

Chapter 10

General Trends in Mortality by Cause

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At the end of the reconstruction described in the previous chapter, we had sex-specific and age-specific deaths by cause, classified under the 177 items of the 1981 Soviet Classification, as amended in 1988, for every year from 1965 to 2004 – 4 years in addition to those initially described in the French edition of this book (Meslé and Vallin 2003). Two further years, 2005 and 2006, had to be added, since cause-of-death statistics for Ukraine were also available for these. However, from 2005, Ukraine adopted the tenth Revision of the International Classification of Diseases, at least in an abridged form with 240 items. Therefore, in order to make these 2 years consistent with the earlier ones, we would have had to reclassify the whole 1965–2004 series into the 240 ICD-10 items. Of course, a mere 2 years' experience of the new classification was not enough to allow us to apply the method we used in the previous chapter in reconstructing the 1965–2004 series: the period covered by the new classification was too short to guarantee the validity of transition coefficients. Therefore we preferred to confine ourselves to provisional guarantees of more basic consistency for the groups of causes that had been used in analysing the results presented in the French edition, updated here for the English one. Consequently, Annex VI (on the Website (<http://www.demogr.mpg.de/books/drm/009> or <http://extras.springer.com/>)), which gives the annual sex-specific trend in the total number of deaths for each of the 177 items in the Soviet Classification, and Annex VIII, which gives the annual trend by 5-year age group (one table by sex and by item), relate only to the period 1965–2004; but they are supplemented by Annex VIIIa, which give the same trends for the years 2005 and 2006, for the 240 items defined

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according to ICD-10. It is from this set of results that cause-specific trends in mortality in Ukraine will be analysed in the following chapters. For comparative purposes, these trends will be systematically set against those in France and in Russia. The choice of these two countries is not accidental. Firstly, since this work on Ukraine is situated within the framework of an overarching project that is looking at all the republics of the former USSR in turn,¹ it seemed to us essential to take the largest republic, Russia, as the reference point each time. Secondly, a point of comparison with Western countries was required and, from this angle, the work we had already done on causes of death in France offered the best guarantees of comparability. For Russia, we used the data already published (Meslé et al. 1996), supplemented for the years 1995–2005 (shortly available in the form of a database on the INED web site²). For France, we took the much more detailed data derived from the reconstruction of homogeneous series in ICD-9 – which we have established elsewhere (Vallin and Meslé 1988, 1998) and regularly update on the INED web site³ – and reclassified them into the 177 Soviet Classification items.

In order to analyse these data, our first task is to decide how to handle deaths from unknown or ill-defined causes (Sect. 10.1). We shall then give an overview of annual trends in standardized mortality rates by major groups of causes, comparing Ukraine to Russia and France (Sect. 10.2).

10.1 Distributing Deaths from Ill-Defined Causes

Traditionally, until the 1990s, very few deaths in the Soviet Union were classified under the items reserved for deaths from unknown or ill-defined causes. This was because strict instructions were issued that, in almost all cases, one cause should be identified as responsible for the death recorded. The view might therefore be taken that the question of ill-defined causes – which is so important for the interpretation of results in many cases (Ledermann 1955; Vallin and Meslé 1988) – was not an issue here. However, as we saw in the previous chapter, in the countries of the former USSR, the situation has changed completely since 1989, and even more so in Ukraine than in Russia. So, whether we were intending to interpret trends peculiar to Ukraine or to compare trends there to those in France or in Russia, we first had to re-distribute deaths from ill-defined causes; failing this, our results would not be comparable over either time or space.

¹ The results for Russia have already been published (Meslé et al. 1996). A book on the three Baltic states is now at the editing stage. Data for the countries of the Caucasus is currently being analysed.

² www.ined.fr

³ http://www.ined.fr/fr/ressources_documentation/donnees_detaillees/causes_de_decès_depuis_1925

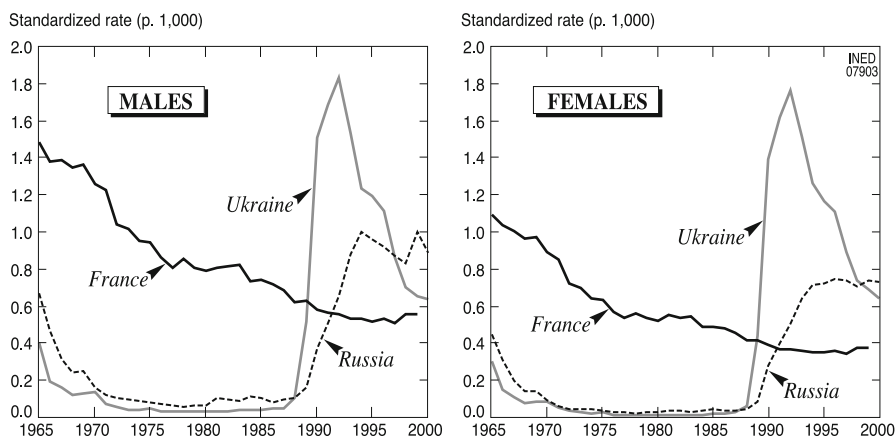


Fig. 10.1 Trends in standardized mortality rates from unknown or ill-defined causes since 1965 in Ukraine, Russia and France

10.1.1 A Phenomenon That Varies Over Time and Space

There were two items in the Soviet classifications covering ill-defined causes of death (in the 1981 Classification, these were Items 158 – *senility* – and 159 – *unknown and ill-defined causes*). Figure 10.1 tracks post-1965 trends in the standardized mortality rate⁴ for both items in all three countries. In France, the rate for these causes, which has never been insignificant, diminished fairly regularly over the whole period, as records gradually became more accurate. By contrast, as we have already mentioned at Chap. 9, while the mortality rates for these items in Ukraine and in Russia were formerly more or less negligible, during the 1990s they saw a steep rise, an outcome of the new coding instructions issued in 1989.

For France, in the context of reconstructing long-term series starting from the 1920s – when the proportion of deaths from ill-defined causes was very large (over 30%) – we had to distribute these deaths on the basis of a statistical analysis of the correlations between this proportion and the proportions of deaths from the various specified causes (Ledermann 1955; Vallin and Meslé 1988). For Russia, we confined ourselves to a simple proportional distribution (Meslé et al. 1996). This was because, before 1989, the numbers of deaths from ill-defined causes were so low that a rough redistribution method was easily adequate; and after 1989, the same method, which tends to favour the largest causes of death (particularly diseases of the circulatory system) seemed good enough, since we know that these were the items drastically reduced by the artificial effects of the 1989 directives. However,

⁴Calculated on the basis of the WHO's 1992 European population figures.

there might be some doubt as far as Ukraine is concerned, because these directives had a much bigger effect there than in Russia (meaning that 10% of total deaths were classified under Items 158 and 159, as against 2.5% in Russia).

10.1.2 Disadvantages of Strictly Proportional Distribution

As the 1989 instructions related primarily to coding old-age deaths, the steep rise in deaths from ill-defined causes was itself specific to these ages; and since the proportional distribution of deaths was made inside each age group, the overall results of the correction varied from one cause to another according to its age profile. The outcome was that this proportional distribution of deaths from ill-defined causes may seem to give relatively satisfactory results at the overall level, even in the case of Ukraine. However, since our ambition here was also to provide age-specific results, we had to take into account the effects of the proportional distribution across the age groups.

In order to form a judgement about this, we compared annual trends in mortality rates for the most sensitive age groups (80–84; 85 and over) by major groups of causes before and after proportional distribution of deaths from ill-defined causes. Although the results for the various groups of circulatory diseases may appear acceptable, this is not the case at all for most other groups of causes. The results for neoplasms are particularly unacceptable: we can hardly assume that cancer mortality rates – which up to then had stagnated or risen slightly according to age – suddenly soared in the early 1990s in the 80-plus age groups, only to fall again, almost as steeply, a few years later (Fig. 10.2). Yet any correction one would like to make here seems to be too glaring a distortion of the initial information.

Figure 10.2 shows that the cancer mortality rate in the 80–84 age group, observed before distributing deaths from ill-defined causes, is lower than the rate in the 70–74 age group, and it may certainly be reasonable to see this as symptomatic of under-declaration of cancer among the oldest old. Furthermore, that is the hypothesis that we accepted in an earlier article (Shkolnikov et al. 1999). Consequently, it might be assumed that the adjustment made by proportional distribution of deaths from ill-defined causes in this age group gives the true value for the cancer mortality rate in the early 1990s. However, even if we accept this relatively bold hypothesis, a distribution made in this way would completely distort the view obtained of trends in mortality from cancer, because it in no way tackles assumed under-estimation for earlier years and represents an increasingly incomplete way of dealing with under-estimation in the most recent years.

10.1.3 Distribution Method Adopted

From one point of view, therefore, the 1989 instructions were not entirely without foundation; it is highly probable that the past desire to identify one specific cause

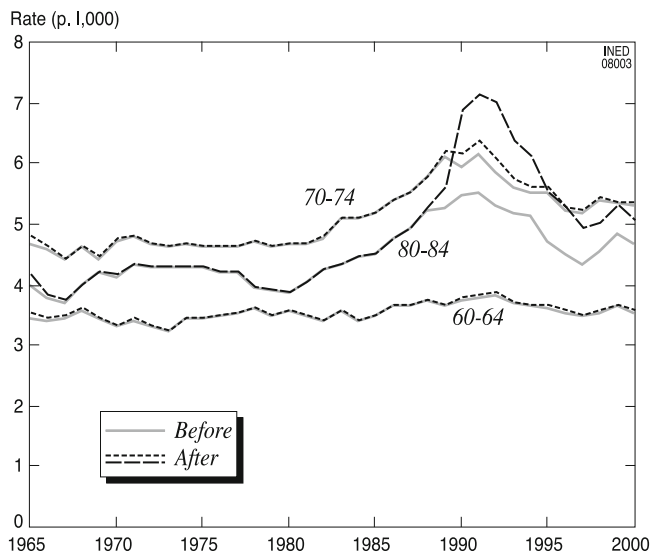


Fig. 10.2 Trends in female cancer mortality rates for three age groups in Ukraine, before and after distributing deaths from ill-defined causes, where all deaths from ill-defined causes are distributed proportionally

for every death at all costs had contributed to pseudo-causes such as “sudden cardiac death” or “heart failure” – without any other indication – being classified as circulatory, whereas they should have been classified under the ill-defined causes item. In other words, it is probable that mortality from diseases of the circulatory system was being over-estimated in Soviet statistics up to 1989. However, the few investigations that have been carried out into the quality of recording (Chap. 8) show that this over-estimation cannot have been very large. It is highly implausible that it could have affected even 10% of deaths, as the consequences of the 1989 reform in Ukraine might lead one to believe. Moreover, there is no reason to think that 80 would represent a significant age boundary for this type of error. The fact that specific instructions were given for the 80-plus age group reveals a fad for the concept of senility rather than a real desire to tackle the problem of diagnosing circulatory causes of death. Finally, supposing that the 1989 instructions did bring a real improvement, we would be faced not with one issue, but with two: distributing the deaths from ill-defined causes that have recently burst onto the statistical scene, and estimating the proportion of deaths that should have been classified under other items but, until then, were attributed to diseases of the circulatory system. Although we could assume that the number of deaths classified under the ill-defined causes items since 1989–1990 has provided a correct estimate of the proportion of deaths formerly classified wrongly under circulatory items, we would nevertheless not be able to readjust earlier series. For example, allocating a certain percentage of pre-1989 deaths from diseases of the circulatory system to neoplasms would retrospectively

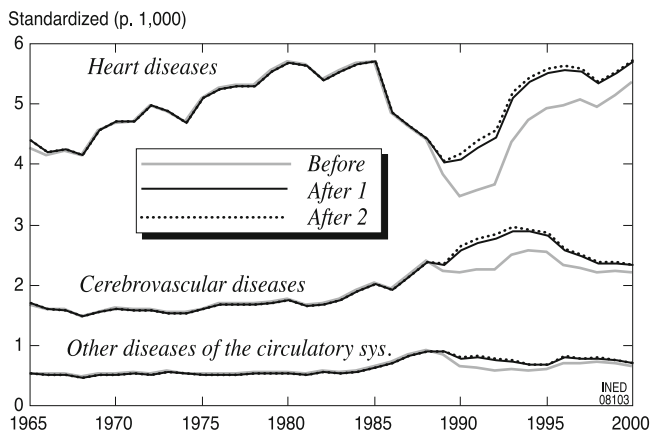


Fig. 10.3 Trends in the standardized mortality rate for three groups of circulatory diseases in Ukraine, before and after distributing deaths from ill-defined causes. Female (1, completely proportional distribution; 2, distribution of senility limited to circulatory items after 1988)

inject fluctuations that were actually peculiar to circulatory mortality, thus falsely distorting the remarkable regularity of trends in cancer mortality.

For all these reasons, we preferred to correct the effects of the 1989 reform in such a way as to restore series of causes with constant definitions according to the old Soviet procedure, even though this meant retaining – at this stage – the probable over-estimation of mortality from diseases of the circulatory system, which would then need to be taken into account in interpreting the results. At least then we would be sure we were dealing with a phenomenon that was more or less constant over time.

In order to achieve this, we decided to distribute the deaths classified under Item 158 – senility – differently from those under Item 159 – ill-defined causes of death. For the latter, which was relatively little affected by the 1989 reform, we distributed the contents proportionally between all other items (except, of course, Item 158). In contrast, for senility, we limited completely proportional distribution to the years before the reform (1965–1987),⁵ whereas for subsequent years (1988–2006), we distributed the contents of the item proportionally between only the circulatory items (Items 84–102).

While this enabled us to avoid distorting trends in other causes of deaths, in fact we only marginally altered the result for circulatory diseases. Figure 10.3 provides evidence of this by comparing, for the three major groups of circulatory causes, standardized mortality rates before distribution and after distribution according to the two different methods. The final distribution (between the post-1988 circulatory

⁵ As we saw in the previous chapter, this change in practice started in Ukraine even before the reform was officially launched throughout the USSR.

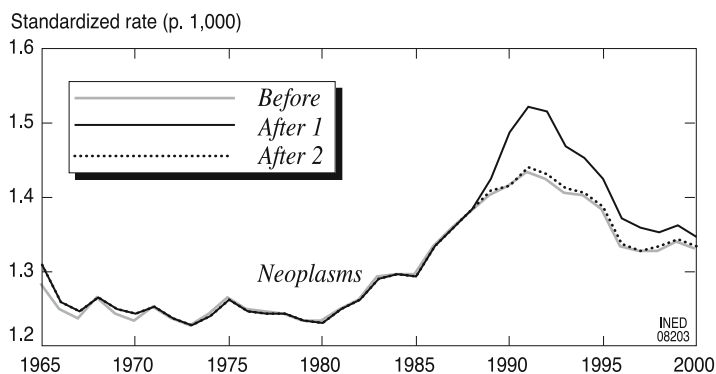


Fig. 10.4 Trends in the standardized mortality rate from neoplasms in Ukraine, before and after distributing deaths from ill-defined causes. Female (1, completely proportional distribution, 2, distribution of senility limited to circulatory items after 1988)

items alone) gave a result that differed very little from the completely proportional distribution, which, in contrast, substantially increased the rates for the 1990s.

Conversely, Fig. 10.4 illustrates the relatively light touch that we adopted in correcting standardized cancer mortality rates, where completely proportional distribution would have dramatically altered the trend.

Therefore the distribution method adopted for Ukraine differs from the one that we used the first time round for Russia (Meslé et al. 1996). As we have already said, in the case of Russia – where the consequences of the 1989 reform were much less marked – completely proportional distribution did not lead to excessively serious consequences; however, here we decided to carry out a new distribution of Russian deaths from *senility*, in line with the one adopted for Ukraine, in order to be sure that our subsequent comparisons would be absolutely consistent. For France, on the other hand, since the proportion of deaths from ill-defined causes was low and displayed a regular trend over the whole period studied here, we confined ourselves to a single proportional distribution.

10.2 Trends in Standardized Mortality Rates by Major Groups of Causes, 1965–2006

Sex-specific standardized mortality rates⁶ after distributing deaths from ill-defined causes are provided in Annex X (on the Website), for each of the 177 items⁷ in the 1981 Soviet Classification as amended in 1988. In this chapter, we shall confine our analysis to the results for 7 major groups of causes, defined in Table 10.1, leaving

⁶The reference population is the WHO's 1992 population for Europe, with the sexes combined.

⁷Except Items 158 and 159, which are reserved for ill-defined causes.

Table 10.1 Soviet classification organized into seven major groups, with their approximate correspondences to ICD-9 items

Groups	1965–2004 deaths		2005 and 2006 deaths	
	Soviet classification items (1981/88 classification)	ICD-9 items	Ukrainian classification items (adopted in 2005)	ICD-10 items
1 Infectious and parasitic diseases	1–44	001–139	3–57	A00–B99
2 Neoplasms	45–67	140–239	59–104	C00–D48
3 Diseases of the circulatory system	84–102	390–459	133–156	I00–I99
4 Diseases of the respiratory system	103–114	460–519	158–173	J00–J99
5 Diseases of the digestive system	115–127	520–579	175–189	K04–K92
6 Other diseases	68–83, 128–157	240–389, 580–779	106–131, 190–236, 239	D50–H83, L00–Q89, R95
7 Injury and poisoning	160–175	800–999	242–258	V01–Y89

the more detailed analysis of each group of pathologies to Chap. 12. For these major groups, annual trends in standardized mortality rates and in rates by age group will be found in Annex XI on the Website.⁸

After a general presentation of mortality trends observed in Ukraine for the major groups of causes (Section 10.2.1), we shall compare these trends with those observed in Russia and in France (Section 10.2.2).

10.2.1 *Annual Trends in Standardized Mortality Rates by Groups of Causes*

A preliminary representation of cause-specific mortality trends in Ukraine is given in Fig. 10.5. This graph, like all subsequent ones tracing cause-specific mortality trends (with any exceptions duly indicated), is constructed on the basis of a semi-logarithmic scale, in order to account for the rate of change (whatever the level reached) and also to allow observed trends for causes of very different sizes to be read simultaneously. In order to enable comparisons between them, all these graphs are systematically constructed on the same scale.

The proportion of diseases of the circulatory system is overwhelming for both sexes. Among males, this category accounts for between 50% and 60% – depending on the period – of the standardized mortality rate for all causes. Among females, there is a still greater proportion (since other causes account for less) and this has

⁸ However, it should be noted that these Annexes distinguish nine major groups of causes, not seven, by subdividing the very large group of diseases of the circulatory system into three.

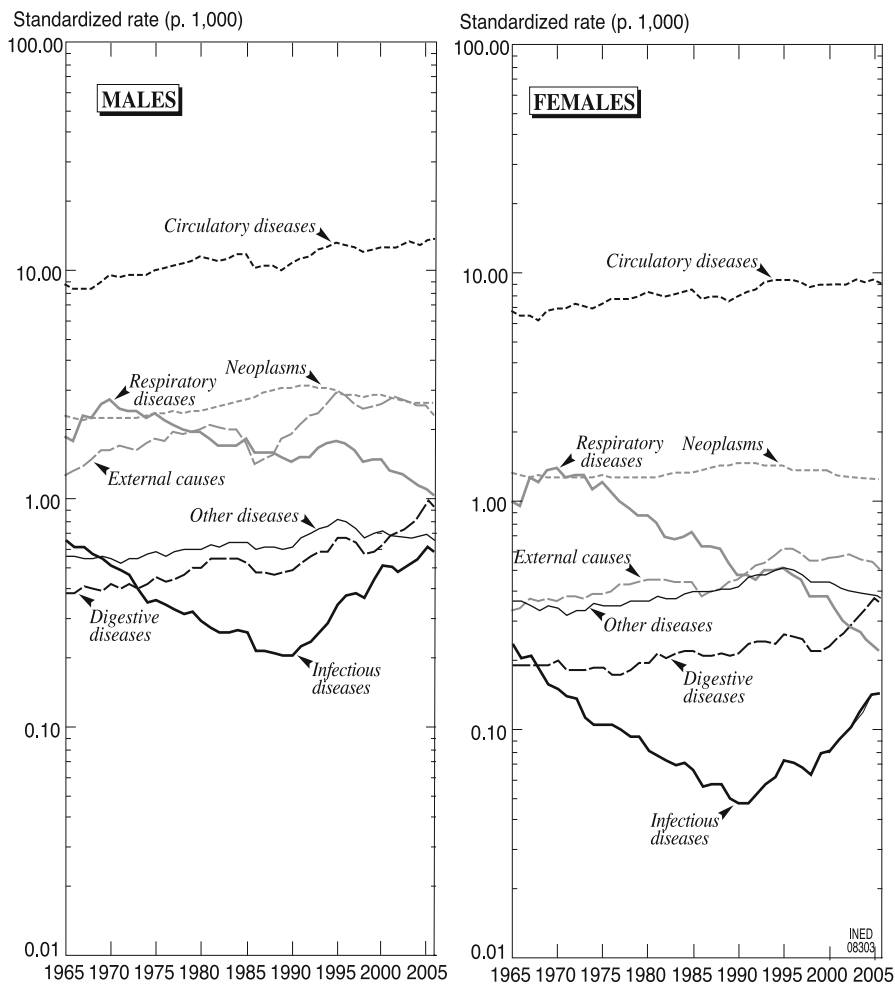


Fig. 10.5 Annual trends in the standardized mortality rate for seven major groups of causes, 1965–2006, by sex

never fallen below 63%; it even reached 75% in 2006. Thus it is obvious that the trend in mortality from diseases of the circulatory system governs trends in mortality from all causes.

Neoplasms occupied second place for almost the whole period under study, even though in the late 1960s they were slightly outstripped by diseases of the respiratory system, while more recently, among males, deaths from injury and poisoning have reached a par with cancers. Among females, cancer mortality, with almost 11% of total mortality, has been far ahead of all other non-circulatory causes since the late 1960s. Among males, cancer mortality, with 12% of total mortality, was – as we have just said – more or less equal with deaths from injury and poisoning.

Mortality from respiratory diseases, still very substantial in the late 1960s, has declined markedly since then, despite a significant fresh upsurge among males in the mid-1990s. Nowadays, it occupies no more than fourth place among males (practically equal with diseases of the digestive system, which themselves have greatly increased) and fifth place among females.

The fall in mortality from infections was even more spectacular until the late 1980s. However, from 1990 onwards, this type of mortality increased steeply again and, after faltering in 1997–1998, the rise has recently become more marked. One might wonder whether this is not due to the impact of AIDS. In 2006, male mortality from infections returned almost to its 1965 level, and female mortality from infections to that of the early 1970s.

Mortality from digestive diseases increased regularly throughout the whole period, to the point where it reached the same level as mortality from respiratory diseases for males and went far beyond it for females.

Finally, mortality from all other diseases increased regularly until the mid-1990s, after which it stabilized among males and dropped significantly among females.

Of all these groups of causes, it is deaths from injury and poisoning that best reflect the large fluctuation in life expectancy observed since 1985 (see Chap. 5). As we shall see in detail in the following chapters, in the Soviet system of cause-of-death registration, this group contained most of the deaths from alcoholism, since the system habitually categorized most such deaths as accidental poisonings and, in contrast, made little use of the items specific to alcoholism. Here, however, strong – though somewhat smaller – fluctuations also appear on the curve for diseases of the circulatory system and on the curve for diseases of the digestive system. In both cases, alcohol consumption plays a major role. However, it is far from the only factor in these fluctuations; as we shall see more specifically in Chap. 11, the difficulties linked to the end of Communism and to the transition to a market economy also weighed heavily on trends in causes of death during the 1990s.

10.2.2 Comparisons with Russia and France

10.2.2.1 The Rise in Diseases of the Circulatory System

It is not just the case that diseases of the circulatory system occupy a dominant position in the pathologies of Ukrainians; these diseases have also been on the increase since the mid-1960s, with the large fluctuation in the 1980s and 1990s doing nothing to reverse this strong trend. This expansion in diseases of the circulatory system is a phenomenon very largely shared with the other European republics of the former USSR, among them notably Russia (Meslé et al. 1996; Shkolnikov et al. 2002) and the Baltic states (Hertrich and Meslé 1999), as well as with some former Communist countries in Central Europe (Meslé and Hertrich 1997; Vallin and Meslé 2001). Figure 10.6 shows how the situations in Russia and Ukraine met, in terms of both level and trend: the curves for the two countries are almost exactly on top of each other.

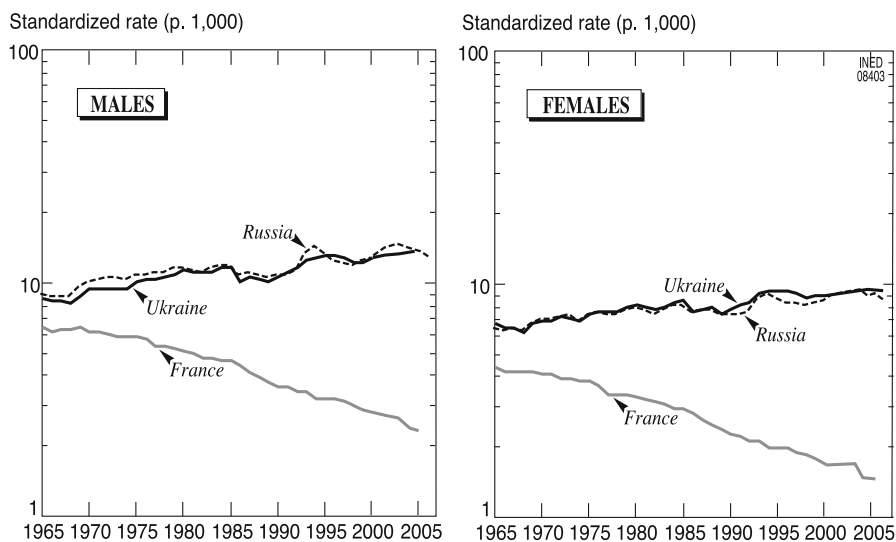


Fig. 10.6 Annual trends in standardized mortality rate from diseases of the circulatory system in Ukraine, Russia (1965–2006) and France (1965–2005)

At the same time, the contrast with France is absolutely striking; there, mortality from diseases of the circulatory system fell rapidly across the whole period – a decline that even accelerated from the 1980s onwards.⁹ It is particularly striking to note that, in this area, Russia and Ukraine have followed extremely close paths, even since the break-up of the USSR. However, we should note that the fluctuations have been more marked in Russia than in Ukraine; we shall return to this point later.

Given the dominant position of these conditions in the Ukrainian and Russian disease pictures, this unfavourable trend in mortality from diseases of the circulatory system obviously represents the crux of the grave health crisis experienced by these countries since the mid-1960s (Meslé et al. 1998) and, more generally, of the spectacular divergence observed over the same period between Eastern and Western European countries (Bourgeois-Pichat 1985; Caselli et al. 2002; Vallin and Meslé 2001; Meslé and Vallin 2002).

However alike they are, the Ukrainian and Russian situations nevertheless include some interesting differences, particularly as far as recent years of observation are concerned (see Fig. 10.7, which focuses on the detail of the last two decades from Fig. 10.6, at the arithmetic scale). When Gorbachev's anti-alcohol campaign was

⁹ We know that mortality from diseases of the circulatory system is particularly low in France compared to other Western countries, in particular to the United Kingdom and to the Nordic countries. However, if the United Kingdom had been taken as a point of comparison in Figure 10.6, a curve exactly parallel to that of France would have been obtained, though at a higher level; but it would have started at exactly the same point as the curves for Ukraine and Russia, so that the impression of divergence would have been all the more striking (Caselli et al. 2002, p.33, Figure 15).

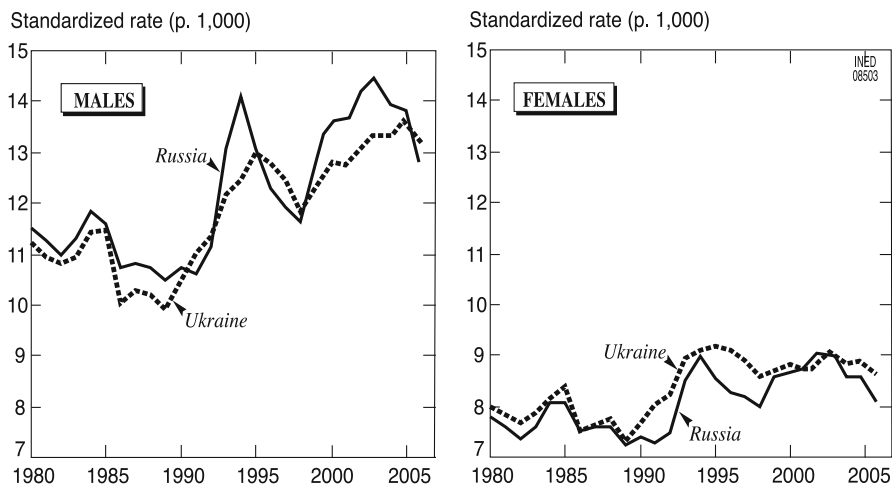


Fig. 10.7 Close-up of recent trends (1980–2006) in standardized mortality rate from diseases of the circulatory system in Ukraine and Russia (arithmetic scale)

launched in 1985, Ukraine and Russia both saw significant concomitant reductions in mortality from diseases of the circulatory system; however, the fresh rise that followed was slower in coming to Russia but also steeper there, particularly among males. In Ukraine, the fresh upsurge in male mortality manifested itself from 1990 onwards, and rose until 1995 without any break. In Russia, on the other hand, mortality from diseases of the circulatory system only started to rise again in 1992; this movement went into reverse from 1995, but in the meantime had jumped much more steeply than in Ukraine: the standardized rate increased by 33% in 3 years as opposed to 32% in 6 years. Conversely, the reduction in this type of mortality since the last reversal of the trend has been more marked in Russia than in Ukraine. In other words, although Gorbachev's anti-alcohol campaign seems to have had very similar effects on mortality from diseases of the circulatory system in both countries, the renewed rise in this mortality does not seem to have been only due to the relaxation of those measures: as we shall see below, this took place earlier than the rise observed here in Ukraine. Perhaps it was due more to a deterioration in the economic and social situation following the break-up of the USSR and the end of Communism, which might have occurred earlier in Ukraine – and perhaps the very fact that this deterioration came a little later in Russia helped to make it steeper.

After improving in the years 1996–1998, mortality from diseases of the circulatory system (like total mortality) rose very strongly again in Russia, reaching a higher maximum in 2003 than it had in 1994, before declining again from 2004 onwards. In this case, too, the fresh rise was a little less steep in Ukraine, but continued until 2005; it was only in 2006 that a new fall was observed there. But in the

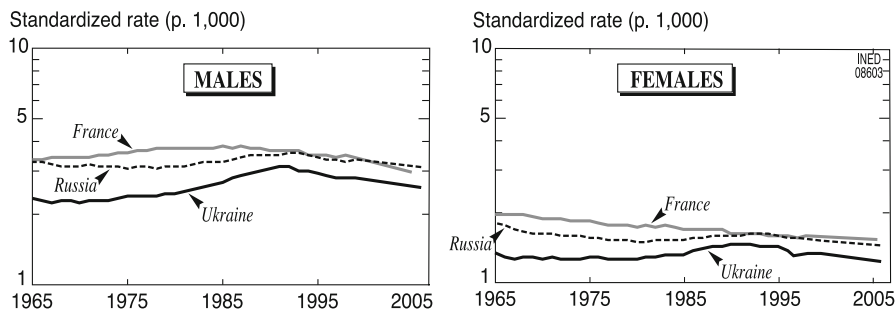


Fig. 10.8 Annual trends in standardized mortality rate from neoplasms in Ukraine, Russia (1965–2006) and France (1965–2005)

end, in both countries, the 2006 level of mortality from diseases of the circulatory system remained close to its 1998 maximum (a little below for Russia, a little above for Ukraine).

10.2.2.2 Trend Reversal in Likely Underestimated Mortality from Cancer

In both Ukraine and Russia, observed mortality from cancer grew slowly and regularly until about 1990 (Fig. 10.8). After that it diminished slightly; this time, the fall was more obvious in Ukraine than in Russia. Throughout the whole period, its level was significantly lower in Ukraine than in Russia, although the gap closed in the 1980s. But what is astonishing here is the comparison with France, where mortality from cancer, while following a fairly similar pathway, was significantly higher, especially for females, until the early 1990s. The gap between France and Ukraine was particularly large, and this applied to both sexes. Certainly cancer mortality in France was a little higher than average for males by comparison with other Western countries, and notably with northern ones, but for females the reverse was true. Here we encounter again the question of a likely under-estimate of mortality from cancer in the countries of the former USSR, and perhaps particularly in Ukraine; this will become even more acutely visible in our age-specific analyses.

The other very striking element illustrated by Fig. 10.8 is the total absence of any link between recent trends in mortality from cancer and the large fluctuation of the 1980s and 1990s. In all countries, this mortality is generally not very sensitive to immediate circumstances. Here we can see that it has been completely insensitive to the immediate political, economic and social circumstances in the countries of the former USSR – even though these circumstances are very particular and very pronounced.

On the other hand, we must ask whether the slight increase in mortality from cancers observed in the second half of the 1980s was not due, at least in part, to the

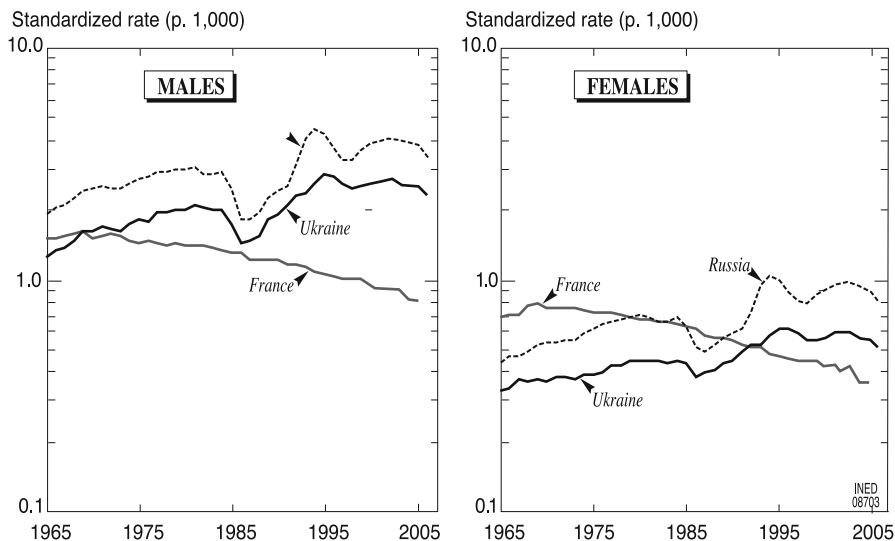


Fig. 10.9 Annual trends in standardized mortality rate from injury and poisoning in Ukraine, Russia (1965–2006) and France (1965–2005)

consequences of the Chernobyl disaster. We may suspect not, firstly because this trend had already got under way before 1986, the year of the explosion at the nuclear reactor, and secondly because it clearly went into reverse from the early 1990s. We shall return to this question in our more detailed examination of the different forms of cancers (Chap. 12).

10.2.2.3 Chaotic Trends in Deaths from Injury and Poisoning

The picture of mortality from injury and poisoning is completely different: this is the group of causes that is by far the most sensitive to the large fluctuation characteristic of countries of the former USSR. Here again, as with diseases of the circulatory system, there is a strong similarity between Ukraine and Russia, which both contrast radically with France (Fig. 10.9). Whereas mortality from injury and poisoning declined constantly in France from the early 1970s onwards, it became very much worse in Ukraine and in Russia. At the start of the period, mortality from injury and poisoning was substantially higher among females in France than in Ukraine or in Russia, while for males it was at a similar level as in these two countries; however, this was because of the much larger place occupied by traffic accidents in France at this time. After that, the rise of alcoholism in the USSR (and its decline in France, as well as the reduction in road accident mortality) totally reversed these situations. The major fluctuation in the 1980s and 1990s did nothing to challenge this unfavourable trend in either Ukraine or Russia. In both countries and for

both sexes, the standardized mortality rate from injury and poisoning was much higher in 2006 than it had been in the early 1980s. The general trend certainly remained the same as that of the two previous decades, at least until the turn of the twenty-first century. Since 2001, however, it may have become pertinent to ask whether a real reversal of the trend has been in sight, as there has been a fairly pronounced decline over 5 years' observation. Nevertheless, it is still a little too early to make definitive conclusion.

In both countries, the launch of Gorbachev's anti-alcohol campaign brought a pronounced fall in mortality from injury and poisoning. In 2 years, from 1984 to 1986, the standardized male rate fell by over 40% in Ukraine and by almost 60% in Russia. There was also a large reduction on the female side (20% in Ukraine and 40% in Russia). In the countries of the former USSR, the relationship between alcohol consumption and deaths from injury and poisoning is a very close one, as, for example, a study of Russia (Meslé et al. 1994) has clearly shown. On the one hand, as we have already indicated, Soviet practice in cause-of-death coding was to classify most deaths that were directly due to alcoholism as accidental poisonings. But on the other hand, whether they involve traffic accidents, domestic accidents, homicides or even suicides, violent deaths very often occur under the influence of alcohol. It is not surprising that in countries where the traditional pattern of alcohol consumption is to drink large quantities of strong alcohol at irregular intervals ('binge-drinking'), drastic measures can have such an obvious effect when applied suddenly. Nor is it surprising that when the measures taken were relaxed, mortality from injury and poisoning rose again almost immediately. Here it can be clearly seen that the increase – and therefore the relaxation of the measures – was very premature. Mortality from injury and poisoning had risen in Ukraine from 1988, and this too was perfectly consistent with what happened in Russia. However, the two trends started to diverge in 1992. In Ukraine the rise in mortality from injury and poisoning marked time, whereas in Russia it gathered pace, among females as well as males. The more severe impact on Russia of the economic and social crisis, caused by its more abrupt transition to a market economy, can again be seen here. But here too, Russia seems to have overcome this new difficulty more rapidly, and the gap between the two countries, which became much wider in 1992–1993, fell back to its usual level in subsequent years.

As with diseases of the circulatory system, there was a substantial rise in the following years, and in fact the end of the crisis led to a resumption of long-term trends, at least until the turn of the century.

10.2.2.4 The Particular Case of Digestive Diseases

As far as diseases of the digestive system are concerned, the comparison between France and the two countries of the former USSR serves rather to highlight a particular feature of France. Just as in Ukraine and Russia, alcoholism occupies a larger place in French mortality than in most industrial countries, but it manifests itself very differently there: arising mainly from high but regular consumption of

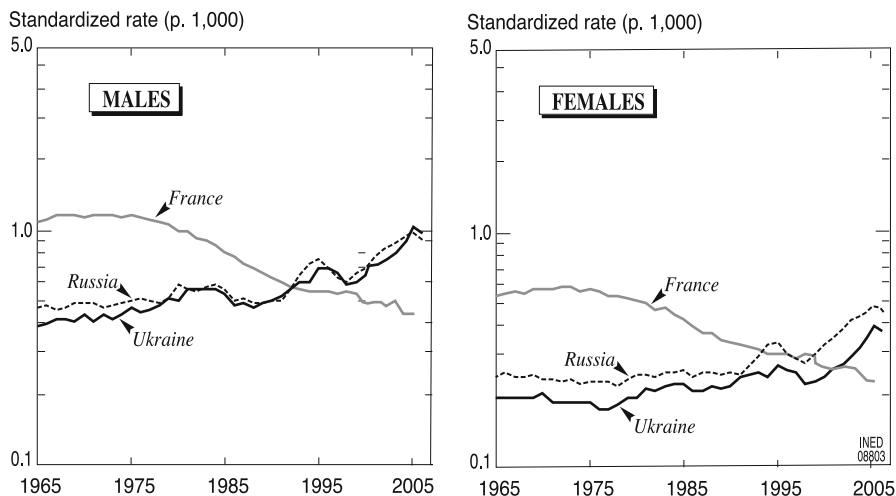


Fig. 10.10 Annual trends in standardized mortality rate from diseases of the digestive system in Ukraine, Russia (1965–2006) and France (1965–2005)

low-alcohol beverages, it is expressed more through chronic conditions (in particular cirrhosis of the liver), which dominated mortality from diseases of the digestive system fairly heavily throughout this period. Thus, in the late 1960s, mortality from digestive diseases was much higher in France than in Ukraine or in Russia, both for females and for males (Fig. 10.10). However, with the large-scale reduction in alcoholism from the 1960s onwards, the three countries had reached a similar level by the early 1990s.

Even though the role of alcohol was smaller in Ukraine and in Russia than in France, it became more apparent when the 1985 anti-alcohol campaign reduced mortality from diseases of the digestive system in 1985–1986, and again when the economic and social crisis caused this mortality to rise once more (especially in Russia) in the early 1990s. We note here the same differences between Ukraine and Russia as for deaths from injury and poisoning.

The new deterioration observed in 1999 and 2000 was also just as substantial as for deaths from injury and poisoning, and in this case it has continued until the most recent years – even the slight reduction in 2006 does not yet justify talk of the beginnings of a reversal in the trend.

10.2.2.5 The Fall in Mortality from Infections Thrown Completely into Reverse

From 1965 until the late 1980s, mortality from infections in Ukraine fell radically (as it also did in Russia) to the point where, during those years, for males, it came into line with the level observed in France; for females, it even fell sharply below

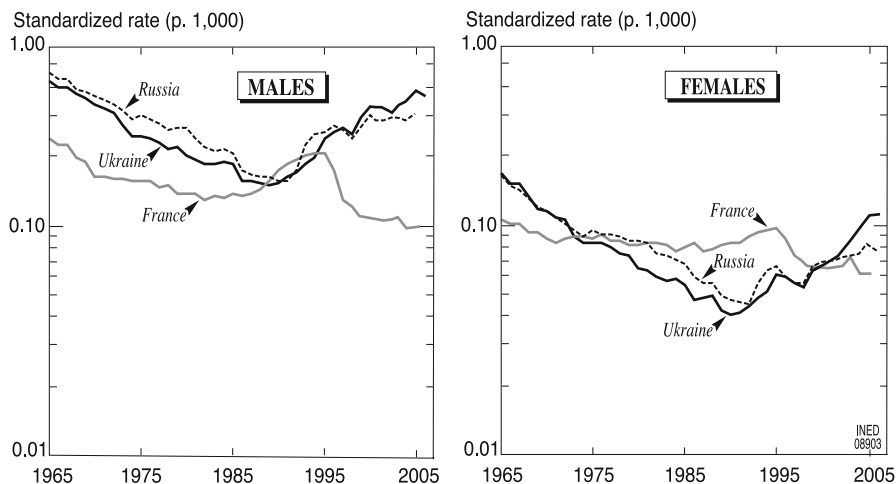


Fig. 10.11 Annual trends in standardized mortality rate from infectious diseases in Ukraine, Russia (1965–2006) and France (1965–2005)

the French level (Fig. 10.11). However, this remarkable downward movement in mortality from infections was thrown completely into reverse in both countries in the early 1990s. And, once again, it can be noted that the turning-point came a little later in Russia than in Ukraine, though the rise was much steeper. Therefore, although, of course, the economic and social crisis linked to the fall of the Communist regime was the cause, we can once again see that Ukraine entered this crisis a little earlier, but also less abruptly, than Russia.

Obviously one must wonder to what extent this fresh rise in mortality from infections could be linked, directly or indirectly, to AIDS, which, as we know, is the main explanation for the upsurge observed in France, notably among males, in the second half of the 1980s and the early 1990s (Prioux 1996). This is a question that we shall be able to answer precisely only in view of the more detailed cause-specific analysis to which Chap. 12 will be devoted.

Diseases of the respiratory system (Fig. 10.12), most of which are infectious, followed a downward trend throughout almost the whole period in all three countries. (The reality of the apparent rise observed in Ukraine at the very start of the period is suspect, since it should probably be linked to the opposite movement observed for mortality from “other diseases”, described in the next section.) The major difference from the previous group of infectious diseases is the large annual fluctuations. These are obviously due to the fact that the only major modern epidemic disease (influenza) is classified (in both the Soviet Classification and the ICD) under respiratory diseases, rather than under infectious diseases.

Throughout the whole period for males and up to the mid-1980s for females, mortality from diseases of the respiratory system was much higher in Ukraine and in Russia than in France. Indeed, the fact that the trends for females met in the late 1990s relates more to the stagnation (or even slight increase) observed over two decades in France than to a more rapid improvement in the countries of the former USSR.

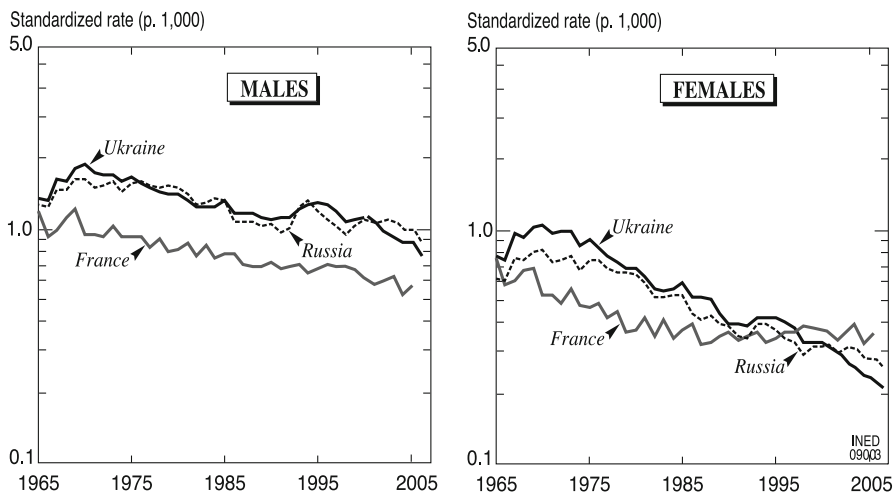


Fig. 10.12 Annual trends in standardized mortality rate from diseases of the respiratory system in Ukraine, Russia (1965–2006) and France (1965–2005)

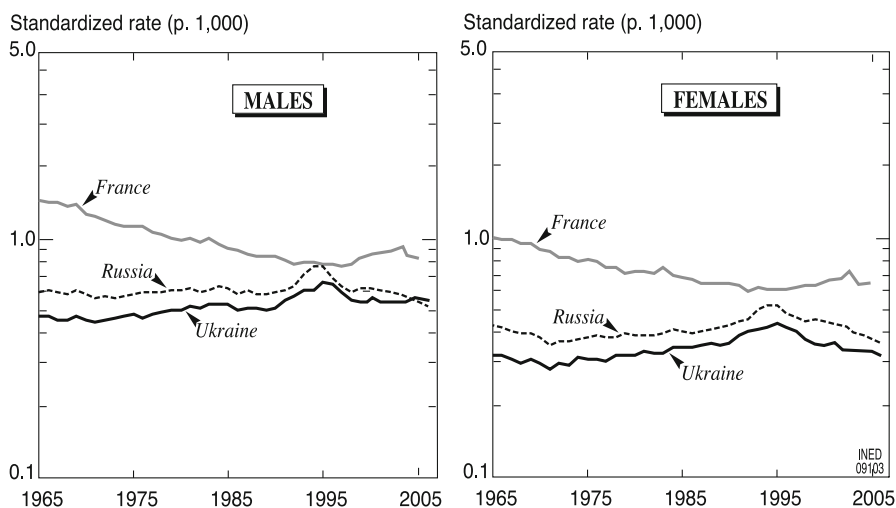


Fig. 10.13 Annual trends in standardized mortality rate from other diseases in Ukraine, Russia (1965–2006) and France (1965–2005)

However, although the downward trend in mortality from respiratory diseases there was clearly slower in the second half of the 1990s, it was, in contrast, faster in Ukraine, notably among females. This is one of the rare manifestations of recent divergence between Ukraine and Russia.

10.2.2.6 Mortality from Other Causes

For the record and for the sake of completeness, Fig. 10.13 tracks trends in the standardized mortality rate in the three countries for all causes other than those already mentioned above. What is essentially a two-stage trend can be noted here. Firstly, this residual mortality increased constantly in Ukraine and in Russia until the mid-1990s (the fall observed for females at the start of the period was probably artificial, symmetrical with the apparent rise in mortality from respiratory diseases noted above), while in France it followed a strong downward trend. Consequently, whereas in the 1960s mortality from these causes was much lower in Ukraine and Russia than in France, by the mid-1990s the gap was no longer very large (and even, with Russia, non-existent). But, in a second phase, this gap widened again, because near-stagnation in France was then set against a significant reduction in Ukraine and in Russia.

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We shall go into more detail about causes of death in the final chapter of this book, but first of all Chap. 11 will allow us to assess the weights of these major groups of causes in comparative trends in life expectancy in Ukraine, in Russia and in France.

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