st year of applic. of ICD X	Instit. resp.of data collect.
	all hospitals	sample (%)		9	10		
Austria	√		84%		√	1996	Statistik Austria
Belgium	√			√		1998	Ministry of Health/Hosp dep.
Czech Republic	√		100%		√	1996	National Inst. of Welfare & Health
Denmark	√		100%		√	1994	National Board of Health
Finland	√		100%		√	1996	National Institute of Welfare & Health
France	√			√	√	1997	ATIH
Germany	√		99%		√	2000	Inst. of Statistics of G. Countries
Greece		15%		√			National Inst. Of Statistics
Hungary	√				√	1996	Centre for Healthcare Information
Iceland				√			
Italy	√			√			Ministry of Health/ISTAT
Netherlands	√		90%	√			Prismant
Norway	√				√	1999	Statistics Norway/SINTEF Helse
Poland		85%	90%		√	2002	National Inst.of Hygene
Portugal	√(excl psych)		100%	√			IGIF
Spain				√			
Sweden	√		100%		√	1997	National Board of Health and Welfare
UK					√		

Blank spaces: missing or unclear information

(**) Statistical data are available only for 50% of the total HDR; (#) National Board of Health and Welfare

TABLE 5 a 2003

DISEASE: ISCHAEMIC HEART DISEASE, ACUTE MYOCARDIAL INFARCTION,

SOURCE: SURVEYS AT NATIONAL LEVEL

CEREBROVASCULAR ACCIDENTS, HEART FAILURE

COUNTRY	Disease				Sample x 1000	Indicators		Periodicity	Source		1 st year	Age range	Population			Response rate %	Access data	Stand meth.
	IHD	AMI	CVA	HF		Preval	Other		Quest	Exam			Men x1000	Women x1000	Total x1000			
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium HIS	✓	✓	✓			✓	-	4-years	✓	-	-	-	5.9	6.2	12.1	61	-	-
Denmark HIS	General questions on health				5-20	✓	-	4-years	✓	-	1987	16→	8.2	8.5	16.7	75	Nat. Inst. of Public Health	Questionn
Finland HEALTH 2000	✓	✓	✓	✓	8	✓	-	15-years	✓	✓	2000	25→	2500	2500	5000	80	KTL	MONICA WHO
France	✓	✓	-	-	20	✓	-	10-years	✓	-	1960	0→	-	-	20	-	INSEE	-
Germany-National HIS/HES	-	✓	✓		7.124	✓	-	4/8-years	✓	-	1998	18 - 79	3.4	3.7	7.2	61	R. Koch Institute	Questionn
Greece CARDIO 2000	✓	-	-	-	1	✓	-	-	✓	-	2000	26 - 84	0.7	0.148	0.848	-	Dr. Panagiotakos	WHO
Italy HIS	✓	✓	✓	-	70	✓	-	3-4 years	✓	-	1980	0 →	-	-	70	-	ISTAT	-
Netherlands POLS	✓	✓	✓	✓	18	✓	-	yearly	✓	-	1981	0→	5.4	5.5	10.9	59	CBS	own std.
Norway HIS	✓	✓	✓	✓	5	✓	-	3-years	#CAPI	-	1998	16→	-	-	5	73	Statistic Norway	CAPI
Portugal HIS	Question about circulatory system				49.718	-	% by cause	1987, 1995, 1998	✓	-	1987	1-79	20	22	42	77	Min. of Health	Questionn
Portugal EPICA	-	-	-	✓	6.3	✓	-	-	✓	✓	1998	25-80+	2	3	5	66	Min. of Health	ESC
Spain - Encuesta nacional de salud	Only one question on disease in general				8.4	-	-	Irregular, lately every two years	✓	-	1987	0→	4	4	8	-	Min. de Sanidad and CIS	-
Sweden National survey on living conditions	General questions on health				12-13			every 2 yrs	✓	-	1975	16 - 84			7.5		Statistic Sweden	
UK Health Survey for England	✓	✓	✓	-	23	✓	-	Irregular 1993/94/98	✓	✓	1993	16→	7	9	16	69	UCL & Dept of Health	Questionn
UK – Scottish Health Survey	✓	✓	✓	-	12	✓	-	Irregular 1995/98	✓	✓	1995	16 -74	-	-	9	76	UCL & Dept of Health	Questionn

TABLE 5 b 2003

DISEASE: ISCHAEMIC HEART DISEASE, ACUTE MYOCARDIAL INFARCTION,
SOURCE: SURVEYS AT REGIONAL LEVEL
 CEREBROVASCULAR ACCIDENTS, HEART FAILURE

COUNTRY	Disease				Sample x 1000	Indicators		Periodicity	Source		1 st year	Age range	Population			Resp. rate %	Access data	Standard method.
	IHD	AMI	CVA	HF		Preval	Other		Quest	Exam			Men x1000	Women x1000	Total x1000			
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Belgium Ghent Charleroi	✓ ✓	✓ ✓	-	-	-	-	-	1992 last	✓ ✓	✓ ✓	1983	25-64	-	-	-	50	MONICA	MONICA
Finland FINRISK	✓	✓	✓	-	6	✓	-	5-years	✓	✓	1972	25-74	185	189	374	78	KTL	MONICA
Germany Augsburg	✓	✓	✓	-	6.5	✓	-	5-years	✓	✓	1984	25-74	2	2	4	66	GSF	MONICA LSH
Germany SHIP	✓	-	✓	-	7	✓	-	-	✓	✓	1997	20-80	2	2	4	69	Greifswald Univ.	MONICA LSH
Italy OEC	✓	✓	✓	-	6	✓	-	no	✓	✓	1998	35-74	3.2	3.2	6.4	-	ISS	MONICA
Netherlands Rotterdam ERGO	✓	✓	✓	✓	10.3	✓	Incid.	-	✓	✓	1990	55→	3.1	4.9	8	78	Erasmus Univ.	WHO
Netherlands Morgen	✓	✓	✓	-	10 x year	✓	-	yearly (1993-97)	✓	-	1993	20-59	10	12	22	55	RIVM	protocol
Norway (**) Nord-Trondelag	✓	✓	✓	-	65	✓	-	5 to 10 yrs	✓	-	1984	20-90	30	35	65	69	HUNT	Questionn
Norway Hordaland	✓	✓	✓	-	37	✓	-	5 to 10 yrs	✓	-	1992	39-72	-	-	26	60	Bergen Univ.	Questionn
Spain-MONICA Catalonia	✓	✓	✓	✓	5	✓	-	last 1996	✓	✓	1986	25-64	1.8	1.6	3.4	72	MONICA	MONICA
Sweden Gothenburg	✓	-	✓	-	1.5	✓	-	5-years	✓	✓	1985	25-64	-	-	1	70-73	Ostra Hospital	MONICA
Sweden Northern Sweden	✓	-	✓	-	2/2.5	✓	-	4/5-years	✓	✓	1986	25-74	-	-	1.95	73-83	Umea Univ.	MONICA

(A), (B), (C), (D) distinguish different Surveys in the same country

(**) surveys like those in Nord-Trondelag are conducted in several regions, with 5-10 year's intervals (e.g. FINNMARK)

Computer Assisted Personal Interview (CAPI)

National Institute of Public Health, Denmark

TABLE 5 c 2006 SOURCE: HES

DISEASE: ISCHAEMIC HEART DISEASE

COUNTRY	Years of data collection		Periodicity	Gender		Age range	Population			Methods of data collection				Age-Std values	Comp./last year avail.	Access data
	1st	last		M	W		Men x1000	Women x 1000	Total x 1000	LSHTM quest	Other quest	Exam	ECG			
Denmark 1	1976	2001	1976-78; 81-83; 91-93, 2001-03	√	√	20+	9.3	10.3	19.6	√	-	√	√	-	2000	Copenhagen City Heart Study
Denmark 2	1964	2005	2 or more times	√	√	35-85+	17	24	41	√	√	√	√	-	2001	Research Center for Prevention and Health
Finland	1972	2002	*	√	√	35-85+	2,600	2,600	5,200		√	√	√**	√	2002	National Inst. of P. H.
Germany (BGS)	1997	1999	5-6 years	√	√	18-79				-	√	√	-	√		National Inst. of P. H.
Greece	1994	2004	3-4yrs	√	√	all	12	17	29	-	√	√	-	-	2004	Univ. of Athens, Medical School
Hungary	2001	2001		√	√	55-64	3.7	4.7	8.4	-	-	-	-	-	2001	School of Public Health
Iceland	1967	2005	continually	√	√	all tog.	15	15	30	-	√	√	√	√	2005	Icelandic Heart Ass.
Italy	1998	2002		√	√	35-74	3.2	3.2	6.4	√	√	√	√	√		National Inst. of P. H.
The Netherlands	1987	2001	continously	√	√	35-74	25	25	50	-	√	√	-	-	2001	National Institute of P.H.
Norway I	1974	2001	discontinued	√	√	30-75			a)	√	√	b)	-	-	2001	Norwegian Institute of P.H.
Norway II	1985	1995	next:2006-8	√	√	20+	55	55	110	-	√	b)	-	-	1995	Univ. of Trondheim
UK	1994	2004	every year	√	√	16-85+ 2-15 (child.)			14	-	√	√	-	√	2003	Department of Health

* 5 years (FINRISK); 15 years (Health 2000) ** only for Health 2000

1 Copenhagen City Heart Study **2** Surveys at the Research Centre for Prevention and Health in Copenhagen

II North Trondelag

a) County surveys of adults within the range 30-75yrs, 5000 to 100 000 invited.

b) risk factors

Blank spaces: missing or unclear information

TABLE 5d 2006

DISEASE: ISCHAEMIC HEART DISEASE

SOURCE: HIS

COUNTRY	Years of data collection		Periodicity	Gender		Age range	Population			Questions included	Age-Std values	Comput./lat year avail.	Access data
	1st	last		M	W		Men x1000	Women x1000	Total x 1000				
Belgium	1997	2004	every 4 yrs	√	√	35-85+/all together	6	6	12	on AMI, PCI	-	2001	Nat. Inst. of Public H.
Czech Republic	1993	2002	every 3 yrs	√	√	15+ 5yrs ranges				on stroke, IHD	-	2002	Inst of Health Inf. and Stat. of CR
Denmark	1987	2000	1987, 91, 94, 97, 2000, 2005	√	√	15+	8.2 (in 2000)	8.5 (in 2000)	16.7	on AP and all heart diseases	√	2000	Nat. Inst. of P.H.
Finland	1978	2004	every year	√	√	all	2,600	2,600	5,200	on AMI, AP, HF	-	2004	Nat. Inst. of P. Health
Germany (BGS)	1997	1999	5-6 years	√	√	18-79				on AMI, HF, AP, IC, Stroke	√		Nat. Inst. of P. Health
Hungary	2000	2003	every 3 yrs	√	√	*			7	on AMI, stroke	-	2003	Nat. Inst. of P. Health
Italy	1999	2000		√	√	20-79			140	on AMI, stroke			Nat. Inst. of P. Health
The Netherl.	1981	2004	continously	√	√	35-85+	5	5	10	on AMI, ACS, AP, Stroke	-	2004	Nat. Inst. of Statistics
Norway	1975	2002	every year	√	√	16+			4.5	on all CVD	√	2002	N.Inst.Stat./ N.Inst P.H.
Poland	1996		only once	√	√	35-85+/all together				on isch. heart dis	-	1996	Nat. Inst. of Statistics
Portugal	1987	1998/99	5yrs	√	√	35-74 (10-year grp), 75+	23.3	25..3	48.6	on AMI, Stroke	-	1998	INSA/ONSA
Spain	1987	2003	1987, 95, 97, 2003	√	√	0-4, 5-74, (10-year grp), 75+	20,000	20,000	40.000	on heart dis and arter. hypert.	-	√	Ministry of Health
Sweden	1975	2004	every year	√	√	16-84	6	6	12	health questions		2003	Nat. Inst of Statist.
UK	1994	2004	every year	√	√	16-85+ 2-15 (children)			14	on AMI, ACS, HF, AP, Stroke	√	2003	Department of Health

* non-institutionalized adult population aged 18 years or older

Blank spaces: missing or unclear information

TABLE 6 2003

**DISEASE: ISCHAEMIC HEART DISEASE, ACUTE MYOCARDIAL INFARCTION,
CEREBROVASCULAR ACCIDENTS, HEART FAILURE**

SOURCE: LONGITUDINAL STUDIES

COUNTRY	Disease				Area			Source			1 st year	Age range	Population			Resp. rate %	Indicators			Access data	Valid
	IHD	AMI	CVA	H F	Nat	Reg	Sample x1000	Quest	Exam	Re - exam			Men x1000	Women x1000	Total x1000		Incid	Mort	Case fatality		
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	✓	✓	✓	-	✓	-	4	✓	✓	-	1980	55-74	2	2	4	70	✓	-	-	School of Pub. Health	WHO
Denmark (A) Copenhagen City Heart Study	✓	✓	✓	✓	-	✓	14	✓	✓	✓	1976	20→	7	7	14	72	✓	✓	✓	CCHS, Bispebjerg Hospital	-
Denmark (B) Glosrup Population Studies	✓	✓	✓	✓	-	✓	25	✓	✓	✓	1964	20→	12	13	25	53-88	✓	✓	✓	Res. Centre for Prevention and Health	
Denmark DANCOS F-U of Nat. Health Interview Surveys	Outcome measures from registers				✓	-	46	✓	-		1987	16→	23	23	46	75-80	✓	✓	✓	Nat. Inst. of Public Health	-
Finland FINRISK	-	✓	✓	-	-	✓	36	-	-		1972	25-74	18	18	36	78	✓	-	✓	KTL	MON
Finland HEALTH 2000	-	✓	✓	-	✓	-	8	-	-		2000	25→	4	4	8	80	✓	-	✓	KTL	MON, WHO
France - PRIME	✓	✓	✓	-	-	-	7.8	✓	✓		1991	50-59	7.8	-	7.8	97	✓	-	✓	INSERM	MON
Germany KORA	-	✓	-	-	-	✓	18	✓	✓		1984	25-74	7	7	14	75-80	✓	-	-	GSF	MON
Germany (B) (*)	✓	✓	✓	-	-	✓	6.5	✓	✓		2001	45-75	-	-	-	-	✓	-	-	Essen Univ.	MON
Italy	✓	✓	✓	-	-	-	47	✓	✓		1984	20-69	13	17	30	65	✓	-	-	Milano Univ.	MON
Netherlands Rotterdam ERGO	✓	✓	✓	✓	-	✓	10.3	✓	✓		1990	55→	3	5	8	78	✓	-	✓	Erasmus Univ.	WHO
Netherlands Zutphen	✓	✓	✓	-	-	✓	1.3	✓	-		1985	65-84	1	-	1	74	✓	✓	✓	RIVM	SCS
Netherlands Doetinchem	✓	✓	✓	-	-	✓	6	✓	-		1987	20-59	3	3	6	75	✓	-	-	RIVM	protocol
Norway	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-
Sweden Stockholm	✓	✓	✓	-	-	✓	4.178	✓	✓	-	1997	60	1.67	1.59	3.26	78	✓	✓	✓	Karolinska Institutet	protocol
United Kingdom BRHS	✓	✓	✓	✓	✓		7.7	✓	✓	✓	1978	40-60	7.7		7.7	78	✓	✓	✓	UCL	WHO

(A), (B), (C) distinguish different Longitudinal Studies in the same country

(*) Germany (B) is ongoing (RECALL Study);

National Institute of Public Health, Denmark

TABLE 7 2003

DISEASE: ISCHAEMIC HEART DISEASE, ACUTE MYOCARDIAL INFARCTION,
SOURCE: GENERAL PRACTITIONERS RECORDS CEREBROVASCULAR ACCIDENTS, HEART FAILURE

COUNTRY	Disease				Area				GPs propo rtion %	1 st year	Duration years	Age range	Population			Indicators					Access data	Valid		
	IHD	AMI	CVA	HF	Nat.	Reg.	Sample	Other					Men x1000	Women x1000	Total x1000	Incid	Preval	Attack rate	Case fatality	Other				
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlanls LINH	✓	✓	✓	✓	✓	-	228	-	3	1993	onward	0→	-	-	424	-	-	-	-	-	contacts x patient	NIVE L	-	-
Netherlands NHL	✓	✓	✓	✓	-	✓	56	-	20	1985	onward	0→	39	41	80	✓	✓	-	-	-	-	Maas Univ.	-	-
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	-	✓	✓	-	✓	-	200	-	0.5	1990	10	0-75+	77	85	162	✓	-	✓	-	-	-	Inst. Nac. de Saude	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UK – England	✓	✓	✓	✓	✓	-	137	-	3	1987	onward	all	2000	2000	4000	-	✓	-	-	-	-	ONS	-	-
UK - Scotland	✓	✓	✓	✓	✓	✓	80	-	8	1992	onward	all	-	-	400	✓	✓	-	-	-	-	IDS	-	-

(A), (B) distinguish different General Practitioners Registers in the same country

TABLE 8 2003

DISEASE: ACUTE MYOCARDIAL INFARCTION

SOURCE: POPULATION BASED REGISTER

COUNTRY	Area	Year	Age range	Population			Sources			Indicators				Access data	Valid
				Men x1000	Women x1000	Total x1000	Mortal	HDR	Other	Incid	Preval	Attack rate	Case fatality		
<i>Regional Registers</i>															
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium Ghent	-	1983-1997	25-69	50	51	101	✓	✓	-	✓	-	✓	In/out hospital	University of Ghent	MONICA and troponine
Ghent	-	1998 →	25-74	70	72	142							University of Ghent		
Bruge	-	1999 →	25-74	75	76	151							University of Ghent		
Charleroi	-	1983 →	25-69	58	59	117							School of Pub.Health		
Denmark	-	1977 →	0 →			493	✓	✓	-	✓	-	✓	In/out hospital	Aarhus University	-
Finland FINAMI	-	1993-2002	35-100	104	128	232	✓	✓	-	✓	-	✓	In/out hospital	KTL	MONICA, proponine; comparison with FINAMI register
France	-	1985 →	35-74	✓	✓	1,800	✓	✓	GP	✓	-	✓	In/out hospital	Ministry of Health	MONICA
Germany	-	1985 →	25-74	200	200	400	✓	✓	-	✓	-	✓	In/out hospital	GSF KORA	MONICA
Italy	8 areas	1996-1999	35-74	-	-	3,360	✓	✓	-	✓	✓	✓	In/out hospital	ISS	MONICA
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway Regional MI	-	2001 →	18 →	150	150	300	-	-	Information by physicians in hospital	-	-	-	In hospital	Trondheim University	by HDR
Norway (Finmark)	-	2000 →	15 →	29	29	58	✓	✓	In-hosp inform	✓	✓	✓	In/out hospital	Kirkenes hospital	MONICA and onine
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	Barcelona	1985-1998	25-74	380	386	766	✓	✓	necropsy	✓	-	✓	In/out hospital	MONICA	MONICA
Sweden Northern Swed.	-	1985 →	25-74	250	260	510	✓	✓	-	✓	-	✓	In/out hospital	MONICA	MONICA
UK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 8 2003

DISEASE: ACUTE MYOCARDIAL INFARCTION

SOURCE: POPULATION BASED REGISTER

COUNTRY	Area	Year	Age range	Population			Sources			Indicators			Access data	Valid	
<i>National Registers</i>															
Denmark	-	1978 →	0 →			5,368	✓	✓	-	✓	-	✓	In/out hospital	NIPH #	MONICA Register
Finland	-	1991 →	0 →			5,000								KTL, Stakes	
Norway-cardiac surgery register	-	1995	20 →	-	-	4.5 (2000)	-	-	Information by heart surgeon	-	-	-	In hospital	Norwegian surgeons' association	-
Sweden	-	1987 →	0 →			8,880	✓	✓	-	✓	✓	✓	In/out hospital	Nat. Board of Health & Welf	Recommended national diagnostic criteria

National Institute of Public Health, Denmark

TABLE 8a 2006

DISEASE: ACUTE MYOCARDIAL INFARCTION

SOURCE: REGIONAL POPULATION BASED REGISTER

Country	Area coverage	Year	Age range	Population		Access data	Validation	Age-Std. values
				Men x 1000	Women x 1000			
Belgium	Charleroi	1983-2003	25-69	50	50	missing	ECG; enzymes; symptoms, MONICA	√
Belgium	Ghent	1983-2003	25-74	71	71	missing	ECG; enzymes; symptoms, MONICA	√
Belgium	Bruges	1999-2003	25-74	75	75	missing	ECG; enzymes; symptoms, MONICA	√
Denmark	Northern Jutland	1978-2001	35-85+	247	247	Århus Univ. Hospital	-	√
Finland FINAMI		1993-2002	all	90	103	Nat. Inst of Publ. H.	MONICA, troponine, enzymes, ECG, symptoms, autopsy	√
France	Lille,Strasbourg,Toulouse	1985-2004	35-74	752	767	INSERM U258	MONICA	√
Germany	Ausburg	1985-2002	25-74	203	204	Nat. Institute of Stat. GSF and official German health report via internet	ECG; enzymes; symptoms, autopsy ; MONICA; troponine	√
Italy	7 areas	1996-1999	35-74	tot: 3,600		Nat Inst. Public Health	MONICA	√
Norway		1972-2002	35-85+/all tog	tot: 1000		Health Reg. West	ECG; enzymes; symptoms, autopsy	√
Poland	1 urban/1 rural popul.	1983-93	35-64	180	200	missing	ECG; enzymes; symptoms, autopsy ; MONICA	√
Spain		1985-98	25-74	234	246	Catalan Dep. of Health Inst. of Health Studies	ECG; enzymes; symptoms, autopsy ; MONICA	√
Sweden		1987-2001	35-74	160	162	NBHW	MONICA	√

TABLE 8b 2006

DISEASE: ACUTE MYOCARDIAL INFARCTION

SOURCE: NATIONAL POPULATION BASED REGISTER

COUNTRY	Year	Age range	Population		Access data	Validation	Age-Std. values
			Men x1000	Women x1000			
Denmark	1978-2001	35-85+	2,677	2,734	Nat. Institute of Public Health	MONICA	√
Finland	1991-2003	all	2,600	2,600	Nat. Inst. of P. Health	ECG, MONICA, troponine, enzymes, autopsy, symptoms	√
Iceland	1981-2002	25-74			Nat. Inst P.H. ; Icelandic Heart Association	ECG, enzymes, symptoms, autopsy, MONICA	√
Sweden	1987-2001	all ages	4545	4466	Nat. Board of H. and Welfare	ECG; enzymes; symptoms; autopsy; troponine	√

Blank spaces: missing or unclear information

TABLE 9 2003

DISEASE: CEREBROVASCULAR ACCIDENTS

SOURCE: POPULATION BASED REGISTER

COUNTRY	Area	Year	Age range	Population			Sources			Indicators				Access data	Valid
				Men x1000	Women x1000	Total x1000	Mort.	HDR (*)	Other	Incid.	Preval	Attack rate	Case-fatality		
<i>Regional Registers</i>															
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Denmark															
Finland FINSTROKE	-	1993-1997	25-99	97	114	232	✓	✓	-	✓	-	✓	In/out hospital	KTL	MONICA
France - Dijon Stroke Register	Dijon	1985 →	01 →	70	80	150	✓	✓	GP	✓	-	✓	In/out hospital	Dijon	CT-Scan
Germany	-	1994 →	18 →	48	52	100	✓	✓	case ascertainment	✓	-	-	In/out hospital	Erlangen University	CT-Scan, Health Insurance
Italy	8 areas	1996-1999	35-74	-	-	3,360	✓	✓	-	✓	✓	✓	In/out hospital	ISS	MONICA
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	1998 →	24-95+	29	29	58	✓	✓	hosp. journal	✓	✓	✓	In/out hospital	Kirkenes hospital	MONICA
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Sweden	-	1985 →	25-75	160	162	322	✓	✓	-	✓	-	✓	In/out hospital	MONICA	MONICA
UK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>National Registers</i>															
Denmark	-	1978 →	0 →	2,654	2,714	5,368	✓	✓	-	✓	-	✓	In/out hospital	Nat. Inst. Pub.Health	-
Finland		1991 →	25-99			5,000	✓	✓		✓		✓	In/out hospital	KTL stakes	comparison with FINSTROKE register
Sweden Riks-Stroke	-	1995 →	01 →	4,390	4,490	8,880	✓	✓	-	✓	-	✓	In hospital	Umea University	HDR

(*) HDR = Hospital Discharge Records

TABLE 9a 2006

DISEASE: CEREBROVASCULAR ACCIDENTS

SOURCE: REGIONAL POPULATION BASED REGISTER

COUNTRY	Area coverage	Year	Age range	Population		Access data	Validation	Age-Std. values
				Men x1000	Women x1000			
Denmark*	Glostrup (Copenhagen city)	1982-1991	25-74	326		Danish Institute of Public Health	MONICA	√
Finland		1993-97	all	93	103	Nat. Inst. of P. Health	MONICA	√
France	Dijon (town)	1985-2004	6 months □	69	81	Ministry of Health	MONICA, autopsy, examinations, surg./pharm.treatment, signs & symptoms	√
Germany	Erlangen Stroke R.	1994-....	18+	49	51	University of Erlangen	signs and sympt; surg. or pharmac. treatment; exam.: neurologist, TAC, MRI	√
Greece	Arcadia	1993-95	all	42	39	Alexandra Hospital, Univ. of Athens		
Italy	8 areas	1998-1999	35-74	4,500		National Institute Public Health	signs and sympt; surg. or pharmac. treatment; exam.: neurologist, TAC, MRI, Carotid Doppler; autopsy; MONICA	√
Norway		1972-2002	all	tot: 1,000		Nat.Inst.Stat./HDR	-	-
Poland	Pol-MONICA	1984-93	35-64			Nat. Inst. of Cardiology	Examin: neurologist, TAC; autopsy; MONICA	√
Sweden		1985- 2004	35-74	160	162	MONICA Northern Sweden	MONICA	

TABLE 9b 2006

DISEASE: CEREBROVASCULAR ACCIDENTS

SOURCE: NATIONAL POPULATION BASED REGISTER

COUNTRY	Year	Age range	Population		Access data	Validation	Age-Std. values
			Men x1000	Women x1000			
Denmark	1978-2001	35-85+	2,677	2,734	Nat. Inst. of P. Health	-	√
Finland	1991-2003	35-85+	2,600	2,600	Nat. Inst. of P. Health	MONICA	√

Blank spaces: missing or unclear information

Table 10 Registers of AMI: case definition in each country

Country	ICD version	Sources of information		Linkage mortality / HDR	Validation
		Mortality ICD codes (*)	HDR ICD codes (*)		
Belgium Charleroi, Ghent, Bruges	IX, X	410-414, 428, 798, 799	410-414, 428, PTCA, CABG	name, date of birth	MONICA
Northern Denmark	VIII,X	410	410	ID	----
Finland	X	410, 411, 428, 798, 799	410, 411, PTCA, CABG	ID	MONICA, troponine
France	IX, X	410-414, 428, 798, 799, others	410-414, 428	name, date of birth	MONICA
Germany	X	410-414, 798, 799	410, 411, PTCA, CABG	name, date of birth	MONICA, troponine
Italy	IX	410-414, 798, 799, others	410-414	name, date of birth	MONICA
Norway	X	410	410, PTCA, CABG	ID	MONICA, troponine
Poland	X	410-414, 428, 798, 799	410-413	-	MONICA
Spain	IX	410-414, 428, 798, 799, others	410-414	name, date of birth	MONICA
Northern Sweden MONICA	X	410, 411	410, 411	ID	MONICA
Denmark	VIII, X	410-414, 798, 799	410, PTCA, CABG	ID	Recommended national diagnostic criteria and MONICA
Finland	X	410-414, 428, 798, 799	410-414, 428, PTCA, CABG	ID	MONICA, troponine
Iceland	IX, X	410-414, 428, 798, 799	410-412, 414, PTCA, CABG	ID	MONICA
Sweden	IX, X	410	410	ID	Recommended national diagnostic criteria, troponine

(*) all codes are presented in the ICD-9 revision to facilitate the comparison

Table 11 Registers of Stroke: case definition in each country

<u>Regional Registers</u>		<i>Sources of information</i>			
<i>Country</i>	<i>ICD version</i>	<i>Mortality ICD codes</i>	<i>HDR ICD codes</i>	<i>Linkage mortality / HDR</i>	<i>Validation</i>
Finland	X	430-432, 435, 436	430-438	ID	MONICA
France	X	430-438, 442.81	430-438, 442.81	ID, date of birth	CT-Scan
Germany	X	430-438	430-438	name, date of birth	CT-Scan, Health Insurance
Greece	IX	430-438	430-438	ID	MONICA CT-Scan
Italy	IX	430-434, 436-438	430-434, 436-438	name, date of birth	MONICA
Norway	X	430-438	430-438	ID	MONICA
Sweden MONICA	IX, X	430-438, 798, 799	430-438, 798, 799	ID	MONICA
<u>National Registers</u>					
Denmark	VIII, X	430-438	430-438	ID	-
Finland	X	430-438	430-438	ID	MONICA CT-Scan

(* all codes are presented in the ICD-9 revision to facilitate the comparison)

Table 12: Conversion table between ICD-VIII, IX and X revisions

ICD-VIII	ICD-VIII label	ICD-IX	ICD-IX label	ICD-X	ICD-X label
<i>Rheumatic heart disease</i>					
		393-398	Chronic rheumatic heart disease	I05-I09	Rheumatic heart disease
<i>Ischaemic heart disease</i>					
410 - 414	Ischaemic heart disease	410 - 414	Ischaemic heart disease	I20 - I25	Ischaemic heart disease
410	Acute myocardial infarction	410	Acute myocardial infarction	I21, I22	Acute myocardial infarction
411	Other acute and subacute forms of ischaemic heart disease	411	Other acute and subacute forms of ischaemic heart disease	I20.0	Other acute ischaemic heart disease
413	Angina pectoris	412	Old myocardial infarction	I25.2	Old myocardial infarction
412, 414	Chronic ischaemic heart disease, asymptomatic ischaemic heart disease	413	Angina pectoris	I20	Angina pectoris
		414	Other forms of chronic ischaemic heart disease	I25 (excluding I25.2)	Chronic ischaemic heart disease
<i>Heart failure</i>					
		428	Heart failure	I50	Heart failure
427.0	Congestive heart failure	428.0	Congestive heart failure	I50.0	Congestive heart failure
		428.1	Left heart failure, acute oedema of lung	I50.1	Left heart failure, acute oedema of lung
<i>Other cardiovascular disease</i>					
400-404	Hypertensive disease	401-405	Hypertensive disease	I11-I13	Hypertensive disease
		415	Acute pulmonary heart disease	I26	Acute pulmonary heart disease
420-429	Other forms of heart disease	420-429	Other forms of heart disease	I30-I49, I51	Other forms of heart disease
		426-427	Conduction disorders and cardiac dysrhythmias	I44-I49	Conduction disorders and cardiac dysrhythmias
440	Atherosclerosis	440	Atherosclerosis	I70	Atherosclerosis
		441-442	Aortic aneurysm	I71-I72	Aortic aneurysm
		444	Arterial embolism and thrombosis	I74	Arterial embolism and thrombosis
451-456	Venous thromboembolic disease	451-456	Venous thromboembolic disease	I80-I87	Venous thromboembolic disease

Table 12: Conversion table between ICD-VIII, IX and X revisions

ICD-VIII	ICD-VIII label	ICD-IX	ICD-IX label	ICD-X	ICD-X label
Cerebrovascular disease					
430 - 438	Cerebrovascular disease	430-438	Cerebrovascular disease	I60 - I69, G45	Cerebrovascular disease
430	Subarachnoid haemorrhage	430	Subarachnoid haemorrhage	I60	Subarachnoid haemorrhage
431	Cerebral haemorrhage	431	Intracerebral haemorrhage	I61	Intracerebral haemorrhage
431	Cerebral haemorrhage	432	Other and unspecified intracranial haemorrhage	I62	Other non-traumatic intracranial haemorrhage
432	Occlusion of precerebral arteries	433	Occlusion and stenosis of precerebral arteries	I65	Occlusion and stenosis of precerebral arteries, not resulting in cerebral infarction
433, 434	Cerebral thrombosis, cerebral embolism	434	Occlusion and stenosis of cerebral arteries	I66	Occlusion and stenosis of cerebral arteries, not resulting in cerebral infarction
433	Cerebral thrombosis	434.9	Cerebral infarction	I63	Cerebral infarction
435	Transient cerebral ischaemia	435	Transient cerebral ischaemia	G45	Transient cerebral ischaemic attacks and related syndromes
436	Acute but ill-defined cerebrovascular disease	436	Acute, but ill-defined, cerebrovascular disease	I64	Stroke, not specified as haemorrhage or infarction
437, 438	Generalised ischaemic cerebrovascular disease, other and ill-defined cerebrovascular disease	437	Other and ill-defined cerebrovascular disease	I67, I68	Other cerebrovascular disease, Cerebrovascular disorders in diseases classified elsewhere
		438	Late effects of cerebrovascular disease	I69	Sequelae of cerebrovascular disease
Sudden death					
795	Sudden death	798	Sudden death, cause unknown	R96 – R98	Sudden death
			ICD 9 CM	NOMESCO	
		36.1	CABG	FNA-FNE	
		36.01-	PTCA	FNG0	
		36.06			
		88.55-	Coronary angiography	XAC85 (Denmark)	
		88.57			
		35.0-	Valvular operations	FG, FJ, FK, FM	
		.35.3,			
		35.95,			
		35.96,			
		35.99			

Table 13

**INDICATORS FOR ACUTE MYOCARDIAL INFARCTION
(ICD-9 410, ICD-10 I21-I22)**

<i>AMI</i>	<i>AVAILABLE</i>	<i>SHORT-TERM IMPLEMENTATION</i>	<i>LONG-TERM IMPLEMENTATION</i>
HEALTH STATUS:			
<i>MORTALITY</i>	Mortality rate <i>ICD-9 410-414</i> <i>ICD-10 I20-I25</i>	Mortality rate <i>ICD-9 410</i> <i>ICD-10 I21-I22</i>	Validated mortality rate
<i>MORBIDITY</i>	Hospital Discharge Rate <i>ICD-9 410</i> <i>ICD-10 I21, I22</i> In-hospital case-fatality	Attack rate/incidence rate 1-day, 28-day case-fatality	Validated attack/incidence rate Re-admission after 1 year 1 year survival 28-day case-fatality among first day survivors
HEALTH SYSTEM: HEALTH CARE UTILISATION			
<i>Medicine use</i>		Thrombolytic therapy	
<i>Surgical operations and invasive procedures</i>			CABG per AMI PTCA per AMI Emergency CABG (within 24 hrs) Emergency PTCA (within 24 hrs) 30-day case-fatality rate for CABG
<i>In-patient care utilisation</i>	Aggregate bed-day rate Mean length of stay	Median length of stay	

Table 14

INDICATORS FOR ACUTE CORONARY SYNDROME

(ICD-9 410-411, 413 ICD-10 I20.0, I21, I22, I24)

<i>ACS</i>	<i>SHORT-TERM IMPLEMENTATION</i>	<i>LONG-TERM IMPLEMENTATION</i>
HEALTH STATUS:		
<i>MORTALITY</i>	Mortality rate <i>ICD-9 410-411</i> <i>ICD-10 I20.0, I21, I22</i>	Validated mortality rate
<i>MORBIDITY</i>	Hospital discharge rate <i>ICD-9 410-411</i> <i>ICD-10 I20.0, I21, I22</i>	Validated attack rate/incidence
HEALTH SYSTEM: HEALTH CARE UTILISATION		
<i>Surgical operations and invasive procedures</i>		CABG per ACS PTCA per ACS Emergency CABG (within 24 hrs) Emergency PTCA (within 24 hrs)
<i>In-patient care utilisation</i>	Aggregate bed-day rate Mean length of stay	ACS patients in ICU Median length of stay

Table 15

HEALTH STATUS INDICATOR FOR ALL ISCHAEMIC HEART DISEASE

(ICD-9 410-414, ICD-10 I20-I25)

<i>ALL ISCHAEMIC HEART DISEASE</i>	<i>AVAILABLE</i>	<i>SHORT-TERM IMPLEMENTATION</i>	<i>LONG-TERM IMPLEMENTATION</i>
HEALTH STATUS:			
<i>MORTALITY</i>	Mortality rate <i>ICD-9 410-414</i> <i>ICD-10 I20-I25</i>	Mortality rate <i>ICD-9 410-414+ 798</i> <i>ICD-10 I20-I25, R96, R98</i>	
<i>MORBIDITY</i>	Hospital Discharge rate <i>ICD-9 410-414, ICD-10 I20-I25</i>	Prevalence of effort angina	Prevalence of IHD MI, CABG, PTCA, angina
<i>DISABILITY</i>			Functional disability and quality of life indicators
HEALTH SYSTEM: HEALTH CARE UTILISATION			
<i>Surgical operations and invasive procedures</i>		CABG rate PTCA rate Coronary angiography rate	

Table 16

**HEALTH STATUS INDICATOR FOR HEART FAILURE
(ICD-9 428, ICD-10 I50)**

<i>HEART FAILURE</i>	<i>AVAILABLE</i>	<i>SHORT-TERM IMPLEMENTATION</i>	<i>LONG-TERM IMPLEMENTATION</i>
HEALTH STATUS			
<i>MORTALITY</i>		Mortality rate <i>ICD-9 428</i> <i>ICD-10 I50</i>	Validated mortality rate
<i>MORBIDITY</i>		Hospital Discharge Rate <i>ICD-9 428 rate</i> <i>ICD-10 I50 rate</i>	Validated hospital discharge rate Prevalence
<i>DISABILITY</i>			Functional disability and quality of life indicators
HEALTH SYSTEM: HEALTH CARE UTILISATION			
<i>Surgical operations</i>	Heart transplant rate		
<i>In-patient care utilisation</i>		Aggregate bed-day rate Mean length of stay	Median length of stay

Table 17

HEALTH STATUS INDICATOR FOR OTHER FORMS OF HEART DISEASE

OTHER FORMS OF HEART DISEASE	AVAILABLE	SHORT-TERM IMPLEMENTATION	LONG-TERM IMPLEMENTATION
HEALTH STATUS:			
MORTALITY	Mortality rate <i>ICD-9</i> 393-398, 401-405, 420-429 <i>ICD-10</i> I05-I09, I11-I13, I30-I49, I51	Mortality rate <i>ICD-9</i> 440, 441, 444, 415, 426-427, 428, 429 <i>ICD-10</i> I70, I71, I82, I44-I49, I50, I51	Validated mortality rate
MORBIDITY	Hospital Discharge Rate <i>ICD-9</i> 393-398, 401-405, 420-429 <i>ICD-10</i> I05-I09, I11-I13, I30-I49, I51	Hospital Discharge Rate <i>ICD-9</i> 440, 441, 444, 415, 426-427, 428, 429 <i>ICD-10</i> I70, I71, I82, I44-I49, I50, I51	Validated hospital discharge rate
HEALTH SYSTEM: HEALTH CARE UTILISATION			
<i>In patient care utilisation</i>	Mean length of stay Aggregate bed-day rate	Mean length of stay Aggregate bed-day rate	Median length of stay
<i>Surgical operations and invasive procedures</i>		HDR rates and mean length of stay for: <i>Valvular operations,</i> <i>Aortic and other aneurism,</i> <i>Pace maker,</i> <i>Catheter ablation,</i> <i>Implantable cardioverter defibrillators</i>	

Table 18

HEALTH STATUS INDICATORS FOR CEREBROVASCULAR DISEASE

(ICD-9 430-438, ICD-10 I60-I69, G45)

<i>STROKE</i>	<i>AVAILABLE</i>	<i>SHORT-TERM IMPLEMENTATION</i>	<i>LONG-TERM IMPLEMENTATION</i>
HEALTH STATUS:			
MORTALITY	Mortality rate <i>ICD-9 430-438,</i> dementia (290.4) <i>ICD-10 I60-I69, G45, F01</i>	Mortality rate <i>ICD-9 430, 431+432, 434, 436+437</i> <i>ICD-10 I60, I61+I62, I66, I64+I67, I68</i>	Validated mortality rate
MORBIDITY	Hospital Discharge Rate <i>ICD-9 430-438</i> dementia (290.4) <i>ICD-10 I60-I69, G45, F01</i>	Hospital Discharge Rate <i>ICD-9 430, 431+432, 434, 436+437</i> <i>ICD-10 I60, I61+I62, I66, I64+I67</i> Attack rate/incidence 7-day case-fatality rate	Attack rate / incidence by subtype of stroke (ischaemic subarachnoid, intracerebral haemorrhagic) Prevalence of stroke
DISABILITY			Functional disability and quality of life indicators
HEALTH SYSTEM: HEALTH CARE UTILISATION			
<i>In-patient care utilisation</i>	Aggregate bed-day rate Mean length of stay	CT, MRI per population Median length of stay	Stroke units per population
<i>Surgical operations and invasive procedures</i>	Carotid angioplasty rate		