

HEALTH CONDITIONS IN THE AMERICAS 1961-1962

PREPARED FOR
THE XV MEETING OF THE DIRECTING COUNCIL



Scientific Publications No. 104

August 1964

PAN AMERICAN HEALTH ORGANIZATION
Pan American Sanitary Bureau - Regional Office of the
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1501 New Hampshire Ave., N. W.
Washington D.C., 20036

FOREWORD

The recent impetus given in the Americas to National Health Planning has produced an increasing awareness of the need for accurate statistical information. Governments are in agreement on the advantages of working toward concrete objectives with well defined program action, careful measurement of results and evaluation of the social impact, followed, if necessary, by readjustment of goals and methods. At each stage of this process factual data, as reliable as possible, are of paramount importance.

In the Pan American Health Organization we have been witnessing progress during the last ten years in the registration, collection and analysis of vital and health statistics in the Region of the Americas. However, as these data are used, evidence of deficiencies also appear, and it is not always possible to assess their validity. Thus it may be advisable at this time, at least in some countries, to organize demonstration or "measurement" areas where accurate and reliable information can be developed, understood and wisely used. Extension of the measurement areas to the entire country would of course gradually follow. The Pan American Health Organization is interested in the development of such areas and offers its technical assistance to countries in this activity.

In government, policy decisions are being based on technical knowledge far more frequently than in the past. In the health field, biostatistics is one of the indispensable disciplines for obtaining this knowledge and for its application.

The Organization has the responsibility, as expressed in the Pan American Sanitary Code, to present to Member Governments in a comprehensive manner information on health conditions in the Region. This report prepared as recommended has two objectives: first, to serve each national government and second, to provide data which will make it possible to analyze and attack on a scientific basis the problems of a regional nature or those common to several countries.



Abraham Horwitz
Director

HEALTH CONDITIONS IN THE AMERICAS, 1961-1962

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EXPLANATION OF SYMBOLS

Data not available
None	-
Less than half of unit employed	0.0

INTRODUCTION

Summary reports on health conditions in the Americas from 1950 to 1960 have been prepared for the XIV, XV and XVI Pan American Sanitary Conferences.^(1, 2, 3) Data were collected for these reports through three questionnaires completed in the countries and other areas of the Region. The information provided in the last two questionnaires has also served for the First and Second Reports on the World Health Situation, published by the World Health Organization.

Following the presentation of the *Second Report on the World Health Situation, 1957-1960* at the Fifteenth World Health Assembly in 1962 a Resolution was passed requesting that a Supplemental Questionnaire for the years 1961 and 1962 be sent to Member Governments and that a Report be presented to the Seventeenth World Health Assembly in 1964. Data obtained through this questionnaire have recently been published in the *Supplement to the Second Report on the World Health Situation, 1961-1962*, mainly in the form of individual country resumes.

Information from the same questionnaire together with data received in response to the annual joint request of the World Health Organization and the Pan American Health Organization to the countries for statistics on mortality by cause and age, on vaccinations, on hospitals and on health personnel have been used by PAHO in preparing the present report. An Appendix Table gives the names of the countries and other areas of the Americas from which these two sources of data were received. Publications of the countries as well as other official reports from the countries to PAHO, to WHO and to the United Nations have also served as reference documents. When data from different sources were not in agreement, efforts were made to ascertain the most reliable or consistent figure.

This report is less extensive than the previous Summaries of Four-Year Reports on Health Conditions in the Americas with respect to the health problems included. The largest chapters are concerned with demography and vital statistics and with hospital services in the Region. Population characteristics have been emphasized at this time since data from recent censuses are now becoming available. The new demographic information presented is of considerable significance and use in the health field. Information on numbers of hospitals and hospital beds in the Region is more nearly complete than in the past. Through use of data for selected countries it has been possible to present a more comprehensive picture of hospital utilization than in earlier publications.

Only limited data are given on the communicable diseases since a separate publication, *Reported Cases of Notifiable Diseases in the Americas, 1962*, has recently been prepared which contains the details of the reported occurrence of approximately forty diseases in the Region. Since the basic questionnaires requested only limited information on environmental sanitation, data in this health area are not included here.

Throughout the report indices for evaluating health conditions and measuring progress in health are stressed. Included are those based on population structure, on vital statistics and on resources of hospitals and of manpower, all of which will be valuable in measuring the achievements of the countries of the Americas toward reaching the goals established in the Charter of Punta Del Este. It is hoped that with the addition of data for 1963 and 1964 to those in this and in earlier publications trends of health indices can be shown over an extended period of years in a report for the Pan American Sanitary Conference in 1966.

-
- (1) *Summary of Reports on the Health Conditions in the Americas, 1950-1953* (Scientific Publications No. 25), Washington, 1956.
 - (2) *Summary of Four-Year Reports on Health Conditions in the Americas* (Scientific Publications No. 40), Washington, 1958.
 - (3) *Summary of Four-Year Reports on Health Conditions in the Americas 1957-1960* (Scientific Publications No. 64) Washington, 1962.

CHAPTER I

VITAL STATISTICS

Reliable demographic data are a requisite for planning for health services. Knowledge of the age structure, the growth rate and other characteristics of each population is essential as a basis for understanding the specific health problems. Moreover indices based on population and vital statistics remain as in the past the indispensable and classical measures of health progress. Included among such indices are the structure of the population by age and by socio-

economic characteristics, the distribution of deaths by age and the level of mortality from selected causes. Development of reliable and complete data in these fields is a recommended goal for each national health service. The information presented in this report is based mainly on summaries received from member governments and indicates the improvement which has occurred in recent years in the quality and availability of data in this field.

POPULATION

The recent censuses in the Region and the demographic data now becoming available from them are of considerable significance in the analysis of health conditions.

In all but three of the 24 countries in the Americas, population censuses have been taken in the years between 1960 and 1964. For only two of the other areas of the Region are recent census data not available. During the present decade these population statistics obtained from censuses will be the basis for projections which are so essential for planning and evaluating health programs.

Provisional information on total population and its distribution by major political divisions is available for most countries. For some, distributions by age, by housing characteristics, by educational level and by occupational status have also been published or prepared. These data when available are presented in this report.

In the Region of the Americas the population has been growing since 1950 at a faster rate (2.3 per cent per year) than in any other broad Region of the world. This is due to the extremely high growth rates in Middle and South America. By 1960 Middle America

and South America had over 50 per cent of the population of the Region and it is estimated that by 1980 at the present growth rates, this area will include close to 60 per cent of the Regional population (Table 1).

In Table 2 are shown the populations in the countries and other areas in the Americas according to the two most recent censuses, usually taken around 1950 and 1960. For countries without a recent census or for which the result of the enumeration is not yet known, the estimated population for midyear 1960 as published by the United Nations is given instead. Also included in the table is the annual rate of population increase in the period between the censuses, and in Figure 1 these rates are shown for the countries of the Region. The rate of increase ranges from 4.0 per cent per year in Costa Rica to 1.3 per cent in Jamaica. For ten of the 24 countries growth rates are 3 per cent or more, and for another nine between 2 and 2.9 per cent. The remaining five countries which are increasing by 1.3 to 1.7 per cent each year are Argentina, Bolivia, Jamaica, United States and Uruguay, and they are the only countries in the Americas with a growth rate below the average estimated for the world (1.8 per cent).

TABLE 1. ESTIMATED POPULATIONS (IN MILLIONS) AND PERCENTAGE DISTRIBUTION IN THE THREE REGIONS OF THE AMERICAS IN 1950, 1960 AND 1980 WITH ANNUAL PERCENTAGE GROWTH 1950-1960

Region (a)	1950		1960		1980		Average annual growth rate (b) 1950-1960
	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	
Total	329	100	411	100	603	100	2.3
Northern America	167	50.8	200	48.7	254	42.1	1.8
Middle America	51	15.5	67	16.3	115	19.1	2.8
South America	111	33.7	144	35.0	234	38.8	2.7

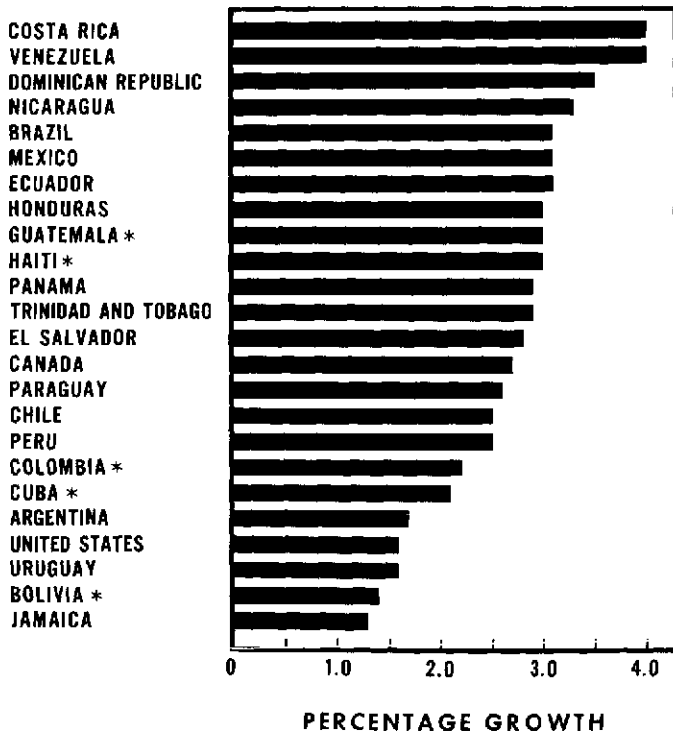
Source: United Nations

- (a) Northern America: Bermuda, Canada, St. Pierre and Miquelon and United States.
- Middle America: Caribbean Islands, Central America, Mexico and Panama.
- South America: Continent of South America and Falkland Islands.

(b) Annual percentage growth on compound interest formula.

FIGURE 1

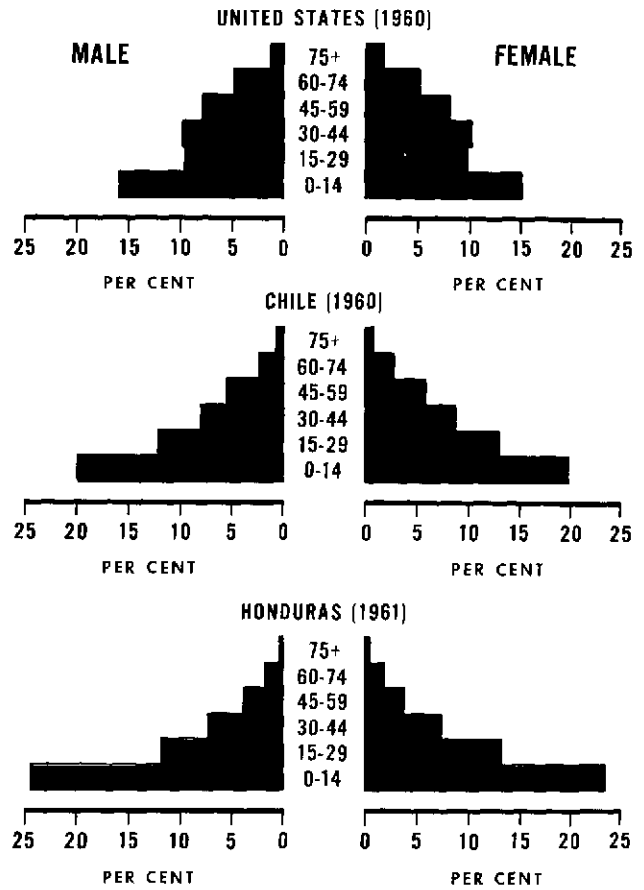
ANNUAL PERCENTAGE GROWTH RATES OF POPULATION BETWEEN THE TWO MOST RECENT CENSUSES, IN COUNTRIES OF THE AMERICAS



* CENSUS FOR 1960'S NOT YET TAKEN. ESTIMATED POPULATION FOR JULY 1, 1960 USED TO DETERMINE ANNUAL GROWTH RATE.

FIGURE 2

PERCENTAGE DISTRIBUTION BY SEX AND AGE OF POPULATION IN THREE AMERICAN COUNTRIES, RECENT CENSUS



Growth rates in other areas of the Americas showed considerable variation and in general were lower than those for the countries. The highest were for the two areas without censuses in the 1960's, Surinam and the Bahama Islands. For only four was the increase greater than 3 per cent and for five between 2 and 2.9. For the remainder, growth was less marked; for nine between 1 and 1.9 per cent, for four between 0 and 0.9 per cent, and for three decreases were recorded.

Populations in countries of the Americas vary widely in their age distributions. The percentage distributions by age groups are given for countries for which tabulations have already been published, based on a recent census or on a sample from the census (Table 3). Such age distributions will undoubtedly be used in the period until the next census for the estimation of age distributions. In the twelve

TABLE 2. POPULATION DATA FROM CENSUSES AROUND 1950 AND 1960 WITH ANNUAL RATE OF INCREASE IN THE DECADE, IN THE AMERICAS

Area	Date	Population	Date	Population	Annual rate of increase
Argentina	10 V 1947	15 893 827	30 IX 1960	20 005 691	1.7
Bolivia	5 IX 1950	2 704 165	a) 1 VII 1960	a) 3 453 000	b) 1.4
Brazil	1 VII 1950	51 976 357	1 IX 1960	70 967 185	3.1
Canada	1 VI 1951	14 009 429	1 VI 1961	18 238 247	2.7
Chile	24 IV 1952	5 932 995	29 XI 1960	7 339 546	2.5
Colombia	9 V 1951	11 548 172	VII 1964	a) 14 132 000	2.2
Costa Rica	22 V 1950	800 875	1 IV 1963	1 325 155	4.0
Cuba	28 I 1953	5 829 029	a) 1 VII 1960	a) 6 797 000	2.1
Dominican Republic	6 VIII 1950	2 135 872	7 VIII 1960	3 013 525	3.5
Ecuador	29 XI 1950	3 202 757	25 XI 1962	4 581 476	3.1
El Salvador	13 VI 1950	1 855 917	2 V 1961	2 510 984	2.8
Guatemala	18 IV 1950	2 790 868	18-26 IV 1964	4 278 000	3.0
Haiti	7 VIII 1950	3 097 304	a) 1 VII 1960	a) 4 156 000	3.0
Honduras	18 VI 1950	1 368 605	17 IV 1961	1 883 362	3.0
Jamaica	X-XI 1953	1 486 723	7 IV 1960	1 613 880	1.3
Mexico	6 VI 1950	25 791 017	8 VI 1960	34 923 129	3.1
Nicaragua	31 V 1950	1 057 023	25 IV 1963	1 524 027	3.3
Panama	10 XII 1950	805 285	11 XII 1960	1 075 541	2.9
Paraguay	28 X 1950	1 341 333	14 IX 1962	1 816 890	2.6
Peru	9 VI 1940	6 207 967	2 VII 1961	10 364 620	2.5
Trinidad and Tobago	9 IV 1946	557 970	7 IV 1960	827 957	2.9
United States	1 IV 1950	151 325 798	1 IV 1960	179 323 175	1.6
Uruguay	12 X 1908	1 042 686	16 X 1963	2 556 020	1.6
Venezuela	26 XI 1950	5 034 838	26 II 1961	7 523 999	4.0
Antigua	9 IV 1946	41 757	7 IV 1960	54 304	1.9
Bahama Islands	6 XII 1953	84 841	a) 1 VII 1960	a) 105 000	3.3
Barbados	9 IV 1946	192 800	7 IV 1960	232 333	1.3
Bermuda	22 X 1950	37 403	23 X 1960	42 640	1.3
British Guiana	9 IV 1946	375 701	7 IV 1960	560 620	2.9
British Honduras	9 IV 1946	59 220	7 IV 1960	90 381	3.1
Canal Zone	1 IV 1950	52 822	1 IV 1960	42 122	- 2.2
Cayman Islands	IV-VI 1964	7 503	7 IV 1960	7 622	0.3
Dominica	9 IV 1946	47 624	7 IV 1960	59 916	1.7
Falkland Islands	28 III 1953	2 230	18 III 1962	2 172	- 0.3
French Guiana	1 VII 1954	27 863	9 X 1961	33 505	2.6
Grenada	9 IV 1946	72 387	7 IV 1960	88 677	1.5
Guadeloupe	1 VII 1954	229 120	9 X 1961	283 000	2.9
Martinique	1 VII 1954	239 130	9 X 1961	292 000	2.8
Montserrat	9 IV 1946	14 333	7 IV 1960	12 108	- 1.2
Netherlands Antilles	31 VII 1930	76 304	31 XII 1960	188 914	3.1
Puerto Rico	1 IV 1950	2 210 703	1 IV 1960	2 349 544	0.6
St. Kitts-Nevis-Anguilla	9 IV 1946	46 243	7 IV 1960	56 591	1.5
St. Lucia	9 IV 1946	70 113	7 IV 1960	86 108	1.5
St. Pierre and Miquelon	14 V 1951	4 606	IV 1962	4 990	0.7
St. Vincent	9 IV 1946	61 647	7 IV 1960	79 948	1.9
Surinam	31 X 1950	183 681	a) 1 VII 1960	a) 270 000	4.1
Turks and Caicos Islands	IV-VI 1954	5 052	7 IV 1960	5 716	2.1
Virgin Islands (U. K.)	9 IV 1946	6 505	7 IV 1960	7 340	0.9
Virgin Islands (U. S.)	1 IV 1950	26 665	1 IV 1960	32 099	1.9

Note: Rate of increase for period between two dates shown.

(a) No recent census or data not yet available; estimated midyear population for 1960 used instead.

(b) Based on estimates not on 1950 census.

TABLE 3. PERCENTAGE DISTRIBUTION OF POPULATION BY AGE GROUP BASED ON CENSUSES TAKEN AROUND 1960 IN THE AMERICAS

Area	Total	Age in years										
		Under 5	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75 and over	Not stated	
Argentina (a)	100	21.10	18.08	15.22	15.07	11.95	9.40	8.94				.25
Canada	100	12.37	21.58	14.34	13.60	13.10	10.30	7.07	4.88	2.75		
Chile	100	15.13	24.66	18.01	13.53	10.62	8.44	5.35	4.26			
El Salvador	100	17.24	27.58	17.90	13.10	10.03	6.60	4.30	2.04	1.20	0.03	
Honduras	100	18.98	29.07	18.05	12.67	8.96	5.98	3.67	1.72	0.87	0.04	
Jamaica	100	16.64	24.51	16.75	12.73	10.66	8.98	5.40	2.60	1.72		
Mexico	100	16.54	27.70	18.56	13.05	9.40	6.58	4.42	2.14	1.28	0.33	
Panama	100	16.92	26.54	18.40	13.12	10.17	7.06	4.26	2.33	1.20		
Peru	100	16.82	26.71	18.09	13.67	9.62	6.75	4.49	3.81		0.05	
Trinidad and Tobago	100	15.90	26.50	17.65	12.32	10.70	8.15	4.71	2.83	1.24		
United States	100	11.33	19.78	13.39	12.72	13.43	11.42	8.68	6.13	3.10		
Venezuela	100	17.82	26.98	17.65	14.11	9.80	6.80	4.08	1.80	0.96		
Antigua	100	15.41	27.42	17.39	11.47	9.91	8.82	5.12	2.67	1.79		
Barbados	100	13.97	24.28	16.36	11.08	10.71	10.19	7.00	4.08	2.31		
Bermuda	100	12.39	20.99	15.30	15.70	12.30	10.43	7.00	3.69	1.99	0.23	
British Guiana	100	17.52	23.74	16.78	12.21	9.42	7.28	4.69	2.32	1.04		
British Honduras	100	18.33	26.28	16.22	12.80	9.23	7.83	5.12	2.82	1.38		
Canal Zone	100	11.11	22.97	19.32	13.97	15.94	10.44	4.19	1.25	0.80		
Cayman Islands	100	13.99	21.49	16.24	14.31	10.75	9.09	6.54	4.51	3.07		
Dominica	100	18.69	26.04	16.37	10.65	9.03	8.13	5.58	3.39	2.11		
Falkland Islands (b)	100	10.64	15.52	24.49	15.42	12.29	10.96	6.63	2.81	1.24		
Grenada	100	19.84	27.82	15.85	10.48	8.04	7.57	5.21	3.18	2.02		
Montserrat	100	14.56	23.17	16.77	7.49	8.18	9.16	7.49	4.75	3.44		
Netherland Antilles	100	15.40	25.98	16.44	12.80	10.78	8.88	5.38	2.81	1.54	.01	
Puerto Rico	100	15.08	27.61	17.81	11.19	10.13	7.69	5.28	3.39	1.81		
St. Kitts - Nevis - Anguilla	100	19.03	26.69	14.94	9.90	9.35	9.35	5.76	3.03	1.96		
St. Lucia	100	17.86	26.40	17.51	11.24	9.71	7.55	4.94	2.91	1.88		
St. Pierre and Miquelon	100	9.54	23.09	16.59	13.27	11.90	10.82	7.71	4.55	2.53		
St. Vincent	100	20.28	28.89	16.66	10.44	8.26	6.70	4.56	2.55	1.67		
Turks and Caicos Islands	100	16.69	23.42	13.85	10.48	10.52	8.77	5.47	3.18	2.63		
Virgin Islands (U.K.)	100	18.31	29.58	15.88	9.89	8.79	6.93	4.91	3.66	2.06		
Virgin Islands (U.S.)	100	15.37	24.41	16.04	12.03	10.90	8.60	5.78	4.37	2.50		

Note: Based on samples in some countries.

(a) Age groups: Under 10, 10-19, 20-29, 30-39, 40-49, 50-59, 60 and over.

(b) Age groups: 15-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80 and over.

countries for which data are available the proportion of the total population under 5 years of age varied from 11 to 19 per cent. For the other areas of the Americas the range was similar, from 10 to 20 per cent. The proportion under 15 years of age is lowest in the United States (31 per cent) and highest in Honduras (48 per cent). The distributions of the populations of Canada and Argentina are those most nearly similar to that of the United States. At the other end of the age span the proportion in the age group of 65 years and over ranges from over 9 to less than 3 per cent of the population, the highest being for the United States and the lowest for Honduras. Three countries were selected to show in Figure 2 the differing pat-

terns of age structure in the Region — the two extremes, United States and Honduras, and Chile which has an intermediate distribution.

Knowledge of the geographic distribution of the population is essential in planning and evaluating health programs and in assessing the adequacy of the resources available and their distribution. During the past decade there have been high growth rates, due in part to migration, in urban areas, and the problems presented in large cities are frequently emphasized. The urban-rural distribution is also a highly variable factor in the countries of the Americas. In a few a high proportion of the population resides in large cities and smaller urban areas but in others the

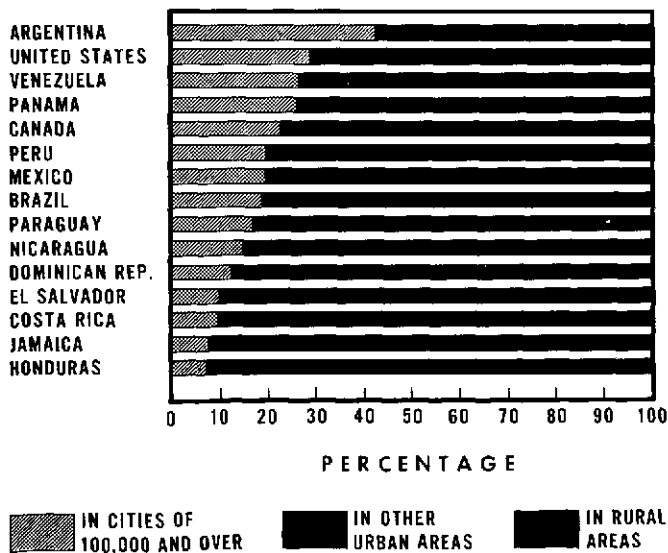
TABLE 4. PERCENTAGE OF POPULATION LIVING IN CITIES WITH 100,000 OR MORE INHABITANTS, IN OTHER URBAN AND IN RURAL AREAS, IN 15 COUNTRIES OF THE AMERICAS, ACCORDING TO CENSUSES AROUND 1960

Country	In cities of 100,000 or more	In other urban areas	In rural areas
Argentina	42.8	a) 23.6	a) 33.6
Brazil	18.8	21.6	59.6
Canada	22.8	33.0	44.2
Costa Rica	9.4	25.1	65.5
Dominican Republic	12.2	18.3	69.5
El Salvador	9.9	28.6	61.5
Honduras	7.1	15.4	77.5
Jamaica	7.7	24.5	67.8
Mexico	19.2	31.5	49.3
Nicaragua	14.8	26.3	58.9
Panama	25.4	17.3	57.3
Paraguay	16.8	18.8	64.4
Peru	19.6	27.5	52.9
United States	28.4	36.7	34.9
Venezuela	26.9	36.8	36.3

a) Estimated.

FIGURE 3

PERCENTAGE OF POPULATION LIVING IN CITIES WITH 100,000 OR MORE INHABITANTS, IN OTHER URBAN AREAS AND IN RURAL AREAS, ACCORDING TO CENSUSES TAKEN AROUND 1960



opposite situation exists, large proportions living in rural sections. Material from recent censuses showing the percentage of population living in cities of 100,000 and over, in other urban areas, and in rural areas is presented in Table 4 and Figure 3. In Argentina almost 43 per cent of the population lives in cities of at least 100,000 inhabitants while only 34 per cent lives in rural areas. This represents a greater

FIGURE 4

PERCENTAGE DISTRIBUTION OF LABOR FORCE INTO THREE SECTORS IN COUNTRIES IN THE THREE REGIONS OF THE AMERICAS, 1960

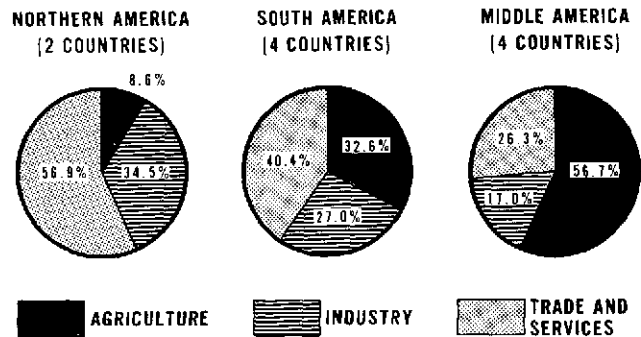


FIGURE 5

PER CAPITA NATIONAL INCOME IN THE THREE REGIONS OF THE AMERICAS, 1962

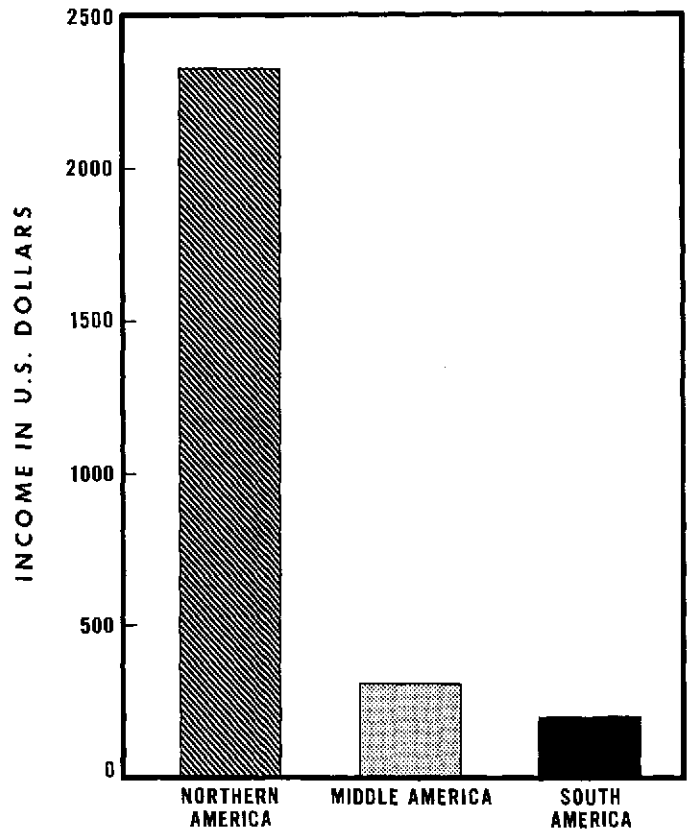


TABLE 5. PERCENTAGE DISTRIBUTION OF THE LABOR FORCE INTO THREE SECTORS, IN TEN COUNTRIES OF THE AMERICAS, ACCORDING TO CENSUSES AROUND 1960

Country	Total		Agriculture and mining		Industry and construction		Trade and services		Not stated	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Argentina	7 599 000	100	1 504 000	19.8	2 339 000	30.8	2 988 000	39.3	768 000	10.1
Canada	6 472 000	100	907 000	14.0	1 836 000	28.4	3 570 000	55.2	159 000	2.5
Chile	2 356 000	100	745 000	31.6	571 000	24.2	914 000	38.8	126 000	5.3
El Salvador	807 000	100	486 000	60.2	135 000	16.7	178 000	22.1	8 000	1.0
Honduras	580 000	100	383 000	66.0	55 000	9.5	106 000	18.3	36 000	6.2
Mexico	11 332 000	100	6 287 000	55.5	1 965 000	17.3	2 999 000	26.5	81 000	0.7
Panama	311 000	100	156 000	50.2	40 000	12.9	110 000	35.4	5 000	1.6
Peru	3 034 000	100	1 559 000	51.4	512 000	16.9	840 000	27.7	123 000	4.1
United States	69 877 000	100	5 233 000	7.5	22 838 000	32.7	37 072 000	53.1	4 734 000	6.8
Venezuela	2 407 000	100	820 000	34.1	423 000	17.6	1 008 000	41.9	156 000	6.4

TABLE 6. PER CAPITA NATIONAL INCOME IN THE THREE REGIONS OF THE AMERICAS, 1962

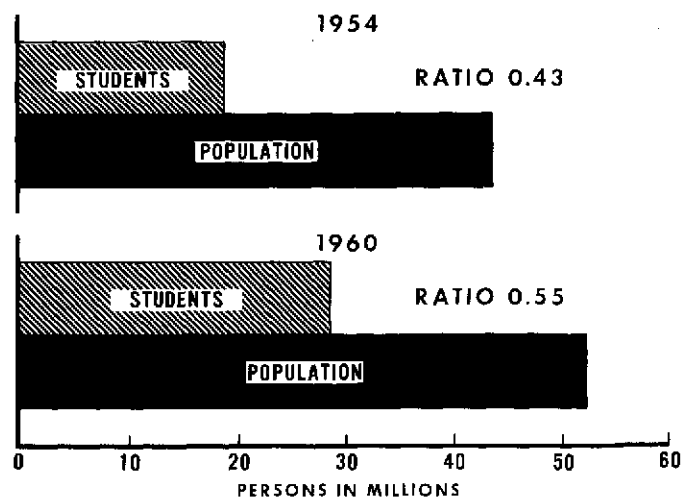
Region and country	National income			Per capita income in US\$
	National currency	Total (millions)	Per capita	
Northern America				2 338
Canada	Dollar	30 400	1 634	1 516
United States	Dollar	450 000	2 421	2 421
Middle America				311
Costa Rica	Colon	2 661	2 089	314
Dominican Republic	Peso	616	191	191
El Salvador	Colon	1 402	534	213
Guatemala	Quetzal	612	152	152
Honduras	Lempira	732	375	187
Jamaica	Pound	225	137	384
Mexico	Peso	160 500	4 311	344
Nicaragua	Cordoba	2 936	1 861	254
Panama	Balboa	427	373	373
Trinidad and Tobago	Dollar	779	871	508
South America				200
Argentina	Peso	906 000	42 301	315
Brazil (a)	Cruzeiro	1 879 000	28 608	130
Chile	Escudo	5 306	661	273
Colombia	Peso	28 200	1 909	172
Ecuador	Sucre	13 400	2 925	132
Paraguay	Guarani	27 300	14 701	117
Peru	Sol	49 400	4 652	173
Venezuela	Bolivar	20 900	2 655	585

(a) For 1960.

degree of urbanization than in the United States where only 28 per cent is in comparable large cities and 35 per cent in rural areas. Venezuela is fairly similar to the United States in its urban-rural distribution. At the other extreme, in Honduras, only 7 per cent

FIGURE 6

STUDENTS IN PRIMARY AND SECONDARY SCHOOLS AND POPULATION IN AGE GROUP 5-14 YEARS WITH RATIO OF STUDENTS TO POPULATION IN LATIN AMERICA, 1954 AND 1960



lives in a city of 100,000 population and 78 per cent resides in rural areas. In general the distributions shown emphasize that a large proportion of the population of Latin American countries is living in rural areas and health services must be provided which are adapted to this environment. It can be estimated from the available data that close to 60 per cent of the population in Latin America lives in rural areas, essentially in communities of less than 2,000 population. (The definitions of rural in the data shown are not always uniform.)

Closely related to the urban-rural distribution

TABLE 7. NUMBER ATTENDING PRIMARY AND SECONDARY SCHOOLS AND RATIO TO POPULATION OF 5-14 YEARS OF AGE, IN THE AMERICAS, RECENT YEARS

Country	Year	Population 5-14 years of age	Students in primary and secondary schools	
			Number	Ratio
Argentina	1960	4 032 000	2 984 308	0.74
Bolivia	1960	824 000	380 853	0.46
Brazil	1961	18 674 789	8 795 064	0.47
Canada	1959	3 780 967	a) 4 010 471	1.06
Chile	1960	1 907 600	1 315 646	0.69
Colombia	1960	3 659 000	1 830 690	0.50
Costa Rica	1961	321 900	236 879	0.73
Cuba	1960	1 543 000	1 323 264	0.86
Dominican Republic	1961	837 906	b) 519 827	0.62
Ecuador	1959	1 110 866	603 860	0.54
El Salvador	1960	676 856	342 121	0.50
Guatemala	1961	988 788	350 008	0.35
Haiti	1959	1 018 206	252 519	0.25
Honduras	1961	542 560	234 759	0.43
Jamaica	1960	397 000	c) 279 260	0.70
Mexico	1960	9 875 360	5 148 195	0.53
Nicaragua	1958	368 524	134 250	0.36
Panama	1961	295 308	199 593	0.68
Paraguay	1960	422 000	315 138	0.75
Peru	1959	2 637 055	1 533 014	0.58
Trinidad and Tobago	1961	229 800	202 847	0.88
United States	1960	35 465 272	b) 40 698 000	1.14
Uruguay	1959	543 008	380 182	0.70
Venezuela	1959	1 921 374	1 162 314	0.60

(a) Including public schools offering technical courses with programs at secondary level. (b) Including technical education. (c) Not including unaided schools.

TABLE 8. NUMBER AND PERCENTAGE LITERATE OF POPULATION 15 YEARS OF AGE AND OVER IN NINE COUNTRIES OF THE AMERICAS

Country	Year	Population 15 Years and over	Literate Population	Percentage Literate
Argentina (a)	1960	14 199 299	12 925 652	91.0
Chile (b)	1960	4 440 800	3 711 700	83.6
Ecuador (b)	1962	2 478 133	1 667 799	67.3
El Salvador (b, c)	1961	1 694 880	813 470	48.0
Honduras (b)	1961	969 700	432 200	44.6
Mexico	1960	19 471 022	12 728 102	65.4
Panama (c)	1960	698 624	546 818	78.3
United States (a, d)	1959	121 373 000	118 754 000	97.8
Venezuela (b)	1961	4 153 275	2 677 550	64.5

(a) Data for population 14 years and over. (b) Based on a sample. (c) Data for population 10 years and over. (d) Based on a special sample survey.

of the population is the division of the labor force into three sectors of activity, (Table 5 and Figure 4). Since the population of Latin America is predominantly a rural one it is to be expected that a large proportion of the economically active population is

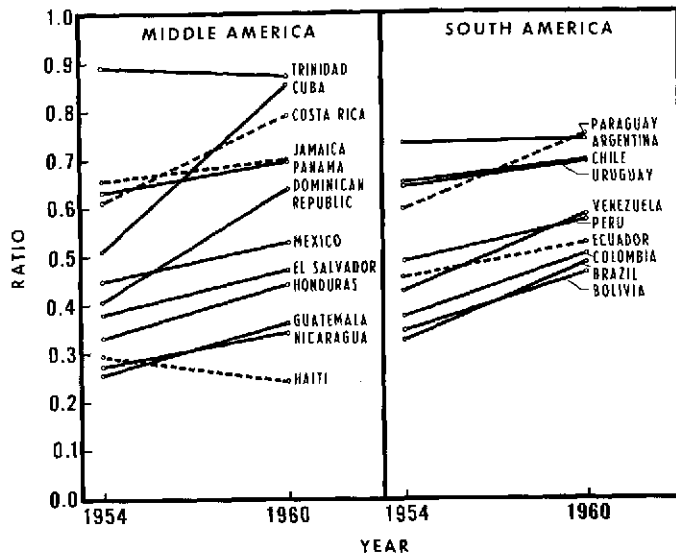
TABLE 9. ESTIMATED MIDYEAR POPULATIONS IN THE AMERICAS, 1960-1963

Area	1960	1961	1962	1963
Argentina	a)20 744 000	21 078 000	21 418 000	21 762 000
Bolivia	3 453 000	3 500 000	3 549 000	3 596 000
Brazil b)	70 619 000	72 729 000	74 902 000	77 141 000
Canada	17 909 000	18 269 000	18 600 000	18 928 000
Chile	7 738 000	7 938 000	8 029 000	8 222 000
Colombia	14 132 000	14 443 000	14 769 000	15 098 000
Costa Rica	1 171 000	1 225 000	1 274 000	1 338 000
Cuba	6 797 000	6 933 000	7 068 000	7 203 000
Dominican Republic	2 999 000	3 110 000	3 220 000	3 334 000
Ecuador	4 317 000	4 455 000	4 581 000	4 728 000
El Salvador	b) 2 454 000	2 523 000	2 627 000	2 721 000
Guatemala	3 765 000	3 886 000	4 017 000	4 095 000
Haiti	4 156 000	4 249 000	4 348 000	4 448 000
Honduras	1 833 000	1 893 000	1 950 000	2 008 000
Jamaica	b) 1 620 000	1 634 000	1 641 000	1 687 000
Mexico	34 988 000	36 091 000	37 233 000	38 418 000
Nicaragua	1 477 000	1 526 000	1 578 000	a) 1 628 000
Panama	1 062 000	1 115 000	1 146 000	1 177 000
Paraguay	1 768 000	1 812 000	1 857 000	1 903 000
Peru c)	10 116 000	10 365 000	10 620 000	10 881 000
Trinidad and Tobago	841 000	867 000	894 000	d) 921 000
United States	178 992 000	183 057 000	185 890 000	188 616 000
Uruguay	2 832 000	2 873 000	2 914 000	a) 2 955 000
Venezuela	7 364 000	7 612 000	7 872 000	8 144 000
Antigua	54 000	56 000	58 000	60 000
Bahama Islands	105 000	108 000	111 000	114 000
Barbados	232 000	232 000	232 000	235 000
Bermuda	44 000	45 000	46 000	47 000
British Guiana	567 000	583 000	598 000	612 000
British Honduras	90 000	94 000	96 000	99 000
Canal Zone	42 000	43 000	45 000	50 000
Cayman Islands	8 000	8 000	8 000	8 000
Dominica	60 000	61 000	61 000	62 000
Falkland Islands	2 000	2 000	2 000	2 000
French Guiana	b) 33 000	34 000	34 000	35 000
Grenada	89 000	90 000	91 000	91 000
Guadeloupe	269 000	279 000	289 000	297 000
Martinique	b) 283 000	290 000	297 000	303 000
Montserrat	12 000	13 000	13 000	13 000
Netherlands Antilles	190 000	194 000	198 000	202 000
Puerto Rico	2 362 000	2 409 000	2 460 000	2 513 000
St. Kitts, Nevis, Anguilla	57 000	59 000	60 000	61 000
St. Lucia	86 000	89 000	92 000	95 000
St. Pierre and Miquelon	5 000	5 000	5 000	5 000
St. Vincent	80 000	82 000	82 000	82 000
Surinam	270 000	283 000	307 000	330 000
Turks and Caicos Islands	6 000	6 000	6 000	6 000
Virgin Islands (U. K.)	7 000	8 000	8 000	9 000
Virgin Islands (U. S.)	32 000	33 000	35 000	37 000

a) Census figure inconsistent with series; replaced with previous estimate; b) Differs from UN publications; c) Series estimated on basis of growth between last two censuses; d) PAHO estimate Sources: United Nations, *Monthly Bulletin of Statistics*, June 1964; *Population and Vital Statistics Reports*, Statistical Papers, Series A, April 1, 1964; *Demographic Yearbook*, 1962 For the territories, figures for 1963 are mainly PAHO estimates based on U.N. series.

FIGURE 7

RATIO OF STUDENTS IN PRIMARY AND SECONDARY SCHOOLS TO POPULATION IN AGE GROUP 5-14 YEARS IN LATIN AMERICAN COUNTRIES, 1954 AND 1960



employed in agriculture. For the three regions of the Americas the distribution of the labor force into three sectors, namely, agriculture, industry, and trades and services is shown. Three rather distinctive patterns emerge with Northern and Middle America at the extremes and South America in the intermediate position. In Northern America only 8.6 per cent of the economically active population is employed in agriculture and mining as compared to 32.6 in South and 56.7 per cent in Middle America. Industry accounts for over one third of the employed in Northern

America (34.5 per cent), 27.0 per cent in South and 17.0 per cent in Middle America. As regards the remaining sector, trade and services, the largest proportion is found in Northern America, 56.9 per cent, as against 40.4 per cent in South and 26.3 per cent in Middle America. Per capita national income in a recent year, 1962, (Table 6 and Figure 5) reflects the high employment in agriculture and the resulting low income in many countries.

Another factor closely related to both health and demography is the educational level of the population. One measure commonly used is the ratio of the number of primary and secondary school students to the population in the age group 5-14 years. The limitations of the ratio are recognized. The students may not necessarily be from the age group specified and also the younger children in the group may not be admitted to school, for example those of 5 years of age. A second indicator often used is the proportion literate of the population over fifteen years of age.

As shown in Figure 6 the ratio of school attendance to the population 5-14 years of age has been increasing in Latin America and by 1960 had reached a ratio of 0.55. The range was wide from 0.87 in Trinidad and Tobago and 0.86 in Cuba to a low of 0.24. Data already available are given in Tables 7 and 8 and in Figure 7.

A basic population table (Table 9) has been prepared for the years 1960-1963 for countries and other areas of the Americas, which has been used for calculations in this report. For the most part these data are taken from estimates published by the United Nations. Occasionally when only provisional figures were available from recent censuses, previous estimations were retained to provide consistency in consecutive years.

BIRTHS

Registered birth rates in the three regions of the Americas have shown little change in the past decade, remaining throughout at approximately the same levels. A decrease is observed in Northern America from a rate of slightly over 25 per 1,000 population in the period 1953-1957 to a low of 22.7 in 1962 (Figure 8). In Middle and South America rates have remained at about 43 and 34 per 1,000 population respectively. Completeness of birth registration and the procedures and requirements for registration vary widely among the countries in the Region. Estimates

point to underregistration in many areas, which in a few countries may amount to nearly 50 per cent of the total births. This stresses the value of the improvement of birth registration to obtain reliable data for planning and evaluating health services as well as for use in other fields.

In Table 10 are presented for 1961 and 1962 the numbers of live births with rates per 1,000 population for all areas of the Americas except Haiti and Brazil. Shown in the table for Brazil are data for the State of São Paulo with a population in 1961 of over 13 million

and for the city of Recife (State of Pernambuco) with a population of 867,000.

In nine of the countries, registered birth rates exceeded 40 per 1,000 population and in another eight they were between 30 and 40 per 1,000. The highest registered rates, close to 50 per 1,000, were in countries of Middle America — Costa Rica, El

Salvador and Guatemala. The lowest were in Argentina, United States and Uruguay, approximately 22 per 1,000 population. The areas other than countries showed similar variation with birth rates ranging from 16 to 49 per 1,000 population. In seven areas the rates were in excess of 40 per 1,000.

TABLE 10. NUMBER OF LIVE BIRTHS WITH RATES PER 1,000 POPULATION IN THE AMERICAS, 1961-1962

Area	Number		Rate		Area	Number		Rate	
	1961	1962	1961	1962		1961	1962	1961	1962
Northern America	4 745 303	4 638 359	23.6	22.7	Antigua	1 768	1 787	31.6	30.8
Middle America (a)	2 749 469	2 706 028	42.4	42.6	Bahama Islands	2 943	2 865	27.3	31.2
South America (b)	2 947 006	2 037 847	34.1	33.7	Barbados	6 805	6 883	29.3	29.7
Argentina	* 470 214	* 472 899	* 22.3	* 22.1	Bermuda	1 184	1 185	26.3	25.8
Bolivia	* 93 145	...	* 26.6	...	British Guiana	* 22 864	24 012	* 39.2	40.2
Brazil (c)	471 689	...	33.0	...	British Honduras	4 244	4 461	45.1	46.5
Canada	475 700	469 693	26.0	25.3	Canal Zone	781	735	18.2	16.3
Chile	263 985	275 960	33.3	34.4	Cayman Islands	277	290	34.6	36.3
Colombia	626 120	658 104	43.4	44.6	Dominica	...	2 566	...	42.1
Costa Rica (d)	57 385	53 720	50.7	49.2	Falkland Islands	48	49	24.0	24.5
Cuba (e)	225 400	236 653	32.5	33.5	French Guiana	1 066	1 099	31.4	32.3
Dominican Republic	102 585	...	33.0	...	Grenada	3 691	3 419	41.0	37.6
Ecuador	* 199 081	* 202 995	* 44.7	* 44.3	Guadeloupe	10 047	10 914	36.0	37.8
El Salvador	124 871	127 315	49.5	48.5	Martinique	10 488	10 641	36.2	35.8
Guatemala	* 193 883	* 191 420	* 49.9	* 47.7	Montserrat	335	324	25.8	24.9
Haiti	...	...	...	...	Netherlands Antilles	6 338	6 529	33.7	32.9
Honduras	85 842	92 128	45.3	47.2	Puerto Rico	75 418	76 596	30.3	31.4
Jamaica	* 66 945	* 66 948	* 41.0	* 40.8	St. Kitts - Nevis and Anguilla	2 038	2 112	34.5	35.2
Mexico	1 621 917	1 662 790	44.9	44.7	St. Lucia	4 011	3 935	45.1	42.8
Nicaragua	59 582	60 020	39.0	38.0	St. Pierre and Miquelon	93	119	18.6	23.8
Panama	43 200	44 960	38.7	39.2	St. Vincent	3 986	...	48.6	...
Paraguay	49 405	...	27.3	...	Surinam	12 600	...	44.5	...
Peru	396 356	...	38.2	...	Turks and Caicos Islands	244	252	40.7	42.0
Trinidad and Tobago	32 991	34 111	38.1	38.2	Virgin Islands (U.K.)	261	283	32.6	35.4
United States	4 268 326	4 167 362	23.3	22.4	Virgin Islands (U.S.)	1 193	1 371	36.2	39.2
Uruguay	...	* 65 450	...	* 22.5					
Venezuela	* 340 433	* 337 279	* 44.7	* 42.8					

* Provisional.

(a) Excludes Haiti and Dominica in 1961 and Dominican Republic, Haiti and St. Vincent in 1962. (b) Excludes Uruguay in 1961, and Bolivia, Brazil, Paraguay, Peru and Surinam in 1962. (c) Data for the State of São Paulo and the city of Recife.

(d) By year of occurrence. (e) Estimated by country.

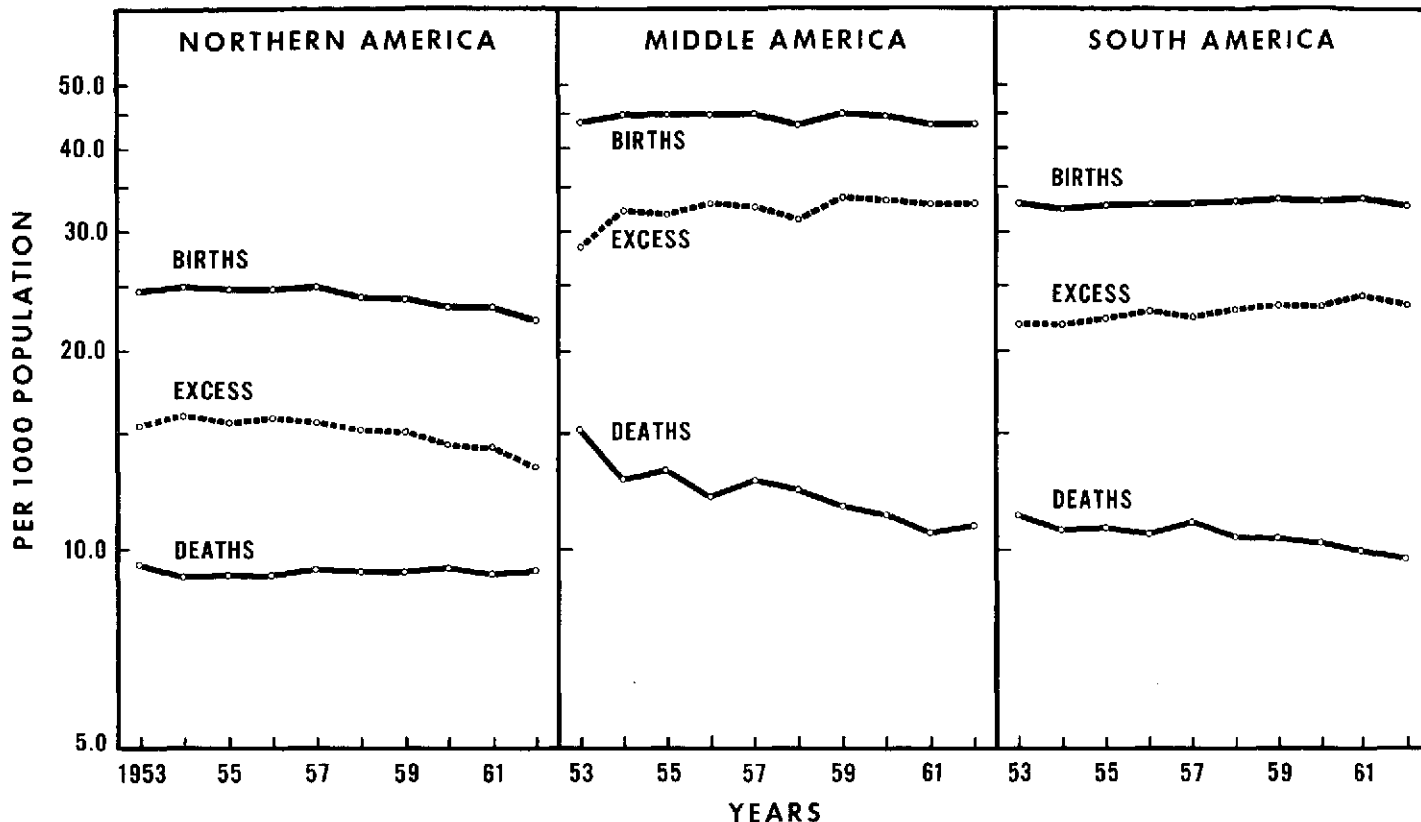
DEATHS

Crude death rates for the three regions of the Americas — that is the number of deaths per 1,000 population of all ages — are at present similar in magnitude. In 1962 the death rate for Northern America was 9.3 per 1,000 population, for Middle America

10.3 and for South America 9.6. Despite the overall similarity there do exist wide variations in mortality in the Region which are not apparent due to differences in the completeness of registration of deaths and in the age distributions of the populations.

FIGURE 8

**BIRTHS, DEATHS AND EXCESS OF BIRTHS OVER DEATHS PER 1000 POPULATION
IN THE THREE REGIONS OF THE AMERICAS, 1953-1962**



In Table 11 the numbers of deaths with rates per 1,000 population are shown for 1961 and 1962 for all countries and other areas of the Americas with the exception of Haiti and Brazil. For Brazil mortality data for the State of Sao Paulo and the cities of Rio de Janeiro (State of Guanabara) and Recife (State of Pernambuco) with a combined population in 1961 of almost 18 million are presented. In the countries of the Region mortality rates varied in 1962 from 6.8 per 1,000 population in Nicaragua to 17.2 in Guatemala. In the other areas the range was from 2.8 to 13.0. For 16 of the 23 countries for which rates are shown the mortality was less than 10 per 1,000 population. Similarly in 18 of the 25 territories mortality had fallen below 10 per 1,000 by 1962.

In Figure 8 is shown the trend of the crude death rates in the three regions from 1953 through 1962. No change is observable in Northern America where

each year the proportion of persons increases in the older age groups in which mortality rates are highest. However age adjustment produces death rates which decrease by approximately 10 per cent in the decade (1). While the crude death rate in Northern America has remained unchanged that in Middle America has decreased by 25 per cent in the same decade and that in South America by 15 per cent.

Data on causes of death are available for 22 of the countries and 18 of the other areas of the Region for 1962 or for an earlier year. Causes of death are given in accordance with a slight expansion of the B List of the International Classification of Diseases. The main sources of data are the questionnaires completed by the countries in response to the requests from the Pan American Health Organization and the World Health Organization for the Supplement to the Second Report on the World Health Situation, 1961-

(1) Trends, 1963, U.S. Health, Education and Welfare Department, Washington D. C.

1962, and for annual mortality tabulations in accordance with the A List of the Classification. In a few instances data were supplemented from other sources.

The numbers of deaths from specific causes are given in Table 12 and the rates per 100,000 population in Table 13. An understanding of the limitations of these data, of the extent and quality of the medical certification, is essential for their interpretation and use. In spite of their limitations these data furnish useful indices for the evaluation of health conditions in the Region and of the quality of the statistical information.

As in previous reports the first five principal causes of death have been determined for each country

(Table 14). The method of grouping used for selection of the principal causes is that recommended by Curiel which excludes residual groups of diseases and the ill defined and unknown causes (2).

In the last decade a noticeable change has been observed in the leading causes of death with a shift away from the communicable diseases as the leading causes. In five of the 22 countries gastritis and enteritis, mainly infectious in origin, retains its importance as the leading cause and in five influenza and pneumonia is the principal cause of mortality. However in seven countries diseases of the heart is now the first cause and in two malignant neoplasms.

TABLE 11. NUMBER OF DEATHS WITH RATES PER 1,000 POPULATION IN THE AMERICAS, 1961-1962

Area	Number		Rate		Area	Number		Rate	
	1961	1962	1961	1962		1961	1962	1961	1962
Northern America	1 842 858	1 900 840	9.2	9.3	Antigua	503	405	9.0	7.0
Middle America (a)	651 592	649 221	10.0	10.3	Bahama Islands	1 024	...	9.5	...
South America (b)	897 846	729 699	9.7	9.6	Barbados	2 410	2 116	10.4	9.1
Argentina	* 172 079	* 171 981	* 8.2	* 8.0	Bermuda	306	368	6.8	8.0
Bolivia	* 29 700	...	* 8.5	...	British Guiana	4 982	...	8.5	...
Brazil (c)	162 710	136 840	9.2	9.3	British Honduras	708	853	7.5	8.9
Canada	140 985	143 699	7.7	7.7	Canal Zone	122	126	2.8	2.8
Chile	91 551	94 569	11.5	11.8	Cayman Islands	68	51	8.5	6.4
Colombia	175 612	177 208	12.2	12.0	Dominica	...	658	...	10.8
Costa Rica	9 726	10 861	7.9	8.5	Falkland Islands	26	24	13.0	12.0
Cuba	44 611	49 173	6.4	7.0	French Guiana	487	...	14.3	...
Dominican Republic	26 018	...	8.4	...	Grenada	1 022	840	11.4	9.2
Ecuador	* 61 071	* 61 995	* 13.7	* 13.5	Guadeloupe	2 367	2 392	8.5	8.3
El Salvador	28 491	30 136	11.3	11.5	Martinique	2 372	2 179	8.2	7.3
Guatemala	* 63 287	* 69 287	* 16.3	* 17.2	Montserrat	136	128	10.5	9.8
Haiti	...	...	...	...	Netherlands Antilles	896	...	4.6	...
Honduras	18 045	18 650	9.5	9.6	Puerto Rico	16 364	16 548	6.8	6.7
Jamaica	* 14 193	* 14 844	* 8.7	* 9.0	St. Kitts- Nevis and	...	...	...	...
Mexico	388 857	* 402 488	10.8	* 10.8	Anguilla	711	587	12.1	9.8
Nicaragua	11 381	10 729	7.5	6.8	St. Lucia	1 228	1 186	13.8	13.0
Panama	8 529	8 054	7.6	7.0	St. Pierre and	...	...	...	...
Paraguay (d)	9 285	9 311	10.1	9.7	Miquelon	45	53	9.0	10.6
Peru	110 613	...	10.7	...	St. Vincent	1 024	...	12.5	...
Trinidad and Tobago	6 999	6 465	8.1	7.2	Surinam	2 310	...	8.2	...
United States	1 701 522	1 756 720	9.3	9.5	Turks and Caicos	...	...	...	...
Uruguay	21 954	22 833	7.6	7.8	Islands	63	72	10.5	12.0
Venezuela	55 466	54 938	7.3	7.0	Virgin Islands (U. K.)	111	70	13.9	9.9
					Virgin Islands (U. S.)	326	321	9.9	9.2

* Provisional

(a) Excludes Haiti and Dominica in 1961 and Dominican Republic, Haiti, Bahama Islands, Netherlands Antilles and St. Vincent in 1962. (b) Excludes Bolivia, Peru, British Guiana, French Guiana and Surinam in 1962. (c) Data for State of Sao Paulo and cities of Recife and Rio de Janeiro. (d) Area of information only.

(2) Curiel, D., *Causas Principales de Muerte, Boletín de la Oficina Sanitaria Panamericana*, Vol. XI, No. 3, March 1956.

TABLE 12. NUMBER OF DEATHS FROM SPECIFIC CAUSES IN THE AMERICAS

Cause	Argentina 1960	Brazil 1961 (a)	Canada 1962	Chile 1962	Colombia 1962 (b)	Costa Rica 1962	Cuba 1960	Dominican Republic 1961	Ecuador 1960	El Salvador 1962 (b)	Guatemala 1962 (b)
Total deaths	170 195	162 710	143 699	94 569	177 208	10 861	c) 42 244	d) 6 018	61 054	30 136	69 287
Tuberculosis, all forms 001-019	3 363	6 176	785	3 906	4 260	151	1 054	457	1 290	371	1 261
Syphilis and its sequelae 020-029	212	885	129	153	195	8	97	121	44	91	4
Typhoid fever 040	76	...	2	230	659	10	41	123	758	47	290
Paratyphoid fever and other salmonella infections 041, 042	...	...	6	16	80	2	20	...	42	1	13
Dysentery, all forms 045-048	74	970	17	61	971	35	36	108	340	121	1 440
Scarlet fever and streptococcal sore throat 050, 051	6	12	8	41	14	1	1	1	-	...	9
Diphtheria 055	212	431	9	353	359	38	47	106	100	24	54
Whooping cough 056	302	308	24	185	2 371	66	72	24	3 621	435	3 675
Meningococcal infections 057	43	90	40	19	29	8	8	1	1	-	-
Plague 058	...	...	-	-	-	-	-	-	5	-	-
Leprosy 060	...	377	-	-	130	-	39	...	7	1	1
Tetanus 061	...	2 008	5	33	2 106	204	311	...	1 058	511	259
Yaws 073	...	...	-	-	-	-	-	...	-	-	-
Acute poliomyelitis 080	127	209	7	108	68	12	32	9	26	4	29
Smallpox 084	2	59	-	-	31	-	-	-	298	-	1
Measles 085	266	1 113	81	2 455	2 050	255	74	32	2 364	672	2 149
Yellow fever 091	...	...	-	-	38	-	-	-	3	-	-
Rabies 094	13	35	-	6	35	-	-	2	11	6	10
Typhus and other rickett diseases 100-108	14	1	-	8	682	3	-	-	35	-	1
Malaria 110-117	12	16	1	-	1 202	8	16	443	581	340 e)	4 344
All other infective and parasitic diseases Residual	1 409	3 368	393	794	3 916	317	396	895	764	233	3 987
Malignant neoplasms, etc. 140-205	23 959	12 56	24 519	7 831	7 473	944	6 526	660	1 514	573	1 041
Benign and unspecified neoplasms 210-239	2 079	626	357	358	1 487	57	229	37	100	55	155
Diseases of thyroid gland 250-254	f) ...	...	g) 50	20	g) 100	4	29	...	10	11	6
Diabetes mellitus 260	1 500	1 753	2 169	470	782	86	733	83	115	70	108
Avitaminoses and other metabolic diseases 280-289	f) ...	...	h) 59	227	h) 4 072	100	109	...	248	412	1 073
Anemias 290-293	492	292	335	177	2 765	105	247	390	1 175	339	1 573
Vascular lesions affecting central nervous system 330-334	12 106	9 367	15 300	4 218	4 637	306	3 478	204	719	313	279
Non-meningococcal meningitis 340	1 422	806	193	547	1 672	78	157	129	308	48	142
Rheumatic fever 400-402	61	369	49	113	165	12	93	8	25	5	17
Chronic rheumatic heart disease 410-416	268	1 205	1 347	541	589	49	291	29	98	14	21
Arteriosclerotic and degenerative heart disease 420-422	9 028	12 478	44 438	4 227	4 046	498	4 219	273	265	176	618
Other diseases of the heart 430-434	6 500	6 889	2 147	689	5 474	245	2 137	45	994	150	325
Hypertension with heart disease 440-443	...	5 285	2 995	552	1 153	62	...	...	119	...	...
Hypertension without mention of heart 444-447	} 1 550	1 641	876	417	782	41	290	} 279	79	} 27	} 205
Arteriosclerosis 450	...	...	2 469	1 265	...	45	1 598	...	100	28	245
Other diseases of the circulatory system 451-468	...	...	1 594	282	1 818	53	334	...	211	71	63
Influenza 480-483	265	1 401	572	1 039	2 124	139	298	41	2 431	182	5 855
Pneumonia 490-493	6 878	9 461	5 255	15 263	11 572	612	1 675	579	2 998	786	5 636
Bronchitis 500-502	918	1 121	923	549	8 564	292	455	544	5 412	661	1 163
Other diseases of respiratory system 470-475, 510-527	...	...	1 569	1 064	1 460	134	458	...	558	231	233
Ulcer of stomach and duodenum 540, 541	399	659	934	291	900	32	253	38	138	59	61
Appendicitis 550-553	149	108	157	120	160	13	45	9	25	8	45
Intestinal obstruction and hernia 560, 561, 570	1 017	945	862	512	329	61	355	92	430	85	201
Gastritis, enteritis, etc. 543, 571, 572	5 078	13 650	889	4 969	18 852	1 582	2 905	4 107	5 639	1 687	8 976
Cirrhosis of the liver 581	...	2 251	1 052	2 791	789	61	...	...	169	...	...
Other diseases of digestive system Residual	...	...	1 337	1 660	5 265	115	} 1 094	...	1 884	} 3 538	} 1 439
Nephritis and nephrosis 590-594	1 915	2 069	1 462	621	1 902	84	977	207	330	50	242
Other diseases of the genitourinary system 600-637	...	...	1 437	436	829	69	367	...	132	50	80
Complications of pregnancy, childbirth and puerperium 640-689	442	860	191	914	1 509	90	261	156	557	179	457
Congenital malformations 750-759	1 472	2 018	2 896	882	1 402	185	925	87	250	126	159
Certain diseases of early infancy 760-776	10 688	14 627	7 316	15 635	18 468	952	2 621	1 974	3 381	5 474	7 487
Senility, ill-defined, and unknown 760-795	47 552	21 445	12 777	8 023	27 861	1 627	808	8 968	16 281	8 778	10 337
All other diseases Residual	18 056	12 672	3 485	2 385	4 929	262	3 935	1 381	1 156	1 123	1 525
Motor vehicle accidents E810-E835	...	...	4 325	1 140	1 798	71	...	...	395	...	...
All other accidents E800-E802	...	...	...	...	...	...	...	...	...	...	...
Suicide E963, E970-E979	} 10 270	} 9 858	5 759	4 787	5 681	349	} 3 002	} 558	1 956	} 307	} 1 301
Homicide and injury resulting from operations of war E984-E985	...	...	1 331	595	710	30	...	...	13	246	123
from operations of war E980-E999	...	...	266	591	5 393	48	...	...	473	917	569

(a) Data for State of São Paulo, and cities of Recife, and Rio de Janeiro. (b) Provisional. (c) Due to overlapping in certain categories, the total reported for all causes (42, 244) is less than the total (43, 196) obtained by the addition of categories. (d) Total classified by cause amounting to 23, 389 deaths. (e) Includes 4, 266 deaths classified as due to malaria not medically certified. (f) Included in residual all other diseases. (g) Categories 250-252. (h) Categories 280-286 only.

TABLE 12. NUMBER OF DEATHS FROM SPECIFIC CAUSES IN THE AMERICAS (Continued)

Cause	Honduras 1962	Jamaica 1961	Mexico 1961	Nicaragua 1962	Panama 1962 (a)	Paraguay 1962	Peru 1962 (b)	Trinidad and Tobago 1962 (a)	United States 1962	Uruguay 1961	Venezuela 1962		
Total deaths	18 650	14 193	388 857	10 729	8 054	9 311	38 361	8 465	1 756 720	21 954	54 938		
Tuberculosis, all forms	001-019	271	143	9 403	128	249	273	3 164	48	9 506	449	1 255	
Syphilis and its sequelae	020-029	6	135	525	-	7	25	52	41	2 811	95	180	
Typhoid fever	040	61	21	2 341	110	2	6	87	1	15	15	25	
Paratyphoid fever and other													
Salmonella infections	041, 042	-	1	1 093	323	-	5	68	-	62	-	11	
Dysentery, all forms	045-048	74	26	4 329	38	27	69	77	15	323	4	987	
Scarlet fever and streptococcal													
sore throat	050, 051	1	-	104	-	-	2	5	-	102	1	3	
Diphtheria	055	6	7	346	4	7	13	32	4	41	7	50	
Whooping cough	056	300	4	5 452	148	48	23	136	1	83	14	51	
Meningococcal infections	057	-	1	75	-	8	4	9	-	649	6	6	
Plague	058	-	-	-	-	-	-	1	-	-	-	-	
Leprosy	060	4	1	63	-	-	6	1	11	8	3	14	
Tetanus	061	111	129	2 635	398	193	204	306	50	215	23	464	
Yaws	073	-	-	-	-	-	-	-	-	-	-	1	
Acute poliomyelitis	080	12	3	186	2	2	8	62	-	60	3	46	
Smallpox	084	-	-	-	-	1	-	-	-	-	-	-	
Measles	085	182	-	5 951	151	36	45	1 254	-	408	11	271	
Yellow fever	091	-	-	-	-	-	-	16	-	-	-	1	
Rabies	094	3	-	62	-	-	-	9	-	1	-	21	
Typhus and other rickett diseases	100-108	-	-	176	-	-	-	4	-	16	-	-	
Malaria	110-117	255	12	2 432	451	51	1	6	-	18	-	-	
All other infective and parasitic	diseases	Residual	356	193	4 147	221	...	112	472	31	5 462	196	785
Malignant neoplasms, etc.	140-205	436	1 165	12 864	281	559	519	2 765	573	2 78 562	4 541	4 242	
Benign and unspecified													
neoplasms	210-239	11	59	965	71	46	41	104	10	4 681	116	146	
Diseases of thyroid gland	250-254	2	c) 7	c) 63	1	...	3	c) 6	c) 3	c) 579	c) 9	c) 8	
Diabetes mellitus	260	32	280	2 784	55	73	51	313	129	31 222	397	430	
Avitaminoses and other metabolic													
diseases	280-289	149	d) 484	d) 4 934	33	...	39	d) 1 069	d) 41	d) 1 627	d) 24	d) 494	
Anemias	290-293	225	124	3 306	106	126	126	188	53	3 398	62	170	
Vascular lesions affecting central													
nervous system	330-334	203	1 200	7 522	272	467	427	1 185	773	197 451	2 540	1 777	
Non-meningococcal meningitis	340	58	67	1 668	77	40	68	365	24	2 322	67	249	
Rheumatic fever	400-402	1	17	563	1	4	20	51	10	550	15	28	
Chronic rheumatic heart													
disease	410-416	3	66	1 410	-	29	38	116	52	1 7 201	106	216	
Arteriosclerotic and degenerative													
heart disease	420-422	34	698	5 298	57	398	192	1 907	704	582 206	3 337	3 603	
Other diseases of the heart	430-434	485	392	15 792	352	130	172	274	213	26 876	342	733	
Hypertension with heart disease	440-443	-	312	1 420	-	-	35	336	240	62 176	458	596	
Hypertension without mention					10	121							
of heart	444-447	33	274	658	-	-	52	225	147	12 497	318	249	
Arteriosclerosis	450	11	-	756	10	...	110	312	-	36 848	-	252	
Other diseases of the													
circulatory system	451-468	66	160	3 013	60	...	30	139	90	22 632	557	178	
Influenza	480-483	488	43	4 555	475	18	118	354	21	3 431	162	731	
Pneumonia	490-493	849	721	48 430	41	288	449	5 149	371	56 564	548	1 945	
Bronchitis	500-502	249	235	10 280	-	-	116	1 036	132	4 665	148	436	
Other diseases of respiratory													
system	470-475, 510-527	58	81	3 600	99	...	117	415	69	25 492	214	440	
Ulcer of stomach and duodenum	540, 541	43	124	1 717	31	30	17	141	44	12 228	107	107	
Appendicitis	550-553	12	12	509	7	11	23	51	8	1 800	27	48	
Intestinal obstruction and hernia	560, 561, 570	41	120	2 131	35	51	95	373	27	9 723	165	293	
Gastritis, enteritis, etc.	543, 571, 572	826	1 195	54 857	1 163	512	579	3 636	250	8 194	391	3 783	
Cirrhosis of the liver	581	49	134	7 752	-	-	-	-	-	21 824	-	-	
Other diseases of digestive					567	...	214	1 335	171	16 581	568	889	
system	Residual	2 054	99	11 112	-	-	-	-	-	-	-	-	
Nephritis and nephrosis	590-594	46	178	3 064	18	87	82	419	51	12 945	229	576	
Other diseases of the													
genitourinary system	600-637	51	159	969	52	...	60	172	125	17 864	164	247	
Complications of pregnancy,													
childbirth and puerperium	640-689	245	114	3 186	115	92	108	298	48	1 465	62	369	
Congenital malformations	750-759	29	118	3 584	4	62	64	570	72	21 192	223	765	
Certain diseases of early													
infancy	760-776	845	1 056	46 847	1 093	568	582	4 870	794	64 205	1 516	5 179	
Senility, ill-defined, and unknown	780-795	7 470	2 924	49 686	2 519	1 628	3 111	1 012	311	19 730	1 560	15 717	
All other diseases	Residual	669	408	8 307	276	1 039	401	914	275	32 831	834	1 191	
Motor vehicle accidents	E810-E835	-	131	1 105	-	-	-	489	104	40 804	95	1 260	
All other accidents	E800-E802	-	-	-	522	478	277	-	-	-	-	-	
E840-E862	1 235	307	13 625	-	-	-	-	1 766	226	56 335	864	2 128	
Suicide	E963, E970-E979	-	30	-	-	75	26	108	24	20 207	248	416	
Homicide and injury resulting	E964-E965	-	-	639	-	-	-	-	-	-	-	-	
from operations of war	E980-E999	-	23	10 611	352	70	157	67	53	9 038	113	877	

(a) Provisional. (b) Data for districts with medical certification of deaths only. (c) Categories 250-252 only. (d) Categories 280-286 only.

TABLE 12. NUMBER OF DEATHS FROM SPECIFIC CAUSES IN THE AMERICAS (Continued)

Cause	Antigua 1962	Bahama Islands 1962 (a)	Barba- dos 1962	Bermuda 1961	British Hon- duras 1962	Canal Zone 1962	Falkland Islands 1962	Grenada 1961	Martin- ique 1962
Total deaths	405	714	2 118	306	853	126	24	1 022	2 179
Tuberculosis, all forms 001-019	7	9	17	1	10	2	-	6	56
Syphilis and its sequelae 020-029	17	1	29	1	-	-	-	7	-
Typhoid fever 040	1	1	1	-	2	-	-	1	-
Paratyphoid fever and other Salmonella infections 041, 042	-	-	-	-	-	-	-	...	6
Dysentery, all forms 045-048	1	-	1	-	4	-	-	7	-
Scarlet fever and streptococcal sore throat 050, 051	-	-	-	-	-	-	-	-	-
Diphtheria 055	-	-	2	-	-	-	-	-	4
Whooping cough 056	1	-	2	-	2	-	-	4	3
Meningococcal infections 057	-	-	1	-	-	-	-	1	-
Plague 058	-	-	-	-	-	-	-	-	-
Leprosy 060	2	1	-	...	-	1	-	...	-
Tetanus 061	-	8	20	...	7	-	-	...	8
Yaws 073	...	-	-	-	-	-	-	...	-
Acute poliomyelitis 080	-	-	1	-	-	-	-	-	-
Smallpox 084	-	-	-	-	-	-	-	-	-
Measles 085	-	-	-	-	-	-	-	-	-
Yellow fever 091	-	-	-	...	-	-	-	...	-
Rabies 094	-	-	-	-	-	-	-	...	-
Typhus and other rickett diseases Malaria 100-108 110-117	-	-	-	-	-	-	-	-	-
All other infective and parasitic diseases Residual	5	-	13	1	3	-	-	10	69
Malignant neoplasms, etc. 140-205	35	53	232	38	30	19	4	72	63
Benign and unspecified neoplasms 210-239	-	5	4	-	11	-	-	-	75
Diseases of thyroid gland 250-254 ^{f)}	-	-	-	...	-	-	-	...	-
Diabetes mellitus 260	9	7	69	4	1	2	2	17	18
Avitaminoses and other metabolic diseases 280-289	1	7	24	...	27	1	-	...	-
Anemias 290-293	4	4	5	-	8	1	-	6	39
Vascular lesions affecting central nervous system 330-334	52	43	300	49	25	12	-	65	109
Non-meningococcal meningitis 340	1	11	10	-	7	1	-	3	29
Rheumatic fever 400-402	-	-	12	-	-	-	-	-	5
Chronic rheumatic heart disease 410-416	1	1	7	3	2	2	-	2	-
Arteriosclerotic and degenerative heart disease 420-422	20	40	217	92	23	19	5	37	-
Other diseases of the heart 430-434	8	15	93	8	30	4	-	43	207
Hypertension with heart disease 440-443	17	-	81	-	-	4	-	-	-
Hypertension without mention of heart 444-447	1	} 12	29	} 12	} 5	-	-	} 32	-
Arteriosclerosis 450	-	13	72	...	3	-	-	...	-
Other diseases of the circulatory system 451-468	} 11	10	19	...	6	2	-	...	-
Influenza 480-483	3	-	9	-	-	-	-	6	7
Pneumonia 490-493	35	94	115	8	68	12	2	100	102
Bronchitis 500-502	-	2	32	-	7	-	2	20	-
Other diseases of respiratory system 470-475, 510-527	2	7	27	...	8	1	-	...	-
Ulcer of stomach and duodenum 540, 541	-	3	5	2	2	1	1	3	-
Appendicitis 550-553	-	-	1	-	-	-	-	1	-
Intestinal obstruction and hernia 560, 561, 570	2	4	13	1	3	2	-	2	-
Gastritis, enteritis, etc. 543, 571, 572	23	72	41	-	125	-	-	202	53
Cirrhosis of the liver 581	7	} 35	19	...	} 14	} 3	-	...	-
Other diseases of digestive system Residual	1	-	14	-	-	-	-	...	-
Nephritis and nephrosis 590-594	12	8	10	6	4	-	-	8	7
Other diseases of the genitourinary system 600-637	3	8	37	...	3	1	-	...	-
Complications of pregnancy, childbirth and puerperium 640-689	8	3	16	1	2	-	-	5	-
Congenital malformations 750-759	7	7	28	8	1	4	-	4	28
Certain diseases of early infancy 760-776	33	116	225	26	30	11	-	89	118
Senility, ill-defined, and unknown 780-795	53	31	120	16	87	5	7	152	400
All other diseases Residual	10	33	69	16	276	2	1	91	743
Motor vehicle accidents E810-E835	3	} 43	15	} 10	} 27	} 10	-	} 23	} 12
All other accidents E800-E802 E840-E862	9	-	54	-	-	-	-	-	-
Suicide E963, E970-E979	-	3	3	2	-	-	-	2	-
Homicide and injury resulting from operations of war E964-E965 E980-E999	-	5	2	1	-	4	-	1	-

(a) Data for deaths in hospitals only.

TABLE 12 . NUMBER OF DEATHS FROM SPECIFIC CAUSES IN THE AMERICAS (Continued)

Cause	Mont- serrat 1962	Puerto Rico 1962	St. Kitts- Nevis- Anguilla 1962	St. Lucia 1961	St. Pierre and Miquelon 1962	St. Vincent 1961	Surinam 1961	Turks and Caicos Islands 1961 (a)	Virgin Islands (US) 1962
Total deaths	128	16 548	587	1 228	53	1 024	2 310	29	321
Tuberculosis, all forms	2	566	11	12	-	7	23	-	2
Syphilis and its sequelae	-	36	1	4	-	2	11	-	1
Typhoid fever	-	-	2	13	-	-	4	1	...
Paratyphoid fever and other Salmonella infections	-	-	-	-	-	...	-	-	...
Dysentery, all forms	-	4	1	4	-	3	3	-	-
Scarlet fever and streptococcal sore throat	-	-	-	-	-	-	-	-	-
Diphtheria	-	3	1	-	-	-	-	-	-
Whooping cough	-	25	-	-	-	43	-	-	-
Meningococcal infections	-	2	-	-	-	-	-	-	-
Plague	-	-	-	-	-	-	-	-	...
Leprosy	-	-	-	-	-	...	-	-	...
Tetanus	-	65	2	8	-	...	15	-	...
Yaws	-	-	...	...	-	...	...	-	...
Acute poliomyelitis	-	3	-	-	-	-	-	-	-
Smallpox	-	-	-	-	-	-	-	-	-
Measles	-	28	-	-	-	-	-	-	1
Yellow fever	-	-	-	-	-	...	-	-	...
Rabies	-	-	-	-	-	...	-	-	...
Typhus and other rickett diseases	-	-	-	-	-	-	-	-	...
Malaria	-	-	-	-	-	-	-	-	...
All other infective and parasitic diseases	-	158	4	19	-	4	20	-	5
Malignant neoplasms, etc.	8	1975	60	30	11	42	140	4	31
Benign and unspecified neoplasms	-	94	-	1	-	2	8	-	6
Diseases of thyroid gland	-	...	b)	b)	-	...	b)	-	...
Diabetes mellitus	4	295	8	4	1	5	33	2	13
Avitaminoses and other metabolic diseases	7	...	c) 37	c) 113	-	...	c) 43	1	...
Anemias	-	142	1	5	-	-	8	-	1
Vascular lesions affecting central nervous system	28	1 183	74	45	7	38	126	-	32
Non-meningococcal meningitis	-	89	1	3	-	4	9	-	-
Rheumatic fever	-	-	1	-	-	-	2	-	-
Chronic rheumatic heart disease	-	83	-	4	-	1	12	-	2
Arteriosclerotic and degenerative heart disease	25	2 321	68	44	1	14	110	-	47
Other diseases of the heart	-	393	21	28	9	32	77	8	8
Hypertension with heart disease	-	295	9	9	-	-	18	3	21
Hypertension without mention of heart	-	109	6	4	1	12	6	3	21
Arteriosclerosis	-	426	4	4	-	...	17	-	17
Other diseases of the circulatory system	-	128	13	8	-	...	13	-	8
Influenza	-	39	-	1	-	-	7	-	-
Pneumonia	4	827	32	92	-	125	97	1	16
Bronchitis	-	80	3	21	-	29	62	-	1
Other diseases of respiratory system	-	...	2	5	-	...	11	-	...
Ulcer of stomach and duodenum	-	100	2	1	1	-	6	-	1
Appendicitis	-	8	2	-	-	4	1	-	-
Intestinal obstruction and hernia	-	86	7	9	-	2	14	-	4
Gastritis, enteritis, etc.	9	702	37	141	-	117	61	-	7
Cirrhosis of the liver	-	...	2	1	-	-	28	-	...
Other diseases of digestive system	-	...	4	4	3	1	19	5	...
Nephritis and nephrosis	-	143	5	3	-	16	49	-	1
Other diseases of the genitourinary system	-	...	3	4	-	...	27	1	1
Complications of pregnancy, childbirth and puerperium	2	55	4	10	-	7	12	-	-
Congenital malformations	-	390	1	8	-	2	41	-	9
Certain diseases of early infancy	18	1 535	77	226	4	256	223	3	24
Senility, ill-defined, and unknown	16	1 413	44	275	88	200	740	3	4
All other diseases	-	1 459	17	35	2	44	78	1	31
Motor vehicle accidents	-	-	3	1	-	-	40	-	-
All other accidents	5	931	21	27	4	11	62	1	17
Suicide	-	190	1	1	-	1	30	-	5
Homicide and injury resulting from operations of war	-	159	-	-	1	-	6	-	5

(a) Data for Grand Turk only. (b) Categories 250-252 only. (c) Categories 280-286 only.

TABLE 13. DEATH RATES PER 100,000 POPULATION FROM SPECIFIC CAUSES IN THE AMERICAS

Cause	Argentina 1960	Brazil 1961 (a)	Canada 1962	Chile 1962	Colombia 1962 (b)	Costa Rica 1962	Cuba 1960	Dominican Republic 1961	Ecuador 1960	El Salvador 1962 (b)	Guatemala 1962 (b)	
Total deaths	820.5	919.7	772.6	1177.8	1199.9	852.5	821.5	836.6	1414.3	1147.2	1724.6	
Tuberculosis, all forms	001-019	16.2	34.9	4.2	48.6	28.8	11.9	15.5	14.7	20.9	14.1	31.4
Syphilis and its sequelae	020-029	1.0	5.0	0.7	1.9	1.3	0.6	1.4	3.9	1.0	3.5	0.1
Typhoid fever	040	0.4	...	0.0	2.9	4.5	0.8	0.6	4.0	17.6	1.8	7.2
Paratyphoid fever and other Salmonella infections	041, 042	...	...	0.0	0.2	0.5	0.2	0.3	...	1.0	0.0	0.3
Dysentery, all forms	045-048	0.4	5.5	0.1	0.8	6.6	2.7	0.5	3.5	7.9	4.6	36.8
Scarlet fever and streptococcal sore throat	050, 051	0.0	0.1	0.0	0.5	0.1	0.1	0.0	0.0	...	...	0.2
Diphtheria	055	1.0	2.4	0.0	4.4	2.4	3.0	0.7	3.4	2.3	0.9	1.3
Whooping cough	056	1.5	1.7	0.1	2.3	16.1	5.2	1.1	0.8	83.9	16.6	91.5
Meningococcal infections	057	0.2	0.5	0.2	0.2	0.2	0.6	0.1	0.0	0.0	-	-
Plague	058	-	-	-	-	-	-	-	-	0.1	-	-
Leprosy	060	...	2.1	-	-	0.9	-	0.6	...	0.2	0.0	0.0
Tetanus	061	...	11.4	0.0	0.4	14.3	16.0	4.6	...	24.5	19.5	6.4
Yaws	073	...	...	-	-	-	-	...	...	-	-	-
Acute poliomyelitis	080	0.6	1.2	0.0	1.3	0.5	0.9	0.5	0.3	0.6	0.2	0.7
Smallpox	084	0.0	0.3	-	-	0.2	-	-	-	6.9	-	0.0
Measles	085	1.3	6.3	0.4	30.6	13.9	20.0	1.1	1.0	54.8	25.6	53.5
Yellow fever	091	-	-	-	-	0.3	-	-	-	0.1	-	-
Rabies	094	0.1	0.2	-	0.1	0.2	-	-	0.1	0.3	0.2	0.2
Typhus and other rickett diseases	100-108	0.1	0.0	-	0.1	4.6	0.2	-	-	0.8	-	0.0
Malaria	110-117	0.1	0.1	0.0	-	8.1	0.6	0.2	14.2	13.5	12.9	108.1
All other infective and parasitic diseases	Residual	6.8	19.0	2.1	9.9	26.5	24.9	5.8	28.8	17.7	8.9	99.3
Malignant neoplasms, etc.	140-205	115.5	72.4	131.8	97.5	50.6	74.1	96.0	21.2	35.1	21.8	25.9
Benign and unspecified neoplasms	210-239	10.0	3.5	1.9	4.5	10.1	4.5	3.4	1.2	2.3	2.1	3.9
Diseases of thyroid gland	250-254	f) ...	g) 0.3	0.2	g) 0.7	0.3	0.4	...	0.2	0.4	0.1	0.1
Diabetes mellitus	260	7.2	9.9	11.7	5.9	5.3	6.8	10.8	2.7	2.7	2.7	2.7
Avitaminoses and other metabolic diseases	280-289	h) ...	h) 0.3	2.8	h) 27.6	7.8	1.6	...	5.7	15.7	26.7	26.7
Anemias	290-293	2.4	1.7	1.8	2.2	18.7	8.2	3.6	12.5	27.2	12.9	39.2
Vascular lesions affecting central nervous system	330-334	58.4	52.9	82.3	52.5	31.4	24.0	51.2	6.6	16.7	11.9	6.9
Non-meningococcal meningitis	340	6.9	4.6	1.0	6.8	11.3	6.1	2.3	4.1	7.1	1.8	3.5
Rheumatic fever	400-402	0.3	2.1	0.3	1.4	1.1	0.9	1.4	0.3	0.6	0.2	0.4
Chronic rheumatic heart disease	410-416	1.3	6.8	7.2	6.7	4.0	3.8	4.3	0.9	2.3	0.5	0.5
Arteriosclerotic and degenerative heart disease	420-422	43.5	70.5	238.9	52.6	27.4	39.1	62.1	8.8	6.6	6.7	15.4
Other diseases of the heart	430-434	31.3	38.9	11.5	8.6	37.1	19.2	32.2	1.4	23.0	5.7	8.1
Hypertension with heart disease	440-443	7.5	29.8	16.1	6.9	7.8	4.9	...	...	2.8	...	...
Hypertension without mention of heart	444-447	9.3	4.7	5.2	5.3	3.2	4.3	9.0	1.8	1.0	5.1	
Arteriosclerosis	450	...	13.3	15.8	12.3	3.5	23.5	...	2.3	1.1	6.1	
Other diseases of the circulatory system	451-468	...	...	8.6	3.5	4.2	4.9	...	4.9	2.7	1.6	
Influenza	480-483	1.3	7.9	3.1	12.9	14.4	14.8	4.4	1.3	56.9	6.9	145.8
Pneumonia	490-493	33.2	53.5	28.3	190.1	78.4	63.7	24.6	18.6	69.4	29.9	140.3
Bronchitis	500-502	4.4	6.3	5.0	6.8	58.0	22.9	6.7	17.5	125.4	25.2	29.0
Other diseases of respiratory system	470-475, 510-527	...	...	8.4	13.3	9.9	10.5	6.7	...	12.9	8.8	5.8
Ulcer of stomach and duodenum	540, 541	1.9	3.7	5.0	3.6	6.1	2.5	3.7	1.2	3.2	2.2	1.5
Appendicitis	550-553	0.7	0.6	0.8	1.5	1.1	1.0	0.7	0.3	0.6	0.3	1.1
Intestinal obstruction and hernia	560, 561, 570	4.9	5.3	4.6	6.4	5.6	4.8	5.2	3.0	10.0	3.2	5.0
Gastritis, enteritis, etc.	543, 571, 572	24.5	77.2	4.8	61.9	127.6	124.2	42.7	132.1	130.6	64.2	223.5
Cirrhosis of the liver	581	...	12.7	5.7	34.8	5.3	4.8	...	...	3.9	...	...
Other diseases of digestive system	Residual	...	...	7.2	20.7	35.6	9.0	...	...	43.6	134.7	35.8
Nephritis and nephrosis	590-594	9.2	11.7	7.9	7.7	12.9	6.6	14.4	6.7	7.6	1.9	6.0
Other diseases of the genitourinary system	600-637	...	...	7.7	5.4	5.6	5.4	5.4	...	3.1	1.9	2.0
Complications of pregnancy, childbirth and puerperium	640-689	2.1	4.9	1.0	11.4	10.2	7.1	3.8	5.0	12.9	6.8	11.4
Congenital malformations	750-759	7.1	11.4	15.6	11.0	9.5	14.5	13.6	2.8	5.8	4.8	4.0
Certain diseases of early infancy	760-776	51.5	82.7	39.3	194.7	125.0	74.7	38.6	63.5	78.3	208.4	166.4
Senility, ill-defined, and unknown	780-795	220.2	121.2	6.0	32.3	133.0	127.7	11.9	288.4	354.0	334.1	257.3
All other diseases	Residual	87.0	71.6	18.7	29.7	33.4	20.6	57.9	44.4	26.8	42.7	38.0
Motor vehicle accidents	E810-E835	...	...	23.3	14.2	12.2	5.6	...	...	9.1	...	...
All other accidents	E800-E802	...	...	...	...	...	...	...	...	...	...	...
Suicide	E840-E902	49.5	55.7	31.0	59.6	38.5	27.4	44.2	17.9	45.3	30.7	32.4
Homicide and injury resulting from operations of war	E963, E970-E979 E984-E985 E980-E999	...	...	7.2	7.4	4.8	2.4	...	2.3	0.3	9.4	3.1
			1.4	7.4	36.5	3.8	...	3.7	11.0	34.9	14.2	

(a) Data for State of Sao Paulo, and cities of Recife and Rio de Janeiro. (b) Provisional. (c) Due to overlapping in certain categories, the rate corresponding to total reported is smaller than the addition of categories. (d) Number classified by cause smaller than total deaths reported. (e) Of total rate, 106.2 are deaths classified as due to malaria not medically certified. (f) Included in residual, all other diseases. (g) Categories 250-252 only. (h) Categories 280-286 only.

TABLE 13..DEATH RATES PER 100,000 POPULATION FROM SPECIFIC CAUSES IN THE AMERICAS (Continued)

Cause	Honduras 1962	Jamaica 1961	Mexico 1961	Nicaragua 1962	Panama 1962 (a)	Paraguay 1962	Peru 1962 (b)	Trinidad and Tobago 1962 (a)	United States 1962	Uruguay 1961	Venezuela 1962
Total deaths	956.4	868.6	1077.4	679.9	702.8	970.0	873.6	723.2	945.0	764.1	697.9
Tuberculosis, all forms 001-019	13.9	8.8	26.1	8.1	21.7	28.4	72.1	5.4	5.1	15.6	15.9
Syphilis and its sequelae 020-029	0.3	8.3	1.5	-	0.6	2.6	1.2	4.6	1.5	3.3	2.3
Typhoid fever 040	3.1	1.3	6.5	7.0	0.2	0.6	2.0	0.1	0.0	0.5	0.3
Paratyphoid fever and other Salmonella infections 041,042	-	0.1	3.0	20.5	-	0.5	1.5	-	0.0	-	0.1
Dysentery, all forms 045-048	3.8	1.6	12.0	2.4	2.4	7.2	1.8	1.7	0.2	0.1	12.5
Scarlet fever and streptococcal sore throat 050,051	0.1	-	0.3	-	-	0.2	0.1	-	0.1	0.0	0.0
Diphtheria 055	0.3	0.4	1.0	0.3	0.6	1.4	0.7	0.4	0.0	0.2	0.6
Whooping cough 066	15.4	0.2	15.1	8.4	4.2	2.4	3.1	0.1	0.0	0.5	0.6
Meningococcal infections 057	-	0.1	0.2	-	0.7	0.4	0.2	-	0.3	0.2	0.1
Plague 058	-	-	-	-	-	-	0.0	-	-	-	-
Leprosy 060	0.2	0.1	0.2	-	-	0.6	0.0	1.2	0.0	0.1	0.2
Tetanus 061	5.7	7.9	7.3	25.2	16.8	21.3	7.0	5.8	0.1	0.8	5.9
Yaws 073	-	-	-	-	-	-	-	-	-	-	0.0
Acute poliomyelitis 080	0.6	0.2	0.5	0.1	0.2	0.8	1.9	-	0.0	0.1	0.6
Smallpox 084	-	-	-	-	0.1	-	-	-	-	-	-
Measles 085	9.3	-	16.5	9.6	3.1	4.7	28.6	-	0.2	0.4	3.4
Yellow fever 091	-	-	-	-	-	-	0.4	-	-	-	0.0
Rabies 094	0.2	-	0.2	-	-	-	0.2	-	0.0	-	0.3
Typhus and other rickett diseases 100-108	-	-	0.5	-	-	-	0.1	-	0.0	-	-
Malaria 110-117	13.1	0.7	6.7	28.6	4.5	0.1	0.1	-	0.0	-	-
All other infective and parasitic diseases Residual	18.3	11.8	11.5	14.0	...	11.7	10.7	3.5	2.9	8.8	10.0
Malignant neoplasms, etc. 140-205	22.4	71.3	85.6	17.8	48.8	54.1	63.0	64.1	149.9	158.1	53.9
Benign and unspecified neoplasms 210-239	0.6	3.6	2.7	4.5	4.0	4.3	2.4	1.1	2.5	4.0	1.9
Diseases of thyroid gland 250-254	0.1	c) 0.4	c) 0.2	0.1	...	0.3	c) 0.1	c) 0.3	c) 0.3	c) 0.3	c) 0.1
Diabetes mellitus 280	1.6	17.1	7.7	3.5	6.4	5.8	7.1	14.4	16.8	13.8	5.5
Avitaminoses and other metabolic diseases 280-289	7.6	d) 29.6	d) 13.7	2.1	...	4.1	d) 24.3	d) 4.6	d) 0.9	d) 0.8	d) 6.3
Anemias 290-293	11.5	7.6	9.2	6.7	11.0	12.7	4.3	6.5	1.8	2.2	2.2
Vascular lesions affecting central nervous system 330-334	10.4	73.4	20.8	17.2	40.8	44.4	27.0	86.5	106.2	88.4	22.6
Non-meningococcal meningitis 340	3.0	4.1	4.6	4.9	3.5	7.1	8.3	2.7	1.2	2.3	3.2
Rheumatic fever 400-402	0.1	1.0	1.6	0.1	0.3	2.1	1.2	1.1	0.3	0.5	0.4
Chronic rheumatic heart disease 410-416	0.2	4.0	3.9	-	2.5	4.0	2.6	5.8	9.3	3.7	2.7
Arteriosclerotic and degenerative heart disease 420-422	1.7	42.7	14.7	3.6	34.7	20.0	43.4	78.7	313.2	116.2	45.8
Other diseases of the heart 430-434	24.9	24.0	43.8	22.3	11.3	17.9	6.2	23.8	13.9	11.9	9.3
Hypertension with heart disease 440-443	-	19.1	3.9	0.6	10.6	3.6	7.7	28.8	33.4	15.9	7.6
Hypertension without mention of heart 444-447	1.7	16.8	1.8	0.6	...	5.4	5.1	16.4	6.7	11.1	3.2
Arteriosclerosis 450	0.6	9.8	2.1	0.6	...	11.4	7.1	10.0	19.8	19.4	3.2
Other diseases of the circulatory system 451-468	3.4	8.3	8.3	3.8	...	3.1	3.2	12.2	12.2	5.6	2.3
Influenza 480-483	25.0	2.6	12.6	30.1	1.6	12.3	8.1	2.3	1.8	5.6	9.3
Pneumonia 490-493	43.5	44.1	134.2	37.6	46.8	117.3	41.5	30.4	19.1	24.7	24.7
Bronchitis 500-502	12.8	14.4	28.3	2.6	25.1	12.1	23.6	14.8	2.5	5.2	5.5
Other diseases of respiratory system 470-475,510-527	3.0	5.0	10.0	6.3	...	12.2	9.5	10.0	13.7	7.4	5.6
Ulcer of stomach and duodenum 540,541	2.2	7.6	4.8	2.0	2.6	1.8	3.2	4.9	6.6	3.7	1.4
Appendicitis 550-553	0.6	0.7	1.4	0.4	1.0	2.4	1.2	0.9	1.0	0.9	0.6
Intestinal obstruction and hernia 560,561,570	2.1	7.3	5.9	2.2	4.5	9.9	8.5	3.0	5.2	5.7	3.7
Gastritis, enteritis, etc. 543,571,572	42.4	73.1	152.0	73.7	44.7	60.3	83.9	28.0	4.4	13.6	48.1
Cirrhosis of the liver 581	2.5	8.2	21.5	6.8	2.3	...	12.7	10.7	11.7	8.3	6.3
Other diseases of digestive system Residual	105.3	6.1	30.8	29.1	...	22.3	17.7	8.4	8.9	11.5	5.0
Nephritis and nephrosis 590-594	2.4	10.9	8.5	1.1	7.6	8.5	9.5	5.7	7.0	8.0	7.3
Other diseases of the genitourinary system 600-637	2.6	9.7	2.7	3.3	...	6.3	3.9	14.0	9.6	5.7	3.1
Complications of pregnancy, childbirth and puerperium 640-689	12.6	7.0	8.8	7.3	8.0	11.3	6.8	5.4	0.8	2.2	4.7
Congenital malformations 750-759	1.5	7.2	9.9	0.3	5.4	6.7	13.0	8.1	11.4	7.8	9.7
Certain diseases of early infancy 760-776	43.3	64.6	129.8	69.3	48.7	60.6	110.9	86.8	34.5	52.8	65.8
Senility, ill-defined, and unknown 780-795	383.1	178.9	137.7	159.6	142.1	324.1	23.0	34.8	10.6	54.3	199.7
All other diseases Residual	34.3	25.0	23.0	17.5	88.4	41.8	20.8	30.8	17.7	29.0	15.1
Motor vehicle accidents E810-E835	-	8.0	3.1	33.1	41.7	28.9	11.1	11.6	22.0	3.3	16.0
All other accidents E800-E802	-	-	-	-	-	-	40.2	25.3	30.3	30.1	27.0
Suicide E963, E970-E979	-	1.8	1.8	-	6.5	2.7	2.5	2.7	10.9	8.6	5.3
Homicide and injury resulting from operations of war E964-E965	-	1.4	29.4	22.3	6.1	16.4	1.5	5.9	4.9	3.9	11.1
	E980-E999										

(a) Provisional. (b) Data for districts with medical certification only. (c) Categories 250-252 only. (d) Categories 280-286 only.

TABLE 13. DEATH RATES PER 100,000 POPULATION FROM SPECIFIC CAUSES IN THE AMERICAS (Continued)

Causa	Puerto Rico 1962	St. Kitts- Nevis Anguilla 1962	St. Lucia 1961	St. Pierre and Miquelon 1962	St. Vincent 1961	Surinam 1961	Turks and Caicos Islands 1961 (a)	Virgin Islands (US) 1962
Total deaths	672.7	978.3	1379.8	1060.0	1248.8	816.3	483.3	817.1
Tuberculosis, all forms 001-019	23.0	18.3	19.5	-	8.5	8.1	-	5.7
Syphilis and its sequelae 020-029	1.5	1.7	4.5	-	2.4	3.9	-	2.9
Typhoid fever 040	-	3.3	14.6	-	-	1.4	16.7	...
Paratyphoid fever and other								
Salmonella infections 041, 042	-	-	-	-	...	-	-	...
Dysentery, all forms 045-048	0.2	1.7	4.5	-	3.7	1.1	-	-
Scarlet fever and streptococcal								
sore throat 050, 051	-	-	-	-	-	-	-	-
Diphtheria 055	0.1	1.7	-	-	-	-	-	-
Whooping cough 056	1.0	-	-	-	52.4	-	-	-
Meningococcal infections 057	0.1	-	-	-	-	-	-	-
Plaque 058	-	-	-	-	-	-	-	...
Leprosy 060	-	-	-	-	...	-	-	...
Tetanus 061	2.6	3.3	9.0	-	...	5.3	-	...
Yaws 073	-	...	...	-	...	...	-	...
Acute poliomyelitis 080	0.1	-	-	-	-	-	-	...
Smallpox 084	-	-	-	-	-	-	-	2.9
Measles 085	1.1	-	-	-	-	-	-	...
Yellow fever 091	-	-	-	-	...	-	-	...
Rabies 094	-	-	-	-	...	-	-	...
Typhus and other rickettsiae 100-108	-	-	-	-	-	-	-	...
Malaria 110-117	-	-	-	-	-	-	-	...
All other infective and parasitic								
diseases Residual	6.4	6.7	21.3	-	4.9	7.1	-	14.3
Malignant neoplasms, etc. 140-205	80.3	100.0	33.7	220.0	51.2	49.5	66.7	88.6
Benign and unspecified								
neoplasms 210-239	3.8	-	1.1	-	2.4	2.8	-	17.1
Diseases of thyroid gland 250-254	...	b)	b)	-	...	b)	-	...
Diabetes mellitus 280	12.0	13.3	4.5	20.0	6.1	11.7	33.3	37.1
Avitaminoses and other metabolic								
diseases 280-289	...	c)	c)	-	...	c)	15.2	...
Anemias 290-293	5.8	1.7	5.6	-	-	2.8	-	2.9
Vascular lesions affecting central								
nervous system 330-334	48.1	123.3	50.6	140.0	46.3	44.5	-	91.4
Non-meningococcal meningitis 340	3.6	1.7	3.4	-	4.9	3.2	-	-
Rheumatic fever 400-402	...	-	1.1	-	-	0.7	-	...
Chronic rheumatic heart								
disease 410-416	3.8	-	4.5	-	1.2	4.2	-	5.7
Arteriosclerotic and degenerative								
heart disease 420-422	94.3	113.3	49.4	20.0	17.1	38.9	-	134.3
Other diseases of the heart 430-434	16.0	35.0	31.5	180.0	39.0	27.2	50.0	22.9
Hypertension with heart disease 440-443	12.0	15.0	10.1	-	-	6.4	-	-
Hypertension without mention								
of heart 444-447	4.4	10.0	4.5	20.0	14.6	2.1	50.0	60.0
Arteriosclerosis 450	17.3	-	4.5	-	...	6.0	-	48.6
Other diseases of the								
circulatory system 451-468	5.1	21.7	9.0	-	...	4.6	-	22.9
Influenza 480-483	1.6	-	1.1	-	-	2.5	-	-
Pneumonia 490-493	33.6	53.3	103.4	-	152.4	34.3	16.7	45.7
Bronchitis 500-502	3.3	5.0	23.6	-	35.4	21.9	-	2.9
Other diseases of respiratory								
system 470-475, 510-527	...	3.3	5.6	-	...	3.9	-	...
Ulcer of stomach and duodenum 540, 541	4.1	3.3	1.1	20.0	-	2.1	-	2.9
Appendicitis 550-553	0.3	3.3	-	-	4.9	0.4	-	-
Intestinal obstruction and hernia 560, 561, 570	3.5	11.7	10.1	-	2.4	4.9	-	11.4
Gastritis, enteritis, etc. 543, 571, 572	28.5	61.7	158.4	-	142.7	21.6	-	20.0
Cirrhosis of the liver 581	...	3.3	1.1	-	-	9.2	-	...
Other diseases of digestive								
system Residual	...	6.7	4.5	60.0	1.2	6.7	83.3	...
Nephritis and nephrosis 590-594	5.8	8.3	3.4	-	19.5	17.3	-	2.9
Other diseases of the								
genitourinary system 600-637	...	5.0	4.5	-	...	9.5	16.7	2.9
Complications of pregnancy,								
childbirth and puerperium 640-689	2.2	6.7	11.2	-	8.5	4.2	-	-
Congenital malformations 750-759	15.9	1.7	9.0	-	2.4	14.5	-	25.7
Certain diseases of early								
infancy 760-776	62.4	123.3	253.9	80.0	312.2	78.8	50.0	68.6
Senility, ill-defined, and unknown 780-795	57.4	73.3	309.0	160.0	243.9	261.5	50.0	11.4
All other diseases Residual	59.3	28.3	39.3	40.0	53.7	27.6	16.7	88.6
Motor vehicle accidents E810-E835	...	5.0	1.1	-	-	14.1	-	-
All other accidents E800-E802	37.8	-	-	80.0	13.4	-	16.7	48.6
E840-E962	...	35.0	30.4	-	-	21.9	-	-
Suicide E963, E970-E979	7.7	1.7	1.1	-	1.2	10.6	-	14.3
Homicide and injury resulting								
from operations of war E964-E965	6.5	-	-	20.0	-	2.1	-	14.3

(a) Data for Grand Turk only. (b) Categories 250-252 only. (c) Categories 280-286 only.

TABLE 14. FIRST FIVE PRINCIPAL CAUSES OF DEATH WITH RATES PER 100,000 POPULATION
IN THE AMERICAS, RECENT YEARS

Area and cause of death	Number	Rate	Per cent of total deaths	Area and cause of death	Number	Rate	Per cent of total deaths
ARGENTINA (1960) - All causes ..	170 195	820.5	100	CUBA (1960) - All causes	42 244	621.5	100
Malignant neoplasms (140-205)	23 959	115.5	14.1	Diseases of the heart (410-447) (a)...	6 987	102.8	16.5
Disease of the heart (410-447) (a) ...	17 348	83.6	10.2	Malignant neoplasms (140-205)	6 526	96.0	15.4
Vascular lesions affecting central nervous system (330-334)	12 106	58.4	7.1	Vascular lesions affecting central nervous system (330-334)	3 478	51.2	8.2
Certain diseases of early infancy (760-776)	10 688	51.5	6.3	Accidents, suicide and homicide (E800-E999) (b)	3 002	44.2	7.1
Accidents, suicide, and homicide (E800-E999) (b)	10 270	49.5	6.0	Gastritis, enteritis, etc. (543, 571, 572)	2 905	42.7	6.9
BRAZIL (1961)-All causes (c)	162 710	999.7	100	DOMINICAN REPUBLIC (1961) - All causes	26 018	836.6	100
Diseases of the heart (410-443).....	25 837	146.0	15.9	Gastritis, enteritis, etc. (543, 571, 572)	4 107	132.1	15.8
Certain diseases of early infancy (760-776)	14 627	82.7	9.0	Certain diseases of early infancy (760-776)	1 974	63.5	7.6
Gastritis, enteritis, etc. (543,571, 572)	13 650	77.2	8.4	Malignant neoplasms (140-205).....	660	21.2	2.5
Malignant neoplasms, (140-205)	12 816	72.4	7.9	Diseases of the heart (410-447) (a) ..	626	20.1	2.4
Influenza and pneumonia (480-483, 490-493).....	10 862	61.4	6.7	Influenza and pneumonia (480-483, 490-493)	620	19.9	2.4
CANADA (1962) - All causes	143 699	772.6	100	ECUADOR (1960) - All causes	61 054	1414.3	100
Diseases of the heart (410-443)	50 927	273.7	35.4	Gastritis, enteritis, etc. (543,571, 572)	5 639	130.6	9.2
Malignant neoplasms (140-205).....	24 519	131.8	17.1	Influenza and pneumonia (480-483, 490-493)	5 427	125.7	8.9
Vascular lesions affecting central nervous system (330-334)	15 300	82.3	10.6	Bronchitis (500-502)	5 412	125.4	8.9
Accidents (E800-E962)	10 084	54.3	7.0	Whooping cough (056)	3 621	83.9	5.9
Certain diseases of early infancy (760-776)	7 316	39.3	5.1	Certain diseases of early infancy (760-776)	3 381	78.3	5.5
CHILE (1962) - All causes	94 568	1177.8	100	EL SALVADOR (1962) - All causes	*30 136	1147.2	100
Influenza and pneumonia (480-483, 490-493)	16 302	204.0	17.2	Certain diseases of early infancy (760-776)	5 474	208.4	18.2
Certain diseases of early infancy (760-776)	15 635	194.7	16.5	Gastritis, enteritis, etc. (543, 571, 572)	1 687	64.2	5.6
Malignant neoplasms (140-205).....	7 831	97.5	8.3	Influenza and pneumonia (480-483, 490-493)	968	36.8	3.2
Diseases of the heart (410-443)	6 009	74.8	6.4	Homicide and injuries resulting from the operations of war (E964-E965, E980-E999)	917	34.9	3.0
Accidents (E800-E962)	5 927	73.8	6.3	Accidents (E800-E962)	807	30.7	2.7
COLOMBIA (1962) - All causes ...	*177 208	1199.9	100	GUATEMALA (1962) - All causes .	*69 287	1724.8	100
Gastritis, enteritis, etc. (543, 571, 572)	18 852	127.6	10.6	Influenza and pneumonia (480-483, 490-493)	11 491	286.1	16.6
Certain diseases of early infancy (760-776)	18 468	125.0	10.4	Gastritis, enteritis, etc. (543,571, 572)	8 976	223.5	13.0
Influenza and pneumonia (480-483, 490-493)	13 696	92.7	7.7	Certain diseases of early infancy (760-776)	7 487	186.4	10.8
Diseases of the heart (410-443)	11 262	76.3	6.4	Malaria (110-117)	(d)4 344	108.1	6.3
Bronchitis (500-502)	8 564	58.0	4.8	Whooping cough (056)	3 675	91.5	5.3
COSTA RICA (1962) - All causes ..	10 861	852.5	100	HONDURAS (1962) - All causes	18 650	956.4	100
Gastritis, enteritis, etc. (543,571, 572)	1 582	124.2	14.6	Influenza and pneumonia (480-483, 490-493)	1 337	68.6	7.2
Influenza and pneumonia (480-483, 490-493)	1 001	78.6	9.2	Accidents, suicides and homicides E-800-E-999 (b)	1 235	63.3	6.6
Certain diseases of early infancy (760-776)	952	74.7	8.8	Certain diseases of early infancy (760-776)	845	43.3	4.5
Malignant neoplasms (140-205)	944	74.1	8.7	Gastritis, enteritis, etc. (543, 571, 572)	826	42.4	4.4
Diseases of the heart (410-443)	854	67.0	7.9	Diseases of the heart (410-443)	522	26.8	2.8

* Provisional. (a) Includes hypertension without mention of heart disease (444-447). (b) Data available only for entire group of accidents and violence (E800-E999). (c) Data for State of Sao Paulo and cities of Recife and Rio de Janeiro.

TABLE 14. FIRST FIVE PRINCIPAL CAUSES OF DEATH WITH RATES PER 100,000 POPULATION
IN THE AMERICAS, RECENT YEARS (continued)

Area and cause of death	Number	Rate	Per cent of total deaths	Area and cause of death	Number	Rate	Per cent of total deaths
JAMAICA (1961) - All causes	14 193	868.6	100	PERU (1962) - All causes (b)	38 361	873.6	100
Diseases of the heart (410-443).....	1 468	89.8	10.3	Influenza and pneumonia (480-483, 490-493)	5 503	125.4	14.3
Vascular lesions affecting central nervous system (330-334)	1 200	73.4	8.5	Certain diseases of early infancy (760-776)	4 870	110.9	12.7
Gastritis, enteritis, etc. (543, 571, 572)	1 195	73.1	8.4	Gastritis, enteritis, etc. (543, 571, 572)	3 686	83.9	9.6
Malignant neoplasms (140-205)	1 165	71.3	8.2	Tuberculosis, all forms (001-019) ..	3 164	72.1	8.2
Certain diseases of early infancy	1 056	64.6	7.4	Malignant neoplasms (140-205)	2 765	63.0	7.2
MEXICO (1961) - All causes	388 857	1 077.4	100	TRINIDAD AND TOBAGO			
Gastritis, enteritis, etc. (543, 571, 572)	54 857	152.0	14.1	All causes	* 6 465	723.2	100
Influenza and pneumonia (480-483, 490-493).....	52 985	146.8	13.6	Diseases of the heart (410-443) ...	1 209	135.2	18.7
Certain diseases of early infancy (760-776).....	46 847	129.8	12.0	Certain diseases of early infancy (760-776)	794	88.8	12.3
Diseases of the heart (410-443).....	23 920	66.3	6.2	Vascular lesions affecting central nervous system (330-334)	773	86.5	12.0
Accidents (E800-E962).....	14 730	40.8	3.8	Malignant neoplasms (140-205) ..	573	64.1	8.9
NICARAGUA (1962) - All causes ..	10 729	679.9	100	Influenza and pneumonia (480-483, 490-493)	392	43.8	6.1
Gastritis, enteritis, etc.	1 163	73.7	10.8	UNITED STATES (1962)-All causes	1756 720	945.0	100
Certain diseases of early infancy (760-776)	1 093	69.3	10.2	Diseases of the heart (410-443) ...	687 459	369.8	39.1
Accidents (E800-E962)	522	33.1	4.9	Malignant neoplasms (140-205)	278 562	149.9	15.9
Influenza and pneumonia (480-483, 490-493)	475	30.1	4.4	Vascular lesions affecting central nervous system (330-334)	197 451	106.2	11.2
Malaria (110-117)	451	28.6	4.2	Accidents (E800-E962)	97 139	52.3	5.5
PANAMA (1962) - All causes	8 054	702.8	100	Certain diseases of early infancy (760-776)	64 205	34.5	3.7
Diseases of the heart (410-447) (a)...	678	59.1	8.4	URUGUAY (1961) - All causes ...	21 954	764.1	100
Malignant neoplasms (140-205)	559	48.8	6.9	Malignant neoplasms (140-205)	4 541	158.1	20.7
Certain diseases of early infancy (760-776)	558	48.7	6.9	Diseases of the heart (410-443)....	4 243	147.7	19.3
Gastritis, enteritis, etc. (543, 571, 572)	512	44.7	6.4	Vascular lesions affecting central nervous system (330-334)	2 540	88.4	11.6
Vascular lesions affecting central nervous system (330-334)	467	40.8	5.8	Certain diseases of early infancy (760-776)	1 516	52.8	6.9
PARAGUAY (1962) - All causes .	9 311	893.6	100	Accidents (E800-E962)	959	33.4	4.4
Certain diseases of early infancy (760-776).....	582	55.9	6.3	VENEZUELA (1962) - All causes	54 938	697.9	100
Gastritis, enteritis, etc. (543, 571, 572)	579	55.6	6.2	Certain diseases of early infancy (760-776)	5 179	65.8	9.4
Influenza and pneumonia (480-483, 490-493)	567	54.4	6.1	Diseases of the heart (410-443) ...	5 148	65.4	9.4
Malignant neoplasms (140-205)	519	49.8	5.6	Malignant neoplasms (140-205) ...	4 242	53.9	7.7
Diseases of the heart (410-443)	437	41.9	4.7	Gastritis, enteritis, etc. (543, 571, 572)	3 783	48.1	6.9
				Accidents (E800-E962)	3 388	43.0	6.2

* Provisional. (a) Includes hypertension without mention of heart disease (444-447). (b) Data for districts with medical certification only.

TABLE 15. FIVE PRINCIPAL CAUSES OF DEATH BY RANK ORDER IN 22 COUNTRIES OF THE AMERICAS, 1962

Cause of death	Total	Order				
		1st	2nd	3rd	4th	5th
Certain diseases of early infancy (760-776)	21	3	7	5	2	4
Gastritis, enteritis, etc. (543, 571, 572)	16	6	3	3	3	1
Diseases of the heart (410-443)	17	7	3	-	4	3
Malignant neoplasms (140-205)	15	2	4	3	5	1
Influenza and pneumonia (480-493)	14	4	3	3	1	3
Accidents (E800-E962)	11	-	1	1	3	6
Vascular lesions affecting the central nervous system (330-334)	8	-	1	8	-	1
Whooping cough (056)	2	-	-	-	1	1
Malaria (110-117)	2	-	-	-	1	1
Bronchitis (500-502)	2	-	-	1	-	1
Tuberculosis (001-019)	1	-	-	-	1	-
Homicides (E964, E965, E980-E999)	1	-	-	-	1	-

TABLE 16. DEATHS FROM INFECTIOUS AND PARASITIC DISEASES (001-138) WITH RATES PER 100,000 POPULATION IN COUNTRIES OF THE AMERICAS

Country	Year	Estimated population	Deaths			
			All causes	Infectious and parasitic diseases		
				Number	Rate	Per cent of total deaths
Argentina	1960	20 744 000	170 195	8 131	29.6	3.6
Brazil (a)	1961	17 690 000	162 710	16 058	90.9	9.9
Canada	1962	18 600 000	143 699	1 507	8.1	1.0
Chile	1962	8 029 000	94 569	8 369	104.2	8.8
Colombia (b)	1962	14 769 000	177 208	19 196	130.0	10.8
Costa Rica	1962	1 274 000	10 861	1 118	87.8	10.3
Cuba	1960	6 797 000	42 244	2 244	33.0	5.3
Dominican Republic	1961	3 110 000	26 018	c)2 322	c)...	c)8.9
Ecuador	1960	4 317 000	61 054	11 348	262.7	18.6
El Salvador(b)	1962	2 627 000	30 136	2 857	108.8	9.5
Guatemala(b)	1962	4 017 000	69 287	17 527	436.3	25.3
Honduras	1962	1 950 000	18 650	1 642	84.2	8.8
Jamaica	1961	1 634 000	14 193	676	41.4	4.8
Mexico	1961	36 091 000	388 857	39 320	108.9	10.1
Nicaragua	1962	1 578 000	10 729	1 974	125.1	18.4
Panama (b)	1962	1 146 000	8 054	631	55.1	7.8
Paraguay (d)	1962	1 857 000	9 311	796	82.5	8.5
Peru (e)	1962	3 881 000	38 361	5 781	149.0	15.1
Trinidad and Tobago (b)	1962	894 000	6 465	202	22.6	3.1
United States	1962	185 890 000	1 756 720	19 774	10.6	1.1
Uruguay	1961	2 873 000	21 954	827	28.8	3.8
Venezuela	1962	7 872 000	54 938	4 171	53.0	7.6

(a) Data for the State of Sao Paulo and cities of Recife and Rio de Janeiro. (b) Provisional. (c) Total classified by cause amounting to 23,389 deaths. (d) Data on deaths covering 50 per cent of the population of the country. (e) Data for districts with medical certification.

TABLE 17. DEATHS FROM ILL-DEFINED AND UNKNOWN CAUSES (780-795) WITH RATES PER 100,000 POPULATION IN COUNTRIES OF THE AMERICAS

Country	Year	Estimated population	Deaths			
			All causes	Ill-defined and unknown causes		
				Number	Rate	Per cent of total deaths
Argentina	1960	20 744 000	170 195	47 552	229.2	27.9
Brazil (a)	1961	17 690 000	162 710	21 445	121.2	13.2
Canada	1962	18 600 000	143 699	1 277	6.9	0.9
Chile	1962	8 029 000	94 569	8 023	99.9	8.5
Colombia(b)	1962	14 769 000	177 208	27 861	188.6	15.7
Costa Rica	1962	1 274 000	10 861	1 627	127.7	15.0
Cuba	1960	6 797 000	42 244	1 808	24.4	3.9
Dominican Republic	1961	3 110 000	26 018	c)8 468	c)...	c)38.3
Ecuador	1960	4 317 000	61 054	15 281	354.0	25.0
El Salvador(b)	1962	2 627 000	30 136	8 778	334.1	29.1
Guatemala (b)	1962	4 017 000	69 287	10 337	257.3	14.9
Honduras	1962	1 950 000	18 650	7 470	383.1	40.1
Jamaica	1961	1 634 000	14 193	2 924	178.9	20.6
Mexico	1961	36 091 000	388 857	49 686	137.7	12.8
Nicaragua	1962	1 578 000	10 729	2 519	159.6	23.5
Panama (b)	1962	1 146 000	8 054	1 628	142.1	20.2
Paraguay (d)	1962	1 857 000	9 311	3 111	324.0	33.4
Peru (e)	1962	3 881 000	38 361	1 012	26.1	2.6
Trinidad and Tobago (b)	1962	894 000	6 465	311	34.8	4.8
United States	1962	185 890 000	1 756 720	19 730	10.6	1.1
Uruguay	1961	2 873 000	21 954	1 560	54.3	7.1
Venezuela	1962	7 872 000	54 938	15 717	199.7	28.6

(a) Data for the State of Sao Paulo and cities of Recife and Rio de Janeiro. (b) Provisional. (c) Total classified by cause amounting to 23,389 deaths. (d) Data on deaths covering 50 per cent of the population of the country. (e) Data for districts with medical certification.

In the first group with gastritis and enteritis as the leading cause are Colombia, Costa Rica, Dominican Republic, Ecuador and Nicaragua and with influenza and pneumonia in first place are Chile, Guatemala, Honduras, Mexico and Peru. Included in the latter two groups are Argentina, State of Sao Paulo (Brazil), Canada, Cuba, Jamaica, Panama, Trinidad and Tobago, United States and Uruguay.

For three countries the largest numbers of deaths were assigned to certain diseases of early infancy, namely, for El Salvador, Paraguay and Venezuela. Certain diseases of early infancy, a group which includes many diarrheal and nutritional deficiency diseases in children under one year of age as well as ill-defined causes of death of infants, was one of the five principal causes in 21 of the 22 countries (Table 15). Gastritis and enteritis was among the five principal causes in 16 countries, diseases of the heart in 16, malignant neoplasms in 15 and influenza and pneumonia in 14. Accidents and vascular lesions

affecting the central nervous system also appear frequently among the principal causes. In addition to the causes stated, others which appear are whooping cough and malaria in three countries, bronchitis in two, tuberculosis in one and homicide in one.

Despite the lesser importance of the infectious diseases as principal causes of death in recent years, as a group they result in an appreciable mortality, and to a large degree mortality which should be preventable. The proportion of deaths attributed to infective and parasitic diseases is useful as an index for evaluating the health conditions of the population. In Table 16 are presented for 21 countries the numbers of deaths from all causes and from infectious and parasitic diseases together with rates per 100,000 population and the percentage of total deaths assigned to the infectious and parasitic disease group. The infectious and parasitic diseases account for 1 per cent of all deaths in Northern America but in Latin America for 10 per cent. By country the range in Middle and South America is from 3 per cent in Trinidad and Tobago to 25 per cent in Guatemala. Death rates in the Americas range from 8 in Canada

to 436 per 100,000 population in Guatemala.

Excluded from the group of infectious and parasitic diseases are the diarrheal diseases and influenza and pneumonia, both of which in many areas of the Americas are frequently of infectious etiology. These diseases are grouped in the International Classification of Diseases with other diseases of the digestive and respiratory systems and do not appear in the infectious disease section.

Another useful index for evaluation which is easily obtained from mortality statistics is the percentage of deaths assigned to ill-defined or unknown causes. This percentage indicates the proportion of deaths not medically certified or for which sufficient information was not available to assign a cause of death, thus giving a rough measure of the adequacy of the medical care available. In many countries these deaths from ill-defined or unknown causes account for large proportions of total deaths. The range as shown in Table 17 is from 0.9 per cent in Canada to 40 per cent in Honduras. In 14 of the 21 countries shown over 10 per cent of the deaths were in this group and in ten countries over 20 per cent.

MORTALITY BY AGE

Proportionate mortality by age is often used as an index of the health conditions of a population. The two commonly used measures are the proportion of total deaths which occurs in children under 5 years of age and the proportion of deaths which occurs in persons 50 years or over. There is a close relationship between these two indices, for in populations with high childhood mortality, life expectancy is of course low and relatively small proportions of the population survive to ages over 50 years. Thus usually deaths of persons 50 years or over account for only low proportions of the total mortality.

In Table 18 and Figure 9 these two proportions are given for 21 of the 24 countries of the Americas. The first, the proportion of deaths under 5 years of age, ranges from 58 per cent in the Dominican Republic to 7 per cent in the United States. For 5 countries the percentage is over 50 and for 13 countries in excess of 40.

The second index shows a different pattern varying from 20 to 24 per cent in four countries to over 80 per cent in the United States. In most countries the proportion of deaths which occurs between 5 and 50 years of age is comparatively small. In interpreting these

proportions the completeness of registration of deaths and in particular of deaths of infants and young children must be taken into consideration. It is in these latter two age groups that the degree of underregistration of mortality is greatest.

These proportionate mortality data bring out the wide differences in mortality patterns and point sharply to the major health problem in Latin America, the excessive mortality among infants and children under five years of age. However, proportionate mortality does not accurately express the comparative or absolute risk of death at various ages. For this, death rates are usually adjusted for age differences or the age specific death rates are compared. As an example of the latter, age specific death rates are shown in Table 19 and Figure 10 for three countries, one from each region of the Americas, the United States, Mexico and Chile, in 1940 and in 1961. In 1940 the crude rates were 10.8, 23.3 and 21.5 per 1,000 population in the United States, Mexico and Chile respectively. Relatively the greatest difference between the United States and the other two countries was in the age group under 5 years: for infants the death rate was only one fourth that of Mexico and Chile

TABLE 18. NUMBER AND PERCENTAGE OF DEATHS UNDER 5 YEARS OF AGE AND OVER 50 YEARS OF AGE IN COUNTRIES OF THE AMERICAS, RECENT YEARS

Country	Year	Total deaths	Under 5 years		Over 50 years	
			Number	Per cent	Number	Per cent
Northern America		1 900 419	136 719	7.2	1 532 423	80.6
Canada	1962	143 699	14 986	10.4	111 031	77.3
United States	1962	1 756 720	121 733	6.9	1 421 392	80.9
Middle America		581 478	272 109	46.8	172 940	29.7
Costa Rica	1962	10 861	6 674	52.2	3 321	30.6
Dominican Republic	1961	26 018	15 021	57.7	6 077	23.4
El Salvador	1961	28 491	14 248	50.0	7 210	25.3
Guatemala	1962	69 287	35 024	50.5	15 520	22.4
Honduras	1961	18 045	8 082	44.8	4 287	23.8
Jamaica	1961	14 193	4 675	32.9	7 330	51.6
Mexico	1961	388 857	179 524	46.2	119 430	30.7
Nicaragua	1962	10 729	4 841	45.1	2 971	27.7
Panama	1961	8 529	3 480	40.8	3 077	36.1
Trinidad and Tobago	1962	6 465	1 540	23.8	3 717	57.5
South America		747 885	290 069	38.8	304 279	40.7
Argentina	1959	171 840	34 561	20.1	104 641	60.9
Brazil (a)	1961	118 450	45 931	38.8	46 894	39.6
Chile	1962	94 569	40 401	42.7	35 288	37.3
Colombia	1962	177 208	88 235	49.8	51 660	29.1
Ecuador	1960	61 054	34 694	56.8	b)14 411	23.6
Paraguay (c)	1962	9 311	3 150	33.8	4 150	44.6
Peru (d)	1962	38 361	18 001	46.9	11 522	30.0
Uruguay	1961	21 954	2 972	13.5	15 648	71.3
Venezuela	1962	54 938	22 124	40.3	20 165	36.7

(a) State of São Paulo. (b) Age group 45 years and over. (c) Area of information only. (d) Data for districts with medical certification.

and for children of 1-4 years of age it was less than one tenth of that in these two countries. With increasing age the relative differences between the countries decreased and death rates at the older ages were more nearly alike. However except at the extreme old ages they remained lowest for the United States.

In 1961 the crude death rates in the three countries are more similar, 11.5 in Chile, 10.8 in Mexico and 9.3 in the United States, but some of the differences in age specific rates in 1940 have remained. Death rates under 5 years of age in the United States continue to be only a small percentage of those in Mexico and Chile. However in other age groups the differences in age specific rates between the three countries have diminished and over 60 years age specific rates are similar.

An interesting comparison can be made between the rates for Mexico and Chile for 1961 and those for the United States for 1940. Infant mortality at the later period in Mexico and Chile is still 78 and 132 per

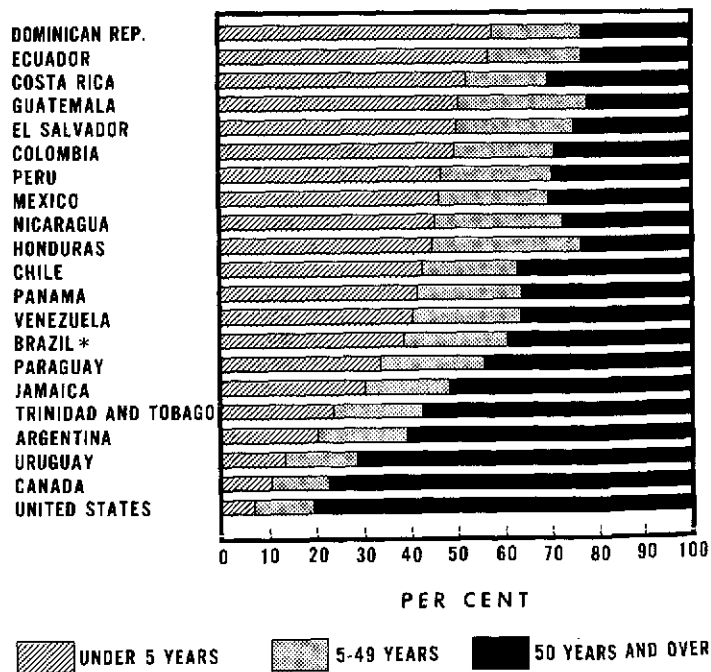
TABLE 19. DEATHS FROM ALL CAUSES BY AGE PER 1,000 POPULATION IN THREE COUNTRIES IN THE AMERICAS, 1940 AND 1961

Age	1940			1961		
	Chile	Mexico	United States	Chile	Mexico	United States
All ages	21.5	23.3	10.8	11.5	10.8	9.3
Under 1	239.9	205.3	54.9	127.6	97.8	25.3
1-4	31.5	48.2	2.9	7.1	13.3	1.0
5-9	2.8	7.9	1.1	1.3	2.5	0.5
10-14	3.3	4.0	1.0	1.0	1.3	0.4
15-19	6.6	6.0	1.7	1.7	2.1	0.9
20-24	9.4	9.0	2.4	2.6	3.2	1.2
25-29	9.5	10.0	2.8	3.9	3.9	1.3
30-34	10.1	11.5	3.4		4.7	1.6
35-39	10.9	13.2	4.4	5.9	5.9	2.3
40-44	12.9	15.4	6.1		6.9	3.6
45-49	15.5	18.0	8.7	10.0	8.5	5.7
50-54	19.3	21.6	12.8		11.0	8.1
55-59	27.3	27.1	18.6	21.4	15.6	13.3
60-64	35.4	40.4	26.8		21.9	20.9
65-69	53.9	54.8	39.2	67.7	33.0	31.0
70-74	72.5	84.7	61.1		47.2	45.2
75-79	103.1	108.0	94.8	89.1	71.7	89.1
80-84	134.2	161.1	145.6		96.0	111.4
85 and over	238.8	295.2	235.7	152.0	195.9	

Source: U.N. Demographic Yearbook, 1948 and 1961.

FIGURE 9

PERCENTAGE OF DEATHS IN THREE AGE GROUPS IN COUNTRIES OF THE AMERICAS, AROUND 1961

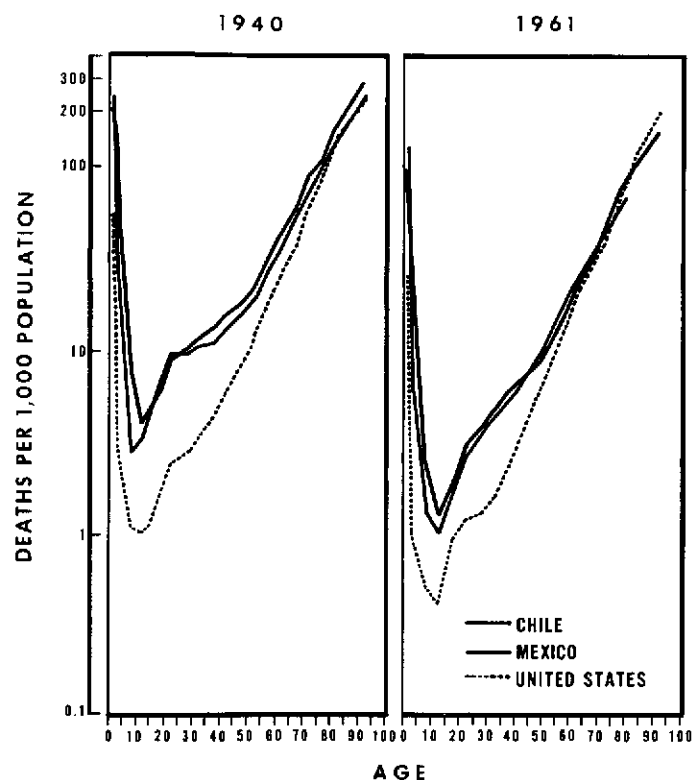


* (STATE OF SÃO PAULO)

cent higher than in the United States in 1940 and similarly mortality in the 1-4 year group is 359 and 145 per cent higher. In most other age groups the differences are relatively smaller.

FIGURE 10

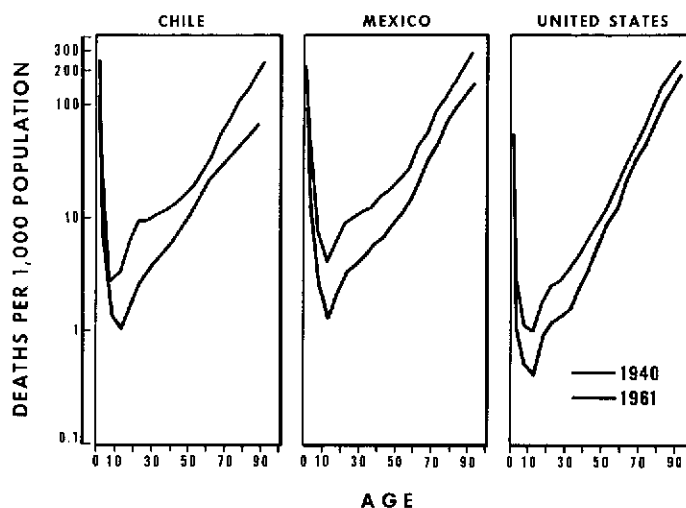
DEATHS FROM ALL CAUSES PER 1,000 POPULATION BY AGE
IN CHILE, MEXICO AND UNITED STATES, 1940 AND 1961



The same sets of rates for 1940 and 1961 are shown in another arrangement in Figure 11 to illustrate for each of the countries the changes in the twenty-one year period. The great decreases in Mexico and Chile in the death rates for most age groups are apparent. It is evident that in these two countries and in the United States reductions in mortality are relatively greater at young and middle ages than at the older ones. Emphasis however remains focused on the continuing need for the reduction of infant and early childhood mortality.

FIGURE 11

DEATHS FROM ALL CAUSES PER 1,000 POPULATION BY AGE
IN CHILE, MEXICO AND UNITED STATES, 1940 AND 1961



MORTALITY UNDER FIVE YEARS OF AGE

The distributions of deaths by age, as revealed by the indices of proportionate mortality and the comparisons of age specific death rates in Mexico, Chile and the United States have already emphasized a major problem area in health in Latin America. In Table 20 are shown for the countries and other areas of the Americas the number of infant deaths with rates per 1,000 live births for the years of 1961 and 1962. By region the rates in 1962 are 25.5 in Northern America, 68.5 in Middle America and 79.9 in South America. By country the range is from 25.3 in the United States to 119.3 in Chile. Among the other areas of the Region infant mortality varies from 8 to 107

per 1,000 live births. Registration of deaths is probably more incomplete in infancy than in any other age period. In some countries deaths of infants occurring before the birth is registered are not counted. In others, deaths occurring in the first 24 hours after birth are also not included. Distinctions are not uniformly made between a live birth and a fetal death. In many areas infant death rates are probably even higher than the official figures which clearly indicate a major health problem.

In Figure 12 are shown the trends of infant mortality for six countries of the Americas in the ten years from 1953 to 1962. The countries included are

TABLE 20 NUMBER OF INFANT DEATHS WITH RATES PER 1,000 LIVE BIRTHS IN THE AMERICAS, 1961-1962

Area	Number		Rate	
	1961	1962	1961	1962
Northern America	120 933	118 463	25.5	25.5
Middle America(a)	177 018	169 068	70.1	68.5
South America (b)	230 580	157 560	80.8	79.9
Argentina	28 391	27 905	60.4	59.0
Bolivia	...	...	...	...
Brazil (c)	38 046	...	80.7	...
Canada	12 940	12 941	27.2	27.6
Chile	31 638	32 909	119.8	119.3
Colombia	56 176	58 265	89.7	88.5
Costa Rica	3 803	4 121	66.3	76.7
Cuba	...	...	...	...
Dominican Republic	10 499	...	102.3	...
Ecuador	* 20 850	* 21 120	* 105.2	* 104.0
El Salvador	8 739	9 099	70.0	71.5
Guatemala	16 438	17 485	84.8	91.3
Haiti	...	...	...	...
Honduras	4 283	4 020	49.9	43.6
Jamaica	3 228	3 218	48.2	48.1
Mexico	115 666	* 118 580	71.3	* 71.3
Nicaragua	3 806	3 280	63.9	54.6
Panama	2 352	1 918	54.4	42.7
Paraguay	2 418	2 219	86.3	...
Peru	39 046	...	83.4	...
Trinidad and Tobago	1 472	1 316	44.6	38.6
United States	107 956	105 479	25.3	25.3
Uruguay	2 680	...	...	...
Venezuela	18 137	16 187	53.3	48.0
Antigua	97	75	54.9	42.0
Bahama Islands	190	168	64.6	48.4
Barbados	570	376	83.8	54.8
Bermuda	36	42	30.4	35.4
British Guiana	* 1 185	* 1 091	* 51.0	* 45.4
British Honduras	232	306	54.7	68.6
Canal Zone	19	15	24.3	20.4
Cayman Islands	11	7	39.7	24.1
Dominica	...	189	...	73.7
Falkland Islands	2	-	41.7	-
French Guiana	57	83	53.5	75.5
Grenada	266	179	72.1	52.4
Guadaloupe	426	356	42.4	32.6
Martinique	479	432	45.7	40.8
Montserrat	30	27	89.6	83.3
Netherlands Antilles	151	127	23.1	19.5
Puerto Rico	3 129	3 191	41.7	39.8
St. Kitts - Nevis - Anguilla	206	129	101.1	61.1
St. Lucia	408	378	101.7	96.1
St. Pierre and Miquelon	1	1	10.8	8.4
St. Vincent	426	...	106.9	...
Surinam	554	...	44.0	...
Turks and Caicos Islands	27	27	110.7	107.1
Virgin Islands (U.K.)	14	11	53.6	38.9
Virgin Islands (U.S.)	51	38	42.7	27.7

* Provisional

(a) Excludes Cuba, Haiti, and Dominica in 1961 and Cuba, Dominican Republic, Haiti and St. Vincent in 1962.

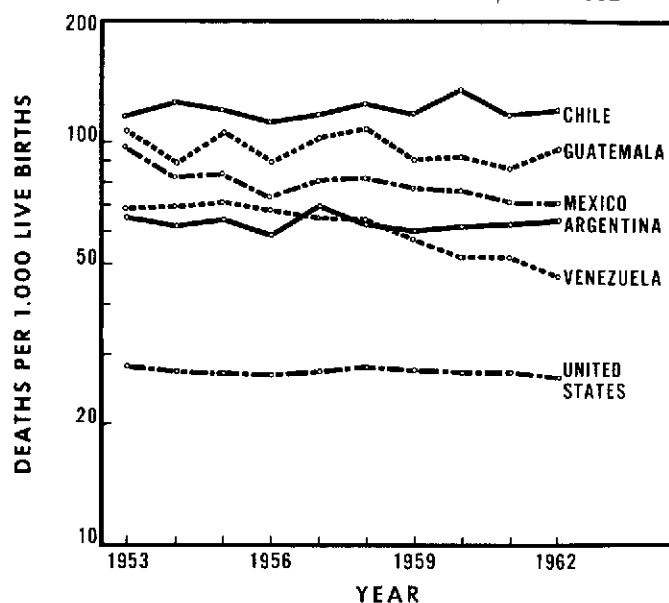
(b) Excludes Brazil and Uruguay in 1961 and Bolivia, Brazil, Paraguay, Peru, Uruguay, and Surinam in 1962.

(c) Data for the State of Sao Paulo and city of Recife.

those with the highest and lowest infant mortality rates in the decade. Incomplete registration of deaths, perhaps more marked early in the period, may be responsible for the apparent lack of progress in reducing infant mortality. The highest rate in 1962 (119 per 1,000 live births) is almost five times the lowest (25). For three countries — Chile, Guatemala and Argentina — no consistent decrease is apparent in the period. For both Mexico and Venezuela downward trends are evident, and for the United States only a slight reduction is seen.

FIGURE 12

DEATHS UNDER ONE YEAR OF AGE PER 1,000 LIVE BIRTHS IN SIX COUNTRIES OF THE AMERICAS, 1953-1962



The division of infant deaths into neonatal deaths, those occurring under the age of 28 days, and post-neonatal deaths, those occurring in the remainder of the first year of life, often is made as the basis for obtaining indices to express the effect of environmental factors on infant mortality. The former are in large part due to conditions at birth while those occurring later in the first year of life are more often associated with environmental conditions. In Table 21 are shown the neonatal and post-neonatal death rates for 15 countries for 1962. The variations in mortality between countries are large in both periods of age but differences in the post-neonatal rates are strikingly greater than in the neonatal rates. Neonatal death rates vary only from 17.7 to 37.4 per 1,000 live births while mortality in the post-neonatal period ranges from 7.0 per 1,000 live births to 81.8. In these

TABLE 21. NEONATAL AND POST-NEONATAL DEATH RATES IN THE AMERICAS, RECENT YEARS

Country	Year	Rates per 1,000 live births			Per cent under 28 days
		Total	Under 28 days	28 days-11 months	
Canada	1962	27.6	18.7	8.9	67.9
Chile	1962	119.3	37.4	81.8	31.4
Colombia	1961	89.7	a) 36.1	b) 53.6	a) 40.3
Costa Rica	1962	76.7	24.9	51.8	32.4
Ecuador	1960	100.0	31.6	68.3	31.6
El Salvador	1961	70.0	28.7	41.3	41.0
Guatemala	1962	91.3	36.3	55.1	39.7
Jamaica	1961	48.2	17.7	30.5	36.6
Mexico	1961	71.3	27.2	44.1	38.1
Nicaragua	1962	54.6	16.6	38.1	30.3
Panama	1962	42.7	23.2	19.5	54.4
Paraguay	1961	86.3	41.3	45.0	47.9
Peru (c)	1960	67.8	22.2	45.6	32.8
United States	1962	25.3	18.3	7.0	72.4
Venezuela	1962	48.0	23.9	24.1	49.8

(a) Under 30 days. (b) 30 days-11 months. (c) Principal cities only.

same countries the lowest proportion of infant deaths occurring under 28 days of age was 30.3 per cent and the highest was 72.4.

As post-neonatal death rates in the first year of life are related to environmental conditions so to an even greater extent are the death rates in the age group of 1-4 years. It is in this age group that it is possible with present knowledge to make rapid reductions in mortality.

In Table 22 are shown for a recent year deaths under 5 years of age, in infancy and between 1 to 4 years together with rates for all countries of the Americas except Bolivia, Brazil and Haiti. For Brazil only infant deaths are shown and only for the State of São Paulo.

The mortality in the age group of 1-4 years shows relatively large variations from 1.0 per 1,000 population in the United States to 33.2 in Guatemala. However, by 1962 nine countries in Middle and South America had attained death rates of less than 10 per 1,000 population in this age group.

TABLE 22. DEATHS AND DEATH RATES PER 1,000 POPULATION AMONG CHILDREN UNDER 5 YEARS OF AGE IN COUNTRIES OF THE AMERICAS, RECENT YEARS

Country	Year	Number of deaths			Death rates		
		Under 1 year	1-4 years	Under 5 years	Under 1 year	1-4 years	Under 5 years
<u>Northern America</u>		118 420	18 299	136 719	25.5	1.0	5.9
Canada	1962	12 941	2 045	14 986	27.6	1.1	6.5
United States	1962	105 479	16 254	121 733	25.3	1.0	5.8
<u>Middle America</u>		177 808	101 092	271 626	68.5	13.9	29.7
Costa Rica	1962	4 121	1 553	5 674	76.7	7.7	21.4
Cuba	1960	7 274	...	...	34.8	...	...
Dominican Republic	1961	10 499	4 522	15 021	102.3	10.4	27.4
El Salvador	1961	8 739	5 509	14 248	70.0	16.5	32.8
Guatemala	1962	17 485	17 539	35 024	91.3	33.2	51.8
Honduras	1961	4 283	3 799	8 082	49.9	...	...
Jamaica	1961	3 227	1 448	4 675	48.2	6.8	17.2
Mexico	1961	115 666	63 858	179 524	71.3	13.3	30.1
Nicaragua	1962	3 280	1 561	4 841	54.6	7.1	17.2
Panama	1962	1 918	1 079	2 997	42.7	7.1	15.5
Trinidad and Tobago	1962	1 316	224	1 540	38.6	2.0	10.8
<u>South America</u>		206 858	71 344	241 166	78.4	10.1	26.8
Argentina	1959	28 055	6 506	34 561	59.4	3.7	15.1
Brazil (State of São Paulo)	1961	34 356	11 575	45 931	76.8	...	...
Chile	1962	32 920	7 481	40 401	119.3	7.8	33.3
Colombia	1962	58 265	29 970	88 235	88.5	15.6	35.8
Ecuador	1960	20 610	14 084	34 694	104.7	23.3	45.2
Paraguay (a)	1962	2 219	931	3 150	86.5	8.9	23.7
Peru (b)	1962	11 566	6 435	18 001	71.2	11.2	24.4
Uruguay	1961	2 680	292	2 972	42.7	...	...
Venezuela	1962	16 187	5 937	22 124	48.0	5.5	15.8

(a) Area of information only. (b) Data for districts with medical certification.

In Figure 13 the trends of mortality in this age group are shown for the period 1953-1962 for the same six countries as in Figure 12. Data for the countries with the highest and lowest rate in the Region are included in the Figure. The country with the highest mortality in the age group 1-4 years is not the highest with respect to infant mortality. For four of the five Latin American countries shown a decrease has occurred in the death rate at ages 1-4 years. The decrease for the United States continues but is small since the rate has already reached a very low level.

As shown in Table 22, the total mortality among children under five years of age ranges from 5.8 per 1,000 population in the United States to 51.8 in Guatemala. For ten of the 16 countries for which data are available mortality rates in this age group exceed 20 per 1,000 population. For the regions of Middle and South America the corresponding rates are 29.7 and 26.8 per 1,000 population.

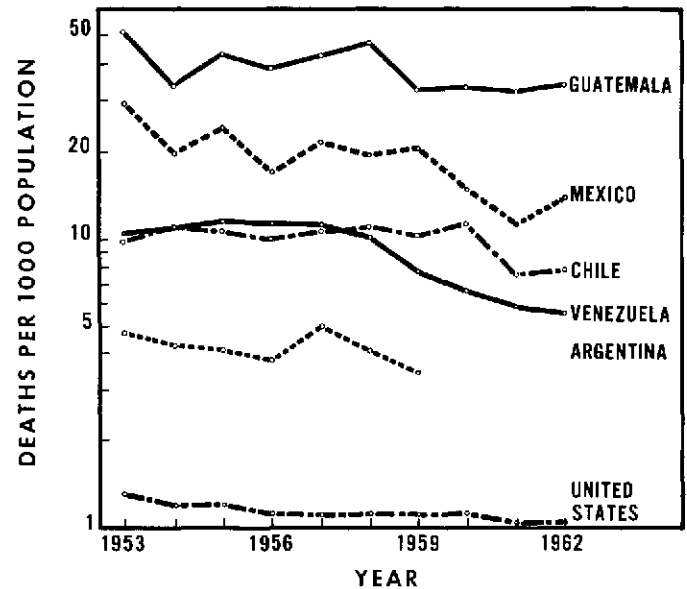
Data on principal causes of mortality of children under 5 years of age were assembled from various sources. The questionnaire for the Supplement to the Second Report on the World Health Situation does not provide data on causes of mortality by age. However, the annual questionnaires of WHO and PAHO completed in the countries do contain tabulations by cause and age as do official reports from countries to the United Nations and statistical publications of some countries.

Information on causes of mortality for children of two age groups, under one year and 1-4 years, are available for 18 countries of the Americas for 1962 or an earlier year. Numbers of deaths, rates per 1,000 population and the percentages of total deaths in the age group are presented for the first five principal causes of death in each country (Table 23). In all countries the group, diseases of early infancy, is one of the principal causes of death under one year of age. In fact in all but two countries it is the leading cause of death. Gastritis also ranks high on the list in all of the 18 countries, and another leading cause is influenza and pneumonia. Congenital malformations and bronchitis are among the first five causes of infant mortality in almost two thirds of the countries, and tetanus figures among the principal causes in eight countries. Accidents, whooping cough, malaria and measles each appear in a few instances.

For deaths of children in the age group of 1-4 years, gastritis and enteritis is listed in all 18 countries as one of the five leading causes, and the principal cause in 11 countries. Influenza and pneu-

FIGURE 13

DEATHS OF CHILDREN 1-4 YEARS OF AGE PER 1000 POPULATION IN SIX COUNTRIES OF THE AMERICAS, 1953-1962



monia also is included on the list for all 18 countries and is in second place in eleven. Bronchitis, measles and accidents appear next in order of frequency of inclusion. Accidents were the principal cause of death in the 1-4 year group in the United States and Canada. Included among the principal causes less frequently were whooping cough, congenital malformations, avitaminosis and other nutritional deficiency states, malignant neoplasms, malaria, diphtheria, dysentery, tuberculosis and anemias.

The provision of data according to the A List of causes of death through the annual questionnaires of WHO and PAHO has made it possible to bring out the importance of tetanus as a cause of deaths in infants in the countries and of avitaminosis and other nutritional deficiency states among the principal causes of mortality in early childhood. In general, death rates from avitaminoses and other nutritional deficiency states do not reflect the seriousness of these conditions in the Americas. Deaths in which these states are associated factors often are assigned to the infectious diseases of childhood, to the diarrheal diseases or to ill-defined groups of causes. The principal causes of deaths among infants and children 1-4 years of age are summarized in Table 24.

TABLE 23. FIRST FIVE PRINCIPAL CAUSES OF DEATH AMONG CHILDREN UNDER 5 YEARS OF AGE, UNDER 1 YEAR, AND 1-4 YEARS WITH RATES PER 100,000 POPULATION IN THE AMERICAS, RECENT YEARS

Country and principal causes	Under 5 years				Under 1 year				1-4 years			
	Rank	Number	Rate	Per cent	Rank	Number	Rate	Per cent	Rank	Number	Rate	Per cent
CANADA (1962) - All causes		14 986	651.3	100.0		12 941	2755.2	100.0		2 045	111.9	100.0
Certain diseases of early infancy (760-776)	1	7 314	317.9	48.8	1	7 313	1557.0	56.5	-	1	0.1	0.0
Congenital malformations (750-759) ..	2	2 476	107.6	16.5	2	2 230	474.8	17.2	3	246	13.5	12.0
Influenza and pneumonia (480-483, 490-493)	3	1 590	69.1	10.6	3	1 329	283.0	10.3	2	261	14.3	12.8
Accidents (E800-E962)	4	1 294	56.2	8.6	4	558	118.8	4.3	1	736	40.3	36.0
Gastritis, enteritis, etc. (543, 571, 572)	5	459	19.9	3.1	5	379	80.7	2.9	5	80	4.4	3.9
Malignant neoplasms (140-205)	-	218	9.5	1.5	-	22	4.7	0.2	4	196	10.7	9.6
CHILE (1961)(a) - All causes		38 252	3185.0	100.0		31 505	11934.4	100.0		6 747	708.6	100.0
Certain diseases of early infancy (760-776)	1	12 685	1056.2	33.2	1	12 685	4805.2	40.3	-	-	-	-
Influenza and pneumonia (480-483, 490-493)	2	12 159	1012.4	31.8	2	9 722	3682.8	30.9	1	2 437	255.9	36.1
Gastritis, enteritis, etc. (543, 571, 572)	3	4 350	362.2	11.4	3	3 642	1379.6	11.6	3	708	74.4	10.5
Measles (085)	4	1 810	150.7	4.7	4	813	308.0	2.6	2	997	104.7	14.8
Congenital malformations (750-759) ..	5	703	58.5	1.8	5	657	248.9	2.1	-	46	4.8	0.7
Accidents (E800-E962)	-	688	57.3	1.8	-	157	59.5	0.5	4	531	55.8	7.9
Diphtheria (055)	-	181	15.1	0.5	-	54	20.5	0.2	5	127	13.3	1.9
COLOMBIA (1962) - All causes		88 235	3581.7	100.0		58 265	8853.5	100.0		29 970	1558.6	100.0
Certain diseases of early infancy (760-776)	1	18 466	749.6	20.9	1	18 466	2805.9	31.7	-	-	-	-
Gastritis, enteritis, etc. (543, 571, 572)	2	17 273	701.2	19.6	2	10 498	1595.2	18.0	1	6 775	352.3	22.6
Influenza and pneumonia (480-483, 490-493)	3	9 544	387.4	10.8	3	5 866	891.3	10.1	2	3 678	191.3	12.3
Bronchitis (500-502)	4	7 791	316.3	8.8	4	4 828	733.6	8.3	3	2 963	154.1	9.9
Avitaminoses and other deficiency states (280-286)	5	3 140	127.5	3.6	-	910	138.3	1.6	4	2 230	116.0	7.4
Measles (085)	-	1 796	72.9	2.0	-	523	79.5	0.9	5	1 273	66.2	4.2
Tetanus (061)	-	1 665	67.6	1.9	5	1 601	243.3	2.7	-	64	3.3	0.2
COSTA RICA (1962) - All causes ...		5 674	2144.4	100.0		4 121	7671.3	100.0		1 553	773.4	100.0
Gastritis, enteritis, etc. (543, 571, 572)	1	1 432	541.2	25.2	1	1 066	1984.4	25.9	1	366	182.3	23.6
Certain diseases of early infancy (760-776)	2	952	359.8	16.8	2	952	1772.2	23.1	-	-	-	-
Influenza and pneumonia (480-483, 490-493)	3	714	269.8	12.6	3	511	951.2	12.4	2	203	101.1	13.1
Bronchitis (500-502)	4	268	101.3	4.7	4	210	390.9	5.1	4	58	28.9	3.7
Measles (085)	5	232	87.7	4.1	-	57	106.1	1.4	3	175	87.2	11.3
Congenital malformations (750-759) ...	-	162	61.2	2.9	5	145	269.9	3.5	-	17	8.5	1.1
Accidents (E800-E962)	-	62	23.4	1.1	-	18	33.5	0.4	5	44	21.9	2.8
DOMINICAN REPUBLIC (1961) (a) - All causes		15 021	2744.6	100.0		10 499	10234.4	100.0		4 522	1044.8	100.0
Certain diseases of early infancy (760-776)	1	6 674	1219.4	44.4	1	6 674	6505.8	63.6	-	-	-	-
Gastritis, enteritis, etc. (543, 571, 572)	2	2 315	423.0	15.4	2	1 154	1124.9	11.0	1	1 161	268.3	25.7
Bronchitis (500-502)	3	530	96.8	3.5	3	308	300.2	2.9	2	222	51.3	4.9
Influenza and pneumonia (480-483, 490-493)	4	426	77.8	2.8	4	228	222.3	2.2	3	198	45.7	4.4
Malaria (110-117)	5	240	43.9	1.6	5	92	89.7	0.9	4	148	34.2	3.3
Anemias (290-293)	-	194	35.4	1.3	-	56	54.6	0.5	5	138	31.9	3.1

(a) Data available from the Abbreviated List of 50 causes of the International Classification (B list) only.

TABLE 23. FIRST FIVE PRINCIPAL CAUSES OF DEATH AMONG CHILDREN UNDER 5 YEARS OF AGE, UNDER 1 YEAR, AND 1-4 YEARS WITH RATES PER 100,000 POPULATION IN THE AMERICAS, RECENT YEARS (continued)

Country and principal causes	Under 5 years				Under 1 year				1-4 years			
	Rank	Number	Rate	Per cent	Rank	Number	Rate	Per cent	Rank	Number	Rate	Per cent
ECUADOR (1960) - All causes (a)		34 694	4517.4	100.0		20 610	10469.5	100.0		14 084	2330.2	100.0
Gastritis, enteritis, etc. (543, 571, 572)	1	3 301	...	31.2	1	1 860	...	27.9	1	1 441	...	36.8
Certain diseases of early infancy (760-776)	2	1 581	...	14.9	2	1 563	...	23.4	-	18	...	0.5
Influenza and pneumonia (480-483, 490-493)	3	1 167	...	11.0	4	765	...	11.5	2	402	...	10.3
Bronchitis (500-502)	4	1 124	...	10.6	3	780	...	11.7	3	344	...	8.8
Tetanus (061)	5	389	...	3.7	5	377	...	5.6	-	12	...	0.3
Measles (085)	-	339	...	3.2	-	86	...	1.3	4	253	...	6.5
Whooping cough (056)	-	281	...	2.7	-	147	...	2.2	5	134	...	3.4
EL SALVADOR (1961) - All causes.		14 248	3275.4	100.0		8 739	6998.4	100.0		5 509	1646.0	100.0
Certain diseases of early infancy (760-776)	1	5 205	1196.6	36.5	1	5 205	4168.3	59.6	-	-	-	-
Gastritis, enteritis, etc. (543, 571, 572)	2	1 180	271.3	8.3	2	662	530.1	7.6	1	518	154.8	9.4
Bronchitis (500-502)	3	495	113.8	3.5	4	338	270.7	3.9	5	157	46.9	2.8
Influenza and pneumonia (480-483, 490-493)	4	451	103.7	3.2	5	257	205.8	2.9	3	194	58.0	3.5
Tetanus (061)	5	427	98.2	3.0	3	422	337.9	4.8	-	5	1.5	0.1
Measles (085)	-	351	80.7	2.5	-	91	72.9	1.0	2	260	77.7	4.7
Whooping cough (036)	-	311	71.5	2.2	-	145	116.1	1.7	4	166	49.6	3.0
GUATEMALA (1962) - All causes ...		35 024	5180.3	100.0		17 485	9134.4	100.0		17 539	3323.0	100.0
Certain diseases of early infancy (760-776)	1	7 486	1107.2	21.4	1	7 483	3909.2	42.8	-	3	0.6	0.0
Influenza and pneumonia (480-483, 490-493)	2	6 323	935.2	18.1	2	3 016	1575.6	17.2	2	3 307	626.6	18.9
Gastritis, enteritis, etc. (543, 571, 576)	3	5 748	850.2	16.4	3	2 257	1179.1	12.9	1	3 491	661.4	19.9
Whooping cough (056)	4	3 325	491.8	9.5	4	1 398	730.3	8.0	3	1 927	365.1	11.0
Measles (085)	5	1 655	244.8	4.7	-	376	196.4	2.2	4	1 279	242.3	7.3
Bronchitis (500-502)	-	920	136.1	2.6	5	501	261.7	2.9	5	419	79.4	2.4
JAMAICA (b) (1961) - All causes ..		3 914	1439.0	100.0		2 606	3892.7	100.0		1 308	614.1	100.0
Certain diseases of early infancy (760-776)	1	1 056	388.2	27.0	1	1 056	1577.4	40.5	-	-	-	-
Gastritis, enteritis, etc. (543, 571, 572)	2	1 042	383.1	26.6	2	726	1084.5	27.9	2	316	148.4	24.2
Influenza and pneumonia (480-483, 490-493)	3	439	161.4	11.2	3	265	395.8	10.2	3	174	81.7	13.3
Avitaminoses and other deficiency states (280-286)	4	409	150.4	10.4	-	50	74.7	1.9	1	359	168.5	27.4
Bronchitis (500-502)	5	154	56.6	3.9	4	85	127.0	3.3	4	69	32.4	5.3
Congenital malformations (750-759) ..	-	102	37.5	2.6	5	81	121.0	3.1	-	21	9.9	1.6
Accidents (E800-E962)	-	83	30.5	2.1	-	30	44.8	1.2	5	53	24.9	4.1
MEXICO (1961) - All causes		179 524	3007.4	100.0		115 666	7131.4	100.0		63 858	1833.8	100.0
Certain diseases of early infancy (760-776)	1	46 847	784.8	26.1	1	46 847	2888.4	40.5	-	-	-	-
Gastritis, enteritis, etc. (543, 571, 572)	2	43 245	724.4	24.1	2	24 434	1506.5	21.1	1	18 811	392.9	29.5
Influenza and pneumonia (480-483, 490-493)	3	35 180	589.3	19.6	3	22 874	1410.3	19.8	2	12 306	257.0	19.3
Bronchitis (500-502)	4	8 381	140.4	4.7	4	6 218	383.4	5.4	5	2 163	45.2	3.4
Measles (085)	5	5 033	84.3	2.8	-	977	60.2	0.8	3	4 056	84.7	6.4
Whooping cough (056)	-	4 949	82.9	2.8	-	1 738	107.2	1.5	4	3 211	67.1	5.0
Congenital malformations (750-759) ..	-	3 329	55.8	1.9	5	2 874	177.2	2.5	-	455	9.5	0.7

(a) Distribution by cause with percentages shown only for medically certified deaths totalling 10,587 for under 5 years, 6,676 for under 1 year and 3,911 for 1-4 years. (b) Totals do not include 761 deaths not distributed by cause of which 140 were among children 1-4 years.

TABLE 23. FIRST FIVE PRINCIPAL CAUSES OF DEATH AMONG CHILDREN UNDER 5 YEARS OF AGE, UNDER 1 YEAR, AND 1-4 YEARS WITH RATES PER 100,000 POPULATION IN THE AMERICAS, RECENT YEARS (continued)

Country and principal causes	Under 5 years				Under 1 year				1-4 years			
	Rank	Number	Rate	Per cent	Rank	Number	Rate	Per cent	Rank	Number	Rate	Per cent
NICARAGUA (1962) - All causes ..		4 841	1724.0	100.0		3 280	5464.8	100.0		1 561	709.5	100.0
Gastritis, enteritis, etc. (543, 571, 572)	1	1 131	402.8	23.4	2	785	1307.9	23.9	1	346	157.3	22.2
Certain diseases of early infancy (760-776)	2	1 093	389.2	22.6	1	1 093	1821.1	33.3	-	-	-	-
Influenza and pneumonia (480-483, 490-493)	3	292	104.0	6.0	5	163	271.6	5.0	2	129	58.6	8.3
Tetanus (061)	4	277	98.6	5.7	3	254	423.2	7.7	-	23	10.5	1.5
Malaria (110-117)	5	272	96.9	5.6	4	175	291.6	5.3	3	97	44.1	6.2
Whooping cough (056)	-	128	45.6	2.6	-	63	105.0	1.9	5	65	29.5	4.2
Measles (085)	-	124	44.2	2.6	-	36	60.0	1.1	4	88	40.0	5.6
PANAMA (1962) - All causes		2 997	1545.6	100.0		1 918	4266.0	100.0		1 079	709.9	100.0
Certain diseases of early infancy (760-776)	1	567	292.4	18.9	1	567	1261.1	29.6	-	-	-	-
Gastritis, enteritis, etc. (543, 571, 572)	2	464	239.3	15.5	2	281	625.0	14.7	1	183	120.4	17.0
Bronchitis (500-502)	3	259	133.6	8.6	3	147	327.0	7.7	3	112	73.7	10.4
Influenza and pneumonia (480-483, 490-493)	4	236	121.7	7.9	5	116	258.0	6.0	2	120	78.9	11.1
Tetanus (061)	5	169	87.2	5.6	4	166	369.2	8.7	-	3	2.0	0.3
Accidents (E800-E962)	-	67	34.6	2.2	-	14	31.1	0.7	4	53	34.9	4.9
Measles (085)	-	43	22.2	1.4	-	8	17.8	0.4	5	35	23.0	3.2
PARAGUAY (1962) (a) - All causes ..		3 150	2372.0	100.0		2 219	...	100.1		931	894.3	100.0
Certain diseases of early infancy (760-776)	1	580	436.7	18.4	1	580	...	26.1	-	-	-	-
Gastritis, enteritis, etc. (543, 571, 572)	2	494	372.0	15.7	2	296	...	13.3	1	198	190.2	21.3
Influenza and pneumonia (480-483, 490-493)	3	333	250.8	10.6	3	209	...	9.4	2	124	119.1	13.3
Tetanus (061)	4	174	131.0	5.5	4	170	...	7.7	-	4	3.8	0.4
Bronchitis (500-502)	5	99	74.5	3.1	5	69	...	3.1	3	30	28.8	3.2
Accidents (E800-E962)	-	41	30.9	1.3	-	13	...	0.6	5	28	26.9	3.0
Measles (085)	-	38	28.6	1.2	-	9	...	0.4	4	29	27.9	3.1
PERU (1962) (b) - All causes		18 001	2439.8	100.0		11 566	7117.5	100.0		6 435	1118.5	100.0
Certain diseases of early infancy (760-776)	1	4 870	660.1	27.1	1	4 870	2996.9	42.1	-	-	-	-
Influenza and pneumonia (480-483, 490-493)	2	3 682	499.1	20.5	2	2 266	1394.5	19.6	1	1 416	246.1	22.0
Gastritis, enteritis, etc. (543, 571, 572)	3	3 288	445.6	18.3	3	1 966	1209.8	17.0	2	1 322	229.8	20.5
Measles (085)	4	1 152	156.1	6.4	-	313	192.6	2.7	3	839	145.8	13.0
Bronchitis (500-502)	5	842	114.1	4.7	4	554	340.9	4.8	4	288	50.1	4.5
Congenital malformations (750-759) ..	-	517	70.1	2.9	5	458	281.8	4.0	-	59	10.3	0.9
Tuberculosis - All forms (001-019) ..	-	344	46.6	1.9	-	76	46.8	0.7	5	268	46.6	4.2
TRINIDAD AND TOBAGO (1962) - All causes		1 540	1083.7	100.0		1 316	3858.0	100.0		224	201.1	100.0
Certain diseases of early infancy (760-776)	1	794	558.8	51.6	1	793	2324.8	60.3	-	1	0.9	0.4
Influenza and pneumonia (480-483, 490-493)	2	197	138.6	12.8	3	134	392.8	10.2	1	63	56.6	28.1
Gastritis, enteritis, etc. (543, 571, 572)	3	193	135.8	12.5	2	162	474.9	12.3	2	31	27.8	13.8
Congenital malformations (750-759) ..	4	66	46.4	4.3	4	61	178.8	4.6	-	5	4.5	2.2
Accidents (E800-E962)	5	45	31.7	2.9	-	15	44.0	1.1	3	30	26.9	13.4
Tetanus (061)	-	20	14.1	1.3	5	18	52.8	1.4	-	2	1.8	0.9
Avitaminoses and other deficiency states (280-286)	-	19	13.4	1.2	-	6	17.6	0.5	4	13	11.7	5.8
Bronchitis (500-502)	-	26	18.3	1.7	-	15	44.0	11.4	5	11	9.9	4.9

(a) Data are for area of information only. (b) Data are for districts with medical certification only.

TABLE 23. FIRST FIVE PRINCIPAL CAUSES OF DEATH AMONG CHILDREN UNDER 5 YEARS OF AGE, UNDER 1 YEAR, AND 1-4 YEARS WITH RATES PER 100,000 POPULATION IN THE AMERICAS, RECENT YEARS (continued)

Country and principal causes	Under 5 years				Under 1 year				1-4 years			
	Rank	Number	Rate	Per cent	Rank	Number	Rate	Per cent	Rank	Number	Rate	Per cent
UNITED STATES (1962) - All causes		121 733	578.0	100.0		105 479	2531.1	100.0		16 254	96.7	100.0
Certain diseases of early infancy (760-776)	1	64 195	304.8	52.7	1	64 185	1540.2	60.9	-	10	0.1	0.1
Congenital malformations (750-759) ..	2	16 712	79.4	13.7	2	14 832	355.9	14.1	3	1 880	11.2	11.6
Influenza and pneumonia (480-483, 490-493)	3	11 258	53.4	9.2	3	8 985	215.6	8.5	2	2 271	13.5	14.0
Accidents (E800-E962)	4	8 705	41.3	7.2	4	3 653	87.7	3.5	1	5 052	30.1	31.1
Gastritis, enteritis, etc. (543, 571, 572)	5	2 845	13.5	2.3	5	2 342	56.2	2.2	5	503	3.0	3.1
Malignant neoplasms (140-205)	-	1 871	8.9	1.5	-	261	6.3	0.2	4	1 610	9.6	9.9
URUGUAY (1961) - All causes		2 972	...	100.0		2 680	4267.5	100.0		292	...	100.0
Certain diseases of early infancy (760-776)	1	1 516	...	51.0	1	1 516	2414.0	56.6	-	-	...	-
Gastritis, enteritis, etc. (543, 571, 572)	2	307	...	10.3	2	277	441.1	10.3	3	30	...	10.3
Influenza and pneumonia (480-483, 490-493)	3	262	...	8.8	3	219	348.7	8.2	1	43	...	14.7
Congenital malformations (750-759) ..	4	177	...	6.0	4	163	259.6	6.1	5	14	...	4.8
Accidents (E800-E962)	5	58	...	2.0	5	23	36.6	0.9	2	35	...	12.0
Malignant neoplasms (140-205)	-	25	...	0.8	-	3	4.8	0.1	4	22	...	7.5
VENEZUELA (1962) - All causes ..		22 124	1577.1	100.0		16 187	4799.3	100.0		5 937	546.2	100.0
Certain diseases of early infancy (760-776)	1	5 179	369.2	23.4	1	5 179	1535.5	32.0	-	-	-	-
Gastritis, enteritis, etc. (543, 571, 572)	2	3 504	249.8	15.8	2	2 657	758.1	15.8	1	947	87.1	16.0
Influenza and pneumonia (480-483, 490-493)	3	1 940	138.3	8.8	3	1 342	397.9	8.3	2	598	55.0	10.1
Congenital malformations (750-759) ..	4	701	50.0	3.2	4	641	190.1	4.0	-	60	5.5	1.0
Accidents (E800-E962)	5	548	39.1	2.5	-	129	38.2	0.8	3	419	38.5	7.1
Dysentery, all forms (045-048)	-	446	31.8	2.0	-	189	56.0	1.2	4	257	23.6	4.3
Tetanus (061)	-	333	23.7	1.5	5	310	91.9	1.9	-	23	2.1	0.4
Avitaminoses and other deficiency states (280-286)	-	304	21.7	1.4	-	51	15.1	0.3	5	253	23.3	4.3

TABLE 24. FIVE PRINCIPAL CAUSES OF DEATH BY RANK ORDER FOR CHILDREN UNDER ONE YEAR AND 1-4 YEARS OF AGE IN 18 COUNTRIES, OF THE AMERICAS, 1962

Under one year of age							1-4 years of age						
Cause of death	Total	1st	2nd	3rd	4th	5th	Cause of death	Total	1st	2nd	3rd	4th	5th
Certain diseases of early infancy	18	16	2	-	-	-	Gastritis, enteritis, etc.	18	11	3	2	-	2
Gastritis, enteritis, etc.	18	2	11	3	-	2	Influenza and pneumonia	18	4	11	3	-	-
Influenza and pneumonia	18	-	3	10	2	3	Measles	11	-	2	3	4	2
Congenital malformations	10	-	2	-	3	5	Bronchitis	12	-	1	4	3	4
Bronchitis	11	-	-	3	6	2	Whooping cough	5	-	-	1	2	2
Tetanus	8	-	-	2	2	4	Accidents	10	2	1	2	2	3
Accidents	3	-	-	-	2	1	Malaria	2	-	-	1	1	-
Whooping cough	1	-	-	-	1	-	Diphtheria	1	-	-	-	-	1
Measles	1	-	-	-	1	-	Congenital malformations	3	-	-	2	-	1
Malaria	2	-	-	-	1	1	Malignant neoplasms, etc.	3	-	-	-	3	-
							Dysentery, all forms	1	-	-	-	1	-
							Avitaminoses and other metabolic diseases	4	1	-	-	2	1
							Tuberculosis, all forms	1	-	-	-	-	1
							Anemias	1	-	-	-	-	1

MATERNAL MORTALITY

Death rates due to complications of pregnancy, childbirth and the puerperium (Categories 640-689 of

the International Classification of Diseases) remain high in Latin America (Table 25). All maternal deaths

TABLE 25. NUMBER OF MATERNAL DEATHS WITH RATES PER 1,000 LIVE BIRTHS IN THE AMERICAS, 1961-1962

Area	Number		Rate		Area	Number		Rate	
	1961	1962	1961	1962		1961	1962	1961	1962
Argentina	390	378	0.8	0.8	Antigua	8	8	4.5	4.5
Brazil (a)	724	...	1.5	...	Barbados	15	16	2.2	2.3
Canada	219	191	0.5	0.4	Bermuda	1	...	0.8	...
Chile	923	914	3.5	3.3	British Honduras	14	2	3.3	0.4
Colombia	1475	1509	2.4	2.3	Canal Zone	-	-	-	-
Costa Rica	96	90	1.5	1.4	Falkland Islands	-	-	-	-
Dominican Republic	156	...	1.5	...	Grenada	5	3	1.4	0.9
El Salvador	185	179	1.5	1.4	Martinique	-	-	-	-
Guatemala	488	457	2.5	2.4	Montserrat	6	2	17.9	6.2
Honduras	217	245	2.5	2.7	Puerto Rico	44	55	0.6	0.7
Jamaica	114	...	1.7	...	St. Kitts, Nevis and Anguilla	2	4	1.0	1.9
Mexico	3208	...	2.0	...	St. Lucia	10	...	2.5	...
Nicaragua	117	115	2.0	1.9	St. Pierre and Miquelon	-	-	-	-
Panama	89	92	2.1	2.0	St. Vincent	7	...	1.8	...
Paraguay	97	108	b) 3.5	...	Surinam	12	...	1.0	...
Peru	378	...	1.0	...	Virgin Islands (U. K.)	9	7	34.5	24.7
Trinidad and Tobago	36	48	1.1	1.4	Virgin Islands (U. S.)	1	-	0.8	-
United States	1573	1465	0.4	0.3					
Uruguay	62	...	...	...		
Venezuela	378	368	1.1	1.1					

Note: Maternal deaths as defined in categories 640-689 of the International Classification of Diseases (1955 Revision).
(a) Data for the State of São Paulo and the city of Recife (State of Pernambuco). (b) Rate as given by country.

may not be assigned to this group for information on pregnancy and delivery may not be available to medical personnel certifying the cause of death. In particular an accurate assignment of maternal causes may not be made in areas with limited medical personnel and facilities. Exploratory studies in selected areas have indicated that many deaths due to maternal

causes have been assigned to other categories. In almost all countries of Latin America death rates are over 1 per 1,000 live births and in several countries they are as much as 6 to 8 times higher than the rates in Northern America (0.3 per 1,000 live births in 1962).

MORTALITY FROM SPECIFIC CAUSES

The decreases in the death rates by age from all causes in three countries of the Americas have been pointed out earlier as well as the changing importance of specific causes of death in the period between 1940 and 1961. To show how mortality from specific causes has changed, the percentage increase or decrease between 1940 and 1961 in death rates from seven selected groups of diseases is presented for the same three countries, namely, Chile, Mexico and the United States. In addition, proportionate mortality from the same seven groups of causes in the two periods is shown (Tables 26 and 27).

In 1940 tuberculosis, a leading cause of death in Chile, was responsible for 12 per cent of deaths, at an annual rate of 260 per 100,000 population. Rates in Mexico and the United States were lower, 57.0 and 45.9 per 100,000 population, respectively. In these latter two countries tuberculosis was the cause of

only 2 and 4 per cent of all deaths. By 1961 the rates in the three countries had decreased by 81, 54, and 88 per cent respectively, and tuberculosis accounted for only 4 per cent of deaths in Chile, and for only 0.6 per cent of deaths in the United States. The proportion of deaths assigned to tuberculosis in Mexico remained about the same in both periods.

Similarly rates from all other infective and parasitic diseases were high in 1940: 126 per 100,000 population in Chile, 422 in Mexico and only 30 in the United States. By 1961 these deaths were reduced by amounts varying from 63 to 81 per cent in the three countries and accounted for only 7.7 per cent of deaths in Mexico and only 0.6 per cent of deaths in the United States. Death rates from influenza and pneumonia and from gastritis and enteritis, also leading causes of death in Chile and Mexico, decreased in a similar manner. In 1940 the infectious and parasitic diseases,

TABLE 26. DEATHS FROM SELECTED CAUSES WITH RATES PER 100,000 POPULATION IN THREE COUNTRIES, 1940 and 1961

Causes	Deaths						Rates					
	1940			1961			1940			1961		
	Chile	Mexico	United States	Chile	Mexico	United States	Chile	Mexico	United States	Chile	Mexico	United States
All causes	107 771	458 906	1 417 269	91 348	388 857	1 701 522	2145.3	2335.0	1076.4	1150.8	1077.4	930.0
Tuberculosis, all forms . . . 001-019	13 067	11 199	60 428	4 004	9 403	9 938	260.1	57.0	45.9	50.4	26.1	5.4
All other infective and parasitic diseases . . . rest of 001-138	6 317	83 043	39 170	3 684	29 917	10 140	125.8	422.5	29.7	46.4	82.9	5.5
Malignant neoplasms . . . 140-205	3 669	4 553	163 478	7 704	12 864	273 502	73.0	23.2	124.2	97.1	35.6	149.5
Vascular lesions affecting central nervous system. 330-334	2 132	3 720	119 753	4 498	7 522	192 951	42.4	18.9	90.9	56.7	20.8	105.5
Diseases of the heart. . . 400-443	8 677	10 666	385 191	7 088	24 488	663 391	172.7	54.3	292.6	89.3	67.9	362.6
Influenza and pneumonia 480-483, 490-493	25 214	74 959	92 525	17 361	52 985	55 175	501.9	381.4	70.3	218.7	146.8	30.2
Gastritis, enteritis, etc. 543, 571, 572	9 650	96 556	13 573	4 655	54 857	7 820	192.1	491.3	10.3	58.6	152.0	4.3

Note: Category numbers from VII Revision of International Classification of Diseases.

TABLE 27. PERCENTAGE CHANGE IN DEATH RATES PER 100,000 POPULATION AND PROPORTIONATE MORTALITY FROM SELECTED CAUSES IN THREE COUNTRIES, 1940 and 1961

Causes	Percentage change between 1940 and 1961			Proportionate mortality					
	Chile	Mexico	United States	1940			1961		
				Chile	Mexico	United States	Chile	Mexico	United States
All causes	-46.4	-53.9	-13.6	100.0	100.0	100.0	100.0	100.0	100.0
Tuberculosis, all forms..... 001-019	-80.6	-54.2	-88.2	12.1	2.4	4.3	4.4	2.4	0.6
All other infective and parasitic diseases..... rest of 001-138	-63.1	-80.4	-81.5	5.9	18.1	2.8	4.0	7.7	0.6
Malignant neoplasms..... 140-205	+33.0	+53.4	+20.4	3.4	1.0	11.5	8.4	3.3	16.1
Vascular lesions affecting central nervous system..... 330-334	+33.7	+10.1	+16.1	2.0	0.8	8.4	4.9	1.9	11.3
Diseases of the heart..... 400-443	-48.3	+25.0	+23.9	8.1	2.3	27.2	7.8	6.3	39.0
Influenza and pneumonia..... 480-493	-56.4	-61.5	-57.0	23.4	16.3	6.5	19.0	13.6	3.2
Gastritis, enteritis, etc..... 543, 571, 572	-69.5	-69.1	-58.3	9.0	21.0	1.0	5.1	14.1	0.5

Note: Category numbers from VII Revision of International Classification of Diseases.

influenza and pneumonia, and gastritis and enteritis accounted for almost 60 per cent of deaths in Mexico, for 50 per cent in Chile, but for only 15 per cent in the United States. The decrease in mortality from these causes represents over 75 per cent of the overall reduction in the total death rate between 1940 and 1961 in Mexico and for 70 per cent of the decline in both Chile and in the United States.

As mortality from these causes decreases and the proportions of deaths assigned to them become smaller, changes are simultaneously occurring in other diseases which acquire a greater significance in the total mortality. About many of these additional knowledge is needed to advance their control or prevention. Many are diseases of the older ages and as the number of persons at advanced ages increases, the number of deaths from these causes also will rise. Malignant neoplasms, vascular lesions affecting the central nervous system and diseases of the heart are examples of illnesses in this category. For malignant neoplasms and vascular lesions affecting the central nervous system, increases were observed in the crude death rates for the three countries between 1940 and 1961. Mortality from diseases of the heart rose in both Mexico and the United States but for Chile decreased by almost 50 per cent. Since total mortality decreased from 1940 to 1961, the proportionate mortality from these three groups of causes was considerably higher in 1961 in all three countries.

To determine in which specific age groups decreases in mortality rates have occurred and whether the mortality risk for diseases for which crude rates are increasing is in fact greater in the later year, it is necessary to study the age specific rates from these causes. These rates are shown in Table 28

and in Figures 14 and 15. The first Figure shows data for causes of death which by 1961 constituted a smaller proportion of the total deaths than in 1940 — tuberculosis, all other infective and parasitic diseases, gastritis and enteritis, and influenza and pneumonia. The second includes age specific death rates for those diseases for which proportionate mortality is higher in 1961 than in 1940 — malignant neoplasms, vascular lesions affecting the central nervous system and diseases of the heart.

For tuberculosis the decrease in mortality has been most marked at ages below 45 years in both the United States and Chile. By age, reductions in death rates in Chile ranged from 92 per cent under 5 years to 49 per cent for those 65 years of age and over. In Mexico the decline was less marked and in fact an increase was recorded in the age group under 5 years of age, perhaps related to underregistration of deaths in this age group in 1940. At ages 60 years and over the decrease in the rate was 30 per cent. In the United States the overall decrease was almost 90 per cent and varied by age from 99 per cent for young adults of 15-24 years, to a low of 60 per cent in the death rate for persons 65 years and over.

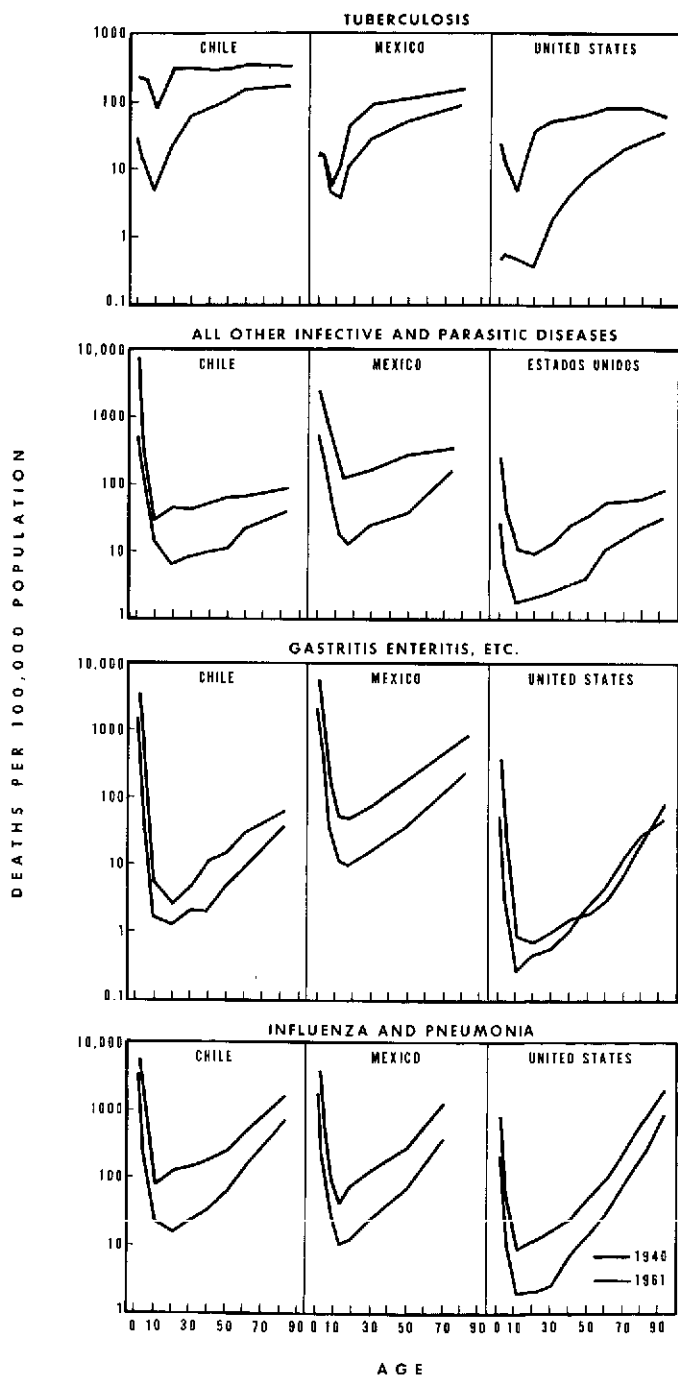
For the other infective and parasitic diseases, for influenza and pneumonia and for gastritis and enteritis, sizeable reductions in the mortality rates are observed in most age groups. In some instances the percentage decrease was less for young children and old people than for young adults.

In contrast to the curves for the group of diseases in Figure 14, those in Figure 15 show relatively small differences between 1940 and 1961. For malignant neoplasms an increase in mortality is observed at ages under 25 years, the largest occurring in children. In

part this may be attributed to better diagnosis of disease. Otherwise, in the United States and Chile, the curves for the two years are alike. In Mexico the mortality rates are consistently higher in 1961 than in 1940.

FIGURE 14

DEATHS FROM TUBERCULOSIS, ALL OTHER INFECTIVE AND PARASITIC DISEASES, GASTRITIS, ENTERITIS, ETC., AND INFLUENZA AND PNEUMONIA, PER 100,000 POPULATION, BY AGE, IN CHILE, MEXICO AND UNITED STATES, 1940 AND 1961

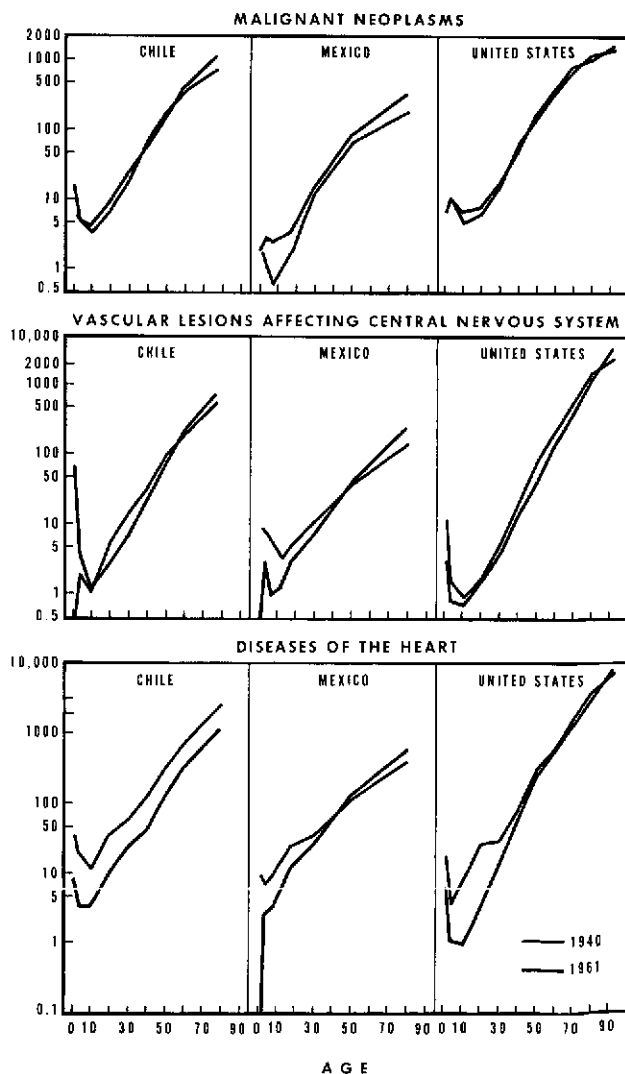


In all three countries mortality rates from vascular lesions affecting the central nervous system were higher at most ages in 1940 than in 1961. This may represent improvements in diagnosis or change in the method of classifying diseases in this interval of time.

The age curves for mortality from diseases of the heart have not followed the same pattern of change in the three countries, but in all there was a reduction under 35 years of age. In the United States after 35 years of age the rates are similar in the two years but under this age the appreciable decline in mortality

FIGURE 15

DEATHS FROM MALIGNANT NEOPLASMS, VASCULAR LESIONS AFFECTING CENTRAL NERVOUS SYSTEM, AND DISEASES OF THE HEART, PER 100,000 POPULATION, BY AGE, IN CHILE, MEXICO AND UNITED STATES, 1940 AND 1961



between 1940 and 1961, may be related to the decrease in mortality from rheumatic fever and rheumatic heart disease. For Mexico an increase is observed at older ages. In Chile the rates are less in 1961 than in 1940 throughout the age span. The decline was greater under 35 years.

The increase in crude death rates and in proportionate mortality from these three groups of diseases does not imply that the risk of mortality from these causes is increasing but rather that the age distribution of the population is changing and also that deaths from other causes are being prevented.

The comparison of Figures 14 and 15 shows that

the two series of curves represent diseases with different age patterns of mortality. The first includes infective diseases for which mortality is very high in infancy and early childhood, is generally decreasing in the next twenty years of life and increasing thereafter. In most instances, with the exception of tuberculosis, death rates at older ages do not reach levels above those of infancy. The second series in Figure 15 represents diseases with a rate of mortality which increases fairly consistently with age. For the most part for the three curves shown the age specific death rates among adults in the two periods 1940 and 1961 are of similar magnitude.

TABLE 28. DEATHS FROM SELECTED CAUSES PER 100,000 POPULATION, BY AGE, IN THREE COUNTRIES OF THE AMERICAS, 1940 AND 1961

Age	Tuberculosis, all forms		All other infective and parasitic diseases		Malignant neoplasms		Vascular lesions affecting CNS		Diseases of the heart		Influenza and pneumonia		Gastritis enteritis, etc.	
	1940	1961	1940	1961	1940	1961	1940	1961	1940	1961	1940	1961	1940	1961
CHILE														
All ages	260.1	50.4	125.8	46.4	73.0	97.1	42.4	56.7	172.7	89.3	501.9	218.7	192.1	58.6
Under 1	241.3	32.7	1723.5	550.0	6.6	14.5	-	71.0	33.8	9.3	6546.7	3920.2	3997.2	1468.5
1-4	220.7	14.3	332.6	144.2	4.9	6.0	1.9	4.8	20.6	3.3	1212.4	255.7	665.4	74.3
5-14	86.6	5.7	32.8	16.8	3.0	4.8	1.0	1.2	11.9	3.4	79.0	24.9	6.6	1.8
15-24	342.8	27.1	48.5	7.1	7.2	9.8	5.4	2.9	33.2	11.4	120.0	18.2	3.0	1.3
25-34	349.9	61.6	45.7	9.1	19.4	23.5	14.4	7.2	63.0	26.0	137.9	25.1	4.9	2.2
35-44	313.7	84.5	55.5	10.1	65.3	64.8	30.9	21.7	120.1	49.8	171.1	39.9	10.5	2.5
45-54	317.7	107.2	62.1	12.8	180.0	179.1	91.8	79.0	307.9	123.4	251.5	66.4	13.1	5.2
55-64	334.2	149.4	72.0	23.3	399.1	447.5	189.9	215.3	679.2	345.6	500.8	162.1	31.6	9.9
65 and over	323.6	165.4	86.5	42.9	722.7	1027.8	518.0	740.8	2225.7	1126.6	1767.3	800.3	77.4	37.9
MEXICO														
All ages	57.0	26.1	422.5	82.9	23.2	35.6	18.9	20.8	54.3	67.9	381.4	146.8	491.3	152.0
Under 1	14.0	19.1	2697.7	589.9	1.7	2.0	9.1	0.5	9.9	0.1	4477.7	1935.2	5577.7	2067.2
1-4	14.4	16.3	766.8	244.3	1.2	2.9	7.4	3.0	7.6	2.7	765.1	257.1	1770.9	393.0
5-9	6.7	5.9		48.2	0.6	2.4	3.9	1.2	8.9	3.4	99.8	31.2	182.1	40.9
10-14	12.3	4.5	122.8	19.7	1.0	3.0	3.2	1.5	14.2	6.8	49.8	12.6	56.9	12.4
15-19	49.4	11.8		16.4	1.9	3.6	5.1	3.1	23.0	13.0	72.6	15.1	52.6	10.3
20-39	89.2	31.6	164.8	24.3	12.2	13.6	10.7	7.3	38.1	29.0	128.6	27.3	82.0	17.3
40-59	101.8	54.3	259.4	45.3	67.9	91.1	36.5	37.8	106.3	124.3	302.8	74.3	184.2	42.1
60 and over	132.0	91.7	675.7	132.8	186.5	337.8	158.0	232.5	423.9	739.1	1174.1	441.3	797.3	238.7
UNITED STATES														
All ages	45.9	5.4	29.7	5.5	124.2	149.5	90.9	105.5	292.6	362.6	70.3	30.2	10.3	4.3
Under 1	24.6	0.5	272.6	30.0	9.5	6.9	11.9	3.4	17.5	6.9	870.1	216.0	407.0	53.9
1-4	12.3	0.6	44.7	6.5	9.5	10.4	1.5	0.9	3.6	1.2	62.5	13.1	30.2	3.3
5-14	5.5	0.1	10.4	1.7	5.0	7.1	0.9	0.7	8.0	1.0	9.0	2.1	0.9	0.3
15-24	38.2	0.4	9.5	1.1	7.0	8.3	1.7	1.7	14.0	4.0	11.5	2.2	0.7	0.5
25-34	56.3	1.8	14.8	1.6	19.0	19.4	5.5	4.8	29.7	14.9	17.1	3.2	1.0	0.6
35-44	59.4	4.6	26.0	2.4	63.9	59.4	21.5	14.7	91.6	73.5	28.6	7.2	1.6	1.0
45-54	66.3	8.1	39.8	4.8	173.9	175.6	79.1	46.9	279.5	267.2	51.8	13.9	1.9	2.4
55-64	76.2	13.9	53.4	10.3	378.7	392.7	212.8	138.0	713.4	714.9	98.7	30.9	3.3	4.9
65-74	80.8	21.7	59.1	16.1	707.5	723.2	569.2	451.9	1723.5	1701.7	226.4	86.3	7.0	11.4
75-84	80.4	29.8	60.5	22.8	1177.1	1104.7	1451.7	1421.2	4233.7	3930.9	691.2	274.4	23.0	27.2
85 and over	62.0	37.9	80.2	32.4	1326.2	1491.2	2540.8	3709.1	8313.0	9241.6	1929.9	952.8	71.1	51.2

CHAPTER II

COMMUNICABLE DISEASES

Two recent publications of the Pan American Health Organization provide in considerable detail the available data on notifiable diseases in the Americas for 1961 and 1962.^(1, 2) These are the fourth and fifth in a series^(3, 4, 5) of reports on notifiable diseases in the Region from 1946 through 1962. Both of these recent reports are based primarily on summary data received from health authorities of the countries in response to a joint annual questionnaire from the World Health Organization and the Pan American Health Organization. Included in these publications are seven tables which present, for the years 1961 and 1962, the available data for each country or territory of the Region. These comprise the total numbers of reported cases of forty notifiable diseases with rates per 100,000 population and, for comparisons, the corresponding numbers for the previous year and the medians for the preceding five-year period. Numbers of reported cases by month of occurrence are also shown for selected diseases and age distributions of reported cases are given for some diseases. The frequency of the quarantinable diseases and leprosy, malaria and yaws is presented by major political divisions of each country. Data on cases of

zoonoses in man and animals and data on deaths from notifiable diseases appear in two tables.

The last publication of this series has been prepared concurrently with the present report and therefore to avoid duplication the contents of this chapter will be limited to summary data. Table 29 based on *Reported Cases of Notifiable Diseases in the Americas, 1962* has been included showing by country and other areas the numbers of reported cases of 27 selected diseases in 1962.

Interpretation of these data should be made only with an understanding of local conditions for many factors affect their completeness. Among these factors are the procedures of national and local reporting systems, the availability of medical facilities and health services and the severity of the disease.

In Tables 12 and 13 of Chapter I the numbers of deaths and rates per 100,000 population from 19 diseases of the infective and parasitic disease group are shown for 1962 or a recent year.

Furthermore, to describe the current situation with respect to the quarantinable diseases, data on their occurrence in the Region in recent years including 1963 are also presented in this chapter.

QUARANTINABLE DISEASES

By international agreement all cases of the six

quarantinable diseases, namely cholera, plague, louse-

- (1) *Reported Cases of Notifiable Diseases in the Americas, 1961, PASB Sc. Publ. No. 86.*
- (2) *Reported Cases of Notifiable Diseases in the Americas, 1962, PASB Sc. Publ. No. 102.*
- (3) *Reported Cases of Notifiable Diseases in the Americas, 1946-1955, PASB Sc. Publ. No. 38.*
- (4) *Reported Cases of Notifiable Diseases in the Americas, 1949-1958, PASB Sc. Publ. No. 48.*
- (5) *Reported Cases of Notifiable Diseases in the Americas, 1959-1960, PASB Sc. Publ. No. 58.*

TABLE 29. REPORTED CASES OF SELECTED NOTIFIABLE DISEASES IN THE AMERICAS, 1962

Area	Amebiasis	Ankylostomiasis	Anthrax	Brucellosis	Diphtheria	Dysentery, bacillary and other(a)	Encephalitis, infectious	Gonococcal infection	Hepatitis, infectious
Argentina (b)	...	...	...	...	1295	...	...	...	...
Bolivia	...	...	...	...	9	c) 8	4	35	1
Brazil	...	...	...	...	...	...	...	...	...
Canada	7	*	-	98	71	2903	d) 4	17 697	e) 12 538
Chile	399	*	334	6	2022	75	141	...	250
Colombia (f)	72 053	50 201	9	11	1021	g) 10 883	d) 380	47 229	*
Costa Rica	1317	908	-	-	61	1750	-	2 237	219
Cuba (b)	65	...	*	35	1368	g) 14	49	530	3 615
Dominican Republic	1 239	19 233	-	-	306	18 347	-	...	...
Ecuador	*	...	...	*	386	*	...	...	...
El Salvador (f)	553	516	7	5	91	10 042	9	3 718	335
Guatemala	...	...	...	*	45	c) 8 631	5	2 026	*
Haiti	575	578	77	...	29	985	2	5 072	109
Honduras (f)	...	*	*	*	11	c) 30 281	9	4 751	*
Jamaica	163	159	-	-	80	132	d) 11	27 516	118
Mexico	32 764	25 843	174	1 339	712	g) 5 219	d) 17	18 882	3 727
Nicaragua (b)	...	...	...	...	7	...	...	787	...
Panama	729	4 287	-	-	123	552	2	487	...
Paraguay (f)	...	16 562	-	2	40	c) 1 122	29	654	209
Peru (f)	3 341	3 498	60	963	38	18 575	67	7 492	2 251
Trinidad and Tobago	...	847	*	-	56	c) 1 598	-	6 230	-
United States	3 048	h) 8 636	9	409	444	g) 12 443	2 094	263 708	e) 53 016
Uruguay	...	b) -	54	6	67	c) 2	d) 29	162	...
Venezuela (f)	26 476	i) 232 251	7	3	551	84 774	6 897	19 125	*

Antigua (b)	...	...	...	...	-	c) 3	-	...	...
Bahama Islands	...	...	...	...	2	...	b) 1	b) 438	...
Barbados	...	*	*	*	6	...	*	*	*
Bermuda	-	-	-	-	-	-	1	102	5
British Guiana	...	20	-	-	13	c) 276	-	378	41
British Honduras	2	-	-	-	2	5	-	184	4
Canal Zone	3	-	-	-	-	9	-	72	e) 17
Cayman Islands	-	-	-	-	-	-	1	3	-
Dominica	306	1 329	-	*	2	533	1	305	2
Falkland Islands	-	-	-	-	-	-	-	13	-
French Guiana	-	...	-	-	-	-	-	166	...
Grenada	...	...	...	...	-	...	...	...	...
Guadeloupe	-	...	-	-	2	-	-	2	...
Martinique	-	-	-	-	45	-	-	-	-
Montserrat	...	...	...	...	-	...	...	...	...
Netherlands Antilles	...	*	*	*	8	g) 1 179	*	*	*
Puerto Rico	24	-	-	-	56	g) 18	-	2 423	e) 1 114
St. Kitts-Nevis and Anguilla	...	-	-	-	1	c) 52	1	419	38
St. Lucia	...	...	-	-	-	c) 50	*	1 635	...
St. Pierre and Miquelon	3	-	-	-	-	-	-	7	630
St. Vincent	...	...	...	...	...	...	...	...	...
Surinam	...	*	-	*	1	...	-	*	*
Turks and Caicos Islands	-	-	-	*	-	1	-	17	-
Virgin Islands (UK)	...	...	...	...	-	...	...	...	...
Virgin Islands (US)(b)	10	67	...	...	-	g) 3	-	95	...

* Disease not notifiable. (a) Categories 045, 047, 048 of ICD. (b) Provisional. (c) Dysentery, all forms (045-048). (d) Arthropod-borne encephalitis (082.0). (e) Including serum jaundice (N998, 5 pt.). (f) Reporting area. (g) Bacillary dysentery (045). (h) Optionally reported from 12 states; not notifiable nationally. (i) Including other cestode infestation (126) and infection with worms of other, mixed and unspecified type (130).

TABLE 29. REPORTED CASES OF SELECTED NOTIFIABLE DISEASES IN THE AMERICAS, 1962 (continued)

Area	Leprosy	Malaria	Measles	Meningococcal infections	Paratyphoid fever (a)	Plague	Poliomyelitis	Rabies	Smallpox
Argentina	458	4 501	b) 12 906	b) 423	...	-	c) 1 082	40	d) 2
Bolivia	21	315	390	7	-	-	3	-	-
Brazil	...	e) 72 060	...	...	...	36	...	...	f) 2 812
Canada	1	-	*	110	...	-	c) 89	-	g) 1
Chile	-	g) 1	37 649	96	185	-	441	8	-
Colombia (h)	561	21 245	42 575	280	...	-	581	34	41
Costa Rica	25	e) 1 583	2 977	-	2	-	50	-	-
Cuba	291	3 519	1 590	7	b) 46	-	46	-	-
Dominican Republic	74	10 160	1 521	...	305	-	29	2	-
Ecuador	...	e) 5 557	...	...	...	326	49	20	204
El Salvador (i)	24	e) 15 433	5 443	-	51	-	37	6	-
Guatemala	8	5 563	1 942	-	30	-	111	2	-
Haiti	17	36 564	855	39	-	-	c) 12	1	-
Honduras (h)	28	6 750	1 571	90	55	-	10	2	-
Jamaica	25	j) 5	441	20	-	-	25	-	-
Mexico	219	13 781	54 558	29	2 462	-	c) 483	54	-
Nicaragua	...	e) 11 359	...	b) -	263	-	b, c) 13	...	-
Panama	2	3 871	1 101	12	7	-	65	-	-
Paraguay (i)	531	e) 5 755	1 442	8	...	-	25	...	-
Peru (k)	78	2 195	1 692	91	...	164	598	11	-
Trinidad and Tobago	27	-	130	3	...	-	12	-	-
United States	80	118	481 530	2 150	l) 9 680	-	910	2	-
Uruguay	34	1	6 191	2	8	-	50	-	d) 10
Venezuela (k)	266	898	30 257	9	...	1	c) 393	21	11

Antigua (b)	...	-	22	-	...	-	2	...	-
Bahama Islands	-	4	1	-	6	-	2	-	-
Barbados	-	*	*	-	-	-	7	*	-
Bermuda	-	-	6	-	-	-	2	-	-
British Guiana	61	355	334	-	1	-	c) 182	-	-
British Honduras	-	e) 20	-	-	-	-	1	-	-
Canal Zone	-	12	93	1	1	-	-	-	-
Cayman Islands	-	-	-	2	2	-	-	-	-
Dominica	-	-	7	3	...	-	-	-	-
Falkland Islands	-	-	-	-	-	-	-	-	-
French Guiana	103	25	17	-	-	-	-	...	-
Grenada	-	-	-	...	...	-	-	1	-
Guadeloupe	60	-	-	-	-	-	6	-	-
Martinique	55	-	70	-	...	-	7	-	-
Montserrat	...	...	...	...	...	-	-	-	-
Netherlands Antilles	5	*	*	*	l) 634	-	...	...	-
Puerto Rico	3	-	4 865	8	l) 21	-	13	*	-
St. Kitts-Nevis and Anguilla	-	-	5	-	-	-	-	-	-
St. Lucia	-	e) 4	-	-	-	-	1	-	-
St. Pierre and Miquelon	-	-	-	-	-	-	-	-	-
St. Vincent	...	...	...	...	...	-	...	...	-
Surinam	171	e) 716	*	-	*	-	c) 3	-	-
Turks and Caicos Islands	-	1	1	-	-	-	-	-	-
Virgin Islands (UK)	-	-	-	-	...	-	-	-	-
Virgin Islands (US)(b)	1	-	...	-	-	-	-	-	-

* Disease not notifiable. (a) When data for paratyphoid are not available, see data for typhoid fever for possible inclusion. (b) Provisional. (c) Paralytic poliomyelitis (080.0, 080.1). (d) Including imported cases. (e) Specified as confirmed cases. (f) Data for states of Guanabara, Pernambuco and São Paulo and capitals of 8 other states and territories reporting 4 to 12 months. (g) Imported. (h) Reporting area except for quarantinable diseases. (i) Reporting area except for quarantinable diseases and malaria. (j) Including 2 confirmed cases. (k) Reporting area except for quarantinable diseases, malaria and rabies. (l) Including other salmonella infections (042).

TABLE 29. REPORTED CASES OF SELECTED NOTIFIABLE DISEASES IN THE AMERICAS, 1962 (continued)

Area	Syphilis	Tetanus	Trachoma	Tuberculosis	Typhoid fever	Typhus, louse-borne	Whooping cough	Yaws	Yellow fever (jungle)
Argentina (a)	3 000	...	380	18 000	b) 1 038	-	10 246	-	-
Bolivia	80	7	...	1 714	116	1	511	...	-
Brazil	...	...	...	...	...	-	...	...	1
Canada	2 432	9	-	c) 6 284	b) 276	-	8 076	*	-
Chile	3 106	61	4	*	3 688	3	2 352	-	-
Colombia (d)	12 232	1 069	*	14 362	b) 13 810	-	28 990	416	30
Costa Rica	1 200	46	3	602	58	-	1 104	-	-
Cuba	805	e) 525	-	2 725	1 007	-	151	-	-
Dominican Republic	10 494	123	823	1 060	622	-	1 507	285	-
Ecuador	...	...	...	5 082	b) 3 117	493	...	...	-
El Salvador (d)	6 552	243	1	4 581	1 353	-	3 049	-	-
Guatemala	816	68	...	3 495	732	-	2 322	*	-
Haiti	5 201	679	34	3 875	493	-	3 621	271	-
Honduras (d)	2 345	23	*	2 157	368	-	3 702	*	-
Jamaica	2 776	136	-	335	163	-	3 157	317	-
Mexico	18 219	1 049	13	16 242	6 138	3	30 562	...	-
Nicaragua (a)	1 537	...	...	391	286	-	188	...	-
Panama	370	64	...	1 423	49	-	1 023	...	-
Paraguay (d)	1 835	149	17	1 223	b) 66	-	1 577	...	-
Peru (d)	3 872	246	5	24 005	b) 4 318	57	9 295	41	20
Trinidad and Tobago	327	7	*	398	84	-	632	f) 722	-
United States	126 245	322	g) 460	c) 64 159	608	-	17 749	...	-
Uruguay	203	53	e) -	1 836	303	-	331	-	-
Venezuela (d)	9 127	622	33	8 138	b) 691	-	6 263	373	1

Antigua (a)	...	...	...	2	b) 32	-	1 086	...	-
Bahama Islands	14	...	-	156	17	-	-	-	-
Barbados	*	*	*	74	6	-	*	*	-
Bermuda	5	-	-	10	-	-	-	-	-
British Guiana	415	23	1	212	308	-	596	3	-
British Honduras	648	2	-	58	10	-	104	-	-
Canal Zone	17	-	-	21	-	-	-	-	-
Cayman Islands	3	-	-	3	-	-	-	-	-
Dominica	55	3	-	161	b) 76	-	475	40	-
Falkland Islands	-	-	-	6	-	-	-	-	-
French Guiana	98	2	...	26	9	-	22	...	-
Grenada	...	...	-	29	1	-	...	7	-
Guadeloupe	530	10	...	208	10	-	5	-	-
Martinique	9	12	-	151	b) 169	-	92	-	-
Montserrat	-	...	...	4	9	-	...	...	-
Netherlands Antilles	*	*	*	33	1	-	*	*	-
Puerto Rico	1 056	109	...	c) 1 816	18	-	676	-	-
St. Kitts-Nevis and Anguilla	22	4	-	8	3	-	-	-	-
St. Lucia	668	...	-	53	34	-	3 401	415	-
St. Pierre and Miquelon	-	-	-	17	-	-	-	-	-
St. Vincent	...	...	...	...	...	-	...	...	-
Surinam	*	*	425	143	12	-	*	488	-
Turks and Caicos Islands	1	-	-	-	-	-	-	-	-
Virgin Islands (UK)	-	...	-	2	2	-	-	-	-
Virgin Islands (US)(a)	481	...	...	4	1	-	-	...	-

* Disease not notifiable. (a) Provisional, except for quarantinable diseases. (b) Including paratyphoid fever (041). (c) Newly reported active cases. (d) Reporting area, except for quarantinable diseases. (e) Provisional. (f) Non-infectious. (g) Optionally reported from 9 states; not nationally notifiable.

borne relapsing fever, smallpox, louse-borne typhus and yellow fever, are to be reported in the Americas to the Pan American Sanitary Bureau and to Headquarters of the World Health Organization in Geneva.

Five of the six diseases occur in the Americas. The sixth, cholera, has not been present in the Region

TABLE 30. REPORTED CASES OF QUARANTINABLE DISEASES IN THE AMERICAS, 1954-1963

Year	Plague	Relapsing fever, louse-borne	Small-pox	Typhus, louse-borne (a)	Yellow fever
1954	171	3	11979	3104	95
1955	87	38	8348	1545	39
1956	115	-	6389	1089	28
1957	154	-	6220	747	80
1958	97	6	4343	818	61
1959	93	10	4763	659	30
1960	258	4	5158	668	34
1961	308	1	3278	474	82
1962	527	3	3081	557	52
1963	423	-	353	464	141

(a) In 1957-1958 includes a few cases of unspecified typhus in Guatemala.

for over 50 years. Only sporadic cases of relapsing fever have been reported since 1955 and in 1963 no reports of this disease were received. The summary in Table 30 gives the reported incidence of the five diseases for the last ten years and in Table 31 the distribution of reported cases in 1963 by country.

TABLE 31. REPORTED CASES OF QUARANTINABLE DISEASES, BY COUNTRY, IN THE AMERICAS, 1963

Country	Jungle yellow fever	Plague	Louse-borne typhus	Smallpox
Total	141	423	464	353
Bolivia	81	53	141	-
Brazil	-	39	-	a) 300
Chile	-	-	11	-
Colombia	10	-	2	4
Ecuador	-	258	258	45
Mexico	-	-	39	-
Peru	49	72	13	4
United States	-	1	-	-
Venezuela	1	-	-	-

(a) Incomplete data; States of Guanabara, Paraiba and Pernambuco and City of Natal, Rio Grande do Norte.

PLAGUE

During the last four years the number of human cases of plague reported in the Americas has increased from 93 cases in 1959 to 527 in 1962 and 423 in 1963. The major outbreaks in the period have been limited to four countries, Bolivia, Brazil, Ecuador and Peru. Occasional cases have occurred also in the United States and Venezuela in areas where the disease is endemic among wild rodents.

In Table 32 is given the location of reported cases of plague in the Americas by country and major political divisions for the years 1961 to 1963. The peak year for reported human cases in Bolivia was 1963, in Brazil 1961, in Ecuador and Peru 1962. The outbreaks in Brazil occurred mainly in the Northeast. In Ecuador the largest number of human cases were reported for Manabi and Chimborazo Provinces. Also affected were two areas in Ecuador and Peru which are adjacent, the Province of Loja and the Department of Piura.

In 1961 plague was reported for the first time in seven years for a port in the Americas, in Manta, Ecuador. The importance to the Region of the control

of the disease which appears to be increasing in incidence is clear, and investigations are underway.

TABLE 32. REPORTED CASES OF PLAGUE BY MAJOR POLITICAL DIVISIONS OF EACH COUNTRY, IN THE AMERICAS, 1961-1963

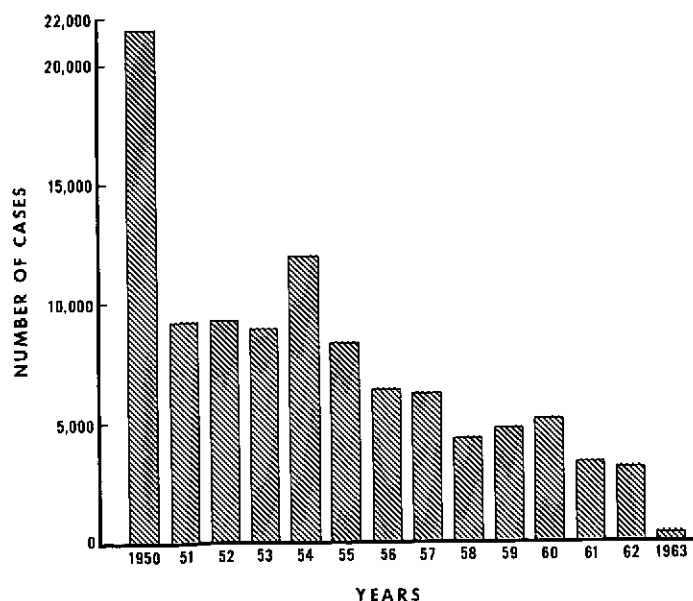
Country and division	Number of cases			Country and division	Number of cases			Country and division	Number of cases		
	1961	1962	1963		1961	1962	1963		1961	1962	1963
Total	308	527	423	Brazil, (cont.) States:				Peru	68	164	72
Bolivia	20	-	63	Paraiba	31	3	2	Departments:			
Departments:				Pernambuco	39	33	7	Amapa	-	25	34
Chuquisaca	20	-	-	Rio Grande do Norte	-	3	-	Arequcha	-	47	6
Santa Cruz	-	-	63	Ecuador	105	320	258	Piura	68	32	28
Brazil	109	36	39	Provinces:				United States	3	-	1
States:				Chimborazo	2	27	87	States:			
Aragua	12	1	3	El Oro	15	2	18	Arizona	-	-	1
Bahia	15	-	14	Loja	6	69	29	New Mexico	3	-	-
Ceara	?	15	13	Manabi	71	241	144	Venezuela	6	1	-
Minas Gerais	2	-	-	Tungurahua	8	-	-	State:			
								Aragua	6	1	-

SMALLPOX

The achievements of the eradication program for smallpox are clearly evident despite incomplete reporting of cases from some areas of the Region. In 1963 smallpox was reported for only four countries as compared to ten countries in 1954. The annual numbers of reported cases in the same interval decreased from 11,979 in 1954 to 353 in 1963 (Figure 16). The geographic distribution of the cases in 1963 is shown in Table 31. Eighty-five per cent of all reported cases occurred in Brazil and the remainder in Ecuador (45), Colombia (4) and Peru (4). In both Ecuador and Colombia in recent years vaccination programs have been extensive and have been followed by marked reductions in the numbers of reported cases. The four cases reported in Peru in 1963 originated in or were secondary to cases from areas adjacent to the Brazilian border. Vaccination activities were immediately increased following diagnoses of these cases. No cases had been diagnosed in Peru since 1954.

In Table 33 information is provided for 1961 and 1962 on the numbers of smallpox vaccinations performed in countries and other areas of the Region.

FIGURE 16

REPORTED CASES OF SMALLPOX IN THE AMERICAS
BY YEARS, 1950-1963

The sources for these data were the questionnaires completed for the Supplement to the Second Report on the World Health Situation and the annual questionnaires on vaccinations sent to the countries by WHO and PAHO. In four of the countries for which data were available, over 20 per cent of the population was vaccinated against smallpox in 1961 or 1962. In other countries such as the United States complete information is not obtained since vaccinations performed by private physicians are not reported.

TABLE 33. NUMBER OF SMALLPOX VACCINATIONS
IN THE AMERICAS, 1961 AND 1962

Country	1961	1962
Argentina	4 569 523	1 351 772
Brazil	a) 2 282 285	b) 2 594 480
Chile	382 946	703 302
Colombia	996 584	1 196 491
Costa Rica	78 138	107 588
Cuba	119 758	139 698
Dominican Republic	...	27 388
Ecuador	550 000	1 180 000
El Salvador	c) 40 499	133 606
Guatemala (c)	73 080	127 004
Haiti (c)	6 582	4 148
Honduras	9 570	120 549
Jamaica	70 129	140 094
Mexico	1 596 141	6 231 497
Nicaragua	17 608	19 208
Panama (c)	22 444	21 411
Paraguay	104 368	175 705
Peru	849 392	591 750
Trinidad and Tobago	43 938	48 820
United States (d)	2 418 113	2 858 159
Venezuela	1 133 543	1 322 559
Antigua	1 777	1 273
Barbados	14 070	88 763
British Honduras	...	10 617
Canal Zone	11 400	14 036
Falkland Islands	265	701
Grenada	1 452	...
Martinique	8 065	10 665
Montserrat	459	569
Puerto Rico	43 412	59 870
St. Kitts-Nevis and Anguilla	2 935	2 487
St. Pierre and Miquelon	220	910
Turks and Caicos Islands	351	...
Virgin Islands (UK)	46	117
Virgin Islands (US)	608	8 081

(a) Includes data for 100 municipios in 12 States. (b) Includes data for 97 municipios in 8 States. (c) Primary vaccinations (d) Excludes vaccinations given by private physicians or in other non-governmental facilities.

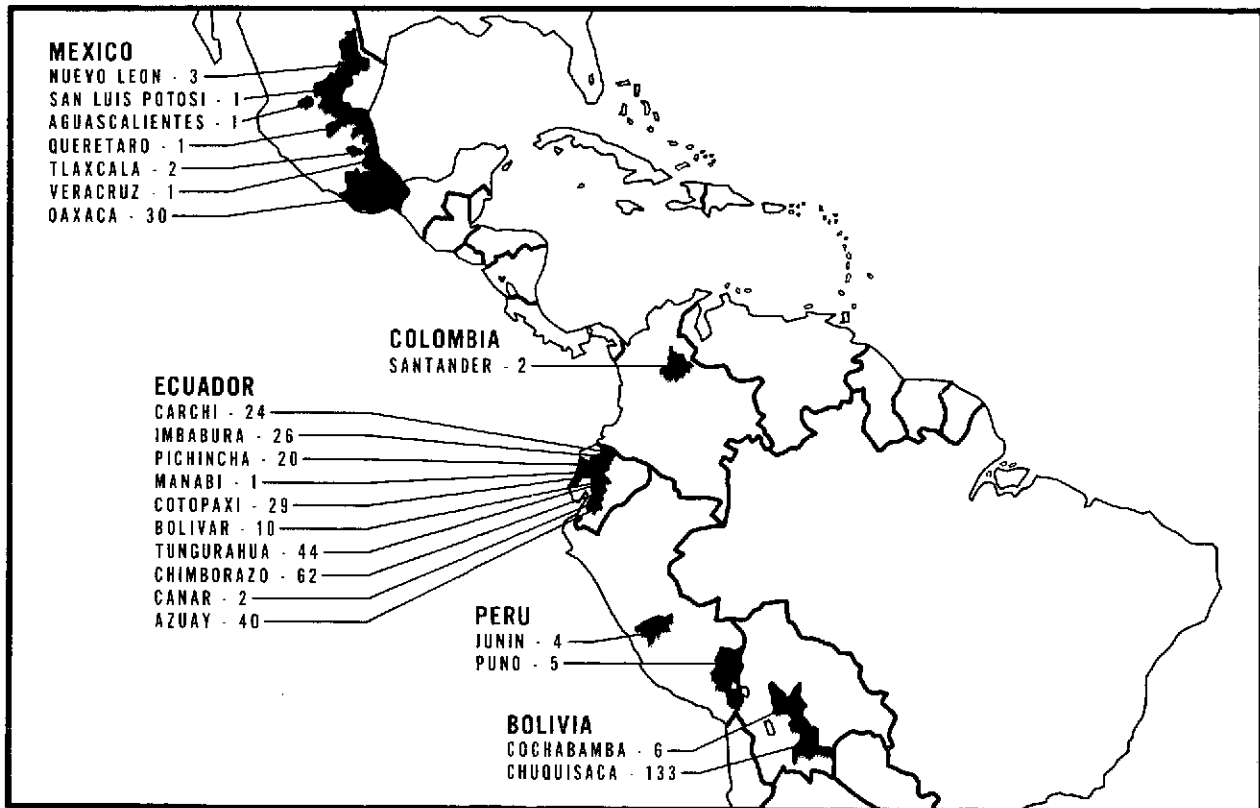
LOUSE BORNE TYPHUS

In the ten years from 1954 to 1963 reported cases of louse-borne typhus in the Americas have decreased by 85 per cent from a high of 3,104 in 1954 to a low of 464 in 1963. The geographic distribution of the disease is similar in most of the years, being limited to Mexico and to the Andean regions of South America

from Colombia to Chile (Figure 17). Of the 464 cases reported in 1963, 258 or 56 per cent occurred in Ecuador and 141 or 30 per cent in Bolivia, the only country with an increase. Other countries which continue to report cases but in diminished numbers are: Mexico 39, Peru 13, Chile 11 and Colombia 2.

FIGURE 17

REPORTED CASES OF LOUSE-BORNE TYPHUS BY MAJOR POLITICAL DIVISIONS OF EACH COUNTRY, IN THE AMERICAS, 1963



YELLOW FEVER

Jungle yellow fever continues to be reported with a varying number of cases each year, ranging in the past decade from a low of 28 cases in 1956 to 141 in 1963. The number in 1963 was the highest reported in the Americas since 1952. The two countries in which most of the cases occurred were Bolivia (81) and Peru (49). Ten cases were reported for Colombia and one for Venezuela. The geographic distribution of these 141 cases is shown in Figure 18.

During the decade the disease has been reported from ten countries. The five countries which usually

report one or more cases each year are Bolivia, Brazil, Colombia, Peru and Venezuela. In earlier years of the decade a few cases were reported from Guatemala, Honduras, Panama and Trinidad and Tobago, and in more recent years from Trinidad and Tobago and British Guiana.

Vaccination against yellow fever is limited principally to countries in which the virus of yellow fever persists in jungle areas and to travelers from other countries who may be visiting in countries with such areas. The numbers of reported vaccinations against yellow fever in the years 1961 and 1962 are given in Table 34.

FIGURE 18

REPORTED CASES OF JUNGLE YELLOW FEVER BY MAJOR POLITICAL DIVISIONS OF EACH COUNTRY, AND LOCATION, IN THE AMERICAS, 1963

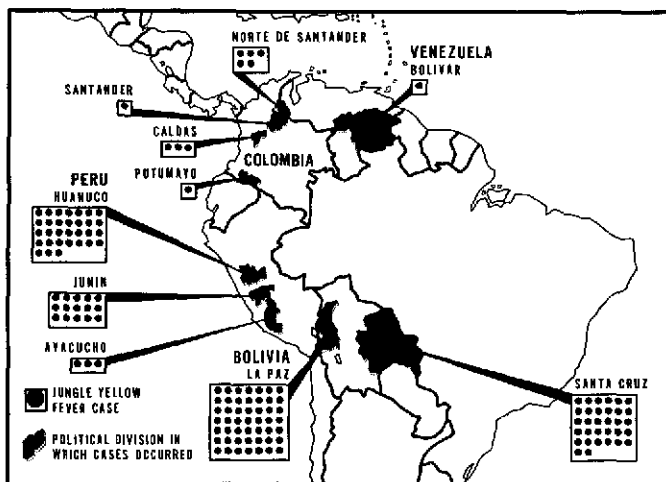


TABLE 34. NUMBER OF VACCINATIONS AGAINST YELLOW FEVER IN THE AMERICAS, 1961 AND 1962

Country	1961	1962
Argentina	733	551
Canada	8 328	7 415
Colombia	137 023	103 268
El Salvador	41	38
Guatemala	267	45
Jamaica	61	110
Nicaragua	...	40
Panama	2 721	5 189
Peru	195 099	62 024
Trinidad and Tobago (a)	1 440	1 706
United States	2 130 500	2 186 500
Venezuela	340 869	223 659
Barbados	269	203
British Honduras	733	...
Canal Zone	1 837	720
Martinique	105	79

(a) Excludes vaccinations under school program.

CHAPTER III

HEALTH SERVICES

The improvement of national and local health services was among the goals adopted by the American Republics in establishing a program of action to carry forward the Alliance for Progress.⁽¹⁾ Many of the recommendations for both long and short term measures enunciated in the Ten Year Public Health Program of the Alliance were directed to that goal. In Resolution A.2 it is specifically stated that the countries take the necessary steps "to improve the organization and administration of national and local health services by combining the functions of prevention and cure; obtain a better return from medical care services; create the necessary services gradually; and ensure financial accessibility to therapeutic agents and means for the prevention of disease." In another section of the Resolution it is further recommended to the countries "to take measures for giving increasingly better medical care to a larger number of patients by improving the organization and administration of hospitals and other centers for the care and protection of health."

Prevention of disease and restoration of health were thus viewed as a continuous process that should be planned and coordinated to produce the best possible results. Measurements of health services rendered are needed to plan for action toward the goals of the Alliance and to evaluate the progress achieved.

The organizational structure of health services varies greatly by country and often by areas of the

individual countries. The availability of information on health services is related to the structure. For example data are more readily available for health services which are the responsibility of the government. When many ministries or agencies within the government share the functions of providing medical services it may not be possible to assemble information from all sources. Also in countries in which the proportion of medical care provided by private and non-profit organizations is large, it is usually more difficult to describe health activities.

In most countries, however, hospitals and health centers or other similar units for outpatient consultation are two major sources of health services. In many countries preventive and curative medicine are practiced in both types of services. The role of hospitals in rendering services through outpatient clinics as well as in treating patients is expanding, and health centers give medical care in addition to providing other services on a community basis. A goal in medical care in every country is to have sufficient health facilities which meet the needs and demands of the population. Measurement of the adequacy of services should be based on knowledge of total resources regardless of ownership or special uses. Since both hospitals and health centers contribute to the total resources of medical care they are considered together in this chapter.

(1) *Alliance for Progress, OAS Official Records, Ser. H/XII.1, Washington D.C., 1961*

HOSPITALS

Hospitals account for a large and important share of the health services provided for a population. Statistics on hospitals and on the patients treated in hospitals are thus essential in planning for health services. Data regarding the illnesses of patients contribute to knowledge of health conditions in a community, region or country.

The information available in annual reports of the countries has been assembled to show (a) statistics relating to hospitals and (b) statistics relating to patients. Many difficulties are encountered in the presentation of these data. One such difficulty is that standard definitions and procedures have not been developed; and another that data are rarely available for all hospitals and patients in a country. However, these data, even if partial, give an overall view of the numbers of hospitals and hospital beds in the Americas and indicate the usefulness of information which is available for some of the countries. Also many of the indices which are recommended for evaluation of services and measurement of progress are derived

from such data on the provision of hospital beds to the population and the number of patients rendered service.

The sources of the data presented in this chapter are many. They include annual reports and summary reports on health conditions for 1961 and 1962 prepared by health services in the countries for the Pan American Health Organization and the World Health Organization and publications of the countries. Differences in methods of compiling the material in these basic reports have sometimes resulted in small discrepancies in the data presented in the various tables. Whenever numbers differ, the source of the second figure is stated in a footnote.

The problems involved in the improvement of the quality and comparability of the data are fully recognized (2). It is essential for health services to place greater emphasis on improvement of the basic data in each hospital and on a system of collection and analysis for national health programs.

STATISTICS RELATING TO HOSPITALS

According to the information available for 1962 or recent years, there were 17,821 hospitals in the Americas (Tables 35 and 36). Of these hospitals, 8,404 were in Northern America, 2,728 in Middle America and 6,689 in South America. Data were provided regarding the types of patients treated in these hospitals and a division has been made into general and other hospitals. The first group, the general hospitals, consists principally of hospitals for all types of short-term illnesses including any special hospitals for maternity, pediatrics and acute infectious diseases. The second group is composed of the hospitals for chronic diseases requiring long periods of stay, such as for mental diseases, tuberculosis, leprosy, etc. However, this division was not obtained for all

TABLE 35. NUMBER OF HOSPITALS BY TYPE IN THE THREE REGIONS OF THE AMERICAS, 1962

Type	Total	Northern America	Middle America	South America
Total	a) 17 821	8 404	2 728	a) 6 689
General - Total	15 484	7 000	2 548	5 936
General	14 223	6 845	2 012	5 366
Maternity	924	86	451	387
Pediatrics	279	65	44	170
Other	58	4	41	13
Tuberculosis	556	264	44	248
Leprosy	81	3	18	62
Mental diseases	909	615	59	235
Other	778	522	61	195

(a) Includes 13 hospitals with no information in Peru.

(2) *Advisory Committee on Health Statistics, Third Report, PASB Sc. Publ. No. 103, 1964.*

TABLE 36. NUMBER OF HOSPITALS BY TYPE IN THE AMERICAS, 1962

Area	Year	Total	General hospitals					Other hospitals				
			Total	General	Mater- nity	Pedia- trics	Other	Total	Tuber- culosis	Lep- rosy	Mental diseases	Other
Total		a) 17 821	15 484	14 223	924	279	58	2 324	b) 556	81	909	778
Argentina	1962	2 253	2 055	1 852	115	85	3	198	76	9	59	54
Bolivia	1962	107	99	91	6	1	1	8	4	2	1	1
Brazil	1961	2 654	2 310	2 066	200	44	-	344	88	38	130	88
Canada	1962	1 371	1 069	1 020	39	6	4	302	49	1	79	173
Chile	1962	c) 252	199	184	9	6	-	53	16	-	2	35
Colombia	1961	560	517	458	32	20	7	43	21	-	19	3
Costa Rica	1962	44	39	37	2	-	-	5	2	1	1	1
Cuba	1962	175	124	107	7	6	4	51	7	2	2	40
Dominican Republic	1963	79	74	62	10	2	-	5	2	1	1	1
Ecuador	1963	76	58	51	3	4	-	18	13	2	3	-
El Salvador	1962	40	33	30	2	1	-	7	4	-	1	2
Guatemala	1962	45	36	30	1	5	-	9	3	1	1	4
Haiti	1960	31	22	21	1	-	-	9	4	-	2	3
Honduras	1962	30	27	27	-	-	-	3	2	-	1	-
Jamaica	1962	28	23	22	1	-	-	5	2	1	1	1
Mexico	1962	1 925	1 894	1 419	415	28	d) 32	31	e) ...	...	31	...
Nicaragua	1960	29	26	26	-	-	-	3	e) 1	e) 1	e) 1	-
Panama	1961	27	25	24	-	1	-	2	1	-	1	-
Paraguay	1962	131	126	124	-	1	1	5	1	1	1	2
Peru	1961	f) 228	192	182	10	-	-	23	7	3	7	6
Trinidad and Tobago	1962	27	24	24	-	-	-	3	1	1	1	-
United States	1962	7 028	5 928	5 823	46	59	-	1 100	214	2	535	349
Uruguay	1960	g) 61	55	50	2	2	1	6	4	-	2	-
Venezuela	1962	315	282	265	10	7	-	33	16	2	9	6

Antigua	1962	3	1	1	-	-	-	2	-	1	1	-
Bahama Islands	1962	3	2	1	-	-	1	1	-	-	1	-
Barbados	1962	10	7	1	2	-	4	3	1	1	1	-
Bermuda	1961	2	1	1	-	-	-	1	-	-	1	-
British Guiana	1960	27	24	24	-	-	-	3	1	1	1	-
British Honduras	1962	9	6	6	-	-	-	3	1	-	1	1
Canal Zone	1962	4	2	2	-	-	-	2	-	1	1	-
Cayman Islands	1962	1	1	1	-	-	-	-	-	-	-	-
Dominica	1960	6	4	4	-	-	-	2	-	1	1	-
Falkland Islands	1962	1	1	1	-	-	-	-	-	-	-	-
French Guiana	1960	4	3	3	-	-	-	1	-	1	-	-
Grenada	1962	7	3	3	-	-	-	4	1	-	1	2
Guadeloupe	1960	21	19	15	3	1	-	2	-	1	1	-
Martinique	1962	17	15	9	6	-	-	2	1	-	1	-
Montserrat	1962	1	1	1	-	-	-	-	-	-	-	-
Netherlands Antilles	1960	h) 7	4	4	-	-	-	3	1	1	1	-
Puerto Rico	1962	141	124	124	-	-	-	17	8	1	3	5
St. Kitts - Nevis and Anguilla	1962	4	4	4	-	-	-	-	-	-	-	-
St. Lucia	1961	3	1	1	-	-	-	2	1	-	1	-
St. Pierre and Miquelon	1962	3	2	1	1	-	-	1	1	-	-	-
St. Vincent	1957	6	2	1	1	-	-	4	1	1	1	1
Surinam	1960	20	15	15	-	-	-	5	1	3	1	-
Turks and Caicos Islands	1961	1	1	1	-	-	-	-	-	-	-	-
Virgin Islands (U. K.)	1962	1	1	1	-	-	-	-	-	-	-	-
Virgin Islands (U. S.)	1962	3	3	3	-	-	-	-	-	-	-	-

(a) Includes 13 hospitals in Peru not distributed by type. (b) Includes 4 hospitals in Haiti not specified for tuberculosis or for leprosy. (c) Data for 1962 only for hospitals of the National Health Service; for 64 hospitals, data for 1958 are used.

(d) Probably includes tuberculosis and other chronic infectious disease hospitals. (e) Data from Annual Epidemiological and Vital Statistics, 1959, WHO. (f) No information available for 13 hospitals. For 28 hospitals, data for 1960.

(g) Government hospitals only. (h) Hospitals in Curaçao and Aruba only.

countries. For example, among the 28 infectious disease hospitals listed in one country probably many are for treatment of tuberculosis. Also hospitals for children classified as pediatric hospitals may include a few for long-term care of patients with tuberculosis. However, the data appear to be more nearly complete than in previous reports. For example, in this report there are 909 hospitals for mental diseases of which 615 are in Northern America and 294 in Middle and South America. However, in the previous report for 1960 data were available for only 674 hospitals of which only 95 were in Middle and South America. Brazil and Mexico which are now known to have 161 mental disease hospitals were not included in the previous total.

TABLE 37. NUMBER OF HOSPITAL BEDS PER 1,000 POPULATION BY TYPE IN THREE REGIONS OF THE AMERICAS, 1962

Type of hospital	Northern America		Middle America		South America	
	Number	Rate	Number	Rate	Number	Rate
Total	1 887 158	9.2	1 92 927	2.7	a) 521 823	3.5
General hospitals	898 230	4.4	128 094	1.8	335 588	2.3
Mental diseases	851 401	4.2	32 573	0.5	76 398	0.5
Tuberculosis	58 516	0.3	11 638	0.2	46 559	0.3
Others	79 011	0.4	20 622	0.3	55 907	0.4

(a) Includes 7371 beds in Bolivia not distributed by type of hospital.

Although the total number of hospitals in Latin America was larger than in Northern America, the reverse was noted for hospital beds. Table 37 pro-

FIGURE 19

HOSPITAL BEDS PER 1,000 POPULATION BY TYPE OF HOSPITAL IN THE THREE REGIONS OF THE AMERICAS, AROUND 1962

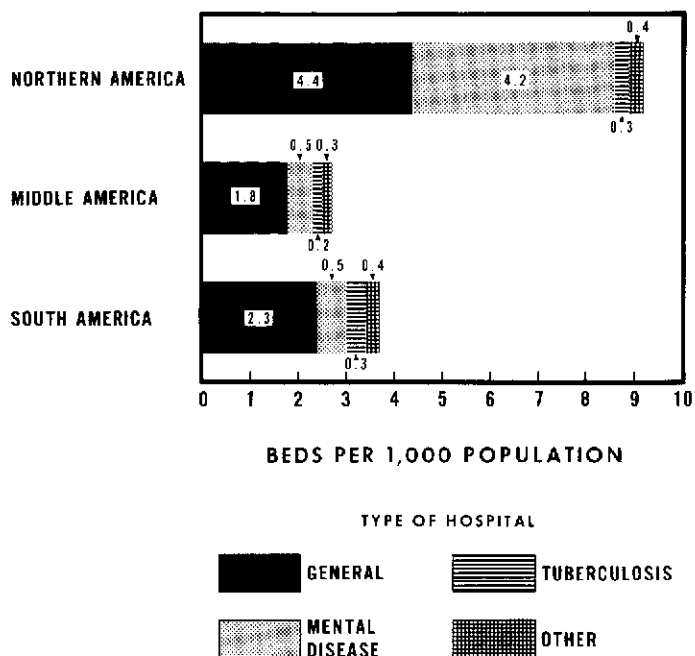


TABLE 39. NUMBER AND PERCENTAGE OF HOSPITALS BY SIZE IN SIX COUNTRIES IN THE AMERICAS AROUND 1962

Country	Year	Total	Under 50 beds		50-99 beds		100-199 beds		200-399 beds		400 beds and over	
			Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
			Canada	1962	a) 1 375	758	55.1	190	13.8	191	13.9	123	8.9	113	8.2
Costa Rica	1961	b) 45	24	53.3	4	8.9	10	22.2	4	8.9	3	6.7
Chile	1960	c) 217	97	44.7	38	17.5	33	15.2	25	11.5	24	11.1
Ecuador	1959	d) 99	56	56.6	18	18.2	18	18.2	5	5.1	2	2.0
Peru	1961	e) 207	108	52.2	40	19.3	30	14.5	13	6.3	16	7.7
United States	1962	f) 6 371	2 125	33.3	1 563	24.5	1 190	18.7	882	13.8	611	9.6

(a) List of Canadian Hospitals and Related Institutions and Facilities, Dominion Bureau of Statistics, 1962.

(b) WHO - International Study of Hospital Utilization.

(c) Excludes 35 hospitals.

(d) Country Plan for Hospital and Health Center Coordination and Construction in Ecuador, USOM/Ecuador, January 1960.

(e) Excludes 21 hospitals.

(f) Excludes 657 hospitals (101 mental hospitals, 11 tuberculosis hospitals, and 545 general and other specialized hospitals). Hospitals, American Hospital Association, August 1, 1963.

TABLE 38. NUMBER OF HOSPITAL BEDS BY TYPE OF HOSPITAL, WITH RATES PER 1,000 POPULATION IN THE AMERICAS, AROUND 1962

Area	Year	Total		General hospitals					Other hospitals					
		Number	Rate	Total		General	Mater- nity	Pedi- atrics	Other	Total	Tuber- culosis	Lep- rosy	Mental disease	Other
				Number	Rate									
Total		2 601 908		1 361 912		1 266 563	40 272	40 079	14 998	1 232 625	116 713	23 398	960 372	132 142
Argentina	1962	129 435	6.0	92 990	4.3	84 297	2 621	5 451	621	36 445	9 112	1 992	21 454	3 887
Bolivia	1962	7 371	2.1	...	...	...	...	...	...	...	...	...	...	...
Brazil (c)	1961	219 233	3.0	125 316	1.8	84 993	21 513	14 807	4 003	93 917	21 146	16 554	32 508	23 709
Canada	1962	197 361	10.6	103 862	5.6	99 942	962	2 384	574	93 499	10 673	12	66 980	15 834
Chile	1962	d) 38 047	4.7	23 444	2.9	21 806	154	1 484	-	14 603	4 505	-	3 682	6 416
Colombia	1961	45 726	3.2	35 102	2.4	31 012	1 067	1 862	1 161	10 624	2 954	-	7 424	246
Costa Rica	1962	6 016	4.7	4 123	3.2	4 000	123	-	-	1 893	535	177	1 041	140
Cuba	1962	41 698	5.9	16 282	2.3	11 757	1 811	1 753	961	25 616	3 124	750	5 750	15 992
Dominican Republic	1963	13 825	4.1	11 608	3.5	10 612	446	550	-	2 217	936	181	700	400
Ecuador	1963	9 027	1.9	6 443	1.4	5 470	483	490	-	2 584	1 573	175	836	-
El Salvador	1962	6 504	2.5	4 524	1.7	3 957	324	243	-	1 980	980	-	850	150
Guatemala	1962	10 250	2.6	8 119	2.0	7 627	11	481	-	2 131	916	50	510	655
Haiti	1960	e) 2 316	0.6	1 985	0.5	1 899	86	...	...	331	312	-	19	...
Honduras	1962	3 579	1.8	2 849	1.5	2 849	-	-	-	730	543	-	187	-
Jamaica	1962	6 825	4.2	3 007	1.8	2 843	164	-	-	3 818	402	185	3 115	116
Mexico	1962	62 964	1.7	51 301	1.4	36 101	6 123	1 790	7 287	11 663	...	...	11 663	...
Nicaragua	1960	3 328	2.3	2 660	1.8	2 660	-	-	-	668	gh) 300	gh) 68	gh) 300	-
Panama	1962	4 461	3.9	2 367	2.1	2 236	-	131	-	2 094	322	-	1 236	536
Paraguay	1962	4 359	2.3	3 312	1.8	3 264	-	18	30	1 047	280	304	430	33
Peru	1961	i) 23 481	2.3	18 844	1.8	18 143	701	-	-	4 637	1 965	535	1 849	288
Trinidad and Tobago	1962	4 712	5.3	2 692	3.0	j) 2 692	-	-	-	2 020	473	-	1 547	-
United States	1962	1 689 414	9.1	794 190	4.3	784 906	2 227	7 057	-	895 224	47 819	663	784 240	62 502
Uruguay (k)	1960	12 135	4.3	7 067	2.5	5 938	258	741	130	5 068	2 084	-	2 984	...
Venezuela	1962	27 463	3.5	19 101	2.4	17 427	874	800	-	8 362	2 888	900	4 037	537
Antigua	1962	420	7.2	180	3.1	180	-	-	-	240	-	40	200	-
Bahama Islands	1962	747	6.7	547	4.9	447	-	-	100	200	-	-	200	-
Barbados	1962	1 559	6.7	547	2.4	453	40	-	54	1 012	40	175	797	-
Bermuda	1961	313	7.0	132	2.9	132	-	-	-	181	-	l) 181	-	-
British Guiana(m)	1960	2 665	4.7	1 831	3.2	1 831	-	-	-	834	...	...	834	-
British Honduras	1962	462	4.8	272	2.8	272	-	-	-	190	19	-	119	52
Canal Zone	1962	998	22.2	616	13.7	616	-	-	-	382	-	120	262	-
Cayman Islands	1962	28	3.5	28	3.5	28	-	-	-	-	-	-	-	-
Dominica	1960	274	4.6	222	3.7	222	-	-	-	52	-	22	30	-
Falkland Islands	1962	32	16.0	32	16.0	32	-	-	-	-	-	-	-	-
French Guiana	1960	961	31.0	856	27.6	856	-	-	-	105	-	105	-	-
Grenada	1962	697	7.7	280	3.1	280	-	-	-	417	60	-	200	157
Guadeloupe	1960	2 302	8.5	1 858	6.9	1 683	138	37	-	444	-	114	330	-
Martinique	1962	3 703	12.5	2 963	10.0	2 766	121	-	77	740	170	-	570	-
Montserrat	1962	69	5.3	69	5.3	69	-	-	-	-	-	-	-	-
Netherlands Antilles	1960	n) 1 410	7.4	920	4.8	920	-	-	-	490	60	30	400	-
Puerto Rico	1962	12 289	5.0	7 239	2.9	7 239	-	-	-	5 050	2 356	-	2 327	367
St. Kitts-Nevis-Anguilla	1962	205	3.4	205	3.4	205	-	-	-	-	-	-	-	-
St. Lucia	1961	410	4.6	240	2.7	240	-	-	-	170	50	-	120	-
St. Pierre and Miquelon	1962	70	14.0	46	9.2	37	9	-	-	24	24	-	-	-
St. Vincent	1957	435	5.7	150	2.0	134	16	-	-	285	40	20	100	125
Surinam	1960	1 888	7.0	1 250	4.6	1 250	-	-	-	638	52	226	360	-
Turks and Caicos Islands	1961	16	2.7	16	2.7	16	-	-	-	-	-	-	-	-
Virgin Islands (U.K.)	1962	34	4.3	34	4.3	34	-	-	-	-	-	-	-	-
Virgin Islands (U.S.)	1962	191	5.5	191	5.5	191	-	-	-	-	-	-	-	-

(a) Includes 7,371 beds in Bolivia not distributed by type of hospital. (b) Includes 785 beds of which some may be in leprosy hospitals. (c) Beds in hospitals and para-hospitals. (d) Data for 1962 available only for hospitals of the National Health Service; for 64 other hospitals, data for 1958 were used. (e) Excludes beds in "Other hospitals". (f) Probably includes beds in tuberculosis and other chronic disease hospitals. (g) Data from Annual Epidemiological and Vital Statistics, 1959, WHO. (h) For 1959. (i) Beds in 215 hospitals of which data for 28 hospitals are for 1960. (j) Beds in only 13 general hospitals. (k) Beds in government hospitals only. (l) Number of patients. (m) Data on tuberculosis and leprosy hospital beds are not available. (n) Beds in hospitals in Curaçao and Aruba only.

vides a summary of hospital beds by type for Northern, Middle and South America with number of beds per 1,000 population. In Northern America there were 9.2 beds per 1,000 population. Over half of these beds were in hospitals for mental diseases, tuberculosis, and other chronic diseases. In Middle and South America there were 2.7 and 3.5 beds per 1,000 popu-

FIGURE 20

PERCENTAGE DISTRIBUTION OF HOSPITALS BY SIZE, IN SIX COUNTRIES, AROUND 1962

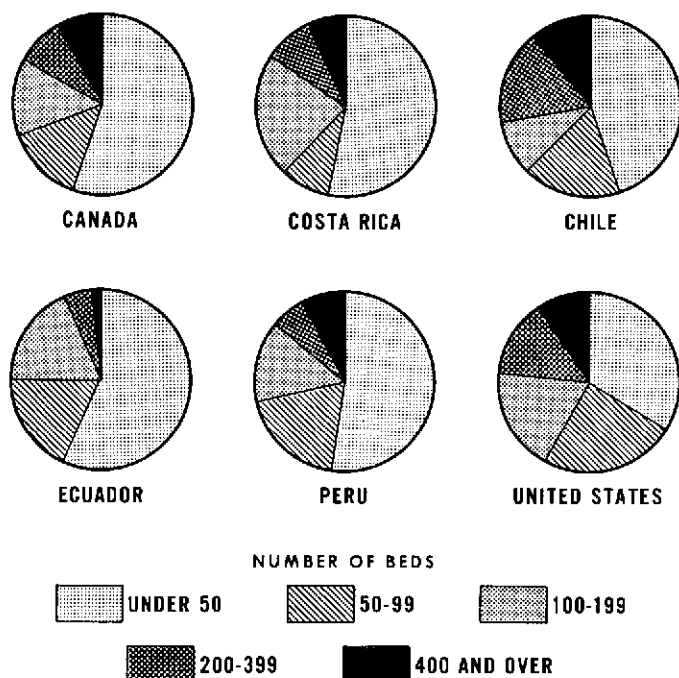


TABLE 40. AVERAGE NUMBER OF BEDS IN GENERAL AND OTHER HOSPITALS IN THREE REGIONS OF THE AMERICAS, AROUND 1962

Region	General hospitals			Other hospitals		
	Number of hospitals	Number of beds	Average number of beds	Number of hospitals	Number of beds	Average number of beds
Northern America	7 000	898 230	128	1 404	988 928	704
Middle America	a) 2 537	128 094	50	b) 177	64 833	366
South America	c) 5 837	335 588	57	732	178 864	244

(a) Excludes 11 general hospitals in Trinidad and Tobago.

(b) Excludes 3 hospitals in Haiti.

(c) Excludes 107 hospitals (99 general and 8 other) in Bolivia, and 13 hospitals in Peru.

TABLE 41. NUMBER AND PERCENTAGE OF HOSPITALS AND HOSPITAL BEDS WITH GOVERNMENT OWNERSHIP IN 13 COUNTRIES OF THE AMERICAS, AROUND 1962

Country	Year	Hospitals			Beds		
		Total	Governmental Number	Per cent	Total	Governmental Number	Per cent
Latin America		8 356	3 788	45.3	561 582	374 648	66.7
Argentina	1961	2 253	1 291	57.3	129 435	103 569	80.0
Bolivia	1962	107	82	57.9	7 371	4 547	61.7
Brazil	1961	2 654	416	15.7	a) 210 872	83 826	39.8
Chile	1962	252	188	74.6	38 047	28 434	74.7
Colombia	1961	b) 558	433	77.6	b) 44 686	39 980	89.4
Costa Rica	1961	c) 45	36	80.0	c) 5 751	5 441	94.6
Guatemala	1962	45	35	77.8	10 250	9 384	91.6
Mexico	1962	d) 925	1 031	53.6	d) 62 964	53 754	85.4
Panama	1962	27	16	59.3	e) 4 168	3 488	83.7
Peru	1961	f) 164	97	59.1	f) 19 554	17 291	88.4
Venezuela	1963	326	183	56.1	28 484	24 954	87.6
Canada	1963	1 346	494	36.6	202 306	85 835	42.4
United States	1962	7 028	2 415	34.4	1 689 414	132 367	67.0

(a) Excludes beds in para-hospitals.

(b) Excludes 2 hospitals with no information.

(c) Source: *International Studies of Hospital Utilization*, WHO (A pilot study, 1961).

(d) Excludes 12 hospitals with no information.

(e) Source: *Plan Nacional de Salud Pública, 1962-1970*, Panama, 1963.

(f) Excludes 64 hospitals with no information.

TABLE 42. NUMBER OF HOSPITAL BEDS AND RATE PER 1000 POPULATION IN CAPITALS AND LARGE CITIES IN 13 COUNTRIES, AROUND 1962

Country	Year	Total		Capitals and large cities (a)		Remainder of country	
		Number of hospital beds	Rate	Number of hospital beds	Rate	Number of hospital beds	Rate
Latin America		572 137	3.0	255 637	5.8	316 500	2.2
Argentina	1962	129 435	6.0	57 639	8.2	71 796	5.0
Bolivia	1962	7 371	2.1	2 028	4.4	5 343	1.7
Brazil	1961	219 233	3.0	b) 96 743	7.1	122 490	2.1
Chile	1962	c) 28 434	3.5	12 686	4.8	15 748	2.9
Colombia	1962	d) 44 226	3.0	19 375	3.7	24 851	2.6
Costa Rica	1962	6 016	4.7	3 780	8.6	2 236	2.7
Dominican Republic	1962	e) 6 222	1.9	3 377	6.8	2 845	1.0
El Salvador	1962	d, e) 5 787	2.2	2 924	6.0	2 863	1.3
Guatemala	1962	10 250	2.6	4 863	7.6	5 387	1.6
Honduras	1962	e) 2 811	1.4	f) 1 888	4.7	923	0.6
Jamaica	1962	6 825	4.2	g) 4 645	12.0	2 180	1.7
Mexico	1958	47 505	1.4	21 499	2.7	26 006	1.0
Nicaragua	1959	2 738	1.9	948	4.5	1 790	1.5
Panama	1960	h) 4 340	4.1	2 523	6.9	1 817	2.6
Peru	1961	i) 23 481	2.3	11 018	4.8	12 463	1.5
Venezuela	1962	27 463	3.5	9 701	7.4	17 762	2.7

(a) Includes federal districts, capital cities or departments with capital cities plus other cities of at least 500,000 population or departments with a city of 500,000 population or more. (b) State capitals and State of Guanabara. (c) Government hospitals only. (d) Source differs from that for preceding tables. (e) Hospitals of Ministry of Health and Social Welfare only. (f) Distrito Sanitario No. 1. (g) Kingston and St. Andrew. (h) Source: *Panama en Cifras*, Dirección de Estadística y Censo, Panama, 1961. (i) Beds in 215 hospitals.

lation, respectively. In these regions nearly two-thirds of the beds were in general hospitals. The differences in the provision of beds in general, tuberculosis and mental disease hospitals in relation to the population can be seen in Figure 19. Data for each country and territory in the Americas are shown in Table 38.

Only limited information is available regarding the size of hospitals. In Table 39 and Figure 20 data are provided for 6 countries. In four of these countries over half of the hospitals were small, with less than 50 beds. In Chile, the distribution by size was different with 45 per cent of the hospitals with less than 50 beds and 23 per cent with 200 or more. The United States had a higher proportion of the hospitals with 50-399 beds than did the other countries.

Since the distributions of hospitals by size were not available for many countries, the average sizes of general and other hospitals were calculated from the total numbers of hospitals and beds (Table 40). Both general and specialized hospitals were on the average

much larger in Northern America than in Middle and South America. The average number of beds in general hospitals in Northern America was 128 as compared to 50 in Middle America and 57 in South America. Northern America has large hospitals for mental disease patients which accounts for the high average of 704 beds for other hospitals.

Planning for hospital facilities and their maximum utilization necessitates consideration of size of hospitals in relation to the needs of communities and regions of a country.

Data were available on ownership of hospitals for 13 countries (Table 41). In the countries of Latin America on the average approximately 45 per cent of the hospitals with 67 per cent of the beds were owned by the government. However, there were marked differences among these countries in the proportion of total beds which were in governmental hospitals (Figure 21). The proportion ranged from 40 per cent in Brazil to 95 per cent in Costa Rica. In some of the

FIGURE 21

PERCENTAGE OF BEDS IN GOVERNMENTAL HOSPITALS IN 13 COUNTRIES OF THE AMERICAS, AROUND 1962

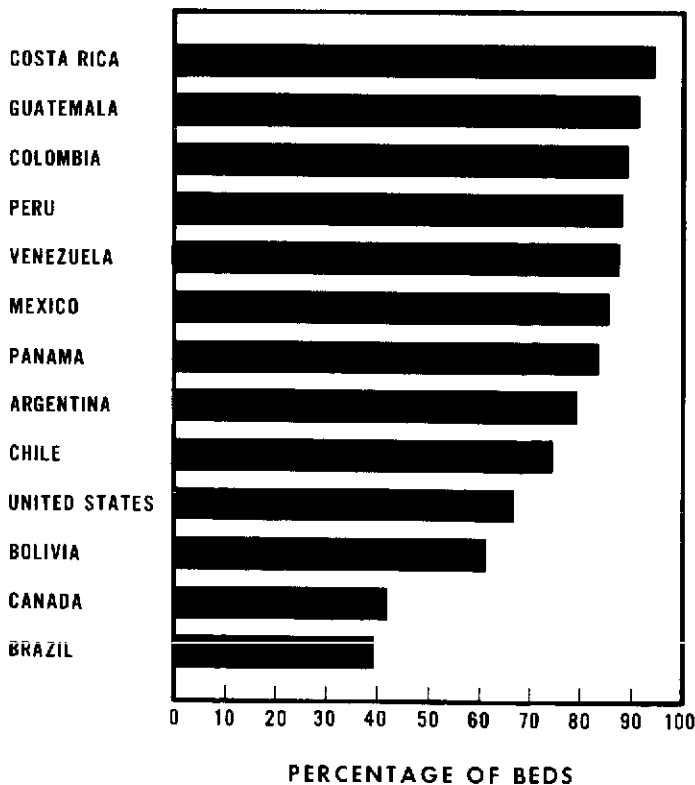
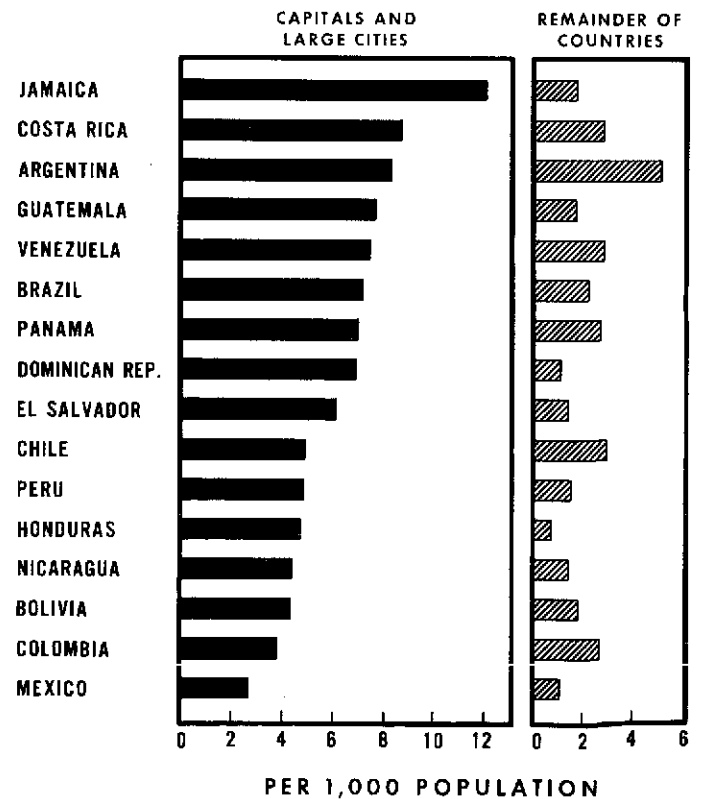


FIGURE 22

HOSPITAL BEDS PER 1,000 POPULATION IN CAPITALS AND LARGE CITIES AND IN REMAINDER OF THESE COUNTRIES, IN THE AMERICAS, AROUND 1962



countries, only limited information is available regarding hospitals which are not owned and operated by the government. However, for planning, data for all facilities are necessary.

Knowledge of the distribution of hospital beds within a country is important for planning for services for the entire population. Recent national publications were used to obtain such data as are available on the location of hospitals. Since information could be obtained for capitals, federal districts and large cities, for this presentation each country has been divided into two parts, namely (a) the capital or federal district and cities of over 500,000 population and (b) remainder of the country. In some instances it was necessary to include in the former group the department in which the large city or capital was located.

STATISTICS RELATING TO PATIENTS IN HOSPITALS

Statistics on patients contribute considerable knowledge of health problems and are useful for evaluating both the needs and demands for services. The number of admissions and discharges per 1,000 population and the average lengths of stay are valuable indices in this field. The frequency of serious illnesses requiring hospitalization in a country is an important measure. Also the use of hospitals for deliveries gives essential data for health planning. Unfortunately complete and comparable data for patients are limited and thus only material for a few selected countries is presented.

For 12 countries data on admissions to general hospitals were available (Table 43). The admission rates varied from 12 to 149 per 1,000 population. In Canada and the United States admission rates have been increasing. For example in Canada in 1948 the admissions per 1,000 population were 111 while in 1961 they were 149. In the United States in this same period the increase in admissions was from 110 to 135 per 1,000 population⁽³⁾.

The number of patient days in general hospitals likewise varies considerably. In three of the countries for which such data are available there is about one patient day per person in a year. In Canada the figure is higher, 1.6 patient days per person per year. The average length of stay in the six countries with data

Data are provided in Table 42 for 16 countries with an estimated population of 189 million, representing 90 per cent of the population of Latin American countries around 1962. In these 16 countries the number of hospital beds in the capitals and large cities was 5.8 per 1,000 population which is two and one half times the number (2.2 per 1,000 population) reported for the remainder of these countries. Although large cities naturally are centers for hospital care, the remainders of these countries, that is, the smaller cities and the rural areas where approximately 77 per cent of the population live, also are in great need of services. The ratios of hospital beds to population are shown in Figure 22 for these two divisions of 16 countries.

available for both patient days and admissions varied from 8.6 to 17.3 days. Data regarding admissions, patient days and lengths of stay are useful in evaluating hospital programs.

Some information was available for hospitals for mental diseases and for tuberculosis, (Tables 44 and 45). The rates of admission to these specialized hospitals were much lower than to general hospitals.

TABLE 43. ADMISSIONS AND PATIENT DAYS WITH RATES PER 1,000 POPULATION AND AVERAGE LENGTH OF STAY IN GENERAL HOSPITALS IN 12 COUNTRIES

Country	Year	Admissions		Patient days		Average length of stay in days
		Number	Rate	Number	Rate	
Canada (a)	1961	2 728 305	149.3	28 803 015	1576.6	10.6
Colombia	1962	803 451	54.4	8 792 319	595.3	10.9
Costa Rica	1962	138 220	106.9	1 260 393	989.3	9.3
El Salvador	1962	111 047	42.3	...	...	...
Guatemala	1962	130 570	32.5	2 256 716	561.8	17.3
Jamaica	1961	83 697	51.2	...	...	...
Mexico	1962	1 532 372	41.2	...	...	...
Panama	1961	...	...	1 366 195	1 225.3	...
Paraguay	1961	23 000	12.0	...	...	...
Peru	1961	288 735	27.9	4 479 166	432.1	15.5
Trinidad and Tobago	1962	65 132	75.1	...	...	...
United States	1961	24 693 720	134.9	221 448 055	1 209.7	8.6

(a) General hospitals excluding allied special hospitals.

(3) Trends, 1963, U.S. Department of Health, Education and Welfare, Washington D.C.

For mental disease hospitals the highest admission rate, 2.6 per 1,000 population, was reported for the United States. This admission rate has increased in recent years; in 1933 it was 1.4 per 1,000 population. The number of patient days in mental disease hospitals in the United States was larger than the number of patient days in general hospitals as given in Table 43. However, in relation to the total population, the number of patient days has declined in the last few years to 1,420 per 1,000 population in 1961 or 1.4 patient days per person per year.

Admission rates and patient days for tuberculosis hospitals are available for eight countries. The variation in these rates is great. Both admission rates and patient days per 1,000 population in tuberculosis hospitals have been declining in many countries. For example, in Canada⁽⁴⁾ in the five years from 1957 to 1961 the patient days in tuberculosis hospitals decreased by nearly fifty per cent. This decline is expected to continue and the number of patient days in another ten years, in 1971, was estimated at 55 per 1,000 population.

TABLE 44. ADMISSIONS AND PATIENT DAYS WITH RATES PER 1,000 POPULATION IN MENTAL HOSPITALS IN 11 COUNTRIES, AROUND 1962

Country	Year	Admissions		Patient days	
		Number	Rate	Number	Rate
Canada	1961	38 251	2.1	24 802 382	1 357.6
Costa Rica	1962	2 706	2.1	a) 387 003	315.9
Dominican Republic	1961	1 202	0.4	455 323	146.4
Ecuador	1960	1 826	0.4	...	...
Guatemala (b)	1962	2 291	0.6	395 660	98.5
Jamaica	1961	1 301	0.8	...	...
Mexico	1962	9 682	0.3	...	...
Panama	1961	1 600	1.4	...	...
Peru	1961	1 117	0.1	527 763	50.9
Trinidad and Tobago	1962	1 546	1.7	...	...
United States	1961	475 917	2.6	259 943 510	1 420.0

(a) 1960

(b) 5 hospitals

Hospital morbidity data based on diagnoses on admission or discharge provide valuable information about health conditions. Many hospital admissions are for deliveries and complications of pregnancy and childbirth. Other important causes are infectious and diarrheal diseases, external causes (that is, accidents and violence), respiratory and circulatory diseases. Unfortunately complete data are usually not available for all hospitals in a country and without a population

base rates cannot be calculated. However, in order that health conditions as revealed by hospital morbidity data may be considered, data for four countries are presented in Table 46. For Colombia the data are for all hospitals in the country; for Ecuador for 49 out of 76 hospitals; for Peru for 168 of a total of 228 hospitals; and for Venezuela for 101,473 discharges from hospitals of the National Health Service.

TABLE 45. ADMISSIONS AND PATIENT DAYS WITH RATES PER 1,000 POPULATION IN TUBERCULOSIS HOSPITALS IN 8 COUNTRIES, AROUND 1962

Country	Year	Admissions		Patient days	
		Number	Rate	Number	Rate
Canada	1961	13 924	0.8	2 960 637	182.1
Colombia (a)	1961	8 970	0.6	1 100 195	76.2
Costa Rica	1961	316	0.3	88 446	72.2
Dominican Republic	1961	399	0.1	159 388	51.3
Guatemala	1962	2 258	0.6	436 269	108.6
Panama	1961	269	0.2	...	...
Peru	1961	1 544	0.1	553 687	53.4
United States	1961	69 703	0.4	12 940 710	70.7

(a) Patients with diagnosis of tuberculosis (001-019).

Since, except for Colombia, these discharges could not be related to the population, rates have not been obtained. The percentage distributions by diagnostic group of the International Classification of Diseases have been calculated. The importance of the infective and parasitic diseases as causes of hospitalization is clearly evident. The percentages varied from 5 in Venezuela to 17 in Ecuador. Tuberculosis was an important cause of hospitalization in Peru and dysenteries and malaria in Ecuador.

Several preventable diseases such as typhoid fever, diphtheria, whooping cough and measles, were responsible for large numbers of hospitalizations. The number of admissions due to malaria varied widely from a low of 14 (0.01 per cent) in Venezuela, which has large areas with malaria eradicated, to 5,874 (0.81 per cent) in Colombia and 3,371 in Ecuador (2.80 per cent). These figures are for years between 1960 and 1962 and it is expected that this cause of hospital admission will be eliminated as the program for malaria eradication progresses.

Deliveries and complications of pregnancy, childbirth and the puerperium were responsible for 34 per cent of the hospitalizations in Peru, 35 per cent in Colombia, 36 per cent in Ecuador, and 50 per cent in Venezuela. Accidents and violence caused from

(4) Royal Commission on Health Services, Vol. 1, Ottawa, Canada, 1964.

7 to 10 per cent of the hospitalizations.

Data were not available for the United States. However, from the National Health Survey (5) the per cent distribution by type of condition for which patients were hospitalized was available for discharges from short-stay hospitals. According to the

results of this survey 2 per cent of the patients were hospitalized for infective and parasitic diseases, 22 per cent for deliveries and complications of pregnancy and the puerperium, 13 per cent for respiratory conditions, 13 per cent for diseases of the digestive system and 9 per cent for accidents and other violence.

TABLE 46. NUMBER AND PERCENTAGE DISTRIBUTION OF HOSPITAL DISCHARGES BY DIAGNOSIS IN FOUR COUNTRIES, AROUND 1961

Diagnosis (International Classification of Diseases)	Colombia (1961)		Ecuador (1960)		Peru (1961)		Venezuela (1962)	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
All diagnoses	a) 724 486	100	b) 120 575	100	c) 256 588	100	d) 101 473	100
Infective and parasitic diseases.... 001-138	85 348	9.02	20 185	16.74	23 729	9.25	5 052	4.98
Tuberculosis 001-019	8 970	1.24	1 826	1.51	11 046	4.30	564	0.56
Syphilis 020-029	1 144	0.16	321	0.27	709	0.28	88	0.09
Typhoid fever 040	6 559	0.91	1 815	0.71	1 815	0.71	119	0.12
Dysentery, all forms 045-048	8 874	1.22	e) 5 183	4.30	779	0.30	1 410	1.39
Diphtheria 055	901	0.12	...	...	83	0.03	189	0.19
Whooping cough 056	512	0.07	...	...	175	0.07	13	0.01
Measles 085	1 146	0.16	...	...	869	0.34	305	0.30
Malaria 110-117	5 874	0.81	3 371	2.80	349	0.14	14	0.01
Diseases due to helminths 123-130	18 095	2.50	...	...	...	...	903	0.89
Other diseases Residual	13 273	1.83	9 484	7.86	7 904	3.08	1 447	1.43
Malignant neoplasms 140-206	7 351	1.02	882	0.73	3 901	1.52	1 591	1.57
Benign neoplasms 210-239	11 221	1.55	727	0.60	4 118	1.60	1 635	1.61
Nutritional deficiency states and anemias 280-293	20 659	2.85	f) 2 761	2.29	1 060	0.41	1 037	1.02
Psychosis, psychoneurosis and mental deficiency 300-326	13 504	1.86	1 671	1.39	...	...	181	0.18
Vascular lesions affecting the central nervous system 330-334	2 003	0.28	189	0.16	617	0.24	443	0.44
Diseases of the heart 410-443	10 485	1.45	432	0.36	2 177	0.85	1 264	1.25
Influenza and pneumonia 480-493	14 922	2.06	5 520	4.58	8 538	3.33	1 394	1.37
Bronchitis 500-502	8 696	1.20	2 005	1.66	4 356	1.70	748	0.74
Ulcer of stomach and duodenum 540, 541	4 055	0.56	...	...	1 636	0.64	275	0.27
Apendicitis 550-553	11 382	1.57	1 877	1.56	5 502	2.14	2 048	2.02
Intestinal obstruction and hernia 560, 561, 570	22 064	3.04	...	...	5 173	2.02	2 745	2.70
Gastritis, enteritis, etc. 543, 571, 572	24 728	3.41	...	...	7 908	3.08	3 475	3.42
Cirrhosis of the liver 581	875	0.12	...	...	691	0.27	211	0.21
Nephritis and nephrosis 590-594	3 590	0.50	693	0.57	928	0.36	673	0.66
Deliveries, complications of pregnancy childbirth and puerperium 640-689	255 875	35.32	43 056	35.71	86 039	33.53	50 932	50.19
Congenital malformations 750-759	2 704	0.37	318	0.26	973	0.38	630	0.62
Certain diseases of early infancy 760-776	10 128	1.40	803	0.67	2 464	0.96	1 072	1.06
External causes E800-E999	69 685	9.62	9 579	7.94	25 873	10.08	7 331	7.22
Other diseases Residual	149 622	20.65	26 815	22.24	63 981	24.94	17 583	17.33
Ill-defined and unknown causes 780-795	15 589	2.15	3 082	2.54	6 924	2.70	1 153	1.14

(a) All hospitals. (Source: Anuario General de Estadística-1961, Departamento Administrativo Nacional de Estadística, Colombia, 1963). (b) For 49 hospitals under the "Junta de Asistencia Social". (Source: Estadísticas Hospitalarias-1960, División de Estadística y Censos, Quito, Ecuador, 1964). (c) For 163 hospitals. (Source: Estadísticas Hospitalarias en el Perú, Servicio Especial de Salud Pública, 1961). (d) For 101,473 discharges from hospitals of the "Ministerio de Sanidad" for 6 months period. (Source: Anuario de Epidemiología y Estadística Vital, 1962, Tomo 1, Caracas, Venezuela 1963). (e) Categories 040-049. (f) Categories 280-299.

(5) *Health Statistics from the U.S. National Health Survey, Series B, No. 32, U.S. Department of Health, Education and Welfare, Washington D.C., 1962*

OTHER HEALTH SERVICES

In addition to the services rendered to patients in hospitals, information was provided in the questionnaire for the Supplemental Report on Health Conditions on out-patient consultations in hospitals and also on clinic visits to health centers and other health units. Data available for 14 countries are given in Table 47 to show the total of services rendered. For example, in several of the countries approximately one out-patient visit per person is made per year. The proportion of these visits which were to health centers varied from 23 to 62 per cent; however, on the average for 10 countries nearly half (46 per cent) of these visits were made to health centers. The volume of services being provided both by out-patient clinics and health centers is large. However, the total volume of care is unknown and without doubt exceeds one visit per person per year.

Although complete data were not available for all out-patient services in Venezuela, in 1962 in the "medicaturas rurales", through which health services are provided to 39.2 per cent of the population of the

TABLE 47. TOTAL CONSULTATIONS IN OUTPATIENT CLINICS OF HOSPITALS AND IN HEALTH CENTERS WITH NUMBERS PER 1,000 POPULATION IN 14 COUNTRIES, 1962

Country	Year	Total visits		Outpatient consultations in hospitals	Health center visits	
		Number	Rate		Number	Per cent
Argentina	1961	3 503 272	166	a) 2 092 636	1 410 636	40.3
Canada	1962	...	...	8 001 919	...	...
Chile	1962	8 631 551	1 075	...	...	...
Costa Rica	1962	1 439 203	1 130	800 892	638 311	44.4
Cuba	1962	8 264 643	1 169	3 207 064	5 057 579	61.2
El Salvador	1962	882 459	336	676 935	205 524	23.3
Guatemala	1962	405 058	101	150 058	b) 255 000	63.0
Honduras	1962	406 765	209	185 432	221 333	54.4
Jamaica	1961	1 083 361	663	546 701	c) 536 660	49.5
Mexico	1962	22 005 451	591	8 395 472	13 609 979	61.8
Panama	1961	1 200 345	1 077	481 145	719 200	59.9
Paraguay	1962	...	...	...	c) 579 535	...
Trinidad and Tobago	1962	874 318	754	310 446	c) 363 872	54.0
Venezuela	1962	d) 3 772 703	479	...	...	...

(a) Ministry of Social Welfare exclusively.

(b) Excluding dispensaries.

(c) Incomplete.

(d) Memoria y Cuenta, Ministry of Health and Social Welfare, 1962: Outpatient consultations in hospitals and health centers of the Ministry and consultations of curative medicine in "medicaturas rurales".

country, 2,553,000 consultations were given for medical care to an estimated 2,950,000 people or on the average 0.8 consultation a person. This figure probably represents the total medical care received outside of hospitals for the small communities involved.

In 17 countries there were 10,743 health centers or other establishments for out-patient care (Table 48). Excluding the United States, the number totalled 8,404 in 16 countries with a population of 122 millions. Thus there is at present some kind of health center, rural post for medical care or other health unit for each 15,000 people. In Venezuela each "medicatura rural" serves on the average about 6,700 people. Unfortunately the extent of the coverage of the population by health centers is not known. Some of the health centers serve urban areas with large concentrated populations while others such as rural posts serve only a few thousand people.

TABLE 48. NUMBER OF HEALTH CENTERS AND OTHER ESTABLISHMENTS FOR OUT-PATIENT CARE (EXCLUDING HOSPITALS) IN 17 COUNTRIES, 1962

Country	Total	Health centers	Poly-clinics	Dispensaries (a)	Medical aid posts	Mobile health units	Other
Total	10 473						
Argentina b)	155	88	-	5	40	-	22
Colombia c)	1 057	...	...	...	...	...	...
Costa Rica	125	81	d) 1	39	-	4	-
Cuba	407	126	137	23	121	-	-
Dominican Republic	188	5	-	60	120	1	-
El Salvador	83	64	10	8	-	-	1
Guatemala	203	48	...	155	...	...	...
Haiti	171	14	-	157	-	-	-
Honduras	63	44	-	-	13	-	6
Jamaica	146	72	-	71	-	3	-
Mexico	4 219	1 550	-	-	2 648	21	-
Panama	48	39	1	8	-	-	-
Paraguay	179	57	...	-	122	-	-
Peru	635	73	-	-	354	162	46
Trinidad and Tobago	216	107	-	107	-	e) 2	-
United States	2 069	f) 144	-	-	-	-	f) 925
Venezuela	511	g) 71	-	-	h) 440	-	-

(a) Not in hospitals. (b) For 1961. (c) For 1963.

(d) Social Security. (e) Opened in 1963. (f) Auxiliary health centers. (g) Health units and centers. (h) "Medicaturas Rurales."

Among other indicators of the health activities available in a country are several related to maternal and child health services. The attendance at deliveries of medical or trained nursing personnel is of great importance for the protection of health of both mothers and children. Information available for eleven countries on the numbers of deliveries attended by qualified doctors or midwives is shown in Table 49. Percentages of deliveries with such assistance were reported for some of the countries but usually were based on the part of the country with health services reporting this information. To judge the country-wide extent of such services, percentages were also calculated using the total live births for the country. Although the percentages vary, in three countries more than 60 per cent of the live births were delivered by qualified doctors or midwives.

Another measure of the child health services provided is the number of infant and preschool children receiving clinic services. Comparison of the number of children receiving services in health units in the two specified age groups suggests that less attention is focused on the preschool children than on infants since relatively fewer are seen in health centers. The numbers of children receiving services under one year of age were large in several of these countries indicating that these services were available to large segments of the population.

TABLE 49. NUMBER OF DELIVERIES ATTENDED BY QUALIFIED PHYSICIAN OR MIDWIFE AND NUMBER OF CHILDREN UNDER 1 YEAR AND 1-5 YEARS ATTENDED IN HEALTH SERVICE UNITS IN 12 COUNTRIES, AROUND 1962

Country	Year	Deliveries attended by qualified physician or midwife			Number of children receiving services	
		Number	Percentage		Under 1 year	1-5 years
			Reported	Of total live births		
Chile	1961	a) 168 555	...	63.1	...	...
Colombia	1961	61 350	21.9	9.8	452 303	719 209
Costa Rica	1962	a) 37 447	59.8	...	56 577	79 428
El Salvador	1962	4 158	14.9	3.3	20 694	13 164
Guatemala	1962	...	...	...	5 356	4 147
Honduras	1962	7 378	...	8.0	24 431	50 268
Jamaica	1962	15 295	...	22.8	23 243	...
Mexico	1962	334 234	20.1	20.1	2 991 940	...
Panama	1962	5 462	...	12.1	23 322	37 358
Paraguay	1961	13 058	46.6	26.4	30 107	37 195
Peru	1962	9 951	68.	2.5	119 495	...
Trinidad and Tobago	1962	23 416	86.6	68.6	...	...

(a) National Health Service.

Health activities for children can also be evaluated from information on the number and proportion immunized particularly against diseases usually acquired in childhood such as diphtheria and whooping cough. Tables 50 and 51 show the numbers immunized against these two diseases by country and region of the Americas. For some countries the totals include immunization in all age groups but in others are limited to children. In many countries the data are incomplete since reports are not received from all medical sources. Because of these variations the proportions immunized are not shown. The small numbers in many countries emphasize the need for expansion of such preventive activities in the Region and explain in part the high morbidity and mortality from the infectious diseases of childhood in Middle and South America.

Nutritional deficiency states particularly protein deficiency is one of the serious problems with which maternal and child health services in the Americas are concerned. In Tables 23 and 24 the group of diseases, avitaminosis and other nutritional deficiency states, appeared among the principal causes of death for children of 1-4 years of age in four countries. Many other deaths associated with malnutrition are probably assigned to conditions such as the infectious diseases, gastritis and enteritis and ill defined causes, and thus the total impact of poor nutrition on mortality cannot be measured. To assess the extent of less severe nutritional deficiency which does not lead to death is even more difficult.

Two examples of the basic problems in food production and distribution in the Americas are given. Since 1953 food production in Northern America has in general increased year by year (Figure 23). At the same time population has increased at a corresponding rate, which has resulted in a fairly constant per capita supply of food over the time period. From 1953 to 1958 food production in Latin America was increased rapidly with the per capita amounts also increasing. Since 1958 the upward trend of total production has continued but at a lower rate and the per capita food production in 1963 was in fact below the 1953 level.

In Figure 24 data are given to illustrate the hours a skilled laborer must work in selected cities in seven countries to purchase three basic food commodities. By showing work time for a given purchase some of the problems of comparisons of different currencies are eliminated. There is a wide variation among countries. Whereas in the United States a laborer earns enough in 20 minutes to purchase a kilogram of meat, in four countries he must work over two hours to be able to buy the corresponding

TABLE 50. NUMBER OF PERSONS IMMUNIZED AGAINST DIPHtherIA IN THE AMERICAS, 1961 AND 1962

Area	1961	1962
Argentina	576081	562870
Chile	764089	939955
Colombia	375407	368013
Costa Rica	12595	19582
Cuba	225319	416857
Dominican Republic	...	5370
Ecuador (a)	17000	2000
El Salvador (b)	18445	14421
Guatemala	44757	30671
Haiti	12	55
Honduras	5577	9881
Jamaica	3530	4347
Mexico	345725	424680
Nicaragua (c)	3393	7398
Panama	4583	7400
Paraguay	6342	8137
Peru	136236	76427
Trinidad and Tobago (d)	1114	994
United States (e) (f)	10981730	11240145
Venezuela (g)	216437	201400
Antigua (e)	23261	26314
Barbados	1318	1471
British Honduras	11911	7747
Canal Zone (e) (f)	6066	7201
Falkland Islands	22	28
Grenada	-	-
Martinique	12258	16721
Montserrat	-	-
Puerto Rico (h)	64719	59244
St. Kitts-Nevis-Anguilla	-	-
St. Lucia	-	-
St. Pierre and Miquelon	138	57
Virgin Islands (UK)	164	280
Virgin Islands (US)	1263	1911

(a) Includes children 2 months to 7 years only. (b) Includes children under 5 years only. (c) Includes children 1-5 years only. (d) Excludes immunizations under school program. (e) Number of doses. (f) Excludes immunizations by private physicians or in other non-governmental facilities. (g) Includes children 2 months to 9 years only. (h) Includes children only.

TABLE 51. NUMBER OF PERSONS IMMUNIZED AGAINST WHOOPING COUGH IN THE AMERICAS, 1961 AND 1962

Area	1961	1962
Argentina	105977	207898
Chile	764089	939955
Colombia	375407	368013
Costa Rica	19582	...
Cuba	225319	470141
Dominican Republic	...	5370
Ecuador (a)	10000	45000
El Salvador (b)	18445	14421
Guatemala	44757	30671
Honduras	5577	9881
Jamaica	3530	4347
Mexico	350749	424680
Nicaragua (c)	3393	7398
Panama	4583	7400
Paraguay	6342	8137
Peru	136236	76427
Trinidad and Tobago (d)	1114	994
United States (e, f)	10981730	11240145
Venezuela (g)	210148	170998
Antigua (e)	23261	26314
Barbados	1261	1368
British Honduras	11911	7747
Canal Zone (e, f)	6066	7201
Falkland Islands	22	28
Grenada	-	-
Martinique	205	8
Montserrat	-	-
Puerto Rico (h)	32006	27658
St. Kitts-Nevis and Anguilla	-	...
St. Lucia	-	-
St. Pierre and Miquelon	138	57
Virgin Islands (UK)	164	280
Virgin Islands (US)	1263	1911

(a) Includes children 2 months to 7 years only. (b) Includes children under 5 years only. (c) Includes children 1-5 years only. (d) Excludes immunizations under school program. (e) Number of doses. (f) Excludes immunizations by private physicians or in other non-governmental facilities. (g) Includes children 2 months to 9 years only. (h) Includes children only.

amount. The same situation exists for the other foods. In four of the countries, in addition to the United States, the work time involved decreased between 1954 and 1962 but in one increases were observed.

FIGURE 23

PERCENTAGE CHANGE IN TOTAL AND PER CAPITA FOOD PRODUCTION AND IN POPULATION IN NORTHERN AND LATIN AMERICA FROM 1953-54 TO 1962-63

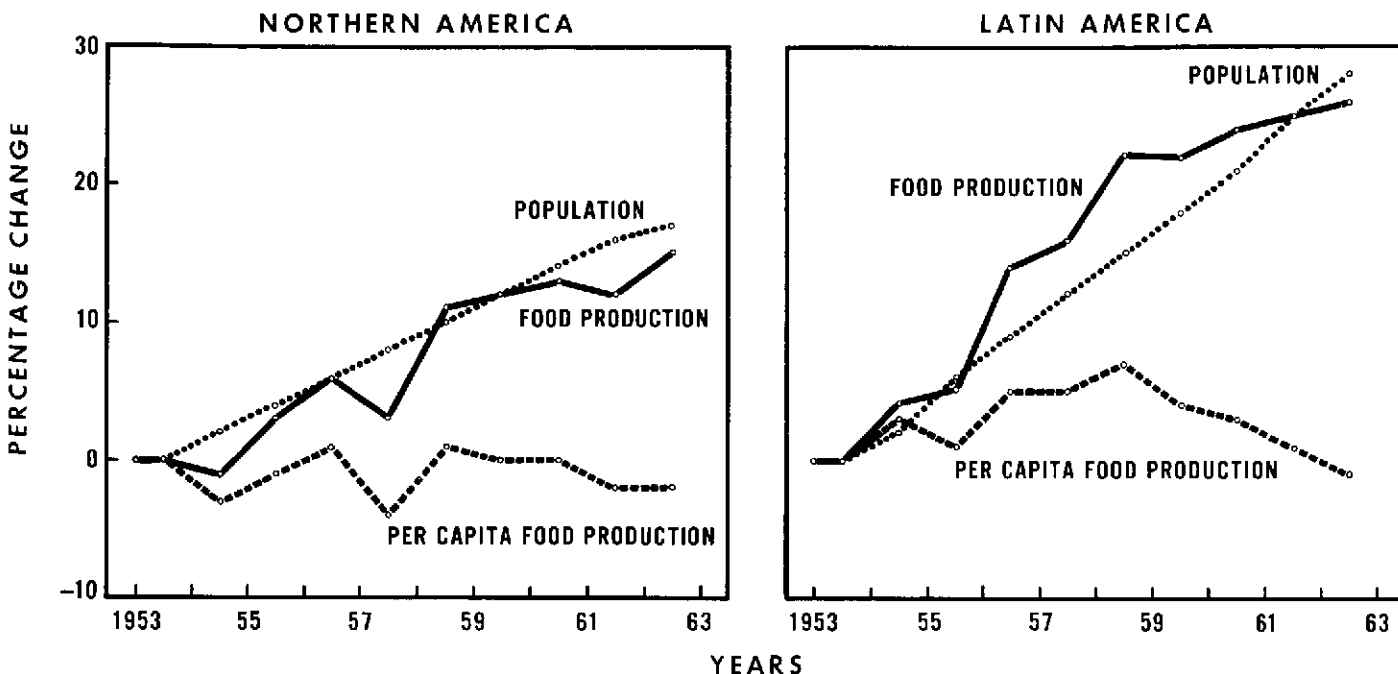
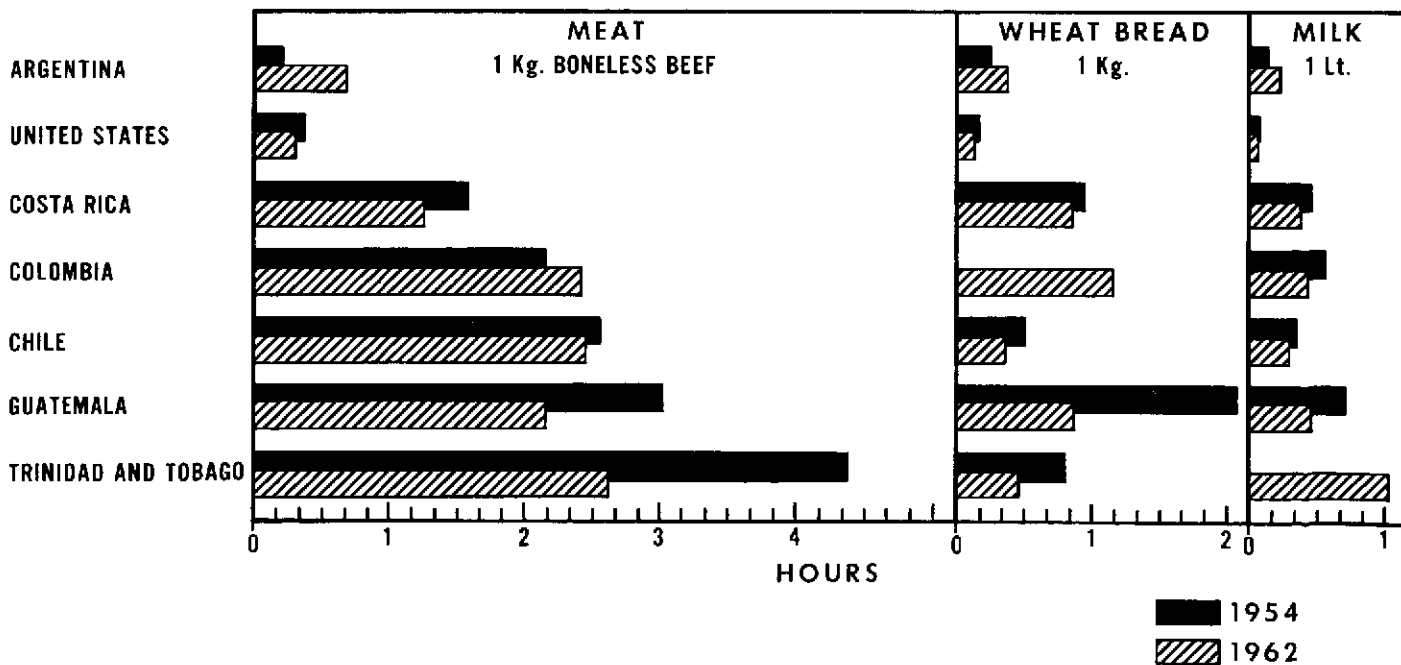


FIGURE 24

WORK-TIME REQUIRED TO PURCHASE THREE BASIC FOODS IN SELECTED COUNTRIES OF THE AMERICAS 1954 AND 1962



NOTE: BASED ON AVERAGE EARNINGS OF SKILLED LABORERS IN SELECTED CITIES.

CHAPTER IV

HEALTH MANPOWER

Health planning requires continuous evaluation of the health needs of a country in relation to the resources available of manpower and facilities, and for planning a major goal is the utilization of resources for the best possible solution of the health problems. A first step in this field is an accurate accounting of the numbers of physicians, nurses, dentists, sanitary engineers and other technical and auxiliary personnel already prepared for the many phases of health programs. Also it is necessary to know how many persons enter the health professions each year, for example, the numbers graduating from schools of medicine, nursing and dentistry, as well as the numbers who end their professional careers through retirement, death or for other reasons. A registry for each professional group, maintained on a current basis by the addition of names and information on new graduates and the removal of entries for those retiring or dying is a useful tool for providing, at any given time, statistics on professional manpower for the health field. From a registry information can also become available on the distributions of professionals within a country or by other factors such as age or medical specialty.

In many areas statistics of health manpower have not been developed through registries. In some countries census figures on occupation and the labor force are used as the source of information on health personnel. However, such data are satisfactory only in the census period. In countries where health programs are being expanded to provide services to a larger proportion of the population and where plans are underway to educate and train increased numbers of physicians, nurses, engineers, etc., current data on health manpower are essential.

In a few countries studies on health personnel, their utilization and the demand for their services are being carried out. A pilot study, now in the first phases, in Colombia may lead to development of procedures which will be useful for similar investigations in other countries. The development of statistics of resources and facilities is recognized as an important field in which the Statistical Section of the Ministry of Health can render an important service.

In the questionnaire for the Supplement to the Second Report on the World Health Situation information was requested on health personnel and a special section was devoted to the education and training of selected categories of such personnel. Also the annual questionnaire of the Pan American Health Organization and the World Health Organization contains forms for the reporting of data on personnel in the health field. Although complete information is not available from these reports, the most recent data obtained from these and other official sources have been used for the tables in this chapter.

Since in many areas professionally qualified personnel are not now sufficient in numbers to expand health programs in accordance with the goals set by health officials, large numbers of technical and auxiliary personnel are used or are needed to provide some of the essential services. Therefore, although the data as presented may be useful in evaluating the current resources in health manpower, in each country the final determination of the desirable ratios of the various types of health personnel to the population served will depend on many factors related in large measure to conditions within the country.

PHYSICIANS

A study of the numbers of physicians, the services they render and their distribution in a country is important. Ratios of physicians to population which are attainable in highly developed countries may not be a satisfactory guide in realistic planning for every country. Thus the data available on physicians for the countries and other areas of the Region must be considered in relation to many other factors.

According to the data available for a recent year, usually around 1962, there were over 400,000 physicians in the Americas of which almost 70 per cent were in Northern America (Table 52). As shown in Figure 25 the ratios varied for the three regions from 4.9 physicians per 10,000 population for Middle America to 13.8 for Northern America. The number of physicians in both Middle and South America have

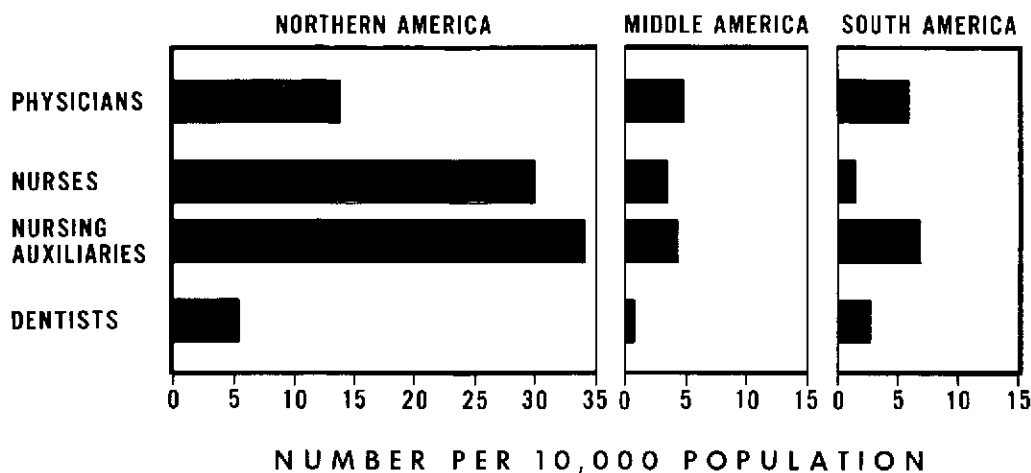
TABLE 52. NUMBER OF PHYSICIANS, SCHOOLS OF MEDICINE AND MEDICAL GRADUATES WITH RATIOS OF PHYSICIANS PER 10,000 POPULATION IN THE AMERICAS, RECENT YEARS

Area	Year	Physicians		Medical Schools		Area	Year	Physicians		Medical Schools	
		Number	Ratio	Number	Graduates (annual)(a)			Number	Ratio	Number	Graduates (annual) (a)
Northern America		281 441	13.8	98	7 940	Antigua	1962	17	2.9	-	-
Middle America		34 207	4.9	33	...	Bahama Islands	1962	65	5.9	-	-
South America		88 938	6.9	70	...	Barbados	1962	82	3.5	-	-
						Bermuda	1960	37	8.4	-	-
Argentina	1962	31 831	14.9	9	1 770	British Guiana	1960	145	2.6	-	-
Bolivia	1963	1 032	2.9	3	55	British Honduras	1962	20	2.1	-	-
Brazil	1960	26 392	3.7	31	1 342	Canal Zone	1962	103	22.9	-	-
Canada	1962	21 000	11.3	12	817	Cayman Islands	1962	3	3.8	-	-
Chile	1961	4 729	6.0	4	220	Dominica	1960	8	1.3	-	-
Colombia	1962	7 453	5.0	7	442	Falkland Islands	1962	4	20.0	-	-
Costa Rica	1962	575	4.5	1	...	French Guiana	1962	23	6.8	-	-
Cuba	1962	5 841	8.3	2	355	Grenada	1962	20	2.2	-	-
Dominican Republic	1960 ^{b)}	442	1.5	1	85	Guadeloupe	1962	122	4.2	-	-
Ecuador	1962	1 620	3.5	3	...	Martinique	1962	122	4.1	-	-
El Salvador	1961	526	2.1	1	29	Montserrat	1962	3	2.3	-	-
Guatemala	1962	954	2.4	1	35	Netherlands Antilles	1960	137	7.2	-	-
Haiti	1961	400	0.9	1	41	Puerto Rico	1962	1 721	7.0	1	45
Honduras	1957	365	2.2	1	34	St. Kitts, Nevis and Anguilla	1962	12	2.0	-	-
Jamaica	1961	655	4.0	1	25	St. Lucia	1962	10	1.1	-	-
Mexico	1961	20 590	5.7	21	1 011	St. Pierre and Miquelon	1962	4	8.0	-	-
Nicaragua	1960	524	3.5	1	22	St. Vincent	1960	10	1.2	-	-
Panama	1962	502	4.4	1	14	Surinam	1960	149	5.5	1	6
Paraguay	1962	1 082	5.8	1	97	Turks and Caicos Islands	1962	2	3.3	-	-
Peru	1962	6 010	5.7	4	378	Virgin Islands (UK)	1962	2	2.5	-	-
Trinidad and Tobago	1962	350	3.9	-	-	Virgin Islands (US)	1960	24	7.3	-	-
United States	1962	260 400	14.0	86	7 123						
Uruguay	1962	2 700	9.3	1	91						
Venezuela	1962	5 766	7.3	6	258						

(a) Data usually for 1960 from WHO World Directory of Medical Schools, Third Edition, 1964. Other sources include the following: Supplement to the Second Report on the World Health Situation (Cuba, Guatemala, Peru); Anuario Estadístico do Brasil, 1963, Brazil; Servicio Nacional de Salud, Desarrollo Socioeconómico y Planificación, 1963, Chile; Medical Education in the United States, 1961-1962, JAMA, Vol. 182, (Canada, United States and Puerto Rico); Demografía; 1961, Dirección de Estadística y Censo, Panama. (b) Ministry of Health only.

FIGURE 25

**NUMBER OF PHYSICIANS, NURSES, NURSING AUXILIARIES AND
DENTISTS PER 10,000 POPULATION IN THE THREE
REGIONS OF THE AMERICAS, 1962**



increased slightly over those shown in the previous report for 1960.⁽¹⁾ However, the ratio of physicians to population did not increase for Middle America. The ratios in 1960 were 13.2 per 10,000 population for Northern America, 5.2 for Middle America and 5.7 for South America.

Around 1962 the ratios per 10,000 population ranged from 14.9 in Argentina to 0.9 in Haiti. In four countries ratios exceeded 10 per 10,000 population and in six they were less than 3, pointing to a great disparity in the availability of medical care in the Region. In several countries the numbers of physicians have increased markedly. In a few countries more complete data may have become available.

Information regarding the numbers of medical schools and of graduates in recent year was also obtained from various sources and is given in Table 52. The number of medical schools in the Region has increased from 194 around 1960 to 201 in 1962, with 98 in Northern and 103 in Latin America. The number graduating from medical schools has also increased. Data on numbers graduating each year are essential in planning for health services but complete and consistent information for a country is often not readily available.

TABLE 53. NUMBER OF PHYSICIANS AND RATIOS PER 10,000 POPULATION IN CAPITALS AND LARGE CITIES AND IN REMAINDER OF THESE COUNTRIES, IN 13 COUNTRIES, AROUND 1962

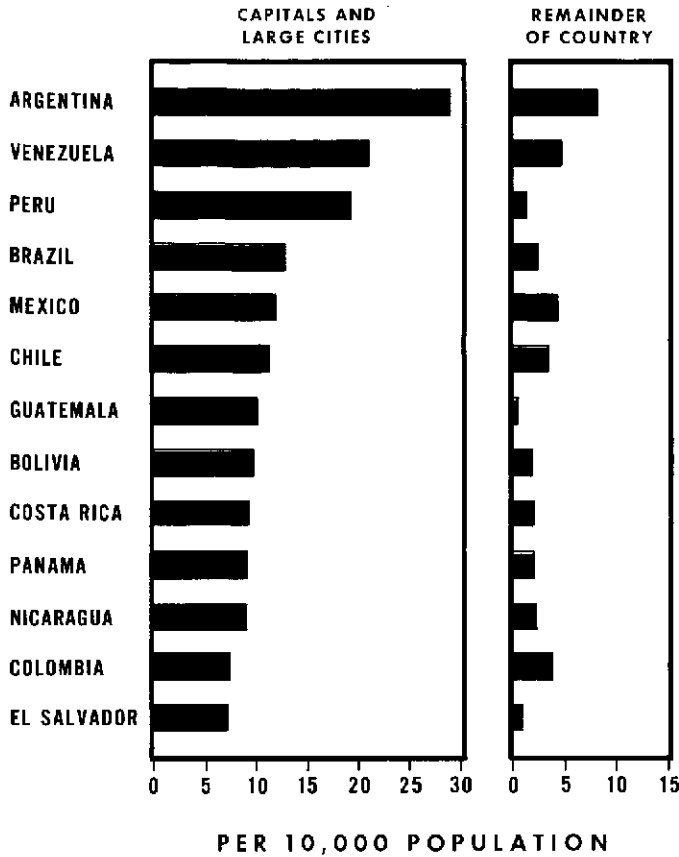
Country	Year	Capital and large cities (a)		Remainder of country	
		Physicians	Ratio	Physicians	Ratio
Total		58 653	15.1	48 159	3.4
Argentina	1962	20 353	28.8	11 478	8.0
Bolivia	1963	456	9.7	576	1.8
Brazil	1960	11 684	12.8	14 708	2.4
Chile	1960	2 929	11.4	1 692	3.3
Colombia	1962	3 784	7.4	3 669	3.8
Costa Rica	1962	408	9.3	167	2.0
El Salvador	1960	329	7.3	176	0.9
Guatemala	1958	571	10.1	159	0.5
Mexico	1960	10 047	11.9	11 094	4.2
Nicaragua	1960	248	9.0	278	2.3
Panama	1960	245	9.1	156	2.0
Peru	1957	2 843	19.2	998	1.3
Venezuela	1962	2 758	21.0	3 008	4.6

(a) Includes federal districts, capital cities or departments with capital city, and other cities of at least 500,000 population or departments with the city of 500,000 population or more.

(1) *Summary of Four-Year Reports on Health Conditions in the Americas, 1957-1960* PASB Sc. Pub. No. 64, Washington D.C., 1962

FIGURE 26

PHYSICIANS PER 10,000 POPULATION IN CAPITALS AND LARGE CITIES AND IN REMAINDER OF THESE COUNTRIES, IN THE AMERICAS, AROUND 1962



Knowledge of the distribution of physicians within countries is essential in planning for extension of health services to all areas of the country. The available information on geographic distribution is presented here. Table 53 provides data for 13 Latin American countries, each divided into two parts: a) capitals and large cities, and b) the remainder of the country. While only 21 per cent of the population lived in these capitals and large cities, 54 per cent of the physicians were located there. The number of physicians varied from 7.3 to 28.8 per 10,000 population in capitals and large cities. As shown in Figure 26 the situation was entirely different in the remainder of these countries where 79 per cent of the population lived. In these large areas the number of physicians ranged from 0.5 to 8.0 per 10,000 population. Thus in developing indices for evaluating medical manpower and progress toward the desirable level of health services throughout the countries, the distribution of health manpower in rural areas and in small cities must be considered for it is a critical problem deserving careful study.

NURSES AND NURSING AUXILIARIES

Nursing services in the Americas are provided by several groups with very different levels of education and training such as graduate nurses, nursing auxiliaries and midwives. Nursing personnel in Latin America render services in both hospitals and health centers and are employed mainly in official government services. In Northern America the largest numbers work in hospitals, both government and private non-profit. Each of the three groups of nursing personnel shows variations by country in qualifications and education, making it difficult to develop comparable data on resources. Information on the

numbers working in the field often is not available or is incomplete. However, at present increasing attention is being given to studies of nursing resources and the development of accurate data in this field. Reports of national studies on nursing personnel which are available to the Organization have been used as one of the sources of data for Table 54.

The variation in the number of nursing personnel per 10,000 population in the three regions is seen in Figure 25. Midwives, except nurse-midwives, have not been included in these numbers. Far more graduate nurses are working in Northern America than in

TABLE 54. NUMBER OF NURSES AND NURSING AUXILIARIES
WITH RATIOS PER 10,000 POPULATION
IN THE AMERICAS

Country	Year	Number		Number per 10,000	
		Nurses	Nursing auxiliaries	Nurses	Nursing auxiliaries
Northern America		611 765	697 583	30.0	34.2
Middle America		24 631	29 205	3.5	4.3
South America		20 260	94 939	1.5	6.9
Argentina	1961	6 176	18 000	2.9	8.5
Bolivia	1963	367	a) 3 508	1.0	a) 9.8
Brazil	1956	3 296	38 429	0.5	6.2
Canada	1961	61 699	62 553	33.8	34.2
Chile	1963	1 375	10 780	1.7	13.1
Colombia	1962	900	3 084	0.6	2.1
Costa Rica	1962	411	1 233	3.2	9.7
Cuba	1962	5 701	2 003	8.1	2.8
Dominican Republic	1962	207	1 171	0.6	3.6
Ecuador	1962	274	1 714	0.6	3.7
El Salvador	1962	500	1 333	1.9	5.1
Guatemala	1962	466	b) 1 672	1.2	b) 4.2
Haiti	1962	357	561	0.8	1.3
Honduras	1963	161	982	0.8	4.9
Jamaica	1961	3 424	...	21.0	...
Mexico	1962	6 000	12 304	1.6	3.3
Nicaragua	1962	263	868	1.7	5.5
Panama	1962	723	1 144	6.3	10.0
Paraguay	1963	76	1 200	0.4	6.3
Peru	1963	3 441	4 806	3.2	4.4
Trinidad and Tobago	1960	1 254	...	14.9	...
United States	1962	550 000	635 000	29.6	34.2
Uruguay	1962	340	2 921	1.2	10.0
Venezuela	1962	2 868	10 512	3.6	13.4
Antigua	1962	106	...	18.3	...
Bahama Islands	1962	248	102	22.3	9.2
Barbados	1962	248	355	10.7	15.3
Bermuda	1959	63	15	15.0	3.6
British Guiana	1960	a,c) 325	...	5.7	...
British Honduras	1962	165	-	17.2	-
Canal Zone	1962	208	343	46.2	76.2
Dominica	1960	55	-	9.0	-
Falkland Islands	1962	4	5	20.0	25.0
French Guiana	1962	118	...	34.7	...
Grenada	1962	114	24	12.5	2.6
Guadeloupe	1962	215	...	7.4	...
Martinique	1962	245	218	8.2	7.3
Montserrat	1962	26	-	20.0	-
Puerto Rico	1962	3 212	4 787	13.1	19.5
St. Kitts-Nevis					
Anguilla	1962	132	56	22.0	9.3
St. Lucia	1962	84	5	9.1	0.5
St. Pierre and Miquelon	1962	3	15	6.0	30.0
St. Vincent	1957	74	32	9.7	4.2
Surinam	1960	700	...	25.9	...
Turks and Caicos Islands	1962	7	3	11.7	5.0
Virgin Islands (UK)	1962	6	9	7.5	11.2
Virgin Islands (US)	1960	19	...	5.9	...

(a) 1962. (b) 1960. (c) Government only.

the other two regions. In Middle and South America there are less than one tenth as many graduate nurses per 10,000 population as in Northern America. The ratios for these two regions are 3.5 and 1.5 per 10,000 as compared to 30.0 in Northern America.

Canada has the largest number of graduate nurses of the countries of the Region (33.8 per 10,000 population). This information was based on the census of the labor force in 1961. In the United States according to data also obtained through the census there are 29.6 graduate nurses per 10,000 population. The only other countries with over 10 nurses per 10,000 population were Jamaica (21.0) and Trinidad and Tobago (14.9). According to available data there were seven countries with less than 1 nurse per 10,000 population with the ratio reaching as low as 0.4. In the other areas of the Region the numbers of graduate nurses appear to be more adequate.

In Latin America there are almost three times as many auxiliary nurses as professional nurses, while in Northern America the number of auxiliary nurses is only slightly in excess of the number of graduate nurses. Nevertheless, the ratio of this group of nursing personnel per 10,000 population is six times higher in Northern than in Middle and South America, 34.2 per 10,000 as compared to 4.3 and 6.9.

Despite efforts to meet in part the shortage of graduate nurses in Latin America through the use of auxiliary nursing personnel, there clearly is a great need to increase the numbers trained in both groups. The shortage of physicians, particularly in rural areas, places greater responsibility on the nurses and nursing auxiliaries in Latin America. Also the smaller number of graduate nurses in relation to population increases their functions in the field of teaching and supervision and accentuates the need for strengthening both basic secondary and professional nursing education.

DENTISTS

Studies have been initiated in several countries of the Americas on manpower in the field of dentistry. In addition surveys are being made of the educational facilities for dentists in preparation for international seminars on dental education. In Table 55 is presented information on the numbers of dentists, the numbers of dental schools and the graduates in a recent year by country or other area of the Region.

Around 1962 there were 111,147 dentists in Northern America or 5.4 per 10,000 population; in Middle and South America there were 5,596 and 39,314 dentists respectively or 0.8 and 2.7 per 10,000 popu-

lation. The countries with the highest ratios of dentists to population were Uruguay (6.1 per 10,000), United States (5.7) and Argentina (5.4). In eight countries there was less than 1 dentist per 10,000 population.

In 1962 there were 137 dental schools in the Americas — 53 in Northern America, 19 in Middle and 65 in South America. From the 53 schools in Northern America 3,383 dentists were graduated in 1962. Graduates in Middle America totalled 405 and in South America 2,594. The greatest shortage both in dentists and in annual new graduates appears to exist in Middle America.

TABLE 55. NUMBER OF DENTISTS WITH RATIOS PER 10,000 POPULATION AND SCHOOLS OF DENTISTRY WITH GRADUATES PER YEAR IN THE AMERICAS, AROUND 1962

Area	Year	Dentists		Schools of dentistry (1960-1961)		Area	Year	Dentists		Schools of dentistry (1960-1961)	
		Number	Ratio	Number	Graduates (annual)			Number	Ratio	Number	Graduates (annual)
Northern America		111 147	5.4	53	3 383	Antigua	1962	3	0.5	-	-
Middle America		5 596	0.8	19	405	Bahama Islands	1962	10	0.9	-	-
South America		39 314	2.7	65	2 594	Barbados	1962	20	0.9	-	-
Argentina	1962	11 584	5.4	6	480	Bermuda	1960	26	5.9	-	-
Bolivia	1960	500	1.4	3	44	British Guiana	1960	32	0.6	-	-
Brazil	1959	15 532	2.3	39	1 294	British Honduras	1960	7	0.8	-	-
Canada	1962	5 868	3.2	6	a) 174	Canal Zone	1962	8	1.8	-	-
Chile	1960	2 504	3.2	3	137	Dominica	1960	3	0.5	-	-
Colombia	1962	3 400	2.3	4	169	Falkland Islands	1962	2	10.0	-	-
Costa Rica	1962	170	1.3	1	8	French Guiana	1962	7	2.1	-	-
Cuba	1962	1 266	1.8	1	92	Grenada	1962	4	0.4	-	-
Dominican Republic	1962	460	1.4	1	13	Guadeloupe	1962	39	1.3	-	-
Ecuador	1962	529	1.2	3	59	Martinique	1962	59	2.0	-	-
El Salvador	1961	153	0.6	1	15	Montserrat	1962	1	0.8	-	-
Guatemala	1962	157	0.4	1	9	Netherlands Antilles	1960	31	1.6	-	-
Haiti	1957	150	0.1	1	5	Puerto Rico	1962	330	1.3	1	29
Honduras	1962	92	0.1	1	6	St. Kitts, Nevis and Anguilla	1962	4	0.7	-	-
Jamaica	1961	105	0.6	-	-	St. Lucia	1962	3	0.3	-	-
Mexico	1961	2 180	0.6	10	216	St. Pierre and Miquelon	1962	1	2.0	-	-
Nicaragua	1960	135	0.8	1	12	St. Vincent	1957	1	0.1	-	-
Panama	1962	102	0.9	-	-	Surinam	1960	18	0.7	-	-
Paraguay	1962	303	1.6	1	10	Turks and Caicos Islands	1962	1	1.7	-	-
Peru	1962	1 953	1.8	2	248	Virgin Islands (U. K.)	1962	1	1.2	-	-
Trinidad and Tobago	1962	93	1.0	-	-	Virgin Islands (U. S.)	1959	8	2.6	-	-
United States	1962	105 252	5.7	47	3 209						
Uruguay	1957	1 650	6.1	1	43						
Venezuela	1962	1 300	1.7	3	110						

(a) 1961

OTHER HEALTH PERSONNEL

In general, information is incomplete for other categories of personnel employed in health programs in the Region. Registries are usually not maintained for many of these special groups and inventories of resources are difficult to obtain. However, for seven categories the data reported on the annual questionnaires of PAHO and WHO and the questionnaire for

the Supplement to the Second Report on the World Health Situation have been assembled in Table 56. These categories include sanitary engineers and sanitary inspectors, veterinarians, pharmacists, laboratory and X-ray technicians, and others. The data, although incomplete, may serve as reference material in this field.

TABLE 56. PERSONNEL FOR MEDICAL AND HEALTH SERVICES IN THE AMERICAS, 1962

Area	Pharmacists	Veterinarians	Sanitary engineers	Sanitary inspectors	Laboratory technicians	X-ray technicians	Other
Argentina	...	...	...	...	...	a) 1359	1089
Bolivia	...	...	41	...	63	9	906
Brazil	1022	...	...	...	1451	1419	26308
Canada	b) 7428	b) 1524	...	...	c) 4949	2944	6880
Costa Rica	26	17	104	...	d) 54	...	160
Cuba	274	326	172	...	378	336	838
Guatemala	3	3	127	...	30	-	14
Jamaica	522	15	347	...	100	...	30
Mexico	850	149	81	1231	327	...	...
Panama	362	36	150	...	...	30	360
Paraguay	675	59	...	...	...	...	...
Peru	1960	460	211	...	...	...	326
Trinidad and Tobago	318	-	94	...	-	65	78
United States	117400	20800	22000	...	68000	70000	426300
Venezuela	1857	420	...	...	...	...	...
Antigua	16	1	...	...	14	...	...
Bahama Islands	4	2	-	-	14	10	21
Barbados	103	6	111	...	16	8	18
British Honduras	24	-	13	...	3	2	41
Canal Zone	7	5	9	...	48	9	19
Cayman Islands	-	-	-	-	1	-	3
Dominica	-	-	-	-	-	-	1
Falkland Islands	-	-	-	-	-	-	-
French Guiana	2	-	-	-	-	-	-
Grenada	28	2	16	...	6	2	32
Guadeloupe	43	-	-	-	-	-	-
Martinique	58	3	-	-	33	13	36
Montserrat	2	-	4	...	1	1	-
Puerto Rico	952	81	399	...	592	...	1089
St. Kitts-Nevis-Anguilla	19	2	14	...	2	1	1
St. Lucia	7	2	-	-	4	1	14
St. Pierre and Miquelon	-	-	-	-	-	-	-
Turks and Caicos Islands	-	-	-	-	-	-	7
Virgin Islands (UK)	-	-	-	-	2	-	3

(a) Auxiliary radiologists. (b) 1961. (c) Includes 283 acting as both laboratory and x-ray technicians. (d) Includes other technicians.

Sanitary engineering personnel, both engineers and sanitarians, are required in increasing numbers for the environmental sanitation program which is given high priority in the Region. Sanitary engineers are employed in many agencies, in health and other ministries, institutes, banks and private companies involved with construction of water supplies and sewerage systems. It is difficult to obtain information on the numbers outside the government service. Sanitary inspectors are used in health services in

Latin America in larger numbers than in the United States. Special short courses are provided for their training.

The countries of the Region vary widely in the proportions of health personnel employed in government services. Table 57 summarizes the numbers of personnel employed by the government in the categories previously mentioned. These numbers include both those in full and in part-time government service.

TABLE 57. GOVERNMENTAL PERSONNEL FOR MEDICAL AND HEALTH SERVICES IN THE AMERICAS, 1962

Area	Physicians	Dentists	Pharmacists	Veterinarians	Sanitary engineers	Sanitary inspectors	Nurses	Nursing auxiliaries	Midwives	Technicians		Other
										Laboratory	X-ray	
Argentina	19 609	2 416	...	...	...	...	...	...	...	...	...	...
Bolivia (a)	368	...	...	...	...	...	195	413	...	...	...	...
Canada	...	669	...	...	...	...	...	...	...	...	...	...
Cuba	3 000	690	274	326	172	4 421	2 003	-	378	336	838	
El Salvador (a)	225	50	2	1	11	136	229	300	-	61	19	32
Guatemala	102	35	2	3	1	126	65	215	15	-	-	14
Honduras (a)	188	28	12	1	74	116	691	-	59	17	84	
Jamaica (b)	210	23	85	15	311	1 175	74	254	100	34	30	
Mexico (b)	4 482	321	149	68	1 460	4 462	5 490	308	327	61	1 938	
Panama	474	78	23	32	143	567	852	-	118	22	295	
Paraguay (c)	610	145	111	6	40	57	390	246	34	35	1 249	
Peru	523	176	280	59	41	140	3 066	4 806	306	41	...	295
Trinidad and Tobago	202	28	76	-	4	87	911	-	...	-	65	35
United States (d)	19 600	6 700	...	...	...	...	30 000	...	...	...	...	...
Bahama Islands	41	3	4	2	-	-	188	102	17	12	8	21
Barbados	51	9	12	2	111	248	355	17	16	8	18	
British Honduras	14	-	13	-	13	95	-	95	3	2	41	
Canal Zone	70	8	7	5	1	7	208	145	-	48	9	19
Cayman Islands	2	1	-	-	-	-	3	-	-	1	-	3
Dominica	14	2	-	-	-	-	e) 4	6	-	-	-	1
French Guiana	23	7	5	-	-	-	118	-	10	-	-	-
Grenada	16	1	18	1	15	112	24	63	6	2	24	
Guadeloupe	122	39	43	-	-	-	215	-	79	-	-	-
Martinique	107	5	11	3	-	-	335	128	51	22	13	35
Montserrat	3	1	2	-	4	26	-	9	1	1	-	-
Puerto Rico	1 216	81	31	20	307	1 560	1 035	20	349	125	68	
St. Kitts - Nevis - Anguilla	9	2	5	1	14	24	56	21	2	1	1	
St. Lucia	9	2	7	1	-	-	84	f) 5	...	4	1	14
St. Pierre and Miquelon	4	1	-	-	-	-	2	15	1	-	-	-
Turks and Caicos Islands	2	1	-	-	-	-	7	3	3	-	-	7
Virgin Islands (U. K.)	2	-	-	-	-	-	6	9	-	2	-	-

(a) Of the Ministry of Health, (b) 1961, (c) Provisional, (d) Of Federal government, (e) Nurse - midwives, (f) Including midwives.

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APPENDIX

WORLD HEALTH SITUATION QUESTIONNAIRES 1961-1962 RECEIVED FROM THE FOLLOWING:

Argentina	Mexico	Falkland Islands
Canada	Panama	Grenada
Chile	Paraguay	Martinique
Colombia	Peru	Montserrat
Costa Rica	Trinidad and Tobago	Puerto Rico
Cuba	United States	St. Kitts-Nevis and Anguilla
Dominican Republic		St. Lucia
El Salvador	Bahama Islands	St. Pierre and Miquelon
Guatemala	Barbados	Turks and Caicos Islands
Haiti	British Honduras	Virgin Islands (UK)
Honduras	Canal Zone	Virgin Islands (US)
Jamaica		

WHO/PAHO 1961-1962 ANNUAL QUESTIONNAIRES RECEIVED FROM THE FOLLOWING:

Argentina	Nicaragua	Barbados
Canada	Panama	Canal Zone, 1962
Colombia	Paraguay	Falkland Islands
Costa Rica	Peru	Guadeloupe
Dominican Republic	Trinidad and Tobago	Martinique
Ecuador, 1959-1960	United States	Puerto Rico
El Salvador, 1961	Uruguay, 1961	St. Kitts-Nevis-Anguilla
Honduras, 1962	Venezuela	St. Lucia
Jamaica, 1961		St. Pierre and Miquelon
Mexico	Antigua	Surinam

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