EVALUATION OF A LOAN TO NICARAGUA FOR HEALTH CENTERS AND RURAL MOBILE HEALTH UNITS

(AID Loan 524-L-023)

Prepared for:

The United States Agency for
International Development
USAID/Nicaragua

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November 9, 1973

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115 pages

2 appendices

AID Contract Number:

AID Project Number: 524-22-530-080

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PREFACE

This report summarizes an evaluation of the contribution of AID Loan 524-L-023 to health services for poor people in Nicaragua. The evaluation was conducted with full participation of the Ministerio de Salud Publica (MSP) and the Nicaragua mission of the U.S. Agency for International Development (USAID). The findings, conclusions and recommendations of the report reflect the judgments of Practical Concepts Incorporated (PCI), a management research firm hired to structure and manage the joint evaluation. These judgments may differ significantly from the views of USAID and MSP personnel who participated in the evalution or who have responsibility for health programs in Nicaragua.

The intended audience for the evaluation is USAID/Nicaragua. The authors have tried to objectively assess and report on the actual and potential contribution to health services for poor people in Nicaragua from AID Loan 524-L-023. The intended focus, orientation, and emphasis in the evaluation are to provide an objective basis for carrying out the objectives of the loan. Because of this forward-looking orientation, effort has been focused on analyzing the situation and also defining practical approaches to improving the situation in the future.

The report is organized into seven chapters with supporting material in Appendices. The highlights are summarized in Section I. Succeeding sections treat The Use of the Loan (II), Benefits to Nicaraguan Patients (III), High Unit Costs (IV), Problems of Inefficiency in The Important Components of the System (V), Recent Improvements (VI), and Recommendations (VII). The Appendices include supporting tables and 20 MSP Supervisor's Summaries for evaluation visits that included PCI or USAID staff.

A separate volume of working papers has been submitted to USAID/Nicaragua with the evalaution instruments, instructions to evaluators, and 51 supervisor summaries for health centers visited by MSP or Tribunal de Cuentas without PCI or USAID.

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SECTION ONE

HIGHLIGHTS

The evaluation of AID Loan 023 was led by Practical Concepts Incorporated between August 29 and November 9, 1973. Discussions at MSP included the heads of the Central Administration offices in Managua. The field survey included visits to 45 of the 55 Health Centers financed by AID. In addition, 25 other Health Centers and 4 PUMAR units were visited because they used equipment and medicines supplied by the Loan. PCI representatives participated in seventeen site visits (16 Health Centers and one PUMAR unit) and USAID staff visited another seven Centers. All visits included an MSP supervisor or, in the case of 25 non-AID centers, an inventory-taker from the Tribunal de Cuentas. The sites visited are listed in Exhibit I-1 at the end of Section I and most locations are identifiable in the map of Nicaragua in Exhibit I-2.

The AID Loan 023 to Nicaragua has financed the construction of 55 Health Centers plus medicines, equipment and vehicles for use in MSP's Health Centers and PUMAR program. The purpose that motivated the Loan was "to bring medical services, preventive and curative, to a much larger percentage of the population ... especially in the rural areas." Basically, AID has done what it promised to do in the Loan Project. Yet the Loan Project has not produced an efficient and effective health system for poor people today. The Government of Nicaragua (GON) has not provided the good administration and resources required for success. AID omitted adequate benchmarks for monitoring the achievement of the project. AID recognized the seriousness of problems belatedly and has not found remedies for the problems. (Section 2).

Results are disappointing if the services to be anticipated by poor Nicaraguans in the future are estimated based on the services actually being received. Nevertheless, the Loan has helped create an infrastructure for health services that could be more fruitfully used in the future than it is being used in the present. Despite low patient loads there have been some practical benefits to poor people from the Loan. They received medicines that would have been unavailable or much more expensive commercially. The medical services of Health Centers satisfactorily resolve many medical problems they are supposed to address, both curative and preventive, despite their severe handicaps. (Section 3).

The patient loads are disappointingly low in most Health Centers. Preventive medicine is not eagerly sought by poor Nicaraguans so it is necessary to actively "market" preventive medical services. The most effective approaches to expanding preventive care appear to be provision of cheap medicines, a doctor to cure sickness, free milk for children, and "active" programs that do not depend on patients coming to the Health Center (e.g., vaccination campaigns, sanitary inspectors, and education programs). The cost per patient service would drop significantly with increased patient loads since existing facilities and staffs could serve the extra patients with little additional expense. (Section 4).

There are management problems in virtually all the support systems necessary to sustain the Health Centers. The Managua earthquake diverted MSP resources and energy to restoring the Ministry and serving the medical needs of Managua but the problems usually antedate the earthquake. (Section 5.A).

The medicine system does not provide a reliable supply of medicines at prices appropriate to poor Nicaraguans. Many Health Centers received no medicines for six months or more because their line of credit for medicines was used up through donations and sales at "token" prices according to MSP policy. Centers with AID-financed medicines must sell them at prices far above the cost of replacement through JNAPS (although even the high MSP prices are usually well below retail prices for comparable medicines). The supply of AID medicines is being depleted without money to replace the AID-financed medicines; GON has not appropriated funds nor collected enough money through the sale of medicines. MSP has lost control over the medicines in the Health Centers and the personnel in the Centers do not know how they are supposed to order, control, sell, and donate medicines. (This evaluation has gotten MSP supervisors to the Health Centers to take physical inventories for MSP and to instruct personnel about what to do.) (Section 5.C.1).

The expensive equipment financed by the Loan brings little benefit to patients due to incomplete installation, lack of repair and maintenance, lack of technicians, and inappropriatenes. The Health Centers lack basic medical equipment; some items should be available from AID supplies in the warehouse but are not distributed; some are unavailable from AID supplies but not reordered. Laboratories are severely limited where they exist. Lack of typewriters and printed forms hamper record-keeping. Some equipment would be better used in hospitals. (Section 5.C.2). Vehicles are being used hard. Vehicles that were intended to be in departments away from Managua are assigned to diverse MSP divisions in Managua and not available to transport goods and supervisors to Health Centers. (Section 5.C.3).

Facilities are oversized relative to present low patient loads. Burglary has been a problem due to the lack of secure windows and fencing. Many Centers need cleaning, repairs, and maintenance but conditions are far better than in the older non-AID Centers. (Section 5.C.4).

Staffing falls far short of the original plans. There are 22 Health Centers without a doctor in November, 1973, 15 AID-financed and 7 others. The obligatory Social Service Law has induced young doctors to serve in "hardship" posts for six months, and this year many have continued voluntarily for additional service. Dependence on six month tours normally leaves six month gaps between doctors. Vacancies in other positions result from limited MSP budget to fill the posts. When low patient loads do not justify a full-time doctor, dentist, or laboratory technician, these professionals could serve less than full-time. Better supervision is needed to improve attendance, reduce chiseling, and eliminate conspicuously poor performers. Preventive medicine programs often depend on filling non-doctor vacancies to carry services outside the Health Center. (Section 5.C.5).

Supervision had been grossly neglected before the evaluation. The result has been that MSP did not know what was happening in the Centers and did not resolve problems in the Centers. MSP has now assigned supervisors to the job who are energetic and capable. The evaluation provided them the necessary transportation, per diem allowances, secretarial support, and management attention necessary for good supervision. They will need the same support after the artificial urgency of the evaluation has passed. (Section 5.C.6).

Lic. Villalta appears capable and energetic as the head of Administration (since early 1973). The Office of the AID Loan has not been able to

control the use of AID-financed goods effectively. When the Loan is fully disbursed, there will be no reason to maintain a separate office of the AID Loan if MSP could operate an integrated office with staff and with procedures appropriate to controlling the purchase, distribution, consumption of medicines and the systematic maintenance and replacement of equipment. (Section 5.C.7).

The CAM arrangement for warehousing has served its purpose adequately, protecting the MSP medicines and equipment from theft and incompetence prior to distribution to Health Centers. CAM is not perfect but losses are fully insured. The arrangement is liquidating itself as the supply of AID-financed goods is depleted. MSP has not paid the agreed ten percent charge for warehousing (C$318,398.18 at June 30, 1973). Health Centers complain that CAM shipments arrive "short" and CAM refuses all claims. The best approach for future Health Center procurement and warehousing needs appears to be transfer of AID-financed MSP goods to CAM in return for a line of credit of equal value. Collaboration with JNAPS has been minimal except for the CAM warehousing and defacto coordination at the local level. (Section 5.C.8).

USAID management of the Loan has been effective when focused on the construction and procurement aspects of the project but ineffective in getting GON to provide money and management talent sufficient to administer the project successfully. USAID suspended disbursement in November, 1971 to influence GON to remedy deficiencies in staffing and management; the suspension had little impact on these problems but postponed the second Special Center for Managua that would have aggravated the already observable problems. The low priority of this project for GON was known to USAID. However USAID failed to develop an effective combination of (a) clear and realistic benchmarks for

monitoring GON compliance, (b) credible sanctions, and (c) incentives for compliance. (Section 5.D.).

Recent improvements in MSP performance include purging of many "phantom employees" by Minister Valle-Lopez, increased willingness of doctors to serve in Health Centers until Managua's hospitals are rebuilt, the effective participation of MSP personnel in this evaluation, and the development of an effective supervisory group. (Section VI).

Recommended actions to improve performance of the Loan project are the following:

1. Restore the stocks of medicines in the Health Centers.
2. Lower the price of MSP medicines.
3. GON should restore the depleted stock of medicines by appropriating money in the MSP budget for medicines and for paying the obligation owed to CAM.
4. Extend the social service obligation for physicians to one year.
5. Increase the preventive medicine activities outside the Health Centers. As a minimum, every Center should have at least one person working most of the time outside the Center (e.g., sanitary inspector or health educator).
6. Put all AID-financed equipment in working condition promptly.
7. Assign all vehicles financed by AID to be used to directly support Health Center operations.
8. Establish maintenance and repair services to keep AID-financed equipment, vehicles, and buildings usable.
9. Establish and support an effective team of Supervisors visiting each Center approximately four times per year.
10. Establish a short monthly report from Health Centers on a preprinted form modeled after the Supervisor's Summary.
11. Discontinue the monthly progress reports to AID in their current form as soon as an improved format is developed which focuses on the operations of the Health Centers and their effectiveness.

Recommendations going beyond the Loan Project are the following:

12. Establish a "normal ordering cycle" for Health Centers to request medicine, equipment, and supervisory assistance.
13. Encourage MSP to use CAM for purchasing and warehousing its medicines and equipment.
14. Establish a Management Improvement Office in MSP to advise the Minister on how to make MSP more effective and more efficient.
15. Explore improved procedures for lowering the cost of medicines to Health Center patients.
16. Analyze the feasibility of extending Family Planning through all Health Centers and integrating Family Planning into the regular operations of the Health Centers.
17. Analyze and rationalize MSP's policies on financing of medicines.
18. Experiment with increased community participation in the affairs of the Health Centers.
19. Analyze and test the feasibility of operating Health Centers with less dependence on doctors.

(Section VII).

EXHIBIT I-1

THE NICARAGUAN HEALTH CENTERS VISITED DURING THE EVALUATION

Type	Center	Team*	Comments	Report Loc.**
	A. AID-FINANCED CENTERS			
I	1. Somotillo	PCI/MSP	Before uniform survey	A
	2. Granada	PCI/MSP		A
	3. Malpaisillo	MSP		W
	4. Monimbo	MSP/TC		W
	5. Bluefields	USAID/MSP		A
	6. Puerto Cabezas	USAID/MSP		A
	7. Waspam		Good inventory	
II	8. San Lorenzo	PCI/MSP		A
	9. Teustepe	PCI/MSP		A
	10. Posoltega	USAID/MSP		A
	11. Villa Somoza	MSP		W
	12. La Libertad	MSP		W
	13. Santo Domingo	MSP		W
	14. Acoyapa	MSP		W
	15. Santa Teresa	PCI/MSP		A
	16. Condega	MSP		W
	17. Pueblo Nuevo	PCI/MSP/USAID	Before uniform survey	
	18. Diriomo	MSP		W
	19. Yali	MSP		W
	20. Tipitapa	PCI/MSP		A
	21. Achuapa			
	22. San Rafael del Sur	USAID/MSP		A
	23. La Concepcion	USAID/MSP		A
	24. Niquinohomo	MSP		W
	25. Matiguas	MSP		W
III	26. San Jose de los Remates	MSP		W
	27. Santa Lucia	PCI/MSP		A
	28. El Realejo	MSP		W
	29. Villanueva	MSP		W
	30. Santo Tomas del Norte	PCI/MSP		A
	31. San Pedro del Lovago	MSP	Note difficulty in visit	W
	32. La Conquista	USAID/MSP		A
	33. Diria	MSP		W
	34. Santa Rosa del Penon	MSP		W
	35. Telica	PCI/MSP		A
	36. Mateare	USAID/MSP		A
	37. San Francisco del Carnicero	PCI/MSP		A
	38. La Concordia	MSP		W
	39. Catarina	PCI/USAID/MSP	Training Interviewers	A
	40. Tisma	PCI/MSP		W
	41. San Isidro	PCI/MSP/USAID	Before uniform survey	
	42. Sebaco	MSP		W
	43. Esquipulas	MSP		W
	44. Terrabona	MSP		W
	45. San Miguelito		Good inventory	

Exhibit 1-1 (cont.)

Type	Center	Team *	Comments	Report Loc.**
III	46. San Jose de Cusmapa			
	47. San Juan del Rio Coco			
	48. Santa Maria			
	49. Murra			
	50. San Fernando	MSP		W
	51. Altagracia		Good inventory	
	52. Morrito		Good inventory	
	53. Corn Island		Good inventory	
Esp.	54. Hope Portocarrero de Somoza	PCI/USAID/MSP		
Esp.	55. Palacaquina	PCI/MSP/USAID	Before uniform survey	
	B. PUMAR			
	P1 PUMAR/Matagalpa	TC		W
	P2 PUMAR/Rivas			
	P3 PUMAR/Leon			
	P4 PUMAR/San Carlos			
	P5 PUMAR/Rio Escondido			
	P6 PUMAR/Granada	PCI/MSP		A
	P7 PUMAR/Prinzapolka			
	P8 PUMAR/San Juan Rio Coco			
	P9 PUMAR/Puerto Cabezas	MSP		W
	P10 PUMAR/Ocotal, N.S.	TC		W
	P11 PUMAR/Chontales			
	C. OTHER HEALTH CENTERS (AID Medicines and equipment)			
	56. Boaco			
	57. Camoapa			
	58. Jinotepe	TC		W
	59. Diriamba	TC		W
	60. San Marcos	TC		W
	61. Chinandaga			
	62. San Francisco del Norte			
	63. Chichigalpa			
	64. Cinco Pinos			
	65. Corinto			
	66. El Viejo			
	67. Tonala			
	68. Puerto Potosi			
	69. Juigalpa			
	70. Santo Tomas			
	71. Comalpa			
	72. Esteli	TC		W
	73. La Trinidad	TC		W
	74. San Juan de Limay	TC		W

Exhibit 1-1 (cont.)

Type	Center	Team *	Comments	Report Loc.**
	75. Nandaime	TC		W
	76. Granada (#2)			
	77. Jinotega	TC		W
	78. San Rafeal del Norte	TC		W
	79. Leon Regional			
	80. Centro de Salud L.H. Debayle			
	81. Centro de Salud Mantica Berio			
	82. El Sauce	TC		W
	83. La Paz Centro	TC		W
	84. Nagorate			
	85. Puerto Samoza			
	86. Somato			
	87. Telpaneca			
	88. Tocogalpa			
	89. Masaya			
	90. Masatepe	TC		W
	91. San Juan de Criente			
	92. Nindiri			
	93. Matagalpa	TC		W
	94. Muy Muy			
	95. Ciudad Dario	TC		W
	96. San Dionisio			
	97. Ocotal	TC		W
	98. El Jicaro			
	99. Jalapa	TC		W
	100. Quilali			
	101. San Carlos			
	102. Rivas	TC		W
	103. San Jorje	TC		W
	104. Tola	TC		W
	105. Cardenas			
	106. Moyogalpa			
	107. Guadalupe	TC		W
	108. Belen	TC		W
	109. Potosi	TC		W
	110. San Juan del Sur	TC		W
	111. Bonanza			
	112. Siuna			
	113. Rama	TC		W
	114. Tasba-Raya			
	115. Nueva Guinea			
	116. Villa El Carmen	TC		W

* Team Composition Abbreviations: PCI=Practical Concepts Incorporated; USAID= USAID; MSP=Ministerio de Salud Publica; TC=Tribunal de Cuentas

** Report Location Code: A=Supervisor's Report is in Appendix B of Final Report; W=Supervisor's Report is included with working papers submitted separately to USAID/Nicaragua.

Exhibit I-2

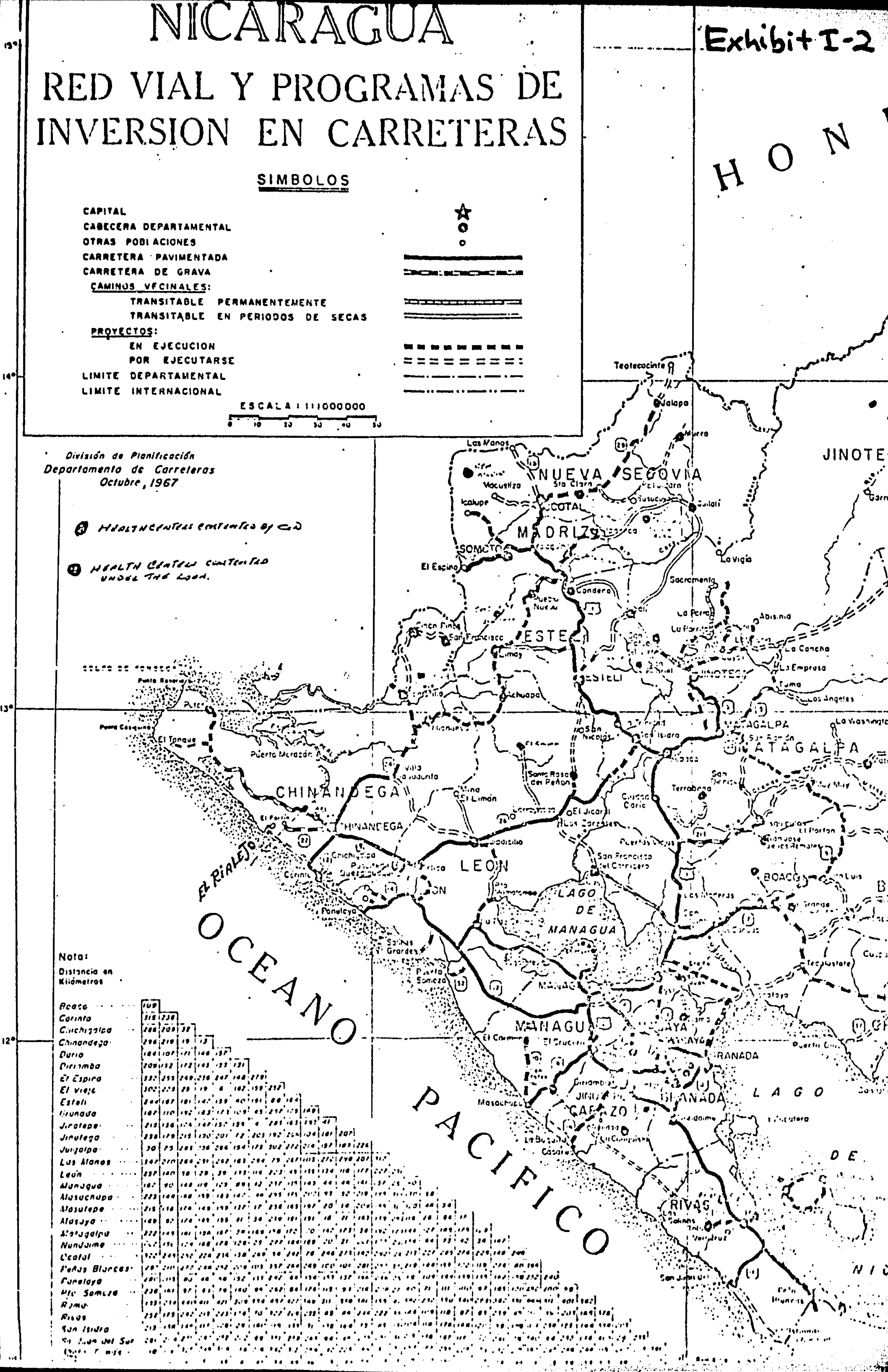
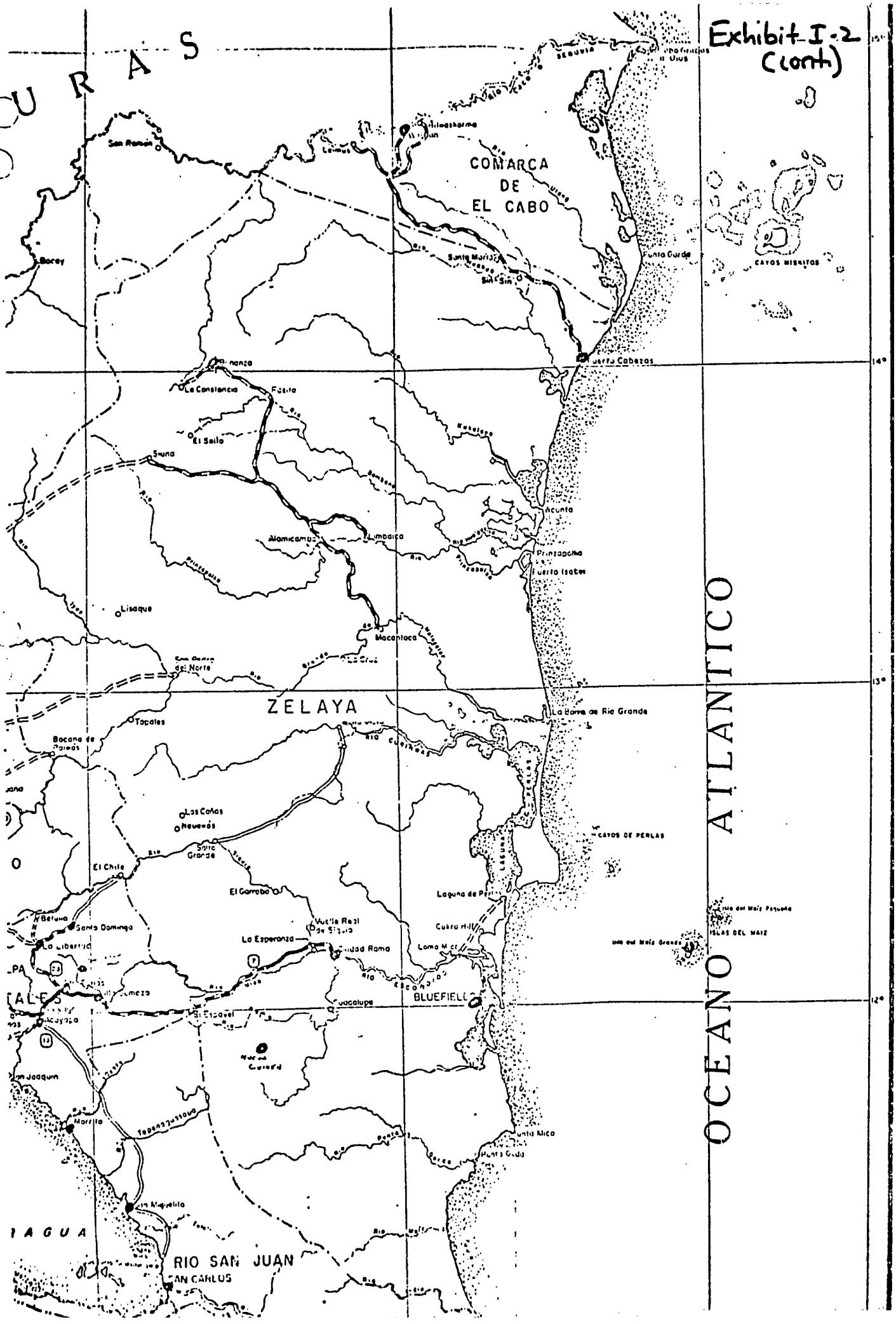

NICARAGUA
RED VIAL Y PROGRAMAS DE INVERSION EN CARRETERAS
SIMBOLOS
CAPITAL
CABECERA DEPARTAMENTAL
OTRAS POBLACIONES
CARRETERA PAVIMENTADA
CARRETERA DE GRAVA
CAMINOS VECINALES:
TRANSITABLE PERMANENTEMENTE
TRANSITABLE EN PERIODOS DE SECAS
PROYECTOS:
EN EJECUCION
POR EJECUTARSE
LIMITE DEPARTAMENTAL
LIMITE INTERNACIONAL
ESCALA 1:1000000
División de Planificación
Departamento de Carreteras
Octubre, 1967
HEALTH CENTERS CONTENTED BY GN
HEALTH CENTERS CONTEMPLATED UNDER THE LOAN
HON
JINOTE
NUEVA SEGOVIA
MADRIZ
ESTELI
CHINANDEGA
LEON
LAGO DE MANAGUA
MANAGUA
GRANADA
CARAZO
RIVAS
MATAGALPA
BOACO
OCEANO PACIFICO
EL RIALEJO
LAGO DE
Teotecacinte
Jalapa
Las Manos
Ocotal
Somoto
El Espino
Condega
San Francisco
Limay
Achuapa
El Tanque
Puerto Morazán
El Sauce
Santa Rosa del Peñon
El Jicaral
Corinto
Poneloya
Salinas Grandes
Puerto Somoza
Masachapa
La Boquita
Casares
Jinotepe
San Juan del Sur
Peñas Blancas
Terrabona
Ciudad Dario
San Francisco del Carnicero
Las Banderas
San Lorenzo
Teustepe
Tipitapa
Masaya
Sacramento
La Concha
La Empresa
Tuma
Los Angeles
Abisinia
Nota:
Distancia en Kilómetros

Exhibit I-2 (cont)



SECTION TWO

USE OF THE LOAN

A. SUMMARY

The Loan has been used for its intended purpose -- "to bring medical services, preventive and curative, to a much larger percentage of the population of Nicaragua than is presently (i.e. 1968) being served, especially in rural areas."

B. THE LOAN AGREEMENT

The objectives and strategy for the Health Centers Loan Project are crisply summarized in Article I of the Loan Agreement.

> "Section 1.1 The Loan.
>
> AID agrees to lend to Borrower in furtherance of the Alliance for Progress and pursuant to the Foreign Assistance Act of 1961, as amended, an amount not to exceed two million two hundred thousand United States dollars ($2,200,000) ("Loan") to assist Borrower in carrying out the Project as defined in Section 1.2 ("project"). The Loan shall be used exclusively to finance United States dollar costs of goods and services required for the Project ("Dollar Costs") and Central American Common Market costs of goods and services required for the Project ("Cordoba Costs"). The aggregate amount of disbursements under the Loan is hereinafter referred to as "Principal".
>
> "Section 1.2 The Project.
>
> The Project will bring medical services preventive and curative, to a much larger percentage of the population of Nicaragua than is presently being served, especially in rural areas. The Project will consist of:
>
> (a) the construction, staffing, equipping, and providing with medicines of 56 new health centers and the improving of existing health centers;
>
> (b) the continuation and strengthening of the Rural Mobile Health Program ("PUMAR") by providing necessary new vehicles, equipment and medicines;

(c) the incorporation, as an integral part of the project of newly graduated physicians and other university trained medical personnel under the obligatory Social Service Law of Nicaragua.

"Another important purpose of the Project is to achieve better coordination and integration of health activities carried out by the various public health agencies by strengthening existing coordinating mechanisms and implementing already existing legislation which provides for coordination at both national and local levels.

"Through the Project it is expected that basic health facilities will be expanded to cover areas with an estimated total population of 1,500,000 by the end of the loan disbursement period; i.e., approximately 80% of the projected total Nicaraguan population of 1971.

"The Ministerio de Salud Publica (MSP) will have primary responsibility for execution of the Project, but responsibility for the construction aspects of the Project will rest in the National Construction Office ("CN") of the Ministry of Public Works.

"Proceeds of the Loan will finance capital investment and medicine procurement under the Project; Borrower will contribute all the Cordoba Costs for operation of health centers and PUMAR units both during and after the Loan disbursement period and approximately $58,000 or its equivalent in cordobas for engineering services required in connection with the design and construction of the Health Centers."

C. BRIEF HISTORY OF COMPLIANCE WITH SECTION I OF THE LOAN AGREEMENT

The Loan Agreement for $2,200,000 was signed on August 23, 1968 by the Government of the Republic of Nigaragua (GON) and the U.S. Agency for International Development (USAID). Disbursements were suspended on the Managua Special Center #2 on November 8, 1971. The suspension was intended to press MSP to deliver medicines and equipment to the Health Centers and PUMAR, to inventory what was already there, and

to provide adequate staff.* The destruction of health facilities in Managua during the Managua earthquake of December 23, 1972 led USAID to reconsider and permit disbursements for the Special Center (a very large facility). On April 27, 1973 the Loan was amended to permit reallocation of funds that had not been spent for medicines to replace four small health centers in Managua that were destroyed in the earthquake.

The original deadline for disbursements, August 23, 1971, has been extended three times. It is anticipated that another extension to mid-1974 will be necessary to complete the last of the original 56 Health Centers (Managua-Special Center #2) and the four additional centers for Managua. A summary of the construction work and actual costs appears in Appendix A, Table A-1. The commodities financed by AID under the loan totalled US$946,418.42 on June 28, 1973. Table A-2 in the Appendix shows the composition of the commodities by type, separating the Health Centers from PUMAR, and distinguishing stocks at the CAM warehouse from distributions to the Health Centers and PUMAR units.

The Centers have never been staffed fully as anticipated in the Capital Assistance Paper.** The Government of Nicaragua (GON) implemented the obligatory Social Service Law. One hundred forty-six newly graduated doctors have served six months in a health center after completing their hospital work in order to receive final approval of their medical degree. Table 5-6 summarizes the number of doctors providing obligatory service from 1970-1973. Eighteen of the thirty-six social service doctors voluntarily extended their service after the obligatory period ended in September, 1973.*** The coordination and integration of health

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* Source: letter to Minister Orcayo Maliano from Director Haynes, November 8, 1971.

** Further discussion appears in Section 5.C.5.

*** Further discussion appears in Section 5.C.5.

activities, described as an important purpose of the loan, has been little affected by the project. The only important cooperation was forced on the MSP and JNAPS; namely, the warehousing of MSP medicines by the Centro de Abastecimientos de Medicinas (CAM). The forced cooperation had not created a "success model" for fruitful coordination by November, 1973.*

Basic health facilities have been expanded to cover areas that previously lacked comparable basic health facilities. However, claiming coverage of 1,500,000 people would be meaningless since there is no easy and objective measure of the number of people close enough to a Center to benefit from it.

The evaluation study included an empirical analysis of the "catchment area" from most Centers visited by a PCI/MSP team or a USAID/MSP team. The area actually served by a health center varied dramatically in size. Our random samples included patients at many Centers coming 30 to 40 kilometers to the Health Center. The Center at Somotillo in Chinandaga receives patients from a radius of about 8 miles as do many other Centers in sparsely settled areas. In densely settled Masaya the Health Centers may be as close as 3 kilometers (Catarina and Niquinomo). The main determinant of the size and shape of the catchment area appears to be alternative sources of medical care for poor people. The catchment areas are asymmetrical when there are Health Centers nearby on one side. Unfortunately, population data in Nicaragua are not analyzed into small enough geographic areas to estimate the population in the "catchment areas." A special analysis could be done in a Health Sector Study to identify important gaps in coverage.

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* Further discussion appears in Section 5.C.1 and 5.C.8.

SECTION THREE

BENEFITS TO NICARAGUAN PATIENTS

A. SUMMARY

The Health Centers Loan has created an infrastructure for health services that could be more fruitfully used in the future than it is being used at the present. Despite low patient loads, the Loan has provided poor Nicaraguans medicines through the Health Centers that would have been unavailable or much more expensive commercially. Also despite the severe handicaps on the Health Centers, their medical services satisfactorily resolve many medical problems, both curative and preventive, that they were supposed to address.

B. INFRASTRUCTURE

The AID Loan financed construction of 55 Health Centers and will finance five more according to present plans. These buildings have been built and are being used for Health Centers, even though the deficiencies in the supporting systmes have handicapped their operations. Improving the support system should be an easier task than creating the system from nothing. The Health Centers proved particularly valuable in handling earthquake refugees who were displaced all over Nicaragua after the disaster of December 23, 1972. The population of Tipitapa doubled in a few weeks. The displaced people, often destitute, were able to turn to the existing Health Centers for health care.

C. ATTITUDES OF POTENTIAL PATIENTS AND ALCALDES

The Health Centers appear to serve their communities despite bad performances in some places. PCI and USAID evaluators interviewed the Alcaldes in twenty-two communities regarding the contributions of the

Health Centers, problems, and suggestions on how to improve it. The results were generally favorable. Specific comments are summarized in Table 3-1.

Interviews with seventy-seven patients and potential patients were conducted near the twenty-two Health Centers visited by PCI or USAID evaluators. The interviews covered general questions, knowledge of the Center, use of the Center and attitudes, how they learned about the Center, alternative costs for medicine and consultations, and finally, a socio-economic profile of the people interviewed. The results are summarized in Table 3-2. The patient interviews indicated:

- Patients go to the Centers for sickness (57) and vaccinations (10);
- The services they mention most frequently are medicines (28) and vaccines (24);
- They know the hours are in the morning (62);
- The names of Center staff are not known by most: Doctor known (33), Auxiliary Nurse (30);
- Patients use some Center services heavily -- vaccinations (57) and sickness assistance (41); other services are seldom obtained at Health Centers -- prenatal care (9), post-partum care (6), and family planning (8);
- The price of medicines are considered low or free (42);
- The cost of consultations outside the Health Center are usually 5-20 Cordobas;
- The patients are poor people, usually mothers and children.

TABLE 3-1

COMMENTS BY ALCALDES IN TWENTY TWO COMMUNITIES SERVED BY NICARAGUAN HEALTH CENTERS

I. CONTRIBUTION OF THE HEALTH CENTERS

- good services;
- covering infant population with various vaccines;
- serving adult population with preventive and curative medicines;
- Registered and auxiliary nurse make frequent visits to homes and invite people to Center;
- Doctor doing splendid job; thinks he should have chance for more training (feels scholarships do not go to those who return to public health); Doctor gives own medicine away or at lower price in his private clinic;
- Doctor working to capacity and gives good attention;
- Doctor doing great job; generally happy with services; medicine sold at reasonable prives;
- Feels Doctor is alright; no major problems with center
- Seemed pleased with center;
- Doctor has much interest in her work; many people go to Center; Center provides milk; Center provides examinations; work of inspector is good; feels staff works well (beyond the regular schedule);
- Have consultations everyday; poor people get free medicines -- or so cheap it's like giving it away; employees very responsible; good building and service;
- Center doing best it can but can do nothing -- sit and write prescriptions; provides vaccinations and prescriptions; likes doctor but has little to work with;
- Feels Center of great utility for the community;
- Pleased with family planning program; pleased with the doctor and likes Center in general;
- Center is of great importance to community; have done many vaccinations; giving free care to earthquake victims; give prescriptions;
- Vaccinations, latrines;
- Good doctor and nurse -- previous doctor came very little but present doctor doing very good job;
- Feels center is a "nulidad" -- offers nothing and all staff should be replaced [doctor noted that since Alcalde cannot control center or the doctor, he is against the center]
- Environmental sanitation, inspect markets, exterminate rabid dogs, preventive and curative programs (especially of importance is "club de madres"; yes, it is meeting needs of poor people;
- Doctor comes late but always comes and takes care of everyone before he leaves; nurse good, auxiliary had child and did not return;

TABLE 3-1 (cont.)

II. PROBLEMS OF THE HEALTH CENTER

- Sanitary inspector does not do good inspections for animal slaughter; sanitary inspector does not inspect draining where sewage connected;
- Very little medical care given to indigents -- in some cases, patients he refers to center are not treated even though alcalde tells doctor he will pay for services; sanitary inspectors not doing proper job in explaining garbage disposal to people, inspecting slaughter activities, and market stalls;
- Not enough vaccines (e.g. measles); insufficient medicines (only give consultations); lack an ambulance (70km to nearest ambulance); needs equipment for emergencies; have X-Ray equipment but no dark room;
- Town relatively free from disease, real problem is HUNGER; need more medicines (vitamins, parasite medicine);
- Need medicine, people very poor so would like to have it given free; need greater variety of vaccinations, only have polio; Center staff should make home visits; no family planning information, people cannot afford to go to the town where services are provided; no milk; no laboratory; need fence around Center; no emergency vehicle; town government officials asked for dynamite and cement to help in latrine building program;
- Need a jeep;
- Need more medicine to give away (not know charge policy of center); malnutrition; problems with trash disposal and sewage; need latrines; [Evaluator's comment -- alcalde (woman) lives across street from center but has little idea of what is going on at center, has no professional relations with center, does not work together with it in any way; AMURT (American relief organization) was of great help with food and medicine until their money was gone);
- No major complaints, big improvement over last 12 years; depend on doctor who is only there for 6 months -- problem of how to hold doctor;
- Needs bed for emergencies; needs telephone; needs oxygen; need latrine program; needs ambulance; needs improved drinking water; population doubled since earthquake;
- Needs laboratory; should increase size of center to take care of those fleeing earthquake;
- Need more medicines; need more employees -- people leave without being attended to because doctor does not have enough time to see everyone; should give medicines and not sell them; need latrines; center deteriorating and went unfixed (glass broken, need lavoratories, translucent glass); need furniture in center (mayor had to talk personally to vice-minister to get what they have) so more people can sit during meetings;
- No laboratory; auxiliary nurse is generally hated, mistrusted, and dishonest (feels she does nothing, has caused trouble with personnel, especially conserje); no vaccines; swine run wild as do dogs; no slaughter facilities;
- Doctor comes only three times a week while nurse (auxiliary) comes every day, sometimes doctor cannot come because of rain; medicines have gone up in price;

TABLE 3-1 (cont.)

- Feels doctor generally removed from community, needs a public relations effort to get himself out of the center and develop better relationships with the inhabitants; need more medicine; problems with slaughter procedures; bad water; no laboratory;
- Need latrines; public slaughterhouse; more electricity; garbage collection; drain ditches (some underway)-- mayor has worked on these community projects with inspector;
- Need doctor; need medicines; no electricity, only able to have service at night when center is closed; gas refrigerator; more potable water; slaughter facilities; latrines; people died for stupid reasons, indicating inadequate care;
- Not enough medicines (problem: the center giving prescriptions causes delays to patient); too many patients for doctor; no MSP dentist, but one comes weekly and charges are reasonable;
- Have very little medicine; no control by the inspector; problem with latrines; need a doctor who wants to do a job; need laboratory; doctors should make home visits; few people come to center [Evaluator thinks alcalde had it against this Center no matter what it did];
- Need more medicines, especially for children; many prefer to go to private doctor even at considerable hardship; venereal disease;
- Need medicines, prescription no good if cannot buy; need laboratory, otherwise must go elsewhere and pay for transportation; for some maladies, do not have medicines at lower prices, give prescription but no money to buy it with; need dental set-up; no provision for emergency care, first aid -- hospital never seems to have beds for the people;
- People have lost faith in the Doctor because two patients died, they don't go to his private clinic nor the Health Center, he will leave at the end of September (1973).

III. HOW TO IMPROVE HEALTH CENTERS

- Push the latrine program; more education of people through films, especially family planning;
- Have doctor all year; have hospitalization facilities; mayor herself conducted a campaign informing people of center service;
- Aldaldia now building fence around center; get another auxiliary nurse;
- Have doctor work in morning (2 hours) and afternoon (2 hours) because poor people cannot always come in morning; set up a rotating fund to permit purchase of needed items; doctor should plan with his staff how to improve situation;
- More family planning services in Center; more hours of doctor to attend those from earthquake;
- Get new center staff; staff should hold town meetings to educate the population; [Evaluator thinks alcalde had it against Center no matter what it did];
- Need good pediatrician [Evaluator's note: Director of Health Center is a pediatrician]; more milk, vitamins, medicines.

TABLE 3-2

KNOWLEDGE, PRACTICES, AND ALTERNATIVES OF POTENTIAL PATIENTS OF NICARAGUAN HEALTH CENTERS -- 77 INTERVIEWS NEAR 22 HEALTH CENTERS -- SELECTED QUESTIONS AND NUMBER OF RESPONSES

I. General Questions

1. When do you go to the Health Center?
sickness - 33; vaccination -- 10; sick child - 24.

2. When do you go elsewhere?
never - 27; when services unavailable at Center - 11; when sick - 8; Hospital/Clinic - 9.

II. Knowledge of Center

3. Services Available? (patient volunteers knowledge)
medicines - 28; vaccines - 24; prescriptions - 11; consultations - 11; milk - 7.

4. Hours of the Center?
mornings - 62; afternoons - 3; don't know - 11;

5. What names are known?
Doctor - 33; Nurse - 20; Auxiliary Nurse - 30; inspector - 12; all others - 15; no one - 12.

III. Use of the Center - for what services?

		Yes, at Center	Yes, elsewhere	No
6.	Vaccinated?	57	6	8
7.	Prenatal Care?	9	13	37
8.	Post-partum care?	6	9	43
9.	Family Planning Advice?	8	5	43
10.	Sickness Assistance?	41	17	11

11. How Learned About the Center?
General knowledge- 29; visits to home - 18; announcements - 6; other - 11

12. Has anyone come from Center? Who?
No one - 29; Auxiliary Nurse or Visitadora - 22; Nurse - 7; Inspector - 5; Doctor - 3; others - 3.

13. When was last visit to Health Center?
Less than one month - 43; 1-6 months - 14; 7+ months - 10.

14. Services Received on last visit?
Medicines - 39; Consultation - 35; Injection - 15; Prescription 14; Vaccine - 8; Lab Test - 2; Milk - 1; Nothing - 1.

TABLE 3-2 (cont.)

IV. Alternatives

15. Medicine Prices at Center regarded: High - 5; Normal - 3; Low/Free - 42; Don't Know or No Medicines at Center - 9.

16. Cost of Consultations Outside Center? Less Than 5 Cordobas - 3; 5-10 Cordobas - 20; 11-20 Cordobas - 24; over 20 Cordobas - 11; Don't Know or No Doctor Regardless of price - 13.

V. Profile of Interviewees

17. Number of Children in Family? None - 3; 1-4 Children - 28; 5-10 Children - 38; 11 or more - 4.

18. Can Read Newspaper? Yes - 60; No - 8.

19. General Health? Good - 45; Average - 15; Poor - 10.

20. Sex? Woman - 57; Man - 17; Child - 3.

21. Age? Under 25 - 15 people; 25-50 - 40 people; Over 50- 18 people.

22. Distance from Center? Less than 1 block - 4; 1-5 blocks - 57; More than 5 blocks - 11.

23. House Condition? City - 2; Town - 24; Rustic - 34.

24. Economic Status of Interviewee? Well off - 0; Average - 16; Poor - 43.

Source: Home interviews conducted during evaluations in September - November, 1973 by Practical Concepts Incorporated and USAID/Nicaragua officers. Patients were selected at random from the daily register of the Health Centers. Non-patients were interviewed in nearby homes. Patients far from the Health Center were not interviewed. Patients were also selected from MCH clinic records.

D. CHEAP MEDICINES

The Centers (and PUMAR units) provide cheap medicines, (sometimes free) and cheap doctor and nurse consultations (not always free). Poor people appear to come to the Centers for cheap medicine and free milk (not part of the loan), more than because a doctor is present. The prices for medicines at the Centers have varied from free (for everyone after the earthquake, and selectively at other times) to nominal charges (two Cordobas for consultation and all medicines prescribed) to substantial charges that range up to the cost in a pharmacy or grocery store (where even dangerous medicines are sold without supervision). The AID loan was the source of many cheap medicines; donations from other sources after the earthquake were an important, non-recurring benefit in 1973.

When the Centers lack cheap medicines, as many Centers lack them now and have lacked them for many months, the patients stay away in large numbers. They appear to see little benefit in consulting a doctor who can only write them a prescription for expensive medicines they cannot afford to buy.

The evaluators tried to quantify the benefit from the cheap medicines. A gross value of the AID-financed medicines distributed to poor people is in the range from C$345,874 to C$2,117,290. The higher estimate uses the Managua retail value of the AID-financed medicines. The lower estimate uses the replacement cost at which MSP could buy comparable medicines through CAM. MSP's current selling prices are between these limits. Table 3-3 shows (a) the relationship of MSP prices to JNAPS prices and (b) the realtionship of MSP prices to MSP costs (excluding the 10% warehousing fee to CAM). The savings to poor people are reduced by C$431,853 paid by patients and properly deposited in Bank Account 6645 through September, 1973 for purchasing additional medicines. The net benefit implied by these calculations is the value of medicines distributed to patients less the payments made for the medicines. The

TABLE 3-3

THE MSP SALES PRICE FOR AID-FINANCED MEDICINES
COMPARED TO THE JNAPS PRICE FOR COMPARABLE MEDICINES
AND COMPARED TO MSP'S COST

Código	Nombre	Unds	Código [illegible]	Nombre	Uns	Precio Venta MSP	Precio Venta [illegible]	Dif. + (-)	% + (-)	Precio Costo MSP	Precio Venta MSP	Dif + (-)
[illegible]-[illegible]	[illegible]tambea [illegible]intura	Pts.	101[illegible]	[illegible]rthiolate	Pta.	5.[illegible]	[illegible]	[illegible]	4[illegible]	3.59	5.50	([illegible]1.09)
MSP-010	[illegible] de [illegible]cin	Fco.	1013[illegible]1	[illegible]cin Un[illegible]nto	Fco.	[illegible].00	[illegible]	.[illegible]11	[illegible].07	14.53	30.00	1[illegible].[illegible]
MSP-0[illegible]	Sulfadiazina	Tabs	1015[illegible]	Sulfadiazina	Tabs	0.10	0.033	0.0[illegible]	67.00	0.0[illegible]	0.10	0.072
MSP-013	[illegible]cort Ungüento	Tubo	113910	[illegible]codesil	Tubo	3.00	1.506	1.[illegible]	4[illegible]	5.4[illegible]	[illegible].00	([illegible].4[illegible])
MSP-014	[illegible]ercilina Plus	Fco.	101[illegible]45	Penicilina	Fco.	1.00	0.45	0.55	55.00	0.[illegible]7	1.00	[illegible]
MSP-015	[illegible]ciclin V. Jarabe	Fco.	191473	Tetraciclina Sus.	Fco.	4.00	1.[illegible]19	[illegible].731	6[illegible].5	9.24	4.00	([illegible].2[illegible])
MSP-0[illegible]	Donnatal	Tabs	109[illegible]	[illegible]olina	Tabs	0.20	0.10	0.10	50.00	0.0[illegible]	0.20	0.1[illegible]
MSP-107	[illegible]cin	Pta.	191469	[illegible]cido[illegible]cina	Pta.	12.00	3.37	8.63	71.9	[illegible]	12.00	([illegible].5[illegible])
MSP-10[illegible]	Renese R. [illegible] mg.	Tabs	107155	Hidroclorotiazida	Tabs	0.50	0.04	0.46	92.00	0.3[illegible]	0.50	0.12
MSP-10[illegible]	Diabinese 100 mg.	Tabs	10[illegible]5	Clorpropamida	Tabs	0.50	0.2[illegible]	0.[illegible]	40.4	0.30	0.50	0.[illegible]
MSP-110	Visine de 1/2 Onza	Fco.	111225	Cortison [illegible]	Fco.	5.00	1.80	3.20	64.00	6.5[illegible]	5.00	(1.5[illegible])
MSP-111	Otos [illegible]osen	Fco.	111215	[illegible]icetina Otica	Fco.	3.00	1.5[illegible]	1.5[illegible]	[illegible].4	3.41	3.00	(0.41)
MSP-112	Aldrox	Tabs	102115	Aldrox	Tabs	0.10	0.04	0.05	60.00	0.0372	0.10	0.0[illegible]
MSP-113	[illegible]cetacil 6-3-3	Fco.	190150	[illegible]cetacil 6-3-3	Fco.	10.00	3.845	6.154	61.54	71.12	10.00	(61.12)
MSP-114	Antiveneno Ofídico	Tubo	101120	Antiveneno Ofídi	Tubo	35.00	35.00	-0-	-0-	52.45	35.00	(17.45)
MSP-14[illegible]	[illegible] Expectorante	Pta.	[illegible]1	[illegible] Expector.	Pta.	6.00	[illegible]	3.4[illegible]	57.00	7.[illegible]	6.00	(1.[illegible])
MSP-14[illegible]	Caladryl de 6 Onzas	Fco.	113715	Caladryl	Fco.	3.50	[illegible].65	0.[illegible]	[illegible].2[illegible]	2.31	3.50	1.19
[illegible]	[illegible]	Fco.	10[illegible]	Extracto de [illegible]	Fco.	3.00	0.8[illegible]	[illegible]	7[illegible]	2.11	3.00	0.89
[illegible]	[illegible]	Tabs	101410	[illegible]	Tabs	0.10	0.0[illegible]	0.0[illegible]	[illegible]	0.0[illegible]	0.10	0.0[illegible]
[illegible]	[illegible] mg.	Tabs	101[illegible]10	Sulfa[illegible]	Tabs	0.[illegible]	0.05	[illegible]	[illegible]	0.[illegible]	0.[illegible]	(0.00[illegible])
MSP-1[illegible]	Sol. Clorhidrato Acua.	Ampa	109110	[illegible]cilina Acuosa	Ampa	1.00	0.417	0.5[illegible]	5[illegible]	0.51	1.00	0.49

TABLE 3-3 (cont.)

Código [illegible]	Nombre	Unds	Código JMAPS	Nombre	Und	Precio Venta MSP	Precio Venta JMAPS	Dif. +(-)	% +(-)	Precio Costo FSP	Precio Venta FSP	Dif. + (-)
[illegible]SI-151	Vitamina C	Tabs	103211	Vitamina C	Tabs	0.10	[illegible]	0.07	76	[illegible]	[illegible]	[illegible]
[illegible]-152	Cloromycetin 250 mg.	Caps	[illegible]	Cloranfenicol	Caps	0.40	0.10	0.30	75	[illegible]	0.40	0.08
[illegible]	[illegible] Sirope	Gln	[illegible]	Benyl Jarabe	Gln.	64.00	[illegible]	45.42	[illegible]	29.44	64.00	[illegible]
[illegible]	Jalea Lubricante [illegible]	Tubo	[illegible]	Jalea Lubricante	Tubo	[illegible]	[illegible]	[illegible]	4	1.72	3.00	[illegible]
[illegible]	Aspirina	Tabs	[illegible]	Aspirina Adulto	Tabs	0.05	0.01	0.04	80	[illegible]	0.05	0.041
[illegible]	[illegible]	Caps	[illegible]	Multivitam y Min	Caps	0.200	0.019	[illegible]	[illegible]	[illegible]	0.20	[illegible]
[illegible]	[illegible] de 100 mg.	Gln.	[illegible]	[illegible] Jarabe	Gln.	64.00	[illegible]	[illegible]	71	64.04	64.00	(4.04)
[illegible]	[illegible] de 8 mg.	Tabs	[illegible]	[illegible] de 8 mg.	Tabs	1.00	[illegible]	[illegible]	47	[illegible]	1.00	[illegible]
[illegible]	[illegible] Elixer	Gln	[illegible]	[illegible] Jarabe	Gln	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	96.00	8.41
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10.13	[illegible]	[illegible]

Note: This Table was derived from Table A-3, Table A-4, and Table A-5 in the Appendix. The notes to Table A-3 will indicate the grossness of some assumptions used.

inventory of medicines still at the Health Centers has also been deducted. Table 3-4 shows the range of benefits to be between negative C$330,241.79 and positive C$1,443,174.66. These estimates include many gross approximations. The derivation of the estimates is shown in Appendix Tables A-3, A-4, and A-5. The inventories of medicines at the Health Centers were done during the evaluation in most cases. Supervisor Reports prepared at the time of the evaluation are included in Appendix B for sites visited by PCI or USAID evaluators.*

E. THE QUALITY OF HEALTH SERVICES AT NICARAGUAN HEALTH CENTERS

The main benefit from the Health Centers Loan should be resolving important health problems of poor Nicaraguans through preventive or curative medical services. The evaluation attempted to objectively verify the Quality of Health Services and the effects of the handicaps at the Health Centers.

The "quality" of the services provided by Health Centers was assessed, using an experimental approach described below. In brief, performance was uneven from one type of Center to another, from one Center to another of the same Type, and from one health situation to another.

The experimental approach to assessing the quality of health care was to analyze how Health Centers would respond to ten health situations that might confront a Health Center. The interview instrument appears in Exhibit 3-1. The doctor in each Center was asked what actually happens in his Health Center and separately to indicate "what he would like to do but cannot do," recognizing the constraints on many Health Centers such as the lack of X-Ray and laboratory equipment, the limited choice of medicines, etc. The Health Center responses were rated by a physician at MSP (and adjusted in some cases by the evaluator). The ratings were based on whether the actual services resolve the main health

*Other Supervisor reports have been submitted separately to USAID/Nicaragua as working papers.

TABLE 3-4

THE BENEFITS TO NICARAGUAN PATIENTS FROM AID-FINANCED MEDICINES DISTRIBUTED THROUGH HEALTH CENTERS AND PUMAR

	Using Managua Retail Prices	Using Replacement Cost through JNAPS
Value of Medicine Distributed from CAM to Health Centers and PUMAR through May, 1973	C$2,117,290.50	C$345,874.05
Less: Medicines not yet distributed to patients and undeposited patient payments	(242,262.63)	(242,262.63)
Less: Patient Payments - through September, 1973	(431,853.21)	(431,853.21)
Net Benefit to Patients	C$1,443,174.66	(C$ 330,241.79)

Centro _____

Medico _____

El propósito de esta encuesta es el de describir de una manera objetiva los servicios médicos curativos y preventivos tal como son. Suplicamos al médico escribir lo que pasaría hoy si los pacientes con las situaciones descritas se presentaran al centro. Favor de describir lo que el personal del centro hace al encontrarse esos casos, y no lo que se "debiera hacer".

Las autoridades superiores saben que los centros no tienen todas las facilidades óptimas, ya que frecuentemente no hay aparatos de rayos X, laboratorio asequible, ni las medicinas de su preferencia.

Sus respuestas fieles ayudarán a conocer mejor la situación y a entender mejor las consecuencias en la atención médica de las limitaciones que su centro tiene.

Situaciones	Presunto Diagnóstico	Pasos a tomar en su centro para confirmar diagnóstico	Tratamiento que se da en su centro, si Ud. sigue juzgando que el presunto diagnóstico es correcto	Lo que le gustaría hacer y no se puede.
1. niño: 3 meses pesó 4 Kg; temperatura 38 °C deshidratado diarrea 3 días.				
2. niño: 5 años Falta de energía distención del abdomen; no quiere comer				
3. Familia de 7 personas; padre tiene tos con sangre, demacrado, no quiere comer, estado general malo.				
4. Madre de 5 niños normales, 28 años; 5 meses embarazo; sin quejas busca cualquier asistencia pre-natal; primera visita.				

3-13
Exhibit 3-1

Exhibit 3-1 (cont.)

Situaciones	Presunto Diagnóstico	Pasos a tomar er su centro para confirmar diagnóstico	Tratamiento que se da en su centro, si Ud. sigue juzgando que el presunto diagnóstico es correcto	Lo que le gustaría hacer y no se puede.
5. Hombre: 35 años calentura de vez en cuando. Dolor en los huesos. La boca amarga.				
6. Señora: 25 años vagina sangrante; con coagulo dos días. Llega sola a las 6 p.m. desde casa a 5 Km. de distancia.				
7. Madre viene con 3 niños 5, 3, 1 años para vacunación contra parásitos.				
8. Nueva panadería abrirá en dos semanas.				
9. Hombre de 45 años tratado por TB 8 meses regularmente; no viene desde hace dos meses. Vive a 5 kms. del Centro.				
10. Niño de 18 meses, temperatura 39 °C, tos, esputo.				

problems (rated 2), provide some benefit but fail to resolve the main health problem (rated 1), no benefits but no harm (rated 0), or in the worst case, "lack of treatment, follow-up or referral make it likely the illness will get worse and/or be transmitted to others" (rated negative). When "preventive medicine" services were appropriate in addition to "curative services", the Health Center had to provide both for the "two" rating, i.e. "resolving the main health problem."

The results of the "Quality" analysis are summarized in Table 3-15 Greater detail is available on request. The results are interpreted briefly below:

- Gastroenteritis (#1), parasitosis (#2), and upper respiratory inflections (#10) would be treated satisfactorily in Health Centers of all types. When a Center lacked lab facilities to confirm the diagnosis for parasites, they prescribed Piperex for the presumed problem, Ascaris. There is little risk of side effects from Piperex; negative ratings were in Centers where no treatment was given. In four cases medicines were prescribed but not available at the Center; in these cases, satisfactory results would follow only for patients who could and did buy the prescribed medicines.
- Tuberculosis (#3), Prenatal Care (#4) and Malaria (#5) situations all provided opportunities for treatment plus preventive medical services. Ten Centers treated the TB patient and also planned to test the other six members of the family too; ten other Centers overlooked the rest of the family; one Center did nothing. The pregnant mother would have received some help in all 21 Centers, but only nine mentioned setting up subsequent appointments to control the pregnancy. The malaria symptoms led to appropriate tests and treatment in 12 Centers, although the tests and/or medicines had to be obtained elsewhere in 4 cases. Three Centers treated the symptoms without taking slides for reporting to SNEM to support the eradication campaign. The malaria symptoms were not recognized in several centers; diagnoses included "syphilis", "TB, rheumatic fever, or typhoid", and "rheumatism or colecistis chronica." Aspirin was prescribed. Four Centers were rated negative.

- Preventive Medicine was appropriate in situations #7, #8, and #9. The impossible request for "vaccination against parasites" (#7) was recognized in eight Centers as an opportunity for education, testing and treating for parasites, and providing other vaccinations for the children. Ten other Centers provided treatment for parasites or vaccination or education. Three Centers provided nothing. The Bakery (#8) led five Centers to both test employees for communicable diseases and also inspect for environmental contamination. Ten Centers omitted the employees, six omitted the environment and one omitted both. Eighteen Centers indicated the TB Follow-up situation (#9) would result in someone going to find the patient. Only two said no one would go. (Probably actual performance would be much poorer on this situation due to failure to recognize the problem and actually follow through on it.)
- The question about the presumed abortion patient arriving at 6 P.M. was a bit too tricky. Health Centers would be closed at 6 P.M. but in towns where the Doctor lived nearby, the patient could be sent to the Doctor's house. Referral to a hospital was considered appropriate in five Centers, complete rest in five others. There were several Centers where abortion was not among the likely diagnosis.
- The problems of the Health Centers included no Doctor, no inspector, no medicines, no lab equipment, no X-Ray, no laboratory technician, and poor access to hospitals. The Centers' hours are shorter than a hospital's emergency room service; bad diagnoses and omitting important preventive services were common.
- The recorded responses should be interpreted as "the best the Center could do under the circumstances" -- actual service may be far worse.

TABLE 3-5

QUALITY OF HEALTH CARE IN NICARAGUAN HEALTH CENTERS

Situation	Special Center A	Type I				Type II				
		B	C	D	E	F	G	H	I	J
Gastroenteritis	2	2	neg-2[A]	1	NA	2	2	neg	2	2
Parasitosis	2	2	NA	2	NA	neg-1[A]	2	neg	2	2
TB	1	1	NA	2	NA	2	1	1	1	2
Prenatal Care	1	2	NA	1	NA	2	1	2	2	1
Malaria	2	0-neg[D]	NA	2	NA	2	NA-2[L]	2	neg-1[A]	NA
Abortion[T]	NA-2	neg-1[D]	NA	NA-2	NA	neg-NA	neg	neg	neg-NA	NA-neg
Education, Prevention Curative	1	2	NA	2	NA	2	2	1	1	1
Bakery	1	1	NA	2	NA	1	1	1	1	1
TB Follow-up	2	2	NA	2	NA	2	2	2	2	2
Respiratory	2	2	NA	2	NA	2	2	2	0-1[A]	NA

RATING SCALE:

3= Equivalent to best care in Nicaragua;
2= Satisfactory resolution of the major health problem, lacking only refinements and subtleties;
1= Some benefit from consultation but fails to resolve the major health problem;
0= No benefit and no harm done;
neg= Lack of treatment, follow-up, or referral make it likely illness will get worse and/or be transmitted to others;
NA= Other response; No information; Inappropriate response; Unable to rate response.

Notes:

A= Patient receives prescription; the higher rating applies only if the medicine is available commercially and patient can afford to buy it and in fact gets the medicine and uses it properly, otherwise, the lower rating applies. Also used for referral to hospital for treatment;
D= Depends on the diagnosis;
L= Unclear if lack of lab results in not doing test or sending for test elsewhere;
T= Time of day; first rating is for night visit; many Centers did not note patient arriving at 6 p.m. when Center is closed; others correctly indicate poorer attention for 6 p.m. arrival than in normal hours.

TABLE 3-5 (cont.)

Type II			Type III										PUMAR
K	L	M	N	O	P	Q	R	S	T	U	V	W	X
2	2	2	2	2	2	2	2	NA	2	2	2	2	2
2	2	2	2	2	2	2	2	NA	2	2	2	2	2
2	1	2	neg	1	1	2	2	NA	1	1	2	2	2
1	2	1	2	2	1	2	1	NA	1	2	1	1	1
neg	NA-2	2	neg	2	2	1	2	NA	0-2[A]	neg	2	1	1-2
neg-neg	NA-2	2	neg	1	neg	neg-neg	0-2[A]	NA	neg-1	1-1	neg-2[A]	neg-1	neg-N
0	2	2	1	1	0	1	1-2[A]	NA	1	2	0	1	1
2	2	1	1	1	1	1	2	NA	1	2	1	0	1
NA	2	2	neg	2	2	2	2	NA	2	1-2[A]	2	2	neg
2	2	2	2[D]	2	2	2	2	NA	1-2[A]	2	NA	NA	2

F. EVALUATION FOCUSED ON EFFECTS OF THE LOAN OUTSIDE MANAGUA

The Loan has provided benefits to Managua as well as other parts of Nicaragua.

- The biggest single Center is in Managua (Hope Portocarrero de Somoza);
- The undisbursed balance of the Loan is being used to build five other centers in Managua. Four are replacements for health facilities destroyed by the earthquake and the fifth is a Special Center included in the original loan.

Nevertheless, the loan emphasizes serving rural areas, and the implicit orientation of USAID has been to narrow the gap between services available to people in Managua and in other parts of Nicaragua. The situation in Managua is easier to observe for USAID and MSP personnel and different in important respects from the problems elsewhere in Nicaragua:

- medical staff want to be near Managua;
- supervision is easier even though it is still inadequate;
- many alternative sources of medical care exist; and
- health problems may differ in the urban environment.

With these differences in mind, limited resources available for the evaluation were focused on the impact of the loan outside Managua.

SECTION FOUR

HIGH UNIT COSTS

A. SUMMARY

The patient loads are low at most Health Centers. Unit costs would drop significantly with an increase in patient load since existing facilities and staff could serve more patients with little extra expense.

B. LOW PATIENT LOAD

The overall patient load is low at most Centers. The evaluation teams noted at most Centers, both large and small, there were not enough patients to keep the staff fruitfully occupied in the Health Center.

The statistics on "patient services" in Table 4-1 were assembled from the 22 Health Centers observed during the evaluation to provide a more objective basis for judging the patient load.

TABLE 4-1

Patient Services in Nicaragua Health Centers

Type of Center	Average # of Services per month	Services/Day (column 2÷27 days)
Large (Type I)	2901	107.4
Medium (Type II)	1698	62.9
Small (Type III & Special)	1001	37.1
Telica (Most Active Type III Center)	3467	128.4

The Health Centers should have been operating 27 days in August (Monday - Saturday). The number of "services" counted is undoubtedly much greater than the number of "patients" served due to the double-counting involved (e.g. a child would be counted five times if he attended the well baby clinic, received free milk. a lab test, a vaccination, and was referred to the doctor).

For lack of a better standard of workload, a "busy" Type III Center in the sample, Telica, provides a measure of what is possible in a small Center without a graduate nurse, laboratory, secretary, or dentist. The Health Center at Telica has a good auxiliary nurse and, significantly perhaps, it has medicines available. The evaluators who visited Telica confirm that it was indeed an active program and not a mere statistical anomaly. The "busy" Type II Center at Santa Teresa is more of an anomaly; its 4103 patient services include 1988 anti-parasite treatments and 844 school children tests. The Center, however, has medicines and an aggressive "tyrannical" staff that get things done.

The statistics are crude approximations of reality but do reflect the low level of utilization. The basic source of the statistics (in most Centers) was the official monthly report sent to MSP. The evaluators adjusted the official statistics based on their on-site visit to conform as well as possible to the reality they observed. For example, "well baby" and "well mother" programs are omitted from the official statistics but were added for this analysis; educational talks were counted according to the number of listeners when known; and undocumented estimates were often accepted except when they appeared to be "made up on the spot." Data in three Centers were for months other than August. In most Centers the interviewers also "probed behind the statistics" to ascertain if the data from the Center was credible (i.e., inquiring about how a patient coming for a polio vaccination or a "well baby clinic" would be entered in the records and ultimately counted in the statistics).

C. THE PRODUCT MIX--CURATIVE AND PREVENTIVE SERVICES AND SERVICES OUTSIDE THE HEALTH CENTER

Patient services have been analyzed into three categories: curative in the Center, preventive in the Center, and services outside the Center. Health Centers provide both curative services (i.e., treating sick people for their illness) and preventive services (e.g., vaccinations, environmental sanitation, nutrition, education, and screening with laboratory tests). Although the organizational objective of the Ministry is "preventive medicine", the AID-Loan is explicitly intended to provide both curative and preventive services.

The "product mix" of the Health Centers visited during the evaluation is summarized in Table 4-2. The ratio of preventive to curative services in the smaller Type III Centers is higher than in the big Type I Centers. This finding was surprising since Type III Centers are typically farther from cities with hospitals and alternative sources of curative care. In Type I Centers it should be possible to allocate more effort to preventive care because sick people could go elsewhere. Further analysis would be justified to consider reallocations of money and effort to increase the preventive medicine services. For example, reducing the expenditures for doctor consultations to pay for more vaccinations, environmental sanitation, and education programs.

The Telica Health Center (Type III) was outstanding for its preventive care performance. 2338 patient services were provided in August, 1973. By comparison, three Type I Centers provided an average of 1338 preventive services per Center in August. The auxiliary nurse appears to deserve the credit.

The services provided outside the Health Center are separated for analysis because there is a group of public health thinkers (e.g., Dr. Ned Wallace of the University of Wisconsin) who advocate an aggressive, "active" role for carrying health services to the people. They argue that no preventive health program for poor people can be effective with a "passive" health staff waiting for patients to come to the Health Center. Table 4-1 shows that Health Centers are providing relatively few services outside the Health Center -- the range is from a high of 33.8% in Tipitapa to nothing in several Centers. The outside services that weigh heaviest in the

TABLE 4-2

ANALYSIS OF HEALTH SERVICES PROVIDED IN NICARAGUAN HEALTH CENTERS IN AUGUST, 1973

Type Center/Location	Services in the Clinic		Services Outside the Center	Total of cols.1,2,3 (all 100%)
	Curative # (%)	Preventive # (%)	# (%)	
Type I (Large)				
Somotillo	1321 (49.5%)	1350 (50.5%)	0 (0%)	2671
Bluefields	2038 (50.5%)	1704 (42.2%)	295 (7.3%)	4037
Puerto Cabezas	598 (30.0%)	959 (48.0%)	439 (22.0%)	1996
Granada	NA	NA	NA	NA
Subtotal Type I	3957 (45.5%)	4013 (46.1%)	734 (8.4%)	8704
Average (of three)	1319	1338		2901
Type II (Medium)				
San Lorenzo	103 (23.3%)	319 (72.2%)	20 (4.5%)	442
Teustepe	128 (23.8%)	280 (52.0%)	130 (24.2%)	538
Posoltega (Sept 1973)	486 (31.6%)	1041 (67.7%)	10 (0.1%)	1537
Santa Teresa	2429 (59.2%)	1154 (28.1%)	520 (12.7%)	4103
Tipitapa	584 (31.4%)	649 (34.9%)	629 (33.8%)	1862
San Rafael del Sur	870 (81.0%)	189 (17.6%)	15 (1.4%)	1074
Santa Lucia	NA	NA	23	23
La Concepcion	522 (22.6%)	1529 (66.2%)	258 (11.2%)	2309
Pueblo Nuevo	NA	NA	NA	NA
Subtotal Type II	5122 (43.1%)	5161 (43.4%)	1605 (13.5%)	11,888
Average (of six and seven)	854	860	229	1,698
Type III (Small)				
Santo Tomas del Norte	167 (27.2%)	447 (72.8%)	0 (0%)	614
La Conquista	149 (79.7%)	38 (20.3%)	0 (0%)	187
Telica	932 (26.9%)	2338 (67.4%)	197 (5.7%)	3467
Mateare (May 1973)	457 (27.1%)	1159 (68.7%)	71 (5.7%)	1687
San Francisco del Carnicero	48 (6.8%)	600 (85.0%)	58 (8.2%)	706
Catarina	272 (82.2%)	56 (16.9%)	3 (0.9%)	331
Tisma	250 (75.5%)	80 (24.2%)	1 (0.3%)	331
San Isidro	NA	NA	NA	NA
Palacaquina (special) (July)	135 (19.7%)	539 (78.8%)	10 (1.5%)	684
Subtotal Type III	2410 (30.1%)	5257 (65.7%)	340 (4.2%)	8007
Average (of eight)	301	657	42	1001
TOTAL -- All Type Centers	11,489 (40.2%)	14,431 (50.5%)	2,679 (9.4%)	28,599

Comments on Table 4-2: Analysis of Health Services

The statistics are best estimates of magnitudes and not at all reliable.

The large numbers in preventive care usually are results of a school vaccination campaign.

Family Planning is included under preventive medicine for Somotillo, Posoltega, and La Concepcion, but not counted by some other Centers that offer Family Planning.

Estimates are sometimes made from periods other than August; e.g., Posoltega -- September, 1973; Mateare -- May, 1973; Palacaquina -- July, 1973.

Estimates were permitted sometimes when records were inadequate (8 houses per day x 20 days per month for the sanitary inspector).

A "charla" for 40 people was counted as "services for 40 people" rather than as "one charla".

The month selected may be atypical for some Centers -- one doctor was on vacation half the month.

The normal MSP statistics omit "well babies" and "well mothers" both of which are counted in these statistics.

The health significance may vary substantially among items given equal weights in counting health services: e.g., doctor consultation, an injection, and anti-parasite treatment.

There are a lot of patients counted more than once; e.g., doctor, injection, and lab test.

Interpretation of the "Analysis of Health Services", Table 4-2

1. The Health Centers provide a lot of curative services (40.2%) in addition to the preventive services (50.5%) that constitute their primary mission.
2. Services outside the Health Center are few (9.4%) relative to services inside the Center (90.7%).
3. The curative services are particularly low in Type III Centers (301 per Center in August) but preventive care is much better (657 per Type III Center versus 860 per Type II Center).
4. Services outside the Center are low, even where the overall patient load was low.
5. The variation among Centers is large, varying more than ten fold in number of services provided by Centers of the same type.

statistics are school vaccination campaigns which vary greatly from one month to another; therefore, comparisons among Centers may be unfair based on statistics for a single month.

D. INCREASING PATIENT USE WOULD LOWER THE COST PER PATIENT SERVICE

The cost per "patient service" could be reduced significantly if the number of patients increased. The existing facilities and staffs could serve the extra patients with little extra expense since the Health Centers have been built. The "busy" Health Centers are not systematically bigger than the "sleepy" Centers. See Table 4-3; in fact, there are three standard floor plans, only Palacaquina is different being smaller than the normal Type III Center. The differences in cost are mainly due to differences in transportation and construction costs in locations scattered all around Nicaragua.

The "busyness" of Health Centers appears to be related to the budget for staff. See Table 4-4. The "busiest" Center for each size group the Center with the biggest budget for staff in 1973. However, the variations in patient services are much greater than the variations in staff budgets. The point cannot be made conclusively based on these statistics (e.g., the actual expenditures undoubtedly vary substantially from the budget; the Doctor at Mateare was on vacation half of the month, and of course there are effective and ineffective people filling comparable posts.) Nevertheless, it is intuitively plausible that adding a competent person to the staff would increase the number of patients served substantially if the Center is active and the community's needs are not saturated.

The expenses for medicines and consumable supplies would increase proportionally with a larger patient load. This is the only expense category that would change substantially and assuming the medicines were competently prescribed, the money would directly benefit the poor patients

TABLE 4-3

ESTIMATED AND ACTUAL COSTS FOR CONSTRUCTION OF HEALTH CENTERS VISITED IN THE EVALUATION

Type of Center	Actual Costs (C$000)	Total for Group (C$000)	Average Cost (C$000)	Actual Average Cost	Estimated Cost in CAP
Type I					
Granada	117				
Bluefields	165				
Puerto Cabezas	165				
Somotillo	119	566	141.5	US$20,200	US$24,020
Type II					
Posoltega	70				
Santa Teresa	74				
La Concepcion	74				
Tipitapa	73				
Pueblo Nuevo	80				
San Lorenzo	77				
Teustepe	69				
Santa Lucia	54				
San Rafael del Sur	71	642	71.3	US$10,200	US$11,500
Type III*					
Catarina	58				
Mateare	62				
Tisma	63				
San Isidro	65				
Telica	66				
San Francisco C.	50				
La Conquista	58				
Santo Tomas	56				
Palacaquina	45	523	58.1	US$ 8,300	US$ 8,915

* Includes Palacaquina which is smaller than Type III.

Source: Actual Costs derived from Table 2-1; estimated costs are from the the Capital Assistance Paper, Annex III, page 25.

TABLE 4-4

STAFF COSTS FOR HEALTH CENTERS VISITED
DURING THE EVALUATION -- BUDGETED 1973

Type I Centers	C$000	Type II Centers	C$000	Type III Centers[A]	C$000
Granada	105.0	San Lorenzo	22.2	Santo Tomas del N.	22.2
Bluefields	118.8	Teustepe	22.2	La Conquista	22.2
Puerto Cabezas	84.6	Posoltega	22.2	Telica	29.4
Somotillo	41.4	Santa Teresa	45.6	Mateare	22.8
		Tipitapa	34.2	San Franciso del C.	22.2
		San Rafael S.	22.2	Catarina	22.2[B]
		Santa Lucia	22.2	Tisma	22.2
		La Concepcion	22.2	San Isidro	33.0
		Pueblo Nuevo	39.6	Palacaquina	22.2
Subtotal	349.8	Subtotal	252.6	Subtotal	218.4
Average (4)	87.5	Average (9)	28.1	Average (9)	24.3

Notes: A - including Palacaquina which is smaller than Type IIIl
B - budget for Catarina has been adjusted by 12,000 for a doctor who is present but not included in budget.

Source: Ministerio de Hacienda, Presupuesto General de Ingresos y Egresos de la Republica por Programas 1973, pp. 460 FF.

by either curing or preventing illness. Unfortunately, medicine consumption could not be calculated from the data available.*

The low patient use in most Health Centers should not be interpreted to mean lack of need for health services in the community. Usually it means the staff are not used efficiently either because they do not actually spend the proper hours working for the Center or because they wait passively for patients to come to the Center. The preventive care functions could be increased by using some of the available time to go more aggressively outside the Center into the community or to the nearby towns served by the Health Center.

The interviews with 77 patients and non-patients suggest that the Center reaches the community most effectively for curative medicine and vaccinations. (Table 3-2)

However, there were many people within five blocks of the Center who did not know what services were available to them at little or no cost. Furthermore, our sample was heavily weighted to include patients selected at random from the patient files of the Health Center. In a truly random sample of the potential patient population, there would be many more cases of ignorance of the Center and its services.

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* It should not be difficult for MSP to collect its monthly reports in a way that make it easy to estimate the medicine comsumption per Center from month to month and to relate medicine consumption to the patient services provided. This type of analysis could be used to forecast the demand for medicines and to recognize abnormal patterns of medicine consumption that signal dishonest diversions of medicines to commerical channels.

SECTION FIVE

PROBLEMS OF INEFFICIENCY IN IMPORTANT COMPONENTS OF THE SYSTEM

A. SUMMARY

The efficiency of the Health Center system has been compromised by the Managua earthquake, by a variety of management failures in GON, and by the procedures AID used for managing the loan.

B. THE EARTHQUAKE

The Managua earthquake of December 23, 1973 may have been the best thing that ever happened for the health care of poor people outside Managua -- at least in the short run. The earthquake sent them a deluge of displaced persons from Managua, but it also sent them free medicines plus doctors and nurses at the Health Centers who would otherwise have remained in the hospitals and medical facilities in Managua.

The negative effects of the earthquake on MSP were serious. The Ministry itself was destroyed with many records wiped out. All vehicles were taken by the National Guard for almost four months and returned in bad condition. The stock of medicines and equipment were depleted due to a combination of earthquake damage, theft, and free distributions. The energy, money, and administrative talent of MSP were forcible focused on Managua, diverting them from programs everwhere else.

Even USAID, with its rural orientation, could not overlook the need for rebuilding health facilities in Managua. AID Loans were amended to finance hospitals (Loan 028) and health centers (Loan 023) for Managua to reflect the new facts of life. Even now, ten months after the earthquake, the effects linger on; the joint USAID/MSP meetings now focus on Managua facilities and USAID health staff are devoting their time to hospital contractors, etc. However, the problems described below are not mainly attributable to the earthquake unless so noted.

C. MINISTERIO DE SALUD PUBLICA

The performance of virtually every system in MSP has fallen short of what was needed to support good service to poor patients in the Health Centers outside Managua. In fairness to MSP, most of the problems noted below were known to someone in MSP before the evaluation and many problems were called to the attention of the evaluation team by MSP personnel. MSP is working to ameliorate the problems currently (in some cases as a result of the evaluation). Section VI describes recent improvements occurring in some systems and efforts to remedy other problems. Section VII describes specific approaches to improve service for the future.

1. Medicines

At the time of the evaluation, MSP did not know what medicines were in the Health Centers and had not known since the earthquake ten months ago. Probably control was lost much earlier.

PCI analysis of the medicine control system in September, 1973 revealed that MSP/Managua was receiving no reports from many centers and when the records from a Health Center conflicted with MSP records, the MSP records were adjusted with an entry marked "donations" even though the Center had made no corresponding report. MSP knew that Health Centers were instructed to donate medicines after the earthquake and that MSP records were wrong. However, there had been no supervision to establish through physical inventories what medicines were actually on hand in the Centers. Non-AID medicines that had been donated were not controlled at all. There are in fact medicines from four different sources today (AID, JNAPS, donations at the Lottery, and donations at MSP) handled in four different ways by MSP!

The need for physical inventories had been recognized by MSP before the evaluation and six centers were invetoried by PUMAR supervisors.

PCI used the evaluation to create a sense of urgency in MSP to get reliable inventories more promptly. MSP cooperated fully providing three experienced supervisors from PUMAR and one new supervisor plus acquiesing in the use of two outside "inventory-takers" from the Tribunal de Cuentas. As a result of this "major campaign", there are data available at MSP today to reestablish reliable records and controls. The supervisors' summaries of the problems at Health Centers appear in Appendix B and in working papers submitted separately to USAID.

PCI had expected the "Office of the AID Loan" to prepare an integrated analysis of MSP's medicines and medical equipment based on the CAM inventory of May 31, 1973, the physical inventories from the Health Centers and adjusted for recent medicine orders. Such an analysis would be the starting point for later analysis of medicine "consumption" for estimating overall budget needs, medicine allocations by Center, etc. No such analysis has been started yet despite PCI discussions with Donald Bell on the subject. Bell will need help to do the analysis.

The lack of supervisory visits to the Health Centers resulted in a variety of medicine control problems. The current personnel often had accepted their posts without an initial inventory of goods, thereby inheriting any deficiencies left by their predecessors. They often had no forms to keep records. The price policy seemed different in every Center the evaluators visited -- one sold everything at MSP prices; another sold at MSP prices and took IOU's from those without money; a third charged two cordobas regardless of the quantity; some donated to the needy; one had only donated medicines and charged no one. The patients resented paying for medicines after months of receiving them free. Some suspected the doctors were pocketing the proceeds. (One doctor made his first deposit in six months of C$400 to

account #6645 on the day before our visit; we had notified him in advance of our visit. There were no supporting records.) Some Centers added a surcharge of one cordoba per prescription or C$1 per consultation for an "administrative fund" to pay for minor expenses, (a procedure MSP proposes to legitimize as a practical source of petty cash.) The supervisors used the on-site visits during the evaluation to take physical inventories, deliver forms to the Health Centers, and to instruct the staff what they were supposed to do regarding medicine distributions.

The conventional wisdom about medicine prices was that Health Center prices were far below the retail prices. The evaluation team checked the availability and prices of MSP medicines to verify the magnitude of the savings. In fact there were savings on many items of 50% or more. (See Table A-4.) In remote areas very few items were available outside the Health Center (or inside it either). However, some MSP items were as expensive as the Managua retail cost of an equivalent medicine. (The Hope Center in Managua currently sells one medicine below the official price because it is available cheaper in the pharmacies.)

The total proceeds from sale of medicines have been grossly inadequate to buy replacements. The original loan provided US$716,000 for medicines for PUMAR and the Health Centers. Actual disbursements have been approximately US$521,766.25*. The total of all deposits to MSP's special account for medicines (#6645) has totalled C$431,853.21 Table A-5 indicates that C$141,758.66 has been used to buy JNAPS medicines leaving a balance of C$290,094.55 for payments to CAM and

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* Source: Memo of August 28, 1973 from Terrance Brown to Al Grego based on MSP monthly report (no date).

purchasing more medicines. However, the obligation to CAM was C$328,715.53* at the end of August so the net amount available for new purchases was minus C$38,620.98 (US$5,517.28). The value of the MSP medicines and medical equipment at CAM was verified by physical inventory on May 31,1973 and reported to MSP in September, 1973 to be C$2,157,530.82** (US$308,218.68). On the basis of the same inventory, MSP claimed C$243,024.53 for merchandise that was insured against losses from earthquake and other causes.

The value of the AID medicines and medical equipment in the Health Centers could not be provided by MSP. However, PCI estimates the sum of the values of medicines and money at 68 Centers and 10 PUMAR bases was C$242,262.63. (See Table A-3.) There are 40 other locations that could have AID medicines including zero Type I Centers, three Type II Centers, eight Type III Centers, one PUMAR circuits and thirty-seven non-AID Centers.

The total value of MSP's medicines and money for medicines is estimated by this approach at approximately US$341,206.21 plus the value of unknown inventories in 47 Centers. (See Table 5-1.) For comparison, the Loan provided US$521,766 and there must have been an inventory for PUMAR and the non-AID Centers before Loan 023.

Dr. Canales has explained that GON consciously chose to let the stock of medicines be depleted and that appropriations would be requested in the MSP budget when it was necessary to restore the stock of medicines. The obligations to CAM were to be paid in the same fashion. In the 1973 MSP budget, funds were requested to pay CAM but none were provided. The 1974 budget includes funds for paying CAM and for buying

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* Source: Letter from CAM to MSP dated October 24, 1973.

** Source: Computer run of September 15, 1973 provided by CAM to MSP correcting the omissions of the early report on the May 31, 1973 inventory.

TABLE 5-1

AN ESTIMATE OF THE VALUE OF MSP'S MEDICINES AND MONEY AVAILABLE TO BUY MEDICINES

	(C$)
MSP Medicines at CAM[1]	2,157,530.82
Insurance Proceeds for Losses at CAM[2]	243,024.53
Special Bank Account 6645[3]	290.094.55
Inventory at 68 Health Centers and 10 PUMAR Units	
--JNAPS Medicines[4,5]	21,698.23
--AID Medicines [4,5]	217,489.96
--Undeposited Money [4,5]	3,074.04
GROSS AVAILABLE	2,932,912.13
Less: MSP Obligation to CAM	(328,715.53)
Future Liability to CAM - 10% of inventory	(215,753.08)
NET AVAILABLE FOR STOCKING HEALTH CENTER[5]	C$2,388,443.52
	US$ 341,206.21

Notes: 1 -- Source: physical inventory May 31, 1973 at CAM. Values are at MSP cost without ten percent warehousing fee to CAM.
2 -- Source: Letter from CAM to MSP dated October 24, 1973.
3 -- MSP Office of the AID Loan, September 30, 1973.
4 -- Derived from Table A-3 summarizing the available physical inventories taken at varied dates in August, September, October, and November 1973 inventories are valued at MSP selling prices.
5 -- Forty-seven locations are not included.

medicines although nothing is specifically earmarked as replacements for the AID medicines. The 1974 budget has yet to be approved; MSP would be pleased to have AID lend its influence to get the budget approved.

Many Health Centers have operated since spring without even basic medicines; they have used up their "line of credit" and have no money to buy replacements even though the medicines are available in the warehouse of MSP or JNAPS. Table A-5, column 4, summarizes the money available in the MSP medicine account at the end of September, 1973 for each Health Center to buy medicines. Twenty-five Centers were not listed at all because they had no money available. In September, probably because of this evaluation, MSP sent "new lots" of medicines to many Centers that had no lines of credit. The 'new lots" do not appear in the regular "bank account #6645" account. Neither do medicines that were donated to MSP with the requirement that they be donated to MSP patients.

Some other observations bear on the medicine support system:

- In Centers where there were medicines that had expiration dates, the medicines were often expired; MSP has no system to control these medicines to assure they are used while usable or destroyed when not usable;

- There is virtually no control over donations of medicines and selling prices, thereby inviting abuse by Health Center staff. The evaluation team heard rumors in one Center (Mateare) that donated medicines were being diverted to the local Pharmacy. Overcharging could be made much more risky by requiring the prominent public display of the MSP price list. Preventing improper donations will require a record-keeping procedure identifying the recipient so that a supervisor or a community representative can detect and document abuses.

- In a small Center (Telica) they received penicillin in bulk containers intended for a hospital; unfortunately the penicillin is only good for 24 hours after opening the container so most of it was wasted.

- The Health Centers complain that their orders for medicines are ignored for months, that they are sent medicines different from their orders, and that the medicines received differ from the shipping documents. The long delays usually were due to exhausting the line of credit for medicines. The substitutions may have been efforts to force the use of more expensive MSP medicines that were stagnating in the warehouse; alternatively, when the medicine of choice is used up, a substitute is often sent. Some substitutions are undoubtedly incompetence. The "short" orders probably result from several causes including being shipped out "short" from CAM, pilferage in transit, and acceptance at the Health Center by unauthorized people without proper controls. MSP now has a representative at CAM who counts the medicines before the packages are sealed for shipment but the complaints continue.

2. Equipment Other than Vehicles

Expensive equipment stands idle in the Health Centers due to incomplete installation, lack of repairs and maintenance, lack of technicians, or inappropriateness. The supervisors' summaries provide Center-by-Center detail. Patterns are discussed below.

Dental equipment appears to be wasted in places we know about outside Managua. Where there are dentists functioning, they usually use their own clinics or do without AID equipment. The usual dental work involves extracting several teeth; the equipment typically required and used are a good light, a firm chair, and some pliers. Several Centers provide dental assistance without AID dental equipment; the dentists are not even paid by MSP but are willing to treat patients referred by the Center without charge.

X-Ray equipment has not been well used. In Somotillo, X-Ray equipment is unused because there is no darkroom, no film, improper electrical wiring, and no technician. In Monimbo, X-Ray was never installed. In Bluefields, the X-Ray room is inundated with water and the equipment

deteriorating in a garage. At Puerto Cabezas the X-Ray has not worked since November, 1972. At the Hope Center they are using a portable unit for the time being.

If MSP and the hospitals were part of an integrated health system, the sophisticated equipment probably would provide more benefits located in the hospitals with referrals from the Health Centers. There are Health Centers with X-Ray machines near hospitals with none (Nandaime) where cooperation with hospitals would add to use and benefits for Nicaragua. In the CAM warehouse, there are MSP incubators (presumably for premature babies) that would be better suited to a hospital than for a Health Center.

Laboratory equipment is sparse. (See the Supervisor Reports for specific details.) Centers without laboratory assistants receive no lab equipment or supplies. Often the doctor cannot even prepare slides to be analyzed alsewhere (as is done for SNEM by 3,500 unpaid "voluntary cooperators" all around the country).

Simple medical equipment is absent in many centers -- gloves, stethoscopes, blood pressure guages, all kinds of laboratory reagents and supplies (e.g., pipettes), baby scales, etc.

Non-medical equipment and supplies are generally inadequate. The lack of preprinted forms and lack of typewriters make record-keeping very time consuming.

All of the deficiencies in medicines and equipment have been called to the attention of MSP by the MSP supervisors formally and informally Lic. Villalta indicates he is initiating action wherever possible. There is recognition of the need to resolve many of these problems; only time will tell if there is a will and budget to correct them.

The equipment provided to PUMAR such as boats and motors were at locations not observed by PCI personnel during the evaluation so no assessment has been made.

3. Vehicles

Lack of transportation has been a problem despite the 30 vehicles provided Health Centers and 12 vehicles provided PUMAR in the loan. The National Guard took everything after the earthquake, returning the vehicles in bad condition in April, 1973. However, even now lack of transportation hampers the Health Centers.

- Supervisors have not had MSP vehicles available for field visits; they had to use public buses even to remote areas. One supervisor with a personal car (SACASA) used his own car, receiving reimbursement only for gasoline (in effect subsidizing MSP from his own funds to get the job done). During the evaluation, MSP made available up to five vehicles for use by the supervisors. After the evaluation, supervisors will probably have no vehicles assigned to them again unless outside influence lends weight to their claim.

- Delivery of goods to Health Centers has been hampered. In early September 1973, there were 260 parcels of medicines in the storeroom of MSP awaiting transportation to Health Centers by MSP vehicles or by commercial shipping. These packages represented long and unnecessary delays.

- Vehicles were paralyzed for almost a month in Spring, 1973 and for a few days in August, 1973 because Esso cut off gasoline purchases because it had not been paid. PCI was informed, but has not confirmed, this was a government-wide cut-off that was not the fault of MSP.

- Ambulances are crucial for PUMAR rather than a peripheral support system. PUMAR units report problems getting replacement parts, prompt repairs, and even gasoline (PUMAR/Granada).

Many of the 25 AID-financed vehicles that were supposed to be used by the Health Centers and the 5 vehicels for supervision have been diverted to other departments of MSP. The actual distribution of vehicles is summarized in Exhibit 5-1. The exhibit shows only 10 vehicles at the Health Centers including three at Managua Oriental;the one in Esteli which was moved there from MSP during the evaluation in September, 1973. The 5 vehicles assigned for supervision (#29-33) have not actually been available for supervisors, except during the evaluation when MSP had to find vehicles or face an awkward situation with AID.

17 jeeps and 2 other AID vehicles are attached to MSP programs and 4 jeeps are being repaired. The programs assigned the vehicles are the following:

PMA (Nutrition)	3 jeeps
Epidemiology Division (including environmental sanitation and the Campaign Against Aedes Egyptic)	4 jeeps
Education Division	1 jeeps
Nutrition Division (including Mental Health)	2 jeeps
Management of Medical Care (including supervision)	4 jeeps 1 wagoneer
Management of Administration	3 jeeps 1 ambulance
TOTAL	19 vehicles

Three of the vehicles are not garaged at the MSP yard because they are used by Dr. Ortega, Dr. Canton, and Lic Villalta.* The

* American readers should not immediately infer abuse, recalling the practice in U.S. government agencies of providing chauffeurred vehicles to high officials as a fringe benefit. The practice extends to lower levels in many countries. GON officials argue that their pay is low and when they have the use of a vehicle it is an important part of their compensation. The hard-nosed AID official should take issue, not with the fringe benefits (they can use non-AID vehicles if they wish) but with the inadequate support for the Health Centers and uses of AID-financed vehicles that are inefficient for the Health Center project.

Exhibit 5-1: The Distribution of AID-Financed Vehicles

"AÑO DE LA ESPERANZA
Y LA RECONSTRUCCION"

MINISTERIO DE SALUD PUBLICA
MANAGUA, D. N.
Dirección Cablegráfica: SALUBRIDAD

Octubre 23 de 1973.

Nº.....

Mr. Albert Grego,
Representante de AID., en Nicaragua,
Presente.

Estimado Mr. Grego:

Tengo mucho gusto en dirigirme a usted para informarle de la distribución de vehículos comprados con el Préstamo de AID., así:

I. Centros de Salud Departamentales.

1.	Jeep placa	#640-88	Bluefields	
2.	" "	"640-87	Managua-Hope P. de Somoza	
3.	" "	"640-85	Managua-Hope P. de Somoza	
4.	" "	"640-02	Managua-Hope P. de Somoza	
-	- -	---	------ (2 turnos)	
5.	" "	"641-21	Moyogalpa-RIVAS	
6.	" "	"641-07	León	
7.	" "	"641-13	Corn Island-ZELAYA	
8.	" "	"641-28	Waspán Río Coco-ZELAYA	
9.	" "	"641-29	Puerto Cabezas-ZELAYA	
10.	" "	"641-11	Estelí	Total 10 Jeeps.

II. Programa PUMAR.

11.	Ambulancia	Placa #641-26	Granada	
12.	"	" "641-24	Puerto Cabezas-ZELAYA	
13.	"	" "640-80	Chontales	
14.	"	" "641-22	Rivas	
15.	"	" "641-25	León	
16.	"	" "641-23	Nueva Segovia	
17.	"	" "640-81	Matagalpa	Total 7 Ambulanc

III. Programa P.M.A.

18.	Jeep placa	#641-08	
19.	" "	"641-06	
20.	" "	"641-05	Total 3 Jeeps

...../.....

NISTERIO DE SALUD PUBLICA
MANAGUA, D. N.
Dirección Cablegráfica: SALUBRIDAD

"AÑO DE LA ESPERANZA
Y LA RECONSTRUCCION"

Exhibit 5-1 (cont.)

Pág. 2.

IV.....División Epidemiología

21.	Jeep placa	#641-14		
22.	"	"641-37		
23.	"	"641-35		
24.	"	"640-83	Saneamiento Ambiental	
25.	"	"641-15	Campaña Aedes Egyptic	
			Total	5 Jeeps

V. División de Educación

26.	Jeep placa	#641-04		
			Total	1 Jeeps

VI. División de Nutrición.

27.	Jeep placa	#641-15		
28.	Jeep placa	#640-84	Salud Mental	
			Total	2 Jeeps

VII. Dirección Atención Médica.

29.	Wagonner Placa	#641-03	Dirección	
30.	Jeep placa	#640-86	Supervisión AID	
31.	"	"640-77	" "	
32.	"	"641-10	" "	
33.	"	"641-09	" "	
			Total	1 Wagonner, 4 Jeeps

VIII. Dirección Administración

34.	Jeep placa	#641-02		
35.	"	"641-01		
36.	"	"641-30		3 jeeps
37.	Ambulancia placa	#640-79	Supervisión.	1 ambulance

IX. Garage (Reparación.

38.	Jeep placa	#640-89		
39.	"	"641-12		
40.	"	"641-38		
41.	"	"641-16		
42.	Ambulancia placa	#641-27	Total	4 Jeeps 1 Ambulancia

Total: 32 Jeeps
9 ambulances
1 wagoneer

De usted, Atentamente,

Lic. Antonio da J. Villalta
Director Servicios Administrativos.

AJV/mom.

evaluation did not include further investigation of who was using each vehicle and for what purpose; one would expect to find confirmation for the nearly universal tendency for vehicles to be used for the convenience of high officials even when the system lacks vehicles to transport lower status technicians for important work.

The change in use of AID-financed vehicles does not appear to be a violation of the Loan Agreement. Nothing has been specified clearly enough about location and/or use to be a violation. The plans appear in formal correspondence from Dr. Gustavo Tellez Lacayo to Albert Grego (June 3, 1970) with references to an undated memo to Grego and a letter to Carl Forsberg (February 16, 1970). The Forsberg letter includes the following comments (translated and paraphrased):

> The five vehicles remaining for MSP General Supervision will be sent to different parts of the country with the Supervisor Corps at the level of the appropriate Divisions and "Direcciones", following a calendar of work previsouly planned and coordinated among them.
>
> The vehicles dedicated to each Department will be in the Health Center of the Department Capital as a Command Center; from there they will connect with the other Centers of the Department, implementing a calendar of work previously planned with the Command Center, which will serve as the connection with the rural areas served by the Center in different activities of sanitation and implementing specific programs of penetration.

This concept from the 1970 memo is still attractive. The actual experience should be analyzed to learn what happened in the Departments where vehicles were located, i.e., Leon, Moyogalpa, Puerto Cabezas, Waspam, Bluefields, Corn Island, and Managua. Parenthetically, the evaluation at Somotillo suggested that an ambulance may be justified there for direct service to patients. The Center serves a large

population (48,000) and is so far from the nearest hospital--70 km over rough roads -- that many patients die before reaching the hospital.

The MSP vehicle maintenance facilities and records of vehicle use suggest more severe maintenance and repair problems for the future. (See Section Seven for recommendations). The daily records for all vehicles based in Managua reveal very heavy use in August, 1973. 18 of the 22 Health Center vehicles garaged at the MSP yard were used 24-28 days in August. The other 4 vehicles were out of service for long periods for repairs: 3 were out of use the entire month and 1 out of use for 10 days, (See Table 5-2). When the vehicles break down, it takes a long time to get them back into operation.

- In collision cases, the insurance claims take a long time;
- The MSP procedure for estimates, bids, and approvals is cumbersome and time consuming, even for minor purchases. See Exhibit 5-2;
- An inventory of frequently needed spares would reduce delays, (e.g., clutch cables and tires) and preempt improvizations that are unsafe;
- The auto shops will not work for MSP on normal terms (30 days credit) because they know the Ministry only pays after long delays (e.g., 90 days);
- MSP has facilities appropriate for washing, greasing, and only the most modest maintenance work;
- Vehicles far from Managua are required to return to Managua for repairs of more than US$100 which is time-consuming and costly;
- The staff for maintenance are not qualified for important repair work and the salaries too low to attract a good mechanic. The MSP head mechanic gets C$600 per month as opposed to private sector salaries for good mechanics of C$1300, (not verified by PCI).

TABLE 5-2

ANALYSIS OF USE OF VEHICLES FINANCED BY AID LOAN DURING AUGUST, 1973

Vehicle #	Known Days of Use	Known Working Days Not in Use	Why Not Used	Comments
Health Centers				
116	26	0		
117	25	0		
118	24	0		
119	26	0		
120	27	0		
124	27	0		
125	27	0		
126	27	0		
127	27	0		
128	15	10	Collision	Taller Canton
129	27	0		
131	26	0		
132	28	0		
133	27	0		
134	26	0		
135	28	0		
138	26	0		
139	25	0		
142	28	0		
137	0	26	Lacks parts	Needs Bendix clutch cable
113	0	26	Lacks parts	Needs Bendix clutch cable
115	0	26	Collision	Insurance claim pending
121	0	26	Collision	Insurance claim pending (4 mos
136	?	?	No control	Dr. Ortega
105	?	?	sheets	Dr. Canton
No #	?	?	available	Lic. Villalta
Six Vehicles	?	?	" "	Garaged outside Managua (#114, 122,123,130,140,141)
SUBTOTAL	492	104		
PUMAR				
Six Vehicles	?	?		(#89,90,91,92,94,95)-- Garaged outside Managua
93	22	4	Repairs	Clutch -- factory defect
96	27	0	Repairs	From Matagalpa
97	26	0	Repairs	Clutch -- factory defect
83	0	26	Collision	From Rivas -- problem in Sept. insurance claim is slow
SUBTOTAL	75	30		
TOTAL	567	134		

TABLE 5-2 (cont.)

Sources: MSP monthly logs for vehicles based at the Managua vehicle yard next to Centro Hope Portocarrero de Somoza.

Notes: Auto logs show use of vehicles on weekends. MSP workweek is 5 1/2 days. Field trips sometimes extend over weekends. Evaluators did not attempt to check what vehicles were used for.

There is a bias in records since vehicles garaged away from Managua and operating are not in the records. However, when those vehicles need major repairs, they are sent to Managua for repairs.

Exhibit 5-2:

The Procedure for Purchasing Tires, Parts, Lubricants and Other Items for Vehicles of MSP

Managua, D.N., Octubre 30, 1973.

PASOS A SEGUIR PARA LA COMPRA DE LLANTAS, REPUESTOS, LUBRICANTES Y OTROS, PARA LOS VEHICULOS DEL MINISTERIO DE SALUD PUBLICA

1º El Jefe del Garaje se dirige al Jefe de Transporte, solicitando los Repuestos que necesita para instalarles en los vehículos que tienen fallas mecánicas.

2º El Jefe de Transporte hace formalmente solicitud al Administrador del M.S.P., éste se la pasa al Comprador para que cotice los precios en plaza, una vez obtenidos los precios, devuelve la Solicitud a la Oficina de Contabilidad, que verifica si hay disponibilidad de dinero para su compra.

3º Con el valor de los repuestos se pasa a la Oficina correspondiente para que se elabore Solicitud con autorización del Administrador del M.S.P. y aprobación del Oficial Presupuestario y el Auditor Delegado del Tribunal de Ctas., y firma del Señor Ministro de Salud Pública, enviándose posteriormente a la Oficina de Suministros del Gobierno del Ministerio de Hacienda y C.P., esta oficina elabora una Orden de Compra para cualquiera de los Almacenes donde venden los repuestos.

4º El Comprador retira la Orden de Compra de la Oficina de Suministro, para la compra de los Repuestos y Otros, una vez que tiene los repuestos, los entrega en la Bodega del M.S.P.

5º En Bodega se hace la Hoja de Ingreso correspondiente y posteriormente una Orden de Egreso de dichos repuestos para que el Jefe del Taller los retire y sean instalados en los vehículos respectivos.

GOB/sad.

The heavy vehicle use cannot be sustained indefinitely as the vehicles age. The six AID vehicles for which PCI noted the mileage had 22,000 to 42,000 km of use. Considering the rough roads to many Health Centers, these vehicles will need increasing preventive maintenance, repairs, and eventually replacement to support the Health Centers with goods and supervisors.

The chief of the Vehicle Section (OROZCO) made a number of practical suggestions to improve vehicle support.

- Provide money to hire a good mechanic at C$1300 per month in place of the present one. Total staff with one supervisor and three mechanics,
- Provide a budget for small repairs and purchases that would be available in advance for cash purchases. A budget of C$1,000 per month would speed up procurement and control could be maintained through receipts;
- Esso could locate a tank at the MSP yard for the MSP purchases reducing the work time for taking vehicles to the station. The tank should remain under Esso control to preclude abuses.
- A stock of frequently needed spares (clutch cables, batteries, tires, plugs) should be maintained;
- Tools and workbench for mechanics ;
- Improved records for preventive maintenance scheduling (he is developing it already).

Some other observations:

- Vehicle availability can be increased during working hours by having some mechanics work in afternoons when vehicles are not normally needed (MSP works 8-2).
- A mechanic could travel to the Atlantic locations to maintain vehicles making a circuit. If he is preceded by a supervisor who reported what was needed, the mechanic could bring the appropriate spares and tools for repairs as well as tune-ups, etc.

- The chauffeurs (also in this section of MSP) should receive their travel allowances (viaticos) at the start of a trip. They get C$20 for meals and lodging but it is paid after a month at best. These low-paid employees often have no money for food and lodging so they sleep at the Health Center or with friends and go hungry or impose on the goodwill of MSP professionals.

A single fleet maintenance facility probably would be justified for all the vehicles used in all the MSP programs including SNEM and Family Planning. There are more than 100 vehicles altogether, some financed by AID, others by UNICEF, Partners of the Americas, and others. The evaluators were told SNEM does a good job managing its vehicles. Rather than create a special maintenance facility for AID vehicles, MSP should analyze the feasibility and desirability of an integrated fleet operation. The small fleet of JNAPS might benefit from the integrated operation too, if there is a possibility of greater cooperation among Health Agencies.

Facilities

Fifty-five health centers have been constructed with the Loan. The Centers are oversized relative to present patient loads but not relative to the potential patient load for their areas if the Centers become effective and efficient health care facilities, (See Section Four for discussion). Some centers are located inconveniently; PCI was informed that problems with land titles prevented getting good central locations in some places.

There are fewer large centers and more small centers than originally proposed in the CAP.

	CAP	Completed	Approved but Not Completed
Special (very large)	2	1	1
Type I	9	7	0
Type II	27	18	0
Type III	18	29	4

The observed physical condition of the AID-financed Health Centers is much better than the reported condition of older non-AID Centers. Problems in AID-financed Centers reported by supervisors (see Appendix B) included the following:

- electricity to support X-Ray machine inadequate (Somotillo);
- lack of a darkroom (Somotillo);
- insecure glass venetian slats without grill or bars makes Centers vulnerable to burglars (everywhere);
- insecure doors (Malpaisillo, San Rafael de Sur, Mateare);
- lack of washbasins, flooded X-Ray room, rotted roof (Bluefields);
- cracked walls (Bluefields, Puerto Cabezas, Posoltega, and many others);
- leaky toilets (many places);
- no toilet for patients (Managua Oriental, the biggest Center in Nicaragua);
- lack of fencing resulting in encroachment by animals and prowlers (many Centers including Type I Centers like Granada);
- bulging wall requiring a retaining wall (Niquinohomo);
- no electricity or water supply due to leaks in the floor (Matiguas);
- lack of secure storage for medicines (Granada and others).

MSP informs AID that maintenance of the Centers is made by allocations from the Ministry for minor repairs and that major repairs are provided for in the Budget of the Ministry of Public Works, item 05-03*. However, the Centers don't receive help for making the Centers secure, remedying structural problems (cracks), fixing the electricity or windows, etc. The local community has helped on occasion and some Centers have collected money locally by requesting patients to contribute one or two Cordobas per visit. Other Centers go through paperwork with MSP for authorizations and, in some cases, staff end up paying for small items.

5. Staffing

While attention has been focused on the absence of doctors in some Health Centers, the greatest shortfalls in staffing have been in

* Letter from Gustavo Tellez Lacayo to Albert Grego, June 3, 1970.

auxiliary nurses, sanitary inspectors, and lab technicians. Table 5-3 compares the planned staffing of the Ministry and the actual staffing in 1972. The job of health educator (visitadores) has merged with the auxiliary nurse position in the Health Centers for reasons that were not explored in the evaluation. Thus, the Table might be reinterpreted as showing a combined deficit of auxiliary nurses and visitadoras of 291. These shortfalls may explain the low volume of Health Center services provided outside the Center, as discussed in Section Four.

TABLE 5-3

STAFFING IN MINISTRY OF PUBLIC HEALTH

Staff Position	(1) MSP 1968	(2) CAP Plans for End CY 1971	(3) Actual 1972	(4) Deviations col 3-col 2	(5) % Deviation col 2-col 4
Physicians	147	242	208	(34)	(14.0%)
Dentists	23	33	38	5	15.2%
Lab Technicians	76	126	99	(27)	(21.4%)
Graduate Nurses	61	92	89	(3)	(3.3%)
Auxiliary Nurses	221	511	193	(318)	(62.2%)
Trained	NA	NA	172	NA	
Untrained	NA	NA	21	NA	
Sanitary Inspectors	174	347	258	(89)	(25.6%)
Inspectors	NA	NA	226	NA	
Educators	NA	NA	32	NA	
Health Educators (Visitadoras)	33	39	66	27	69.2%
Others*	NA	NA	28	NA	

* Sanitary Engineers - 3; Nutritionists - 10; X-Ray Technicians - 7; Statisticians - 82; other Specialists - 6.

Sources: col. 1 and col. 2 -- Capital Assistance Paper, page 21; col. 3 -- derived from a Table specially prepared by the Department of Personnel of the Ministry of Public Health. See Table 5-4.

These 1972 statistics (Table 5-4) provided by MSP Department of Personnel conceal as much as they reveal about the adequacy of Health Center staffing.

- These global totals include the AID-financed health centers, non-AID health centers, and the other programs of MSP including Central Administration.
- The doctors in Health Centers are paid for less than full-time; mornings for social service doctors and only a few hours for other doctors.
- Doctors work less hours than they are paid for.
- Social service doctors are obligated to serve six months, leaving six months with no doctor in many Centers; (the budget provides for 12 months).
- MSP dentists do not work full-time; on the other hand, there are dentists providing services through the Centers who are not on the MSP roster. Part-time dental service is probably appropriate in many Centers.
- The concentration of staff in Managua is conspicuous despite postponement of Special Center #2.

  32.2% of MSP phsicians
  44.7% of MSP dentists
  46.1% of graduate nurses
  31.1% of auxiliary nurses
  56.0% of visitadoras
  19.2% of lab technicians
  57.1% of X-Ray technicians
  33.7% of sanitary inspectors and educators

  The second "special" Health Center was postponed by USAID in 1971 based on the shortfalls in staffing and other areas. Had the Center been built and siphoned away positions from the other Health Centers, the shortfalls outside Managua would be far more serious.

  USAID has approved the construction of the second special Center for Managua in 1974. The proposed MSP 1974 budget includes 192 full-time positions; 98 are for the new Center and C$140,000 is proposed for part-time physicians and dentists, making a total budget for the Center #2 staff of C$399,090 per year. Lab technicians and sanitary inspectors are in other budgets.

TABLE 5-4

MINISTERIO DE SALUD PUBLICA
Managua, D.N.

LISTA DEL PERSONAL DE LOS DEPARTAMENTOS DEL AÑO 1972

	MEDICOS	ODONTOLOGOS	INGENIEROS SANITARIOS	TECNOLOGOS MEDICOS.	NUTRICIONISTAS.	ENFERMERAS GRADUADAS.	AUXILIARES ENFERMERIA ADIESTRADAS.	AUXILIARES ENFERMERIAS EMPIRICAS.	VISITADORAS.	TECNICOS EN LABORATORIOS.	TECNICOS EN RAYOS X.	EDUCADORES SANITARIOS.	INSPECTORES SANITARIOS.	ENCARGADOS DE ESTADISTICAS (CIT).	[illegible]
BOACO	8	1	-	-	-	2	6	1	1	2	-	1	5	-	-
CARAZO	7	2	-	-	-	5	9	3	2	5	1	3	9	-	-
CHINANDEGA	14	1	-	-	-	4	15	-	3	10	-	1	12	-	-
CHONTALES	10	1	-	-	-	1	6	1	2	5	-	1	12	-	-
ESTELI	6	1	-	-	2	4	9	-	-	6	-	1	6	-	-
GRANADA No. 2.-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-
GRANADA No. 1.-	9	2	-	-	1	3	7	-	3	-	-	1	9	-	-
JINOTEGA	5	1	-	-	-	3	4	-	3	2	-	1	5	-	-
LEON (C/S.Central).-	18	4	-	-	-	7	9	3	2	7	1	-	17	-	-
MADRIZ	6	-	-	-	-	1	5	1	2	3	-	-	5	-	-
MANAGUA	67	17	3	-	5	41	53	7	37	19	4	20	67	2	6
MASAYA	10	1	-	-	1	4	8	2	5	7	-	1	9	-	-
MATAGALPA	11	1	-	-	1	3	10	1	3	7	-	1	13	-	-
NUEVA SEGOVIA.	9	-	-	-	-	1	9	-	2	3	-	-	11	-	-
RIO SAN JUAN.	4	-	-	-	-	1	3	-	-	2	-	-	7	-	-
RIVAS.	11	2	-	-	-	4	7	1	-	9	-	-	16	-	-
ZELAYA.	13	4	-	-	-	5	12	1	1	8	1	1	23	-	-
TOTAL [illegible]	208	38	3	0	10	89	172	21	66	99	7	32	226	2	6

El=/

- If nothing is cut from the proposed budget, the existing Health Centers will get 20 more nurses and 21 auxiliary nurses. The other big budget increases are for Project Rigoberto Cabezas and 30% pay increase for nurses and auxiliaries.

The AID-financed Health Centers have not been fully staffed. The actual staffing reported in May, 1973 as compared to the original plans of the CAP appear in Table 5-5. The most striking deviations in Table 5-5 are:

- Fewer large centers and more small centers than originally planned; i.e.:

	Plan	1973 Actual	Difference
Special	2	1	(1)
Type I	9	7	(2)
Type II	27	18	(9)
Type III	18	29	11
Total	56	58	(1)

- No Health Educators in Type II and Type III Centers;
- Lab Technicians in 64% of Type II Centers and 24% of Type III Centers instead of 100%.

The loan provided that the Government of Nicaragua would use an Obligatory Social Service Law to obtain medical staff for the Health Centers. The personnel plan, submitted to AID as a condition precedent to the loan, estimated that 45 to 50 doctors per year would be available from the University of Nicaragua, having recieved a nine month course in Preventive Medicine in their last year of school. Also expected were six dentists per year, ten Medical Technologists, and 45 nurses.

TABLE 5-5

COMPARISON OF HEALTH CENTER STAFFING PROPOSED IN THE CAP AND ACTUAL STAFFING IN MAY, 1973

	Special Centers[B]	Type I	Type II	Type III[A]
I. PROPOSED IN CAP				
# Centers Proposed (CAP)	2	9	27	18
Typical Staffing				
Doctors	NA	2	1	1
Dentist	NA	1	0[B]	
Graduate Nurse	NA	1	0[B]	
Auxiliary Nurse	NA	3	1	1
Sanitary Inspectors	NA	3	1	1
Health Educators	NA	1	1	1
Lab Technicians	NA	1	1	1
Secretary	NA	1	0[B]	
Chauffeur	NA	1	0[B]	
Others	NA	NA	B	
II. ACTUAL STAFFING May 1973				
# Centers	1	7	18	29
Staffing (average)				
Doctor	18	1.86	1.00	.86
Dentist	10	1.00	.00	.00
Nurse	7	1.14	.33	.10
Auxiliary Nurse	47	2.85	.94	1.00
Sanitary Inspectors	21	2.00	.94	.96
Health Educator	4	.42	.00	.00
Lab Technicians	15	1.14	.61	.24
Secretary	1	.57	.16	.03
Chauffeur	1	.00	.05	.00
Janitor, Others	7	1.00	1.00	.96

A = includes Palacaquina

B = "Type II Centers may have added personnel. Staffing of Special Centers will be considerably larger," (CAP, page 13).

Sources:

Section I -- CAP, page 13.
Section II -- derived from the MSP Monthly Report to AID for May 1973.

The Social Service Law has been implemented with results summarized in Table 5-6. In the four years 1970-1973, 146 doctors served under the Social Service Law, 113 of them in Health Centers outside Managua.* Presumably, these doctors served in remote Health Centers that otherwise would have had no doctor; the more convenient Health Centers have been staffed by established doctors working part-time. Thus, the law has been effective in redistributing physicians to serve, at least temporarily, poor people outside Managua.

The six month term of service has created a six month gap in many Health Centers until the next class of doctors graduates. Eighteen doctors voluntarily extended their service this year after the obligatory six months, usually to support themselves until they can start studies abroad or obtain a more attractive position in a hospital. (See A-6 in Appendix A.) Nevertheless, there were 22 Health Centers without a doctor on October 30, 1973, one month after most of the 30 Social Service doctors completed their obligation. Fifteen of the vacant centers were AID-financed. (See A-7, Appendix A.)**

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* The figures in Table 5-6 were derived from the files of Dr. Canales from the lists of doctors serving in 1970, 1971, 1972, and 1973. The figures below were offered by Dr. Canales himself using the Annual Reports of MSP for the years ending in 1970-1973:

Doctors Serving Obligatory Service From

	UNAN	Foreign Medical Schools	Total
1969	40	2	42
1970	50	4	54
1971	45	11	56
1972	45	6	51

The annual reports also show 15 dentists and 37 nurses serving in 1971.

** The lists are inconsistent with respect to Jalapa, San Francisco Carnicero, Santa Rosa del Penon, and Sam Juan del Rio Coco.

TABLE 5-6

Doctors Serving Under the Obligatory Social Service Law

	Managua		Outside Managua		
	hospital	health center	hospital, sanatorio, or UNAN	health center or PUMAR	TOTAL
1970	2	7	6	21	36
1971	2		1	29	32
1972	2	9	0	37	48
1973	2	0	2	26	30
1974 (projected)					50*
1975 (projected)					80*

Sources: 1970 -1973 - Doctors identified by name in lists from office of Dr. Canales, (MSP)

* 1974 and 1975 estimates provided by Dr. Canales (MSP) based on the size of the graduating classes at UNAN.

What practical approaches exist to the problem of Health Centers without Doctors? Four alternatives are considered below:

(1) Make the Health Centers more attractive for doctors. If more doctors voluntarily continue, there will be fewer empty posts to fill through Social Service.

(2) Increase the supply of doctors by extending the social service obligation to 12 months.

(3) Use one doctor to serve more than one center.

(4) Continue the status quo leaving no doctor at all for periods of six months or more.

Alternative 1:

The issue of how to attract and retain doctors was addressed directly by the evaluation teams. They interviewed doctors about what influenced them positively and negatively in their decision to work in their Health Center. The results are summarized in Table 5-7. The interviews suggest several avenues for making Health Centers more attractive to doctors:

- Better support from MSP so they can work more effectively;
- Better support from the local community;
- A location within commuting distance of a comfortable home and/or the doctor's family;
- An adequate income including MSP salary and his private practice;
- Professional enrichment opportunities -- perhaps providing professional supervision, research assistance, or scholarships tied to longer service in hardship posts.

Alternative 2:

It appears feasible to extend social service obligations to 12 months. The Doctor interviews suggest there would be little resistance from

TABLE 5-7

RESPONSES FROM DOCTOR'S IN NICARAGUAN HEALTH CENTERS

I. SUMMARY of Doctors' Comments about the Most Important Factors that Influence Their Decision to Work in Their Health Center:

	Positive Factors	Negative Factors
A. Social Service Doctors	a. not far from family b. enjoy helping the community c. feel well accepted by community d. the pace is relaxing e. enjoy the work and their help is needed f. good private practice	a. prefer to study specialty b. lack of medicines and equipment, particularly lab equipment c. personnel problems or vacancies d. loss of professional competence due to exposure to a limited range of medical problems e. poor relations with alcalde (1 Center only) f. people don't come because they have to pay for medicines
B. Doctors not Serving Social Service Obligation	a. enjoy serving community (many) b. enjoy public health work c. enjoy influencing community to practice better health d. enjoy working with the people (many) e. family is here f. to be part of MSP and for economic motives g. the only doctor in the area h. private clients provide a living, likes to serve community with free consultations	a. people don't cooperate with Center b. low salary (1 Center) c. too many curanderos (1 Center) d. people resent some health measures (confiscating unclean meat) e. lack equipment and medicine to cure and can't be sure of diagnosis f. away from Managua -- no diversion, not good food, no flush toilets, no privacy g. far from Granada h. "The natural obstacles that everyone meets in life but idealism is stronger than the obstacles; one has to struggle!"

TABLE 5-7 (cont.)

II. STATISTICS ON DOCTORS INTERVIEWED	Social Service	Other	Total
A. Doctors Interviewed			
Health Centers	10	10	20
PUMAR		1	1
No Doctor Present	1	1	2
Total	11	12	23
B. Doctor's Residence			
In the place where Center is located	6	6	12
Living Elsewhere (Center/Residence-distance)	4	5	9
Social Service Doctors: Santa Lucia/Boaco-40 km; Catarina/Diriambe-30 km; San Lorenzo/Teustepe-18 km; San Isidro/Esteli-35 km.			
Non-Social Service Doctors: Telica/Leon-10 km; San Rafael Sur/Concepcion-48 km; Mateare/Managua-24 km; Posoltega/Leon-15 km; La Conquista/Granada-45 km.			
C. Plans to Continue Working in the Same Community (asked at end of obligatory six months for social service doctors)			
Less than 1/2 year	5	0	5
1/2 - 1 year	3	1	4
1 - 2 years	1	0	1
2 - 5 years	0	1	1
More than 5 years	0	9	9
Uncertain	0	1	1
Total	9	12	21

them. Mexico has recently extended its term of service to 12 months, reportedly without incident. Mr. Grego indicates UNAN is receptive. Dr. Canales at MSP is also receptive.

Alternative 3:

Providing one doctor for more than one center should be feasible, particularly where the Centers are not far apart (Catarina and Niquinohomo) and/or where the patient load is too low to justify a full-time doctor. Many Doctors already commute (up to 48 km) to their Health Center so travelling to two different Centers on alternate days should also be feasible, either for a social service Doctor or an established Doctor. Dr. Canales says there are Doctors willing to work more if they are paid more but money is limited. There should be funds available since the MSP budget provided for 12 months of Doctor salary for Health Centers making it possible to pay as much as double the normal salary for a doctor serving two Centers. Providing an MSP jeep might help by providing the transportation and the incentive in some cases for a Doctor to serve two remote Centers.

Alternative 4:

Continuing the status quo situation, with no Doctor at some Centers, could be used as an opportunity to break away from traditional doctor-centered medical care. Many preventive medicine functions can be handled adequately by a nurse, para-medical, and/or sanitary inspector. If the nurse is able to recognize cases that require a Doctor and can refer the patient to another Center or to a Hospital nearby, then the doctor may be unnecessary. Making this kind of system work requires good coordination among organizations plus communication and/or transportation. It might work in Posoltega which is only 15 km from Leon on a good road. Centers without Doctors should receive compensating resources to run an excellent preventive medicine program with

aggressive campaigns outside the Health Center, well baby programs, latrine building, school vaccinations, etc.

Both social service doctors and the established doctors work in Health Centers only part-time. They earn most of their money in their private clinics. The problems in this arrangement include the following:

- The doctor works less hours than promised because he has higher priority commitments; when there are no patients waiting, he may leave for the day to do other work.
- There is a temptation to divert patients who can pay away from the Center to the private clinic in the afternoon. One young Doctor said the system encourages the Doctor to make service so bad at the Center that patients will prefer to pay for the Doctor's care away from the Center.
- The Doctors passively receive patients at the Center, only rarely making an unpaid home visit or other work outside the Center.

Despite these problems, part-time Doctors are likely to be the only economical approach to serving poor people. Doctors are willing to work part-time for poor people out of humanitarianism or for a few hours pay from MSP. For full-time work, they would expect a much higher income.

Other observations on staffing:

- Without a lab technician, MSP will not send laboratory equipment or microscopes so even a consciencious doctor or nurse will lack a microscope; one Doctor complained he could not even make slides to send elsewhere for testing (e.g., to SNEM). Perhaps a single laboratory could serve several Centers with appropriate coordination, communication, and transportation. Catarina wanted to have

the lab technician from Niquinohomo come three days a week (from 3 km away) and serve both Centers.

- The evaluators were informed that MSP salaries are low by Nicaraguan standards. Evaluators noted that the portero in Monimbo was getting C$150 per month compared to C$250 in Villa de Carmen, and C$250 in San Jorge-Rivas.

- There are problems of chiseling, bad attendance, incompetent individuals, and bad feelings among the staff. Some of these problems are inevitable but many could be ameliorated by better supervision and management.

- The evaluators learned of several Centers where Dentists work for low fees (C$2) or for free or accept referrals from the Center at their own clinics; these cases disturbed the MSP supervisors because the Dentists were not regular MSP employees. The PCI evaluators considered these Dentists valuable additions to the services avialable to poor patients through the Health Center. In communities where private Dentists are willing to treat the poor patients, the Health Center could and should devote its resources to other health problems which are no less urgent.

6. Supervision

Supervision was grossly neglected before the evaluation. The supervisory process described by Lic. Villalta was plausible but unreal. The evaluation visits to the Health Centers revealed MSP supervision had left MSP unaware of what was going on in the Health Centers and ineffectual for resolving problems as they developed. Earlier sections have described the resulting problems of the medicine distribution system, equipment, transportation, facilities, and personnel.

How did the situation get so bad? Basically, there was no supervision by the Administrative Section which had responsibility for the Loan Project. Before the evaluation, there was only one Supervisor who could not handle all the supervision needs. Shortly before the evaluation, MSP began to use the three PUMAR supervisors to visit a few Health Centers. Faced with AID's desire for an evaluation, Dr. Canton and Lic. Villalta assigned the three experienced PUMAR supervisors (SUASO, CHAVEZ, SEVILLA) and fourth new supervisor (POU) and they became supervisors for the Health Centers. MSP has now formally integrated its supervisory groups for PUMAR and the Health Centers, a sound and overdue management change.

For practical purposes supervision began with the supervisory visits made during the evaluation. The MSP supervisors visited 44 Health Centers; their summary reports in Appendix summarize the status of the Health Centers and also the capabilities of the Supervisors. The highest priority in these evaluation/supervision visits was (1) taking inventories, (2) informing the Health Center staff what it was supposed to be doing, and (3) identifying serious problems in the Centers that required action from MSP.

The four MSP supervisors proved energetic, dedicated, and capable. They all have extensive experience in health programs. They were candid and insightful about the problems of MSP and Health Centers. They worked effectively as a team helping each other and developing their own improved procedures. They used the outside evaluation to get the support they needed for good supervision; namely,

- transportation;
- "viaticos" (travel allowances);
- secretarial support; and
- management attention for resolving problems in the Health Centers.

The MSP Supervisors trained two inventory takers from Tribunal de Cuentas to visit non-AID Health Centers during the evaluation.

The future adequacy of supervision will depend on MSP continuing the type of support given during the evaluation after the artificial urgency has passed. (See recommendation 9). USAID can help by emphasizing its continuing concern that good supervision be continued.

The emphasis of the Supervisors must go first to resolving internal problems of the Health Centers -- getting medicines delivered, equipment repaired, personnel problems attended to, and MSP procedures used properly. However, they must become more than policemen for MSP; they should become expediters who can and do help solve problems that hamper the operations of the Health Centers. This orientation should be comfortable to the Supervisors and also to Dr. Canton and Lic. Villalta in MSP. After the internal situation is tightened up, the Supervisors should shift emphasis to the relationship of the Health Center to the community it serves. Supervisory visits would routinely include a chat with the mayor or the local "development committee." Interviews with patients or potential patients would help police abuses by Health Center staff and identify ways to improve the Health Centers' contribution to the community. The intended effect is to make the Centers

responsive to the differing priorities of the varied communities they serve.

In addition to visits by the PUMAR-Health Centers supervisors, the Health Centers are being supervised by a variety of MSP departments and programs. The visiting groups identified by Lic. Villalta are:

- Nursing
- Sanitation
- Education
- Laboratories
- Family Planning
- T.B.
- PMA (feeding)
- Nutrition
- Pharmacies
- Regional Supervision in the Pacific
- Dr. Canton.

These varied supervisors will never become interchangeable but should become more coordinated. As a minimum, they should know each other well enough so they can exchange information and help one another. For example, when a Health Center supervisor hears "rumors" about misconduct by a nurse, he should convey the "rumor" to the nursing supervisors to be investigated. If supervisors are coordinating their work, the nursing supervisors will welcome this kind of information-sharing rather than rejecting it as "meddling" by an outsider.

There is little or no technical supervision for the Doctors in the Centers. The evaluation suggests that some technical supervision would be appropriate based on: (1) review of medical histories from Health Centers by a Nicaraguan Doctor, and (2) the description of diagnosis and treatment of hypothetical cases given by Center Doctors and subsequently

analyzed by a Nicaraguan Doctor in MSP.*

The young doctors in remote areas have the clearest need for supervision; they are recently graduated, inexperienced doctors, far away from the normal supporting system of peers and more experienced practitioners. Their potential clientele are poor and suffer many health problems that are potentially preventable or curable. These young doctors will face tough decisions, they will make mistakes, and they will face tough psychological problems where the supportive counsel of a good doctor can help. One young Health Center Doctor said:

> "The doctor must make himself insensitive to survive in a Health Center. A poor woman will bring me a baby with four different health problems, all of which are curable in theory but require medicines and care that she cannot provide. I know the baby is going to die so I have to treat the problems I can handle most easily and move on to the other patients."

Young doctors should welcome "professional support" that is offered constructively and perhaps as scientific self-improvement, such as guidance on his own research project on a medical problem of significance to his area. One approach would be for the UNAN to provide supervision as an extension of the medical school program. Alternatively, MSP can provide it. Young doctors who consider the medical problems of the Centers pedestrian may respond well to supportive visits.

7. Other Administration

The AID Loan has emphasized MSP administrative procedures for

* Further discussed in Section Three, Part E.

"launching" an expanded Health Center system. MSP now needs to shift emphasis to procedures for a system that is self-sustaining, self-renewing, and self-improving. The problems described in other sections will require disciplined thinking backed up by resources to implement improvements. MSP has lacked the necessary combination of manpower, talent, money, and political clout necessary to make the system work efficiently.

The AID Loan is managed in MSP by "The Office of the AID Loan" within the Administrative Department headed by Lic. Villalta. The Office of the AID Loan has collected data on the use of the AID loan and reported to AID periodically. The Office of the AID Loan has not been able to control the use of the AID loan effectively. The preceding sections indicate the failures in distributing, controlling, selling and replenishing medicines, the lack of systematic maintenance and repairs, the failures of communication and responsiveness, etc.

There will be no need for a separate Office of the AID Loan when the Loan is fully disbursed if MSP can produce an integrated administrative process that is run competently. A separate Office made sense during the procurement and construction stage when there were many interrelated AID-financed activities to be coordinated; that time is past. The AID Health Centers are so interwoven with the other activities of MSP that a parallel administrative structure is artificial and wasteful. The only reason to keep it alive would be to induce MSP to use good management procedures on the AID-financed part of the system where AID has some leverage; this has not been accomplished successfully so far. Even the reports produced for AID are 90% wasted energy, counting what goods were purchased while completely neglecting

the operations of the Health Centers (e.g., medicine consumption, patients served, vehicles in operation and for what uses).

MSP should develop improved administrative procedures for managing an integrated system of Health Centers. AID should encourage good procedures for the integrated system and use its leverage under the loan to encourage such procedures. The task of managing the AID-Centers or the AID medicines separately involves all the same problems with the added complication of separating out non-AID Centers and goods.

Being realistic, MSP has not produced good management procedures in the past; it would be naive to expect a complete revolution, but there are hopeful elements:

- Lic. Villalta appears energetic and capable. He heads Administration for MSP so he is already properly placed to improve management.
- The head of Transportation (OROZCO) appears capable. Establishing an effective maintenance and repairs operation may be the hardest task of all but there is a good man to start with.
- Dr. Canton is a pragmatic expediter. His self-concept, as a "pusher" who gets things done, is consistent with what is needed in MSP. During the evaluation, Dr. Canton cut red tape and got things done.

Several specific recommendations for improving administration appear in Chapter Seven.

Other observations about administration:

- Improved planning is necessary. MSP did not know how many social service doctors would extend their service

voluntarily, nor for how long. No plans were made to cover the vacated Centers, even with weekly visits by a Doctor.

- There is no provision for a substitute Doctor or Nurse to fill in during vacation, illnesses, or other extended absence of key staff.

- There are foreseeable problems that merit analysis now. For example, the milk that is distributed free is not likely to be received free for very long because of changes in the world market for milk. MSP should be testing the importance of free milk for "catching" needy children for preventive medicine. The information will be needed someday soon when MSP has to decide between buying milk and using the money for medicines and staff.

- Experiments will be useful to test new approaches with careful analysis of results. Could MSP use a SNEM-type network of 3500 "voluntary cooperators" with minimal training for other health services?

- There are inadequate buffers for contingencies that were not anticipated in the budget. For example, the budget provides for one set of tires per vehicle per year. If the tires don't last, there is a problem.

- There is need for a "normal" cycle of Health Centers ordering goods, MSP processing the orders, and delivering back to the Centers. A regular cycle would help MSP administrators to recognize when something should have happened and did not.

- The Tribunal de Cuentas (Court of Accounts of GON which corresponds to the GAO) plays a constructive role. Its audits appear workmanlike, and conscientious. A discussion with the President of Tribunal de Cuentas was reassuring about the institution's perception of its role in ensuring proper use of AID loans to GON. The auditor for this loan calls attention to, among other things, poor accounting, and the high prices paid for AID-

financed medicines. He questions the legality of using a rotating fund for MSP medicines because it circumvents the normal GON appropriation process. The audits resulted in a dialogue between the Tribunal de Cuentas and MSP about deficiencies of management and remedial measures.

- Administration at the Health Center level is encumbered by dependence of Doctors. The Doctors often:
  - are not inclined to be administrators by training nor personality;
  - lack incentives to become good administrators because their incomes come mainly from private practice and social service doctors do not expect to stay long anyway;
  - are only at the Center a few hours a day, even in Type I Centers where the nurse or auxiliary nurse should be present full-time;
  - make poor use of their medical skills if they spend a lot of time on administration.

These factors suggest shifting the responsibilities for administration from the Doctor to the Nurse, Auxiliary Nurse, or perhaps to a local resident of the community, (see recommendation 19).

8. The Centro de Abastecimiento de Medicinas (CAM) and Other Coordination with JNAPS

The agreement with CAM has served its purpose adequately, protecting the AID-financed MSP medicines and equipment from theft and incompetence prior to distribution to Health Centers. There have been some losses but MSP is fully protected through insurance. The factors which led to using CAM were: its secure facility, its operational IBM inventory control system, and its staff already handling a large volume of medicines for JNAPS, INSS, and

the Managua Junta. Rather than integrating the AID-financed goods with CAM's, CAM operates a physically separated warehouse for MSP where AID-financed goods are received, stored, packed for delivery, and received by MSP.

MSP was supposed to pay a 10% fee to CAM for its services, but no payments have been made. The unpaid balance was C$328,715.53 (US$ 46,959.36) on August 31, 1973.* MSP acknowledges the obligation to CAM but lacks money to pay it. The entire proceeds deposited in MSP's special account for medicines (#6645) were C$292,605.38 on September 30, 1973, of which C$129,577.66 is earmarked for payment to CAM. For practical purposes, the earmarked funds are frozen, doing no good for anyone; MSP doesn't use them to purchase medicines for restocking Health Centers and CAM cannot use them either. The situation should be unfrozen promptly for the benefit of all concerned. MSP requested funds in its 1973 budget to pay the CAM obligation. No funds were provided in 1973, certainly understandable in view of the high priority problems created by the earthquake. The 1974 budget also includes an item to pay CAM but its fate is still uncertain.

Other observations on CAM performance:

- The Health Centers complain that the sealed shipments from CAM arrive "short" on important items or substitute lower value medicines than were or ordered (discussed in Section 5); CAM refuses to even consider claims.

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* Source: Letter to Fernando Valle-Lopez (MSP) from Ing. Juan de Dios Padilla (CAM), October 24, 1973.

- Inspection of the warehouse during the evaluation showed cases of broken bottles.

- Neil Billig points out the lack of air-conditioned facilities for temperature-sensitive merchandise.

- The MSP employee receiving goods was an inexperienced young man substituting for the regular, recently-appointed representative.

- There were mountains of a few medicines (e.g., Theragram) almost no medicines with expiration dates.

- No new medicines had been received for almost two years.

- Physical inventories at CAM have been long delayed, done only at the insistence of auditors and the Tribunal de Cuentas, and have revealed significant shortages. The only inventory since the earthquake of December 23, 1972 was conducted May 31, 1973 and transmitted to MSP in September, 1973. That inventory revealed shortages of C$243,024.53 that were covered by insurance from the National Company of Insurance of Nicaragua.* The computer run CAM showed PCI showed a total deficit of C$249,085.61.** CAM had earlier provided MSP yet another computer-produced schedule sowing the deficit at $252,451.89,*** but omitting completely the items where the physical inventory showed an overage, a difference of C$2,778.94**** in the net shortages.

- The cost paid for AID-financed medicines was regarded as unreasonably high by the Tribunal de Cuentas compared to the cost of similar products purchased by JNAPS. (See Section 5.D).

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* Padilla letter, cited on page 5-42.

** Source: Confrontation of the Physical Inventory of the CAM to May 31, 1973 with the Net Balances adjusted to the Register of Stocks, Run Number FO-317, page 9, September 15, 1973.

*** Source: Confrontation of the Physical Inventory of the CAM to May 31, 1973 with the Net Balanced Adjusted to the Register of Stocks, August 21, 1973, page 8.

**** Source: The computer run of September 15, 1973, page 1, listing averages of MSP.

The current arrangement between MSP and CAM is liquidating itself as the stockpile of AID-financed goods is depleted. The relevant issue today is what should replace it. There are at least four plausible alternatives:

(1) MSP joins CAM in an integrated procurement and warehousing system;

(2) Continue a parallel but separate arrangement like the status quo;

(3) A completely separate MSP system;

(4) A private sector alternative.

The evaluation did not explore these alternatives in depth. An integrated system looks attractive for basic economic reasons:

- CAM can handle MSP's needs with no new facilities, staff, or costly changes in procedures;
- CAM has a "debugged" procurement process that has faults but is probably far better than any independent process MSP could set up. There is a learning process involved;
- CAM should be able to buy in bigger lots, maintain bigger buffer stocks, and negotiate better deals than MSP could alone. CAM purchases will be C$20 million in 1973 and C$25 million in 1974, according to Ing. Padilla, with a 1973 budget of C$2 million. This is approximately seven times the value of all MSP medicine proceeds to account #6645 through September, 1973 and much more purchasing "clout" than MSP would have alone.
- Integrating MSP goods into a common pool would reduce the cost of operating two parallel systems. Some of the MSP goods that are not moving in the Health Centers can be exchanged for a line of credit of equal value. Then the MSP goods will be consumed in hospitals and Health Centers will get other goods they need. (AID approval will be required for commingling medicines in this manner).

- The share of operating costs paid by MSP would be equal to the 10% paid by JNAPS, INSS, and Managua/ JLAPS. The cost of MSP operating independently or through the private sector has not been analyzed but logic suggests it would be higher due to the need for capital expenditures, training, small scale operations, and learning.

Integrating MSP into CAM is likely to encounter some resistance from MSP and perhaps from CAM. Dr. Canales indicated MSP prefers not to see the 10% for administration go to another organization. Dr. Canales and Dr. Rossman (JNAPS) both commented on possible MSP reluctance to become more dependent on JNAPS. Some veiled CAM reluctance could come from those concerned about MSP participation in the procurement process disrupting some cozy relationships with suppliers. (See Recommendations 3 and 13 regarding settlement of the CAM debts and moving toward MSP joining an integrated procurement system.)

The role of JNAPS in the project has been minimal except for the CAM arrangement described above. The Loan project was intended:

> "to achieve better coordination and integration of various public health agencies by strengthening existing coordinating mechanisms and implementing already existing legislation which provides for coordination at both national and local levels," (Loan Paper, Section 1.2).

Discussion with Dr. Abraham Rossman of JNAPS suggests there was no major effort for coordination at the national level other than CAM. JNAPS and MSP view their roles to be "curative" and "preventive" medicine respectively. There is little effort to

create bridges through referrals or coordinated use of expensive equipment or scarce personnel.

At the local level, the evaluators observed in Palacaquina an example that illustrated the limits of de facto coordination between MSP and JNAPS.

- JNAPS operates a "dispensary" across the main square at the local savings cooperative connected to the Church. A doctor comes weekly from Esteli and serves 30 to 40 patients per visit (a very full day). Patients pay five Cordobas for the consultation including all medicines needed; poor patients regard this as a great bargain since medicines are more expensive at the Health Center. The doctor keeps C$2.50 for his consultation.
- The JNAPS dispensary duplicates the coverage of the MSP Health Center indicating poor coordination since presumably there are other communities within commuting distance of Esteli, which have no Health Center for poor people.
- There is a de facto coordination nevertheless. Since the Social Service doctor at the Health Center was planning to leave at the end of September, the JNAPS dispensary planned to expand its service to twice-weekly until a replacement doctor arrived.
- A coordinated health program for Palacaquina probably would operate out of a single facility for economy in the support systems (medicine, facilities, etc.) and use the curative medicine as "bait" to bring patients in for preventive care too.
- There are benefits to the people of Palacaquina since they have added options with both Health Center and dispensary. The losers from poor coordination are people elsewhere who have neither a dispensary nor a Health Center to use.

D. USAID/NICARAGUA

USAID management of the Loan has been effective when focused on the construction and procurement aspects of the project but ineffective in getting GON to provide money and management talent sufficient to administer the project successfully. USAID suspended disbursement in November 1971 to influence GON to remedy deficiencies in staffing and management; the suspension had little impact on these problems but postponed the second Special Center for Managua that would have aggravated the already observable problems. The low priority of this project for GON was known to USAID. However, USAID failed to develop an effective combination of (a) clear and realistic benchmarks for monitoring GON compliance, (b) credible sanctions, and (c) incentives for compliance.

AID personnel have focused their attention on the construction and procurement aspects of the Loan project from the beginning They lacked adequate benchmarks for judging GON compliance with its obligations in the loan. Also missing were benchmarks for judging the "payoff" from the project in terms of health services for poor Nicaraguans. The CAP (Capital Assistance Paper) and Loan and Implementation Letters give only passing attention to the "payoff" from the loan to poor people; they dwell at great length on the technical details about drugs and equipment purchased, construction requirements, and conditions precedent. USAID has had its hands full policing compliance with the conditions precedent (e.g., land titles) and expediting the purchasing and construction activities required for disbursements under the loan. With the limited staff to monitor implementation disbursements under the loan, there has been little time to assess whether the health system was really helping anyone.

USAID's lack of attention on the effective operation of the system contributed to continued expansion of a health system MSP could not staff nor manage at the time. The "deficiencies in project implementation" were identified in AID's audit of June 29, 1970 (Audit Report 70-84-N10) and attributed at that time to "inadequate initial planning and lack of an effective administrative section within MOH to operate the project." Recommendation No. 8 was for USAID/N to "reevaluate the objectives and goals of this project based on a current, realistic assessment of GON/MOH capability to carry out the project." The same audit report focused in on the problems that continue unsatisfactorily today --

- improved central administration (recommendation 3)
- getting drugs and medicines to the Health Centers (recommendation 4)
- MSP properly records costs of each Health Center (recommendation 6) and submits timely reports (recommendation 7).

USAID personnel have been frustrated by the inability to get MSP moving but reluctant to assess the Loan in terms of health services delivered. The USAID response to the Audit Recommendation #8 was to reconfirm the objective of 56 Health Centers with adequate staffing and medicines. See A-8, Appendix A for the 1971 USAID response to Recommendation 8.

Even today some AID people in Washington and Managua will argue that the loan has not been a failure because the buildings were constructed and the goods devlivered. The health system is not working well <u>yet</u> but the loan has provided the necessary first stage.

USAID cut off disbursements on November 8, 1971 to influence GON to remedy the deficinecies in staffing and management. The cutoff postponed construction of the second Special Center for Managua. USAID's assessment of the curoff is that it had little impact on getting MSP to change its management. However, the cutoff automatically prevented the second Special Center from further

aggravating the already observable problems such as inadequate staffing of Centers outside Managua, lack of supervision, and lack of control. The cutoff remained in effect until after the Managua earthquake of December 23, 1972 had destroyed four smaller Health Centers in Managua. The obvious need for health facilities for Managua and the availability of funds under the old loan was an irresistable combination so USAID approved further disbursement for Managua.

In fairness to the USAID staff managing Loan 023, the same management practices and deficiencies occur in many other AID Loans. To the extent there are defects, they should be considered defects in AID's system of Loan implementation.

- The focusing of attention of "moving resources" more than on implementation of an effective project;
- The lack of benchmarks for GON compliance;
- The lack of benchmarks for accomplishment of social objectives -- in this case, measures of patient services provided by the Health Centers;
- The reluctance to alter the project when AID was doing its share but the patient services were not forthcoming.

With the benefit of hindsight, some specific improvements can be identified.

The USAID control procedures were focused on preventing theft and incompetence at the first stage of the project and USAID had its hands full policing these problems. Unfortunately, the procedures stopped short of monitoring the operation of the health system including the

use of AID-financed goods. Thus, reports to AID accurately show expensive X-Ray equipment delivered to a Health Center without indicating the equipment had never been installed nor used. The reports accurately trace medicines from suppliers in the U.S.A. to the warehouse to the health system. However, there is no indication that many Centers received no medicines for six months, nor does it reveal the breakdown of the system for selling medicines to generate funds for replenishing the stock of medicines.

The system of reporting and control might have been appropriate to a straight commercial transaction (e.g., the Export-Import Bank) ensuring the buyer receives full value from the exporter so there will be no grounds for challenging the validity of the debt. It misses the whole point of a loan for a project managed for socio-economic impact. In managing the socio-economic project, the management reports should be related to the receipt of the valuable services by the intended beneficiaries, in this case medical services for poor people in Nicaragua.

The "Buy-American" requirements forced GON to pay prices far above the prices paid by JNAPS for comparable products. MSP wrote off C$1,023,163.80 (US$146,166.25) in 1971, reducing the value of inventory from the inflated costs from U.S. suppliers to the replacement cost buying through JNAPS. The audit report of Tribunal de Cuentas of 21 December 1971 includes the following statements on page 2:

> "The cost of medicines in stock in the warehouse (CAM) was adjusted by a total of C$1,023,163.80 according to the memo of 23 August 1971 from Dr. Carlos M. Canales to Dr. Zacharias Rodriguez of CAM* to diminish the high cost at which they were purchased from JNAPS.
>
> ...medicines purchased in the U.S.A. were observed to have very short expiration dates that had not been foreseen in the procurement competition. Also the prices of acquisition were very high, although tab-

* Dr. Canales' secretary could find no record of this memo in his files nor more than an oblique reference in records of the MSP/AID committee.

ulations of the bids showed the selection of the lowest bids when awarding purchase orders."

These statements by Tribunal de Cuentas are a soft way of saying the suppliers got away with C$1,023,163.80 but there is no proof of collusion. The inflated costs also led to an unfortunate price policy for medicines which continues in effect today. (See Table 3-3.) Some medicines are sold with a high mark-up (250%) and others far below cost (86% below the inflated cost), attempting to lower some prices to approximate JNAPS prices and still recover enough on the high mark-up item to recover full costs. The substantial deviation from JNAPS selling prices is an incentive for Centers to use the cheaper source, leaving the high price medicines standing in the warehouse. The large and unequal discount from prices in the Pharmacies is a temptation for diversion of medicines to commercial channels. MSP has not changed its price policy to reflect the lower costs for replacing the AID medicines. MSP should be told that it is free to use the proceeds from sale of AID-financed medicines to buy at the cheapest price regardless of country of origin.

In fairness to AID, the costs to GON are probably a bargain, despite the inflated prices, when the liberal terms of payment are analyzed using the discounted value of payments over 40 years at 2% and 2 1/2% interest.

The low priority assigned to this project by GON was known to USAID but the implications were inadequately provided for. USAID appears to have pressed this loan on GON because USAID thought it was important for Nicaragua. The conventional wisdom of development lending today would be to stay out of projects that are not high priority for the borrower. The "easy cases" are those projects USAID and GON both consider high priority. There will also be "hard cases"

where the priorities overlap partially and a bargain is struck between the parties that adequalely defines the expectations and obligations of both parties.

The implied role of USAID lending is active analysis and interaction with the government to define good projects in the "easy" category and to strike realistic agreements in the "hard" category. The hard cases will typically involve grants and concessionary loans for activities that the government would not, or could not, support from its own resources without USAID assistance.

The Health Center Loan is a useful example of a "hard case." USAID could and should anticipate that GON would comply with its obligations, to the extent USAID enforced those obligations, and that discretionary resources would go to other acticities considered higher priority by GON. Therefore, a good loan must define GON obligations sufficiently to constitute a "realistic agreement."

The obligations of GON described in the loan agreement include preparation of plans specified in Article III (Conditions Precedent to Financing) and executing the project according to broad subjective norms described in Articles IV and V. For monitoring the execution of the project there was no objective standard for judging what GON was obliged to accomplish or the level of effort to maintain and operate the system. Specifically, GON promised the following:

- "To cause the Project to be carried out and maintained with due diligence and efficiency and in conformity with sound public health and general administrative practices, and shall assure that MSP takes the measures necessary to develop and strengthen a Section to directly administer the Project."
- "(carry out the Project) in conformity with plans, schedules, and other agreements and with all modification thereto, agreed upon by AID."

- "...establish and maintain an adequate system of drug distribution control for the Project, both at the Central and field levels."

- "...provide promptly as needed all funds, in addition to the Loan and all other resources required for the punctual and effective carrying out and operation and maintenance of the Project during the life of the Loan."

- "...cooperate fully to assure that the purposes of the Loan will be accomplished."

- "...provide qualified and experienced management for the Project and shall train such staff as may be appropriate..."

- "take adequate measures, including special training courses, to assure that the Project has sufficient well prepared medical and para-medical personnel for its operation..."

There are no incentives built in to the project to encourage GON to work for the social objectives that motivated USAID to make the loan. Enforcing the terms of the loan and monitoring its success in meeting USAID priorities were bound to create frictions and frustrations on both sides because the obligations were unclear, the priorities differ, and finally, the sanctions available to USAID were ineffectual. USAID could only cut off disbursements before the loan was fully disbursed, (more deliterious to USAID objectives than GON's) or declare the loan in default. After the disbursement period, the only sanction was to deny further loans and grants or to use the personal influence of the Ambassador and USAID.

What then can be done about this loan now (November, 1973)? USAID did intervene to enforce the broad obligations of GON in November, 1971 but with disappointing results already discussed. Theoretically, there are at least three approaches to enforcing GON compliance with the loan:

(1) Define reasonable and objective performance standards and call upon GON to do whatever is necessary to meet those standards with its own resources;

(2) In addition, USAID can help GON to fulfill the performance objectives USAID considered important by providing technical assistance, policy guidance and money as necessary;

(3) In addition, USAID can create incentives for GON to embrace the USAID social objectives, probably by a combination of credible rewards, help, and sanctions that bear on activities of high priority to GON.

In practice, USAID's interest in providing further assistance to the Health Sector suggests alternative three -- a combination or rewards, help, and sanctions that are discussed further in Section VII.

SECTION SIX

RECENT IMPROVEMENTS

A. SUMMARY

Despite the problems cited in Section V, the situation has improved recently in staffing, management of medicines, and supervision.

B. IMPROVEMENTS IN STAFFING

The Minister of Public Health, Fernando Valle-Lopez, is generally credited with eliminating most of the "phantom employees" (who were paid by MSP and did no work) and with making several good appointments. MSP has been criticized as a haven for political appointees and nepotism. The implication was that salaries were wasted on people who were absent or incompetent and not subject to replacement because of political or personal connections.* Minister Valle-Lopez has already shown that abuses can be stopped when there is a will stop them suggesting the norms of competent, honest work could be institutionalized even if there continued to be some "chiseling" that cannot be prevented.

The earthquake helped the Health Centers by wiping out more attractive alternatives in Managua. Many doctors welcome a Health Center job this year because the Managua hospitals are gone and even the population of Managua is dispersed around the country. It is predictable that the improvement in supply of doctors will last approximately one year and then deteriorate seriously. The 1973 graduates who are staying voluntarily lack attractive alternatives. The next cohort will have to serve from April to September, 1974 but they will face a richer set of alternatives. By that time, Managua will have

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* American readers should defer judgment before equating political appointments and nepotism with corruption and incompetence. Nicaraguans are as relaxed about personal relationships influencing government appointments at low levels as Americans are about political appointments at Ambassadorial and Cabinet level.

two new hospitals and five additional Health Centers. Reconstruction will bring the patients back to Managua and remote Health Centers will be regarded as hardship posts once again. The supply of nurses for remote areas will also drop next year. The earthquake reduced the size of the 1974 graduating class drastically. MSP has approximately one year to ameliorate a predictable problem of attracting and retaining doctors far from Managua.

C. IMPROVEMENTS IN ADMINISTRATION AND SUPERVISION

The MSP administration deserves high marks for performance during the joint evaluation. The MSP administration showed it could "sprint." This was amply demonstrated by the following MSP actions:

(1) MSP provided four hard-working supervisors who developed their own procedures for improved supervision, (with some assistance from PCI);

(2) MSP provided five vehicles, a feat of cutting bureaucratic red tape to schedule and coordinate including getting good tires and gas coupons.

(3) MSP arranged for two inventory-takers from Tribunal de Cuentas to collaborate in the evaluation, doing work different than their normal duties, and overcoming the bureaucratic problems involved in MSP paying "viaticos" at a higher rate than is paid to MSP supervisors.

(4) MSP provided secretarial support for the MSP supervisors.

(5) MSP acted promptly on some of the urgent problems identified during the field evaluations, e.g., expediting medicine deliveries where none had been sent for months before.

(6) MSP notified Centers by telegram of the forthcoming visits.

(7) Other urgent work at PUMAR/Puerto Cabezas was integrated into the evaluation work with minimal disruption, and

(8) Many of the actions above were carried out despite the unexpected departure of Lic. Villalta, indicating that there is some depth of administration. At least 15 Nicaraguans were involved in the evaluation.

Successful "sprinting" does not guarantee a strong "long distance" race, but it is encouraging. When the system was put under stress, it responded constructively and effectively.

For the longer run, MSP has injected badly needed talent and resources into administration and supervision. Licenciado Villalta is a promising head of Administration; he was in Argentina for a training course in October. The supervisory team has been expanded from one (SACASA) by adding three experienced supervisors from PUMAR (SUASO, CHAVEZ, and SEVILLA) and one new supervisor (POU). They will have made supervisory visits to more than 44 of the 56 AID-financed Health Centers by the end of October, 1973.*

D. IMPROVEMENTS REGARDING MEDICINES AND EQUIPMENT

MSP is recovering control of its medicine distribution system. As described in Section 5.C.1, MSP has not had control since the earthquake. The problem was recognized prior to the evaluation and MSP had already diverted PUMAR supervisors to visit a few Health Centers to (1) prepare an accurate inventory, (2) ensure the personnel knew how to handle medicines and money, and (3) identify other problems at the Health Centers. The joint USAID/MSP evaluation was used, at USAID/ PCI initiative, to accelerate the process as much as possible. The responsibilities of the MSP supervisors on the evaluation teams have been the same work they should have done in a good supervisory

* Related discussion appears in Section 5.C.6.

visit. The evaluation provided a sense of urgency that focused MSP attention on the problem and created pressure to provide vehicles, viaticos, secretarial support, and top management interest but the hard work was done by GON people -- MSP supervisors in the AID-financed Health Centers, and "Inventoriantes" from Tribunal de Cuentas in the other Health Centers. By the end of October, MSP had reliable inventories for 44 of the 55 AID-financed Centers and 44 other locations where AID-financed medicines exist. See Section VII for recommendations regarding future supervision.

SECTION SEVEN

RECOMMENDATIONS

A. SUMMARY

Practical measures to improve the Loan Project are recommended to increase patient use of Health Centers and improve the efficiency of the support systems. Separately recommended are actions that would improve performance of the Health Centers even though these actions go beyond the Loan Project. Several are immediate management improvements in MSP and others require further analysis by MSP or as part of a Health Sector Study.

B. RECOMMENDATIONS TO IMPROVE THE LOAN PROJECT

Recommendation 1: Restore the stocks of medicines in the Health Centers.

The Health Centers and PUMAR units lack medicines and equipment, even when the necessary goods are available in the Managua warehouse. MSP trapped the Centers by restricting orders to a limited "line of credit" and then ordering the donation of medicines. The result is that many Centers have no funds available for replacements. The administrative system should yield, either my MSP sending "new lots" or in some other fashion ensuring every Center and PUMAR unit has enough medicines with an appropriate selection. Restoring the stocks of medicines can and should be done quickly. Related discussion is in Sections 3.D, 4.D, and 5.C-1.

Recommendation 2: Lower the price of MSP medicines.

The price of many MSP medicines can be lowered substantially while generating enough money to replace the medicines through SNAPS. The evaluation suggests, but does not prove, that patient loads of the

Health Centers will increase substantially when patients realize they can get medicines they need at bargain prices. The relationship of cheap medicines to patient load could and should be tested (see recommendation 14).

In order to expedite the change, it is recommended that medicines be priced initially at approximately 20% above the cost of replacement through JNAPS. The 20% margin will pay for the warehousing fee to CAM (10%) and contribute to the cost of donations, transportation, and other MSP handling. Exceptions to the 20% markup policy should be allowed for donations to the very poor and donations by MSP policy for TB, VD, and parasites. The new prices should be displayed prominently in all Health Centers to ensure that patients are not overcharged and to spread the news about the lower prices. The "new prices" should be considered temporary and changed periodically as the replacement costs change or as a result of the analysis described in recommendation 17. Related discussion appears in Sections 3.D, and 5.C-1 and pps. 5-50 to 5-51.

Recommendation 3: GON should restore the depleted stock of medicines by appropriating money in the MSP budget for medicines and for paying the obligation owed to CAM.

MSP should have approximately six months supply of medicines on the average over the year; six months is the estimated lead time (CAM's rule of thumb) from recognizing a need to order until medicines arrive.

The theoretically correct amount for GON to appropriate should be estimated from forecasts of MSP medicine consumption and MSP replacement costs. These figures are not available to the evaluators in November, 1973. A more practical but less appropriate estimate would be to restore the medicine inventory to a level equal to what was

financed by AID. The calculation would be as follows: Estimate the value of (1) the goods purchased with the AID-loan with JNAPS replacement costs; (2) deduct the replacement cost of the existing MSP inventory at CAM, the Health Centers, and PUMAR units (using JNAPS replacement cost instead of MSP selling prices); (3) the difference should be provided by GON.

GON should also appropriate money to pay MSP's obligations to CAM. The obligation was C$328,715.53 at the end of August. The C$292,605.38 in bank account #6645, at the end of September, can be used to buy medicines or reduce the debt to CAM but is insufficient for either purpose without an appropriation.

These GON appropriations will be non-recurring special charges if medicines are administered as a rotating fund with proceeds from sales available immediately to purchase replacement medicines. This arrangement would minimize the dependence of MSP on the annual GON budget process. However, Tribunal de Cuentas pointed out that it is against the law unless some special arrangement is made. (See Recommendation 17). Related discussion appears in Sections 5.C-1 and 5.C-8.

Recommendation 4: Extend the Social Service Obligation for Physicians to One Year.

The reasoning for this recommendation is in pages 5-24 to 5-33.

Recommendation 5: Increase the preventive medicine activities outside the Health Centers. As a minimum, every Center should have at least one person working most of the time outside the Center (e.g. sanitary inspector or health educator).

Health Centers with low patient loads should be prodded to use at least one day per week to go outside the Health Center to aggressively seek

out health problems and improve the situation. Large Health Centers could allocate at least 20 - 25% of their resources to "outreach" activities. Health Centers near hospitals, e.g., Posoltega, Nandaime, Managua, should concentrate even more on preventive medicine, offering curative services only to the extent expedient to attract patients who would not come otherwise for preventive medicine. Shift the responsibility for outpatient care back to the hospitals wherever possible to free MSP resources for preventive care. The discussion related to this recommendation includes Section 3, Section 4.C, and Section 5.C.5.

Recommendation 6: Put all AID-financed equipment in working condition promptly.

The equipment should be put to use in Health Centers or else removed to another place where it is needed and will be useful. Related discussion appears in Section 5.C.2.

Recommendation 7: Assign all vehicles financed by AID to be used to directly support Health Center operations.

At least three vehicles should be available at all times for Lic. Villalta's supervisors travelling away from Managua. At least one jeep or pick-up truck should be available to transport goods to Health Centers. All jeeps not being used for high priority services for the Health Centers should be moved from Managua to other Departments where vehicles will expedite (i) services outside the Health Centers or (ii) a single doctor, laboratory technician, and dentist serving more than one Health Center. So long as a shortage of transportation hampers the operation of the Health Centers, no AID-financed vehicles should be reserved for MSP officials except when they are supervising Health Centers. Related discussion appears in Section 5.C.3 and pages 5-31 to 5-33.

Recommendation 8: Establish maintenance and repair services to keep AID-financed equipment, vehicles, and buildings usable.

The need for equipment maintenance is discussed in pages 5-7 to 5-9. The need for vehicle support is discussed in pages 5-14 to 5-19 and facilities maintenance needs are discussed in pages 5-19 to 5-20. Vehicles and equipment not financed by AID need just as much attention and should not be excluded. The pervasiveness of the maintenance problem* suggests that cooperation among Health Agencies might yield one competent source for maintenance of equipment and one source for vehicle support. However, MSP must move ahead even if other agencies do not collaborate.

Recommendation 9: Establish and support an effective team of Supervisors visiting each Center approximately four times per year.

The frequence estimate is based on need for three routine visits and an average of one special visit per year. Four full-time supervisors should be able to handle the workload for supervising the Health Centers and PUMAR. The discussion on pages 5-33 to 5-37 describes the need for secretarial support, travel allowances, management support at MSP, coordination with supervisors in other programs, and the development of supervision into a problem resolving system.

Recommendation 10: Establish a short monthly report from Health Centers on a preprinted form modeled after the Supervisor's Summary.

This will lead to routine communication to MSP about unresolved problems of medicine, equipment, and personnel. Lic. Villalta and his supervisors should respond with action or an explanation before the next monthly report arrives. The same procedure would apply to both

*The findings of the Hospital Administration evaluation show comparable neglect of maintenance and repairs in Nicaraguan hospitals.

AID and non-AID Centers. Related discussion appears on pages 5-37 to 5-41.

Recommendation 11: Discontinue the monthly progress reports to AID in their current form as soon as an improved format is developed that focused on the operations of the Health Centers and their effectiveness.

Most of the information in the current reports is wasted (see page 5-49ff) and will be of even less value after mid-1974 when the last disbursements are made. The main value of the report to AID is to induce MSP to collect some information that should be used by MSP to manage its own affairs. AID should encourage MSP to develop a report that will be useful to the Minister and to send a copy to USAID instead of the old format report. The new format would include an analysis of medicine consumption and sale, equipment that is in service or out of service, vehicle utilization and problems, an analysis of patient services, and reports on important experiments in progress. The reports could even be quarterly rather than monthly if they were competently done.

C. RECOMMENDATIONS GOING BEYOND THE LOAN PROJECT

There are other opportunities for improvement at MSP that would make the Health Centers more effective and efficient. These are really MSP problems rather than problems of the AID loan. However, AID may wish to help MSP successfully address these problems by providing encouragement and technical assistance as necessary.

Recommendation 12: Establish a "normal ordering cycle" for Health Centers to request medicine, equipment, and supervisory assistance.

To illustrate, normal orders from Health Centers in Northern Nicaragua would all come the first week of the month; they would be processed by

MSP and CAM during the next two weeks and transported to the Health Centers the last week of the month. The "normal ordering cycle" would establish a "pace" for the whole Health Center system making it conspicuous when anything is behind schedule (e.g., no order received from Somotillo this month). The transportation vehicles will travel with full loads to the North one week, to the South another week, etc., accompanied by maintenance crews or supervisors when necessary. The work for MSP and CAM will be distributed evenly over the month since orders will be arriving evenly over the month. As soon as the MSP system is capable of processing orders quicker, the deliveries can be accelerated. "Special orders" should be permitted to meet urgent needs, with any extra costs (e.g., commercial transportation) charged to the Health Center.

Recommendation 13: Encourage MSP to use CAM for purchasing and warehousing its medicines and equipment.

The discussion related to this recommendation appears on pages 5-41 to 5-46.

There will be a negotiation between MSP and CAM over the terms of integration including issues such as (i) MSP representation in the procurement and policy making process, (ii) the settlement of MSP obligations, (iii) the use of the insurance proceeds due to MSP, (iv) the valuation and disposition of MSP goods if integrated into a common pool, (v) and the contribution MSP will make to the capital and operating costs of CAM. The bargaining position of MSP is likely to be weak against JHAPS and INSS. AID should consciously help MSP to negotiate terms of integration that protect the legitimate interests of the Health Centers system. For example:

- Health Centers need penicillin in small quantities rather than the bulk containers appropriate for hospitals (see page 5-6, bottom);
- MSP should try to get as large a line of credit as possible in exchange for the AID-financed goods; often the MSP medicines are the "medicine of choice" and will command some premium over the Central American or European versions with the same generic name;
- MSP should not be forced to supinely acquiese in "cozy" relationships with suppliers. A breath of fresh air would be good for CAM although there is no reason to expect MSP to crusade effectively for better management within CAM;
- AID permission is necessary before the insurance proceeds can be used to pay MSP's obligation to CAM or before AID-financed goods can be integrated into a pool used by JNAPS, INSS, and Managua/JLAPS. AID should consult MSP to define MSP's legitimate needs (e.g., protecting equipment needed for Special Center #2 from raiding by the hospitals) and protect those interests.

Recommendation 14: Establish a Management Improvement Office in MSP to advise the Minister on how to make MSP more effective and more efficient.

The Management Improvement Office should conduct experiments and analytical studies and demonstrations of innovations that would improve MSP. The remaining recommendations all describe innovations that merit further analysis and testing. These innovations are likely to be dismissed casually (or accepted uncritically) unless there is an organized and institutionalized process for analysis, testing, and getting top management interest in innovations. An innovation office will also generate ideas tested in Nicaragua that merit support by GON and foreign donors that want to improve health in Nicaragua (e.g., UNICEF, PAHO, BID, IBRD, the Wisconsin partners, etc.).

The MSP Management Improvement Office should report directly to the Minister. In its first year, it should conduct several major projects and perhaps a dozen small projects. A tentative staffing pattern would be three professionals and one secretary. The critical skills required are systems analysis, applied economics, management, and sufficient sensitivity to organizational constraints to sell good innovations to the MSP managers who must implement them.

Recommendation 15: Explore improved procedures for lowering the cost of medicines to Health Center patients.

There a variety of interesting possibilities worthy of consideration by a management improvement office at MSP:

- Posting the prices prominently in the Health Centers to make overcharging risky and to reassure patients about the honesty of Health Center staff;
- Medicines can be identified as GON merchandise on boxes, bottles, or even capsules. Such identification would make diversions to commercial channels more risky;
- Medicines with expiration dates should be managed more carefully so they are used while safe and effective. When they pass that time, proper control over disposal should prevent further distribution;
- Doctors should be encouraged to use lower cost medicines, probably purchased by generic name;
- Quality controls should be sufficient to prevent purchasing of ineffective or dangerous medicines;
- There may be opportunities for major economies through "clever purchasing." The profit margins in many pharmaceutical products are very large (e.g., selling prices twenty times the incremental cost of production.) Nicaragua consumes $14 million in medicines already.)
- CAN is a big enough buyer itself to negotiate some special deals with purchases of 20 to 25 million Cordobas per year. The benefits could be substantial if the potentially fat profit margins were converted into low prices on key items for poor people; the alternatives are windfall profits for producers and/or fat commissions to people who can influence procurement decisions. Being realistic, "clever purchasing" may require successfully bucking an international cartel; it will only work with General Somoza's

support but the potential savings are substantial and could be significant if the benefits were concentrated on medicines used by poor people.

Recommendation 16: Analyze the feasibility of extending Family Planning through all Health Centers and integrating Family Planning into the regular operations of the Health Centers.

This evaluation excluded Family Planning although many Health Centers provided Family Planning services with the same staff several afternoons per week. Nevertheless, the evaluator offered the following subjective impressions from their site visits:

- There is an unsatisfied demand for Family Planning in many communities where Health Centers offer no help or where only follow-up services are available;
- Family Planning is probably the best preventive medicine for many of the poor families interviewed during the evaluation;
- Offering Family Planning only during specific afternoon hours creates a needless burden on patients. It should be made as easy as possible for a mother to get family planning assistance at the same time she brings her children for vaccinations, milk, etc. The community would be best served by making all services available whenever the Center is open and accelerating Family Planning promotion efforts whenever the number of acceptors dropped off.

Recommendation 17: Analyze and rationalize MSP's policies on financing of medicines.

There are three interrelated policies that should be examined together:

a) pricing of medicines for patients who can pay;
b) an MSP budget to pay for medicines needed by patients who cannot pay; and
c) the subsidy GON will provide MSP for medicines to be

Recommendation 2 (page 7-1) suggests starting with a price of 20% aobve cost for "patients who can pay" with GON apying most of the cost for the very poor. But if every poor Nicaraguan came to the Health Centers, the harsh truth is that probably GON could not afford or would not want to donate to all of them. GON has other high priority obligations too so MSP must limit donations or generate enough money from sales to pay for donations. The optimum balance of sales, donations, and subsidy can and should be estimated systematically using forecasts of medicine consumption at different prices, the need for donated medicines, and the implied subsidy from GON.

Recommendation 18: Experiment with increased community participation in the affairs of the Health Centers.

The Health Centers should be oriented toward serving the unique needs of each community to the extent MSP can support those differing services. The communities served by Health Centers are better situated than MSP for some supporting functions.

- Policing abuses by the Health Center staff. If the Health Center is donating to some patients and not to others, the local people will know who is poor and who is not. They will learn about illegal diversions of medicines and they will know if the staff of the Health Center does not work regularly and conscientiously. A one day visit by an MSP supervisor is a pale substitute for a vigilant local committee fighting to get good service for the community.

- Attracting and retaining a good doctor or nurse should be the responsibility of the local community. MSP can assign a young doctor for six to twelve months. However, the doctor's comments (page 5-28ff) make clear the community itself will influence his satisfaction and presumably his willingness to continue working there.

MSP can and should experiment in several communities to see if local involvement can make an important contribution to Health Center effectiveness.

Recommendation 19: Analyze and test the feasibility of operating Health Centers with less dependence on doctors.

The discussion underlying this recommendation is on pages 5-28 to 5-33. MSP should try using doctors who divide their time among two or three Health Centers. The test should be planned, not casual, and analyzed to assess the benefits to patients served in each community.

Transferring administrative responsibility from the doctor also should be tested in several Centers. An experiment could be set up with the nursing division to have a graduate nurse or auxiliary nurse run a Health Center with the doctor acting as an expert technician responsible only for his consultations and medical duties. Another variant would be to use a non-medical local resident to handle administration. The experiment should be planned and assessed based on the impact on patient services.

APPENDIX A

Supporting Tables

TABLE A-1

File 0-3

PROGRAMA CENTROS DE SALUD (AID)

ESTADO DE LOS PROYECTOS AL 30 DE SEPTIEMBRE 1972

No.	LOCALIDAD	DEPARTAMENTO	TIPO	Fondo de Construcción	Total Pagado	Total Reservado	Total Disponible	Fecha inicio Construcción	Fecha de terminación Construcción	Fecha entrega M. S. P.	Pagado c/fondos del Gobierno
1	Yalí	JINOTEGA	II	C 81.500.00	86.402.17	----	(C 4.902.17)	12 Junio 1969	10 Octubre 69	27 Novbre. 69	----
2	Diría	GRANADA	III	67.500.00	60.912.86	----	6.587.14	2 Julio 1969	15 Octubre 69	30 Octubre 69	----
3	Corn Island	ZELAYA	III	82.775.00	85.962.03	----	(3.187.03	12 Agosto 69	15 Marzo 70	4 Junio 70	----
4	Villa Somoza	CHONTALES	II	81.500.00	78.901.44	----	2.598.56	23 Agosto 69	28 Novbre. 69	22 Dicbre. 69	----
5	Posoltega	CHINANDEGA	II	81.500.00	70.319.44	----	11.180.69	23 Septbre. 69	6 Dicbre. 69	8 Enero 70	----
6	Malpaisillo	LEON	I	105.500.00	105.354.78	----	145.22	23 Septbre. 69	20 Dicbre. 69	16 Enero 70	----
7	Santa Teresa	CARAZO	II	81.500.00	74.243.67	----	7.736.33	6 Abril 69	11 Junio 70	14 Agosto 70	99.55
8	Catarina	MASAYA	III	67.500.00	58.112.74	----	9.387.26	13 Abril 69	13 Junio 70	14 Agosto 70	43.91
9	La Concepción	MASAYA	II	81.500.00	74.258.95	----	7.241.05	6 Abril 69	8 Junio 70	14 Agosto 70	108.49
10	[illegible]	MASAYA	II	81.500.00	68.721.62	----	12.778.38	13 Abril 70	13 Junio 70	14 Agosto 70	119.24
11	Granada	GRANADA	I	105.500.00	116.547.92	----	(11.047.92)	20 Abril 70	13 Junio 70	14 Agosto 70	97.38
12	Matiare	MANAGUA	III	67.500.00	62.176.41	----	5.323.59	23 Abril 70	8 Julio 70	14 Agosto 70	26.86
13	Tipitapa	MANAGUA	II	81.500.00	73.041.43	----	8.458.66	20 Mayo 70	15 Agosto 70	7 Septbre. 70	119.48
14	Teoma	MASAYA	III	67.500.00	63.539.87	----	4.140.13	20 Mayo 70	30 Julio 70	7 Septbre. 70	56.23
15	San Rafael del Sur	MANAGUA	II	81.500.00	71.575.87	----	9.924.13	1 Junio 70	22 Julio 70	7 Septbre. 70	300.69
16	Bluefields	ZELAYA	I	154.500.00	164.773.54	----	(10.273.54)	5 Junio 70	24 Octubre 70	6 Novbre. 70	59.71
17	Sta Rosa del Peñón	LEON	III	67.500.00	65.269.30	----	2.230.70	8 Junio 70	8 Agosto 70	22 Septbre. 70	161.31
18	La Libertad	CHONTALES	II	81.500.00	79.543.83	----	1.956.17	13 Julio 70	7 Septbre. 70	28 Octubre 70	288.20
19	Puerto Cabezas	ZELAYA	I	154.500.00	145.032.22	----	(8.532.22)	16 Junio 70	21 Novbre. 70	6 Marzo 70	91.87
20	Santo Domingo	CHONTALES	II	81.500.00	81.550.97	----	(50.97)	11 Agosto 70	22 Octubre 70	1 Dicbre. 70	171.75
21	San Isidro	MATAGALPA	III	67.500.00	64.535.74	----	2.964.26	20 Agosto 70	7 Octubre 70	7 Novbre. 70	118.70
22	[illegible]	ESTELI	II	81.500.00	79.597.38	----	1.902.62	24 Agosto 70	22 Octubre 70	7 Novbre. 70	123.47
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	----	([illegible]	31 Agosto 70	24 Octubre 70	22 Dicbre. 70	[illegible]

[illegible]	[illegible]	[illegible]	II	81.[illegible]	[illegible]	----	[illegible] 19	[illegible]	[illegible]	[illegible]	[illegible]
25	Somo[illegible]	CHINANDEGA	I	105.500.00	118.955.57	----	([illegible]5.57)	21 Septbre. 70	26 Novbre. 70	22 Dicbre. 70	[illegible]
26	Tala[illegible]	MADRIZ	Esp.	59.000.00	45.11[illegible].37	----	13.88[illegible]	28 Septbre. 70	28 Novbre. 70	5 Dicbre. 70	96.66
27	Sebaco	MATAGALPA	III	67.500.00	69.035.74	----	(1.535.74)	10 Septbre. 70	2 Dicbre. 70	17 Dicbre. 70	111.57
28	San Miguelito	RIO SAN JUAN	III	67.500.00	72.519.00	----	5.019.00	28 Septbre. 70	15 Dicbre. 70	14 Enero 71	1.15[illegible].46
29	Morrito	RIO SAN JUAN	III	67.500.00	70.087.94	----	(2.587.94)	27 Octubre 70	19 Dicbre. 70	14 Enero 71	94.82
30	Esquipulas	MATAGALPA	III	67.500.00	66.913.16	----	586.84	2 Novbre. 70	23 Dicbre. 70	22 Enero 71	77.86
31	Telica	LEON	III	67.500.00	66.065.97	----	1.434.03	9 Novbre. 70	8 Enero 71	10 Febrero 71	122.50
32	Villanueva	CHINANDEGA	III	67.500.00	67.740.90	----	(2[illegible]0.90)	9 Novbre. 70	9 Enero 71	10 Febrero 71	121.81
33	Waspan	ZELAYA	I	167.500.00	176.054.79	----	(8.554.79)	3 Agosto 70	14 Enero 71	22 Febrero 71	44.44
34	Matiguás	MATAGALPA	II	81.500.00	80.146.39	----	1.353.61	14 Dicbre. 70	26 Febrero 71	6 Marzo 71	101.45
35	Terrabona	MATAGALPA	III	67.500.00	67.801.78	----	(301.78)	11 Enero 71	6 Marzo 71	19 Marzo 71	134.44
36	San Lorenzo	BOACO	II	81.500.00	76.610.21	----	4.889.79	25 Febrero 71	24 Marzo 71	5 Mayo 71	155.06
37	Acoyapa	CHONTALES	II	81.500.00	78,997.14	----	2,502.86	9 Febrero 71	17 Abril 71	22 Mayo 71	93.28
38	Sn Pedro de Lóvago	CHONTALES	III	67.500.00	70.627.23	----	(3.127.23	16 Febrero 71	17 Abril 71	22 Mayo 71	118.55
39	La Concordia	JINOTEGA	III	67.500.00	76.959.74	----	(9.459.73)	25 Febrero 71	13 Mayo 71	26 Junio 71	465.07
40	Santa María	N. SEGOVIA	III	67.500.00	70.998.35	----	(3.498.35)	8 Marzo 71	13 Mayo 71	7 Abril 72	4.057.92
41	Sn José de Remates	BOACO	III	67.500.00	70.397.45	----	(2-897.45)	17 Marzo 71	31 Mayo 71	26 Junio 71	805.64
42	Murra	N. SEGOVIA	III	65.500.00	61.673.95	----	3.826.05	29 Marzo 71	22 Mayo 71	6 Abril 72	3.197.45
43	San Fernando	N. SEGOVIA	III	67.500.00	65.293.23	31.50	2.175.27	6 Mayo 71	10 Julio 71	24 Agosto 71	4.[illegible].96
44	Diriomo	GRANADA	II	81.500.00	54.903.80	----	26.59[illegible].20	8 Junio 71	4 Agosto 71	24 Septbre. 71	13.617.25
45	Teustepe	BOACO	II	81.500.00	68.605.04	----	12.894.96	12 Junio 71	23 Agosto 71	25 Septbre. 71	12.159.96
46	Santa Lucía	BOACO	III	67.500.00	[illegible].856.46	----	13.643.54	2 Julio 71	28 Agosto 71	25 Septbre. 71	12.[illegible]0.04
47	Altagracia	RIVAS	III	67.500.00	59.829.80	----	7.670.20	19 Julio 71	11 Septbre. 71	4 Octubre 71	9.403.19
48	S. Fco. Carnicero	MANAGUA	III	67.500.00	50.111.36	----	17.388.64	6 Agosto 71	2 Octubre 71	30 Octubre 71	15.202.28
49	La Conquista	CARAZO	III	67.500.00	58.394.21	----	9.105.79	27 Agosto 71	13 Novbre. 71	23 Febrero 72	8.059.68
50	Santo Tomás	CHINANDEGA	III	67.500.00	55.603.91	----	11.896.09	27 Septbre. 71	13 Novbre. 71	24 Febrero 72	15.659.38
51	San José Cusmapa	MADRIZ	III	67.500.00	56.175.26	----	11.324.74	17 Novbre. 71	8 Enero 72	7 Abril 72	12.247.31
52	Monimbó	MASAYA	I	105.600.00	113.591.96	----	(8.091.96)	18 Octubre 71	15 Enero 72	5 Abril 72	1[illegible].852.05
53	San Juan Río Coco	MADRIZ	III	67.500.00	57.193.88	----	10.306.12	2 Dicbre. 71	31 Enero 72	6 Abril 72	12.112.60
54	Achuapa	LEON	II	81.500.00	72,051.56	----	9,448.44	7 Enero 72	29 Febrero 72	14 Mayo.72	4.303.32
55	[illegible] ([illegible]) Managua		Esp.								

[illegible]

Managua, D. N., 4 de Octubre de 1972

Ing. Jorge Haro Vogel
Director del Departamento de
Const. y Mant. de Edif. Públs.

TABLE A-2

Financial Status of AID Financed Commodities Under AID Loan No. 524-L-023

		Received	Distributed	In CAM
I	Allocated to Health Centers			
	A. Medicines	182,751.93	119,498.33	63,253.60
	B. Medical Equipment, Materials and Instruments	222,667.43	243,189.44	(20,521.96)
	C. Dental Equipment and Instrument	62,415.32	39,146.01	23,269.31
	D. Dental Materials	7,487.00	796.37	6,689.51
	E. Office Equipment	7,479.40	7,078.68	400.72
II	Allocated to PUMAR			
	A. Medicines	339,014.77	62,521.11	276,493.66
	B. Medical Equipment, Materials and Instruments	123,133.37	12,756.76	110,376.61
	C. Dental Equipment and Instruments	-	-	-
	D. Dental Materials	934.03	93.20	840.83
	E. Office Equipment	534.14	534.24	(.10)
III	TOTAL			
	A. Medicines	521,766.75	182,019.49	339,747.26
	B. Medical Equipment, Materials and Instruments	345,800.35	255,946.20	89,854.65
	C. Dental Equipment and Instruments	62,415.32	39,146.01	23,269.31
	D. Dental Material	8,421.96	891.57	7,530.39
	E. Office Equipment	8,013.54	7,612.92	400.62
	TOTAL	946,418.42	485,616.19	460,802.23

Source: Memo from A. Grego from T. Brown, USAID/Nicaragua August 29, 1973 based on NSP monthly report. Results of the CAM inventory were not available

TABLE A-3

THE VALUE OF MEDICINES AND MEDICAL EQUIPMENT INVENTORIES AND MONEY FOR MEDICINES AT 68 MSP HEALTH CENTERS AND 10 PUMAR UNITS

Health Centers	Inventory at MSP Sales Prices (C$)		Undeposited Money (C$)
	JNAPS Medicines	AID Medicines	
1. Somotillo	260.75	29.35	0
2. Granada	0	2,161.45	81.05
3. Malpaisillo	662.15	2,782.90	830.00
4. Monimbo	0	86.50	0
5. Bluefields	390.15	4,281.00	17.39
6. Puerto Cabezas	1,245.12	0	42.70
7. Waspam	2,824.62	349.70	
8. San Lorenzo	496.00	682.00	0
9. Teustepe	NA	NA	NA
10. Posoltega	0	503.80	0
11. Villa Somoza	1,423.50	1,353.00	98.00
12. La Libertad	748.70	2,411.10	335.00
13. Santo Domingo	282.10	2,562.00	131.00
14. Acoyapa	245.50	0	0
15. Santa Teresa	0	2,366.00	0
16. Condega	342.55	1,214.65	
17. Pueblo Nuevo	NA	NA	NA
18. Diriomo	0	2,480.00	0
19. Yali	364.30	2,115.00	0
20. Tipitapa	25.00	59.00	184.00
21. Achuapa	NA	NA	NA
22. San Rafael del Sur	0	643.20	
23. La Concepcion	1,127.08	48.00	--
24. Niquinohomo	--	3,015.50	--
25. Matiguas	122.60	1,818.00	420.00
26. San Jose de los Remates	331.92	1,565.00	0
27. Santa Lucia	0	2,750.90	0
28. El Realejo	135.00	3,809.50	122.80
29. Villanueva	674.35	2,023.30	152.35
30. Santo Tomas	0	1,612.10	100.00
31. San Pedro del Lovago	NA	NA	NA
32. La Conquista	31.50	1,342.45	0
33. Diria	0	2,433.30	0
34. Santa Rosa del Penon	55.95	3,193.00	0
35. Telica	0	2,558.50	368.75
36. Mateare	0	15.70	0
37. San Francisco del Carnicero	0	680.30	0
38. La Concordia	650.00	2,798.20	125.00
39. Catarina	0	444.00	0
40. Tisma	267.75	4,445.00	0
41. San Isidro	NA	NA	NA
42. Sebaco	NA	NA	NA

TABLE A-3 (cont.)

THE VALUE OF MEDICINES AND MEDICINE EQUIPMENT INVENTORIES AND MONEY FOR MEDICINES AT 68 MSP HEALTH CENTERS AND 10 PUMAR UNITS

Health Centers	Inventory at MSP Sales Prices (C$)		Undeposited Money (C$)
	JNAPS Medicines	AID Medicines	
43. Esquipulas	0	2,297.00	0
44. Terrabona	114.10	1,515.50	32.00
45. San Miguelito	0	244.00	
46. San Jose de Cusmapa			
47. San Juan del Rio Coco			
48. Santa Maria			
49. Murra			
50. San Fernando	0	228.80	0
51. Altagracia		2,196.09	
52. Morrito	0	3,128.00	
53. Corn Island		385.78	
54. Hope Portocarrero de Somoza	0	26,868.70	
55. Palacaquina	NA	NA	NA
P1 PUMAR/Matagalpa	0	6,069.88	
P2 PUMAR/Rivas		2,310.04	
P3 PUMAR/Leon		6.078.65	
P4 PUMAR/San Carlos			
P5 PUMAR/Rio Escondido	0	739.24	
P6 PUMAR/Granada	0	5,129.00	0
P7 PUMAR/Prinzapolka		3,730.99	
P8 PUMAR/San Juan Rio Coco		3,782.81	
P9 PUMAR/Puerto Cabezas	0	15,791.00	34.00
P10 PUMAR/Ocotal,N.S.	48.00	20,462.00	
P11 PUMAR/Chontales		2,476.53	
56. Boaco			
57. Camoapa			
58. Jinotepe	941.00	966.10	
59. Diriamba	18.20	92.15	
60. San Marcos	640.73	2,914.00	
61. Chinandega			
62. San Francisco del Norte			
63. Chichigalpa			
64. Cinco Pinos			
65. Corinto			
66. El Viejo			
67. Tonala			
68. Puerto Potosi			
69. Juigalpa			
70. Santo Tomas			
71. Comalapa			
72. Esteli	836.83	3,654.30	
73. La Trinidad	199.85	1,692.80	
74. San Juan de Limay		3,631.40	
75. Nandaime	398.25	2,311.00	
76. Granada (#2)			
77. Jinotega		2,394.80	
78. San Rafael del Norte		561.40	
79. Leon Regional			
80. Centro de Salud L.H. Debayle			

TABLE A-3 (cont.)

THE VALUE OF MEDICINES AND MEDICAL EQUIPMENT INVENTORIES AND MONEY FOR MEDICINES AT 68 MSP HEALTH CENTERS AND 10 PUMAR UNITS

Health Centers	Inventory at MSP Sales Prices (C$)		Undeposited Money (C$)
	JNAPS Medicines	AID Medicines	
81. Centro de Salud Mantica Berio			
82. El Sauce	*	0	
83. La Paz Centro	3,051.37	2,339.50	
84. Nagarote			
85. Puerto Samoza			
86. Somato			
87. Telpaneca			
88. Totogalpa			
89. Masaya			
90. Masatepe	39.75	262.00	
91. San Juan de Criente			
92. Nindiri			
93. Matagalpa	47.00	3,405.50	
94. Muy Muy			
95. Ciudad Dario	836.20	1,828.00	
96. San Dionisio			
97. Ocotal		5,043.95	
98. El Jicaro			
99. Jalapa	44.40	186.20	
100. Quilali			
101. San Carlos			
102. Rivas	557.25	2,693.30	
103. San Jorge	408.99	2,140.40	
104. Tola		2,342.50	
105. Cardenas			
106. Moyogalpa			
107. Guadalupe		3,299.25	
108. Belen		1,239.55	
109. Potosi	365.10	3,602.45	
110. San Juan del Sur	108.22	1,621.50	
111. Bonanza			
112. Siuna			
113. Rama	336.80	2,824.50	
114. Tasba-Raya			
115. Nueva Guinea			
116. Villa El Carmen		2,376.00	
TOTALS	21,698.63	217,489.96	3,074.04

Source: Reports of MSP supervisors and Tribunal de Cuentas Inventory Takers on evaluation visits in September, October, and November, 1973, except for inventories taken by Supervisors before the evaluation at six Health Centers and seven PUMAR units. Not included are 46 centers and one PUMAR unit.

*Inventory not permitted

TABLE A-4

ANALYSIS OF THE VALUE OF AID-FINANCED MEDICINES SOLD OR DONATED THROUGH HEALTH CENTERS AND PUMAR

MSP Name	(1) MSP CODE	(2) UNITS	(3) Quantity Distributed Through 5/73	(4)	(5)	(6) Unit Prices (cordobas)
			Health Centers	PUMAR	TOTAL (3+4)	MSP COST
Metophen Tintura	009	Fco	44	150	194	6.59
Picrato de Butesin	010	Fco	36	45	81	14.53
Sulfadizina	012	Tab	166,400	61,000	227,400	0.048
Kenacort Unguente	013	Tub	500	1,317	1,817	5.46
Despacilina Plus	014	Fco	430	11,188	11,618	0.77
Misteclin V. Jarabe	015	Fco	515	11,419	11,934	9.24
Donnatal	098	Tab	142,650	25,000	167,650	0.056
Kaomicin	107	Pta	570	1,525	2,095	20.58
Renese R. - 2 mgs.	108	Tab	11,500	12,700	24,200	0.38
Diabinese - 100 mgs.	109	Tab	5,750	8,500	14,250	0.20
Visine - 1/2 onza	110	Fco	1,496	1,902	3,398	6.58
Otos Mosan	111	Fco	2,402	981	3,383	3.41
Aldrox	112	Tab	75,000	72,070	147,070	0.0672
Benecetacil 6-3-3	113	Fco	1,650	4,226	5,876	71.12
Anti Veneno Ofidico	114	Tub	95	19	114	52.45
Ben lin Expectorante	142	Pta	4,434	2,854	7,288	7.36
Caladryl - 6 onzas	144	Fco	8,328	2,620	10,948	2.31
Combex Parenterico	146	Fco	3,100	6,380	14,480	2.11
Camoquin	147	Tab	133,150	39,000	172,150	0.03048
Midicel - .5 gm	148	Tab	35,900	46,450	82,350	0.253
Sol. Clorhidrato Adre.	150	Amp	3,230	372	3,602	0.51
Vitamina C	151	Tab	88,150	57,100	145,250	0.04975
Cloromycetin 250 mg.	152	Cap	104,900	45,400	150,300	0.32
Benadryl Sirope	153	Gln	253	412	665	29.44
Jalea Lubricante KY	190	Tub	361	---	361	1.72
Aspirina	192	Tab	290,900	663,000	953,900	0.0089
Theragram	193	Cap	567,100	721,000	1,288,100	0.122
Piperex de 100 mg.	194	Gln	1,303	805	2,108	68.04
Kenacort - 8mg.	195	Tab	11,650	25,800	37,450	0.662
Rubraton Elixier	196	Gln	353	662	1,015	87.59
Bentyl - 20 mg.	201	Amp	458	838	1,296	10.13
TOTALS						

TABLE A-4 (cont.)

ANALYSIS OF THE VALUE OF AID-FINANCED MEDICINES SOLD OR DONATED THROUGH HEALTH CENTERS AND PUMAR

Unit Prices (cordobas)			(10) Value of Medicines Distributed	(11)
(7) MSP Sales Price	(8) JNAPS Sales Price	(9) Managua Retail Price (C)	JNAPS Prices (col. 5 x col. 8)	Managua Prices (col. 5 x col. 9)
5.50	2.84	2.70[E]	550.96	1,067.00[M,E]
30.00	27.289	8.45[E]	2,210.41	2,430.00[M,E]
0.10	0.033	.10	7.504.20	22,740.00
3.00	1.506	8.75	2.736.40	15,898.75
1.00	0.45	2.00	5,228.10	23,236.00
4.00	1.219	6.80	14,547.55	81,151.20
0.20	0.10	.50	16,765.00	83,825.00
12.00	3.37	26.81[A]	7,060.15	56,166.95
0.50	0.04	.95	968.00	22,990.00
0.50	0.298	.85	4,246.50	12,112.50
5.00	1.80	13.00	6,116.40	44,174.00
3.00	1.358	---	4,627.94	10,149.00[M]
0.10	0.04	.25	5,882.80	36,767.50
10.00	3.846	5.45	22,599.10	32,024.20
35.00	35.00	---	3,990.00	3,990.00[M]
6.00	2.58	6.25	18,803.04	45,550.00
3.50	2.65	8.55	29,012.20	93,605.40
3.00	0.825	3.85	11,946.00	55,748.00
0.10	0.092	.35	15,837.80	60,252.50
0.25	0.05	.35	4,117.50	28,822.50
1.00	0.417	.35[E]	1,502.03	3,602.00[M,E]
0.10	0.024	.25	3,486.00	36,312.50
0.40	0.10	.30	15,030.00	45,090.00
64.00	18.578	6.25[E]	12,354.37	42,560.00[M,E]
3.00	2.88	7.00	1,039.68	2,527.00
0.05	0.01	.05	9,539.00	47,695.00
0.20	0.019	.30	24,473.90	386,430.00
64.00	18.702	171.90[A]	39,423.82	362,365.20
1.00	0.531	3.60	19,885.95	134,820.00
96.00	33.166	315.42[A]	33,663.49	320,151.30
2.00	0.56	2.25	725.76	2,916.00
			345,874.05	2,117,290.50

Notes: A = price adjusted for difference in quantity;
E = retail price not used because data not available to adjust price;
M = MSP sales price used;
C = the lowest cost equivalent was used when available at retail, not necessarily the same brand used by MSP.

Notes for Table A-4.

Columns 1,2,6,7,8--MSP analysis (untitled and undated) of the cost and prices of medicines. See Table 3-3.

Columns 3,4,5--MSP Monthly Report #37 for the months of January-May 1973.

Column 9--Data collected during the evaluation, primarily at Farmacia Horacio Fonseca T. at Ciudad Jardin C-34 in Managua. See the notes below.

Notes on Data Collection:

The evaluation included "comparison shopping" in sixteen stores identified at sixteen Health Centers as the best alternative sources for medicines for local residents. The evaluators used a list of 31 MSP Medicines (financed by AID) with the corresponding JNAPS medicine names. The evaluators inquired about the availability of the MSP medicine or its equivalent. If the MSP medicine name was not recognized, the JNAPS name was used. Prices were noted. When the name or quantity varied from the MSP list, the evaluator noted what item was being priced so adjustment could be made later.

Frequently there were only a few medicines available locally so patients who could not get medicine at the Health Center would have to go to another town or city, paying for transportation as well as medicine.

Additional Notes on Table A-4.

Column 1:

MSP sells some medicines in addition to those on the 31 item list.

Columns 3,4,5:

(a)The quantities distributed were recorded at CAM. A conceptually ideal measure would deduct the inventory at Health Centers and PUMAR units which had not been distributed to patients.

(b)The evaluation took place in Autumn 1973, so distributions for intervening months are omitted.

(c)The value of medicines stored at CAM and health centers are potentially valuable to patients but are excluded since patients have not actually received them.

Column 6:

MSP costs do not include the ten percent fee for CAM warehousing nor the MSP costs for handling, transportation to Health Centers, losses after the warehouse, etc.

Additional Notes on Table A-4 (cont.)

Column 7:

MSP sales prices are the current prices. Many medicines were distributed free or at nominal prices.

Column 8:

JNAPS prices include the ten percent handling fee for CAM warehousing. The medicines often are different brands that were purchased on a cost basis. They may not be exact equivalents.

Column 9:

Managua retail prices have been used when available. When there was more than one medicine available, the cheaper price was used. The prices for some items were adjusted for differences in quantity--e.g., the Health Centers get Piperex in gallons while retail stores sell in small containers. When it was impossible to adjust prices or the medicine was not available in the Farmicias, the MSP selling price was used instead. All prices that were adjusted are footnoted in Table A-4.

TABLE A-5

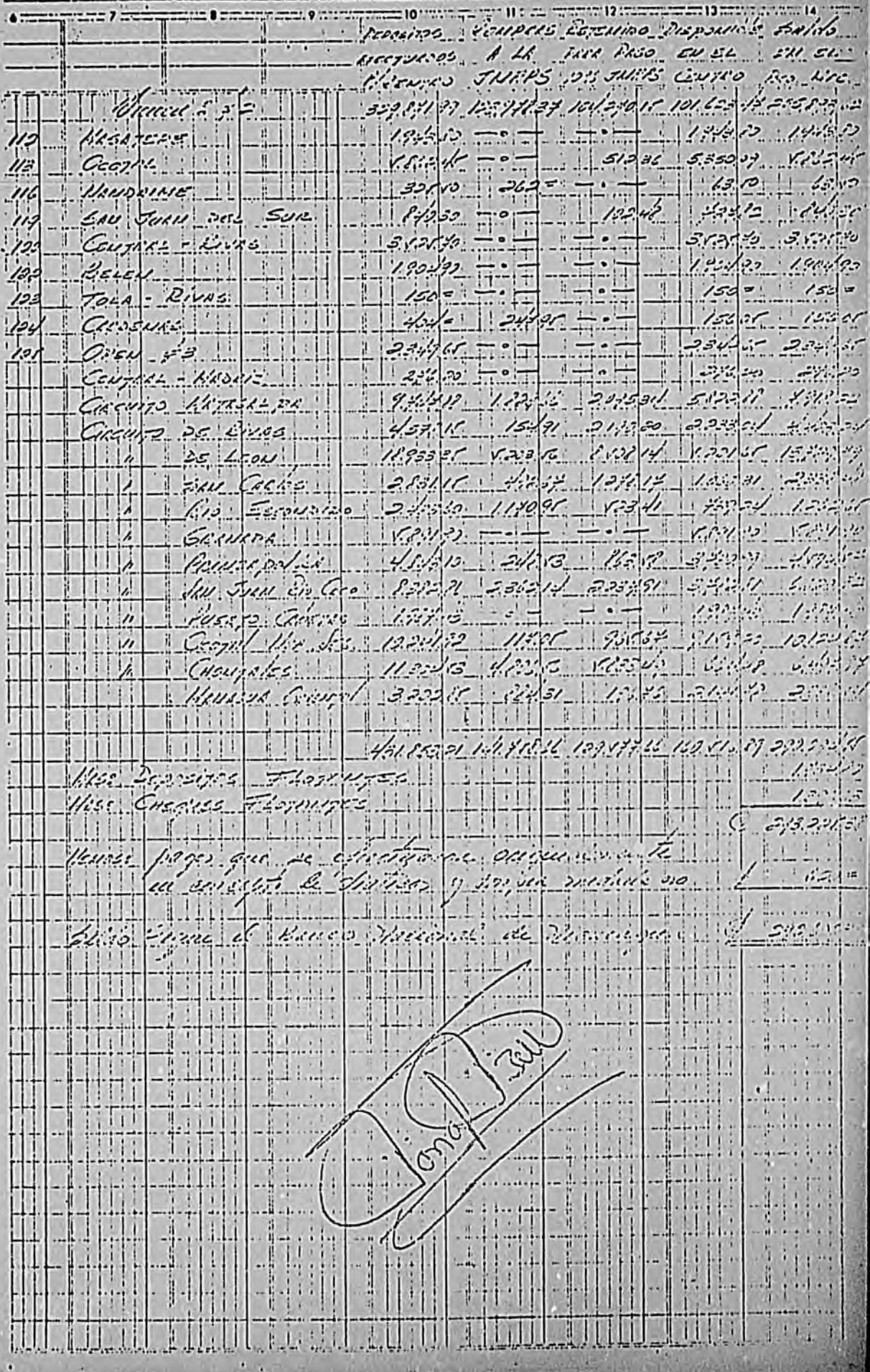
Cuadro informativo del manejo de la Cuenta #11.15 "Fondos de Medicinas" al 30 de Septiembre de 1973.

			1	2	3	4	5
			Depositos Efectuados P/Centro	Compras a la [illegible]	Retenido para pago [illegible]	Disponible en el Centro	Saldo en Bco. Nac.
1	1	Santa Teresa	2.010.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	2	Granada #1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	3	Diriá	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	4	[illegible]	631.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	5	San Rafael del Sur	600.[illegible]	—	—	[illegible]	[illegible]
6	6	[illegible]	[illegible]	—	—	[illegible]	[illegible]
7	7	Villa Somoza	12.381.13	[illegible]	3.441.17	[illegible]	[illegible]
8	8	La [illegible] del Peñón	[illegible]	—	—	[illegible]	[illegible]
9	9	[illegible]	3.[illegible]	[illegible]	1.541.45	[illegible]	[illegible]
10	10	Catarina	[illegible]	—	[illegible]	[illegible]	[illegible]
11	11	Niquinohomo	[illegible]	—	[illegible]	[illegible]	[illegible]
12	12	La Concepción	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	13	Tisma	1.533 =	—	[illegible]	[illegible]	1.533 =
14	14	Bluefields	2.[illegible]	[illegible]	1.[illegible]	[illegible]	[illegible]
15	16	Puerto Cabezas	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	17	Corn Island	2.31[illegible]	1.61[illegible]	[illegible]	[illegible]	[illegible]
17	18	Yalí	6.[illegible]	[illegible]	3.646.41	[illegible]	[illegible]
18	19	[illegible]	341.[illegible]	[illegible]	—	[illegible]	[illegible]
19	20	[illegible] Oriental	10.[illegible] =	—	[illegible]	[illegible]	[illegible] =
20	21	La Libertad	2.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	22	Santo Domingo	[illegible] =	[illegible]	[illegible]	[illegible]	[illegible]
22	23	Matiguás	[illegible] =	[illegible]	[illegible]	[illegible]	[illegible]
23	24	Somotillo	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	25	El Realejo	[illegible] =	[illegible]	—	[illegible]	[illegible]
25	26	Altagracia	6.[illegible] =	3.[illegible]	[illegible]	[illegible]	[illegible]
26	28	Terrabona	[illegible] =	[illegible]	[illegible]	[illegible]	[illegible]
27	29	Condega	10.[illegible] =	6.[illegible]	[illegible]	[illegible]	[illegible]
28	30	Pueblo Nuevo	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	31	Telica	2.9[illegible]	—	—	[illegible]	[illegible]
30	32	Sébaco	[illegible] =	[illegible]	[illegible]	395.[illegible]	[illegible]
31	33	San Isidro	3.[illegible] =	[illegible]	[illegible]	[illegible]	[illegible]
32	36	San [illegible]	[illegible]	1.137.[illegible]	[illegible]	[illegible]	[illegible]
33	38	Villanueva	[illegible]	1.761.90	[illegible]	[illegible]	[illegible]
34	39	La Conquista	[illegible]	[illegible]	[illegible]	([illegible])	[illegible]
35	40	Monimbó	[illegible]	—	[illegible]	[illegible]	[illegible]
36	41	San José de los Remates	2.[illegible]	661.19	[illegible]	[illegible]	[illegible]
37	42	San Lorenzo	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
38	43	Santa Lucía	[illegible]	—	—	[illegible]	[illegible]
39	44	Teustepe	[illegible]	2.[illegible]	[illegible]	[illegible]	[illegible]
40	45	Acoyapa	[illegible]	—	[illegible] =	[illegible]	[illegible]
41	46	San Pedro Lóvago	[illegible]	2.11[illegible]	[illegible]	[illegible]	[illegible]
42	47	Diriomo	[illegible]	—	—	[illegible]	[illegible]
43	48	San Fco Carnicero	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] =
44	50	La Concordia	2.[illegible]	1.[illegible]	[illegible]	[illegible]	[illegible]
45	51	Palacagüina	6.[illegible]	[illegible]	3.[illegible]	[illegible]	[illegible]
46	53	San [illegible] Río Coco	[illegible] =	1.[illegible]	[illegible]	[illegible]	[illegible]
47		[illegible]	[illegible]	57.[illegible]	53.[illegible]	37.[illegible]	[illegible]

TABLE A-5 (cont.)

No.	Centro	10 Depositos efectuados	11 Compras a la Juntas	12 Retenido para pago 10% Juntas	13 Disponible en el Centro	14 Saldo en Bco Nac.
	Columna = 1					
54	San Fernando	144.921.71	57.857.54	53.913.93	57.757.54	41.095.5[illegible]
55	Santa Maria	633.25	560.18	—.—	[illegible]	[illegible]
56	Murra	1.877.65	1.155.[illegible]	468.32	222.27	[illegible]
58	Central Jinotepe	2.925 =	231.61	312.33	2.315.03	[illegible]
59	Luis H. Debayle	2.337.05	—.—	—.—	2.337.05	[illegible]
60	Jalapa	17.311.10	2.771.54	5.277.[illegible]	3.385.[illegible]	[illegible]
61	Rama - Chino	6.410.23	2.545.14	471.[illegible]	3.315.31	[illegible]
62	La Trinidad	4.705.15	1.674.[illegible]	2.555.[illegible]	175.71	[illegible]
63	Mozonte	3.762.[illegible]	176.1[illegible]	—.—	3.775.35	[illegible]
64	El Jicaro	8.777.[illegible]	4.275.55	2.310.52	755.25	[illegible]
65	Muy Muy	3.461.75	645.20	1.245.57	635.[illegible]	[illegible]
66	Ciudad Dario	5.623 =	1.122.[illegible]	1.662.11	757.[illegible]	[illegible]
67	Quilali	8.625 =	3.415.98	2.926.33	1.625.69	[illegible]
68	San Fco. del Norte	1.925.75	1.035.[illegible]	539.20	297.91	[illegible]
69	Somotillo	2.222 =	530.76	362.35	1.336.69	[illegible]
70	Telpaneca	3.319.99	272.[illegible]	1.556.[illegible]	1.490.[illegible]	[illegible]
71	Totogalpa	12.[illegible]	7.773.05	1.622.[illegible]	2.111.70	[illegible]
72	San Rafael del Norte	2.215.20	1.071.24	832.[illegible]	309.[illegible]	[illegible]
73	Nindiri	10.757.[illegible]	7.371 =	2.577.97	[illegible]	[illegible]
76	La Paz Centro	4.[illegible]	2.771.[illegible]	1.777.[illegible]	[illegible]	[illegible]
77	San Juan de Limay	13.[illegible]	5.972.30	5.[illegible]	2.[illegible].20	[illegible]
78	Central Masaya	3.[illegible]	976.[illegible]	[illegible]	1.677.[illegible]	[illegible]
79	San Jorge	1.026.55	100.20	455.39	1.71[illegible]	[illegible]
80	San [illegible]	3.611.57	1.281.11	520.15	2.004.[illegible]	[illegible]
82	Jose [illegible] Estrada	1.222.10	—.—	—.—	1.222.10	[illegible]
83	Masatepe	5.572.20	1.775.48	2.231.27	1.014.[illegible]	[illegible]
84	Corinto	1.695 =	—.—	—.—	1.695 =	[illegible]
85	Chichigalpa	1.750.05	—.—	—.—	1.750.05	[illegible]
86	Chinandega	3.611.[illegible]	—.—	1.145.[illegible]	2.4[illegible]	[illegible]
89	Santo Tomas Chontales	5.244.20	56.20	1.[illegible]	3.225.15	[illegible]
91	Central Esteli	870 =	—.—	—.—	870 =	[illegible]
92	Boaco	2.235.30	663.[illegible]	1.077.74	511.[illegible]	[illegible]
93	San Dionisio	[illegible]	—.—	—.—	[illegible]	[illegible]
95	San Marcos	129.70	—.—	—.—	129.70	[illegible]
96	Central de Jinotega	2.07[illegible]	[illegible]	1.267.[illegible]	[illegible]	[illegible]
97	San Carlos	1.970 =	—.—	—.—	1.970 =	[illegible]
98	Cinco Pinos - Chinandega	6.461.45	531.39	3.214.[illegible]	2.715.[illegible]	[illegible]
100	Colonia [illegible]	1.200 =	—.—	—.—	1.200 =	[illegible]
101	Jucuapa	7.560.[illegible]	7.281.[illegible]	557.95	1.[illegible]	[illegible]
103	[illegible]	5.142.55	—.—	—.—	5.142.55	[illegible]
104	Matagalpa Central	1612.45	—.—	759.19	[illegible]	[illegible]
105	El [illegible]	3.061.15	—.—	—.—	3.061.15	[illegible]
106	Granada [illegible]	3.457 =	557.13	1.782.09	1.1[illegible]	[illegible]
107	[illegible]	7[illegible]	22[illegible]	2[illegible]	[illegible]	[illegible]
110	Diriamba	1.4[illegible].60	[illegible]	1.031.35	[illegible]	[illegible]
		201.20	—.—	—.—	[illegible]	[illegible]
	Columna = [illegible]	329.871.99	123.[illegible].54	104.270.15	101.625.[illegible]	[illegible]

TABLE A-5 (cont.)



Appendix

"AÑO DE LA ESPERANZA
Y LA RECONSTRUCCION"

MINISTERIO DE SALUD PUBLICA
MANAGUA, D. N.

Dirección Cablegráfica: SALUBRIDAD

Nº.....

TABLE A-6

MEDICOS QUE PRESTAN SERVICIO SOCIAL OBLIGATORIO EN EL AÑO 1973

1. Dr. Jaime Gonzalez +	Jalapa
2. Dra. Sandra Araúz de Aviles +	Cinco Pinos
3. Dr. Rafael Alemán López +	San Pedro de Lóvago
4. Dr. Jaime Darce Rivera +	San Rafael del Norte
5. Dr. Roberto Aguilar Briceño	Moyogalpa
6. Dr. Axel Palma B.+	San Francisco del Carnicero
7. Dr. Concepción Flores Vivas	Condega
8. Dr. Mariano Lacayo G. +	San Lorenzo
9. Dra. Miriam García Rocha +	Teustepe
10. Dr. Ronald Linarte Aguirre +	Sta. Rosa del Peñón
11. Dr. Carlos Fernandez Hellman	Tola
12. Dr. Feliciano Pacheco Antón	Palacaguina
13. Dr. Reinaldo Pastora Frenzell +	La Concordia
14. Dra, Ivonne Robles de Castillo	Isla de Altagracia
15. Dr. Moises Sotelo Castillo +	El Jicaro
16, Dr. José Enrique Solís Diaz +	Pueblo Nuevo
17. Dr. Marvin Velz Hanon +	Yalí
18. Dr. Oscar Saravia +	Catarina
19. Dr. Valentín Toruño +	C/S. Mántica-León
20. Dr. Harry Torres Solís +	Terrabona
21. Dra. Nayda Vargas de Rivera +	Tisma
22. Dr. Luis Noel Balladares +	El Rama
23. Dr. Patricio Moreno García +	San Juan Rio Coco
24. Dra. Teresa Baldizón S.	Achuapa
25. Dr. Armando Bermudez	San Miguelito
26. Dr. Ramón Blandón J. +	San Isidro
27. Dr. Tomás Delgado	Hospital Estelí
28. Dra. Marlene Parra	Hospital Siquiatrico

TABLE A-6 (cont.)

Nº .....

29. Dr. Julio César Molina Pineda	Hospital "Asunción" Juigalpa.
30. Dr. ROberto Soza S	Hospital "San Vicente Matagalpa

\+ Se quedarán 6 meses más en el C/Salud.

x Muerto en setiembre

MINISTERIO DE SALUD PUBLICA
MANAGUA, D. N.

Dirección Cablegráfica: SALUBRIDAD

NO.....

TABLE A-7

30/10/73

CENTROS DE SALUD SIN MEDICOS.

1 Centro de Salud SAN JOSE CUSMAPA, Dpto. de Madriz,
2 " " " SAN JUAN DEL RIO COCO, Dpto. de Madriz
3 " " " COMALAPA, Dpto. de Chontales.
4 " " " SAN FERNANDO, Dpto. de Nueva Segovia
5 " " " MURRA, Dpto. Nueva Segovia.
6 " " " ACHUAPA, Dpto. de León.
7 " " " CONDEGA, Dpto. de Estelí
8 " " " STA. ROSA DEL PEÑON, Dpto. de León.
9 " " " SAN MIGUELITO, Dpto. de Rio San Juan.
10 " " " PALACAGUINA, Dpto. de Madriz
11 " " " ALTAGRACIA- ISLA DE OMETEPE, Dpto. Rivas
12 " " " TOLA, Dpto. de Rivas
13 " " " SAN JOSE DE LOS REMATES, Dpto. de Boaco
14 " " " PUERTO SOMOZA, Dpto. de León.
15 " " " TOTOGALPA, Dpto. de Madriz
16 " " " JALAPA, Dpto. de Nueva Segovia
17 " " " SAN FRANCISCO DEL CARNICERO, Dpto. de Managua,
18 " " " PUERTO POTOSI- Dpto. de Chinandega,
19 " " " SAN JUAN DE LIMAY, Dpto. de Estelí
20 " " " SANTAMARIA (Santa Maria) Dpto. de NuevaSegovia.
21 " " " MORRITO, Dpto. de Rio San Juan.
22 " " " STO. DOMINGO, Dpto. de Chontales.

xb.-

ORIG in Audit

Memorandum

TABLE A-8

TO : Files

DATE: January 13, 1971

FROM : Albert Ortego - Public Health Advisor

SUBJECT: Re-evaluation of objectives of AID Loan 524-L-023
Health Construction - PUMAR

Recommendation No.8 - Re-evaluation of the objectives.

The objectives of this project still remain the same; namely, the construction of 56 health centers and improvement of existing health centers, along with adequate staffing and provision of medicines to the center. The construction of the centers is just about on schedule. As for as the provision of medicines, this objective is in process of being met through the signing of an agreement between the Ministry of Health and the National Warehouse System whereby that system will provide all of the services necessary for the procurement, distribution and control of the medicines to the health centers. The first lot of medicines purchased under the loan will soon be delivered to the warehouse under the new agreement.

This particular objective changed in the sense that, according to the loan agreement, the Ministry of Health was to provide the necessary warehousing facilities. However, a check of this item by a warehouse expert brought down on TDY from Washington revealed that the Ministry's facilities were inadequate to meet this objective. Therefore, an agreement was worked out with the National Warehouse System to take on this important activity.

All of the medicines will be sold (except for indigent cases) and this will furnish the means for funding future purchase.

# # # #

In order to clear Audit recommendation Number 8 which has to do with this subject, approval of Mission Director is requested of above re-evaluation.

APPROVED: William R. Haynes

William R. Haynes, Director USAID/N

Date: 1/21/71

APPENDIX B

SUPERVISOR REPORTS ON EVALUATION VISITS THAT INCLUDED USAID OR PCI EVALUATORS.

GUIDE TO SUPERVISOR REPORTS (A) ON THE NICARAGUAN HEALTH CENTERS VISITED DURING THE EVALUATION

Type	Center	Team*	Comments	Report Loc.**
	A. AID-FINANCED CENTERS			
I	1. Somotillo	PCI/MSP	Before uniform survey	A
	2. Granada	PCI/MSP		A
	3. Malpaisillo	MSP		W
	4. Monimbo	MSP/TC		W
	5. Bluefields	USAID/MSP		A
	6. Puerto Cabezas	USAID/MSP		A
	7. Waspam		Good inventory	
II	8. San Lorenzo	PCI/MSP		A
	9. Teustepe	PCI/MSP		A
	10. Posoltega	USAID/MSP		A
	11. Villa Somoza	MSP		W
	12. La Libertad	MSP		W
	13. Santo Domingo	MSP		W
	14. Acoyapa	MSP		W
	15. Santa Teresa	PCI/MSP		A
	16. Condega	MSP		W
	17. Pueblo Nuevo	PCI/MSP/USAID	Before uniform survey	
	18. Diriomo	MSP		W
	19. Yali	MSP		W
	20. Tipitapa	PCI/MSP		A
	21. Achuapa.			
	22. San Rafael del Sur	USAID/MSP		A
	23. La Concepcion	USAID/MSP		A
	24. Niquinohomo	MSP		W
	25. Matiguas	MSP		W
III	26. San Jose de los Remates	MSP		W
	27. Santa Lucia	PCI/MSP		A
	28. El Realejo	MSP		W
	29. Villanueva	MSP		W
	30. Santo Tomas del Norte	PCI/MSP		A
	31. San Pedro del Lovago	MSP	Note difficulty in visit	W
	32. La Conquista	USAID/MSP		A
	33. Diria	MSP		W
	34. Santa Rosa del Penon	MSP		W
	35. Telica	PCI/MSP		A
	36. Mateare	USAID/MSP		A
	37. San Francisco del Carnicero	PCI/MSP		A
	38. La Concordia	MSP		W
	39. Catarina	PCI/USAID/MSP	Training Interviewers	A
	40. Tisma	PCI/MSP		W
	41. San Isidro	PCI/MSP/USAID	Before uniform survey	
	42. Sebaco	MSP		W
	43. Esquipulas	MSP		W
	44. Terrabona	MSP		W
	45. San Miguelito		Good inventory	

GUIDE TO SUPERVISOR REPORTS (A) ON
THE NICARAGUAN HEALTH CENTERS VISITED DURING THE EVALUATION
(CONTINUED)

Type	Center	Team *	Comments	Report Loc.**
III	46. San Jose de Cusmapa			
	47. San Juan del Rio Coco			
	48. Santa Maria			
	49. Murra			
	50. San Fernando	MSP		W
	51. Altagracia		Good inventory	
	52. Morrito		Good inventory	
	53. Corn Island		Good inventory	
Esp.	54. Hope Portocarrero de Somoza	PCI/USAID/MSP		
Esp.	55. Palacaquina	PCI/MSP/USAID	Before uniform survey	
	B. PUMAR			
	P1 PUMAR/Matagalpa	TC		W
	P2 PUMAR/Rivas			
	P3 PUMAR/Leon			
	P4 PUMAR/San Carlos			
	P5 PUMAR/Rio Escondido			
	P6 PUMAR/Granada	PCI/MSP		A
	P7 PUMAR/Prinzapolka			
	P8 PUMAR/San Juan Rio Coco			
	P9 PUMAR/Puerto Cabezas	MSP		W
	P10 PUMAR/Ocotal, N.S.	TC		W
	P11 PUMAR/Chontales			
	C. OTHER HEALTH CENTERS (AID Medicines and equipment)			
	56. Boaco			
	57. Camoapa			
	58. Jinotepe	TC		W
	59. Diriamba	TC		W
	60. San Marcos	TC		W
	61. Chinandaga			
	62. San Francisco del Norte			
	63. Chichigalpa			
	64. Cinco Pinos			
	65. Corinto			
	66. El Viejo			
	67. Tonala			
	68. Puerto Potosi			
	69. Juigalpa			
	70. Santo Tomas			
	71. Comalpa			
	72. Esteli	TC		W
	73. La Trinidad	TC		W
	74. San Juan de Limay	TC		W

GUIDE TO SUPERVISOR REPORTS (A) ON THE NICARAGUAN HEALTH CENTERS VISITED DURING THE EVALUATION (CONTINUED)

Type	Center	Team *	Comments	Report Loc.**
	75. Nandaime	TC		W
	76. Granada (#2)			
	77. Jinotega	TC		W
	78. San Rafeal del Norte	TC		W
	79. Leon Regional			
	80. Centro de Salud L.H. Debayle			
	81. Centro de Salud Mantica Berio			
	82. El Sauce	TC		W
	83. La Paz Centro	TC		W
	84. Nagorate			
	85. Puerto Samoza			
	86. Somato			
	87. Telpaneca			
	88. Totogalpa			
	89. Masaya			
	90. Masatepe	TC		W
	91. San Juan de Criente			
	92. Nindiri			
	93. Matagalpa	TC		W
	94. Muy Muy			
	95. Ciudad Dario	TC		W
	96. San Dionisio			
	97. Ocotal	TC		W
	98. El Jicaro			
	99. Jalapa	TC		W
	100. Quilali			
	101. San Carlos			
	102. Rivas	TC		W
	103. San Jorje	TC		W
	104. Tola	TC		W
	105. Cardenas			
	106. Moyogalpa			
	107. Guadalupe	TC		W
	108. Belen	TC		W
	109. Potosi	TC		W
	110. San Juan del Sur	TC		W
	111. Bonanza			
	112. Siuna			
	113. Rama	TC		W
	114. Tasba-Raya			
	115. Nueva Guinea			
	116. Villa El Carmen	TC		W

* Team Composition Abbreviations: PCI=Practical Concepts Incorporated; USAID= USAID; MSP=Ministerio de Salud Publica; TC=Tribunal de Cuentas

** Report Location Code: A=Supervisor's Report is in Appendix B of Final Report; W=Supervisor's Report is included with working papers submitted seperately to USAID/Nicaragua.

Resumen de Supervision

Fecha de visita 26-9-73   Centro de Salud Sanctillo Tipo:

Resumen de dinero.

Total de dinero de Medicamentos en existencia AID ₡ 293.

Total de dinero de Medicamentos en existencia JNAP ₡ 260.7

Total de dinero depositado en el Banco AID + JNAP ₡ 4143.2

Total ₡ 4.433.35

II Resumen de los problemas sobre Medicinas.

Falta Medicinas. Se donó en la epidemia de Gastroenteritis en Palo grande y a los damnificados de la sequía.

El Mistaclin V está vencido, no le ha llegado el pedido de Medicinas, el médico necesita que se le extienda la línea de antibióticos, antiparasitarios, antidiarreicos. La medicina se dona a las personas de escasos recursos.

IV Recomendaciones.

Hablar con el señor Bell para agilizar el pedido pendiente y también para que trate de solucionar el problema de extensión de medicamentos. Se le recomendó al Dr. que done [illegible] y también se le recomendó que nombre a una persona para que se encargue del control de medicina.

Inventario de mobiliario y equipo. Problemas.

Estetoscopios (2) están malos, el Tensiómetro y lámpara cuello de cisne están quebrados. Falta a la clínica odontológica Jeringa de agua y está en mal estado la jeringa de aire, los baños y lavaderos están en mal estado y está desplomado el [illegible]; faltan bombillos y 3, la luz que llega al centro es muy [illegible]; se necesita un cuarto oscuro para revelado de Radiografías; necesitan Materiales de sutura y un equipo quirúrgico Menor.

Recomendaciones

Hablar con el señor Villalta para que resuelva los problemas. Hablar con el equipo y construcción al cuarto oscuro. Hablar con el

Ingeniero Jerez para su diseño y costo.

4 Hablar con Oscar Terán para problemas de equipo Odontologico. Se recomendo al médico mande a reparar los servicios cosa que ya esta haciendo especialmente a su médico.

IV Personal problemas:

no hay Inspector de Saneamiento ni Secretaria y faria Tambien el nombramiento de un Tecnico para q se encargue del manejo del equipo de Rayo X cuando este equipo este instalado

A) Recomendaciones

Hablar con el Ingeniero Jerez, el Lic Villalta y el Sr Defranco para el nombramiento de este personal.

José Antonio Sevilla B.
Jefe C. de S. y Puma.

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Managua, D. N.

Dirección Cablegráfica: SALUBRIDAD

No.....

RESUMEN DE SUPERVISION

Fecha- 18-9-73

CENTRO DE SALUD GRANADA # 1

I.-

a.- Total de Medicamento en Dinero en existencia AID	C$	2161.45
b.- Total de Dinero depositado en el Banco.	"	1312.60
c.- Total de dinero encontrado sin depositar	"	81.05
d.- Total de dinero de medicamentos JNAPS. (NINGUNO)		
TOTAL.....	$	3555.10

II.-PROBLEMAS SOBRE LA MEDICINA:

A.- En este Centro de Salud se había tarjeteado el medicamento en dos ocaciones anteriores y a pesar de eso no se encuentra las tarjetas en dicho Centro o sea que han desaparecido. Se volvió a tarjetear el medicamento y se les informó que es completamente prohibido deshacerse de las tarjetas de control.

b.- El medicamento no se encuentra en lugar seguro. No hay estantería para colocar el medicamento.

c.- Varias personas tienen llave para la bodega de medicamento lo cual se les explicó que solo una persona puede tener llave y control de los medicamentos.

d.- El médico dice que necesita más medicamentos variados para a atender los distintos tipos de enfermedad.

RECOMENDACIONES

a.-Se les pidió llevar control exacto del gasto de medicamento como también informar a Managua mensualmente en la forma M.S.P y M.S.F.P 4. Hablar con la Administración para que este Centro siga deshaciéndose de las tarjetas de control de medicamento.

b.-Hablar con la Administración

c.-Sex les explicó que sólo una persona debe tener llave de la bodega de medicamentos.

d.-Hablar con el Sr. BELL y la Administración.

III.-PROBLEMAS Y NECESIDADES

a.-En dicho Centro se han metido a robar en tres ocaciones, en e cerje se siente incapacitado para parar ola de robo. Se nece tar cercar el predio y ponerlo verjas de hierro a todas las v tanas, las puertas traseras son inseguras. Hay muchos vidrio quebrados donde se han metido a robar.

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b.- El equipo de Odontología no funciona porque dicen no les ha llegado instrumental Dental a pesar que constaté que de las Oficinas de las Bodegas del Ministerio aparece que se envió instrumental a este Centro de Salud. El Odontólogo dice atender a los pacientes del Centro de Salud en su clínica particular.

c.- El personasl de este Centro de Salud se pudo observar en la visita de este día no hacían el cuaderno de asistencia que el personal entra muy tarde a trabajar.

d.- Falta total de papelería para los envíos de los informes mensuales.

e.- Centro de Salud las paredes se encuentran muy sucias, personal y concerje dicen que es imposible sacarle suciedad, por lo cual se considera necesario pintarse.

f.- El Laboratorio adolece de equipo suficiente como también de reactivos.

RECOMENDACIONES

a.- Se habló con el concerje sobre los motivos que él pensaba por lo cual se metían a robar, dice que es por inseguridad del Centro. Hablar con la Administración.

b.- Hablar con la Administracion, con el Sr. BELL y bodega JUAPS

c.- Se habló con el director de ese Centro sobre la necesidad de que su personal entre temprano a trabajar. Hablar con la Administración.

d.- Hablar con la Administración para el envío de papelería necesaria.

e.- Hablar con la Administración para que se mande a pintar Centro de Salud

f.- Hablar con la Administración y con el Dr. Amaya

g) Problemas de personal.
La enfermera Florencia mas de estar ausente por ...
en Costa Rica, estos son nombres.

Responsable
Milciades Chavez Reyes
Supervisor C.Salud y Pumar

g) Recomendación
1) Que la Oficina de enfermería tome nota y la Oficina de Personal sobre este problema.

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RESUMEN DE SUPERVISION

Fecha- 18-9-73

CENTRO DE SALUD GRANADA # 1

I.-

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d.- El médico dice que necesita más medicamentos variados para a atender los distintos tipos de enfermedad.

RECOMENDACIONES

a.-Se les pidió llevar control exacto del gasto de medicamento como también informar a Managua mensualmente en la forma M.S.P. y M.S.P.P 4. Hablar con la Administración para que este Centro siga deshaciéndose de las tarjetas de control de medicamento.

b.-Hablar con la Administración

c.-Se les explicó que sólo una persona debe tener llave de la bodega de medicamentos.

d.-Hablar con el Sr. BELL y la Administración.

III.-PROBLEMAS Y NECESIDADES

a.-En dicho Centro se han metido a robar en tres ocaciones, en ce cerje se siente incapacitado para parar oja de robo. Se necesitar cercar el predio y ponerlo verjas de hierro a todas las ventanas, las puertas traseras son inseguras. Hay muchos vidrios quebrados donde se han metido a robar.

"AÑO DE LA ESPERANZA
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Nº.....

CENTRO SALUD DE BLUEFIELDS.
4 de Octubre de 1973.

Tipo I

a. Total de Medicamentos en Dinero en Existencia AID C$ 4,281.00
b. Total de dinero depositado en el Banco. 2,561.79
c. Totalde dinero encontrado sin deposito. 17.39
d. Total de dinero de medicamentos JWAPS 390.15

Total: C$ 7,249.54

e. Dinero en caja Chica encontrado 15.00

II. PROBLEMAS SOBRE MEDICINAS:

a. Algunos productos no se enviaron en el último pedido, pero si aparecieron como si se habían enviadas en la remisión; como también vinieron otros productos sin remisión en el mismo pedido, ej. no llegó 1000 tabletas de Asmitosil, 50ampollas de Argotrate, 25 ampollas de Macrón, Mandelamina cápsulas, vinieron desbarantadas. Los medicamentos que vinieron sin número de código y sin remisión son: Meterglin 50 ampolas, Fenobarbital 300 tabletas y Scanderón al 5% 25 ampollas.

b. Se piden medicamentos a Managua en base de las enfermedades de la región y envían otros, urge en este Centro de Salud, medicamentos para las vías Respiratorias y para la Sífilis, necesario un Stop de medicamentos más variadas.

RECOMENDACIONES

a. ~~Estos~~ Hablar con el Sr. Donald Bell, hablar con la Administración JWAPS.
b. Hablar con el Dr. Canales, la Administración Donal Bell.

III. PROBLEMAS Y NECESIDADES.

a. El Centro de Salud esta rajado sus paredes, piso se esta hundiendo, techo y zinc podrido, 26 paletas de vidrio quebradas, inseguridad en los
b. ventanales, urge verjas de hierro y cercar predio Centro de Salud.
c. [illegible]

b. El local de Rayos X se inunda completamente de agua, imposible instalarlo, este Equipo se encuentra garage Hospital, con las consecuencias que se está deteriorando rápidamente y el local es inadecuado.

c. Techo del Edificio, tiene grandes nidos de Comején, necesario pintar todo el Edificio. Todas las paredes del Centro el fino cuarteado.

d. Se necesitan Archivadoras con urgencia, si es posible metálicas, los archivos están tirados por todas partes por falta de tener lugar donde alzarse.

e. Medicamentos en lugar inseguro, no hay estantería, para medicamentos estos se encuentran en el suelo, necesario un estante. Paredes del Centro sucias.

f. Falta de Papelería en general. Informes diarios y mensuales, Hojas de Registro Diario, papelería de Inscripción de casos nuevos. Equipo para mantenimiento deCentro: Lampazos, rastrillos, escobas, etc.

g. Se necesita un rollo de mantas para hacer cortinas, delantales, sábanas, fundas etc. Falta de mobiliario en la recepción (bancas).

h. PROBLEMAS DE PERSONAL. Managua hace cambios, manda becado gentes sin consultarle a la dirección de este Centro, ej. El Inspector de Saneamiento se le cambio por orden de la Oficina de Saneamiento sin previa consulta al Director de este Centro. El programa de Pro-bienestar de la familia ha enviado gente becada al exttanjero sin avisarle a este Centro. (dirección).

i. Se necesitan tres (3) Inspectores de Saneamiento, ya que en la actualidad solo hay uno en este Centro, y la población es grande y cubre hasta el bluff. Se necesita una Educadora en Salud. Necesita se le mejore el suelo de la Secretaria.

RECOMENDACIONES: Hace falta Supervisión Tecnico/medico (aprobado) Falta Visas de Radiografía.

a. Hablar con la Administración.

b. Hablar con la Administración.

c. Se habló con el Director del Centro de Salud, hablar con la Administración.

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[illegible] 4 de [illegible] de 1991.

d. Hablar con la Administración.

e. Se habló con conserje, dice necesita material para limpieza, se habló con el Director del Centro, no tiene recursos. Hablar Administración.

f. Hablar con la Administración.

g. Hablar con la Administración.

h. Hablar con la Administración.

i. Sexrecexitx Hablar con la Administración.

Nota: Que se Nombre el medico escolar presupuestado
Que se nombren los Insp. Saneamiento Presupuestados

II. Responsable de la Supervision.

Nilcindes Chavez Lopez
Supervisor C.S. y Puran.

b.

I.

b.

III.

a.

"AÑO DE LA ESPERANZA
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MINISTERIO DE SALUD PUBLICA
MANAGUA, D. N.

Dirección Cablegráfica: SALUBRIDAD

Nº.....

RESUMEN DE SUPERVISION

Tipo I

Fecha: 2-X-73

Centro de Salud Puerto Cabezas

I.-

a.-Total de Medicamentos en Dinero en Existencia AID		Ninguno-
b.-Total de Dinero Depositado en El Banco	$	5,169.65
c.-Total de Dinero encontrado sin depositar		42.70
d.-Total de dinero de medicamentos JNAPS		1,245.12
Total.....	$	6,457.47
e.-Dinero de Caja Chica Encontrado		24.45

II.- PROBLEMAS SOBRE MEDICINA:

a.- El 21 de septiembre de este año recibieron un lote de medicamentos de la JNAPS. en el cual faltaron 500 tabletas de Diazepol. 200 Espasmokyles llegaron humedas y desbaratandose.

b.- Necesitan más medicamentos variados.

c.- Faltan recetarios medicos.

RECOMENDACIONES

a.- Hablar con el señor Bell, el Sr. Sacasa y JNAPS para que se xxxx compruebe el envio.

b.- Se le explico a este Centro que en breves días les llegará un lote de los medicamentos del préstamo AID, que esta listo en Mana ua para ser enviado.

C.- Hablar a administración.

III.- PROBLEMAS Y NECESIDADES

a.- Falta una Secretaria, ya que este Centro es tipo 1 (uno) y sin muchas las labores de secretariado. Se necesitan dos Auxiliares mas de Enfermeria ya que la comunidad es grande.

b.- Aparatos de Rayos X descompuestos, este Centro informa que el personal del Hospital Heraxo lo descompuso. Se necesita repararlo y un tecnico que lo maneje. Aparato de Odontologia no trabajan pero necesitan ser revisados.

c.- Falta lecho, no hay programa de Nutrición.
Falta gasolina.

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c.- Se necesitan llantas para el Joep, bateria, tapa del distribuidor vidrio lateral izquierdo. (quebrado) trasero, falta gasolina.

d.- Falta pedido en general, papelería, jabón, lampaso, manguera Etc.etc. Especialmente papeleria de los informes que se envian mensualmente a Managua.

e.- Verjas de hierro, para protejer todas las ventanas de este Centro ya que en varias ocasiones se han medido a robar, siendo la última el dia de ayer, quebrando 16 ~~m~~ paletas de vidrio.

f.- Paredes del Centro el fino completamnte cuarteadas, tres paredes laterales tienen fisuras abiertas (rajadas), el tejado se pasa por la parte de enfermería, sistema eléctrico del Centro malo. Total de paletas quebradas en el Centro 22. NOTA: Este Centro ya paso presupuesto de las verjas a Managua.

g.- Falta cerca para protejer del ganado el predio del Centro.

h.- Piso del Centro sucio, necesita ser lavado, paredes sucias (curtidas) necesita pintarse.

RECOMENDACIONES

a.- Hablar con la administración Srita. Vindoll.

b.- Hablar a administración Dr. Palacio, Dr. Cantón.

c.- Hablar señor Gonzalo Orozco Jefe transporte y administración.

d.- Hablar administración (comprar con caja chica hasta donde se pueda)

e.- Hablar con administración .

h.- ~~2~~ Hablar con el consorje del Centro, responsable del Centro y Administración

f.- Hablar con administración.

g.- Hablar con administración.

ASUNTO PERSONAL:

a.- Médico Director Locado en Colombia.

b.- Dr. Ronald Ruiz en Managua con permiso de este Centro.

c.- Chofer gozando de vacaciones legales.

RESPONSABLE DE SUPERVISION

Hilario Chávez Reyes
Supervisor C.S. y Puntar

Centro Tipo 3 8.

II

"AÑO DE LA ESPERANZA
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Nº.....

RESUMEN DE LA VISITA DE SUPERVISION-EVALUACION

AL CENTRO DE SALUD DE Sn. LORENZO

Los resultados son los siguientes:

1) CONTROL DE MEDICAMENTOS Y DINERO

Problemas: a) Al momento de la Supervisión no se llevaba el control de medicamentos y dinero en las hojas adecuadas que para ese fin fueron elaboradas

Recomendaciones: a) Que se lleve el control de medicamentos y dinero en las hojas adecuadas que también sirven para informes, tales como MSPP0, MSPP1, MSPP3, MSPP4 y MSPP5. Como acción inmediata se instruyó a la auxiliar de enfermería sobre el proceso de control informes.

2) ESTADO DEL PERSONAL

Problemas: El Inspector de saneamiento no asiste con regularidad al Centro de Salud. No tiene ni días ni horas definidas de trabajo en el Centro de Salud. Hoy no se presentó al trabajo

2) No hay Laboratorista.

3) No hay secretaria.

Recomendaciones: a) Hablar con el Coordinador Nacional de Saneamiento sobre el problema del Inspector.

b) Hablar con el Dr. Amaya con respecto a la falta de Laboratorista.

c) Hablar con el Administrador de los Servicios de Salud sobre la posibilidad de adquirir los servicios de una secretaria.

3) EQUIPO QUE NO FUNCIONAL, QUE HACE FALTA O SE NECESITA.

Problemas: Un closet está con una cerradura menos, por lo tanto no ocupa.

b) El grifo de l lavamanos esta en mal estado.

c) Un inodoro tiene malo el accesorio.

d) No hay balanza pediátrica.

e) Hay 4 paletas de los ventanales quebradas.

Recomendaciones: a) Comprar la cerradura y darla a por [illegible] con fondo de caja chica.

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b) Dar a reparar el grifo descompuesto de un lavamanos y pasar la cuenta a la Administración como CUENTA DE GASTOS o ver la posibilidad de pagarla de caja chica.

c) Hacer igual que la recomendación anterior.

d) Hablar con la Administración a fin de ver posibilidad de dotar a este Centro con una balanza pediátri

4) Estado actual del Movimiento de medicinas expresados en córdobas

Saldos de medicinas de AID expresados en córdobas	C$	682.00
Saldos de medicinas de JNAPS expresados en córdobas	"	496.00
Saldo total.....	"	1.178.00
Dinero en efectivo.....	"	0
Dinero depositado en el Banco desde el inicio.....	"	2.630.80

Nota: Se desconoce el total de medicinas expresadas en córdobas, desde que se remitió el primer pedido, pués no hay archivo que lo indique.

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"AÑO DE LA ESPERANZA
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RESUMEN DE LA VISITA DE SUPERVISION-EVALUACION AL CENTRO DE SALUD DE TEUSTEPE

Los resultados son los siguientes:

1) CONTROL DE MEDICAMENTOS Y DINERO

Problemas: a) Al momento de hacer la Supervisión, no se llevaba el control de medicamentos y dinero en las hojas especialmente elaboradas para ese fin, tales como la MSPP0, MSPP1, MSPP3, MSPP4 y MSPP5.

b) La Jefe del Centro de Salud, nos expresó que de la gaveta del escritorio donde guarda el dinero de ventas medicinas, le sustrajeron C$ 280.00, sin haber forzado el escritorio, dando a indicar de que el conserje es que posiblemente tiene una copia de la llave, pués él fué quién le entregó a su llegada dicha llave.

Recomendaciones: a) El control de medicamentos y dinero, debe de llevarse en las hojas adecuadas que para ese fin elaboraron.

b) Poner en conocimiento del Administrador de los Servicios de Salud la pérdida de este dinero a fin que se investigue la sustracción y se determine quién ha de pagarlos.

2) ESTADO DE PERSONAL

Problemas: a) No hay Laboratorista.

b) No hay secretaria.

c) El Médico de Sn. Lorenzo(jefe del Centro) y la Dra. Jefe del Centro de esta población, son casados y tienen su residencia en el propio Centro de Salud de Teustepe ocupando una buena parte del Centro en su dormitorio, sina y otros. El refrigerador guarda mas alimentos que vacunas.

Recomendaciones: a) Hablar con el Dr. Amaya con respecto al Laboratorista que hace falta.

b) Hablar con el Admimistrador de los Servicios de Salud a fin de ver posibilidad de adquirir los servicios de una Secretaria.

c) Hablar con la Administración a fin de que se dé cumplimiento a la circular que fué enviada anteriormente a los Centros indicando que con excepción del conserje, nadie debe dormir en el Cen

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3.) EQUIPO QUE NO FUNCIONA, QUE HACE FALTA O SE NECESITA.

Problemas: a) El centro no tiene cerco por lo tanto está expuesto a que los animales que deambulan por las calles lo deterioren.

b) Hay 4 paletas de los ventanales en mal estado.

Recomendaciones: Hablar con la Administración de Salud, el PMA y la Alcaldía de Teustepe, a fin de que se le dote de un cerco de mallas al Centro de Salud.

Hablar con la Administración con respecto a las paletas quebradas.

Nota: No se presenta la totalización de los saldos de medicinas porque la Dra. Jefe del Centro está en su casa en período post-natal y dice tener los papeles relacionados al control de medicinas y dinero en el Centro de Salud, donde yo no pude localizarlos. Posteriormente se hará este tipo de detalle.

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"AÑO DE LA ESPERANZA
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"RESUMEN DE SUPERVISION"

TIPO- 12

Nº.....

Fecha: 10 Octubre-73 — Centro de Salud Posoltega.

I.-

a.-	Total de Medicamentos en Dinero en existencia AID.	C$ 503.80
b.-	Total de dinero depositado en el Banco.	1,294.05
c.-	Total de dinero encontrado sin depositar. (Ninguno)	-------
d.-	Total de Medicamento en dinero de la JNAPS.(Ninguno)	-------
	TOTAL.....	C$1.797.85

e.- Dinero en caja chica encontrado .....(Ninguno)..

II.- PROBLEMAS SOBRE MEDICINAS.-

a.- Este Centro ha hecho pedidos de medicamentos en varias ocasiones después del terremoto y no ha recibido contestación, según él médico.

b.- Le urge el envío de medicamentos, ya que ese Centro practicamente no tiene.

c.- El Poco medicamento del préstamo (AID), lo habían estado donando se le informo que ésto medicamento debía ser vendido en base a la lista.

RECOMENDACIONES:

a.- Hablar con la Administración.

b.- Hablar con el Sr. Donald Bell y Administración.

c.- Se les informo que éste medicamento tiene que ser vendido como también se les explico las forma del envio de control y gastos de medicamentos en la forma MSPP-3, y MSPP-4.

III.-PROBLEMAS Y NECESIDADES:

a.- Falta papelería en general y falta de equipo para darle mantenimiento al Centro de Salud. Paredes sucias.

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b.- Las paredes del Centro estan rajadas en su totalidad, el fino del Centro se encuentra muy cuarteado.

c.- Hace falta mobiliario, médico pide cuatro escritorios y 6 sillas.

d.- Tiene problema el Laboratorio por la falta de envío de reactivos, se piden y no los envían.

e.- Este Centro esta preparando el presupuesto para verjas y ventanas de hierro que el Lic. Villalta le solicito. Hace falta cercar el predio. Nota: Importante es que el predio de ésteCentro de Salud es muy grande.

f.- Ninguna persona a ecepción del conserje viven en ésta comunidad tienen que viajar de León y de Chinandega entrando demasiadotarde a éste Centro.

RECOMENDACIONES:

a.- Hablar con la Administración.

b.- Hablar con la Administración.

c.- Hablar con la Administración.

de.- Hablar con el Dr. Amaya y la Administración.-

e.- Hablar con la Administración.

f.- se hable con el médico de la necesidad de entrar a la hora reglamentaria que es de 8am. a 2pm., estando de acuerdo el médico en que el personal tiene que ajustarse a èste horario.

Responsable de Supervisión.

Milciades Chavez Reyes,
Supervisor C.S. y Pumar.

MCHR/xb.-

II

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No.....

RESUMEN DE SUPERVISION

9 de Octubre de 1972

CENTRO DE SALUD SANTA TERESA

14.-

a.- Total de Medicamentos en Dinero en Existencia AID	$ 2366.00
b.- Dinero depositado en el Banco	$ 3280.25
c.- Total deDinero encontrado sin depositar	---
d.- Total de Dinero de medicamentos JNAPS	---
TOTAL	$ 5,614.25
e.- Dinero de caja chica encontrado	Ninguno

II.- PROBLEMAS SOBRE MEDICINAS:

a.- Necesitan medicamentos más variados,principalmente para las diarréas e infecciones.
b.- Se necesita el envío más rápido de los pedidos de medicamentos

RECOMENDACIONES

a.- Se habló con la Dra. par que ella haga pedidos de la JNAPS hablar con administración.
b.- Hablar con la administración. Tiene que informar mensualmente en la forma ITSPAIS?

PROBLEMAS Y NECESIDALES

a.- Falta de pedido en general de materiales para este centro como son: papelería,lampazos,manguera, papel higiénico etc.
b.- El Médico de éste centro pide se le cancele cuenta de gasto de 9 meses que se deben,pués ella ha enviado toda la documentación.
c.- Se necesita sercar el predio del centro.Quebradas 4 paletas de vidrio.El Médico dice se le instale teléfono.
d.- En las paredes del centro,se puede observar que está cuarteado el fino.
e.- Las relaciones internas del personal de este centro están deterioradas,hay tirantez entre xxx algunos de sus miembros. Enfermera graduada se siente marginada con relación a líneas de autoridad

ERIO DE SALUD PUBLICA
MANAGUA, D. N.

cción Cablegráfica: SALUBRIDAD

No.....

RECOMENDACIONES

a.- Hablar con la administración y Dra. para que cuando hayan fondos de caja chica, se compren cosas pequeñas.

b.- Hablar con la administración.

c.- Hablar con administración.

d.- Hablar con la administración.

e.- Se platicó con el médico Jefe del dentro, sobre la importancia y la necesidad de las buenas relaciones que tienen que tener todo el personal de este centro para la buena marcha de sus actividades y las metas propuestas.

f.- Se habló con la Dra. para que el Inspector Sr. Róger Alvarado, cumpla con sus obligaciones.

CENTRO DE SALUD MIXTO MODELO - DPTO. CARAZO

RESPONSABLES DE SUPERVISION:

Silvia [illegible]
Supervisor C.S y P[illegible]

MINISTERIO DE SALUD PUBLICA
MANAGUA, D. N.

Dirección Cablegráfica: SALUDRIDAD

Nº.....

RESUMEN DEL SUPERVISOR

Fecha de Visita, 24-9-73. Centro de Salud Tipitapa.

T/P C II

I.- Total de dinero de medicamento en existencia AID. C$ 59.00
Total de dinero de medicamento en existencia JNAFS. C$ 25.00
Total de dinero que esta depositado en el Banco -
AID-JNAFS - C$ 688.40
Total de dinero sin depositar AID-JNAFS. - C$ 131.00
TOTAL....C$ 907.40

II..-Resumen de los problemas sobre la medicina.

1.- Falta de medicina, Falta de medicina porque se dono a las personas que vinieron despues del terremoto no se lleva un buen control de medicamentos.

2.- Necesitan se extienda la linea de medicamentos especialmente los antibioticos tanto en jarabes como inyectables tambien antidiarreicos, no han hechos pedidos de medicamentos.

..- Bo- Redomendación:

Hablar con el señor Doll encargado de control de Medicinas del M.S.P. con relación de este medicamento.
Se recomendó al médico haga sus pedidos y mande sus informe mensuales, se le enseño a la encargada de medicamentos los bonos y manejos del medicamento.

3.- Inventario- Problemas.

a.- No esta instalado el telefono, no tienen bombillos, no hay pipetas suficiente, necesitan una máquina de escribir, se necesita el estetoscopio y el tonciometro, el lavamanos.

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esta malo y el inodoro también, Inseguridad del Centro, les hace falta papelería en General.

b.- Recomendaciones:

Hablar con el Lic. Antonio de J. Villalta para resolver los problemas de los equipos que falten y de los que estan malos.

IV.- PERSONAL.

a.- Problemas les hace falta secretaria y Odontologo.

b.- Recomendacion.-

Hablar con el Dr. Palacios, Director de la División de Odontología y con el Coronel Francisco De Franco, Jefe de la División de Personal.-

José Antonio Sevilla
Superv. de Centro de Salud y Puma.

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MANAGUA, D. N.
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"AÑO DE LA ESPERANZA
Y LA RECONSTRUCCION"

Nº.....

RESUMEN DE LA VISITA DE SUPERVISION-EVALUACION AL CENTRO DE SALUD DE Sn. RAFAEL DEL SUR

1) CONTROL DE MEDICAMENTOS Y DINERO

Problemas: Las hojas MSPP0 a MSPP5 no son usadas para llevar este tipo de Control.

Recomendación: Acción inmediata en el uso de las hojas MSPP0 a MSPP5, con el correspondiente envío de informes al Ministerio de Salud. Se le instruyó al respecto a la Auxiliar de Enfermería.

Saldos de medicinas de AID expresados en córdobas	C$ 643.20
" " " " JNAPS " " "	--- --
Total de dinero depositado en el Banco.....	" 630.70
	1.303.90

2)

2) EQUIPO QUE NO FUNCIONAL, QUE HACE FALTA O SE NECESITA

Problemas: 1) Una puerta de la calle está cerrada con llave y esta se perdió; no se puede abrir ni por dentro ni por fuera.

2) 10 paletas de los ventanales están quebradas.

3) Ventana de vidrio de la calle está quebrada.

4) Una puerta está sin llave; solamente se puede abrir por dentro.

5) 11 bujías hacen falta.

6) La llave o grifo del baño está mala.

7) El Centro está sin cerca.

Recomendaciones: Con respecto a las puertas aludidas en los puntos 4, se deben de reparar con dinero de caja chica.

Con respecto a los puntos 3 y 4 debe de ponerse en manos de la administración para reponer las paletas la ventana de vidrio.

Con respecto al punto 6, se debe reparar con dinero de caja chica.

Pedir a la administración que envíe las 11 bujías que faltan y que cerque el Centro con malla.

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"AÑO DE LA ESPERANZA
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Nº.....

3) ESTADO DEL PERSONAL

Problemas: 1) No hay Laboratorista
2) El Inspector de Saneamiento está sumamente enfermo y ca
no llega a trabajar porque su enfermedad es muy crónica
Según el médico ya no se desempeña bien en sus labores
su avanzada edad y su enfermedad.

Recomendaciones: Solicitar al Dr. Amaya los servicios de 1 laboratori
y a la División de Saneamiento para poder señalar la
necesidad de jubilación o descanso indefinido al Ins
tor de Saneamiento y enviar a otro inspector al Cent

Francisco J. Suazo C.

27-IX-73

Tipo N2

IF

CONCLUSIONES DE LAS EVALUACIONES EN LOS CENTROS DE SALUD DE LA CONCEPCION, ~~MATEARE, LA CONQUISTA y Sn. RAFAEL DEL SUR~~

Las conclusiones por Centros de Salud, son las siguientes:

La Concepción

Se hizo un inventario total de mobiliario, equipos, medic nas y materiales. En el inventario de medicinas se introdujo una innov ción al separar los medicamentos de AID, JNAPS y lo donado por el Comit Nacional de Emergencias y otras organizaciones. Con excepción de el med camento donado, a los de AID y JNAPS se les marcó en córdobas su precio total, quedando de la manera siguiente:

Saldo de medicamentos en córdobas: AID C$ 48.00
JNAPS "1127.08

TotalC$ 1175 08

Total depositado en el Banco desde el primer envío C$ 6.9

Total General de Saldo de medicinas y depósitos bancarios

C$ 8.137.63.

En los inventarios se comprobó que el Tensiómetro está en mal estado, no hay refrigerador para mantener sin problemas los programas de inmun ciones y no hay balanza para niños.

Recomendación: Con respecto al Tensiómetro, se debe hablar con la Divi de Servicios Administrativos a fin que cambie el malo por el bueno. Ha con Bell para conocer si hay tensiómetros en existencia. Con respecto Refrigerador y la balanza, hay que hablar con la División de Servicios ministrativos para ver la posibilidad de este tipo de implementación.

PERSONAL

El médico no tiene hora definida para atender al Centro de Se lo cual hace que los pacientes no estén seguros de la hora que hay qu sistir. Al momento de hacer nuestra visita, se encontraba de vacacion y logramos localizarlo en su casa después del medio día. En tiempo e te la mayoría de veces llega a las 12 m.

Hay una auxiliar de enfermería prestada por el Hospital El R. a partir de la emergencia que provocó el terremoto, pero no se encuen su trabajo por haber presentado constancias de que está enferma. Falt mucha regularidad.

La Auxiliar de enfermería del Ministerio de Salud, mira muy prometido su tiempo en la atención de los programas que tiene que at en el Centro, pués tiene que minimizar su atención a cada paso por e los archivos y otras atribuciones similares.

RECOMENDACIONES

El caso del Dr. Flores, hay que ponerlo en manos del Dr. Carlos H. Canales, Director Gral. de Salud.

El caso de la Auxiliar de Enfermería de El Retiro, hay que ponerlo en manos de la División de Enfermería del Ministerio de Salud Públi

El caso de la Auxiliar de Enfermería del Ministerio de Salud, hay que ponerlo en manos de la División de Enfermería y la Dirección d Servicios Administrativos. La Dirección de Servicios Administrativos puede ver la posibilidad de poner una Secretaria.

Francisco J. Suazo C.
Supervisor Centros Salud y PUMAR.

24/IX/73

C 1.

"AÑO DE LA ESPERANZA
Y LA RECONSTRUCCION"

RIO DE SALUD PUBLICA
MANAGUA, D. N.

Dirección Cablegráfica: SALUBRIDAD

No.....

RESUMENDE LA VISITA DE SUPERVISION-EVALUACION

AL CENTRO DE SALUD DE Santa LUCIA

1) CONTROL DE MEDICAMENTOS Y DINERO

Problemas: a) Llegó al Centro de salud un lote de medicinas de AID pero el médico considera que no son los tipos sufici tes para administrarle adecuadamente un tratamiento un paciente.

b) En el pedido que recientemente llegó, hizo falta lo guiente: 1 galón de Piperex, 20 ampolletas de Adrena 5 Frascos de Vitamina C. y 20 Frascos de Caladryl. I este motivo el médico no tenía en movimiento el medi mento.

c) En este Centro, no había ninguna documentación reci sobre el control de medicamentos y dinero. En vista no había médico en el Centro, la auxiliar de enferme se hizo cargo totalmente de todo este movimiento, p no muestra ningún inventario ni control de dinero, d de que dejó de atender el Dr. Zavala del Pumar. El timo informe de existencia y gastos que me presentó, de Julio de 1972.

Recomendaciones: Que el médico haga un pedido por aproximadamente C$ 1.200.00(que es lo hay disponible) de medicam tos de la INAPS donde él encontrará una gran var dad de medicinas.

Pedir a los encargados de enviar los pedidos, qu constaten bien el envío a fin de no tener inconv niencias en el control que se llevará en el Cent Nota: Este medicamento que faltaba, fué llevado nosotros cuando viajamos a hacer la Supervisión.

Que la auxiliar de enfermería lleve todas las ho de informes que han sido elaboradas para llevar buen control de medicamentos y dinero.
Nota: A la auxiliar se le instruyó sobre el man de las hojas de MSPP0 a MSPP5 con excepción de l MSPP2 que concierne más al PUMAR.

2) ESTADO DEL PERSONAL

Problemas: Al llegar al Centro de Salud, constatamos que estaba pletamente cerrado y fué el Inspector que abrió el Ce pués el viajó con nosotros a Santa Lucía solamente po probable utilidad que daba su presencia, pués se enc ba de vacaciones. El resto del personal fué llegando la forma siguiente: El Conserje apareció a las 8:40 a auxiliar de enfermería a las 9:10 y el médico aproxim mente a las 10:20 am.

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b) El Inspector duerme en el Centro de Salud.

Recomendaciones:a) Hablar con el señor Jefe del Personal del Ministerio de Salud, a fin de que se haga cumplir con los horarios de entrada y salida del personal.

Hablar con la Administración para que se exija el cumplimiento de la circular enviada anteriormente a los Centros sobre que con excepción del Conserje, ninguna persona puede dormir en el Centro.

Nota: Se le dió al personal recomendaciones verbales en el momento de la Supervisión.

3) EQUIPO QUE NO FUNCIONA, QUE HACE FALTA O SE NECESITA.

Problemas: a) No hay estetoscopio.
b) No hay laringoscopio
c) No hay otoscopio.
d) El reverbero se descompone con frecuencia.
e) No hay equipo PPD y BCG
f) No hay balanza pediátrica.
g) La cama ginecológica Hamilton, no está acompañada de la lámpara cuello de cisne.

Recomendaciones: a) Con respecto a: a) b) c) y f), hablar con la Administración para que implemente con este equipo el Centro.

b) Con respecto al punto d), hablar con la Administración para que cambie el viejo por un nuevo.

c) Consultar con la oficina del Préstamo de AID sobre el probable envío que se hizo a este Centro de l lámpara cuello de cisne. En caso se haya enviado, pedir al médico investigue el rumbo que tomó

4) ESTADO ACTUAL DEL MOVIMIENTO DE MEDICINAS EXPRESADOS EN CORDOBAS

Saldo de medicinas de AID expresados en córdobas C$ 2.750.90

Dinero en Efectivo..... 0

Dinero depositado en el Banco desde el inicio... " 1.291.23

Nota: No hay medicinas de INAPS
Se desconoce la cantidad de medicina enviada expresada en córdobas desde el inicio del movimiento de medicinas en el cen

MINISTERIO DE SALUD PUBLICA
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Nº.....

"AÑO DE LA ESPERANZA
Y LA RECONSTRUCCION"

RUSUMEN DEL SUPERVISOR Jose A Gutiérrez B

Fecha de Visita - 27-9-73

Centro de Salud Sto. Tomas.
Tipo III

I.- RESUMEN

Total de dinero del medicamento en existencia-	AID.....	C$	1.612.10
Total de dinero en efectivo sin depositar -	AID.....	C$	100.00
Total de dinero depositado en el Banco -	AID	C$	418.00
	TOTAL....	C$	2.130.00

II.- RESUMEN DE LOS PROBLEMAS SOBRE MEDICINA.-

Le falta medicamento, ésta fue donada sin control, no ha recibido pedido, necesita se extienda la línea de medicamentos (anti-parasitarios anti-diarreicos, anti-bioticos),

Resoluciones: Llevar control de lo donado, Hablar con el Sr. Bell - para asunto de medicinas y pedido.

III.-RESUMEN INVENTARIO.

Les hace falta equipo completo de Laboratorios, equipo completo de sutura, papeleria en General, les hace mucha falta la bomba para el pozo, les falta 1 otoscopio, telefono, recetarios.

Recomendaciones:

Hablar con el Lic. Villalta para resolución de Estos problemas.-

IV.- RESUMEN - PERSONAL.

Problemas.- Le falta Inspector de Saneamiento y Laboratorista, el médico termina su servicio social en Diciembre de 73,

Recomendaciones:

Hablar con el Coronel De Franco, con el Ing. Júrez, y el Lic. Villalta, para el asunto relacionado con el personal

III

"AÑO DE LA ESPERANZA Y LA RECONSTRUCCION"

RESUMEN DE LA VISITA DE SUPERVISION- EVALUACION AL CENTRO DE SALUD LA CONQUISTA

MINISTERIO DE SALUD PUBLICA
MANAGUA, D. N.
Dirección Cablegráfica: SALUBRIDAD

26-XI-73

Nº.....

1) CONTROL DE MEDICAMENTOS Y DINERO

Saldos de medicinas de AID expreados en córdobas	C$ 1.342.45
" " " " JNAPS " " "	" 31.50
	" 1.373.95
Dinero depositado en el Banco AID-JNAPS	" 664.15
	" 2.038.10

2) ESTADO DEL PERSONAL

Problemas: El médico trabaja solamente 3 días a la semana.

El Inspector tiene 14 días de haber sido nombrado y tiene 7 días de ausente, pues dijo que iba al Ministerio a buscar papelería.

No hay Laboratorista.

Recomendaciones: Hablar con el Dr. Canales y la jefatura del Personal sobre los días que no asiste el médico al Centro de Salud.

Hablar con la División de Saneamiento sobre el caso d Inspector que ha estado ausente por 7 días.

Hablar con el Dr. Amaya para ver posibilidad de enviar un Laboratorista a este Centro.

3) EQUIPO QUE NO FUNCIONA, QUE HACE FALTA O SE NECESITA

Problemas: Un tensiómetro está malo (quebrado).
Un inodoro está en mal estado.
Un grifo de lavamanos esta en mal estado.
Hacen falta 10 bujías en el Centro.

Recomendaciones: Solicitar a la Administración que provea de un tensiómetro al Centro.

Con respecto al inodoro, grifo y las bujías, comprarlas de caja chica.

Francisco J. Suazo C.

INISTERIO DE SALUD PUBLICA
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"AÑO DE LA ESPERANZA
Y LA RECONSTRUCCION"

Nº.....

25, De Septiembre de 1973

Centro de Salud de Télica T/p c. III

RESUMEN DE SUPERVISION

1).- Total de medicamento en existencia AID. $2.558.50
Total en dinero que esta depositado en el Banco AID. $2.950.02
Total de dinero encontrado sin depósito $ 368.75

Total. $5.877.27

11).- Resumen de los problemas sobre medicina.

1).- El misteclin V.250.Cap. esta voncido, El Benzetacil este medicamento viene en dosis muy grandes (Frascos Hospitalarios) y ya esta por vencerse.Nov.73. El médico dice le hacen falta Vacunas antitetánica y antiamlaria. El médico dice se necesita entender La línea de(médico) Antibióticos.Falta medicina (Fué donada).

A) Recomendación.

1).- Que done el misteclin V.

2,.- Hablar con el sr; Bell para que le manden Benzotcil para uso indivisualy para el asunto de extensión de antibióticos Hablar con el Dr: Morales para que le suministre la Vacuna contra el tétano.

111).- Inventario Problemas.

Falta equipo completo de Laboratorio (nolay laboratorio)

Falta vehículo para la zona Rural (visitas) No hay teléfono Archivadora, Reloj y Papeleria en General. Falta jeringas, agujas, balanza para pesar la leche y bombillo.

Recomendación.
Hablar con el Dr: Amaya y Lic. Villalta, para los problemas de equipos.

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"AÑO DE LA ESPERANZA
Y LA RECONSTRUCCION"

"2"

Nº.....

25 deSeptimbre de 1973

IV).- Prlblemas de Personal:

No hay emgermera Graduada, ni Laboratorista;

Falta Secretaria y Odontólogo.

Recomendadión:

Hablar con Antonio Villalta y Francisco do Frnco para nombraminnto de este personal.

José Antonio Sevilla
Supervisor. Centro de Salud y Pumar.

Matcare

Se hizó inventario total del mobiliario, equipo, medicinas y materiales. La medicina existe en un número muy reducido y tiene casi la totalidad el medicamento donado por el Comité Nacional de Emergencia y otras organizaciones. Al separar el medicamento solamente se pudo identificar un tipo de AID (Camoquín, tabletas), algunos nombres del tipo de JNAPS, pero que no son de ese orígen. La cantidad marcada en córdobas, es la siguiente:

Saldo medicamentos AID C$ 15.70

JNAPS C$ -----

Total C$ 15.70

Cantidad depositada en el Banco C$ 341.90.

Total general de saldo de medicamentos y depósitos banc

C$ 357.60

Nota: La cantidad depositada en el banco y el saldo de medicamentos son son uno de los más bajos en la República.

En esta visita se comprobó lo siguiente:

1) Los 3 lavamanos están en mal estado.
2) El grifo del cuarto de limpieza está en mal estado.
3) Una puerta está casi destruída por las lluvias.
4) El grifo del lavamanos del baño del personal está en mal estado.
5) 10 paletas de las persianas de vidrio se encuentran quebradas.
6) Hacen falta 12 bujías.
7) La báscula está mal equilibrada.
8) Los equipos PPD y BCG no sirven.
9) La máquina de escribir está vieja y sucia.
10) No hay secretaria, lo cual quita tiempo al personal técnico.

Recomendaciones

Con respecto a la parte física del edificio, se recomie al médico jefe del Centro, que se haga un presupuesto de gastos que cub las reparaciones y compras, para ser enviadas al Ministerio de Salud, D visión de Servicios Administrativos. Con respecto a la báscula, pedir a Administración envíe a alguien con este tipo de conocimiento para que e libre la báscula. Hay que pedir que cambien la máquina vieja por una n o en buen estado. Ver la posibilidad con la Admón. de conseguir los ser cios de una secretaria. Con respecto a los Equipos de BCG y PPD, hablar el Dr. del Palacio, jefe de la División de Tuberculosis.

PERSONAL

El médico trabaja como máximo 1 hora diario y sin incluir l sábados. No quiere que envíen al Centro medicamentos porque dice que difícil que la gente pague por esto. La Auxiliar de Enfermería tiene pagaré firmado por C$ 400.00 por medicamentos y dinero que perdió.

El Laboratorista también se desenvuelve en este centro, como Inspector de Saneamiento. Este señor tiene nombramiento de Inspector por lo que el médico solicita le envíen un Laboratorista.

RECOMENDACIONES

Con respecto al caso del médico, hay que poner en manos del Dr. Carlos H. Canales, Director Gral. de Salud Pública el asunto a fin de buscar como el médico trabaje sus horas reglamentarias. Hay que hablar con la División de Enfermería y exponerles el caso de la auxiliar de enfermería. Con respecto al Laboratoriata, hay que hablar con el Dr. Carlos Amaya para buscar la posibilidad de enviar un Laboratorista.

Francisco J. Suazo C.
Supervisor Centros Salud y PUMAR.

25/IX/73

CENTRO TIPO 3

37.

"AÑO DE LA ESPERANZA
Y LA RECONSTRUCCION"

MINISTERIO DE SALUD PUBLICA
MANAGUA, D. N.

Dirección Cablegráfica: SALUBRIDAD

Nº.....

RESUMEN DE LA VISITA DE SUPERVISION-EVALUACION

AL CENTRO DE SALUD DE Sn. FRANCISCO DEL CARNICERO

Las conclusiones son las siguientes:

1) CONTROL DE MEDICAMENTOS Y DINERO

Problemas: a) Al momento de la Supervisión, no se llevaba el contr de medicamentos y dinero en las hojas adecuadas que para ese fin fueron elaboradas.

b) Al ser trasladado el médico a otro Centro, no entregó a la auxiliar de enfermería el medicamento bajo inventario, ni hizo en el tiempo que él estuvo, los depósitos bancarios correspondientes a la venta de medicamentos.

c) No había dinero en efectivo porque el medicamento estaba siendo donado.

Recomendaciones: a) Que se lleve el control de medicamentos y dine en las hojas adecuadas que también sirven para formes. Se instruyó a la auxiliar de enfermer sobre este proceso.

b) Se hizo inmediatamente un inventario con sus dos expresados en córdobas. Que pida al Dr. A Palma que responda por el dinero del medicamen vendido.

c) Se instruyó a la auxiliar de enfermería sobre venta de medicinas y se le recomendó ajustarse la lista de precios.

2) Estado del personal

Problemas: a) No hay médico en el Centro, b) No hay Laboratorista, No hay secretaria.

Recomendaciones: a) Hablar con el Dr. Canales sobre el problema q causa en el Centro la ausencia de un médico, blar con el Dr. Amaya sobre la posibilidad de viar un Laboratorista y avocarse con el Dire de Servicios Administrativos para ver po bil de adquirir los servicios de una secretaria.

3) EQUIPO QUE NO FUNCIONA, QUE HACE FALTA O SE NECESITA

Problemas: a) La báscula DETECTO no está bien equilibrada.

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MANAGUA, D. N.

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b) Uno de los closets o armarios del Centro, tiene las 2 cerraduras en mal estado.

c) No hay refrigeradora.

d) Existen 3 paletas de los ventanales en mal estado.

e) No hay balanza pediátrica.

f) Hace falta papelería en general.

g) El centro está sin cercar, expuesto a ser deteriorado por los animales que deambulan por las calles..

Recomendaciones: Pedir a la Administración que envíe a una persona con conocimiento en la materia para que equilibre la balanza DETECTO.

b) Que se cambien las cerraduras del armario, envien la cuenta de gastos a la Administración o se repare con dinero de caja chica cuando se venda el medicamento por consulta médica.

c) Hablar con la administración sobre la posibilidad de implementar con una refrigeradora de gas a este centro, pués hay luz eléctrica solamente de noche.

d) Hablar con la Administración con respecto a las paletas en mal estado.

e) Hablar con la Administración para ver posiblidad de dotar al Centro de una balanza pediátrica y ahorrar tiempo de esta manera a la auxiliar de enfermería.

f) Hablar con la Administración, el PMA y la Alcaldía Municipal de Sn. Francisco del Carnicero para ver posibilidad de cercar el Centro.

ESTADO ACTUAL DEL MOVIMIENTO DE MEDICINAS EXPRESADOS EN CORDOBAS

Saldos de medicinas de AID expresados en córdobas C$ 600.30

Saldos de medicinas de JUAPS expresados en córdobas " 0

Dinero en efectivo..... " 0

Dinero depositado en el banco desde el inicio.....C$ 1,133.45

MINISTERIO DE SALUD PUBLICA
Managua, D. N.

Dirección Cablegráfica: SALUBRIDAD

No.....

RESUMEN DE SUPERVISION

FECHA: 21-9-73

CENTRO DE SALUD CATARINA

I.-

a.- Total de Medicamento en Dinero en existencia AID C$ 444.00
b.- Total de Dinero depositado en el Banco C$ 269.2[illegible]
c.- Total de dinero encontrado sin depositar(NINGUNO)
d.- Total de dinero de medicamentos JNAPS.(NINGUNO)

TOTAL.....C$ 7 13.[illegible]

II.- PROBLEMAS SOBRE LA MEDICINA

a.- No tiene suficiente medicamento, han hecho pedido desde hace varios meses y no se le han enviado, urge medicamento.

b.- El poco medicamento que tiene no lo tienen bajo control de tarjeta. Se tarjetó.

c.- No tienen recetario médico ni papelería en general.

d.- Necesitan cartuchosp para extracción de muelas (anestecia)

e.- Se necesita estantería para colocar medicamento ya que se encuentran en el suelo.

RECOMENDACIONES

a.- Hablar con la Administración, con el Sr. BELL y la JNAPS

b.- Se le explicó del medicamento debe estar bajo control y mandarse informes mensuales a Managua.

c.- Hablar con la Administración para el envío de papelería

d.- Hablar con la Administración

e.- Hablar con la Administración

III.- PROBLEMAS Y NECESIDADES

a.- Falta de supervisión constante en las varias disciplinas

b.- No hay laboratorista, no hay inspector de Saneamiento

c.- Urge un Odontólogo para este Centro de Salud. Un odontólogo de Granada llega una vez a la semana y cobra dos córdobas con el consentimiento del Director de este Centro de Salud.

d.- Paredes del Centro de Salud sucias, falta de protección de ventanas y predios, varias paletas de vidrios quebrados.

RECOMENDACIONES.

a.- Hablar con el Doctor Canales y las distintas disciplinas.

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No.....

b.- Hablar con la Administración Dr. Canales, Dr. Amaya y con el Ing. Alejandro Jerez.

c.- Hablar con la Administración y el Dr. Palacio.

d.- Hablar con el Director del Centro, con el Concerje y la Administración.

e.-

Responsable

Miliciades Chavez Reyes
Supervisor C. Salud y Rural.

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No.....

RESUMEN DE SUPERVISION

FECHA 18-9-73

CIRCUITO PUMAR GRANADA

I.-

a.- Total de Medicamento en Dinero en existencia AID C$ 5,128.
b.- Total de Dinero depositado en el Banco C$ 5.491.
c.- Total de dinero encontrado sin depositar(NINGUNO)
d.- Total de dinero de medicamentos JNAPS (NINGUNO)

TOTAL..... C$ 10,62

II.- PROBLEMAS SOBRE LA MEDICINA

a.-Ha hecho dos pedidos de medicamentos seguidos y no ha recibido ninguno, le urge le envíen medicamentos ya que está muy escaso.

b.-Necesitan medicamentos variados.

RECOMENDACIONES

a.- Hablar con la Administración con Sr. BEIL y JNAPS.

b.- Se le explicó al Dr. Carballo que él está en facultad de pedir medicamentos de la JNAPS y que se gestionaría el envío de su pedido.

III.- PROBLEMAS Y NECESIDADES

a.- Falta constante de gasolina para su movilización y cumplir con sus compromisos en diez comunidades rurales.

b.- Necesitan que cuando el vehículo se les descompone se lo reparen con rapidez o le manden otro.

c.- Necesita más personal para trabajar en las áreas rurales en los puestos de salud, sólo cuenta con cinco.

d.- Necesita papelería para el envío de informes mensuales.

RECOMENDACIONES

a.- Hablar con la Administración, Jefe de transporte y el Director General PUMAR

b.- Hablar con la Aministración y Jefe de transporte.

c.- Hablar con la Aministración y Director General del Pumar

d.- Hablar con la Administración y Dr. López Berríos.

Responsable
Médico Cirujano
Supervisor de Salud