

Special Topic

The ten leading causes of death in countries of the Americas

Table 1: Country specific information on the ten leading causes of death in broad age groups, by sex, for the latest two or three data years available

Graph 1: Five leading causes of death around 2000, by PAHO sub-region and sex

The ten leading causes of death in countries of the Americas for the latest two or three data years available

Introduction

The 10 leading causes of death were determined in 31 countries for the latest two or three years of available data. Generally, this corresponded to mortality occurring around the year 2000 with the exception of Guyana (1994-1996) and Honduras (1988-1990). The leading causes of death were calculated using the PAHO/WHO ranking list shown in Annex Tables 8 and 9 for each sex based on the cumulative number of deaths occurring in the latest two or three year period available and corresponding to the following age groups: all ages, under one year, 1-4, 5-14, 15-24, 25-44, 45-64 and 65 years and over. The PAHO/WHO ranking list was developed to determine the leading causes of death in the general population. Since many causal categories of this list do not frequently occur among children under 5 years old and under one year old, or are aggregated into larger causal groupings, the list is not especially informative in determining leading causes of death in these age groups. Consequently, PAHO and WHO are collaborating in the development of a specific ranking list for use in these age categories.

Table 1 presents the 10 leading causes of death in these countries by sex and includes the cumulative number of deaths (n), the estimated crude or age-specific rate (r) per 100,000 population and the percentage of defined deaths due to each ranked cause category (%). Ranked categories are shown in age category only when they contain at least five deaths. In the case of tied values, the mean of the corresponding ranks is assigned, although Table 1 shows only the integer value of the rank. Due to space constraints, Table 1 utilizes an abbreviated naming convention to denote each ranked leading cause of death. Table 2 cross references the abbreviated ranked causal name to the corresponding leading cause list code shown in the Annex Tables.

Additionally, Graph 1 shows the five leading causes of death in the general population by sex for each of the eight defined PAHO sub-regions of the Americas. Sub-regional leading

causes of death were determined by accumulating the available deaths in each country as noted above according to its sub-region location. Due to their relative population sizes, Brazil and Mexico each comprise a sub-region. North America includes Bermuda, Canada and the United States. The Andean Area corresponds to Bolivia, Colombia, Ecuador, Peru and Venezuela. However, no detailed data are available in Bolivia. The Central American Isthmus corresponds to Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama. The Southern Cone includes Argentina, Chile, Paraguay and Uruguay. The Latin Caribbean corresponds to Cuba, Dominican Republic, Haiti, Puerto Rico, and the French Departments of French Guiana, Guadeloupe and Martinique. Since French Guiana had only one year of available data in the relevant time period it was excluded. Lastly, the Non-Latin Caribbean comprises Anguilla, Antigua and Barbuda, Bahamas, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, Netherlands Antilles, Saint Kitts and Nevis, St. Lucia, St. Vincent, Suriname, Trinidad and Tobago, Turks and Caicos, Virgin Islands (UK) and Virgin Islands (US).

The 10 leading causes of death accounted for 43.1 - 59.8% of the defined deaths in these 31 countries. Among males, the top 10 causes ranged from 45.7% of defined male deaths in Guadeloupe to 64.1% in Trinidad and Tobago. Among females, the top 10 causes ranged from 45.5% in Peru to 68.2% in Trinidad and Tobago.

Ischemic heart disease was cited as the leading cause of death in 13 countries, cerebrovascular disease in six countries, diabetes in three countries, heart failure and its complications and ill defined descriptions of heart disease in two countries, influenza and pneumonia and hypertensive diseases each in two countries, and HIV/AIDS, assault (homicide), and cardiac arrest each in one country. Cerebrovascular disease was the second leading cause of death in 14 countries while ischemic heart disease ranked second in seven countries. Diabetes was the second leading cause in three countries and intestinal infectious

diseases in two countries. Certain conditions originating in the perinatal period, malignant neoplasm of the trachea, bronchus and lung and assault (homicide) each ranked second in one country. The third ranked cause of death was cerebrovascular disease in six countries, ischemic heart disease in three countries, and assault (homicide) in three more countries. Cirrhosis and other diseases of the liver, diabetes, hypertensive disease, heart failure and complications and ill defined descriptions of heart disease, influenza and pneumonia, conditions originating in the perinatal period and malignant neoplasm of the trachea, bronchus and lung each ranked third in two countries, while chronic lower respiratory diseases, HIV/AIDS, diseases of the urinary system, malignant neoplasm of prostate, and intestinal infectious diseases were each ranked third in one country. Ischemic heart diseases and land transport accidents were each ranked third in Belize (1999-2001).

Cerebrovascular disease was among the top ten leading causes of death in all 31 countries; ischemic heart disease in all but Dominica, Haiti and Honduras; influenza and pneumonia in all but Canada, Dominican Republic and US Virgin Islands; diabetes in all but Cuba, Honduras and Peru. Heart failure and complications and ill defined descriptions of heart disease were ranked among the top ten in 23 countries; hypertensive diseases among the top ten in 22 countries; conditions originating in the perinatal period in 19 countries; and chronic lower respiratory diseases and cirrhosis and other diseases of the liver in 13 countries. External causes of death ranked that were ranked in the top ten included land transport accidents in 17 countries and assault (homicide) in 12 countries with events of undetermined intent in 5 countries. The latter cause group reflects insufficient information to enable a medical or legal authority to distinguish between accident, self-harm and assault.

Among males, cerebrovascular diseases ranked among the top 10 causes of death in 29 countries, ischemic heart disease in 28, land transport accidents in 24, diabetes, influenza and pneumonia in 22 countries. Malignant neoplasms of the prostate ranked in the top 10 in 17 countries and conditions originating in the perinatal period and assault (homicide) were in the top 10 in 16 countries. Cirrhosis and other liver disease were ranked in 15 countries, and

both chronic lower respiratory diseases and heart failure and complications and ill defined descriptions of heart disease were ranked in 14 countries, and hypertensive disease in 13 countries. HIV/AIDS was among the top 10 causes of death in 9 countries and the leading cause of male deaths in Haiti.

Among females, cerebrovascular diseases ranked among the top 10 causes of death in all 31 countries, influenza and pneumonia in 30, ischemic heart disease in 28, diabetes in 27, heart failure in 25, and hypertensive disease in 23 countries. Malignant neoplasm of the female breast and malignant neoplasm of the uterus were each ranked in the top 10 causes in 16 countries, followed by malignant neoplasm of the colon in six, and malignant neoplasm of the trachea, bronchus and lung in five countries. External causes infrequently ranked among the top 10 leading causes. Only assault (in Colombia and Honduras), land transport accidents (in Belize, El Salvador, and Venezuela), and events of undetermined intent (in Dominican Republic and Guatemala) were highly ranked.

Age group highlights

Under one year old

As might be expected in the less than one year age group, the leading cause of death in 30 of 31 countries was certain conditions originating in the perinatal period. This was followed by congenital malformations, deformations and chromosomal abnormalities which ranked second in 24 countries and by influenza and pneumonia which was ranked among the top five leading causes in 29 countries. Among the top ten causes in 24 countries were intestinal infectious diseases and septicemia; malnutrition and nutritional anemias in 21, meningitis in 20, accidental threats to breathing in 18 countries, and acute respiratory infections other than influenza and pneumonia in 14 countries.

Similarly, among males less than one year old, the leading cause of death in 30 of 31 countries was certain conditions originating in the perinatal period and in Honduras it ranked second. Congenital malformation, deformations and chromosomal abnormalities ranked second in 20 countries, and among the top 10 in 29 countries. Influenza and pneumonia were ranked

in third or fourth place in 29 countries and ranked sixth in Guatemala. Septicemia ranked among the top 10 in 23 countries, intestinal infectious diseases in 22, and meningitis, malnutrition and nutritional anemias each in 21 countries and accidental threats to breathing in 18.

As was the case for males, the leading cause of female deaths less than one year old was certain conditions originating in the perinatal period in 30 of 31 countries. In Honduras it was ranked second. Congenital malformations were among the top 10 causes of death in 30 countries and ranked second in 20 countries. Influenza and pneumonia were ranked in third or fourth place in 26 countries and ranked sixth in the United States in this age group. Also, ranked in the top 10 was influenza and pneumonia in 27 countries; intestinal infectious diseases and septicemia each in 23 countries, malnutrition and nutritional anemia in 19, meningitis in 18, and accidental threats to breathing in 17 countries. HIV/AIDS was among the top 10 leading causes of death for males and females less than one year in six countries.

One to four years old

In the one to four year old age group, external causes begin to appear among the 10 leading causes of death in countries of the Americas. In 26 of 31 countries, accidental drowning and submersion was ranked in the top 10. In Belize and Bermuda among males 1-4 years old they were the leading cause of death and ranked second in Argentina, Chile, Colombia, Costa Rica, Cuba, Guadeloupe and the United States. Land transport accidents, a category with almost all the deaths involving motor vehicles, ranked in the top 10 in 25 countries and were the leading cause of male deaths this age in Guadeloupe and Belize and the leading cause in both males and females this age in the United States. Also, among the top 10 causes of death were accidental threats to breathing in 17 countries, assault in 8, and events of undetermined intent in 9. Congenital malformations were highly ranked in 25 countries and the leading cause in both male and female deaths in Argentina, Costa Rica, Cuba, Mexico, Puerto Rico, Trinidad and Tobago, and Uruguay. In Canada, they also ranked first in female deaths this age. Influenza and pneumonia was in the top 10 in 26 countries and the leading cause of both males and females this age in Brazil, Colombia, Ecuador, El Salvador,

Guatemala, Nicaragua, Paraguay, and Peru. Other cause groups appearing in this age group in the top ten were intestinal infectious diseases in 20 countries, septicemia in 18 countries, malnutrition and nutritional disorders in 17, meningitis and malignant neoplasms of lymphoid, haematopoietic and related tissues in 15 countries.

Five to fourteen years old

The most important cause of death in this age group is land transport accidents where it ranked in the top 10 in all 31 countries. In 23 countries it was the leading cause of death and ranked second in two additional countries. Similarly, deaths due to land transport accidents in males 5-14 years old was the leading cause of death in 21 countries and in the top five causes in six more countries. This was also true for females aged 5-14 years, where it was the leading cause of death in 20 countries and in the top 5 in seven more countries. Accidental drowning and submersion registered in the top 10 causes of death in 26 countries and in males, it was in the top 5 causes in 24 countries and ranked first in Barbados and Cuba. Other top 10 ranked external causes were assault (homicide) in 19 countries and suicide in 16 countries. Among females, assault was the second ranked cause in Belize, Colombia and Puerto Rico. In Canada, suicide ranked third in males and in both sexes and ranked second in females 5-14 years old. Congenital malformations continued to rank among the top 10 causes in 24 countries and ranked first in the U.S. Virgin Islands, and second in Canada, Panama, United States, Trinidad and Tobago and Venezuela. Among females 5-14 years old, it was the leading cause of death in Panama and the second ranked cause in Costa Rica, Cuba, Venezuela, United States and U. S. Virgin Islands. Deaths from malignant neoplasms of lymphoid, haematopoietic and related tissues had an important impact in this age group as well ranking in the top 5 causes in 23 countries and this was followed by deaths due to influenza and pneumonia which ranked in the top 10 in 23 countries and ranked first in Guatemala and Peru.

Fifteen to twenty-four years old

In this age group, external causes are increasing in importance as causes of mortality. Land transport accidents continue to be the most frequently highly ranked cause of death in this

age group. It was ranked among the top three leading causes of death in 28 countries, among the top 5 causes of male deaths in this age group in 29 countries and among the top 5 causes of female deaths in 26 countries and, in 14 countries, it was the leading cause of female deaths. Assaults, suicides and accidental drowning were important leading causes of mortality in this age group. Assaults ranked first in 13 of 26 countries where it was ranked among the top 5 causes of mortality. Of 30 countries ranking it in the top 10 causes of male mortality, it was the leading cause in 16 countries. Similarly, among females 15-24 years, it was top 5 ranked in 21 countries. Suicides were ranked among the top 5 causes in 25 countries and ranked first in Chile and second in Canada, Costa Rica, and Uruguay. Among males, suicides ranked in the top 5 causes in 24 countries and first in Chile and second in Guyana, Canada, Nicaragua, and Uruguay. In females aged 15-24 years, suicide was the leading cause in Costa Rica, Ecuador, El Salvador and Nicaragua and top 5 ranked in 16 additional countries. Accidental drowning was ranked among the top 10 causes of male deaths and in 25 countries and female deaths in nine countries. Malignant neoplasms of the lymphoid and related tissues also were a leading cause in 21 countries. Pregnancy, childbirth and the puerperium was the leading cause of death in females in Haiti, Honduras, and Paraguay and ranked in the top 5 in 18 countries. Also, HIV/AIDS was among the 10 leading causes in 19 countries and ranked first in Haiti and Trinidad and Tobago. It was the leading cause of death in females, 15-24 years in Belize, Guyana, and Trinidad and Tobago.

Twenty-five to forty-four years old

Assault (homicides), suicides, land transport accidents, and events of undetermined intent were the external cause grouping most often cited among the top 10 leading causes of death in this age group. Also, cited in this age group as important causes of mortality were cerebrovascular diseases (stroke), cirrhosis and other diseases of the liver, ischemic heart disease, malignant neoplasm of the female breast, and HIV/AIDS. Among males, homicides and land transport accidents were the leading cause of death in 11 countries; suicide was top ranked in Canada and Uruguay and in the top 10 in 28 countries. HIV/AIDS ranked first in 7 countries and in the top 5 in 19 additional

countries. Cirrhosis and other diseases of the liver were ranked first among male deaths in Mexico and in the top 10 in 23 additional countries. Ischemic heart disease was ranked in the top 10 in 22 countries; malignant neoplasms of lymphoid and related tissues in 12. Also, mental and behavioral disorders due to psychoactive substance abuse appeared in the top 10 male causes in 12 countries. Among females, HIV/AIDS was the leading cause of death in 10 countries and malignant neoplasms of the uterus in seven countries and female breast in 24 countries. Deaths due to neoplasm of female breast in this age group were ranked first in Bermuda, Canada, St. Lucia, and Uruguay. Also, in females of this age group diabetes appears as a top 10 cause of death in 13 countries and the leading cause in Mexico. Pregnancy, childbirth and the puerperium was ranked in the top 5 in 11 countries and the leading cause of females aged 25 - 44 in Nicaragua and Paraguay.

Forty-five to sixty-four years old

Deaths due to ischemic heart disease were the leading cause of death in 16 countries, the leading cause of male deaths in 18 countries and female deaths in nine countries. Among the ten leading causes of death in this age group were cerebrovascular diseases, which ranked first in five countries, diabetes, cirrhosis of the liver, land transport accidents, and malignant neoplasms of trachea, bronchus and lung, female breast, stomach and uterus. Heart failure and its complications and hypertensive disease were among the 10 leading causes of death in 13 and 19 countries, respectively. Leading causes of male deaths aged 45-64 years, were cerebrovascular disease (30 countries), cirrhosis of the liver (29 countries), diabetes (28 countries), land transport accidents (25 countries), malignant neoplasms of trachea bronchus and lung (19 countries) and stomach (13 countries), heart failure and its complications (16 countries), hypertensive disease (17 countries) and HIV/AIDS (10 countries). Similarly, among the 10 the leading causes of female deaths in this age group were cerebrovascular disease (31 countries), diabetes (31 countries and ranked first in 7), ischemic heart disease (29 countries and ranked first in 9), malignant neoplasms of the uterus (25 countries), female breast (26 countries), lymphoid and related tissues and stomach (13 countries each), and colon (11 countries) and

heart failure and its complications (12 countries) and hypertensive disease (19 countries).

Sixty-five years and over

Not surprisingly, in the oldest age group and frequently cited in the top 10 causes of death were the following: cerebrovascular disease (stroke), in 31 countries and ranked first in nine countries, ischemic heart disease (31 countries, and ranked first in 15), influenza and pneumonia (31 countries), diabetes (30 countries), heart failure and its complications (27 countries), hypertensive disease (24 countries), disease of the urinary system (19 countries), and malignant neoplasms of the prostate, tracheas bronchus and lung (each in 17 countries), and stomach (14 countries). Among males, ischemic heart disease ranked first in 16 countries and cerebrovascular disease in seven. Other causes of male deaths appearing frequently in the top 10 were: influenza and pneumonia (30 countries), chronic lower respiratory disease (25), diabetes (29), heart failure (26), hypertensive disease (23), and malignant neoplasms of prostate (28), trachea bronchus and lung (16), and stomach (13). Among females 65 years and over and ranked in the top 10 causes of death were: ischemic heart disease (31 countries, first in 12 countries); influenza and pneumonia and cerebrovascular disease (each in 31 countries); diabetes (30); heart failure (29) and hypertensive disease (26); diseases of the urinary system (19); chronic lower respiratory diseases (17); and malignant neoplasms of female breast (13), and uterus (15).