



**Technical Assistance to the
Health Sector Policy Support Programme
in the Philippines
(EC-TA HSPSP)**

**COSTING OF PHILHEALTH'S
OUTPATIENT BENEFIT PACKAGE**

Final DRAFT

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ABBREVIATIONS

CBMS	Community Base Monitoring System
CHD	Center for Health and Development
CHO	City Health Officer
COPD	Chronic Obstructive Pulmonary Disease
DOH	Department of Health
EPI	Expanded Program of Immunization
FFS	Fee-For-Service
GOP	Government of the Philippines
ILHZ	Inter-Local Health Zone
IMCI	Integrated Management of Childhood Illness
LCE	Local Chief Executive
LGU	Local Government Unit
MCH	Mother and Child Health
MCP	Maternity Care Package
MHO	Municipal Health Officer
MoA	Memorandum of Agreement
MOOE	Maintenance Operating and Other Expenses
MOU	Memorandum of Understanding
NTP	National Tuberculosis Program
OPB	Out Patient Benefit
OWP	Overseas Workers Program
PCF	Philhealth Capitation Fund
PG	Provincial Government
PHC	Primary Health Care
PhilHealth	Philippine Health Insurance Corporation
RHU	Rural Health Unit
SP	Sponsored (or Indigent) Program
TB DOTS	Tuberculosis Directly Observed Treatment Short-course
VAAW	Visual Acetic Acid Wash
WHO	World Health Organization

Acknowledgement. The opinions contained in this report are those of the consultant. Many Philhealth staff facilitated and supported the task of gathering relevant information, including Gitchi Diaz and Melissa Pineda of CorPlan. Joyce Encluna of Benefits Development and Research Department, along with Mercy and Eric who helped with data collection. A list of survey respondents will be presented in the Annex.

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I. INTRODUCTION

A. Background

The Outpatient Consultation and Diagnostic Package (OPB) was designed and launched by PhilHealth in 2000 and comprises diagnostic, preventive and curative services for indigent families enrolled in the Sponsored Program. Currently premiums are financed by Local Government Units and the National Government, whilst services are typically delivered through Rural Health Units (RHU). Modol (2008) noted that no targets were set on the quantity of services to be provided during OPB design. Similarly, no calculations were made on the adequacy of the capitation fund.

Inadequate funding and management systems have limited the impact of programs designed to address public health threats and the effectiveness of the decentralized primary health care delivery system has been hindered by the lack of coordination. The Health Sector Reform Agenda (HSRA) was developed to address these constraints – with a focus on securing funding for priority public health programs, promoting the development of local health systems and ensure its effective performance and expanding health insurance to a wider population, especially the poor. The HSRA has been followed by the FOURmula ONE for Health, or the implementation framework for health sector reforms in the Philippines for the medium term covering 2005-2010. The general objective for the framework is to achieve critical reforms with speed, precision and effective coordination directed at improving the quality, efficiency, effectiveness and equity of the Philippine health system.

As part of this framework there is need to estimate the costs of providing different packages of services and corresponding coverage targets – particularly as the relation between capitation released and services provided is unknown. A better understanding of this relationship will help define the overall requirement for the capitation fund.

B. Approach and Methodology

A three step methodology was pursued to assess the unit and total costs of differing OPB package designs and associated coverage targets. Firstly, literature was reviewed and a questionnaire developed to analyse costs of OPB and associated primary health care service delivery. Secondly, a targeted survey was carried out across the Philippines to gather cost data. The survey covered somewhere in the order of 25 RHUs in Manila, Northern Luzon, Visayas and Mindanao. Thirdly, a costing model was developed to estimate unit, per member and total outpatient service delivery costs for a range of utilisation, coverage and packaging of service scenarios. Key steps were staged over the April to July period, as outlined in the following table.

Table: Schedule of Activities

	April			May			June			July		
Inception												
Review Literature		■										
Develop Questionnaire			■									
Formulate Methodology												
Draft Inception Report												
Survey and Unit Costs												
Manila					■							
Northern Luzon						■						
Visayas							■					
Mindanao								■				
Estimate Unit Costs												

presentation of survey results section. It is used to support cost estimates for personnel, medicines and MOOE expenditures. Capital depreciation information was not collected as part of the data, therefore costs are likely to underestimate total resources dedicated to providing outpatient services at RHUs.

C. Organization of the Report

The report will contain three sections. The first section will outline study background and methodology. Secondly, the unit costs and national outpatient service delivery costs will be estimated for current and future OPB package design scenarios. Scenarios will capture differing assumptions in relation to utilisation and coverage, and costs will be presented as an aggregate national total, for each member and per patient visit. The third, and final section of the report, will outline results of the OPB cost analysis and any needs for further research.

II. COSTING OF PHILHEALTH'S CURRENT AND POTENTIAL INTEGRATED OUTPATIENT BENEFIT PACKAGES

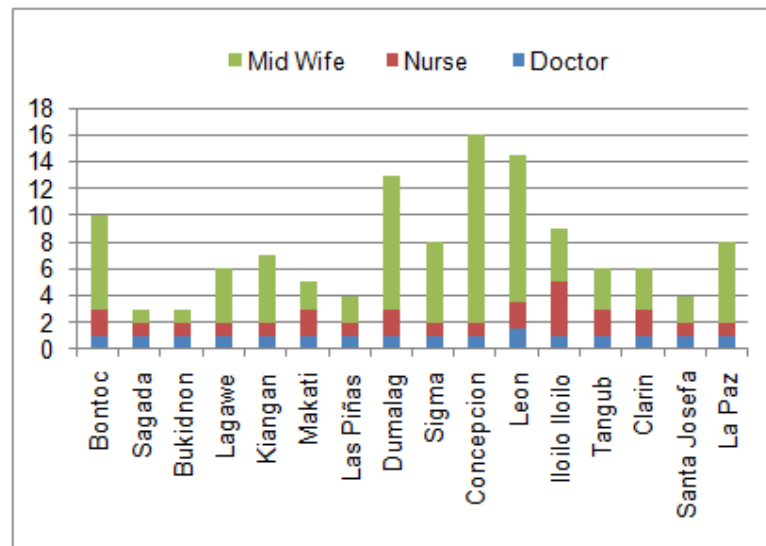
A. Survey of Rural Health Units (RHU)

Rural health units belonging to 5 regions from Luzon, Visayas and Mindanao were surveyed. No attempt was made to get a statistically accurate sample; however, the results of the survey are used to estimate the operation of a typical RHU. An overview of RHU operations, which include staff capacity at surveyed RHUs, catchment size and the estimated maximum number of patients a doctor in each RHU could consult within a week is presented in this section. The financial profiles of surveyed RHU's are then presented and the section concluded with a description of the burden of disease evident at the selected RHU's. This information is used to develop a spreadsheet costing model.

1. Overview of RHUs

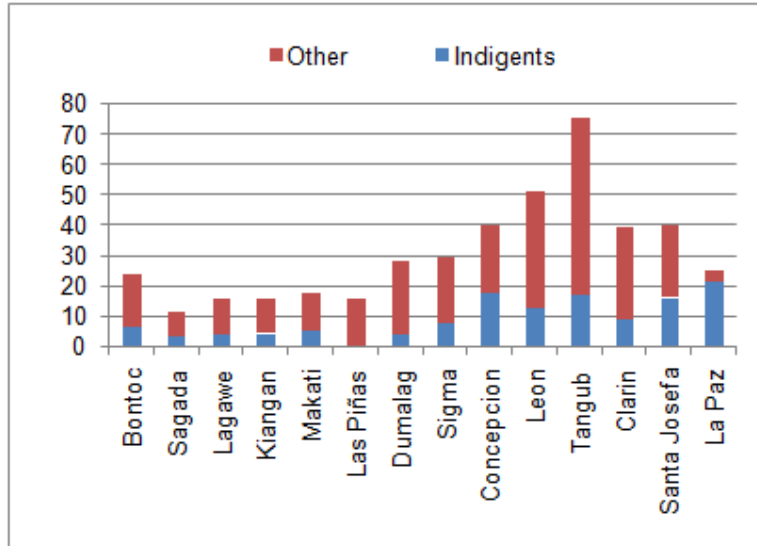
The number of staff varies considerably across the surveyed RHUs, however, there did not appear to be a geographic or urban / rural pattern associated with observed staff capacity. All facilities had a doctor, and in the case of Leon, two doctors were practicing in the RHU. The greatest source of variation in staff number is associated with midwives. In the case of Concepcion, approximately 14 midwives were currently employed and a similarly high number of midwives are employed at Leon and Dumalag. The average number of midwives across all survey facilities was found to be five. An average number of one doctor and two nurses were also in evidence.

Figure: Numbers of Staff per RHU



Of the surveyed RHUs, Tangub was found to have the highest catchment size of more than 70,000 people. Leon and Clarin were also observed to have large catchment sizes of around 40,000 people. Most other RHUs had catchments of approximately 20 to 30,000 people. The number of indigents residing in the catchments was generally not known by medical staff at the RHU. Some provinces have instituted policies relating to the description of indigents so that this subpopulation accounts for a certain

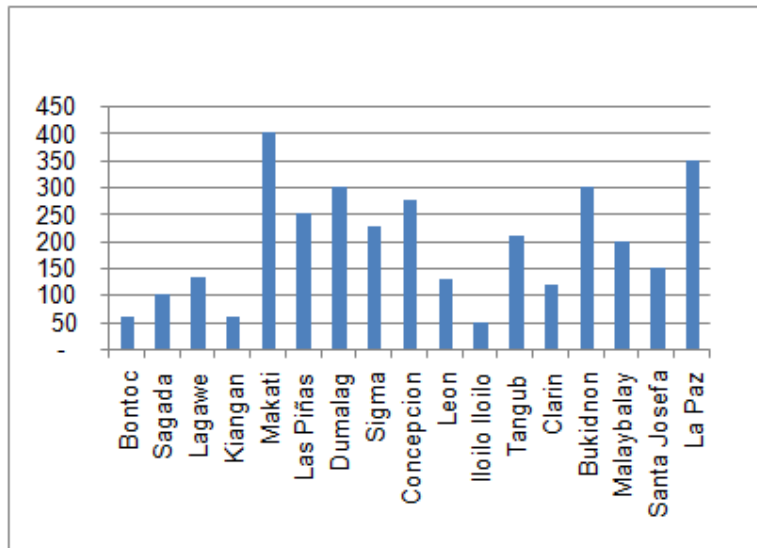
Figure: RHU Catchment Size



percentage of the population. For example, in the Western Visayas, indigents are described as the population earning the lowest 25% of income. The lack of definition about the exact nature of indigents made estimation of this subpopulation difficult. Best estimate were derived after discussions with RHU staff and are presented in the above figure. It is evident that Tangub, Leon and La Paz have some of the highest proportion indigent populations. In general, indigents accounted for around 25% of the overall catchment populations for most RHUs. This percentage is somehow arbitrary, since poverty incidence is not equal everywhere

Doctors were asked their opinion about how many consultations though could practically conduct during a week. The maximum number considered to be feasible varies amongst the surveyed RHUs. In Makati and La Paz, the average number of consultations per week was considered to be greater than 350, whereas in Bontoc and Iloilo Iloilo, less than one hundred consultations per week was considered a maximum. There was no regional or urban/rural bias to this estimation of maximum consultations. The average estimate per week is calculated to be around 200 consultations.

Figure: Maximum Consultations per Doctor per Week

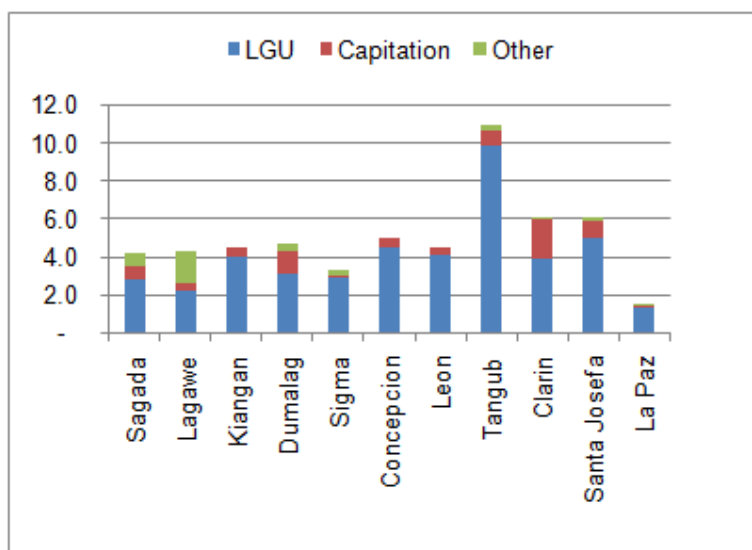


2. Financial Profile of RHUs

a. RHU Revenue

Tangub was found to have the highest revenue of all surveyed RHUs. Revenue of this facility exceeded 10 million pesos in 2007. The average revenue from surveyed RHUs that could readily provide financial data was 5.1 million pesos in this corresponding year. The major source of revenue for RHUs is the local government contribution. Approximately 80% of all revenue is from local government. Capitation is the next most important source of revenue accounting for an average of 13% of revenue. Capitation, as a percentage of revenue, does not exceed 20% for the above RHUs. In the case of the Bukidnon, all provincial health units are financed exclusively using capitation. These facilities are not representative of a typical RHU. For costing purposes they are not included in many of the figures and tables which are being used to derive average productivity and financial operations estimates.

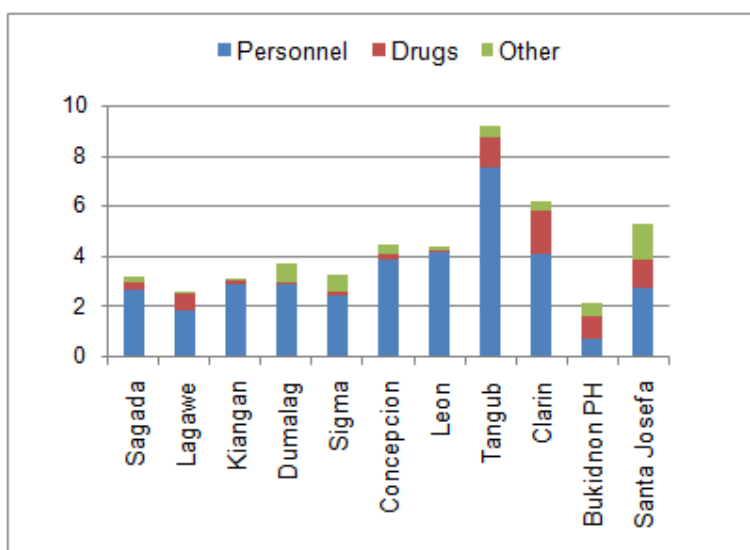
Figure: RHU Revenue in 2007 (million Pesos)



b. RHU Expenditure

RHU expenditure follows the above pattern of revenue. Tangub has both the highest revenue and expenditure for a single facility and is followed by Clarín. The average annual expenditure for a surveyed RHU in 2007 was found to be 4.6 million pesos. Personnel were the largest expenditure item, followed by medicines and other expenditures (MOOE). Average annual expenditure on personnel had a medium proportion of 66% of total expenditure. Medicines and other expenditures each accounted for a little over 10%. In the case of Bukidnon provincial health services, only curative services are offered. Preventive interventions are provided by the department of

Figure: RHU Expenditure in 2007 (million Pesos)

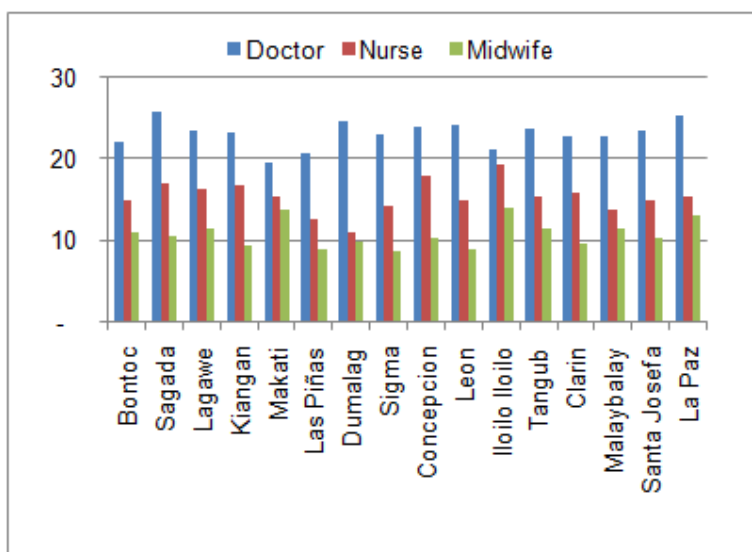


health facilities. Consequently, the average RHU expenditure for Bukidnon provincial health services is the lowest for all surveyed facilities.

c. Personnel Costs

As part of the survey, staff was asked about average monthly salaries for doctors, nurses and midwives in the facility. The results of this question are presented in the adjoining figure. It is evident that there is not a regional or rural/urban pattern in monthly salaries of health facilities staff. The average monthly salary for a doctor was found to be 23,000 pesos, while a midwife and nurse received 11,000 and 15,000 respectively. Given the relative

Figure: Average monthly salary in 2007 (thousand Pesos)



homogeneity in a monthly salary, much of the variation in the personal costs that was observed across survey facilities relates to variations in the number of staff employed during 2007. Salaries are presented from the results of the questionnaire and do not include additional capitation support.

Table: Annual Salaries and Total Personnel Costs from Selected RHUs

Million pesos	La Paz	Leon	Concepcion	Bontoc	Bukidnon	Average
Salaries	1.7	2.4	2.4	2.7	2.3	2.3
Other	1.7	2.1	2.1	2.4	1.6	2.0
Total	3.4	4.5	4.5	5.1	3.9	4.3

Source: RHU Survey

LGU expenditure accounts were reviewed during the RHU survey to gauge direct salary and other staff costs included in personnel cost estimates. Direct salary costs were found to account for around half of personnel costs. Other costs included hazard pay, laundry, insurance, and other staff related costs. To accommodate these staff overheads, base salaries are loaded by a factor of 2.5 to estimate the total cost per staff member at an RHU. These estimates are included in the adjoining box. Total personnel costs are divided by the total number of contacts for each staff category to estimate the unit costs per staff member at different utilization rates. The calculation for each category follows:

Box: Salary and Overall Personnel Cost Estimates for a Typical RHU				
	Annual Salary	Number Of Staff	Overhead Loading	Personnel Total
	(pesos)			(pesos)
Doctor	277,943	1	2.5	694,856
Nurse	184,643	2	2.5	923,216
Midwife	129,788	5	2.5	1,622,353
Other	60,000	1	2.5	150,000

- **Doctor.** The total personnel cost for a doctor is estimated at 695 thousand pesos per year. When estimating the unit cost per doctor consultation, the total personnel

cost was divided by the number of consultations associated with a base utilization rate of 0.37 RHU visits per person per year. Based on this utilization - and the share of patient consultation between various members of staff (outlined later in the report) - the doctor has 6,375 annual consultations. The unit cost per consultation is therefore 695 thousand pesos divided by 6,375, or 109 pesos per contact

- **Nurses, Midwife and Others.** A similar procedure is followed to determine the unit cost of other staff categories.

a. Medicine Costs

Drug costs vary across the various RHUs included in the survey. Costs for selected medicines are provided in the following table.

Table: Medicine Costs from Selected RHUs

	Los Pinas	Makati	Malay	Clarin	Sagada	Lagawe	Tangub	Average
Paracetamol (100, 500 MG)	162	227	75	75		125	120	131
Amoxicillin (100, 250 MG)	637		218	380	134	1,071	380	470
Amoxicillin (100, 500 MG)		995	295	420	500		475	537
Metoprolol (100, 50 MG)		324	257		300	870		438
Metaformin (100, 500 MG)		288	350			303		314
FeSo4 (60 ML)			29		75			52

Source: RHU Survey

b. Test Costs

Test costs are included in the following table for a selection of surveyed RHUs.

Table: Test Costs from Selected RHUs

	Sigma	Kiagnin	Leon	Bukidnon	Tangub	Lagawe	Makati	Average
Blood Count								
Plate	30	100	50	55				59
Typing	182	50		70				101
CBC	50	60	40	100	70	160*	60	63
Fasting Blood Sugar								
FBS	125	80	50		85		80	84
RBS	11							11
Blood Chemistry						1,500		1500
Sputum				605				605
Other								
Uric Acid	125	80						103
Cholesterol		80		110			80	90

Creatinine		80		120	85		80	91
Pregnancy Test		150		130		100		127
Stool		20				60		40
Hepa		200	120	155			200	169
HIV		350		250				300
Hematocrit			40	40				40
Fecalysis			20		45			33
Urinalysis			20	40		80		47
X-ray						200		200

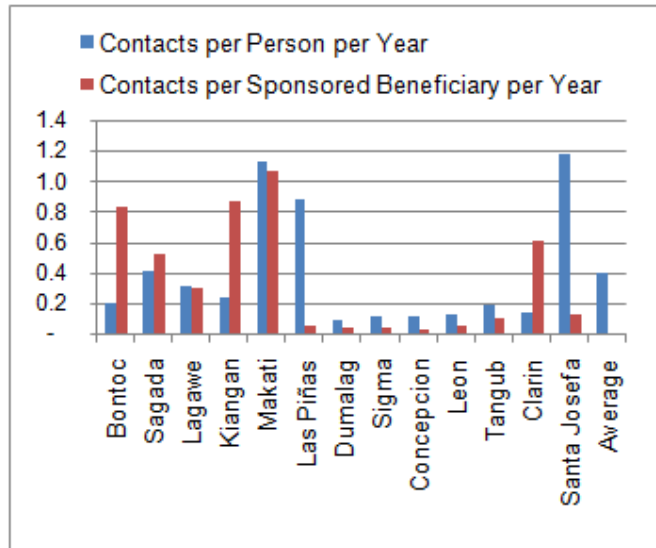
* With plate count. Source: RHU Survey

3. Contact Rates and Disease Burden at RHUs

A large part of the survey was dedicated to determining the workload of staff and burden of disease experienced at RHUs. It was difficult establishing the total number of consultations that various staff at RHU carried out across 2007. There are a number of reasons for this difficulty. Firstly, most RHUs do not keep records about total consultations conducted; rather they document accomplishments for their facility. For example, a child receiving the full complement of vaccination is typically recorded, whereas the total number of contacts to achieve full immunization is not documented. Additionally staff at the RHU provide services at the facility itself and also at Barangay health stations.

The number of contacts per person per year and per sponsored beneficiary per year is documented in the adjoining figure. It is evident that there is considerable variation between the various facilities visited. Contact rates are particularly high in Makati and also in parts of Mindanao. The average contact rate was found to be 0.35 per beneficiary per year. This contact rate represents a considerable increase from that found in 2004, where contact rates of 0.16 per person per year were in evidence (Abt Associates, 2004).

Figure: RHU Contacts per Year in 2007

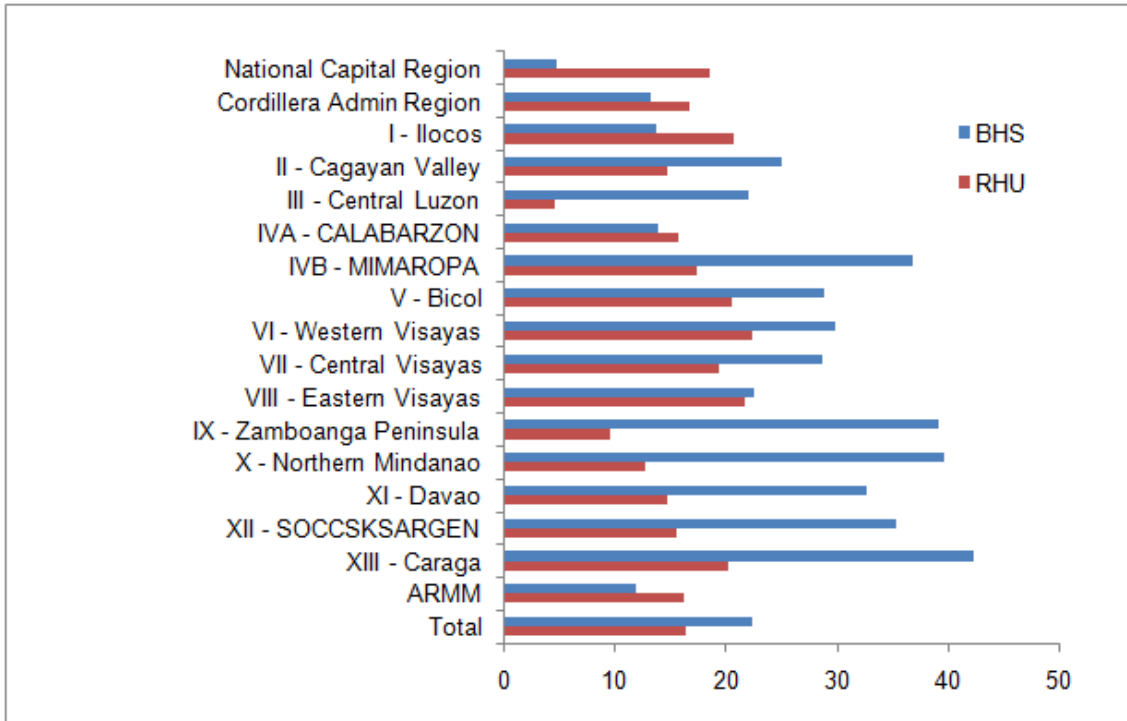


The Abt survey of RHUs in 2004 confirmed that utilization of care in RHUs is generally extremely low, irrespective of SP enrollment level. The average number of curative visits per RHU by SP insured and visit rates for curative care per 100 IP members, during the six-month interview period was reported. Curative visit rates for all patients per 100 inhabitants in high SP enrollment were found to be 8.1 per 100 in six months. Modol (2008) also found RHU contact rates to be low - in the order of 0.2 per beneficiary per year.

The regional variation in contact rates found in this survey contrasts to that observed during national household surveys such as the DHS. In 2003, DHS survey respondents were asked whether a member of their household had visited a rural health unit in the preceding six months. The results of this survey are presented in the following figure on a provincial basis. It is evident that households in the Visayas had contact rates above the national

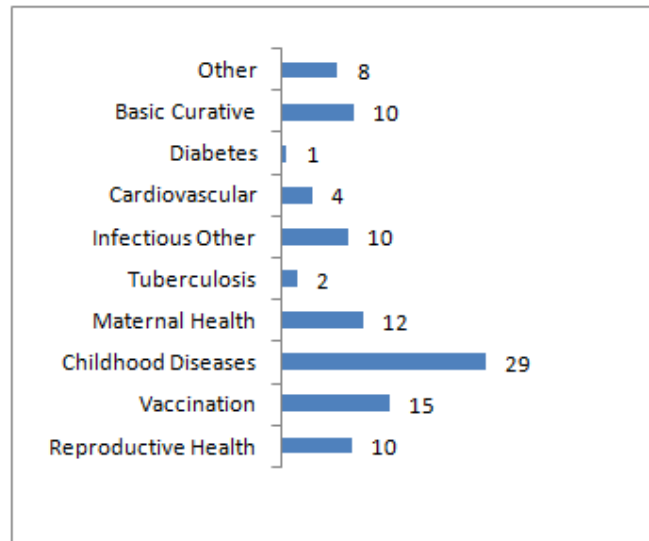
average, whereas the selected survey of rural health units visited during this project suggests otherwise. On a provincial basis, the utilization of rural health units appears to be lowest in Central Luzon and northern Mindanao.

Figure: In the 2003 NDHS, respondents were asked if a member of their household visited any health facility in the six months preceding the survey



Medical personnel were also asked about the types of diseases most commonly observed in patients presenting at their facilities. The average contribution each disease makes to the overall contact workload of the survey at RHUs is presented in the adjoining figure. It is apparent that childhood diseases, vaccination and reproductive health issues are the key conditions addressed at rural health units. On the other hand,

Figure: Contacts per Disease (% overall contacts)



as tuberculosis and non-communicable diseases such as diabetes and hypertension are consuming a relatively small proportion of the rural health unit's resources.

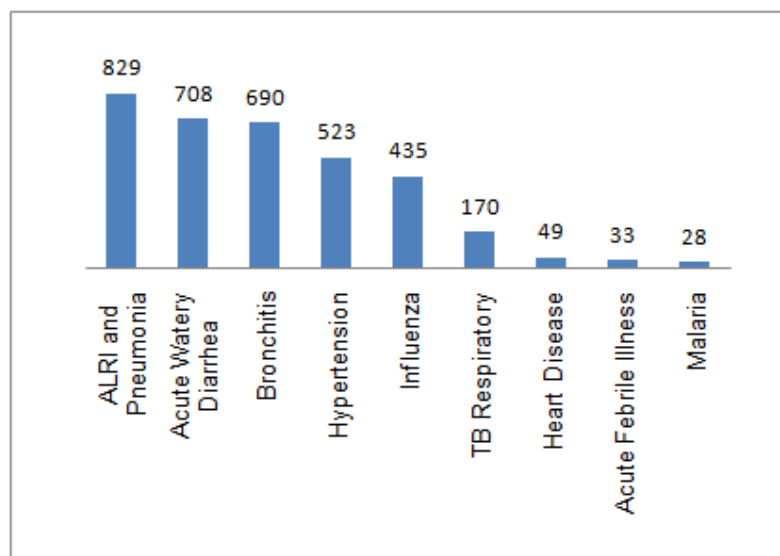
Disease-related contacts for the majority of survey RHUs are presented in the following table. For some RHUs it was difficult to attain contact rate and disease specific information requests. Additionally, the treatment of some diseases was specified in accomplishments for the rural health unit and not the overall number of contacts to achieve desired treatment and prevention targets. It is noticeable that for all RHUs childhood diseases, child vaccination and reproductive health issues were the dominant prevention and treatment activities.

Table: Contacts per Disease (% overall contacts)

	Repro Health	EPI	Childhood Diseases	Maternal Health	TB	Infectious Other	Cardio vascular	Diabetes	Basic Curative	Other
Average	10	15	29	12	2	10	4	1	10	8
Bontoc	17	22	21	30	3	0	-	-	-	6
Sagada	13	40	32	7	-	-	4	0	-	3
Lagawe	10	7	46	5	0	19	7		26	-
Kiangan	10	3	40	3	-	20	10	3	5	5
Makati	10	12	10	10	0	14	2	1	10	30
Dumalag	6	25	20	25	3	7	6	2	2	4
Sigma	0	17	34	14	1	2	3	1	1	28
Concepcion	12	2	48	7	2	6	2	-	-	22
Leon	6	25	20	25	3	7	6	2	2	4
Iloilo Iloilo	7	17	29	6	12	2	2	1	17	8
Tangub	9	12	25	11	1	28	3	0	9	3
Clarín	1	3	34	2	1	1	2	0	55	-
Santa Josefa	10	15	20	10	5	20	5	-	15	-
La Paz	30	15	27	9	2	7	9	1	-	-

The types of diseases most commonly treated at RHUs reflect national morbidity statistics presented in the Department of Health, Health Objectives 2005-2010. Respiratory infections and childhood diseases account for the highest morbidity per 100,000 people, while heart disease TB and malaria represent much smaller disease burdens. In preparing the cost spreadsheets for a typical RHU, these morbidity statistics were cross-referenced against accomplishments recorded at the visited RHUs. In most cases there is strong correlation between national and RHU statistics. In the case of chronic conditions, such as hypertension, there is considerable variation in reported disease prevalence. The need to

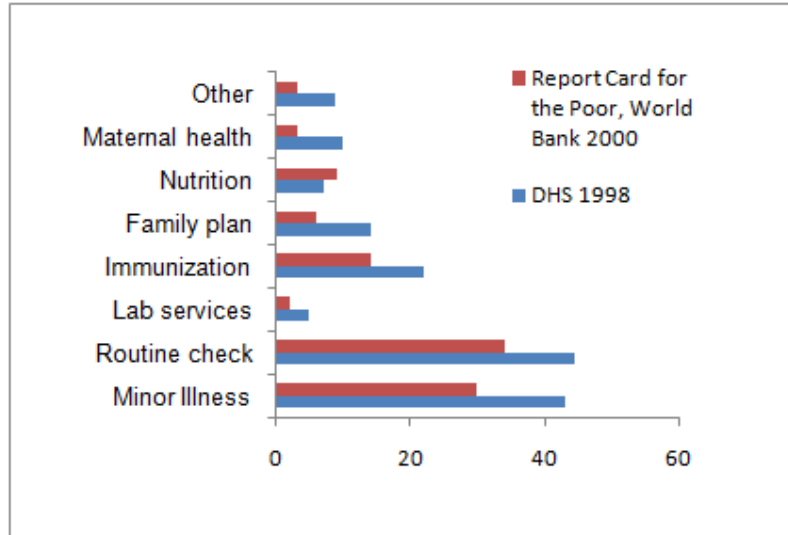
Figure: Philippine National Morbidity per 100,000 people (DoH, Health Objectives 2005-2010)



address this information gap is highlighted in the conclusion section, as variations in prevalence has a considerable impact on the costs of providing appropriate services.

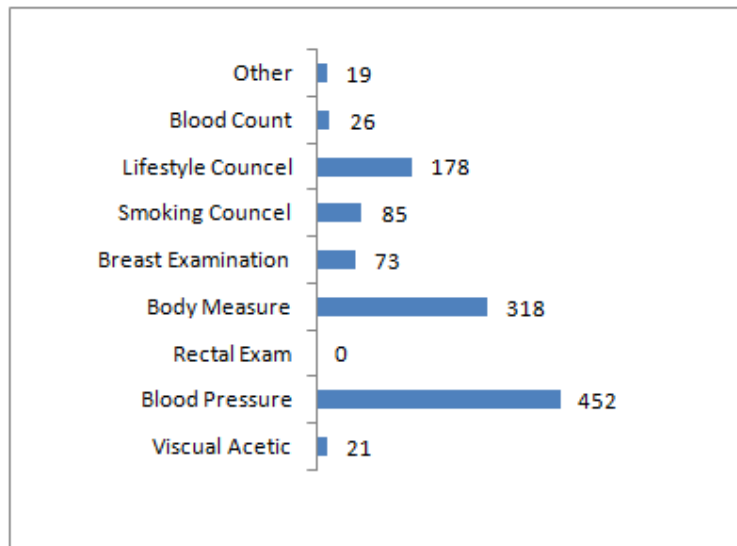
Results of the RHU survey conducted as part of this project can be compared against broader national survey results. During the national DHS in 1998 and also as part of poverty reporting to the World Bank, households were asked the main reasons for visiting RHUs in the six months preceding the respective surveys. It is evident that the treatment of minor illness, routine checkup, immunization and family planning where the main reasons for visiting these primary care facilities. The low use of laboratory services is also a feature of this survey comparison.

Figure: Respondents Visited RHUs for the Following Conditions % (DHS, World Bank surveys)



As part of OPB reporting procedures RHU staff record the numbers of examinations and tests availed to sponsored members. Low use of blood count and other diagnostic procedures is apparent in the reports submitted to PhilHealth. The most common examinations provided include blood pressure and body measurement which are standard operating procedures availed during general consultation. The number of tests and examinations availed to sponsored members at an average RHU are illustrated in the adjoining figure.

Figure: Diagnostic Tests (for SP), Average for RHUs in 2007



B. Costing Model for Typical RHU

A theoretical model, of an “average” health facility was defined, with catchment population and a number of Barangay Health Stations. The model splits the catchment population of the RHU into sponsored and non-sponsored (other) sub-populations. The amount of services availed, resulting in staff and operational needs, is calculated and combined with costing data. It should be stressed that utilization of OPB-related services is currently low. On average, Modol (2008) found that consumption of benefits was 1.06 contacts per member (usually a 5-people household) per year, each one of which availed 2 benefits. Low consumption was found to be widespread, even where RHUs are the only facility (Bukidnon Province). OPB-related services are about 1/3 of overall facility workload. To account for the potential for increased utilization, costs are presented for current (0.35) and 0.75 RHU visits per person per year scenarios. Each of these elements of the RHU model is subsequently described.

1. Catchment Size

Based on the selected survey carried out as part of this study, an average catchment for a typical RHU is estimated to be around 25,000 people. There is considerable variation in the number of people served by RHUs across the country and the Department of Health has not publicly made available RHU statistics since 2001. With the growing population and consolidation of catchment areas within some provinces, the average size of an RHU catchment is likely to be increasing. Even in a small sample of RHUs surveyed during this project, the distribution of catchment sizes is quite skewed. There was found to be two or three RHUs with catchment sizes of above 40,000 people, although the average catchment is likely to be around 20 to 30,000 people. The catchment population is divided into sponsored and non-sponsored members. On average, sponsored members comprised about 15% of the overall catchment size for the visited RHUs. This average composition is similar to national enrolment statistics. Based on this estimate, a typical RHU catchment 25,000 people contains approximately 4,000 sponsored beneficiaries. Both sponsored and non-sponsored subpopulations are assumed to have similar burdens of disease and health seeking behavior. Medical staff at many of the visited RHUs suggested that the health needs of these populations do not vary considerably, and records of services availed is not differentiated and recorded for both the subpopulations. In line with this information shortfall, utilization rates are assumed to be identical.

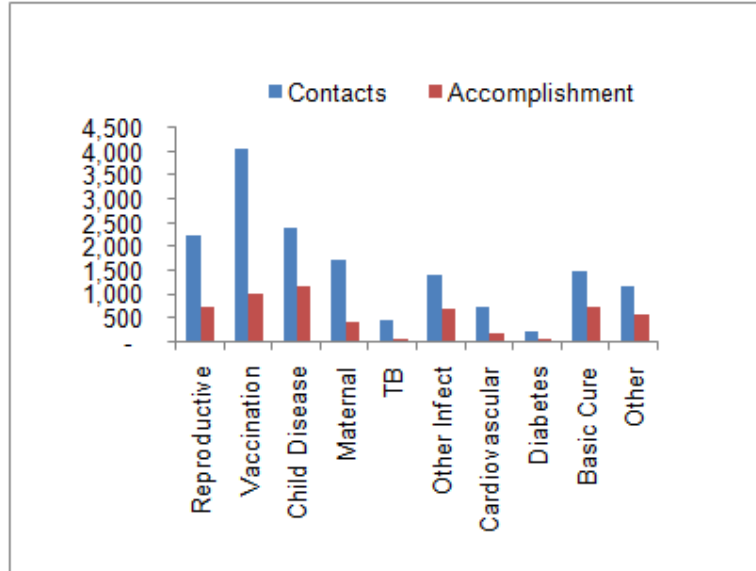
2. RHU Activities

Services at the RHU are grouped into functional prevention and treatment activities focusing on disease targets and currently available PhilHealth packages. This categorization of activities serves to simplify the costing procedure and also provide a basis for calculating integrated packages at the conclusion of the report. Activities are grouped into those focusing on reproductive health, childhood vaccination, childhood diseases, maternal health, tuberculosis, cardiovascular conditions, diabetes and other curative and non-categorized services. During the interview of RHU staff a range of questions were posed to gain an appreciation for the types of labor inputs, medicines, diagnostics and other inputs associated with the provision of preventive and curative activities under these groupings.

A unit costing approach is adopted to calculate RHU operational costs. Based on this approach, the cost of labor input for different staff members of the RHUs are computed and the number of units of medical supplies and diagnostics associated with each of the above-mentioned activities calculated. In the next section these costs and units are specified for the above mentioned categorizations. As an overview of RHU productivity, the various accomplishments for a typical facility serving a 25,000 person catchment is provided below (and adjoining figure).

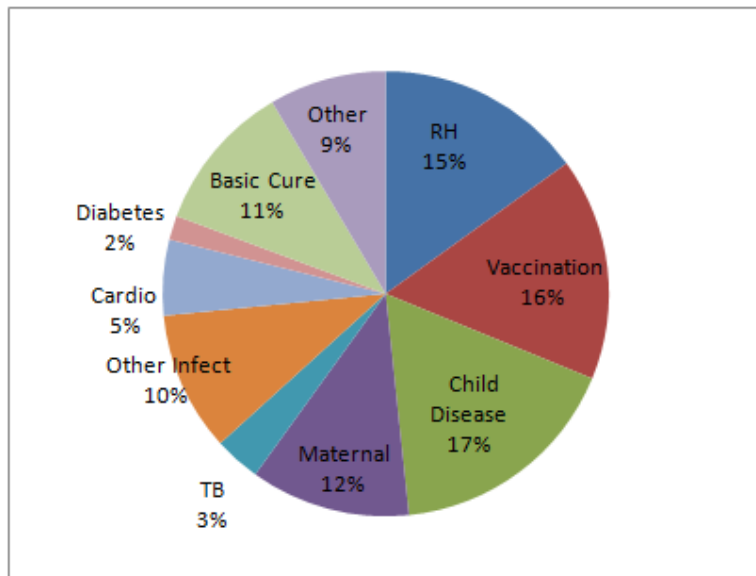
- Reproductive , 748
- Vaccination, 508
- Maternal, 432
- Childhood disease cases, 1,200
- TB + cases, 80
- Cardio, 191
- Diabetes, 61

Figure: Contacts and Accomplishments for 'Typical' RHU – catchment of 25,000 people



It should be noted that a number of contacts are often necessary to achieve accomplishments. In the above figure the relationship between accomplishment and number of contacts for the key prevention and treatment interventions are outlined. It is evident that vaccination, maternal health and reproductive health accomplishment involves three or four visits whereas some of the curative activities are assumed to be associated with low numbers of contacts for accomplishment. The various assumptions underpinning these estimates are described in the next section of the report. When combined, the workloads for each intervention can be

Figure: Contacts by Intervention for 'Typical' RHU – catchment of 25,000 people

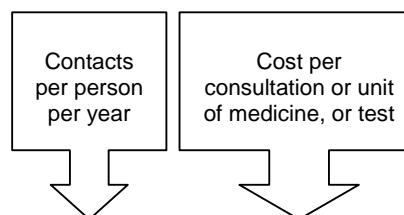


RH= reproductive health, TB= Tuberculosis

illustrated as per the above figure. Similarly to survey results, the workload of RHU staff is dominated by childhood diseases, maternal health vaccination and reproductive health issues.

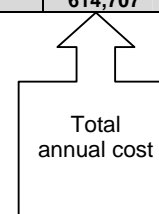
3. Costing of Activities

Cost templates for each of the above mentioned groupings of RHU activities have been used to estimate costs for sponsored and non-sponsored people availing outpatient RHU services. An example is provided below:



EXAMPLE - VACCINATION (VACC)	Accomplished				
Target	750	Utilization	Total Units	Unit Cost (Pesos)	Cost (Pesos)
Accomplished - 75%	563				
Consultation					
Doctor	Contacts	0.005	135	109	14,792
Nurse	Contacts	0.041	1,016	99	100,889
Midwife	Contacts	0.054	1,355	96	129,410
Medicines					
DPT Vaccines (20 doses/vial) - 3 per child	Dose	0.068	1,694	13	21,169
OPV (20 doses/vial) - 3 per child	Dose	0.068	1,700	13	21,250
Measels Vaccine (10 doses/vial) - 1 per child	Dose	0.027	680	38	25,840
BCG (20 doses/vial) - 1 per child	Dose	0.027	680	13	8,500
Hepa B (10 doses/vial) - 3 per child	Dose	0.068	1,700	120	204,000
Syringe + Buffer	Dose	0.190	4,754	10	47,535
Other					
RHU Overheads	Test	0.027	677	61	41,322
Subtotal					614,707

- Accomplishment and Target.** RHU records were reviewed as part of the survey and typical targets for reproductive, vaccination, maternal care and TB cases noted. Average estimates are provided for each type of intervention, along with what percentage of the target was typically attained. In the example of vaccination, it is evident that a target of 750 is included. This approximates 3% of the catchment size of 25,000, or an average birth cohort for a population of this size. About 75% of these children were assumed to receive the full complement of childhood vaccines.
- Utilization.** Contact, or utilization rates, with various members of RHU staff to attain the above accomplishment were estimated following the RHU survey. In the example above a doctor is estimated to provide 135 vaccination contacts per year. Consequently, a utilization rate of 0.005 is included. A utilization rate of this order times the catchment population of 25,000 yields an annual number of vaccination contacts for a doctor of 135.
- Consultation Unit Costs.** Doctor, nurse and midwife costs are fixed within the RHU over a range of contact rates. For example, if a doctor sees 100, or 150 patients in a week her/his salary will not change as it is fixed by the local government. Consequently, the unit cost of a consultation is the total salary and non-salaried remuneration for the doctor divided by the number of consultations per year. At overall RHU consultation workloads, the unit cost per consultation is estimated to be 109 pesos. As utilization increases, the unit cost decreases until it is impossible for a doctor to see more patients in a year. At this point staff numbers have to be expanded. Utilization rates and unit costs are calculated for nurse, midwife and doctors in a typical RHU



- **Medicines and tests.** The average unit costs of medicines and tests provided at RHUs are multiplied by their respective unit costs to estimate overall total costs. In the case of vaccines, these costs may be borne by national government through the EPI program, whereas many medications may be purchased directly by a patient when they cannot be provided by the RHU. All costs are estimated no matter who they are financed by. The number of doses for common vaccinations is derived from the accomplishment assumptions and number of doses to achieve fully immunized child status.
- **RHU Overheads.** The RHU overhead cost (MOOE) is also assumed to be fixed and is allocated back to specific RHU activities based on the relative utilization of the doctor. For activities with high utilization, such as childhood diseases, the cost of MOOE is relatively more significant.
- **RHU Cost.** The total cost of the RHU operation is estimated by adding all activities (eg. reproductive, maternal, childhood diseases, TB, etc...) together. This part of the analysis is provided in the following section.

a. Reproductive Health.

Priority to providing basic reproductive health services to young people and pregnant women. Reproductive and sexual health services should be integrated within a system that offers primary health care and referrals for more specialized needs. A full sexual and reproductive health package includes:

- Family planning/birth spacing services
- Prevention of abortion and management of complications resulting from unsafe abortion
- Prevention and treatment of reproductive tract infections and sexually transmitted infections including HIV/AIDS
- Early diagnosis and treatment for breast and cervical cancer
- Promotion, education and support for exclusive breast feeding
- Prevention and appropriate treatment of sub-fertility and infertility
- Adolescent sexual and reproductive health
- Prevention and management of gender-based violence

Cost elements of reproductive health services offered in the Philippines were derived from the RHU survey and DOH recommendations. Unit costs for main budget lines include personnel, drugs and medical supplies, and other MOOE, These costs, along with unit cost and utilization assumptions are reported in the following table.

Typical Annual Rural Health Unit Operations			Total		
	Unit	Utilisation	Units	Unit Cost (Pesos)	Cost (Pesos)
REPRODUCTIVE HEALTH (RH)	Accomplished				
Target	1,752				
Accomplished - 40%	701				
Consultation					
Doctor	Contacts	0.015	374	109	40,810
Nurse	Contacts	0.045	1,121	99	111,339
Midwife	Contacts	0.090	2,243	96	214,222
Other	Contacts	0.003	75	363	27,141
Medicine					
Contraceptive pills (Lady, Trust) - 1 per accomplishment	Pack	0.028	710	15	10,653
Contraceptive Inject able (DMPA) - 0.2 per accomplishment	Dose	0.006	142	50	7,102

IUD Insertion - 0.1 per accomplishment	IUD	0.003	71	100	7,102
Condoms - 2 packs per accomplishment	Pack	0.057	1,420	100	142,040
Tests					
Pap Smear - 0.2 of accomplishments	Test	0.006	142	100	14,204
Gram Stain - 0.1 of accomplishment	Test	0.003	71	30	2,131
Other					
RHU Overheads	Test	0.009	224	61	13,681
Subtotal					576,743

Key elements of costing reproductive services include:

- **Accomplishment and Target.** RHU records were reviewed as part of the survey and typical targets for reproductive noted. For reproductive services an average target of 1,752 people was included. 1,752 represent approximately 7% of the 25,000 RHU catchment number of people. A typical accomplishment was found to be about 701 people, or 40% of the target number of people targeted for reproductive services
- **Utilization.** Contact, or utilization rates, with various members of RHU staff to attain the above accomplishment were estimated. To attain an accomplishment of 701 people a doctor is estimated to provide 378 contacts per year. Consequently, a utilization rate of 0.015 is included. A utilization rate of this order times the catchment population of 25,000 yields an annual number of reproductive contacts for a GP of 378. Utilization rates of 0.05 and 0.09 were assumed for nurses and midwives at the RHU. Contact rates are difficult to estimate for reproductive services at the RHU, as midwife contacts maybe undertaken at the BHS
- **Consultation Unit Costs.** Doctor, nurse and midwife costs are fixed within the RHU over a range of contact rates. As utilization increases, the unit cost decreases until it is impossible for staff to see more patients in a year. For contact rates included in the analysis, the unit costs for doctors, nurses and midwives are 109, 99 and 96 pesos respectively.
- **Consultation Costs.** Unit costs are multiplied by the number of contacts per year to calculate total consultation costs for the delivery of reproductive services. In the cases of the RHU doctor, it is estimated that 378 consultations are provided per year for the total RHU population, at an average cost of 109 pesos per contact. The total doctor cost for reproductive services is therefore 378 multiplied by 109 pesos to generate an annual total of 41 thousand pesos. For nurses, 1,121 contacts are multiplied by a unit cost of 99 pesos per contact to generate an annual total cost of nurse service delivery for reproductive health of 111 thousand pesos. The unit costs and contacts for midwife assumptions are also outlined in the table.
- **Medicines and tests.** The average unit costs of medicines and tests provided at RHUs are multiplied by their respective unit costs to estimate overall total costs. The following consumables are included for reproductive health - contraceptive pills (Lady, Trust), contraceptive inject able (DMPA), IUD Insertion and condoms. Assumption relating to the number of contacts associated with the purchase of each of these products is provided in the table. Again, these estimates are difficult to arrive at because many RHU do not regularly supply these commodities, and new initiatives, such as PopShops, have only been recently established in many facilities. The cost estimation procedure for commodities can be illustrated using contraceptive pills as an example. For this commodity it is assumed that contraceptive pills are purchased at an average of 1 pack per accomplishment. Given this assumption, around 710 packs are assumed to be sold per RHU per year. Based on a pack cost of 15 pesos, 11 thousand pesos are spent per year for this medication. The same procedure is used to estimate costs for each medicine and test included for reproductive health services.

- **RHU Overheads.** The RHU overhead cost (MOOE) is also assumed to be fixed and is allocated back to specific RHU activities based on the relative utilization of the doctor. The overhead cost for reproductive services is estimated to be 13 thousand pesos per year

The total cost of the reproductive services at the RHU is estimated to be 576 thousand pesos. This overall cost is estimated by adding staff, medicines, testing and overhead costs together.

b. Vaccinations.

The immunization program seeks to improve child survival and child health by controlling, eliminating, or eradicating all vaccine preventable diseases. The key program objectives are raise coverage for all antigens among children under 1 year of age, maintain capability for rapid detection and containment of any imported wild poliovirus until the time of global eradication, neonatal tetanus elimination, and effectively control measles. The resources required for full immunization of children is estimated by multiplying the 2007 birth cohort (3% of 25,000 catchment population) by the cost of selected vaccinations a child receives.

VACCINATION (VACC)	Accomplished				
Target	750	Utilization	Total Units	Unit Cost Pesos)	Cost (Pesos)
Accomplished - 75%	563				
Consultation					
Doctor	Contacts	0.005	135	109	14,792
Nurse	Contacts	0.041	1,016	99	100,889
Midwife	Contacts	0.054	1,355	96	129,410
Medicine					
DPT Vaccines (20 doses/vial) - 3 per child	Doses	0.068	1,694	13	21,169
OPV (20 doses/vial) - 3 per child	Doses	0.068	1,700	13	21,250
Measles Vaccine (10 doses/vial) - 1 per child	Doses	0.027	680	38	25,840
BCG (20 doses/vial) - 1 per child	Doses	0.027	680	13	8,500
Hepa B (10 doses/vial) - 3 per child	Doses	0.068	1,700	120	204,000
Syringe + Buffer	Doses	0.190	4,754	10	47,535
Other					
RHU Overheads	Test	0.027	677	61	41,322
Subtotal					614,707

Key elements of costing vaccination delivery include:

- **Accomplishment and Target.** Given average fertility in the Philippines, the annual birth cohort represents around 3% of the population. For an average population per RHU of 25,000 – the birth cohort requiring vaccination is 750 children. A typical accomplishment was found to be about 563, or 75% of the target
- **Utilization.** Contact, or utilization rates, with various members of RHU staff to attain the above accomplishment were estimated. To fully vaccinate 750 children a doctor is estimated to provide 135 contacts per year. Consequently, a utilization rate of 0.005 is included. A utilization rate of this order times the catchment population of 25,000 yields an annual number of vaccination contacts for a GP of 135. Utilization rates of 0.04 and 0.05 were assumed for nurses and midwives at the RHU.
- **Consultation Costs.** Unit costs are multiplied by the number of contacts per year to calculate total consultation costs for vaccination services. In the cases of the RHU doctor, it is estimated that 135 consultations are provided per year for the total RHU population, at an average cost of 109 pesos per contact. The total doctor cost for

vaccination is therefore 135 multiplied by 109 pesos to generate an annual total cost for this staff category. A similar costing method is used for other staff at the RHU.

- **Medicines and tests.** The average unit costs of medicines and tests provided at RHUs are multiplied by their respective unit costs to estimate overall total costs. The costs of these commodities are included despite being provided by the national government.
- **RHU Overheads.** The RHU overhead cost (MOOE) is also assumed to be fixed and is allocated back to specific RHU activities based on the relative utilization of the doctor. The overhead cost for reproductive services is estimated to be 41 thousand pesos per year

The total cost of vaccination at the RHU is estimated to be 614 thousand pesos. This overall cost is estimated by adding staff, medicines, testing and overhead costs together.

c. Childhood Diseases.

Infections of the respiratory tract are a major contributor to childhood mortality. The various unit costs and number of contacts assumed for a typical RHU are documented in the following table using results of the survey and RHU accomplishment data.

Typical Annual Rural Health Unit Operations		Utilisation	Units	Unit Cost (Pesos)	Cost (Pesos)
CHILDHOOD DISEASES (CD)	Accomplished				
Consultation	1,196				
Doctor	Contacts	0.096	2,392	109	261,155
Nurse	Contacts	0.144	3,588	99	356,244
Midwife	Contacts	0.239	5,980	96	571,193
Other	Contacts	0.005	120	363	43,421
Medicine					
(Amoxicillian) - 80% of CD GP contacts	Course	0.077	1,914	100	191,358
(Isoniazid, Rifampicin, Prazinanide) - 1% CD GP contacts	Course	0.001	24	12,000	287,037
Cotrimoxazole (800/160mg) - 10% CD GP contacts	Course	0.010	239	200	23,920
Tests					
Complete Blood Count - 5% of CD GP contacts	Test	0.003	72	160	11,481
Urinalysis - 5% of CD GP contacts	Test	0.003	72	80	5,741
Stool Exam - 5% of CD GP contacts	Test	0.003	72	60	4,306
Chest X-ray - 2% of CD GP contacts	Test	0.001	24	200	4,784
PPD - 2% of GP CD contacts	Test	0.001	24	500	11,960
Other					
RHU Overheads	Test	0.096	2,392	61	145,911
Subtotal					1,918,509

Key elements of costing the treatment of childhood diseases include:

- **Accomplishment and Target.** A typical accomplishment was found to be about 1,196 children treated per year. This estimate was arrived at following discussions with RHU staff and using national morbidity statistics.
- **Utilization.** Contact, or utilization rates, with various members of RHU staff to attain the above accomplishment were estimated. To treat 1,196 children a doctor is estimated to provide 2,392 contacts per year. Consequently, a utilization rate of 0.096 is included. A utilization rate of this order times the catchment population of 25,000 yields an annual number of contacts for a GP of 2,392. Utilization rates were assumed for nurses, other (med tech) and midwives at the RHU.

- **Consultation Costs.** Unit costs are multiplied by the number of contacts per year to calculate total consultation costs for childhood disease services. In the cases of the RHU doctor, it is estimated that 2,392 child diseases consultations are provided per year, at an average cost of 109 pesos per contact. A similar costing method is used for other staff at the RHU.
- **Medicines and tests.** The average unit costs of medicines and tests provided at RHUs are multiplied by their respective unit costs to estimate overall total costs. The largest cost is associated with the purchase of antibiotics. For amoxicillin, it is assumed that the drug is required in about 80% of doctor contacts. The total number of units demanded at the RHU is 1,914 courses of amoxicillin per year. Based on a unit cost of 100 pesos, the total cost of this drug is 191 thousand pesos per year. A similar method is used to cost other medicines and tests used to treat childhood diseases.
- **RHU Overheads.** The RHU overhead cost (MOOE) is also assumed to be fixed and is allocated back to specific RHU activities based on the relative utilization of the doctor. The overhead cost for childhood diseases is estimated to be 145 thousand pesos per year

The total cost of childhood diseases at the RHU is estimated to be 1.9 million pesos per year. This overall cost is estimated by adding staff, medicines, testing and overhead costs together.

d. Maternal Health.

Pre and post natal care are key preventive interventions to address maternal morbidity. Both services are elements of the Mother-Baby Package promoted by WHO (Maternal health and safe motherhood program 1994) and are also found in PhilHealth packages. The services that are costed as part of maternal health care include labour, drug and MOOE. Calculations related to the various populations in need of the different services rest principally on the number of births and the number of pregnancies. For the costing analysis is assumed that about 3% of the catchment populations are targets for maternal care each year. This estimate was frequently cited in RHU and has been included in the unit costing and utilization estimates below.

MATERNAL HEALTH (MH)	Accomplished	Utilisation	Units	Unit Cost (Pesos)	Cost (Pesos)
Target	813				
Accomplished - 50%	406				
Consultation					
Doctor	Contacts	0.024	605	109	66,049
Nurse	Contacts	0.028	691	99	68,646
Midwife	Contacts	0.086	2,161	96	206,373
Other	Contacts	0.002	43	96	4,127
Medicine					
Vitamin A	48 pcs	0.005	130	50	6,482
Eye Prophylaxis	Unit	0.005	130	500	32,408
Tests					
Pregnancy Test Kit - 90% of MH GP contacts	Kit	0.014	346	100	34,569
Urinary Analysis - 20% of MH GP contacts	Test	0.002	43	80	3,457
Complete Blood Count - 20% of GP contacts	Test	0.002	43	120	5,185
UTZ - 5% of GP contacts	Test	0.001	22	500	10,803
Tetanus Toxoid vaccine (20 doses/vial)	Test	0.017	432	13	5,617
HSsAg Test - 3% of GP contacts	Dose	0.001	26	200	5,185

Pregnancy Test Kit - 90% of MH GP contacts	Dose	0.014	346	100	34,569
Urinary Analysis - 20% of MH GP contacts	Test	0.002	43	80	3,457
Other					
RHU Overheads	Test	0.035	864	122	52,718
Subtotal					501,621

Key elements of costing maternal care include:

- **Accomplishment and Target.** A typical accomplishment was found to be about 406 mothers cared for per year. This estimate was arrived at following discussions with RHU staff. A target of about 813 per 25,000 was in evidence, as pregnant women represent a little over 3% of the population. About half of pregnant mothers are cared for at the RHU.
- **Utilization.** Contact, or utilization rates, with various members of RHU staff to attain the above accomplishment were estimated. To care for 813 mothers a doctor is estimated to provide 605 contacts per year. Consequently, a utilization rate of 0.02 is included. A utilization rate of this order times the catchment population of 25,000 yields an annual number of maternal related contacts for a GP of 605. Utilization rates were assumed for nurses, other (med tech) and midwives at the RHU.
- **Consultation Costs.** Unit costs are multiplied by the number of contacts per year to calculate total consultation costs for maternal services. In the cases of the RHU doctor, it is estimated that 605 maternal health consultations are provided per year, at an average cost of 109 pesos per contact. The total doctor cost is therefore 605 multiplied by 109 pesos to generate an annual total of 66 thousand pesos. A similar costing method is used for other staff at the RHU.
- **Medicines and tests.** The average unit costs of medicines and tests provided at RHUs are multiplied by their respective unit costs to estimate overall total costs.
- **RHU Overheads.** The RHU overhead cost (MOOE) is also assumed to be fixed and is allocated back to specific RHU activities based on the relative utilization of the doctor. The overhead cost for maternal care is estimated to be 52 thousand pesos per year

The total cost of maternal care provision at the RHU is estimated to be 0.5 million pesos. This overall cost is estimated by adding staff, medicines, testing and overhead costs together.

e. Tuberculosis

Estimates for the size of the population that suffers from tuberculosis rely on information on disease incidence and prevalence. The number upon of positive cases cited in RHU suggests that prevalence is relatively low. It is estimated the number of new positive cases in a typical catchment of 25,000 people is around 78 people.

	Accomplished	Utilisation	Units	Unit Cost (Pesos)	Cost (Pesos)
TUBERCULOSIS (TB)					
Consultation	78				
Doctor	Consultations	0.002	39	109	4,250
Nurse	Consultations	0.002	62	99	6,183
Midwife	Consultations	0.012	311	96	29,743
Other	Consultations	0.000	1	96	74
TB Administration and Other	Lump Sum	0.003	78	53	657
Medicine					
TB Kit (Cat 1 and 3) - all TB patients	Kit	0.003	78	718	55,894

TB Kit (Cat 2) - all TB patients	Kit	0.003	78	1,889	147,054
Tests					
Sputum Exam - 2 per patient	Test	0.006	156	10	1,557
Other					
RHU Overheads	Test	0.003	78	61	4,749
Subtotal					250,162

The total cost of tuberculosis care provision at the RHU is estimated to be 250 thousand pesos. Key elements of costing TB care include:

- **Accomplishment and Target.** A typical accomplishment was found to be about 78 people per year.
- **Utilization.** Contact, or utilization rates, with various members of RHU staff to attain the above accomplishment were estimated.
- **Consultation Costs.** Unit costs are multiplied by the number of contacts per year to calculate total consultation costs
- **Medicines and tests.** The average unit costs of medicines and tests provided at RHUs are multiplied by their respective unit costs to estimate overall total costs.
- **RHU Overheads.** The RHU overhead cost (MOOE) is also assumed to be fixed and is allocated back to specific RHU activities based on the relative utilization of the doctor.

f. Infectious Diseases (Other)

There are a wide range of infectious diseases affecting adults and account for a great deal of RHU staff time and medicines. Assumptions relating to this package of interventions include:

INFECTIOUS DISEASES - OTHER (ID)	Accomplished	Utilisation	Units	Unit Cost (Pesos)	Cost (Pesos)
Consultation	706				
Doctor	Contacts	0.028	706	109	77,062
Nurse	Contacts	0.028	706	99	70,081
Midwife	Contacts	0.028	706	96	67,420
Other	Contacts	0.001	35	53	1,862
Medicine					
(Amoxicillian) - 30% of ID contacts	Course	0.023	565	100	56,466
Tests					
Malaria Smear	Test	0.001	35	100	3,529
Vaginal Smear	Test	0.001	35	150	5,294
Other					
RHU Overheads	Amount	0.028	706	61	43,056
Subtotal					324,770

The total cost of infectious disease (other) provision at the RHU is estimated to be 324 thousand pesos. Key elements of costing other infectious diseases care include:

- **Accomplishment and Target.** A typical accomplishment is estimated to be 706 people per year.
- **Utilization.** Contact, or utilization rates, with various members of RHU staff to attain the above accomplishment were estimated.
- **Consultation Costs.** Unit costs are multiplied by the number of contacts per year to calculate total consultation costs

- **Medicines and tests.** The average unit costs of medicines and tests provided at RHUs are multiplied by their respective unit costs to estimate overall total costs.
- **RHU Overheads.** The RHU overhead cost (MOOE) is also assumed to be fixed and is allocated back to specific RHU activities based on the relative utilization of the doctor.

g. Cardiovascular (CVD)

Wagner et al (2006) suggest that two out of 10 Filipinos above 20 years of age, an estimated 7.76 million in 2003, have diagnosed hypertension. There is a wide variation in hypertension estimates – with the DoH health objectives indicating hypertension morbidity at 523 per 100,000. RHU records also indicate hypertension prevalence of this order. This variation needs further consideration. A CVD package could be designed for the management of cardiovascular risk in individuals detected to have hypertension through opportunistic screening. The package could cover consultation costs associated with measure BMI or waist circumference, looking for features of secondary hypertension by history and physical examination, or checking urine sugar and urine albumin. Medications for use to control hypertension include thiazide diuretics, beta-Blocker, calcium channel blocker and angiotensin converting enzyme inhibitor. The costs and current work load associated with CVD is provided in the following cost estimate

CARDIOVASCULAR	Accomplished	Utilisation	Units	Unit Cost (Pesos)	Cost (Pesos)
Consultation	191				
Doctor	Contacts	0.023	579	109	63,228
Nurse	Contacts	0.023	579	99	57,500
Midwife	Contacts	0.023	579	96	55,316
Other	Contacts	0.001	29	53	1,528
Medicine					
Metoprolol	Box	0.023	579	325	188,212
Tests					
Blood Chemistry	Test	0.001	29	1,000	28,956
Other					
RHU Overheads	Amount	0.023	579	61	35,326
Subtotal					430,065

Key elements of costing CVD care include:

- **Accomplishment and Target.** An accomplishment was found to be about 191 people treated for cardiovascular problems per year.
- **Utilization.** Contact, or utilization rates, with various members of RHU staff to attain the above accomplishment were estimated. In the case of the doctor, it is estimated that the patient has to visit the GP three times per year.
- **Consultation Costs.** Unit costs are multiplied by the number of contacts per year to calculate total consultation costs
- **Medicines and tests.** The average unit costs of medicines and tests provided at RHUs are multiplied by their respective unit costs to estimate overall total costs. The principal medication is assumed to be metoprolol. Each patient is assumed to require 3 boxes per year, giving a demand at the RHU of 579 boxes per year. At a unit cost of 325 pesos per box (median used as average is skewed), an overall RHU expenditure per year of 188 thousand pesos for metoprolol is estimated

- **RHU Overheads.** The RHU overhead cost (MOOE) is also assumed to be fixed and is allocated back to specific RHU activities based on the relative utilization of the doctor.

The total annual cost of CVD care provision at the RHU is estimated to be 430 thousand pesos. This overall cost is estimated by adding staff, medicines, testing and overhead costs together.

h. Diabetes

A significant proportion of the adult population has diabetes, and the number of affected individuals is rising. Complications are the major cause of associated morbidity and mortality. They are classified as macrovascular (affecting large arteries) or microvascular (affecting capillaries and small blood vessels). The major aim of diabetes management is to prevent complications. A package could be developed for:

- **Lifestyle Counseling.** Dietary modification, regular exercise and smoking cessation are recommended to help prevent cardiovascular disease. Lifestyle change also halves the progression from impaired glucose tolerance to type 2 diabetes. As complications are often present in type 2 diabetes at diagnosis, prevention has an important role in reducing complications, as does early detection.
- **Treating Hypertension.** Fifty per cent of people with type 2 diabetes have hypertension (blood pressure > 140/90 mmHg) and systolic hypertension is the main disorder in the elderly. In type 1 diabetes, hypertension is less common but remains an important modifiable risk factor.
- **Control of Dyslipidaemia.** Fibrates such as gemfibrozil can treat diabetic dyslipidaemia, as they increase HDL cholesterol and lower triglyceride level.

RHUs were surveyed to determine the costs and current work load associated with diabetes to develop the following cost estimate. The total annual cost of diabetes care provision at the RHU is estimated to be 194 thousand pesos, with the following cost elements.

DIABETES	Accomplished	Utilisation	Units	Unit Cost (Pesos)	Cost (Pesos)
Consultation	61				
Doctor	Contacts	0.007	185	109	20,231
Nurse	Contacts	0.007	185	99	18,398
Midwife	Contacts	0.011	278	96	26,549
Other	Contacts	0.000	9	53	489
Medicine					
Metformin	Box	0.015	371	288	106,732
Tests					
Fasting Blood Sugar	Test	0.005	130	80	10,377
Other					
RHU Overheads	Amount	0.007	185	61	11,303
Subtotal					194,078

Key elements of costing diabetes care include:

- **Accomplishment and Target.** An accomplishment was found to be about 61 people treated for diabetes problems per year.
- **Utilization.** Contact, or utilization rates, with various members of RHU staff to attain the above accomplishment were estimated. In the case of the doctor, it is estimated that the patient has to visit the GP three times per year.

- **Consultation Costs.** Unit costs are multiplied by the number of contacts per year to calculate total consultation costs
- **Medicines and tests.** The average unit costs of medicines and tests provided at RHUs are multiplied by their respective unit costs to estimate overall total costs.
- **RHU Overheads.** The RHU overhead cost (MOOE) is also assumed to be fixed and is allocated back to specific RHU activities based on the relative utilization of the doctor.

i. Basic Curative and Other

RHUs were surveyed to determine the costs and current work load associated with curative care to develop a unit cost estimate. A wide range of activities are associated with his intervention. So of the more commonly mentioned medications and diagnostics are presented in the following table.

BASIC CURATIVE	Accomplished	Utilisation	Units	Unit Cost (Pesos)	Cost (Pesos)
Consultation	755				
Doctor	Contacts	0.030	755	109	82,387
Nurse	Contacts	0.030	755	99	74,923
Midwife	Contacts	0.075	1,886	96	180,195
Other	Contacts	0.002	38	53	1,991
Medicine					
Amoxicillian - 60% of BC GP contacts	Course	0.018	453	100	45,276
Pain Relief - 50% of GP BC contacts	60ml	0.015	377	100	37,730
Cotrimoxazole (800/160mg) - 20% BC GP contacts	Course	0.019	478	200	47,840
Other					
X-ray	Test	0.002	38	200	7,546
Ultrasound	Test	0.002	38	500	18,865
Other					
RHU Overheads	Test	0.030	755	61	46,031
Subtotal					542,782
OTHER	Accomplished				
Consultation	594				
Doctor	Consultations	0.024	594	109	64,893
Nurse	Consultations	0.024	594	99	59,014
Midwife	Consultations	0.059	1,486	96	141,932
Other					
RHU Overheads	Test	0.024	594	61	36,256
Subtotal					303,663

4. Current Total and Sponsored Program RHU Costs

The cost analysis includes estimates for main budget lines, i.e., personnel, drugs and medical supplies, and other MOOE. Costs are also specified as a total and for the sponsored subpopulation. Following the structure of the RHU costing model, activity costs are specified for reproductive, vaccination and other groupings of RHU activities. It should be noted that all costs are included in the cost analysis whether they are financed by the LGU, or not. Costs such as childhood vaccines and medicines purchased using out-of-pocket finances do not typically appear on RHU expenditure accounts. For the purposes of this costing exercise all these items are included in calculations, and therefore, overall RHU costs are greater than those observed during the survey.

a. Total RHU Costs

The overall expenditure for a typical RHU is calculated to be 5.7 million pesos. Overall costs can be split between sponsored and non-sponsored populations, with the sponsored subpopulation accounting for 0.9 million pesos of expenditure. This level of expenditure represents about 16% of overall RHU costs -- equivalent to the portion this population represents within the catchment. Given the burden of disease and health seeking behavior of sponsored a non-sponsored subpopulations is assumed to be similar, cost allocation between the two populations of this order could be expected.

Table: Annual Expenditure for a Typical RHU

	Unit	Total	Sponsored	Other
Personnel	Million Pesos	3.3	0.5	2.8
Medicine	Million Pesos	1.7	0.3	1.4
Tests	Million Pesos	0.2	0.0	0.2
Other	Million Pesos	0.4	0.1	0.4
Total	Million Pesos	5.7	0.9	4.8

As in the RHU survey, personnel costs were calculate to be the most significant expenditure item for the RHU. At an estimated annual total of 3.3 million pesos, personnel accounts for 57% of overall costs. Medicines, then diagnostics account for the next most important expenditure items. Capital expenditures, such as the amortization of buildings, were not included in the cost analysis. Given this omission, overall costs can be viewed as an under estimate.

Table: Annual Expenditure for a Typical RHU

	Unit	Total	Sponsored (15%)	Other (85%)
Reproductive	Million Pesos	0.6	0.1	0.5
Vaccination	Million Pesos	0.6	0.1	0.5
Childhood Disease	Million Pesos	1.9	0.3	1.6
Maternal Health	Million Pesos	0.5	0.1	0.4
TB	Million Pesos	0.3	0.0	0.2
Infectious Other	Million Pesos	0.3	0.1	0.3
Cardiovascular	Million Pesos	0.4	0.1	0.4
Diabetes	Million Pesos	0.2	0.0	0.2
Curative Basic	Million Pesos	0.5	0.1	0.5
Other	Million Pesos	0.3	0.0	0.3
Total	Million Pesos	5.7	0.9	4.8

The categorization of RHU operations into packages of activities was outlined in the previous section. A summary of costs attributable to each of these activities are outlined in the above table. It is evident vaccination, childhood diseases, the treatment of cardiovascular conditions and basic curative interventions are the most costly elements.

b. Costs for SP Beneficiaries

The cost of outpatient services for the sponsored sub-population accounts for around 16% of total RHU costs. For a typical RHU it is estimated that the sponsored program costs around 0.9 million pesos per year. Given that there are approximately 4,000 sponsored beneficiaries in an average catchment, the costs per sponsored household and beneficiary are approximately 1,089 and 227 pesos respectively.

Table: Annual Expenditure for a Typical RHU

	Total Sponsored (million pesos)	Cost per Sponsored Household (pesos)	Cost per Sponsored Beneficiary (pesos)
Personnel	0.5	639	133
Medicine	0.3	331	69
Tests	0.0	38	8
Other	0.1	83	17
Total	0.9	1,089	227

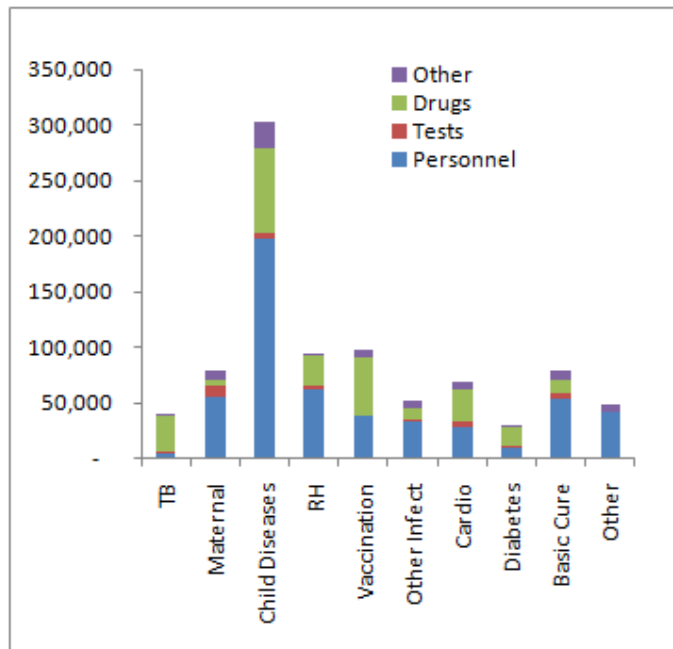
The costs of vaccination, childhood diseases and cardiovascular conditions represent the most significant cost per sponsored household. In the case of childhood diseases, costs are estimated to be 253 pesos per sponsored household or about 53 pesos per beneficiary.

Table: Sponsored Program Expenditure for a Typical RHU

	Total Sponsored (million pesos)	Cost per Sponsored Household (pesos)	Cost per Sponsored Beneficiary (pesos)
Reproductive	0.1	70	15
Vaccination	0.1	119	25
Childhood Disease	0.2	287	60
Maternal Health	0.1	149	31
TB	0.0	40	8
Infectious Other	0.1	93	19
Cardiovascular	0.1	117	24
Diabetes	0.0	32	7
Curative Basic	0.1	72	15
Other	0.0	40	8
Total	0.9	1,025	214

The breakdown of costs by intervention grouping for sponsored program beneficiaries is illustrated in the adjoining figure. It is evident that personnel costs represent the most significant cost element for most interventions. Additionally, childhood diseases and maternal health represent the most significant interventions cost for the RHU.

Figure: Costs for SP Beneficiaries (0.9 million pesos)



When the outpatient benefit package was originally costed, consideration was given to costs

associated with general practitioner consultation and the availing of a limited number of diagnostic tests. Specifically, the costing assumed that each sponsored beneficiary would utilize GP services at least once per year, whereas complete blood count, stool analysis, urinalysis and x-ray would be utilized 0.13, 0.04, 0.16 and 0.11 per beneficiary per year. By combining these utilizations rates with consultation and diagnostic test costs prevailing in the year 2000, a total cost per sponsored household of 300 pesos was calculated.

If these costs were the only elements to be considered today, then based on current RHU utilization and sponsored program membership, the original allocation of 300 pesos per family would cover the costs of the program. Based on calculations using the RHU model, the total costs of general practitioner consultation and diagnostic tests is about 0.13 million pesos for a typical catchment. This translates into about 161 pesos per enrolled family. The lower than budgeted average cost largely is driven by the low utilization rate of 0.37 RHU visits per beneficiary per year.

c. RHU Utilization

A key finding of the survey was the low utilization of RHUs. This finding is supported by previous field research conducted by Abt and Modol. A number of reasons could be responsible for this finding. Efforts to promote the use of preventive and curative care services in RHUs should be especially encouraged by PhilHealth This includes informing members about the benefits of their PhilHealth membership card (such as free care and drugs at the RHU and a limited benefit package at the hospital) with the objective of increasing utilization of services among the insured.

Survey results suggest that utilization is below 0.37 RHU visits per person per year. Current staff capacity is sufficient to manage this workload. In the future, increased utilization may result in additional staff being required to deliver quality service. Contact rate assumptions for doctor, nurse, midwife and other staff categories are outlined in the following table for the various categories of interventions presented in the costing.

- **Doctor.** All doctor consultations are assumed to occur at the RHU and be reflected in PhilHealth OPB records for the sponsored population. Childhood disease related consultations are estimated to be the most time consuming activity – as it is calculated that 2,392 consultations per year are provided. The total number of doctor consultations per year for all activities is estimated to be 6,375 at a utilization rate of 0.37 RHU visits per year for people residing in the RHU catchment
- **Nurses.** A staff capacity of two nurses per RHU was estimated for a typical RHU. These two staff are assumed to provide 9,298 consultations per year
- **Midwife.** A complement of 5 midwives per RHU catchment was assumed, although one was typically based at the RHU and the remainder moved between the RHU and lower level primary health facilities. The number of midwife contacts at the RHU and other facilities is provided in the table. It is assumed that 1/5 midwife contacts occurred at the RHU, while 4/5 occurred outside of the RHU.
- **Joint Consultations.** Many RHU consultations at the RHU involved more than one staff member. For example one patient may see a doctor and a medical technician, or a nurse and a doctor as part of one visit. When calculating workloads at the RHU it is assumed that each patient visit entails contact with two staff members during a single visit. In the case of midwives at other facilities, only one contact per staff member per visit is assumed.

The assumptions associated with an RHU utilization rate of 0.37 contacts per person per year are outlined in the following table.

Table: Utilization for a Typical RHU

	Unit	Total	Sponsored	Other
Reproductive				
Doctor - RHU	Contacts	374	60	314
Nurse - RHU	Contacts	1,121	179	942
MidWife - RHU	Contacts	449	72	377
MidWife - Other	Contacts	1,794	287	1,507
Other - RHU	Contacts	75	12	63
Vaccination				
Doctor - RHU	Contacts	135	22	114
Nurse - RHU	Contacts	1,016	163	854
MidWife - RHU	Contacts	271	43	228
MidWife - Other	Contacts	1,084	173	910
Childhood Disease				
Doctor - RHU	Contacts	2,392	383	2,009
Nurse - RHU	Contacts	3,588	574	3,014
MidWife - RHU	Contacts	1,196	191	1,005
MidWife - Other	Contacts	4,784	765	4,019
Other - RHU	Contacts	120	19	100
Maternal Health				
Doctor - RHU	Contacts	519	83	436
Nurse - RHU	Contacts	691	111	581
MidWife - RHU	Contacts	432	69	363
MidWife - Other	Contacts	1,728	277	1,452
Other - RHU	Contacts	43	7	36
TB				
Doctor - RHU	Contacts	39	6	33

Nurse - RHU	Contacts	62	10	52
MidWife - RHU	Contacts	62	10	52
MidWife - Other	Contacts	249	40	209
Other - RHU	Contacts	1	0	1
Infectious Other				
Doctor - RHU	Contacts	706	113	593
Nurse - RHU	Contacts	706	113	593
MidWife - RHU	Contacts	141	23	119
MidWife - Other	Contacts	565	90	474
Other - RHU	Contacts	35	6	30
Cardiovascular				
Doctor - RHU	Contacts	579	93	486
Nurse - RHU	Contacts	579	93	486
MidWife - RHU	Contacts	116	19	97
MidWife - Other	Contacts	463	74	389
Other - RHU	Contacts	29	5	24
Diabetes				
Doctor - RHU	Contacts	185	30	156
Nurse - RHU	Contacts	185	30	156
MidWife - RHU	Contacts	56	9	47
MidWife - Other	Contacts	222	36	187
Other - RHU	Contacts	9	1	8
Curative Basic				
Doctor - RHU	Contacts	151	24	127
Nurse - RHU	Contacts	755	121	634
MidWife - RHU	Contacts	377	60	317
MidWife - Other	Contacts	1,509	241	1,268
Other - RHU	Contacts	38	6	32
Other				
Doctor - RHU	Contacts	594	95	499
Nurse - RHU	Contacts	594	95	499
MidWife - RHU	Contacts	297	48	250
MidWife - Other	Contacts	1,189	190	999
Total - Annual RHU Contacts	(Contacts)	18,719	2,995	15,724
RHU Vists (2 staff per visit)	(per year)	9,360	1,498	7,862
Annual Utilisation Rate	(per person)	0.37	0.37	0.37

A higher utilization scenario of 0.74 RHU visits per person per year is added to the baseline estimate of 0.37 RHU visits per person per year to estimate the cost implications from an increase in utilization. It is evident that overall RHU costs increase from 5.7 to 7.3 million pesos per year with increased patient demand for RHU services. The increased expenditure is largely driven by increased expenditure on medications

For the higher utilization scenarios it is computed that no additional doctors would have to be employed. Corresponding with a utilization scenario of 0.74 RHU visits per person per year, around 12 thousand consultations per year would have to be made by the doctor. This is about 233 consultations per week. Most doctors in the survey suggested that they could see up to 250 patients per week – therefore current capacity is just sufficient at this work load.

Table: Total Expenditure for a Typical RHU at Current and Increased Utilization

	0.37 Contacts per Beneficiary per Year	0.74 Contacts per Beneficiary per Year
Cost at RHU (million pesos)		
Reproductive	0.6	0.8
Vaccination	0.6	0.7
Childhood Disease	1.9	2.6
Maternal Health	0.5	0.6
TB	0.3	0.5
Infectious Other	0.3	0.4
Cardiovascular	0.4	0.5
Diabetes	0.2	0.2
Curative Basic	0.5	0.8
Other	0.3	0.4
Total	5.7	7.3

C. National Costs of Outpatient Services

1. Total and Sponsored Member National Costs

The national costs of outpatient service provision at the RHU level can be estimated by multiplying outpatient costs for a typical RHU by the national population. A catchment population of 25,000 people was estimated for a typical RHU. Given the total population of the Philippines is around 88.6 million people, average costs for a population of 25,000 need to be multiplied by a factor three and a half thousand (eg. 88.6 million divided by 25,000) to calculate overall national estimates of outpatient services costs.

This aggregate cost is calculated for the range of outpatient services and for the base utilization scenario of 0.37 RHU visits per person per year in the following table. It is evident that the overall cost of outpatient services is 20.1 billion pesos. The national costs of the various groupings of outpatient services are also evident, with childhood diseases being the largest cost item. Based on calculations included in the analysis, it is estimated that the outpatient treatment of all childhood disease at all RHUs in the Philippines would total 6.9 billion pesos per year.

Table: National Expenditure for Outpatient Services

	Unit	Total	Sponsored	Other
Reproductive	Million Pesos	2,070	331	1,739
Vaccination	Million Pesos	2,187	355	1,833
Childhood Disease	Million Pesos	6,872	1,100	5,773
Maternal Health	Million Pesos	1,682	269	1,413
TB	Million Pesos	910	146	764
Infectious Other	Million Pesos	1,160	186	974
Cardiovascular	Million Pesos	1,530	245	1,285
Diabetes	Million Pesos	687	110	577
Curative Basic	Million Pesos	1,944	311	1,633
Other	Million Pesos	1,078	172	905
Total	Million Pesos	20,120	3,224	16,896

Costs associated with the provision of outpatient services for the sponsored population account for 16% of all costs. Given the overall cost is estimated to be 20.1 billion pesos, the sponsored population account for around 3.2 billion pesos per year. This amount is greater than PhilHealth contributions to the sponsored program in 2007. In this year the corporation contributed 613 million pesos for the sponsored program through capitation.

III. RESULTS AND RECOMMENDATIONS

The final section of the report outlines key results and any needs for further research, under the following headings.

A. Summary of Results

It is evident that the cost of delivering all outpatient services for sponsored members totals 0.9 million pesos for a typical RHU when all costs are considered. This cost is equivalent to 1,025 pesos per sponsored household. Not all outpatient costs were identified to be covered by the PhilHealth sponsored program when it was initially devised. Only doctor consultation and a limited number of diagnostic tests were targeted for support. Based on current utilization, these elements of outpatient services only amount to 161 pesos per enrolled family. The 300 peso per family premium estimate originally calculated for the outpatient benefit package sufficiently covers costs.

Costs for a typical RHU were aggregated to the national level. Total national cost at current utilization was estimated to be 458 million pesos, when GP consultation and testing was considered. This cost increases to over 3 billion pesos if all outpatient related costs are included. There is a large difference between the cost of the basic OPB package and that of all outpatient services due to the inclusion of non-doctor staff costs, along with the inclusion of medicines and other overhead expenses. Given this large cost difference, a number of new packages could be identified and itemized for costing purposes. For example, smaller packages targeting chronic diseases such as hypertension, diabetes and COPD could be individually specified.

B. Discussion of Results and Future Research

New Packages. Modol (2008) found that most currently available OPB interventions seem at least fairly cost-effective, and do not have clear alternatives. However, some major conditions are not adequately addressed, with chronic diseases most urgently requiring attention. The costs of including new packages are outlined in the table below and discussed in the following text.

Table: Cost of Sponsored Outpatient Services

	Unit	Total Sponsored (million pesos)	Cost per Sponsored Household (pesos)	Cost per Sponsored Beneficiary (pesos)
Reproductive	Million Pesos	0.1	112	23
Vaccination	Million Pesos	0.1	118	25
Childhood Disease	Million Pesos	0.3	372	78
Maternal Health	Million Pesos	0.1	91	19
TB	Million Pesos	0.0	49	10
Infectious Other	Million Pesos	0.1	63	13
Cardiovascular	Million Pesos	0.1	83	17
Diabetes	Million Pesos	0.0	37	8
Curative Basic	Million Pesos	0.1	105	22
Other	Million Pesos	0.0	58	12
Total	Million Pesos	0.9	1,094	228

- **Cardiovascular.** The cost of providing cardiovascular outpatient services was estimated to be 0.1 million pesos for sponsored members in a typical RHU setting. If this cost was divided by the sponsored population, then the cost per sponsored household is 83 pesos per year. This cost includes doctor, other staff, testing and medication costs. If cost elements already covered in the existing OPB package were excluded, then it would cost 73 pesos per member per year to package non-doctor staff, medicine and tests in a cardiovascular outpatient costs.
- **Diabetes.** The cost of providing diabetes outpatient services to sponsored members in a typical RHU is less than 0.1 million pesos per year. This modest cost is driven by low diabetes prevalence assumptions used in the analysis. If cost elements already covered in the existing OPB package were excluded, then it would cost 33 pesos per member per year to package non-doctor staff, medicine and tests in a diabetes outpatient costs.
- **Integrated Package of All Outpatient Services (referred to as OPB Plus at ExeComm).** If the costs of all outpatient services were included in an integrated package, then the package would encompass 1,094 pesos in services per year. This cost is estimated by dividing 0.9 million by the number of sponsored families in the catchment

Prevalence of Disease. Modol (2008) and research at PhilHealth have identified the need to develop OP packages that match emerging disease trends in the Philippines. Such diseases include hypertension and diabetes. Cost estimates produced in this study suggest that these diseases are significant, yet have much lower impact when compared to childhood diseases. Further research is required to determine the prevalence of chronic disease problems. Currently available RHU accomplishment records have low hypertension and diabetes burden of disease estimates.

Cost Implications for PhilHealth. The total amount that Philhealth paid for benefits for 2007 was 18.5B. The sponsored program represents a minor part of the corporations operations, yet is critical in targeted poverty alleviation. In total, 613 M was paid for capitation in 2007, accounting for around 3% of all benefit payments. The total cost of all outpatient care in 2007 (OPB Plus) is estimated in this costing study is around 3.2 billion. This cost is equivalent to around 20% of all PhilHealth benefit payments. Clearly the corporation cannot support all of these costs – therefore packages targeting key diseases and appropriate cost sharing arrangements with local and national government, need to be developed.

Table: National Costs of Sponsored Program Outpatient Services at Current Coverage and Universal Coverage of Poor Filipinos

	Unit	Current Coverage	Universal Coverage
Reproductive	Million Pesos	331	497
Vaccination	Million Pesos	355	532
Childhood Disease	Million Pesos	1,100	1,649
Maternal Health	Million Pesos	269	404
TB	Million Pesos	146	218
Infectious Other	Million Pesos	186	278
Cardiovascular	Million Pesos	245	367
Diabetes	Million Pesos	110	165
Curative Basic	Million Pesos	311	467
Other	Million Pesos	172	259
Total	Million Pesos	3,224	4,836

Based on current coverage, the cost of all outpatient services for sponsored members is estimated at about 3.2 billion pesos. If all poor people were covered the national cost would increase to 4.8 billion pesos per year.

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Rural Health Unit Questionnaire

All information will be treated in strict confidence

This worksheet forms part of a project designed to determine unit and total costs implications associated with development options for the Outpatient Benefit Package

SECTION A: BACKGROUND DATA

Questionnaire

Name of Enumerator: _____

Date visited : _____

RHU Details

Name of RHU Facility: _____

Municipality: _____ Province: _____

Officer Interviewed: _____

Total population living in area served by RHU _____
(For example number of Barangays, and associated populations)

Total number of indigents living in catchment area of facility: _____

Total number of indigents in catchment area who are enrolled in PhilHealth SP: _____
(this will require to have access to PHIC data prior to visit the facility)

Date of accreditation with PhilHealth for IP contract: _____

RHU Human Resources (for 2007) – Circle full time equivalent per year. For example part time staff may only work 3 days per week. Therefore include time worked at proportion of full time equivalent

Physicians 3 2.5 2 1.5 1 0.5 0

Nurses 3 2.5 2 1.5 1 0.5 0

Mid wife 3 2.5 2 1.5 1 0.5 0

Technicians 3 2.5 2 1.5 1 0.5 0

Other 3 2.5 2 1.5 1 0.5 0

Maximum Number of Consultations per Week.

In your opinion please specify the maximum number of consultations your current staff capacity can manage

Physician_____

Nurse_____

Mid wife_____

Technician_____

Other_____

Monthly salary (for 2007)

Physician, Average monthly salary ('000P)_____.Paid by_____

Nurse, Average monthly salary ('000P)_____.Paid by_____

Mid wife, Average monthly salary ('000P)_____.Paid by_____

Technician, Av monthly salary ('000P)_____.Paid by_____

Other, Average monthly salary ('000P)_____.Paid by_____

Comments and notes:_____

Note, paid by should be specified as national government, province, municipality, donations, Phil health capitation, NGO, donors, or other.

Pharmaceuticals

Please provide a list of all pharmaceuticals supplied to the RHU in 2007

SECTION B: RHU FINANCIAL DATA
NOTE - IF DATA CANNOT BE SUPPLIED BY RHU, PLEASE GO TO SECTION C

Pharmaceutical Purchases

Please supply the price list for each pharmaceuticals sold by the RHU (If possible specify both procurement cost for the LGU and sale price at RHU)

Non Medical Consumables

Please list non medical consumables and levels of expenditure in Pesos (thousands) for 2007

Office supplies _____ Who paid _____

Maintenance products _____ Who paid _____

Cleaning _____ Who paid _____

Water _____ Who paid _____

Electricity _____ Who paid _____

Tel/fax _____ Who paid _____

Gas _____ Who paid _____

Other _____ Who paid _____

Other _____ Who paid _____

Other _____ Who paid _____

Comments and notes: _____

Equipment

Please list expenditure on equipment in Pesos (thousands) for 2007. Note date of purchase

_____ Who paid _____

_____ Who paid _____

_____ Who paid _____

_____ Who paid _____

_____ Who paid _____

Who paid _____

Who paid _____

Comments and notes: _____

Construction. Please list expenditure on construction in Pesos (thousands) for 2007. Include period of construction (eg. Dates)

Who paid _____

Who paid _____

Who paid _____

Who paid _____

Who paid _____

Who paid _____

Who paid _____

Comments and notes: _____

PhilHealth Accreditation. If any equipment, construction or other expenditure was related to accreditation, please outline items. In case accreditation has not been achieved, please stipulate what needs to be purchased, and value. Specify for different packages – TB-DOTS, OPB etc..

Comments and notes: _____

RHU Revenue for 2007.

National Government _____ '000 P

Province Government _____ '000 P

Municipal Government _____ '000 P

User Fees _____ '000 P

PhilHealth Capitation _____ '000 P

Donor _____ '000 P

Other _____ '000 P

Summary of Rural Health Unit Expenditure for 2007

Please include expenditure ('000 Peso) for each cost item and source of finance (eg. who paid)

	National Govt	Province	Municipality	User Fee	Phil-Health capitation	Donor	Other
Personnel							
Pharmaceutical							
Non-Medical Consumables							
Construction							
Equipment							
Other							
Total							

Should collect official budget expenditure. Often management is centralized in the municipality accountancy department

SECTION C: RHU ACTIVITIES

Specify activities associated with reproductive health, child diseases and vaccination, chronic and infectious diseases prevention and treatment at your RHU

Reproductive Health. Please provide details on the following

Overview. What types of reproductive health services are most commonly provided?

Human Resources. Specify the staff member (s) consulted, typical number of visits for treatment and approximate time per consultation

Pharmaceutical Products for intervention (Include quantities, unit price and total cost for intervention). Specify details

Other Costs associated with reproductive health (eg. Diagnostic tests, other)

Specify details

Child Vaccination. Please provide details on the following

Overview. What types of childhood vaccines are most commonly provided?

Human Resources. Specify the staff member (s) consulted, typical number of visits for treatment and approximate time per consultation

Pharmaceutical Products for intervention (Include quantities, unit price and total cost for intervention). Specify details

Other Costs associated with intervention (eg. Diagnostic tests, other)

Specify details

Childhood Diseases. Please provide details on the following

Overview. What types of childhood diseases are most commonly treated?

Human Resources. Specify the staff member (s) consulted, typical number of visits for treatment and approximate time per consultation

Pharmaceutical Products for intervention (Include quantities, unit price and total cost for intervention). Specify details

Other Costs associated with intervention (eg. Diagnostic tests, other)

Specify details

Maternal Care. Please provide details on the following

Overview. What types of maternal care is most commonly provided?

Human Resources. Specify the staff member (s) consulted, typical number of visits for treatment and approximate time per consultation

Pharmaceutical Products for intervention (Include quantities, unit price and total cost for intervention). Specify details

Other Costs associated with intervention (eg. Diagnostic tests, other)

Specify details

Tuberculosis. Please provide details on the following

Overview. What types of prevention and treatment is most commonly provided for Tuberculosis?. Please specify the numbers receiving intensive and maintenance treatment

Human Resources. Specify the staff member (s) consulted, typical number of visits for treatment and approximate time per consultation

Pharmaceutical Products for intervention (Include quantities, unit price and total cost for intervention). Specify details

Other Costs associated with intervention (eg. Diagnostic tests, other)

Specify details

Other Infectious Diseases. Please provide details on the following

Overview. What types of infectious diseases – such as malaria, AIDS, SARS...are preventive and treatment services most commonly provided for?

Human Resources. Specify the staff member (s) consulted, typical number of visits for treatment and approximate time per consultation

Pharmaceutical Products for intervention (Include quantities, unit price and total cost for intervention). Specify details

Other Costs associated with intervention (eg. Diagnostic tests, other)

Specify details

Cardio vascular Disease. Please provide details on the following

Overview. What types of preventions and treatment is most commonly provided for cardiovascular disease? Please specify the numbers of new and existing patients (eg. existing patients maybe senior citizens requesting follow up consultations...etc) and types of services for each group

Human Resources. Specify the staff member (s) consulted, typical number of visits for treatment and approximate time per consultation

Pharmaceutical Products for intervention (Include quantities, unit price and total cost for intervention). Specify details

Other Costs associated with intervention (eg. Diagnostic tests, other)

Specify details

Diabetes. Please provide details on the following

Overview. What types of preventions and treatment is most commonly provided for diabetes?
Specify for new and existing patients

Human Resources. Specify the staff member (s) consulted, typical number of visits for treatment and approximate time per consultation

Pharmaceutical Products for intervention (Include quantities, unit price and total cost for intervention). Specify details

Other Costs associated with intervention (eg. Diagnostic tests, other)

Specify details

Chronic Obstructive Pulmonary Diseases. Please provide details on the following

Overview. What types of preventions and treatment is most commonly provided for COPD?. Specify for new and existing patients.

Human Resources. Specify the staff member (s) consulted, typical number of visits for treatment and approximate time per consultation

Pharmaceutical Products for intervention (Include quantities, unit price and total cost for intervention). Specify details

Other Costs associated with intervention (eg. Diagnostic tests, other)

Specify details

Basic Curative. Please provide details on the following

Overview. What other basic curative services are commonly provided?

Human Resources. Specify the staff member (s) consulted, typical number of visits for treatment and approximate time per consultation

Pharmaceutical Products for intervention (Include quantities, unit price and total cost for intervention). Specify details

Other Costs associated with intervention (eg. Diagnostic tests, other)

Specify details

SECTION D: OUPATIENT CONSULTATIONS

Rural Health Units – Services. Total number of outpatient consultations for IP and all patients in 2007

All patients (total outpatient consultations)_____

SP 'indigent' patients (total outpatient consultations)_____

PhilHealth (non-SP) (total outpatient consultations)_____

Types of Consultations. (for all patients). (over one typical month, or 1 year, depending on records).

Please review RHUs consultation records and specify by the following categories below. If records are not available, please provide an estimate of what % the specific intervention represents of all outpatient visits. Note, include new and existing patients (eg. existing maybe those people requesting follow-up pharmaceuticals) for each condition.

Consultations

Reproductive health Total _____, or estimate (%) of total _____

Children (vaccination) Total _____, or estimate (%) of total _____

Children (diseases*) Total _____, or estimate (%) of total _____

Maternal care Total _____, or estimate (%) of total _____

Tuberculosis Total _____, or estimate (%) of total _____

Infectious diseases** Total _____, or estimate (%) of total _____

Cardiovascular Total _____, or estimate (%) of total _____

Diabetes Total _____, or estimate (%) of total _____

COPD*** Total _____, or estimate (%) of total _____

Basic curative Total _____, or estimate (%) of total _____

Other Total _____, or estimate (%) of total _____

* eg. Respiratory and diarrheal, ** eg. Malaria, SARS or AIDS, ***Chronic Obstructive Pulmonary Diseases

Tests & counseling

Visual Acetic Screen Total _____

BP Measurement Total _____

Digital Rectal Exam Total _____

Body Measurement Total _____

Breast Examination Total _____

Smoking Counsel Total _____

Lifestyle Counsel Total _____

Blood Count Total _____,

Other* Total _____,

Eg. * Fasting Blood Sugar, peak-flow measurements for COPD, Cholesterol, Creatinine, sputum

Referrals. Indicate the numbers of consultation that involved referral

Referral Total _____(Specify for 2007, or for one month)

What types of medical problems were most referrals associated with?

Comments and notes: _____

Consultations for Sponsored Program Members (Indigents)

Do indigent people have special preventive and curative needs that differ from other members of your community? If yes, please specify in terms of the types of consultations

Comments and notes: _____

Consultations for Sponsored Program Members (Indigents)

Please review RHUs consultation records for **Sponsored Program Members (Indigents)** and specify by the following categories below. If records are not available, please provide an estimate of what % the specific intervention represents of all outpatient visits. Note, include new and existing patients (eg. existing maybe those people requesting follow-up pharmaceuticals) for each condition

Reproductive health Total _____, or estimate (%) of total _____

Children (vaccination) Total _____, or estimate (%) of total _____

Children (diseases*) Total _____, or estimate (%) of total _____

Maternal care Total _____, or estimate (%) of total _____

Tuberculosis Total _____, or estimate (%) of total _____

Infectious diseases** Total _____, or estimate (%) of total _____

Cardiovascular Total _____, or estimate (%) of total _____

Diabetes Total _____, or estimate (%) of total _____

COPD*** Total _____, or estimate (%) of total _____

Basic curative Total _____, or estimate (%) of total _____

Other Total _____, or estimate (%) of total _____

* eg. Respiratory and diarrheal, ** eg. Malaria, SARS or AIDS, ***Chronic Obstructive Pulmonary Diseases

SP (Indigents) Tests. Please include total number of tests and counseling sessions for sponsored program members for 2007. (This is a sub set of the total number of tests specified in a previous question)

Visual Acetic Screen Total _____

BP Measurement Total _____

Digital Rectal Exam Total _____

Body Measurement Total _____

Breast Examination Total _____

Smoking Counsel Total _____

Lifestyle Counsel Total _____

Blood Count Total _____,

Financial Data Questionnaire

All information will be treated in strict confidence

This worksheet forms part of a project designed to determine unit and total costs implications associated with development options for the Outpatient Benefit Package

SECTION A: BACKGROUND DATA

Questionnaire

Name of Enumerator: _____

Date visited : _____

LGU Details

Municipality: _____ Province: _____

Officer Interviewed: _____

Total population living in area served by RHU _____
(For example number of Barangays, and associated populations)

Total number of indigents living in catchment area of facility: _____

Total number of indigents in catchment area who are enrolled in PhilHealth SP: _____
(this will require to have access to PHIC data prior to visit the facility)

Date of accreditation with PhilHealth for IP contract: _____

SECTION B: FINANCIAL DATA

Pharmaceutical Purchases. Are records on product purchases, including date of purchase, unit price, quantity purchased and who paid - available for all of 2007 _____?

If yes, include appendix on questionnaire, in following format. List products by date of purchase.

Name of product	Quantity Received (Include date)	Unit price	Total value	Who paid for purchase
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Non Medical Consumables

Please list non medical consumables and levels of expenditure in Pesos (thousands) for 2007

Office supplies _____ Who paid _____

Maintenance products _____ Who paid _____

Cleaning _____ Who paid _____

Water _____ Who paid _____

Electricity _____ Who paid _____

Tel/fax _____ Who paid _____

Gas _____ Who paid _____

Other _____ Who paid _____

Other _____ Who paid _____

Other _____ Who paid _____

Comments and notes: _____

Equipment

Please list expenditure on equipment in Pesos (thousands) for 2007. Note date of purchase

_____ Who paid _____

_____ Who paid _____

_____ Who paid _____

_____ Who paid _____

_____ Who paid _____

_____ Who paid _____

_____ Who paid _____

Comments and notes: _____

Construction

Please list expenditure on construction in Pesos (thousands) for 2007. Include period of construction (eg. Dates)

_____ Who paid _____

_____ Who paid _____

_____ Who paid _____

_____ Who paid _____

_____ Who paid _____

_____ Who paid _____

_____ Who paid _____

Comments and notes: _____

PhilHealth Accreditation

If any equipment, construction or other expenditure was related to accreditation, please outline items. In case accreditation has not been achieved, please stipulate what needs to be purchased, and value. Specify for different packages – TB-DOTS, OPB etc..

Comments and notes: _____

RHU Revenue for 2007.

National Government _____ '000 P

Province Government _____ '000 P

Municipal Government _____ '000 P

User Fees _____ '000 P

PhilHealth Capitation _____ '000 P

Donor _____ '000 P

Other _____ '000 P

Summary of Rural Health Unit Expenditure for 2007

Please include expenditure ('000 Peso) for each cost item and source of finance (eg. who paid)

	National Govt	Province	Muni- cipality	User Fee	Phil- Health capitation	Donor	Other
Personnel							
Pharmaceutical							
Non-Medical Consumables							
Construction							
Equipment							
Other							
Total							

Should collect official budget expenditure. Often management is centralized in the municipality accountancy department