

**PHILIPPINE NATIONAL HEALTH RESEARCH SYSTEM**

**NATIONAL UNIFIED  
HEALTH RESEARCH AGENDA  
2006-2010**

2006

## PREFACE

This document embodies the unified health research agenda that was drawn from multi-sector regional and national consultations involving representations from the government, academe, research institutions, professional organizations, non government agencies, civil society and funding agencies.

This national unified health research agenda specifies the areas and topics that need to be addressed in the next five years (2006-2010) in line with global and national initiatives influencing the health sector like the Millennium Development Goals, the Medium Term Philippine Development Plan, the Fourmula One, Framework for Health Reforms, and the Science and Technology Agenda.

These identified research topics are not meant to be comprehensive and final. Rather, they represent an evolving list of priorities that can be viewed as research topics in need of immediate action, given current thrusts and realities. Furthermore, these identified research concerns and topics serve the following purposes:

- as basis for policy action and advocacy for achieving the critical goals and objectives of health,
- as basis for funding projects particularly by the government sector and other stakeholders from private and international organizations,
- as basis for academic work (thesis and dissertations),
- as basis for collaboration between and among institutions,
- as basis to maximize resource utilization among stakeholders and minimize duplication of efforts with the delineation of responsible agencies and
- as the template to advocate for support from local, national and international organizations so health research can be mainstreamed as an essential component in providing solutions that impact on the pressing health needs of the country and contribute to national development.

## ACKNOWLEDGEMENTS

Grateful thanks to the regional and zonal facilitators who took up the challenge in setting the health research priorities of their localities, the major players from the Department of Science and Technology's Philippine Council for Health Research and Development, the Department of Health's Health Policy Development and Planning Bureau for putting these priorities together. Last but not least, we would like to acknowledge the participants from the different sectors of society, from academe, public and private sectors and the civil society who participated and provided inputs and insights in setting the health research priorities of the country.

Research Management Committee  
Philippine National Health Research System

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*The process of setting priorities is as critical as conducting the research itself. Since the funding available for health research is low in comparison to its very high potential benefits, it is essential that it is based on a rational priority setting process.*

*Global Forum for Health Research, 2004*

## I. INTRODUCTION

### ***Rationale***

The need for a national unified health research agenda was one of the major recommendations raised by some of the technical working groups for the 1<sup>st</sup> Philippine National Health Research System (PNHRS) Consultative Assembly (2004). This national unified health research agenda consolidates the efforts of the different public agencies particularly the Department of Health, the Department of Science and Technology and other government agencies, private and non-government organizations. The agenda also serves as one of the unifying activities of the PNHRS.

The national unified health research agenda is expected to serve the needs of the population, particularly the marginalized, disadvantaged and those with special needs. Results of the researches identified in the agenda are expected to provide evidence for critical policy actions that will change behavior and the dynamic interactions of players in the health system. The results of these researches will lead to the improvement of health outcomes and equitable delivery of health services, ensuring availability of quality health products, facilities and services, and the development of safe, cheap, accessible world-class health technologies/ products. Moreover, the research agenda also seeks to address concerns to promote and enhance the observation of health research ethics and the development of a functional health information system.

### ***Background Information***

#### ***Health Situation***

The National Objectives of Health (2005b) comprehensively describe the country's health situation and needs of the health sector. The situation presented below is just a snapshot of the country's health situation and is anchored on the National Objectives of Health (2005b).

The health sector's major clientele is the country's large population of 85 million with its predominantly young population and increasing proportions of elderly populations (NSO et al., 1999, NSO and ORC Macro, 2004). About one of every four families live in poverty (NEDA, 2005) and unemployment rate remains to be relatively high (11.3%)



despite the 2.64 million overseas jobs that were created in 2004 (NEDA, 2004). More than half of the population live in urban centers (NSO, 2005) making a large segment of the population vulnerable to health problems arising from industrial pollution and overcrowding.

The country's efforts to curb fertility remain insufficient. The country still grows annually at 2.3% (NSCB, 2005), reduction in crude birth rates and total fertility rates have been sluggish and increments in the use of family planning methods in recent years have not been substantial (NSO, 2005, 2006b). Moreover, the problem of teenage pregnancies has been rising (NSO et al., 1999; NSO and ORC Macro, 2004).

There have been considerable gains in decreasing mortality statistics in the country. Infant and child mortality rates have declined over the past five years (NSO et al., 1999; NSO and ORC Macro, 2004), but not for maternal mortality rates (NSO et al., 1999, DOH, 2006b). Estimates of the expectation of life have increased from 60 years in 1994 (World Bank, 1996) to 68.3 years in 2002 (World Health Organization, 2004). However, despite the improvement in longevity, the leading causes of mortality and morbidity have remained the same. The country is in epidemiologic transition, experiencing both high rates of mortality and morbidity due to non-communicable and communicable diseases respectively (NSCB, 2000, 2002; NSCB, 2002, NEC, 2001).

Improvements in the nutritional status of the population, particularly of children, have not been significant. Although the proportions of underweight and stunted children among the 0-5 and 6-10 age groups have declined, obesity is an emerging problem particularly for school children aged between 6-10 years old (FNRI, 2001, San Pedro et al., 2005). Preschool children are still anemic, although significant improvements in the anemia status are noted among pregnant and lactating mothers (FNRI, 2001; Perlas et al., 2005).

The utilization of major health programs has improved. More pregnant women seek prenatal care. Frontliners like nurses and midwives and traditional birth attendants are more popular choices of antenatal care compared to doctors (NSO, 1999; NSO and ORC Macro, 2004). Although seeking antenatal care has improved, this may not be the case for child immunization, particularly for certain vaccinations. Immunization with BCG continues to be high, and there has been slight increase in the proportions of children immunized against measles. However, the proportion of children with DPT vaccinations or polio shots has declined minimally (NSO et al., 1999; NSO and ORC Macro, 2004).

The utilization of health services is still not popular in the country. Although results from national surveys reveal an increase in the proportions using a health facility, the proportions are still low. Among the public facilities, barangay (or village) health stations or rural health centers have become more popular compared to the bigger facilities. Similarly, among the private facilities, clinics tend to be more utilized than private hospitals (NSO, 1999; NSO and MACRO ORC, 2004).

Devolution of health services to local governments is another major concern influencing the health sector. Devolution of health services has led to administrative and technical fragmentation (DOH, 2005b). Some district and municipal hospitals have been



operating on limited or inadequate budgets and with no managerial autonomy, thus leading to the worsening of the delivery of health care services (DOH, 2005b).

Recent statistics also reveal that the country's health insurance has already reached universal coverage, and more than five million indigents are enrolled in the program. (Philhealth, 2004). However, claims by the indigent sector are still low compared to the private and government sectors (Philhealth, 2004).

Access to safe, effective and cheap drugs has also been a major problem affecting the health sector. Multinational companies dominate the pharmaceutical market. Although efforts to provide access to cheaper medicines have been made through parallel drug importation, the poor and disadvantaged populations still have limited access (Ac-ac and Calabia, nd). Furthermore, quality assurance of drugs remains a problem (DOH, 2005b).

The country is also faced with other health related problems. These include more teenagers engaging in risky behavior like smoking, drinking, drug use and premarital sex (Raymundo, 2004 and YAFS 2004), and cases of child rape, physical abuse and maltreatment of children and physical abuse and battering of wives (NSCB, 2005).

The country also faces several health threats resulting from the globalization of health goods and the frequent crossing of borders and countries because of overseas travel of Filipino nationals and deployment of overseas Filipino workers. Threats of diseases like AIDS have been increasing (Esguerra, 2005), and emerging diseases such as SARS (Lopez, 2003), avian influenza (Lugo, 2004; Manongdo, 2005a; Minh, 2005), mad cow disease (Chua, 2004), and marbug hemorrhagic fever (Gonzales, 2005) are concerns that the country has had to cope with over these past few years. At the local level, threats of meningococemia (Alano, 2004; Reyes, 2004b) and dengue (Manogdo, 2005b, Napallacan, 2005, Manila Bulletin, 2004; Business World, 2003) outbreaks have been major concerns in some provinces. Compounding these challenges is the exodus of health professionals who prefer to work overseas, responding to the global demand for nurses in particular. This great demand for nurses has encouraged doctors and other professionals to pursue nursing degrees to work overseas and leave their posts (Galvez-Tan, 2005)

### ***Health Research Situation***

Health research in the Philippines is still in its developmental stage. Although there have been efforts to improve the health research situation in the country since the 80s, developments have been sluggish because of waning financial, logistic and political support from major stakeholders.

Available information from existing databases of PCHRD, CHED and DOH reveal that there were more than a thousand research projects (1,319) conducted from 1999 to 2005. Only about half of these projects were within the identified priority areas identified by either the PCHRD (1999) or the DOH (2002). Although only a fifth (6 of 29) of the identified national priority areas of the health sector reform agenda of the central DOH office were funded, the DOH also funded other initiatives that were deemed important



in improving its governance functions and its supportive role in service delivery. Some of these projects focused on civil society participation in the health sector reform agenda and assessment of the implementation of the magna carta for health workers, good clinical practice, air pollution, deafness, health risk perceptions and tobacco use among the youth.

The poor adherence to the national agenda may be due to inappropriate strategies of dissemination of the agenda, the scarcity of research funds (Barquin, 2004) and different donor or personal research interests. Of the researches included in the databases, more than a quarter of these were on communicable diseases. There was also a considerable proportion of researches devoted to nutrition, health concerns of vulnerable populations and metabolic, degenerative and lifestyle related disorders. Herbal medicine, the health sector reform agenda and environmental and occupational health concerns were also major areas for research. Although these databases contain researches that have been conducted in the country, an assessment of selected entries in the HERDIN database reveals that the quality of research still can not be fully assessed because of lack of information. There is no observable consistent information showing the relationship between health research production and health gains improvement (Taguiwalo, 2004).

Health researchers are still concentrated in the National Capital Region, where majority of academic institutions offer related degree programs and where medical centers and research centers and more research mentors are located. A substantial proportion of health researches are in the clinical sciences because of the predominance of researchers with medical degrees. Research capabilities are mostly in the clinical sciences rather than in the health social sciences, basic sciences and advanced sciences like biotechnology (TWG on Capacity Development, 2006). In addition, many health research institutions still do not have institutional ethics review boards or do not have members with appropriate training in health research ethics (Reyes, 2004a).

Health research funds are still below the recommended allocation of the national health expenditure set by the Commission on Health Research and Development (Galvez-Tan, 2004). A previous review of health funding reveals that majority of health research funds are provided for systems or operations research, while other priorities such as communicable and non communicable diseases and fundamental research share the remaining 25 per cent of the research funds (Galvez-Tan, 2004). Moreover, funds and resources are still hardly adequate to support health research, capacity development for health research, support for facilities improvement, and the provision of awards and incentives for health research (TWG on Capacity Development, 2006).

These deficiencies and gaps are currently being addressed with the formal establishment of technical committees under the Philippine National Health Research System<sup>i</sup>.



*The prioritization of health research should take place at the local national and global level levels, as resources are invested in health research in one form or another, at all three levels. The three levels should be linked in an iterative process and involve all stakeholders*

*Global Forum for Health Research, 2004*

## II. METHODOLOGY

### *Framework for Consultations*

The health research agenda was formulated using the national commitments, national initiatives and local initiatives (in the case of the regions) as frameworks for the consultations. These included the following:

The Millennium Development Goals (2000), an international movement espoused by countries and international agencies that aims to reduce poverty, hungry populations, child mortality, improve maternal health, combat malaria, HIV/AIDS and other diseases, ensure environmental sustainability, assure universal primary education, and gender equality.

The Medium Term Philippine Development Plan (2004-2010), which targets for 2010 the reduction of poverty and hunger, provision of basic amenities (safe water supply), reduction of infant and under five mortality rates, improvement of maternal health, reduction in malaria morbidity and HIV, and increase in detection and cure of tuberculosis cases. Research and development has been identified as one of the mechanisms to improve health and productivity with the strengthening of the Philippine National Health Research System, along with conduct of research in areas supportive of the Department of Health's Agenda in areas of natural products, development of processes and technologies for priority health problems, development of vaccines and pharmaceuticals, periodic health, nutrition and demographic surveys, and evaluation of health, nutrition and population programs.

The Fourmula One for Health as Framework for Health Reforms (2005), an initiative from the Department of Health, seeks to enhance the performance of the health sector by improving the provision and financing of health services with the expansion of the national and local public health programs, increasing access to personal health services provided by public and private providers especially



among the poor, and reducing the burden on individual families through universal coverage of the national health insurance program.

The National Science and Technology Plan 2002-2010 sets the directions for the science and technology sector, including the health and medical sciences. The plan indicates that the health and sciences sector niche on the development of novel technologies and processes for the development of human vaccines and therapeutics, diagnostic kits, functional foods and nutraceuticals, natural health products including bioactive compounds/drugs and herbal medicine from marine and terrestrial sources, telemedicine and bioinformatics.

Other national directives that also influenced the crafting of the research agenda include National Health Insurance Act of 1995<sup>ii</sup>, An Act of Salt Iodization Nationwide of 1995<sup>iii</sup>, the Agriculture and Fisheries Modernization Act of 1997<sup>iv</sup>, the Traditional and Alternative Medicine Act of 1997<sup>v</sup>, the Philippine Clean Air Act of 1999<sup>vi</sup>, the Philippine Food Fortification Act of 2000<sup>vii</sup>, the Early Childhood Care and Development Act of 2000<sup>viii</sup>, the Wildlife Resources Conservation and Protection Act<sup>ix</sup>, and the Order Directing National Government Agencies and Other Concerned Agencies to Support and Implement Programs on the Bright Child<sup>x</sup>.

## **Approaches**

Two approaches have been used to generate health research priorities of the country. First was the formulation of research priorities at the regional/zonal level and second was to generate a set of national health research priorities.

### ***Regional/Zonal Health Research Agenda***

The development of a regional agenda for each of the seventeen regions of the country was done by first clustering the country into zones composed of at least three contiguous regions. The country was divided into four zones namely North Luzon (Ilocos, Cagayan Valley, Cordillera Autonomous Region), South Luzon (Central Luzon, Bicol, Calabarzon, Mimaropa and MetroManila), Visayas (Eastern, Central and Western Visayas), and Mindanao (Zamboanga Peninsula, North Mindanao, Davao, Caraga, Socsargen and Autonomous Region of Muslim Mindanao). Each zone had a facilitator to oversee the consultation process in the various regions of her/his zone (Annex A). In each region, a region-based facilitator was designated to conduct the health research priority setting activity with the various stakeholders from the public and private sectors.



## ZONAL AND REGIONAL FACILITATORS

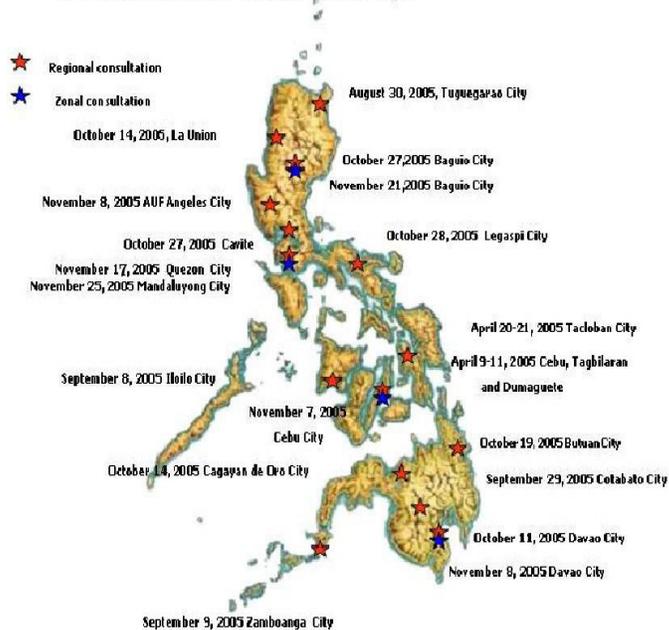
Region	Facilitator	Institution
<b>NORTH LUZON</b>	Dr. Leonardo Quitos	NEDA -I
Ilocos	Dr. Socorro Escalante	Center for Health Development Ilocos
Cagayan Valley	Dr. Rustico Santos	Department of Science and Technology - II
Cordillera Autonomous Region	Dr. Elizabeth Dacanay	St. Louis University
<b>SOUTH LUZON</b>	Dr. Charles Yu	De la Salle University College of Medicine
Central Luzon	Dr. Evelyn Yumiaco	Angeles University Foundation
Mimaropa and Calabarzon	Dr. Carmen Tolabing	Dela Salle University College of Medicine
Bicol	Dr. Elma Cabrera	Center for Health Development Bicol
MetroManila	Dr. Dennis Teo	Manila Doctor's Hospital
<b>VISAYAS</b>	Dr. Fidelis Quiza	Cebu Institute of Medicine
Western Visayas	Dr. Edgardo Gonzaga	Center for Health Development - Western Visayas
Central Visayas	Dr. Crisol Tabarejo	Center for Health Development - Central Visayas
Eastern Visayas	Dr. Fe Barquin	Center for Health Development - Eastern Visayas
<b>MINDANAO</b>	Dr. Marlina Lacuesta	Ateneo de Davao University
Zamboanga Peninsula	Dr. Grace Rebollos	Western Mindanao State University
Northern Mindanao	Dr. Chona Echavez	Xavier University
Davao	Dr. Victoria Lupase	Davao Medical School Foundation
Socsargen and ARMM	Dr. Dolores Daguino	Notre Dame University
Caraga	Ms. Lucita Taguidin	Center for Health Development - Caraga



Preparatory work and initial consultations started in April 2005 and zonal based consultations culminated in the first week of December 2005. The health research priority setting activity involved gathering of information through qualitative and quantitative techniques (surveys, round table and focus group discussions and in depth interviews) and the conduct of a consultative workshop (See Annex B) from which health research priorities were drawn.

To arrive at a set of priorities in the workshop or round table discussions, participants in the consultations were assigned to designated groups. In each group, participants recommended research topics that were later rated by the whole group using a set of criteria<sup>xi</sup>. The criteria highlighted urgency, magnitude, impact, feasibility, potential R&D contribution, utilization, collaboration potential and gender responsiveness of the problem in health.

### Sub-National Consultation Workshops



The results of the region-based consultations<sup>xii</sup> (which in some cases included provincial level consultations) led to regional health research priorities, which now serve as the template for each region's health research agenda. To further strengthen collaboration among the contiguous regions in each zone, a zonal consultation was convened for each of the four zones<sup>xiii</sup> to identify common areas in which research collaboration may be pursued. These areas of



collaboration now serve as the health research priorities for the different zones (Please see Quito et al., 2006, Yu, 2006 Quiza, 2006, Lacuesta et al., 2006 for their respective reports on their zones).

### **National Level Priorities**

The national level priorities were drawn from different processes. These included a series of consultations with both public and private sectors, and inputs from the different line agencies of government.

The identification of national health research priorities on the four components of the Department of Health's Fourmula One—namely, health financing, governance, health regulations and service delivery—was done through a series of consultations. First, program officers of the Department of Health (December 15, 2005) and other national line agencies and non-government organizations (April 6, 2006) were consulted separately to draw the national priorities using the region-priorities as inputs. These identified national priorities were later validated in subsequent workshops and consultations with the Department of Health<sup>xiv</sup> (April 26, 2006, May 19, 2006) and other national line agencies (May 10, 2006) identified as responsible agencies for the implementation of the research agenda.



The identification of the national health priorities on health technology development was drawn from the regional consultations, validation workshops, and from the Workshop on the Formulation of an R&D program for the Health Bioindustry<sup>xv</sup> (March 10, 2006). Another meeting with a special group on human vaccines and therapeutics under the Biotechnology Cluster<sup>xvi</sup> of the Department of Science and Technology (April 27, 2006) provided some focus on what specific concerns must be targeted in the next few years.

The research topics included for health research ethics were results of the region based consultations and inputs generated from the participants of research ethics related workshops held November 5-6, 2005<sup>xvii</sup> and March 17, 2006<sup>xviii</sup>. The final set of research priorities for research ethics were further validated and short-listed by the members of a sub-committee of the Philippine Health Research Ethics Board<sup>xix</sup> last May 12, 2006.



*The prioritization process in health research should encompass all factors affecting people's health; i.e. not only basic, biomedical, clinical and laboratory research but also health systems, demography, social and behavioral sciences, economics, management, macroeconomic policies, and sectors other than health having a large impact on health in the country.*

*Global Forum on Health Research, 2004*

### III. PRIORITIES

This section lists the country's health research priorities and discusses the need for an information system. The priorities may be classified into major areas, namely, health financing, governance, health regulations, health service delivery, health technology development and health research ethics. Apart from the priority research topics, the responsible agency<sup>xx</sup> and proposed funding sources have also been identified in this agenda. The need for an information system is also discussed as a fundamental component of health research. The priorities are classified as high, medium or low as agreed upon by the responsible agencies. High priorities are topics that need to be implemented over the next two years (2006-2007), medium priorities refer to topics that are to be implemented during the period 2008-2009, and low priorities are topics that can wait until 2010.

#### HEALTH FINANCING

"Health care financing system refers to various structures, methods, processes and procedures in which financial resources are made available to fund health sector activities, and how it is used on the delivery of health services. The purpose of health financing is to make funding available, to set the right financial incentives for providers, as well as ensure that all individuals have access to effective public health and personal health care" (WHO, 2000 in DOH, 2005b).

Health financing is one of the major programs under the Fourmula One for Health framework. The objective of the health financing component is to acquire better and sustained health investments and provide equitable services and improve health outcomes especially for the poor. The objectives can be achieved by mobilizing resources from extra budgetary sources, coordinating local and national spending by pooling resources across all levels on identified areas and focusing direct subsidies to priority programs by mobilizing more investments and maximizing expected performance outputs using available resources. By adding a performance based financing system, expanding the enrollment and coverage of the national health insurance program, improving benefit packages and investing payments on quality of care and strengthening coordination with engaging partners at the local levels (DOH, 2005c) access to effective public health services can be achieved.



Health financing has become a major concern for the government with the increasing costs of health care, the aggressive marketing of social health insurance and the growth of health maintenance organizations. Since the national health insurance has already been in place and aims for universal coverage particularly for the indigent population, researches earmarked for the next five years will focus on assessing and improving Philhealth's performance by considering the various strategies implemented by Philhealth and new developments that influence health care financing. These will include studies on the factors influencing expanding enrollment, coverage, standardization of fees, financial management, and compliance with accreditation standards. Studies on client awareness and satisfaction, and the health insurance's impact on health outcomes and the participation of other stakeholders are also research priorities. Specifically, the priority topics include the following:

<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>HIGH PRIORITY</b>			
<b>Macro and Local Financing</b>	Strategies for setting prices of health services	DOH	DOH and External
	Use of income among DOH hospitals	DOH	
	Evaluation of current local health financing in support of a performance based budget system	DOH	External
	Factors affecting budget allocation for local health sector among LGUs	DOH	External
	Assessment of allocation and utilization of health budget at the central and regional levels	DOH	DOH
<b>Philhealth/Health Insurance</b>	Assessment of Philhealth's performance (including administrative efficiency)	Philhealth	HPDPB-DOH or Philhealth
	Knowledge, attitude, practices and utilization of Philhealth benefits across identified population parameters	Philhealth	Philhealth
	Support value of Philhealth reimbursements to hospital operations: determinant of quality improvement programs	DOH	External
	Benefit packages: Support value on cost of care, health needs assessment of members and beneficiaries as basis for benefit package formulation or new services, impact on premium contributions	Philhealth	Philhealth
	Philhealth Premium and Efficiency of Funds Flow: Structure (including strategies and schemes such as market segmentation), impact and client satisfaction	DOH	External
	Financial analysis of Philhealth's investments	Philhealth	Philhealth
	Assessment of the capability of LGUs to comply with accreditation standards for providers of out-patient benefit packages	Philhealth, DOH	Philhealth



<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>Philhealth/Health Insurance</b> (cont'd)	Strategic assessment of Philhealth's role in the medium and long term development plan	Philhealth	Philhealth
	IPP and Sponsored Membership: Assessment, sustainability through marketing strategies, and client satisfaction	Philhealth	HPDPB-DOH or Philhealth
<b>MEDIUM PRIORITY</b>			
<b>Macro and Local Financing</b>	Local health accounts and factors affecting the allocation and expenditures for health	DOH	External
	Public-private mix in the critical F1 programs of the reform components	DOH	DOH and External
	Incentives to sustain public private mix in the critical F1 programs or reform components: the budgetary and organizational requirements	DOH	DOH and External
	Factors affecting cost/price setting in RHUs, hospitals and other health facilities	DOH	DOH and External
<b>Philhealth/Health Insurance</b>	Cost analysis of the top three causes of hospitalization and the margins between prices and operational costs (retrospective study)	Philhealth	Philhealth
	Actuarial analysis of the impact of the non paying sector	Philhealth	Philhealth
	Impact of Philhealth on the health status of beneficiaries	Philhealth	HPDPB-DOH or Philhealth
	Feasibility/assessment of other programs supportive of health in financing: POGI/KaSAPI and its variation	Philhealth	External



## GOVERNANCE

Governance, one of the components of the Fourmula One for Health framework, refers to the management of political systems, public and financial management and accountability, and efficient delivery of services and other support systems to improve health status of populations. Governance also includes the enhancement of public and private partnerships in managing the health sector, building local capacities for technical leadership and management, knowledge management for improved decision making, and improving and retention of critical health personnel to promote and maintain the well being of the people (DOH, 2005b, 2005c).

The objectives of good governance are to improve health systems' performance at the local and national levels with the introduction of interventions to improve governance and coordination across local health systems, enhance public and private partnership and improve national capacities to manage the health sector. These objectives may be achieved through the improvement of local health systems by supporting the implementation of Fourmula One for Health (F1) components in convergence sites, tracking the progress of F1 sites with an F1 health LGU scorecard, and institutionalizing a professional development and career track for health professionals. Good governance also includes the improvement in national capacities to manage the health sector through strengthening of technical leadership and management capability, improving public finance and procurement management systems, improving an integrated management information system, and strengthening procurement and logistics and warehousing capacity. Moreover, good governance also involves strengthening information communications technology capabilities, monitoring and evaluation systems, research and knowledge management systems, and network mechanisms and referral systems (DOH, 2005c).

Good governance has been a critical component in having an efficient and effective delivery of health services, particularly to the marginalized and disadvantaged. The country health system still has problems because of the decentralization of health services which have resulted, in most cases, in weak governance and sluggish implementation of health interventions due to poor logistic, financial and political support to health programs and dull performance of health providers. Moreover, problems of motivating and retaining health human resources still exist within the health system because of better opportunities that exist elsewhere.

For the next five years, researches must examine strategies that have been initiated to improve governance, such as focusing on the performance of convergence sites, functionality of inter-local health zones, the referral system, performance of providers, health seeking behavior of the clientele, and participation of other partners and stakeholders. Studies also need to focus on external factors affecting health governance like local governments' role in supporting F1 initiatives and the contribution of other partners and stakeholders in providing equitable and quality care to the population, especially the poor, and new forms and ways of public management. These research priorities include the following:



<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>HIGH PRIORITY</b>		
Health seeking behavior and coping mechanisms of the poor for health care	DOH, DSWD, LGUs and Philhealth	LGUs, Philhealth
Challenges of changing political systems for the health sector	DOH	DOH
Barriers to effective work performance of health providers	DOH (HHRDB, AS)	DOH, LGU
Impact and costs of health workers migration on the quality and availability of health services delivery and health outcomes	DOH	DOH
Assessment of DOH employees capacities to implement the critical health reforms for the health sector	HHRDB-DOH	DOH
An Internal Client Satisfaction Study (awareness, utilization) in the Department of Health	DOH	DOH
Assessment or adoption of the primary health care approach as a reform strategy	BLHD-DOH	DOH
Data requirements, capacities and mechanisms for institutionalizing the LGU Performance score card	BLHD-DOH	DOH
Study of the legality of ILHZ operations as an economic enterprise/ corporate entity /cost sharing scheme	BLHD- DOH	DOH and External
Effectiveness of tools/systems used in the monitoring and evaluation in implementing health service programs	HPDPB-DOH	DOH
Development and application of manual for impact assessment of DSWD programs	DSWD	World Bank
Development of a system of health services utilization monitoring (patient satisfaction exit interviews and members satisfaction towards benefit packages)	Philhealth	Philhealth
Assessment of the current drug and vaccine management and regulations	PLS	External
Gaps, strengths, overlaps and challenges for donor assistance to support F1: An initial assessment of donor activities and contributions	DOH	DOH and External
<b>MEDIUM PRIORITY</b>		
Factors (external and internal) influencing the performance of the current health system	DOH	DOH
Health services utilization and customer satisfaction in inter-local health zones (ILHZ)	BLDH-DOH	DOH
Assessment of service delivery of LGU vis-à-vis function of DSWD relevant to the Local Government Code	DSWD	External
Behavioral and impact evaluation of human resource interventions	PLS	External
Development of opportunities for enhancement of competencies of Filipino health workers	HHRDB-DOH	DOH
Level of utilization of health data /information for local health legislation/ policy development	HPDPB-DOH	DOH
Factors affecting the acceptability of contraceptive self reliance (CSR) by local chief executives	DOH	DOH
Research study on the benefits derived from foreign donations by the Philippine Government	BIHC-DOH	External
<b>LOW PRIORITY</b>		
LGUs provision of health services to migrant populations	POPCOM	External
Knowledge attitudes and practices and compliance to the Generics Act by local health workers	DOH	External
Readiness, capacity and creativity of Local Chief Executives (LCEs)/LGUs in managing high-financed investments in public health such as rabies prevention and control	DOH	External
Functionality of health management systems (including its local health bodies/communities)	BLHD-DOH	DOH



## HEALTH REGULATIONS

Health regulation is the major function of government that ensures access to quality, effective, safe and affordable health care products, devices, facilities and services for the improvement and well being of the population, particularly the poor. Health regulation includes the setting up and monitoring of systems, standards, rules, and regulations and compliance. Health regulation also involves harmonizing, licensing, accreditation and certification of health products and services (DOH, 2005b, 2005c).

The objective of the health regulation component of the Fourmula One for Health framework is to assure access to quality and affordable health products devices, facilities and services, especially those needed by the poor. This can be achieved by making health regulation more rational and client responsive with new interventions and strategies and developing a seal of approval system to indicate the assured level of standard or competency, ensuring financial stability with the institution of programs and assuring the availability of low priced quality medicines, especially those used by the poor (DOH 2005c).

With the large demand for effective and efficient services and safe, effective and affordable health products, and the need to strengthen health regulations at the national and local levels and improve adherence to local and national regulations, the next five years need to focus on improving the licensing, accreditation and certification of health products and services. These include researches that focus on the development of standards for performance assessment, the assessment of regulatory bodies and their programs, the effectiveness of laws and regulations, and the compliance and readiness of the various partners and stakeholders to assume regulatory functions particularly at the local level. Other studies that focus on client satisfaction and perceptions of regulations are important research areas that will provide inputs in improving the efficient and effective delivery of products and services. Specifically these research priorities include the following:

<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>HIGH PRIORITY</b>		
Study on the performance of clinical/ drug testing laboratory and food and drug establishments as a result of licensing accreditation	BFAD-DOH	DOH
An assessment of the adequacy of LGU laws in implementing regulatory functions relative to health facilities, devices, and technology	DOH (BHFS& BHDT) /LGU	DOH LGU
BHFS and BHDT stakeholders perceptions on regulations (for effective policy implementation)	DOH (BHFS& BHDT)	DOH
Identification of strategies to enhance the training protocol on food safety and sanitation of the Philippine Bureau of Quarantine for food handlers and ship stewards	BQ-DOH	WHO
Assessment of the current quality control and quality assurance systems of BFAD	BFAD-DOH	External



<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
Identification and review of related regulatory policies and laws to strengthen BFAD's roles and functions	DOH	DOH and External
Development of an integrated and unified licensing and accreditation of health facilities	Philhealth	Philhealth
<b>MEDIUM PRIORITY</b>		
Study on the readiness/capacities of CHDs and other organizations for regulating functions	DOH, LGU, Academe	DOH, LGU
Efficiency of processing and distribution of low priced quality drugs (Pharma 50)	HPDPB-DOH PMU and DOH	DOH
<b>LOW PRIORITY</b>		
Assessment of the capacity for health surveillance addressing hazard analysis and critical control point (HACCP) issues	DOH	DOH
Factors influencing LGU compliance with health standards and regulations	DOH, LGU, Academe	DOH, LGU

## HEALTH SERVICE DELIVERY

Health service delivery involves the improvement of accessibility and availability of basic and essential health care for all Filipinos, particularly the poor.

Health service delivery not only ensures the availability of health care providers of essential services in localities, but also designates providers of specific special services in localities and intensified public health programs in targeted localities (DOH 2005b, 2005c)

Health services delivery as specified in the Fourmula One for Health framework is aimed at improving the accessibility and availability of basic and essential health care for all, particularly for the poor, in both public and private facilities and services. These objectives are to be attained by providing basic and essential health packages in all, and specialized packages in designated, locations. With the upgrading of health facilities and human resources, the quality of health facilities and human resources can be assured. Public health threats are to be reduced with the disease free zone initiative (with intensive campaigns to eliminate diseases like malaria, filariasis, schistosomiasis, dengue, leprosy and vaccine preventable diseases), intensive implementation of disease prevention and control strategies (for TB HIV and other communicable diseases) and enhancing health promotion and disease surveillance through intensification of the disease free zone initiatives and disease surveillance (DOH 2005c)

The utilization of health services is still not maximized because of poor social and physical access to health facilities. Health problems, particularly preventable diseases, persist because of problems in the implementation of health programs. Considering the vast and urgent demand for the delivery of essential services and limited resources and logistical support, there is a need for researches to focus on the delivery of essential services and on implementation of preventive strategies to address perennial health



problems and new and emerging health problems by involving different partners and stakeholders.

These research priorities include concerns on disease control programs including public health and assessment of hospital systems. Research issues on public health include the conduct of household and national surveys and epidemiologic studies, communicable and non communicable diseases, new and emerging diseases, calamity mitigation, and emergency preparedness and response. Also included as public health research issues are drug abuse, environmental health, occupational health, nutrition, family health and vulnerable populations, health communications and health education.

### ***Disease Control and Prevention***

Disease control and prevention encompasses various concerns. These include the delivery of programs dealing with communicable and lifestyle related disorders, nutrition, dental health, new and emerging concerns, mental health and even migrant health, family health, health of vulnerable populations, and other public health concerns. The specific topics identified to address these specific public health issues include the following:

<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>HIGH PRIORITY</b>			
<b>Tuberculosis</b>	3 <sup>rd</sup> National Tuberculosis Prevalence Survey	NCDPC-IDO DOH	GFTAM
	Functionality and sustainability of PPMD (Private-Public Mix DOTS)	NCDPC-IDO DOH	GFTAM Rd 5
	Assessment of TB DOTS implementation (in children, prisoners and urban poor)	NCDPC-IDO DOH	DOH/ NGOs
	Multi-Drug Resistant (MDR) TB Survey in selected communities with operational DOH-DOTS program	DOH	DOH / External
	Financing for TB (assessment of Philhealth's out patient package)	NCDPC-IDO DOH	DOH/ Philhealth
<b>Malaria</b>	Community based initiatives in the development of social marketing strategies on malaria for the indigenous people of Tawi-tawi	DOH, TDRF	DOH
	Malaria prevalence and KAP among the indigenous populations	NCDPC-IDO DOH	GFTAM
	Chemotherapy Expansion of Chloroquine+Sulfadoxine-Pyrimethamine for treatment of uncomplicated P. falciparum malaria	NCDPC-IDO DOH	WHO
<b>Filariasis</b>	Assessment of mass drug treatment elimination for filariasis	NCDPC-IDO DOH	DOH
<b>Schistosomiasis</b>	Epidemiology and prevalence of schistosomiasis	NCDPC-IDO DOH	DOH
<b>Soil-transmitted diseases</b>	Hookworm prevalence survey	NCDPC-DOH	DOH/ External
<b>STD/HIV/AIDS</b>	National STI prevalence survey in 2007 (@5 years)	IDO-DOH	External



<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>STD/HIV/AIDS (cont'd)</b>	STI prevalence among ante-natal care women , incarcerated persons	IDO-DOH	UNICEF/ WHO (fund committed)
	Baseline survey on STI and HIV in children	IDO-DOH	External
	Establishing IDU practices and HIV infection among drug rehabilitation centers	IDO-DOH	WHO (already funded)
	Size estimation of most at risk population and HIV prevalence	NEC-DOH	External
	Behavioral and serologic surveys among identified MARPs (Most at Risk Populations)	NEC-DOH	External
	Operational research on implementing the ARV program at six treatment hubs	IDO-DOH	External
	Establishing sustainability options for the national anti-retroviral program	IDO-DOH	External
	Assessment/ Development of Inter-LGU responses to HIV-AIDS	DOH-IDO	External
<b>Dental Health</b>	Comprehensive Dental Survey: National and special populations/ sectors (e.g. preschool and pregnant women)	NCDPC-DOH	WHO
<b>New and reemerging infections</b>	Epidemiology/Prevalence/ Burden of disease studies of new and reemerging infections (e.g. avian flu, bioterrorism, etc.)	DOH	DOH, External
<b>Degenerative and lifestyle disorders</b>	Profiling of non-communicable diseases support groups	NCDPC-DOH	DOH and other sources
	Burden of non-communicable diseases: cancer, CVD, COPD, diabetes, kidney, and others	NCDPC-DOH	DOH/ PhilHealth
	Cost benefit analysis of non communicable programs	NCDPC-DOH	External
	Actuarial studies on financing non communicable diseases	NCDPC-DOH	External
	Stratification of diseases based on the burden of non-communicable diseases	NCDPC –DOH	DOH and External
	Compliance of private practitioners to clinical practice guidelines on NCDs	NCDPC –DOH	DOH and External
<b>Mental Health</b>	Epidemiological study on mental health and well-being	DOH	DOH
<b>MEDIUM PRIORITY</b>			
<b>Fish/Shell Borne Diseases</b>	Epidemiology of fish/ shell borne diseases among coastal and lakeshore communities	DENR ERDB	DENR External

### **Environmental and Occupational Health**

Environmental and occupational health concerns take into account the risks imposed by one's natural and work environment. With the huge demand for agricultural and marine products by the population's growing population, and the huge potential for the export of natural resources, the natural environment faces the risks of pollution and destruction because of man-made and industrial activities that affect health of populations. Likewise, workers also face some health risks in their work environment. The following research topics are identified as priorities for the next five years:



<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>HIGH PRIORITY</b>			
<b>Occupational Health</b>	Prevalence of occupation related diseases based on employment compensation (EC) claims (using database on employee's compensation claims in the private sector)	DOLE	SIF
	Current safety, health and environment conditions in small-scale laundry shops and dry-cleaning establishments	DOLE	SIF
	Comprehensibility testing for the Globally Harmonized System (GHS) for chemical labeling (KAP and training needs)	DOLE	DOLE UNITAR, UNEP, GEF, SIF
	Researches to assist in review and updating of Occupational Safety and Health Standards (OSHS) and relevant laws	DOLE	SIF and other donors: ILO, UNAIDS, DDB, etc.
	Studies on occupational health and safety risks and outcomes Studies on control and prevention of risk	DOLE	SIF and other donors: ILO, UNAIDS, DDB, etc
<b>Environmental Health</b>			
<b>Water</b>	Impact of nutrient loading from waste water to health of tourists and locals in Boracay	DENR ERDB	External
	PSP Toxicity Risk Assessment: Accumulation and elimination of Saxitoxin in Green Bay Mussels ( <i>Perna veridis</i> ) using nuclear techniques	PNRI-DOST	GAA/DOST-GIA/ IAEA
	Historical profile of harmful Algal Cyst and Anthropogenic Inputs in sediment using isotopic techniques	PNRI-DOST	GAA/DOST-GIA/ IAEA
	Isotope and Chemical techniques application in water resources management and protection	PNRI	GAA, IAEA water companies
<b>Air</b>	Air Pollution Source Apportionment by Nuclear and Related Analytical Techniques	PNRI-DOST	GAA, IAEA, possible contract research
<b>Soil/environment</b>	Biomass and carbon sequestration of selected tree species	DENR ERDS Reg. 5, 6, 9, 10, 11, 13	DENR ERDB External
	Pesticide residue assessment of major crops in watershed areas (Mt. Apo Watershed)	DENR Reg. 11 ERDB	DENR, External
	Radiological assessment for release of technologically enhanced naturally occurring radioactive material (TENORM) into the environment	PNRI-DOST	GAA
<b>GMOs</b>	Preserving biodiversity of healthful ecology: R&D framework to ensure sustainable use of GMO in the Philippines	ERDB-DENR	DENR Program on the Biosafety System
<b>Health Risks</b>	Environmental health risk mapping	EMB	Air Quality Management Fund (AQMF)/ EMB
	Health Impact Assessment ( and development of systems for environmental health impact assessment)	DOH	DOH and External
	Health impacts of emissions from thermal destruction facilities	EMB	External



<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>MEDIUM PRIORITY</b>			
<b>Water</b>	Biological indicators of environmental pollution of freshwater and marine water	DENR ERDS	DENR External
	Impact of mining extraction on water quality and biological components in selected river systems and lake basins	DENR-ERDB	External, DENR
<b>Environment</b>	Presence of hazardous chemicals known as endocrine disrupting substances in the Philippines	DENR (EMB, ERDB), DOH, DOST	External
	Management of Polychlorinated Biphenyls (PCBs) in relation to environmental health: Focus on the operation of the National Power Corporation power plants	NPC, DENR, EMB	External
<b>Health Risks</b>	Study on the relationship between physical, geographical features (e.g. climate, hazes, flood, etc.) to occurrence of endemic diseases	DOH should lead; PAGASA, EMB as support agency, MGB, ERDB	External
<b>LOW PRIORITY</b>			
<b>Environment</b>	Polychlorinated Biphenyl projects of EMB: Assessment of the effects of PCBs in the two former US military bases at Clark Air Base, Pampanga, Subic Naval Base and Zambales	DOH and DENR- EMB	External

## **Nutrition**

Nutrition is one aspect of public health that needs some attention. Malnutrition is still a major problem in the country and delivery of nutrition related programs are needed, particularly by the poor. Several topics have been identified in relation to public health nutrition involving the assessment of the country's nutrition problems, the effectivity of nutrition programs, and effects of supplements and genetically modified organisms. Specifically these include the following:

<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>HIGH PRIORITY</b>			
<b>Nutrition Assessment</b>	Nutrition and health surveys (anthropometric, biochemical, clinical, dietary)	FNRI-DOST	DOH, DOST, NIH, International org, Medical Societies
	Magnitude of prevailing nutritional problems	NNC	External
	Causes of various types of malnutrition across various groups	NNC	External
	Identification of appropriate measures of nutritional status (measures of the nutrition situation)	NNC	External
	Measurement of hunger and food insecurity	NNC	OP, External
	Food quality and safety program (e.g. trans fatty acid content of processed foods)	FNRI-DOST	DOST, DOH, NIH, Int'l Orgs



<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>Nutrition Assessment</b> (cont'd)	Development of nutrition tools and standards for overweight, obesity, predictor of risk	FNRI-DOST	DOST External
	Relationship of nutrition and lifestyle-related disorders/ conditions (non-communicable diseases)	FNRI-DOST	DOST External
<b>Nutrition Programs</b>	Effectiveness of nutrition intervention programs: (a) mandatory food fortification; (b) mix nutrition strategies for behavior change; (c) Nutrition Information, Communication and Education or NICE; (d) food for school program; (e) deployment of nutrition volunteers; (f) Operation Timbang (OPT)	NNC	External
	Development of strategies for the improvement of compliance to iron supplementation	NNC	External
<b>Food Supplements</b>	Long term use and effect of food supplements	NCDPC-DOH	External
	Ill effects of food supplements on non communicable diseases	NCDPC-DOH	External
<b>GMOs</b>	Effects of GMOs (Genetically Modified Organisms) on NCDs – local and international	NCDPC-DOH	External

### **Substance Abuse**

Substance abuse is a major problem confronting the health sector. It has become more popular especially among adolescents who engage in risky health behavior. Several research areas have been identified to provide important information in improving existing programs of government on substance abuse. These priorities include the following:

<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>HIGH PRIORITY</b>		
A Study (Factors) on the Relapse of Recovering Drug Dependents	DDB	DDB
Household Survey on the Nature and Extent of Drug Abuse in the Philippines	DDB	DDB
Outcome Evaluation of the Drug Testing Program Implemented by DOH	DDB/ DOH	DDB/ DOH
Cost Analysis of Illicit Drug Use – Its Impact on Economic Development	DDB	DDB
A Follow-up Study on Nalbuphine Hydrochloride (Nubain) Abuse in Cebu City and Metro Manila	DDB	DDB/ Cebu City Local Government
An Assessment of the Drug Abuse Prevention Programs Being Implemented in the Philippines (2003-2006)	DDB	DDB and Allied Agencies



## Family Health

Family health priorities include maternal and child health, reproductive health, population and adolescent health. These include activities and behavior of family members that influence their health, and utilization of health care services. Specifically these include the following priorities:

<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Sources (s)</i>
<b>Maternal and Child Health</b>	Knowledge, Attitude, and Practices (KAPs) of Filipino Pregnant Women	CWC	Unicef
	Studies on access to safe motherhood and childhood vaccination services	DOH	DOH
	Role of Traditional Birth Attendants (TBAs) on MCHS	DOH	USAID
	Breastfeeding Survey (MCHS)	DOH	DOH
	Development of strategies to promote optimal breastfeeding considering the socio-cultural beliefs in the Philippines	NCDPC DOH	WHO
	Breastfeeding views of health providers	DOH	DOH UNICEF
<b>Reproductive Health</b>	Study on Abortion	POPCOM	External
	Efficiency of RH/FP Care delivery system	DOH	External
	Family planning discontinuation and switching; A study based on the 2004-2005 panel data from the family planning survey	NSO	USAID
	Choice of family planning suppliers and service providers	NSO	USAID
	Factors for using and not using a family planning method and maternal and child health service	NSO	USAID
	Changes of family planning and maternal and child health services	NSO	USAID
	Willingness to pay for contraceptives	NSO	USAID
	The interaction between family planning and maternal and child health services	NSO	USAID
	Characteristics of current non-users of family planning who have no intention to use it in the future	POPCOM	External
	Research on factors that will bring down fertility rates (research on fertility)	POPCOM	External
	Effectiveness of PMC (premarital counseling) as strategy of FP and RP	POPCOM	External
<b>Population</b>	Gender in demographic processes (enhancing male involvement in RH/FP decision making)	POPCOM	External
	International Migration Study (factors influencing migration and effect on demographic processes such as fertility)	POPCOM	External



<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Sources (s)</i>
<b>Population</b> (cont'd)	Research on factors that will bring down fertility rates (research on fertility)	POPCOM	External
	Assessment of LGUs provision of services to migrants (Internal Migration Study)	POPCOM	External
	Causes and distribution of infant, child, maternal and adult mortality (research on mortality)	POPCOM	External
	Best practices on promotion of healthy lifestyle intervention study	NCDPC-DOH	DOH & other sources
<b>Adolescent Health</b>	Effectiveness of ARH Teen Centers Towards Youth Development	POPCOM	External
	Adolescent/Youth Reproductive Health problems	POPCOM	External
	Youth Health and Fitness Study	NCDPC-DOH	External

### ***Vulnerable Populations***

Health of vulnerable populations is a major concern of public health since it is often the children, women, the elderly and populations in difficult situations who are marginalized and have limited access to existing health care services. The need to improve the health of vulnerable populations is a must. Hence, research focusing on vulnerable populations focuses on interventions and programs that have been initiated to improve their health situations. These include the following topics:

<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>HIGH PRIORITY</b>			
<b>Vulnerable groups</b>	Development and application of a manual for impact assessment of programs	DSWD	World Bank
	Policy research on the advantages and disadvantages of selective system of licensing and accreditation	DSWD	DSWD
	Perceptions and practices on physical punishment: form of abuse or discipline among patients in communities in CPC VI areas	DSWD	UNICEF
	Comparative study on the cost of care of children in residential facilities vs community based foster care	DSWD	UNICEF
	Ageing Population and Development Study	POPCOM	UNFPA
<b>MEDIUM PRIORITY</b>	Study on the status of children placed under domestic adoption for the last 10 years	DSWD	DSWD and other international organizations



<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>LOW PRIORITY</b>	Impact assessment of centers and residential care facilities rehabilitation programs	DSWD	World Bank and other international organizations
	Study on the effectiveness of the department's critical incidence stress debriefing (CISD) program	DSWD	World Bank and other international organizations

### ***Other Public Health Concerns***

Promotion of health and health education are two major concerns affecting public health. The promotional materials and advocacy programs affect the population's acceptance of health interventions and programs. Similarly, health education also influences the behavior of students and their families. There are a few topics for health research identified for these areas. These include:

<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>HIGH PRIORITY</b>			
<b>Public Health</b>	Development dissemination and implementation of clinical practice guidelines	Philhealth	Philhealth
<b>Health Education</b>	Multidisciplinary research on health- related disciplines leading to better quality of life for Filipinos; and the delivery of basic health services to the rural areas:	CHED	CHED
	The Effect of an Educational Intervention on Modifiable Risk Behavior and Incidence of Diabetes, Hypertension and Hypercholesterolemia in an Urban Community	CHED	CHED
	Employment Prospects (e.g. Nursing and Information Technology) in Sunrise Industries and Domestic Labor Supply Responses	CHED	CHED
	Employment prospects abroad for teachers, health workers and engineers	CHED	CHED
	Effects of Urbanization: Lifestyle Impact of Urbanization (the influence of education)	CHED	CHED
	Graduate Tracer Studies of Professionals (health professionals)	CHED	CHED
	Labor Market Studies (including health)	CHED	CHED
	Study on the compliance of SUCs to Administrative Order 10 or the Accessibility Law (people with disabilities)	CHED	CHED
	Socio and Political Feasibility of Imposing Moratorium in opening new programs in oversubscribed disciplines (like nursing)	CHED	CHED
	Study on the closure of low performing programs in oversubscribed disciplines (like nursing)	CHED	CHED



<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>Health Education</b> (cont'd)	International benchmarking of professional courses/curricula of priority disciplines (like health professions)	CHED	CHED
	Assessment of existing local curricula in priority disciplines	CHED	CHED
	Evaluation of DAT BAT and Associate Health Education Programs	CHED	CHED
	Review /Assessment of UP Ladderized medical course in Leyte	CHED	CHED
	Review of existing qualifying exams and selections/ adaption of most suitable exam for the NCSQE	CHED	CHED
	Studies of the admission and retention policies in Philippine higher education (including health)	CHED	CHED
	Inventory and assessment of career guidance programs and units of higher education institutes	CHED	CHED
	Legal and other implications of Health Care Management International to send medical students abroad for practicum	CHED	CHED
	Feasibility and other implications of reducing RLE and nursing from 1500 to 1000	CHED	CHED
	Feasibility of compressing medicine to 6 years	CHED	CHED
<b>MEDIUM PRIORITY</b>			
<b>Public Health</b>	National Objectives for Health Survey	DOH	External
	Meta-analysis on relevant health care interventions based on Philhealth priorities: PHIC priority diseases	Philhealth DOH	External
	Clinical Trials on Available Health Care Interventions for Philhealth	Philhealth	External
<b>Health Communications</b>	Evaluation Research for Health Promotion Campaigns: (1) KAP studies (pre & post campaigns) and (2) Integration of HP indicators in the information system	NCHP-DOH	External

### **Health Emergencies and Disasters**

The country is regularly confronted by both natural and man-made calamities and disasters, which are often health emergency situations. Several topics have been identified in relation to health emergency preparedness and disaster response. These include the following:

<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Sources (s)</i>
<b>HIGH PRIORITY</b>		
Assessment of hospital preparedness and response to health emergencies and disasters	DOH-HEMS	External
Assessment of hospital readiness to respond to emergencies and disasters	DOH-HEMS	External
Assessment of DOH hospitals capability during emergency or disaster	DOH-HEMS	External



<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Sources (s)</i>
Assessment of capacity in EPR to BCRN (Biological, Chemical, Radioactive, and Nuclear) incidents	EMB-DENR, DOH, NPC	External
Vulnerability of selected watersheds (assessment and for mitigation/management of calamities)	DENR-ERDB	DENR ERDB, External
<b>MEDIUM – LOW PRIORITY</b>		
Assessment of various emergency preparedness trainings conducted by HEMS	HEMS-DOH	External
Study of existing standards and practices on nutrition management during emergencies	DOH-HEMS	External
Study on BP5 compact food utilization during emergencies in the Philippines	DOH-HEMS	External
Survey on KAP of community on disaster preparedness and mitigation	HEMS-DOH	External
Survey on the KAP of Health Providers on disaster preparedness and mitigation	HEMS-DOH	External
Study of existing practices on the management of the dead and the missing during disasters	DOH-HEMS	External
Causes of mortalities in disasters: are they preventable?	HEMS-DOH	External
Survey of mass gatherings in NCR from 1995-2005	DOH-HEMS	External
Epidemiology study of fire incidents in Metro Manila	HEMS-DOH, BFP	External
Causes of mortalities in disasters: are they preventable?	HEMS-DOH	External
Causes of Mass Casualty Incidents in the Philippines	DOH-HEMS	External
Survey of media practitioners regarding their needed information during disasters and emergencies	DOH-HEMS	External
Logistical prepositioning at various levels of health facilities for different hazards	DOH-HEMS	External

### ***Hospital Services***

The delivery of health services involves the efficient delivery of care to the population. Thus, hospitals need to be more responsive to the health needs of their clientele by efficiently managing their resources and services and making these easily available and accessible particularly to the poor. Several research areas are identified as topics that will provide important information in improving hospital management and policies. These priorities include the following:



<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>HIGH PRIORITY</b>		
Current status and factors affecting health service delivery and care of government hospitals	NCHFD -DOH	DOH, LGU
Assessment of the implementation of AO 51 Implementing Guidelines in the Classification of Patient Availment of medical social services (MSS) in government hospitals	NCHFD-DOH	DOH
Utilization/client satisfaction/case mix/procurement system of different category and ownership of hospitals	DOH	External
Assessment of the implementation of PD856, Chapter VII- Implementing Rules and Regulations of the Sanitation Code of the Philippines (Industrial Hygiene/ Occupational Health) in Government Hospitals	NCHFD-DOH	DOH
Health facility survey on the implementation of the Integrated Management of Childhood Illness (IMCI) and the integration in the curriculum of nursing and midwifery in the Philippines	NCHFD, NCDPC-DOH (/HHRDB may provide assistance)	WHO, UNICEF
Epidemiological survey of infectious diseases among patients in government psychiatric facilities	NCHFD-DOH, NCDPC-DOH	NCDPC-DOH
KAP on voluntary blood donation among potential blood donors	NCHFD-DOH	DOH
Market research for national voluntary blood services program	NCHFD-DOH	DOH

## HEALTH TECHNOLOGY DEVELOPMENT

Although there were some improvements in the country's health situation through the past decades, the country is confronted with a double burden of both infectious diseases and non-communicable diseases. Hence, the health sector is expected to provide solutions and answers to these problems. The development of safe, effective and cheap technologies for health care and delivery of services is the main thrust of research and development. The Traditional and Alternative Medicine Act of 1997 is one law that explicitly encourages the pursuit of researches on traditional and alternative health care systems to enhance the delivery of health services especially for the poor. Moreover, the country's wealth in both terrestrial and marine resources provide the ideal resources that can be tapped for the development of essential drugs, vaccines and therapeutics, functional food and nutritive products and personal care products.

The development of health technologies is envisioned to support health services delivery with the provision of evidence based technologies that are safe, appropriate and accessible to address the urgent health needs, and at the same time support the growth of the small and medium entrepreneurs of the growing health bioindustry.

For the next five years, R&D efforts must be directed towards the development of pharmaceuticals (particularly low cost drugs, vaccines, biologicals and diagnostic kits and therapeutics) and fortified and functional food and nutritified food products and nutraceuticals, and natural products particularly herbal medicine.



<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>HIGH PRIORITY</b>			
<b>Vaccines</b>	Development of vaccines for priority diseases (e.g. schistosomiasis, avian influenza)	PCHRD-DOST and partners	DOST/ External
	Development of edible vaccines for diarrheal diseases and rabies	PCHRD-DOST	DOST/ External
<b>Diagnostic Kits</b>	Development of diagnostic kits for priority diseases (e.g. dengue fever)	PCHRD-DOST	DOST/ External
	Field validation/trials of locally developed or enhanced diagnostic kits (e.g. Schisto dipstick and iodine meter)	PCHRD-DOST	DOST/ External
<b>Drugs</b>	Development of essential /off patent drugs	PCHRD-DOST	DOST/ External
<b>Therapeutics</b>	Therapeutics/ Alternatives for Treatment of Cancer, CVD, Diabetes, Dengue, Pneumonia, Diarrhea, OH Hazards, COPD, Kidney Disease, and Emerging Infections	DOH, PITAHC,	DOH, PITAHC, External
	Radiation Modification of Carrageenan for Biomedical and Other Applications	PNRI-DOST	GAA
	Semi-Commercial Production of PVP-Carrageenan Hydrogel for Wound Dressing	PNRI-DOST	GAA/DOST-GIA
	Development of Honey Wound Dressing for Health Care Management	PNRI-DOST	GAA
	Comet Assay: A Microgel Electrophoretic Technique for the Detection of DNA Damage and Repair in Individual Cells	PNRI-DOST	GAA
	Production of Radio-labeled Compounds for Receptor Binding Assay	PNRI-DOST	GAA/DOST-GIA/IAEA
<b>Fortified/ Nutrifed Products</b>	Technology development for food fortification at least cost but effective and efficacious	NNC	NNC External
	Rice fortification <ul style="list-style-type: none"> <li>• Development of standards for iron fortified rice and premix</li> <li>• Development and testing of mixing technologies for rice fortification for various types of rice millers</li> </ul>	NNC	NNC External
	Stability studies for vitamin A in flour	NNC	NNC External
	Development of “Sprinkler technology” for iron fortification	NNC	NNC External
	Multiple fortification of food/ food products	NNC	NNC External
	Improvement of the quality of raw salt	NNC	External
<b>Functional Foods</b>	Development of functional foods (e.g. yacon, coconut flour, virgin coconut oil)	FNRI, PCHRD, NNC/ PCIERD	DOST, NNC External
	Studies on the effect of virgin coconut oil on priority diseases such as tuberculosis and CVD	PCHRD-DOST	DOST/ External
<b>Nutraceuticals</b>	Development of Calamansi and Yacon as nutraceuticals	DOST-ITDI	DOST-ITDI
<b>Food Safety</b>	Food Irradiation (to improve quality and shelf life of food and agricultural products)	PNRI-DOST	GAA
<b>Herbal Medicine</b>	Development of herbal drugs for priority diseases	PCHRD-DOST/ PITAHC-DOH	DOST/ PITAHC External
	Development of remedies for hyperuricemia, malaria, and tuberculosis	PITAHC-DOH	PITAHC DOH



<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>Herbal Medicine</b> (cont'd)	Dosage formulation and efficacy studies of coconut oil for heart disease	PITAHC DOH	PITAHC DOH
	Documentation of indigenous practices in the use of medicinal plants for disease intervention	DENR ERDB	DENR ERDB External
	Medicinal and essential oil plants as agroforestry crop in community-based forest management site (in Atimonan, Quezon); Magat Experimental Forest, Diadi Nueva Vizcaya	ERDB	External ERDB ERDS-2
	Protecting the Environment, Conserving Biodiversity and Managing Natural Resources: An Ethno-Medico Study of Plants in Lagnas, Batasan, Occidental Mindoro	CHED	CHED
	Diffusion, Adoption, and Impact of Herbals as Indigenous Resource for Food Supplement, Common Illness and Pesticide	CHED	CHED
<b>Personal Care</b>	Development of Essential Oil-Based Cosmeceuticals	DOST-ITDI	DOST-ITDI
<b>Other Products</b>	Development of biomaterials	DOST-ITDI	DOST-ITDI
<b>MEDIUM PRIORITY</b>			
<b>Herbal Medicine</b>	Evaluation of Neem tree and other insecticidal plant species in control of mosquito vectors of diseases	DENR ERDB	DENR External
	Isolation of Antitubercular Constituents of Selected Medicinal Plants	CHED	CHED
<b>Protective Devices</b>	Technology Development on PPEs/ mitigation activities/ management of trauma-burns	HEMS-DOH	External
<b>Other products</b>	Establishment of Protocol for the Analysis of Blood by Total-Reflection X-ray Fluorescence Spectrometry	PNRI-DOST	GAA

## HEALTH RESEARCH ETHICS

The integrity of the health research process is a fundamental requirement for health research. Research activities involving human subjects must uphold the rights and dignity of persons and not be prejudicial to any group or individual by reason of race, creed, age, gender, occupation or health status. A research protocol needs ethical clearance to ensure that the implementation of research involving human participants or human specimens is beneficial to the population, respects the rights and dignity of participants, does no harm to the participants, properly informs and voluntarily solicits the consent of participants to be part of the research activity.

The observance of ethics in health research is a crucial concern raised by the Technical Working Group on Research Ethics during the First Philippine National Research Assembly (PNHRS, 2004). Although the practice of observing ethics in the conduct of health research is strongly advocated, the need to conduct researches on the practice of health research ethics and related concerns has also been raised. Ethics in health research needs to account for Filipino culture, norms and traditions. Similarly, studies on the ethics of health research should also examine the practice of



ethics in health research in the country. Thus, the identified priorities for health research ethics focus on the effectivity of the ethics review, the interaction of Filipino culture and research ethics, issues related to research implementation, public health interventions and research participants.

The top priorities for research include the following:

<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>HIGH PRIORITY</b>			
<b>Interaction of Filipino Culture and Health Research Ethics</b>	Researchers and subjects' understanding of the principle of informed consent	DOST-PCHRD	External
	Researchers understanding of risk benefit assessment	DOST-PCHRD	External
	State of equitable distribution of benefits and burdens in health research	DOST-PCHRD	External
<b>Effectivity of Ethics Review</b>	Impact of traditional practices and healers on ethical guidelines or vice versa	DOST-PCHRD	External
	Attitudes of health researchers towards ethical and technical review	DOST-PCHRD	External
	Incidence of deviation from approved protocols and their consequences	DOST-PCHRD	External
	Incidence and nature of adverse events encountered in researches	DOST-PCHRD	External
	Assessment of complications arising from diagnostic procedure conducted with a foreign co-investigator	DOST-PCHRD	External
	Assessment of risks involved in externally funded research	DOST-PCHRD	External
	Validity of the informed consent process	DOST-PCHRD	External
<b>Ethical Perspective in Public Health Intervention</b>	Ethics of mass treatment in the control of certain diseases (e.g. schistosomiasis and filariasis)	DOST-PCHRD	External
	Level of awareness of basic ethics	DOST-PCHRD	External
<b>Implementation of Research</b>	Assessment /review of institution based researches (compliance with ethics guidelines)	DOST-PCHRD	External
	Review of legal policies and laws governing research ethics and deviations and/or cases of violations	DOST-PCHRD	External
	Issues in externally funded research	DOST-PCHRD	External
<b>MEDIUM PRIORITY</b>			
<b>Implementation of Research</b>	Compliance of researchers on ethical practice	DOST-PCHRD	External
	Survey on the presence and composition of IECs in secondary and tertiary care centers in the country (after advocacy of guidelines)	DOST-PCHRD	External



<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>Ethical Issues Involving Research Participants</b>	Post study / follow up monitoring of participants after clinical drug trials	DOST-PCHRD	External
	Perceptions, attitudes and behavior of research participants	DOST-PCHRD	External

## HEALTH INFORMATION SYSTEM

A functional and effective information system is one of the main ingredients for relevant health planning and policy formulation and for the conduct of researches. The establishment of a health information system is needed for good governance under the Fourmula One Framework for Health Reforms. With the dearth of accurate and reliable data on mortality, morbidity and health indices, the need for an information system was underscored in all the consultations. Health information continues to be a major problem, especially in the recording and retrieval of health data and in the management of information. The development of appropriate and functional information systems is most important for the referral system, drug administration, insurance monitoring, financial tracking, mopping of houses for rabies, human resource planning, and for monitoring and evaluation (M&E) purposes. Moreover, a health research information system needs to be enhanced to enable other researchers to have access to research information and materials in planning their protocols and analyzing and writing their research results.

<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
<b>Public/Private Mix</b>	Development of a relevant and quality health information system (reporting, referral, and networking of the private and public sectors)	IMS, HPDPD-DOH, Philhealth	DOH
<b>Mass Drug Administration</b>	Development of an information management system for mass drug administration surveillance and protocols	DOH	External
<b>Philhealth Member Benefits</b>	System monitoring of member eligibility to benefits (to include hardware requirement and deployment/ training)	Philhealth	DOH or Philhealth
	Development of a Philhealth monitoring and evaluation system	Philhealth	Philhealth
<b>Other Philhealth MIS</b>	Development of a Geographical Information System (GIS) (data on road, access, providers banks etc)	Philhealth	Philhealth
	Efficiency of Philhealth's Management information System	Philhealth	Philhealth



<i>Area</i>	<i>Topic</i>	<i>Responsible Agency</i>	<i>Proposed Funding Source(s)</i>
	Financial Management Information System	Philhealth	External
<b>Rabies Control</b>	Mopping up (house to house visit of rabies free zones and provinces)	NCDPC-DOH	DOH
<b>Health Worker's Competencies</b>	Development of opportunities for enhancement of competencies of Filipino Health Workers	HHRDB-DOH	DOH
	Profile of International Patients in the Philippines	HEMS DOH	DOH and External
<b>Disease Free Zones</b>	Development of a standard M&E system for the 5 priority diseases of the disease free zones	NCDPC IDO	DOH, WHO, LGU
<b>Health Research</b>	Enhancement / Development of a health research information system	PCHRD-DOST and Other partners	PCHRD-DOST and External Sources

- <sup>i</sup> The committees on structure and organization, research management, capability development, research utilization, resource mobilization and monitoring and evaluation address the essential concerns of a functional health research system. Please refer to the Proceedings of the 1st Philippine National Health Research Assembly, Manila Hotel June 2, 2004.
- <sup>ii</sup> The National Health Insurance Act of 1995 (RA 7875) seeks to make essential goods, health and social services available to all people at affordable prices with preference to the needs of vulnerable sectors of the population including the underprivileged, sick, elderly, disabled, women and children and the indigents.
- <sup>iii</sup> An Act for Salt Iodization Nationwide of 1995 (RA 81720) aims to contribute to the elimination of iodine deficiency disorders in the populations through the enforcement, promotion, and monitoring of the iodization of food grade salt used by the population.
- <sup>iv</sup> The Agriculture and Fisheries Modernization Act of 1997 (RA 8435) seeks to harness human and natural resources in the agricultural and fisheries sector to promote food security, sustainable development, people empowerment and rational use of resources to be competitive in domestic and international markets.
- <sup>v</sup> The Traditional and Alternative Medicine Act of 1997 (RA 8423) seeks to answer the present health needs of the people with the provision and delivery of traditional and alternative health care products, services and technologies that have been proven safe, effective and affordable.
- <sup>vi</sup> The Philippine Clean Air Act of 1999 (RA 8749) aims to promote and protect the environment with the proper air pollution management and to balance development and environmental protection within the framework of sustainable development.
- <sup>vii</sup> The Philippine Food Fortification Act of 2000 (RA 8976) advocates the fortification of basic staple food to compensate for the inadequacies in the Filipino diet and promote optimal health especially among the vulnerable populations.
- <sup>viii</sup> Early Childhood Care and Development Act of 2000 (RA 8980) aims to promote the rights of the child for survival development participation and special protection with recognition of the nature of childhood and its special needs.
- <sup>ix</sup> The Wildlife Resources Conservation and Protection Act (RA9147) seeks to protect wildlife resources and their habitats for their sustainability, conserve and protect wildlife species to



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promote ecological balance and biological diversity, and initiate and support studies to conserve biological diversity.

- <sup>x</sup> Directing National Government Agencies and Other Concerned Agencies to Support and Implement Programs on the Bright Child (Executive Order No. 286, 2004) is in consonance with an earlier law (Early Childhood Care and Development Act of 2000) and directs national and other concerned agencies to support and implement programs on the Bright Child involving the delivery of interventions on food nutrition health early education and psychosocial programs for young children resulting in their optimum growth and development
- <sup>xi</sup> Magnitude refers to mortality, morbidity, prevalence, and population coverage of health concern. Urgency refers to whether there is current or potential severe effect or addresses an immediate need. Impact refers to whether pursuit of R&D will yield high social, economic and health benefits and promote equity. Feasibility refers to whether the human and physical resources are present and funding requirements are affordable to pursue the research. Potential R&D contribution refers to whether the research has potential to provide significant contribution to R&D and add on to existing knowledge. Utilization refers to whether the results of the R&D can be applied/used for other R&D, delivery of services, commercialization, community or individual use. Collaboration potential refers to whether the pursuit of R&D has the potential for collaborative undertaking involving other disciplines and agencies. Gender responsiveness refers to whether the identified R&D topic promotes gender equity (females and males are given equal importance).
- <sup>xii</sup> Except in Region 7 where provincial consultations were done.
- <sup>xiii</sup> The zonal and regional reports each contain the research priorities for the zone and region respectively.
- <sup>xiv</sup> For the DOH, the following criteria were used: magnitude, which refers to mortality, morbidity, prevalence, population coverage of health concern; urgency, which refers to whether there is current or potential severe effect or if an immediate need is addressed; impact, whether pursuit of R&D will yield high social, economic and health benefits; and promote equity, whether the proposed R&D will provide inputs to policy development and enhancement and improve health care systems/programs.
- <sup>xv</sup> The Philippine Council for Health Research and Development and the Philippine Institute of Traditional and Alternative Health Care of the Department of Health and in collaboration with the National Academy of Science and Technology and the National Research Council of the Philippines organized the workshop.
- <sup>xvi</sup> The Biotechnology cluster is an initiative of the Export Development Council of the Department of Trade and Industry, spearheaded by the Department of Science and Technology in cooperation with other national agencies to accelerate and harness the economic potentials of biotechnology for the export market. One of sub-sector products identified in the biotechnology cluster was human vaccines and therapeutics.
- <sup>xvii</sup> The Fogarty Sponsored Training Course in Ethics Review of Research Proposals held in Waterfront Hotel in Cebu City
- <sup>xviii</sup> PCHRD's 24<sup>th</sup> Anniversary at Pan Pacific Hotel, Manila.
- <sup>xix</sup> The Philippine Health Research Ethics Board is a body under the Philippine National Health Research System that is tasked to formulate/update guidelines for the ethical conduct of human health research, establishment and management of ethical review committees, standardization of ethics review; promote establishment of functional ethics review committees, provide advise to programs, policies and regulations related to ethical issues in human health research; and contribute to the discourse of health research ethics and form linkages with local, national and international bodies. The Department of Science and Technology formalized this body with a department special order dated 1 March 2006. Members of the board were inducted during the 24<sup>th</sup> anniversary of DOST-PCHRD.
- <sup>xx</sup> Responsible agency refers to an agency of government or a private organization that will oversee the implementation of the research project and assist in seeking support for the proposed topics.