HEALTH RESEARCH AGENDA OF SOUTH LUZON: A ZONAL REPORT 2006-2010

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TABLE OF CONTENTS

FOREWORD

In 1997, the Philippine Council for Health Research and Development (PCHRD) under the Department of Science and Technology embarked on a pioneering effort in utilizing a grassroots or "bottom up approach" to come out with the research agenda for 2000-2005. The result was a large-scale countrywide series of six zonal consultations and reports that culminated in a national congress and the publication of *Voices from the Grassroots* consolidated national, zonal and regional reports.

Six years passed, and in 2003 the Philippine National Health Research System (PNHRS) was created. It was formalized through an MOU signed on 17 March of that year, led by the Department of Health and the Department of Science and Technology through the Philippine Council for Health Research and Development (PCHRD). The PNHRS involves all the stakeholders in health and health-related systems in the country. Its components are divided into six technical working groups that have since been converted into standing committees. It was acknowledged in a recent international report by WHO as an illustrative example of how a country can get its act together in the area of health research.

The First PNHRS Consultative Assembly was held in June 2004 and featured the highlights and recommendations of the Technical Working Groups regarding mechanisms, strategies, and action plans for the effective, efficient, and equitable implementation of the System. One of the recommendations from the Assembly was the formulation of a unified health research agenda in the country.

Thus, the PCHRD, the Health Policy Development and Planning Bureau-Department of Health (HPDPB-DOH), and the Commission on Higher Education (CHED) joined efforts towards setting the PNHRS unified health research agenda for 2005-2010 for the Philippines. Given a limited budget, the PNHRS sought to reprise the bottom-up approach adopted in the 1997 consultation, albeit on a smaller scale. Part of the undertaking was to verify whether formulation and implementation of the research agenda set forth in 1998 were accomplished and are still relevant to current health issues. Much work has been done since that time, and based on the data as well as deliberations, it was felt that some objectives should be abridged and newer agenda added.

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While most of the zones and some regions, particularly in the Visayas, have gone through the research prioritization activity and have functioning regional research coordinating groups, what was originally Zone 2—consisting of Regions 3, 4, and 5—was composed of disparate research groups and institutions with regional research aggrupations in DOH, CHED and DOST. It posed a particular challenge to try to consolidate or even attempt to unify one research agenda for the zone. The addition and closeness of the regions to the NCR added another dimension to the logistical challenge. Ironically, Zone 2, which was closest to Manila, was the last to attempt to consolidate its research priorities.

In the third quarter of 2005, the newly appointed Executive Director of the DOST-PCHRD, Dr. Jaime Montoya, approached Dr. Charles Y. Yu, who was the previous zonal convenor for Zone 2, in 1997 to be the zonal facilitator for the South Luzon Health Research Agenda Setting project. The South Luzon area would cover regions 3, 4 and 5 as well as the National Capital Region (NCR). The instructions were for the consultations to be as multi-sectoral as possible, to hew to the grassroots approach taken previously, albeit given a smaller budget to work with. Primary data gathering was encouraged but not required. While each region was to do its own prioritization using guidelines and matrices provided with clearly defined objectives, the instruction was for all the regions to agree to a zonal list of top priority research areas for the years 2006-2010 to guide policy-makers, DOH, DOST, CHED, GOs, NGOs, and academe in attaining a common research agenda in conformity with the Unified Health Research Agenda of the PNHRS.

Arriving at a consensus is difficult enough as it is. South Luzon is a mix of landlocked mountainous areas as well as many island groups, especially in Region 4B. It was an enormous logistical challenge to try to accomplish so much within so little time and budget, but our group tried its best to live up to the task thrust upon us. Combining South Luzon with "imperial Manila" or the NCR was an equally difficult challenge, but as stated in the early part of this report, the desired outcome of this entire exercise was to make Metro Manilans in health research more attuned with their brethren who feel left out of the prioritization or decision making process. By defending and seeing how other regions thought and saw things, and by leveling the playing field, it is hoped that the consensus and priorities arrived at in this zone that comprises nearly 44% of the entire Philippines will be reflective of the priorities arrived at on the national level.

During the final meetings, it was strongly expressed that the consensus arrived at in the zone should not be overruled or superimposed by any other "higher" group. The plan to present the final consolidated top 10 research priorities to a panel of experts was therefore scuttled. Judging from the feedback received during the interviews, consultations and consensus-building that went into this work, it is anticipated that users, funders and doers of research here and abroad may be able to utilize the information that was gathered and benefit from the lessons learned, processes, and final outputs of this zonal prioritization project.

I would like to thank PCHRD for again giving us the opportunity to serve, and our regional facilitators and the many, many individuals who devoted thousands of person-hours to make this report possible. As a new father, I hope that my child will live to see a better, healthier, and more prosperous nation that is evidence-based in its decision-making, that fully utilizes its potential and talents, and research for the betterment of its people, rising above its differences, united in its hopes and dreams of a better Philippines.

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ACKNOWLEDGMENTS

My sincerest thanks to our team who, despite our busy schedules, agreed to do our duties as responsible Filipino citizens dedicated to improving health research in this country, and who worked so hard and so well despite all the logistical and time constraints, most especially to our regional facilitators, Dr. Evelyn Yumiaco, Dr. Carmen Tolabing, Dr. Elma Cabrera, Dr. Dennis Teo, Julius, Beth, other members of the PCHRD family, Alan, and Merl; to Dr. Jimmy Montoya for the challenge and the leadership to continue with a grassroots approach to health prioritization; to the many participants in the zonal and regional consultative workshops; to those who participated in the surveys and roundtable discussions; and to the various governmental, local and private institutions and individuals who collaborated to make this project happen .

My thanks also to my family, Dey and newborn son Charles Joachim ”Kim,” for the love, patience and understanding to see this through.

EXECUTIVE SUMMARY

In the third quarter 2005, PCHRD and DOH, under the umbrella of PNHRS, commissioned the *Health Research Agenda Setting in South Luzon* project, with Dr. Charles Y. Yu of the De La Salle University Health Sciences Campus as zonal facilitator. South Luzon was composed of regions 3, 4, 5 and National Capital Region (NCR). Regional facilitators were then chosen: Dr. Evelyn Yumiaco, Angeles University Foundation (AUF) for Region 3, Dr. Carmen Tolabing, De La Salle University Health Sciences Campus (DLSU-HSC), for Region 4, Dr. Elma Cabrera, Bicol Regional Training and Teaching Hospital (BRTTH), for Region 5, and Dr. Dennis Teo, Manila Doctors Hospital (MDH) and Lung Center of the Philippines (LCP), for NCR.

The zonal consultation was primarily tasked to come up with a common zonal health research agenda but also to provide a forum to determine which health problems/issues were common among the regions and what were the peculiarities in the region/zone, and to validate/reconfirm the priorities presented in the regional consultations (and identify areas or concerns that were not addressed or were overlooked in the consultations) as well as past priorities (national level) that have not been addressed (as gleaned from existing databases). It involved a review/assessment of the zone's health situation, health R&D resources, past health researches, and identified gaps, problems, and emerging concerns, to pinpoint zonal/regional priority research areas, document techniques/strategies used in arriving at priorities, and to prepare zonal/regional reports. Subsequently, according to an agreed timeline, the regional facilitators reviewed and analyzed key documents, conducted key informant interviews, conducted surveys (of hospitals, academic and research institutions, LGUs) and focus-group discussions, modified Delphi techniques, and finally conducted regional and zonal consultative workshops that were multi-sectoral and where extensive cross and interdisciplinary, lively and rich discussions predominated.

Demographics

The combined population of South Luzon (comprising regions 3, 4, 5 and NCR) is 35.1 million, representing 44% of the entire Philippine population. There are 23 provinces, 46 cities and 13,738 barangays. The zone represents a major center of industry and commerce, and rapid urbanization. It is the seat of the central government, with headquarters for the executive, legislative and judiciary branches. It also has the highest concentration of academic and research institutions, and has been the major source of health researches. Funding for research over the decades has concentrated on this zone.

The analysis of the population pyramid shows a typical wide-based population pyramid, with a great majority of people being in the young and productive age groups. Poverty indices have shown the incidence of poverty to be 20.9 % for Central Luzon, 10% for NCR, 46% for Bicol, and 20.8% for Region 4. There are wide disparities as far as incidence of poverty is concerned, with the lowest being in the NCR and the highest in Bicol. Within each region there are also provinces that are a mix of the richest and poorest in the country.

Health Situation

Over-all as a zone, key health indices seem to reach international benchmarks for infant mortality rate (IMR) and maternal mortality rate (MMR), with over-all MMR of 65/100,000 which is less than the 86/100,000 benchmark and IMR of 10.6/1,000 which is less than 17/1,000. Crude birth and death rates have been falling over the last five years within the regions and across the zone. MMR are lowest in Region 3 and highest in Bicol region, which noted an increase from last year and is higher than the national average. All the regions (3, 4 and NCR) except Bicol attained the DOH benchmark of less than 86

maternal deaths per 100,000 live births. IMR, said to be the most sensitive indicator of a country's health status, has a low range of 5.98 in Central Luzon to a high of 16.4/1000 in the national capital region, but all regions reached the DOH benchmark of less than 17 per 1000. IMR has been falling dramatically through the years.

There is increasing concern about the persistently high maternal mortality rates and high fertility rates and infant mortality rates in the Bicol region. Significantly, however, while NCR has one of the lowest poverty rates, it almost failed the benchmark for IMR, having the highest among the four regions, an even higher IMR than Bicol, the poorest in the zone.

Mortality

The combined data for the zone comprising regions 3, 4A, 4B, 5 and NCR shows that the leading cause of death is now cardiovascular diseases, with the notable exception of Region 4B where it is ranked at eighth place. Pneumonia is the second leading cause of death across the zone: It is still the leading cause in Region 4B, second in NCR, third in Region 4A, and gradually falling in Region 3 where it is now the fourth leading cause of death. There is a perceptible gradual fall in ranking of pneumonia over the past decade, with the notable exception of Region 4B. Cancer continues to climb and is now the third leading cause of death in the zone, with regions 4A and 4B ranking it as the second leading cause of death. Cerebrovascular disease ranks as the fourth leading cause of death. Notable is the fact that in the zone, three out of the top five leading causes of mortality are the lifestyle-related disorders (LRDs) namely cardiovascular, cancer and cerebrovascular diseases. Because of non-standardization in the nomenclature, particularly in cardiovascular and cerebrovascular diseases, there is a possibility that this data is actually still underestimated. PTB ranked fifth in the zone, in contrast to nationwide statistics where it is now the sixth leading cause of death. This may have been influenced by PTB ranking as the third leading cause of death in Bicol and the fifth leading cause in NCR. Accidents and trauma ranked sixth overall, but interestingly is nowhere to be found in NCR. COPD is ranked seventh and again, it is not in the top 10 in NCR, where it is expected to be higher given the pollution and crowding. Notable tail-enders occupying the eighth to tenth rank are diabetes mellitus, kidney diseases, and diarrhea. In Region 4B, unknown causes are ranked at ninth place, and are an area that should be looked into.

Morbidity

For the leading causes of morbidity across the zone, the top three are respiratory, namely acute respiratory infection (ARI), bronchitis, and pneumonia. It was noted in the consultations and in the observations of the regional and zonal facilitators that there is a problem in the non-standardization of terms with ARI, LRI, bronchitis and pneumonia being reported. It is suggested that DOH, national professional societies, accreditation groups like PhilHealth and other concerned agencies like NCSO meet to iron out these problems in definitions and to conform with national and international standards in disease nomenclature like ICD10. Diarrhea is still ranked fourth and one of the top 10 causes of morbidity across all regions (including its rank as second in NCR), while hypertension is also an increasing cause of morbidity among the top five causes of morbidity. Again, while NCR seems to be showing increases in mortality related to lifestyle-related disorders, it is still plagued by developing country concerns such as diarrheas and respiratory disorders. The sixth to tenth leading causes of morbidity in the zone vary widely, with influenza, pulmonary tuberculosis, urinary tract infection, asthma, parasitism, and skin diseases among those most prominently mentioned.

Health Facilities

According to DOH statistics, South Luzon has a total of 787 hospitals (representing 46% of all hospitals nationwide), 66.1% of which are private and 33.9% government. The hospital bed to population ratio ranges from a low 1:980 in NCR to a high 1:1390 in the Bicol region. RHUs total 1012; as of 1999 there were a total of 2,405 RHUs nationwide, so that the total RHUs in the zone comprise 42% of RHUs nationwide.

Health Researches

Consolidating the PCHRD-DOH-CHED research inventory and the researches gathered from regions 4 and 5, 83.4% (1779 of 2132) of the health researches done in the country for the period 1999-2005 emanated from South Luzon. These researches were primarily contributed by NCR (54.7% of the entire zone and 45.7% of the entire country).

Leading Zonal Research Priorities

Identification of gaps, problems, and emerging concerns through consultative workshops reflected common grievances. These mainly concerned the paucity in data and information, and lack of dissemination of health information for decision-making from central to region to local levels and even within regions and provinces. Across the zone, a lack of coordination was observed among health research related groups, NGOs, GOs and academic institutions. One thing that became obvious from the beginning of this project was the seemingly widespread impression among both facilitators and respondents that the results of the zonal and regional priorities (of PCHRD and DOH) in 1998 and 2000 were not disseminated and were unknown to many stakeholders. Availability of information or data was often repeatedly identified as a major felt need, research was often identified as a low area of priority despite the realization of evidence-based and informed decision making by local, regional, government, NGO and academic circles consulted.

The gathering of primary data on health research was likewise disappointing, as there was no general source or body tasked to gather, monitor and supervise health researches identified as priority areas at all levels. Information gathered was very limited and affected the manner in which the status of health resources and researches were determined. (More details are provided in the individual regional reports.)

After extensive discussions in a zonal consultative prioritization meeting, the following top 10 priority research concerned were agreed upon by consensus: (1) Database standardization and integration/health information system (including improvement in the accuracy and validity of the death certificates, the basic source of mortality information to more advanced utilization and standardization of nomenclature and disease/disorder specific databases); (2) environmental and occupational health; (3) lifestyle related diseases/disorders including cancer, cardiovascular and cerebrovascular diseases, and diabetes mellitus; (4) infectious diseases, which include multi-drug resistant tuberculosis and paragonomiasis, particularly in Region 5; (5) health technology (including issues on alternative medicine, nutraceuticals, and genetically modified organisms (GMOs); (6) policy health system and standards, particularly on STDs, cancer, domestic violence, bioterrorism, and emerging diseases such as avian flu; (7) research information system (including manpower and research capacity, which encompassed outmigration and the brain drain); (8) health care delivery/financing (9) poverty-related health concerns, including researches on the urban poor, utilization of health services, quality of care issues, cost-effectiveness of interventions; (10) special groups including maternal and child issues, which gained special consideration in the light of the regional presentations, showing that of the different significant health indicators in the country, zone and region, it is in the area of maternal health that the Philippines is falling behind. On the other hand, progress has been made in

such areas as infant mortality and nutrition; there has even been a decline in some infectious diseases, notably diarrhea; and there has been a relative decrease in deaths from pneumonia and some improvement in areas such as TB. However, there are also notable increases in lifestyle disorders such as cardiovascular and cerebrovascular diseases, as well as cancer, COPD, diabetes ad trauma/accidents.

There is a great felt need for strong central and regional coordinating bodies similar to those envisioned in an expanded and strengthened PNHRS. Such bodies would be empowered and given the necessary resources in terms of manpower and funding to gather, oversee, monitor and help in the implementation of priority research topics. The priority list created in this project should be widely disseminated, perhaps through the same groups that were involved in this process, but likewise to be all-inclusive, to also look beyond the familiar groups and personalities to cross-fertilize with other disciplines. The interest expressed in linking health and agricultural experts to do research in avian flu is an example of the potential for expanding beyond the current horizon. The paucity of resources for health research should spawn innovation and an efficient use of limited resources, as well as seeking partnerships among non-traditional but similarly concerned sectors and agencies.

I. METHODOLOGY

A. CHOOSING THE REGIONAL FACILITATORS

The zonal facilitator consulted various regional leaders and groups and, after consultations with PCHRD, sought out four regional facilitators: (1) Dr. Evelyn Yumiaco of the Angeles University Foundation (AUF) for Region 3; (2) Dr. Carmen Tolabing of the De La Salle University Health Sciences Campus (DLSU-HSC) for Region 4; (3) Dr. Elma Cabrera, Bicol Regional Training and Teaching Hospital (BRTTH) for Region 5; and (4) Dr. Dennis Teo, Manila Doctors Hospital (MDH) and Lung Center of the Philippines (LCP) for the National Capital Region (NCR).

Common features of the four were (1) most had been PCHRD scholars or were supported by PCHRD in the past; (2) all were interested in research; and (3) from the perspective of the zonal facilitator and with proper consultation with PCHRD, all were adjudged to possess the necessary qualities and people skills to convene various stakeholders across their regions to come up with a common research agenda given a short period of time. A desired aftereffect/fall-out effect/residual effect of the entire process was that each region would form the core of a nascent/budding Coordinating Research Group, drawing from the participants of the consultation process itself and with the facilitators representing the institutions from which the regional consultations took place.

The first organizational meeting of regional facilitators for regions 3, 4, 5 and NCR was held September 7, 2005 at the conference room of Quezon Institute, where an overview of the process was presented by the zonal facilitator and PCHRD, and a briefing document which contained a proposed matrix for arriving at priorities for research and development was distributed. The difference from the 1998 zonal classification was that NCR was now considered part of the South Luzon zone and not independent from it.

B. METHODOLOGIES UTILIZED

During the preparatory phase for the zonal and regional consultations and eventual write-up, the team followed the suggested guidelines outlined by PNHRS (PCHRD/DOH/CHED). The methodologies and matrices suggested by PCHRD for the consultations are listed in Annex A.

Each region was given the liberty to follow which of the following methods were to be utilized. Table 1 below summarizes the various methodologies utilized by the regions as well as the zone.

Table 1. ACTUAL METHODS EMPLOYED IN REPORTS AND CONSENSUS DEVELOPMENT

Methodology employed	Zone	Region 3	Region 4	Region 5	NCR
1. Assessment of Health Situation					
Desk Review	X	X	X	X	X
Key Informant Interview (KII)	X	X		X	
Survey		X			
2. Assessment of Health R & D Resources					
Desk review	X		X	X	X
KII				X	
Survey		X	X		
3. Identification of Gaps, Problems and Emerging Concerns					
Desk review	X		X	X	X
FGD			X		
Survey		X	X		
KII		X			X
Core Group Meeting				X	
4. Identification/ Validation of Priority R&D Areas					
Consultative Workshop	X	X	X	X	
Core Group Meeting				X	
RTD					X
Survey					X

Assessment of health situation

The following methods were utilized:

1. Desk review - The zonal and all regional facilitators were given a dossier of documents for their perusal and analysis. This consisted of the following documents:

a. DOST-PCHRD regional reports for research priorities (1999-2004) from the zonal projects
b. DOH health priorities (2000)
c. NEDA regional health reports
d. DOH health statistics
e. CHD reports and updates
f. NCSO statistics
g. Researches from various GOs, NGOs, academic and research institutions

In addition, individual facilitators, on their own initiatives, gathered additional documents from PCHRD, CHED, DOH, regional technical reports, institutional publications, and other relevant information.

2. Key informant interview (KII) - Key informant interviews were conducted by the regional facilitators. In particular, the NCR facilitator started his work by interviewing the previous NCR zonal convenor and UP Manila Chancellor Dr. Marita Reyes and then NIH Executive Director Dr. Jaime Galvez-Tan. Face-to-face interviews were conducted with various stakeholders from public health officials at the municipal, provincial and regional levels, as well as with members of the academe, research groups, and other stakeholders.

3. Survey – Particular to Region 3, surveys were conducted to obtain information on health concerns of provinces/cities and the top ten mortality and morbidity cases and problems in the various hospitals in the region.

Assessment of health R&D resources (includes research) was conducted through desk review, KII, and survey. Actual primary data gathering was utilized and surveys done by regions 3 and 4. For NCR, data provided by PCHRD-DOH-CHED inventory on researches conducted according to general research areas and on who conducted them were also utilized. Review of the highlights of the PNHRS working group of Research Utilization was also analyzed.

Identification of gaps, problems, and emerging concerns

Given budget constraints, the regional facilitators conducted extensive consultations which included desk review, KII, survey, focus group discussion (FGD), and core group meeting. The Region 4 facilitator, for example, conducted FGDs in half of the provinces covered by the region, despite the great distances and spread of CALABARZON and MIMAROPA in traveling to six out of the 10 provinces, even though this was not required. The Region 5 facilitator convened a core group to assist in identifying health-related issues from the data gathered to facilitate and hasten the process of identifying research areas in the consultative workshop.

Identification/validation of priority R&D areas

Regions 3, 4, 5 and the zone conducted consultative workshops for this purpose. The NCR held a round table discussion and a survey (utilizing the Delphi technique). Another option for the priority setting process was the creation of a special group (e.g., Ad Hoc committee) to be consulted for this purpose. This method was utilized particularly by Region 5 to finalize their top 10 health research priorities, given the detail and extensiveness of the research areas discussed.

The regions, through their individual and institutional contacts, were able to tap into a large pool of experts covering a wide spectrum of the research community that extended beyond the traditional health researchers. In particular, more represented were NEDA, agriculture (timely because of the avian flu issue), social sciences, and CHED where more cross-disciplinary discussions were evident and appreciated. However, it must be shared that there were disappointing results from the primary data gathering, particularly in surveys done in Region 3 where only three (25%) out of the 12 universities responded, and 11 (11%) out of 101 government and private hospitals in Region 3.

A detailed regional description of methodologies employed at arriving at the research priorities is extensively discussed in Annex B.

C. METHODOLOGY IN ARRIVING AT A ZONAL CONSENSUS AND RESEARCH PRIORITIES

The zonal consultation and workshop was conducted at the Linden Suites last November 25, 2005 involving around 40 participants. The participants chosen represented the four regions and were composed of a broad multisectoral group in accordance with the terms of this project. Present were members of the academe, government, DOST, DOH, CHED, NGOs, research institutions, and research-oriented personalities (Annex C).

The objectives of the workshop were to give an overview of the different regional health research priorities and how they were arrived at, and to finally agree as a zone on the top 10 research priority areas for 2006-2010, according to a common standard matrix.

Each regional facilitator presented a 15-20 minute overview of the regional consultation and outputs, with time given for clarificatory questions. A common standard format was followed that utilized the following:

(1) description of the region and demographics
(2) health status and statistics
(3) brief description of methodology at arriving at top 10 priorities
(4) 10 leading regional research priorities

The zonal facilitator then gave instructions for the workshops, and the groups were divided into three, with representations from the different regions. Each group was asked to choose a rapporteur and presentor of their top priority research areas.

The following instructions were given:

- Each group was asked to discuss and come up with the proposed priorities for the zone.
- Each group was then asked to give a 15 minute presentation of their zonal priorities, utilizing the recommended standard matrix in Annex A.

To serve as a guide, the zonal facilitator presented a consolidated tabulation of each of the regions' priorities, color coding those that were similar. This table enabled groups to discuss the research areas in a more rational and efficient way (Annex D). Participants within each group were instructed to discuss the priorities as a zone rather than as regional representatives, but to assimilate and incorporate as inputs the

presentations and interactions that they had heard in the morning during the regional highlights presentations and discussions.

There was significant progress within groups to consolidate specific issues into broader areas, as seen in the three groups' presentation of their own top 10 priority list using the suggested standard matrix. Further elucidation of topics could be seen in the individual group presentations and outputs.

At the end of the three group presentations, a consolidated, color-coded list was made with the help of Dr. Alan Feranil (this is shown in Annex E). The list reflected the research topics and the corresponding ranks given by the groups, the computed average ranks, and the resultant ranks. Color-coding was used to indicate how frequently a particular research topic was identified among the groups (i.e., whether they appeared in all three groups, in two groups, or in one group only). The resultant rank was arrived at taking into consideration the computed average ranks and the number of times the research topic was identified by the groups.

The zonal facilitator then presented the consolidated list of zonal research priorities to the plenary for discussion, consensus on ranking, and finalization of the top 10 research priorities for the zone. Objections and points raised by participants were incorporated into this report. Results of the zonal workshop are presented in the latter part of this report.

II. DEMOGRAPHICS

A summary of the demographics of South Luzon as well as individual regions is shown in Table 2.

The combined population of the zone is 35.1 million, representing 44% of the entire Philippine population. Composed of four regions (3, 4, 5 and NCR), the zone has 23 provinces, 46 cities (many highly urbanized), and 13,738 barangays. The zone represents a major center of industry and commerce and rapid urbanization. It is the seat of the central government, with headquarters for the executive, legislative and judiciary branches. It also has the highest concentration of academic and research institutions, and has been the major source of health researches. Over the decades, funding for research has concentrated on this zone. The analysis of the population pyramid shows a typical wide-based population pyramid, with a great majority of people being in the young and productive age groups.

Table 2. DEMOGRAPHIC CHARACTERISTICS IN SOUTH LUZON

Demographic Features	Region 3	Region 4 (A & B)	Region 5	NCR	Entire zone
Population (in millions)	8.2	11.6	5.0	10.3	35.1 million
Provinces	7	10	6		23
Cities	12	13	7	14	46
Barangays	3102	5468	3471	1697	13738

The incidence of poverty was 20.9 % for Central Luzon, 10% for NCR, 46% for Bicol, and 20.8% for Region 4 There are wide disparities as far as incidence of poverty is concerned, with the lowest being in NCR and highest in Bicol. Within each region there are also provinces populated by a mix of the richest and poorest in the country.

REGION 3

Region III (Central Luzon) is known as the rice granary of the Philippines. It measures 2.1 million hectares, or approximately 21,472.08 square kilometers, and lies in the heart of Luzon, the biggest island of the Philippines, comprising 7.1% of the country's total land area. The region is composed of seven provinces namely, Aurora, Bataan, Bulacan, Nueva Ecija, Pampanga, Tarlac and Zambales. There are twelve cities, namely Angeles, Balanga, Olongapo, Cabanatuan, Gapan, Palayan, San Jose, San Fernando, San Jose Del Monte, Munoz, Malolos, and Tarlac. The region has 118 municipalities, 21 congressional districts, and 3,102 barangays.

According to the 2000 census, Central Luzon has an estimated population of 8,200,151, with children and youth comprising 58.34% of the population, adults (25-59 years old) 36.1%, and senior citizens (60 years old and above) 5.45%. Males slightly outnumber the females.

REGION 4

Region 4 is composed of 10 provinces, 13 cities, 215 municipalities and 5468 barangays. The region is divided into Region 4A and Region 4B, with each division made up of five provinces. In the year 2000, Region 4-A sheltered 9.3 million people with a population density of 574.8 persons per square kilometer, and an average annual population growth of 3.76. In contrast, Region 4-B only had 2.3 million inhabitants, with a population density of 78.7 persons per square kilometer and an average annual population growth of 2.49 (NSCB 2004).

REGION 5

The Bicol region lies at the southernmost tip of Luzon. It is bounded on the northeast by Quezon province, east by the Pacific Ocean, southeast by the Samar Sea, and southwest by the Sibuyan Sea. It lies within coordinates 122 to 124.5 degrees longitude and 12 to 14.5 degrees latitude. Bicol has a total land area of about 18,130.5 square kilometers, comprising about 6% of the country's total land area (300,000 square kilometers). The region is composed six provinces, four of them—Camarines Norte, Camarines Sur, Albay and Sorsogon—occupying the tip of the Luzon landmass and two islands, Catanduanes and Masbate. The region also has seven cities, 107 municipalities and 3,471 Barangays. The region has been known to be prone to calamities such as volcanic eruptions (from Mayon Volcano in Albay) and typhoons.

The estimated population as of 2004 was 5,020,471, about 6% of the country's total population. A 2% increase over the previous year's population was noted. The average annual growth rate over the last five years was reported to be 1.73 %. Though lower than the national growth of 2.36%, it is still considered to be rapid because of the high crude birth rate. Population continued to rise despite the high outmigration. Sorsogon was registered as having the highest growth rate at 2.04 and Catanduanes the lowest rate at 1.33%. The population density was reported to be 271.08 per square kilometer in 2003. Bicol is considered as one of the more densely populated regions outside of NCR. Albay is the most densely populated province and Catanduanes the least. Population is relatively young, with the 0-19 years age group, comprising 51% of

the region's population. Seventy-two percent of the population lives in the rural areas. There are more males (51.08%) than females (48.92%).

NCR

The NCR or Metro Manila is the country's capital and major gateway to the nation, despite the fact that it has the smallest geographic land area, representing only 0.21%. Its population of more than 10 million represents 12.3% of the total population of the country, increasing by 1.06% annually and swelling during the work hours. It has the highest basic literacy rate at 97%. Only 10% of the population belongs to the poverty threshold, and less than 3% to the subsistence threshold.

III. OVERVIEW OF THE HEALTH SITUATION/CURRENT HEALTH PROBLEMS

A. HEALTH INDICES

Table 3. KEY HEALTH INDICES

Health indicator	Region 3	Region 4 A / B	Region 5	NCR	Zonal Average
CBR (per 1000)	19.89	20.46 / 22.45	22.8	18.4	20.6
CDR (per 1000)	3.88	4.3 / 3.82	4.3	4.39	4.2
MMR* (per 100,000)	28	39 / 76.96	116	58	65
IMR** (per 1000)	5.98	9.18 / 11.84	9.33	16.4	10.6

Benchmarks: * MMR should be less than 86/100,000
** IMR should be less than 17/1000

Summary of key health indices are shown above in Table 3. Overall as a zone, key indices seem to reach international and DOH benchmarks for IMR and MMR, with overall MMR at 65/100,000 (less than the 86/100,000 benchmark) and IMR of 10.6/1,000 (less than 17/1,000).

Crude birth and death rates have been falling over the last five years within the regions and across the zone. MMR are lowest in Region 3 and highest in Bicol region which noted an increase from last year and is higher than the national average. All the regions (3, 4 and NCR) except Bicol attained the DOH benchmark of less than 86 maternal deaths per 100,000 live births. IMR has a range of a low 5.98 in Central Luzon to a high of 16.4/1000 in NCR, but all regions reached the DOH benchmark of less than 17 per 1000. IMR has been dramatically falling through the years. There is increasing concern about the persistently high MMR, high fertility rates IMR in the Bicol region. However, while NCR has one of the lowest poverty rates, it almost failed the benchmark for IMR, having the highest among the four regions, higher even than Bicol, the poorest in the zone. While the two indices would seem to be diametrically opposed, one would speculate that the high urban poor population, problems in maternal and child care, immunization and sanitation facilities could be contributing factors to the high IMR in NCR.

B. MORTALITY & MORBIDITY

Table 4. LEADING CAUSES OF MORTALITY

MORTALITY Rank	Region 3	Region 4 4A / 4B	Region 5	NCR	South Luzon Zone
1	Heart disease	Heart disease/ Pneumonia	CVD	Ischemic Heart Disease	CVD
2	Cardiovascular diseases	Malignant neoplasm/ Cancer	Respiratory diseases	Pneumonia	Pneumonia
3	Cancer	Pneumonia/ Hypertensive Vascular disease	TB all forms	Cancer	Cancer
4	Pneumonia	Cerebrovascular disease/ TB	Neoplasms	Hypertensive arteriosclerotic CVD	Cerebrovascular diseases
5	PTB	PTB/ COPD	Trauma/ injuries	TB	PTB
6	COPD	Diabetes Mellitus/ Accidents	Diabetes Mellitus	Cerebrovascular diseases	Accidents/trauma
7	Accidents	COPD/ Cerebrovascular Acc	Kidney diseases	Other forms of heart diseases	COPD
8	Diabetes Mellitus	Accidents/ Coronary Artery Disease	Septicemia	Septicemia	Diabetes Mellitus
9	Kidney diseases	Renal failure/ Unknown	Liver Diseases	Diabetes Mellitus	Kidney Diseases
10	Hypertension	Diarrhea and GE/ Heart Disease	Diarrhea	Bronchial Asthma	Diarrhea

The combined data for the zone shows that the leading cause of death is now cardiovascular diseases, dislodging pneumonia which was the leading cause in 1997. The notable exception is in Region 4B, where it is ranked eighth. Pneumonia is the second leading cause of death across the zone—it is still the leading cause in Region 4B, second in NCR, third in region 4A and gradually falling in Region 3 where it is now the fourth leading cause of death. There is a perceptible gradual fall in ranking of pneumonia over the past decade with the notable exception of Region 4B. Cancer continues to climb and is now the third leading cause of death in the zone, with Regions 4A and 4B ranking it as the second leading cause of death. Cerebrovascular diseases ranked the fourth leading cause of death.

Notable is the fact that in the zone, three out of the top five leading causes of mortality are the lifestyle-related disorders (LRDs) namely cardiovascular, cancer and cerebrovascular diseases. Because of non-standardization in the nomenclature particularly in cardiovascular and cerebrovascular diseases, there is a possibility this data is actually still underestimated. PTB ranked fifth in the zone in contrast to nationwide statistics where it is now the sixth leading cause of death. This may have been influenced by PTB ranking as the third leading cause of death in Bicol and fifth in NCR. Accidents and trauma ranked sixth overall but interestingly are nowhere to be found in NCR. Likewise, COPD is ranked seventh but is not in the top 10 in NCR, where it is expected to be higher. Notable tail-enders occupying the eighth to tenth rank are diabetes mellitus, kidney diseases, and diarrhea. Unknown causes are cited as ninth leading cause of death in Region 4B.

Table 5. LEADING CAUSES OF MORBIDITY

MORBIDITY Rank	Region 3	Region 4 4A / 4B	Region 5	NCR	South Luzon Zone
1	ARI	Acute URI /ARI	ARI	Bronchitis	ARI
2	Diarrhea	Acute LRI/ Influenza	Bronchitis	Diarrhea	Bronchitis
3	Bronchitis	Diarrhea and GE/ Bronchitis	Pneumonia	Pneumonia	Pneumonia
4	Pneumonia	Hypertension/ URTI	Diarrhea	URTI	Diarrhea
5	Hypertension	Influenza/ Diarrhea	Hypertension	TB all forms	Hypertension
6	Skin diseases	Pneumonia/ Acute URTI	Influenza	Influenza	Influenza
7	Influenza	Skin diseases/ CARI	Bites	Hypertension	PTB
8	Parasitism	Wounds/ Malaria	Anemia	Parasitism	UTI
9	UTI	PTB/ Pneumonia	TB, all forms	UTI	Parasitism
10	PTB	Diabetes Mellitus/ Hypertension	Asthma	Bronchial asthma	Bronchial asthma

Table 5 shows a summary of the leading causes of morbidity in South Luzon and broken down by region. For the leading causes of morbidity across the zone, the three top leading causes of morbidity are respiratory, namely acute respiratory infection (ARI), bronchitis and pneumonia. It was noted in the consultations and in the observations of the regional and zonal facilitators that there is a problem in the non-standardization of terms with ARI (URTI, influenza, AURI) LRI, bronchitis and pneumonia being reported. It is suggested that the DOH, national professional societies, accreditation groups like PhilHealth and other concerned agencies like the NCSO, meet to iron out these problems in definitions and to conform with national and international standards in disease nomenclature such as ICD10. Diarrhea is still ranked fourth and one of the top 10 causes of morbidity across all regions (including its rank as second in NCR), while hypertension is also an increasing cause of morbidity among the top five leading causes of morbidity. Again, while mortality related to lifestyle-related disorders is increasing in NCR, the region is still plagued by developing country concerns such as diarrheas and respiratory disorders.

The sixth to tenth leading causes of morbidity in the zone vary widely, with influenza, pulmonary tuberculosis, urinary tract infection, asthma, parasitism, and skin diseases among those most prominently mentioned. Noticeable is the predominance of infectious diseases among eight out of the top 10 morbidities for the zone.. Of the lifestyle disorders, only hypertension and bronchial asthma appear in the list.

C. REGIONAL PECULIARITIES

Region 4B provides peculiarities that should be further looked into. Its leading cause of mortality and morbidity are pulmonary infectious diseases (it stands alone in the zone where pneumonia is still the number one killer and cardiovascular deaths a far 9th).

Curiously, cancer is the second leading cause of death in Region 4B which has some of the poorest or poverty stricken provinces (particularly Palawan). Cancer is characterized as a lifestyle related disorder and is expected in more economically productive regions. Also disturbing is the finding that unknown causes ranked ninth in the region, which may call for further investigation.

The health situation of each region in the zone is detailed in Annex F.

IV. STATUS OF HEALTH RESOURCES AND RESEARCHES BASED ON AVAILABLE INFORMATION

A. ZONAL HEALTH RESOURCES

According to the DOH statistics summarized in Table 6, South Luzon has a total of 787 hospitals, 66.1% of which are private and 33.9% government. The hospital bed to population ratio ranges from a low 1:980 in NCR to a high 1:1390 in the Bicol region. RHUs total 1012; as of 1999 there were a total of 2,405 RHUs nationwide, so that the total RHUs in the zone comprise 42% of RHUs nationwide.

Table 6. BREAKDOWN OF HEALTH MANPOWER IN SOUTH LUZON ZONE

	Region 3	Region 4	Region 5	NCR	South Luzon (Total)
Hospitals	208	270	118	191	787*
Public	71	96	49	51	267
Private	137	174	69	140	520
Primary	28.9%				
Secondary	56.5%			29.3%	
Tertiary	14.5%				
Hospital bed: population	1:1197	1:1224	1:1390	1:980**	
RHUs	250	201	128	433	1012
BHS	1356	2175	1096	55**	

Source: *2003 DOH statistics and ** 2002 Philippine Statistical Yearbook

Annex G provides information on health resources by region.

B. ZONAL HEALTH RESEARCHES

Data from the expanded PCHRD-DOH-CHED inventory of health researches conducted from 1999 to 2005 is shown in Table 7. Data includes researches gathered from regions 4 and 5 (in parenthesis). A total of 1779 out of 2132 studies (83.4%) done in the country emanated from South Luzon, with NCR as the major source of researches (45.7%). For the South Luzon zone, 54.7% of researches were contributed by NCR. If the PCHRD-DOH-CHED inventory was the sole source, 71.7% of researches in the country come from NCR.

It seems evident from the reports of regions 4 and 5 in particular that the PCHRD-DOH-CHED inventory has underreporting from regions outside the NCR. This may partly explain the persistent finding that most of the researches and funding come from NCR. However, given the albeit still incomplete list compiled by the regional facilitators who reported from limited but leading institutions in their areas, there is a further need to improve the efficiency of information and data-base gathering, thus justifying the need to prioritize health databases.

The leading health research priorities for South Luzon in 1998 were communicable diseases, non-communicable diseases, and environmental and occupational health. Based on actual researches done in the zone, research on communicable diseases tops the list. There is still an overwhelming predominance of health researches and funding in communicable diseases in NCR, but the consolidated reports seem to show a marked increase in health researches, particularly in Region 4, in the areas of non-communicable diseases and health care delivery.

How regions performed with regard to areas previously identified is difficult to assess in the absence of reliable region-based information on actual health researches conducted at the regional and local levels. The studies reported in the areas of the zone outside NCR seem to be underreported in the PCHRD-DOH-CHED inventory. This seems to be borne out when checked against databases from professional societies and academic institutions in the area. Large training hospitals (De La Salle University and Batangas Regional Hospital are just two examples) known to churn out large numbers of health researches are nowhere to be found in the latest inventory. This is further confirmed in the Region 4 report that lists 743 researches in contrast to the 15 reported in the PCHRD inventory. Researches conducted in regions 3 and 5 likewise seem to be heavily underreported, as are those from academic institutions (such as UPLB); those from NGOs and many donor projects also seem to be absent.

Obviously, the current inventories of health researches seem to be incomplete and fragmented, with a bias toward NCR for obvious reasons. Based on the abovementioned observations, there is a need for PCHRD and PNHRS to ensure a more reliable inventory of health researches. Furthermore, there is a need to collate more comprehensively those researches done in the zone and the regions in particular. The findings also support the need to focus on databases and information as the top health research priority. Availability of data for informed decision-making is a felt need.

A more detailed breakdown of health researches by region and area of concern is shown in Annex H.

Table 7. HEALTH RESEARCHES BASED ON EXPANDED PCHRD-DOH-CHED INVENTORY (1999-2005)

Zonal Ranking (1998) / Research areas	Region 3	Region 4		Region 5		NCR	South Luzon	National Total
1 / Communicable Diseases	4	3	(58)*		(4)*	303	310(372)**	364 (426)**
2 / Non-communicable Diseases			(109)*		(9)*	155	155 (273)**	177(295)**
3/ Environmental/ Occupational Health	2	2	(31)*		(1)*	46	50 (82)**	85 (117)**
5 / Vulnerable Population Mother and Child	4	6	(51)*	1	(8)*	112	123 (182)**	179 (238)**
8 / Health Delivery		1	(72)*		(6)*	108	109 (187)**	175 (253)**
Other Studies (nutrition, herbal, gender, reproductive health, mental health, etc.)	2	3	(422)*	4	(2)*	250	259 (683)**	379 (803)**
Total	12	15	(743)*	5	(30)*	974	1006 (1779)**	1359 (2132)**

* No. of researches in parenthesis per Regions 4 and 5 reports
(Region 4 source comes from DOH, CHED, DLSU and two other institutions. Region 5 source comes from DOH, AMEC and Bicol University.)

** No. of researches in parenthesis per expanded research inventory (i.e, PCHRD-DOH-CHED, and regional reports)

FIGURE 1. BREAKDOWN OF HEALTH RESEARCHES IN SOUTH LUZON

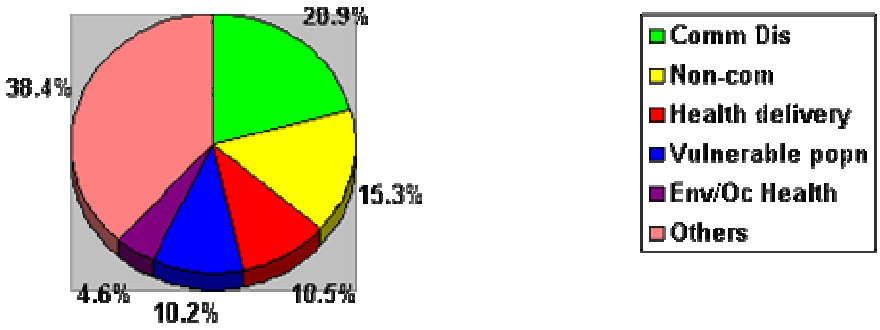

Figure 1 above shows the breakdown of actual research done in the zone during the period 1999 to 2005.

Majority of the researches done in South Luzon were on communicable diseases (20.9%). Non-communicable diseases came second, which comprised 15.3% of total health researches in the zone. These two topics were identified as top research priorities in the zone in 1998. Environmental and occupational health researches were ranked as third research priority in the zone, but in the last five years comprised only 4.6% of the zonal researches. Studies on vulnerable populations were ranked as fifth in the zone and comprised 10.2% of all researches. There is some discordance in the 1998 ranking and the number of actual researches conducted for health delivery. It was ranked as eighth research priority topic in 1998 but placed third in the inventory. Classification may have something to do with this. Health information is not listed; it may have been classified under other studies.

V. HEALTH RESEARCH PRIORITIES

After extensive discussions, the following top 10 priority research concerns were agreed upon by consensus:

(1) Database standardization and integration/health information system (ranging from improvement in the accuracy and validity of death certificates, the basic source of mortality information, to more advanced utilization and standardization of nomenclature and disease/disorder specific databases)

(2) Environmental health and occupational health

(3) Lifestyle related diseases/disorders including cancer, cardio and cerebrovascular diseases, diabetes mellitus

(4) Infectious diseases, which include multi-drug resistant tuberculosis and paragonomiasis, avian flu

(5) Health technology (including issues on alternative medicine, nutraceuticals, and genetically modified organisms (GMOs))

(6) Policy health system and standards

(7) Health research information system (including manpower and research capacity, which encompasses outmigration and the brain drain)

(8) Health care delivery/financing

(9) Poverty-related health concerns, including researches on urban poor, utilization of health services, quality of care issues, and cost-effectiveness of interventions

(10) Special groups including maternal and child issues, which gained special consideration in the light of the regional presentations showing that, of the different significant health indicators in the country, zone and region, it is in the area of maternal health that the country is falling behind; and that progress has been made in such areas as infant mortality and nutrition; some infectious diseases, notably diarrhea, where there has been a decline; pneumonia, where there has been a relative decrease in the number of

deaths; and TB, where there has likewise been some improvement. On the other hand, however, there has been a notable increase in lifestyle disorders such as cardiovascular and cerebrovascular diseases, as well as in cancer, COPD, diabetes ad trauma/accidents.

It may be noted that ranking of the priorities has changed (compared to the initial tabulation in Annex E) as an outcome of the plenary discussions.

There were also some concerns aired regarding the priorities agreed on. One of the participants from CHED strongly raised the point that the Number One priority (database) was not researchable at all. This was quickly clarified by one of the regional facilitators (Dr. Tolabing), who discussed her studies on problems on the accuracy and appropriateness of the death certificates in her province as one example. Another participant shared her concern over the need to mention natural products (herbal medicine among others) explicitly among the highlighted priorities. At the end of the day, through a modified Delphi technique and with the concurrence of all those attending the zonal consultations, the final list was approved.

Table 8 shows the standard matrix of the zone's health research priorities. The paragraphs below the table are an elaboration of the matrix and some of the discussions that took place during the zonal consultative meeting. It is important to note that since many areas of concern were collapsed or integrated into related fields, there is a need to identify more specific areas which are also seen in the individual regional reports in more detail.

There was also a general consensus that whatever would be decided on should be widely disseminated, and that no smaller group of experts should alter the recommendations of the zonal consultation itself.

Table 8. STANDARD MATRIX OF RESEARCH PRIORITY AREAS/TOPICS (COMBINED FINAL ZONAL OUTPUT)

Broad R&D Area [1]	Specific Topic [2]	Rationale [3]	Objective(s) [4]	Responsible Agency [5]	Funding Source [6]
1. Database standardization and integration/health information system (HIS)	Effectiveness and efficiency of HIS databasing Surveillance and monitoring, reliability and nomenclature Standardization in death certificates, impact of retraining MHOs	Growing need for standardization of health information as seen in paucity of databases especially outside NCR and non-standardization in basic nomenclature Deficiencies in creating a comprehensive database of information or researches across DOH,PCHRD, CHED, academe, regional research groups	Analyze the existing database and identify problems in notification of researches/ information and improving information dissemination Determine facilitation factor for comprehensive and reliable HIS	DOH PhilHealth NCSO CHED	DOH PhilHealth PCHRD
2.Environmental and occupational health	Provide more specific, locally-based, objective study on occupational diseases/hazards according to internationally accepted standards Magnitude of health problems brought about by environmental factors Toxic effects of mine tailings in coastal areas	Increasing problems with the environment and its effects on health Air pollution, mining, urbanization and rise in environmentally-linked diseases and disorders require data and information for better decision-making	To determine the magnitude of occupational health problems To determine compliance with occupational health laws Lack of information on above	DOH DENR CHED DOST	DENR Foreign funding ADB USAID

Broad R&D area [1]	Specific Topic [2]	Rationale [3]	Objective(s) [4]	Responsible Agency [5]	Funding Source [6]
3. Lifestyle Related Diseases/Disorders LRDs (CA, CVS, DM, CVD)	Cancer CVD Diabetes Mellitus	Rising death toll from life-style related diseases as evident in latest health statistics on mortality	Determine the M & M of LRDs Program evaluation Development and implementation of clinical practice guidelines (CPGs)	Medical societies DOH Academe	DOH Professional societies
4.Infectious diseases	Prevalence of MDR-TB and Paragonomiasis KAP and factors influencing TB-MDR and paragonimiasis Dengue Emerging Infections Malaria STD	Persistent problem in the zone, 8 out of 10 leading morbidities still under this area	Improve monitoring and surveillance Monitor co-morbidities Capacity-building for emerging infections like avian flu Development of guidelines/ standards for STD	DOH RITM Academe DOST NGOs DepEd	DOH WHO Foreign donors
5. Health technology (alternative medicine/GMOs, nutraceuticals)	Utilization of alternative medicine Role of GMOs and nutraceuticals	Growing popularity and widespread use of nutraceuticals Concerns on safety and efficacy issues	Determine the extent of utilization of GMOs and other health products	PIA, DOST, BFAD, DOH	DOH BFAD
6. Policy health system and standards	Policy Development Human Resources for Health Magna Carta for Health Workers	Determine the effectiveness of existing policies and standards	Identify barriers to effective implementation of existing policies and standards	DOH LGUs	Philhealth DOH Foreign donors

Broad R&D area [1]	Specific topic [2]	Rationale [3]	Objective(s) [4]	Responsible Agency [5]	Funding Source [6]
7. Research information system - manpower /research capacity	Assessment of research capabilities of institutions Factors influencing migration of health professionals and strategies to overcome them	Need to come up with a model framework to enhance research capability	Determine the effectiveness of programs and interventions to improve research capability	CHED Academe	DOH Donors
8. Health care delivery/health care financing	Determine the effectiveness of programs and interventions Factors affecting acceptance of indigence program for PHIC HMOs as options for health care financing	Efficiency of health care delivery vital to a healthy Population	To determine efficiency of health care delivery system	DOH LGUs PHIC HMOs Professional societies	DOH LGUs Donors
9. Poverty related health concerns (urban poor, coping mechanisms)	Determine health seeking behavior and coping mechanisms and barriers to health among poor Poverty studies to analyze how to increase access to health and how to improve Designing interventions to improve over-all health status	Poverty and lack of health are intimately related, a better understanding of the poor may result in better designed solutions The poor are a unique vulnerable population that may need different methods for diagnosing, monitoring and designing interventions	Identify effective programs and interventions to improve the health status of the poor	DOH DSWD LGUs PhilHealth	NAPSI PhilHealth DOH LGUs

Broad R&D area [1]	Specific topic [2]	Rationale [3]	Objective(s) [4]	Responsible Agency [5]	Funding Source [6]
10. Special groups (Maternal, children, elderly, people with disabilities, PWD, indigenous people)	Determine the health problems of special groups and impact on their well-being Magnitude of health problem of special groups: geriatrics, reproductive age group, women and children in difficult circumstances and people working with disabilities (PWDs)	Still unacceptable MMR especially in Region 5 and NCR High IMR especially in NCR, Region 4B and Region 5 Growing elderly population	Improve the quality of life of women and children in difficult circumstances, PWDs and the elderly	DSWD POPCOM DOH	DOH DSWD POPCOM Foreign funding NGOs

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Legend:

1/ Disease or area of concern
2/ Particular topic to be studied/researched
3/ Issues or problems that need to be addressed
4/ Proposed objective(s) of the research – general objective
5/ Agency to ensure implementation of the research
6/ Proposed funding source

1. Database standardization and health information system integration.

Before the zonal consultative meeting and consensus workshop, the need for integration and standardization of databases was ranked first in NCR, second in Region 4 (health information system, especially infectious diseases) and seventh in Region 3. In the three zonal groups of the workshop, it ranked second in two groups and fourth in the third group. There is a growing need for standardization/further integration and collation of health information as seen in paucity of databases, especially outside NCR and non-standardization in basic nomenclature. Terminologies as basic as those used in the death certificate and for reporting morbidity show a lack of standardization and confusion, particularly in URTI, URI, CARI, AURI, LRI, bronchitis, pneumonia. Specific topics include: (1) effectiveness and efficiency of HIS databasing; (2) surveillance and monitoring, reliability & nomenclature; and (3) standardization in death certificates, impact of retraining MHOs. Objectives could include (1) analyzing the existing database and identifying problems in notification of researches/information and improving information dissemination, and (2) determining facilitation/hindrance factors for comprehensive and reliable HIS. Identified concerned agencies include DOH, NCSO, CHED and PhilHealth. The PNHRS committee on health research utilization, capacity building, and research management, as well as monitoring and evaluation, should be informed of these findings. All the regional and zonal facilitators agree that in order to put our PNHRS agenda and research house in order in the country, this is the most pressing need at the moment. If for example the most basic information is unavailable or unreliable, then health research cannot progress. This may need coordination among varied groups such as the National Statistics and Census Office and other agencies and groups that still need to be tapped by PCHRD.

2. Environmental/Occupational Health

A sign of the times issue is the rapid rise in the priority of environmental health, which is increasingly reflected in the headlines and news coverage in the mass media. It was ranked first in Region 4 (probably heavily influenced by Region 4A, which is an industrial heartland), second in NCR (community involvement), third in Region 5 (specifically zeroing in on very specific health concerns related to mine tailings and related recent disasters and tragedies), and Number 6 in Region 3. This was ranked first, second, and seventh among the zonal groups. The rationale for this involves increasing problems with the environment and its effects on health related to the growing industrialization and urbanization in this zone, as well as the growing influence of local and international environmental advocates. Specific topics identified were: (1) occupational diseases/hazards; (2) magnitude of health problems brought about by environmental factors; and (3) determining compliance with occupational health laws. Note that in the last zonal consultation in 1998, environmental and occupational health researches were already ranked as third priority research area in the zone. DOH, DENR, CHED and DOST were specifically identified as responsible agencies.

3. Lifestyle Related Diseases/Disorders (LRD)

With a rising death toll evident in the latest health statistics on mortality, life-style related diseases have become a popular research area, especially in training institutions, academe and tertiary hospitals. Non-communicable diseases or lifestyle related diseases ranked second to communicable diseases (426 vs. 295) in the consolidated PCHRD-DOH-DHED research inventory and Region 4 and 5 updates. There is a need, however, to focus and integrate researches in this area in order to avoid duplication and wastage of resources.

LRD was formerly ranked as second priority research area in the previous Zone 2 consultations. Its fall to third place may actually reflect the substantial number of studies currently being done on this topic and the felt need to move for better access to health information already produced and better coordination. Topics in this area include: (1) determining the M & M of LRDs; (2) program evaluation; and (3) development and implementation of CPGs.

4. Infectious diseases

A persistent problem in the zone, eight out of 10 leading morbidities still fall under this area, although only three remain as leading causes of death—pneumonia ranked second, TB ranked fifth (in contrast to its being ranked sixth nationwide), and diarrhea ranked tenth. Diarrhea will probably fall out of the causes of death in the zone in the coming years, but the persistently high rank of TB in the zone is something worth looking into. Likely correlated to this is the low adoption of DOTS in this zone, particularly NCR; and low detection rates and DOTS coverage, particularly in the private sector and urban poor communities.

In the regional consultations, infectious diseases, particularly TB, MDR-TB, paragonimiasis (a peculiarity in Region 5) ranked first in Regions 3 and 5, third in Region 4, and fourth in NCR (emerging/re-emerging infections), and first in two zonal groups, so it was subsequently ranked fourth (behind database, environmental health, and lifestyle-related diseases which were ranked among all zonal groups). There is a perceptible shift in infectious disease research priorities towards emerging problems such as multi-drug resistant tuberculosis, regional peculiarities such as paragonomiasis among TB suspects, and improved monitoring and surveillance of such diseases as avian flu. Specific topics include: (1) prevalence of MDR-TB; (2) paragonomiasis; and (3) specific KAP and factors influencing dengue, emerging infections, malaria, MDR-TB, monitoring co-morbidities and capacity-building for emerging infections.

5. Health technology GMOs, nutriceuticals, alternative medicine

Ranked second in NCR, ninth in Region 4, and sixth, ninth, and tenth among the zonal groups, this research area was eventually ranked fifth because of the strong interest and growing popularity and widespread use of nutraceuticals, concerns on safety, and efficacy issues. Specific topics include (1) the utilization of alternative medicine; (2) the role of GMOs and nutraceuticals; (3) determining the extent of utilization of GMOs and other health products; and (4) the efficacy and safety of nutraceuticals and GMOs.

6. Health policy

Health policy was cited as fourth in Region 4, sixth in Region 5, and ninth in NCR in terms of health research priorities. The rationale for this is the growing awareness of the importance of this topic and its impact on improving the quality of life. Broad topics include: (1) policy development; (2) human resources for health; and (3) magna carta for health workers, particularly a concern of LGUs and government workers (impact, implementation, or compliance). There is a need to determine the effectiveness of existing policies and standards, and to identify barriers to effective implementation of existing policies and standards.

7. Health research system/manpower and research capacity

This area was adjudged fourth most important in Region 3, seventh in Region 5, and ranked sixth in the zonal consultative workshop. Under this broad area were such topics as impact of outmigration, and problems in the field, including lack of researchers or expertise in certain research areas. Again, reflecting an urgent crisis in the worsening medical brain-drain, doctors-to-nurses migration, poor incentives and enabling environment for local health care providers, and the growing western demand for health care workers (MDs, nurses, caregivers etc), this was deemed an important area for health research for informed decision making on the part of policy makers, administrators, professional societies, and the people at large. Specific topics include the assessment of research capabilities of institutions and factors influencing migration of health professionals. There is a need to produce a model framework to enhance research capability and determine the effectiveness of programs and interventions to improve research capability (examples of similar studies include the impact of the PCHRD twinning project, and CHED zones of excellence).

8. Health care delivery/Health care financing

This was ranked second in Region 4, sixth in Region 5, ninth in Region 3, and fifth and ninth in the zonal groups. It is the fourth most popular area for researches in the zone accounting for a total of 187 researches done between 1999 and 2005 or 10.5% of the output. There is a growing trend for these type of studies (operational researches) and the influence of Philhealth which either commissions or utilizes such studies is evident across the zone. Health and economics seems to have better crossbreeding with researches being conducted in both the economics and health fields into the science of health economics. Specific topics include (1) Determining the effectiveness of programs and interventions; (2) factors affecting acceptance of indigency program for PHIC; and (3) HMO as options for health care financing.

9. Poverty-related health concerns

Poverty-related health researches, expectedly, ranked prominently in the regions of the zone where poverty is predominant or highly visible. They ranked third in NCR and fifth in Region 5, but were nowhere in Regions 3 and 4. They ranked sixth and eighth among the zonal groups. There was considerable debate in the regional and zonal meetings on whether poverty itself had a place in health research, a stand echoed by an influential health researcher in NCR. After some discussions there was general agreement that the poor (urban and rural) could be considered a special category (similar to the vulnerable populations i.e. elderly, very young, abused). There were also discussions that numerous studies had been done in this area, but that they should be more topic or disease-focused. Specific topics suggested included: (1) determining health seeking behavior, coping mechanisms, and barriers to health among poor (for such diseases as MDR-TB, leading causes of MMR and IMR); (2) poverty and lack of access to health care; and (3) designing interventions to improve over-all health status.

It was agreed that this group, while difficult to study, would in the long-run lead to a better understanding of the poor that could result in better designed solutions. Targets are to identify effective programs and interventions to improve the health status of the poor. Adding urgency to this area of concern is that the health indices (IMR and MMR) are unacceptably high in NCR and Region 5. Poverty-related and directed health researches to improve health seeking behavior, to identify and

overcome barriers to health, as well as operational researches at health programs related to better access to quality health services have to be conducted. Note that data on health attendance upon time of death shows a considerable number of Filipinos die without seeing a professional health provider. Better and universal coverage of PhilHealth will ultimately help reduce these concerns.

10. Special groups

Special groups in this category include the vulnerable populations, women and children, the elderly and the differently-abled/disabled, and cultural minorities. The rationale for this in the zone is the still unacceptably high MMR, especially in Regions 5, 4B, and NCR, and high IMR, especially in NCR, Regions 4B, and 5. Again in the NCR, it would have been expected that maternal and infant mortality rates would be better, but the data shows high rates. This may be skewed by the large urban and rural poor, but must be looked into. Infectious diseases such as pulmonary infections and diarrheas may reflect basic problems in crowding and sanitation and lack of access to quality health services. Reproductive health and MCH programs should be looked into in terms of utilization and identify ways to vastly improve delivery, efficiency and access to quality maternal and child health services. While it is ironic that the richest of the regions in the zones have bad health indices, it would be interesting to disaggregate the data to show whether there is a correlation with the economic status of cities and municipalities.

Specific topics include: (1) determining the health problems of special groups and impact on their well-being; and (2) magnitude of health problems of special groups—geriatrics, reproductive age group, women and children in difficult circumstances, and persons with disabilities. While the zone and the country have a predominant young population, there is also a growing elderly population as Filipinos increase their life expectancy and as the economy improves the trend toward lifestyle diseases and diseases and concerns of the elderly need to be studied.

The standard matrix of health research priorities for each region can be found in Annex I.

VI. CONCLUSIONS

Identification of gaps, problems, and emerging concerns through consultative workshops reflected common grievances. Mainly, concern was expressed over paucity in data and information, and lack of dissemination of health information for decision-making from central to region to local levels and even within regions and provinces. Across the zone, there is a lack of coordination among health research related groups, NGOs, GOs, and academic institutions. One thing that became obvious from the beginning of this project was the seeming widespread impression among both facilitators and respondents that the results of the zonal and regional priorities (of PCHRD and DOH) in 1998 and 2000 were not disseminated and were unknown to many stakeholders. Availability of information or data was often repeatedly identified as a major felt need, and research was often identified as a low area of priority, despite the realization of evidence based on informed decision making by local, regional, government, NGO and academic circles consulted.

Even gathering of primary data on health research was disappointing—there is no general source or body tasked to gather, monitor, and supervise health researches identified as priority areas at all levels. Information gathered was very limited and affected the assessment of status of health resources and researches..

There is a great felt need for a strong central and regional coordinating body similar to that envisioned in an expanded and strengthened PNHRS that are empowered and given the necessary resources in terms of manpower and funding to gather, oversee, monitor and help in the implementation of priority research topics.

The priority list created in this project should be widely disseminated, perhaps through the same groups that were involved in this process, but likewise should be all-inclusive to look beyond the familiar groups and personalities to cross-fertilize with other disciplines. The interest expressed in studies on the avian flu for purposes of linking heath and agricultural experts in doing research is an example of the potential for expanding beyond the current horizon. The paucity of resources for health research should spawn innovation and efficient use of limited resources as well as seeking partnerships among non-traditional but similarly concerned sectors and agencies.

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ANNEX A

GUIDELINES FOR ZONAL/REGIONAL CONSULTATIONS (GENERAL INSTRUCTIONS)

The following instructions were given:

The Zonal Consultation process will serve as the forum in which –

1) to determine

   a) health problems/issues common among the regions
   b) peculiarities in each region/zone

2) to validate/reconfirm

   a) priorities presented in the recent regional consultations (and to identify areas or concerns which were not addressed or were overlooked in the consultations)
   b) past priorities (national level) which have not been addressed (as gleaned from existing databases)

   A matrix showing past national priorities (1999-2004) which were not addressed was distributed to the regional facilitators. These are to be processed to determine whether these are still relevant and should be included as national priorities for the period 2006-2010 or beyond 2010

3) to arrive at a consensus ranking of zonal health research priorities for the 2006-2010 period

The following guidelines and suggested activities were utilized for this project:

Major Activities

- Review/assess the zone's health situation/status
- Assess health R&D resources (including researches)
- Identify gaps, problems, and emerging concerns
- Identify zonal/regional priority research areas
- Document techniques/strategies used in arriving at priorities
- Prepare zonal/regional reports

Standard Techniques/Strategies for Data Collection

- Assessment of health situation through desk review, key informant interview (KII), round table discussion (RTD)
- Assessment of health R&D resources (including research) through desk review, KII, Delphi technique
- Identification of gaps, problems, and emerging concerns through consultative workshops
- Identification/validation of priority R&D areas through workshops (Another option for the priority setting process would be the creation of a special group (e.g., Ad Hoc committee) to be consulted for the purpose)

Proposed Criteria for Prioritization of R&D Areas

Prioritization of research areas could be based on the following factors:

- Urgency/magnitude of the issue/problem/prevalence (rank) of the disease/burden to the community
- Feasibility/do-ability of the research based on existing capabilities
- Impact of R&D on a greater number of the population (in terms of mortality and morbidity, quality of life, social desirability, cost of health care, and in anticipating future health problems/issues)
- Research have impact on the health issues being addressed
- Area is not well funded/neglected by other agencies

A standard format for the technical report writing at the levels of the regions and zones was also distributed.

Critical Concerns

- Holding of workshop for validation of priorities
- Accomplishment of the standard matrix for reporting of research priorities
- Documentation of techniques/ strategies used in arriving at priorities
- Attendance of "must" invitees

List of "*Must*" Invitees to the Consultation Workshop

DOH	LGUs
CHED	NGOs (women, indigenous, disabled, elderly, etc.)
DOST	Philhealth
DSWD	CHED Zonal Research Centers
DENR	DA
DOLE	People's organization
NEDA	
POPCOM	

PROPOSED MATRIX FOR ARRIVING AT REGIONAL/ZONAL PRIORITIES FOR R&D

Issue of Concern	Magnitude of the problem (extent, prevalence, urgency, burden to the community)	Problem with the health concern? Or reasons for the persistence of the problem? (lack of tools? poor utilization? poor knowledge? etc.)	Can the specific problem be solved by R&D? (Yes or No)	Type of research? • biomedical • product dev't • operations • communications • others?	Feasibility of research based on existing resources of the zone/region (Yes or No)	Impact of R&D on the issue addressed? on greater number of population? cost of health care?	Research area not well funded? (Yes or No)	Priority status? • High • Medium • Low
Examples: Malaria	Ranked No. 3	Resistance to therapy	Yes	Develop new drugs/vaccines	No	Yes	Yes	High
Devolution	Ranked No. 1	Lack of government funds	No					
		Poor motivation of health workers	Yes	Operations – reasons for poor motivation	Yes	Yes	Yes	High
Tuberculosis	Ranked No. 1	Drug resistance	Yes	New drugs/therapy	No	Yes	Yes	High
		Poor compliance	Yes	Operations – to improve compliance	Yes	Yes	Yes	High

STANDARD MATRIX FOR RESEARCH PRIORITY AREAS/TOPICS

Broad R&D area [1]	Specific topic [2]	Rationale [3]	Objective(s) [4]	Responsible Agency [5]	Funding Source [6]

Legend:
1/ Disease or area of concern
2/ Particular topic to be studied/researched on
3/ Issues or problems that need to be addressed
4/ Proposed objective(s) of the research – general objective
5/ Agency to ensure implementation of the research
6/ Proposed funding source

GANTT CHART OF ACTIVITIES

Health Research Agenda Setting in South Luzon

ACTIVITY	MONTH											
	AUG		SEPT				OCT				NOV	
	3	4	1	2	3	4	1	2	3	4	1	2
1. Preparatory activities	→	→										
Preparation of LIB, timelines, budgets, project design Identification of key personnel – regional technical writers, research assistant												
2. Organizational meeting			→	→								
3. Data collection/Review of literature, secondary data gathering			→	→	→	→	→	→				
4. Preparation of regional write-ups (first draft)								→	→	→		
5. Experts' Panel meeting										→	→	
6. Zonal consultative meeting											→	
7. Experts' Panel meeting												→
8. Preparation/submission of zonal report											→	→

ANNEX B

DESCRIPTION OF METHODOLOGY BY REGION

REGION 3

The following methods to arrive at a regional consensus in Region 3 were used:

1) Assessment and review of the country's health situation using publications and documents
2) Consultation conducted among local government units and agencies through Key Informant Interview
3) Survey of health services, health research system in the hospitals, Local Government Units and Universities
4) Consolidation and validation of priorities through a priority setting workshop

A) REVIEW OF SECONDARY LITERATURE

A letter of request was sent to the different government agencies, namely the Department of Health (DOH) , Department of Labor and Employment (DOLE), DSWD, CHED, TESDA, NSO, DOST, and BFAD, to obtain data which will help in assessing the health situation in Region 3.

The Department of Health through the Regional Epidemiology Surveillance Unit (RESU) provided an electronic database from 2003 to 2004. However, data for the year 2004 is not yet complete. Annual reports of the Department of Health from 1999 to 2001 were also provided. The NSO, DOLE, DSWD, TESDA, DOST, and BFAD provided pertinent data requested by the regional facilitator. In some agencies, the data requested was not available; hence, an electronic search was conducted on the internet.

B) DOCUMENTS/DATABASE OBTAINED

1) NSO 2000 Census of Population and Housing for Region 3
2) Field Health Information System Annual Report 1999 to 2001
3) DOH Region 3 Annual Reports for 1999, 2001, 2003
4) Electronic database on FHSIS 2003 and 2004 (incomplete)
5) State of the Philippine Population Report November 2003
6) Master list of Drug Establishments and Botika sa Barangay updated to 2004, provided by BFAD Region 3
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11) Directory of Hospitals for Region 3
12) Comparative Figures of Claims from July 1999 to September 2005, PHILHEALTH Region 3
13) DOLE program indicators as of December 2004
14) DOST Annual Report Region 3

C) KEY INFORMANT INTERVIEWS

The purpose of the interview is to validate the data obtained from the review of literature. The key informants were identified through communication with the local

health assistance office of the DOH in Region 3, which provided the names of the provincial and city health officers. Some of the key informants were recommended by the different local government units and agencies.

Due to financial and time constraints, only six provinces and cities were covered. Some of the key informants identified were not accessible through telephone or were not available during the time of the visits.

TABLE 1. KEY INFORMANT BY PROVINCE AND CITY

PROVINCE/CITY	KEY INFORMANT
1. Angeles City	Dr Joven Esguerra City Health Officer
2. Cabanatuan city	Dr Gilbert Embuscado City Health Officer Ms Ellen Garcia Chief Nurse Edwin Manabat Surveillance Nurse
3. Nueva Ecija	Dr Benjamin Lopez Provincial Health Officer
4. Pampanga	Dr Ernesto Santos Provincial Health Officer
5. Tarlac	Dr Ricardo Ramos Provincial Health Officer
6. Zambales	Dr Raulin Dadural Provincial Health Officer

TABLE 2. KEY INFORMANT BY AGENCY, HOSPITAL

PROVINCE/CITY	KEY INFORMANT
1. Dr Conrado Oliveros	DOTS REGION 3
2. Ms Mel Hilario	BFAD REGION3
3. Dr Rio Magpantay	DOH REGION 3
4. Ms Ligaya Dungca	POPCOM REGION 3
5. Emerenciana Nabong	Senior Citizen
6. Dr Monica Basa	Chief Resident, Department of Medicine – Dr J. Paulino Research and Memorial Hospital

D) SURVEY

1) A survey using a questionnaire was mailed, faxed or personally delivered to 10 local government units, namely Angeles City, Bulacan, Cabanatuan City, Nueva Ecija, Olongapo, Zambales, Pampanga and San Fernando City. The questionnaire was designed to obtain information on the following:

a) Health concerns of the province or city as well as possible solutions and recommendations
b) Information on the budget allotted by the local government on research
c) Funding agencies or linkages
d) Ongoing researches

2) Survey questionnaires were also sent to 101 government and private hospitals to obtain information on the following:

a) services offered in primary, secondary and tertiary hospitals in terms of:

   i. Diagnostic capability
   ii. Equipment
   iii. Specialists practicing in the province/city
   iv. Other special services offered

b) top ten causes of mortality and morbidity
c) problems encountered by the different hospitals in the region.

3) Questionnaires were also sent to 12 Universities in Region 3 that were previously identified to have engaged in research activities. Only 25% (3) answered the questionnaire.

E) WORKSHOP

All problems identified in the survey and consultations were collated and classified according to broad research and development areas. These were presented during the plenary session of the regional consultation workshop in November 8, 2005. The objectives of the workshop were as follows:

- to validate the research priority areas in Region 3
- to rank the priority areas identified in Region 3
- to determine the types of research for the areas identified in Region 3

The summary of health concerns gathered from the survey and consultations were presented for validation and ranking in the workshop. The criteria for prioritization were emphasized during the presentation, namely:

a) Urgency/magnitude of the issue to the Region
b) Feasibility based on existing capability
c) Impact on the greater number of population/cost to health care
d) Impact of research on the health issue concerned
e) Areas neglected or not well funded

After the presentation, the participants were divided into two groups facilitated by faculty members of the AUF College of Medicine, whose functions were as follows:

1. To guide the participants on how to accomplish the research prioritization form for presentation in the plenary
2. To guide the participants on the health concerns to be validated
3. To encourage all the participants to contribute to the discussion

Each participant was provided a copy of all the priority health concerns identified in the region through consultation and survey. The main task of the group was to determine whether a health problem should be included as a research priority for the region or not, using the criteria provided. All their concerns were entertained and noted. After the discussion, the health concerns identified were ranked according to importance and presented by the two groups in the plenary. During the plenary, each group presented their own ranking with an explanation on why it was included in the top ten and the reason for its rank. After the presentations, the selected areas were again presented by the facilitator for final ranking.

REGION 4

The process of setting a research agenda for Region 4 consisted of three phases: 1) analysis of the health situation and health research; 2) identification of issues and concerns; and 3) identification of research areas to address identified priority issues and concerns. Figure 1 is a schematic representation of the process that was undertaken.

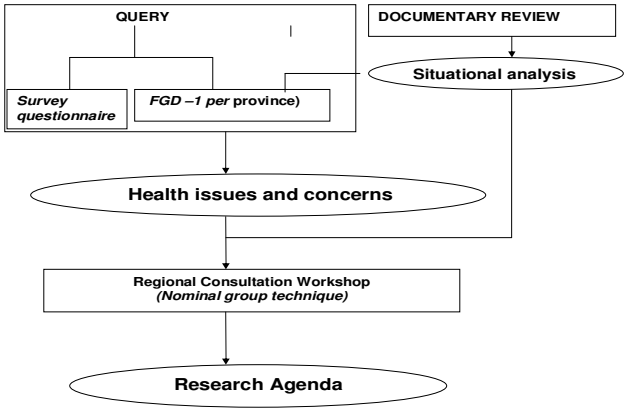

Fig. 1 Health Research Agenda Setting Process in Region 4

The analysis of the health situation involved records review and consisted mainly of determining the extent of attainment of the 2004 health targets. The analysis provided information on the health aspects of the region that fall below the 2004 health targets of the Department of Health and served as inputs in the second phase of the process. The analysis of the health research situation involved survey and review of records. The survey was aimed at determining the number of institutions in the region that are involved in research and the health related researches undertaken in the region for the past 5 years (1999-2004). Questionnaires were sent out to all academic and medical institutions identified earlier as involved in health and health-related researches to obtain a list of researches undertaken during the specified period. Only 5 of the 14 institutions responded, namely: 1) Adventist International Institute of Advanced Studies; 2) De la Salle Health Sciences Campus; 3) Batangas Regional Hospital; 4) DLSU Medical Center; and 5) DOH. In addition, databases of the CHED Zonal Research Center and the PCHRD were reviewed. The research topics were classified according to the research priorities of the region for 1999-2004. Information on the research capability of the region was obtained from the technical report of the working group on Capacity Building of the Philippine National Health Research System entitled, "Health Research: Situationer, Capacity Building Plan, and TWG Workplan". However, information on the research capability of Region 4 is limited since most of the data were presented for the entire country. There were no other available secondary sources on the health research capability in the region.

In the identification of prevailing health issues and concerns, two methods were employed: query and documentary review. The query method was carried out through survey and focus group discussion (FGD). Respondents of the survey were Municipal Health Officers (MHO) of the 10 provinces in the region. Self-administered questionnaires were mailed to a random sample of MHOs. Response rate was a low 36%. For the FGD, the plan was to conduct one for each of the 10 provinces to be participated in by GOs and NGOs. However, due to time and budgetary constraints, only six (6) FGDs were held. For most of the FGDs, assistance from the office of the governor was sought, specifically to convene a

multi-sectoral consultation meeting. This was resorted to when the Provincial Health Officer, initially approached for the purpose, expressed reluctance in convening the requested meeting.

For the third phase, a regional consultation workshop was conducted, rhe objectives of which were: 1) to validate and prioritize health issues and concerns obtained from the survey and the focus group discussions; and 2) to formulate research agenda. The workshop was a one-day affair and was participated in by regional directors/heads of GOS and NGOs in the region. Fifty percent (15/30) of those invited attended the workshop.

For the prioritization of health issues and concerns, the process involved ranking of the issues and concerns using a set of criteria namely magnitude of the problem, solvability by R and D, feasibility of solution given current resources, impact of R and D on the issue, and current funding. The ranks were then collated and the average taken. The participants were given a worksheet to facilitate the prioritization procedure.

Below is a summary of the activities that was undertaken to arrive at the research priorities in the region.

Activity	**Date**	**Respondents/ participants**	**No. of respondents/ participants**
1. Query (questionnaire) ***(municipal level)***	Sept-Oct 2005	Municipal Health Officers	15/43 (36%)
2.Query (FGD/interview) ***(provincial level)***	October 2005	Heads of GOs/NGOs (province)	6/10 (60%)
2.1 Cavite	Oct 3, 2005		11
2.2 Rizal	Oct 13, 2005		13
2.3 Or Mindoro	Oct. 19,2005		18.
2.4 Batangas	Oct . 5, 2005		2.
2.5 Laguna	Oct. 20, 2005		9
2.6 Lucena	Oct. 21, 2005		18.
3. Consultation workshop ***(regional level)***	Oct 27, 2005	Heads of GOs/NGOs (region)	15/30(50%)

REGION 5

For Region V, identifying the health research priorities for Bicol started with a review of the Region V Research and Development agenda for the period 1999 to 2004. The following activities were then placed in the agenda: 1) identification of important data that would help in identifying the research priorities; 2) identification of institutions/agencies that could provide the necessary data; 3) data collection proper through interview of key persons and desk review of reports; and 4) research priority setting through a consultative workshop.

The relevant data needed for defining the research priorities that were identified were as follows:

1) Geographic data
2) Demographic data
3) Health indicators
4) Leading causes of mortality and morbidity
5) Other issues related to health
6) Researches done in the different institutions involved with health research

Review of Literature/Interview

The desired data were obtained through a review of reports and interview of key persons in different institutions, government and non-government as well as the academe. The interviews helped validate the reports and obtain more information regarding certain issues and health related problems that may not have been included in statistical reports.

Below is the list of the institutions that were visited.

1) Center for Health Development/Department of Health Region V
2) Department of Science and Technology Region V
3) Commission of Higher Education Region V
4) NEDA
5) DENR
6) Bureau of Mines and Geophysics
7) Environment Management Bureau
8) DA
9) DOLE
10) DSWD
11) POPCOM
12) PhilHealth Region V
13) National Statistics Office
14) BU
15) BU Research
16) Council of Deans, College of Nursing for Region V
17) Naga College Foundation
18) Provincial Health Office, Albay
19) Provincial Health Office, Sorsogon
20) Provincial Veterinary Office
21) City Health Office, Legazpi
22) National Nutrition Council
23) Simon of Cyrene International
24) Children International
25) Social Action Center, Legazpi
26) Good Shepherd Home

Regional Research Priority Setting Workshop

A one-day workshop was held on October 28, 2005. A few days before the workshop, the regional facilitator invited a core group to discuss the mechanics of the workshop and identify health-related issues that may arise from the data gathered. Presenting the predetermined issues could facilitate and hasten the process of identifying research areas. But it was also decided that the option to add or remove issues be given to the participants.

The one-day workshop was held at the Bicol Regional Training and Teaching Hospital Conference Hall. There were 33 participants. During the workshop, an overview of Bicol and its health situation was presented and discussed by the regional facilitator. The issues that were initially identified were also presented. The participants were then divided into five groups according to their lines of interest. They were given the option to transfer to other groups if they so desired. The issues and problems previously identified were assigned according to the interests of the group. Each group was tasked to identify more specific issues under each broad issue. From these issues they were asked to identify broad research areas from which they formulated specific research topics. Lastly, they were asked to fill up the proposed matrix. Each group presented their outputs in two plenary sessions. A copy of the list of research priorities for 1999-2004 and the list of researches that have been produced by CHD-Bicol, Bicol University, and AMEC-BCCM were provided to each participant for reference (see Annexes).

The main issues that were identified from the data presented are as follows:

Environment/Sanitation
Basic Services
Health Financing
Health Status of Women
Nutrition
Health Manpower
Diseases
Data

After the regional consultation for Bicol, an Ad-Hoc Committee was created to review the results of the workshop. Through simple ranking method, the Committee chose the final 10 research priorities for Region 5.

National Capital Region (NCR)

Given the brief timetable and the enormous task of gathering information and coming up with a meaningful recommendation for the National Capital Region health research priorities, review of literature was initially done, which eventually became instrumental in the work and output.

In 1997, Dr. Marita Reyes, then the NCR zonal convenor conducted a region wide consultation with the academe, non-governmental organizations, and other stakeholders; primary data collection from the ground up was also done. This formed the basis for the Zonal Report of National Capital Region. The report identified 11 key health research priorities. An interview with Dr. Marita Reyes and Dr. Jaime Galvez-Tan were instrumental to the completion of this document. Dr. Marita Reyes observed that no governing body has been convened to integrate the different databases for easy access, and to serve as a navigator for further plotting the course of the national health research agenda. Dr. Jaime

Galvez-Tan suggested a review of directed the author to the different databases available, as well as and also asked him to look into Health Bills of the Senate, Congress and as well the Presidential decrees concerning health and technology development.

Given the depth and comprehensiveness of the work done by Dr. Reyes, and the non feasibility of repeating such an undertaking, a review of the different researches, legislations, health indicators, and health policies of the government was done to determine if these were in line, completed, or in compliance with the previous NCR research agenda. Some of the key issues made in the former NCR zonal document were re-prioritized, as their pervasiveness dwindled due to the amount of work done to eradicate them. This put into perspective new emergent problems vital to the National Capital Region.

Key people from the health sector of the National Capital Region, non-government organizations, health researchers, and academe were invited to a round table discussion held at the PhilCAT Office, Quezon Institute Complex on November 17, 2005. The health situation of the National Capital Region and health research priorities contained in the previous NCR zonal report were presented. A discussion was set into motion, where the main agenda was to establish the 10 health research priorities for the National Capital Region for 2006-2010. A survey using the Delphi Technique was also done (sent either through email or fax) among those who were unable to attend.

ANNEX C

LIST OF PARTICIPANTS
SOUTH LUZON CONSULTATIVE WORKSHOP

"Health Research Agenda Setting"
November 25, 2005
Linden Suites, Ortigas, Pasig City

1.	Dr. Maribel Nonato	-	NCR	UST
2.	Dr. Danilo M. Reynes	-	Region 3	Philhealth
3.	Dr. Israel F. A. Pargas	-	Region 4	Philhealth
4.	Dr. Melchor Frias	-	Region 4	DLSC-HSC
5.	Dr. Teodoro S. Solsoloy	-	NCR	DA-BAR
6.	Dr. Dennis Teo	-	NCR Facilitator	LCP-MDH
7.	Dr. Rommel Dioneda	-	Region 5	Bicol University Research
8.	Dr. Carmen Tolabing	-	Region 4 Facilitator	DLSUHSC
9.	Dr. Renato Dantes	-	NCR	UP-PGH
10.	Ms. Mary Sylvette T. Gunigundo	-	NCR	CHED
11.	Dr. Alan Feranil	-	NCR	PCHRD
12.	Mr. Reymar A. Saracanlao	-	NCR	Env. Mgt. Bureau
13.	Ms. Merlita Opeña	-	NCR	PCHRD
14.	Ms. Carmela Enriquez	-	NCR	NEDA
15.	Dr. Evelyn Yumiaco	-	Region 3 Facilitator	AU Foundation
16.	Ms. Ada Aquino	-	NCR	DSWD
17.	Dr. Charles Yu	-	Zonal Facilitator	DLSUHSC
18.	Dr. Elma Cabrera	-	Region 5 Facilitator	BRTTH
19.	Dr. Ma. Teresa G. De Alban	-	Region 5	CHED
20.	Dr. Edna J. Defante	-	Region 4	CHD
21.	Ms. Maylene M. Beltran	-	NCR	HPDPB-DOH
22.	Ms. Lolita C. Layser	-	Region 4	POPCOM
23.	Mr. Basilio E. Paculan	-	Region 4	CHD
24.	Dr. Noel R. Juban	-	NCR	NIH-UPCM
25.	Mr. Martin T. Jequinto	-	NCR	DOLE
26.	Mr. Raul Castañeda	-	Region 4	DOST
27.	Dr. Cecilia Acuin	-	NCR	NIH-UPCM
28.	Dr. Filipinas Natividad	-	NCR	St. Luke's Med. Center
29.	Dr. Digna Lanuza	-	Region 4	CHED
30.	Dr. Napoleon L. Arevalo	-	Region 5	PHO - DOH
31.	Ms. Ma. Elizabeth Cajigas	-	NCR	PCHRD
32.	Ms. Marie Jeanne B. Berroya	-	NCR	PCHRD
33.	Mr. Julius Tubig III	-	NCR	PCHRD

ANNEX D

SUMMARY OF REGIONAL HEALTH RESEARCH PRIORITIES

Rank	Region 3	Region 4	Region 5	NCR
1	Tuberculosis	Environmental health	MDR-TB and Paragonomiasis among TB symptomatics	Integration and standardization of databases*
2	Dengue	Health information systems Infectious diseases	Impact of specialty clinics and government facilities on health outmigration in Bicol	Health-seeking behavior of Metro Manilans on adherence, alternative/complementary medicine , community involvement in environment*
3	Nutritional practices	Policy formulation	Health impact of minetailings (environmental)	Studies on urban poor
4	Research capacity	Lifestyle conditions	Socio-cultural factors in CVS diseases & IEC	Emerging infectious diseases, resistance*
5	Cancer	Maternal and child health	Coping mechanisms of poverty gaps for health care	Maternal, special groups
6	Environmental/ Occupational health	Occupational health/ accidents	Strategies in augmenting hospital income, indigency, professional fees standards	CPGs on chronic diseases, infections, disasters*
7	Health Information System	Reproductive health	Comprehensive R&D across eco zones	Standards of cancer care
8	Mental health risk and behavior disorders	Health technology	Skills assessment, capacity enhancement, health workers, traditional healers, overseas caregivers	Standards of care for victims of domestic violence
9	Health care delivery Family Planning	Special groups (elderly, teens)	Assessment of feeding programs and nutrition Health rehabilitation, seniors	Migration Health policies

ANNEX E

RANKING OF RESEARCH TOPICS
Zonal Consultative Workshop
24 November 2005

RANK	TOPIC	RANK BY GROUP			TOTAL RANK	AVE RANK
		1	2	3		
2	Environmental health	2	1	7	10	3.33
1	Database standardization and integration/health information system	4	2	2	8	2.67
10	Policy health system reform		3		3	3.00
6	Research information system - manpower /research capacity	7	4		11	5.50
	Socio cultural factors in CVS/nutrition				0	5.00
	Health service manpower capacity-out migration		6		6	6.00
	Guidelines/standards for STD/Infectious diseases/cancer/domestic violence		7		7	7.00
7	Poverty related health concerns (urban poor, coping mechanisms)	6	8		14	7.00
3	Health technology	10	9	6	25	8.33
	Occupational health/accidents		10		10	10.00
	TB MDR/compliance, drop outs		11		11	11.00
9	Special groups	5	12		17	8.50
	Mental health		13		13	13.00
4	Infectious diseases	1		1	2	1.00
10	Lifestyle	8	5	3	16	5.50
5	Policy and standards	3		4	7	3.50
	Factors affecting CVD	8			8	8.00
7	Health care delivery	9		5	14	7.00
	Health emergencies and disaster			8	8	8.00
	Health financing			9	9	9.00
	Herbal alternative medicine			10	10	10.00

ANNEX F

HEALTH SITUATION BY REGION

REGION 3

For Region 3, there was a decrease in the crude birth, infant mortality and maternal death rates from 1999 to 2004. The health conditions in the provinces differ, with Zambales having the highest infant mortality rate (18.63/1000) and Angeles City the lowest (2.37/1000).

The leading causes of morbidity have not changed much since the 1999 to 2004 period. The rates of acute respiratory tract infection, diarrhea and bronchitis decreased from 1998 to 2003, but they maintained their position as the top three leading causes of morbidity. Other disease conditions in the top ten whose incidence increased from 1998 to 2003 were pneumonia, hypertension, skin disease, and urinary tract infection.

Heart disease was still the leading cause of mortality from 1999 to 2004. It was followed by cancer, pneumonia, cardiovascular disease, and TB, which remained in the fifth position from 2001 to 2004.

REGION 4

In 2004, the leading causes of mortality in Region 4-A and in Region 4-B in 2004 were heart disease and pneumonia, respectively. Acute respiratory disease was the leading cause of morbidity in the region (DOH 2004).

In 2004, Region 4-A and Region 4-B had comparable crude birth rates (CBR), crude death rates (CDR) and infant mortality rates (IMR). The region has reached the target of the Department of Health of an IMR of less than 17 infant deaths for every 1000 live births, with Region 4-A and Region 4-B having an IMR of only 9.18 and 11.84, respectively. However, while Region 4-B has not reached the desired level for Maternal Mortality Rate (MMR), Region 4-A has achieved the target. Looking at the provincial data, Quezon, Occidental Mindoro, and Palawan have MMRs of 120.07, 89.43 and 104.81, respectively, exceeding the desired level of less than 86.

REGION 5

In Region 5, health indicators for 2004 have decreased slightly compared to the data from the previous year, except for maternal mortality which was noted to be higher than that of the preceding year and the national rate. Acute respiratory infections remained the most common causes of morbidity, though respiratory diseases have been replaced by cardiovascular diseases as the leading causes of mortality. Endemic diseases in the region (schistosomiasis and filariasis) have been controlled, though cases of paragonimiasis have increased.

The crude birth rate for 2004 was 22.8 per 1000 population, lower than that of the previous five-year average of 23.06 (1999-2003). This represents total registered live births of 114,482. The crude death rate was 4.3, also slightly lower than the five-year average of 4.48 (1998-2003). The infant mortality rate also fell from 10.96 in 2003 to 9.33 in 2004. This is also lower than the five-year average of 12.08. But maternal mortality rate was higher

(1.16) in 2004 than the previous five-year average (1.01) and higher than the national figure of 0.86.

The top three leading causes of morbidity were still respiratory infections. Diarrheas still ranked fourth. Others were hypertension, influenza, animal bites, and anemias. Tuberculosis, which ranked tenth in 2003, rose to ninth place.

Cardiovascular diseases replaced respiratory diseases as the leading cause of death. Tuberculosis still ranked high as a cause of death, being third, followed by neoplasm and traumatic injuries.

Hemorrhages related to pregnancy still ranked first as a cause of maternal deaths. Together with eclampsia, these causes may be preventable with improved prenatal coverage and attendance at births. Only 79% of the mothers received prenatal care, less than the national figure of 84%.

Some parts of the region, especially Sorsogon, have been known to be endemic for diseases like filariasis and schistosomasis. The presence of a surveillance unit in Sorsogon contributed to the control of cases as well as vectors and hosts. In the latest report on case finding activities of the unit, particularly in the two most endemic municipalities of Sorsogon (Irosin and Juban), the infection rate for schistosomiasis was only 23%. Screening of walk-in patients in the RHUs showed only a 5.9% infection rate. The surveillance unit cannot afford to be too complacent, however, because a number of those that were identified as negative by Kato Katz turned out to be positive with COPT. The number of new cases of filariasis has gone down. The region received two (2) rounds of mass treatment.

Rabies cases declined from 69 in 2003 to 49 in 2004, but animal bites still ranked seventh among the reasons for consultation. Roughly about 85% of those who undergo consultation are given post-exposure immunizations, which add to the financial burden of the population, considering that vaccines are expensive.

Malaria cases have gone down. Only two (2) cases were reported from Sorsogon in 2004 (119 in 2000). Sorsogon has started to include paragonimiasis among the diseases under close surveillance. About 12% of symptomatic cases that were screened, most of them being treated for tuberculosis, turned out to be sputum positive for the disease.

The Reproductive Tract and Health Clinics reported 1655 cases of sexually transmitted infections (STIs). Those found positive were mostly males (80%), and majority of positive cases were unmarried (78.3%). Seventy-five percent of sex workers were positive, most of them females. The most common infection was non-gonococcal (69.08%). So far, 24 cases of HIV have been reported.

Malnutrition

Surveys among preschool and school children showed a decrease in the prevalence of malnutrition from the previous year. The prevalence of moderate malnutrition among the preschool children was 22.6% in 2004 compared to that of 2003 which was 37%. Among the school children, the prevalence decreased from 27% to 24%.

The prevalence of iron deficiency is higher than the national average. Among infants 6 months to 1 year, the prevalence was reported to be 34.3% while, the national average was only 31.8%. Among pregnant women, the prevalence was 64.4%, which is significantly higher than the national average of 50.7%. Iodine deficiency was only noted in Albay with a prevalence of 50.1%.

Breastfeeding awareness appears to be better in the region than in the rest of the country. A survey showed that 93% of infants have been breastfed (Phil 87%), though the median duration of exclusive breastfeeding was only 2.2 months (Phil 0.6 months).

Other Issues

The fertility rate in the region has been consistently higher than the national average. Even if the rate has also been dropping consistently (from 5.9 in 1993 to 4.77 in 2002 and 4.3 in 2003), it is still considered as one of the highest among the regions in the country. Among the married women, 64.8% said they do not want any more children, and the average number of children they actually want is 3.5. Perhaps the reason for the high fertility rate is the low contraceptive prevalence (dropping from 36.3 in 2003 to 26.3 in 2004). Among the contraceptive methods used, the most common are pills and withdrawal.

Non-government organizations in the area expressed concern about children and women abuse, about persons with disability, and about needs and welfare of senior citizens. Membership in the organization has increased to 18,226 as of 1994. There have also been growing concerns about possible toxic emissions and leaks from the mining areas in the region. The Bureau of Mines has expressed more concern about toxic wastes from small-scale mining industries. Like the rest of the country, the region is also burdened by problems on pollution, from agro-chemical contamination, household sewage, wastes from public market, to garbage dumpsites.

NCR

NCR accounted for a total of 190,525 live births in CY 2004, with a crude birth rate of 18.4 per 1,000, which is lower than the average over the last five years. Of these live births, 165,333 or 86.7% have birth weights of 2,500 grams and above. Out of 100 babies born, trained health personnel attended to 97, and 63 of these were born either in hospitals or lying-in-clinics. The infant mortality rate of NCR in 2004 is 16.4/1000. The leading causes of infant mortality are pneumonia, septicemia, prematurity, and intrauterine fetal death.

The maternal mortality rate for NCR 2004 was 0.58/1000, much lower than national rate which is 2.0, leading cause of death being maternal hemorrhage related to pregnancy. Notable were Pasay and San Juan, which reported no maternal deaths for two consecutive years.

For 2004, the reported CDR is 4.39 per 1000 population.

Leading causes of mortality from 1999 to 2003 were ischemic heart disease, pneumonia, cancer, hypertensive arteriosclerotic cardiovascular diseases, tuberculosis, cerebrovascular disease, other forms of heart diseases, septicemia, diabetes mellitus, and bronchial asthma.

Leading causes of morbidity from 1999 to 2003 were bronchitis/bronchiolitis, diarrhea, pneumonia, upper respiratory tract infection, tuberculosis, influenza, Hypertension, parasitism, UTI, and bronchial asthma.

From the data reported by the Department of Health (from the local government units and hospitals), it was observed that reporting may not be accurate due to the overlap of reporting of some diseases, and there may be the possibility of under reporting of certain diseases.

ANNEX G

REGIONAL HEALTH RESOURCES

REGION 3

Region 3 has a total of 208 hospitals, of which 71 were managed by the government. It has three retained hospitals (PJGM, JRMC, JBLMRH), one mental ward (Mariveles mental ward), one extension (Talavera extension hospital), five provincial hospitals (Bulacan, Nueva Ecija, Pampanga, Tarlac and Zambales), 26 district hospitals, 250 rural health units, 1356 Barangay Health Stations, and 33 birthing stations (DOH Annual Report 2001). There were 137 privately owned hospitals, 29% of which are primary, 56% secondary, and 12% tertiary (DOH 2002) . There was one bed per 1,197 population (DOH 2000).

REGION 4

Tables 1 and 2 show the manpower resources and health facilities in Region 4.

TABLE 1. MANPOWER RESOURCES IN REGION 4

Health Worker	HW: Population Ratio (2004)	
	CALABARZON	MIMAROPA
Doctors	1 : 40, 036	1 : 30, 386
Dentists	1 : 49, 894	1 : 41,201
Nurses	1 : 21,918	1 : 18,556
Midwives	1 : 5,703	1 : 4,380
Nutritionists	1 : 381, 883	1 : 220, 990
Active BHW	1 : 357	1 : 212

Source: Center for Health Development Regions 4A and 4B Report 2004

TABLE 2. HEALTH FACILITIES IN REGION 4

Health Facility	CALABARZON		MIMAROPA	
	No.	Ratio	No.	Ratio
Hospitals Government Private	 63 160	-	 33 14	
Hospital beds	8096	1:1,195 pop	1912	1: 1,252 pop
RHU	201	1: 9,851 HH	77	1: 5,690
Barangay Health Station	2175	1: 910 HH	812	1: 540
Botika sa barangay (BFAD)	25	-	261	-

Sources: Regional and Social Economic Trends Report 2004 NSCB
BFAD, 2005

REGION 5

The DOH reported a total number of 118 hospitals in Region 5 (49 government and 69 private) as of 2003, providing Bicolanos with a bed-to-population ratio of 1:1390. Masbate had the lowest number of beds with 1:2,213. Other facilities were 128 rural health units and 1096 barangay health stations.

NCR

The total number of hospitals in Metro Manila was 191 (140 private, 51 government; 56 of these have tertiary care facilities). There are 433 health centers operating in Metro Manila, providing a health center-to-population ratio of 1:23.961. In addition, there are 35 lying-in clinics and 12 barangay health stations which are located in Valenzuela (5) and San Juan (5).

These health facilities are manned by the following health personnel: 648 physicians, 686 nurses, 85 nutritionist/dieticians, 554 dentists, 1076 midwives, 204 medical technologists, 286 sanitary engineers/inspectors, 201 dental aides, 3874 active barangay health workers, and 177 trained birth attendants. Moreover, 1,212 administrative staff provided support to the health personnel.

Compared to 2003, the number of physicians decreased by 3.3%, and nurses by 5.5%. Likewise, 71 midwives, 18 sanitary engineers/inspectors, 34 dental aides, and 65 trained birth attendants were observed to have been deducted from the health manpower, while 6 dentists, 8 medical technicians, 81 BHWs, and 83 administrative staff were added to complement health services.

ANNEX H

HEALTH RESEARCHES BY TOPICS AND BY REGIONS

Health Researches from PCHRD-DOH-CHED Inventory (1999-2004)

- *Communicable Diseases*

Area of Interest	Region 3	Region 4	Region 5	NCR	Zone	Total (nationwide)
Dengue		1		48	49	52
Tuberculosis	3	1		68	72	85
Malaria				35	35	39
Pneumonia	1			19	20	24
Viral Hep		1		29	30	32
ARI				9	9	12
Schistosomiasis				28	28	30
STD/HIV				47	47	60
Diarrhea				20	20	30
Total	4	3		303	310	364

- *Non Communicable Diseases*

Area of Interest	Region 3	Region 4	Region 5	NCR	Zone	Total (nationwide)
Cardiovascular/ Hypertension/stroke				25	25	30
Cancer				34	34	40
Diabetes				70	70	74
Smoking				7	7	8
COPD				10	10	13
Drug & substance abuse				9	9	12
Total				155	155	177

- *Health Delivery*

Area of Interest	Region 3	Region 4	Region 5	NCR	ZONE	Total (nationwide)
Health Information				9	9	12
Quality of health service				15	15	26
Devolution of health service				2	2	2
Public health				14	14	16
Local health system		1		16	17	32
Health financing				14	14	17
Hospital system				4	4	8
Health policy				20	20	28
Health regulation				14	14	34
Total		1		108	109	175

- *Environmental/Occupational Health*

Area of Interest	Region 3	Region 4	Region 5	NCR	Zone	Total (nationwide)
Environmental				18	18	33
Occupational	2	2		28	32	52
Total	2	2		46	50	85

- *Vulnerable Population*

Area of Interest	Region 3	Region 4	Region 5	NCR	Zone	Total (nationwide)
Mother & Child	4	6	1	77	88	135
Domestic violence				26	26	28
Disabled				2	2	3
Minorities/indigenous people				2	2	8
Urban poor				5	5	5
Total	4	6	1	112	123	179

- *Other Studies*

Area of Interest	Region 3	Region 4	Region 5	NCR	Zone	Total (nationwide)
Nutritional		1	2	154	157	183
Herbal	2	1	2	62	67	125
Trad medicine				4	4	10
ESRD		1		1	2	7
Reproductive health				16	16	30
Health behavior				3	3	7
Oral health						3
Mental health				8	8	10
Animal bites				1	1	2
Emerging diseases				1	1	2
Total	2	3	4	250	259	379

REGION 4

There was a total of 743 titles of health and health-related researches (for the period 1999-2004). Table 1 below shows the number of researches done for each of the 10 priority areas (1999-2004) identified for Region 4.

TABLE 1. DISTRIBUTION OF RESEARCHES IN REGION 4, 1999-2004

Research Topic	No.	%
A. Research Agenda 1999-2004	**357**	**48.0**
1. Environmental/Occupational Health	31	4.2
2. Communicable diseases	58	7.8
3. Health Operations management	72	9.7
4. Non-communicable disease	100	13.4
5. Poor health information generation/dissemination/utilization	-	-
6. Substance abuse	3	0.4
7. Social concern	67	9.0
8. Accidents/injuries	6	0.8
9. Gender-related issues	7	0.9
10.Geriatric health problems	13	1.7
B. Others (outside research agenda) (reproductive health, medical specialty specific areas, health technology, lifestyle, herbal medicine, etc.)	**386**	**52.0**
Total	**743**	**100.0**

ANNEX I

REGIONAL RESEARCH PRIORITIES
(STANDARD MATRIX FOR TOP TEN RESEARCH PRIORITY AREAS/TOPICS)

REGION 3

Broad R&D Area	Specific Topic	Rationale	Objectives	Responsible Agency	Funding Source
1. TB	Referral system	Increase number of TB deaths	To evaluate the referral system of TB patients	DOH	DOH/PHILHEALTH
2. Dengue	Predictors of shock in dengue	Clinical and laboratory factors related to shock	To determine the predictors of dengue shock	DOH/DOST	WHO/DOST
3. Nutrition	Nutritional status of Region 3	Nutrition in the prevention of mortality and morbidiy	To determine the nutritional status of Region 3	DEPED/Educational Institution	DEPED/Educational institution
4. Research and Research Ethics	Capability of institutions in doing research Compliance of researchers on ethical practice	Deficient in research capability Lack of incentives to conduct research Lack of manpower Lack of funding Informed consent Confidentiality Rights of the respondents Plagiarism	To determine the research capability of institutions in Region 3 To determine the compliance of researchers with ethical practice	CHED	CHED
5. Malignancy	Causes of Malignancy	Increasing incidence of malignancy in Region 3	To identify the factors responsible for increased incidence of malignancy in Region 3	DOH/DENR	DOH/DENR
6. Environmental and Occupational Health Risk	Increase levels of lead in ambient air Guidelines regarding health of workers before and after employment	Magnitude of the Problem There are no existing guidelines on health of workers before and after employment	To determine the proportion of the population affected by the high levels of lead as well as the effects on children To develop a unified occupational health program	LGU/DENR DOLE	LGU/DENR DOLE/DOH

Broad R&D Area	Specific Topic	Rationale	Objectives	Responsible Agency	Funding Source
7. Health Information System	Knowledge	Lack of awareness about PhilHealth benefits Lack of information dissemination about health benefits Lack of data base on the available health services offered by different health agencies in the Region	To standardize the database on information system	PHILHEALTH DOH	PHILHEALTH DOH
8. Mental Diseases, Behavioral Disorder, and Autistic Spectrum Disorder	Profile of patients with mental disorders General profile of children with autism	No existing profile Description of the general profile of autistic children in the Philippines	To determine the profile of patients with mental disorders To determine the general profile of autistic children in the Philippines	DOH Autism Society of the Philippines	DOH Autism Society of the Philippines
9. Health Care Delivery System / Health Care Financing System	Expansion of PhilHealth coverage	High cost of hospitalization Possibility of extending PhilHealth coverage to home care cases (Domiciliary Medical Services)	To determine the feasibility of expanding PhilHealth coverage to include domiciliary medical services	Philhealth	Philhealth
10. Family Planning	Consequence of support pullout from Family Planning Programs	Lack of Budget	To determine the consequence of support pullout from Family Planning Programs	POPCOM	LGU
11. Herbal Medicine	Knowledge Efficacy	Other herbal medicines used have not undergone clinical trial to prove their therapeutic effects Lack of awareness about the herbal medicines included in the list of the PNDF (Phil. National Drugs Formulary)	To conduct clinical trials on available herbal medicine To determine the awareness of the community on the availability of herbal medicine	DOH Institutions	DOH CHED
12. Local Government Code (devolution)	Implementation	Effective and efficient management	To evaluate the implementation of the Local Government Code	LGU	LGU

REGION 4

Broad R&D Area	Specific Topic	Rationale	Objectives	Responsible Agency	Funding Source
1. Environmental Health	Environmental and health effects of land, water, and air pollution in Region 4 KAP on environmental health including environmental laws	The region is one of the major economic hubs and a global industrial site. But there is lack of data on state of environmental health and on compliance of individuals/ local government to environmental health laws	To determine the environmental situation in Region 4 and its effect on health To determine KAP on environmental health and the extent of implementation and compliance to environmental health laws	Academe	Academe DENR DA DPWH
2. Health Care Delivery/Health Information System	Effective and efficient health care delivery/health information system	Need to come up with a model framework to improve health care delivery/health information	To determine adequacy, effectiveness and efficiency of health care delivery/health information systems	Academe	Academe PhilHealth/HMOs LGU DOH Professional organizations
3. Infectious Diseases	PTB, STDs	For OFWs, medical clearance required upon exit, but no such clearance required by Philippine government upon return to the country	To come up with a system of monitoring/surveillance of PTB, STD among special groups – returning OFWs, prisoners, grade school children	DOH	DOLE/OWWA DOH PhilHealth Philcat Academe Specialty societies
4. Policy Formulation	Health policies/regulation	Need to identify model policy framework suited to the region	To assess the effectiveness of health policy making bodies such as the local health board, etc.	DOH	DILG DOH
5. Lifestyle	Substance abuse, nutrition/eating habits	Prevalence of substance abuse; popularity of junk food and potential for fortification	To determine the impact of mass media on healthy lifestyle – substance abuse, eating habits	DOH (BFAD)	CHED, BFAD, DOST, FNRI, OWWA

Broad R&D Area	Specific Topic	Rationale	Objectives	Responsible Agency	Funding Source
6. Maternal and Child Health	MCH services	Most MCH utilization indicators fall below desired levels	To determine factors associated with utilization of MCH services	DOH	Professional societies, Academe, CHED, NSO
7. Occupational Health/Accidents	Occupational diseases/hazards and adequacy of labor laws	There is lack of data on occupational health and on compliance of individuals/local government to occupational health laws	To determine magnitude of occupational health problems and vehicular accidents; To determine individual/industry/ local government compliance to occupational health laws/safety measures KAP on occupational health	DOLE	DOH, PhilHealth, PCCI, LGUs, CHED, NSO
8. Reproductive Health/Population Growth	Contraception Population growth	Need for programs/health interventions to control population growth	To identify determinants of contraceptive use	DOH	DOH, POPCOM, NEDA. Professional organizations, NSO
9. Health Technology	Health technology assessment	Limited data on health technology in the country	To determine status of health technology To determine the extent of use and the effect of GMOs/beauty products on health	DOST	DOST, BFAD, academe, NSO, PhilHealth CHED
10. Special Groups	Elderly, teenagers	Lack of programs Rise in elderly population; increasing teenage pregnancies	To assess health of elderly and teenage population To identify effective programs to improve quality of life of elderly and interventions to prevent teenage pregnancies	DSWD	DSWD, POPCOM, DOH, CHED, COSE, Professional organizations

REGION 5

Broad R&D Area	Specific Topic	Rationale	Objectives	Responsible Agency	Funding Source
Emergence of Anti TB drug Resistant Patients	Prevalence of TB-MDR and paragonimiasis among TB symptomatics in Bicol: Focused on KAPs of patients and factors causing the diseases	Prevalence of TB-MDR and paragonimiasis among TB symptomatics and socio-cultural factors contributing to the disease will help implement program cost effectively	To determine factors contributing to the emergence of TB MDR	DOH	DOH Global Fund
Prevalence of Life-Style Related Diseases (CV diseases, diabetes) Among Bicolanos	The impact of specialty clinics, the present government health facilities and the outmigration of health professionals to the health and welfare of Bicolanos	To know the effectiveness of specialty clinics for life-style related diseases	To be able to identify significant factors (specialty clinics and health facilities) related to the prevalence of lifestyle related diseases among Bicolanos	DOH POEA,PRC,DBM,CSC	DOH DOST
Comprehensive Environmental Monitoring	Health impacts of mine tailings from small and medium scale mining industries in Bicol	Lack of information on the impacts of mercury from small scale mining, hence the need for monitoring	Determine extent of mercury contamination Scanning of impact caused by mercury contamination to residents/communities Quantitative measurement/ determination of mercury contamination of key population	Academe, NGOs LGU	DOH DENR
Prevalence of Life-Style Related Diseases (CV diseases, diabetes) Among Bicolanos	Socio-cultural factors related to the prevalence of cardiovascular diseases and the effectiveness of IEC programs for their control and management	To know the effectiveness of communication materials and develop strategies for behavioral modification	To be able to identify significant socio-cultural factors related to life-style related diseases among Bicolanos	DOH Academe	PCHRD/Extermal

Broad R&D Area	Specific Topic	Rationale	Objectives	Responsible Agency	Funding Source
Behavioral Study	Coping mechanism of poverty groups for health care	For better program identification	To determine behavioral patterns in coping with health care problems	SUCs LGUs	DOH PCHRD
Operations	Strategies in augmenting hospital income for effective and efficient health care delivery with the indigence program and standardization of professional and medical fees as critical factors	For more effective service delivery even for the poor and the indigents	To document good practices on health care management and implementation	DOH PhilHealth LGU	DOH PhilHealth
Health research and development along different ecological zones	Comprehensive health research and development program across ecological zones in Bicol	Local communities hold important traditional health knowledge that could help in drawing policies and intervention	Document and analyze indigenous knowledge in health	Academe, NGOs LGUs	DOH
Caregiver research development in Bicol	Skills assessment, capacity enhancement and management of healthcare delivery agents of Bicol with emphasis on Bicol health workers, traditional healers, overseas caregivers	To enhance performance of caregivers in Bicol region To improve the quality of life of the health workers	To improve health care services in all aspects	DOH OWWA	DOH

Broad R&D Area	Specific Topic	Rationale	Objectives	Responsible Agency	Funding Source
Implementation of Government Programs and Projects on Malnutrition	Assessment of free feeding programs and the nutritional status of Bicolanos focused on diet, food preparation and eating habits of Bicolano families	To evaluate and monitor the program and promote healthy eating habits	To determine the effect of feeding programs in reducing malnourished children	DA DOH LGU	DA
Elderly Health Economics	Status of health rehabilitation programs for senior citizens of Bicol Region	This study will focus on the health rehabilitation programs for senior citizens catering towards the improvement of health and status in society of senior citizens	To determine the operationalization of health rehabilitation programs implemented for senior citizens in the Bicol Region	DSWD, NGOs	DOH

NCR

Broad R & D Area	Specific Topic	Rationale	Objective(s)	Responsible Agency	Funding Source
Health Care Delivery System	Integration and standardization of all health databases gathered from all health facilities for the purpose of information, education, utilization, research and dissemination to end users	Recognition of different health problems and integrating knowledge can facilitate solution and creation of new technologies	To integrate and unify the different health databases for planning and creating better health and science services	NIH, PCHRD, DOH, Academe	
Quality of Health Education and Health Care Delivery System	Research on the health seeking behavior of Metro Manilans especially in the urban poor areas	It would help in the formulation of policies regarding health prevention, delivery of health services	To determine timing of consultation, compliance with medication prescribed, follow-ups etc in relation to socio-demographic factors.	DOH, LGU, Private-Public Health Mix	
	a. Patient compliance (e.g. management of TB and other chronic diseases)	Recognition of the different motivating factors and strategies to improve compliance	To determine factors for poor compliance with TB management; determine knowledge, attitude re: the disease	DOH, LGU, Private-Public Health Mix	
	b. Acceptability of/preference for alternative/complementary modes of care (e.g. acupuncture, herbal, reflexology, hypnosis, functional foods, nutriceuticals) vis-à-vis mainstream health care.	Research on herbal and other alternative modes of therapy to improve wellness.	To improve the research and acceptability of herbal and alternative medicine, and market this not only locally but internationally	DOH, PCHRD, Academe, Pharmaceuticals, PITAHC	
	c. Development of strategies to improve community cooperation in environmental health and disease control.	A successful environmental and health disease control needs the support and participation of the community	To determine factors that lead to better community cooperation in environmental and health disease control	DOH, NGO, Local Government Health Units, Medical Societies	
Health of Special Populations	Define indicators and criteria for classification of an urban poor	To prioritize allocation of limited health resources	Define indicators and criteria for classification of an urban poor	DOH, NGO, DSWD	

Broad R & D A	Specific Topic	Rationale	Objective(s)	Responsible Agency	Funding Source
Public Health Issues	Research on the capability for diagnosis and surveillance of drug resistance and emerging and re-emerging diseases of public health concern	To develop effective strategies for diagnosis and surveillance of emerging and re-emerging diseases	Determine the relevant emerging and re-emerging diseases of public health concern. Determine the present health programs, policies and infrastructure re: these diseases. Determine the strengths and weaknesses of the above	DOH, WHO, Academe, CDC	
Family Health and Health of Special Populations	Develop strategies to improve maternal, child and elderly nutritional status	Maternal and child morbidity and mortality still high in the country; no existing social security net/ health provision for the elderly	To determine state of basic health care delivery and malnutrition in the country specifically in these critical groups; what are the programs in place to address these	DOH, NGO, Obstetric and Pediatric Societies, Local Government Health Units	
Public Health Issues	Develop clinical practice guidelines to be implemented by PhilHealth on the following:	There are varying practices re: these conditions; need to establish a standard for quality of care	To examine and improve existing practice guidelines and develop new guidelines in areas that they are needed. Improving medical reimbursements with the development of clinical practice guidelines	DOH, PhilHealth, different medical societies, HMO	
	a. Chronic disease (e.g., COPD, asthma, cardiovascular diseases, hypertension, strokes, DM I and II)			DOH, PhilHealth, different medical societies, HMO	
	b. Infectious diseases (e.g. diarrheal diseases, acute respiratory diseases, ear infections, eye infections, tuberculosis, STDs)			DOH, PhilHealth, different medical societies, HMO	

Broad R & D Area	Specific Topic	Rationale	Objective(s)	Responsible Agency	Funding Source
Continuation …. Public Health Issues	c. Natural disasters – earthquakes, tsunami, typhoon etc			DOH, PAGASA, Disaster Preparedness Council, Firefighters, Police	
	d. Man-made disasters like terrorism			DOH, Disaster Preparedness Council, Firefighters, Police, NBI	
Public Health Issues	Develop standards of care for cancer (e.g. breast, colon, liver)	To optimize the effectiveness of programs in prevention and treatment of malignancy	To standardize the treatment and care of malignancy patients	DOH, Different Medical Societies, Local Government Health Units, NGO	
Family Health and Health of Special Populations	Develop standards of care for women and children who are victims of domestic violence	To optimize the effectiveness of programs dealing with domestic violence	To determine the adequacy of the number of institutions providing care for victims of domestic violence and the extent of support provided to these victims	DOH, NGO, Local Government Health Units,DSWD	
	Monitor and determine the impact of health personnel migration on the local health services	There is a continuing trend of migration of health personnel and its impact to the health structure should be determined	To determine the effect of health personnel migration on health personnel/patient ratio; number of health institutions closed down, etc	DOH, NGO, Local Gov't Health Unit, Private Hospital	
Health Policies	Research on the relevance and effectivity of health laws and policies.	Several health laws and policies have been passed; indicators of effectiveness of intervention should be in place; review of such is important for its efficient improvement	To determine the effect of the different health laws and policies, whether they have contributed to the overall improvement of health status of the target population	DOH, NGO, PCHRD, DOST	