

New Non-Communicable Diseases Program at PAHO

The Global and Regional Predominance of Non-Communicable Diseases

Estimates of global and regional cause-of-death patterns reveal that, by 1990, noncommunicable causes had superseded communicable, maternal and perinatal causes in all areas of the world except for Sub-Saharan Africa and the Middle Eastern countries (Table 1). If one includes former injuries among the non-communicable causes of death, then only in Sub-Saharan Africa (SSA) does the former category still dominate the mortality profile. (1) In all but SSA, noncommunicable diseases (NCDs) now dominate the age-specific mortality profile in all age groups over 14 years.

Table 1
Distribution of deaths from three groups of causes,
by region, 1990

Number of deaths (x 1,000) attributed to:				
Region ^a	I. Communicable, maternal and perinatal causes	II. Non-communicable causes	III. Injuries	Total, all causes
EME	439 (6.2) ^b	6,238 (87.6)	445 (6.2)	7,121
FSE	136 (3.6)	3,264 (86.8)	362 (9.6)	3,762
CHN	1,343 (15.1)	6,519 (73.4)	1,023 (11.5)	8,885
LAC	966 (32.3)	1,733 (57.9)	293 (9.8)	2,992
OAI	2,306 (41.8)	2,736 (49.6)	477 (8.6)	5,519
MEC	2,026 (46.2)	1,966 (44.8)	392 (8.9)	4,384
IND	4,060 (43.3)	4,700 (50.2)	611 (6.5)	9,371
SSA	5,415 (68.2)	1,898 (23.9)	624 (7.9)	7,937
World	16,690 (33.4)	29,055 (58.1)	4,227 (8.5)	49,971

^a EME, Established Market Economies; FSE, Former Socialist Economies; CHN, China; LAC, Latin America and the Caribbean; OAI, Other Asia and Islands; MEC, Middle Eastern Crescent; IND, India; SSA, Sub-Saharan Africa.

^b Figures in parentheses are percentages of deaths from all causes.

Source: Murray CJL, Lopez AD: page 27, Table 2, Reference 1.

In Latin America and the Caribbean (LAC), estimated mortality from all causes in 1990 (in thousands) was 2,992. Of this, communicable, maternal and perinatal causes accounted for 966 (32.3%) and injuries for 293 (9.8%), while NCDs accounted for 1733 (57.9%). Within the NCD category, cardiovascular disease accounted for 786.7 (45.4%), malignant neoplasms 341.0 (19.7%), and diabetes mellitus 85.2 (4.9%).

The impact of morbidity from these cause groups has also been estimated for 1990 in terms of disability adjusted life years (DALYs). NCDs also dominate on this measure in LAC, accounting for 54.2% of the impact, followed by the communicable, maternal and perinatal cause group at 28.1% and injuries at 17.7% (Table 2).

Table 2
Percentage distribution of YLD^a according to region, by broad
cause group, 1990

Region ^a	Cause group ^b			All causes
	I	II	III	
EME	0.9	8.0	0.7	9.6
FSE	0.4	4.1	0.5	5.0
CHN	4.1	12.1	2.2	18.4
LAC ^c	2.7 (28.1)	5.2 (54.2)	1.7 (17.7)	9.6
OAI	3.9	8.0	1.6	13.6
MEC	2.4	5.7	1.7	9.8
IND	5.3	12.2	2.2	19.7
SSA	6.3	6.1	2.0	14.4
All regions	26.0	61.4	12.6	100.0

^a YLD are expressed as a percent of the global YLD. They refer to DALYs due to year of life lived with a disability.

^b Grupo I = Communicable, maternal and perinatal causes
Group II = Non-communicable causes
Group III = Injuries and poisonings

^c EME, Established Market Economies; FSE, Former Socialist Economies; CHN, China; LAC, Latin America and the Caribbean; OAI, Other Asia and Islands; MEC, Middle Eastern Crescent; IND, India; SSA, Sub-Saharan Africa.

^d Figures within parentheses refer to within-row percentages for LAC only.

Source: Adapted from Murray CJL, Lopez AD, page 61, Table 4, Reference 1.

Unlike Canada and the United States, where reductions on the order of 15% in the proportional mortality from diseases of the circulatory system were seen during the period 1980-90, many countries in LAC experienced an increase attributable to this cause group (2). Individual trends for selected countries are presented in Table 3.

Table 3
Proportional mortality from diseases of the circulatory
system (% based on deaths from defined causes),
selected countries, 1980 and 1990

Country	1980	1990
Argentina	46.6	46.4
Belize	29.7	24.7
Brazil	32.1	34.4
Canada	47.6	40.1
Chile	29.4	29.0
Colombia	27.4	30.9
Costa Rica	27.6	28.9
Cuba	43.4	43.5
Dominican Republic	23.9	27.2
Ecuador	14.9	20.7
El Salvador	8.5	20.6
Mexico	17.6	20.3
Panama	27.8	29.3
Paraguay	30.3	36.9
Peru	11.8	19.4
Puerto Rico	40.5	34.0
Suriname	31.8	33.5
Trinidad and Tobago	45.9	38.4
United States	50.6	43.3
Uruguay	44.1	41.4
Venezuela	27.3	29.3

Source: Adapted from Health Conditions in the Americas, 1994 Edition, Table 39, Page 219, Reference 2.

The impact of cancer throughout the Americas has greatly increased (by 73% overall from the early 1960s to the late 1980s) as shown in a recent 25-year analysis (Table 4) (2).

Table 4
Estimated annual deaths from malignant neoplasms, in the Americas, 1960-1964 and 1985-1989

Year	Total	Men	Women
Region of the Americas			
1960-1964	520,000	270,000	250,000
1985-1989	900,000	470,000	430,000
North America			
1960-1964	315,000	170,000	145,000
1985-1989	540,000	290,000	250,000
Latin America and the Caribbean			
1960-1964	205,000	100,000	105,000
1985-1989	360,000	180,000	180,000

Source: Health Conditions in the Americas, 1994 Edition, Table 48, page 230, Reference 2.

Proportional mortality from this cause group has increased in virtually every country, as illustrated in Table 5. Proportional mortality from external causes also increased in virtually all countries (see Table 6) (2).

Table 5
Proportional mortality from malignant neoplasms (% based on deaths from defined causes), selected countries, 1960-1964 and 1985-1989

Country	1960-1964	1985-1989
Argentina	20.6	18.7
Barbados	11.9	19.5
Belize	7.6	9.0
Canada	17.3	26.9
Chile	11.5	19.9
Colombia	6.1	13.4
Costa Rica	12.8	21.2
Cuba	16.0	19.5
Dominica	6.2	18.2
Dominican Republic	3.8	8.9
Ecuador	3.6	11.2
Grenada	9.7	13.1
Jamaica	10.8	17.5
Martinique	11.0	22.9
Mexico	4.2	10.2
Nicaragua	3.7	7.0
Panama	8.5	15.3
Paraguay	9.2	10.4
Peru	5.9	12.5
Puerto Rico	14.9	15.9
Saint Vincent and the Grenadines	5.6	13.2
Suriname	9.2	11.1
Trinidad and Tobago	8.7	13.2
United States of America	16.3	23.1
Uruguay	22.0	24.7
Venezuela	10.7	13.8

Source: Adapted from Health Conditions in the Americas, 1994 Edition, Table 46, page 228, Reference 2.

Table 6
Trends in proportional mortality from external causes (% based on deaths from defined causes), selected countries, 1960-1964 and 1985-1989

Country	Period	
	1960-1964	1985-1989
Argentina	8.2	6.9
Barbados	3.0	4.8
Belize	4.2	12.1
Canada	8.2	7.5
Chile	7.9	13.3
Colombia	8.7	22.5
Costa Rica	5.7	11.4
Cuba	7.4	11.9
Dominica	1.8	5.8
Dominican Republic	4.7	9.1
Ecuador	6.2	14.2
Jamaica	4.5	3.3
Martinique	6.7	9.0
Mexico	7.8	15.5
Panama	8.4	13.7
Paraguay	7.3	8.7
Puerto Rico	8.5	9.2
Saint Lucia	3.2	7.9
Saint Vincent and the Grenadines	0.9	7.3
Suriname	8.2	12.6
Trinidad and Tobago	6.1	8.6
United States of America	7.3	7.2
Uruguay	6.4	6.4
Venezuela	11.1	15.8

Source: Adapted from Health Conditions in the Americas, 1994 Edition, Table 31, page 206, Reference 2.

Much of the mortality, morbidity, and socio-economic impact of these and other non-communicable conditions is preventable through lifestyle modification and specific interventions.

Establishment of a PAHO Program for Non-communicable Diseases

In recognition of the predominance of NCDs among causes of morbidity and mortality throughout the Americas, the Director of PAHO, early in 1995, established a new technical cooperation program. This is in addition to other activities relevant to noncommunicable diseases (e.g. healthy lifestyles, food and nutrition) which remain active elsewhere in the Organization, most notably in the Division of Health Promotion and Protection.

The new Non-Communicable Disease Program (HCN) is located within the Division of Disease Prevention and Control (HCP), and has a staff complement of three professional and two support posts. The program has a mandate to strengthen the capacity of the organization in support of specific prevention and control initiatives in member countries.

During the first few months, much effort was devoted to planning and consultation in order to clarify the role and modus operandi of the program. A limited number of priorities were selected for the coming biennium (1995-97), key internal relationships have been

identified, and a method of working defined. A team approach will be emphasized.

Initial priorities include surveillance of disease impact, risk factor intervention (with emphasis on cardiovascular disease), cervical cancer prevention, cancer registry development, diabetes initiatives, and support for injury prevention.

The program will place emphasis on technical capacity building, including support for demonstration projects within countries. It will work in consultation and interprogrammatic collaboration with other technical programs, in the interests of integrating non-communicable disease prevention and control within the context of primary health care.

Envoi

The following quotation from Murray and Lopez (1994) sums up the situation. "While recognizing the need for continued vigilance over communicable, maternal and perinatal mortality, it is important to realize that globally the non-communicable diseases have

already emerged as the leading causes of death in developing regions. Even in poor countries, the epidemiological transition is under way with profound implications on the demand for health care to address the burden of chronic diseases. Moreover, with a number of cost-effective interventions targeted to communicable disease mortality in children, it is reasonable to expect the proportion of mortality due to noncommunicable diseases to increase. At present the risk of death from non-communicable diseases during adulthood (15-60) years is considerably higher in the developing world than in the Established Market Economies, suggesting that the future, in effect, has already arrived."

Reference

1. Murray CJL, Lopez AD (eds). Global Comparative Assessments in the Health Sector. World Health Organization, Geneva 1994.
2. Pan American Health Organization. Health Conditions in the Americas, 1994 Edition. Volume I. Washington, DC: PAHO; 1994. (Scientific Publication No. 549).

Source: Non-Communicable Diseases Program, Division of Disease Prevention and Control, HCP/HCN, PAHO.

Health Situation in the Americas Basic Indicators, 1995

Selected Indicators of mortality

Country	IMR	SMR	MMR	Country	IMR	SMR	MMR
Anguila	26	34	...	Guyana	46	62	180
Antigua y Barbuda	19	23	...	Haiti	98	128	457
Argentina	26	30	52	Honduras	44	73	220
Aruba	8	10	...	Jamaica	17	23	115
Bahamas	19	21	21	Martinique	10	12	...
Barbados	16	19	20	Mexico	30	37	45
Belize	36	46	147	Montserrat	12	15	...
Bermuda	13	15	...	Netherlands Antilles	15	18	...
Bolivia	74	100	247	Nicaragua	53	64	150
Brazil	57	67	140	Panama	21	27	60
Canada	7	8	3	Paraguay	42	56	235
Cayman Islands	8	10	8	Peru	59	83	261
Chile	12	17	34	Puerto Rico	12	14	...
Colombia	32	42	140	Saint Kitts and Nevis	27	32	...
Costa Rica	12	14	40	Saint Lucia	19	23	...
Cuba	10	12	32	Saint Vincent and the Grenadines	18	23	6
Dominica	14	18	...	Suriname	31	40	31
Dominican Republic	48	62	90	Trinidad and Tobago	17	22	49
Ecuador	44	62	120	Turks and Caicos Islands	19	22	...
El Salvador	43	56	140	United States of America	8	10	8
French Guiana	20	23	...	Uruguay	19	22	38
Grenada	20	25	...	Venezuela	26	31	63
Guadeloupe	11	13	...	Virgin Islands (UK)	20	23	...
Guatemala	51	81	220	Virgin Islands (US)	13	15	...

Note: Data extracted from the brochure: "Health Situation in the Americas. BASIC INDICATORS 1995". (PAHO/HDP/HDA/95.03).

... Data not available

IMR: Infant mortality rate (1994) (per 1,000 live births)

MR5: Under 5 years mortality rate (1994) (per 1,000 live births)

MMR: Maternal mortality rate (latest year available between 1987-1993) (per 100,000 live births)