



Health statistics

Atlas on mortality in the European Union

Chapter 6 Typologies of mortality by age

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6. Typologies of mortality by age

The differences in mortality in the EU vary depending on age and sex. In order to improve the analysis of these variations, we devised a typology of European regions according to their mortality rates by five-year age groups, with separate treatment of men and women.

The first typology covers the entire population. We then conducted an analysis based solely on premature deaths (under 65 years) in order to portray more clearly the spatial disparities for deaths which can often be avoided by taking preventive measures.

The maps showing regional mortality profiles by age reveal marked continuities

The analysis of mortality rates by age for the entire population reveals five types of region with distinctly different features. Furthermore, there are clear-cut differences between the types defined for men and women.

Whatever the sex, the maps for these types reveal distinctive structures.

Typology by age of male mortality

Type 1 is typified by mortality at all ages that is slightly lower than the European average. It is present in regions belonging to all the Member States except Ireland and Portugal.

It is the predominant profile in Belgium, Greece, Italy and Sweden. It is also a feature of the regions of northern Finland, the southern half of the United Kingdom except the former industrial regions of England (Greater Manchester and Lancashire), the broad western half of Germany except Bremen, Hamburg and the former industrial *Länder* (Saarland), and the Alpine *Länder* of Austria. In Spain, it is present in all the inland provinces except the Comunidad de Madrid and in France in two mountainous southern regions: Midi-Pyrénées and the Rhône-Alpes region.

Type 2 is typified by slightly excess infant mortality, below-average mortality between five and 16 years, very marked between 30 and 40 years, and excess mortality in the older age groups. This type is far less common than Type 1 and is present in regions or Member States that are geographically close: Ireland, Northern Ireland, the Netherlands,

Scotland and the former industrial regions in the north of England (Lancashire and Greater Manchester).

Type 5 is the opposite of the previous type and is typified by excess mortality before 65 years and below-average mortality in the older age groups.

It is the predominant profile in France and is also present in the coastal provinces of Spain and the Comunidad de Madrid, which is an exception among the inland regions. It is found in Danubian Austria, Luxembourg and, to a lesser extent, Hamburg and Valle d'Aosta.

Type 4 is typified by slightly below-average mortality between 0 and 14 years and excess mortality for the other age groups, particularly between 40 and 55 years. It is present in eastern Germany, the former industrial *Länder* of Germany (Saarland), Denmark, and southern Finland. It is also found in the former industrial region of Nord-Pas-de-Calais in France.

Type 3 is the most exceptional, since it is typified by excess mortality at all ages, particularly before 44 years. The whole of Portugal and Anatoliki Makedonia-Thraki in Greece stand out from the rest of the EU as the only regions where this type is present.

Typology by age of female mortality

Type 3 displays a curve close to the European average at all ages, with slightly below-average mortality between 0 and 40 years. It is found mainly in regions north of a line running from Cornwall (UK) to Friuli (IT). It is encountered only exceptionally in the Mediterranean countries, for example Sicily.

This profile is typical of a continuous cross-border area comprising the Netherlands, Belgium, Luxembourg, western Germany except Saarland, Hamburg and Bremen, the whole of Austria, and Alsace. It is also found in Scotland, Yorkshire, and the whole of southern Great Britain except London (inner and outer), the eastern and southern regions of Finland, and Norra Mellansverige in Sweden.

Type 2 displays below-average mortality at all ages except less than 14 years. This profile, the most favourable, is relatively close to male Type 1 and is found in the same regions, namely in Sweden and Finland and in the Mediterranean countries: the inland provinces of Spain except the Comunidad de Madrid, Italy and the whole of Greece except Anatoliki Makedonia-Thraki.

Type 1 displays excess mortality between 20 and 45 years and below-average mortality for other age groups. It is the predominant profile in France. In Spain, it is found in the coastal regions and islands, Aragon and the Comunidad de Madrid, and in Italy in the north-west and Lazio.

Type 5 is typified by excess mortality after 15 years, particularly for the older population. The regions with this profile are geographically close to those with Type 3: Ireland, northern England and Wales. It is also found in Denmark, eastern Germany and the large urban regions of London, Bremen and Hamburg. It is also present in the former industrial regions of Nord-Pas-de-Calais in France and Saarland.

Type 4, similar to male Type 3 with excess mortality at all ages, is less common and affects the same regions, i.e. Portugal and Anatoliki Makedonia-Thraki (Greece).

For each of the sexes, the Member States thus display one to two predominant mortality profiles. Their distribution shows clear-cut gradients and cross-border continuities.

It should also be noted that the 0–64 age group is the best suited for portraying regional disparities in general mortality. It would therefore be worthwhile drawing up typologies specific to the under-65s.

Typologies of 'premature' mortality

The level of 'premature' mortality is mainly linked to violence or behavioural risks such as accidents, suicide, smoking and alcoholism. The typologies are based solely on deaths occurring before the age of 65, so that those age groups can be identified which are the most significant with regard to spatial differences in early mortality in Europe.

Numerous types have been defined for both sexes, but their distribution throughout Europe is uneven. If we consider the most common types, it can be seen that the most marked differences in premature mortality between regions occur mainly between 30 and 65 years.

For men, the coastal regions of Spain and southern France, the Comunidad de Madrid and Île-de-

France stand out from among the other European regions on account of their excess mortality between 30 and 44 years (Type 2). However, Belgium, Greece, southern Italy, the Netherlands, Sweden and the UK have below-average mortality for this same age group (Types 6 and 8).

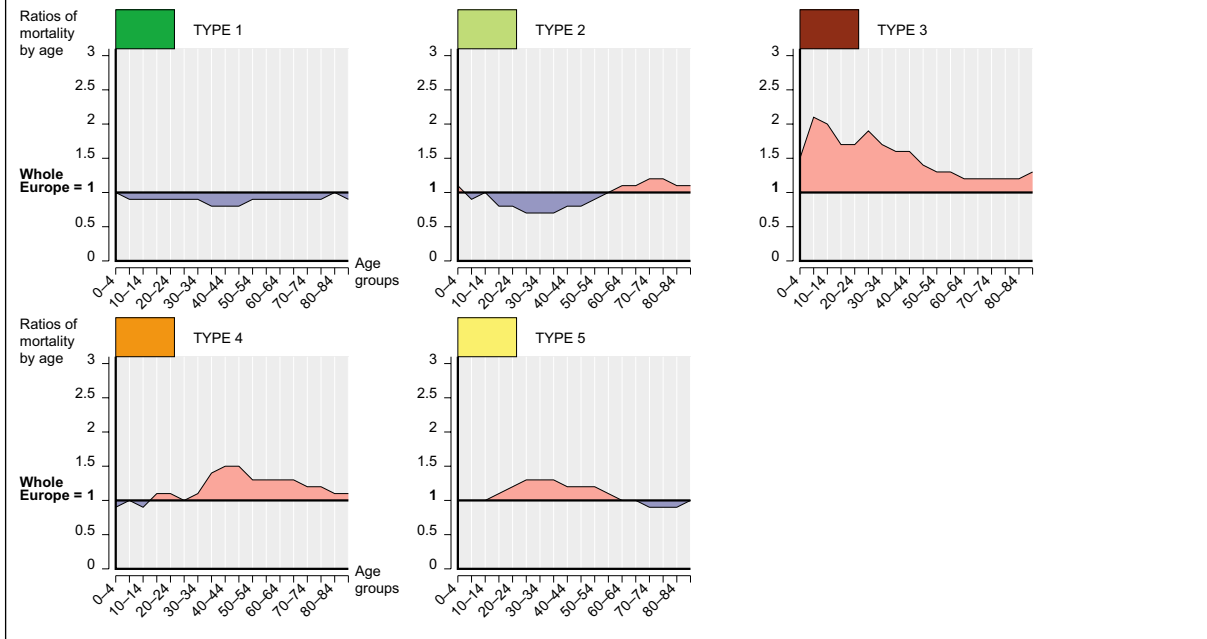
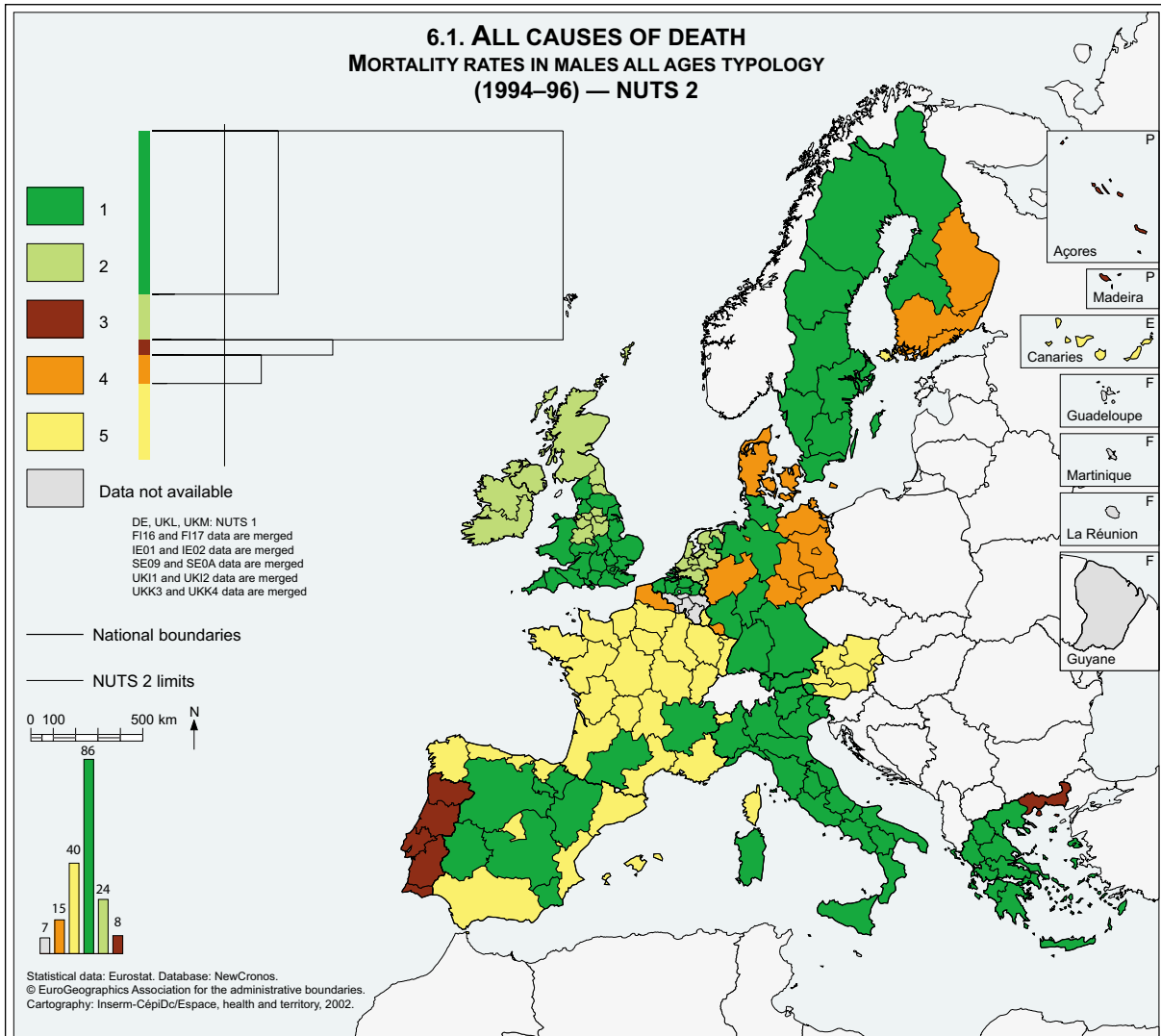
In northern France, there is high male mortality particularly between 40 and 65 years. This excess mortality is also typical of Denmark, northern Germany, Luxembourg, eastern Austria and southern Finland.

For women, the same age groups, 30–44 years and 40–64 years, are also significant. However, the regions affected by high female mortality in this population are in most cases not the same as those affected by male mortality. The clear-cut north/south divide in France according to two distinct male mortality profiles does not apply to women. Most of the regions of France are typified by high female mortality between 30 and 44 years and slightly below-average mortality at higher ages. The northern coastal provinces of Spain, the Comunidad de Madrid and Luxembourg also fall into this category.

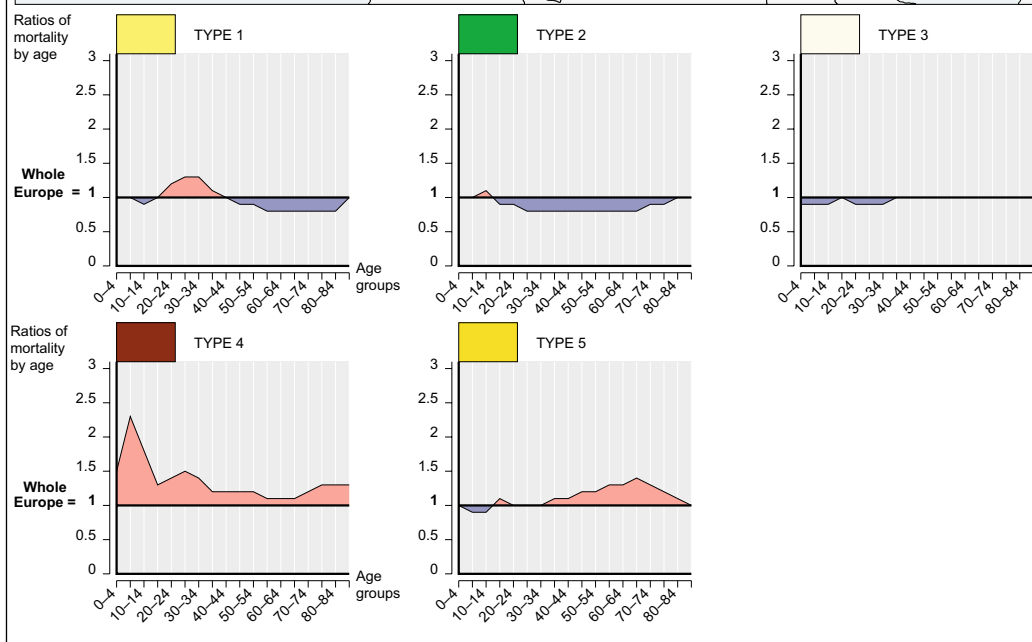
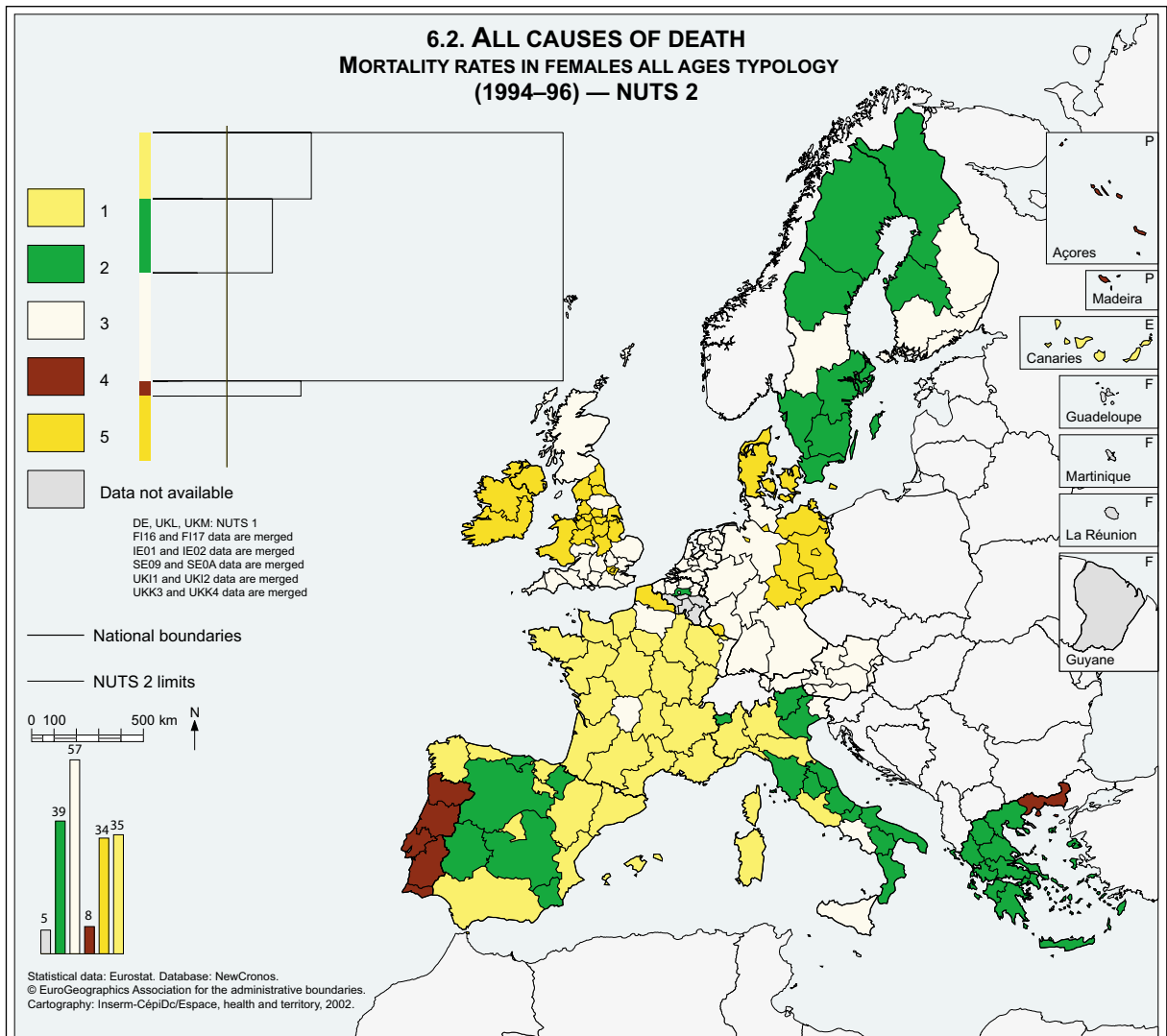
For women, the regions with excess mortality for the 40–64 age group are to be found on a diagonal line stretching from the UK to Austria (Type 4). Along the same line, a smaller group of regions display high female mortality (Type 3): Nord-Pas-de-Calais in France, certain *Länder* of eastern Germany and the urban *Länder*, Denmark, and Lancashire and Greater Manchester in the United Kingdom.

This typology of premature mortality shows that, overall, the oldest population categories (among the under-65s) are the most significant. However, certain regions stand out from the rest of Europe by virtue of their marked excess mortality at earlier ages.

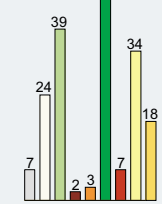
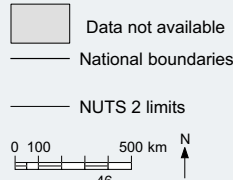
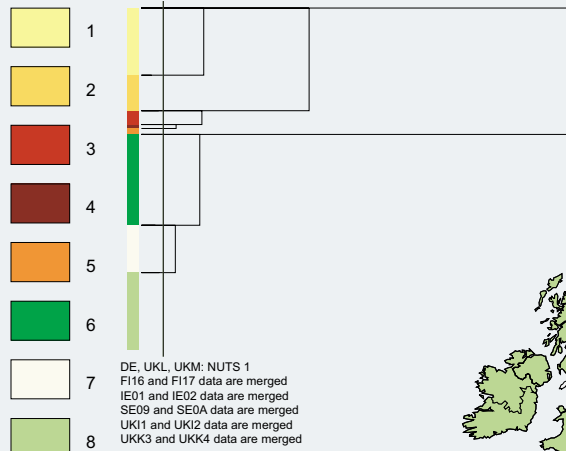
In the *Länder* of north-eastern Germany, there is excess male mortality in the 15–24 age group, together with excess mortality in the 40–64 age group. In Portugal, Corsica and Anatoliki Makedonia-Thraki, male mortality is also very high between 10 and 35 years. In these same regions, except Corsica, there is excess female mortality between 0 and 20 years.



6. Typologies of mortality by age



6.3. ALL CAUSES OF DEATH
MORTALITY RATES IN MALES AGED 0–64 TYPOLOGY
(1994–96) — NUTS 2



Statistical data: Eurostat. Database: NewCronos.
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