

---

# The Qualitative Performance of the French Health Care System - Evolutions compared to Europe since 1970\*

Béatrice Majnoni d'Intignano, Philippe Ulmann<sup>1</sup>

GRATICE - University of Paris 12 - Val de Marne

---

*ABSTRACT.* To judge a health care system, it is necessary to analyse its results in terms of health and to bring them back to its economic effectiveness. Health outcomes can be evaluated in several ways but none of them is really representative. To locate the performance in terms of health for the French system, we thus compared France with four European countries (Germany, Denmark, Sweden and the United-Kingdom), which are close in relation to and comparable in terms of behaviour and standard of living, from 1960 to 1995. We selected a sample of frequent and revealing pathologies of the Health care system activity and risks behaviour. The result of this approach is paradoxical and sometimes in contradiction with the common belief, which often confuses the means and the results and allots the health status mainly to the action of the Health care system.

*KEY WORDS.* Health Status Indicators, Health care system performance, Death rates, France and OECD countries

*Journal of Economic Literature Classification:* I10, I12, I18, 052

---

\* This paper is a modified version of a report written by Béatrice MAJNONI D'INTIGNANO and Philippe ULMANN for the French Economics Analysis Council and published in MOUGEOT [MOU 99] and of an article published in : MAJNONI D'INTIGNANO B. & ULMANN P. [1999], « The Qualitative Performance of the French Health Care System - Evolutions compared to Europe since 1970 », *Health and Science System*, vol.3, p.123-141, Hermès ed.

<sup>1</sup> Since 2000, new Correspondence Address : Philippe ULMANN – Assistant Professor in Economics - Chair of Economics and Management of Health Services – CNAM  
292, rue Saint-Martin – 75141 Paris Cedex 03 – France  
E-mail: philippe.ulmann@cnam.fr - Website: <http://www.cnam.fr/deg/sante>

## Introduction

If various institutions, organisations or institutions have studied and analysed the indicators of health for several years, these works were very often limited to national studies with little international openings. At the French level, the INSERM, the HCSP or the CREDES, and on the international level WHO and OECD<sup>2</sup> to quote only them, little studied the whole of health indicators available through international comparisons. In particular the study of France compared to other large industrialised countries is approached only in a limited way in the majority of work.

It is true that the problem of the data remains particularly sensitive in this field. Global health indicators are indeed partial and unsatisfactory for representing Health status. For many years, to have an idea of population or large sample health status, one compared statistics of life expectancy at birth, crude death rate or infant death rate. Aware of these indicator borderlines to reflect such a complex variable as health status, the researchers in epidemiology, medicine, demography or economics tried to enlarge the indicators pattern to represent health status. As WHO information director TOMICHE [TOM 78] wrote 20 years ago : « *None of existing indicators permit to evaluate, in a satisfactory way, increasing or decreasing population health status. For want of better, we currently use several partial indicators* ». This affirmation still seems effective in spite of research efforts in that field.

For example, the life expectancy is a very partial indicator. One can recall that men and women, who have the same Health care system, present a variation of life expectancy of 8 years in France. In fact, with time, women take less risks and they use more and better the supply of care. This indicator is clearly more dependant of socio-economic factors than care supply or the health care system. On the other hand, infant mortality is almost influenced by the health care system and medical supply (statistics of global health indicators are presented in annex). Then, global indicators are unsatisfactory for health measurement.

Thus, several solutions were proposed. New judicious measurements to represent health were more or less developed like the life expectancy without incapacity, or certain representative specific death rates like the avoidable death rate or the death rate for ischaemic disease (see BRENNER [BRE 79]). In addition, researchers tried to approach true measurements of health by estimating this unobservable variable by econometric models (see VAN OF VEN & VAN DER

---

<sup>2</sup> See end of paper for abbreviations index.

GAAG [VAN 82]). See CULYER [CUL 76], JOLY [JOL 78], MOONEY [MOO 92], JEE & OR [JEE 99] for synthesis on health indicator problems.

Although some information was found, these works have only reinforced the feeling that on a large scale, measuring exactly population health status seems more like a search for the Holy Grail than of a way of research leading to an admissible solution.

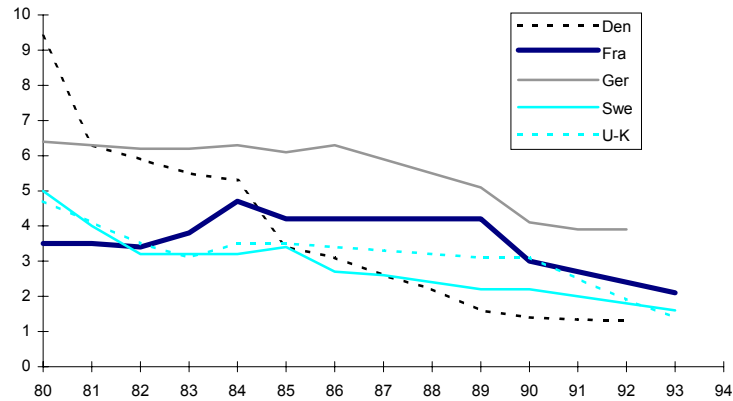
Nevertheless we propose to carry out a first synthesis of the indicators by taking a sample of 5 European countries for several pathologies over the period 1970-1995. Hence, our approach is not to propose an exact measurement of health, but to try to give the large characteristics of the French Health care system.

The objective sought in this work is obviously to bring a new angle of analysis of French health and some performance of our system of care such as its medicine.

## 1. Prevention

In many cases (measles, mumps, tetanus, tuberculosis), France showed a significant delay compared to the other countries, which tend to reabsorb. However, whereas diseases seem to be eradicated (rubella, measles, mumps, teeth spoiled in the children) at some of our neighbours (Scandinavian countries), such is not the case in France.

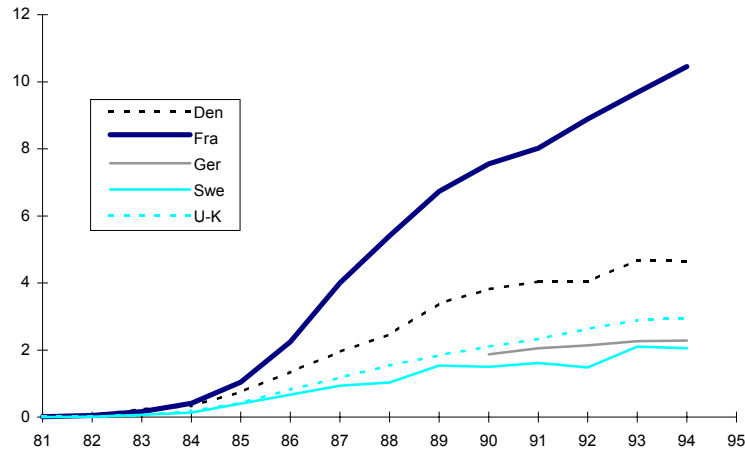
Number of teeth spoiled in the children at age 12.



These questions were not the object of a priority of public health, nor of suitable financial incentives. For example, the dentists remain paid to look after the decays rather than to prevent them and the doctors do not receive gratification when every child is vaccinated.

The exceptional diffusion of AIDS, whose prevention was delayed, deserves to be pointed out.

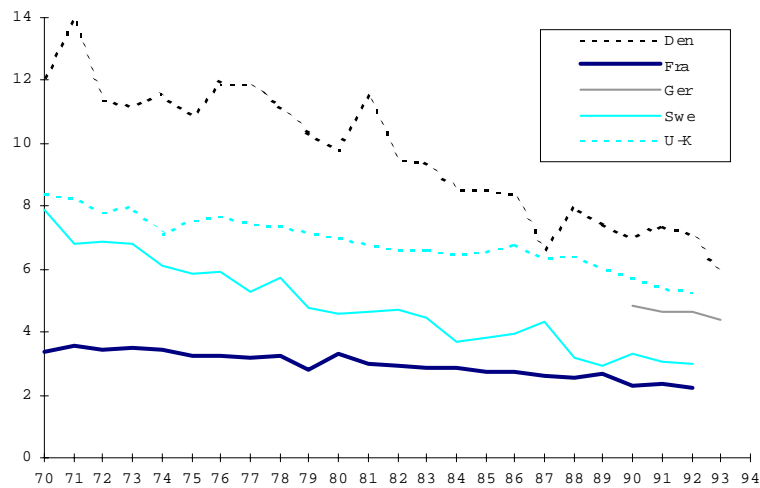
HIV Death Rate for 100.000 people



On the other hand, France appears very powerful concerning the detection of uterus and breast cancers, dense network specialists and hospital complexes, free of accesses, pay-as-you-go acts, therefore encouraged the activity. However the priority was given to tracking, more than with the prevention.

\*: SDR = Standardised Death Rate

SDR\* Cervix cancer for 100.000 women 0-64 years

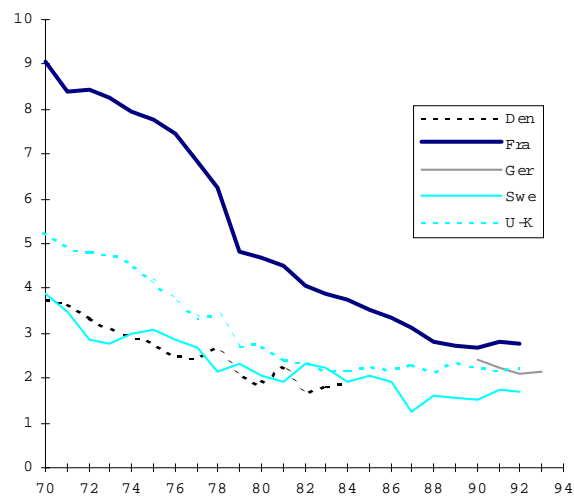


Moreover, the resources are badly allocated since one performs too many acts of detection before menopause and rather afterwards. Economies and profits in human life could thus be increased.

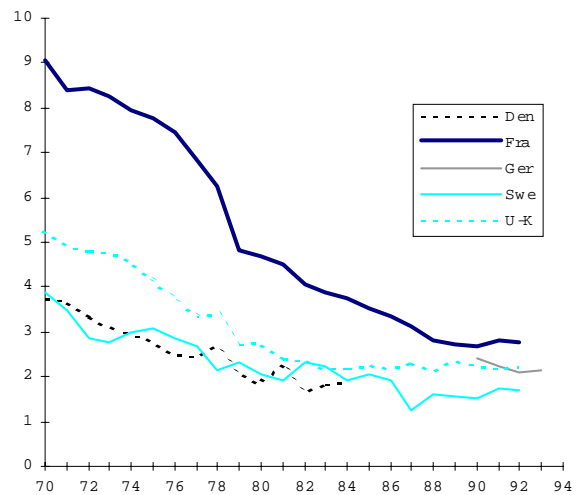
## 2. Pathology cures

France, which was clearly late in a shocking field like maternal mortality but also for mortality due to current diseases like those of blood, digestive, hernias and obstructions of the bowels and parasitics, made up for this lost time without, however, filling it.

Number of maternal deaths for 100.000 living births

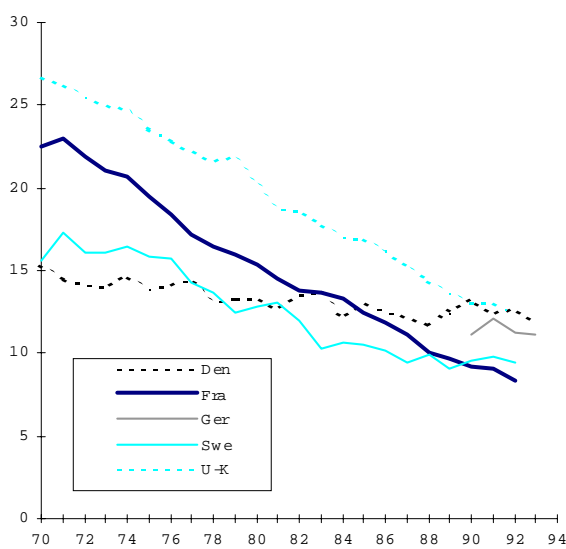


SDR Infectious diseases for 100.000 people 0-64 years

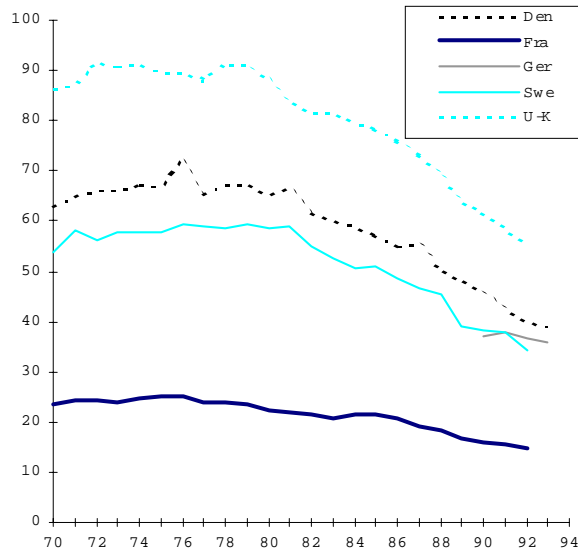


On the other hand, our delay disappeared for infant mortality, diabetes, cerebrovascular diseases and that known of as Hodgkin.

SDR Cerebrovascular disease for 100.000 p. 0-64 years



SDR Ischaemic disease for 100.000 p. 0-64 years



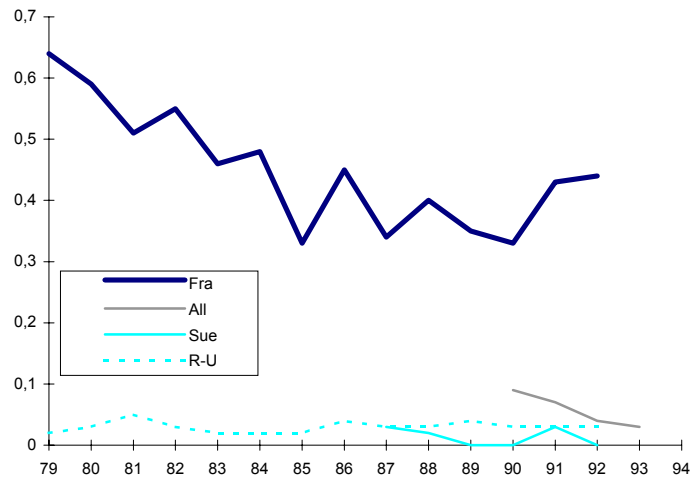
For mortality by appendicitis, by endocrinienne diseases and diseases of the respiratory system, the French evolution does not differ from the others, everyone having made same progress and being today appreciably on the same level.

France, on the other hand, is more powerful in the processing of the elderly of more than 65 years and in the fight against mortality due to the circulatory system, cardiovascular diseases, bronchitis, asthma, etc...

It seems well that these diseases were the object of detailed attention, of an abundant offer of specialised care. Perhaps this is what explains the excess of the harmful effects of the drugs and the nosocomial infections compared to the foreign countries.

These results are connected to drug overconsumption (antibiotics and antidepressants in particular) and to the high number of surgical acts (appendicitis for example). French surgeons operate much more on appendicitis than the English or the Germans for comparable death rates

SDR Therapeutics agents adverse effects for 100.000 p 0-64 years

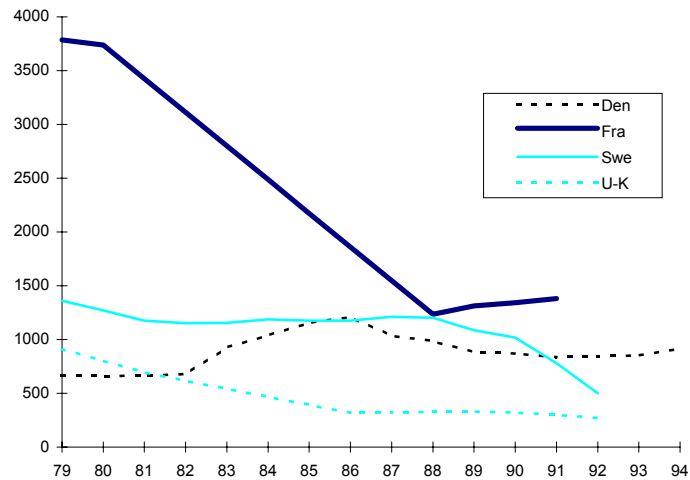


The fight against iatrogen risks (risks from bad health care use) is today one of the major goals of French public health policy in order to decrease these unforgivable sources of death as most of them could be avoided with better practising and information.

### 3. Risks behaviours

The excess of mortality for diseases of the liver and cirrhosis, cancers of the aerodigestives ways and the lung, and work and road accidents, mainly explains the variation of life expectancy between the men and the women, more significant in France. It is with alcoholism, nicotinism and the negligence of our country in front of the risk.

Number of work accident deaths for 100.000 people



The fact of binding the rate of contribution of the companies for the industrial accidents to the number of accidents noted since the years 1980, if it accelerated the correction, was not enough to fill the unfavourable variation compared to the foreign countries. As much to others, this index testifies to a certain indifference of the French with regard to the value of the human life.

Today, death rates for 20-30 year-old people have not improved in fifty years because of youth behaviour risks. Most of them and others can be put together in a special category that we call « industrial epidemics ».

#### 4. Industrial epidemics

One calls " industrial epidemics ", the diseases and deaths due to products or behaviours risked, promoted by international industries, in general oligopolistic. They are for example the following elements :

- tobacco
- alcohol
- speed (motor bikes and cars)
- noise (wandering, discotheque)
- armament (the United States)
- violence with television
- pollution, asbestos, mad cow...

The producers call upon the will for power, the sexual image, the assertion of oneself or the social link to the customer, in particular, the young people. These producers benefit from three economic mechanisms which are favourable to them.

Firstly, the asymmetry of information. Thanks to publicity (direct incentive), these industries push to take risks, badly identified with, in particular, by the young people. This action is reinforced by the threat to withdraw it from the media (to prevent the publication of the studies on the harmful effects of these risks). And, with respect to the public opinion, these industrialists are based on the concept of the personal freedoms (to smoke, go quickly, to take drugs), guaranteed by the constitutions or the declaration of the rights of man.

Secondly, a long incubation period often separates the risk from its effects (for the nicotinism thirty years approximately). The production of cigarettes starts in the years 1910, the epidemic itself in the years 1930, the tobacco is suspected from 1950, the causalities shown between 1960 and 1970 and the nicotinism fought from 1980 in Anglo-Saxon countries. These deadlines tend however to decrease with progress of information and search.

Lastly, the moral risk. The producers release from significant profits, the State perceives taxes without undergoing the consequences of the risks in terms of public health. The concept of industrial epidemics remains little recognised in France, although the statistics of mortality and morbidity testify to the width of their effects (for the road accidents) and of the delay of action (for the nicotinism or asbestos).

## **5. Conclusion**

From this fast browsing of the bank of data of WHO, come out three implicit priorities of the system of French health: cancers, diseases cardiovascular and care of the elderly.

On the other hand, taking into account the extravagant character of the French system, it seems shocking that the current diseases, childbirth and the dental decay was thus neglected. Lastly, the industrial epidemics remain perceived like random diseases, treated by remedial medicine, whereas they call a specific policy of prevention. These results reflect tacit arbitrations often related to mechanisms of remunerations or incentives.

The French system is expensive, effective for remedial medicine, late and often failing for prevention. These conclusions militate for new forms of specific remuneration incentive to develop at the same time supply and demand of prevention (subscription near a general practitioner or of a dentist, capitation, premium with the results...). The use of indicators of performance in terms of health, at the regional level, in the analysis of the medical practices and the training of the doctors, thus, is essential.

It is known that the financial constraint was felt as from 1985 in the hospitals, then was accentuated and generalised after 1990. However, one notes no rupture in

the indicators of results (excluded maternal mortality). It thus seems that the improvement of the results is not related to the total equipment.

Progress which remains to be made would result at the same time from a redeployment from the means and priorities in the system from health and actions determined against the risks which deteriorate the health of the young and male populations (nicotinism, violences, alcoholism, suicide, road accidents...). The doctors, in a surplus number compared to the curative needs, should play a role in education, information, the prevention and the modification of the individual attitudes (occupational medicine and school modernised).

#### **ABBREVIATIONS INDEX :**

CREDES : Centre de Recherches et d'Etudes en Economie de la Santé  
HCSP : Haut Comité de la Santé Publique  
INSERM : Institut National de la Santé Et de la Recherche Médicale  
OECD : Organisation for Economic Co-operation and Development  
WHO : World Health Organisation

#### **REFERENCES :**

- [BRE 79] BRENNER M., «Unemployment, economic growth and mortality», *Lancet*, 1, n°672. (1979)
- [CUL 76] CULYER A.J., *Need and the National Health Service*, Martin Robertson, Londres. (1976)
- [JEE 98] JEE M. & OR Z., *Health outcomes in OECD countries : a framework of health indicators for outcome-oriented policymaking*, Labour market and social policy Occasional Papers n°36, OECD, Paris, jan., (1999)
- [JOL 78] JOLY D., « A la recherche d'un indicateur « synthétique de santé », *Les Cahiers Français*, n°188, La Documentation Française, p.10-13. (1978)
- [MOO 92] MOONEY G., *Economics, Medecine and Health Care*, Harvester Wheatsheaf, London. (1992)
- [MOU 99] MOUGEOT M., *Régulation du système de santé*, Rapport n°13 pour le Conseil d'Analyse Economique, La Documentation Française. (1999)
- [TOM 78] TOMICHE F.J., « Problèmes et perspectives d'une nouvelle discipline », *Les Cahiers Français*, n°188, La Documentation Française, p.4-9. (1978)
- [VAN 82] VAN DE VEN W. & VAN DER GAAG J., «Health as an unobservable : a MIMIC model of demand of health care», *Journal of Health Economics*, vol. 5, p. 195-233. (1982).

## ANNEX :

**WOMEN LIFE EXPECTANCY AT BIRTH**  
**OECD - 1960-1995**

	1995			1990			1980			1970			1960		
	WomLife Expect.	Deviation to Mean	Rank	WomLife Expect.	Deviation to Mean	Rank	WomLife Expect.	Deviation to Mean	Rank	WomLife Expect.	Deviation to Mean	Rank	WomLife Expect.	Deviation to Mean	Rank
Japan	82,8	2,5	1	81,9	2,4	1	78,8	1,2	5	74,7	-0,2	13	70,2	-2,8	22
France	81,9	1,6	2	80,9	1,4	2	78,4	0,8	9	75,9	1,0	8	73,6	0,6	11
Switzerland	81,7	1,4	3	80,9	1,4	3	78,8	1,2	7	76,2	1,3	6	74,1	1,1	8
Sweden	81,5	1,2	4	80,4	0,9	6	78,8	1,2	6	77,1	2,2	2	74,9	1,9	4
Canada	81,3	1,0	5	80,4	0,9	4	79,1	1,5	4	76,4	1,5	4	74,3	1,3	5
Spain	81,2	0,7	6	80,4	0,9	5	78,6	1,0	8	75,1	0,2	10	72,2	-0,8	16
Australia	80,9	0,6	7	80,1	0,6	8	78,1	0,5	10	74,2	-0,7	15	73,9	0,9	9
Italy	80,8	0,5	8	80	0,5	10	77,4	-0,2	14	74,9	0,0	11	72,3	-0,7	15
Norway	80,8	0,5	9	79,8	0,3	11	79,2	1,6	2	77,3	2,4	1	75,8	2,8	1
Iceland	80,6	0,3	10	80,3	0,8	7	79,7	2,1	1	76,3	1,4	5	75	2,0	3
Netherlands	80,4	0,1	11	80,1	0,6	9	79,2	1,6	3	76,6	1,7	3	75,5	2,5	2
Greece	80,3	0,0	12	79,4	-0,0	12	76,6	-1,0	17	73,6	-1,3	20	70,7	-2,3	21
Finland	80,2	-0,1	13	78,9	-0,6	16	77,6	0,0	12	74,2	-0,7	17	71,6	-1,4	20
Austria	80,1	-0,2	14	78,9	-0,6	15	76,1	-1,5	20	73,4	-1,5	21	71,9	-1,1	17
Belgium	80,0	-0,3	15	79,1	-0,4	14	76,8	-0,8	15	74,2	-0,7	16	73,5	0,5	12
United-Kingdom	79,7	-0,6	16	78,6	-0,9	18	75,9	-1,7	21	75,2	0,3	9	74,2	1,2	6
Luxembourg	79,5	-0,8	17	78,5	-1,0	19	75,1	-2,5	22	73,9	-1,0	18	71,9	-1,1	18
Germany	79,5	-0,8	18	79,1	-0,4	13	76,6	-1,0	16	73,8	-1,1	19	72,4	-0,6	14
New-Zealand	79,2	-1,1	19	78,3	-1,2	20	76,3	-1,3	19	74,6	-0,3	14	73,9	0,9	10
United States	79,2	-1,1	20	78,8	-0,7	17	77,4	-0,2	13	74,7	-0,2	12	73,1	0,1	13
Portugal	78,6	-1,7	21	77,9	-1,6	21	76,6	-1,0	18	71	-3,9	23	67,2	-5,8	23
Ireland	78,5	-1,8	22	77,5	-2,0	23	75	-2,6	23	73,2	-1,7	22	71,8	-1,2	19
Denmark	77,8	-2,5	23	77,7	-1,8	22	77,6	0,0	11	75,9	1,0	7	74,1	1,1	7
Mean	80,3			79,5			77,6			74,9			73,0		
Stand.deviation	1,20			1,14			1,37			1,47			1,95		
Growth rate	0,86			2,49			3,46			2,51			-		

**MEN LIFE EXPECTANCY AT BIRTH**  
**OECD - 1960-1995**

	1995			1990			1980			1970			1960		
	Men Life Expect.	Deviation to Mean	Rank	Men Life Expect.	Deviation to Mean	Rank	Men Life Expect.	Deviation to Mean	Rank	Men Life Expect.	Deviation to Mean	Rank	Men Life Expect.	Deviation to Mean	Rank
Iceland	76,5	2,4	1	75,7	2,6	2	73,7	2,9	1	71,1	2,4	2	70,7	2,8	5
Japan	76,4	2,3	2	75,9	2,8	1	73,4	2,6	2	69,3	0,6	10	65,3	-2,6	21
Sweden	76,2	2,1	3	74,8	1,7	3	72,8	2,0	3	72,2	3,5	1	71,2	3,3	4
Switzerland	75,3	1,2	4	74,0	0,9	5	72,3	1,5	7	70,3	1,6	6	68,7	0,8	7
Canada	75,3	1,2	5	73,8	0,7	7	71,9	1,1	9	69,3	0,6	9	68,4	0,5	9
Greece	75,1	1,0	6	74,6	1,5	4	72,2	1,4	8	70,1	1,4	7	67,5	-0,4	13
Australia	75,0	0,9	7	73,9	0,8	6	71,0	0,2	11	67,4	-1,3	18	67,9	0,0	11
Norway	74,8	0,7	8	73,4	0,3	11	72,3	1,5	6	71,0	2,3	3	71,3	3,4	3
Netherlands	74,6	0,5	9	73,8	0,7	8	72,4	1,6	5	70,9	2,2	4	71,6	3,7	2
Italy	74,4	0,3	10	73,5	0,4	9	70,6	-0,2	12	69,0	0,3	11	67,2	-0,7	15
United-Kingdom	74,3	0,2	11	72,9	-0,2	12	70,2	-0,6	14	68,6	-0,1	12	68,3	0,4	10
France	73,9	-0,2	12	72,7	-0,4	14	70,2	-0,6	13	68,4	-0,3	14	67,0	-0,9	16
New-Zealand	73,8	-0,3	13	72,4	-0,7	17	70,1	-0,7	15	68,3	-0,4	15	68,7	0,8	6
Austria	73,5	-0,6	14	72,4	-0,7	15	69,0	-1,8	21	66,5	-2,2	21	65,4	-2,5	20
Belgium	73,3	-0,8	15	72,4	-0,7	16	70,0	-0,8	16	67,8	-0,9	16	67,7	-0,2	12
Spain	73,2	-0,9	16	73,4	0,7	10	72,5	1,7	4	69,6	0,9	8	67,4	-0,5	14
Germany	73,0	-1,1	17	72,7	-0,4	13	69,9	-0,9	18	67,4	-1,3	17	66,9	-1,0	17
Ireland	72,9	-1,2	18	72,0	-1,1	20	69,5	-1,3	19	68,5	-0,2	13	68,5	0,6	8
Finland	72,8	-1,3	19	70,9	-2,2	22	69,2	-1,6	20	65,9	-2,8	22	64,9	-3,0	22
Denmark	72,5	-1,6	20	72,0	-1,1	19	71,4	0,6	10	70,7	2,0	5	72,3	4,4	1
United States	72,5	-1,6	21	71,8	-1,3	21	70,0	-0,8	17	67,1	-1,6	19	66,6	-1,3	18
Luxembourg	72,5	-1,6	22	72,3	-0,8	18	68,0	-2,8	22	67,0	-1,7	20	66,1	-1,8	19
Portugal	71,5	-2,6	23	70,9	-2,2	23	67,7	-3,1	23	65,3	-3,4	23	61,7	-6,8	23
Mean	74,1			73,1			70,8			68,7			67,9		
Stand.deviation	1,38			1,33			1,66			1,81			2,46		
Growth rate	1,31			3,18			3,07			1,31			-		

**INFANT MORTALITY**  
**OECD - 1960-1995**

	1995			1990			1980			1970			1960		
	Infant Mortality	Deviation to Mean	Rank	Infant Mortality	Deviation to Mean	Rank	Infant Mortality	Deviation to Mean	Rank	Infant Mortality	Deviation to Mean	Rank	Infant Mortality	Deviation to Mean	Rank
Finland	0,40	-0,18	1	0,56	-0,21	2	0,76	-0,41	3	1,32	-0,73	5	2,10	-0,80	6
Norway	0,40	-0,18	2	0,70	-0,07	7	0,81	-0,36	5	1,27	-0,78	2	1,89	-1,01	4
Sweden	0,41	-0,17	3	0,60	-0,17	4	0,69	-0,48	1	1,10	-0,95	1	1,66	-1,24	2
Japan	0,43	-0,15	4	0,46	-0,31	1	0,75	-0,42	2	1,31	-0,74	4	3,07	0,17	15
Switzerland	0,50	-0,08	5	0,68	-0,09	6	0,91	-0,26	8	1,51	-0,54	8	2,11	-0,79	7
Luxembourg	0,50	-0,08	6	0,74	-0,03	11	1,15	-0,02	13	2,49	0,44	18	3,15	0,25	17
France	0,50	-0,08	7	0,73	-0,04	10	1,00	-0,17	9	1,82	-0,23	11	2,74	-0,16	13
Germany	0,53	-0,05	8	0,71	-0,06	8	1,27	0,10	18	2,34	0,29	17	3,38	0,48	18
Austria	0,54	-0,04	9	0,78	0,01	14	1,43	0,26	20	2,59	0,54	19	3,75	0,85	19
Denmark	0,55	-0,03	10	0,75	-0,02	12	0,84	-0,33	6	1,42	-0,63	7	2,15	-0,75	8
Netherlands	0,55	-0,03	11	0,71	-0,06	9	0,86	-0,31	7	1,27	-0,78	3	1,79	-1,11	3
Spain	0,55	-0,03	12	0,76	-0,01	13	1,23	0,06	16	2,63	0,58	20	4,37	1,47	21
Australia	0,57	-0,01	13	0,82	0,05	17	1,07	-0,10	11	1,79	-0,26	10	2,02	-0,88	5
United-Kingdom	0,60	0,02	14	0,79	0,02	15	1,21	0,04	15	1,85	-0,20	12	2,25	-0,65	9
Canada	0,60	0,02	15	0,68	-0,09	5	1,04	-0,13	10	1,88	-0,17	13	2,73	-0,17	12
Iceland	0,61	0,03	16	0,59	-0,18	3	0,77	-0,40	4	1,32	-0,73	6	1,30	-1,60	1
Italy	0,62	0,04	17	0,82	0,05	19	1,46	0,29	21	2,96	0,91	21	4,39	1,49	22
Ireland	0,63	0,05	18	0,82	0,05	18	1,11	-0,06	12	1,95	-0,10	14	2,93	0,03	14
New-Zealand	0,70	0,12	19	0,84	0,07	20	1,29	0,12	19	1,68	-0,37	9	2,26	-0,64	10
Belgium	0,70	0,12	20	0,80	0,03	16	1,21	0,04	14	2,11	0,06	16	3,12	0,22	16
Portugal	0,74	0,16	21	1,10	0,33	23	2,43	1,26	23	5,51	3,46	23	7,75	4,85	23
United States	0,80	0,22	22	0,92	0,15	21	1,26	0,09	17	2,00	-0,05	15	2,60	-0,30	11
Greece	0,81	0,23	23	0,97	0,20	22	1,79	0,62	22	2,96	0,91	21	4,01	1,11	20
Mean	0,61			0,77			1,15			2,05			2,94		
Stand.deviation	0,12			0,14			0,39			0,94			1,35		
Growth rate	-22,2			-34,3			-42,9			-29,4					

Source OECD-CREDES : Health Data 1997

**CRUDE DEATH RATES  
OECD - 1960-1994**

	1994			1990			1980			1970			1960		
	Death Rates	Rank	Deviation to Mean	Death Rates	Rank	Deviation to Mean	Death Rates	Rank	Deviation to Mean	Death Rates	Rank	Deviation to Mean	Death Rates	Rank	Deviation to Mean
Iceland	6,5	1	3,1	6,7	1	2,9	6,7	2	3,1	7,1	2	3,0	6,6	1	3,2
Japan	7,0	2	2,6	6,7	1	2,9	6,2	1	3,6	6,9	1	3,2	7,6	4	2,2
Australia	7,1	3	2,5	7,0	3	2,6	7,4	4	2,4	8,9	8	1,2	8,5	6	1,3
Canada	7,2	4	2,4	7,2	4	2,4	7,2	3	2,6	7,3	3	2,8	7,8	5	2,0
New-Zealand	7,7	5	1,9	7,9	5	1,7	8,5	7	1,3	8,8	7	1,3	8,8	8	1,0
Spain	8,6	6	1,0	8,6	6	1,0	7,7	5	2,1	8,4	6	1,7	8,6	7	1,2
Ireland	8,6	7	1,0	8,9	9	0,7	9,8	12	0,0	11,4	18	-1,3	11,5	19	-1,7
Netherlands	8,7	8	0,9	8,6	7	1,0	8,0	6	1,8	8,4	5	1,7	7,5	3	2,3
United States	8,8	9	0,8	8,6	8	1,0	8,8	8	1,0	9,5	10	0,6	9,5	11	0,3
Switzerland	8,9	10	0,7	9,5	12	0,1	9,4	11	0,4	9,2	9	0,9	9,8	15	0,0
France	9,0	11	0,6	9,4	11	0,2	10,1	16	-0,3	10,6	17	-0,5	11,3	18	-1,5
Greece	9,4	12	0,2	9,3	10	0,3	9,1	9	0,7	8,4	4	1,7	7,3	2	2,5
Finland	9,4	13	0,2	10,0	15	-0,4	9,2	10	0,6	9,6	11	0,5	9,0	9	0,8
Italy	9,6	14	0,0	9,5	13	0,1	9,9	13	-0,1	9,8	13	0,3	9,6	13	0,2
Luxembourg	9,8	15	-0,2	9,9	14	-0,3	11,2	19	-1,4	12,4	22	-2,3	11,8	22	-2,0
Portugal	10,0	16	-0,4	10,4	16	-0,8	9,9	14	-0,1	10,3	16	-0,2	10,5	17	-0,7
Austria	10,0	17	-0,4	10,7	18	-1,1	12,2	23	-2,4	13,2	24	-3,1	12,7	24	-2,9
Norway	10,2	18	-0,6	10,9	19	-1,3	10,1	15	-0,3	10,0	14	0,1	9,2	10	0,6
Sweden	10,5	19	-0,9	11,1	20	-1,5	11,1	18	-1,3	10,0	15	0,1	10,0	16	-0,2
Belgium	10,7	20	-1,1	10,5	17	-0,9	11,5	20	-1,7	12,3	21	-2,2	12,4	23	-2,6
Germany	11,0	21	-1,4	11,3	22	-1,7	11,6	21	-1,8	12,1	20	-2,0	11,6	21	-1,8
United-Kingdom	11,3	22	-1,7	11,2	21	-1,6	11,8	22	-2,0	11,7	19	-1,6	11,5	20	-1,7
Czech Rep.	11,4	23	-1,8	12,5	24	-2,9	13,1	24	-3,3	12,6	23	-2,5	9,7	14	0,1
Denmark	11,8	24	-2,2	11,9	23	-2,3	10,9	17	-1,1	9,7	12	0,4	9,6	12	0,2
MEAN	9,4			9,6			9,8						9,8		

For United-Kingdom and Luxembourg 1993 data for 1994

**STANDARDIZED DEATH RATES  
OECD - 1960-1993**

	1993			1990			1980			1970			1960		
	Death Rates	Rank	Deviation to Mean	Death Rates	Rank	Deviation to Mean	Death Rates	Rank	Deviation to Mean	Death Rates	Rank	Deviation to Mean	Death Rates	Rank	Deviation to Mean
Japan	5,9	1	1,7	6,2	1	1,7	7,9	2	1,4	10,8	13	0,0	13,2	22	-1,8
Iceland	6,5	2	1,1	6,8	2	1,1	7,4	1	1,9	9,2	3	1,6	8,8	1	2,6
Switzerland	6,6	3	1,0	7,1	4	0,8	8,2	5	1,1	9,9	9	0,9	11,1	9	0,3
France	6,7	4	0,9	6,9	3	1,0	8,5	10	0,8	9,7	7	1,1	11,4	12	0,0
Australia	6,7	5	0,9	7,2	7	0,7	8,9	12	0,4	11,7	17	-0,9	11,4	10	0,0
Canada	6,8	6	0,8	7,1	6	0,8	8,3	9	1,0	9,8	8	1,0	11,1	7	0,3
Sweden	6,9	7	0,7	7,1	5	0,8	8,3	8	1,0	8,8	2	2,0	10,2	5	1,2
Spain	7	8	0,6	7,4	8	0,5	8,2	6	1,1	10,4	10	0,4	11,4	11	0,0
Italy	7,1	9	0,5	7,4	10	0,5	9,1	13	0,2	10,4	11	0,4	11,6	16	-0,2
Greece	7,2	10	0,4	7,4	9	0,5	8,3	7	1,0	8,8	1	2,0	10,0	4	1,4
Norway	7,5	11	0,1	7,7	12	0,2	8,2	4	1,1	9,3	4	1,5	9,5	2	1,9
Netherlands	7,6	12	0,0	7,5	11	0,4	8,1	3	1,2	9,6	5	1,2	9,7	3	1,7
United States	7,7	13	-0,1	8,0	13	-0,1	8,9	11	0,4	10,8	12	0,0	11,6	15	-0,2
Austria	7,8	14	-0,2	8,1	15	-0,2	10,2	19	-0,9	12,1	20	-1,3	12,5	19	-1,1
New-Zealand	7,8	15	-0,2	8,1	16	-0,2	10,3	20	-1,0	11,4	15	-0,6	11,1	8	0,3
United-Kingdom	7,9	16	-0,3	8,2	17	-0,3	9,8	17	-0,5	11,0	14	-0,2	11,4	13	0,0
Germany	8,0	17	-0,4	8,1	14	-0,2	9,6	15	-0,3	11,7	18	-0,9	12,7	20	-1,3
Belgium	8	18	-0,4	8,2	18	-0,3	10,0	18	-0,7	11,5	16	-0,7	12,4	18	-1,0
Luxembourg	8,0	19	-0,4	8,4	19	-0,5	10,7	21	-1,4	12,2	21	-1,4	12,7	21	-1,3
Finland	8,3	20	-0,7	8,7	21	-0,8	9,7	16	-0,4	12,5	22	-1,7	13,3	24	-1,9
Denmark	8,7	21	-1,1	8,7	20	-0,8	9,2	14	0,1	9,6	6	1,2	10,6	6	0,8
Ireland	8,8	22	-1,2	9,3	22	-1,4	11,0	22	-1,7	12,1	19	-1,3	12,1	17	-0,7
Portugal	9,3	23	-1,7	9,3	23	-1,4	11,2	23	-1,9	12,6	23	-1,8	13,2	23	-1,8
Czech Rep.	10,5	24	-2,9	11,7	24	-3,8	12,5	24	-3,2	12,8	24	-2,0	11,5	14	-0,1
Mean	7,6			7,9			9,3			10,8			11,4		

**PYLL (POTENTIAL YEARS OF LIFE LOST) FOR 100 000 WOMEN  
OECD - 1960-1992**

	1992			1990			1980			1970			1960		
	PYLL Women	Rank	Deviation to Mean	PYLL Women	Rank	Deviation to Mean	PYLL Women	Rank	Deviation to Mean	PYLL Women	Rank	Deviation to Mean	PYLL Women	Rank	Deviation to Mean
<b>Japan</b>	2622,6	1	927,2	2666,5	1	1106,1	3644,3	3	1147,8	6028,1	9	614,0	10705,7	23	-2554,3
<b>Austria</b>	2711,0	2	838,8	2782,0	2	990,6	4413,9	9	378,2	6460,1	11	182,0	7984,2	15	167,2
<b>Sweden</b>	2913,5	3	636,3	3150,1	3	622,5	3713,8	4	1078,3	4584,8	2	2057,3	5915,0	4	2236,4
<b>Iceland</b>	3011,6	4	538,2	3353,5	5	419,1	3270,7	1	1521,4	4519,0	1	2123,1	5561,6	1	2589,8
<b>Switzerland</b>	3149,1	5	400,7	3292,1	4	480,5	3842,9	6	949,2	5343,6	5	1298,5	6674,4	5	1477,0
<b>Spain*</b>	3150	6	399,8	3453,5	9	319,1	4370,6	8	421,5	6430,5	10	211,6	9745,4	21	-1594,0
<b>Norway</b>	3205,4	7	344,4	3379,7	6	392,9	3624,1	2	1168,0	4607,6	3	2034,5	5816,5	2	2334,9
<b>Finland</b>	3265,1	8	284,7	3481,8	10	290,8	3775,4	5	1016,7	5683,8	7	958,3	7489,5	11	661,9
<b>France</b>	3334,4	9	215,4	3448,6	8	324,0	4520,7	10	271,4	5899,1	8	743,0	7505,2	12	646,2
<b>Italy</b>	3376,0	10	173,8	3382,6	7	390,0	4851,9	14	-59,8	7599,1	20	-957,0	10544,2	22	-2392,8
<b>Australia</b>	3391,9	11	157,9	3619,7	12	152,9	4714,2	11	77,9	6960,8	15	-318,7	7477,5	10	673,9
<b>Netherlands</b>	3411,0	12	138,8	3491,9	11	280,7	3938,4	7	853,7	5227,5	4	1414,6	5861,9	3	2289,5
<b>Canada</b>	3413,0	13	136,8	3668,3	14	104,3	4801,1	12	-9,0	6499,7	13	142,4	7979,1	14	172,3
<b>Greece</b>	3421,4	14	128,4	3627,0	13	145,6	4924,0	15	-131,9	6986,1	16	-344,0	8124,4	16	27,0
<b>Luxembourg</b>	3484,0	15	65,8	4204,0	19	-431,4	5841,6	21	-1049,5	8059,9	23	-1417,8	6807,3	7	1344,1
<b>Belgium*</b>	3600	16	-50,2	3850	16	-77,4	5155,2	17	-363,1	6808,8	14	-166,7	8278,7	17	-127,3
<b>Germany</b>	3669,6	17	-119,8	3695,0	15	77,6	5071,5	16	-279,4	7282,8	19	-640,7	8889,4	19	-738,0
<b>United-Kingdom</b>	3762,3	18	-212,5	4056,8	17	-284,2	5259,9	18	-467,8	6462,6	12	179,5	7176,9	8	974,5
<b>Ireland</b>	3835,8	19	-286,0	4146,0	18	-373,4	5439,5	19	-647,4	7629,0	21	-986,9	9251,9	20	-1100,5
<b>Denmark</b>	4214,4	20	-664,6	4450,5	20	-677,9	4826,7	13	-34,6	5616,5	6	1025,6	6696,0	6	1455,4
<b>New-Zealand</b>	4240,8	21	-691,0	4680,6	21	-908,0	6136,0	22	-1343,9	7039,0	17	-396,9	7710,1	13	441,3
<b>Portugal</b>	4582,6	22	-1032,8	4884,1	23	-1111,5	6970,5	24	-2178,4	12822,0	24	-6179,9	17396,1	24	-9244,7
<b>United States</b>	4656,1	23	-1106,3	4816,9	22	-1044,3	5715,0	20	-922,9	7697,5	22	-1055,4	8658,4	18	-507,0
<b>Czech Rep.</b>	4773,1	24	-1223,3	4960,2	24	-1187,6	6189,2	23	-1397,1	7162,4	18	-520,3	7384,0	9	767,4
<b>Mean</b>	<b>3549,8</b>			<b>3772,6</b>			<b>4792,1</b>			<b>6642,1</b>			<b>8151,4</b>		

**PYLL (POTENTIAL YEARS OF LIFE LOST) FOR 100 000 MEN  
OECD - 1960-1992**

	1992			1990			1980			1970			1960		
	PYLL Men	Rank	Deviation to Mean	PYLL Men	Rank	Deviation to Mean	PYLL Men	Rank	Deviation to Mean	PYLL Men	Rank	Deviation to Mean	PYLL Men	Rank	Deviation to Mean
Iceland	4377,4	1	2203,0	5396,5	4	1513,8	7621,1	6	1060,1	9891,7	7	1329,2	9373,2	4	2954,2
Japan	4792,8	2	1787,6	4917,8	1	1992,5	6298,9	1	2382,3	9811,3	6	1409,6	14785,3	22	-2457,9
Sweden	4878,8	3	1701,6	5270,5	2	1639,8	6585,3	2	2095,9	7389,9	1	3831,0	8470,2	1	3857,2
Austria	5242,0	4	1338,4	5347,0	3	1563,3	8727,0	13	-45,8	11724,4	16	-503,5	12973,5	16	-646,1
Netherlands	5421,1	5	1159,3	5752,8	5	1157,5	6982,9	3	1698,3	8910,8	3	2310,1	8907,9	2	3419,5
Norway	5673,7	6	906,7	6195,6	6	714,7	7319,8	5	1361,4	8989,3	4	2231,6	9431,1	5	2896,3
Australia	5743,6	7	836,8	6197,5	7	712,8	8589,9	11	91,3	11847,6	17	-626,7	11804,7	11	522,7
Canada	5789,1	8	791,3	6384,3	9	526,0	8608,2	12	73,0	11016,8	13	204,1	12601,1	15	-273,7
United-Kingdom	5941,1	9	639,3	6496,8	11	413,5	8442,0	10	239,2	10380,3	9	840,6	11319,0	9	1008,4
Switzerland	6087,5	10	492,9	6224,2	8	686,1	7094,0	4	1587,2	9403,3	5	1817,6	11052,8	8	1274,6
Ireland	6196,0	11	384,4	6639,0	12	271,3	8941,1	15	-259,9	10938,3	12	282,6	12131,0	13	196,4
Greece	6408,9	12	171,5	6458,1	10	452,2	8064,2	8	617,0	10271,8	8	949,1	10352,3	6	1975,1
Belgium	6600	13	-19,6	6900	15	10,3	9221,2	19	-540,0	11635,5	15	-414,6	13630,8	18	-1303,4
Denmark	6623,1	14	-42,7	6953,5	16	-43,2	7623,7	7	1057,5	8749,8	2	2471,1	9334,9	3	2992,5
Italy	6699,9	15	-119,5	6667,7	13	242,6	8971,4	16	-290,2	12022,6	18	-801,7	14939,8	23	-2612,4
Finland	6948,8	16	-368,4	7610,5	20	-700,2	9014,4	17	-333,2	12680,8	20	-1459,9	14040,0	20	-1712,6
Germany	7035,6	17	-455,2	6808,2	14	102,1	9171,7	18	-490,5	12205,4	19	-984,5	13653,4	19	-1326,0
New-Zealand	7066,6	18	-486,2	7417,0	18	-506,7	9226,7	20	-545,5	11437,9	14	-217,0	11406,4	10	921,0
Spain	7200	19	-619,6	7603,0	19	-692,7	8130,7	9	550,5	10481,4	10	739,5	13561,0	17	-1233,6
Luxembourg	7356,5	20	-776,1	7376,7	17	-466,4	8753,6	14	-72,4	13728,2	23	-2507,3	10416,1	7	1911,3
France	7378,3	21	-797,9	7623,9	21	-713,6	9360,9	21	-679,7	10886,7	11	334,2	12469,9	14	-142,5
United States	8503,9	22	-1923,5	8791,2	22	-1880,9	10300,4	22	-1619,2	13479,2	22	-2258,3	14158,3	21	-1830,9
Portugal	9915,4	23	-3335,0	9919,9	23	-3009,6	13201,4	24	-4520,2	18676,8	24	-7455,9	23073,6	24	-10746,2
Czech Rep.	10048,8	24	-3468,4	10896,2	24	-3985,9	12097,4	23	-3416,2	12740,8	21	-1519,9	11970,7	12	356,7
Mean	6580,4			6910,3			8681,2			11220,9			12327,4		

Source OECD-CREDES : Health Data 1997

**GLOBAL HEALTH OUTCOMES**  
**COUNTRIES RANK IN THE 24 OECD SAMPLE COUNTRIES**

**IN 1995**

Life Expectancy at birth for Women (in years)	Life Expectancy at birth for Men (in years)	Potential Years of Life Lost (PYLL) for 100 000 Women*	Potential Years of Life Lost (PYLL) for 100 000 Men*	Global Standardised Death Rate for 1 000 people **	Infant Mortality Rate for 100 births
---	---	--	--	--	--------------------------------------

	Data	Rank	Data	Rank	Data	Rank	Data	Rank	Data	Rank	Data	Rank
<b>Sweden</b>	81,5	4	76,2	3	2 914	3	4 879	3	6,9	7	0,41	3
<b>France</b>	81,9	2	73,9	12	3 334	9	7 378	21	6,7	4	0,50	7
<b>Italy</b>	80,8	8	74,4	10	3 376	10	6 700	15	7,1	9	0,62	17
<b>Unit-Kingdom</b>	79,7	16	74,3	11	3 762	18	5 941	9	7,9	16	0,60	14
<b>Germany</b>	79,5	18	73,0	17	3 670	17	7 036	17	8,0	17	0,53	8
<b>Denmark</b>	77,8	23	72,5	20	4 214	20	6 623	14	8,7	21	0,55	10

Source OECD - CREDES : : Health Data 1997

\* : 1992 data

\*\* : 1993 data

**IN 1960**

Life Expectancy at birth for Women (in years)	Life Expectancy at birth for Men (in years)	Potential Years of Life Lost (PYLL) for 100 000 Women*	Potential Years of Life Lost (PYLL) for 100 000 Men*	Global Standardised Death Rate for 1 000 people **	Infant Mortality Rate for 100 births
---	---	--	--	--	--------------------------------------

	Data	Rank	Data	Rank	Data	Rank	Data	Rank	Data	Rank	Data	Rank
<b>Sweden</b>	74,9	4	71,2	4	5 915	4	8 470	1	10,2	5	1,66	2
<b>Denmark</b>	74,1	7	72,3	1	6 696	6	9 334	3	10,6	6	2,15	9
<b>Unit-Kingdom</b>	74,2	6	68,3	10	7 177	8	11 319	9	11,4	12	2,25	10
<b>France</b>	73,6	11	67,0	17	7 505	12	12 470	14	11,4	12	2,74	14
<b>Germany</b>	72,4	15	66,9	18	8 889	19	13 653	19	12,7	20	3,38	19
<b>Italy</b>	72,3	16	67,2	16	10 544	22	14 940	23	11,6	16	4,39	23

Source OECD - CREDES : : Health Data 1997