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PRITECH

Technologies for Primary Health Care

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DRUG STUDY FINDINGS AND RECOMMENDATIONS

PHILIPPINES

A Report Prepared By PRITECH Consultants:
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MEDICINES AND MEDICAL SUPPLIES LOGISTICS STUDY

CONSULTANCY REPORT
Manilla, Philippines
4-21 June 1989
Richard S. ROBERTS, Jr.
Management Sciences for Health/PRITECH

I. INTRODUCTION

The purpose of this consultancy was to supplement the technical inputs of the Foundation for People's Concerns (FPC) during the early stages of the preparation of the Inception Report under the FPC's contract with the Department of Health for a study of the logistics of drugs and medical supplies.

The Management Sciences for Health inputs have been provided through meetings with Mr. Rene Santiago, the FPC Project Manager for the study, and in the present report. These are complemented by the separate report submitted by my colleague Dr. Albert Wertheimer. In addition, we are leaving with the FPC team documents gathered during our mission here and a copy of the MSH publication 1988 Essential Drug Reference Prices, as well as the same reference price information in computer-readable form for eventual use in drug price analysis.

During this mission to the Philippines, I have reviewed the documents listed in the Annex and have met with,

> FPC: Rene Santiago and key consultants;
> DOH, Manila: Under-Secretary Rhais Gamboa, Attorney Tayao, head of the Procurement and Logistics Service and several of his colleagues, Mrs. Mayahi Pons, head of the Management Advisory Service and her senior colleagues;
> Dr. Jose R. Reyes Memorial Hospital: The Director, the chief pharmacist and the pharmacy staff.
> RHO, Region No. 10: Directors and/or senior staff of the RHO, of the Provinces of Misamis Oriental and Bukidnon, and of three DHOs, one province and two district hospitals, and two RHUs;
> Mr. William Harrison and Dr. Kenneth Farr, Office of Population and Health, USAID; Mr. David Alt, PRITECH Resident Advisor; Mr. Tokuo Yoshida, WHO Pharmaceuticals Specialist, and (informally) with Mrs. Lourdes Echauz, of the Philiippine Pharmaceutical Association.

I am grateful to these people for having made my visit to the Philippines both informative and enjoyable. One could not ask for more cooperation and support than I received.

II. OVERVIEW

As reflected in the Terms of Reference and in the preliminary draft workplan, the study is essentially well conceived. It is ambitious, perhaps more so than has been realized, but it is certainly feasible and timely. In this report I will present some overall conclusions and recommendations regarding the study, followed by remarks, suggestions and questions on the present logistics system. This is all based on my very limited and decidedly incomplete observation of the system. I offer it as input to the study, and to provide some guidance to the consultants in the development of their workplan. I have tried to suggest inquiries and analyses that will help the consultants and the DOH arrive at fruitful, well-founded recommendations for improvement of the system, but have avoided anticipating conclusions that will come from the overall Phase I evaluation of the system. Note also that I have tried to complement the planning already in hand at the FPC, and thus do not deal with every aspect of the subject.

MAJOR CONCLUSIONS/RECOMMENDATIONS

1. The study quite appropriately encompasses all phases of the logistics cycle (selection, procurement, distribution and utilization) and the distribution of responsibilities among the authorities at different levels (center, region, province, district). Also very correctly, it will do this before trying to define storage and transport needs and an information system.

2. Authorities at the level of the Region, Province and District play very important roles in the supply system. As they apply the "standard" system and experience it in operation, they very naturally make adjustments in procedures and practices to cope with the realities they face. Given this, it will require a close look at actual practices in the Regions to accurately describe "the system," doing so will involve noting differences, and these will have to be taken into consideration when comparing experience from one locale to another.

3. As a result of the "adjustments" mentioned above, there is a very considerable body of experience with an unknown number of variations on the standard system among the Regions, Provinces and Districts. In effect, these are the equivalent of informal, undocumented operations research projects. One objective of the study should be to identify and document the most promising policies and practices among them, those that seem to avoid or at least minimize problems encountered with the "standard" system and appear to work well.

4. Foreign assistance (e.g., from the World Bank and USAID) may result in significant increases in the volume of medicines and medical

supplies for primary health care (especially RHU and BHS levels) in the next few years. The increases and any special factors related to procurement, distribution and reporting under such funding arrangements should be identified and taken into account in proposed system revisions.

5. The Generics Act is a promising initiative with a very worthy goal. The objectives of the study refer primarily to the "means" defined in the act, but the consultants should keep the objective in mind. The study's attention to implementation and monitoring should go beyond the specifics of the Act to its effects on distribution and buying habits. This is likely to lead to other factors of importance, such as the general availability of generics at the wholesale level and the interest of drugstores in stocking them.

II. THE LOGISTICS SYSTEM - OBSERVATIONS

The logistics system involves selection, procurement, distribution and utilization. The remainder of the present section is organized under these headings followed by brief remarks on the issue of generic drugs and the Generics Act.

A. SELECTION: What is needed, in what form, in what basic quantity?

1. What is ordered is dealt with each time a requisition or purchase order is prepared. As long as budgets are too small to meet all needs, some choices are made with every requisition. Bad choices lead to inadequate supplies, or to overstock and eventually to wastage unless there is redistribution. (There are other possible causes of over- or under-stocking of a given product, but this must be considered.)

2. Therapeutic committees apparently play a key role in the hospitals and at the PHO.

   a) Is selection of RHU drugs a function of the DHO or the PHO?

   b) Do therapeutic committees selecting for RHUs include RHU doctors and/or other RHU staff? (I was told that it does at Bukidnon.)

   c) What exactly is the role of the therapeutic committees?
      - determine what can be requisitioned (medicines, supplies, other)?
      - limit the forms in which a given medicine can be ordered?
      - fix the basic, or starting quantity of each product for each facility, or category of facility?
      - establish -- or approve -- each requisition and/or purchase order?

d) What records to they have available for consultation when making their decisions?

3. Vertical programs: In the case of vertical programs, it is understood that the programs' field representatives play a key role in determining needs. At what level (region, province, district?) do they determine the basic stock needed? On what basis? What is their role in determining quantities for resupply?

4. Other: My colleague Dr. Albert Wertheimer has suggested other questions that could usefully be raised with respect to selection. Among them,

a) Are all of the forms and presentations of individual products being ordered really necessary? The more there are, the greater the administrative workload, storage space requirements and costs.

b) Are there products of questionable value on the approved lists (see Dr. Wertheimer's report)?

B. PROCUREMENT: Who obtains and receives stock, through what procedures, how often, with what safeguards against spoilage, theft and other losses, and on the basis of what information? Who plays what role?

1. Multiple variants: The answers to these questions appear to vary from place to place. Obtaining and interpreting them will be a major challenge, but an excellent system can probably be pieced together from the various approaches in place and that have been tried.

2. DOH: The Procurement and Logistics Service(PLS) of the DOH buys drugs and supplies for the entire country for Rural Health, TB, cancer, malaria, schistosomiasis (the "vertical" programs), receives them, then redistributes them to the Regions.

a) How often is this done? That is, is there a single annual bidding for all rural health drugs, one for all cancer drugs, etc.? Or one for all collectively? Or is each (or are some) bid more than once a year? (In the latter case, how is the order split, some drugs one time, some another, or a fraction of the quantity of each drug in each order, or some other way)?

b) How is the content of each order established? If requisitions from the Regions are used, is it normally possible to supply the quantities and forms requested? If not, who decides, on what basis what to supply, what to omit? Are the Regions informed of the products, forms and quantities that will (and will not) be ordered for them?

c) Apparently, the practice is to share an order among several (all?) bidders, but applying the price of the low bidder. (See the Result of Public Bidding for RHU Medicines and Malria Drugs Held on September 21, 1988) As Dr. Wertheimer points out, with such a practice, what incentive is there to bid low? Moreover, does this not increase the number and irregularity of deliveries to the DOH, samples for BFAD to test and shipments to the regions?

d) What is the calendar for the typical central procurement (requisition from Region, report to the region on what is to be bought,call for bids, announcement of winner of contract, receipt of goods in Manila, region informed of shipping schedule, shipment to the Region)? How much variation in this calendar is there from order to order, region to region? I would suggest that a few actual procurements be tracked from RHU annual needs list to the arrival of medicines at the RHU.

3. Region: I have looked only at one region (Region X), and the indications are that not all use the same procedures. In fact, Region X has changed its procedures from last year to this to try to overcome some difficulties encountered.

a) In Region X, requisitions are collected from the Provinces and hospitals and consolidated into a single listing which becomes the basis for a call for bids. The three lowest bidders are selected for this bulk procurement. Individual PHOs and hospitals issue their own purchase orders (POs) against the quantity in the bulk procurement for them (and are obliged to order within plus or minus 10% of that quantity). The low bidders are to retrieve POs at the RHO monthly and deliver directly to those issuing the POs. When a low bidder cannot deliver, the purchaser turns to the second, then the third lowest. Very small orders (e.g., much less than a case) and emergency needs are filled through direct procurement via sealed bids.

b) The bulk procurement was done every four months in the past. They are now shifting to a semi-annual procurement to reduce the workload.

c) A year or so ago, the procedure was to have the bulk quantities delivered to the RHO, which then delivered to the Provinces. It was discontinued because there were too many problems arranging payment, since the funds are controlled at the Province and hospital level. The RHO reports no real problems in delivering from Cagayan de Oro to the Provinces; I have no feedback from the Provinces or hospitals on the subject.

d) The provinces and districts report frequent cases of suppliers not picking up orders or not being able to deliver within the specified delays (or at all) under the present bulk procurement

arrangement. At the RHO, I was told that the suppliers seemed to deliver more readily, and more reliably with the approach of a year ago, when they delivered everything to the RHO; again, I have no Province feedback on the subject (I learned of the old system only after visiting the Provinces).

e) Th PHO and hospitals have instructions to report suppliers that do not perform according to contract, but I was told that there are no formal reports of non-performance on record, in spite of the many heard informally. One doctor cited a specific case; when asked, he admitted he had never gotten around to writing a formal report though he knew he should. The RHO is understandably reluctant to santicn suppliers on the basis of oral reports.

f) In other Regions, are the PHOs and hospitals obliged to buy from the low bidder the quantities (plus or minus a percentage) indicated in the bulk procurements?

- I have been told that in some cases the bidding is used only to establish a price, and that the PHOs and hospitals are neither obliged to buy the quantity in the initial requisition or to buy from the low bidder (or, perhaps they are supposed to do so, but in the absence of strict enforcement they tend to ignore the "obligation"). If this is the case, once the practice becomes evident, does it not effect the willingness of firms to bid low, or at all?

g) In the case of the Metro-Manila hospitals under the direct authority of the DOH, the Procurement and Logistics Service(PLS) of DOH/Manila plays the role described above for the RHO in managing bulk procurement. This is done quarterly on the basis of requisitions from the hospitals. I was told that it is more of a price-setting practice than an obligation to purchase a particular quantity from a given supplier, but this should be verified with the PLS, one or two hospitals and some selected suppliers (they may not all see it the same way).

4. Province: I have looked only at two Provinces (Misamis Oriental and Bukidnon) in one region (Region X), and the indications are that not all use the same procedures. In fact, there are differences between these two Provinces and I heard of others elsewhere in this same Region.

a) The PHO prepares the requisitions from which the bulk procurement is derived, and issues the subsequent POs, for the Provincial Hospital and in at least some cases, for the RHUs of the Province.

- In Misamis Oriental, the PHO prepares the consolidated requisition for the RHUs (on the basis of requisitions they have submitted) which it then sends the RHO for the bulk procurement;

it is also the PHO that issues POs for the RHU drugs, receives them and then distributes them to the RHUs.

- In Bukidnon, the suppliers deliver to the Districts for subsequent distribution to the RHUs.

- I was told that at one time (perhaps still), in another Province of the Region, authority to order and receive for RHUs was delegated to the DHO level.

- I understand that in this last case, the RHUs may not receive (or, have received) all the medicines destined for them; it may be to avoid the risk of such leakage (a relatively common problem when drugs are in short supply) that control is held at the Province level in at least one of the other cases.

b) At an RHU, I was shown a list of "needs for 1989" that had been prepared and sent up the line. I was not able to find out what happens to it as it goes, or where it goes. However, the PLS (Manila) and the PHO both buy for the RHUs. In some cases, I am told, they buy the same medicines because the need is great. But it is my understanding that when the PHO prepares its requisition for a bulk procurement, it does not know how much of what is going to be provided during that same procurement period through the PLS, nor does the PLS know what the PHO will order. This is not likely to result in procuring the right amount of the right drugs.

- Note that the needs of an RHU include those of BHS in its catchment area; in Medina I was told that 40% of the RHU drugs are for BHS, but the fraction depends on the number of BHS in the catchment area.

c) What are the PHO policies, procedures and practices elsewhere? With what results?

5. Quality control: In the case of pharmaceuticals, regulations say a sample from each lot must be tested by the Bureau of Food and Drugs (BFAD) in Manila. Centrally procured drugs are held after receipt in Manila until BFAD results are received, then shipment to the Regions is arranged. In the case of procurement in the Regions, samples are sent to BFAD from goods received (e.g., by the PHO or hospital) but distribution is not delayed pending BFAD tests, nor is consumption of the drugs when there is no other supply.

a) In Region X they report that BFAD results are received after one to three months and that they cannot possibly seal a shipment for that long.

b) Sub-standard results are received; in Region X, I understand three cases were cited the past quarter, including two of antibiotics.

c) What are typical delays elsewhere in receiving BFAD test results?

d) At least in the case of Regional procurements, the PHOs and District Hospitals are often likely to be receiving products from a single lot, or batch. Does BFAD keep a register of batch/lot numbers tested and report back on the basis of prior tests when samples from tested batches are received, or does it test every sample regardless of whether others from the same batch have been tested?

e) Sub-standard results are more serious in the case of some medicines than others, particularly if there is any chance of the drugs being used during long test delays. Does - or could - BFAD give priority to the testing of, for example, life-saving drugs?

f) One supplier has suggested that there is at least one private laboratory in Manila capable of running the quality control tests. Does this offer a way to accelerate testing?

6. Shelf-life: I understand the general rule is to require at least one year of shelf-life at time of delivery, but this should be confirmed in several locations, including PLS. It is clear that exceptions can be and are made to this rule and may be acceptable under some circumstances. On the other hand, one year may be too little in some cases.

   a) In Region X (and in some of the documents read) it was not unusual to hear of products being received in large quantities and with little useful shelf-life left; these were generally said to have come from central procurements.

   b) How much time passes from delivery of drugs in Manilla to their receipt by the final outlet? Do shelf-life requirements for centrally procured drugs take this adequately into account?

7. Procurement monitoring has involved having all purchase orders sent to Manila for control. It is hard to imagine effective vetting of the thousands of POs in question. A new procurement monitoring system is now being tested by the MAS. Experience with it will be reviewed in the course of the study.

8. Structure: The more parties there are doing procurement for a single outlet, the more information flow and coordination is required, the more it is complicated and the more likely there are to be supply problems. The solution may be in changing the MIS, reallocating procurement responsibilities, or some of each.

   a) Are over- or under-stocking, late deliveries and other problems more commonly linked to one kind of procurement than another?

b) Compare central and regional procurement content to assess amount of overlap. I am told that there is some. Region X (possibly others) bulk procurement documents distinguish between orders for RHUs and those for hospitals, thus facilitating such an analysis.

c) Where possible, compare prices obtained through central and regional bidding to evaluate the price advantage of central purchasing (after adjusting for delivery costs). At the RHO (Region X) and one PHO, cases were cited of obtaining lower prices locally than those achieved by PLS in Manila for the same product and supplier. At the RHO, I was told they think anti-biotic prices tend to be lower in Manilla, but other prices are lower in the Region.

C. DISTRIBUTION: Who distributes, stores and re-distributes it, where, how, when?

1. DOH: the case of central (PLS) procurement, the DOH arranges distribution to the Regions in some (probably most) cases and to lower levels in others. This needs to be clarified. Under what circumstances does the Center deliver to what level? Those arrangements can then be evaluated.

2. Region: See the notes above regarding distribution from bulk procurements in Region X. Now the suppliers distribute to PHO and hospital levels; last year they delivered to the RHO, which took care further distribution.

3. PHO/DHO: As noted earlier, delivery to RHUs may handled by the PHO or the DHO; in Region X it appears to vary from one Province to another. Information is needed from other Regions.

   a) This does not seem to pose problems at the RHO or PHO level, but the districts are less well equipped with transport. For example, in Maramag, where the roads leave much to be desired, the only vehicle is the ambulance, in need of repairs when I was there. The equivalent of perhaps half a cargo container of dried peas and grains were awaiting distribution to RHUs; a truck was to be hired that would deliver to RHUs on the main road; they will have to find other means to get the bulky load to more remote units.

4. BHS: In Region X, I was told that BHS medicines are typically picked up during weekly meetings at the RHU.

5. Flows: How even, or even, are flows through storage facilities at various levels? I heard some reports of very large but infrequent shipments from higher levels that create storage problems (e.g., the dried grains cited above at the District Hospital in Maramag, and two

cargo containers at the port in Cagayan de Oro while I was there). The maximum flow is a key factor in determining storage capacity requirements and evening flow may be less costly than building larger bodegas.

6. Records: What stock records are kept at each type of facility? To what extent is practice standard nationwide? Standard forms? If practices and/or forms are not standardized, who defines them?

   a) The stock records kept at the hospital pharmacies visited were quite good.

   b) The stock records kept at the PHO bodegas were not up to date and appear to be little used. Where stock cards did exist, albeit out of date, they reflect simultaneous distributions of all of a given product to the various destinations in the Province; apparently the departure of the entire stock in the product at one time. This suggests that the PHO bodega is a very temporary storage place in which stock is held only as long as it takes to arrange transport to move it out, and that no safety stocks are held there.

7. Communications: What stock-related data are communicated from and to each level, on what schedule, with what regularity? What is done with any such data received? To what extent is practice standard nationwide? Standard forms? If practices and/or forms are not standardized, who defines them?

   a) I did ask for a monthly consumption report described to me at an RHU. The most recent found was for October 1988; this was not surprising, considering the tedious work involved in preparing it and the fact that submitting it has no effect on supplies.

   b) In Region X, one District Hospital (Surigao, in Surigao del Norte) submits regular monthly reports on drug consumption; I was told that these are not required. I saw some of these reports and was assured that there is a full file of them. Thus, data from a relatively remote 75 bed hospital is available for analysis if this would be useful.

8. Stock levels: In my very small sample of health facilities, I saw situations of both inadequate supply and over-stock and was told of others. Among them,

   a) PRISMA Vitamin A was almost exhausted in the Maramag RHU, while the Gingoog District Hospital had an excess.

   b) The Medina RHU has stock of Antistine that will last 4-5 years at the rate it has been used the past 12 months, and nearly 13 years supply of Epinephrine received 6/88 and expiring 12/89.

c) A shipment of Dilantine recently arrived in Bukidnon, reportedly for the schistosomiasis program, seems to be much more than they are likely to be able to use before it expires.

d) These cases can be corrected through stock transfers, but these are costly in managment time and in money; in the spirit of priority to preventive medicine, it is better to improve the supply system so as to minimize the numbewr of problems requiring curative stock transfers.

9. Contraceptives: A December 1988 review by consultants for USAID found a number of inadequacies in storage and record-keeping. Major ones,

a) They judged the DOH Central warehouse inadequate to handle contraceptive supplies, although the nature of the inadequacy was not specified.

b) They found expired contraceptives in stock, discolored condom packaging (prompting them to suggest that the products be tested), some personnel not aware of shelf-life requirements, and cases of over- and under-stocking (including some extreme over-stocking).

c) They reported that "dispensed-to-user and stocks-on-hand data needed to monitor and evaluate performance and to forecast contraceptive needs are not available in a timely manner for program analysis on past or current trends."

10. Safety stock: Region X reports holding 20% of stocks purchased as safety stock.

a) In the case of Region X, this should be defined more precisely; a revolving 20% of quarterly shipments is roughly 3 weeks of stock, but 20% of an annual shipment is 2.5 months of stock. The safety stock is taken from central shipments only? Or is 20% of the bulk procurement financed by PHOs and hospitals delivered to the RHO and held there for later distribution as needed? What experience is there in using the safety stock; in practice, what have been the criteria for distribution? What are the PHO and DHO views of safety stock management?

b) Is this safety stock policy of Region X typical? What is done in the other regions?

c) A recent communication from U/S Rhais Gamboa informed the RHOs that a percentage of central procurement funds would be accessible for emergency procurements by them in the Regions. Will this replace the 20% being withheld from trans-shipments now in Region X, and perhaps elsewhere? If not, how do the two emergency/safety valves relate to each other?

D. UTILIZATION: How is it dispensed, by whom, to the final user?

Dr. Wertheimer has dealt with this subject at some length. The main point I would add is that in studying dispensing at the pharmacy level in the hospitals, special attention should be given the implications of the apparently widespread experience selling medicines in these pharmacies.

1. Sales: The first question is, how common is sale of drugs in DOH hospitals? It was the practice in the four I visited, and I heard of others. Who authorizes revolving funds? How is the total value of such a fund fixed (criteria used)? How is the mark-up determined (I encountered 10% and 20%.) I am told the "profit" is returned to the Treasury, but is held in a trust fund and can be made available to the hospital for special projects, but -- if this is the case -- not all hospital administrators are aware of it.

2. Sales: Detailed records are kept of the quantity of each drug sold, given to a Medicare patient or given to an indigent patient free of charge. Moreover, I am told that the Regions report regularly to the DOH the percentage of drugs dispensed under each heading: sold, Medicare, indigent. A sample of these reports could be reviewed to get an idea of the readiness of the public to pay for medicines.

   a) In the Bukidnon Provincial Hospital drugs were dispensed in May for a value of about 82,000 pesos, 43% paid, 16% Medicare and 41% indigent. In Maramag District Hospital, the value was less than 20,000, but roughly 8 times as much was paid as indigent; I was told that the people pay when they can, and since it is harvest time, they have some money.

   b) With regard to the role of drugstores in DOH facilities in making available low-cost medicines to the general public, I have been told that the law permits sales only to patients of the hospital. This will require some investigation.

3. Micro-analysis: In the description of the "Situational Analysis," the context of the reference to "micro-analysis" of hospital drug outlets suggests that they may be singled out because they dispense directly to patients as opposed to supplying health facilities. If this is the case, then RHUs should probably also be included, and perhaps BHS. On the other hand, if this "micro-analysis" is part of the later activity focused on the drugstores as sales outlets, then limiting the study to the hospital pharmacies is probably appropriate.

E. GENERICS AND THE GENERICS ACT

1. RHO Requisitions: In the past, orders arriving at PLS often cited drugs by brand name; PLS converted them to generic equivalents for RFB documents. With the Generics Act, there has been a big effort educate to use generic names, and the most recent orders have come in generic form.

2. Availability: To what extent are non-brand generics available in the country? To what extent are they bid? Are there competing non-brand generic products? Do private hospitals buy them?

   a) United Laboratories has a Generics Division, with its own detail men. In at least some cases identical products are marketed by this Division as generic, and by another under a brand name, the latter much more costly than the former. The company is almost certain to promote the brand names and use the generic items only where necessary. The study should look to see if the generic versions are found in private pharmacies.

   b) I understand that at least one firm is offering only generics. It is from such a firm that one can hope for dynamic commercial marketing of generics.

3. Availability: One of the key questions in getting generics actively sold in the private sector is their availability (subject of the above) and the motivation of pharmacists to sell them (profit). In this study or another, this question should receive careful review.

III. THE STUDY - OBSERVATIONS

1. The consultants will have to be attentive to, and identify procedural or other differences at each step and level related to such variables as sources (e.g., donors), type of product (e.g., those requiring a cold chain), or category of health facility (e.g., Metro Manila hospitals). It is very possible that the best system for most purposes will not be the best for dealing with all product categories, and that special arrangements may be needed for some.

2. It will be important to distinguish persistent problems that may indicate a need for system modification from unique (one-time) problems due to temporary external factors or needing only minor adjustments or learning. For example, one can expect problems when a new system and new procedures are first introduced, during unusually difficult economic times, or with major personnel changes.

3. The consultants need a wide-reaching but manageable way to identify variations in policies and practices from one Region to another, and among Provinces, and among Districts, what provoked local changes and their results. One possible approach: visit two or three Regions (and use the attached notes from Region X) to identify common variations in key policies (e.g., ways of using bulk procurement, ordering for RHUs, delivery to RHUs, management of reserves); write up the system, briefly describing variants observed in key policies or activities, then ask directors at the RHO, PHO and DHO levels in all Regions to identify the parts of the description that fit their systems (or to describe their own variations if they differ from what is described), to comment on problems solved by any changes they have made, and on any problems that persist. It is very likely that major improvements are possible through selective combination of practices already tested in one place or another, or several, in the country.

4. Note that there are regular meetings of responsible officials of every level of the system with those immediately above them, apparently throughout the country. The consultants may be able to make use of some of these meetings for information gathering and discussion of "trial balloons".

5. I understand that USAID assistance may result in substantial increases in the supply of medicines to RHUs and BHS in the not very distant future. This should be verified; if it is true, volume should be estimated and taken into account in projecting flow levels and distribution modalities. It would have a major impact on quantities to be moved and stored (and capacity needed), and on the importance of stock management practices at the RHU level.

6. The issue of public sales of drugs from DOH pharmacies does not appear in Terms of Reference descriptions of the content of Phases II or III. Does this mean that this will be dealt with definitively (as far as this study is concerned) in PHASE I? If so, that should come out clearly in the PHASE I workplan.

7. The idea of examining "synergies and complementarities between the DOH network and private drug distributors" raises the question of DOH views and policy with regard to the relative roles of the public and private sectors in meeting the pharmaceutical needs of the public. This is a big subject, perhaps one no one intends to have covered in this study, but one that is quite relevant and merits some reflection.

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DOCUMENTS CONSULTED

(author/s not identified), DISTRICT HEALTH OFFICE STUDY, 6/89. initial reporting documents: Attachments A & B, and several District "Intervention packages".

Copy given to Rene Santiago for the Foundation team. Someone should perhaps pursue the issue of "Task Force 2" proposed to deal with — among other things -- procurement and supply. Dr. Farr, USAID, can identify the people actively involved in the study.

ARC Associates, A STUDY ON BOTIKA SA BARANGAY OPERATIONS. 1985. Vol. 1, 289 pp. NOTE: Three other volumes contain the detail from each of three sample regions (Regions III, VI and X).

This does not appear to be very relevant to the current study, but should certainly be consulted if proposals to resuscitate the Botika sa Barangay concept are seriously considered.

ASEAN, THE ASEAN MANUAL ON PERIPHERAL DRUG SUPPLY MANAGEMENT. 1988. 77pp.

Could be useful to the Foundation and the DOH when considering procedures, forms and manuals. If not already at DOH, see Mr. Tokuo YOSHIDA, WHO.

DOH, RHO No. 1, DOH LOGISTICS OF DRUGS AND MEDICAL SUPPLIES (LODAMES). Responses to questions submitted for LOGDAM study. Typescript. 4pp + 3 pp. tables. 6.89.

Foundation team has this. Useful, though much of it is a bit general. Note the shift from brand names to generic names from the 1987 to the 1988 list of drugs ordered.

LGDMDOCS.LST: 21.6.89

Glatzer, Maurice (for Centers for Disease Control), Consultancy report on Logistics Management System Review (Philippines), December 1988. Report of a consultation undertaken jointly by CDC and the the Family Planning Logistics Management Project (FPLM), of John Snow, Inc (JSI) at the request of DOH and POPCOM, and with the support of USAID. 12 pp. + attachments.

They found the DOH central warehouse inadequate for the flow of contraceptives (handled by POPCOM), but did not identify specific inadequacies. Overall, they noted lack of attention to expiry dates and signs of possible product deterioration, over- and under-supply at different locations, and inadequate data flow for proper contraceptive use monitoring and management. Annexes include estimates of quantities to be needed in 1990, 1991. Copy to be given to Rene Santiago.

Leverage International (Consultants) Inc., ASSESSMENT OF DISTRICT HOSPITALS REFERRAL FACILITIES (UPDATED REPORT). April 1986. 79pp. Appendices separately bound. Not numbered.

Table of contents and two supply-related pages have been to be given to Rene Santiago. Balance of report not likely be useful for this study, unless lists of standard equipment are needed.

Management Advisory Service (MAS), MATERIAL MANAGEMENT IN THE DEPARTMENT OF HEALTH (REPORT ON WAREHOUSING ACTIVITIES). undated. typescript. 27pp. 15 Annexes. Submitted by Amador N. Esleta, Chief Management Analyst and Staff, OMED, MAS.

Very useful. Obtain from Mrs. PONS and Mr. Esleta, DOH/MAS.

Regional Health Office No. X., 1988 ANNUAL REPORT. No date. 130.pp.

Abundant very interesting data, including value of medecines & supplies bought and distributed by the RHO, and same for those received from DOH/Manila, numbers of drug stores by province and city..and much more.

Regional Health Office No. 10, PRICE SCHEDULE FOR DRUGS & MEDECINES FOR THE DIFFERENT PROVINCIAL HEALTH OFFICES AND HOSPITALS, REGION 10, PER RESULTS OF THE PUBLIC BIDDING HELD ON MARCH 2, 1989. Romeo. 38pp.

Product & quantity by purchasing unit (PHO or District Hospital), with prices for lowest three bidders.

Regional Health Office No. 10, PRICE SCHEDULE FOR MEDICAL AND HOSPITAL SUPPLIES FOR THE BULK PROCUREMENT UNDER THE REGIONAL HEALTH OFFICE NO. 10 FOR THE FIRST TRIMESTER REQUIREMENT OF 1989 (JANUARY TO APRIL, 1989) AS PER SEALED CANVASS OF NOVEMBER 16, 1989. Roneo. 50pp.

Product & quantity by purchasing unit (PHO or District Hospital), with prices by bidder.

Regional Health Office No. 10, PRICE SCHEDULE FOR THE SUPPLY OF LABORATORY REAGENTS & X-RAY FILMS FOR THE BULK PROCUREMENT UNDER THE REGIONAL HEALTH OFFICE NO. 10 FOR THE FIRST TRIMESTER REQUIREMENT OF 1989 (JANUARY TO APRIL, 1989) AS PER SEALED CANVASS OF NOVEMBER 16, 1989. Roneo. 22pp.

Product & quantity by purchasing unit (PHO or District Hospital), with prices by bidder.

Regional Health Office No. 10, PRICE QUOTATION FORM FOR DRUGS AND MEDICINES, SECOND SEMESTER (JULY TO DECEMBER 1989). May 26, 1989. 20pp.

Regional Health Office No. 10, PRICE QUOTATION FORM FOR LABORATORY & X-RAY FILMS SUPPLIES, SECOND SEMESTER (JULY TO DECEMBER 1989). May 18, 1989. 8pp.

Regional Health Office No. 10, PRICE QUOTATION FORM FOR MEDICAL AND HOSPITAL SUPPLIES, SECOND SEMESTER (JULY TO DECEMBER 1989). May 18, 1989. 20pp.

Regional Health Office No. 10, Regional Committee on Bulk Procurement, GENERAL CONDITIONS FOR THE SEALED BULK BIDDING FOR THE SUPPLY OF DRUGS/MEDICINES, MEDICAL/SURGICAL SUPPLIES, LABORATORY AND X-RAY SUPPLIES FOR THE OFFICES AND HOSPITALS UNDER REGIONAL HEALTH OFFICE NO. 10. 26 May 1989. 6pp. also, AMENDMENT TO THE GENERAL CONDITIONS FOR THE 1989 SECOND SEMESTER SEALED BIDDING. June 1, 1989, 1p.

World Bank, PROJECT PROPOSAL, PHILIPPINE HEALTH DEVELOPMENT PROJECT III. Vol. 1, January 27, 1989. 91pp + A1-A55.

Data on anticipated drugs, supplies, equipment to be provided, as well as training anticipated. Presumed available at DOH.

REPORT

TO: Rene S. Santiago, Dir.
Foundation for People's Concerns

16 June 1989

FR: Albert I. Wertheimer, Pritech Consultant

RE: Drug study findings andrecommendations

Background:
I arrived in Manila, Philippines on 8 June 1989 and during the next week, read numerous reports from the Foundation, USAID, US CDC, Department of Health, IMS (Pharmaceutical Market Research), Management Sciences for Health, Pritech, ARC Associates, The Lancet, SCRIP Newsletter, local news reports and copies of documents from the government as well as copies of drug purchase summaries, etc.

In addition, I spoke with several representatives of USAID Mission in Manila, officers of the Philippine Pharmaceutical Association, the Philippine Assn. of Colleges of Pharmacy, officers of a drug manufacturer (United), the owner of a drug store shop, yourself and a few persons from the Department of Health, MAS division. I visited a hospital pharmacy and examined an independent and chain-owned pharmacy shop in Manila. Also, Mr. Roberts of M.S.H. and Mr. Alt of Pritech were most helpful.

Introduction:
It was my understanding that I was to review all of the materials and resources available to me and to respond with questions, comments and suggestions regarding the National Drug Policy and the Generic Drug legislation so that these thoughts might be considered in the soon-to-be prepared inception report by the Foundation for People's Concerns. Also, my assignment was to add guidance and specificity to the workplan in the area of Dispensing at the Pharmacy Level. It iswith these goals in mind that the following was prepared.

First of all though, it should be clearly stated that the goals of the Philippine Government and Department of Health are laudable, well thought out and likely to facilitate greater access to drug products by more persons at a lower price. The scope anddepth of the National Drug Policy demonstrates a genuine commitment to the welfare of the people anddemonstrates very foreward thinking and planning. The Generic legislation, while not free of challenges and the normal implementation problems is a bold and brave initiative that will be resisted by powerful forces who benefit from the status quo.

In considering any program or proposal, it is essential to carefully review the environment. While nearly 60 million Philippine residents exist today, the vast majority are unable to afford drugs. While it might be quite simple to recomend an off the shelf solution, as a system used in a neighboring country, this strategy would likely be doomed to failure given the unique: geography, political, economic situations, traditions, etc. Moreover, the goals may be very different even within neighboring nations. From the statements made by persons in the government of the Republic of the Philippines, it appears that the goal for the drug sector includes education of the health professions, distribution efficiency, the availability of high quality generic products at fair prices and a system to monitor and review the status and to make improvements.

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The National Drug Policy:
The fourth pillar of the NDP relates to the "targeted procurement of drugs by government." There are numerous ways to accomplish this goal and none should be discarded prematurely. In essence, the major changes brought about by the Generics legislation may provide an excellent opportunity for yet other related changes to be installed. Based upon the reaction of domestic drug manufacturers and importers, the DOH may wish to consider an alternative distribution channel, as has been successfully done with the distribution of contraceptive items. Furthermore, it might be feasible for the DOH to build or finance the construction of a drug factory to manufacture final dosage forms of generic drugs. It would probably be wise for the DOH to contract with the private sector for the operation of the plant. A successful example is Indonesia which operates a generic drug company to satisfy domestic essential drug needs and which also has the possibility to earn export profits.

Generics Act of 1988:
The greatest source of mystery in reading this Act was Section 4b regarding the establishment of a system of incentives to encourage generic drug use. Positive incentives would raise the cost/price of the drugs and it is unlikely that incentives can be created to come close to the markup possibilities found with the branded products. In order to accomplish this, it would be necessary to rigidly administer prices at all levels, legislate prohibitions regarding promotional activities, and create an office to monitor and police this. One must ask whether the cure is better than the problem.

In section 7 of the act, it is specified that the date of manufacture be included on the label, as well as the expiration date. I would argue that the expiry date alone would be sufficient. The date of manufacture could cause anxiety as well as confusion with lesser educated persons, especially those who could not be expected to know that solid dosage forms can have a several year shelflife, and still have virtually all of its potency one to two years later depending on storage conditions.

I was unable to identify the mandate, means of appointment, term of appointment, exact mission, etc. of several committees which serve as advisory bodies to the DOH. These include the BFAD Advisory Committee, National Drug Committee (NDC). Also, it remains unclear as to be status of the NGO, Philippine Drug Action Network, and its role.

Other:
In administrative order number 63 (1989), "Rules and Regulations to Implement Dispensing Requirement....", I wish to call to your attention section 3.2 which specifies the information to be placed on the label by drug outlets. This is a lot of text, which, I am afraid, will result in abbreviation or omission of important details of the directions to make adequate space for every required item. A possible means to reduce the space requirement would be to require the generic names followed by a 3-digit number identifying the source, as well as identifying the pharmacist by initials rather than full name.

The following reaction also deals with the above-mentioned label space as well as with a larger, more controversial topic; the generation of generic names for drug products having multiple ingredients. It might be far simpler to assign unique registration numbers to each product listed in the national formulary. For example, Ampicillin might be nr. 064; United might be manufacturer 345 and the product might be 250mg. tablets, listed as dosage form 098. Therefore, the product becomes: 064-345-098. Products containing two to fifty active ingredients would be given a unique number.

It was somewhat surprising that the lists A and B of dangerous products were described by brand or trademarked name in most cases. It does not set a good example and worse yet, opens a huge loophole wherebrands or other sources could be used without violation of the regulations as interpreted. For example, Demerol ampules and tablets are listed, but does this include generic meperidine or another brand of the same active ingredient?

Large questions remain about the National Drug Policy and about the Generic Act, as well. To be specific, my reading of the purchases report for 1987 and for 1988 indicates that the question of selection, omitted from the terms of reference, might be reinserted. It makes sense to have an efficient, well organized and monitored sytem that will distribute only the most cost-effective drugs of choice for the Philippine people. This comment is not made to be unduly critical as the products purchased in the recent past are quite acceptable by any definition, but there is always room for improvement. For example, a cough syrup was purchased in the quantity of 21,582 bottles, each containing 60 ml. for one region in 1988. This product contained the following ingredients: diphenhydramine, an antihistamine useful when allergic reaction is causal; phenylpropamine, a decongestant; acetominophen for fever, pain; but not a sufficient dose; dextromethorpan, a cough supressant; and glyceryl guaiacolate, an expectorant. The cough supressant will not allow the expectorant to work and vice versa.

While perhaps other examples are not so dramatic, there are instances where drugs which are perfectly good and equivalent in therapeutic effect are not included, which is surprising when there might be price advantages. In brief, it would seem to be reasonable to reopen the question of selection. If the DOH is satisfied with the present selection, then no harm was caused and a minimal expenditure of time was used. But, on the other hand, there would be a sense of satisfaction to be gained if an additional review indicated that no modifications were in order.

In a related issue, the DOH may wish to explore the question of packaging. Most drugs purchased by the DOH and its regions are in bottles of 100 units (tablets or capsules). If dispensing is in original packages from the supplier, one must ask what is the appropriate dispensing quantity for one encounter of illness or medical problem. One-hundred is probably too many units for most acute conditions. If, on the other hand, the bottles are used for dispensing in much smaller quantities, it is appropriate to specify materials and criteria for packaging. Paper envelopes used in some countries do not protect against temperature or moisture, etc. etc. The bottom line is whether the study should develop a unit of use (not unit dose) standard dispensing quantity, as is done in most European countries. Then the drug is dispensed in packaging from the manufacturer with the correct patient information, directions, warnings, and quantity for one course of therapy. For example, antibiotics are frequently dispensed and prescribed as 4 doses per day for a period of 10 days. Therefore, antibiotics would be packaged in boxes of 40. A once-daily therapy for one-month's supply would be distributed in boxes of 30 tablets. Representatives of the DOH, Medical Association , Pharmaceutical Association and with the input of consultant pharmacologists generally prepare these standard quantity specifications for a country. Suppliers are then asked to bid on the drugs in these sizes.

In this way, selection and packaging might be jointly explored. For example, ferrous sulfate is a entirely fine source of iron for anemia patients, but re-evaluation of the list could provide the opportunity to check the current literature, other national formularies and the World Health Organization Essential Drugs List. In our example, $FeSO_4$ has been replaced by ferrous gluconate and other salts at about the same price, but which are felt to be less irritating to the gastric mucosa.

Other items worthy of mention include the following:

The idea of requesting bids from potential suppliers and subsequently dividing the award among the several lowest bidders might be counter productive. While this policy has the ability to prevent favoritism by creating a sharing of the rewards, it also can cause a powerful disincentive for firms to offer their lowest bid. If I were a manufacturer, I would bid close to the winning bid of the previous time, expecting to get some of the business. Economies of scale may be possible and price reductions might be found if the low bidder received all or nearly all of an order, irrespective of the quantity involved.

The numbers of orders that went to the second or third lowest bidder would tend to indicate that the low bidder was unable to deliver at the offered price. This situation should be studied, with the intention of creating an approved bidders list. If penalties were real, severe and inforced, only serious bidders would be expected to respond. For example, there are many nations where one is prevented from bidding if their performance the previous year resulted in late deliveries, the failure to deliver or substandard products.

Several sources indicated that bioavailability testing is not required for generic products purchased by the DOH or regions. While qualitative and quantitative assays are important, the ultimate means of control to assure that the active ingredients would be absorbed is bioavailability testing. It is expensive, and might be discussed.

Time and money might be saved if the BFAD kept a master list of the drug products and batched tested, so that duplication might be prevented. If Region 4 purchased the same drug and batch from the same source as had Region 7, six months earlier, there is little or no rationale to repeat the assay. Furthermore, cooperation fror drug manufacturers and repackagers, distributors and importers could further cut tl workload in this area. It may well be the case that Rosewell's and Marsman's 250mg tetracycline capsules are from the same manufacturer and batch.

On the topic of manufacturer cooperation, it seems reasonable to encourage the three (3) different associations of manufacturers to work more closely or to even consider a merger, if that were possible. It would make negotiations, arrangements, etc. much simpler if the DOH were able to work with only one organization. A by-product would likely be a better and more cooperative working relationship between the DOH and domestic manufacturers.

The procurement of drugs in the Philippines is a difficult concept to fully understand. It appears that the DOH purchases some drugs, as do regional and local authorities. What should be examined is the prices for a sample of drug products at the DOH level and at the regional levels for 3 or 4 regions. All of these costs should be compared with published UNICEF and other international prices. One possible additional consideration perhaps worthy of study is to require that pharmaceuticals be purchased from the low bidding sources by DOH and regional purchasers.

An intriguing question worthy of deliberation and study would be for bids to be requested centrally in Manila by the DOH and to then permit all agencies, governmental offices, etc. to purchase what they needed and when the stocks are needed only from the source awarded the bid for that item. If bidders understood that their bid was for a guaranteed minimum, large quantity, it is theor-

etically possible that lower bids would result, when the eligible bidders had the knowledge that a low bid would gurantee a large volume of purchases. This might be even further enhanced by the awarding of multi-year bids. Three years may be too long a period of time, but a two-year bid period has sufficient merit to be further studied. In any contract, it is reasonable to specify a maximum number of orders and delivery sites. Perhaps some consideration might be given to 24 month bid periods with delivery to the 12 regional offices. The regions might be permitted to routinely order 6 times per year with the ability of 2 rush orders in addition. This would mean a total delivery obligation of eight shipments per year to each of the 12 regions for a total of 96 shipments annually.

A cursory review of purchases from two different regions indicates that there is sufficient consistancy present in the most popular products, to enable a batching of the bid items to include the needs from all of the regions. At that point, it would potentially be reasonable to explore the standardization of final dosage forms. On the surface, it appears logical to have pediatric and adult dosages of drugs as well as a selection of non-oral dosages when the gastrointestinal route is inappropriate. Therefore, the appearance of suppositories, injectables, sprays and ointments is surely warranted, BUT a study should look into the need for several strengths of oral medications. Such standardization holds the promise to simplify ordering, inventory control and prescribing. If a patient had a particularly severe case of a pathology, two 250mg. tablets should suffice rather than having to keep in stock the 500mg. tablets as well. This is especially salient when the 250 mg. dosage form is by and large the overall dominant treatment, so much so that the 500mg. dosage form is not only not cheaper than two of the 250 mg. ones, but might even be more expensive.

The other difficulties that were seen or mentioned, do not, in the opinion of this consultant, merit system modifications as much as they require greater policing and enforcement of the rules and procedures already on the books, or of the use of resources already available. For example, the means to correct stock anomalies exists. If one region has too much and another is running short of a drug product, this may be rectified from existing mechanisms. Similarly, the simple matter of sharing bid price information between regional offices could be of assistance.

Education:
Education at at the heart of planned initiatives of the DOH. It will be necessary be educate: physicians, pharmacists, other health workers involved with drug prescribing and dispensing, and the consuming public about the goals and objectives of the National Drug Policy and the 1988 Generic Drug legislation. The most successful programs oftentimes create an environment of cooperation and common goals. This reviewer was surprised to see the abundant use of rather severe sanctions to deal with noncompliance with the regulations. Health care practitioners are being asked to report on their colleagues when branded, impossible and other irregularities in prescribing are found. I cannot speak for the Philippines, but in some cultures and societies, this type of regulation strengthens the bond among practitioners to resist what are considered inappropriate incursions by the government in practice. The means of assuring compliance should be studied and alternatives considered. The British send a colleague physician to visit a doctor who is seen as a high cost prescriber, from records when the cost of that physician's prescriptions exceed those in that district by more than one standard deviation on a repeated basis. The Australians publish a newsletter to prescribers that attempts to educate regarding identified problems and issues, such as the introduction of a new drug that is quite expensive and only marginally superior in some cases over previously existing products.

The Swedes and Norwegians among others undertake the publication of similar bulletins. Health Maintenance Organizations (HMOs) and hospitals in North America and Europe publish photocopied review papers for participating physicians about the preferred therapy for different diseases each month when the bulletin is published.

One could enlist the assistance and cooperation of the Health professions schools to teach positive modules about the National Drug Policy and Generics Act with a thrust of this program as valuable for welfare of the people, patriotism, etc. Moreover, one might wish to explore coordination with the continuing education activities of the Colleges of Medicine and Pharmacy and with the Philippine Medical Association and Philippine Pharmaceutical Association. Dean Tinio of the College of Pharmacy at Adamson University is also the chairman of the Philippine Association of Colleges of Pharmacy, which offers continuing education for pharmacists. It is known that his organization has agreed to cooperate with teaching about the control of diarrheal disease, so cooperation could be expected here as well.

I sense a great deal of excitement and enthusiasm about the benefits to be gained through the enactment of the generics legislation. Even laypersons are aware of the new law and are appreciative of it. Yet, if one asks further questions, one learns that the public really has no idea about how the legislation will save any money for themselves and their families, or for the State.

REACTIONS RE: LOGDAMS TERMS OF REFERENCE

The DOH Study of the Logistics of Drugs and Medical Supplies states six objectives on pages 2 and 3. Items: 1, 2, and 4 do not require comment. However, item number 3 deserves some attention.To review the efficacy of decentralized purchasing, one must consider a true test in the form of a case study or properly controlled demonstration. Moreover, such a demonstration must include all of the various schemes used in the different rural areas. These results should be compared to the results achieved via centralized procurement. This topic will be addressed in the last section of this report.

Objective number 5 is somewhat perplexing as we have discovered that the practice of selling drugs through government-run out lets already exists. While this practice differs in character and scope in diverse geographic areas within the country, it does exist. One additional point should be raised at this juncture, and that is the creation of a real dilemma. One of the key and principal parties needed for all of this to function efficiently is the pharmacist, and I would imagine that a strategy to court the support of the pharmacist might be far more successful than threatening them with mention of this possibility of competing with the privately owned drugstores.

Item 6 follows from the previous remarks surrounding objective number 5. The desired complementation and synergy can most successfully arise from a sharing of common goals and not from an adversarial relationship between the DOH and practitioners. Number 6 is crucial for the overall success of these endeavors as it would seem that private outlets, government installations, donated drugs and other for profit and not for profit institutions and organizations must peacefully co-exist for the forseeable future.

The three phases described on pages3-5 seem logical and reasonable, at this time.

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With regard to the Scope of Work, on pages 5 - 7, it might prove beneficial to study how similar problems or concerns have been dealt with in comparable nations. Even some considerably less developed countries, of urgent necessity, have made progress along interesting and creative avenues with regard to the accessability of inexpensive and efficacious drugs even in the most remote venues. The generics programs in India, Bangladesh are suggested. The manufacturing of generics in Egypt, Indonesia are recommened for further study as well as the practitioner education programs (for essential drugs) in the Sudan, Nigeria and the Gambia. The coordination between the public and private sectors as examples of what to do and what not to do may be gained from a study of policies in Jordan, Ghana, and Bolivia.

What remains unsaid throughout all of the documents, reports, laws and studies are the rank-ordered priorities of the Department of Health (DOH) of the Republic of the Philippines. To be specific, many trade-offs are possible and decisions cannot be accurately made unless everyone knows the same goals. For example, the policies appear to favor domestic suppliers. This is normal, logical and encountered everywhere. But, up to what price disadvantage should this policy be encouraged? Should the country spend 5%, 10% or 20% more for a local source and for how long a period should the local industry be sheltered? What is the overall goal of the DOH regarding commercial drugstores? If they are seen as an asset to the society, they require protection, and on the other hand, if they are seen as expendable and redundant, then this should be known. There is, in a parallel vein, the legitimate question of tilting contracts to local producers, and not just to local importers. This can be accomplished openly and above-board by stating in the bid documents the number of points to be added or subtracted to bids based upon questions such as: whether production is local, the number of facilities and/or employees there are of the manufacturer in the Philippines, etc., etc.

Is it a higher priority to establish an integrated hospital system, or to strengthen the rural health units, to train regional personnel for greater autonomy? Many such questions can and should be answered before a drug procurement, logistics and distribution system is set in concrete in the near future.

Overall, I have some concerns. They are as follows. In a typical experiment, the investigator holds everything constant and introduces one single change in an effort to see what the ultimate impact of that change would be. With the changes along several domains mandated by the Generic Act and the implementation of components of the new National Drug Policy, coupled with other educational and technological changes, it will be extremely difficult to be able to figure out who or what caused what.

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STUDY OF DISPENSING AT PHARMACY LEVEL

Several items are in need of exploration in a full-fledged dispensing study. The first phase involves interviews with a small sample of pharmacy owners and managers. From such conversations, it should be possible to construct a questionnaire that would be distributed to pharmacists. The means of distribution might most conviently be via continuing education gatherings, or at Pharmaceutical Association major meetings. The basic items that would be included in such a survey include the following:

- The number of written prescriptions from physicians received per day
- The number of requests for prescription medications
- The numbers of the above 2 items requested in generic terminology
- The number of patients seen per day who ask for medical advice
- The number of patients per week who do not purchase drugs due to price
- The number of customers per week who ask for a cheaper brand or source
- Where the pharmacist obtains information, such as journals, lectures, etc.
- What reference books are available for use in the pharmacy
- How the pharmacist selects the brands sold in the shop
- What type of training/instructions given to sales clerks at the counter
- What is the procedure when a problem is identified re: dose or strength

Other items for the questionnaire will become visible following the subsample interviews done at the beginning of the first phase. From observation, and conversations next with the drugstore inspectors, as well as from meetings with representatives of consumer groups, a tabulation should be constructed to see what areas are are underserved or unserved in the commercial drugstores. The question of service refers to medical problems. For instance, are there areas where drugstores do not carry in stock/sell products or devices, such as supplies for babies, ostomy products, contraceptives,oral rehydration therapy, bandages, etc.

A similar, but modified survey should be constructed for the other types of drug outlets. In particular, these should, at a minimum include hospital pharmacies, rural health units, clinics, etc.

The last component of this first phase is to solicit attitudes and opinions of patients. This should be accomplished across all geographic regions and across all social class strata. It is important to permit open-ended replies after the structured questions are answered, to enable respondents to express themselves in their own words. Often, valuable insights arise from this step. The consumers are to be asked about their ability to afford needed drugs, whether generics are ever suggested, whether they ever price drugs are different pharmacies, whether the hours of business of the commercial or hospital pharmacy they patronize are adequate, whether the pharmacist or whomever serves them is able to answer their questions, and whether they would think of asking a medicine or health-related question at the pharmacy. We also need to learn what type of pharmacy they shop in, their sociodemographics; i.e.: gender, age, occupation, income level, area of residence as urban, suburban or rural, when they last visited a physician or dentist. In essence, the consumer questions should parallel the pharmacist questions as an added means of testing validity of the replies.

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It might be useful, but certainly not essential to administer the survey to a sample of physicians and also to DOH personnel in order to see to what extent any consensus exists regarding the current role of the pharmacist and different types of pharmacy outlets.

The second phase of the study is to screen the international literature regarding the provision of pharmaceutical services and drugs around the world. This theme is briefly addressed on pages five and six of this report. One would endeavor to collect information and experiences accessable through the conventional achival literature and through the common electronic databases. But, in addition, it would probably prove prudent to request documentation on this topic from U.S.A.I.D., the W. H. O., and perhaps other organizations that just might have experience in this field. Naturally, this phase may be conducted simultaneously with the first phase.

The third phase involves an in-depth study and analysis of the various configurations through drugs and pharmaceutical services are provided in the Philippines. This phase should exclude no region, district or province. We might look forward to learning about interesting, creative and imaginative operations. All of these may not be in 100% compliance with the myriad of regulations outstanding, but that should be overlooked for the purposes of this study. In fact, complete openness of drug outlets will require some immunity and the promise of anonymous treatment of the information provided.

The fourth phase involves a financial evaluation of the different service and organization configurations as learned from the preceding phases two and three. In this review, the emphasis is on financial management. Essentially, the most salient question is what type of organizational arrangement is able to provide drugs with the least amount of capital tied up in inventory, with the minimum number of stock outage situations and with the minimum amount/quantity of drugs that reached their expiration dates without being dispensed. When relative scores are computed, given agreement of the weightings for each of these parameters, these leading organizational type candidates need then to be correlated with the level of satisfaction ratings generated in the first few phases of this dispensing study.

The fifth and final phase is to attempt to replicate the features of the ideal type of outlet to determine whether the correct variables were identified and then to further experiment in an effort to create the most ideal format for the ordering and dispensing of drugs that is as compatible with all of the images of the key relevant parties, for a plan for dispensing that fits optimally into the National Drug Policy and of the goals and objectives of the overall Philippine health care delivery system.

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