



## Follow-up data

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## 1. Introduction

After the baseline examination, the MORGAM cohorts were followed up for all deaths and optionally for non-fatal coronary, stroke and thromboembolic events. The follow-up procedure for each cohort is described in document "[Description of MORGAM Cohorts](#)". The purpose of this part of the Description and quality assessment of MORGAM data is to assess the follow-up procedures and the quality of the follow-up data.

The follow-up period varies between the cohorts, and the [MPCs](#) can extend the follow-up period when a longer follow-up becomes possible during the course of the study. Consequently, different publications from the Project may consider different follow-up periods, and this document will be updated after the extension of the follow-up period of a cohort. The current follow-up periods for the different study end-points can be identified in sub-sections "End of follow-up periods" below.

## 2. Approach to the description and quality assessment

The data will be described and the quality assessed separately for the different study end-points: deaths, coronary events, stroke events and venous thromboembolic events. The assessment of deaths will consider

general aspects of the mortality follow-up, whereas any disease-specific aspects of deaths will be considered under the sections for the three disease-specific end-points. For each of the four end-point categories, we will consider:

- availability and distributions of the data items;
- reasons for exit from the study;
- end of the follow-up period;
- follow-up procedures and coverage; and
- end-point diagnosis.

The last two of these are most challenging.

## 2.1 Assessment of follow-up procedures and coverage

The assessment of follow-up procedures and coverage comprise:

- notification of events;
- notification of loss-to-follow-up;
- comparison between mortality in the cohorts and mortality in the general population.

The key components of good coverage of follow-up are good notification of end-point event and good notification of loss to follow-up.

By notification of events we mean the procedure through which the end-point events of the cohort members during the follow-up come to the attention of the study team of the MPC. If they do not come to their attention, the persons concerned will become misclassified as non-cases, which will bias the results of the data analyses. A good notification of events may yield possible events which, after validation, are found not to be end-point events, but it does not miss true events.

A person is lost to follow-up on a certain date (before the end of the study) if his end-point status can be ascertained until that date, but not thereafter. If loss to follow-up remains unnoticed, the person will become misclassified as a non-case even if he or she has an end-point event after the loss to follow-up, which will bias the results of the study. The percentage of loss-to-follow-up is also relevant for the quality of follow-up, but it is considered to be far less important than the availability of good notification of loss-to follow-up, and it could anyway be assessed only for the cohorts where a good notification of loss-to-follow-up was in place. Although the percentage of loss-to-follow-up will be reported, it will not be considered as a major quality indicator.

As an additional indicator of the coverage of the follow-up, mortality in the cohorts was compared with the mortality in the general population from which the cohort was sampled. For this purpose, the official annual mortality statistics and population sizes of the MORGAM [Reporting Units](#) were collected for the follow-up periods. These data were used to estimate the number of deaths in cohorts, and the estimates were compared with the number of deaths identified in the follow-up. The details of the estimation procedure are described in [Annex F.1](#).

Four scores were defined to summarize the quality of the follow-up procedures and coverage:

### 1. *Event notification score*

:

Two definitions of the score are given based on the source of notification of the events.

#### **I: Event notification using event registers or medical records**

*Event notification score*

= 2 if sources of notification cover the whole country or more;

- 1 if sources of notification cover the [Reporting Unit](#) and possibly surrounding areas but not the whole country;
- 0 if sources of notification cover an area less than the [Reporting Unit](#) area.

## II. Event notification by letter or telephone or clinical event questionnaire

*Event notification score*

- = 2 if, in case the first contact fails, satisfactory attempts are made to contact the person and/or relatives and/or his/her general practitioner. If these contacts fail, the person's vital status and emigration from the area is checked satisfactorily from other sources;
- 1 if intermediate between 2 and 0.
- 0 if only one attempt is made to contact the participant, or in case of no contact, the person's vital status is not checked from other sources;

2. *Loss-to-follow-up notification score*

:

*Loss-to-follow-up notification score*

=

- 2 if good notification of loss to follow-up or *Event notification score* = 2;
- 1 if no good notification of loss to follow-up;

3. *Mortality comparison score*

:

Let R be the ratio of the observed (O) number of deaths in the cohort to the expected (E) number of deaths calculated from the mortality statistics of the [Reporting Units](#). The *Mortality comparison score*

is defined as:

*Mortality comparison score*

- = 2 if  $R \geq 70\%$ ,
- 1 if  $55\% \leq R < 70\%$ ,
- 0 if  $R < 55\%$ .

See [Annex F.2](#) for the discussion on the limits 55% and 70%.

4. *Coverage score*

:

The *Coverage score*

summarizing the above three scores is defined as:

		<i>Loss-to-follow-up notification score</i>					
		<b>2</b>			<b>1</b>		
		<i>Event notification score</i>			<i>Event notification score</i>		
		<b>2</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>
<i>Mortality comparison score</i>	<b>2</b>	2	2	1	-	1	1
	<b>1</b>	2	1	1	-	1	0
	<b>0</b>	1	1	1	-	0	0

## 2.2 Assessment of end-point diagnoses

The approach for the assessment of the diagnoses differs for the different end-point events. Therefore, the approach is described together with the assessment of each end-point below.

## 3. Mortality follow-up

In this section, the follow-up of deaths is considered to the extent that is covered by the data specified in the [Data transfer format: follow-up data \(Form 25\)](#). This part of the follow-up is compulsory for all cohorts.

Issues related specifically to the follow-up of coronary, stroke and thromboembolic events and their diagnosis are considered in later sections.

### 3.1 Availability and distributions of data items

Here are hyperlinks to the distributions of the data items of the [Data transfer format: follow-up data \(Form 25\)](#):

- EXDATE: Date of exit from the study ([day](#), [month](#), [year](#))
- EXREAS: Reason for exit from the study
- DEATHDU: ICD code of the underlying cause of death ([all](#), [ICD-8](#), [ICD-9](#), [ICD-10](#), [irrelevant](#))
- UCDSOUR: Source of the diagnosis of the underlying cause of death
- DEATHDA: ICD code of the disease or condition directly leading to death
- DEATHDB: ICD code of the intervening antecedent cause of death
- DEATHDC: ICD code of the underlying antecedent cause of death
- DEATHDO: ICD code of other significant condition contributing to the death
- DSOURCE: Source of the diagnoses
- ICDVERD: ICD-version used for causes of death
- NECP: Necropsy performed

From the point of view of data analysis, the most important ones of these data items are EXDATE, which indicates the end of mortality follow-up for each subject, and the DEATHDU, which specifies the underlying cause of death. For EXDATE, MORGAM has no option for missing data. If the date is not known exactly by the MPC, they are asked to provide their best estimate. Therefore, this item is practically always available. DEATHDU is missing very occasionally in some cohorts, and more often in:

- DEN-GLO: DEATHDU is missing for 23 subjects, mostly in Cohort 01. The underlying causes of death are not available to the MPC on these subjects.
- GER-AUG: missing for 8 subjects in Cohort 01 and for 1 subject in Cohort 02. These subjects died abroad or did not give the permission to obtain these data.
- ITA-FRI: missing for 7 subjects in Cohorts 01 and 02.
- ITA-ROM: missing for 10 subjects in Cohort 01 and 8 subjects in other cohorts.
- POL-TAR: missing for 77, 25 and 12 subjects in Cohorts 01, 02 and 03, respectively. This is partly, but not fully, explained by a strike of health service personnel in Poland during the years 1997-1998, when in majority

of the cases physicians did not record the cause of death in the death certificate.

- POL-WAR: missing for 48, 15 and 16 subjects in Cohorts 01, 02 and 03, respectively. This is explained by a strike of health service personnel in Poland during the years 1997-1998, when in majority of the cases physicians did not record the cause of death in the death certificate.

### 3.2 Reasons for exit from the study

According to the MORGAM Manual the follow-up of a person continues until the earliest one of the following events occurs:

- the person dies;
- the fixed follow-up period of the cohort for the study ends;
- the person refuses from taking part in the study;
- the person is lost to follow-up, i.e. it is no longer possible to follow-up the person for his or her death with reasonable efforts.

[Table F.1](#) gives the percentage of the different reasons of exit. The reason is mostly "end of the study" or "death". Loss to follow-up is an occasional reason in the Cohorts where the MPC had notification of loss to follow-up (see [Table F.3](#)). For these, "moved away" was used in the Cohorts which were followed up using event registers or medical records, and "refusal" was used in the cohorts where the subjects were contacted periodically. Reason "other" was used in some of the cohorts for subjects, for which the record linkage for the follow-up failed (POL-WAR). In these cases the follow-up was coded to end on the day of the baseline examination. For some other cohorts it was apparently used in situations where the reason could not be specified.

### 3.3 End-of-follow-up period for death

[Table F.2](#) gives the dates, reported by the MPCs, when the follow-up was ended in the case the person did not die, did not refuse from participation or was not lost to follow-up earlier. The table also gives the three most frequent exit dates in these cases. These dates are consistent with the reported end-of follow-up dates, and confirm that nearly all cohorts ended the follow-up at a fixed date. The exceptions are:

- FRA-LIL/STR/TOU and UNK-BEL, where the follow-up period was 10 years (5-years for UNK-BEL) from the date of baseline examination of each person. This explains the multitude of end-of-follow-up dates.
- GER-AUG, where the end-of-follow-up date depends on when the person returned the follow-up questionnaire or when population registries gave information on vital status and address.

To avoid bias in the results, it is important that the follow-up period is not extended from the general upper limit for some subject because their later death becomes to the attention of the MPC. To check for this, the last two columns of [Table F.2](#) give the number of exit dates that are later than the most frequent one, and latest exit date of the cohort. The findings suggest that the good practise was followed in all cohorts.

### 3.4 Follow-up procedures and coverage

The procedures used for notification of deaths and notification of loss to follow-up are given in [Table F.3](#), the percentage of loss-to-follow-up for these cohorts is available in [Table F.4](#). More details of these procedures are given in the [Description of MORGAM Cohorts](#). [Table F.5](#) reports the comparison of the expected and observed number of deaths in the Cohorts.

The scores to summarize the quality of the follow-up procedures and coverage are shown in [Table F.6](#).

Most RUAs used national death register for the follow-up and hence it covered the whole country. For many RUAs, notification of loss to follow-up was not required due to the high coverage of the death register. The percentage lost to follow-up was small in all Cohorts: less than 2% in nearly all cohorts and even the maximum was only 6.6%. The ratio of observed to expected deaths varies from 39% to 123%. There are large differences between the observed and expected number of deaths in some RUAs. This may be due to poor coverage of follow-up, but other potential reasons are the possibility that the Cohort is healthier than

the general population. For some Cohorts the annual population mortality data were not available for the last years of follow-up, and therefore the estimated mortality may be an overestimate.

Comments on individual RUAs on the follow-up procedure and coverage:

- FIN-ATB: The cohort was recruited from smokers of Southern Finland, and therefore representative population mortality data are not available for comparison. However, the follow-up procedure is identical with that FIN-EAS/WES, which have a high coverage score.
- FRA-LIL, FRA-STR and FRA-TOU: The follow-up procedure looks very appropriate, but the low Mortality comparison score (0) is likely to reflect the fact that these are largely occupational cohorts and therefore are not representative of the general population.
- ITA-FSE: The annual population mortality data are not available.
- LTU-KAU: Notification of deaths covered the RU (i.e. city of Kaunas) only. Notification of loss to follow-up was obtained only for Cohort 03.
- RUS-NOV: The coverage score is low because the source of notification of deaths covered the district of Novosibirsk only and there was no notification of loss-to-follow-up.
- UNK-BEL: The low Mortality comparison score (0) is likely to reflect the fact that these are largely occupational cohorts and therefore are not representative of the general population.
- UNK-EDI: Comparison with the population mortality data could not be done because the annual population mortality data were not available. However, the follow-up procedure is identical with that of UNK-GLA and UNK-SHH, which have a high coverage score.

### 3.5 Diagnosis of cause of death

According to the MORGAM Manual, whenever possible, final official codes should be used. If these are not available the death diagnoses should be derived from the latest available source, such as the death certificate. [Table F.7](#), computed from the MORGAM follow-up data, gives the percentage of the final official codes and death certificates as the source of the underlying cause of death. For the PRIME cohorts (FRA-LIL/STR/TOU and UNK-BEL), [Table F.7](#) suggest incorrectly that the underlying cause of death was derived from death certificates. In these cohorts, the PRIME "Deaths" Medical Committee assigned the underlying cause of death using all available information from the death certificate, from the autopsy report and from the general practitioner's, hospital and emergency team's notes.

[Table F.7](#) also gives the source of the other death diagnoses, when available. In some cases the sum of the alternatives is less than 100%, indicating that the cause of death was not available at all. For the underlying cause of death, column "NNN" of the [table on irrelevant codes of the underlying cause of death](#) gives the number of missing data for the diagnosis. The missing data is described in section [Availability and distributions of data items](#) above.

The ICD version used for coding the death diagnoses is given in [Table F.7](#) along with the period of using each version. ICD- 8 was in use in Denmark up to year 1993 and in Finland up to 1986. Otherwise ICD-9 was used until it was changed to ICD-10 in the late 1990s. In Augsburg, Germany and Italy, ICD-9 was used still in the 2000s. The periods of the ICD versions understandably follow the periods generally used in the country. However, in GER-AUG, the MPC had coded the deaths to ICD-9 throughout the follow-up period, using information from the death certificates, even though the official statistics in Germany changed to ICD-10 already in 1998.

The results of necropsy give valid data for the diagnostic classification of fatal events. The cause of death remains often uncertain. [Table F.7](#) gives the percentage of deaths in the cohorts that are known to have been necropsied. The percentage varies between 0% and 56%. Necropsies are rare in many countries, but also many MPCs have not provided the data on whether or not necropsy was performed.

## 4. Follow-up of coronary events

This section considers the aspects of the follow-up of coronary events beyond what was already considered in the section [Mortality follow-up](#) above. The follow-up of fatal coronary events is compulsory for all cohorts, and the follow-up of non-fatal events is highly recommended. There is flexibility on the extent of the end-

point categories of non-fatal events. The data specific to the follow-up of coronary events are described in two data transfer formats:

1. [Data Transfer Format: Coronary Events Inventory \(Form 27\)](#). These data should be provided for every member of the cohorts;
2. [Data Transfer Format: Coronary Events \(Form 22\)](#). These data should be provided for:
  - o every death during the follow-up period which either
    - has a CHD code in the death certificate or final death diagnoses. This includes ICD-8 and 9 codes 410-414 and ICD-10 codes I20-I25, or
    - has a code of sudden or unattended death or cardiac arrest as an underlying cause of death in the death certificate or final death diagnoses (this includes ICD-8 code 795, ICD-9 code 798 and ICD-10 codes I46, R96, R98 and R99), or
    - would lead to MORGAM diagnostic category of AMI or coronary death.
  - o all non-fatal coronary events of types agreed between the MPC and the MDC.

#### 4.1 Types of non-fatal coronary events followed up

The extent to which the follow-up of non-fatal coronary events was done depends on each MPC. Alternative schemes providing data on non-fatal coronary events included:

- person's first non-fatal definite AMIs.
- person's first and recurrent non-fatal definite AMIs.
- person's first non-fatal definite and possible AMIs (i.e. DGNCAT=1, 2 or 3 in Form 22).
- person's first and recurrent non-fatal definite and possible AMIs.
- person's first diagnosis of unstable angina pectoris, provided that it was not preceded by a definite or possible AMI.
- person's first unclassifiable coronary event, provided that it was not preceded by a definite or possible AMI.
- person's first silent myocardial infarction, provided that it was not preceded by a definite or possible AMI.
- first cardiac revascularization (or, alternatively, on first and recurrent cardiac revascularizations)
- person's first recorded angina pectoris, provided that it was not preceded by an acute coronary event or a cardiac revascularization.

The types of non-fatal coronary events followed up in each Cohort are given in [Table F.8a](#). The main deviations from the majority of the cohorts were in:

- AUS-NEW and POL-TAR, where non-fatal coronary events were not followed up;
- GER-AUG, which followed up non-fatal coronary events only for those who did not have a self-reported history of MI at baseline.
- UNK-CAE followed up first definite MIs only.

FRA-LIL, FRA-STR, FRA-TOU and UNK-BEL did not have the category "possible MI", but this is largely compensated by their category "unstable angina". All other Cohorts followed up also possible MIs. For some of the cohorts it is not possible to separate between definite and possible MIs. Some cohorts have included all unstable angina pectoris, but the borderline between unstable MI and possible MI varies largely depending on the diagnostic criteria that were used for the cohort. In MONICA classification most cases of unstable angina are apparently included in the category "possible MI", whereas in the PRIME classification, most of the possible MIs go to the category "unstable angina". Cardiac revascularizations were recorded for most cohorts, silent MI in Rome only and stable angina in the PRIME (France and UNK-BEL) and Scottish (UNK-EDI, UNK-GLA and UNK-SHH) cohorts. Details of the diagnostic criteria used in the Cohorts are described in the [Description of MORGAM Cohorts](#), and evaluated further in section [Diagnosis of coronary events](#) below. Recurrent MI was followed up systematically in DEN-GLO, FIN-ATB and the PRIME (France and UNK-BEL).

The number of events observed during the follow-up are heavily dependent on the extent of the non-fatal follow-up.

#### 4.2 Availability and distributions of data items (Forms 22 and 27)

Here are hyperlinks to the distributions of the data items of the [Data Transfer Format: Coronary Events](#)

[Inventory \(Form 27\)](#) and [Data Transfer Format: Coronary Events \(Form 22\)](#):

- EXDATEC: Date of exit from the follow-up for non-fatal coronary events ([day](#), [month](#), [year](#))
- EXREASC: Reason for the exit from the follow-up for non-fatal coronary events
- EVDATE: Date of event ([day](#), [month](#), [year](#))
- EVTYPE: Type of event
- CLIND1: ICD code of the clinical diagnosis: main clinical condition
- CLIND2: ICD code of the clinical diagnosis: other clinical condition
- CLIND3: ICD code of the clinical diagnosis: other clinical condition
- ICDVER: ICD version used for the clinical diagnoses
- SURVIV: Survival at 28 days
- Source of diagnosis of angina pectoris
  - APSOUR1: Medical record or drug reimbursement register
  - APSOUR2: Interview with doctor
  - APSOUR3: Interview with person
- REVTYPE: Type of revascularization
- Source of data on revascularization
  - REVSOUR1: Medical record
  - REVSOUR2: Interview with doctor
  - REVSOUR3: Interview with person
- Source of notification of acute coronary event
  - CESOUR1: MONICA or other coronary event register
  - CESOUR2: Cause of death register
  - CESOUR3: Medical record
  - CESOUR4: Interview with doctor
  - CESOUR5: Interview with person
  - CESOUR6: ECG
  - CESOUR7: Other
- Source of validation of the diagnosis of acute coronary event
  - DSOUR1: Full MONICA validation
  - DSOUR2: Other systematic review of diagnostic data
  - DSOUR3: Hospital notes seen
  - DSOUR4: Discharge letter
  - DSOUR5: Discharge diagnosis
- SYMPT: Symptoms in the coronary event
- ECG: ECG findings
- ENZ: Serum enzymes
- MARKER: Troponin or other non-enzymatic marker of cardiac injury
- NECSUM: Necropsy findings summary
- DGNCAT: Diagnostic category
- DEATHB: Death before arrival at hospital
- THROMBD: Thrombolytic therapy during episode

In FRA-LIL/STR/TOU and UNK-BEL, the main clinical diagnosis (CLIND1) was not the diagnosis from the health care provider, but it was assigned by the PRIME Medical Committee using all available information.

### 4.3 Reasons for exit from the follow-up of non-fatal coronary events

As the main rule, a person exits from the follow-up of non-fatal coronary events at the same time as he/she exits from the mortality follow-up. The latter is considered in section [Reasons for exit from the study](#) above. In some situations for some cohorts the exit from the follow-up of non-fatal coronary events can take place earlier than the exit from mortality follow-up:

- If the geographic coverage of the notification is smaller for non-fatal events than for deaths, then a person, who moves out of the smaller area but within the larger area, is lost-to-follow-up of non-fatal events but

continues to be followed up for death;

- The general end of the follow-up for non-fatal events is earlier than for deaths. This is the case if the source used for notification of non-fatal events is not available after a certain time point;
- The upper age limit for follow-up may be lower for non-fatal events than for deaths.

[Table F.9](#) gives the number of exits occurred due to above reasons. In most cases, the reason of exit ([EXREASC](#)) is coded as irrelevant, which means that the end of follow-up of non-fatal coronary events is the same as that of mortality follow-up. Cohorts where the follow-up of non-fatal coronary events ends earlier than for deaths for some of the subjects are:

- GER-AUG, where
  - the area of notification of non-fatal events is smaller than the area of notification of deaths (see [Tables F3](#) and [F11a](#)), and
  - the upper age limit of the follow-up of non-fatal coronary events is 74 years (see [Description of MORGAM Cohorts](#)). For persons reaching the upper age limit, item [EXREASC](#) was coded "other".
- ITA-BRI/PAM, where the area of notification of non-fatal events is smaller than the area of notification of deaths (see [Table F3](#) and [F11a](#)).
- POL-WAR, where
  - the follow-up for non-fatal coronary events ended much earlier than the follow-up for death, and
  - the upper age limit of the follow-up of non-fatal coronary events is 65 years (see [Description of MORGAM Cohorts](#)). For persons reaching the upper age limit, item [EXREASC](#) was coded "other".
- RUS-NOV, where the upper age limit of the follow-up of non-fatal coronary events is 65 years (see [Description of MORGAM Cohorts](#)). For persons reaching the upper age limit, item [EXREASC](#) was coded "other".
- SWE-NSW, where
  - the area of notification of non-fatal events is smaller than the area of notification of deaths (see [Tables F3](#) and [F11a](#)), and
  - the upper age limit of the follow-up of non-fatal coronary events is 65 years (see [Description of MORGAM Cohorts](#)). However, persons who were already at baseline 64 years old were not followed up for non-fatal coronary events, except one person. For persons reaching the upper age limit, item [EXREASC](#) was coded "other".

We also checked that whenever the [Description of MORGAM Cohorts](#) suggests that the follow-up of non-fatal coronary events ends earlier than for deaths, this is consistent with [Table F.9](#).

#### 4.4 End-of-follow-up period for coronary events

In most cohorts, the date of exit from the follow-up of non-fatal coronary events is always the same as from the mortality follow-up for every subject. This can be seen as blank rows in [Table F.10](#), which shows the dates of exit from the follow-up of non-fatal coronary events. The end of mortality follow-up period was assessed in section [End-of-follow-up period for death](#) above.

The end of follow-up of non-fatal coronary events differs from that of mortality follow-up only for the cohorts specified in section [Reasons for exit from the follow-up of non-fatal coronary events](#) above. For these cohorts, it is relevant to check that:

- the general end-of follow-up period for non-fatal coronary events reported by the MPC is supported by the data, i.e. the most frequent date of exit when [EXREASC](#)=1. [Table F.10](#) shows no discrepancies here.
- the date of exit from the follow-up of non-fatal coronary events is never later than the date of exit from mortality follow-up. This is included in the routine checking constraint EXDATEC27\_EXDATE25\_DEXAM20\_77 and hence the MPC is asked to check for this already before transferring the data to the MDC (see [Table I.3](#)).
- the date of exit from the follow-up of non-fatal coronary events is never later than the general end of such follow-up. This can be seen from the rightmost column of [Table F.10](#).
- item [EXREASC](#) has value 8 ("irrelevant") if and only if the date of exit from the follow-up of non-fatal coronary events is the same as the date of exit from the mortality follow-up. This is included in the routine checking constraint EXDATEC27\_EXREASC27\_EXDATE25\_77 (see [Table I.3](#)).

These checks show no discrepancies.

## 4.5 Follow-up procedures and coverage

The procedures used for notification of deaths was given in the section on [mortality follow-up procedures and coverage](#) above. The procedures used for notification of non-fatal coronary events are given in [Table F.11a](#). More details of the procedures are given in the [Description of MORGAM Cohorts](#). [Table F.11b](#) shows the percentage of different sources of notification of fatal and non-fatal coronary events as indicated in the data. In the cases where the event was identified through several sources, it is assigned to the left-most relevant column in [Table F.11b](#). Most MPCs used linkage to a national or regional hospital discharge register for the follow-up or/and linkage to a local or regional coronary event register maintained by the [MPC](#). For four cohorts, there is inconsistency between [Table F.11a](#) and [Table F.11b](#):

- ITA-FRI: The source of notification is missing for most of the events.

The procedures used for notification of loss to follow-up of non-fatal coronary events are also given in [Table F.11a](#), and the percentage of loss-to-follow-up of fatal and non-fatal coronary events is available in [Table F.12](#). In general, as expected, the same data sources were used for notification of loss to follow-up of non-fatal events as for deaths (cf. [Table F.3](#)). Compared to the mortality follow-up, the percentage of loss to follow-up increased for the cohorts where the geographical coverage of non-fatal notification was smaller (GER-AUG, ITA-BRI/PAM and SWE-NSW). Nevertheless, the percentage remained reasonably low (2-4%) in these cohorts. Note that reason "other" of exit from the follow-up of non-fatal coronary events was not considered as loss to follow-up because this code was used when the person reached the possible upper age limit of the follow-up of non-fatal events.

[Table F.13](#) reports the comparison of the expected and observed number of coronary deaths in the Cohorts. The ratio of observed to expected numbers are mostly similar to the numbers for all deaths in [Table F.5](#) with, as expected, more variation when the numbers are small. There are clear systematic differences in:

- FRA-LIL/STR/TOU and UNK-BEL, where the underlying cause of death for the cohort data was not derived from the death certificates but they were exceptionally assigned by the PRIME "Deaths" Medical Committee using all available information from the death certificate, from the autopsy report and from the general practitioner's, hospital and emergency team's notes. Therefore, for these cohorts the figures of [Table F.13](#) cannot be used for quality assessment.

According to the MORGAM data requirements, a coronary event record should be provided for each death with CHD, sudden death, unattended death or cardiac arrest in the death certificate or final death diagnoses. This is checked in Section [Record inventory and routine data checking](#).

The scores (see [Assessment of follow-up procedures and coverage](#) above) to summarize the quality of the follow-up procedures and coverage of fatal and non-fatal coronary events are shown in [Table F.14](#). The coverage score is less than two for the following cohorts:

- ITA-FRI: The ratio of observed and expected numbers of CHD deaths is far lower than for all deaths.
- ITA-FSE: See [mortality follow-up procedures and coverage](#) above.
- ITA-ROM: In Cohort 24, the ratio of observed and expected numbers of CHD deaths is slightly than for all deaths.
- LTU-KAU: See [mortality follow-up procedures and coverage](#) above.
- POL-WAR: In Cohort 03, the ratio of observed and expected numbers of CHD deaths is lower than for all deaths.
- SWE-NSW: In Cohort 02, the ratio of observed and expected numbers of CHD deaths is lower than for all deaths.
- RUS-NOV: See [mortality follow-up procedures and coverage](#) above.
- UNK-EDI: See [mortality follow-up procedures and coverage](#) above.

## 4.6 Diagnosis of coronary events

We will focus here on the diagnosis of acute coronary events: myocardial infarctions, unstable angina pectoris and other coronary deaths. The diagnosis is made difficult by (a) the fact that the severity of a non-fatal

coronary events is very heterogeneous, where the diagnosis of the milder forms is often uncertain or they may not come to medical attention at all, and (b) for fatal events the diagnostic information is often very sparse. Most of the coronary deaths take place without medical presence, and in most countries necropsy is rarely performed to the uncertain cases. Because of these uncertainties, MORGAM has defined several diagnostic categories for coronary events, reflecting the characteristics of the events and the certainty of the diagnostic information.

The initial recommendation in MORGAM was that coronary events should be classified using the WHO MONICA procedure (see [MONICA Manual](#), Part IV, Section 1, Subsections 2.2 and 2.3). However, it was recognized that some of the cohorts had already diagnosed their coronary events using some other standardized procedure. Also the use of clinical diagnoses was considered acceptable provided that validation studies are available to support the good quality of the clinical diagnoses in the region. During the course of the study, strict MONICA validation has become partially outdated due to the replacement of cardiac enzymes with more specific and sensitive non-enzymatic markers as routine diagnostic tests.

[Table F.15](#) lists the source of validation for acute coronary events by RUA. Most of the MPCs used MONICA validation, but most of them only for a part of the events. More details of the diagnostic procedures are given in the [Description of MORGAM Cohorts](#). Some centres used MONICA validation for events found in a local or regional coronary event register maintained by the MPC, and used e.g. a clinical diagnosis for events that took place outside the registration area or at age higher than the upper age limit of the event registration. [Table F.16](#) gives the percentages of the source of validation used, as indicated in the event data. For one cohort, there is inconsistency between [Table F.15](#) and [Table F.16](#):

- ITA-FRI: The source of validation is missing for most of the events.

Perhaps a dominating aspect concerning the diagnosis of fatal events is the availability of information on which the diagnosis can be based. When MONICA diagnostic criteria are used, this is reflected in the percentage of the diagnostic category "unclassifiable". A high percentage of "unclassifiable" indicates much uncertainty in the diagnosis, and there is nothing that the MPC can do to remove this uncertainty. The percentage of unclassifiable events in the MORGAM cohorts can be used as an indicator only when MONICA classification was used for nearly all events. However, even when MONICA classification was not used extensively in for MORGAM, the percentage of unclassifiable events in the MONICA event registration that took place in the same population can often be used as an indicator (see [Table 7](#) of [Quality Assessment of Coronary Event Registration Data in the WHO MONICA Project](#)).

Furthermore, when the diagnosis of fatal events was based on the official death diagnoses or death certificates, the comparison of the official mortality with the MONICA validated mortality is a useful indicator of the quality of the routine diagnoses in the populations which took part in the MONICA Project. Such a comparison can be seen in Figure 5 of reference [1].

A Diagnosis Score based on the above aspects was defined for each cohort as:

<i>Diagnosis score</i>	= 2	if no concern in the diagnosis of coronary events was identifiable
	1.5	if small concern was identifiable, such as: <ul style="list-style-type: none"> <li>• routine diagnosis was used for remarkable percentage of the events but there are validation studies suggesting the diagnosis is reasonable for epidemiologic studies, or</li> <li>• MONICA validation was used for nearly all events, but there is a moderate percentage of unclassifiable deaths.</li> </ul>
	1	if small concern was identifiable on several quality aspects or there was moderate concern on some aspect, such as a remarkable percentage of unclassifiable deaths in the population.
	0.5	if there is moderate concern about various aspects of the diagnosis.

- 0 if the diagnosis of coronary events is considered clearly unsuitable for MORGAM.

The Diagnosis scores are given in [Table F.14](#). The scoring gives emphasis on a wide definition of a coronary event, which includes both definite and possible non-fatal MIs. This principle is consistent with the finding [ref?] that persons with even mild events have a high risk of developing a more severe coronary event later. This principle differs from that adopted in the WHO MONICA Project, where only definite non-fatal MIs were considered in the main analyses. In MONICA the objective was to use a reliable definition for assessing time trends in the population and comparisons between populations, whereas in MORGAM it is more important to classify each event into coronary/non-coronary with as few miss-classifications as possible. There may be situations in MORGAM where a more narrow definition will be used. In such cases the scoring of [Table F.14](#) is not necessarily good.

The findings on which the scores of [Table F.14](#) were based for each RUA are given here:

- AUS-NEW:
  - The MPC has a follow-up for deaths only. The diagnosis of coronary events was based on the official underlying cause of death. No validation studies of the diagnosis are available.
  - In MONICA, the number of unclassifiable deaths was a half of the number of definite and possible coronary deaths. The number of "official" coronary deaths was close to the number of definite, possible and unclassifiable coronary deaths.
- DEN-GLO:
  - The diagnosis was based on hospital discharge diagnosis and on underlying or immediate cause of death. According to a validation study of the hospital discharge and routine mortality diagnosis published in 2003 [2], these sources provide a reasonable source of diagnosis for epidemiological studies.
  - In MONICA, the number of unclassifiable deaths was a half of the number of fatal definite and possible coronary deaths. The number of "official" coronary deaths is close to the number of definite and possible coronary deaths excluding the unclassifiable.
- FIN-ATB:
  - The diagnosis was based on hospital discharge diagnosis and the underlying cause of death. There are three validation studies on the CHD diagnoses from different periods [3, 4] suggesting that the diagnoses are suitable for epidemiological studies.
- FIN-EAS/WES:
  - MONICA Diagnosis has been used for events found in coronary event registers. This varies from a half of the events in the first cohorts to about 10% in cohort 24. For the rest of the events, the diagnosis was based on hospital discharge diagnosis and the underlying cause of death. There are three validation studies on the CHD diagnoses from different periods [3, 4] suggesting that the diagnoses are suitable for epidemiological studies.
  - In MONICA, the number of unclassifiable events was very small due to selective necropsy in the country. The number of "official" coronary deaths was close to the number of MONICA coronary deaths.
- FRA-LIL/STR/TOU:
  - The diagnosis was based on the PRIME diagnostic procedure described in the [Description of MORGAM Cohorts](#). It is a very reasonable procedure, where MI is close to MONICA definite MI, and unstable angina covers a large part of the MONICA possible MI.
  - In MONICA, the number of unclassifiable deaths in the same areas was about 80% of the number of fatal definite and possible coronary deaths. In MORGAM the percentage of unclassifiable is 80 in FRA-LIL, 120 in SRA-STR and 90 in FRA-TOU.
- GER-AUG:
  - For non-fatal events the diagnostic classification is good. MONICA classification, possibly with simplified ECG-coding, was used for nearly all events up to age 74, which was the upper age limit for the follow-up of non-fatal events.
  - Diagnostic information available on fatal events was very limited. For those above 74 years, the underlying cause based on the death certificate was used. For the younger deaths, the MONICA classification was used. In MONICA, the number of unclassifiable deaths was a half of the number of definite and possible coronary deaths. In MORGAM the respective proportion is 50%.
- ITA-BRI/PAM:
  - MONICA classification was used.
  - In MONICA, the number of unclassifiable deaths was a third of the number of definite and possible coronary deaths. In MORGAM the respective proportion is 20%.

- ITA-FRI/FSE:
  - MONICA classification was used.
  - In MONICA, the number of unclassifiable deaths was a quarter of the number of definite and possible coronary deaths. In MORGAM the respective proportion is 110%.
- ITA-ROM:
  - About 85% of the coronary events were coded using the MONICA classification, and the rest using the principles of the Seven Countries Study (see [Description of MORGAM Cohorts](#)).
  - The number of unclassifiable deaths in the MORGAM data is 20% of the number of definite and possible coronary deaths.
- LTU-KAU:
  - MONICA classification was used up to age 64.
  - After age 64, the diagnosis was based on a clinical diagnosis by a cardiologist or on the underlying cause of death.
  - In MONICA, the number of unclassifiable deaths was less than 15% of the number of fatal definite and possible coronary deaths. The number of unclassifiable deaths in the MORGAM data is 14 % of the number of definite possible coronary deaths among the validated coronary deaths. The number of "official" coronary deaths overestimated the number of MONICA coronary deaths.
- POL-TAR:
  - The MPC has a follow-up for deaths only. The diagnosis of coronary events was based on the underlying cause of death on the death certificate. No validation studies of the diagnosis are available.
  - In MONICA, the number of unclassifiable deaths was about 80% of the number of definite and possible coronary deaths. The number of "official" coronary deaths was smaller than the number of definite and possible coronary deaths. This was largely due to the fact that atherosclerosis or hypertension was commonly used as the underlying cause of death. In MORGAM this underestimation was compensated by the fact that atherosclerosis and hypertension were assigned diagnostic category "unclassifiable".
- POL-WAR:
  - MONICA classification was used up to age 64 and year 1994.
  - After age 64 and year 1994, the cohort was followed up for deaths only. Such deaths were classified using the underlying cause of death. No validation studies of the diagnosis are available.
  - The number of "official" coronary deaths was smaller than the number of definite and possible coronary deaths in MONICA. This was largely due to the fact that atherosclerosis was commonly used as the underlying cause of death. In MORGAM this underestimation was compensated by the fact that atherosclerosis was assigned diagnostic category "unclassifiable".
- RUS-NOV:
  - MONICA classification was used for nearly all fatal and non-fatal events up to age 64.
  - After age 64, only deaths were followed up. For these the underlying cause of the official statistics or from death certificate was used. No validation studies of the diagnosis are available.
  - In MONICA, the number of unclassifiable deaths was very small, but in MORGAM it is equal to the total of definite and possible coronary deaths. These come from the death certificate diagnoses 413-414, which the MPC decided to code as unclassifiable.
- SWE-NSW:
  - MONICA classification was used for nearly all fatal and non-fatal events up to age 64.
  - After age 64, only deaths were followed up. For these the official underlying cause was used. No validation studies of the diagnosis are available.
  - In MONICA, the number of unclassifiable deaths was about 4% of the number of definite and possible coronary deaths. The number of "official" coronary deaths was close to the number of MONICA coronary deaths.
- UNK-BEL:
  - The diagnosis was based on the PRIME diagnostic procedure described in the [Description of MORGAM Cohorts](#). It is a very reasonable procedure.
  - In MONICA, the number of unclassifiable deaths in the same areas was about 17% of the number of fatal definite and possible coronary deaths. In MORGAM the percentage of unclassifiable is 80.
- UNK-CAE:
  - For non-fatal coronary events, a modification of the old WHO criteria were used. These assign diagnosis "no MI" to a large proportion of the events that would be classified as "possible MI" in MONICA.
  - The diagnosis of coronary deaths was based on the underlying cause of death of the death certificate. No validation studies of the diagnosis are available.
  - There were no MONICA Centres in Wales to indicate the availability of information for the coding of the cause of death.
- UNK-EDI/GLA/SHH:
  - The diagnosis was based on hospital discharge diagnoses and on the causes of death. No validation studies of the diagnosis are available.

- o In MONICA, the number of unclassifiable deaths in UNK-GLA was about 10% of the number of fatal definite and possible coronary deaths. The number of "official" coronary deaths was close to the number of MONICA coronary deaths.

## 4.7 Coronary Event Score

To summarize the reliability of the end-point data, a simple

*Coronary Event Score*

was defined as the mean of

the [Coverage Score](#) and the [Diagnosis Score](#). The Coronary Event Score for each Cohort is shown in [Table F.14](#).

## 5. Follow-up of stroke events

This section considers the aspects of the follow-up of stroke events beyond what was already considered in the section [Mortality follow-up](#) above. The follow-up of fatal strokes is compulsory for all cohorts, and the follow-up of non-fatal events is highly recommended. The data specific to the follow-up of stroke events are described in two data transfer formats:

1. [Data Transfer Format: Stroke Events Inventory \(Form 28\)](#). These data should be provided for every member of the cohorts;
2. [Data Transfer Format: Stroke Events \(Form 23\)](#). These data should be provided for:
  - o every death during the follow-up period which either
    - has a code for stroke in the death certificate or final death diagnoses. This includes ICD-8 codes 430-436 and ICD-9 codes 430, 431, 433, 434 or 436 and ICD-10 codes I60, I61, I63 and I64, or
    - would lead to MORGAM diagnostic category of stroke (i.e. [DGNCAT](#) = 1 or 9 in Form 23).
  - o first and recurrent non-fatal stroke events. The recording of non-fatal stroke events is optional, but recommended.

### 5.1 Types of non-fatal stroke events followed up

The types of non-fatal stroke events followed up in each Cohort are given in [Table F.8b](#):

- **Non-fatal stroke events** were not followed up in AUS-NEW, GER-AUG and POL-TAR.
- In most of the Cohorts, **diagnostic categories** "definite" and "unclassifiable" were used. Some cohorts have provided data also on suspected stroke events which ended up with diagnostic category "No stroke". In DEN-GLO, FIN-ATB and UNK-EDI/GLA/SHH all strokes are "unclassifiable" because further validation of events was not done (see section [Stroke or not a stroke](#) below). FIN-WES/EAS used sufficient validation to identify "definite" stroke only for the events that were included in local stroke registers. This depended on the geographic area, and age of the patient and year of the event.
- **Recurrent stroke events** were followed up systematically in DEN-GLO, FIN-ATB and UNK-EDI/GLA/SHH. Most other Centres followed up recurrent definite strokes but not recurrent unclassifiable strokes. FIN-EAS/WES and ITA-ROM followed up recurrent strokes if the subtype of recurring stroke was different from the preceding ones.

Details of diagnostic criteria used in the Cohorts are described in the [Description of MORGAM Cohorts](#) and evaluated further in section [Diagnosis of stroke events](#) below.

### 5.2 Availability and distributions of data items (Forms 23 and 28)

Here are hyperlinks to the distributions of the data items of the [Data Transfer Format: Stroke Events Inventory \(Form 28\)](#) and [Data Transfer Format: Stroke Events \(Form 23\)](#):

- EXDATES: Date of exit from the follow-up for non-fatal stroke events ([day](#), [month](#), [year](#))
- EXREASS: Reason for the exit from the follow-up for non-fatal stroke events
- EVDATE: Date of event ([day](#), [month](#), [year](#))
- CLIND1: ICD code of the clinical diagnosis: main clinical condition
- CLIND2: ICD code of the clinical diagnosis: other clinical condition
- CLIND3: ICD code of the clinical diagnosis: other clinical condition

- [ICDVER](#): ICD version used for the clinical diagnoses
- [SURV7](#): Survival at 7 days
- [SURV28](#): Survival at 28 days
- Source of notification of acute stroke event
  - [SESOUR1](#): MONICA or other stroke event register
  - [SESOUR2](#): Cause of death register
  - [SESOUR3](#): Medical record
  - [SESOUR4](#): Interview with doctor
  - [SESOUR5](#): Interview with person
  - [SESOUR6](#): Other
- Source of validation of the diagnosis of acute stroke event
  - [DGSOUR1](#): Full MONICA validation
  - [DGSOUR2](#): Other systematic review of diagnostic data
  - [DGSOUR3](#): Hospital notes or other medical records
  - [DGSOUR4](#): Discharge letter
  - [DGSOUR5](#): Discharge diagnosis
- [MANAGE](#): Management
- Examination by ...
  - [INVEST1](#): Physician
  - [INVEST2](#): Computerized axial tomography
  - [INVEST3](#): Magnetic resonance imaging
  - [INVEST4](#): Angiography
  - [INVEST5](#): Ultrasound of carotid arteries
  - [INVEST6](#): Lumbar puncture
  - [INVEST7](#): Electrocardiogram
  - [INVEST8](#): Echocardiography
- [DGNCAT](#): Diagnostic category of stroke
- [ASSMI](#): Was the event associated with a definite or possible myocardial infarction?
- Type of stroke
  - [SAH](#): Subarachnoid haemorrhage
  - [ICH](#): Intracerebral haemorrhage
  - [CI](#): Cerebral infarction
  - [OTYPE](#): Other specified type of stroke
- Further specification of type of stroke
  - [SOURSAH](#): Source of subarachnoid haemorrhage
  - [CAREM](#): Known cardiac source of embolism
  - [DISSART](#): Known dissection of a precerebral artery
- Severity of the stroke
  - [CONSC](#): Level of consciousness at the first examination
  - [COURSE](#): Course of stroke in the first 72 hours
- [DIAB](#): Diabetes

In DEN-GLO, most of SESOUR\* and DGSOUR\* items were coded as 9 (insufficient data) for all members of the Cohort. There is always code 1 (yes) for some of the sources. Apparently code 9 in this cohort means that the source was not used, but there is no confirmation of this from the MPC.

In FRA-LIL/STR/TOU and UNK-BEL, the main clinical diagnosis (CLIND1) was not the diagnosis from the health care provider, but it was assigned by the PRIME Medical Committee using all available information.

### 5.3 Reasons for exit from the follow-up of non-fatal stroke events

As the main rule, a person exits from the follow-up of non-fatal stroke events at the same time as he/she exits from the mortality follow-up. The latter is considered in section [Reasons for exit from the study](#) above. In some situations for some cohorts the exit from the follow-up of non-fatal stroke events can take place earlier than the exit from mortality follow-up:

- If the geographic coverage of the notification is smaller for non-fatal events than for deaths, then a person, who moves out of the smaller area but within the larger area, is lost-to-follow-up of non-fatal events but continues to be followed up for death;
- The general end of the follow-up for non-fatal events is earlier than for deaths. This is the case if the source used for notification of non-fatal events is not available after a certain time point;
- The upper age limit for follow-up may be lower for non-fatal events than for deaths.

[Table F.17](#) gives the number of exits occurred due to above reasons. In most cases, the reason of exit ([EXREASS](#)) is coded as irrelevant, which means that the end of follow-up of non-fatal stroke events is the same as that of mortality follow-up. Cohorts where the follow-up of non-fatal stroke events ends earlier than for deaths for some of the subjects are:

- ITA-BRI/PAM, where the area of notification of non-fatal events is smaller than the area of notification of deaths (see [Table F3](#) and [F19a](#)).
- LTU-KAU, where the upper age limit of the follow-up of non-fatal stroke events is 65 years (see [Description of MORGAM Cohorts](#)). For persons reaching the upper age limit, item [EXREASS](#) was coded "other".
- POL-WAR, where
  - the follow-up for non-fatal stroke events ended much earlier than the follow-up for death, and
  - the upper age limit of the follow-up of non-fatal stroke events is 65 years (see [Description of MORGAM Cohorts](#)). For persons reaching the upper age limit, item [EXREASS](#) was coded "other".
- RUS-NOV, where the upper age limit of the follow-up of non-fatal stroke events is 75 years (see [Description of MORGAM Cohorts](#)). For persons reaching the upper age limit, item [EXREASS](#) was coded "other".
- SWE-NSW, where
  - the area of notification of non-fatal events is smaller than the area of notification of deaths (see [Tables F3](#) and [F19a](#)), and
  - the upper age limit of the follow-up of non-fatal stroke events is 75 years (see [Description of MORGAM Cohorts](#)). For persons reaching the upper age limit, item [EXREASS](#) was coded "other".

We also checked that whenever the [Description of MORGAM Cohorts](#) suggests that the follow-up of non-fatal stroke events ends earlier than for deaths, this is consistent with [Table F.17](#).

## 5.4 End-of-follow-up period for stroke events

In most cohorts, the date of exit from the follow-up of non-fatal stroke events is always the same as from the mortality follow-up for every subject. This can be seen as blank rows in [Table F.18](#), which shows the dates of exit from the follow-up of non-fatal stroke events. The end of mortality follow-up period was assessed in section [End-of-follow-up period for death](#) above.

The end of follow-up of non-fatal stroke events differs from that of mortality follow-up only for the cohorts specified in section [Reasons for exit from the follow-up of non-fatal stroke events](#) above. For these cohorts, it is relevant to check that:

- the general end-of follow-up period for non-fatal stroke events reported by the MPC is supported by the data, i. e. the most frequent date of exit when [EXREASS](#)=1. [Table F.18](#) shows no discrepancies here.
- the date of exit from the follow-up of non-fatal stroke events is never later than the date of exit from mortality follow-up. This is included in the routine checking constraint `EXDATES28_EXDATE25_DEXAM20_77` and hence the MPC is asked to check for this already before transferring the data to the MDC (see [Table I.3](#)).
- the date of exit from the follow-up of non-fatal stroke events is never later than the general end of such follow-up. This can be seen from the rightmost column of [Table F.18](#).
- item [EXREASS](#) has value 8 ("irrelevant") if and only if the date of exit from the follow-up of non-fatal stroke events is the same as the date of exit from the mortality follow-up. This is included in the routine checking constraint `EXDATES28_EXREASS28_EXDATE25_77` (see [Table I.3](#)).

These checks show no discrepancies.

## 5.5 Follow-up procedures and coverage

The procedures used for notification of deaths was given in the section on [mortality follow-up procedures and coverage](#) above. The procedures used for notification of non-fatal stroke events are given in [Table F.19a](#). More details of the procedures are given in the [Description of MORGAM Cohorts](#). [Table F.19b](#) shows the percentage of different sources of notification of fatal and non-fatal stroke events as indicated in the data. In the cases where the event was identified through several sources, it is assigned to the left-most relevant column in [Table F.19b](#). Most MPCs used linkage to a national or regional hospital discharge register for the follow-up or/and linkage to a local or regional stroke event register maintained by the [MPC](#). There is no inconsistencies between [Table F.19a](#) and [Table F.19b](#).

The procedures used for notification of loss to follow-up of non-fatal stroke events are also given in [Table F.19a](#), and the percentage of loss-to-follow-up of fatal and non-fatal stroke events is available in [Table F.20](#). Compared to the mortality follow-up, the percentage of loss to follow-up increased for cohorts where the geographical coverage of non-fatal notification was smaller (ITA-BRI/PAM and SWE-NSW). The percentage remained reasonable low (2-4%) in these cohorts. Note that reason "other" of exit from the follow-up of non-fatal stroke events was not considered as loss to follow-up because this code was used when the person reached the possible upper age limit of the follow-up of non-fatal events.

[Table F.21](#) reports the comparison of the expected and observed number of stroke deaths in the Cohorts. The ratio of observed to expected numbers are mostly similar to the numbers for all deaths in [Table F.5](#) with, as expected, more variation when the numbers are small. Like for coronary deaths there are clear systematic difference in:

- FRA-LIL/STR/TOU and UNK-BEL, where the underlying cause of death for the cohort data was not derived from the death certificates but they were exceptionally assigned by the PRIME "Deaths" Medical Committee using all available information from the death certificate, from the autopsy report and from the general practitioner's, hospital and emergency team's notes. Therefore, for these cohorts the figures of [Table F.21](#) cannot be used for quality assessment.

According to the MORGAM data requirements, a stroke event form should be provided for each death with stroke in the death certificate or final death diagnoses. This is checked in Section [Record inventory and routine data checking](#).

The scores (see [Assessment of follow-up procedures and coverage](#) above) to summarize the quality of the follow-up procedures and coverage of fatal and non-fatal stroke events are shown in [Table F.22](#). The coverage score is less than two for the following cohorts:

- AUS-NEW: In Cohorts 02 and 03, the ratio of observed to expected numbers of stroke deaths is lower than for all deaths.
- DEN-GLO: In Cohort 02, the ratio of observed to expected numbers of stroke deaths is lower than for all deaths.
- GER-AUG: In Cohort 02, the ratio of observed to expected numbers of stroke deaths is lower than for all deaths.
- ITA-BRI: In Cohort 02, the ratio of observed to expected numbers of stroke deaths is lower than for all deaths.
- ITA-FRI: In Cohort 02, the ratio of observed to expected numbers of stroke deaths is lower than for all deaths.
- ITA-FSE: See [mortality follow-up procedures and coverage](#) above.
- ITA-ROM: In Cohort 01, the ratio of observed to expected numbers of stroke deaths is lower than for all deaths. In Cohorts 21-24, it was not possible to calculate the [Mortality comparison score](#) because the numbers of stroke deaths in the population were not available.
- LTU-KAU: See [mortality follow-up procedures and coverage](#) above.
- POL-WAR: In Cohort 03, the ratio of observed to expected numbers of stroke deaths is lower than for all deaths.
- RUS-NOV: See [mortality follow-up procedures and coverage](#) above.
- UNK-EDI: See [mortality follow-up procedures and coverage](#) above.
- UNK-GLA: In Cohort 02, the ratio of observed to expected numbers of stroke deaths is lower than for all deaths.

It is striking that the ratio of stroke mortality in the cohort to stroke mortality in the population (and hence the stroke mortality comparison score) is generally often much lower or higher than the ratio for all deaths (see [Table F.21](#) and [Table F.5](#)). It is unclear to which extent this is due to bad coverage of stroke. A

potential explanation for a general tendency for lower stroke mortality ratios is that persons with a high risk of stroke are likely to be non-respondents in the baseline survey. However, the number of stroke events is generally low, suggesting that randomness explains much of the variation.

## 5.6 Diagnosis of stroke events

Stroke is diagnosed in MORGAM in two levels. The first level is based on clinical signs, and determines whether or not the suspect event was a stroke. The second level determines the subtype of stroke and requires special diagnostic procedures. These two levels of diagnosis are considered here separately.

### Stroke or not a stroke?

The recommended diagnostic classification of stroke events in MORGAM follows the WHO MONICA procedure (see [MONICA Manual](#), Part IV, Section 2, Subsections 2.2):

Stroke is defined as rapidly developed clinical signs of focal (or, in selected instances, global) disturbance of cerebral function lasting more than 24 hours (unless interrupted by surgery or death), with no apparent cause other than a vascular origin: it includes patients presenting clinical signs and symptoms suggestive of subarachnoid haemorrhage, intracerebral haemorrhage or cerebral infarction. It does not include transient cerebral ischaemia or stroke events in cases of blood disease (e.g. leukemia, polycythaemia vera), brain tumour or brain metastases. Secondary stroke caused by trauma should also be excluded.

For further details, see the specific instructions for item [DGNCAT of Form 23](#) in the MORGAM Manual.

[Table F.23](#) lists the source of validation for stroke events used in each RUA. More details of the diagnostic procedures are given in the [Description of MORGAM Cohorts](#). Most of the MPCs used the MONICA validation. Some centres used MONICA validation for events found in a local or regional stroke event register maintained by the MPC, and used e.g. the clinical diagnosis for events that took place outside the registration area or at age higher than the upper age limit of the event registration. [Table F.24](#) gives the percentages of source of validation used. There is inconsistency between [Table F.23](#) and [Table F.24](#) for:

- ITA-ROM: In Cohort 21 and 24, the source of validation is missing for two events.

When MONICA diagnostic criteria are used, the percentage of diagnostic category "unclassifiable" reflects the availability of information on which the diagnosis was based. A high percentage of "unclassifiable" indicates uncertainty in the diagnosis.

When the diagnostic classification is based on routine diagnosis and this indicates a stroke, then the MORGAM diagnostic category always becomes "unclassifiable". There is some variation between the MPCs in whether or not to consider other cerebrovascular disease (437 of ICD-9, 167 of ICD-10) or late effects of cerebrovascular disease (438 of ICD-9, 169 of ICD-10) as a stroke (see [Description of MORGAM Cohorts](#)). If the population took part in the MONICA stroke registration, comparison of the official mortality with the MONICA validated mortality gives some indication of the quality of the routine diagnoses. Such a comparison can be seen in Figure 2 of reference [\[5\]](#).

A Diagnosis Score was defined for each cohort as:

*Diagnosis score* = 2 if no concern in the diagnosis of stroke events was identifiable  
1.5 if small concern was identifiable, such as:

- routine diagnosis was used for remarkable percentage of the events but there are validation studies suggesting the diagnosis is reasonable for epidemiologic studies, or
- MONICA validation was used for nearly all events, but there is a moderate percentage of unclassifiable deaths.

- 1 if small concern was identifiable on several quality aspects or there was moderate concern on some aspect, such as a remarkable percentage of unclassifiable deaths in the population.
- 0.5 if there is moderate concern about various aspects of the diagnosis.
- 0 if the diagnosis of stroke events is considered clearly unsuitable for MORGAM.

The findings on which the scores of [Table F.22](#) were based for each RUA are given here:

- AUS-NEW:
  - The MPC has a follow-up for deaths only. The diagnosis of stroke events was based on the official underlying cause of death. No validation studies of the diagnosis are available.
  - In MONICA, stroke event registration data were not collected.
- DEN-GLO:
  - The diagnosis was based on hospital discharge diagnosis or underlying cause of death and immediate cause of death codes. No validation studies of the diagnosis are available.
  - In MONICA, the number of unclassifiable deaths was about 10 % or less of the number of definite strokes. The number of "official" stroke deaths is close to the number of definite stroke deaths.
- FIN-ATB:
  - The diagnosis was based on hospital discharge diagnosis and the underlying cause of death. There are two validation studies on the stroke diagnoses from different periods [6, 7] suggesting that the diagnoses are suitable for epidemiological studies.
- FIN-EAS/WES:
  - MONICA diagnosis has been used for events found in stroke event registers. This varies from over a third of the events in the first cohorts to about 1 % in cohort 24. For the rest of the events, the diagnosis was based on hospital discharge diagnosis and causes of death. There are two validation studies on the stroke diagnoses from different periods [6, 7] suggesting that the diagnoses are suitable for epidemiological studies.
  - In MONICA, the number of unclassifiable events was very small due to selective necropsy in the country. The number of "official" stroke deaths was close to the number of MONICA definite stroke deaths.
- FRA-LIL/STR/TOU:
  - The diagnosis was based on the PRIME diagnostic procedure described in the [Description of MORGAM Cohorts](#) which in essence is the same as the MONICA protocol.
  - Only definite stroke events were provided for MORGAM.
  - In MONICA, stroke event registration data were not collected in these areas.
- GER-AUG:
  - The cohort was not followed up for non-fatal stroke events. The diagnosis of stroke events was based on the official underlying cause of death. No validation studies of the diagnosis are available.
  - In MONICA, stroke event registration data were not collected.
- ITA-BRI/PAM:
  - MONICA classification was used.
  - In MONICA, stroke event registration data were not collected. In MORGAM, the proportion of unclassifiable stroke deaths is 40 % of the number of definite stroke deaths.
- ITA-FRI/FSE:
  - MONICA classification was used.
  - In MONICA, the number of unclassifiable stroke deaths was about 10 % of the number of definite stroke deaths. The number of "official" stroke deaths is close to the number of definite and unclassifiable stroke deaths. The number of unclassifiable deaths in the MORGAM data is about 25% of the number of definite stroke deaths.
- ITA-ROM:
  - About 85% of the stroke events were coded using the MONICA classification. For the rest, the event validation was based on the death certificate or on the hospital discharge form only (see [Description of MORGAM Cohorts](#)).
  - In the MORGAM data among the validated stroke deaths, the number of unclassifiable stroke deaths is 60% of the number of definite stroke deaths.
- LTU-KAU:
  - MONICA classification was used up to age 64.
  - After age 64, the cohort was followed up for deaths only. Such deaths were classified using the ICD-codes of the underlying cause of death on the death certificate.
  - In MONICA, the number of unclassifiable deaths was less than 5 % of the number of fatal definite stroke

deaths. The number of "official" stroke deaths is about the same or less (in women) than the number of definite and unclassifiable stroke deaths. The number of unclassifiable deaths in the MORGAM data is 0 % of the number of definite stroke deaths among the validated stroke deaths. No unclassifiable stroke deaths were provided.

- POL-TAR:
  - The MPC has a follow-up for deaths only. The diagnosis of stroke events was based on the underlying cause of death on the death certificate. No validation studies of the diagnosis are available.
  - In MONICA stroke event registration data were not collected.
- POL-WAR:
  - MONICA classification was used up to age 64 and year 1994.
  - After age 64 and year 1994, the cohort was followed up for deaths only. Such deaths were classified using the official underlying cause of death code. No validation studies of the diagnosis are available.
  - In MONICA, the number of "official" stroke deaths was greater than the number of definite stroke deaths but less than the number of definite and unclassifiable stroke deaths. The number of unclassifiable deaths was about 25 % of the number of definite strokes. In MORGAM, the number of unclassifiable stroke deaths is 30 % of the number of definite stroke deaths.
- RUS-NOV:
  - MONICA classification was used up to age 74.
  - The follow-up of fatal events after the age of 74, and in RU 03 for all ages up to the end of year 1986 was carried out using the Mortality Register only. The diagnostic classification was done using the ICD-codes of the underlying cause of death. The underlying cause of the official statistics or from death certificate was used. No validation studies of the diagnosis are available.
  - In MONICA, the number of unclassifiable stroke deaths was very small, but in MORGAM it is 20 % of definite stroke deaths. In MONICA, the number of "official" stroke deaths was about 130 % of the number of MONICA stroke deaths.
- SWE-NSW:
  - MONICA classification was used up to age 74.
  - After age 74, only deaths were followed up. For these the official underlying cause was used. No validation studies of the diagnosis are available.
  - In MONICA, the number of unclassifiable deaths was about 5 % of the number of definite stroke deaths. The number of "official" stroke deaths was close to the number of MONICA definite stroke deaths. In MORGAM, the number of unclassifiable stroke deaths is 5 % of the number of definite stroke deaths.
- UNK-BEL:
  - The diagnosis was based on the PRIME diagnostic procedure described in the [Description of MORGAM Cohorts](#) which in essence is the same as the MONICA protocol.
  - Only definite stroke events were provided for MORGAM.
  - In MONICA, stroke event registration data were not collected in this area.
- UNK-CAE:
  - The study committee for stroke classification validated non-fatal stroke events using Hospital notes and General Practitioners' records according to the definition comparable with the MONICA protocol. Cases of non-fatal subarachnoid haemorrhage were not reported to MORGAM.
  - The diagnosis of stroke deaths was based on the underlying cause of death of the death certificate. No validation studies of the diagnosis are available.
  - There were no MONICA Centres in Wales to indicate the availability of information for the coding of the cause of death.
- UNK-EDI/GLA/SHH:
  - The diagnosis was based on the death certificate or hospital discharge codes. No validation studies of the diagnosis are available.
  - In MONICA stroke event registration data were not collected.

## Subtype of stroke

Stroke subtyping is essential for phenotypic characterization in the MORGAM genetic component. MORGAM data identifies the three main subtypes, which are subarachnoid haemorrhage (SAH), intracerebral haemorrhage (ICH) and cerebral infarction (CI), and has a separate data item (OTYPE) for other subtypes of stroke. The criteria of the subtypes of stroke events presume that diagnostic procedures or necropsy findings provide an unambiguous diagnostic information. In addition to clinical and necropsy findings, diagnostic procedures taken into consideration are computerized axial tomography (CT), magnetic resonance imaging (MRI) and cerebrospinal fluid examination (for SAH and ICH) (see the [Data Transfer](#)

[Format: Stroke Events](#) of [MORGAM Manual](#)). If routine diagnosis is used and no further information is available, all subtypes of stroke are coded as "insufficient data".

Compared to MONICA, the criteria for subtypes of stroke were updated for MORGAM, and some items for further specification of type of stroke were added. Further classification of cerebral infarction to its subtypes is still impossible in MORGAM because data on the location and the size of the infarction are not collected.

The assessment of the diagnosis of stroke subtypes will be completed later.

## 5.7 Stroke summary scores

### Stroke Event Score

To summarize the reliability of the end-point data, a simple *Stroke Event Score* was defined for general definition of stroke as the mean of the [Coverage Score](#) and the [Diagnosis Score](#). The Stroke Event Score for each Cohort is shown in [Table F.22](#).

## 6. Follow-up of thromboembolic events

This section considers the aspects of the follow-up of thromboembolic events beyond what was already considered in the section [Mortality follow-up](#) above. The follow-up for non-fatal venous thromboembolic events is optional for the cohorts which take part in the genetic substudy, and should be done only if the coverage of non-fatal hospitalized events is good. The data specific to the follow-up of thromboembolic events are specified in two data transfer formats:

- [Data Transfer Format: Venous Thromboembolic Events Inventory \(Form 29\)](#). These data should be provided for every member of the cohorts;
- [Data Transfer Format: Venous Thromboembolic Events \(Form 26\)](#). These data should be provided for:
  - person's first and recurrent non-fatal pulmonary embolism and deep vein thrombosis (i.e. [VTETYPE](#) = 1 or 2 in Form 26).
  - a death during the follow-up period which has a code for pulmonary embolism or deep vein thrombosis in the death certificate or final death diagnoses.

The relevant ICD codes are

- ICD-8: 450, 451, 671 and 673.9
- ICD-9: 415, 451 (excl. 451.0), 671.3, 671.4 and 673.2
- ICD-10: I26, I80 (excl. I80.0), O87.1 and O88.2.

### 6.1 Types of non-fatal thromboembolic events followed up

Thromboembolic events were followed up in DEN-GLO, FIN-ATB and FIN-EAS/WES as listed in [Table 8b](#). Recurrent thromboembolic events were followed up systematically in DEN-GLO and FIN-ATB. Details of diagnostic criteria used in the Cohorts are described in the [Description of MORGAM Cohorts](#) and evaluated further in section [End-point diagnosis](#) below.

### 6.2 Availability and distributions of data items (Forms 26 and 29)

Here are hyperlinks to the distributions of the data items of the [Data Transfer Format: Venous Thromboembolic Events Inventory \(Form 29\)](#) and the [Data Transfer Format: Venous Thromboembolic Events \(Form 26\)](#):

- EXDATET: Date of exit from the follow-up for non-fatal thromboembolic events ([day](#), [month](#), [year](#))
- EXREAST: Reason for the exit from the follow-up for non-fatal thromboembolic events
- EVDATE: Date of event ([day](#), [month](#), [year](#))

- [CLIND1](#): ICD code of the clinical diagnosis: main clinical condition
- [CLIND2](#): ICD code of the clinical diagnosis: other clinical condition
- [CLIND3](#): ICD code of the clinical diagnosis: other clinical condition
- [ICDVER](#): ICD version used for the clinical diagnoses
- [SURVIV](#): Survival at 28 days
- Source of notification of acute thromboembolic event
  - [TESOUR1](#): Cause of death register
  - [TESOUR2](#): Medical record or hospital discharge register
  - [TESOUR3](#): Interview with doctor
  - [TESOUR3](#): Interview with person
  - [TESOUR5](#): Other
- Source of validation of the diagnosis of acute thromboembolic event
  - [VDSOUR1](#): Systematic review of diagnostic data
  - [VDSOUR2](#): Hospital notes or other medical records seen
  - [VDSOUR3](#): Discharge letter
  - [VDSOUR4](#): Discharge diagnosis
- [VTETYPE](#): Type of venous thromboembolic event
- [VTESEC](#): Was the venous thromboembolic event secondary to other disease or condition?
- [VTEUND](#): Underlying disease or condition
- [CLINDU](#): ICD code of the underlying disease or condition

### 6.3 Reasons for exit from the follow-up of non-fatal thromboembolic events

[Table F.25](#) gives the number of exits due to different reasons by cohort for each RUA. The reason is always coded as "irrelevant", which means that the end of follow-up of non-fatal thromboembolic events was the same as that of mortality follow-up.

### 6.4 End-of-follow-up period for thromboembolic events

[Table F.2](#) and [Table F.26](#) give the end-of-follow-up dates for fatal and non-fatal thromboembolic events by RUA, respectively. [Table F.26](#) also gives the percentages of three most frequently occurring dates among such individuals. The end of follow-up of non-fatal thromboembolic events is the same as that of mortality follow-up in all cohorts.

### 6.5 Follow-up procedures and coverage

[Table F.3](#) and [Table F.27a](#) give the source of notification used for the follow-up of fatal and non-fatal thromboembolic events by RUA. [Table F.27a](#) also gives the procedures used for the notification of loss to follow-up from the follow-up of thromboembolic events. [Table F.27b](#) shows the percentage of different sources of notification of fatal and non-fatal thromboembolic events as indicated in the data. In the cases where the event was identified through several sources, it is assigned to the left-most relevant column in [Table F.27b](#). The percentages of loss to follow-up by consecutive three year period for non-fatal thromboembolic events are given in [Table F.28](#). As we do not have available the numbers of thromboembolic deaths in the population, we are unable to calculate the [Mortality comparison score](#) and hence the [Coverage score](#) for thromboembolic events.

The follow-up procedures for thromboembolic events are identical with the follow-up procedures for coronary and stroke events in the MPCs that have provided thromboembolic events. The coverage score is high (2) for coronary and stroke deaths in all Cohorts except in Cohort 02 of DEN-GLO.

### 6.6 Diagnosis of thromboembolic events

[Table F.29](#) lists the source of validation for thromboembolic events by RUA. [Table F.30](#) gives the percentages of source of validation used.

[Table F.30](#) gives the ICD-version used for codes of clinical diagnoses by cohort for each RUA.

The diagnosis of thromboembolic events is based on routine diagnosis in all Cohorts. There are no validation studies available assessing the suitability of the routine diagnosis of thromboembolic events for epidemiologic studies.

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## Updates to this document

Date	Update
2007-07-04	First published version.

[Follow-up Data](#)



# Annex F.1: Estimation of the expected number of deaths during follow-up

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## Introduction

Population demographic and mortality data are available for MONICA [Reporting Units](#) (RU) for the MONICA periods. This data is also collected in MORGAM for non-MONICA cohorts and for years after the MONICA period. The data collection procedures are described in the document [Population demographic and mortality data](#). The data are classified according to sex, cause of death, calendar year and five year age groups and are used for calculating mortality rates in the background populations for the MORGAM cohorts. Coverage of the mortality follow-up is assessed by comparing the observed number of deaths in the cohorts to the expected number of deaths based on population mortality rates. This document describes the procedure used to estimate the expected number of deaths.

## Augmenting the population mortality rates

The population data may not be available for all combinations of calendar year and age group. To augment the data to match the follow-up years and age ranges in the cohorts, a model is fitted to available mortality rates and predictions from the model are used to fill in mortality rates for the missing years and age groups. Logistic regression model  $\text{logit}(p_{ij}) = \alpha + \beta_1 * \text{age}_i + \beta_2 * \text{year}_j$ , where  $p_{ij}$  is the mortality rate in five year age group  $i$  and calendar year  $j$ , is reasonable for this purpose as long as the predicted period is not too long. Mortality rates are calculated at [Reporting Unit Aggregate](#) (RUA) level and the above model is fitted separately for each RUA and separately for men and women. Using estimates for parameters  $\alpha$ ,  $\beta_1$  and  $\beta_2$ , predicted mortality rate is calculated from the formula  $1/(1 + \exp\{-(\alpha + \beta_1 * \text{age}_i + \beta_2 * \text{year}_j)\})$ .

## Estimating the expected number of deaths

Expected number of deaths is calculated on a one year grid over age and calendar time for each cohort and separately for men and women. Let  $r_{ij}$  be the risk set of age  $i$  in year  $j$  (cell  $(i, j)$  in the grid). When  $j$  is the first follow-up year for the cohort (defined as a mean of [DEXAM](#) in years and rounded to full year),  $r_{ij}$  is the number of people of age  $i$  at cohort baseline. Expected number of deaths in the cell  $(i, j)$  is estimated as  $r_{ij} * p_{ij}$ , where  $p_{ij}$  is the total mortality rate in the background population for age  $i$  in year  $j$ . Risk set for cell  $(i+1, j+1)$  is  $r_{i+1, j+1} = r_{ij} * (1 - p_{ij})$  and number of deaths is estimated as  $r_{i+1, j+1} * p_{i+1, j+1}$ . This process is continued until the last year of follow-up for the cohort (defined as a mean of [EXDATE](#) in years for cohort members with [EXREAS](#) = 2). The expected number of deaths in the cohort is the sum of deaths over the one year cells. Coronary and stroke deaths are estimated analogously using coronary and stroke mortality rates, but always subtracting the total number of deaths from the risk set.

## Updates to this document

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[Follow-up Data](#)



## Annex F.2: Defining limits for Mortality comparison score

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## Contents

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- [Effect of randomness of cohort mortality and limited availability of official statistics](#)
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## Introduction

Most of the MORGAM cohorts consist of the respondents of population surveys. Therefore, the comparison of mortality in the population, which is usually available from the official statistics, and the mortality in the cohorts provides an indicator of the coverage of the mortality follow-up. We aim here to define reasonable limits to the difference between the observed mortality in the cohorts and the mortality estimated from the population statistics.

## Effect of randomness of cohort mortality and limited availability of

## official statistics

Because of approximations used in the estimation of the expected mortality (see [Annex F.1](#)) and random variation in the cohort mortality, we cannot expect that the cohort mortality is equal to the estimate from the population. Furthermore, the last years of the population mortality are often based on extrapolation. Therefore, it should be reasonable to assign a high Mortality comparison score if the cohort mortality is at least 90% of the population mortality. On the other hand, a cohort mortality less than 70% of the population mortality should indicate major concern.

## Effect of survey non-response

An additional explanation to a difference between the two mortalities relates to survey non-response. The response rates in the surveys were generally between 65% and 80% (see [Full descriptions of MORGAM cohorts](#)). There is a fairly consistent finding that the the total mortality as well as cardiovascular mortality of the non-respondents of such surveys is about twice the mortality of the respondents (see e.g. [1]). Therefore, the number of deaths in the cohorts, estimated using population mortality data, is higher than the expected number of deaths in the cohorts, which consist of the survey respondents only. We estimate the effect of non-response on the comparison:

Let  $n$ ,  $n_r$ ,  $n_{nr}$  be the cohort size, number of the respondents and number of the non-respondents. Then  $n=n_r+n_{nr}$ . Let  $d$ ,  $d_r$ ,  $d_{nr}$  be the mortality rate for the whole cohort, for the respondents and for the non-respondents, respectively. Then  $nd=n_r d_r+n_{nr} d_{nr}$ . Assuming that  $d_{nr}=2d_r$  we get  $d_r=d/(2-n_r/n)$ . For response rate 75% ( $=n_r/n$ ), which is close to the average of the MORGAM cohorts, we get  $d_r=d/1.25$ .

## Limits for Mortality comparison score

To correct the limits 90% and 70% above for the effect of non-response, we have to divide the limits by 1.25. This gives limits about 70% and 55%.

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## Updates to this document

<b>Date</b>	<b>Update</b>
2007-07-04	First published version.

**Follow-up Data****Table F.1.** Percentage of types of exit from the mortality follow-up and period of follow-up in years (See [Reasons for exit from the study](#))

RUA	Cohort	Percentage of <b>EXREAS</b>														Follow-up period in years		
		Men							Women							Mean	Min. *	Max.
		N	death	end of study	moved away	refusal	other	total	N	death	end of study	moved away	refusal	other	total			
AUS-NEWa	01	1220	18	82				100	1246	9	91				100	14.43	15.05	15.64
	02	890	10	90				100	884	5	95				100	9.38	9.12	10.49
	03	812	3	97				100	821	1	99				100	4.26	4.05	4.54
DEN-GLOa	01	1940	23	76	1			100	1845	14	85	1			100	17.21	17.93	19.16
	02	748	15	85	1			100	756	8	91	0			100	14.41	14.69	15.40
	03	809	7	92	1			100	815	5	94	1			100	10.18	9.65	10.90
	21	1333	12	88	0			100	1323	7	93	1			100	7.46	7.08	8.55
FIN-ATBa	21	5073	20	80				100							0	6.51	6.81	7.39
FIN-EASa	01	2902	28	72				100	2910	19	81				100	21.53	23.75	23.95
	02	2107	21	79				100	2260	10	90				100	17.59	18.75	18.95
	03	1409	11	89				100	1604	5	95				100	13.38	13.75	13.95
FIN-EASb	24	2419	9	91				100	2427	4	96				100	8.60	8.57	8.94
FIN-WESa	01	1563	31	69				100	1654	17	83				100	21.59	23.75	23.95
	02	695	16	84				100	749	10	90				100	17.88	18.75	18.95
FIN-WESb	03	1424	10	90				100	1562	5	95				100	13.42	13.78	13.99
	24	1673	9	91				100	1622	4	96				100	8.59	8.61	8.94
RUA	Cohort	Percentage of <b>EXREAS</b>														Follow-up period in years		
		Men							Women							Mean	Min. *	Max.
		N	death	end of study	moved away	refusal	other	total	N	death	end of study	moved away	refusal	other	total			
FRA-LILa	21	2633	6	90	3	1		100							0	9.62	10.00	10.00
FRA-STRa	21	2612	6	90	3	1		100							0	9.57	10.00	10.00
FRA-TOUa	21	2610	4	90	4	2		100							0	9.58	10.00	10.00
GER-AUGa	01	2004	19	80	1			100	1976	10	89	1			100	16.81	17.47	18.23
	02	1857	10	89	1			100	1875	4	95	1			100	12.41	12.37	13.23
	03	1818	4	95	0			100	1814	2	98	1			100	7.71	7.35	8.22
ITA-BRIa	01	818	15	84	0		0	100	841	6	94			0	100	15.53	15.75	16.73
	02	804	10	89	0		0	100	795	5	94			1	100	12.77	12.48	13.66
	03	810	6	93	0		0	100	864	2	97	0		0	100	8.47	8.12	9.32

Table F.1. Percentage of types of exit from the mortality follow-up and period of follow-up in years

ITA-FRIa	01	942	9	89	2				100	938	4	94	2			100	12.20	12.33	13.97
	02	922	6	92	2				100	922	3	96	1			100	9.28	9.03	9.84
	03	891	3	97	1				100	895	1	98	1			100	4.44	4.17	4.82
ITA-FSEa	21	200	1	99					100	200	2	99				100	2.79	2.51	3.21
ITA-PAMa	21	1032	13	87				0	100	1012	5	94			0	100	10.78	9.63	12.07
ITA-ROMb	01	852	17	82	2				100	871	8	91	1			100	17.74	15.21	20.61
RUA	Cohort	Percentage of <b>EXREAS</b>														Follow-up period in years			
		Men							Women							Mean	Min. *	Max.	
		N	death	end of study	moved away	refusal	other	total	N	death	end of study	moved away	refusal	other	total				
ITA-ROMc	21	1718	23	76	1			100	1930	13	87	1			100	17.37	18.51	19.51	
	22	1294	17	82	0			100	1600	10	90	0			100	14.86	15.00	16.30	
	23	970	5	94	1			100	1000	2	97	1			100	8.16	6.65	9.60	
	24	785	11	89				100	1734	5	95	0			100	7.90	6.63	9.65	
LTU-KAUa	01	727	23	77				100	736	11	89				100	14.31	13.57	15.96	
	02	894	15	85				100	868	7	93				100	11.20	11.52	12.08	
	03	616	8	88	4			100	644	2	94	4			100	6.01	5.59	6.93	
POL-TARa	01	1250	24	73	2		2	100	1472	10	88	2		1	100	14.02	14.14	15.74	
	02	627	14	85	1		0	100	684	5	93	1		1	100	10.44	10.10	11.69	
	03	625	8	91	1		0	100	704	2	97	1		0	100	6.18	5.44	6.58	
POL-WARa	01	1309	27	72	0		1	100	1337	14	86			0	100	13.17	13.95	15.07	
	02	700	15	85			0	100	717	7	92	0		0	100	9.96	9.93	10.97	
	03	751	5	95			0	100	763	2	98				100	5.51	5.04	5.99	
RUS-NOVb	01	1573	19	81				100	1602	9	91				100	12.39	12.97	13.99	
	02	1721	13	87				100	1666	6	94				100	9.71	9.69	10.65	
	03	1605	5	95				100	1668	1	99				100	3.91	3.06	4.66	
RUA	Cohort	Percentage of <b>EXREAS</b>														Follow-up period in years			
		Men							Women							Mean	Min. *	Max.	
		N	death	end of study	moved away	refusal	other	total	N	death	end of study	moved away	refusal	other	total				
RUS-NOVc	21	1603	21	79				100							0	13.35	13.61	15.10	
SWE-NSWa	01	823	10	90				100	802	6	94				100	13.41	13.72	13.96	
	02	773	5	95				100	803	2	98				100	9.71	9.68	9.97	
	03	928	5	95				100	965	2	98				100	5.77	5.69	6.00	
UNK-BELa	21	2745	3	97	0	0		100							0	4.93	5.00	5.55	
UNK-CAEa	21	2398	27	71	2			100							0	12.67	12.54	16.48	

Table F.1. Percentage of types of exit from the mortality follow-up and period of follow-up in years

<b>UNK-ED Ia</b>	<b>01</b>	671	22	78	0			100	628	11	88	1			100	18.26	19.34	19.83
<b>UNK-GLAa</b>	<b>01</b>	583	30	70	0			100	526	20	80				100	17.64	19.44	19.91
	<b>02</b>	849	29	71	0			100	905	19	81				100	12.21	13.33	13.98
	<b>03</b>	797	13	87	0			100	859	6	94				100	10.08	10.24	10.84
	<b>21</b>	493	23	76	1			100	524	16	84				100	15.38	16.53	17.92
<b>UNK-SH Ha</b>	<b>01</b>	4676	26	74	0			100	4489	16	84	0			100	18.11	18.17	21.10
<b>RUA</b>	<b>Cohort</b>	<b>Percentage of <a href="#">EXREAS</a></b>														<b>Follow-up period in years</b>		
		<b>Men</b>							<b>Women</b>							<b>Mean</b>	<b>Min.*</b>	<b>Max.</b>
		<b>N</b>	<b>death</b>	<b>end of study</b>	<b>moved away</b>	<b>refusal</b>	<b>other</b>	<b>total</b>	<b>N</b>	<b>death</b>	<b>end of study</b>	<b>moved away</b>	<b>refusal</b>	<b>other</b>	<b>total</b>			

\*: Where EXREAS = 2, i.e. end of the follow-up period of the cohort in MORGAM

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**Follow-up data****Table F.2.**Reported end of follow-up date and three most frequently occurring dates of exit (see [End-of-follow-up period for death](#))

RUA	Cohort	Reported end of follow-up date	EXREAS = 2								All subjects			
			N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the 1st frequent	latest date of exit
				exit date	N	exit date	N	exit date	N	dates	N			
AUS-NEWa	01	22 Dec 1998	2127	1998-12-22	2127		.			0	0	2466	0	1998-12-22
	02	22 Dec 1998	1640	1998-12-22	1640		.			0	0	1774	0	1998-12-22
	03	22 Dec 1998	1597	1998-12-22	1597		.			0	0	1633	0	1998-12-22
DEN-GLOa	01	31 Dec 2001	3047	2001-12-31	3047		.			0	0	3785	0	2001-12-31
	02	31 Dec 2001	1325	2001-12-31	1325		.			0	0	1504	0	2001-12-31
	03	31 Dec 2001	1514	2001-12-31	1514		.			0	0	1624	0	2001-12-31
	21	31 Dec 2001	2400	2001-12-31	2400		.			0	0	2656	0	2001-12-31
FIN-ATBa	21	31 Dec 1999	4069	1999-12-31	4069		.			0	0	5073	0	1999-12-31
FIN-EASa	01	31 Dec 2005	4427	2005-12-31	4427		.			0	0	5812	0	2005-12-31
	02	31 Dec 2005	3706	2005-12-31	3706		.			0	0	4367	0	2005-12-31
	03	31 Dec 2005	2774	2005-12-31	2774		.			0	0	3013	0	2005-12-31
RUA	Cohort	Reported end of follow-up date	EXREAS = 2								All subjects			
			N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the 1st frequent	latest date of exit
				exit date	N	exit date	N	exit date	N	dates	N			

Table F.2. Reported end of follow-up date and three most frequently occurring dates of exit

<b>FIN-EASb</b>	24	31 Dec 2005	4536	2005-12-31	4536		.	.	0	0	4846	0	2005-12-31	
<b>FIN-WESa</b>	01	31 Dec 2005	2466	2005-12-31	2466		.	.	0	0	3217	0	2005-12-31	
	02	31 Dec 2005	1260	2005-12-31	1260		.	.	0	0	1444	0	2005-12-31	
<b>FIN-WESb</b>	03	31 Dec 2005	2767	2005-12-31	2767		.	.	0	0	2986	0	2005-12-31	
	24	31 Dec 2005	3082	2005-12-31	3082		.	.	0	0	3295	0	2005-12-31	
<b>FRA-LILa</b>	21	10 years after date of examination	2369	2001-11-25	11	2001-12-11	11	2002-02-28	11	492	2336	2633	1908	2003-03-06
<b>FRA-STRa</b>	21	10 years after date of examination	2341	2002-12-22	13	2003-11-05	12	2002-11-30	11	467	2305	2612	1513	2003-09-25
<b>FRA-TOUa</b>	21	10 years after date of examination	2342	2003-03-23	11	2002-06-23	10	2002-07-10	10	431	2311	2610	58	2003-03-29
<b>GER-AUGa</b>	01	31 Dec 2002	3373	2002-12-31	1521	2002-11-10	134	2002-11-11	134	51	1584	3980	0	2002-12-31
	02	31 Dec 2002	3445	2002-12-31	1374	2002-11-11	147	2002-11-15	120	52	1804	3732	0	2002-12-31
	03	31 Dec 2002	3504	2002-12-31	1527	2002-11-14	126	2002-11-11	124	52	1727	3632	0	2002-12-31
<b>RUA</b>	<b>Cohort</b>	<b>Reported end of follow-up date</b>	<b>EXREAS = 2</b>									<b>All subjects</b>		
			<b>N</b>	<b>1st frequent</b>		<b>2nd frequent</b>		<b>3rd frequent</b>		<b>other</b>		<b>N</b>	<b>exit dates after the 1st frequent</b>	<b>latest date of exit</b>
				<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>dates</b>	<b>N</b>			
<b>ITA-BRIa</b>	01	31 Dec 2002	1478	2002-12-31	1478		.	.	0	0	1659	0	2002-12-31	
	02	31 Dec 2002	1468	2002-12-31	1468		.	.	0	0	1599	0	2002-12-31	
	03	31 Dec 2002	1594	2002-12-31	1594		.	.	0	0	1674	0	2002-12-31	
<b>ITA-</b>	01	31 Dec 1998	1716	1998-12-31	1716		.	.	0	0	1880	0	1998-12-31	

Table F.2. Reported end of follow-up date and three most frequently occurring dates of exit

<b>FRIa</b>	02	31 Dec 1998	1731	1998-12-31	1731		.	.	0	0	1844	0	1998-12-31	
	03	31 Dec 1998	1740	1998-12-31	1740		.	.	0	0	1786	0	1998-12-31	
<b>ITA-FSEa</b>	21	31 Dec 1998	395	1998-12-31	395		.	.	0	0	400	0	1998-12-31	
<b>ITA-PAMa</b>	21	31 Dec 2002	1855	2002-12-31	1855		.	.	0	0	2044	0	2002-12-31	
<b>ITA-ROMb</b>	01	31 Dec 2002	1490	2002-12-31	1490		.	.	0	0	1723	0	2002-12-31	
<b>ITA-ROMc</b>	21	31 Dec 2002	2980	2002-12-31	2980		.	.	0	0	3648	0	2002-12-31	
	22	31 Dec 2002	2501	2002-12-31	2501		.	.	0	0	2894	0	2002-12-31	
	23	31 Dec 2002	1886	2002-12-31	1886		.	.	0	0	1970	0	2002-12-31	
	24	31 Dec 2002	2345	2002-12-31	2345		.	.	0	0	2519	0	2002-12-31	
<b>RUA</b>	<b>Cohort</b>	<b>Reported end of follow-up date</b>	<b>EXREAS = 2</b>								<b>All subjects</b>			
			<b>N</b>	<b>1st frequent</b>		<b>2nd frequent</b>		<b>3rd frequent</b>		<b>other</b>		<b>N</b>	<b>exit dates after the 1st frequent</b>	<b>latest date of exit</b>
				<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>dates</b>	<b>N</b>			
<b>LTU-KAUa</b>	01	31 Dec 1998	1210	1998-12-31	1210		.	.	0	0	1463	0	1998-12-31	
	02	31 Dec 1998	1570	1998-12-31	1570		.	.	0	0	1762	0	1998-12-31	
	03	31 Dec 1998	1147	1998-12-31	1147		.	.	0	0	1260	0	1998-12-31	
<b>POL-TARa</b>	01	31 Dec 1998	2198	1998-12-31	2198		.	.	0	0	2722	0	1998-12-31	
	02	31 Dec 1998	1168	1998-12-31	1168		.	.	0	0	1311	0	1998-12-31	
	03	31 Dec 1998	1249	1998-12-31	1249		.	.	0	0	1329	0	1998-12-31	
<b>POL-WARa</b>	01	31 Dec 1998	2092	1998-12-31	2092		.	.	0	0	2646	0	1998-12-31	
	02	31 Dec 1998	1254	1998-12-31	1254		.	.	0	0	1417	0	1998-12-31	

Table F.2. Reported end of follow-up date and three most frequently occurring dates of exit

	03	31 Dec 1998	1461	1998-12-31	1461		.	.	0	0	1514	0	1998-12-31	
<b>RUS-NOVb</b>	01	31 Dec 1998	2740	1998-12-31	2740		.	.	0	0	3175	0	1998-12-31	
	02	31 Dec 1998	3066	1998-12-31	3066		.	.	0	0	3387	0	1998-12-31	
	03	31 Dec 1998	3163	1998-12-31	3163		.	.	0	0	3273	0	1998-12-31	
<b>RUA</b>	<b>Cohort</b>	<b>Reported end of follow-up date</b>	<b>EXREAS = 2</b>									<b>All subjects</b>		
			<b>N</b>	<b>1st frequent</b>		<b>2nd frequent</b>		<b>3rd frequent</b>		<b>other</b>		<b>N</b>	<b>exit dates after the 1st frequent</b>	<b>latest date of exit</b>
				<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>dates</b>	<b>N</b>			
<b>RUS-NOVc</b>	21	31 Dec 1998	1268	1998-12-31	1268		.	.	0	0	1603	0	1998-12-31	
<b>SWE-NSWa</b>	01	31 Dec 1999	1494	1999-12-31	1494		.	.	0	0	1625	0	1999-12-31	
	02	31 Dec 1999	1519	1999-12-31	1519		.	.	0	0	1576	0	1999-12-31	
	03	31 Dec 1999	1832	1999-12-31	1832		.	.	0	0	1893	0	1999-12-31	
<b>UNK-BELa</b>	21	5 years after date of examination	2650	1998-02-12	12	1998-02-16	12	1998-02-22	12	466	2614	2745	927	1999-01-05
<b>UNK-CAEa</b>	21	31 Dec 2000	1709	2000-12-31	1709		.	.	0	0	2398	0	2000-12-31	
<b>UNK-ED1a</b>	01	31 Dec 2005	1077	2005-12-31	1077		.	.	0	0	1299	0	2005-12-31	
<b>UNK-GLAa</b>	01	31 Dec 2005	830	2005-12-31	830		.	.	0	0	1109	0	2005-12-31	
	02	31 Dec 2005	1331	2005-12-31	1331		.	.	0	0	1754	0	2005-12-31	
	03	31 Dec 2005	1500	2005-12-31	1500		.	.	0	0	1656	0	2005-12-31	
	21	31 Dec 2005	819	2005-12-31	819		.	.	0	0	1017	0	2005-12-31	
<b>RUA</b>	<b>Cohort</b>	<b>Reported end of</b>	<b>EXREAS = 2</b>									<b>All subjects</b>		
				<b>1st frequent</b>	<b>2nd frequent</b>	<b>3rd frequent</b>	<b>other</b>		<b>exit dates</b>	<b>latest date</b>				

Table F.2. Reported end of follow-up date and three most frequently occurring dates of exit

		<b>follow-up date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>dates</b>	<b>N</b>	<b>N</b>	<b>after the 1st frequent</b>	<b>of exit</b>
<b>UNK-SHHa</b>	01	31 Dec 2005	7220	2005-12-31	7220	.	.	.	.	0	0	9165	0	2005-12-31
<b>RUA</b>	<b>Cohort</b>	<b>Reported end of follow-up date</b>	<b>EXREAS = 2</b>									<b>All subjects</b>		
			<b>N</b>	<b>1st frequent</b>		<b>2nd frequent</b>		<b>3rd frequent</b>		<b>other</b>		<b>N</b>	<b>exit dates after the 1st frequent</b>	<b>latest date of exit</b>
				<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>dates</b>	<b>N</b>			

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**Follow-up data****Table F.3.** Procedures of follow-up for deaths for RUA (see [Reasons for exit from the study](#) and [Follow-up procedures and coverage](#))

<b>RUA</b>	<b>Notification of deaths</b>	<b>Coverage of the source</b>	<b>Notification of loss to follow-up</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>
AUS-NEW	The matching between the cohort and the National Death Index (NDI) was undertaken using a probabilistic record linkage package called Automatch.	All deaths in Australia	No	2	2
DEN-GLO	Linkage with the Causes of Death Register using personal identification number.	All deaths in Denmark	Yes, linkage with the Civil Registration System.	2	2
FIN-ATB	Linkage with the Register of Causes of Death using personal identification number.	All deaths in Finland or abroad of persons who were residents of Finland at the time of death, regardless of their citizenship.	No	2	2

Table F.3. Procedures of follow-up for deaths for RUA

FIN-EAS/WES	Linkage with the Register of Causes of Death using personal identification number.	All deaths in Finland or abroad of persons who were residents of Finland at the time of death, regardless of their citizenship.	No	2	2
FRA-LIL	Subjects are contacted annually by letter. If no reply further contacts were made by re-mail, by telephone, by contacting person's doctor (s) or Occupational Medicine Department, by making home-visit/talking with neighbours. If these fail the city hall of the town where the person was born is contacted.	Basically complete. Death certificates only available for subjects still living in the Urban Community of Lille at the time of the death.	Yes, in case the contacts fail the person's vital status and emigration from the area was checked by contacting the city hall. If person was alive he was classified as lost-to-follow-up.	2	2
FRA-STR		Basically complete. Death certificates only available for subjects still living in the Bas-Rhin area at the time of the death.			

Table F.3. Procedures of follow-up for deaths for RUA

FRA-TOU		Basically complete. Death certificates only available for subjects still living in the Haute-Garonne area at the time of the death.			
GER-AUG	The vital status of cohort members, who did not return the follow-up questionnaire, was ascertained through the Population Registers inside and outside the study area. Record linkage was based on name, sex, date of birth and address.	Persons whose permanent residency is in Germany (possibly excluding persons who have moved to an unknown location in the country).	Yes, linkage with the Population Registers.	2	2
<b>RUA</b>	<b>Notification of deaths</b>	<b>Coverage of the source</b>	<b>Notification of loss to follow-up</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>

Table F.3. Procedures of follow-up for deaths for RUA

ITA-BRI	Probabilistic record linkage of the cohorts to the municipality register was done using six variables: family name, first name, sex, date of birth, place of birth and place of residence. Similar follow-up of emigrated person through the municipality where moved.	Italy	Yes, emigration known by linkage to the municipality registers.	1	2
ITA-FRI	Linkage with the Regional health information system (includes deaths) using unique personal identification code.	Region of Friuli-Venezia Giulia	Yes, linkage with the General Registry Office.	1	2
ITA-FSE	Linkage with the Regional health information system (includes deaths) using unique personal identification code.	Region of Friuli-Venezia Giulia	Yes, linkage with the General Registry Office.	1	2

Table F.3. Procedures of follow-up for deaths for RUA

ITA-PAM	<p>Probabilistic record linkage of the cohorts to the municipality register was done using six variables: family name, first name, sex, date of birth, place of birth and place of residence.</p> <p>Similar follow-up of emigrated person through the municipality where moved.</p>	Italy	Yes, emigration known by linkage to the municipality registers.	1	2
ITA-ROM	<p>From 1983 to 1996 municipalities were contacted every five years for information about vital status, emigration and residency; from 1996 onwards municipalities were contacted every year.</p>	Region of Lazio	Yes, if a person moved out of the Lazio Region, the date of emigration is known.	1	2
LTU-KAU	<p>The MPC obtained from the Death registration department in the Kaunas bureau of the Civil Registry Office the death certificates of all deaths in Kaunas which were linked manually</p>	All deaths in Kaunas	<p>Cohort 01 and 02: No Cohort 03: Yes, from the Address Bureau of Kaunas.</p>	1	<p>Cohort 01 and 02: 1 Cohort 03: 2</p>

Table F.3. Procedures of follow-up for deaths for RUA

<b>RUA</b>	<b>Notification of deaths</b>	<b>Coverage of the source</b>	<b>Notification of loss to follow-up</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>
POL-TAR	Linkage with the Voivodship Statistical Office which kept at the time of study a local death register including the causes of death based on death certificates issued by physicians. Record linkage was done using person's date of birth and address.	All deaths in the province of Voivodship.	Yes, person's moving out of the area of Voivodship known by linkage to the Local Address Register.	1	2
POL-WAR	Linkage with the Central Death Register using personal identification number provided by the Polish Universal Electronic Population Register (PESEL).	All deaths in Poland	Yes, linkage with the Population Register	2	2
RUS-NOV	Linkage with the Population Based Mortality Register of the Institute of Internal Medicine.	District of Novosibirsk city	No	1	1

Table F.3. Procedures of follow-up for deaths for RUA

SWE-NSW	Record linkage with the National Death Register.	Deaths in Sweden or abroad of people who were resident in Sweden (citizens and non-citizens) at the time of death.	No	2	2
UNK-BEL	Subjects are contacted annually by letter. Central Services Agency informed the MPC when any of the PRIME subjects died, moved to a health authority in Great Britain or moved outside Northern Ireland.	Death certificates of deaths in Northern Ireland were obtained from the General Register Office.	Yes, from Central Services Agency.	2	2
UNK-CAE	The National Health Service (NHS) Registry numbers of the members of the Cohort were flagged at the NHS Registry, which recorded all deaths. A copy of death certificate is received automatically from National Health Service Central Registry.	All deaths in UK	Yes, from the National Health Service Registry	2	2

Table F.3. Procedures of follow-up for deaths for RUA

UNK-EDI/GLA/ SHH	Cohort members can all be identified centrally on the National Health Service (NHS) register (coverage 99 % of the population). If someone dies, his death certificate is forwarded in the MPC. If someone leaves UK, the MPC may or may not know about the death.	All deaths in UK	Yes, from the National Health Service (NHS) Registry.	2	2
<b>RUA</b>	<b>Notification of deaths</b>	<b>Coverage of the source</b>	<b>Notification of loss to follow-up</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>

Updated 2007-06-07

### Follow-up Data

**Table F.4.** Percentage of loss to follow-up from the mortality follow-up by consecutive three year period (See [Follow-up procedures and coverage](#). Length of the follow-up period is in [Table F.1](#) and availability of the notification of loss to follow-up in [Table F.3](#).)

RUA	Cohort	N	Percentage of loss to follow-up EXREAS=3, 4 or 5						
			Years 0-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years > 15	Total
AUS-NEWa	01	2466	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	02	1774	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	03	1633	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEN-GLOa	01	3785	0.2	0.1	0.1	0.1	0.2	0.2	0.9
	02	1504	0.0	0.1	0.1	0.1	0.1	0.0	0.4
	03	1624	0.1	0.2	0.4	0.2	0.0	0.0	0.9
	21	2656	0.2	0.0	0.2	0.0	0.0	0.0	0.4
FIN-ATBa	21	5073	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIN-EASa	01	5812	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	02	4367	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	03	3013	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIN-EASb	24	4846	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUA	Cohort	N	Percentage of loss to follow-up EXREAS=3, 4 or 5						
			Years 0-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years > 15	Total
FIN-WESa	01	3217	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	02	1444	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIN-WESb	03	2986	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	24	3295	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FRA-LILa	21	2633	0.2	1.3	1.4	0.6	0.0	0.0	3.5
FRA-STRa	21	2612	0.4	1.9	1.2	0.9	0.0	0.0	4.4
FRA-TOUa	21	2610	0.6	3.0	2.0	1.0	0.0	0.0	6.6
GER-AUGa	01	3980	0.1	0.1	0.1	0.2	0.0	0.3	0.8
	02	3732	0.0	0.1	0.2	0.3	0.0	0.0	0.6
	03	3632	0.2	0.2	0.0	0.0	0.0	0.0	0.4
ITA-BRIa	01	1659	0.1	0.1	0.1	0.0	0.2	0.1	0.6

Table F.4. Percentage of loss to follow-up from the mortality follow-up by consecutive three year period

	<b>02</b>	1599	0.1	0.1	0.3	0.2	0.1	0.0	0.8
	<b>03</b>	1674	0.1	0.3	0.2	0.0	0.0	0.0	0.6
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Percentage of loss to follow-up EXREAS=3, 4 or 5</b>						
			<b>Years 0-3</b>	<b>Years 4-6</b>	<b>Years 7-9</b>	<b>Years 10-12</b>	<b>Years 13-15</b>	<b>Years &gt; 15</b>	<b>Total</b>
<b>ITA-FRIa</b>	<b>01</b>	1880	0.7	0.8	0.4	0.1	0.1	0.0	2.1
	<b>02</b>	1844	1.0	0.4	0.3	0.0	0.0	0.0	1.7
	<b>03</b>	1786	0.5	0.3	0.0	0.0	0.0	0.0	0.8
<b>ITA-FSEa</b>	<b>21</b>	400	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>ITA-PAMa</b>	<b>21</b>	2044	0.0	0.0	0.2	0.0	0.0	0.0	0.2
<b>ITA-ROMb</b>	<b>01</b>	1723	0.2	0.6	0.2	0.2	0.1	0.0	1.3
<b>ITA-ROMc</b>	<b>21</b>	3648	0.4	0.1	0.1	0.1	0.1	0.0	0.8
	<b>22</b>	2894	0.1	0.2	0.0	0.1	0.0	0.0	0.4
	<b>23</b>	1970	0.4	0.2	0.0	0.0	0.0	0.0	0.6
	<b>24</b>	2519	0.1	0.0	0.0	0.0	0.0	0.0	0.1
<b>LTU-KAUa</b>	<b>01</b>	1463	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>02</b>	1762	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>03</b>	1260	1.9	1.7	0.2	0.0	0.0	0.0	3.8
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Percentage of loss to follow-up EXREAS=3, 4 or 5</b>						
			<b>Years 0-3</b>	<b>Years 4-6</b>	<b>Years 7-9</b>	<b>Years 10-12</b>	<b>Years 13-15</b>	<b>Years &gt; 15</b>	<b>Total</b>
<b>POL-TARa</b>	<b>01</b>	2722	0.1	0.2	0.3	1.0	1.7	0.0	3.3
	<b>02</b>	1311	0.2	0.6	0.7	0.1	0.0	0.0	1.6
	<b>03</b>	1329	0.4	0.7	0.0	0.0	0.0	0.0	1.1
<b>POL-WARa</b>	<b>01</b>	2646	0.7	0.0	0.1	0.0	0.0	0.0	0.8
	<b>02</b>	1417	0.2	0.1	0.0	0.0	0.0	0.0	0.3
	<b>03</b>	1514	0.1	0.0	0.0	0.0	0.0	0.0	0.1
<b>RUS-NOVb</b>	<b>01</b>	3175	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>02</b>	3387	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>03</b>	3273	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>RUS-NOVc</b>	<b>21</b>	1603	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>SWE-NSWa</b>	<b>01</b>	1625	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>02</b>	1576	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>03</b>	1893	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table F.4. Percentage of loss to follow-up from the mortality follow-up by consecutive three year period

RUA	Cohort	N	Percentage of loss to follow-up EXREAS=3, 4 or 5						
			Years 0-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years > 15	Total
UNK-BELa	21	2745	0.3	0.3	0.0	0.0	0.0	0.0	0.6
UNK-CAEa	21	2398	0.2	0.0	0.1	0.5	0.8	0.0	1.6
UNK-EDLa	01	1299	0.0	0.1	0.0	0.2	0.1	0.0	0.4
UNK-GLAa	01	1109	0.0	0.0	0.0	0.1	0.1	0.0	0.2
	02	1754	0.0	0.0	0.1	0.0	0.0	0.0	0.1
	03	1656	0.0	0.1	0.1	0.0	0.0	0.0	0.2
	21	1017	0.1	0.0	0.2	0.0	0.1	0.0	0.4
UNK-SHLa	01	9165	0.0	0.0	0.0	0.1	0.0	0.1	0.2
RUA	Cohort	N	Percentage of loss to follow-up EXREAS=3, 4 or 5						
			Years 0-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years > 15	Total

Updated on 2007-06-19

### Follow-up Data

**Table F.5.** Number of observed and expected deaths (See Follow-up procedures and coverage)

RUA	Cohort	N	Number of deaths		Ratio % (O/E)	Age range at baseline	Follow-up period	Population mortality data <sup>1</sup>
			Observed (O)	Expected (E)				
AUS-NEWa	01	2466	339	335	101	34-65	1983-1998	1983-1998 ( <a href="#">men/women</a> )
	02	1774	134	181	74	24-70	1988-1998	
	03	1633	36	58	62	35-70	1994-1998	
DEN-GLOa	01	3785	710	784	90	30-61	1982-2001	1982-2001 ( <a href="#">men/women</a> )
	02	1504	172	209	82	29-61	1986-2001	
	03	1624	94	114	82	29-61	1991-2001	
	21	2656	246	326	75	41-72	1993-2001	
FIN-ATBa	21	5073	1004	<a href="#">nia</a>	<a href="#">npc</a>	54-77	1992-1999	
FIN-EASa	01	5812	1385	1487	93	24-63	1982-2005	1982-2005 ( <a href="#">men/women</a> )
	02	4367	661	743	88	24-64	1987-2005	
	03	3013	239	292	81	24-64	1992-2005	
FIN-EASb	24	4846	310	373	83	24-74	1997-2005	1992-2005 ( <a href="#">men/women</a> )
RUA	Cohort	N	Number of deaths		Ratio % (O/E)	Age range at baseline	Follow-up period	Population mortality data <sup>1</sup>
			Observed (O)	Expected (E)				
FIN-WESa	01	3217	751	824	91	24-63	1982-2005	1982-2005 ( <a href="#">men/women</a> )
	02	1444	184	224	82	24-64	1987-2005	
FIN-WESb	03	2986	219	288	76	24-64	1992-2005	1992-2005 ( <a href="#">men/women</a> )
	24	3295	213	291	73	24-74	1997-2005	
FRA-LILa	21	2633	169	433	39	49-64	1991-2003	1982-1999 ( <a href="#">men/women</a> )
FRA-STRa	21	2612	156	312	50	48-60	1991-2003	1983-1999 ( <a href="#">men/women</a> )
FRA-TOUa	21	2610	96	223	43	49-60	1991-2005	1982-1999 ( <a href="#">men/women</a> )
GER-	01	3980	579	600	96	24-65	1984-2002	1983-1994
	02	3732	260	318	81	24-65	1989-2002	

Table F.5. Number of observed and expected deaths

<b>AUGa</b>	<b>03</b>	3632	109	147	74	24-65	1994-2002	( <a href="#">men/women</a> )
<b>ITA-BRIa</b>	<b>01</b>	1659	174	183	95	25-65	1986-2002	1985-2002 ( <a href="#">men/women</a> )
	<b>02</b>	1599	121	130	93	25-66	1989-2002	
	<b>03</b>	1674	69	77	89	26-66	1993-2002	
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Number of deaths</b>		<b>Ratio % (O/E)</b>	<b>Age range at baseline</b>	<b>Follow-up period</b>	<b>Population mortality data<sup>1</sup></b>
			<b>Observed (O)</b>	<b>Expected (E)</b>				
<b>ITA-FRIa</b>	<b>01</b>	1880	125	156	80	24-65	1985-1998	1983-1993 ( <a href="#">men/women</a> )
	<b>02</b>	1844	81	91	89	24-64	1989-1998	
	<b>03</b>	1786	32	26	123	24-64	1994-1998	
<b>ITA-FSEa</b>	<b>21</b>	400	5	<a href="#">nia</a>	<a href="#">npc</a>	45-65	1995-1998	
<b>ITA-PAMa <sup>2</sup></b>	<b>21</b>	2044	184	224	82	25-75	1990-2002	1985-2002 ( <a href="#">men/women</a> )
<b>ITA-ROMb</b>	<b>01</b>	1723	211	267	79	24-66	1982-2002	1983-1991 ( <a href="#">men/women</a> )
<b>ITA-ROMc</b>	<b>21</b>	3648	640	653	98	19-69	1983-2002	1982-1998 ( <a href="#">men/women</a> )
	<b>22</b>	2894	381	418	91	18-72	1986-2002	
	<b>23</b>	1970	72	72	100	20-77	1993-2002	
	<b>24</b>	2519	172	217	79	26-81	1993-2002	
<b>LTU-KAUa</b>	<b>01</b>	1463	253	324	78	35-64	1983-1998	1983-1999 ( <a href="#">men/women</a> )
	<b>02</b>	1762	192	278	69	35-64	1986-1998	
	<b>03</b>	1260	66	88	75	33-65	1992-1998	
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Number of deaths</b>		<b>Ratio % (O/E)</b>	<b>Age range at baseline</b>	<b>Follow-up period</b>	<b>Population mortality data<sup>1</sup></b>
			<b>Observed (O)</b>	<b>Expected (E)</b>				
<b>POL-TARa</b>	<b>01</b>	2722	434	514	84	34-65	1983-1998	1983-1998 ( <a href="#">men/women</a> )
	<b>02</b>	1311	123	167	73	34-65	1987-1998	
	<b>03</b>	1329	66	75	88	34-65	1992-1998	
<b>POL-WARa</b>	<b>01</b>	2646	532	609	87	35-65	1983-1998	1983-2000 ( <a href="#">men/women</a> )
	<b>02</b>	1417	159	193	82	34-64	1988-1998	
	<b>03</b>	1514	52	91	57	34-64	1993-1998	
<b>RUS-NOVb</b>	<b>01</b>	3175	435	540	80	24-65	1985-1998	1981-2000 ( <a href="#">men/women</a> )
	<b>02</b>	3387	321	430	74	24-65	1988-1998	
	<b>03</b>	3273	110	134	82	24-65	1994-1998	

Table F.5. Number of observed and expected deaths

<b>RUS-NOV<sub>c</sub></b>	<b>21</b>	1603	335	408	82	23-63	1983-1998	1981-2000 ( <a href="#">men/women</a> )
<b>SWE-NSW<sub>a</sub></b>	<b>01</b>	1625	131	149	87	25-65	1986-1999	1983-1999 ( <a href="#">men/women</a> )
	<b>02</b>	1576	57	76	75	24-64	1990-1999	
	<b>03</b>	1893	61	86	70	24-74	1994-1999	
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Number of deaths</b>		<b>Ratio % (O/E)</b>	<b>Age range at baseline</b>	<b>Follow-up period</b>	<b>Population mortality data<sup>1</sup></b>
			<b>Observed (O)</b>	<b>Expected (E)</b>				
<b>UNK-BEL<sub>a</sub></b>	<b>21</b>	2745	80	156	51	49-60	1991-1999	1983-1993 ( <a href="#">men/women</a> )
<b>UNK-CAE<sub>a</sub></b> <sup>3</sup>	<b>21</b>	2398	652	638	102	47-67	1984-2000	1984-2000 ( <a href="#">men/women</a> )
<b>UNK-EDI<sub>a</sub></b>	<b>01</b>	1299	217	<a href="#">nia</a>	<a href="#">npc</a>	25-65	1986-2005	
<b>UNK-GLA<sub>a</sub></b>	<b>01</b>	1109	277	347	79	25-65	1986-2005	1983-1995 ( <a href="#">men/women</a> )
	<b>02</b>	1754	422	514	82	25-75	1992-2005	
	<b>03</b>	1656	154	204	75	25-65	1995-2005	
	<b>21</b>	1017	194	251	77	25-65	1988-2005	
<b>UNK-SHH<sub>a</sub></b> <sup>3</sup>	<b>01</b>	9165	1927	2423	79	38-61	1984-2005	1984-2000 ( <a href="#">men/women</a> )
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Number of deaths</b>		<b>Ratio % (O/E)</b>	<b>Age range at baseline</b>	<b>Follow-up period</b>	<b>Population mortality data<sup>1</sup></b>
			<b>Observed (O)</b>	<b>Expected (E)</b>				

**observed:** deaths in the cohort

**expected:** expected number of deaths in the cohort assuming the same mortality as in the general population (see [Annex F.1](#))

**nia:** no information available

**npc:** not possible to calculate

**1:** population mortality data: age and relevant calendar years for which the annual population demographic and mortality data are available

**2:** mortality data for the whole of Brianza region used for estimation of deaths

**3:** WHO data used for estimation of deaths

Updated on 2007-06-19

### Follow-up Data

**Table F.6** Scores for the follow-up of mortality (See [Follow-up procedures and coverage](#))

<b>RUA</b>	<b>Cohort</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>	<b>Mortality comparison score</b>	<b>Coverage score</b>
<b>AUS-NEWa</b>	<b>01</b>	2	2	2	2
	<b>02</b>	2	2	2	2
	<b>03</b>	2	2	1	2
<b>DEN-GLOa</b>	<b>01</b>	2	2	2	2
	<b>02</b>	2	2	2	2
	<b>03</b>	2	2	2	2
	<b>21</b>	2	2	2	2
<b>FIN-ATBa</b>	<b>21</b>	2	2	<a href="#">npc</a>	2?
<b>FIN-EASa</b>	<b>01</b>	2	2	2	2
	<b>02</b>	2	2	2	2
	<b>03</b>	2	2	2	2
<b>FIN-EASb</b>	<b>24</b>	2	2	2	2
<b>FIN-WESa</b>	<b>01</b>	2	2	2	2
	<b>02</b>	2	2	2	2
<b>FIN-WESb</b>	<b>03</b>	2	2	2	2
	<b>24</b>	2	2	2	2
<b>FRA-LILa</b>	<b>21</b>	2	2	0	1
<b>FRA-STRa</b>	<b>21</b>	2	2	0	1
<b>FRA-TOUa</b>	<b>21</b>	2	2	0	1
<b>RUA</b>	<b>Cohort</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>	<b>Mortality comparison score</b>	<b>Coverage score</b>
<b>GER-AUGa</b>	<b>01</b>	2	2	2	2
	<b>02</b>	2	2	2	2
	<b>03</b>	2	2	2	2
<b>ITA-BRIa</b>	<b>01</b>	2	2	2	2
	<b>02</b>	2	2	2	2
	<b>03</b>	2	2	2	2

Table F.6 - Scores for the follow-up of mortality

<b>ITA-FRIa</b>	<b>01</b>	1	2	2	2
	<b>02</b>	1	2	2	2
	<b>03</b>	1	2	2	2
<b>ITA-FSEa</b>	<b>21</b>	1	2	<a href="#">npc</a>	2?
<b>ITA-PAMa</b>	<b>21</b>	2	2	2	2
<b>ITA-ROMb</b>	<b>01</b>	1	2	2	2
<b>ITA-ROMc</b>	<b>21</b>	1	2	2	2
	<b>22</b>	1	2	2	2
	<b>23</b>	1	2	2	2
	<b>24</b>	1	2	2	2
<b>LTU-KAUa</b>	<b>01</b>	1	1	2	1
	<b>02</b>	1	1	1	1
	<b>03</b>	1	2	2	2
<b>RUA</b>	<b>Cohort</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>	<b>Mortality comparison score</b>	<b>Coverage score</b>
<b>POL-TARa</b>	<b>01</b>	1	2	2	2
	<b>02</b>	1	2	2	2
	<b>03</b>	1	2	2	2
<b>POL-WARa</b>	<b>01</b>	2	2	2	2
	<b>02</b>	2	2	2	2
	<b>03</b>	2	2	1	2
<b>RUS-NOVb</b>	<b>01</b>	1	1	2	1
	<b>02</b>	1	1	2	1
	<b>03</b>	1	1	2	1
<b>RUS-NOVc</b>	<b>21</b>	1	1	2	1
<b>SWE-NSWa</b>	<b>01</b>	2	2	2	2
	<b>02</b>	2	2	2	2
	<b>03</b>	2	2	2	2
<b>UNK-BELa</b>	<b>21</b>	2	2	0	1
<b>UNK-CAEa</b>	<b>21</b>	2	2	2	2
<b>UNK-EDLa</b>	<b>01</b>	2	2	<a href="#">npc</a>	2?
<b>UNK-GLAa</b>	<b>01</b>	2	2	2	2
	<b>02</b>	2	2	2	2
	<b>03</b>	2	2	2	2

Table F.6 - Scores for the follow-up of mortality

	<b>21</b>	2	2	2	2
<b>UNK-SHHa</b>	<b>01</b>	2	2	2	2
<b>RUA</b>	<b>Cohort</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>	<b>Mortality comparison score</b>	<b>Coverage score</b>

**npc:** Not possible to calculate because death estimates are unavailable

Updated on 2007-05-24

**Follow-up Data****Table F.7.** Percentages of source of death diagnoses used, ICD-version used for causes of death and necropsy performed (See [Diagnosis of cause of death](#). A blank table cell indicates 0 percent.)

RUA	Cohort	N	Underlying cause of death*		Death diagnoses*		ICD version used						Necropsy performed		
			Final official (%)	Death certificate (%)	Final official (%)	Death certificate (%)	ICD-8		ICD-9		ICD-10		Yes (%)	No (%)	Insufficient data (%)
							Period	(%)	Period	(%)	Period	(%)			
AUS-NEWa	01	339	100						1983-1998	100					100
	02	134	100						1988-1998	100					100
	03	36	100						1994-1998	100					100
DEN-GLOa	01	710	98		55			1983-1993	42			1994-2001	56		100
	02	172	95		46			1987-1993	33			1994-2001	63		100
	03	94	100		55			1991-1993	21			1994-2001	79		100
	21	246	98		57							1994-2001	98		100
FIN-ATBa	21	1004	99	1					1992-1995	37		1996-1999	63	3	97
FIN-EASa	01	1385	100		100			1982-1986	11	1987-1995	33	1996-2005	56	32	67
	02	661	100		100					1987-1995	39	1996-2005	61	37	63
	03	239	100		100					1992-1995	21	1996-2005	79	47	53
FIN-EASb	24	310	100		100							1997-2005	100	34	66
FIN-WESa	01	751	100		100			1982-1986	10	1987-1995	35	1996-2005	55	46	54
	02	184	100		100					1987-1995	30	1996-2005	70	49	51
FIN-WESb	03	219	100		100					1992-1995	22	1996-2005	78	56	44
	24	213	100		100							1997-2005	100	47	52
RUA	Cohort	N	Underlying cause of death*		Death diagnoses*		ICD version used						Necropsy performed		
			Final official (%)	Death certificate (%)	Final official (%)	Death certificate (%)	ICD-8		ICD-9		ICD-10		Yes (%)	No (%)	Insufficient data (%)
							Period	(%)	Period	(%)	Period	(%)			

Table F.7. Percentages of source of death diagnoses used, ICD-version used for causes of death and necropsy performed

							Period (%)		Period (%)		Period (%)				
<b>FRA-LILa</b>	<b>21</b>	169		100		83			1992-2002	100			1	99	
<b>FRA-STRa</b>	<b>21</b>	156		100		71			1993-2003	100			8	92	
<b>FRA-TOUa</b>	<b>21</b>	96		100		48			1992-2002	100				100	
<b>GER-AUGa</b>	<b>01</b>	579		99					1985-2002	99			2	97	1
	<b>02</b>	260		100					1990-2002	100			3	97	
	<b>03</b>	109		100					1995-2002	100			1	99	
<b>ITA-BRIa</b>	<b>01</b>	174	3	96	3	81			1987-2002	100				1	99
	<b>02</b>	121	2	98	2	87			1990-2002	100			1	3	96
	<b>03</b>	69	1	99	3	90			1994-2002	100					100
<b>ITA-FRIa</b>	<b>01</b>	125	95	1	89	1			1986-1998	96			10	86	5
	<b>02</b>	81	98		98				1989-1998	98			25	73	2
	<b>03</b>	32	100		100				1994-1998	100			9	91	
<b>ITA-FSEa</b>	<b>21</b>	5	100		100				1997-1998	100				100	
<b>ITA-PAMa</b>	<b>21</b>	184		100	1	96			1991-2002	100			1	1	98
<b>ITA-ROMb</b>	<b>01</b>	211	22	73	21	64			1984-2002	95			1	50	49
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Underlying cause of death*</b>		<b>Death diagnoses*</b>		<b>ICD version used</b>					<b>Necropsy performed</b>			
			<b>Final official (%)</b>	<b>Death certificate (%)</b>	<b>Final official (%)</b>	<b>Death certificate (%)</b>	<b>ICD-8</b>		<b>ICD-9</b>		<b>ICD-10</b>		<b>Yes (%)</b>	<b>No (%)</b>	<b>Insufficient data (%)</b>
<b>ITA-ROMc</b>	<b>21</b>	640	8	91	23	76			1983-2002	100				69	31
	<b>22</b>	381	5	94	24	75			1987-2002	99			1	64	35
	<b>23</b>	72	4	93	22	75			1994-2002	97				61	39
	<b>24</b>	172	3	97	30	70			1994-2002	100			1	49	50
	<b>01</b>	253	37	63	37	63			1983-1996	84	1997-1998	16			100

Table F.7. Percentages of source of death diagnoses used, ICD-version used for causes of death and necropsy performed

LTU-KAUa	02	192	38	63	38	63			1987-1996	80	1997-1998	20			100
	03	66	32	68	32	68			1992-1996	68	1997-1998	32			100
POL-TARa	01	434		82					1983-1996	70	1997-1998	13			100
	02	123		80					1987-1996	68	1997-1998	11			100
	03	66		82					1992-1996	53	1997-1998	29			100
POL-WARa	01	532	91						1984-1996	81	1997-1998	10			100
	02	159	91						1988-1996	76	1997-1998	14			100
	03	52	69						1993-1996	48	1997-1998	21			100
RUS-NOVb	01	435	69	31	69	31			1985-1998	100			27	73	
	02	321	74	26	74	26			1988-1998	100			36	64	
	03	110	39	61	39	61			1994-1998	100			22	78	
RUA	Cohort	N	Underlying cause of death*		Death diagnoses*		ICD version used						Necropsy performed		
			Final official (%)	Death certificate (%)	Final official (%)	Death certificate (%)	ICD-8		ICD-9		ICD-10		Yes (%)	No (%)	Insufficient data (%)
							Period	(%)	Period	(%)	Period	(%)			
RUS-NOVc	21	335	64	36	64	36			1984-1998	100			34	66	
SWE-NSWa	01	131	99	1	98	2			1986-1996	69	1997-1999	31	5	6	89
	02	57	100		81	18			1991-1996	56	1997-1999	44	9	16	75
	03	61	100		74	21			1994-1996	44	1997-1999	56	5	18	77
UNK-BELa	21	80	3	98		98			1992-1998	100			23	56	21
UNK-CAEa	21	652	100						1985-2000	100					100
UNK-EDLa	01	217	100		100				1986-2000	61	2000-2005	39	16	84	
UNK-GLAa	01	277	100		100				1986-1999	64	2000-2005	36	16	83	1
	02	422	100		100				1992-1999	49	2000-2005	51	14	86	1
	03	154	100		100				1995-2000	32	2000-2005	68	19	81	

Table F.7. Percentages of source of death diagnoses used, ICD-version used for causes of death and necropsy performed

	<b>21</b>	194	100		100				1989-1999	52	2000-2005	48	23	77	
<b>UNK-SHHa</b>	<b>01</b>	1927	100		100				1985-1999	54	2000-2005	46	15	84	1
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Underlying cause of death*</b>		<b>Death diagnoses*</b>		<b>ICD version used</b>						<b>Necropsy performed</b>		
			<b>Final official (%)</b>	<b>Death certificate (%)</b>	<b>Final official (%)</b>	<b>Death certificate (%)</b>	<b>ICD-8</b>		<b>ICD-9</b>		<b>ICD-10</b>		<b>Yes (%)</b>	<b>No (%)</b>	<b>Insufficient data (%)</b>
							<b>Period</b>	<b>(%)</b>	<b>Period</b>	<b>(%)</b>	<b>Period</b>	<b>(%)</b>			

\*: The sum of the percentages can be less than one hundred if no such diagnosis is available.

Updated on 2007-06-19

**Follow-up data****Table F.8a**List of types of non-fatal coronary events followed-up (see [Types of non-fatal coronary events followed up](#))

RUA	Definite AMI		Possible AMI		Definite or possible AMI		Unstable Angina Pectoris	Unclassifiable coronary event	Silent MI	Cardiac revascularization	First recorded angina pectoris
	First	recurrent	First	recurrent	First	recurrent					
AUS-NEW	-	-	-	-	-	-	-	-	-	-	-
DEN-GLO	-	-	-	-	+	+	+	-	-	-	-
FIN-ATB	-	-	-	-	+	+	+	-	-	-	-
FIN-EAS/WES	+	-	+	-	+	-	+	-	-	+	-
FRA-LIL	+	+	-	-	-	-	+	-	-	+	+
FRA-STR	+	+	-	-	-	-	+	-	-	+	+
FRA-TOU	+	+	-	-	-	-	+	-	-	+	+
GER-AUG	+	-	+	-	+	-	-	-	-	-	-
ITA-BRI	+	-	+	-	-	-	-	-	-	+	-
ITA-FRI	+	+	+	+	-	-	-	-	-	+	-
ITA-FSE	+	-	+	-	-	-	-	-	-	+	-
ITA-PAM	+	-	+	-	-	-	-	-	-	+	-
ITA-ROM	+	-	+	-	-	-	-	+	+	+	-
LTU-KAU	+	-	+	-	+	-	-	-	-	-	-
POL-TAR	-	-	-	-	-	-	-	-	-	-	-
POL-WAR	+	-	+	-	-	-	-	-	-	-	-
RUS-NOV	+	-	+	-	+	-	-	+	-	-	-
SWE-NSW	+	-	+	-	-	-	-	-	-	-	-
UNK-BEL	+	-	-	-	-	-	+	-	-	+	+
UNK-CAE	+	-	-	-	-	-	-	-	-	-	-
UNK-EDI	-	-	-	-	+	-	+	+	-	+	+
UNK-GLA	-	-	-	-	+	-	+	+	-	+	+
UNK-SHH	-	-	-	-	+	-	+	+	-	+	+
RUA	Definite AMI		Possible AMI		Definite or possible AMI		Unstable Angina Pectoris	Unclassifiable coronary event	Silent MI	Cardiac revascularization	First recorded angina pectoris
	First	recurrent	First	recurrent	First	recurrent					

**Table F.8b**List of types of non-fatal stroke (see [Types of non-fatal stroke events followed up](#)) and thromboembolic events (see [Types of non-fatal thromboembolic events followed up](#)) followed-up

RUA	Definite stroke		No stroke	Unclassifiable stroke event		Thromboembolic events	
	First	recurrent		First	recurrent	First	recurrent

AUS-NEW	-	-	-	-	-	-	-
DEN-GLO	-	-	-	+	+	+	+
FIN-ATB	-	-	-	+	+	+	+
FIN-EAS/WES	+	_*	+	+	_*	+	-
FRA-LIL	+	+	-	-	-	-	-
FRA-STR	+	+	-	-	-	-	-
FRA-TOU	+	+	-	-	-	-	-
GER-AUG	-	-	-	-	-	-	-
ITA-BRI	+	+	+	+	-	-	-
ITA-FRI	+	+	+	+	+	-	-
ITA-FSE	+	+	+	+	-	-	-
ITA-PAM	+	+	+	+	-	-	-
ITA-ROM	+	_*	+	+	-	-	-
LTU-KAU	+	+	-	+	-	-	-
POL-TAR	-	-	-	-	-	-	-
POL-WAR	+	+	-	-	-	-	-
RUS-NOV	+	+	+	+	-	-	-
SWE-NSW	+	+	+	-	-	-	-
UNK-BEL	+	+	-	+	-	-	-
UNK-CAE	+	+	-	-	-	-	-
UNK-EDI	-	-	-	+	-	-	-
UNK-GLA	-	-	-	+	-	-	-
UNK-SHH	-	-	-	+	-	-	-
RUA	Definite stroke		No stroke	Unclassifiable stroke event		Thromboembolic events	
	First	recurrent		First	recurrent	First	recurrent

+ = followed up

- = not followed up

\* = followed up if the subtype is different from the preceding ones

[Follow-up Data](#)**Table F.9.** Percentage of types of exit from the follow-up for nonfatal coronary events and period of follow-up in years  
(See [Reasons for exit from the follow-up of non-fatal coronary events](#))

RUA	Cohort	Percentage of <a href="#">EXREASC</a>														Follow-up period in years			
		Men							Women							Mean	Min. *	Max.	
		N	end of study	moved away	refusal	other	irrelevant	total	N	end of study	moved away	refusal	other	irrelevant	total				
AUS-NEWa	01	1220					100	100	1246						100	100			
	02	890					100	100	884						100	100			
	03	812					100	100	821						100	100			
DEN-GLOa	01	1940					100	100	1845						100	100	17.21	17.93	19.16
	02	748					100	100	756						100	100	14.41	14.69	15.40
	03	809					100	100	815						100	100	10.18	9.65	10.90
	21	1333					100	100	1323						100	100	7.46	7.08	8.55
FIN-ATBa	21	5073					100	100							0	6.51	6.81	7.39	
FIN-EASa	01	2902					100	100	2910						100	100	21.53	23.75	23.95
	02	2107					100	100	2260						100	100	17.59	18.75	18.95
	03	1409					100	100	1604						100	100	13.38	13.75	13.95
FIN-EASb	24	2419					100	100	2427						100	100	8.60	8.57	8.94
FIN-WESa	01	1563					100	100	1654						100	100	21.59	23.75	23.95
	02	695					100	100	749						100	100	17.88	18.75	18.95
FIN-WESb	03	1424					100	100	1562						100	100	13.42	13.78	13.99
	24	1673					100	100	1622						100	100	8.59	8.61	8.94
RUA	Cohort	Percentage of <a href="#">EXREASC</a>														Follow-up period in years			
		Men							Women							Mean	Min. *	Max.	
		N	end of study	moved away	refusal	other	irrelevant	total	N	end of study	moved away	refusal	other	irrelevant	total				
FRA-LILa	21	2633					100	100							0	9.62	10.00	10.00	
FRA-STRa	21	2612					100	100							0	9.57	10.00	10.00	
FRA-TOUa	21	2610					100	100							0	9.58	10.00	10.00	
GER-AUGa	01	2004		2		15	83	100	1976			2		17	81	100	15.95	0.00	18.23
	02	1857		2		7	91	100	1875			1		8	91	100	12.09	0.00	13.23
	03	1818		2		2	96	100	1814			1		0	98	100	7.56	0.00	8.22
ITA-BRIa	01	818		2			98	100	841			2			98	100	15.33	0.00	16.73
	02	804		2			98	100	795			1			99	100	12.66	0.05	13.66
	03	810		2			98	100	864			2			98	100	8.39	0.01	9.32
ITA-FRIa	01	942					100	100	938						100	100	12.20	12.33	13.97
	02	922					100	100	922						100	100	9.28	9.03	9.84
	03	891					100	100	895						100	100	4.44	4.17	4.82

Table F.9. Percentage of types of exit from the follow-up for nonfatal coronary events and period of follow-up in years

ITAFSEa	21	200					100	100	200					100	100	2.79	2.51	3.21																		
																			ITAPAMa	21	1032	2			98	100	1012	2				98	100	10.69	0.32	12.07
Percentage of <a href="#">EXREASC</a>																Follow-up period in years																				
RUA	Cohort	Men								Women								Mean	Min.*	Max.																
		N	end of study	moved away	refusal	other	irrelevant	total	N	end of study	moved away	refusal	other	irrelevant	total																					
ITAROMc	21	1718					100	100	1930						100	100	17.37	18.51	19.51																	
	22	1294					100	100	1600						100	100	14.86	15.00	16.30																	
	23	970					100	100	1000						100	100	8.16	6.65	9.60																	
	24	785					100	100	1734						100	100	7.90	6.63	9.65																	
LTUKAUa	01	727					100	100	736						100	100	14.31	13.57	15.96																	
	02	894					100	100	868						100	100	11.20	11.52	12.08																	
	03	616					100	100	644						100	100	6.01	5.59	6.93																	
POLTARa	01	1250					100	100	1472						100	100																				
	02	627					100	100	684						100	100																				
	03	625					100	100	704						100	100																				
POLWARa	01	1309	54			34	12	100	1337	60			36	5	100	100	8.17	0.00	11.07																	
	02	700	77			16	7	100	717	76			20	4	100	100	5.76	0.09	6.97																	
	03	751	97			2	1	100	763	97			2	0	100	100	1.56	0.10	1.99																	
RUSNOVb	01	1573				28	72	100	1602				32	68	100	100	10.63	0.00	13.99																	
	02	1721				22	78	100	1666				23	77	100	100	8.66	0.00	10.65																	
	03	1605				9	91	100	1668				8	92	100	100	3.74	0.00	4.66																	
Percentage of <a href="#">EXREASC</a>																Follow-up period in years																				
RUA	Cohort	Men								Women								Mean	Min.*	Max.																
		N	end of study	moved away	refusal	other	irrelevant	total	N	end of study	moved away	refusal	other	irrelevant	total																					
RUSNOVc	21	1603				23	77	100							0	100	12.72	5.66	15.10																	
SWE-NSWa	01	823		3		34	63	100	802		3		34	62	100	100	11.03	0.04	13.96																	
	02	773		4		23	73	100	803		4		23	73	100	100	8.48	0.05	9.97																	
	03	928		3		10	88	100	965		3		9	88	100	100	5.44	0.03	6.00																	
UNK-BELa	21	2745					100	100							0	100	4.93	5.00	5.55																	
UNK-CAEa	21	2398					100	100							0	100	12.67	12.54	16.48																	
UNK-EDLa	01	671					100	100	628						100	100	18.26	19.34	19.83																	
UNK-GLAa	01	583					100	100	526						100	100	17.64	19.44	19.91																	
	02	849					100	100	905						100	100	12.21	13.33	13.98																	
	03	797					100	100	859						100	100	10.08	10.24	10.84																	
	21	493					100	100	524						100	100	15.38	16.53	17.92																	
UNK-SHHa	01	4676					100	100	4489						100	100	18.11	18.17	21.10																	

Table F.9. Percentage of types of exit from the follow-up for nonfatal coronary events and period of follow-up in years

RUA	Cohort	Percentage of <a href="#">EXREASC</a>														Follow-up period in years		
		Men							Women							Mean	Min. *	Max.
		N	end of study	moved away	refusal	other	irrelevant	total	N	end of study	moved away	refusal	other	irrelevant	total			

\*: Where EXREAS (Form 25) = 2, i.e. end of the follow-up period of the cohort in MORGAM

Updated on 2007-06-19

**Follow-up data****Table F.10.** Reported end of follow-up date for nonfatal coronary events and three most frequently occurring dates of exit by [EXREASC](#) (see [End-of-follow-up period for coronary events](#))

RUA	Cohort	Reported end of follow-up date	EXREASC = 1								EXREASC = 1, 2, 3 or 4			
			N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the 1st frequent	latest date of exit
				exit date	N	exit date	N	exit date	N	exit dates	N			
AUS-NEWa	01	n.a.	0	.	.	.	.	.	.	0	.	.		
	02	n.a.	0	.	.	.	.	.	.	0	.	.		
	03	n.a.	0	.	.	.	.	.	.	0	.	.		
DEN-GLOa	01	31 Dec 2001	0	.	.	.	.	.	.	0	.	.		
	02	31 Dec 2001	0	.	.	.	.	.	.	0	.	.		
	03	31 Dec 2001	0	.	.	.	.	.	.	0	.	.		
	21	31 Dec 2001	0	.	.	.	.	.	.	0	.	.		
FIN-ATBa	21	31 Dec 1999	0	.	.	.	.	.	.	0	.	.		
FIN-EASa	01	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
	02	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
	03	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
RUA	Cohort	Reported end of follow-up date	EXREASC = 1								EXREASC = 1, 2, 3 or 4			
			N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the 1st frequent	latest date of exit
				exit date	N	exit date	N	exit date	N	exit dates	N			
FIN-EASb	24	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
FIN-WESa	01	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
	02	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
FIN-WESb	03	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
	24	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		

Table F.10. Reported end of follow-up date for nonfatal coronary events and three most frequently occurring dates of exit

<b>FRA-LILa</b>	21	10 years after date of examination	0	.	.	.	.	.	.	.	0	.		
<b>FRA-STRa</b>	21	10 years after date of examination	0	.	.	.	.	.	.	.	0	.		
<b>FRA-TOUa</b>	21	10 years after date of examination	0	.	.	.	.	.	.	.	0	.		
<b>GER-AUGa</b>	01	31 Dec 2002	0	.	.	.	.	.	.	.	700	658	2002-11-26	
	02	31 Dec 2002	0	.	.	.	.	.	.	.	334	328	2002-11-20	
	03	31 Dec 2002	0	.	.	.	.	.	.	.	96	19	2002-06-14	
<b>RUA</b>	<b>Cohort</b>	<b>Reported end of follow-up date</b>	<b>EXREASC = 1</b>								<b>EXREASC = 1, 2, 3 or 4</b>			
			<b>N</b>	<b>1st frequent</b>		<b>2nd frequent</b>		<b>3rd frequent</b>		<b>other</b>		<b>N</b>	<b>exit dates after the 1st frequent</b>	<b>latest date of exit</b>
				<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>exit dates</b>	<b>N</b>			
<b>ITA-BRIa</b>	01	31 Dec 2002	0	.	.	.	.	.	.	.	33	31	2000-07-06	
	02	31 Dec 2002	0	.	.	.	.	.	.	.	28	27	2002-12-23	
	03	31 Dec 2002	0	.	.	.	.	.	.	.	30	9	2002-09-26	
<b>ITA-FRIa</b>	01	31 Dec 1998	0	.	.	.	.	.	.	.	0	.		
	02	31 Dec 1998	0	.	.	.	.	.	.	.	0	.		
	03	31 Dec 1998	0	.	.	.	.	.	.	.	0	.		
<b>ITA-FSEa</b>	21	31 Dec 1998	0	.	.	.	.	.	.	.	0	.		
<b>ITA-PAMa</b>	21	31 Dec 2002	0	.	.	.	.	.	.	.	34	33	2002-05-14	

Table F.10. Reported end of follow-up date for nonfatal coronary events and three most frequently occurring dates of exit

RUA	Cohort	Reported end of follow-up date	EXREASC = 1								EXREASC = 1, 2, 3 or 4			
			N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the 1st frequent	latest date of exit
				exit date	N	exit date	N	exit date	N	exit dates	N			
<b>ITA-ROMb</b>	01	31 Dec 2002	0	.	.	.	.	.	.	.	.	0	.	.
<b>ITA-ROMc</b>	21	31 Dec 2002	0	.	.	.	.	.	.	.	.	0	.	.
	22	31 Dec 2002	0	.	.	.	.	.	.	.	.	0	.	.
	23	31 Dec 2002	0	.	.	.	.	.	.	.	.	0	.	.
	24	31 Dec 2002	0	.	.	.	.	.	.	.	.	0	.	.
<b>LTU-KAUa</b>	01	31 Dec 1998	0	.	.	.	.	.	.	.	.	0	.	.
	02	31 Dec 1998	0	.	.	.	.	.	.	.	.	0	.	.
	03	31 Dec 1998	0	.	.	.	.	.	.	.	.	0	.	.
<b>POL-TARa</b>	01	n.a.	0	.	.	.	.	.	.	.	.	0	.	.
	02	n.a.	0	.	.	.	.	.	.	.	.	0	.	.
	03	n.a.	0	.	.	.	.	.	.	.	.	0	.	.
<b>POL-WARa</b>	01	31 Dec 1994	1509	1994-12-31	1509	.	.	.	.	0	0	2425	0	1994-12-31
	02	31 Dec 1994	1084	1994-12-31	1084	.	.	.	.	0	0	1342	0	1994-12-31
	03	31 Dec 1994	1471	1994-12-31	1471	.	.	.	.	0	0	1507	0	1994-12-31
<b>RUS-NOVb</b>	01	31 Dec 1998	0	.	.	.	.	.	.	.	.	945	931	1998-12-28
	02	31 Dec 1998	0	.	.	.	.	.	.	.	.	761	498	1998-12-13
	03	31 Dec 1998	0	.	.	.	.	.	.	.	.	278	265	1998-12-25
<b>RUA</b>	<b>Cohort</b>	<b>Reported end of follow-up date</b>	EXREASC = 1								EXREASC = 1, 2, 3 or 4			
			N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the	latest date of

Table F.10. Reported end of follow-up date for nonfatal coronary events and three most frequently occurring dates of exit

				exit date	N	exit date	N	exit date	N	exit dates	N		1st frequent	exit
<b>RUS-NOVc</b>	21	31 Dec 1998	0	.	.	.	.	.	.	.	.	373	206	1998-12-16
<b>SWE-NSWa</b>	01	31 Dec 1999	0	.	.	.	.	.	.	.	.	605	98	1999-12-29
	02	31 Dec 1999	0	.	.	.	.	.	.	.	.	420	265	1999-12-25
	03	31 Dec 1999	0	.	.	.	.	.	.	.	.	229	21	1999-12-25
<b>UNK-BELa</b>	21	5 years after date of examination	0	.	.	.	.	.	.	.	.	0	.	
<b>UNK-CAEa</b>	21	31 Dec 2000	0	.	.	.	.	.	.	.	.	0	.	
<b>UNK-EDLa</b>	01	31 Dec 2005	0	.	.	.	.	.	.	.	.	0	.	
<b>UNK-GLAa</b>	01	31 Dec 2005	0	.	.	.	.	.	.	.	.	0	.	
	02	31 Dec 2005	0	.	.	.	.	.	.	.	.	0	.	
	03	31 Dec 2005	0	.	.	.	.	.	.	.	.	0	.	
	21	31 Dec 2005	0	.	.	.	.	.	.	.	.	0	.	
<b>RUA Cohort</b>	Reported end of follow-up date	<b>EXREASC = 1</b>									<b>EXREASC = 1, 2, 3 or 4</b>			
		N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the 1st frequent	latest date of exit	
exit date	N		exit date	N	exit date	N	exit dates	N						
<b>UNK-SHHa</b>	01	31 Dec 2005	0	.	.	.	.	.	.	.	.	0	.	
<b>RUA Cohort</b>	Reported end of follow-up date	<b>EXREASC = 1</b>									<b>EXREASC = 1, 2, 3 or 4</b>			
		N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the 1st frequent	latest date of exit	
exit date	N		exit date	N	exit date	N	exit dates	N						

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**Follow-up data****Table F.11a.**Source of notification for non-fatal coronary events for RUA (see [Reasons for exit from the follow-up of non-fatal coronary events](#) and [Follow-up procedures and coverage](#))

<b>RUA</b>	<b>Notification of non-fatal coronary events</b>	<b>Coverage of source</b>	<b>Notification of loss to follow-up for non-fatal coronary events</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>
AUS-NEW	nf	-	-	-	-
DEN-GLO	Linkage with the the National Hospital Discharge Register	All hospitalizations in Denmark	Yes, linkage with the Civil Registration System.	2	2
FIN-ATB	Linkage with the Hospital Discharge Register using personal identification number.	All hospitalizations in Finland	No	2	2
FIN-EAS/WES	<ol style="list-style-type: none"> <li>1. Linkage with the FINMONICA and FINAMI coronary event register using personal identification number.</li> <li>2. Linkage with the Hospital Discharge Register using personal identification number</li> </ol>	All hospitalizations in Finland and through the coronary event registers some abroad.	No	2	2
FRA-LIL	Annual clinical event questionnaire mailed and if necessary further contacts made.	Whenever there was suspicion of an event, clinical information was sought directly from the hospital or general practitioner notes.	Yes, if contacts fail, the person's vital status and emigration from the area is checked from the city hall.	2	2
FRA-STR					

Table F.11a. Source of notification for nonfatal coronary events for RUA

FRA-TOU					
GER-AUG	<ol style="list-style-type: none"> <li>1. Linkage with the Coronary Event Register using name and date of birth.</li> <li>2. If a person has moved out of the study area, information from the follow-up questionnaire were used.</li> </ol>	The area of RU and the adjacent areas. Upper age limit 74.	Yes, through the Population Registers whenever a person did not return the follow-up questionnaire.	1	2
ITA-BRI	Probabilistic record linkage with the Hospital discharge records.	Region of Lombardia	Yes, through the municipality registers.	1	2
ITA-FRI	Linkage with the Regional health information system using personal identification code.	Region of Friuli-Venezia Giulia	Yes, through the Regional health information system	1	2
ITA-FSE	Linkage with the Regional health information system using personal identification code.	Region of Friuli-Venezia Giulia	Yes, through the Regional health information system.	1	2
ITA-PAM	Probabilistic record linkage with the Hospital discharge records	Region of Lombardia	Yes, through the municipality registers.	1	2
<b>RUA</b>	<b>Notification of non-fatal coronary events</b>	<b>Coverage of source</b>	<b>Notification of loss to follow-up for non-fatal coronary events</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>

Table F.11a. Source of notification for nonfatal coronary events for RUA

ITA- ROM	<ol style="list-style-type: none"> <li>1. Linkage with the Coronary and Cerebrovascular Event Register, which operated during 1983-85. The upper age limit of registration was 74 years.</li> <li>2. Linkage with the files of the Hospital Discharge Records, manually in 1990-93 and by computerized procedures from 1995 onwards. Computerized linkage covered 80% of hospitalized in 1990-95, 98% in 1996-1998 and 100% in 1999-2002.</li> <li>3. Re-examinations of the cohorts.</li> <li>4. In case of non-response to the re-examination, persons were first contacted by mail, asking to return a standardized questionnaire containing information on their health conditions, and hospitalizations. Non-respondents were contacted through telephone and the same questionnaire was filled in. Further information from non-respondents was collected from the general practitioners.</li> </ol>	<p>Region of Lazio, but the coverage of the follow-up of non-fatal events is likely to be lower in 1985-89 than at other periods because it was only based on the re-examinations of the cohorts.</p>	<p>Yes, through the municipality registers.</p>	1	2
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Table F.11a. Source of notification for nonfatal coronary events for RUA

	Record linkage was done using person's first name, last name, date of birth and sex.				
LTU-KAU	Linkage to the Coronary Event Register using name, date of birth and current address of residence.	Town of Kaunas	Cohort 01 and 02: No Cohort 03: Yes, from the Address Bureau of Kaunas.	1	Cohort 01 and 02: 1 Cohort 03: 2
POL-TAR	nf	-	-	-	-
POL-WAR	Linkage with the MONICA Coronary Register the unique PESEL number.	Area of RUs in years 1983-1994. Upper age limit 64.	Yes, through the population register.	1	2
RUS-NOV	Linkage to the Coronary Event Register using the date of birth and family name.	Area of RUs. Upper age limit 64.	No	1	1
SWE-NSW	Linkage to the Coronary Event Register using personal identification code.	Area of RUs. Upper age limit 64.	Yes, through the Local Population Registers.	1	2
UNK-BEL	Annual clinical event questionnaire mailed and if necessary further contacts made.	Whenever there was suspicion of an event, clinical information was sought directly from the hospital or general practitioner notes.	Yes, if contacts fail, the person's vital status and emigration from the area is checked from the Registrar General's data.	2	2

Table F.11a. Source of notification for nonfatal coronary events for RUA

UNK-CAE	<ol style="list-style-type: none"> <li>1. Re-examination</li> <li>2. Men who did not to attend for re-examination or who had left the study area were contacted by letter</li> <li>3. Linkage with the Hospital Activity Analysis Lists of all possible hospitals within the study area using date of birth and address code.</li> </ol>	Whenever the re-examination questionnaire suggested, the MPC sought information from hospitals within the UK and sometimes abroad.	Yes, through the National Health Service (NHS) Registry	2	2
UNK-EDI/GLA/SHH	Linkage with the Scottish Record Linkage System on all hospital episodes using a sophisticated computer programme.	All hospitalizations in Scotland	Yes, through the National Health Service (NHS) Registry	2	2
<b>RUA</b>	<b>Notification of non-fatal coronary events</b>	<b>Coverage of source</b>	<b>Notification of loss to follow-up for non-fatal coronary events</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>

nf = not followed up

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**Follow-up Data****Table F.11b.** Percentages of source of notification of acute coronary events (See [Follow-up procedures and coverage](#)). In the case of multiple sources the event is assigned to leftmost relevant column.

<b>RUA</b>	<b>Cohort</b>	<b># of acute coronary events</b>	<b>Event register (%)</b>	<b>Cause of death register (%)</b>	<b>Hospital discharge register (%)</b>	<b>Contact with doctor (%)</b>	<b>Contact with person (%)</b>	<b>Other (%)</b>	<b>ECG (%)</b>	<b>Source missing (%)</b>
<b>AUS-NEWa</b>	<b>01</b>	94	0	100	0	0	0	0	0	0
	<b>02</b>	33	0	100	0	0	0	0	0	0
	<b>03</b>	10	0	100	0	0	0	0	0	0
<b>DEN-GLOa</b>	<b>01</b>	599	0	28.9	71.1	0	0	0	0	0
	<b>02</b>	191	0	16.2	83.8	0	0	0	0	0
	<b>03</b>	117	0	20.5	79.5	0	0	0	0	0
	<b>21</b>	256	0	21.1	78.9	0	0	0	0	0
<b>FIN-ATBa</b>	<b>21</b>	661	0	37.1	62.9	0	0	0	0	0
<b>FIN-EASa</b>	<b>01</b>	1124	36.4	29.9	33.7	0	0	0	0	0
	<b>02</b>	559	38.5	26.8	34.7	0	0	0	0	0
	<b>03</b>	205	25.9	22.4	51.7	0	0	0	0	0
<b>FIN-EASb</b>	<b>24</b>	241	22	27.4	50.6	0	0	0	0	0
<b>RUA</b>	<b>Cohort</b>	<b># of acute coronary events</b>	<b>Event register (%)</b>	<b>Cause of death register (%)</b>	<b>Hospital discharge register (%)</b>	<b>Contact with doctor (%)</b>	<b>Contact with person (%)</b>	<b>Other (%)</b>	<b>ECG (%)</b>	<b>Source missing (%)</b>
<b>FIN-WESa</b>	<b>01</b>	510	45.1	30.2	24.7	0	0	0	0	0
	<b>02</b>	140	52.9	25	22.1	0	0	0	0	0
<b>FIN-WESb</b>	<b>03</b>	142	31.7	28.9	39.4	0	0	0	0	0
	<b>24</b>	126	5.6	43.7	50.8	0	0	0	0	0
<b>FRA-LILa</b>	<b>21</b>	133	0	0	86.5	12	0	1.5	0	0
<b>FRA-STRa</b>	<b>21</b>	124	0	0	79	21	0	0	0	0

Table F.11b. Percentages of source of notification of acute coronary events

<b>FRA-TOUa</b>	<b>21</b>	129	0	0	89.9	10.1	0	0	0	0
<b>GER-AUGa</b>	<b>01</b>	264	87.5	11.4	1.1	0	0	0	0	0
	<b>02</b>	153	96.1	2.6	1.3	0	0	0	0	0
	<b>03</b>	64	96.9	1.6	1.6	0	0	0	0	0
<b>ITA-BRIa</b>	<b>01</b>	94	0	33	67	0	0	0	0	0
	<b>02</b>	69	0	24.6	75.4	0	0	0	0	0
	<b>03</b>	42	0	33.3	66.7	0	0	0	0	0
<b>RUA</b>	<b>Cohort</b>	<b># of acute coronary events</b>	<b>Event register (%)</b>	<b>Cause of death register (%)</b>	<b>Hospital discharge register (%)</b>	<b>Contact with doctor (%)</b>	<b>Contact with person (%)</b>	<b>Other (%)</b>	<b>ECG (%)</b>	<b>Source missing (%)</b>
<b>ITA-FRIa</b>	<b>01</b>	142	43.7	0	0	0	0	0	0	56.3
	<b>02</b>	103	36.9	0	0	0	0	0	0	63.1
	<b>03</b>	22	59.1	0	0	0	0	0	0	40.9
<b>ITA-FSEa</b>	<b>21</b>	4	100	0	0	0	0	0	0	0
<b>ITA-PAMa</b>	<b>21</b>	90	0	36.7	63.3	0	0	0	0	0
<b>ITA-ROMb</b>	<b>01</b>	86	12.8	34.9	51.2	0	0	1.2	0	0
<b>ITA-ROMc</b>	<b>21</b>	219	0.9	33.3	54.3	0.5	8.2	0.9	1.8	0
	<b>22</b>	139	0	33.8	58.3	0	6.5	0	1.4	0
	<b>23</b>	45	0	22.2	75.6	0	0	2.2	0	0
	<b>24</b>	64	1.6	28.1	54.7	1.6	9.4	0	4.7	0
<b>LTU-KAUa</b>	<b>01</b>	154	83.8	16.2	0	0	0	0	0	0
	<b>02</b>	122	86.1	13.9	0	0	0	0	0	0
	<b>03</b>	39	94.9	5.1	0	0	0	0	0	0
<b>RUA</b>	<b>Cohort</b>	<b># of acute coronary events</b>	<b>Event register (%)</b>	<b>Cause of death register (%)</b>	<b>Hospital discharge register (%)</b>	<b>Contact with doctor (%)</b>	<b>Contact with person (%)</b>	<b>Other (%)</b>	<b>ECG (%)</b>	<b>Source missing (%)</b>
<b>POL-TARa</b>	<b>01</b>	119	0	100	0	0	0	0	0	0
	<b>02</b>	30	0	100	0	0	0	0	0	0
	<b>03</b>	11	0	100	0	0	0	0	0	0

Table F.11b. Percentages of source of notification of acute coronary events

<b>POL- WARa</b>	<b>01</b>	257	65	35	0	0	0	0	0	0
	<b>02</b>	76	59.2	40.8	0	0	0	0	0	0
	<b>03</b>	16	62.5	37.5	0	0	0	0	0	0
<b>RUS- NOVb</b>	<b>01</b>	207	55.6	32.4	0	0	0	12.1	0	0
	<b>02</b>	125	50.4	32.8	0	0	0	16.8	0	0
	<b>03</b>	70	67.1	25.7	0	0	0	7.1	0	0
<b>RUS- NOVc</b>	<b>21</b>	152	59.2	27.6	0	0	0	13.2	0	0
<b>SWE- NSWa</b>	<b>01</b>	89	64	36	0	0	0	0	0	0
	<b>02</b>	53	81.1	18.9	0	0	0	0	0	0
	<b>03</b>	35	62.9	37.1	0	0	0	0	0	0
<b>RUA</b>	<b>Cohort</b>	<b># of acute coronary events</b>	<b>Event register (%)</b>	<b>Cause of death register (%)</b>	<b>Hospital discharge register (%)</b>	<b>Contact with doctor (%)</b>	<b>Contact with person (%)</b>	<b>Other (%)</b>	<b>ECG (%)</b>	<b>Source missing (%)</b>
<b>UNK- BELa</b>	<b>21</b>	112	0	19.6	0	0	80.4	0	0	0
<b>UNK- CAEa</b>	<b>21</b>	458	0	47.8	0	0	52.2	0	0	0
<b>UNK- EDla</b>	<b>01</b>	172	0	33.1	66.9	0	0	0	0	0
<b>UNK- GLAa</b>	<b>01</b>	209	0	39.7	60.3	0	0	0	0	0
	<b>02</b>	284	0	40.1	59.9	0	0	0	0	0
	<b>03</b>	127	0	29.1	70.9	0	0	0	0	0
	<b>21</b>	135	0	33.3	66.7	0	0	0	0	0
<b>UNK- SHHa</b>	<b>01</b>	1588	0	35.5	64.5	0	0	0	0	0
<b>RUA</b>	<b>Cohort</b>	<b># of acute coronary events</b>	<b>Event register (%)</b>	<b>Cause of death register (%)</b>	<b>Hospital discharge register (%)</b>	<b>Contact with doctor (%)</b>	<b>Contact with person (%)</b>	<b>Other (%)</b>	<b>ECG (%)</b>	<b>Source missing (%)</b>

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**Follow-up Data**

**Table F.12.** Percentage of loss to follow-up from the follow-up of fatal and nonfatal coronary events (See [Follow-up procedures and coverage](#). Length of the follow-up period is in [Table F.9](#) and availability of the notification of loss to follow-up in [Table F.11a](#).)

RUA	Cohort	N	Percentage of loss to follow-up*						
			Years 0-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years > 15	Total
AUS-NEWa	01	2466	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	02	1774	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	03	1633	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEN-GLOa	01	3785	0.2	0.1	0.1	0.1	0.2	0.2	0.9
	02	1504	0.0	0.1	0.1	0.1	0.1	0.0	0.4
	03	1624	0.1	0.2	0.4	0.2	0.0	0.0	0.9
	21	2656	0.2	0.0	0.2	0.0	0.0	0.0	0.4
FIN-ATBa	21	5073	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIN-EASa	01	5812	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	02	4367	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	03	3013	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIN-EASb	24	4846	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUA	Cohort	N	Percentage of loss to follow-up*						
			Years 0-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years > 15	Total
FIN-WESa	01	3217	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	02	1444	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIN-WESb	03	2986	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	24	3295	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FRA-LILa	21	2633	0.2	1.3	1.4	0.6	0.0	0.0	3.5
FRA-STRa	21	2612	0.4	1.9	1.2	0.9	0.0	0.0	4.4
FRA-TOUa	21	2610	0.6	3.0	2.0	1.0	0.0	0.0	6.6
GER-AUGa	01	3980	0.3	0.6	0.4	0.4	0.4	0.5	2.6
	02	3732	0.4	0.3	0.6	0.6	0.0	0.0	1.9
	03	3632	0.9	1.1	0.1	0.0	0.0	0.0	2.1
	01	1659	0.5	0.5	0.5	0.4	0.4	0.1	2.4

Table F.12. Percentage of loss to follow-up from the follow-up of fatal and nonfatal coronary events

<b>ITA-BRIa</b>	<b>02</b>	1599	0.6	0.3	0.3	0.9	0.2	0.0	2.3
	<b>03</b>	1674	0.9	0.8	0.7	0.0	0.0	0.0	2.4
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Percentage of loss to follow-up*</b>						
			<b>Years 0-3</b>	<b>Years 4-6</b>	<b>Years 7-9</b>	<b>Years 10-12</b>	<b>Years 13-15</b>	<b>Years &gt; 15</b>	<b>Total</b>
<b>ITA-FRIa</b>	<b>01</b>	1880	0.7	0.8	0.4	0.1	0.1	0.0	2.1
	<b>02</b>	1844	1.0	0.4	0.3	0.0	0.0	0.0	1.7
	<b>03</b>	1786	0.5	0.3	0.0	0.0	0.0	0.0	0.8
<b>ITA-FSEa</b>	<b>21</b>	400	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>ITA-PAMa</b>	<b>21</b>	2044	0.3	0.5	0.7	0.3	0.0	0.0	1.8
<b>ITA-ROMb</b>	<b>01</b>	1723	0.2	0.6	0.2	0.2	0.1	0.0	1.3
<b>ITA-ROMc</b>	<b>21</b>	3648	0.4	0.1	0.1	0.1	0.1	0.0	0.8
	<b>22</b>	2894	0.1	0.2	0.0	0.1	0.0	0.0	0.4
	<b>23</b>	1970	0.4	0.2	0.0	0.0	0.0	0.0	0.6
	<b>24</b>	2519	0.1	0.0	0.0	0.0	0.0	0.0	0.1
<b>LTU-KAUa</b>	<b>01</b>	1463	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>02</b>	1762	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>03</b>	1260	1.9	1.7	0.2	0.0	0.0	0.0	3.8
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Percentage of loss to follow-up*</b>						
			<b>Years 0-3</b>	<b>Years 4-6</b>	<b>Years 7-9</b>	<b>Years 10-12</b>	<b>Years 13-15</b>	<b>Years &gt; 15</b>	<b>Total</b>
<b>POL-TARa</b>	<b>01</b>	2722	0.1	0.2	0.3	1.0	1.7	0.0	3.3
	<b>02</b>	1311	0.2	0.6	0.7	0.1	0.0	0.0	1.6
	<b>03</b>	1329	0.4	0.7	0.0	0.0	0.0	0.0	1.1
<b>POL-WARa</b>	<b>01</b>	2627	0.0	0.0	0.1	0.0	0.0	0.0	0.1
	<b>02</b>	1414	0.0	0.1	0.0	0.0	0.0	0.0	0.1
	<b>03</b>	1513	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>RUS-NOVb</b>	<b>01</b>	3175	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>02</b>	3387	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>03</b>	3273	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>RUS-NOVc</b>	<b>21</b>	1603	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>SWE-NSWa</b>	<b>01</b>	1619	1.2	0.6	0.6	0.7	0.3	0.0	3.4
	<b>02</b>	1576	1.5	1.0	1.1	0.2	0.0	0.0	3.8
	<b>03</b>	1510	1.6	1.7	0.0	0.0	0.0	0.0	3.3

Table F.12. Percentage of loss to follow-up from the follow-up of fatal and nonfatal coronary events

RUA	Cohort	N	Percentage of loss to follow-up*						
			Years 0-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years > 15	Total
UNK-BELa	21	2745	0.3	0.3	0.0	0.0	0.0	0.0	0.6
UNK-CAEa	21	2398	0.2	0.0	0.1	0.5	0.8	0.0	1.6
UNK-EDLa	01	1299	0.0	0.1	0.0	0.2	0.1	0.0	0.4
UNK-GLAa	01	1109	0.0	0.0	0.0	0.1	0.1	0.0	0.2
	02	1754	0.0	0.0	0.1	0.0	0.0	0.0	0.1
	03	1656	0.0	0.1	0.1	0.0	0.0	0.0	0.2
	21	1017	0.1	0.0	0.2	0.0	0.1	0.0	0.4
UNK-SHLa	01	9165	0.0	0.0	0.0	0.1	0.0	0.1	0.2
RUA	Cohort	N	Percentage of loss to follow-up*						
			Years 0-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years > 15	Total

\* Numerator: (EXREASC = 2 or 3) or (EXREASC = 8 and EXREAS = 3, 4 or 5)

Denominator: EXDATEC != 77777777

Updated on 2007-06-19

**Follow-up Data****Table F.13.** Number of [observed](#) and [expected](#) coronary deaths (See [Follow-up procedures and coverage](#))

RUA	Cohort	N	Number of coronary deaths			Ratio % (O/E)	Age range at baseline	Follow-up period	Population mortality data <sup>1</sup>
			Observed		Expected (E)				
			Official (O)	MORGAM					
AUS-NEWa	01	2466	94	94	88	106	34-65	1983-1998 ( <a href="#">men/</a> <a href="#">women</a> )	
	02	1774	33	33	46	71	24-70		
	03	1633	10	10	13	76	35-70		
DEN-GLOa	01	3785	126	176	131	96	30-61	1982-2001 ( <a href="#">men/</a> <a href="#">women</a> )	
	02	1504	24	33	31	77	29-61		
	03	1624	13	24	14	92	29-61		
	21	2656	34	55	49	69	41-72		
FIN-ATBa	21	5073	303	312	<a href="#">nia</a>	<a href="#">npc</a>	54-77	1992-1999	
FIN-EASa	01	5812	426	439	451	94	24-63	1982-2005 ( <a href="#">men/</a> <a href="#">women</a> )	
	02	4367	210	223	205	102	24-64		
	03	3013	59	62	69	85	24-64		
RUA	Cohort	N	Number of coronary deaths			Ratio % (O/E)	Age range at baseline	Follow-up period	Population mortality data <sup>1</sup>
			Observed		Expected (E)				
			Official (O)	MORGAM					
FIN-EASb	24	4846	81	86	98	82	24-74	1997-2005 ( <a href="#">men/</a> <a href="#">women</a> )	

Table F.13. Number of observed and expected coronary deaths

<b>FIN- WESa</b>	<b>01</b>	3217	213	232	221	96	24-63	1982-2005	1982-2005 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1444	49	53	51	96	24-64	1987-2005	
<b>FIN- WESb</b>	<b>03</b>	2986	48	54	57	84	24-64	1992-2005	1992-2005 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>24</b>	3295	52	59	65	80	24-74	1997-2005	
<b>FRA- LILa</b>	<b>21</b>	2633	15	35	40	37	49-64	1991-2003	1982-1999 ( <a href="#">men/</a> <a href="#">women</a> )
<b>FRA- STRa</b>	<b>21</b>	2612	10	27	31	32	48-60	1991-2003	1983-1999 ( <a href="#">men/</a> <a href="#">women</a> )
<b>FRA- TOUa</b>	<b>21</b>	2610	7	15	21	33	49-60	1991-2005	1982-1999 ( <a href="#">men/</a> <a href="#">women</a> )
<b>GER- AUGa</b>	<b>01</b>	3980	132	168	131	100	24-65	1984-2002	1983-1994 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	3732	70	82	62	112	24-65	1989-2002	
	<b>03</b>	3632	20	26	25	80	24-65	1994-2002	
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Number of coronary deaths</b>			<b>Ratio % (O/E)</b>	<b>Age range at baseline</b>	<b>Follow- up period</b>	<b>Population mortality data<sup>1</sup></b>
			<b>Observed</b>		<b>Expected (E)</b>				
			<b>Official (O)</b>	<b>MORGAM</b>					
<b>ITA- BRIa</b>	<b>01</b>	1659	25	30	26	96	25-65	1986-2002	1985-2002 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1599	14	15	17	82	25-66	1989-2002	
	<b>03</b>	1674	13	13	9	144	26-66	1993-2002	
<b>ITA- FRIa</b>	<b>01</b>	1880	13	17	21	61	24-65	1985-1998	1983-1993 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1844	6	8	11	54	24-64	1989-1998	

Table F.13. Number of observed and expected coronary deaths

	<b>03</b>	1786	0	0	2	0	24-64	1994-1998	
<b>ITA-FSEa</b>	<b>21</b>	400	0	0	<a href="#">nia</a>	<a href="#">npc</a>	45-65	1995-1998	
<b>ITA-PAMa</b> <a href="#">2</a>	<b>21</b>	2044	27	31	35	77	25-75	1990-2002	1985-2002 ( <a href="#">men/</a> <a href="#">women</a> )
<b>ITA-ROMb</b>	<b>01</b>	1723	30	40	39	76	24-66	1982-2002	1983-1991 ( <a href="#">men/</a> <a href="#">women</a> )
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Number of coronary deaths</b>			<b>Ratio % (O/E)</b>	<b>Age range at baseline</b>	<b>Follow-up period</b>	<b>Population mortality data<sup>1</sup></b>
			<b>Observed</b>		<b>Expected (E)</b>				
			<b>Official (O)</b>	<b>MORGAM</b>					
<b>ITA-ROMc</b>	<b>21</b>	3648	82	106	96	85	19-69	1983-2002	1982-1998 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>22</b>	2894	59	67	60	98	18-72	1986-2002	
	<b>23</b>	1970	13	14	9	144	20-77	1993-2002	
	<b>24</b>	2519	20	25	32	62	26-81	1993-2002	
<b>LTU-KAUa</b>	<b>01</b>	1463	71	71	99	71	35-64	1983-1998	1983-1999 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1762	56	52	74	75	35-64	1986-1998	
	<b>03</b>	1260	20	18	20	100	33-65	1992-1998	
<b>POL-TARa</b>	<b>01</b>	2722	80	119	77	103	34-65	1983-1998	1983-1998 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1311	15	30	25	60	34-65	1987-1998	
	<b>03</b>	1329	6	11	10	60	34-65	1992-1998	
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Number of coronary deaths</b>			<b>Ratio % (O/E)</b>	<b>Age range at baseline</b>	<b>Follow-up period</b>	<b>Population mortality data<sup>1</sup></b>
			<b>Observed</b>		<b>Expected (E)</b>				
			<b>Official (O)</b>	<b>MORGAM</b>					

Table F.13. Number of observed and expected coronary deaths

<b>POL- WARa</b>	<b>01</b>	2646	87	136	90	96	35-65	1983-1998	1983-2000 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1417	28	43	27	103	34-64	1988-1998	
	<b>03</b>	1514	5	7	11	45	34-64	1993-1998	
<b>RUS- NOVb</b>	<b>01</b>	3175	125	127	148	84	24-65	1985-1998	1981-2000 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	3387	86	84	115	74	24-65	1988-1998	
	<b>03</b>	3273	31	35	33	93	24-65	1994-1998	
<b>RUS- NOVc</b>	<b>21</b>	1603	91	92	121	75	23-63	1983-1998	1981-2000 ( <a href="#">men/</a> <a href="#">women</a> )
<b>SWE- NSWa</b>	<b>01</b>	1625	34	37	42	80	25-65	1986-1999	1983-1999 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1576	13	14	19	68	24-64	1990-1999	
	<b>03</b>	1893	17	19	24	70	24-74	1994-1999	
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Number of coronary deaths</b>			<b>Ratio % (O/E)</b>	<b>Age range at baseline</b>	<b>Follow- up period</b>	<b>Population mortality data<sup>1</sup></b>
			<b>Observed</b>		<b>Expected (E)</b>				
			<b>Official (O)</b>	<b>MORGAM</b>					
<b>UNK- BELa</b>	<b>21</b>	2745	19	22	44	43	49-60	1991-1999	1983-1993 ( <a href="#">men/</a> <a href="#">women</a> )
<b>UNK- CAEa<sup>3</sup></b>	<b>21</b>	2398	219	220	204	107	47-67	1984-2000	1984-2000 ( <a href="#">men/</a> <a href="#">women</a> )
<b>UNK- ED Ia</b>	<b>01</b>	1299	53	56	<a href="#">nia</a>	<a href="#">npc</a>	25-65	1986-2005	
<b>UNK- GLAa</b>	<b>01</b>	1109	74	82	94	78	25-65	1986-2005	1983-1995 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1754	99	114	144	68	25-75	1992-2005	

Table F.13. Number of observed and expected coronary deaths

	<b>03</b>	1656	32	37	46	69	25-65	1995-2005	
	<b>21</b>	1017	41	45	64	64	25-65	1988-2005	
<b>UNK-SHHa</b> <sup>3</sup>	<b>01</b>	9165	501	561	546	91	38-61	1984-2005	1984-2000 ( <a href="#">men/</a> <a href="#">women</a> )
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Number of coronary deaths</b>			<b>Ratio % (O/E)</b>	<b>Age range at baseline</b>	<b>Follow-up period</b>	<b>Population mortality data<sup>1</sup></b>
			<b>Observed</b>		<b>Expected (E)</b>				
			<b>Official (O)</b>	<b>MORGAM</b>					

**observed official:** deaths in the cohort with  
ICD-8 codes 410, 411, 412, 413, 414,  
ICD-9 codes 410, 411, 412, 413, 414 or  
ICD-10 codes I20, I21, I22, I23, I24, I25  
as the underlying cause

**observed MORGAM:** deaths in the cohort with MORGAM diagnosis 1, 2, 3 or 5

**expected:** expected number of deaths in the cohort assuming the same mortality as in the general population for the ICD codes as specified for "observed official" above (see also [Annex F.1](#))

**nia:** no information available

**npc:** not possible to calculate

**1:** population mortality data: age and relevant calendar years for which the annual population demographic and mortality data are available

**2:** mortality data for the whole of Brianza region used for estimation of deaths

**3:** WHO data used for estimation of deaths

Updated on 2007-06-19

### Follow-up Data

**Table F.14** Scores for the follow-up of fatal and non-fatal coronary events (See [Follow-up procedures and coverage](#), [Diagnosis Score](#) and [Coronary Event Score](#))

RUA	Cohort	Event notification score	Loss-to-follow-up notification score	Mortality comparison score	Coverage score	Diagnosis score	Coronary event score
AUS-NEWa	01	2*	2*	2	2*	1*	1.5*
	02	2*	2*	2	2*	1*	1.5*
	03	2*	2*	2	2*	1*	1.5*
DEN-GLOa	01	2	2	2	2	1.5	1.75
	02	2	2	2	2	1.5	1.75
	03	2	2	2	2	1.5	1.75
	21	2	2	1	2	1,5	1.75
FIN-ATBa	21	2	2	<a href="#">npc</a> <sup>1</sup>	2?	1.5	1.75?
FIN-EASa	01	2	2	2	2	1.5	1.75
	02	2	2	2	2	1.5	1.75
	03	2	2	2	2	1.5	1.75
FIN-EASb	24	2	2	2	2	1.5	1.75
FIN-WESa	01	2	2	2	2	1.5	1.75
	02	2	2	2	2	1.5	1.75
FIN-WESb	03	2	2	2	2	1.5	1.75
	24	2	2	2	2	1.5	1.75
FRA-LILa	21	2	2	<a href="#">npc</a> <sup>2</sup>	2?	1	1.5?
FRA-STRa	21	2	2	<a href="#">npc</a> <sup>2</sup>	2?	1	1.5?
FRA-TOUa	21	2	2	<a href="#">npc</a> <sup>2</sup>	2?	1	1.5?
RUA	Cohort	Event notification score	Loss-to-follow-up notification score	Mortality comparison score	Coverage score	Diagnosis score	Coronary event score
GER-AUGa	01	1	2	2	2	1	1.5
	02	1	2	2	2	1	1.5
	03	1	2	2	2	1	1.5
ITA-BRIa	01	1	2	2	2	1.5	1.75
	02	1	2	2	2	1.5	1.75

Table F.14 - Scores for the follow-up of fatal and non-fatal coronary events

	<b>03</b>	1	2	2	2	1.5	1.75
<b>ITA-FRIa</b>	<b>01</b>	1	2	1	1	1	1
	<b>02</b>	1	2	0	1	1	1
	<b>03</b>	1	2	0	1	1	1
<b>ITA-FSEa</b>	<b>21</b>	1	2	<a href="#">npc</a> <sup>3</sup>	1?	1	1?
<b>ITA-PAMa</b>	<b>21</b>	1	2	2	2	1.5	1.75
<b>ITA-ROMb</b>	<b>01</b>	1	2	2	2	1	1.5
<b>ITA-ROMc</b>	<b>21</b>	1	2	2	2	1	1.5
	<b>22</b>	1	2	2	2	1	1.5
	<b>23</b>	1	2	2	2	1	1.5
	<b>24</b>	1	2	1	1	1	1
<b>LTU-KAUa</b>	<b>01</b>	1	1	2	1	1.5	1.25
	<b>02</b>	1	1	2	1	1.5	1.25
	<b>03</b>	1	2	2	2	1.5	1.75
<b>RUA</b>	<b>Cohort</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>	<b>Mortality comparison score</b>	<b>Coverage score</b>	<b>Diagnosis score</b>	<b>Coronary event score</b>
<b>POL-TARa</b>	<b>01</b>	2*	2*	2	2*	0.5*	1.25*
	<b>02</b>	2*	2*	1	2*	0.5*	1.25*
	<b>03</b>	2*	2*	1	2*	0.5*	1.25*
<b>POL-WARa</b>	<b>01</b>	1	2	2	2	1	1.5
	<b>02</b>	1	2	2	2	1	1.5
	<b>03</b>	1	2	0	1	1	1.5
<b>RUS-NOVb</b>	<b>01</b>	1	1	2	1	1	1
	<b>02</b>	1	1	2	1	1	1
	<b>03</b>	1	1	2	1	1	1
<b>RUS-NOVc</b>	<b>21</b>	1	1	2	1	1	1
<b>SWE-NSWa</b>	<b>01</b>	1	2	2	2	1.5	1.75
	<b>02</b>	1	2	1	1	1.5	1.25
	<b>03</b>	1	2	2	2	1.5	1.75
<b>UNK-BELa</b>	<b>21</b>	2	2	<a href="#">npc</a> <sup>2</sup>	2?	1	1.5?
<b>UNK-CAEa</b>	<b>21</b>	2	2	2	2	0.5	1.25
<b>UNK-EDIa</b>	<b>01</b>	2	2	<a href="#">npc</a> <sup>3</sup>	2?	1	1.5?
	<b>01</b>	2	2	2	2	1	1.5

Table F.14 - Scores for the follow-up of fatal and non-fatal coronary events

<b>UNK-GLAa</b>	<b>02</b>	2	2	1	2	1	1.5
	<b>03</b>	2	2	1	2	1	1.5
	<b>21</b>	2	2	1	2	1	1.5
<b>UNK-SHHa</b>	<b>01</b>	2	2	2	2	1	1.5
<b>RUA</b>	<b>Cohort</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>	<b>Mortality comparison score</b>	<b>Coverage score</b>	<b>Diagnosis score</b>	<b>Coronary event score</b>

\*: non-fatal events not followed up, Scores based solely on fatal events.

Not possible to calculate:

1. In FIN-ATB, the cohort was recruited from smokers of Southern Finland, and therefore representative population mortality data are not available for comparison.

**npc:** 2. In FRA-LIL/STR/TOU and UNK-BEL the underlying cause of death in the cohorts was assigned by the PRIME Deaths Committee, and therefore they are not comparable with the official statistics.

3. For some cohorts the population mortality data are not available.

Updated on 2007-06-15

Follow-up data**Table F.15** Source of validation for acute coronary events for RUA (see [Diagnosis of coronary events](#))

RUA	fatal		non-fatal	
	Source of validation	upper age limit	Source of validation	upper age limit
AUS-NEW	Final official underlying cause of death codes		nf	
DEN-GLO	Final official underlying and immediate cause of death codes or hospital discharge codes		Hospital discharge codes	
FIN-ATB	Final official underlying cause of death codes or hospital discharge codes		Hospital discharge codes	
FIN-EAS/WES	For deaths found in the coronary event registers, the MONICA diagnostic category was used. For events which were found in the Hospital Discharge Register or in the Register of Causes of Death but not in the coronary event registers, final official underlying, antecedent or direct cause of death codes or hospital discharge codes were used.		For events found in the coronary event registers, the MONICA diagnostic category was used. For events which were found in the Hospital Discharge Register but not in the coronary event registers, hospital discharge codes were used.	
FRA-LIL	PRIME validation		PRIME validation	
FRA-STR	PRIME validation		PRIME validation	
FRA-TOU	PRIME validation		PRIME validation	

Table F.15. Procedures of follow-up for deaths for RUA

GER-AUG	For deaths found in the coronary event registers the MONICA validation was used up to 1994, since 1995 ECG recordings were not coded for the Minnesota codes and the modified MONICA validation was used. For events which were found in the Population Registers but not in the Coronary Event Register, the diagnostic classification was done using information from the General Practitioner's notes and hospital discharge letter, or the ICD-code of the underlying cause of death.	74	For events found in the coronary event registers the MONICA validation was used up to 1994, since 1995 ECG recordings were not coded for the Minnesota codes and the modified MONICA validation was used. For non-fatal events which occurred outside the study area and were not in the Coronary Event Register, the diagnostic classification was done using the General Practitioner's notes, hospital discharge letter or clinical diagnoses.	74
	The ICD-code of the underlying cause of death was used.		nf	
<b>RUA</b>	<b>fatal</b>		<b>non-fatal</b>	
	<b>Source of validation</b>	<b>upper age limit</b>	<b>Source of validation</b>	<b>upper age limit</b>
ITA-BRI	MONICA validation		MONICA validation	
ITA-FRI	MONICA validation		MONICA validation	
ITA-FSE	MONICA validation		MONICA validation	
ITA-PAM	MONICA validation		MONICA validation	

Table F.15. Procedures of follow-up for deaths for RUA

ITA-ROM	For deaths found in the coronary event register or for deaths which were not found in the coronary event register but for which satisfactory clinical documentation was available, the MONICA validation was used. For deaths for which clinical documentation was not found, the death was validated using the principles adopted in the Seven Countries Study.		For events found in the coronary event register or for events which were not found in the coronary event register but for which satisfactory clinical documentation was available, the MONICA validation was used. For events for which clinical documentation was not found, the event was validated using the principles adopted in the Seven Countries Study.	
LTU-KAU	MONICA validation for age group 35-64*	64	MONICA validation for age group 35-64*	64
	Underlying cause of death on the death certificate		nf	
POL-TAR	Final official underlying cause of death codes		nf	
POL-WAR	MONICA validation up to age 64 and year 1994	64	MONICA validation up to age 64 and year 1994	64
	Final official underlying cause of death codes		nf	
RUS-NOV	MONICA validation up to age 64	64	MONICA validation up to age 64	64
	Final official underlying cause of death codes, if not available the underlying cause of death from the death certificate was used.		nf	
SWE-NSW	MONICA validation	64	MONICA validation	64
	Final official underlying cause of death codes		nf	
UNK-BEL	PRIME validation		PRIME validation	

Table F.15. Procedures of follow-up for deaths for RUA

UNK-CAE	Underlying cause of death codes assigned by the MPC up to 1996, since 1997 from the copy of the death certificate		Modification of the Old World Health Organization criteria	
UNK-EDI/GLA/SHH	Official underlying or other death certificate codes or hospital discharge codes		Hospital discharge codes	
<b>RUA</b>	<b>fatal</b>		<b>non-fatal</b>	
	<b>Source of validation</b>	<b>upper age limit</b>	<b>Source of validation</b>	<b>upper age limit</b>

nf = not followed up

\* = During years 1996-97, MONICA diagnostic classification was used without upper age limit.

Updated on 2007-05-25

## Follow-up Data

Table F.16. Percentages of source of validation of diagnoses used and ICD-versions used for coronary events (See [Diagnosis of coronary events](#))

RUA	Cohort	# Acute coronary events	Source of validation of diagnosis							ICD version used					
			Monica validation (%)	Systematic review (%)	Hospital notes (%)	Discharge letter (%)	Discharge diagnosis (%)	Several sources (%)	Source missing (%)	ICD-8		ICD-9		ICD-10	
										Period	%	Period	%	Period	%
AUS-NEWa	01	94	0	0	0	0	100	0	0						
	02	33	0	0	0	0	100	0	0						
	03	10	0	0	0	0	100	0	0						
DEN-GLOa	01	599	0	0	0	0	100	0	0	1983-93	33.7		0	1994-01	66.3
	02	191	0	0	0	0	100	0	0	1987-93	22.3		0	1994-01	77.7
	03	117	0	0	0	0	100	0	0	1991-93	13.8		0	1994-01	86.2
	21	256	0	0	0	0	100	0	0	1993-93	0.4		0	1994-01	99.6
FIN-ATBa	21	661	0	0	0	0	100	0	0		0	1992-97	42.6	1995-99	57.4
FIN-EASa	01	1124	36.4	0	0	0	63.6	0	0	1982-86	23.1	1987-95	37.7	1996-05	39.3
	02	559	38.5	0	0	0	61.5	0	0		0	1987-95	50.5	1996-05	49.5
	03	205	25.9	0	0	0	74.1	0	0		0	1992-95	31.9	1996-05	68.1
FIN-EASb	24	241	22	0	0	0	78	0	0		0		0	1997-05	100
RUA	Cohort	# Acute coronary events	Source of validation of diagnosis							ICD version used					
			Monica validation (%)	Systematic review (%)	Hospital notes (%)	Discharge letter (%)	Discharge diagnosis (%)	Several sources (%)	Source missing (%)	ICD-8		ICD-9		ICD-10	
										Period	%	Period	%	Period	%
FIN-WESa	01	510	45.1	0	0	0	54.9	0	0	1982-86	14	1987-95	39.6	1995-05	46.4
	02	140	52.9	0	0	0	47.1	0	0		0	1987-95	46.9	1995-05	53.1
FIN-WESb	03	142	31.7	0	0	0	68.3	0	0		0	1992-95	31.1	1996-05	68.9
	24	126	5.6	0	0	0	94.4	0	0		0		0	1997-05	100
FRA-LILa	21	133	0	100	0	0	0	0	0		0	1992-02	100		0
FRA-STRa	21	124	0	100	0	0	0	0	0		0	1993-03	100		0
FRA-TOUa	21	129	0	100	0	0	0	0	0		0	1991-03	100		0
GER-AUGa	01	264	68.9	17.8	0	1.1	12.1	0	0		0	1985-02	100		0
	02	153	66	29.4	0	1.3	3.3	0	0		0	1990-02	100		0

Table F.16. Percentages of source of validation of diagnoses used, ICD-versions used for coronary events and necropsy performed

	<b>03</b>	64	32.8	64.1	0	1.6	1.6	0	0	0	0	1995-02	100		0
<b>ITA-BRIa</b>	<b>01</b>	94	100	0	0	0	0	0	0	0	0	1987-02	100		0
	<b>02</b>	69	100	0	0	0	0	0	0	0	0	1989-02	100		0
	<b>03</b>	42	100	0	0	0	0	0	0	0	0	1994-02	100		0
<b>RUA</b>	<b>Cohort</b>	<b># Acute coronary events</b>	<b>Source of validation of diagnosis</b>							<b>ICD version used</b>					
			<b>Monica validation (%)</b>	<b>Systematic review (%)</b>	<b>Hospital notes (%)</b>	<b>Discharge letter (%)</b>	<b>Discharge diagnosis (%)</b>	<b>Several sources (%)</b>	<b>Source missing (%)</b>	<b>ICD-8</b>		<b>ICD-9</b>		<b>ICD-10</b>	
										<b>Period</b>	<b>%</b>	<b>Period</b>	<b>%</b>	<b>Period</b>	<b>%</b>
<b>ITA-FRIa</b>	<b>01</b>	142	43.7	0	0	0	0	0	56.3		0	1986-98	100		0
	<b>02</b>	103	36.9	0	0	0	0	0	63.1		0	1990-98	100		0
	<b>03</b>	22	59.1	0	0	0	0	0	40.9		0	1995-98	100		0
<b>ITA-FSEa</b>	<b>21</b>	4	100	0	0	0	0	0	0		0	1996-98	100		0
<b>ITA-PAMa</b>	<b>21</b>	90	100	0	0	0	0	0	0		0	1991-02	100		0
<b>ITA-ROMb</b>	<b>01</b>	86	77.9	15.1	0	0	7	0	0		0	1984-02	100		0
<b>ITA-ROMc</b>	<b>21</b>	219	76.7	21	0	0	2.3	0	0		0	1983-02	100		0
	<b>22</b>	139	76.3	18.7	0	0	5	0	0		0	1987-02	100		0
	<b>23</b>	45	73.3	17.8	0	0	8.9	0	0		0	1995-02	100		0
	<b>24</b>	64	68.8	28.1	0	0	3.1	0	0		0	1994-02	100		0
<b>LTU-KAUa</b>	<b>01</b>	154	66.9	0	0	0	33.1	0	0		0	1983-98	100		0
	<b>02</b>	122	75.4	0	0	0	24.6	0	0		0	1987-98	100		0
	<b>03</b>	39	87.2	0	0	0	12.8	0	0		0	1992-98	100		0
<b>RUA</b>	<b>Cohort</b>	<b># Acute coronary events</b>	<b>Source of validation of diagnosis</b>							<b>ICD version used</b>					
			<b>Monica validation (%)</b>	<b>Systematic review (%)</b>	<b>Hospital notes (%)</b>	<b>Discharge letter (%)</b>	<b>Discharge diagnosis (%)</b>	<b>Several sources (%)</b>	<b>Source missing (%)</b>	<b>ICD-8</b>		<b>ICD-9</b>		<b>ICD-10</b>	
										<b>Period</b>	<b>%</b>	<b>Period</b>	<b>%</b>	<b>Period</b>	<b>%</b>
<b>POL-TARa</b>	<b>01</b>	119	0	0	0	0	100	0	0						
	<b>02</b>	30	0	0	0	0	100	0	0						
	<b>03</b>	11	0	0	0	0	100	0	0						
<b>POL-WARa</b>	<b>01</b>	257	65	0	0	0	35	0	0		0	1984-96	94.2	1997-98	5.8
	<b>02</b>	76	59.2	0	0	0	40.8	0	0		0	1988-96	89.5	1998-98	10.5
	<b>03</b>	16	62.5	0	0	0	37.5	0	0		0	1993-96	81.3	1997-98	18.8
	<b>01</b>	207	55.6	0	0	0	44.4	0	0		0	1985-98	100		0

Table F.16. Percentages of source of validation of diagnoses used, ICD-versions used for coronary events and necropsy performed

RUS-NOVb	02	125	50.4	0	0	0	49.6	0	0	0	1988-98	100		0	
	03	70	67.1	0	0	0	32.9	0	0	0	1994-98	100		0	
RUS-NOVc	21	152	59.2	0	0	0	40.8	0	0	0	1984-98	100		0	
SWE-NSWa	01	89	64	0	0	0	36	0	0	1986-86	8.8	1987-96	73.7	1997-99	17.5
	02	53	81.1	0	0	0	18.9	0	0	0	1990-96	76.7	1997-99	23.3	
	03	35	62.9	0	0	0	37.1	0	0	0	1994-96	50	1997-99	50	
RUA	Cohort	# Acute coronary events	Source of validation of diagnosis							ICD version used					
			Monica validation (%)	Systematic review (%)	Hospital notes (%)	Discharge letter (%)	Discharge diagnosis (%)	Several sources (%)	Source missing (%)	ICD-8		ICD-9		ICD-10	
										Period	%	Period	%	Period	%
UNK-BELa	21	112	0	100	0	0	0	0	0	0	0	1991-98	100		0
UNK-CAEa	21	458	0	52.2	0	0	47.8	0	0	0	0	1985-00	100		0
UNK-ED1a	01	172	0	0	0	0	100	0	0	0	0	1986-99	49.8	1996-05	50.2
UNK-GLAa	01	209	0	0	0	0	100	0	0	0	0	1986-99	52.2	1996-05	47.8
	02	284	0	0	0	0	100	0	0	0	0	1992-99	35.6	1996-05	64.4
	03	127	0	0	0	0	100	0	0	0	0	1995-99	13	1996-05	87
	21	135	0	0	0	0	100	0	0	0	0	1989-99	44.2	1996-05	55.8
UNK-SHHa	01	1588	0	0	0	0	100	0	0	0	0	1984-99	43.4	1996-05	56.6
RUA	Cohort	# Acute coronary events	Source of validation of diagnosis							ICD version used					
			Monica validation (%)	Systematic review (%)	Hospital notes (%)	Discharge letter (%)	Discharge diagnosis (%)	Several sources (%)	Source missing (%)	ICD-8		ICD-9		ICD-10	
										Period	%	Period	%	Period	%

Updated on 2007-06-19

Follow-up Data**Table F.17.** Percentage of types of exit from the follow-up for nonfatal stroke events and period of follow-up in years  
(See [Reasons for exit from the follow-up of non-fatal stroke events](#))

RUA	Cohort	Percentage of <u>EXREASS</u>														Follow-up period in years			
		Men							Women							Mean	Min. *	Max.	
		N	end of study	moved away	refusal	other	irrelevant	total	N	end of study	moved away	refusal	other	irrelevant	total				
AUS-NEWa	01	1220					100	100	1246						100	100			
	02	890					100	100	884						100	100			
	03	812					100	100	821						100	100			
DEN-GLOa	01	1940					100	100	1845						100	100	17.21	17.93	19.16
	02	748					100	100	756						100	100	14.41	14.69	15.40
	03	809					100	100	815						100	100	10.18	9.65	10.90
	21	1333					100	100	1323						100	100	7.46	7.08	8.55
FIN-ATBa	21	5073					100	100							0		6.51	6.81	7.39
FIN-EASa	01	2902					100	100	2910						100	100	21.53	23.75	23.95
	02	2107					100	100	2260						100	100	17.59	18.75	18.95
	03	1409					100	100	1604						100	100	13.38	13.75	13.95
FIN-EASb	24	2419					100	100	2427						100	100	8.60	8.57	8.94
FIN-WESa	01	1563					100	100	1654						100	100	21.59	23.75	23.95
	02	695					100	100	749						100	100	17.88	18.75	18.95
FIN-WESb	03	1424					100	100	1562						100	100	13.42	13.78	13.99
	24	1673					100	100	1622						100	100	8.59	8.61	8.94
RUA	Cohort	Percentage of <u>EXREASS</u>														Follow-up period in years			
		Men							Women							Mean	Min. *	Max.	
		N	end of study	moved away	refusal	other	irrelevant	total	N	end of study	moved away	refusal	other	irrelevant	total				
FRA-LILa	21	2633					100	100							0		9.62	10.00	10.00
FRA-STRa	21	2612					100	100							0		9.57	10.00	10.00
FRA-TOUa	21	2610					100	100							0		9.58	10.00	10.00
GER-AUGa	01	2004					100	100	1976						100	100			
	02	1857					100	100	1875						100	100			
	03	1818					100	100	1814						100	100			
ITA-BRIa	01	818		2			98	100	841		2				98	100	15.33	0.00	16.73
	02	804		2			98	100	795		1				99	100	12.66	0.05	13.66
	03	810		2			98	100	864		2				98	100	8.39	0.01	9.32
ITA-FRIa	01	942					100	100	938						100	100	12.20	12.33	13.97
	02	922					100	100	922						100	100	9.28	9.03	9.84
	03	891					100	100	895						100	100	4.44	4.17	4.82

Table F.17. Percentage of types of exit from the follow-up for nonfatal stroke events and period of follow-up in years

<b>ITA-FSEa</b>	<b>21</b>	200						100	100	200						100	100	2.79	2.51	3.21
<b>ITA-PAMa</b>	<b>21</b>	1032		2				98	100	1012		2				98	100	10.69	0.32	12.07
<b>ITA-ROMb</b>	<b>01</b>	852						100	100	871						100	100	17.74	15.21	20.61
<b>RUA</b>	<b>Cohort</b>	<b>Percentage of <u>EXREASS</u></b>														<b>Follow-up period in years</b>				
		<b>Men</b>							<b>Women</b>							<b>Mean</b>	<b>Min.*</b>	<b>Max.</b>		
		<b>N</b>	<b>end of study</b>	<b>moved away</b>	<b>refusal</b>	<b>other</b>	<b>irrelevant</b>	<b>total</b>	<b>N</b>	<b>end of study</b>	<b>moved away</b>	<b>refusal</b>	<b>other</b>	<b>irrelevant</b>	<b>total</b>					
<b>ITA-ROMc</b>	<b>21</b>	1718						100	100	1930						100	100	17.37	18.51	19.51
	<b>22</b>	1294						100	100	1600						100	100	14.86	15.00	16.30
	<b>23</b>	970						100	100	1000						100	100	8.16	6.65	9.60
	<b>24</b>	785						100	100	1734						100	100	7.90	6.63	9.65
<b>LTU-KAUa</b>	<b>01</b>	727					36	64	100	736				45	55	100	100	11.45	0.06	15.91
	<b>02</b>	894					29	71	100	868				33	67	100	100	9.62	0.17	12.04
	<b>03</b>	616					19	81	100	644				18	82	100	100	5.48	0.07	6.93
<b>POL-TARa</b>	<b>01</b>	1250						100	100	1472						100	100			
	<b>02</b>	627						100	100	684						100	100			
	<b>03</b>	625						100	100	704						100	100			
<b>POL-WARa</b>	<b>01</b>	1309	54				34	12	100	1337	60			36	5	100	100	8.17	0.00	11.07
	<b>02</b>	700	77				16	7	100	717	76			20	4	100	100	5.76	0.09	6.97
	<b>03</b>	751	97				2	1	100	763	97			2	0	100	100	1.56	0.10	1.99
<b>RUS-NOVb</b>	<b>01</b>	1573					3	97	100	1602				6	94	100	100	12.32	9.45	13.99
	<b>02</b>	1721					0	100	100	1666				0	100	100	100	9.71	9.02	10.65
	<b>03</b>	1605						100	100	1668						100	100	3.91	3.06	4.66
<b>RUA</b>	<b>Cohort</b>	<b>Percentage of <u>EXREASS</u></b>														<b>Follow-up period in years</b>				
		<b>Men</b>							<b>Women</b>							<b>Mean</b>	<b>Min.*</b>	<b>Max.</b>		
		<b>N</b>	<b>end of study</b>	<b>moved away</b>	<b>refusal</b>	<b>other</b>	<b>irrelevant</b>	<b>total</b>	<b>N</b>	<b>end of study</b>	<b>moved away</b>	<b>refusal</b>	<b>other</b>	<b>irrelevant</b>	<b>total</b>					
<b>RUS-NOVc</b>	<b>21</b>	1603					0	100	100							0	13.35	13.61	15.10	
<b>SWE-NSWa</b>	<b>01</b>	823		4			8	89	100	802		3		7	90	100	100	13.00	0.12	13.96
	<b>02</b>	773		4				96	100	803		4			96	100	100	9.51	0.05	9.97
	<b>03</b>	928		3			8	89	100	965		3		8	89	100	100	5.48	0.03	6.00
<b>UNK-BELa</b>	<b>21</b>	2745						100	100							0	4.93	5.00	5.55	
<b>UNK-CAEa</b>	<b>21</b>	2398						100	100							0	12.67	12.54	16.48	
<b>UNK-EDLa</b>	<b>01</b>	671						100	100	628					100	100	100	18.26	19.34	19.83
<b>UNK-GLAa</b>	<b>01</b>	583						100	100	526					100	100	100	17.64	19.44	19.91
	<b>02</b>	849						100	100	905					100	100	100	12.21	13.33	13.98
	<b>03</b>	797						100	100	859					100	100	100	10.08	10.24	10.84
	<b>21</b>	493						100	100	524					100	100	100	15.38	16.53	17.92
<b>UNK-SHHa</b>	<b>01</b>	4676						100	100	4489					100	100	100	18.11	18.17	21.10

Table F.17. Percentage of types of exit from the follow-up for nonfatal stroke events and period of follow-up in years

RUA	Cohort	Percentage of <a href="#">EXREASS</a>														Follow-up period in years		
		Men							Women							Mean	Min. *	Max.
		N	end of study	moved away	refusal	other	irrelevant	total	N	end of study	moved away	refusal	other	irrelevant	total			

\*: Where EXREAS (Form 25) = 2, i.e. end of the follow-up period of the cohort in MORGAM

Updated on 2007-06-19

**Follow-up data****Table F.18.** Reported end of follow-up date for nonfatal stroke events and three most frequently occurring dates of exit by [EXREASS](#) (see [End-of-follow-up period for stroke events](#))

RUA	Cohort	Reported end of follow-up date	EXREASS = 1								EXREASS = 1, 2, 3 or 4			
			N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the 1st frequent	latest date of exit
				exit date	N	exit date	N	exit date	N	exit dates	N			
AUS-NEWa	01	n.a.	0	.	.	.	.	.	.	0	.	.		
	02	n.a.	0	.	.	.	.	.	.	0	.	.		
	03	n.a.	0	.	.	.	.	.	.	0	.	.		
DEN-GLOa	01	31 Dec 2001	0	.	.	.	.	.	.	0	.	.		
	02	31 Dec 2001	0	.	.	.	.	.	.	0	.	.		
	03	31 Dec 2001	0	.	.	.	.	.	.	0	.	.		
	21	31 Dec 2001	0	.	.	.	.	.	.	0	.	.		
FIN-ATBa	21	31 Dec 1999	0	.	.	.	.	.	.	0	.	.		
FIN-EASa	01	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
	02	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
	03	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
RUA	Cohort	Reported end of follow-up date	EXREASS = 1								EXREASS = 1, 2, 3 or 4			
			N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the 1st frequent	latest date of exit
				exit date	N	exit date	N	exit date	N	exit dates	N			
FIN-EASb	24	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
FIN-WESa	01	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
	02	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
FIN-WESb	03	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
	24	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		

Table F.18. Reported end of follow-up date for nonfatal stroke events and three most frequently occurring dates of exit

RUA	Cohort	Reported end of follow-up date	EXREASS = 1									EXREASS = 1, 2, 3 or 4		
			N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the 1st frequent	latest date of exit
				exit date	N	exit date	N	exit date	N	exit dates	N			
FRA-LILa	21	10 years after date of examination	0	.	.	.	.	.	.	.	0	.	.	
FRA-STRa	21	10 years after date of examination	0	.	.	.	.	.	.	.	0	.	.	
FRA-TOUa	21	10 years after date of examination	0	.	.	.	.	.	.	.	0	.	.	
GER-AUGa	01	n.a.	0	.	.	.	.	.	.	.	0	.	.	
	02	n.a.	0	.	.	.	.	.	.	.	0	.	.	
	03	n.a.	0	.	.	.	.	.	.	.	0	.	.	
ITA-BRIa	01	31 Dec 2002	0	.	.	.	.	.	.	.	33	31	2000-07-06	
	02	31 Dec 2002	0	.	.	.	.	.	.	.	28	27	2002-12-23	
	03	31 Dec 2002	0	.	.	.	.	.	.	.	30	9	2002-09-26	
ITA-FRIa	01	31 Dec 1998	0	.	.	.	.	.	.	.	0	.	.	
	02	31 Dec 1998	0	.	.	.	.	.	.	.	0	.	.	
	03	31 Dec 1998	0	.	.	.	.	.	.	.	0	.	.	
ITA-FSEa	21	31 Dec 1998	0	.	.	.	.	.	.	.	0	.	.	
ITA-PAMa	21	31 Dec 2002	0	.	.	.	.	.	.	.	34	33	2002-05-14	
ITA-ROMb	01	31 Dec 2002	0	.	.	.	.	.	.	.	0	.	.	
ITA-ROMc	21	31 Dec 2002	0	.	.	.	.	.	.	.	0	.	.	
	22	31 Dec 2002	0	.	.	.	.	.	.	.	0	.	.	

Table F.18. Reported end of follow-up date for nonfatal stroke events and three most frequently occurring dates of exit

RUA	Cohort	Reported end of follow-up date	EXREASS = 1										EXREASS = 1, 2, 3 or 4		
			N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the 1st frequent	latest date of exit	
				exit date	N	exit date	N	exit date	N	exit dates	N				
		23	31 Dec 2002	0	.	.	.	.	.	.	0	.			
		24	31 Dec 2002	0	.	.	.	.	.	.	0	.			
LTU-KAUa	01	31 Dec 1998	0	.	.	.	.	.	.	.	591	239	1998-12-14		
	02	31 Dec 1998	0	.	.	.	.	.	.	.	541	105	1998-12-19		
	03	31 Dec 1998	0	.	.	.	.	.	.	.	235	203	1998-12-26		
POL-TARa	01	n.a.	0	.	.	.	.	.	.	.	0	.			
	02	n.a.	0	.	.	.	.	.	.	.	0	.			
	03	n.a.	0	.	.	.	.	.	.	.	0	.			
POL-WARa	01	31 Dec 1994	1509	1994-12-31	1509	.	.	0	0	2425	0	1994-12-31			
	02	31 Dec 1994	1084	1994-12-31	1084	.	.	0	0	1342	0	1994-12-31			
	03	31 Dec 1994	1471	1994-12-31	1471	.	.	0	0	1507	0	1994-12-31			
RUS-NOVb	01	31 Dec 1998	0	.	.	.	.	.	.	143	118	1998-11-29			
	02	31 Dec 1998	0	.	.	.	.	.	.	3	2	1998-12-05			
	03	31 Dec 1998	0	.	.	.	.	.	.	0	.				
RUA	Cohort	Reported end of follow-up date	EXREASS = 1										EXREASS = 1, 2, 3 or 4		
			N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the 1st frequent	latest date of exit	
				exit date	N	exit date	N	exit date	N	exit dates	N				

Table F.18. Reported end of follow-up date for nonfatal stroke events and three most frequently occurring dates of exit

<b>RUS-NOVc</b>	21	31 Dec 1998	0	.	.	.	.	.	.	1	0	1995-07-01		
<b>SWE-NSWa</b>	01	31 Dec 1999	0	.	.	.	.	.	.	173	60	1999-12-21		
	02	31 Dec 1999	0	.	.	.	.	.	.	63	35	1999-10-15		
	03	31 Dec 1999	0	.	.	.	.	.	.	213	14	1999-12-24		
<b>UNK-BELa</b>	21	5 years after date of examination	0	.	.	.	.	.	.	0	.			
<b>UNK-CAEa</b>	21	31 Dec 2000	0	.	.	.	.	.	.	0	.			
<b>UNK-ED1a</b>	01	31 Dec 2005	0	.	.	.	.	.	.	0	.			
<b>UNK-GLAa</b>	01	31 Dec 2005	0	.	.	.	.	.	.	0	.			
	02	31 Dec 2005	0	.	.	.	.	.	.	0	.			
	03	31 Dec 2005	0	.	.	.	.	.	.	0	.			
	21	31 Dec 2005	0	.	.	.	.	.	.	0	.			
<b>RUA</b>	<b>Cohort</b>	<b>Reported end of follow-up date</b>	<b>EXREASS = 1</b>							<b>EXREASS = 1, 2, 3 or 4</b>				
			<b>N</b>	<b>1st frequent</b>		<b>2nd frequent</b>		<b>3rd frequent</b>		<b>other</b>		<b>N</b>	<b>exit dates after the 1st frequent</b>	<b>latest date of exit</b>
				<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>exit dates</b>	<b>N</b>			
<b>UNK-SHHa</b>	01	31 Dec 2005	0	.	.	.	.	.	.	0	.			
<b>RUA</b>	<b>Cohort</b>	<b>Reported end of follow-up date</b>	<b>EXREASS = 1</b>							<b>EXREASS = 1, 2, 3 or 4</b>				
			<b>N</b>	<b>1st frequent</b>		<b>2nd frequent</b>		<b>3rd frequent</b>		<b>other</b>		<b>N</b>	<b>exit dates after the 1st frequent</b>	<b>latest date of exit</b>
				<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>exit dates</b>	<b>N</b>			

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**Follow-up data****Table F.19a.** Procedures of follow-up for nonfatal stroke events for RUA (see [Reasons for exit from the follow-up of non-fatal stroke events](#) and [Follow-up procedures and coverage](#))

<b>RUA</b>	<b>Notification of nonfatal stroke events</b>	<b>Coverage of source</b>	<b>Notification of loss to follow-up for non-fatal stroke events</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>
AUS-New	nf	-	-	-	-
DEN-GLO	Linkage with the National Hospital Discharge Register	All hospitalizations in Denmark	Yes, linkage with the Civil Registration System.	2	2
FIN-ATBa	Linkage with the Hospital Discharge Register using personal identification number.	All hospitalizations in Finland	No	2	2
FIN-EAS/WES	<ol style="list-style-type: none"> <li>1. Linkage with the FINMONICA and FINSTROKE stroke event register using personal identification number</li> <li>2. Linkage with the Hospital Discharge Register using personal identification number</li> </ol>	All hospitalizations in Finland and through the stroke event registers some abroad.	No	2	2
FRA-LIL	Annual clinical event questionnaire mailed and if necessary further contacts made.	Whenever there was suspicion of an event, clinical information was sought directly from the hospital or general practitioner notes.	Yes, if contacts fail, the person's vital status and emigration from the area is checked from the city hall.	2	2
FRA-STR					
FRA-TOU					

Table F.19. Procedures of follow-up for nonfatal stroke events for RUA

GER-AUG	nf	-	-	-	-
ITA-BRI	Probabilistic record linkage with the Hospital discharge records.	Region of Lombardia	Yes, through the municipality registers.	1	2
ITA-FRI	Linkage with the Regional health information system using personal identification code.	Region of Friuli-Venezia Giulia	Yes, through the Regional health information system	1	2
ITA-FSE	Linkage with the Regional health information system using personal identification code.	Region of Friuli-Venezia Giulia	Yes, through the Regional health information system.	1	2
ITA-PAM	Probabilistic record linkage with the Hospital discharge records	Region of Lombardia	Yes, through the municipality registers.	1	2
	<ol style="list-style-type: none"> <li>1. Linkage with the Coronary and Cerebrovascular Event Register, which operated during 1983-85. The upper age limit of registration was 74 years.</li> <li>2. Linkage with the files of the Hospital Discharge Records, manually in 1990-93 and by computerized procedures from 1995 onwards. Computerized linkage covered 80% of hospitalized in 1990-95, 98% in 1996-1998 and 100% in 1999-2002.</li> <li>3. Re-examinations of the cohorts.</li> </ol>	Region of Lazio, but the coverage of the follow-up of non-fatal events is likely to	Yes, through		

Table F.19. Procedures of follow-up for nonfatal stroke events for RUA

ITA- ROM	4. In case of n case of non-response to the re-examination, persons were first contacted by mail, asking to return a standardized questionnaire containing information on their health conditions, and hospitalizations. Non-respondents were contacted through telephone and the same questionnaire was filled in. Further information from non-respondents was collected from the general practitioners. Record linkage was done using person's first name, last name, date of birth and sex.	be lower in 1985-89 than at other periods because it was only based on the re-examinations of the cohorts.	the municipality registers.	1	2
LTU- KAU	Linkage to the Stroke Event Register using name, date of birth and current address of residence.	Town of Kaunas	Cohort 01 and 02: No Cohort 03: Yes, from the Address Bureau of Kaunas.	1	Cohort 01 and 02: 1 Cohort 03: 2
POL- TAR	nf	-	-	-	-
POL- WAR	Linkage with the MONICA Stroke Register the unique PESEL number.	Area of RUs in years 1983-1994. Upper age limit 64.	Yes, through the population register.	1	2
RUS- NOV	Linkage to the Stroke Event Register using the date of birth and family name.	Area of RUs. Upper age limit 64.	No	1	1

Table F.19. Procedures of follow-up for nonfatal stroke events for RUA

SWE-NSW	Linkage to the Stroke Event Register using personal identification code.	Area of RUs. Upper age limit 74.	Yes, through the Local Population Registers.	1	2
UNK-BEL	Annual clinical event questionnaire mailed and if necessary further contacts made.	Whenever there was suspicion of an event, clinical information was sought directly from the hospital or general practitioner notes.	Yes, if contacts fail, the person's vital status and emigration from the area is checked from the Registrar General's data.	2	2
UNK-CAE	<ol style="list-style-type: none"> <li>1. Re-examination</li> <li>2. Men who did not to attend for re-examination or who had left the study area were contacted by letter</li> <li>3. Linkage with the Hospital Activity Analysis Lists of all possible hospitals within the study area using date of birth and address code.</li> </ol>	Whenever the re-examination questionnaire suggested, the MPC sought information from hospitals within the UK and sometimes abroad.	Yes, through the National Health Service (NHS) Registry	2	2
UNK-EDI/GLA/SHH	Linkage with the Scottish Record Linkage System on all hospital episodes using a sophisticated computer programme.	All hospitalizations in Scotland	Yes, through the National Health Service (NHS) Registry	2	2
<b>RUA</b>	<b>Notification of nonfatal stroke events</b>	<b>Coverage of source</b>	<b>Notification of loss to follow-up for non-fatal stroke events</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>

nf = not followed up



**Follow-up Data****Table F.19b.** Percentages of source of notification of acute stroke events (See [Follow-up procedures and coverage](#)). In the case of multiple sources the event is assigned to leftmost relevant column.

<b>RUA</b>	<b>Cohort</b>	<b># of acute stroke events</b>	<b>Event register (%)</b>	<b>Cause of death register (%)</b>	<b>Hospital discharge register (%)</b>	<b>Contact with doctor (%)</b>	<b>Contact with person (%)</b>	<b>Other (%)</b>	<b>Source missing (%)</b>
<b>AUS-NEWa</b>	<b>01</b>	25	0	100	0	0	0	0	0
	<b>02</b>	6	0	100	0	0	0	0	0
	<b>03</b>	1	0	100	0	0	0	0	0
<b>DEN-GLOa</b>	<b>01</b>	343	0	16.3	83.7	0	0	0	0
	<b>02</b>	99	0	11.1	88.9	0	0	0	0
	<b>03</b>	62	0	16.1	83.9	0	0	0	0
	<b>21</b>	155	0	16.1	83.9	0	0	0	0
<b>FIN-ATBa</b>	<b>21</b>	503	0	4.4	95.6	0	0	0	0
<b>FIN-EASa</b>	<b>01</b>	566	27.7	11.1	61.1	0	0	0	0
	<b>02</b>	293	18.4	8.2	73.4	0	0	0	0
	<b>03</b>	120	10.8	3.3	85.8	0	0	0	0
<b>FIN-EASb</b>	<b>24</b>	144	1.4	7.6	91	0	0	0	0
<b>RUA</b>	<b>Cohort</b>	<b># of acute stroke events</b>	<b>Event register (%)</b>	<b>Cause of death register (%)</b>	<b>Hospital discharge register (%)</b>	<b>Contact with doctor (%)</b>	<b>Contact with person (%)</b>	<b>Other (%)</b>	<b>Source missing (%)</b>
<b>FIN-WESa</b>	<b>01</b>	296	36.8	11.8	51.4	0	0	0	0
	<b>02</b>	66	40.9	10.6	48.5	0	0	0	0
<b>FIN-WESb</b>	<b>03</b>	95	18.9	10.5	70.5	0	0	0	0
	<b>24</b>	106	0.9	7.5	91.5	0	0	0	0
<b>FRA-LILa</b>	<b>21</b>	65	0	0	98.5	0	1.5	0	0
<b>FRA-STRa</b>	<b>21</b>	29	0	0	82.8	13.8	3.4	0	0
<b>FRA-TOUa</b>	<b>21</b>	28	0	0	100	0	0	0	0

Table F.19b. Percentages of source of notification of acute stroke events

<b>GER-AUGa</b>	<b>01</b>	40	0	100	0	0	0	0	0
	<b>02</b>	11	0	100	0	0	0	0	0
	<b>03</b>	7	0	100	0	0	0	0	0
<b>ITA-BRIa</b>	<b>01</b>	59	0	22	78	0	0	0	0
	<b>02</b>	51	0	11.8	88.2	0	0	0	0
	<b>03</b>	27	0	22.2	77.8	0	0	0	0
<b>RUA</b>	<b>Cohort</b>	<b># of acute stroke events</b>	<b>Event register (%)</b>	<b>Cause of death register (%)</b>	<b>Hospital discharge register (%)</b>	<b>Contact with doctor (%)</b>	<b>Contact with person (%)</b>	<b>Other (%)</b>	<b>Source missing (%)</b>
<b>ITA-FRIa</b>	<b>01</b>	65	0	1.5	93.8	1.5	0	3.1	0
	<b>02</b>	30	0	0	96.7	0	0	3.3	0
	<b>03</b>	11	9.1	0	90.9	0	0	0	0
<b>ITA-FSEa</b>	<b>21</b>	2	0	0	100	0	0	0	0
<b>ITA-PAMa</b>	<b>21</b>	69	0	18.8	81.2	0	0	0	0
<b>ITA-ROMb</b>	<b>01</b>	46	2.2	26.1	67.4	0	0	4.3	0
<b>ITA-ROMc</b>	<b>21</b>	175	2.3	26.9	69.1	0	0	1.7	0
	<b>22</b>	119	0	25.2	73.1	0	0	1.7	0
	<b>23</b>	20	0	15	85	0	0	0	0
	<b>24</b>	82	0	12.2	85.4	0	0	2.4	0
<b>LTU-KAUa</b>	<b>01</b>	50	82	0	18	0	0	0	0
	<b>02</b>	52	90.4	0	9.6	0	0	0	0
	<b>03</b>	11	100	0	0	0	0	0	0
<b>RUA</b>	<b>Cohort</b>	<b># of acute stroke events</b>	<b>Event register (%)</b>	<b>Cause of death register (%)</b>	<b>Hospital discharge register (%)</b>	<b>Contact with doctor (%)</b>	<b>Contact with person (%)</b>	<b>Other (%)</b>	<b>Source missing (%)</b>
<b>POL-TARa</b>	<b>01</b>	24	0	100	0	0	0	0	0
	<b>02</b>	9	0	100	0	0	0	0	0
	<b>03</b>	7	0	100	0	0	0	0	0
<b>POL-WARa</b>	<b>01</b>	56	64.3	35.7	0	0	0	0	0
	<b>02</b>	23	52.2	47.8	0	0	0	0	0
	<b>03</b>	6	66.7	33.3	0	0	0	0	0

Table F.19b. Percentages of source of notification of acute stroke events

<b>RUS-NOVb</b>	<b>01</b>	99	98	2	0	0	0	0	0
	<b>02</b>	45	100	0	0	0	0	0	0
	<b>03</b>	22	100	0	0	0	0	0	0
<b>RUS-NOVc</b>	<b>21</b>	73	100	0	0	0	0	0	0
<b>SWE-NSWa</b>	<b>01</b>	54	100	0	0	0	0	0	0
	<b>02</b>	33	100	0	0	0	0	0	0
	<b>03</b>	44	95.5	4.5	0	0	0	0	0
<b>RUA</b>	<b>Cohort</b>	<b># of acute stroke events</b>	<b>Event register (%)</b>	<b>Cause of death register (%)</b>	<b>Hospital discharge register (%)</b>	<b>Contact with doctor (%)</b>	<b>Contact with person (%)</b>	<b>Other (%)</b>	<b>Source missing (%)</b>
<b>UNK-BELa</b>	<b>21</b>	18	0	27.8	0	0	72.2	0	0
<b>UNK-CAEa</b>	<b>21</b>	230	0	15.2	0	0	84.8	0	0
<b>UNK-EDLa</b>	<b>01</b>	79	0	36.7	63.3	0	0	0	0
<b>UNK-GLAa</b>	<b>01</b>	95	0	30.5	69.5	0	0	0	0
	<b>02</b>	164	0	30.5	69.5	0	0	0	0
	<b>03</b>	50	0	18	82	0	0	0	0
	<b>21</b>	74	0	33.8	66.2	0	0	0	0
<b>UNK-SHLa</b>	<b>01</b>	588	0	31.5	68.5	0	0	0	0
<b>RUA</b>	<b>Cohort</b>	<b># of acute stroke events</b>	<b>Event register (%)</b>	<b>Cause of death register (%)</b>	<b>Hospital discharge register (%)</b>	<b>Contact with doctor (%)</b>	<b>Contact with person (%)</b>	<b>Other (%)</b>	<b>Source missing (%)</b>

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**Follow-up Data****Table F.20.** Percentage of loss to follow-up from the follow-up of fatal and nonfatal stroke events (See [Follow-up procedures and coverage](#). Length of the follow-up period is in [Table F.17](#) and availability of the notification of loss to follow-up in [Table F.19a](#).)

RUA	Cohort	N	Percentage of loss to follow-up*						
			Years 0-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years > 15	Total
AUS-NEWa	01	2466	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	02	1774	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	03	1633	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEN-GLOa	01	3785	0.2	0.1	0.1	0.1	0.2	0.2	0.9
	02	1504	0.0	0.1	0.1	0.1	0.1	0.0	0.4
	03	1624	0.1	0.2	0.4	0.2	0.0	0.0	0.9
	21	2656	0.2	0.0	0.2	0.0	0.0	0.0	0.4
FIN-ATBa	21	5073	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIN-EASa	01	5812	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	02	4367	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	03	3013	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIN-EASb	24	4846	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUA	Cohort	N	Percentage of loss to follow-up*						
			Years 0-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years > 15	Total
FIN-WESa	01	3217	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	02	1444	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIN-WESb	03	2986	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	24	3295	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FRA-LILa	21	2633	0.2	1.3	1.4	0.6	0.0	0.0	3.5
FRA-STRa	21	2612	0.4	1.9	1.2	0.9	0.0	0.0	4.4
FRA-TOUa	21	2610	0.6	3.0	2.0	1.0	0.0	0.0	6.6
GER-AUGa	01	3980	0.1	0.1	0.1	0.2	0.0	0.3	0.8
	02	3732	0.0	0.1	0.2	0.3	0.0	0.0	0.6
	03	3632	0.2	0.2	0.0	0.0	0.0	0.0	0.4
	01	1659	0.5	0.5	0.5	0.4	0.4	0.1	2.4

Table F.20. Percentage of loss to follow-up from the follow-up of fatal and nonfatal stroke events

<b>ITA-BRIa</b>	<b>02</b>	1599	0.6	0.3	0.3	0.9	0.2	0.0	2.3
	<b>03</b>	1674	0.9	0.8	0.7	0.0	0.0	0.0	2.4
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Percentage of loss to follow-up*</b>						
			<b>Years 0-3</b>	<b>Years 4-6</b>	<b>Years 7-9</b>	<b>Years 10-12</b>	<b>Years 13-15</b>	<b>Years &gt; 15</b>	<b>Total</b>
<b>ITA-FRIa</b>	<b>01</b>	1880	0.7	0.8	0.4	0.1	0.1	0.0	2.1
	<b>02</b>	1844	1.0	0.4	0.3	0.0	0.0	0.0	1.7
	<b>03</b>	1786	0.5	0.3	0.0	0.0	0.0	0.0	0.8
<b>ITA-FSEa</b>	<b>21</b>	400	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>ITA-PAMa</b>	<b>21</b>	2044	0.3	0.5	0.7	0.3	0.0	0.0	1.8
<b>ITA-ROMb</b>	<b>01</b>	1723	0.2	0.6	0.2	0.2	0.1	0.0	1.3
<b>ITA-ROMc</b>	<b>21</b>	3648	0.4	0.1	0.1	0.1	0.1	0.0	0.8
	<b>22</b>	2894	0.1	0.2	0.0	0.1	0.0	0.0	0.4
	<b>23</b>	1970	0.4	0.2	0.0	0.0	0.0	0.0	0.6
	<b>24</b>	2519	0.1	0.0	0.0	0.0	0.0	0.0	0.1
<b>LTU-KAUa</b>	<b>01</b>	1463	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>02</b>	1762	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>03</b>	1258	1.8	1.5	0.2	0.0	0.0	0.0	3.5
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Percentage of loss to follow-up*</b>						
			<b>Years 0-3</b>	<b>Years 4-6</b>	<b>Years 7-9</b>	<b>Years 10-12</b>	<b>Years 13-15</b>	<b>Years &gt; 15</b>	<b>Total</b>
<b>POL-TARa</b>	<b>01</b>	2722	0.1	0.2	0.3	1.0	1.7	0.0	3.3
	<b>02</b>	1311	0.2	0.6	0.7	0.1	0.0	0.0	1.6
	<b>03</b>	1329	0.4	0.7	0.0	0.0	0.0	0.0	1.1
<b>POL-WARa</b>	<b>01</b>	2627	0.0	0.0	0.1	0.0	0.0	0.0	0.1
	<b>02</b>	1414	0.0	0.1	0.0	0.0	0.0	0.0	0.1
	<b>03</b>	1513	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>RUS-NOVb</b>	<b>01</b>	3175	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>02</b>	3387	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>03</b>	3273	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>RUS-NOVc</b>	<b>21</b>	1603	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>SWE-NSWa</b>	<b>01</b>	1625	1.2	0.6	0.6	0.8	0.3	0.0	3.5
	<b>02</b>	1576	1.5	1.1	1.2	0.2	0.0	0.0	4.0
	<b>03</b>	1893	1.5	1.4	0.0	0.0	0.0	0.0	2.9

Table F.20. Percentage of loss to follow-up from the follow-up of fatal and nonfatal stroke events

RUA	Cohort	N	Percentage of loss to follow-up*						
			Years 0-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years > 15	Total
UNK-BELa	21	2745	0.3	0.3	0.0	0.0	0.0	0.0	0.6
UNK-CAEa	21	2398	0.2	0.0	0.1	0.5	0.8	0.0	1.6
UNK-EDLa	01	1299	0.0	0.1	0.0	0.2	0.1	0.0	0.4
UNK-GLAa	01	1109	0.0	0.0	0.0	0.1	0.1	0.0	0.2
	02	1754	0.0	0.0	0.1	0.0	0.0	0.0	0.1
	03	1656	0.0	0.1	0.1	0.0	0.0	0.0	0.2
	21	1017	0.1	0.0	0.2	0.0	0.1	0.0	0.4
UNK-SHLa	01	9165	0.0	0.0	0.0	0.1	0.0	0.1	0.2
RUA	Cohort	N	Percentage of loss to follow-up*						
			Years 0-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years > 15	Total

\* Numerator: (EXREASS = 2 or 3) or (EXREASS = 8 and EXREAS = 3, 4 or 5)

Denominator: EXDATES != 77777777

Updated on 2007-06-19

### Follow-up Data

**Table F.21.** Number of observed and expected stroke deaths (See Follow-up procedures and coverage)

RUA	Cohort	N	Number of stroke deaths			Ratio % (O/E)	Age range at baseline	Follow-up period	Population mortality data <sup>1</sup>
			Observed		Expected (E)				
			Official (O)	MORGAM					
AUS-NEW <sup>a</sup>	01	2466	24	25	23	104	34-65	1983-1998 ( <a href="#">men/</a> <a href="#">women</a> )	
	02	1774	6	6	13	46	24-70		
	03	1633	1	1	3	33	35-70		
DEN-GLO <sup>a</sup>	01	3785	34	65	44	77	30-61	1982-2001 ( <a href="#">men/</a> <a href="#">women</a> )	
	02	1504	5	12	12	41	29-61		
	03	1624	7	12	6	116	29-61		
	21	2656	15	26	19	78	41-72		
FIN-ATB <sup>a</sup>	21	5073	67	73	<a href="#">nia</a>	<a href="#">npc</a>	54-77	1992-1999	
FIN-EAS <sup>a</sup>	01	5812	120	141	127	94	24-63	1982-2005 ( <a href="#">men/</a> <a href="#">women</a> )	
	02	4367	47	60	59	79	24-64		
	03	3013	14	14	21	66	24-64		
RUA	Cohort	N	Number of stroke deaths			Ratio % (O/E)	Age range at baseline	Follow-up period	Population mortality data <sup>1</sup>
			Observed		Expected (E)				
			Official (O)	MORGAM					
FIN-EAS <sup>b</sup>	24	4846	21	24	27	77	24-74	1997-2005 ( <a href="#">men/</a> <a href="#">women</a> )	

Table F.21. Number of observed and expected stroke deaths

<b>FIN- WESa</b>	<b>01</b>	3217	65	83	72	90	24-63	1982-2005	1982-2005 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1444	10	12	17	58	24-64	1987-2005	
<b>FIN- WESb</b>	<b>03</b>	2986	14	14	19	73	24-64	1992-2005	1992-2005 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>24</b>	3295	12	15	21	57	24-74	1997-2005	
<b>FRA- LILa</b>	<b>21</b>	2633	6	6	15	40	49-64	1991-2003	1982-1999 ( <a href="#">men/</a> <a href="#">women</a> )
<b>FRA- STRa</b>	<b>21</b>	2612	5	5	10	50	48-60	1991-2003	1983-1999 ( <a href="#">men/</a> <a href="#">women</a> )
<b>FRA- TOUa</b>	<b>21</b>	2610	1	2	8	12	49-60	1991-2005	1982-1999 ( <a href="#">men/</a> <a href="#">women</a> )
<b>GER- AUGa</b>	<b>01</b>	3980	35	40	41	85	24-65	1984-2002	1983-1994 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	3732	10	11	19	52	24-65	1989-2002	
	<b>03</b>	3632	5	7	8	62	24-65	1994-2002	
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Number of stroke deaths</b>			<b>Ratio % (O/E)</b>	<b>Age range at baseline</b>	<b>Follow- up period</b>	<b>Population mortality data<sup>1</sup></b>
			<b>Observed</b>		<b>Expected (E)</b>				
			<b>Official (O)</b>	<b>MORGAM</b>					
<b>ITA- BRIa</b>	<b>01</b>	1659	12	13	11	109	25-65	1986-2002	1985-2002 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1599	3	6	7	42	25-66	1989-2002	
	<b>03</b>	1674	5	6	3	166	26-66	1993-2002	
<b>ITA- FRIa</b>	<b>01</b>	1880	7	9	9	77	24-65	1985-1998	1983-1993 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1844	2	1	5	40	24-64	1989-1998	

Table F.21. Number of observed and expected stroke deaths

	<b>03</b>	1786	4	4	2	200	24-64	1994-1998	
<b>ITA-FSEa</b>	<b>21</b>	400	1	0	<a href="#">nia</a>	<a href="#">npc</a>	45-65	1995-1998	
<b>ITA-PAMa</b> <a href="#">2</a>	<b>21</b>	2044	13	13	15	86	25-75	1990-2002	1985-2002 ( <a href="#">men/</a> <a href="#">women</a> )
<b>ITA-ROMb</b>	<b>01</b>	1723	11	17	21	52	24-66	1982-2002	1983-1991 ( <a href="#">men/</a> <a href="#">women</a> )
RUA	Cohort	N	Number of stroke deaths			Ratio % (O/E)	Age range at baseline	Follow-up period	Population mortality data <sup>1</sup>
			Observed		Expected (E)				
			Official (O)	MORGAM					
<b>ITA-ROMc</b>	<b>21</b>	3648	71	82	<a href="#">nia</a>	<a href="#">npc</a>	19-69	1983-2002	
	<b>22</b>	2894	43	50	<a href="#">nia</a>	<a href="#">npc</a>	18-72	1986-2002	
	<b>23</b>	1970	6	8	<a href="#">nia</a>	<a href="#">npc</a>	20-77	1993-2002	
	<b>24</b>	2519	24	26	<a href="#">nia</a>	<a href="#">npc</a>	26-81	1993-2002	
<b>LTU-KAUa</b>	<b>01</b>	1463	16	17	30	53	35-64	1983-1998	1983-1999 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1762	16	16	22	72	35-64	1986-1998	
	<b>03</b>	1260	1	1	6	16	33-65	1992-1998	
<b>POL-TARa</b>	<b>01</b>	2722	24	24	43	55	34-65	1983-1998	1983-1998 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1311	9	9	13	69	34-65	1987-1998	
	<b>03</b>	1329	7	7	6	116	34-65	1992-1998	
RUA	Cohort	N	Number of stroke deaths			Ratio % (O/E)	Age range at baseline	Follow-up period	Population mortality data <sup>1</sup>
			Observed		Expected (E)				
			Official (O)	MORGAM					

Table F.21. Number of observed and expected stroke deaths

<b>POL- WARa</b>	<b>01</b>	2646	37	37	47	78	35-65	1983-1998	1983-2000 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1417	14	15	13	107	34-64	1988-1998	
	<b>03</b>	1514	3	3	6	50	34-64	1993-1998	
<b>RUS- NOVb</b>	<b>01</b>	3175	53	53	76	69	24-65	1985-1998	1981-2000 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	3387	27	27	51	52	24-65	1988-1998	
	<b>03</b>	3273	10	11	13	76	24-65	1994-1998	
<b>RUS- NOVc</b>	<b>21</b>	1603	35	35	38	92	23-63	1983-1998	1981-2000 ( <a href="#">men/</a> <a href="#">women</a> )
<b>SWE- NSWa</b>	<b>01</b>	1625	10	9	11	90	25-65	1986-1999	1983-1999 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1576	5	6	5	100	24-64	1990-1999	
	<b>03</b>	1893	6	7	7	85	24-74	1994-1999	
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Number of stroke deaths</b>			<b>Ratio % (O/E)</b>	<b>Age range at baseline</b>	<b>Follow- up period</b>	<b>Population mortality data<sup>1</sup></b>
			<b>Observed</b>		<b>Expected (E)</b>				
			<b>Official (O)</b>	<b>MORGAM</b>					
<b>UNK- BELa</b>	<b>21</b>	2745	4	5	7	57	49-60	1991-1999	1983-1993 ( <a href="#">men/</a> <a href="#">women</a> )
<b>UNK- CAEa <sup>3</sup></b>	<b>21</b>	2398	36	45	41	87	47-67	1984-2000	1984-2000 ( <a href="#">men/</a> <a href="#">women</a> )
<b>UNK- ED Ia</b>	<b>01</b>	1299	20	29	<a href="#">nia</a>	<a href="#">npc</a>	25-65	1986-2005	
<b>UNK- GLAa</b>	<b>01</b>	1109	17	29	26	65	25-65	1986-2005	1983-1995 ( <a href="#">men/</a> <a href="#">women</a> )
	<b>02</b>	1754	32	50	43	74	25-75	1992-2005	

Table F.21. Number of observed and expected stroke deaths

	<b>03</b>	1656	3	9	13	23	25-65	1995-2005	
	<b>21</b>	1017	14	25	18	77	25-65	1988-2005	
<b>UNK-SHHa</b> <sup>3</sup>	<b>01</b>	9165	114	186	181	62	38-61	1984-2005	1984-2000 ( <a href="#">men/</a> <a href="#">women</a> )
<b>RUA</b>	<b>Cohort</b>	<b>N</b>	<b>Number of stroke deaths</b>			<b>Ratio % (O/E)</b>	<b>Age range at baseline</b>	<b>Follow-up period</b>	<b>Population mortality data<sup>1</sup></b>
			<b>Observed</b>		<b>Expected (E)</b>				
			<b>Official (O)</b>	<b>MORGAM</b>					

**observed official:** deaths in the cohort with ICD-8 codes 430-436, ICD-9 codes 430, 431, 433, 434, 436, 438 or ICD-10 codes I60, I61, I63, I64, I69 as the underlying cause

**observed MORGAM:** deaths in the cohort with MORGAM diagnosis 1 or 9

**expected:** expected number of deaths in the cohort assuming the same mortality as in the general population for the ICD codes as specified for "observed official" above (see also [Annex F.1](#))

**nia:** no information available

**npc:** not possible to calculate

**1:** population mortality data: age and relevant calendar years for which the annual population demographic and mortality data are available

**2:** mortality data for the whole of Brianza region used for estimation of deaths

**3:** WHO data used for estimation of deaths

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[npcFollow-up Data](#)**Table F.22** Scores for the follow-up of fatal and non-fatal stroke events (See [Follow-up procedures and coverage](#), [Diagnosis Score](#) and [Stroke Event Score](#))

<b>RUA</b>	<b>Cohort</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>	<b>Mortality comparison score</b>	<b>Coverage score</b>	<b>Diagnosis score</b>	<b>Stroke event score</b>
<b>AUS-NEWa</b>	<b>01</b>	2*	2*	2	2*	1*	1.5*
	<b>02</b>	2*	2*	0	1*	1*	1*
	<b>03</b>	2*	2*	0	1*	1*	1*
<b>DEN-GLOa</b>	<b>01</b>	2	2	2	2	1	1.5
	<b>02</b>	2	2	0	1	1	1
	<b>03</b>	2	2	2	2	1	1.5
	<b>21</b>	2	2	2	2	1	1.5
<b>FIN-ATBa</b>	<b>21</b>	2	2	<a href="#">npc</a> <sup>1</sup>	2?	1.5	1.75?
<b>FIN-EASa</b>	<b>01</b>	2	2	2	2	1.5	1.75
	<b>02</b>	2	2	2	2	1.5	1.75
	<b>03</b>	2	2	1	2	1.5	1.75
<b>FIN-EASb</b>	<b>24</b>	2	2	2	2	1.5	1.75
<b>FIN-WESa</b>	<b>01</b>	2	2	2	2	1.5	1.75
	<b>02</b>	2	2	1	2	1.5	1.75
<b>FIN-WESb</b>	<b>03</b>	2	2	2	2	1.5	1.75
	<b>24</b>	2	2	1	2	1.5	1.75
<b>FRA-LILa</b>	<b>21</b>	2	2	<a href="#">npc</a> <sup>2</sup>	2?	1	1.5?
<b>FRA-STRa</b>	<b>21</b>	2	2	<a href="#">npc</a> <sup>2</sup>	2?	1	1.5?
<b>FRA-TOUa</b>	<b>21</b>	2	2	<a href="#">npc</a> <sup>2</sup>	2?	1	1.5?
<b>RUA</b>	<b>Cohort</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>	<b>Mortality comparison score</b>	<b>Coverage score</b>	<b>Diagnosis score</b>	<b>Stroke event score</b>
<b>GER-AUGa</b>	<b>01</b>	2*	2*	2	2*	1*	1.5*
	<b>02</b>	2*	2*	0	1*	1*	1*
	<b>03</b>	2*	2*	1	2*	1*	1.5*
<b>ITA-BRIa</b>	<b>01</b>	1	2	2	2	1.5	1.75
	<b>02</b>	1	2	0	1	1.5	1.25

Table F.22 - Scores for the follow-up of fatal and non-fatal stroke events

	<b>03</b>	1	2	2	2	1.5	1.75
<b>ITA-FRIa</b>	<b>01</b>	1	2	2	2	1.5	1.75
	<b>02</b>	1	2	0	1	1.5	1.25
	<b>03</b>	1	2	2	2	1.5	1.75
<b>ITA-FSEa</b>	<b>21</b>	1	2	<a href="#">npc<sup>3</sup></a>	2?	1.5	1.75?
<b>ITA-PAMa</b>	<b>21</b>	1	2	2	2	1.5	1.75
<b>ITA-ROMb</b>	<b>01</b>	1	2	0	1	1	1
<b>ITA-ROMc</b>	<b>21</b>	1	2	<a href="#">npc<sup>3</sup></a>	2?	1	1.5?
	<b>22</b>	1	2	<a href="#">npc<sup>3</sup></a>	2?	1	1.5?
	<b>23</b>	1	2	<a href="#">npc<sup>3</sup></a>	2?	1	1.5?
	<b>24</b>	1	2	<a href="#">npc<sup>3</sup></a>	2?	1	1.5?
<b>LTU-KAUa</b>	<b>01</b>	1	1	0	0	1,5	0.75
	<b>02</b>	1	1	2	1	1.5	1.25
	<b>03</b>	1	2	0	1	1.5	1.25
<b>RUA</b>	<b>Cohort</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>	<b>Mortality comparison score</b>	<b>Coverage score</b>	<b>Diagnosis score</b>	<b>Stroke event score</b>
<b>POL-TARa</b>	<b>01</b>	2*	2*	1	2*	1*	1.5*
	<b>02</b>	2*	2*	1	2*	1*	1.5*
	<b>03</b>	2*	2*	2	2*	1*	1.5*
<b>POL-WARa</b>	<b>01</b>	1	2	2	2	1	1.5
	<b>02</b>	1	2	2	2	1	1.5
	<b>03</b>	1	2	0	1	1	1
<b>RUS-NOVb</b>	<b>01</b>	1	1	1	1	1	1
	<b>02</b>	1	1	0	0	1	0.5
	<b>03</b>	1	1	2	1	1	1
<b>RUS-NOVc</b>	<b>21</b>	1	1	2	1	1	1
<b>SWE-NSWa</b>	<b>01</b>	1	2	2	2	2	2
	<b>02</b>	1	2	2	2	2	2
	<b>03</b>	1	2	2	2	2	2
<b>UNK-BELa</b>	<b>21</b>	2	2	<a href="#">npc<sup>2</sup></a>	2?	1	1.5?
<b>UNK-CAEa</b>	<b>21</b>	2	2	2	2	1	1.5
<b>UNK-EDLa</b>	<b>01</b>	2	2	<a href="#">npc<sup>3</sup></a>	2?	1	1.5?
	<b>01</b>	2	2	1	2	1	1.5

Table F.22 - Scores for the follow-up of fatal and non-fatal stroke events

<b>UNK-GLAa</b>	<b>02</b>	2	2	2	2	1	1.5
	<b>03</b>	2	2	0	1	1	1
	<b>21</b>	2	2	2	2	1	1.5
<b>UNK-SHHa</b>	<b>01</b>	2	2	1	2	1	1.5
<b>RUA</b>	<b>Cohort</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>	<b>Mortality comparison score</b>	<b>Coverage score</b>	<b>Diagnosis score</b>	<b>Stroke event score</b>

\*: non-fatal events not followed up, Scores based solely on fatal events.

Not possible to calculate:

1. In FIN-ATB, the cohort was recruited from smokers of Southern Finland, and therefore representative population mortality data are not available for comparison.

**npc:** 2. In FRA-LIL/STR/TOU and UNK-BEL the underlying cause of death in the cohorts was assigned by the PRIME Deaths Committee, and therefore they are not comparable with the official statistics.

3. For some cohorts the population mortality data are not available.

Updated on 2007-06-15

Follow-up data**Table F.23** Source of validation for stroke events for RUA (see [Diagnosis of stroke events](#))

RUA	fatal		non-fatal	
	Source of validation	upper age limit	Source of validation	upper age limit
AUS-NEWa	Final official underlying cause of death codes		nf	
DEN-GLOa	Final official underlying and immediate cause of death codes or hospital discharge codes		Hospital discharge codes	
FIN-ATBa	Final official underlying cause of death codes or hospital discharge codes		Hospital discharge codes	
FIN-EASa/WESa	For deaths found in the stroke event registers, the MONICA diagnostic category was used. For events which were found in the Hospital Discharge Register or in the Register of Causes of Death but not in the stroke event registers, final official underlying, antecedent or direct cause of death codes or hospital discharge codes were used.		For events found in the stroke event registers, the MONICA diagnostic category was used. For events which were found in the Hospital Discharge Register but not in the stroke event registers, hospital discharge codes were used.	
FRA-LILa	MONICA validation		MONICA validation	
FRA-STRa	MONICA validation		MONICA validation	
FRA-TOUa	MONICA validation		MONICA validation	
GER-AUGa	Underlying cause of death coded to ICD-9 by the MPC was used.		nf	
ITA-BRIa	MONICA validation		MONICA validation	

Table F.23 Source of validation for stroke events for RUA

ITA-FRIa	MONICA validation		MONICA validation	
ITA-FSEa	MONICA validation		MONICA validation	
ITA-PAMa	MONICA validation		MONICA validation	
ITA-ROMa	For deaths found in the stroke event register or for deaths which were not found in the stroke event register but for which satisfactory clinical documentation was available, the MONICA validation was used. For deaths for which clinical documentation was not found, the death validation was based on the death certificate only.		For events found in the stroke event register or for events which were not found in the stroke event register but for which satisfactory clinical documentation was available, the MONICA validation was used. For events for which clinical documentation was not found, the event validation was based on the hospital discharge form only.	
LTU-KAUa	MONICA validation for age group 35-64*	64	MONICA validation for age group 35-64*	64
	Underlying cause of death on the death certificate		nf	
POL-TARa	Final official underlying cause of death codes		nf	
POL-WARa	MONICA validation up to age 64 and year 1994	64	MONICA validation up to age 64 and year 1994	64
	Final official underlying cause of death codes		nf	
RUS-NOVa	MONICA validation up to age 74	74	MONICA validation up to age 74	74
	Final official underlying cause of death codes, if not available the underlying cause of death from the death certificate was used.		nf	
	MONICA validation up to age 74	74	MONICA validation up to age 74	74

Table F.23 Source of validation for stroke events for RUA

SWE-NSWa	Final official underlying cause of death codes		nf	
UNK-BELa	MONICA validation		MONICA validation	
UNK-CAEa	Underlying cause of death codes assigned by the MPC up to 1996, since 1997 from the copy of the death certificate		The event was validated using Hospital notes and General Practitioners' records.	
UNK-EDI/GLA/SHH	Official underlying or other death certificate codes or hospital discharge codes		Hospital discharge codes	
<b>RUA</b>	<b>fatal</b>		<b>non-fatal</b>	
	<b>Source of validation</b>	<b>upper age limit</b>	<b>Source of validation</b>	<b>upper age limit</b>

nf = not followed up

\* = In 1998, all stroke events were validated by MONICA procedure without upper age limit.

Updated on 2007-04-13

## Follow-up Data

Table F.24. Percentages of source of validation of diagnoses and ICD-versions used for stroke events (See [Diagnosis of stroke events](#))

RUA	Cohort	# Acute stroke events	Source of validation of diagnosis							ICD version used					
			Monica validation (%)	Systematic review (%)	Hospital notes (%)	Discharge letter (%)	Discharge diagnosis (%)	Several sources (%)	Source missing (%)	ICD-8		ICD-9		ICD-10	
										Period	%	Period	%	Period	%
AUS- NEWa	01	25	0	0	0	0	100	0	0						
	02	6	0	0	0	0	100	0	0						
	03	1	0	0	0	0	100	0	0						
DEN- GLOa	01	343	0	0	0	0	100	0	0	1983- 93	31.5		0	1993- 01	68.5
	02	99	0	0	0	0	100	0	0	1987- 93	20.2		0	1993- 01	79.8
	03	62	0	0	0	0	100	0	0	1992- 93	9.7		0	1994- 01	90.3
	21	155	0	0	0	0	100	0	0	1993- 93	1.3		0	1994- 01	98.7
FIN- ATBa	21	503	0	0	0	0	100	0	0		0	1992- 95	37.2	1996- 99	62.8
FIN- EASa	01	565	27.6	0	0	0	72.4	0	0	1982- 86	15.5	1987- 95	36.2	1996- 05	48.3
	02	293	18.4	0	0	0	81.6	0	0		0	1987- 95	41.3	1995- 05	58.7
	03	120	22.5	0	0	0	77.5	0	0		0	1992- 95	19.8	1996- 05	80.2
FIN- EASb	24	144	1.4	0	0	0	98.6	0	0		0		0	1997- 05	100
RUA	Cohort	# Acute stroke events	Source of validation of diagnosis							ICD version used					
			Monica validation (%)	Systematic review (%)	Hospital notes (%)	Discharge letter (%)	Discharge diagnosis (%)	Several sources (%)	Source missing (%)	ICD-8		ICD-9		ICD-10	
										Period	%	Period	%	Period	%
FIN- WESa	01	286	34.6	0	0	0	65.4	0	0	1982- 86	11.1	1987- 95	31	1996- 05	57.9
	02	64	39.1	0	0	0	60.9	0	0		0	1988- 95	42.4	1996- 05	57.6
FIN- WESb	03	91	35.2	0	0	0	64.8	0	0		0	1992- 95	30.2	1996- 05	69.8
	24	106	0.9	0	0	0	99.1	0	0		0		0	1997- 05	100
FRA- LILa	21	65	0	100	0	0	0	0	0		0	1992- 02	100		0
FRA- STRa	21	27	0	100	0	0	0	0	0		0	1992- 02	100		0
FRA- TOUa	21	28	0	100	0	0	0	0	0		0	1994- 02	100		0
GER- AUGa	01	40	0	0	0	0	100	0	0						
	02	11	0	0	0	0	100	0	0						

Table F.24. Percentages of source of validation of diagnoses and ICD-versions used for stroke events

RUA	Cohort	# Acute stroke events	Source of validation of diagnosis							ICD version used						
			Monica validation (%)	Systematic review (%)	Hospital notes (%)	Discharge letter (%)	Discharge diagnosis (%)	Several sources (%)	Source missing (%)	ICD-8		ICD-9		ICD-10		
										Period	%	Period	%	Period	%	
	<b>03</b>	7	0	0	0	0	0	100	0	0						
<b>ITA-BRIa</b>	<b>01</b>	35	100	0	0	0	0	0	0	0	0	1988-02	100		0	
	<b>02</b>	29	100	0	0	0	0	0	0	0	0	1990-02	100		0	
	<b>03</b>	19	100	0	0	0	0	0	0	0	0	1994-01	100		0	
<b>ITA-FRIa</b>	<b>01</b>	27	100	0	0	0	0	0	0	0	0	1986-98	100		0	
	<b>02</b>	14	100	0	0	0	0	0	0	0	0	1989-98	100		0	
	<b>03</b>	9	100	0	0	0	0	0	0	0	0	1994-98	100		0	
<b>ITA-FSEa</b>	<b>21</b>	0									0	1996-97	100		0	
<b>ITA-PAMa</b>	<b>21</b>	44	100	0	0	0	0	0	0	0	0	1992-02	100		0	
<b>ITA-ROMb</b>	<b>01</b>	39	82.1	17.9	0	0	0	0	0	0	0	1987-02	100		0	
<b>ITA-ROMc</b>	<b>21</b>	151	86.1	13.2	0	0	0	0	0.7	0	0	1984-02	100		0	
	<b>22</b>	104	89.4	10.6	0	0	0	0	0	0	0	1987-02	100		0	
	<b>23</b>	18	100	0	0	0	0	0	0	0	0	1995-02	100		0	
	<b>24</b>	71	88.7	9.9	0	0	0	0	1.4	0	0	1994-02	100		0	
<b>LTU-KAUa</b>	<b>01</b>	50	82	0	0	0	0	18	0	0	0	1984-98	100		0	
	<b>02</b>	50	90	0	0	0	0	10	0	0	0	1987-98	100		0	
	<b>03</b>	11	100	0	0	0	0	0	0	0	0	1993-98	100		0	
<b>POL-TARa</b>	<b>01</b>	24	0	0	0	0	0	100	0	0						
	<b>02</b>	9	0	0	0	0	0	100	0	0						
	<b>03</b>	7	0	0	0	0	0	100	0	0						
<b>POL-WARa</b>	<b>01</b>	55	63.6	0	0	0	0	36.4	0	0	0	1984-96	96.4	1997-98	3.6	
	<b>02</b>	23	52.2	0	0	0	0	47.8	0	0	0	1988-96	87	1997-98	13	
	<b>03</b>	6	66.7	0	0	0	0	33.3	0	0	0	1993-96	100		0	

Table F.24. Percentages of source of validation of diagnoses and ICD-versions used for stroke events

RUS-NOVb	01	99	99	0	0	0	1	0	0	0	1986-98	100		0	
	02	42	100	0	0	0	0	0	0	0	1989-98	100		0	
	03	21	100	0	0	0	0	0	0	0	1995-98	100		0	
RUS-NOVc	21	70	100	0	0	0	0	0	0	0	1985-98	100		0	
SWE-NSWa	01	52	100	0	0	0	0	0	0	0	1987-96	66.7	1997-99	33.3	
	02	33	100	0	0	0	0	0	0	0	1990-96	63.6	1997-99	36.4	
	03	44	95.5	0	0	0	4.5	0	0	0	1994-98	52.4	1997-99	47.6	
RUA	Cohort	# Acute stroke events	Source of validation of diagnosis							ICD version used					
			Monica validation (%)	Systematic review (%)	Hospital notes (%)	Discharge letter (%)	Discharge diagnosis (%)	Several sources (%)	Source missing (%)	ICD-8		ICD-9		ICD-10	
Period	%	Period								%	Period	%			
UNK-BELa	21	18	0	100	0	0	0	0	0	0	1993-97	100		0	
UNK-CAEa	21	230	0	84.8	0	0	15.2	0	0	0	1985-00	100		0	
UNK-EDLa	01	79	0	0	0	0	100	0	0	0	1986-99	36.7	1996-05	63.3	
UNK-GLAa	01	95	0	0	0	0	100	0	0	0	1986-98	34.7	1997-05	65.3	
	02	164	0	0	0	0	100	0	0	0	1992-98	21.3	1996-05	78.7	
	03	50	0	0	0	0	100	0	0	0	1995-96	10	1996-05	90	
	21	74	0	0	0	0	100	0	0	0	1990-98	31.1	1996-05	68.9	
UNK-SHLa	01	587	0	0	0	0	100	0	0	0	1985-99	30.6	1996-05	69.4	
RUA	Cohort	# Acute stroke events	Source of validation of diagnosis							ICD version used					
			Monica validation (%)	Systematic review (%)	Hospital notes (%)	Discharge letter (%)	Discharge diagnosis (%)	Several sources (%)	Source missing (%)	ICD-8		ICD-9		ICD-10	
Period	%	Period								%	Period	%			

Updated on 2007-06-19

[Follow-up data](#)**Table F.25.** Percentage of types of exit from the follow-up for nonfatal thrombo-embolic events (see [Reasons for exit from the follow-up of non-fatal thromboembolic events](#))

RUA	Cohort	Percentage of <a href="#">EXREAST</a>													
		Men							Women						
		N	end of study	moved away	refusal	other	irrelevant	total	N	end of study	moved away	refusal	other	irrelevant	total
DEN-GLOa	01	1940	.	.	.	.	100	100	1845	.	.	.	.	100	100
	02	748	.	.	.	.	100	100	756	.	.	.	.	100	100
	03	809	.	.	.	.	100	100	815	.	.	.	.	100	100
	21	1333	.	.	.	.	100	100	1323	.	.	.	.	100	100
FIN-ATBa	21	5073	.	.	.	.	100	100	.	.	.	.	.	.	0
FIN-EASa	03	1409	.	.	.	.	100	100	1604	.	.	.	.	100	100
FIN-EASb	24	2419	.	.	.	.	100	100	2427	.	.	.	.	100	100
FIN-WESb	03	1424	.	.	.	.	100	100	1562	.	.	.	.	100	100
	24	1673	.	.	.	.	100	100	1622	.	.	.	.	100	100
RUA	Cohort	Percentage of <a href="#">EXREAST</a>													
		Men							Women						
		N	end of study	moved away	refusal	other	irrelevant	total	N	end of study	moved away	refusal	other	irrelevant	total

Updated on 2006-08-23

**Follow-up data****Table F.26.** Reported end of follow-up date for nonfatal thrombo-embolic events and three most frequently occurring dates of exit by **EXREAST** (see [End-of-follow-up period for thrombo-embolic events](#))

RUA	Cohort	Reported end of follow-up date	EXREAST = 1										EXREAST = 1, 2, 3 or 4	
			N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the 1st frequent	latest date of exit
				exit date	N	exit date	N	exit date	N	exit dates	N			
DEN-GLOa	01	31 Dec 2001	0	.	.	.	.	.	.	.	0	.	.	
	02	31 Dec 2001	0	.	.	.	.	.	.	.	0	.	.	
	03	31 Dec 2001	0	.	.	.	.	.	.	.	0	.	.	
	21	31 Dec 2001	0	.	.	.	.	.	.	.	0	.	.	
FIN-ATBa	21	31 Dec 1999	0	.	.	.	.	.	.	.	0	.	.	
FIN-EASa	01	n.a.	0	.	.	.	.	.	.	.	0	.	.	
	02	n.a.	0	.	.	.	.	.	.	.	0	.	.	
	03	31 Dec 2005	0	.	.	.	.	.	.	.	0	.	.	
FIN-EASb	24	31 Dec 2005	0	.	.	.	.	.	.	0	.	.		
FIN-WESa	01	n.a.	0	.	.	.	.	.	.	.	0	.	.	
	02	n.a.	0	.	.	.	.	.	.	.	0	.	.	
RUA	Cohort	Reported end of follow-up date	EXREAST = 1										EXREAST = 1, 2, 3 or 4	
			N	1st frequent		2nd frequent		3rd frequent		other		N	exit dates after the 1st frequent	latest date of exit
				exit date	N	exit date	N	exit date	N	exit dates	N			
FIN-WESb	03	31 Dec 2005	0	.	.	.	.	.	.	.	0	.	.	
	24	31 Dec 2005	0	.	.	.	.	.	.	.	0	.	.	
RUA	Cohort	Reported end of follow-up date	EXREAST = 1										EXREAST = 1, 2, 3 or 4	
			N	1st frequent	2nd frequent	3rd frequent	other	N	exit dates after the	latest date				

Table F.26. Reported end of follow-up date for nonfatal thrombo-embolic events and three most frequently occurring dates of exit

		<b>date</b>	<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>exit date</b>	<b>N</b>	<b>exit dates</b>	<b>N</b>	<b>1st frequent</b>	<b>of exit</b>
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Updated on 2007-06-19

**Follow-up data****Table F.27a.** Procedures of follow-up for nonfatal thromboembolic events for RUA(see [Reasons for exit from the follow-up of non-fatal thromboembolic events](#) and [Follow-up procedures and coverage](#))

<b>RUA</b>	<b>Notification of nonfatal thromboembolic events</b>	<b>Coverage of source</b>	<b>Notification of loss to follow-up for non-fatal stroke events</b>	<b>Event notification score</b>	<b>Loss-to-follow-up notification score</b>
DEN-GLO	Linkage with the National Hospital Discharge Register	All hospitalizations in Denmark	Yes, linkage with the Civil Registration System.	2	2
FIN-ATB	Linkage with the Hospital Discharge Register using personal identification number.	All hospitalizations in Finland	No	2	2
FIN-EAS/WES	Linkage with the Hospital Discharge Register using personal identification number	All hospitalizations in Finland	No	2	2

Updated on 2006-08-22

**Follow-up Data****Table F.27b.** Percentages of source of notification of venous thromboembolic events (See [Follow-up procedures and coverage](#)). In the case of multiple sources the event is assigned to leftmost relevant column.

<b>RUA</b>	<b>Cohort</b>	<b># of thromboembolic events</b>	<b>Cause of death register (%)</b>	<b>Hospital discharge register (%)</b>	<b>Contact with doctor (%)</b>	<b>Contact with person (%)</b>	<b>Other (%)</b>	<b>Source missing (%)</b>
<b>DEN-GLOa</b>	<b>01</b>	80	16.3	83.8	0	0	0	0
	<b>02</b>	27	14.8	85.2	0	0	0	0
	<b>03</b>	13	38.5	61.5	0	0	0	0
	<b>21</b>	18	16.7	83.3	0	0	0	0
<b>FIN-ATBa</b>	<b>21</b>	77	3.9	96.1	0	0	0	0
<b>FIN-EASa</b>	<b>03</b>	53	9.4	90.6	0	0	0	0
<b>FIN-EASb</b>	<b>24</b>	58	20.7	79.3	0	0	0	0
<b>FIN-WESb</b>	<b>03</b>	38	13.2	86.8	0	0	0	0
	<b>24</b>	33	15.2	84.8	0	0	0	0
<b>RUA</b>	<b>Cohort</b>	<b># of thromboembolic events</b>	<b>Cause of death register (%)</b>	<b>Hospital discharge register (%)</b>	<b>Contact with doctor (%)</b>	<b>Contact with person (%)</b>	<b>Other (%)</b>	<b>Source missing (%)</b>

Updated on 2007-06-19

**Follow-up Data****Table F.28.** Percentage of loss to follow-up from the follow-up of fatal and nonfatal thrombo-embolic events (See [Follow-up procedures and coverage](#). Length of the follow-up period is in [Table F.25](#) and availability of the notification of loss to follow-up in [Table F.27a](#).)

RUA	Cohort	N	Percentage of loss to follow-up*						
			Years 0-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years > 15	Total
DEN-GLOa	01	3785	0.2	0.1	0.1	0.1	0.2	0.2	0.9
	02	1504	0.0	0.1	0.1	0.1	0.1	0.0	0.4
	03	1624	0.1	0.2	0.4	0.2	0.0	0.0	0.9
	21	2656	0.2	0.0	0.2	0.0	0.0	0.0	0.4
FIN-ATBa	21	5073	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIN-EASa	01	5812	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	02	4367	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	03	3013	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIN-EASb	24	4846	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIN-WESa	01	3217	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	02	1444	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIN-WESb	03	2986	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	24	3295	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUA	Cohort	N	Percentage of loss to follow-up*						
			Years 0-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years > 15	Total

\* Numerator: (EXREAST = 2 or 3) or (EXREAST = 8 and EXREAS = 3, 4 or 5)

Denominator: EXDATET != 7777777

Updated on 2007-06-19

**Follow-up data****Table F.29** Source of validation for thromboembolic events for RUA (see [Diagnosis of thromboembolic events](#))

RUA	fatal		non-fatal	
	Source of validation	upper age limit	Source of validation	upper age limit
DEN-GLOa	Final official underlying and immediate cause of death codes or hospital discharge codes		Hospital discharge codes	
FIN-ATBa	Final official underlying cause of death codes		Hospital discharge codes	
FIN-EASa/ WESa	Final official underlying, antecedent or direct cause of death codes		Hospital discharge codes	

Updated on 2006-08-22

Follow-up Data**Table F.30.** Percentages of source of validation of diagnoses and ICD-versions used for thrombo-embolic events  
(See [Diagnosis of thromboembolic events](#))

RUA	Cohort	# Acute thrombo-embolic events	Source of validation of diagnosis				ICD version used					
			Systematic review (%)	Hospital notes (%)	Discharge letter (%)	Discharge diagnosis (%)	ICD-8		ICD-9		ICD-10	
							Period	%	Period	%	Period	%
DEN-GLOa	01	80	0	0	0	100	1983-93	62.5		0	1994-01	37.5
	02	27	0	0	0	100	1987-93	63		0	1994-01	37
	03	13	0	0	0	100	1992-93	15.4		0	1995-01	84.6
	21	18	0	0	0	100		0		0	1995-01	100
FIN-ATBa	21	77	0	0	0	100		0	1993-95	39	1996-99	61
FIN-EASa	03	53	0	0	0	100		0	1992-95	26.4	1996-05	73.6
FIN-EASb	24	58	0	0	0	100		0		0	1997-05	100
FIN-WESb	03	38	0	0	0	100		0	1992-95	15.8	1996-05	84.2
	24	33	0	0	0	100		0		0	1998-05	100
RUA	Cohort	# Acute thrombo-embolic events	Source of validation of diagnosis				ICD version used					
			Systematic review (%)	Hospital notes (%)	Discharge letter (%)	Discharge diagnosis (%)	ICD-8		ICD-9		ICD-10	
							Period	%	Period	%	Period	%

Updated on 2007-06-19