

WHO

World Health
Organization

Mrs. Mayhew

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THE TEN LEADING CAUSES OF DEATH IN THE WORLD

- Sharp differences between industrialized
and developing countries -

The way of death is often a consequence of the way of life. Nowhere does this appear more sharply than in recent statistics of the World Health Organization (WHO) dealing with the ten leading causes of death in highly industrialized and in developing countries.

In a first group of mainly industrialized countries, nearly 70% of all deaths are due to diseases of the heart and blood vessels, to cancer and to accidents. From age 1 up to age 45, accidents, and mainly car accidents, are by far the most widespread cause of death. Tuberculosis has dropped from its formerly important place among the leading death causes but suicide is now listed with increasing frequency.

In a second group of mainly developing countries, infectious and parasitic diseases rank as the principal cause of death. Chief among them are diseases of the gastro-intestinal tract which account for the majority of diagnosed deaths in most of the 17 countries studied by WHO in Africa, South and Central America and Asia. The group "Influenza and pneumonia" is another important cause, as are accidents. Heart disease, cancer and accidents are on the increase. Other causes of death listed, according to country, include the following: "strokes", infections of the newborn, tuberculosis, measles, whooping cough, malaria, homicide and operations of war, meningitis, etc.

This dark picture is however brighter than ten years ago, the WHO statistics show, and improvement in health services is reflected in diminishing death rates from many preventable diseases, among them malaria.

WHO Liaison Office with
United Nations
Public Information
New York, N. Y.

Telephone:

PLaza 4-1234 Ext. 2022

* See notes page 3.

...../2

- 2 -

The greatest improvement is shown among young women for whom maternity is now less of a risk - there is a sharp decline in the number of deaths from deliveries and complications of pregnancy and childbirth.

It should be noted that in most of these 17 countries, the ten leading causes of death are responsible, on the average, only for 56% of reported deaths, the others being recorded without diagnosis.

Industrialized countries

In industrialized countries, a more detailed analysis reveals that on the average:

- . . . Heart disease is the leading cause of death in all 23 countries studied (32.5%)
- . . . Heart disease and "strokes" together are responsible for more than 45% of all deaths.
- . . . Cancer is killer No. 2, and is on the increase. In ten years, the percentage has gone up from 15% to 18.6% of all deaths, and this increase is apparent in both absolute numbers and relative death rates.
- . . . Third place goes to "strokes" (13%).
- . . . Accidents are in fourth place (5%) in 15 of the 23 countries.
- . . . Influenza and pneumonia generally rank fifth (3.3%).

The five remaining causes of death among the leading ten account for much lower rates, and, according to country, include most frequently: diabetes mellitus, congenital malformations, birth injuries, suicide, bronchitis, tuberculosis, cirrhosis of the liver, nephritis and nephrosis (kidney diseases).

Tuberculosis is still listed in ten of the 23 countries, ranking 6th in Austria and Hungary, 7th in Finland, France, Greece and Portugal, 8th in Ireland, 9th in Belgium and Italy, and 10th in Germany (Fed. Rep.).

Suicide is increasing. It now ranks 6th in the list for Denmark, Finland, Sweden, 7th in Australia, Austria, Germany (Fed. Rep.), Hungary, Switzerland, 8th in England and Wales, France, 10th in Belgium, Canada, U.S.A., New Zealand and Norway.

Cirrhosis of the liver also appears among the first 10 causes of death. It is 6th in France (3%) and Germany (Fed. Rep.) (1.9%), 7th in Italy, 8th in Austria and Greece, Switzerland and the U.S.A., 9th in Portugal.

Patterns shift with age

Death patterns shift with age, and there is no doubt that a great victory over disease is manifested by the fact that in industrialized countries, the leading cause of death until middle age is no longer an infectious or chronic disease, but the category of accidents, including car accidents. The figures cry for preventive measures as successful as those which brought down disease as a leading cause of death among the young in prosperous countries.

- 3 -

Age group 1 to 4: 32% of all child deaths are due to accidents. This proportion has gone up from 28% ten years ago - an increase in the relative importance of this cause. Next are congenital malformations, cancer, influenza and pneumonia, in various ranks according to country.

Age group 5 to 14: Accidents again rank first accounting for 43% of all deaths, with cancer next: 15% up from 13% in the previous period. Congenital malformations are generally in third place (7%) with influenza and pneumonia fourth (4%).

Age-group 15 to 44: Accidents, still at the top, are responsible for 27% of all deaths, up from an average of 21% ten years earlier. Cancer is generally next (19%) followed by heart disease (12%), suicide is fourth (6.5%) followed by "strokes" (3%).

Age group 45-64: Cancer and heart disease now lead, each with 30% of all deaths, with "strokes" generally third (8.6%) and accidents fourth (4.8%).

Age group 65 and over: Heart disease is now in first place (36%), "strokes" and cancer being next, (each with 16%) followed by influenza and pneumonia, and accidents, rounding up the list of the most important causes with 3.6% and 2.5% respectively.

Notes

(1) Data came from WEO Epidemiological and Vital Statistics Report, Volume 20, Nos. 1 and 2, 1967.

(2) The 23 countries studied in the first report and belonging in general to the "industrialized" category are: Canada, United States of America, Austria, Belgium, Denmark, Finland, France, Federal Republic of Germany, Greece, Hungary, Iceland, Italy, Netherlands, Norway, Poland, Portugal, Sweden, Switzerland, United Kingdom (England and Wales, Northern Ireland, Scotland), Australia and New Zealand.

(3) The 17 countries in the second report most of which belong to the group of "developing" nations are: Mauritius, United Arab Republic, Chile, Colombia, Costa Rica, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Puerto Rico, Trinidad and Tobago, China (Taiwan), Hong Kong, Israel (Jewish population), Japan and the Philippines.

(4) "Cancer" includes all types of malignant neoplasms.

(5) "Stroke" is the common term to describe the result of rupture or blockage of an artery in the brain. This is the cause of death in the majority of conditions described in the list as "vascular lesions affecting the central nervous system".

(6) "Diseases of the gastro-intestinal tract" cover here the group known in the official list as "gastritis, duodenitis, enteritis, colitis, except diarrhoea of the newborn".

(7) Both statistical reports use 1964 data wherever possible, otherwise those from 1963. Comparison is made with statistics for 1954-1956, approximately ten years earlier.

The ten leading causes of death in 23 countries (N. America, Europe, Oceania)
% of each cause to all deaths (1964)

	Heart	Cancer	"Strokes"	Accidents	'Flu' and pneum	Diabetes	Birth injs.	Cirrhosis of liver	Congenital malfors.	Suicide
Canada	36.1	17.6	10.3	7.2	3.6	1.7	1.6	-	1.8	1.3
United States of America	38.9	16.1	11.0	5.8	3.3	1.8	1.4	1.3	1.1	1.2
Austria	24.6	20.8	13.7	5.6	3.2	1.2	0.9	2.0	-	1.8
Belgium	22.5	19.7	7.6	4.8	2.1	2.1	-	-	-	1.2
Denmark	33.0	22.4	12.7	5.2	2.7	-	1.2	-	1.0	2.1
Finland	35.3	17.1	13.9	6.1	2.3	1.3	1.2	-	-	2.1
France	18.9	19.1	12.1	6.3	2.5	1.5	-	3.0	-	1.4
Germany (Fed. Rep.)	21.9	20.3	15.7	5.5	2.6	1.3	-	1.9	-	1.8
Greece	15.9	14.0	11.7	4.6	6.7	1.6	-	2.0	-	-
Hungary	28.2	18.6	14.2	3.9	2.0	-	1.5	0.9	0.9	2.9
Ireland	33.4	15.2	12.0	3.1	4.9	-	-	-	1.7	-
Italy	27.8	16.9	13.7	4.7	3.9	1.8	-	2.2	-	-
Netherlands	29.2	23.7	12.1	5.5	1.6	1.9	1.0	-	1.6	-
Norway	32.1	17.7	15.7	5.0	5.3	0.9	0.8	-	0.9	0.8
Poland	17.5	15.8	3.9	5.0	5.2	-	1.4	-	1.3	-
Portugal	14.3	10.2	14.5	4.2	8.1	-	-	2.8	-	-
Sweden	36.0	19.1	12.1	4.5	4.5	1.6	-	-	0.8	2.0
Switzerland	29.2	20.2	12.6	6.7	2.2	2.0	1.0	1.7	1.3	1.8
England & Wales	32.5	19.6	13.8	3.5	5.7	-	0.9	-	1.0	1.0
Northern Ireland	36.3	15.7	14.4	3.4	5.2	0.7	1.4	-	1.7	-
Scotland	33.9	19.3	16.6	4.2	3.0	0.9	1.3	-	1.2	-
Australia	37.3	15.1	13.0	5.9	4.0	1.5	1.1	-	1.2	1.6
New Zealand	35.3	16.1	12.0	5.3	6.6	1.4	1.3	-	1.2	0.9

- Category not applicable

The three leading causes of death in some countries of Africa, Central
and South America and Asia
% of each cause to all deaths (1964)

	<u>Gastro-Enteritis</u>	<u>Influenza and pneumonia</u>	<u>Accidents</u>
Mauritius	10.9	5.7	3.7
United Arab Republic	37.0	2.9	3.2
Chile	5.7	16.3	6.7
Colombia	10.5	6.6	4.3
Costa Rica	15.5	7.7	4.4
Guatemala	14.5	15.5	2.1
Mexico	10.8	13.1	4.6
Nicaragua	12.0	3.5	4.5
Panama	6.4	4.8	5.6
Paraguay	8.2	6.3	3.0
Puerto Rico	5.6	5.1	5.7
Trinidad & Tobago	3.6	6.5	5.3
China (Taiwan)	4.8	8.4	6.8
Hong Kong	-	8.9	5.4
Israel (Jewish population)	-	3.0	5.3
Japan	2.1	3.5	6.0
Philippines	7.4	14.5	3.1

$$\begin{array}{r} 100,000 \\ .94 \\ \hline 400,000 \\ 900,000 \\ \hline 94,000.00 \end{array}$$

9.40

$$\begin{array}{r} 17 \\ .98 \\ \hline 134 \\ 153 \\ \hline .1664 \end{array}$$

$$\begin{array}{r} 9.4 \\ 9.4 \\ 9.4 \\ 9.4 \\ 9.4 \\ \hline 47.0 \\ 47 \\ \hline 540 \text{ per } 10,000 \\ 10 \\ \hline 5400 \text{ per } 100,000 \end{array}$$

$$52.3 : 5400 = X : 100$$

~~$$\begin{array}{r} .009 \\ 5400 \overline{) 52.300} \\ \underline{42800} \\ 9500 \end{array}$$~~

$$\begin{array}{r} .98 \\ 54 \overline{) 52.3} \\ \underline{47.8} \\ 4.50 \\ \underline{432} \end{array}$$

USA Death rate 1964 =
9.4 per 1000

Death rate all accidents 1962
52.3 per 100,000

Death rate motor vehicles 1962
22.1 per 100,000

~~32.9~~
~~11.8~~
2 | ~~44.7~~
~~22.1~~

Death rate accidents, poisoning & ~~the~~ violence 1962

M - 96.2 per 100,000
F - 40.8 " "
2 | 137.0
68.5 " "

USA death rate 1964 = 9.4 per 1000 pop

9.4 1000 = x : 100

1000 | 9.400
 90

 40

552
 5

547
 9.4

2188
4923

5,1418

1965

552
 .94

2208
4968

5,1888

1964

542
 .94

2168
4878

5,0948

1966

Expected rate
15.41 deaths

Actual rate
as of Feb. 1967 = 21
deaths

Harold Russell - Feb. 1964
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