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TUBERCULOSIS INITIATIVES FOR THE PRIVATE SECTOR
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Single-Practice Model Development

Reports and Recommendations

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ABBREVIATIONS

AFB	Acid Fast Bacilli (for sputum microscopy)
C-B	Community-based
DOH	Department of Health (Philippines)
DOTS	Directly Observed Treatment, Short-course
GP	General Practitioner
MDRTB	Multiple Drug Resistant Tuberculosis
NGO	Non-governmental Organization
NTP	National Tuberculosis Program
NTRL	National TB Reference Laboratory
PCCP	Philippine College of Chest Physicians
PhilCAT	Philippines Coalition against Tuberculosis
PhilHealth	National Health Insurance
PhilTIPS	Tuberculosis Initiatives for the Private Sector (Philippines)
PPM	Public-Private Mix
QA	Quality Assurance
RHU	Rural Health Unit (Government Health Center)
SPP	Single-Practice Physician
TB	Tuberculosis
VDC	Virtual DOTS Center
WHO	World Health Organization

SINGLE PRACTICE MODEL DEVELOPMENT

Final Report and Recommendations

I. BACKGROUND

According to the Philippines Department of Health (DOH), tuberculosis kills an average of 75 Filipinos every day. The World Health Organization (WHO) ranks the Philippines eighth in the world in estimated incidence of tuberculosis (TB), which in 2002 stood at roughly 330 per 100,000 people. This may even be an underestimate, due to the fact that many persons do not seek medical attention for their illness, for fear of the unique stigma with which TB sufferers have historically been branded. In both economic and social terms, tuberculosis represents a major obstacle which must be overcome if Philippine national development is to fully flourish.

The DOH's National Tuberculosis Program (NTP) has responded vigorously to this challenge, in recent years achieving impressive results in cure rates for patients treated in public health facilities. Private health services, however, which deliver a major portion of the country's health care, has lagged behind. While in recent years the public sector has achieved a success rate of close to 90% in curing TB in its patients, the corresponding rate for the private sector is no more than 50%. Clearly, an essential element in reducing the burden of TB in the Philippines is more effective involvement of the private sector as a partner of Government in curing and preventing the disease.

The Tuberculosis Initiatives for the Private Sector (PhilTIPS) project of Chemonics International, funded under a USAID contract, contributes in numerous ways to this effort. Its core business is developing approaches to private sector delivery of Directly Observed Treatment, Short-course, or DOTS, designated by the WHO as the most effective treatment regimen for TB and adopted as treatment policy by the DOH. PhilTIPS is doing this by developing private "DOTS Centers", supporting hospital-based delivery of DOTS services, testing NGO, pharmaceutical and workplace DOTS models, and other initiatives.

In January, 2004, PhilTIPS asked a team of consultants to explore approaches to more effective involvement of private, single-practice physicians in incorporating the DOTS regimen into their routine treatment of TB. In the Philippines a high percentage of people, even those of modest means, seek health care from private practitioners. Of these, the largest percentage is represented by "single-practice physicians" or SPPs. Perhaps more than any other initiative, expanding participation of these providers in use of DOTS will substantially increase the private sector's share of successful TB treatment in the Philippines.

II. OBJECTIVES OF THIS ASSIGNMENT

For purposes of this analysis, "single-practice physicians" are defined as those with individual, private practices in Philippine cities, towns and rural areas. Numbering, by various estimates, between 12,000 and 15,000 nationwide, SPPs are typically trained as general practitioners or family physicians, although a small percentage may have additional specialty training. A few may also have hospital-based practices, but this assignment focused on the services provided from their private, single practitioner, community-based clinics.

SPPs have, in general, been slow to adopt the DOTS regimen. Some, generally the more veteran providers, simply can't be bothered. Others are willing but unfamiliar with the component parts and rationale for DOTS. To better understand the reasons for this, and why these doctors are not more vigorous advocates of DOTS, the single-practice model development team was asked to conduct a rapid appraisal of SPPs in various areas of the country. It's purpose was to look at their TB caseloads, their approach to diagnosis and treatment, and their access to relevant information and services. Based on appraisal findings, the team was then asked to recommend a model or models, to be tested by PhilTIPS, whereby SPPs could be brought vigorously into the DOTS mainstream, depended on to implement the regimen that is the surest cure for tuberculosis.

III. APPRAISAL OF SINGLE PRACTICE TB TREATMENT STRATEGIES

III.A. Approach

The team was first briefed by PhilTIPS staff on the range of their private sector activities, and the large niche that the program sought to fill through this exercise. In the course of the assignment the team also reviewed numerous research and program reports and other documents. (See **Appendix B,** Bibliography.)

The team's rapid appraisal of current TB treatment strategies was conducted among single-practice physicians in several parts of the Philippines. Its goal was to determine:

- patterns of treatment practice among SPPs, their networks and referral systems;
- levels of knowledge and appreciation of the relative efficacy of different TB treatment protocols;
- awareness on the part of SPPs about the DOTS regimen, and willingness to apply it;
- past participation in DOTS orientation and training programs;

- nature and quality of interactions of private and public sector providers and services;
- effective approaches, from observation and solicitation of suggestions, to engaging SPPs more comprehensively in the DOTS strategy.

The team divided itself into three sub-teams of two members each for this phase of its work, so as to enable it to reach out to as wide a cross-section of providers as possible. It also developed a discussion guide to help team members structure their interviews.

III.B. Site Selection and Coverage

Contacts for interviews were made in a randomly selected group of cities and towns of varying sizes, including Angeles, Bacolod, Bacoor, Cagayan de Oro, Cavite, Cebu, Lucena, Metro Manila, Quezon City and Tayabas. In all, the team spoke with roughly 50 physicians, largely GPs and family physicians, but also a handful of specialists in internal medicine, pulmonology and infectious disease. The list of physicians interviewed, along with other contacts made in the course of this assignment, appears as **Appendix A**.

While most of the contacts for the rapid appraisal consisted of individual interviews with single-practice physicians who manage their own community-based private practices, interviews were also held with doctors operating from private hospital settings. Contact was also made with public sector providers, including visits to public health centers, so as to gain insight into the referral environment between SPPs and public-sector TB services. A group of five practitioners was interviewed in a focus group format (in Angeles), and a focus group was also conducted with officers of the Philippines College of Chest Physicians. Early on, the full team also visited the private DOTS Center at the De La Salle University Medical Center in Cavite.

III.C. SPP Profile

Private clinics of SPPs interviewed typically consisted of a waiting area (either within the premises or partially on the street), modest space for the physician's secretary, and a small consulting/examination room. Few had in-house laboratory services, but all reported access to microscopy and x-ray facilities in the local area. About 20% of the doctors dispensed a modest selection of drugs.

Few respondents interviewed could spontaneously report accurate caseloads. Approximate patient loads reported by SPPs varied anywhere from 10 to 50 per day, with TB patients constituting between 5% and 25% of the total, primarily at the lower end. A typical response was that they saw "3-5 new cases per month".

SPPs described their clientele as falling mostly in middle to low-middle income groups, commonly segmented by physicians as those with and without adequate

financial means to cover TB therapy. Clinic consultation fees varied widely – from P100 to P300 – with most physicians claiming that their fees were flexible, depending on ability to pay. Almost all patients were "walk-in", or self-referred.

III.D. Findings

Detailed findings of the single practice team's rapid appraisal are contained in the team's report to PhilTIPS on Phase I of this assignment, dated January 28, 2004. In general, it found that SPPs have been slow to adopt the DOTS regimen, tending instead to treat suspected TB patients more traditionally, with visual examination and chest x-ray, and limited use of sputum testing. They have usually heard of DOTS, in the sense of the protocols employed in public health centers, but often not the term explicitly, and are usually not familiar with its component parts and rationale. Further, some see health center protocols as too stringent, designed to reduce the number of patients accepted.

Some SPPs, mostly longtime GPs, appear to be relatively set in their ways, and are unlikely ever to become DOTS users and advocates. They do not see the regimen as a useful diagnostic and treatment tool within the private sector environment, where all services must be paid for and be affordable. A majority is interested, however. They know DOTS is the best way to treat TB, as evidenced in part by the fact that they do refer patients to the health center. But the link is so far not a strong one, for several reasons:

- Some patients refuse to go to the public clinic, where they fear suffering the stigma that they feel is attached to "going public" with tuberculosis.
- Patients who do accept referral to the health center, and who test AFB-negative, are rejected for free drugs, which is de-motivating.
- Patients often feel that public sector drugs and services are inferior, and return to their SPP for treatment.
- SPPs usually don't themselves have sputum testing capacity, access to free or low-cost drugs, nor experience organizing treatment partners, all essential components of the DOTS regimen.
- SPPs have neither time nor inclination to do essential record keeping and case reporting.

When patients return to them, unhappy with services elsewhere, even SPPs willing to do DOTS tend to fall back on traditional assessments (visual diagnosis, chest x-ray, less-than-full AFB series), often leading to inadequate prescriptive practices and complications, such as multiple drug resistant TB (MDRTB).

In short, notwithstanding the availability of relatively effective DOTS services in public health centers, an important cohort of patients is not accessing DOTS treatment via their physicians. Yet despite these obstacles, the team's overarching conclusion is that:

Single practice physicians occupy a critical niche in the services arrayed against TB. With rare exceptions they cannot, individually, implement a full DOTS regimen, but many would willingly become DOTS providers if necessary support systems were available. This would greatly enhance the private sector's overall contribution to national TB cure and detection rates.

The team found that, with very few exceptions, SPPs are not in a position to establish their own "DOTS Centers", that is, to themselves provide the full DOTS regimen for their TB patients. Many would, however, willingly join and effectively utilize the resources and services that could be made available through a community-based DOTS support entity, if one could be established to meet the particular requirements of them and their community.

IV. COMMUNITY ORIENTED "VIRTUAL DOTS CENTER"

IV.A. Introduction of the Model

In view of its findings, the single practice model development team recommends adoption of a community oriented, purely private sector approach to stimulating SPP participation in promotion and use of DOTS. The "Virtual DOTS Center" model is so named because, rather than being a service located in one building, as with traditional DOTS Centers, it will instead consist of a network of services and resources available in a community, made accessible in a coordinated fashion. These will be managed and coordinated through a designated manager/coordinator, who may be appointed from within the network or be an external volunteer.

The Virtual DOTS Center model constitutes a single basic approach, to be adjusted according to the specific characteristics of the communities in which it is applied. It is designed to flexibly respond to expanding patient choice of service depending on preference and ability to pay. It provides a structure through which to identify and ensure SPP access to the resources and services in a given community needed to fulfill the various elements of the DOTS regimen. Properly managed, this entity should be able to obtain accreditation normally provided to single site facilities as an integrated DOTS service, eligible to receive free drugs. While seeking such accreditation, it would from the outset provide technical and coordinative support to participating SPPs by ensuring:

- identification and certification of microscopy facilities;
- identification, training and management of treatment partner networks;
- exploration of opportunities for guaranteeing drug supply;
- establishment of Diagnostic Committees to review AFB neg. test results;
- coordination of reporting and recording of DOTS cases.

Successful launching of this model will place a premium on skills in community organization and outreach, which PhilTIPS is encouraged to add to its staff as it prepares to test the model.

The objective of the establishment of a Virtual DOTS Center is to ensure that patients of all SPPs in a particular community are correctly diagnosed and treated through DOTS, while remaining under the care of their private doctor. Secondarily, it is to provide patients with an alternative source of DOTS service, even if they might otherwise be willing to be referred to a Health Center or private DOTS Center (if available). The wider the range of services or products available, the greater the prospects for compliance and, ultimately, reduction in the TB caseload. Some measure of relief to free public sector provision may also be achieved. The implementation objective of the program is to test a range of community-based options for provision of DOTS services to patients of SPPs.

IV.A.1. Essential elements of a Virtual DOTS Center Model

To accomplish its objectives, the Virtual DOTS Center must ensure the following:

i. Identification of SPPs willing to participate and their orientation, training and certification. Commitment on the part of SPPs to ensuring all patients are treated according to the DOTS regimen, across all socio-economic groups, with allowance for sources of service and ability to pay;

ii. Identification of private-sector laboratories willing to provide quality, reasonably priced sputum (AFB) testing, supporting their training and ‘certification’, and ensuring, if possible, the choice to access public services for testing alone for those who cannot afford to pay;

iii. Choice of drug sourcing and pricing according to quality, patient preference and willingness to pay -- ideally including free drugs, low-cost generic drugs, and full-price, branded drugs through prescription;

iv. A reliable community-based group or groups able to provide a treatment partner for each patient, network oversight of treatment partners, tracking of ‘drop-out’ cases, and recording and reporting (to the NTP) of TB cases under observation, all within their present community-based activities.

v. A reliable mechanism whereby SPPs can refer to a Diagnostic Committee to ensure AFB-negative patients are correctly accepted or rejected for DOTS treatment.

vi. Effective oversight and reporting of patient compliance and history to cure.

vii. Provision of DOTS center logo and signage to all participating elements, promotion of the service, and provision of print materials as 'reminders' to take medication and keep follow-up appointments with practitioner.

viii. Assurance of collaboration, coordination, quality assurance (QA) and monitoring provided by the Virtual DOTS Center for all of its elements, and management to levels of sustainability.

PhilTIPS will need to identify and test community groups as to their capacity to be the focal point of the Virtual DOTS Center, supplying quality DOTS services, as listed above, within the context of the services they already offer. Cost of services, management experience, sustainability and replicability will be key elements for analysis across all trial sites.

IV.A.2. Model Variances

Within the core "virtual" model there will be a range of variances to be tested for practicality and cost effectiveness. The strategy assumes that these cannot be predetermined, but will evolve through the process of understanding and working within the unique characteristics of communities chosen for trial programming. Variances will include:

i. *Patient load and number of SPPs able to participate in any one Virtual DOTS Center*. At the outset, it is assumed that a "manageable" network would generate 250 DOTS patients per annum. On this basis, community-based activities would involve direct contact with 23 patients per day (see section VI for details). This would be a reasonable level of effort for the average community-based organization within a typical metropolitan area. For analysis purposes it is assumed that a network of 10 SPPs, with promotional support, could generate this volume of DOTS patients. Variances will exist between different metropolitan areas, resulting in smaller or larger networks and / or the establishment of more than one network in larger municipalities.

ii. *The willingness of SPPs, as well as laboratories, to pay for certification and a 'franchise' fee based on a percentage of their increased income.* This can only be elucidated in the course of the set-up and 'road show' activities that will precede implementation (see below). It is possible that SPPs will agree to this strategy in some sites but not in others. Where none agree, this concept will have been shown to be unfeasible.

iii. *The willingness and capacity of community-based organizations to manage the distribution of drugs, either free or at a cost.* Along with the practicalities of charging for community-based services, this can only be determined through discussions with those organizations willing and able to participate at each site.

iv. *The availability of free drugs*. The manner in which "networks" are established and legal entities involved may, or may not, permit access to free drugs for distribution through the community-based organization managing the VDC. If free public sector provision is approved across all sites it is suggested that one or more sites test a purely private sector approach that offers very low-priced drugs only, as outlined below. The impact of offering free drugs (or a choice of free and low-priced drugs) could then be analyzed against sites offering only low-priced drugs.

v. *Carefully designed and monitored market segmentation strategies* that offer a range of services and costs to consumers according to their preferences and ability to pay. SPPs will, no doubt, continue to refer patients constrained by cost to Health Centers. Some of those will return to the SPP for reasons described elsewhere, others will not. Patients in higher-income groups may refuse to be referred, preferring treatment only from their physician. The extent to which these patients are properly DOTS patients will need to be carefully evaluated. All of the different preferences and variables will need to be built in to program planning, along with evaluation of lessons learned.

vi. *Added benefit of the VDC within municipalities with an existing private DOTS Center* as against testing the concept in sites that may have a private DOTS site in the future (well after the Virtual DOTS Network is established) or may never have access to a private DOTS Center.

The most compelling variables for trial and comparison are:

- Whether the program is operated within an area serviced by a fixed, private DOTS Center or not.

- Whether free drugs are to be supplied, drugs are to be paid for, or a choice of either.

- Whether the virtual center takes the form of a "fractional franchise", with SPPs contributing a percentage of consultation fees to promote and sustain it, or whether it is developed, and sustained, as a more informal 'network'. (See Section V.)

In order to give a reasonable opportunity for the variances described above to be tested, 4-5 trial sites for Virtual DOTS Centers should be considered at the outset. The number of test sites would also be a matter of budgetary, staffing and management consideration within PhilTIPS.

IV.A.3. Process for Setting Up a Virtual DOTS Center

As an indicator to PhilTIPS of possible level of effort required, the following process is suggested for establishing Virtual DOTS Centers within municipal areas selected for testing:

i. Survey of interest and resources in proposed location, to gather information such as:

- Willingness of SPPs in area to support, and draw on, a Virtual DOTS Center. It is suggested that a minimum of 10 SPPs would constitute the "critical mass" necessary to consider launching a center;

- Interest of other medical professionals engaged in TB practice in both the public and private sectors;

- Potential for support from other supporters and TB 'activists';

- Existence of community-based groups - NGOs, faith-based groups, civic organizations, etc. – that could serve as manager/coordinator;

- Willingness of local Medical Societies and other relevant professional associations and organizations to lend moral or practical support to the Virtual DOTS Center concept;

As a first step in facilitating this survey and promoting the concept, mailing lists of SPPs, NGOs, associations, community groups, commercial firms and laboratories in the municipality and surrounding catchment area should be obtained. This will facilitate personal contacts and mailings describing the Virtual DOTS Center initiative and announcing its formal introduction at a forthcoming "Road Show". The promotional effort will be led by the new PhilTIPS Communications office.

ii. Virtual DOTS Center "Road Show"

The road show format will borrow from that already used to considerable success by PhilTIPS in promoting other private sector TB/DOTS initiatives. It will be more inclusive than other road shows, in that it will bring together a wide range of potential Virtual DOTS Center participants and users, those identified from preliminary site visits and those responding to mailings. The road show will NOT serve as a training vehicle, but rather be a program design mission. The broad outline of a road show will be as follows (see **Appendix C** for further details):

- Presentation of the components and importance of the DOTS regimen as the only certain cure for tuberculosis.

- Explanation that the purpose of the meeting is to establish a DOTS service and network for the use of SPPs in serving their TB patients, including rationale for and objectives of the Virtual DOTS Center.

- Exploration of the most feasible ways that the center might be established, by the range of component elements required, in that particular municipality.

- Begin to sketch out size and scope of the network to be coordinated by the Virtual DOTS Center, the resources available and their functions.

- Clarify the in-puts to be provided by PhilTIPS and expected from participants: level of effort, overall management, sustainability, costs and budgets.

- Clarify potential interest in participation by respective road show participants.

- Entertain proposals/applications for entity (NGO, community group, faith-based organization) or individual (SPP, retired physician, other community volunteer) to serve as manager/coordinator of the Virtual DOTS Center.

iii. Subsequent Preparatory Activities

Management assesses results of Road Show, holds one-on-one meetings with interested parties, and works to establish a consortium willing to support the Virtual DOTS Center. Hopefully makes final selection of entity to serve as manager/coordinator. Assuming that all elements are in place, calls first implementation meeting, co-chaired by PhilTIPS and manager/coordinator. This meeting will be followed by additional meetings until ready to launch the center.

iv. Launch

The Virtual DOTS Center will be launched with a significant ‘event’ involving political and other important community and religious leaders, with media coverage assured in advance. Press advertisements and radio spots broadcast to attract potential TB patients. Regular press releases distributed. Network logo and signs erected at SPP clinics, laboratory and participating community-group sites. Orientation/training completed of SPPs, staffs of laboratories selected for sputum testing, and community-based treatment partners. Patient monitoring and reporting systems established. Drug requirements procured and in place for distribution.

v. Monitoring

PhilTIPS management remains in the field to ensure all is working smoothly and to help resolve problems. Monitors the program after one more month and at

least every three months after launch. Interim evaluation after six months of operations. Monitoring and evaluation exercises will include:

1. Assessing the extent to which patient loads have been met; # of patients referred to health centers who do and do not return for SPP consultation; # of patients being followed by Virtual DOTS Center treatment partners.

2. Discussing with SPPs their level of appreciation of this initiative, any cases not referred to either the Health Center or Virtual DOTS Center, and whether they can be regarded as DOTS patients. If a yearly fee was agreed on, discussing whether SPPs still agree with it, and otherwise reviewing sustainability issues and options for sponsorships or other income.

3. Assessing shifts in patient referrals to Virtual DOTS Center from a pre-program baseline. Reviewing causes of patient drop-outs. Where free drugs only are given, determine acceptability. Where low-priced drugs are given, assess affordability. Where both are given, assess the socio-economic characteristics of those who chose one or the other and why. If one or other has no (or few) takers, amend appropriately. Determine whether fees are acceptable, and amend accordingly.

4. Reviewing patient records, ensuring adequately and properly kept. Explore actions where patients drop out, and whether reported to authorities.

5. Reviewing with the community-based Virtual DOTS Center management group (or groups) their experience to date, costs and income, and determination if they are willing and able to continue. Explore solutions if not.

6. Evaluating efforts to obtain sponsorship funding, levels and prospects for continuation and expansion.

7. Assessing the management of the Virtual DOTS Center with the appointed management group. Rectify any difficulties. Explore sustainability issues for the future six months, and sustainability when program support will cease.

It is assumed that costs for the above will be born by PhilTIPS, including on-going costs of monitoring and evaluation and, if applicable, deferred franchise fees for an interim period. There may also be modest continued support for management costs governing a first “revolving stock” of low-priced drugs.

IV.B. Establishing Virtual DOTS Center Microscopy Capacity

IV.B.1. Orientation to Importance of Sputum Microscopy for DOTS

In its rapid appraisal, the single-practice model development team discovered that SPPs, unlike their public sector counterparts, are not convinced of the

rationale for utilizing sputum microscopy in diagnosing TB cases and assessing cure. Although the commitment of the DOH and the NTP to sputum microscopy as the essential diagnostic tool within the DOTS regimen is well known, it has not yet “infected” SPPs on a large scale. Many simply do not accept its reliability, as compared to the traditional use of chest x-ray, because of what they see as a preponderance of negative results. Also, sputum AFB smears are expensive. In private laboratories, tests range from P60 to 150 per smear, or P180 to 450 for the usual course of three smears for diagnosis, more costly than a chest x-ray.

SPPs who agree to participate in the Virtual DOTS Center must, through the “road show” and subsequent follow-up, be given full orientation in the use of sputum microscopy as the definitive TB diagnostic tool in the DOTS regimen, with x-ray as back-up, rather than vice versa. Coordinating this orientation and its follow-up will be a key responsibility of the Center’s management entity.

IV.B.2. Identification and Training of Microscopists

Private laboratories in focus communities that are willing, as part of the Virtual DOTS Center, to provide quality, reasonably priced sputum (AFB) testing, after appropriate training and ‘certification’, must be identified. Ideally, representatives should be invited to the first road show, so as to be made aware of the Virtual DOTS Center from the outset. A local network of “licensed” laboratories should be promoted, so that SPPs know where to send smears for testing and be assured of quality service.

Training of microscopists has to date been centralized in Manila, much of it funded through foreign donors. The cost of training at the National TB Reference Laboratory (NTRL) has ranged from P1,900 to P3,000 per head. It is to be hoped that, as part of operationalizing the community-based Virtual DOTS Center model, PhilTIPS will be able to spur decentralization of training and licensing capacity across the country. As more microscopists are trained, the number of laboratories capable of performing sputum microscopy multiplies, and the more accessible the service becomes. Such a trend will benefit the establishment of DOTS centers, virtual and otherwise.

IV.B.3. Costing

As noted, the rapid appraisal interviews determined that sputum AFB tests in private facilities cost the patient from P60 to P150 per smear. Following the law of supply and demand, if the demand for sputum AFB as a routine test increases, the cost of the procedure should decrease, since there is an assured market for the procedure, one that will expand with the greater involvement of SPPs in DOTS treatment of TB.

This is not to say that the cost of smear tests could not be reduced even now, at least for those with limited capacity to pay. An international NGO, the Committee

of German Doctors, charges only P19 per smear test in its DOTS clinics, mostly in Metro Manila. The De La Salle Hospital private DOTS Center charges P48. Clearly there is room for the Virtual DOTS Center to test a price structure that responds to patients' limitations while not losing money for the laboratory.

Costs of equipping a laboratory to add sputum microscopy to its services will vary. Some labs may need renovations or new equipment, others may need relatively little upgrading. In larger communities, sputum collection sites away from the laboratory itself will need to be established according to DOTS standards, as will specimen pick-up services. A very rough estimate of the cost of preparing a laboratory to be part of the Virtual DOTS Center would be in the P6,000 to P8,000 range, plus (if needed) the cost of a microscope.

As discussed in section V.A., the willingness of SPPs, as well as laboratories, to pay for certification and a 'franchise' fee based on a percentage of their increased income will have implications for long term sustainability of the VDC.

IV.C. Drug Availability and Costing

A review of the TB drug market indicates that an adequate stock of TB drugs appears to be available to supply both free public service (supported by 3-year Global Fund commitments) and within the commercial pharmacy market.

Commercial-sector branded drugs are within the range of P40 – P50 per daily dose, with generic drugs retailing at about P25 per dose. The majority of SPPs interviewed by the single practice model development team seemed to prefer prescription of branded drugs, even though they reported that drug prices are a significant impediment to private-sector provision of TB services. It may be inferred from this that there are quality constraints impeding take-up of generic drugs, and/or they are not so readily available everywhere in the market.

Anecdotal reports indicate the commercial market for TB dugs has grown only sluggishly, with the increase in public sector provision being the principle cause. As a result, manufacturers and distributors are uncertain as to the size of the future market, while finding the market highly competitive. This has led at least one manufacturer (United Laboratories) to plan a non-generic, quad-pack brand to be introduced at just under the generic price of P25.

The review noted that the Committee of German Doctors for Developing Countries TB project is procuring drugs at about P5 per day, unpacked, from Biogenerics Philippines. This manufacturer reported that they could supply Rifampicin, Isoniazid, Pyrazimamide and Ethamutol at this price for orders of one million units (about 5,500/patient requirement). However, it is assumed that for trial programming purposes they would supply a lesser amount.

For notional planning purposes the review assumes low-cost drugs could be arranged at a price of P10, including some reserves for packing into daily dose amounts and a small incentive profit. During project implementation, other sourcing and pricing options may be explored.

DOH policy allows for some donation of free public sector drugs to private sector distribution, for example through DOTS Centers. The primary obligations for access are that the center is operating within a legal entity, has an in-house pharmacist and is implementing DOTS strategy. It is not clear that a "virtual" DOTS network, where the DOTS elements are distributed across many players, would qualify for free drugs. However, approval may be obtained if an NGO responsible for Virtual DOTS Center management and coordination can demonstrate it has its own clinics, i.e., those of its member SPPs, and is supported in its application by PhilTIPS and PhilCAT. Other scenarios will need to be explored within the respective network environments of each site.

IV.D. Establishing and Managing Treatment Partner Networks

IV.D.1 Sources of Treatment Partners

Central to the successful functioning of the Virtual DOTS Center will be the identification of a reliable community-based group or groups able to provide a treatment partner for each patient, network oversight of treatment partners, tracking of 'drop-out' cases, and recording and reporting of TB cases under observation, all within its other community-based activities. Requirements for a dependable treatment partner are simple:

- Training on DOTS regimen
- Dedication and willingness to serve
- Reports to Virtual DOTS Center manager

One of the reasons that single-practice physicians have not more fully embraced DOTS is their lack of access to treatment partner networks. Their tendency has been to give their secretaries responsibility for follow-up, or, in a few instances, do it themselves. This of course means that their patients are more or less left to themselves to follow their drug regimens, with uneven results, to say the least.

Treatment partners for TB DOTS patients come from many sources. Public sector DOTS programs depend primarily on barangay health volunteers, who often receive a modest stipend as incentive for their efforts. Some NGOs depend largely on family members as treatment partners (Friendly Care). Others consciously avoid family members, whom they consider unreliable, instead recruiting friends, workplace companions, or former TB patients. Treatment partners may not be compensated, but the programs for which they work arrange to give them travel allowances, gifts, or other modest inducements.

IV.D.2. Selection and Training

Training of treatment partners is equally varied, lasting anywhere from one hour to 2-3 days. The important thing is that they be fully briefed on the importance of their role in ensuring that patients on the DOTS regimen are rigorous in taking their medication every day, without fail. The other important element of treatment partner training is on the proper use and completion of treatment cards.

The introductory road show will be a first, important opportunity to make contact with community-based organizations that might be able to field treatment partner volunteers. Conceivably, one of these might also be the organization that accepts the role of manager/coordinator of the Virtual DOTS Center for that community. PhilTIPS will work with the manager and participating partners to identify appropriate sources of treatment partners, and design training to equip them to monitor the TB DOTS patients of participating SPPs.

IV.D.3. Cost Issues

Although a low-cost element of the DOTS regimen, there are some expenses associated with setting up and managing a treatment partner network, depending on the type of partner recruited. Estimates below are for different types of partners, based on assumption of 27 "direct observation" home visits per patient:

- *Family member or close friend*. Requires training by Virtual DOTS Center (P100 for materials and food) and a token gift (P100). Little or no transportation expense. Total cost for direct observation of one DOTS patient over 6 months course: P200

- *Barangay health volunteer*. Already trained. Requires transportation allowance (P300) and token gift (P100). Total cost over 6 months: P400

- *NGO worker*. Requires training by Virtual DOTS Center (P100 for materials and food), transportation allowance (P300) and token gift (P100). Total cost over 6 months: P500

If one assumes that the same entity that fields treatment partners will also undertake patient monitoring and reporting protocols, some training and related costs for this element would also need to be included in budgeting.

IV.E. Establishing Diagnostic Committees

IV.E.1 Present Status

The function of the Diagnostic Committee is to evaluate sputum smear negative patients who are suspected of having TB, the objective being to identify active smear negative patients. Such committees currently exist only in some public

sector centers, and are composed of government doctors and prominent private physicians. The committee usually meets weekly to monthly, depending on case needs, and receives no compensation.

IV.E.2. Recommended Community Model

To fully and responsibly implement DOTS with SPPs, the Diagnostic Committee model should be applied to private sector patients in the Virtual DOTS Center community. Its function and objectives will be the same as in the public sector model. The committee will be comprised of all SPPs associated with the community-based Virtual DOTS Center (minimum of 10). Negative sputum smear patients will be referred to one of the SPPs for a second opinion. If the colleague concurs, the patient will be admitted into the program. Otherwise, a third consult is obtained. The rule of the majority prevails.

The strengths of this model are (1) there is no cost of setting up the Diagnostic Committee, or its functioning; and (2) a decision can be reached more quickly than with the public sector model. There are, however, lingering issues:

- It is not customary for SPPs to refer patients to each other, so this will take adjustment;
- It is unclear whether a patient should pay for second or third opinions;
- A question remains as to what should be done if a patient demands a prescription and outsources the drugs.

IV.F. Recording and Reporting

IV.F.1. Requirements

Meeting recording and reporting requirements is an essential element of the application of the DOTS regimen, to maintain an accurate status report on incidence and outcomes. In a fixed, private DOTS center, the supervisor completes the Master List of TB symptomatics, the treatment card, identification card and TB register. He/she prepares quarterly reports on new and relapsed cases, drug inventory, and the “counting sheet” for treatment outcomes. The microscopist completes the laboratory register, and is responsible for the quarterly report and counting sheet for laboratory activities. Reports are submitted to the DOTS administrator, who in turn submits them to the NTP.

IV.F.2. Issues and Suggested Approach

The rapid appraisal of single-practice physicians showed that they find record-keeping distasteful. They view recording and reporting requirement of the DOTS regimen confusing and time consuming, with no financial benefit. Even though disposed to using DOTS, they are unwilling to undertake this part of the process.

For this reason, and to standardize and centralize recording/reporting for the Virtual DOTS Center, the manager/coordinator will oversee this function. He/she will coordinate with microscopists and treatment partners, and as needed with participating SPPs, to be sure of obtaining required records, and will be responsible for filling out reports for submission to the NTP. Expected expenses not covered elsewhere would include computer software for data tabulation.

V. MANAGEMENT AND FINANCIAL SUSTAINABILITY

This section is designed to present some notional assumptions concerning the financial sustainability of a Virtual DOTS Center, as a guide to PhilTIPS' assessment of potential strategies.

V.A Overall Assumptions

Financial and management sustainability of the community-based Virtual DOTS Center must be built into the project from inception. The donor's objective should be to invest in the establishment of the network until such time as it can sustain itself in terms of on-going operations, increasing patient loads, and replacing drop-out partners.

For budget estimating purposes, a Virtual DOTS Center established within a municipal area is assumed to cover a minimum cohort of 10 trained and certified SPPs, 2 certified laboratories with trained microscopists, and a community-based network providing case management, recording, and treatment partner services. Planning assumes that each Center will be developed as a separate entity, unique to its community, and will be a self-sustainable unit. At this point in time it does not seem feasible to consider a scenario where the cost of developing the network could be recovered from a higher level of income and profitability than that assumed, and that the Virtual DOTS Center could thus be a profitable business venture. However, if operational sustainability can be reached it will present a compelling model of a '"social business" or "social franchise" that should be of significant interest.

V.B. Detailed Assumptions

Current Case Load and Income of SPP

- On average, half of all TB patients are currently seen only once before being referred to a Health Center, and do not return to the SPP.
- Of the other half, some are referred to the Health Center but return for monthly visits, others are not referred and remain a patient of the SPP.
- Of patients retained, each visits the SPP a total of 8 times.
- Total TB patient load retained for regular treatment is about 6 patients at any given time.

- Each SPP has a caseload of 2 TB patient consultations per week or 100 per annum
- Assuming P200 per consultation, each SPP will be earning consultation income for TB of about P20,000 per annum.
- Total physician patient load is assumed at about 60 per week or 3,000 per annum, with total consultation income of about P600,000.

Case load after first full year of DOTS program

- With establishment of Virtual DOTS Center, SPP gains 1 new TB patient per week.
- Of new patients, 25% are referred to the Health Center after only one visit and do not return.
- 25% are referred to the Health Center where they receive treatment but return to the SPP for regular consultation.
- 50% are retained by the physician and provided DOTS treatment through the SPP Virtual DOTS Center.
- Total new patients per annum - 50
- Patients served by the SPP - approximately 38
- Number of patient visits: 38 X 8 = 304, plus about 12 single visits from referred patients. Total est. patient visits: 316
- Total consultation fees = 316 X P200 = P63,200

Based on these assumptions, total additional fees earned as a result of a single-practice physician's participation in a Virtual DOTS Center program would come to: P43,200 per annum . Total increased revenue to the practice would be P643,200 or an increase of about 7%.

SPP referrals to Virtual DOTS Center community services

- Assuming that an average community-based, Virtual DOTS Center network consists of 10 physicians in any one metropolitan area, or part of a metropolitan area, total TB patients referred to it would be 25 per SPP per annum, or 250 per annum for all 10.
- Assuming that each patient was visited, on average, once every two days for the first month, once every week for the second month and once per two-weeks for four months, total treatment partner visits per patient would be 27. Total network visits would be 250 X 27 = 6,750, or about 23 per day in a 300-day year.
- For cost analysis purposes it is assumed that patients who receive free drugs would be willing to pay a token fee of P5 per visit. In addition, those who will pay for a low-cost drug will pay P10 per day for drugs, out of which the community-based distributor would gain income of P2.

New sputum tests required

- Total new patients requiring sputum tests: 250 patients X an average of 6 tests = 1,500.

- Cost (without discounts) assumed at P130 each. Total increased revenue = P195,000.
- If caseload for a Virtual DOTS Center is shared by two laboratories, this would mean an additional income of P97,500 for each laboratory.

V.C. Other Budget and Income Projections

In-puts required for a potentially sustainable network of 10 SPPs and related supporting services (2 laboratories and a community-based network servicing 23 patients per day) would include the following notional estimates of Virtual DOTS Center expenditures and income, per annum, in Pesos. Figures exclude SPP and laboratory income, since that is retained by provider.

SUSTAINING THE PROJECT

	Sub-model A Free drugs. Franchise fees	**Sub-model B Free drugs. No franchise fee**	**Sub-model C Low-priced drugs. Franchise fee**	**Sub-model D Low-priced drugs. No franchise fee**
Expenditure estimates				
Advertising Costs	50,000	50,000	50,000	50,000
Print materials	20,000	20,000	20,000	20,000
C-B worker incentive	36,000	36,000	36,000	36,000
Patient management costs	124,000	124,000	124,000	124,000
General management	67,000	67,000	67,000	67,000
Drug cost & P5 per day			225,000	225,000
Cost of packaging / trans.			135,000	135,000
TOTAL COSTS	**297,000**	**297,000**	**657,000**	**657,000**
Income estimates				
Fee income at comm. level	36,000	36,000	36,000	36,000
10% fee from SPPs	49,200		49,200	
10% fee from lab.	19,500		19,500	
Sale of drugs at P10			450,000	450,000
TOTAL INCOME	**104,700**	**36,000**	**554,700**	**486,000**
Losses to be covered from corporate sponsorship or donation or further inputs from participating entities.	**192,300**	**261,000**	**102,300**	**171,000**

Estimated Annual Income for Network components:

SPP: From Consultancy Fees: P 63,200
Additional income because of project: P 43,200

Laboratory: Additional Fees from project patients: P 81,200

Community-based Virtual DOTS Center:

Fees from patients to cover field-workers:	P 36,000
"Profit" from drug sales (if applicable):	P 90,000
Support to patient management costs:	P124,000
Total:	P250,000

Total expenditure per patient: P 1,000

Once established, and assuming the trial program proves successful, the project will be required to sustain itself from income. It is assumed that the incentives to do so, from additional income of an estimated P43,200 earned by the SPPs (see calculations above), should be sufficient to warrant continued participation by participating SPPs. Similarly, there is little reason to assume that participating laboratories would not continue to supply sputum services, at an income of about P97,500 each earned from the Virtual DOTS Center project. *In both cases, it is assumed that SPPs and laboratories continue to provide DOTS-standard services to all patients.*

V.D. Other Sustainability Issues

Patient Participation: *The willingness of patients to be referred to the Virtual DOTS Center network and pay for the service is crucial*. Estimates of cost to the patient for the full course of treatment is estimated at P2,925 if free drugs are supplied and P4,725 if drugs are supplied at P10 per day. This compares to a range of P200 - P2,400 if a patient is referred to a health center or private DOTS center, and P6,880 – P11,380 if the patient is retained by the SPP and purchases prescription drugs. (Please refer to **Appendix D**.) Issues of affordability will best surface during the trial process.

Treatment Partners. The assumption is that the direct observation of TB patients (the "DO" in DOTS) will be performed by a network of treatment partners who are either volunteers or are paid minimum incentives, with incentive payments built in through a small service fee paid by patients. A small profit may also be assumed where low-cost drugs are sold to patients. Again, implementing agencies will have their own policies in respect to the use made of this income. A small cash contribution is, also, assumed from the program's management to cover management costs in respect to patient monitoring and case reporting.

Virtual DOTS Center Manager/Coordinator. The sustainability of the appointed project manager assumes that this would be a voluntary role. There is a wide range of potential entities, both formal and informal, where this management function may be placed. He or she may be a volunteer SPP or from the community-based agency involved in the project. It may be a formal member of a Medical Association. It may be a retired member of the medical profession or an

individual (such as a member of the Rotary Club) or a volunteer from a sponsoring commercial firm.

PhilHealth Reimbursement. It is unclear whether PhilHealth would accept reimbursement for Virtual DOTS Center patients, as they have agreed to do for private, fixed DOTS centers (providing the service is free). It is also unclear how many patients would agree to PhilHealth reimbursement. On the assumption that 20% of Virtual DOTS Center patient costs could be reimbursed at P4,000 per patient, the income gained for the project would be about P1,275 per patient or P63,750. This would help offset the losses in Sub-models "A" and "B" above (where free drug supply is assumed). If 50% of patients were reimbursable, Sub-model "A" would break even (with franchising fees). Without franchising fees, almost all patients would have to be PhilHealth reimbursable to break even, in cash flow terms.

Sponsorships. Program sustainability is, also, predicated on a level of income from commercial sponsorship or donations. In the 'worst case' model to be tested the assumption is that P261,000, or about $4,600 per annum would be required. However, if SPPs and laboratories are willing to pay 10% of their additional income as a 'franchise fee', this is somewhat reduced. Adding income from PhilHealth reimbursements, if possible, would assist sustainability. Commercial sponsorship may well be obtained from pharmaceutical manufacturers and distributors, whether they are engaged in TB drugs or not. They have a considerable interest in presenting a positive image to the community at large, and are particularly interested in being seen by medical practitioners as engaged in making positive contributions to society. They have a strong interest in getting their name and products in front of medical practitioners and may well see this as a way to do this.

*These issues will only surface completely as a result of the road shows and the level of community support that they generate. Certainly different solutions will surface within the different networks to be established in each municipal area. Significant adjustments may need to be made from these early assumptions, both before the program is launched and as a result of implementation experience. Different 'models' of sustainability will surface at each trial site for evaluation and replication***.**

V.E. Prospects for Income from Franchise Fees

The Virtual DOTS program will be testing the prospects for developing a formal 'franchising' system. Franchising is predicated on the notion that the franchiser is offering a franchisee technical support to establish a profit-making venture. The franchisee pays a fee for this technical support (usually a fixed-fee up-front and a percentage of sales) for technical inputs and training, for quality raw materials sourcing and the use of trade marks. It is supported by advertising and promotional activities supplied in support of all franchisees.

Very few franchising operations or networks in the health or family planning fields accomplish the broad definition of franchising as practiced in the commercial world. The income earned from franchise operations may be inadequate to cover the total costs of the program. In fact, many so-called “franchise” operations in development do not insist on any fees from the “franchisee”. In reality, these operations are better described as “networks” rather than “franchises”.

A further term commonly employed is “fractional franchising”, where the franchisee is undertaking a franchise, but the activity is only a part of a broader operation offering other services than those supplied by the franchise operation.

The present TB program may be termed a fractional franchise in that the SPPs and community-based entities that will implement the project will be undertaking the TB program as only a part of their total operations.

In the case of SPPs, the assumption is that their TB patient load will only be a small part of their overall practice, perhaps 7%. The realistic assumption is that the average single-practice physician will service treat only 35-45 TB patients per year.

Research clearly shows the financial constraints relating to TB patients served by SPPs and the lack of financial incentives to these providers to implement DOTS. If, in reality, DOTS was an affordable procedure and, if implemented, would adequately increase practitioners’ income, they would no doubt provide the service with no need for PhilTIPS intervention. The fact that they do not do so is already indicative of the problems faced in considering a fractional franchise that could cover all its costs, in a sustainable way, with SPPs.

Assumptions of a realistic income from franchise fees, at P500 for accredition (to marginally help cover set-up cots) and 10% of increased income (to help cover operational costs), demonstrate that less than half of the total costs of a DOTS operation could be covered from such fees. At best, therefore, such an operation may be termed a “partial, fractional franchise”. It is certainly not franchisable in the normal commercial meaning of the term, nor could set-up costs be reimbursed from future income.

The question of achieving any TB franchise fees from SPPs (or laboratories) is also moot. In reality they are being asked to reduce their TB patient income below that which they receive from all other patients. At the same time where the PhilTIPS program to develop DOTS Centers requests a P500 fee from SPPs who are certified to refer patients to DOTS Centers, there are numerous complaints about this fee from SPPs interviewed.

In order to test the viability of franchise fees the program will need to present convincing evidence that such fees are necessary to sustain the program and,

more importantly, that the SPP gains tangible and real benefits from the fee. It should be stressed that the fee is not an earned income from a profit-making franchiser but is used by the network itself, primarily for advertising, promotional activities and print materials, that will lead to increased revenues to the provider and better service. Ideally the fees should not be paid to PhilTIPS, during the trial phase, but to the local Virtual DOTS Center management. This should be presented, at road shows, in compelling graphic form. At the same time the present assumption is that fees will be paid in arrears and that for the first year (or six months) PhilTIPS funding will cover them. In this way franchisees will feel more comfortable about accepting them.

The acceptability of the payment of fees by SPPs and laboratories will, first, be tested out at road shows and may be found impractical at that early stage. Should any network agree to the payment of these fees, this system will be tested in real life and the end result evaluated for possible replication.

VI. CONCLUSION

Private, single-practice physicians comprise a large fraction of the Philippine medical community, and manage a considerable number of tuberculosis patients. However, diagnosis and management of TB patients is as varied as each individual SPP. It has been definitively proven that, to achieve control of TB, implementation of the Directly Observed Treatment Short-course, or DOTS, is essential. Thus it is imperative to have a cohesive and committed group of SPPs diagnosing and treating TB patients according to uniformly high DOTS standards, while at the same time retaining the personal, community-oriented touch that is characteristic of the single-practice physician.

Referral to public sector health centers is not a viable option for many patients. Similarly, reliance on private, fixed DOTS centers is not an alternative with which to achieve substantial coverage (not least because they are still few in number). Thus, the involvement of SPPs in direct provision of DOTS is an essential complement to services offered through the public sector. Indeed, it is the *only* guarantee that private sector health services will bear their share of the TB burden in a country where such a large percentage of the population seeks health services from private doctors.

The SPP and the patient are but two elements involved in the control of TB at the level of the community. Other stakeholders include the patient's family and friends, the pharmacist and his/her drug supply chain, and the technician in the laboratory. In most instances, NGOs and civic minded persons are also involved. These individuals and groups comprise the community whose concern is not only to control and treat TB, but ultimately to remove it as an obstacle to social and economic progress. Such communities have powerful resources that can be focused on the battle against TB, through creation of Virtual DOTS

Centers. The community tradition, at various levels, of cooperation and dedication in working together is ready to be harnessed for this purpose. A Virtual DOTS Center approach, that draws on private sector and community-based resources, and offers a range of options adjusted to the specific resources available at community levels, can make the most of this tradition.

This is the way to go. The path to TB control and cure leads through creation of a community oriented model, the Virtual DOTS Center, that supports some of its most important and respected members, single-practice physicians, in adopting and following the DOTS approach to curing TB. The model is comprehensive, since it includes all the stakeholders. It should not require the creation of a central DOTS physical structure, since facilities and capacity already exist throughout the community. In fact, the community itself *is* the "virtual" DOTS center. The task is to make certain that its many resources are appreciated and effectively utilized.

APPENDIX A

LIST OF CONTACTS and PHYSICIANS INTERVIEWED

Benedict Roma, TB Program Manager, FriendlyCare, Quezon City

Catherine “CJ” Fischer, PhilTIPS CTO; PHN Office, USAID/Philippines

Elaine Martinez-Umali, National Coordinator, Kusog Baga Project, World Vision

Marilou Ebin Pellosis, Committee of German Doctors for Developing Countries

Dr. Madeleine Valera, Vice President, PhilHealth

Dr. Lynn Vianzon, Program Manager, National Tuberculosis Program, DOH

Dr. Jennifer A. Mendoza-Wi, Head, TB Program, Villaflor Hospital, Dagupan City

Dr. Juan A. Perez III, Chief of Party, PhilTIPS

Alma D. Porciuncula, Deputy COP, PhilTIPS

Dr. Rodrigo C. Romulo, Technical Coordinator, PhilTIPS

Elizabeth A. Bassan, Sr. Vice President, International Health Group, Chemonics

Marilou P. Costello, Health Systems Analyst, PhilTIPS

Dr. Charles Yu, Chairman, PhilCAT

Melita Caldoza, Office Manager, PhilTIPS

Wilfredo Verzosa, Franchise Manager, United Laboratories, Inc.

Rafael Hizon, Hizon Laboratories, Inc.

Troy Tibe, Pfizer Laboratories, Inc.

Ted Lim, Entrepreneur, Cebu City

Dr. Wilfredo Varona, UNICEF Consultant

Janet W. Estranero, VP for Sales and Operation, Biogenerics Philippines

Armando C. Esguerra, Management Consultant, Manila

James Dio, General Manager, Therapharma Philippines

PHYSICIANS INTERVIEWED

by Single-Practice Model Development Team

		Single-Practice Physician	
MD Name	Location	Community	Hospital
1. Jewel Ann Abella	Labangon, Cebu City	Yes	*
2. Ma. Lourdes V. Pama	Tabu-an, Cebu City	Yes	*
3. Romeo Bigornia	Chong Hoa Med Ctr., Cebu City	*	Yes
4. Edgardo G. San Juan	Punta Princesa, Cebu City	Yes	*
5. Alejandro S. Montejo	Basak, Cebu City	Yes	*
6. Ma. Estela Polentinos	Labangon Residence, Cebu City	Yes	*
7. Edisa Ermac	Mandaue City	Yes	Yes
8. Ma. Cristina D. Gravador	Mandaue City	Yes	Yes
9. Antonio G. Dizon	Balibago, Angeles City	Yes	
10.Hernand B. Tulud	Angeles City Hall	Yes	Yes
11. Zenaida R. Castro	Burgos St., Angeles City	Yes	*
12. Gertrudes S. Canono	Burgos St., Angeles City	Yes	*
13. Sesnando S. Sandalo	Pampang Road, Angeles City	Yes	*
14. Gary Carlos	De La Salle Hospital, Cavite	*	Yes
15. Fedelinda. E. Ilano	De La Salle Hospital, Cavite	*	Yes
16. Helen S. Siqua	Quezon City	Yes	*
17. Vincent Balanac	Lung Center, Quezon City	*	Yes
18. Israel Chavez	Mega Mall, Mandaluyong	Yes	Yes
19. Romeo P. Ariniego	Dasmarinas, Cavite	*	Yes
20. Dang Roderno	Indang, Cavite	Yes	*
21. Allen Pacaide	Area G, Dasmarinas, Cavite	Yes	*
22. Florencio Santos	Ind'l. Clinic, Dasmarinas, Cavite	Yes	Yes
23. Lalaine Nicolas	Gen. Trias, Cavite	Yes	*
24. Diana Josephine Santos	Yasaki Anabu, Imus, Cavite	Yes	*
25. Shirley Ramirez	Imus, Cavite	Yes	*
26. Shiela Tan Marino	Candelaria Clinic, Quezon	Yes	Yes
27. Maria Reyes	Tayabas, Quezon	Yes	*
28. Avelino Obispo	Tayabas, Quezon	Yes	Yes
29. Violeta Reyes	Lucena City	Yes	Yes
30. Severina Reyes	Tayabas, Quezon	Yes	*
31. Erlinda Caparros-Plotria	Chest Center, Lucena City	*	Yes (Public)
32. Ohliva A. Deocampo	Imus Cavite	*	Yes (Public)
33. Alex Miranda	Bacolod City	Yes	*
34. Nida Israel	Bacolod City	Yes	Yes
35. Regio Sales	Bacolod City	Yes	*
36. Andy Gumban	Bacolod City	Yes	Yes
37. Daniel Trajera	Bacolod City	Yes	Yes
38. Roro Frias	Cagayan de Oro	*	Yes
39. Jojo Tancoco	Cagayan de Oro	*	Yes
40. Gerry Casino	Cagayan de Oro	Yes	Yes
41. Renmar Natividad	Cagayan de Oro	Yes	Yes
42. Helen Sigua	Quezon City	Yes	*

43. Vince Balanac	**Quezon City**	*****	**Yes**
44. Cholly Obillo	**PCCP, Quezon City**	**Yes**	**Yes**
45. Ong Mateo	**PCCP, Quezon City**	**Yes**	**Yes**
46. Noel Bautista	**PCCP, Quezon City**	**Yes**	**Yes**
47. John Dalisay	**PCCP, Quezon City**	**Yes**	**Yes**
Caridad Diamante	Lucena City, Quezon	RHU	
Nelson Palayan	Tayabas, Quezon	RHU	
Dr. Brual	Airport, handles DOTS Clinic, Central Azucarera de Don Pedro, Batangas		
Tabu-an Health Center Staff	Tabu-an, Cebu		

APPENDIX B

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APPENDIX C

Detailed Outline of "Road Show"

The road show program will bring together those identified from the site visits and those responding to mailings. It will NOT serve as a training vehicle, but will rather be a program design mission, that will:

1. Explain that the purpose of the meeting is to establish a service to TB patients through SPPs.

2. Explain the details and rationale for DOTS.

3. Frankly explain what processes are presently employed by SPPs to diagnose and treat TB patients, why it needs to be improved, and why DOTS is the best approach, provided through the Virtual DOTS Center..

4. Frankly discuss the constraints that SPPs face in providing a full DOTS service and why the present, national strategy to provide DOTS through health centers and DOTS Centers cannot adequately service the needs of all private sector patients; that SPPs themselves need to be involved in the delivery of DOTS so that all patients in the Philippines can be covered.

5. Discuss how SPPs can better implement DOTS for all their patients – the need for SPPs to appreciate that without sputum testing, diagnostic protocols are not adequate, hence the establishment of a Virtual DOTS Center. The need for SPPs to refer sputum negative patients to a Diagnostic Committee. Address need for certified, approved testing facilities.

6. Discuss importance of community-based treatment partners and patient management protocols to cure.

7. Discuss the establishment of groups of SPP participants in the Virtual DOTS Center (about 10); the need for at least 2 approved testing sites and the need for about 23 patients to be visited per day to meet the treatment case management protocols (described).

8. Discuss how all this is to be managed and paid for through the Virtual DOTS Center, the additional income to go to an average SPP and to an average laboratory.

9. Discuss a small charge to be levied on the patient for door-to-door treatment protocol services. If at P2 per day X 24 patients = P48 per day. If at P5 per patient = P120 per day.

10. Discuss the concept of provision of drugs through the community-based SPP, especially to those patients who cannot afford prescription drugs (generic at about P25 up to P60 per day). Discuss the choice of drugs that can be offered: either free public sector drugs, a special P10 per day drug, or both, for the patient to choose depending on the combination being tested. Explain that drug sales of the P10 special drug would earn an additional income of P2 per day per patient to the field-based operation.

11. Explain the management and paperwork issues relating to the field-based operation.

12. Explain the funding to be provided to establish the network – orientation / training for SPPs; training of laboratory staff; training of community-based operations. Program logo / signage for each component site; advertising and promotional activities for first year; posters and brochures for SPPs and for community-based field-workers; some modest assistance with equipment needs of community-based workers and the management of them (basic transport, computer, assistance with computerizing patient records).

13. Review process of referral and patient management (refer to approved laboratory for tests); referral to a Diagnostic Committee or approved Second Opinion physician if sputum tests negative; referral to community-based patient management system, return to physician after two weeks and monthly thereafter and process for defining treatment to cure.

14. Discuss options for establishing a functioning coordination and management group with one member (either an SPP or a laboratory manager or a community-based person or an outside willing member to act as Chairman of the Management Group. Discuss monthly (?) meetings. Discuss plans for yearly meetings between Groups in each Province at a later date when more are established.

15. Discuss potential role of SPPs. Would they like to act as one group to arrange and manage the whole network, appointing one of themselves as the network manager, or would they prefer someone else? Discuss whether SPPs would like to motivate and arrange community-based treatment activities or would they prefer that another entity did this.

16. Discuss with SPPs and laboratory members, would they be willing to contribute a small fee (say P500) to be a certified as a DOTS physician? Would they be willing to add 10% of the additional income they will earn from the added patients they will likely receive (detail again) to help support the management of the network. Discuss that the project will pay this for the first year, the issue is how to sustain the effort in future years. Note that the funds will go to the volunteer Network manager for payment of future expenses of Network management particularly advertising and promotion of services,

provision of materials, and arranging meetings (including the first fee of P500).

17. If there is a clear refusal, ask would they pay a lessor fee. If still refuse to be involved continue anyway.

18. Whether refused or not state that the program will seek commercial sponsorship of promotional activities.

19. Discuss with community people present: What do they think about the practicalities of managing the community-based treatment partner and patient management issues? What do they think about providing drugs (is practical / is possible). What do they think about the income. Adequate? Or not?

20. Request interest in attending a future meeting.

APPENDIX D

Cost to Patient of a range of Service Options

Patient		Cost / Pesos
1.	Referred to health center after one consultation and no sputum test (x-ray may be added)	P200
2.	Referred to health center after three sputum tests and two consultations and does not return	P790
3.	Referred to health center after three sputum tests and two consultations and returns for 6 more consultations	P2,190
4.	Referred private DOTS Center does not return	P200 – P1,200
5.	Referred to private DOTS Center returns for 7 more consultations	P1,600 – P2,400
6.	Referred to Virtual DOTS Center community-services after 3 Sputum tests, free drugs, P5 fee per day, returns for 7 consultations and 3 sputum tests	P2,925
7.	Referred to Virtual DOTS Center community-services after 3 sputum tests, drugs and fee at P10 / day, returns for 7 consultations and 3 sputum tests	P4,725
8.	Retained by SPP for full service: 6 sputum tests, 8 consultations and prescribes generic drugs	P6,880
9.	Retained by SPP for full service: 6 sputum tests, 8 consultations and prescribes branded drugs	P11,380

Cost Assumptions

Service	Pesos	Note
Consultation fee	200	Actual varies between P100 – P300
Health Center	Free	Some donation fee sometimes requested / paid
Sputum test	130	Discounts may be negotiated. Some SPPs may add x-rays and charges additional.
Private DOTS center	Free	Some charge P1,000 full service; some other small fee
Virtual DOTS center		
• Drug	P10	For drugs and service fee (An alternative option of drugs at P10 per day and service fee of P5 per visit may be feasible)
• Service Charge	P5	If drugs free
Generic comm. drugs	P25	If generic
Branded comm. drugs	P50	Actual range P40 – P60