European Community Health Indicators Monitoring

ECHIM

Joint Action for European Community Health Indicators and Monitoring

"JA for ECHIM"

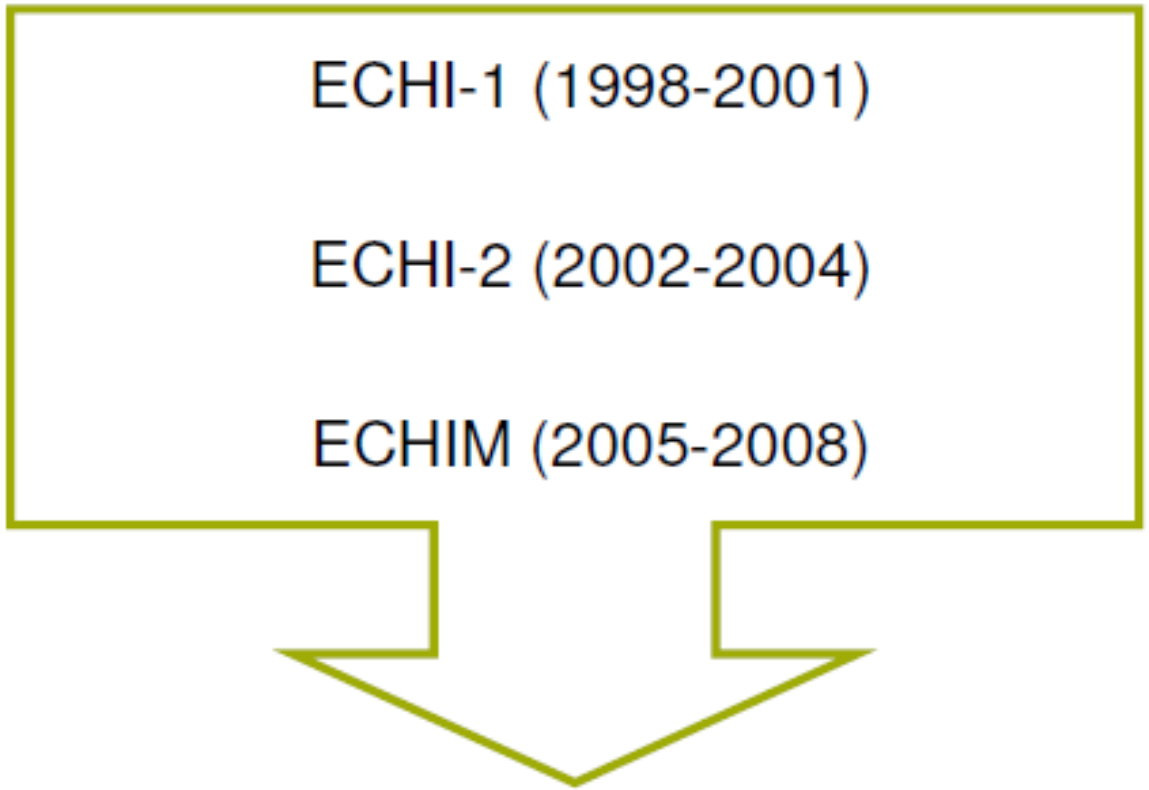
Silvia Ghirini & Emanuele Scafato
Istituto Superiore di Sanità
Via Giano della Bella 34

Rome Jenuary,25,2015

European Community Health Indicators Monitoring

ECHIM

BACKGROUND



European Community Health Indicators Monitoring ECHIM

Structure of the JA

1) **Time schedule** he 1/2009 – 12/2011
2) **Founded by the EC** (budget 3,000,000 €; 50% co-founding)
3) **Partners:** THL (Finland, coordinator), RIVM (Netherlands), RKI (Germany), Institute of Hygiene (Lithuania), ISS (Italy)
4) **Core group:** (31 members from 14 Member States + WHO)
5) Liaison with European Commission, Eurostat, Member States, and international organisations in health monitoring.
6) **Involved countries:** 24 MSs + Iceland, Norway, Republic

- of Moldova (contact persons in 32 countries)

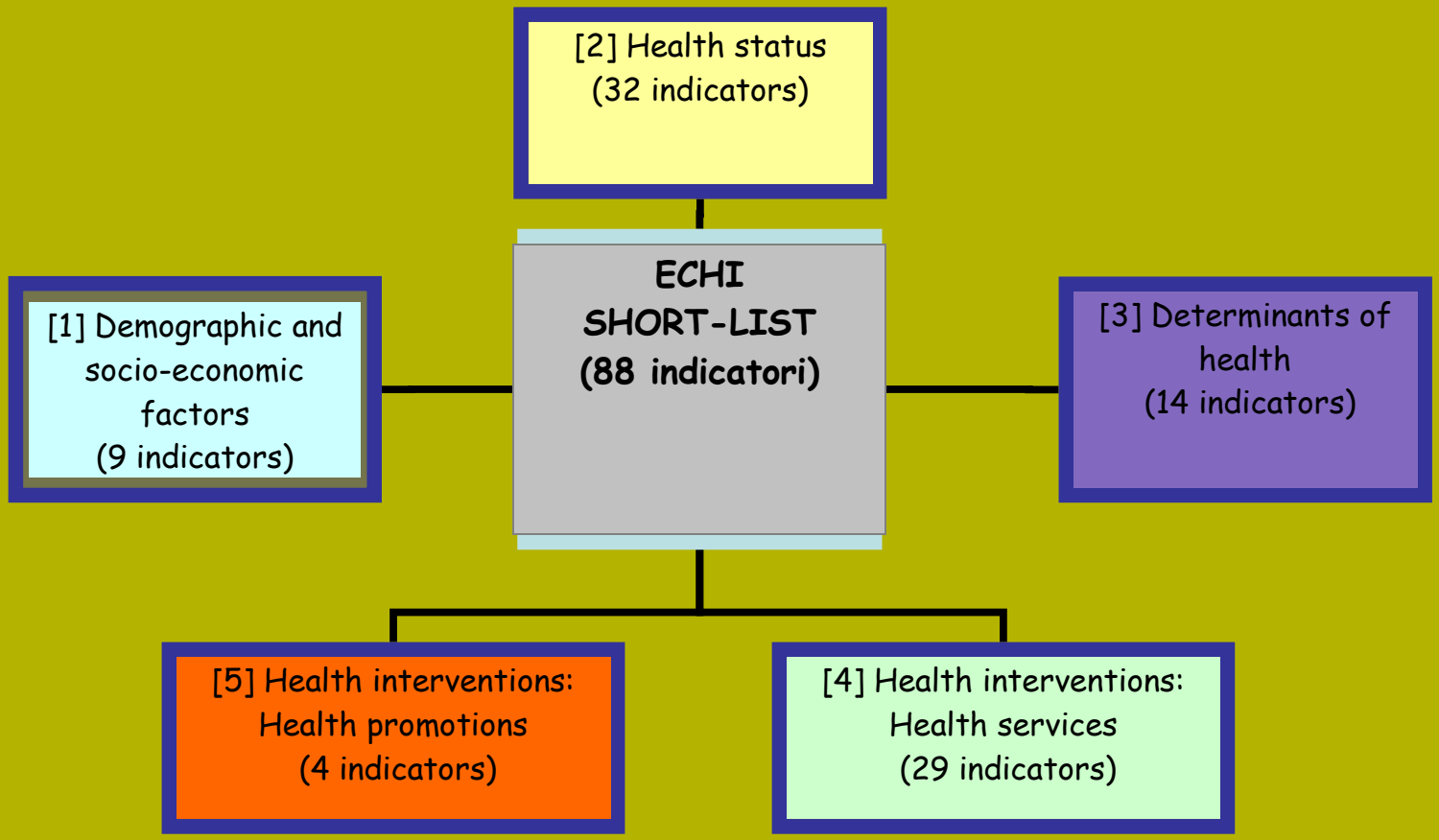
OBJECTIVES of the JA

1) **To improve**, document and maintain the **ECHI Indicators**
2) **To develop guidelines and Member State specific plans** for ECHI shortlist indicators implementation at Member State (MSs), regional and EU-level, as needed
3) **To implement ECHI shortlist indicators** in MSs and to achieve a good coverage
4) **To maintain a network** of national health indicator
5) **To map, design and test the data flow** between MSs and a central capacity for health monitoring
6) **To present health data** based on the ECHI shortlist
7) **To produce the first joint analysis** and report on data based on the ECHI shortlist indicators

European Community Health Indicators Monitoring ECHIM

ECHI SHORT LIST INDICATORS

Rapporto finale ECHIM (2008): http://www.echim.org/docs/ECHIM_final_report.pdf



The classification of Italian ECHI short-list indicators

A. Indicators readily available and delivered to international organizations.

B. Indicators readily available from national databases for which (E)HIS is the preferred data sources.

C. Indicators not available in international databases but available in national databases.

D. Indicators not yet available.

A. Indicators readily available and delivered to international organizations (Eurostat-WHO-OECD).

Demographic and socio-economic factors (9)	**9**
Health status (32)	**18**
Determinants of health (14)	**6**
Health interventions: Health services (29)	**17**
Health interventions: Health promotions (4)	**0**
ALL	**50**

B. Indicators readily available from national databases for which (E)HIS* is the preferred data sources.

Demographic and socio-economic factors (9)	**0**
Health status (32)	**7**
Determinants of health (14)	**1**
Health interventions: Health services (29)	**3**
Health interventions: Health promotions (4)	**0**
ALL	**11**

*The EHIS definition is not exactly the same of national databases during the JA but these kinds of problem should have been solved with the implementation of the new EHIS format 2014 by law

C. Indicators not available in international databases but available in national databases.

Demographic and socio-economic factors (9)	0
Health status (32)	6
Determinants of health (14)	7
Health interventions: Health services (29)	4
Health interventions: Health promotions (4)	1
ALL	18

D. Indicators not yet available.

Demographic and socio-economic factors (9)	0
Health status (32)	1
Determinants of health (14)	0
Health interventions: Health services (29)	5
Health interventions: Health promotions (4)	3
ALL	9

The updated ECHI shortlist, resulting in the 2012

The 2012 version of the ECHI shortlist contains **94 indicators**. These are **the same 88 indicators as in the 2008 version** of the shortlist, but for six of these both a self-reported and a register-based indicator variant have been defined

The 2012 version has three sections instead of two:

A. **Implementation section*** (67 indicators)
B. **Work-in-progress section** (14 indicators)
C. **Development section** (13 indicators).

*Indicators in the implementation section can be used to support policy making, as they are part of regular international data collections and data are available for a majority of the participating countries

European Community Health Indicators Monitoring

ECHIM

ECHI shortlist indicators	Data source
1. Population by sex/age	Eurostat A
2. Birth rate, crude	Eurostat A
3. Mother's age distribution	Eurostat A
4. Total fertility rate	Eurostat A
5. Population projections	Eurostat A
6. Population by education	Eurostat (LFS) A
7. Population by occupation	Eurostat (LFS) A
8. Total unemployment	Eurostat (LFS) A
9. Population below poverty line and income inequality	Eurostat (EU-SILC) A
10. Life expectancy	Eurostat A
11. Infant mortality	Eurostat A
12. Perinatal mortality	WHO HFA A
13. Disease-specific mortality; Eurostat, 65 causes	Eurostat (and CISID for AIDS related mortality) A
14. Drug-related deaths	EMCDDA A

ECHI shortlist indicators	Data source
15. Smoking-related deaths	n.a. B
16. Alcohol-related deaths	n.a. B
17. Excess mortality by extreme temperatures (formerly 'by heat waves')	n.a. C
18. Selected communicable diseases	ECDC A
19. HIV/AIDS	EURO-HIV/CISID A
20. Cancer incidence	Globocan A
21. (A) Diabetes, self-reported prevalence	Eurostat (EHIS) A
21. (B) Diabetes, register-based prevalence	n.a. B
22. Dementia	n.a. B
23. (A) Depression, self-reported prevalence	Eurostat (EHIS) A
23. (B) Depression, register-based prevalence	n.a. B
24. AMI	n.a. B
25. Stroke	n.a. B
26. (A) Asthma , self-reported prevalence	Eurostat (EHIS) A
26. (B) Asthma, register-based prevalence	n.a. B
27. (A) COPD , self-reported prevalence	Eurostat (EHIS) A
27. (B) COPD, register-based prevalence	n.a. B
28. (Low) birth weight	WHO-HFA A
29. (A) Injuries: home/ leisure, violence, self-reported incidence	Eurostat (EHIS) A
29. (B) Injuries: home/ leisure, violence, register-based incidence	IDB A

ECHI shortlist indicators	Data source
30. (A) Injuries: road traffic, self-reported incidence	Eurostat (EHIS) A
30. (B) Injuries: road traffic, register-based incidence	UN ECE A
31. Injuries: workplace	Eurostat (ESAW) A
32. Suicide attempt	n.a. C
33. Self-perceived health	Eurostat (EU-SILC) A
34. Self-reported chronic morbidity	Eurostat (EU-SILC) A
35. Long-term activity limitations	Eurostat (EU-SILC) A
36. Physical and sensory functional limitations	Eurostat (EHIS) A
37. General musculoskeletal pain	n.a. C
38. Psychological distress	n.a. C
39. Psychological well-being	n.a. C
40. Health expectancy: Healthy Life Years (HLY)	Eurostat A
41. Health expectancy, others	EHEMU/EHLEIS project B
42. Body mass index	Eurostat (EHIS) A
43. Blood pressure	Eurostat (EHIS) A
44. Regular smokers	Eurostat (EHIS) A
45. Pregnant women smoking	n.a. B
46. Total alcohol consumption	WHO (GISAH) A
47. Hazardous alcohol consumption	Eurostat (EHIS) A
48. Use of illicit drugs	EMCDDA A
49. Consumption of fruit	Eurostat (EHIS) A
50. Consumption of vegetables	Eurostat (EHIS) A

ECHI shortlist indicators	Data source
51. Breastfeeding	WHO-HFA B
52. Physical activity	Eurostat (EHIS) A
53. Work-related health risks	EUROFOUND C
54. Social support	Eurostat (EHIS) A
55. PM10 (particulate matter) exposure	Eurostat A
56. Vaccination coverage in children	WHO-HFA A
57. Influenza vaccination rate in elderly	Eurostat (EHIS) A
58. Breast cancer screening	Eurostat (EHIS) A
59. Cervical cancer screening	Eurostat (EHIS) A
60. Colon cancer screening	Eurostat (EHIS) A
61. Timing of first antenatal visits among pregnant women	n.a. B
62. Hospital beds	Eurostat A
63. Practising physicians	Eurostat A
64. Practising nurses	Eurostat A
65. Mobility of professionals	n.a. C
66. Medical technologies: MRI units and CT scans	Eurostat A
67. Hospital in-patient discharges, limited diagnoses	Eurostat A
68. Hospital daycases, limited diagnoses	Eurostat A
69. Hospital day-cases as percentage of total patient population (in-patients & day-cases), selected diagnoses	Eurostat (necessary discharge data available but ratio is not centrally computed yet) A
70. Average length of stay (ALOS), limited diagnoses	Eurostat A

ECHI shortlist indicators	Data source
71. General practitioner (GP) utilisation	Eurostat (EHIS) A
72. Selected outpatient visits	Eurostat (EHIS) A
73. Surgeries: PTCA, hip, cataract	Eurostat A
74. Medicine use, selected groups	Eurostat (EHIS) A
75. Patient mobility	Eurostat is regularly collecting data on patient mobility but is not yet publishing these. B
76. Insurance coverage	OECD A
77. Expenditures on health	Eurostat A
78. Survival rates cancer	EUROCARE A
79. 30-day in-hospital case-fatality AMI and stroke	OECD A
80. Equity of access to health care services	Eurostat (EU-SILC) A
81. Waiting times for elective surgeries	n.a. C
82. Surgical wound infections	n.a. C
83. Cancer treatment delay	n.a. C
84. Diabetes control	n.a. C
85. Policies on ETS exposure (Environmental Tobacco Smoke)	WHO Europe tobacco control (compilation of indicator not done centrally yet) A
86. Policies on healthy nutrition	n.a. C
87. Policies and practices on healthy lifestyles	n.a. C
88. Integrated programmes in settings, including workplace, schools, hospital	n.a. C

A=Implementation; B=Work-in-progress; C=Development

THE ECHIM PILOT DATA COLLECTION

The major aim of the Pilot Data Collection was to obtain comparable data for those ECHI shortlist indicators that were at that time not available or not comparable in international DB.

1. only shortlist indicators not yet covered by routine collection procedures
2. focus on indicators derived from (E)HIS or suitable national sources
3. **inclusion of alternatives: register or project data (e.g. for diabetes, asthma, stroke, AMI, COPD, injuries)**
4. development of questionnaire sheets of defined reporting format; operationalization according to updated documentation sheets

THE ECHIM PILOT DATA COLLECTION

Indicators to be derived from (E)HIS = #A
or registers/projects = #B

Health status

21 A/B	Diabetes
23 A/B	Depression
24 B	AMI
25 B	Stroke
26 A/B	Asthma
27 A/B	COPD
29 A/B	Injuries home/ leisure
30 A/B	Injuries road traffic

71 A/B	GP utilisation
72 A	Other outpatient visits (total)
72 A1	Other.. (med. spec.)
72 A2	Other.. (dent. spec.)
72 B	Other outpatient visits (total)
72 B1	Other.. (med. spec.)
72 B2	Other.. (dent. spec.)

Health services

THE ECHIM PILOT DATA COLLECTION

Some general remarks:

1. Regarding Indicators derived from Registers:

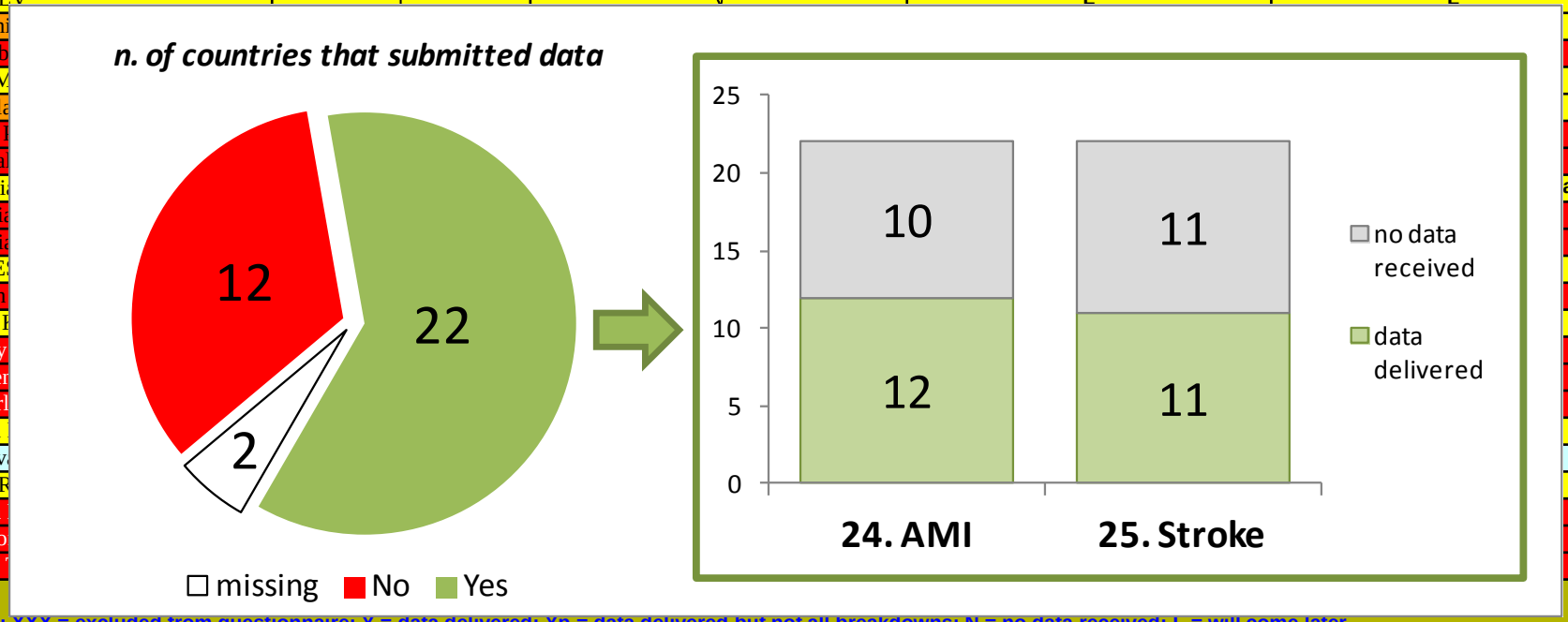
   Register data on diseases largely not available or of little use (except AMI and Stroke from 11 countries but with a lot of differencies in definitions)

   Administrative data on injuries: mostly available for road traffic, less for home/leisure →Trend: values lower than from (E)HIS

   Administrative data on health service providers: mostly not available or fragmented or unsuitable dimensions/aggregations

European Community Health Indicators Monitoring ECHIM

JA Country	type of Questionnaire (F=Full; T=without EHIS derived Indicators)	data received	24. AMI	25. Stroke
Austria AT	F	√	N	N
Belgium BE	F	√	N	N
Bulgaria BG	T	NO		
Cyprus CY	T	√ (see note at end of row)	Y	Y
Czech Republic CZ	T	√	Y	Y
Denmark DK	F	√	N	N
Estonia EE	F	√	Yp	N
Finland FI	ECHIM Partners -F-	√	Y	Y
France FR	F	√	N	N
Germany DE	ECHIM Partners -F-	√	Y	Y
Greece GR	T	NO		
Hungary HU	T	√	Y	Y
Ireland IR	F	√	Y	Y
Italy IT	ECHIM Partners -F-	√	Y	Yp (age limit 74)
Latvia LV	T	√	L	L
Lithuani				
Luxemb				
Malta M				
Netherla				
Poland I				
Portugal				
Romani				ata
Slovakia				
Sloveni				
Spain E				
Sweden				
United I				
Norway				
Liechter				
Switzerl				
Iceland				
Moldov				
Serbia R				
Croatia				
Macedo				
Turkey				



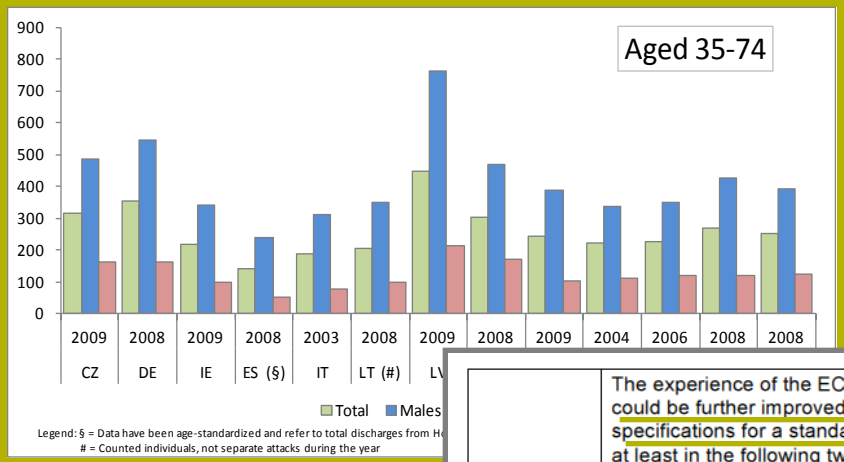
legend: XXX = excluded from questionnaire; Y = data delivered; Yp = data delivered but not all breakdowns; N = no data received; L = will come later

European Community Health Indicators Monitoring ECHIM

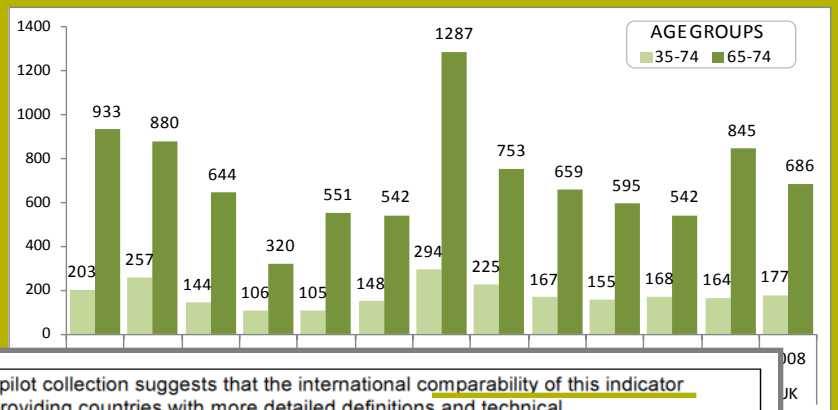
24. ACUTE MYOCARDIAL INFARCTION

Attack rate of acute myocardial infarction (non-fatal and fatal) and coronary death per 100,000 population

by gender



by age groups



1.3.3.	ECHI# 24 Acute Myocardial Infarction (AMI)
ECHIM Indicator name	**B) Health status** 24. Acute Myocardial Infarction (AMI) → ECHI ID Codes: 215
A	**DOCUMENTATION → current and entire Documentation S** **See Report II: Part II. ECHI indicator documentation, chap**
Definition	Attack rate of acute myocardial infarction (non-fatal and fatal)
Calculation	Age-standardized attack rate by sex in the age group 35-74 in based on combined hospital discharge (ICD-10 codes I21, I22 (EUROCISS project recommendation). Attack rate counts the are at least 28 days between the onsets of the events. Age st women separately, according to the direct method, using the standard population (this is the method applied for the Eurost references (document principles and guidelines in CIRCA).
Relevant dimensions and subgroups	- Calendar year - Country - Sex - Age groups: -- for age standardization, data must be collected by 5 year a -- for data presentations, it is required to present the followin
Preferred data type and source	Preferred data type: - Hospital discharge registries combined with causes of death - Alternatively: population-based AMI registers Preferred source: national data sources (no data available in international data sources according to preferred definition)
Rationale	High-burden disease and cause of death although this disease spectrum is preventable.

The experience of the ECHIM pilot collection suggests that the international comparability of this indicator could be further improved by providing countries with more detailed definitions and technical specifications for a standard indicator calculation. The revision of the current ECHI#24 indicator definition, at least in the following two aspects, could also be recommended:

1) The inclusion of all IHD codes (I20-I25) in the mortality component causes large overestimation of AMI rates, particularly in countries where mortality from chronic IHD is high, i.e. LV, LT, EE, HU, CZ, etc. (see Figure 1.3.3.3). There are studies showing that a significant part of these cases of chronic IHD is actually misclassified as other causes of death, e.g. accidental alcohol poisonings [2]. Limiting the mortality component to only AMI codes (I21, I22) would improve the international comparability and would conceptually be more correct.

2) A single hospital discharge record with diagnosis I21, I22 does not always correspond to a separate AMI case and this depends on hospitalization practices at national level. The possibility of linking hospitalization episodes at the subject level and the variation of how a single AMI attack is defined in the case of multiple hospital discharges is another source of distortion, limiting international comparability. This could be avoided by counting AMI patients instead of AMI attacks, i.e. counting persons who have had at least one hospital discharge with diagnosis I21, I22 during the year. It is likely that most countries use some kind of internal patient identification in their hospital discharge databases allowing the linking of hospital discharge records for the same patient. Such internal linking should be less problematic to do than cross-registry linking, i.e. between hospital discharge and mortality databases.

il progetto cuore

EUROCISS

AMI/ACS Population-based Registers in Europe: case definition

Country	ICD version	Mortality ICD codes(*)	HDR ICD codes(*)	Linkage Mortality / HDR	Validation
Belgium	IX, X	410-414, 428, 799	410-414, 428 PTCA, CABG	Name, date of birth	ECG, enzymes, symptoms, MONICA
Northern Denmark	VIII, X	410	410	PIN	No validation
Finland	X	410, 411, 428,798, 799	410, 411 PTCA, CABG	PIN	MONICA, ESC/ACC
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, ESC/ACC
Italy	IX	410-414, 798,799, others	410-414	Name, date of birth	MONICA
Norway	X	410	410 PTCA, CABG	PIN	No validation
Spain	IX	410-414, 428, 798, 799, others	410-414	Name, date of birth	MONICA
Northern Sweden - MONICA	X	410, 411	410, 411	PIN	MONICA

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

CS Population-based Registers in Europe: population characteristics

	Years	Age range	Population x 1000	Accessibility
Ghent	1983-2003	25-69 25-74 (Ghent)	100 142 (Ghent)	School of Public Health/Univ Ghent
Belgium Bruges	1999-2003	25-74	151	University of Ghent
Northern Denmark	1978-2001	All	494	Aarhus University
Finland	1993-2002	35-85	193	NIPH
France	1985-2004	35-74	1,519	INSERM U780
Germany	1985-2002	25-74	407	National Institute of Statistics
Italy	1998-2003	35-74	2,600	Institute of Health
Norway	1972-2002	All	1,000	National Institute of Statistics
Spain	1985-1998	25-74	480	Institute of Health Studies
Northern Sweden	1985-2005	35-74	322	MONICA

il progetto cuore

Epidemiologia e prevenzione delle malattie cerebro e cardiovascolari

European Community Health Indicators Monitoring ECHIM

Documentation sheet: 24. Acute Miocardical Infarcton (AMI)

24. ACUTE MYOCARDIAL INFARCTION (AMI)

24.1. Documentation sheet

ECHIM Indicator name	**B) Health status** 24. Acute Myocardial Infarction (AMI)
Relevant policy areas	• Health system performance assessment, quality of care, efficiency of care, patient safety • Non-communicable diseases (NCDs), chronic diseases • (Preventable) Burden of Disease (BoD) • (Planning of) health care services
Definition	Attack rate of acute myocardial infarction (non-fatal and fatal) and coronary death per 100,000 population.
Calculation	Age-standardized attack rate by sex in age group 35-74 in the population in a given calendar year, based on combined hospital discharge (ICD-10 codes I21, I22) and mortality data (ICD-10 codes I20-I25) (EUROCISS project recommendation). Attack rate counts the first and recurrent events, whenever there is at least 28 days between the onsets of the events. Age standardization should be done for men and women separately, according to the direct method, using the 1976 WHO European population as standard population (this is the method applied for the Eurostat diagnosis-specific morbidity statistics; see references (document principles and guidelines in CIRCA)).
Relevant dimensions and subgroups	• Calendar year • Country • Region (according to ISARE recommendations) • Sex • Age group: - for age standardization data must be collected by 5 year age groups for ages 35-74 - for data presentations it is required to present the following age groups; 35-64, 65-74 • Socio-economic status (see data availability)
Preferred data type and data source	Preferred data type: • Hospital discharge registries combined with causes of death registries • Alternatively: population-based AMI registers Preferred source: national data sources (no data available in international data sources according to preferred definition)
Data availability	No regular data collection for this indicator yet exists. AMI population-based regional registers are available in: Belgium, Denmark, Finland, France, Germany, Iceland, Italy, Norway and Sweden. In general these registers do not produce data on AMI by SES. The ISARE project has not collected regional data on AMI incidence/attack rate.
Data periodicity	See data availability.
Rationale	High-burden disease and cause of death. These diseases are preventable.
Remarks	• About 30-40% of cardiac attacks are fatal and patients die before reaching the hospital. As a consequence, only a combination of mortality data and hospital discharge records can provide a complete picture of the disease in the population. The calculation of this indicator therefore requires linkage of different data sources at subject level. Possibilities for this kind of linkage differ between countries due to a disharmonized legal framework regarding the possibilities to use personal health data for data protection purposes. • A wider group of diagnoses (ICD-10 codes) is proposed for the fatal cases than for the non-fatal cases, because it is often impossible to tell whether the death was caused by a myocardial infarction or other coronary event. Incidence from a primary prevention point of view is more interesting than attack rate, although both bring very similar information. Incidence refers to person's first event. Ideally the denominator should be those who have not had an AMI before, but in practise this is not possible. The total population in the denominator gives a good approximation. Data for attack rate however are more widely available. The preferred age range is limited because the disease is extremely rare in people younger than 35. People older than 74 are excluded as co-morbidity and identification of the cause of death in this group would complicate the interpretation of the results. The accuracy of the mortality diagnosis of ischaemic heart disease varies considerably between countries due to differences in coding practices and differences in the number of autopsies performed.
References	• EUROCISS project • EUROCISS definition AMI incidence/attack rate • EUROCISS project, manual for operating population based AMI register • Diagnosis specific morbidity statistics, Eurostat, public part of CIRCA • Health Indicators in the European Regions (ISARE) project • Tunstall-Pedoe H, Kuulasmaa K, Amouyel P, Arveiler D, Rajakangas A-M, Pajak A, for the WHO MONICA Project. Myocardial infarction and coronary deaths in the World Health • Organization MONICA Project. Registration procedures, event rates and case fatality in 38 populations from 21 countries in 4 continents. Circulation 1994;90:583-612
Work to do	• Discuss with European Commission possibilities for adding this indicator to regular data collection processes • During the ECHIM data collection pilot, which was conducted during the Joint Action for ECHIM, it became clear that there was a need in the Member States for a detailed algorithm for computing this indicator → elaborate algorithm and add to indicator documentation

24.2. Operational indicators

ID	Sub-division	Indicator name	Data source	Operational indicator(s)
21501	Health status	24. Acute Myocardail Infarction (AMI)	National data (registers, administrative sources)	Attack rate of acute myocardial infarction (non-fatal and fatal) and coronary death in population aged 35-74, per 100,000.
21502				Attack rate of acute myocardial infarction (non-fatal and fatal) and coronary death in male population aged 35-74, per 100,000.
21503				Attack rate of acute myocardial infarction (non-fatal and fatal) and coronary death in female population aged 35-74, per 100,000.
21504				Attack rate of acute myocardial infarction (non-fatal and fatal) and coronary death per 100,000, for age group 35-64.
21505				Attack rate of acute myocardial infarction (non-fatal and fatal) and coronary death per 100,000, for age group 65-74.

Documentation sheet: 25. STROKE

25. STROKE

25.1. Documentation sheet

ECHIM Indicator name	B) Health status 25. Stroke
Relevant policy areas	• Health system performance assessment, quality of care, efficiency of care, patient safety • Non-communicable diseases (NCDs), chronic diseases • (Preventable) Burden of Disease (BoD) • Mental health • (Planning of) health care services
Definition	Attack rate of stroke (non-fatal and fatal) per 100,000 population.
Calculation	Age-standardised attack rate by sex in age group 35-84 in the population in a given calendar year, based on combined hospital discharge and mortality data (ICD-10 codes I60-I64) (EUROCISS project recommendation). Attack rate counts the first and recurrent events, whenever there is at least 28 days between the onsets of the events. Age standardisation should be done for men and women separately, according to the direct method, using the 1976 WHO European population as standard population (this is the method applied for the Eurostat diagnosis-specific morbidity statistics; see references (document principles and guidelines in CIRCA)).
Relevant dimensions and subgroups	• Calendar year • Country • Region (according to ISARE recommendations) • Sex • Age group: - for age standardization data must be collected by 5 year age groups for ages 35-84 - for data presentations it is required to present the following age groups: 35-64, 65-84 • Socio-economic status (see data availability)
Preferred data type and data source	Preferred data type: • Hospital discharge registries combined with causes of death registries • Alternatively: population-based stroke registers Preferred source: national data sources (no data available in international data sources according to preferred definition)
Data availability	No regular data collection for this indicator yet exists. Stroke population-based regional registers are available in Denmark, Finland, France, Germany, Italy, Norway and Sweden. In general these registers do not produce data on stroke by SES. The ISARE project has not collected regional data on stroke.
Data periodicity	See data availability.
Rationale	High-burden disease and cause of death. These diseases are preventable.
Remarks	• Between 3 and 13% of strokes are fatal and patients die before reaching the hospital. As a consequence, only a combination of mortality data and hospital discharge records can provide a complete picture of the disease in the population. The calculation of this indicator therefore requires linkage of different data sources at subject level. Possibilities for this kind of linkage differ between countries due to a disharmonised legal framework regarding the possibilities to use personal health data for data protection purposes. • People may die from the effects of stroke long after the event took place. Therefore in stroke it is difficult to establish a time frame for distinguishing between first and recurrent events. 28 days is a commonly applied time frame. One has to realize though that this definition may result in double counting of events; one for the stroke, and one for death as a consequence of the stroke when death occurs later than 28 days after the stroke. EUROCISS project recommends to report separately: a) haemorrhagic stroke (ICD-10 codes I61, I62), b) ischaemic stroke (ICD-10 codes I63, I64) and c) subarachnoid stroke (ICD-10 codes I60), because of the different disease entities (and hence different risk factors) underlying these diagnoses. ECHIM endorses this point of view, but feels that, given the current lack of data, it seems too early to ask the Member States to implement this indicator at such a detailed level now. ECHIM does nevertheless envisage refining the indicator definition in future. • Incidence from a primary prevention point of view is more interesting than attack rate, although both bring very similar information. Incidence refers to person's first event. Ideally the denominator should be those who have not had a stroke before, but in practise this is not possible. The total population in the denominator gives a good approximation. Data for attack rate however are more widely available. • The preferred age range is limited because the disease is rare in people younger than 35. People older than 84 are excluded as co-morbidity and identification of the cause of death in this group would complicate the interpretation of the results.

References	• EUROCISS project • EUROCISS project, manual for operating population based stroke register • Diagnosis specific morbidity statistics, Eurostat, public part of CIRCA • Health Indicators in the European Regions (ISARE) project
Work to do	• Discuss with European Commission possibilities for adding this indicator to regular data collection processes • P.M.: refine indicator definition according to EUROCISS recommendations (report separately for a) haemorrhagic stroke (ICD-10 codes I61, I62), b) ischaemic stroke (ICD-10 codes I63, I64) and c) subarachnoid stroke (ICD-10 codes I60)) • During the ECHIM data collection pilot, which was conducted during the Joint Action for ECHIM, it became clear that there was a need in the Member States for a detailed algorithm for computing this indicator → elaborate algorithm and add to indicator documentation

25.2. Operational indicators

ID	Sub-division	Indicator name	Data source	Operational indicator(s)
21601	Health status	25. Stroke	National data (registers, administrative sources)	Attack rate of stroke (non-fatal and fatal) in population aged 35-84, per 100,000.
21602				Attack rate of stroke (non-fatal and fatal) in male population aged 35-84, per 100,000.
21603				Attack rate of stroke (non-fatal and fatal) in female population aged 35-84, per 100,000.
21604				Attack rate of stroke (non-fatal and fatal) per 100,000, for age group 35-64.
21605				Attack rate of stroke (non-fatal and fatal) per 100,000, for age group 65-84.

European Community Health Indicators Monitoring ECHIM

Thanks for your attention

Part I: Implementation of European Health Indicators - First Years (2012, editors: THL) http://www.echim.org/docs/Final_Report_I_2012.pdf

Part II: ECHI indicator development and documentation (2012, editors: RIVM) http://www.echim.org/docs/Final_Report_II_2012.pdf

Part III: ECHIM Pilot Data Collection, Analyses and Dissemination (2012, editors: RKI) http://www.echim.org/docs/Final_Report_III_2012.pdf

Final Report of the previous phase of ECHIM (2008)
http://www.echim.org/docs/ECHIM_final_report.pdf