

HOW GOOD WAS OUR HEALTH IN 1954?

By

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How good was our health in 1954 is a broad question. There are simple ways by which the question may be answered satisfying the common way of thinking, as there are complicated ones requiring special knowledge and training. We shall make an attempt however to answer it indirectly in a manner which we will express in the shortest terms.

1. *Pestilential Diseases.* — Years before War I, the health of a community was usually measured by the frequency, intensity and the damage caused by pestilential diseases as plague, cholera, smallpox, etc. In 1902, the Philippines recorded 137,505 deaths as a result of an epidemic of cholera morbus; 118,476 deaths from another epidemic caused by malaria and 14,860 deaths from an epidemic of smallpox. The proportionate distribution of these causes of deaths in relation to the total deaths from all causes, (442,476) for cholera morbus was 31% for malaria 26% and 3.4% for smallpox. In terms of population, the mortality rate per 100,000 was 1,968 for cholera morbus 1,696 for malaria and 213 for smallpox. In 1954, not a single case of cholera and smallpox has been recorded and the mortality rate from malaria was reduced from 213 in 1902 to a low as 25 per 100,000 population.

2. *Morbidity Rate.* — The importance of sickness registration, was emphasized by Dr. Lyon Playfair since 1874 in these words:

“The record of deaths only registers, as it were, the wrecks which strew the shore, but it gives no account of the vessels which were tossed in the billows of sickness, strained and maimed as they often are by the effects of recurrent storms. Registration of sickness would tell us to trim our vessels to meet them.”¹

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In the Philippines the reporting of cases of communicable and reportable diseases is mandatory in character but oftentimes medical practitioners fail to comply with the law thus making registration of illness highly defective. In fact records show in many instances when the case fatality rate of some diseases is as high as 100 per cent as if it tends to insinuate that the medical profession is not proficient in this country. This is more apparent than real however. On the other hand the rate of medical attendance specially in rural places is very low. "The prevalence of a given disease cannot be gauged with absolute accuracy in the absence of registration of each case of the disease except when, as in hydrophobia, the disease is always fatal."¹

3. *Infant Mortality.* — Newsholme says that "... infant mortality is the most sensitive index of social welfare and of sanitary improvements which we possess."² For perusal, the average deaths under one year of age per 1,000 live births by quinquennial periods in the Philippines is as follows:

<i>Period</i>	<i>Infant Mortality.</i>
1920-1924	159
1926-1930	157
1931-1935	151
1936-1940	138
1948-1952	106
1954	94

The glaring difference of infant mortality rate as compared with the average of each period is obviously significant. In passing however, it should not be forgotten that infant mortality, "... is indeed a serious problem and worthy of most careful study. It is a complex problem and one difficult to understand. It is a problem which goes beyond itself."²

4. *Public Health Organization.* — It is difficult if not impossible to evaluate with mathematical precision the success or failure of public health procedures of any country. Whatever procedure notwithstanding, it must be based on *service*. Public health administration aims in improving health, in increasing efficiency and in promoting happiness of the people and not

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solely the prevention of disease. After the era of pestilential diseases, importance was given in the Philippines to environmental sanitation, and some years after prevention and control of communicable diseases were integrated.

In many countries since before War II, the incidence and mortality of communicable diseases have been reduced to the minimum so that control measures had to be shifted to such diseases causing high mortality in the old age group of the population. The Philippines had no such privilege as regards public health administration. It is still lagging even in the prevention and control of communicable diseases, yet, a move is now contemplated to convert prematurely the activity of prevention and control to activity centered against the peculiar condition of the senescence.

“It is apparent from the extremely low death rates for communicable diseases that a change in emphasis from the control of these diseases must be made to the control of those diseases that attack the older group. This does not mean that the control of communicable diseases will be neglected, but the change in emphasis will be similar to that made in the early 1920's from environmental sanitation to communicable diseases.”³

The Philippines had a comparatively good public health organization with coordinated activity scientifically and practically sound. It was instrumental in the complete eradication of pestilential diseases and suppression of all forms of serious epidemics; it was an organization similar to the average health organization of many progressive countries both in function and in duty, suitable to local conditions as well. But, for one reason or another it suffered revolutionary changes after War II, under the guise of modernism or speedy perpetual motion that its semblance now can only be discerned by its vanishing shadows. It was praised not only once by prominent public health administrators and used as a public health organization pattern by some latin countries.

Apropos a portion of Dr. Orata's article reads:

“W.H.O. — The administration of public health services in barrios, towns and cities throughout the Philippines leaves much to be desired. Clinics there are and

puericulture centers, but they are badly managed and many of them are not even sanitary. The collection of statistics about diseases to say nothing of the tabulation and interpretation of vital statistics, is still an undeveloped science. Who knows at this stage our life expectancy? Environmental sanitation is primitive. We have specialists in various lines, but the practice of general medicine, nursing, dentistry and public health is known only in large cities and towns. The rural areas which constitute 75 per cent of our country are unprovided with the most elementary and essential health services." 4

No doubt the present health organization of the Philippines is not entirely free from flagrant flaws. In reality,..." we live in a world of chance. Nothing is more true." 2

5. *Health Concept.*—There are many definitions of *health*, from the classical to the most modern obtainable from text-books, official transactions and reports. The contemporary definition is that of the World Health Organization with revolutionary significance, broad in purpose and scope. *Health* is "...a state of complete PHYSICAL, MENTAL AND SOCIAL WELL-BEING and not merely the absence of disease or infirmity." 5

Many individuals are confronting with simple problems of health or problems complicated with economic and social nature in life, as there are also as many free from simple or intricate problems. Since time immemorial, freedom from illness was the basic principle with which to measure *health*, but, as *health* thus defined by the World Health Organization, there must be freedom from imbecility and idiocy, as well as, freedom from want, misery, poverty and social maladjustment. It is "the attainment by all peoples of the highest possible level of health" which is ideal in purpose but costly and difficult to achieve. Public health on the other hand deals more particularly to problems of mass phenomena of the community. It is the aggregate of individual health. The former being directly dependent upon the latter. The nature, quality and the extent with which health services are rendered to the individual or to the community, determine the efficiency of public health administration.

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From this concept of health, how good was ours in 1954? Due to lack of reliable information, the writer is constrained to offer his views to the question until such time our economists are no longer at odds with each other on their specialty. In the mean time, the reader has in his own way a keen idea of the standard living condition of the average filipino family, of the problems facing the country on food, unemployment, housing and of the policy of giving land to the landless. Perhaps he might have heard also of the establishment of new public hospitals, dispensaries, puericulture, maternal, health and other centers in addition to those already in existence for the purpose of ameliorating human suffering; of the drilling of as many artesian wells in rural places to provide its people with good clean water for drinking purposes; of some health teams now rendering medical services and health on environmental sanitation in the barrios. If he did, he is then in a position to draw inferences and conclude what really was our health in 1954. The unread scientific documents in the archives of the government, certainly would help him in addition, to form fiducial judgment on the matter.

6. *Mortality Statistics.* — This is the era of freedom from pestilential diseases when the health of the community was measured through mortality resulting from sporadic epidemics or communicable diseases. One of the highest mortality from communicable diseases in the Philippines after the pandemic of influenza, occurred in 1920, when the malaria rate was 308, tuberculosis of the lungs 256, dysenteries 96 and typhoid fever 30 per 100,000 populations as compared with 23; 111; 3 and 0.9 respectively in 1954.

The use of mortality statistics as a yardstick of community health has gained popularity in view of the difficulty of obtaining accurate data on disease incidence. It must be accepted however with prudence as persons suffering from acute diseases do not always terminate unto death as there are also diseases that never cause death. There is no fixed ratio between sickness and mortality. "The fatality of a given infectious disease varies greatly in different outbreaks under varying circumstances." It depends upon the severeness of the disease, the virulence of

the etiologic factor and of the natural or acquired resistance of the individual to infection. "Mortality statistics necessarily ignore everything that precedes the close of life. They are silent about the large mass of common sickness, which although it may disable man, is not unto death." ¹ "We must have a list of killed and of the wounded too!" so said Charles Dickens. Despite of these pitfalls, mortality statistics are used advantageously in lieu of morbidity statistics which we now peruse.

A. *Mortality rates of selected causes.*— The selected causes of death are listed in Table 1. The rates of 1954 are compared with the average rate of the five years 1948-1952 the salient features of which are:

1. The crude death-rate ⁶ is significantly low.
2. The infant mortality rate ⁶ is significantly low.
3. The natality rate is significantly high.
4. Diseases with significantly low rates:

Broncho-pulmonary
Tuberculosis
Beriberi ⁶
Malaria ⁶
Influenza
Dysenteries ⁶
Diphtheria
Typhoid fever
Rabies.

5. Diseases with normal rates:
 - Diarrhea and Enteritis
 - Measles
 - Pertusis
6. Diseases with significantly high rates:
 - Tetanus ⁶

B. *Vital statistics of selected provinces.*— Of the fifty two provinces and twenty six cities of the Philippines, thirty nine regularly organized provinces and four cities are comprised in this section. Because of defective registration of

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TABLE I
MORTALITY FROM SELECTED CAUSES
RATES FOR 100,000 POPULATION UNLESS OTHERWISE
SPECIFIED: ENDEMICITY 1948-1952

	Rate of ** 1954	Mean Rate	Fluctuation	
			Maxi- mum	Mini- mum
Crude death-rate ¹	10.1	11.9	12.3	11.5
Natality rate *	33.2	31.7	32.0	31.5
Infant mortality rate *	94	106	111	101
Bronchopulmonary diseases	216	245	254	235
Bronchopneumonia	95	104	108	101
Bronchitis	91	103.6	104.3	102.9
Pneumonia	31	37	39	35
Tuberculosis	116	157	163	151
Lungs	111	147	155	140
Other organs	7	9.4	9.7	9.0
Beriberi	110	122	130	113
Under one year	78	86	91	81
Over one year	32	36	39	32
Diarrhea and Enteritis	65	71	77	65
Under two years	44	47	51	43
Over two years	21	24	26	22
Malaria	25	42	49	36
Influenza	20	29	32	27
Tetanus	8	6.3	6.8	5.8
Measles	3	5	7	3
Dysenteries	3	5	6	4
Pertussis	3	3.1	3.5	2.8
Diphtheria	1	1.7	2.1	1.3
Typhoid fever	0.9	1.4	1.7	1.1
Rabies	1	1.2	1.3	1.1

¹ Rate per 1,000 population.

* Rate per 1,000 live births.

** Data furnished by the Bureau of Health.

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TABLE II
CRUDE BIRTH RATE—1954²

<i>Provinces With Significantly High Birth Rates</i>	<i>Provinces With Normal Birth Rates</i>	<i>Provinces With Significantly Low Birth Rates</i>
Camarines Norte .. 57	La Union 38	Leyte 30
Cebu city 52	Albay 38	Negros Oriental ... 29
Isabela 51	Abra 38	Romblon 29
Cagayan 50	Nueva Ecija 36	Cavite 28
Bataan 50	Catanduanes 35	Camarines Sur 28
Quezon city 50	Bohol 35	Sorsogon 26
Quezon 48	Zambales 34	Bacolod city 26
Marinduque 47	Ilocos Norte 34	Masbate 26
Misamis Oriental .. 45	Ilocos Sur 33	Iloilo ** 25
Tarlac 44		Capiz 25
Batangas 43		Bulacan 24
Laguna 43		Samar 22
Mindoro 43		Surigao 22
Manila city 42		Antique 19
Pampanga 41		Negros Occ.*** 19
Misamis Occidental . 41		
Pangasinan 40		
Iloilo city 40		
Rizal 39		
Cebu * 39		

Note: Data furnished by the Bureau of Health.

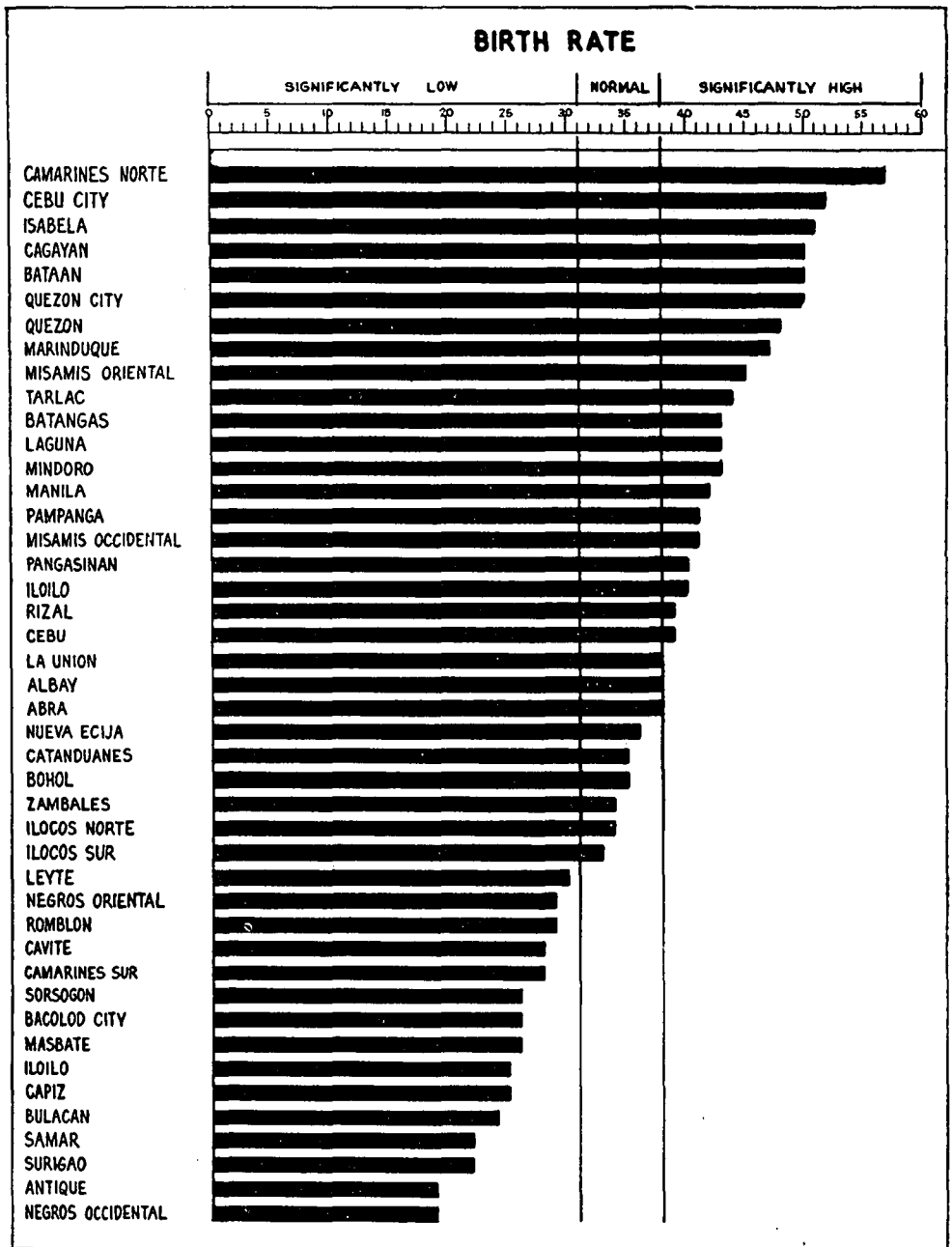
² Rate per 1,000 population.

* Cebu city not included.

** Iloilo city not included.

*** Bacolod city not included.

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TABLE III
CRUDE DEATH RATE*—1954³

<i>Provinces With Significantly High Death Rates</i>	<i>Provinces With Normal Death Rates</i>	<i>Provinces With Significantly Low Death Rates</i>
Camarines Norte . 19.2	Iloilo city 14.1	Sorsogon 11.6
Isabela 17.8	Bataan 13.9	Mindoro 11.5
Cagayan 17.7	Bohol 13.9	Batangas 11.3
Cebu city 16.0	Quezon 13.3	Nueva Ecija 11.2
Marinduque 14.6	Misamis Occ. 13.1	Ilocos Norte 11.0
	Tarlac 12.8	Pampanga 10.7
	Albay 12.5	Romblon 10.7
	Laguna 12.5	Capiz 10.6
	Leyte 12.4	La Union 10.6
	Catanduanes 12.3	Bulacan 10.5
	Cavite 12.3	Surigao 10.5
	Pangasinan 12.3	Ilocos Sur 10.4
	Cebu * 12.1	Misamis Oriental . 10.3
		Abra 10.1
		Camarines Sur . . . 9.8
		Rizal 9.6
		Antique 9.2
		Bacolod city 9.2
		Iloilo ** 8.9
		Negros Oriental . . 8.9
		Manila 8.7
		Quezon city 8.7
		Zambales 8.4
		Negros Occ.*** . . . 8.0
		Masbate 7.3
		Samar 6.8

Note: Data furnished by the Bureau of Health.

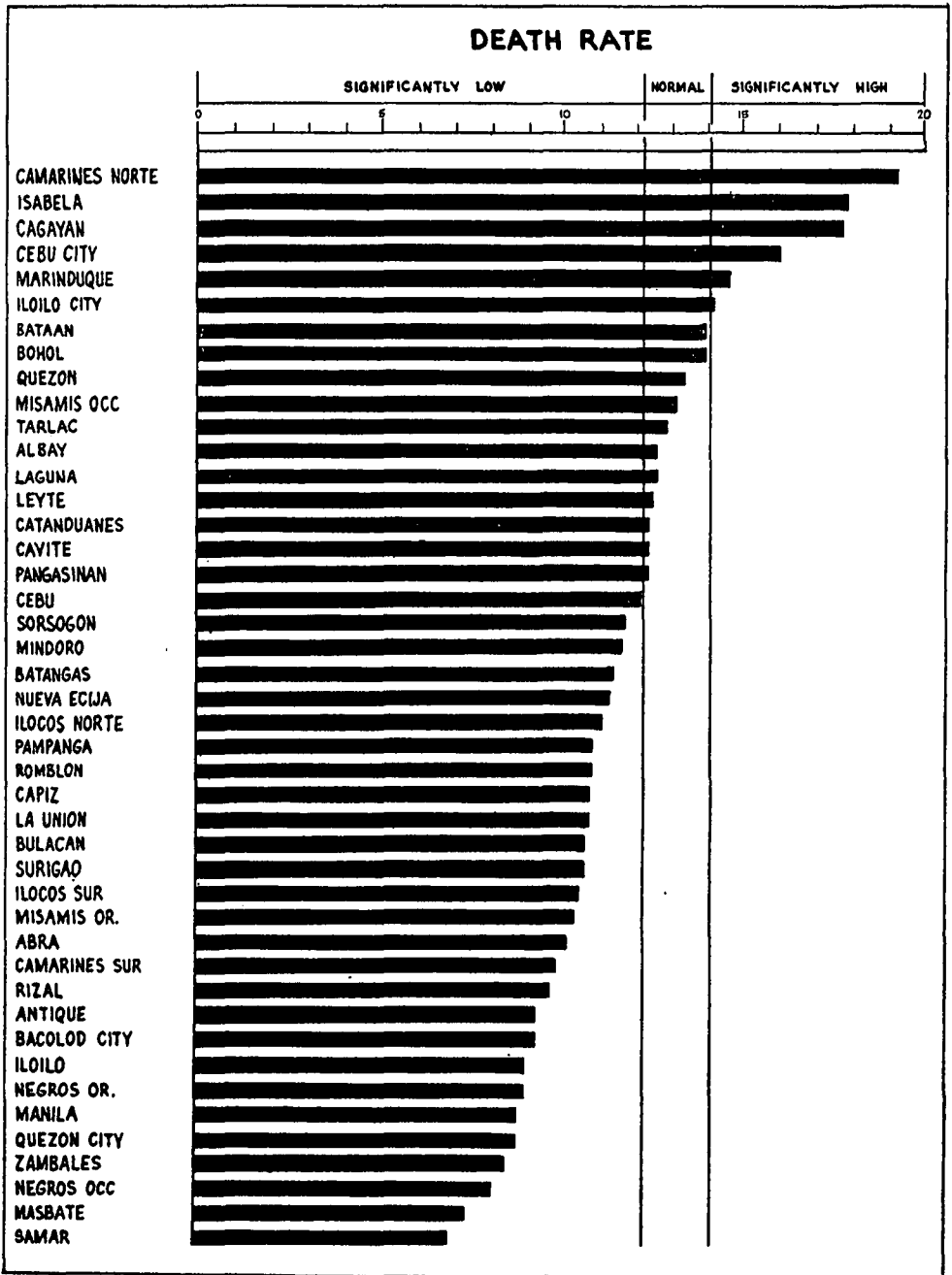
* Cebu city not included.

** Iloilo city not included.

*** Bacolod city not included.

³ Rate per 1,000 population.

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TABLE IV
INFANT MORTALITY—1954²

<i>Provinces With Significantly High Rates</i>		<i>Provinces With Normal Rates</i>		<i>Provinces With Significantly Low Rates</i>	
Surigao	152	Bacolod city	119	Cebu *	99
Bulacan	142	Nueva Ecija	113	Iloilo city	95
Isabela	130	Cavite	112	Catanduanes	95
Misamis Oriental	130	Cebu city	111	Iloilo **	94
Bohol	129	Capiz	110	Leyte	94
Cagayan	127	Misamis Occ.	109	Quezon	92
Negros Occ.***	127	Marinduque	107	Masbate	92
		Antique	107	Mindoro	91
		Romblon	105	Laguna	89
		Bataan	104	Camarines Sur	89
		Sorsogon	103	Batangas	89
		Pangasinan	103	Negros Oriental	86
		Tarlac	101	La Union	83
				Camarines Norte	82
				Rizal	79
				Ilocos Sur	77
				Manila	77
				Pampanga	76
				Zambales	72
				Samar	72
				Abra	70
				Quezon city	66
				Albay	65
				Ilocos Norte	57

Note: Data furnished by the Bureau of Health.

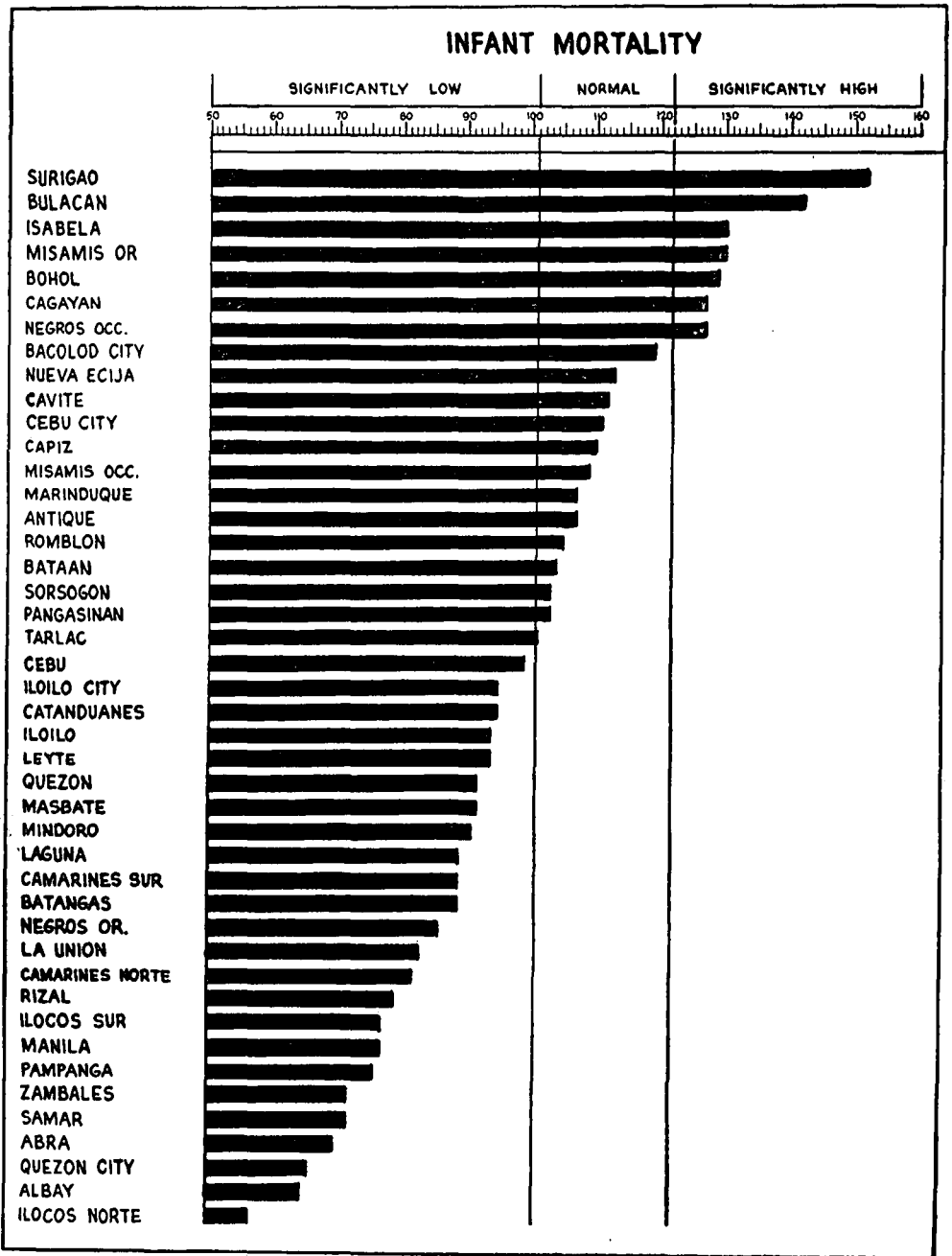
² Rate per 1,000 live births.

* Cebu city not included.

** Iloilo city not included.

*** Bacolod city not included.

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TABLE V
AVERAGE RATE FOR THE PERIOD 1948-1952

<i>Province or City</i>	<i>Crude birth rate</i>	<i>Crude Death rate</i>	<i>Infant mortality rate</i>
1. ABRA	33.6	11.06	80.8
2. ALBAY	44.2	13.22	68.0
3. ANTIQUE	20.2	10.76	111.0
4. BATAAN	45.6	16.18	119.2
5. BATANGAS	42.0	12.98	104.4
6. BOHOL	32.8	15.22	129.4
7. BULACAN	24.4	13.80	167.6
8. CAGAYAN	43.6	16.60	124.0
9. CAMARINES NORTE	47.4	14.68	85.8
10. CAMARINES SUR	32.0	11.18	80.8
11. CAPIZ	26.8	11.74	117.0
12. CATANDUANES	34.4	12.06	84.8
13. CAVITE	28.8	13.96	153.0
14. CEBU *	37.4	13.00	92.8
15. ILOCOS NORTE	35.2	13.12	78.8
16. ILOCOS SUR	30.0	11.22	94.8
17. ILOILO **	25.8	11.34	117.6
18. ISABELA	43.8	17.68	136.6
19. LAGUNA	39.6	15.34	118.4
20. LA UNION	42.0	12.80	85.0
21. LEYTE	31.8	14.40	99.8
22. MARINDUQUE	40.8	15.82	111.4
23. MASBATE	25.8	7.66	75.0
24. MINDORO	38.6	14.30	110.8
25. MISAMIS OCCIDENTAL ..	37.0	13.46	114.8
26. MISAMIS ORIENTAL	24.2	9.42	139.2
27. NEGROS OCCIDENTAL ***	16.0	9.58	160.0
28. NEGROS ORIENTAL	28.2	9.68	85.8
29. NUEVA ECIJA	26.8	15.58	179.4
30. PAMPANGA	37.8	13.70	106.0
31. PANGASINAN	43.6	15.96	110.6
32. QUEZON	42.8	15.60	110.0
33. RIZAL	35.6	11.68	97.6
34. ROMBLON	27.0	13.14	122.6
35. SAMAR	26.6	8.10	71.6
36. SORSOGON	30.4	13.72	94.4
37. SURIGAO	20.2	9.98	138.2
38. TARLAC	48.4	16.86	119.2
39. ZAMBALES	38.0	10.86	88.2
40. MANILA (city)	43.0	11.34	88.8
41. BACOLOD (city)	28.8	13.56	143.4
42. CEBU (city)	43.4	17.14	124.6
43. ILOILO (city)	38.0	17.10	135.2
44. QUEZON (city)	29.0	8.80	110.2

* Cebu city not included.

** Iloilo city not included.

*** Bacolod city not included.

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births and deaths the rest of the provinces and cities are excluded. For instance, doubts are entertained whether the province of Cotabato really had a crude death-rate as low as 3.2 per 1,000 population in 1954.

The average birth, death and infant mortality rates for the period 1948-1952 for each province and city were obtained from which the "endemic indices" were calculated based upon the standard error concept. Thus, a rate of 1954 is said to be *significantly* higher or lower than the mean of means, when its value is above or below the limits of the endemic index.

1. *Natality rate.*— There were twenty provinces and cities in 1954 with *significantly* high birth-rates, ranging from thirty nine to as high as fifty seven for every 1,000 of the population. This is a very healthy sign for these provinces and cities. There were nine with normal rates, but, there were fifteen with *significantly* low birth-rate or 34% of the provinces and cities under consideration as shown in Table II. It is curious to observe for instance three neighboring provinces as Bulacan, Nueva Ecija and Pampanga with no territorial limitation to have a glaring discrepancy in the birth-rates. The rates are 24, 36 and 41 respectively. Might it not be that the people in one province are more law abiding than the other? Since there are many provinces with low natality rate it is evident that even in regularly organized provinces composed mainly of christian population there is defective registration of births, perhaps because no educational campaign has ever been waged and partly, because in some instances a fee for registration is first imposed.

2. *Crude death-rate.*— There are five provinces and cities in 1954 recording *significantly* high death-rates ranging from 14.6 to 19.2 for every 1,000 of the population; thirteen with normal rates and twenty six with significantly low rates. The highest 19.2 which corresponds to Camarines Norte, as shown in Table III.

3. *Infant mortality.*— In 1954, there were seven provinces with *significantly* high infant mortality rate per 1,000 live births; thirteen normal and twenty four *significantly* low rates. The highest rate was that of Surigao province (152)

and the lowest, Ilocos Norte, (57), as shown in Table IV. Since there are provinces such as Surigao, Bulacan and Negros Occidental with high infant mortality rate and low birth-rate, and there are also with high infant mortality and high birth-rate as the provinces of Isabela, Misamis Oriental and Cagayan which may suggest association of these variables, the coefficient of correlation was computed. It is $r = 0.287 \pm 0.152$. If it is assumed that this association is adequately described by a straight line with no distorting effects of another third variable, it may be inferred that no association exists between infant mortality and natality.

Question: How good was our health in 1954?

Answer: Decidedly *Good*.

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