

INSTITUTE OF CURRENT WORLD AFFAIRS

WHM - 3  
The Centro Materno-Infantil

Casilla 35  
Arequipa, Perú  
November 15, 1954

Mr. Walter S. Rogers  
Institute of Current World Affairs  
522 Fifth Avenue  
New York 36, New York

Dear Mr. Rogers:

Around nine o'clock last Tuesday morning, I arrived at the office of Dr. David Salazar Yábar in Calle Rivero. The doctor was busy in the inner office, so I whiled away the time by studying a sheaf of newspaper clippings I had accumulated over the past few weeks. "T.B. RATE IN AREQUIPA RISES" and



Mountain woman and her Meningitis-stricken child

"T.B. FOUND IN 57 OUT OF 700 MISTIANOS", said the headlines of Lima's LA PRENSA. "HOUSES, NOT HOSPITALS ARE NEEDED IN AREQUIPA" and "50% OF SEPTEMBER'S DEATHS ARE CHILDREN FROM ONE TO EIGHT YEARS", cried the local NOTICIAS. Buried deep in an article by a prominent doctor<sup>1</sup> was the following

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1. Dr. José María Bustamante y Rivero - see page 8.

phrase: "Twenty thousand children are living in deplorable conditions in this city. They are potential victims of all the plagues and epidemics!" The clippings were the reason for my being in Dr. Salazar's anteroom. I had called him a few days before and had asked him to supply me with as many details as possible concerning the problem of health, or lack of it, in Arequipa.

The doctor opened his door. "Buenos días. ¿Como le ha ido?"

"I can't complain, doctor," I said. "I hope this won't take up too much of your time."

"No, I have several free hours this morning. I think we had better start with the Dispensary for the very young children. You will be able to see both the children and their parents there." We climbed into the doctor's Buick and headed toward the higher part of the city.



Waiting for vitamin pills and powdered milk

The Centro Materno-Infantil, Dispensario de Primera Infancia is a white building near the Workers' Hospital in Calle Peral. There is a bit of lawn around it and a few flowers nearby. We went up the cement steps and into the main hall. The smell and the noise hit me immediately - the smell of old sweat and dirt, the noise of sick children screaming or whimpering.

An attendant in a torn brown uniform hurried up to Salazar. He pointed to a woman huddled in the corner, her baby hidden under her shawl. "She's Quechua," the attendant said. "She can't speak castellano."

Salazar went over to the woman and bent down, speaking Quechua to her. The frightened tenseness went out of her and she shifted the weight of the baby under the shawl.

We passed through a waiting room crowded with women, most of them wearing the many petticoats, the bright shawls, and the bowler hats of the serranas. Babies crawled on the floor, suckled their mothers, made messes on the benches. The sick, the very sick, lay in the bright shawls, their eyes not moving, their faces very still. The women turned to look at the gringo with his notebook and expensive camera. The gringo didn't feel much like looking back.

Salazar led me into his office, sat me down, and began ticking off the facts and figures. My friend is a busy man. He is head of the Centro - two dispensaries, legal and social sections, and the childrens' section of the hospital. In addition, he is probably the best baby doctor in the city. His mornings, then, are spent at the Centro and his afternoons at his private office.

"The Centro is under the control of the Ministry of Public Health in Lima," said Salazar. "Our job in this particular dispensary is to treat children of from zero to seven years of age. Without charge, of course. At one time we used to practice preventive medicine - hygiene education and the like. Now we have more than enough to do just trying to treat and cure these niños."

"How many children come through here daily?," I asked.

"There are three doctors here. On an average morning each of them handles eighty children. We're pretty busy, you know," he said, laughing. "And here is another thing. Working on the average again, each child comes to the clinic here about twelve times during his first year of life, usually four times for intestinal infections, four for bronchitis, and the rest for skin sores and other results of malnutrition. Let me show you some of the fichas." He called a nurse and asked her to bring the records for the past three years.

The nurse brought in a stack of records - notebooks and forms. Inside each completed form was a long list of treatments for diseases ranging from pneumonia to conjunctivitis. Salazar ran his finger down the columns. "Look here!," he said. "See how many of these kids are suffering from intestinal diseases. A great number of them die from enteritis in their first year. If they survive the first four or five years, they are usually safe. A good illustration of the survival of the fittest, no? Let's take a look at these charts." The charts listed in figures what was outside in the waiting room in the flesh - meningitis, skin sores, tuberculosis. Bronchial pneumonia, enteritis, and T.B. were listed as the big killers.

Dr. Salazar took me out into the hall again. The Quechua woman was gone, the hall empty except for the uniformed attendant. We leafed through a pile of last year's fichas, looking for the salaries received by the fathers of these children. Jose F., worker in a candle factory, eight soles a day (41.6 cents), has six other children besides this child with T.B.. Carlos T., carpenter, fifteen soles a day. The average was about ten soles daily wage.

We pushed through a line of barefoot women into a consulting room. Here a doctor-nurse team relieved each mother of her niño, looked into the baby's eyes, mouth, felt of the abdomen, and reached for another child. It looked slipshod, but it wasn't. "These people rarely make an incorrect diagnosis," said Salazar. He patted the head of what could have been a monkey or a human infant. Hunger had pointed the nose, had stretched the forehead high, had made an old man out of a baby. "This one probably has T.B.," said my friend. "A large proportion of the

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2. See pages 11 and 12.

kids have it in one form or another. About 10% of the deaths are caused by it."

We walked through a room where two nurses were handing out vitamin pills to the shuffling, barefoot line. The doctor opened a door in the rear and beckoned to a young woman sitting behind a desk. He introduced us, saying, "The señorita is a qualified social worker. It is her job to find work for those mothers who have been abandoned by their husbands or who need the extra money more than most. Let's sit in on an interview."

The social worker went to the door and called out a name. A young serrana came in and sat down beside the desk. Her pigtails hung to her waist and her brown bowler hat was pulled low across her forehead. She was nineteen years old; she had two children and a baby sister to look after.

"Did you have a civil marriage?", asked the social worker.

"No."



The consulting room. The child on the bed is suffering from skin sores

"A church marriage?"

"Yes, a church marriage."

In Perú, a church marriage is not valid in the eyes of the law. Only a marriage performed by a civil official holds water in the courts. The social worker looked at Salazar. "The usual," she said. She turned back to the girl.

"Where is your husband?"

"In Lima."

"When did you hear from him last?"

"Last week. He keeps writing me for money."

"And you have an idea of the work you want to do?"

"Yes. I would like to sell breakfasts at the market in San Camillo."

The social worker took the girl's name and address and told her that the Centro would get in touch with her as quickly as possible.

As we left the room, I asked Dr. Salazar what would happen to the girl. "Well," he said, "We usually manage to get sufficient funds from the Government to start these people in small businesses. The girl will be selling her breakfasts in a short time." We turned down a small corridor. "By the way," said the doctor, "I want you to see our milk room." He pointed to a small room where two girls were preparing cups of milk on a long, black table. "We hand out over one thousand rations of milk a day," said my friend. "This is U.S. powdered milk, straight from the States."

Back at the central office, we sat down at the desk for another look at the records. A nurse knocked at the door and told the doctor that there were two mothers waiting to see him. They came padding through the door, ducked their heads in our direction, and sat down on two stools by the wall. One of them grinned and rubbed her dirt-caked feet together. Salazar examined the baby in her lap. "There is nothing wrong with this niño that decent food wouldn't cure," he said. He turned to the other woman. "Where do you come from?", he asked.

"Puno."

"She is Aymará", the doctor told me. "The foot-rubber is Quechua." Turning to the Puno woman, he asked, "How many children do you have?"

"Four."

"Are you married?"

"No,"

"Where is the father of your chicos?"

"I don't know."

Salazar repeated the questions to the Quechua woman in her tongue. She answered, nursing her baby under her shawl. Four children by a man she had lived with for four years. She didn't know where he was. "This is the rule, not the exception," said the doctor. "Most of these babies are illegitimate." He dismissed the women, and they trailed out, leaving a sour smell of old sweat.

The nurse ushered in a handsome Quechua girl. She was very scared of the big office and the medical instruments. Her baby was half dead with meningitis. His eyes were crossed, his limbs sprawling. The girl answered the doctor's

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3. Illegitimate births were 20% over legitimate in September, 1954. Of course, the number of unrecorded illegitimate births would boost the figure even more.

questions, never looking at him. She did not move when I clicked my camera. She came from a village above Yura, near the railway line to Juliaca. She had been looking for work in Arequipa for over a year. She was unmarried. Here was the same deadly pattern that accounted for the mortality figures in the charts, the unending procession of poverty in the hut cities above Arequipa.

We walked to the doctor's Buick, rehashing the morning's facts and figures. "I think you should see the children's section of the hospital," said Salazar. "That is where we send the serious cases from here and from the other dispensary."<sup>4</sup>

Hospital Goyeneche looks like a church. It is over forty years old, and the yellow plaster is beginning to peel off the outer walls. We followed signs saying "LACTANTE" until we came to a small wing off the main building. This was the children's section. As we walked down the corridor, Dr. Salazar told me that there were six doctors handling the two dispensaries and the hospital wards.

We started our inspection in the ward for intestinal diseases. The children lay in small, swinging cots, most of them very still, their eyes fixed on the ceiling. One or two bounced on their beds, talking to each other. The majority had running sores on their faces, the result of the omnipresent malnutrition.

Salazar folded the blankets back from the body of a little boy. The child cried very quietly. The doctor pointed to the emaciated legs and arms. He gently pinched a fold of skin on the abdomen; the skin remained puckered and folded. "Very bad," said Dr. Salazar.

As we were about to leave the ward, a little girl about eight years old stood up in bed and grinned at my friend. "¡Ai, papa!", she called. Salazar grinned back. The creases around his eyes disappeared with the grin.

"She looks pretty healthy to me," I said.

"Oh, she's almost well. The trouble is that her parents left her here and never have come back for her. That's a common occurrence here. Mothers don't want to be bothered by their children - legitimate or illegitimate. We send them to the orphanage after a while."

A young doctor came up and was introduced to me as the head of the section. He turned to Salazar and said, "Perhaps the señor would like to see a transfusion. We are preparing one down the hall." He pointed to a small room off the main corridor. A middleaged woman was standing in a corner of the room, obviously frightened. In the center of the cubicle near an operating table, a young policeman was unbuttoning his blue-grey tunic, talking to two nurses. Salazar stepped into the room and began questioning the woman in mixed castellano-aymara. "Where are you from?"

"Juliaca."

"How old is your baby?"

"Six months."

"How long have you nursed him?" He pointed to the shawl on her back.

"What?"

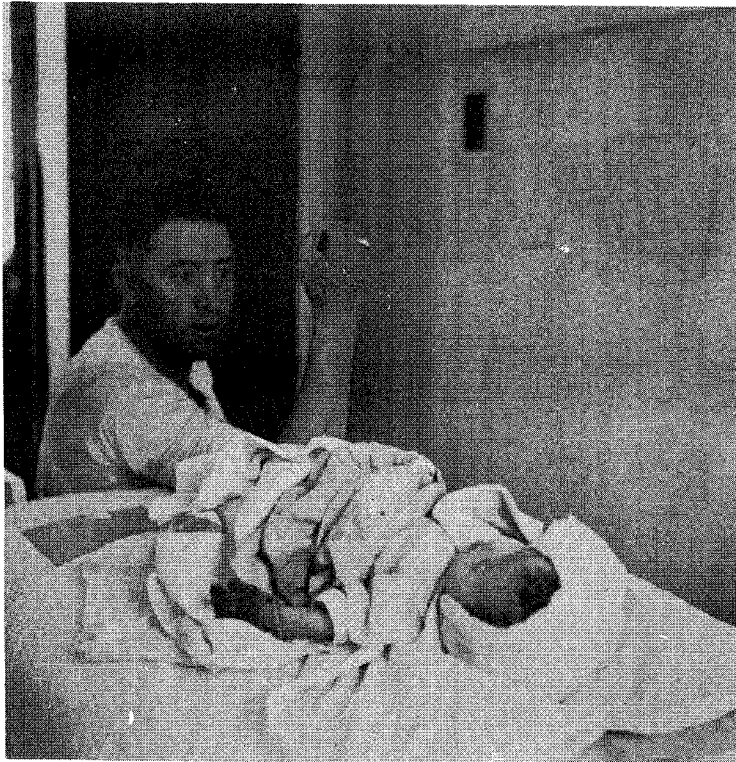
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4. See page 13.

Salazar pointed to her breasts, then to her shawl. "How long," he said. The woman was silent, looking perplexed. Salazar spoke to me over his shoulder. "She's not very bright." He pointed to the table and the woman placed her shawl on it. She unknotted the bundle and began unwrapping. The baby lay in the center, wrapped from head to foot in a shroud of rags. On his hands were filthy woolen gloves. Salazar placed his hand on the shrivelled abdomen; the baby whimpered.

The policeman rolled back the long sleeve of his undershirt and sat at the foot of the table. A nurse removed about one-half of a pint of blood from his arm, then transferred the syringe to the swollen vein in the child's arm. The policeman watched the plunger on the syringe. Then he got up and put on his tunic. The transfusion was over.

"Transfusions are much easier here than in the States," said my friend. "We have a large group of donors like that policeman. It takes just a few minutes to bring one of them over here." He glanced at his watch. "We have time to visit the T.B. ward, if you'd care to see it."



Transfusion

We walked down the corridor to a long ward filled with small cots. As we entered, a little girl waved a blue toy dog at us and smiled. The nurses went over to play with her, and Salazar led me to the table by her bed. He held her X-rays to the light; it did not take an expert to read the whorls and shadows. The child's lungs were practically eaten away. "They always come too late for effective treatment," said my friend. "By the time their mothers get them to the clinic, they are pretty far gone."

As we left the ward, I asked the doctor how many beds there were in the childrens' wards. "Fifty," said Salazar. "Fifty beds, six doctors, and a pop-

ulation of one hundred and fifty thousand. Still, we have been able to bring down the incident rate of many diseases. More important, we have brought the mortality down from three hundred out of one thousand kids in 1945 to one hundred out of one thousand in 1954."

I arrived home with a bundle of papers, notebooks, and a great sense of respect for David Salazar. .

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The interview with Salazar showed me the extent of disease among the children of the city; to find out the general causes of disease, I called up Dr. José María Bustamante y Rivero, brother of the ex-President<sup>5</sup>, founder and former head of the Centro Materno-Infantil, and one of the most respected men in the city. I had read three articles by Bustamante in the local papers, arguing for a change in the unfinished T.B. Sanatorium #2 (WHM - 2) - a change which would turn the Sanatorium into a general hospital. When I saw Bustamante at his office, therefore, I asked him about his articles.

"In the first place," he said, "Arequipa needs hygienic education badly. After that, we need a general hospital equipped to take care of the common diseases here. We do not need a T.B. sanatorium stuffed with the latest instruments for performing, shall we say, eight or ten lung operations a year. No, a T.B. center, if completed as is, would only result in increased population, increased danger of infection from incoming patients, and increased problems for the city." He smiled and leaned back in his chair, a thin man with a serious face and large eyes. "You didn't come here to talk about the hospital," he said. "What facts do you need for your report?"

"Facts which will help me understand the reasons for the high disease rate among the children here."

"¡Bueno! I have just finished a study of five thousand families living in the central part of the city. Poor families. I went from block to block asking these people about their living conditions, their salaries, etc. Because I am a doctor, I had a chance to see for myself what was truth and what were exaggerations. My first question was usually, 'How many children have you had?' The answer - 'Eight, doctor'. 'How many living?'. The answer - 'Two, señor.' I found that the average number of living children per family was four. Living children, mind you."

Bustamante jumped up from his desk and handed me a sheaf of papers. "Look here," he said, "The average family lives in one room, together with dogs and chickens. That's six or seven persons, on the average, wedged into one small room." I nodded my head, remembering the hovels back of our house where the babies and chickens share the floor with the garbage and the whole family relieve themselves in the early morning against the 'dobe wall'.

"What type of food do these people eat?", I asked.

"The meals are barbarous," snorted the doctor. Scarcely more than two thousand calories per day per person." He ruffled through the papers. "Here is a list of average meals. Breakfast - tea and a piece of bread. Lunch - chupe ( a weak stew ) bread, tea. Dinner - soup, rice, a small piece of meat,

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5. José Luis Bustamante y Rivero, President of the Republic from 1945 until the Revolution of 1948 (Revolucion Restauradora) which placed Odría in power.



bread and tea."

"What about milk?", I asked, knowing that the doctor had kept a large dairy herd on his farm in the Chili valley until a few years ago.

"The Government has kept the price of milk so low - around eighty centavos per liter - that it is impossible to keep a herd of good cows. I lost eighty thousand soles on my herd before I finally got rid of it. Now you find your cows scattered over the countryside. It is a rare agricultor who owns more than two or three."

I thought of the women riding their burros in from the chacras with the wire packsaddles loaded with milk cans, the women selling from door to door. "How much milk do your families drink, doctor?", I asked.

"About five grams a day per person."

"And how about fruit?"

"Fruit! Fruit is so expensive that one big orange costs one sol."

I remembered the wage figures on the fichas that Dr. Salazar had shown me. You don't buy milk and fruit when you make eight or ten soles a day.

"Let's figure out the amount of money necessary to supply the average family of six with the bare minimums for one month," the doctor said. "First, the daily food bill: 1.20 for bread; 5 soles for meat; 3 for a little cheese and less milk; 2 soles for vegetables; 2 for tea; 1 for firewood or charcoal; 1 for salt, rocoto,<sup>6</sup> etc. That's about 15 soles a day. 450 a month. The usual rent is about fifty soles a month in the center of town. The minimum cost of clothing for six people in one month would be about 300 soles. Transportation to and from work will cost the obrero ( worker ) about 20 soles." The doctor chewed his pencil and added up the list of figures. "Eight hundred and twenty soles a month for a family of six," he said. "Your average monthly wage in the chacras is about 480 soles. In the city, it runs from 300 for the low class worker to 1200 to 1500 for the experienced factory hand. Of course, for every man who makes 1500 soles a month, there are scores who make 300. I would say that the average wage is below eight hundred." The doctor tapped his pencil on the paper in front of him. "There is a major cause of disease," he said. "No money, no food. No food, no health. That is why you see under-nourished children everywhere - children without shoes or overcoats. That is why eighty per cent. of the arequipeños carry intestinal parasites - up to fifteen types of them in one human body."

I thought to myself, "That is why fifty per cent. of September's corpses were kids."

"In order to rectify the situation," Bustamante said, "there must either be a lowering in the prices of the vital necessities, or a raise in wages. There must be low cost housing projects, good clinics, and, above all, education. Perhaps you can see now why I am arguing for a general hospital and against a T.B. sanatorium."

Doctor Bustamante gave me a stack of books and papers to read. "One of the articles is about the founding and organization of the Centro Materno-Infantil," he said. "This one is an article I wrote for Dr. Eugene Payne this

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6. A very hot pepper used in the picantes, the popular spicy dishes of Perú. Rocoto is hot enough to burn your hands, if you are not careful about holding it too long.

year.<sup>7</sup> Look them over. I think you will have a better picture of the problem after reading them."

I said goodbye and walked out of the doctor's office. The antiseptic sun was warm on the back of my neck. The Plaza de Armas was crowded with people on their way home to lunch. Healthy looking people. Then I saw the woman at the corner carrying her child, her hands under his armpits. I saw the legs like twigs and the wobbly head. The facts and figures given me by my two friends became very human. They explained this child, the children at the dispensary and the hospital. They explained very clearly the terrible problem facing this city.

Sincerely,

*William H. MacLeish*  
William H. MacLeish



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7. Dr. Payne, of the Parke Davis Co., translated this article - describing the miraculous results produced by one drug in curing amoebic colitis - and had it published in the Pakistani magazine MEDICUS in July of this year. The drug is known as Camaform.

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Footnote 2.

MORTALITY CHART 1953, DISP. de PRIMERA INF.

DIAGNOSIS

AGE OF DECEASED

	0-1 . 1-5 . 5-7 . Totals . General Totals								
	M	F	M	F	M	F	M	F	
1. Typhoid-paratyphoid				1	1		1	1	2
2. T.B. of respiratory system	3	1	9	10	5	3	17	14	31
3. T.B. - other types		3	4	6	2	4	6	13	19
4. Infectious diseases					4	1	4	1	5
5. General diseases resulting from lack of vitamins	6		6	5			12	5	17
6. Heart diseases			1			1	1	1	2
7. Circulatory diseases			1				1		1
8. Pneumonia, bronchial pneu.	25	18	18	10	1		44	28	72
9. Diarrhea - enteritis	49	44	31	22			80	66	146
10. Diseases of digestive system			1	1			1	1	2
11. Diseases of urinary system		1						1	1
12. Bronchitis		1	3				3	1	4
13. Apendicitis			1				1		1
14. Nephritis			1				1		1
15. Meningitis	2	5	4	4	2		11	6	17
16. Malaria	1			1			1	1	2
17. Grippe	1	2				1	1	3	4
18. Measles	2	1	4	8			6	9	15
19. Scarlet Fever			1	1			1	1	2
20. Whooping Cough		1	1				1	1	2
21. Diseases of nervous system				1			1		1
22. Diseases of liver or bile			1						1
23. Other diseases of res- piratory system		1	2	3			2	4	6
24. Congenital diseases	48	22					48	22	70
25. Violent or accidental death	4	2	7	5	3	1	14	6	20
26. Deaths not specified	1		1	1			2	1	3
27. Automobile accidents			1		1		2		2
28. Syphilis	1		1	1			2	1	3
29. Born dead	72	50					72	50	122
	214	147	101	77	22	13	337	237	574
I. INFANT MORTALITY							337	227	564
II. DEAD IN FIRST YEAR							214	147	361
III. BORN DEAD							72	50	122*
IV. GENERAL MORTALITY RATE							698	606	1304
V. NUMBER OF BIRTHS							2832	2625	5457

## Footnote 2. (continued)

1952 Statistics, Centro Materno-Infantil, Dispensario de Primera Infancia

	M	F	Total
I. INFANT MORTALITY	248	208	456
II. DEAD IN FIRST YEAR	164	125	289
III. BORN DEAD	24	10	34 *
IV. GENERAL MORTALITY RATE	727	670	1397
V. NUMBER OF BIRTHS	2642	2528	5170

1951 Statistics, Centro Materno-Infantil, Dispensario de Primera Infancia

	M	F	Total
I. INFANT MORTALITY	306	283	589
II. DEAD IN FIRST YEAR	162	142	304
III. BORN DEAD	15	11	26 *
IV. GENERAL MORTALITY RATE	808	781	1589
V. NUMBER OF BIRTHS	2775	2735	5510

## Number of deaths caused by three most common diseases - Dispensario de Primera Infancia

1951 ----- 589 deaths -  
           65 ----Tuberculosis  
          126 ----Pneumonia and Bronchial Pneumonia  
          160 ----Diarrhea-enteritis

1952 ----- 456 deaths  
           31 ----Tuberculosis  
           51 ----Pneumonia and Bronchial Pneumonia  
          182 ----Diarrhea-enteritis

1953 ----- 574 deaths  
           50 ----Tuberculosis  
           72 ----Pneumonia and Bronchial Pneumonia  
          146 ----Diarrhea-enteritis

Statistics for January-April, 1954, Dispensario de Primera Infancia

	M	F	Total
I. INFANT MORTALITY	109	86	195
II. DEAD IN FIRST YEAR	68	57	125
III. BORN DEAD	27	11	38 *
IV. GEN/ MORTALITY RATE	237	213	450
V. NUMBER OF BIRTHS	834	874	1708

\* Note the rapid increase in the number of stillbirths recorded since 1951. This has been attributed by several doctors here to the increase in the serrano population, a natural result of which is a big drop in the standard of living.

## Footnote 4.

The following is a translation of Dr. José María Bustamante y Rivero's article describing the organization of the Centro Materno-infantil. Although written six years ago (Bustamante was removed from the Directorship of the Centro after his brother was deposed by Odría in 1948) the article contains general truths which are still in effect today. The organization of the Centro is the same under Dr. Salazar as it was under Dr. Bustamante.

1948

## Centro Materno-infantil de Arequipa

The Centro is a dependency of the National Service of Maternal-Infantile Protection of the Ministry of Public Health and Social Assistance.

It was inaugurated at the end of 1943 for the purpose of giving medical attention to mothers and children, natives of the city, whose population is calculated to be around 120,000 souls.<sup>1</sup>

Under the central authority of the Centro are nine departments which comprise all of the maternal-infantile assistance in the preventive, therapeutic, social, and legal fields.....

1. Pre-Natal Service - Established in order to give medical attention to those women in pregnancy. It is under the control of an obstetrician and a nurse assistant.....

2. Obstetric Service - This service is mobile and has been established for those mothers who cannot be attended to for any reason in the maternity ward of the hospital. Medical attention is given in the home, with all equipment and medicines necessary for childbirth and recuperation.

3. Dental Service - Established in order to give attention to all mothers and children who are sent from the other departments of the Centro, and who are in need of this service. Under the care of a dentist.

4. Maternal Refectory - This department supplies free breakfasts ( milk or chocolate, meat or cheese sandwiches ) to undernourished expectant mothers. Soon this service will be replaced by restaurants which will serve lunch and supper as well as breakfasts.<sup>2</sup>

5. Milk Bank - Here milk in nursing bottles is supplied daily, free of charge, to hundreds of children selected by our departments and other doctors, in the proportion and dilution required by their ages. In the Dispensario de Primera Infancia, free medical and therapeutic attention is given to children ( from one to seven years old )..... hundreds of transfusions are performed monthly; a list of selected donors has been drawn up for this purpose.....

6. Milk Bank and Dispensary for Older Children (Segunda Infancia)-- In a different locale, this dispensary supplies milk to children ( over 7 years of age ) who are considered undernourished by doctors or physical education specialists in the various schools of the city. Free medical attention is also supplied, as well as necessary medicines.

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1. The population is now well over 150,000

2. The restaurants are still awaiting completion.

## Footnote 4. ( continued )

7. Foundling Hospital - Established to feed and shelter children from two to six years old whose parents work during the day. Hours: 8 to 6. Breakfast, lunch, and dinner are served. In addition, the children are given instruction in hygiene and taught to play games. A voluntary committee of women is in charge of the administration of this service.

8. Legal Aid Section - This office is in charge of a lawyer who advises parents on all matters arising in the course of treatment at the Centro. He arranges for the settlement of pensions and reclamations ( in or out of court ) and other related matters.....

It is interesting to note that 45% of the separations of husbands and wives were caused by lack of responsibility; 22% by polygamy; 10% by physical cruelty; 8% by lack of understanding between couples; 3% by alcoholism; and 1% by sickness.

As for the relationship between the legal situations and the avocations of the men involved in them, the following percentages have been arrived at:

Independent workers .....	40%
Artisans and workers.....	26%
Public servants .....	9%
Farmers.....	8%
Private employees ( servants, etc. ).....	4%
Professional men .....	1.5%

We see here the influence of lack of education and low standard of living in the legal problems which arise.

9. Social Service - Established to accomplish the following missions:

1. To aid the families of those children treated in the dispensaries of the clinic in economic, legal, moral, or hygiene problems.
2. To endeavor to legalize free unions in the eyes of the law. To teach parents the benefits of marriage and baptism.
3. To supply food and clothing..... to the needy.
4. To coordinate all social work in the community.

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Infantile diseases and deaths in Arequipa - their causes

The diseases most commonly found among the Indians are tuberculosis, syphilis, and dysentery. Among the mestizos and whites, rickets, dystrophy, syphilis, and diseases of the skin, in order of their frequency, are the most common.<sup>2</sup>

According to the latest facts, one T.B. case dies every day. Among children less than two years old, 50% are infected; indian children are affected more frequently.

A frequent cause of death - over 50% - is diarrhea-enteritis.

The following chart gives an idea of the mortality rate in the Centro, for each thousand children treated.

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3. Compare these facts with those in the report proper and on pages 11-12.

## Footnote 4. ( continued )

Diarrhea-enteritis	50%
Bronchial pneumonia	20%
T.B. - all types	7%
Syphilis	5%
Dystrophy	5%
Other diseases	23%

The statistics of the Centro show us several factors which produce the index of disease and death.....

There is a strict relationship between sickness and the standard of living; in our city, inadequate housing, food, and clothing contribute heavily to the serious increase of disease. Moreover, the use of women in industrial work is another serious cause of infant mortality. (Women leave the home for the factory, let the child fend for himself.)

Workers in Arequipa have not yet received a salary large enough to insure adequate housing, food, etc..... because of fiestas, religious holidays, and sickness, the worker misses sixty working days out of the year on the average.<sup>4</sup>.....

An investigation carried out by the Centro revealed the following facts: in 41% of the cases, the wage of the worker was not fixed; 10% of the workers received sufficient salary to cover the expenses of food, without considering those of lodging and clothing; 10% received a wage sufficient to cover the bare necessities of a family of two; only 20% received a salary large enough to cover the minimum expenses of a normal family.....

Arequipa needs houses for five thousand families.

In the investigation of 3,000 families, we found that:

87%	lived in one room
8%	" " two rooms
3%	" " three "
1%	" " four "
.5%	" " five "

Only 36% of the families investigated had a sufficient number of beds for each one of its members.

In the matter of nourishment, only 20% of the families investigated consumed over 5,000 calories per day per person; 43% consumed 2,500 calories daily; 15% consumed between 2500 and 1500 calories daily.

The population of Arequipa is 120,000. The production of milk is 60,000 liters daily. Of this amount, 30,000 liters are sent to the factory of Leche Gloria ( a subsidiary of the General Milk Company making condensed or evaporated milk) and 18,000 liters are used in the manufacture of butter. This leaves 12,000 liters for the individual consumer. The daily consumption of milk per person in Arequipa is 100 cc.. In Buenos Aires, the average consumption is 200 cc., and in the U.S., it is 300 cc.. In view of the fact that mother's milk of the women of poor families here is usually deficient in the elements necessary for adequate infant nutrition, this lack of cow's milk in the city is alarming.

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4. Workers are now paid for Sundays and holidays, provided that they work the rest of the week. The stipend is known as a dominical.

## Footnote 4. ( continued )

Ignorance contributes equally to the aforementioned index of disease and death. Behind the good intentions and attempts at hygiene and sanitation lurk superstition and quackery. Young girls are not prepared for the duties of motherhood. Young mothers suffer the consequences of ignorance of the proper care and feeding of their child, with the result that the infants do not receive the proper period of breast feeding.

I would like to make reference here to two other factors which contribute heavily to the disease situation - illegitimacy and alcoholism.

We have found that more than 75% of 6,200 births are the results of illegitimate unions.<sup>5</sup>

The mother, abandoned by the father, is deprived of his earning power and finds herself incapable of satisfying the minimum necessities of the child, who, in a condition of very low physiological resistance, is a victim - a potential victim - of all classes of diseases.

Only 9% of parents investigated have been married by both church and state. 7% have had a religious marriage, and 3% a civil marriage.<sup>6</sup>

In our city, cases of alcoholism are rare among the people of moderate culture and education.....Among the Indians, alcoholism is occasional but excessive, especially during holidays, funerals, etc.

A large amount of alcohol is being brought from the coast to the sierra as contraband. The indios pay high prices for it, at time exchanging food and cattle for the liquor.

The Indian who has come to the city drinks weakened alcohol; the indio of the sierra drinks it pure - 40 degrees. Among the mestizos, the most common drinks are pisco<sup>7</sup> or chicha (a drink made of fermented corn, rarely stronger in alcoholic content than beer)

Among the indios, another inveterate vice is the chewing of coca. To the Indians, coca is a comfort against afflictions and sadness, and at the same time a remedy for their illnesses. Many ailments of the sierras .... are probably owing to the coca habit; hence the prevalence of hepatitis among the Indians.

By suppressing ..... the appetite, coca brings on malnutrition. The organic weakening caused by the constant poisoning makes the coca chewer an easy target for any disease.

According to the figures supplied by the Caja de Depósitos y Consignaciones ( Office of Taxation) 144,895 and 144,987 arrobas ( an arroba is twenty-five lbs.) of coca were consumed in the Department of Puno in the years 1943 and 1944 respectively. The population of that Department is about 500,000. This gives us an idea of the popularity of the weed among the Indians. ( Puno is the center of the Aymarás in Perú )

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5. See footnote 3.

7. An excellent grape brandy tasting a little like tequilla of Mexico.

6. See page 4.



## Footnote 4. ( continued )

## Customs

The aboriginal race of Perú has suffered through the years the consequences of habits which have had their repercussions on the physical wellbeing of the race.

Because of the apathy brought on by the altitude and because of negligence, they are preoccupied very little with personal hygiene. The women, in general, pay little heed to their periods of pregnancy. They have been known to give birth in the midst of their household chores. In the matter of nursing, they keep no regular schedule, nor do they control the quantity of milk. They wean their child very late - sometimes when it is two or three years old, proudly calling attention to the abundancy of their milk. In cases of a failure of mother's milk, they do not employ methods of artificial lactation, but rather feed their babies hard food very early. .... These people are guided only by instinct. I have never seen pure Indian babies who were not receiving mixed food ( milk and hard foods ) at the age of eight months. In spite of the fact that there is no breast feeding schedule, etc., the development of the indio child is above the normal growth curve and the weight of the child is more than that of the average mestizo or blanco baby of the same age. Generally speaking, children are given meat soup, spaghetti, dry meat to suck, bread, vegetables, cheese, and fruits before they are ten months old.

In the Centro Materno-Infantil, the patients are 48% mestizo with white predominance; 40% mestizo; and 7% pure Indian. Only 5% of those treated by the Centro are blancos.

Among the mestizos we find small businessmen - shoemakers, masons, carpenters, farmers, etc ..... They are aided by their wives, who, in addition to their household work, take in laundry, sew, and sell handmade articles.

Rare is the man of this class who is not superstitious, who does not believe in evil spirits, and who does not hire santiguadores ( medicasters ) to chase them away. It is easy to see how superstition can augment the frequency of disease and death.....

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Dr. Bustamante concludes his article with a discussion of the projects which would be useful in rectifying the disease situation . projects which have been discussed in the report proper.