

RECEIVED JUN 17 1974

Health - Child
Mexico

American Academy of Pediatrics, Texas Chapter, Committee
Health Status of Mexican-American Children in Texas

HEALTH STATUS OF MEXICAN-AMERICAN CHILDREN IN TEXAS
COMMITTEE ON MIGRANT WORKER HEALTH PROBLEMS, TEXAS
CHAPTER, AMERICAN ACADEMY OF PEDIATRICS

B. L. Nichols, Chairman

The heat of the late morning had begun to drive the moisture from the dirt floored shed when an infant was brought to our impromptu clinic. She was swaddled in clean but dingy diapers. Her head was covered by a handmade croched bonnet. The pinched nose and atrophic cheeks were mature beyond her six months of age. She was no bigger than at birth. Through an interpreter we learned that the infant had chronic diarrhea since the third week of age. The family had spent \$80.00 for the delivery in a physician's office and \$30.00, cash on the barrel head, for visits to their physician. The total income for 1969-70 was \$400.00; income obtained by hard hot work in the United States Migrant stream. Money for medical care was borrowed against the family's income for the next season.

To understand the basis for this child's failure to grow, we walked down the dusty corridor between the rows of one room family dwellings, ten in a file under common, low pitched tin roofs. We entered an unscreened dwelling. Two large beds and a homemade canvas cradle suspended from the ceiling served this family of six. A small table and a four burner butane stove completed the furnishings of the dirt floored room. What formula is the infant on? The mother brought a can of low lactose milk powder. The formula cost \$8.00 a week. The family had eaten only beans and tortillas for three months in order to obtain the milk powder. The last animal protein the parents and three siblings had received was at a political bar-b-que. May we see the baby's

Resource ID# 4986

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bottle? The milk was curdled and sour. How do you prepare the formula? Water was obtained from the single outdoor faucet shared by twenty families. It was carried in buckets to the home and stored on the lone table. The water was boiled and the terminal sterilization method of preparation skillfully executed in a bucket. The bottles were capped and stored on the table, covered by a clean diaper. There was no income for a refrigerator.

This migrant family resides for half of each year in the Weslaco Migrant Labor Camp located in the beautiful lower Rio Grande Valley of Texas. The Mexican-Americans make up 15% of the state's population and 50% of its indigent peoples. Half of these people are of the pediatric age group. The children of the Weslaco Labor Camp are representative of the indigent Mexican-American children. They are citizens of low priority. The camp belongs to the City of Weslaco. The mayor of this progressive town of 15,313 inhabitants is noted for his planting of thousands of peonies in tubs along the city streets. This is an obvious indication of the priorities of local leadership: their concern about the culture of objects other than Mexican-American children.

The Weslaco Labor Camp is but one of many colonias, or sub-urban slums, which exist in South Texas. These are the off-season homes of the Mexican-American migrant laborers. Hidalgo County ranks first in the nation in number of resident migrants¹, 20% of the migrant laborers live in the county². The Colonias are unincorporated by the adjacent towns which often completely surround them. This purposeful omission evades the corporate responsibility for utilities and sanitation. The impact of this policy is illustrated by the report by the Field Foundation that five of the six colonia water supplies tested were grossly contaminated by fecal microorganisms³. Hidalgo County is

located on the Rio Grande river which marks the U. S. Boundary with Mexico. A total of 85,000 migrant workers make their winter homes in Hidalgo and the neighboring Cameron County. The remaining 160,000 seasonal migrants are located in a 200 mile belt which stretches through the Texas plains toward Colorado. In South Texas the migrant workers make up 25% of the population in the heavily populated counties, up to 90% in some of the sparsely settled areas² (Figure 1). During the winter season these people live on the income of the previous season, averaging less than \$2,000 per family¹; scattered winter labor in the truck farms of South Texas; and on money borrowed against the next year's wages from the migrant labor contractors. In the early Spring⁴ the families travel to the costal agricultural areas (A). The main migration is to the Great Lakes region (B) which occurs in mid-Spring. A later flow into the Northwest continues through the Summer months (C). Most of the families make a sweep toward the East and return to Texas in the late Fall (D). The reduced family income during the Winter is a severe strain on health. In Figure 2, a photograph taken at the Weslaco Labor Camp, we see a common practice during this season. The child in the center holds a bottle partially emptied of its content of rice water. The U. S. Department of Agriculture computes that it costs \$240 a year to feed this child a low-cost diet⁵. This family of five had an earned income of \$600.00 the previous year.

During the Winter season minor health problems are exaggerated by the poverty of the migrant families. One six year old girl had chronic conjunctivitis. Dr. Chase⁶ has shown that trachoma is prevalent among these children. This child was not in school because of the conjunctivitis. She had not been seen by a physician, her mother reported "because you have to make a \$5

deposit with the nurse before you can see the doctor". Six hours of free ambulatory care are available in the County and no indigent inpatient care⁷. The family was already in debt to the labor contractor and could not justify spending the rent money to see a doctor "who would only prescribe an expensive ointment for her eyes". It is reported that in general Mexican-Americans make 2.3 visits/year to physicians compared with 5.6 for Anglos and 3.7 for Negros⁸.

Another child at the Weslaco Labor Camp stood by with an apathetic expression. His hair was dull and easily plucked from the follicules. He had adequate subcutaneous fat, however, his muscle mass was greatly reduced. When his shirt was removed it was evident that he had Harrison's groove chest deformity and flared wrist epiphyses. There was a diffuse hyperkeratosis of the skin. This child had only had beans and corn tortillas to eat since the family left Colorado six months ago. The family income was low because the children had not sufficiently matured to work in the field with their parents.

How universal are the observations made during the visit with these Mexican-American children at the Weslaco Labor Camp? In the total survey⁹, funded by the Field Foundation, 731 children were examined under hurried and suboptimal conditions (Table I). This was one of seven recent health surveys and the migrant peoples insisted on our providing medical care in exchange for their cooperation. We detected 23 families with one or more children with gross failure to thrive; 35 families where one or more signs of specific vitamin deficiencies existed; four with rickets, one child with pellagra. Malnutrition was part of the realities of life for these children. We found

four children with birth defects, the children had been admitted or studied by hospitals in Washington or Wisconsin during the Summer months. No such services exist in South Texas. Twelve children with mental retardation were uncovered. Four additional children, bright and alert, had been classified as retarded by the school system. The parents reported that the children were in special education classes because they spoke no English.

It is appropriate to examine the social context in which these children live for the Winter season. Mexican-American peoples make up half of the *1.3 million indigent Chicanos* indigent peoples of Texas^{10,11}: a total of 1.3 million out of the 1.6 million Chicanos in Texas¹². This 80% are in receipt of family incomes less than \$3,000 per year. In spite of the heavy contribution by Mexican-Americans to the Texas indigent population, they only receive a fourth of the state welfare payments¹¹. This is widely stated to be due to the non-citizen status of this people, however, data from the Texas Nutrition Survey¹⁰ reveals that less than 15% are foreign born. Perhaps a more valid reason is the attitude among the politically powerful Anglos that the agricultural workers will cease to work if they receive welfare payments. The evidence is to the contrary, Texas leads the nation in number of working poor¹¹. Seventy-five percent of indigent families support themselves, less than 10% receive any welfare payments¹⁰. The statewide distribution of Mexican-Americans (sometimes called Chicanos) is illustrated in Figure 3¹². Note the South Texas area where a numerical majority of citizens with Spanish surnames exists and the large area of Southwest Texas where a significant number of such families exist. On a statewide basis 15% of the Mexican-Americans are migrant farm laborers^{2,12}.

The distribution of state welfare payments¹³ is illustrated in Figure 4.

Welfare recipients are grouped in East Texas and the metropolitan areas, a contracting pattern to the previous figure illustrating the distribution of Mexican-Americans. The geographic distribution of the Emergency Food and Medical Service programs of the Office of Economic Opportunity¹⁴ are illustrated in Figure 5. A survey of these grants, totaling 3.5 million dollars for the state reveals that from 12 to 50% of the budgets are devoted to direct service. The remainder is tied up in salaries and indirect services. Figure 6 indicates the location of various U. S. Department of Agriculture food distribution programs¹⁵. The commodity program, most prevalent throughout the state, contributes \$16 per recipient each month. The alternate food stamp program supplements the food dollar by \$18 per individual. Distribution of these programs is capricious, largely influenced by local government. A former county sheriff was until recently in charge of the program in Hidalgo County. Four thousand, four hundred families received commodities in December of 1970. This represents 22% of the families with an income of less than \$3,000.

A number of federal migrant grants¹⁶ have been awarded in Texas. The distribution of these grants is indicated in Figure 7. The large bulk of these grants is for administrative personnel and support. During recent cuts in federal funding, service to migrants has been curtailed while administrative expenses are largely intact. Recruitment of physicians has proved to be the largest obstruction to implementation of the \$600,000 grant in Hidalgo County. The U.S.D.A. estimates¹⁷ that the average U.S. per capita expenditure on health is \$195. It would cost \$54,000,000 to bring this average level of health care to the 50,000 indigent families in the seven counties of the Rio

Grande Valley. The present federal expenditure is \$17,186,846.00¹⁸. Local and state expenditures are totally negligible in this context¹⁸.

It is appropriate to attempt to evaluate the impact of the above welfare programs on the indigent families of the Valley area. The U.S. Census Bureau¹⁹ has suggested the calculation of income necessary to raise a family above the poverty level. The threshold figure commonly used is \$3,000/family. This threshold figure is deceptive because it is based upon a family of four members. In South Texas the families average 5.5 members. Using the 1960 census data it is calculated (Figure 8) that an expenditure of nearly 70 million dollars would be necessary to bring families in the Rio Grande Valley to a survival income. The summed expenditures for the commodity program, state welfare and the OEO Emergency Food and Medical Service programs only total half of this deficit. Eighty-eight percent of the funds expended in the three programs are from the Federal Government.

The lack of state and local involvement in the solution of the problems of the indigent Texans is revealed in the Table II entitled Texas Brags^{11,20}. Texas ranks sixth among the states in total personal income, but 32nd in per capital income. State and local taxes rank near the lowest in the United States. Local health and welfare expenditures reflect this priority for low taxes. Large sums of federal funds are received in the state, obviously subsidies only for the middleclass and wealthy Texans because an excess of \$1,000 per man, woman and child are received annually from the Department of Agriculture, Department of Defense and NASA. As the Texas State Senate Interim Committee on Welfare Reform points out¹¹, Texas is a state of contrasts, the very wealthy living among the very poor.

As evidence of the impact of such a lack of concern by the people of Texas, Figure 9 is shown. It indicates the national rank of Texas in morbidity from six infectious diseases²¹. Four are completely prevented by immunizations, a condemnation of the failure to support public health and preventive medicine in Texas. It is worth noting the high incidence of these diseases in the largely Mexican-American areas of Texas.

Against the backdrop of economic and humanitarian failure we will now turn to the specific problems of health. In 1968-69 a major nutrition survey was undertaken among indigents in Texas¹⁰. The full data has not yet been released, therefore, we are limited to an evaluation based upon state regions instead of ethnic groups. In Figure 10 the ethnic representation of Mexican-American indigent peoples among the samples studied is indicated. We will examine three state areas in detail, the upper Rio Grande, The Alamo Area and the Lower Rio Grande Valley and assume that the data is very little influenced by the less than 15% Anglos in the sample of indigent people. In total more than 3,700 Mexican-Americans were examined in this detailed study funded by the Federal Government.

In Table III some of the elements of pediatric history from the Texas Nutrition Survey are summarized. A high incidence of inadequate sewage exists in the Texas Valley. Half of the fathers and two thirds of the mothers have less than six years of education. The state wide statistics add that more than 90% of the Mexican-Americans drop out before high school. Welfare payments were a minor function of income, three-quarter of the families were working poor. The level of immunizations was quite low throughout the Mexican-American areas of the state except in the El Paso region. The history

of the frequent attacks of infections and infestations was present throughout the state. On physical examination, (Table IV) evidences of protein deficiency were observed in 13% of the children in the lower valley. Rickets was observed in 4 and 6% of the valley children. Although the anthropometric data is not yet subdivided by ethnic groups, 40% of all preschool Texas indigent children had heights which fall below one standard deviation from the standard for age. X-rays of the wrists among the Mexican-American children revealed an average retardation of four carpal centers, equivalent to an average retardation of bone age by nine months. A survey among the children of Mexican-American migrant laborers⁶ has been conducted in Colorado. Eighty percent of these children had spent the Winter in Texas. The large number of children whose height fall below the 3rd percentile is illustrated in Figure 11. Almost none of the children had heights above the average for age. The males are indicated as X and the 3rd percentile for males is the broken line.

Biochemical determinations provide the most objective criterion for nutritional status. The % incidence of low and deficient values for the Colorado study⁶ and the Texas Nutrition Survey¹⁰ are given in Table V. It is relevant to call attention to the fact that the incidence of low biochemical values is qualitatively identical among previous surveys of Amerindian peoples, the Blackfoot tribe in Montana and the Mayan people of Guatemala¹⁰. The low vitamin A blood levels seen in the Texas Nutrition Survey²² have been broken down by age. Eighty percent of preschool children had reduced vitamin A concentrations. This was principally due to the absence of green leafy vegetables in the diet. The clinical significance of this observation is obscure, however, Dr. Chase⁶ finds a statistical correlation between low A blood levels

and the attack rate for measles and for impetigo. The state wide vitamin A deficiency was more pronounced among Mexican-American children²².

The Colorado Migrant Council²³ is in process of analysis of its data on health status of migrant children in Hidalgo County. In the 1970 survey they observed that more than a third of the Mexican-American children were below the third percentile for height. Dental caries were commonplace and specific vitamin deficiency signs quite common. Dr. Chase confirms again the high incidence of vitamin A deficiencies and reports rickets to be a persistent problem among these children.

In closing, we need to broaden the perspective of this discussion to the ethnic context. The Mexican-American child in the Weslaco Labor Camp has many problems: poor income, poor nutrition, poor health and poor educational prospects. These are the problems shared by all the Amerindian peoples of our country. Figure depicts the approximate composition of these people in the United States²⁸. The Navajo child, whose people face the same social, economic and health discrimination as the Mexican-Americans, represents the moral issue unsolved during the nearly five centuries of European conquest of the new world. The equitable compensation of the Amerindian peoples²⁴ is a central economic and social issue through all the Western Hemisphere where the original population has been variously diluted by European and African peoples. The Mayan child in Guatemala is also part of the problem of the Amerindian peoples in our hemisphere. But, the problem in the United States is in a different perspective because it can be solved with the resources at hand. Gordon Harper, a pediatric resident who participated in the Field Foundation study in Hidalgo County, state it clearly in his testimony before the U. S. Senate Subcommittee on Migratory Labor²⁵.

"The meaning of the migrants lives in unmistakable; our country-all of us- build the highways and the rockets and the bombs, pay for empty fields and subsidies to the rich, but have not, will not or cannot guarantee children in our midst the elements of growth: food, health, and hope. Human needs for those outside our affluence, fall far down our unstated list of national priorities."

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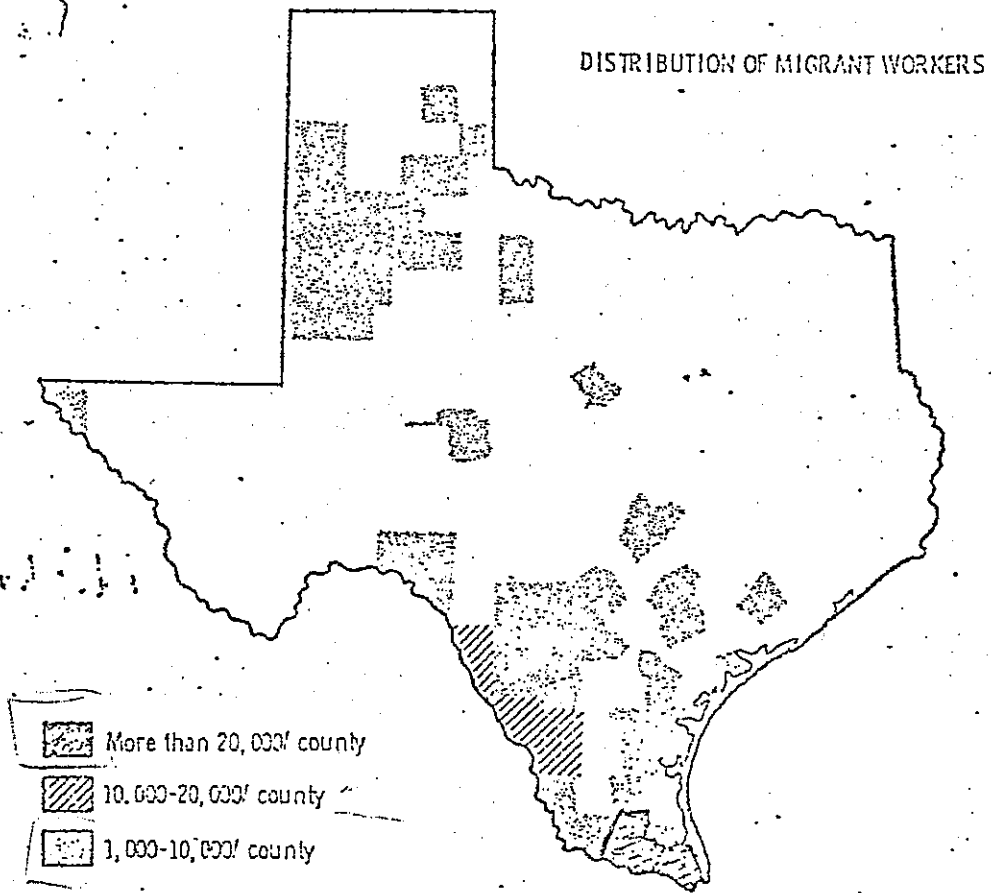


FIGURE I

Geographic distribution of migrant workers
in Texas



FIGURE 2

Migrant workers child drinking rice water

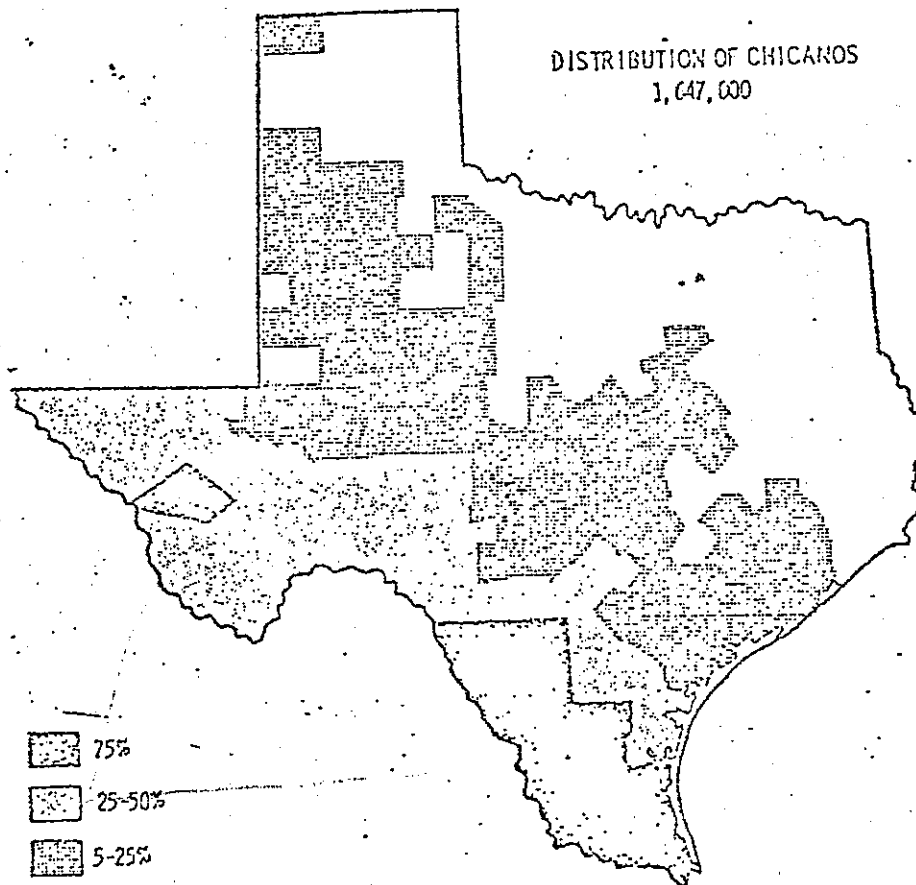


FIGURE 3

Geographic distribution of Mexican-Americans in Texas as percentage of local population.

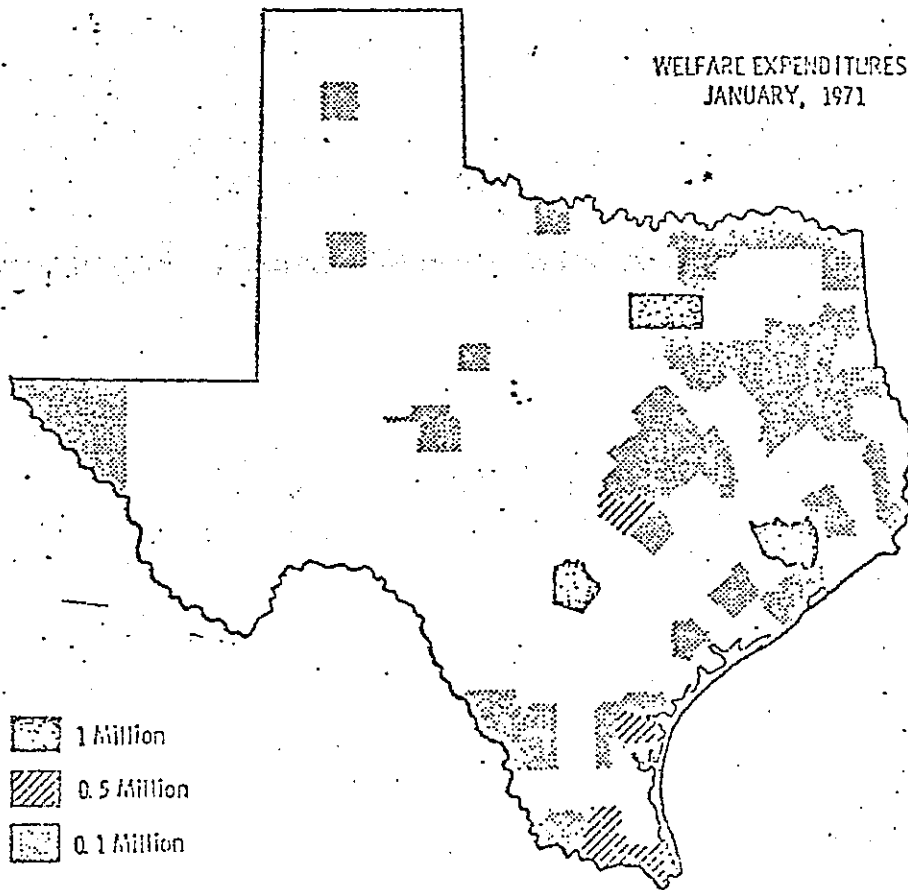


FIGURE 4

Geographic distribution of Texas
Welfare expenditures for January 1971.

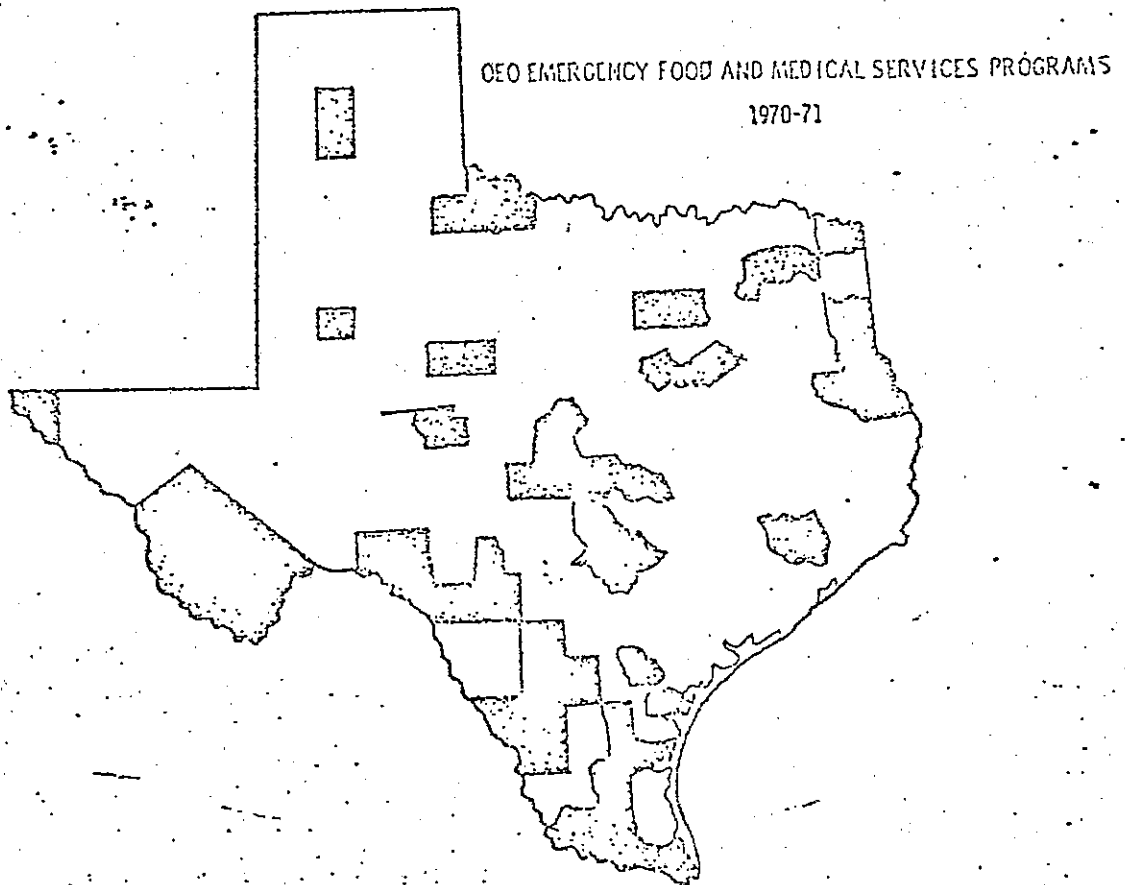


FIGURE 5

Geographic distribution of Office of Economic Opportunity grants for Emergency Food and Medical Services, 1970 - 1971.

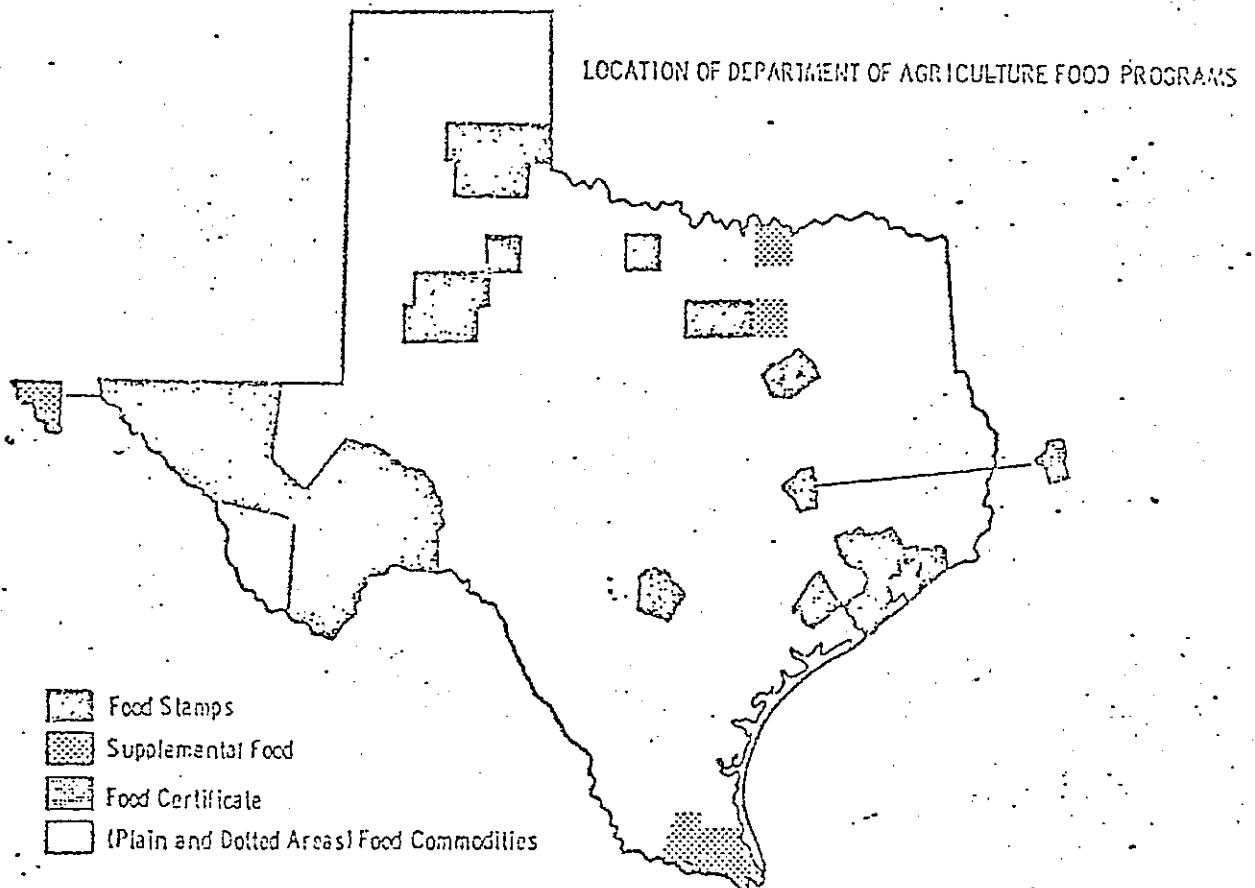


FIGURE 6

Geographic distribution of USDA food programs in Texas. Unless otherwise noted, the Commodity Program is in effect in every county in Texas.

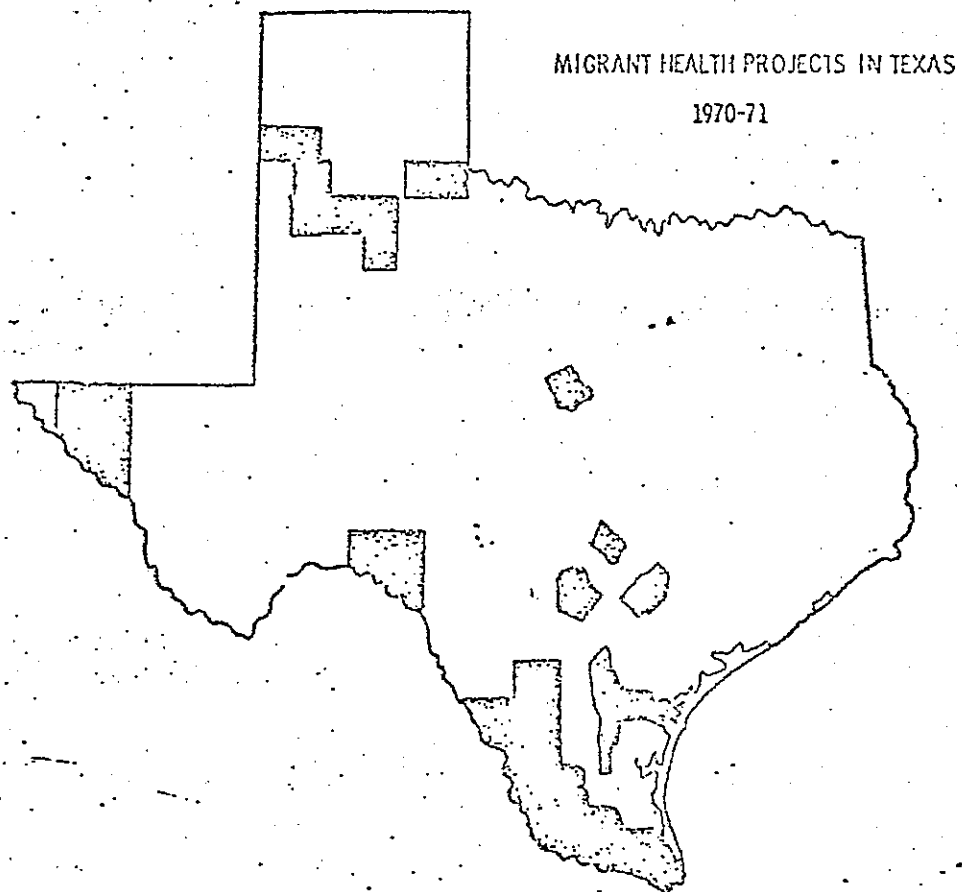


FIGURE 7

Geographic distribution of U. S.
Department of Health, Education
and Welfare Migrant Health Service
grants, 1970 - 71.

WAGE DEFICITS TO ESTABLISH A \$3,000 FAMILY INCOME

IN 7 SOUTH TEXAS COUNTIES

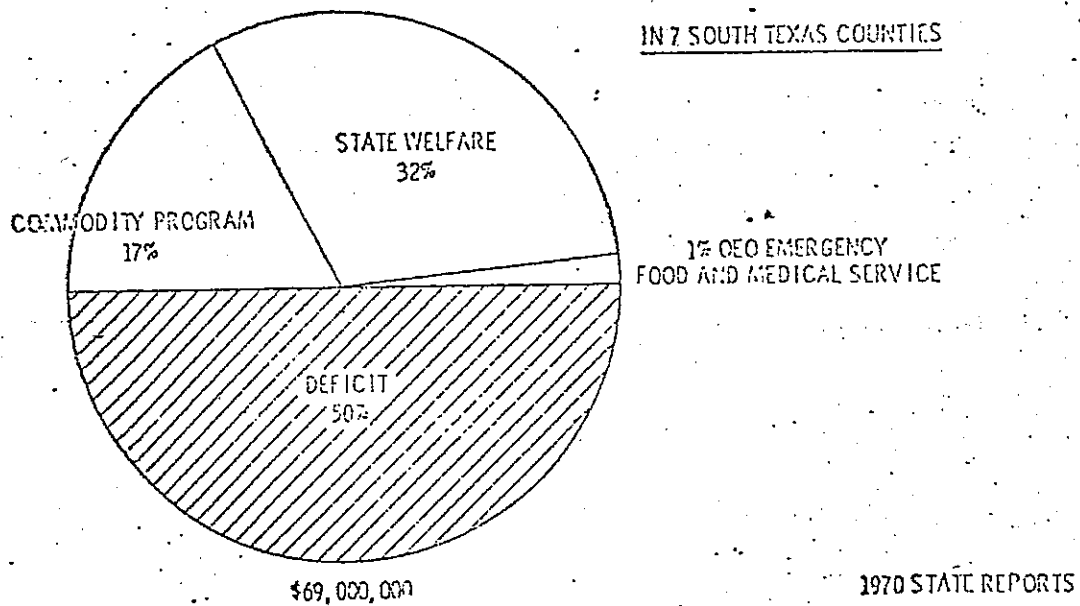


FIGURE 8

Estimate of the quantitative contribution of present programs to the solution of wage deficits in seven South Texas counties. The method of estimate is described in the text.

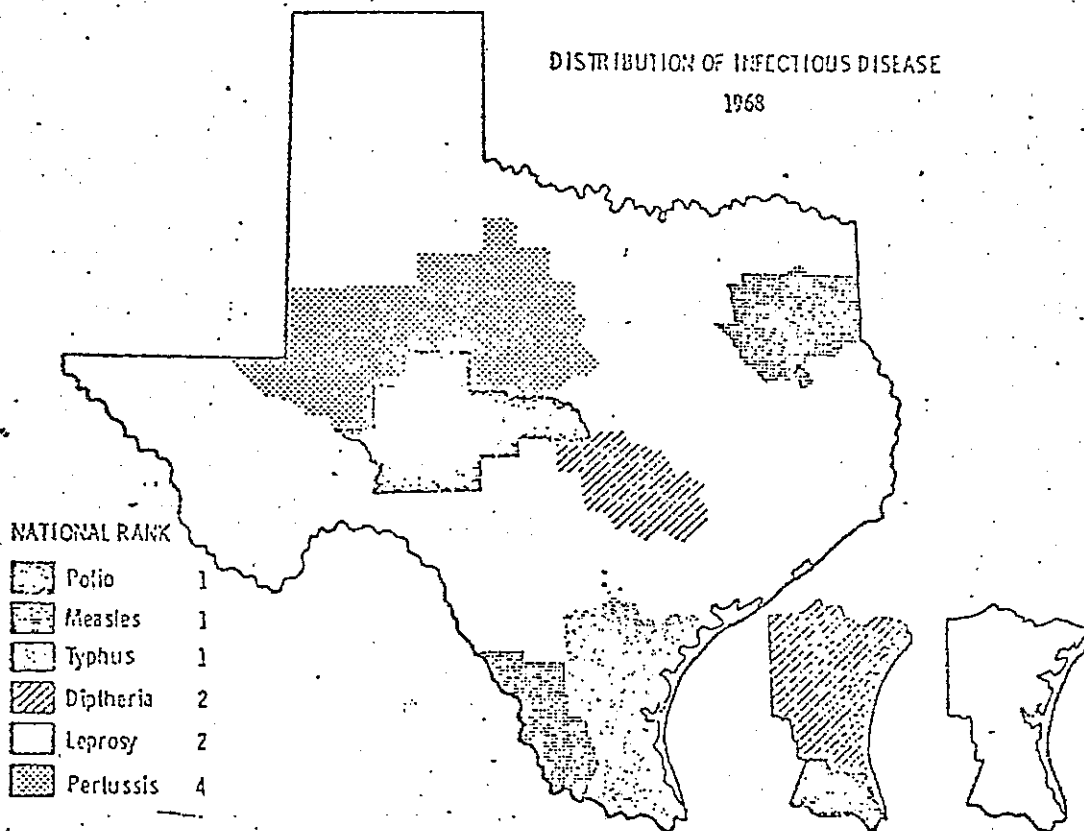


FIGURE 9

National rank of Texas among the 50 states in morbidity from infectious diseases. The geographic distribution of these endemic areas is illustrated.

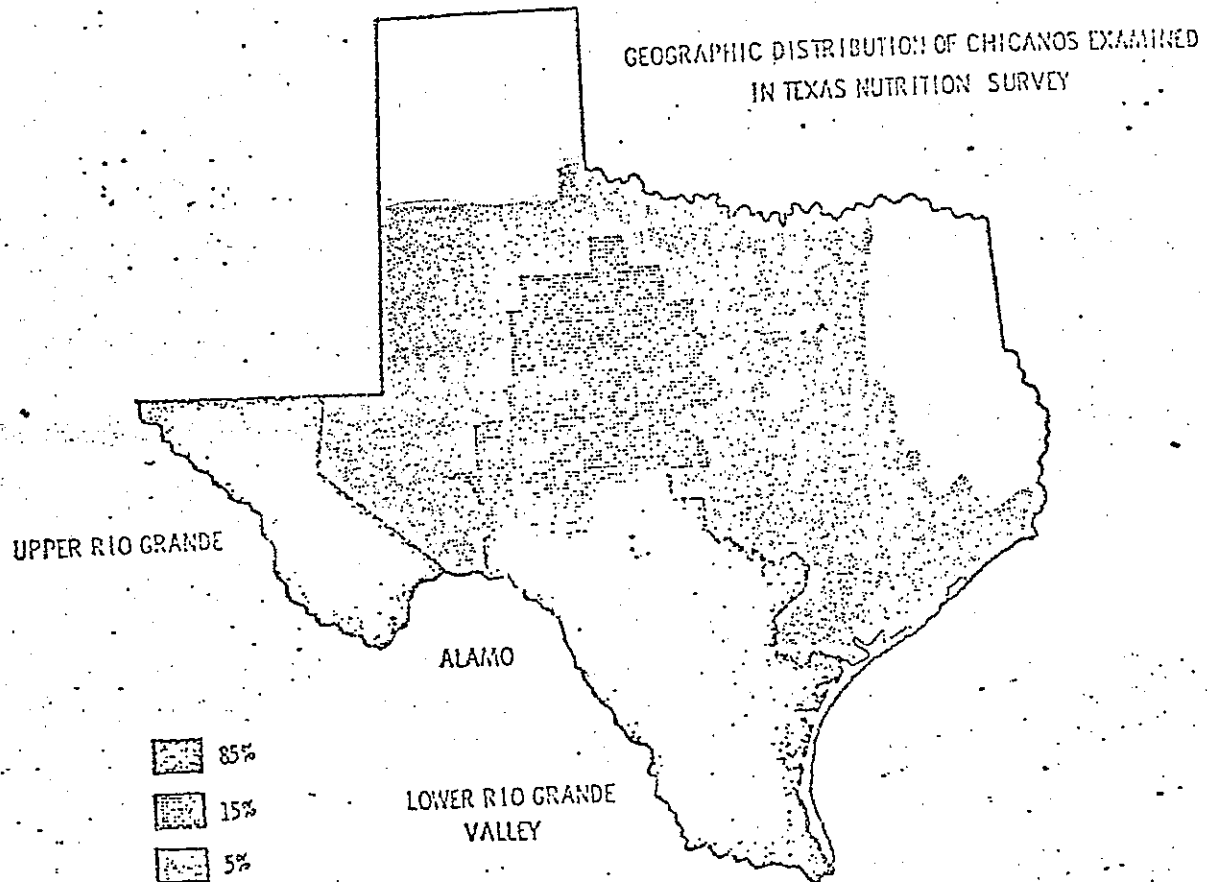


FIGURE 10

Ethnic composition of the indigent sample examined in the Texas Nutrition Survey. The predominately Mexican-American populations in the Upper Rio Grande, Alamo and Lower Rio Grande Valley areas are used in Table III, IV, and V.

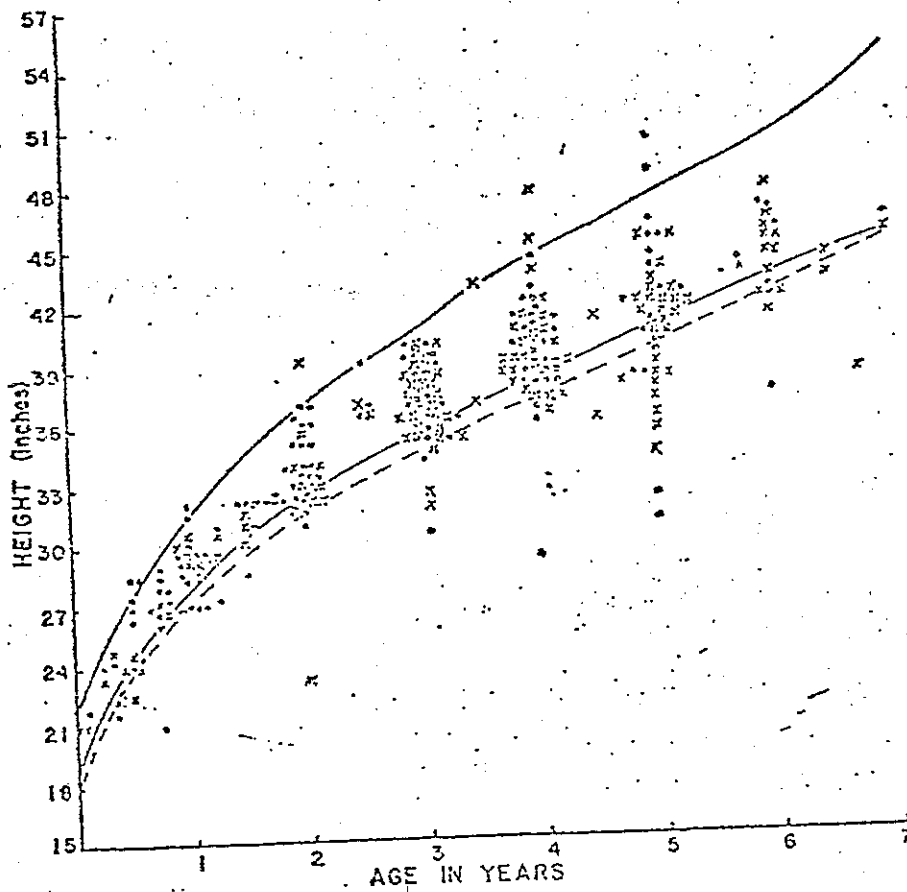


FIGURE 11

Height measurements in migrant children. Males X and females O. The upper line is the fiftieth percentile and the lower solid line the third for females, the broken the third for males. Data of the Colorado Migrant Council.

TABLE IV

TEXAS BRAGS

<u>CHARACTERISTIC</u>	<u>NATIONAL RANK</u>
SIZE	2
TOTAL POPULATION	4
TOTAL PERSONAL INCOME	6
PER CAPITA INCOME	32
PER CAPITA LOCAL TAXES	44
NUMBER OF POOR	2
NUMBER OF WORKING POOR	1
TOTAL WELFARE EXPENDITURE	3
LOCAL WELFARE EXPENDITURE	39
LOCAL HEALTH EXPENDITURE	43
FEDERAL FUND EXPENDITURE	3
USDA	1
DD	2
NASA	2

REPORT OF THE TEXAS SENATE INTERIM COMMITTEE ON WELFARE REFORM, JAN. 1971

OEO REPORT, APRIL 1, 1971

TABLE III

PEDIATRIC HISTORICAL REVIEW: % INCIDENCE

	<u>UPPER VALLEY</u>	<u>ALAMO</u>	<u>LOWER VALLEY</u>	<u>STATE</u>
IMMUNIZATIONS:				
DPT	72	41	53	51
POLIO	75	51	55	50
SMALLPOX	74	34	48	44
MEASLES	58	30	44	33
ILLNESSES WITHIN SIX MONTHS:				
RESPIRATORY ILLNESS	71	56	55	58
DIARRHEA	25	25	27	22
PNEUMONIA	6	7	8	10
WORMS	4	4	4	5

TEXAS NUTRITION SURVEY 1968-69

TABLE IV

PEDIATRIC HISTORICAL REVIEW: % INCIDENCE

<u>CHARACTERISTIC</u>	<u>UPPER VALLEY</u>	<u>ALAMO</u>	<u>LOWER VALLEY</u>	<u>STATE</u>
AVERAGE HOUSEHOLD	4.7	4.6	5.5	4.5
NO INSIDE WATER	2	5	11	7
INADEQUATE SEWAGE	8	20	23	15
INADEQUATE REFRIGERATION	9	5	6	4
LESS THAN 6 GRADE EDUCATION:				
FATHERS	40	38	50	30
MOTHERS	53	48	64	35
LESS THAN \$3,000 FAMILY INCOME	50	52	57	54
INCOME FROM WAGES	74	77	75	72
AFDC INCOME	3	3	5	3.5
SPANISH SURNAME	91	84	95	46
SPANISH LANGUAGE IN HOME	82	71	85	40

TEXAS NUTRITION SURVEY 1968-69

TABLE V

PEDIATRIC CLINICAL EXAMINATION: % INCIDENCE

	<u>UPPER VALLEY</u>	<u>ALAMO</u>	<u>LOWER VALLEY</u>	<u>STATE</u>
ABNORMAL HAIR	0	0	13	4.2
ANGULAR LESIONS	0	2	2	1.1
FILIFORM ATROPHY	9	0	7	3.5
GLOSSITIS	1	1	1	0.6
GOITRE	0	0	3	1.1
FOLICULAR HYPERKERATOSIS	0	0	4	3.1
LIVER ENLARGEMENT	0	0	12	3.4
ENLARGED WRISTS	0	4	6	2.9
BOWED LEGS	0	0	4	1.7

TEXAS NUTRITION SURVEY 1968-69

TABLE VI

% INCIDENCE OF LOW BIOCHEMICAL VALUES

<u>LOCATION</u>	<u>MIGRANT</u>	<u>UPPER VALLEY</u>	<u>ALAMO</u>	<u>LOWER VALLEY</u>	<u>BLACKFOOT</u>	<u>MAYAN</u>
AGES	46	ALL	ALL	ALL	ALL	ALL
HEMOGLOBIN	16	9	31	21	9	7
VITAMIN A	55	41	50	51	62	12
VITAMIN C	1	6	19	11	1	5
TOTAL PROTEIN	1	--	--	--	2	3
ALBUMIN	26	5	17	10	3	3
URINE UREAMINE	--	9	9	7	7	24
URINE RIBOFLAVIN	--	21	22	21	16	32

TEXAS NUTRITION SURVEY 1968-69

TABLE VI

% INCIDENCE OF LOW BIOCHEMICAL VALUES

<u>LOCATION</u>	<u>MIGRANT</u>	<u>UPPER VALLEY</u>	<u>ALAMO</u>	<u>LOWER VALLEY</u>	<u>BLAKEFOOT</u>	<u>PAYAN</u>
AGES	< 6	ALL	ALL	ALL	ALL	ALL
HEMOGLOBIN	16	9	31	21	9	7
VITAMIN A	55	41	50	51	62	12
VITAMIN C	1	6	19	11	1	5
TOTAL PROTEIN	1	--	--	--	2	3
ALBUMIN	26	5	17	10	3	3
URINE THIAMINE	--	9	9	7	7	24
URINE RIBOFLAVIN	--	21	22	21	16	32

TEXAS NUTRITION SURVEY, 1968-69

Colorado Migrant Council 1969