

Memorandum

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(CHPE)

Subject Foreign Trip Report (AID/RSSA): Peru, August 10-25, 1981--General Evaluation
of the Ministry of Health Logistics System

To William H. Foege, M.D.
Director, Centers for Disease Control
Through: Horace G. Ogden
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SUMMARY

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SUMMARY

At the request of the Ministry of Health (MOH) of Peru, I assisted MOH personnel in a general evaluation of the MOH's logistics system. The evaluation was part of an MOH program to improve health services and support systems in 33 of Peru's 60 hospital areas. The critical level at which the logistics system needs to be improved is subregional. Storage and transportation resources, purchasing procedures, and supervision at this level are inadequate for maintaining a continuous flow of supplies and equipment to the periphery. Some of the problems I identified lend themselves to individual investigation and action, e.g., delays in clearing commodities through customs. As special studies are being conducted, a general logistics model should be concurrently implemented in 1 or 2 hospital areas. This would provide a practical context in which to resolve logistics problems and provide a setting in which to train MOH logistics personnel who will be responsible later to expand and adapt the model to other hospital areas in the country. Logistics manuals should be developed based on the knowledge gained from the special studies and from experience in the pilot areas. Concurrently, supervision should be strengthened, and each hospital area should be assigned a person with the authority to manage the peripheral health services.

I. PLACES, DATES, AND PURPOSE OF TRAVEL

Peru, August 10-25, 1981, at the request of USAID/Peru and AID/ST/POP/FPSD, to evaluate the logistics system of the Peruvian Ministry of Health. This consultation was provided by Richard S. Monteith, M.P.H., of the Program Evaluation Branch, FPED/CHPE/CDC. This travel was in accordance with the

Resource Support Services Agreement (RSSA) between the Office of Population, AID, and FPED/CHPE/CDC.

II. PRINCIPAL CONTACTS

A. USAID/Peru

1. Ms. Janet Ballentyne, Chief, Health, Population & Nutrition Division
2. Ms. Helene Kaufman, Family Health Officer
3. Mr. John Holley, Contract Consultant
4. Dr. Genny Martinez, Assistant Family Health Officer
5. Mr. Peter Cross, Logistics Consultant, Management Sciences for Health.

B. Ministry of Health

1. Dr. Luis Sobrevilla, Director, Atencion de Salud a las Personas
2. Dra. Clarisa Ricci, Chief of Logistics, Direccion General de Salud Maternal Infantil (MCH)
3. Srita. Nelly Guillen Valdivia, Asesor Supervisor Enfermera
4. Srita. Aurora Lau Camt, MCH
5. Sra. Nelida Solorzano, MCH
6. Sr. Javier de la Flor, Jefe de Registro y Control, Almacen Central
7. Dr. Carlos Mendoza, Director, Region de Salud Centro Medio
8. Dr. Fermin Ruiz, Director, Area Hospitalario de Hauncayo
9. Sr. Manuel Anchante Herrera, Director, Abastecimientos y Servicios Auxiliares (DASA)
10. Sr. Emilo Rodriguez, DASA
11. Dr. Jesus Toledo, Atencion Primaria de Salud

III. BACKGROUND

Currently, the Ministry of Health of Peru (MOH) is undergoing reorganization. Included as part of the reorganization is the Programas Nacionales de Acciones Coordinadas de Salud (PNACS), which is a program of 30 service and support projects which will be initially implemented in 1982 in 33 hospital areas which have infant mortality rates greater than 150 per 1,000 live births. Four of the support projects deal with improving the logistics system of the MOH. During my initial meeting with Dr. Sobrevilla, Director, Atencion de Salud a las Personas, I was asked to assist Dr. Ricci, Chief of Logistics of the Maternal and Child Health Division (MCH), who is responsible for one of the logistics projects, in identifying problems in the MOH's logistics system and in designing an improved system.

Work on improving the MOH logistics system had already begun before my arrival in Peru. In 1980, a 2-person consultancy team from Management Sciences for Health (MSH) assisted the MOH in developing a training guide in logistics for community health workers in the USAID/MOH's primary health care project. Early in 1981, Mr. John Holley, an AID contractor using the MSH training guide, developed a draft of a supply manual for use at the health post and community level. In the meantime, personnel from the Ministry's Direccion de Abastecimiento y Servicios Auxiliares (DASA) were designing studies to evaluate specific aspects of the MOH's logistics system, e.g., transportation.

It was quickly apparent that there has been little or no coordination between DASA and the MCH Division. Therefore, in addition to making a general evaluation of the MOH's logistics system, Mr. Holley and I attempted to improve communication and coordination between the two units.

During the course of the general evaluation, we inspected the MOH's central warehouse in Lima and made a field trip to the Centro Medio Health Region where we visited the regional warehouse, one hospital area warehouse, and several health centers and posts. Additional field trips were planned, but we were unable to make them because of a national strike by public health physicians.

IV. GENERAL EVALUATION OF THE MINISTRY OF HEALTH LOGISTICS SYSTEM

Most of our findings are based on our field trip to the Centro Medio Health Region. Although some of our findings may apply only to this region, it was our understanding from discussions with MOH personnel that our observations may be representative of what is occurring in other health regions in the country.

Findings of the evaluation are discussed below. Although various logistics activities are discussed separately, it should be kept in mind that these activities are highly interactive in time.

A. Programming and Purchasing of Supplies

Most of the drugs and medicines dispensed through the MOH's service outlets (area hospitals, health centers and posts) are procured at the area level, of which there are 60 in the country. Equipment and office supplies are generally procured centrally for distribution to the regions and areas.

Service outlets frequently experience stockouts (zero inventory of some commodity). As a result, the credibility of the MOH to provide basic health care is reduced, and health facilities are under-utilized. Stockouts are due, in part, to programming procedures and purchasing policies.

Orders placed for new commodities are not based on reorder points that take lead time (the maximum amount of time pharmaceutical companies take to deliver ordered commodities) into account. Thus, if an order is made for a particular commodity that is low in stock and the pharmaceutical company receiving the order does not have the item in its inventory, months may pass before the company makes a production run and delivers the ordered commodity. Data are available to calculate lead time and to establish order quantities, but apparently they are not being used for these purposes.

The purchasing policies of the MOH are regulated by law. These laws also affect the purchasing policies of other government agencies. The law dictates that funds will be disbursed to government agencies in equal amounts every 15 days and how commodities are to be purchased, e.g., direct purchasing vs. bidding. If the value of a purchase is less than 3 million Soles (about U.S. \$7,050), the government agency may purchase a given commodity directly from a manufacturer of choice without going through a lengthy bidding process. However, any purchase over 3 million Soles must be put out for bid.

Under these conditions, the MOH is obliged, on the one hand, to purchase commodities in small lots because of a general lack of liquidity and, on the other hand, to choose this option of purchasing in order to avoid the bidding process. This results in a scarcity of supplies in the system and high unit costs. Exacerbating this situation are inflation and the MOH's policy to exonerate from payment patients that cannot afford to pay for their health services. Because of inflation, the purchasing power of the capital available to the regions/areas to purchase commodities is continually being reduced.

Although the law is designed to prevent fraud and waste, it simultaneously hinders the flexibility of governmental agencies to provide services and to utilize their resources efficiently and rationally. Unless the law is changed, the MOH can expect to realize only minor improvements in the logistics system. We recommend that the MOH request, and USAID consider, long-term assistance (2 years) to establish a strategy that would lead to a change in the law.

B. Distribution

Theoretically, MOH health facilities are resupplied by the next higher administrative level. In practice, this is not always the case. In general, health posts obtain their supplies from the area hospital rather than from health centers to which the health posts are administratively responsible. Thus, the supply line for the health posts is longer than it needs to be. Ideally, health posts should be resupplied by the most convenient and accessible, higher administrative level.

Under the current system, health posts and centers obtain their supplies from the area hospital warehouse. In most cases, resupply occurs monthly when clinic personnel go the area hospital to pick up their pay checks. In short, resupply is associated more with pay day than with consumption rates and existing inventory levels in the health facilities. In addition, the amount of supplies issued to the health facilities also appear to be associated with the amounts clinic personnel can transport back to their health facility. For personnel who work in remote localities and who do not report monthly to the area hospital, the maximum amount of supplies they receive is equivalent to only 1 month's supply. The concept of maximum and minimum supply levels is not used to determine either the frequency of resupply or the quantities that will be issued to the health facilities.

With respect to drugs and medicines, the area hospital pharmacist is the "gatekeeper" of these commodities. That is, he is responsible for approving, disapproving, or modifying requests for drugs and medicine from the different clinical services in the area hospital and from the peripheral services. During our evaluation, it was not clear what criteria are used in making these decisions. In addition, it appears that the hospital services compete with the peripheral services for scarce resources. Given the fact that the hospital services are in day-to-day contact with the pharmacist and that the director of the area hospital is a clinician, it is not surprising that the supply situation of hospital clinical services is more favorable than that of the peripheral services.

C. Coordination

During our field trip we noted several examples of poor coordination with respect to logistics:

1. The Centro Medio Health Region had received an unexpected shipment of 2,000 blankets from the MOH's central warehouse in Lima. The director of the region complained that the shipment was unsolicited, did not take into account the needs of the region, and that higher quality blankets could have been purchased in the region at a lower price.
2. In addition to the blankets, a large unsolicited shipment of oral contraceptives (Norminest) had also been received by the region. No instructions on the use of the contraceptives relative to Noriday accompanied the shipment, nor did the region have a plan to distribute the contraceptives among and within the health areas that constitute the Centro Medio Health Region. At my recommendation, distribution of the oral contraceptives was postponed pending a policy statement on their use.
3. Commodities for the USAID/MOH Primary Health Care Project were being withheld from health facilities that actually could have used them. It was the understanding of the region that these commodities were earmarked only for designated health facilities, whereas it is the intent of USAID that the supplies compliment the region's existing inventory and be distributed to all facilities needing them. In the future, the Centro Medio Health Region will distribute the commodities to all facilities, and the MOH Central will send a memorandum to all regions clarifying the use of these commodities.
4. Records on the supply status of all the health facilities in the area are maintained by the area warehouse. In reviewing the records of some health facilities, we noted supply imbalances for some commodities, e.g., low or high inventory levels of a given commodity. In our discussions with area supply personnel, it was not evident that the area had a mechanism to correct supply imbalances in the system.

D. Warehousing

The regional and area warehouses I saw were small and inadequate to handle large inventories. In the regional warehouse, I found drugs and vaccines that had already exceeded their expiration dates, implying imbalances in the supply system and/or an inadequate cold chain.

The MOH's central warehouse in Lima is also too small to manage the anticipated levels of supplies. The Mission will have to coordinate carefully the shipping dates of commodities for the primary health care project and for the MOH's family planning program and coordinate distribution of commodities to the regions, areas, and health facilities to insure that adequate storage space is always available. I found evidence that the supply principal of "FIRST-IN, FIRST-OUT" (FIFO) was not being observed, and that commodities were not stacked in such a way to facilitate physical inventory. It was also reported that verification procedures (inventory of commodities when they are received) are time-consuming and hinder rapid distribution to the field.

Finally, a review of documents in the central warehouse revealed that an inordinate amount of time is required to clear commodities through customs. One example of this was a shipment of oral contraceptives that arrived in-country the first week of January 1981: the contraceptives were finally cleared through customs on July 31, or almost 7 months later.

E. Conclusions and Recommendations

Based on our general evaluation of the MOH supply system, we conclude that the critical level at which the logistics system needs to be improved is subregional--from the area hospital down to the health post and the community health worker. Storage and transportation resources, purchasing procedures, and supervision at regional as well as area levels are inadequate for maintaining a continuous flow of supplies and equipment to the periphery.

Some of the problems we identified lend themselves to individual study and action, e.g., the national laws regulating purchasing and delays in clearing commodities through customs. An initial study of the latter was to be undertaken by Mr. Peter Cross, an MSH consultant, during August 25-September 4, 1981. In addition to the above studies, we recommend that other studies be conducted by MOH personnel, e.g., DASA personnel, with the technical assistance of external consultants, when appropriate. They include:

1. Implication of central versus decentralized purchasing.
2. Capital requirements for an effective supply system to include the implication of different pricing strategies on the availability of capital.
3. Forecasting and programming procedures.

A concurrent activity would be to select one or two hospital areas where a general logistics model could be introduced and adapted based on a diagnosis of the local situation. This strategy has several advantages:

1. Rapid implementation
2. Low cost
3. Provides a practical context in which to resolve logistics problems.
4. Modification of the model based on experience before implementation nationwide.
5. Provides a setting in which to train central, regional, and area logistics personnel enabling them to be more effective resource personnel in expanding and adapting the model to other hospital areas in the country.

Logistics manuals, which outline the supply procedures and policies of the MOH and the responsibilities of personnel in the supply system, should be developed. Previous visits to Peru by AID consultants have developed a general description of the MOH logistics system which could serve as an outline in developing the manuals. Manuals for use at the community and health center/post levels should be developed first. Knowledge gained from the special studies and from the experience in the pilot hospital areas will be used to modify the manuals. Once these manuals are modified, supply manuals for other levels of the supply system should be developed.

An important prerequisite to implementing a model logistics system in the pilot areas and eventually to other hospital areas is the approval of a budget to cover travel and per diem expenses of central and other level personnel. The MOH should earmark funds to cover these expenses.

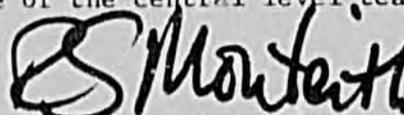
We would like to emphasize that logistics systems do not operate in a vacuum. In order to successfully implement the model logistics system and to extend it throughout the country, two conditions should be present. They are (1) the designation of a person with responsibility and authority to develop and manage peripheral health services in each of the health areas, and (2) the development of an effective supervisory system.

The present supervisory system primarily consists of infrequent spot checks of lower level services by higher level personnel who are not immediately responsible for supervising the lower levels. In other words, a hierarchial system of supervision with limited span of control does not exist in most areas. Efforts to introduce such a system have been hampered, in part, by budgetary constraints but more so by the failure of leadership to recognize the need for regular supervision and the efficient use of limited resources.

It should be noted that the absence of a hierarchial supervisory system implies that each service delivery point in a given area reports directly to the Area Director. Such a span of control is entirely unwieldy. This is coupled with the fact that Area Directors are generally simultaneously responsible for the direction of the area hospital and frequently have no one delegated with specific responsibility for managing the peripheral services. In such circumstances, it is little wonder that the peripheral services have received neither the attention nor the resources required for successful functioning.

Thus, in addition to implementing a hierarchial system in the areas, the system should be headed by a person with the authority to manage all aspects of service delivery in the peripheral areas. In addition, he/she should be a person with strong administrative capabilities and with the ability to gain the respect of others in the system, particularly of doctors. We view this change in overall structure as critical to the successful functioning of the entire health system.

As a means of helping regions and areas to better utilize existing resources and to improve supervision, we recommend that the central management consider establishing a small task force specifically charged with assisting regions and areas in organizing and implementing effective supervisory systems. In addition, we further recommend that technical assistance be provided to the MOH to develop the technical competence of the central level team.


Richard S. Monteith