

PHILIPPINE JOURNAL OF PUBLIC ADMINISTRATION

Journal of the National College of Public Administration and Governance, University of the Philippines Diliman, the Association of Schools of Public Administration in the Philippines, and the Philippine Society for Public Administration

Alampay and Tiglao

Mapping ICT4D Projects in the Philippines

Bautista

Opportunities and Challenges
in Local Governance of Public Health

Ponce

Alternative Health Delivery System

Sanguyu

Lantern Industry of Pampanga

Document Section

Magna Carta of Public Health Workers

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Editor's Notes

Exploring development prospects and opportunities is what links together the articles in this issue of the Journal. Each article maps out directions for the development of social programs, such as, healthcare, micro entrepreneurship, and information and communication technology.

Erwin A. Alampay and Noriel C. Tiglao take a crucial step toward the utilization of information and communication technology in development efforts in the Philippines in their article "Mapping ICT4D Projects in the Philippines." Alampay and Tiglao present—perhaps the first of its kind—an inventory of ICT for Development projects in the country. With this effort, the authors succeed in providing a dependable guide on the best practices in mainstreaming ICTs in the particular context of a developing country like the Philippines.

Victoria A. Bautista stresses that public health is one of the primary concerns in the Philippines, especially in the marginalized sector. She foregrounds the role of the local governance units (LGUs) in the delivery of this important yet often neglected social service in her article "Opportunities and Challenges in Philippine Local Governance of Public Health." Specifically, she underlines the devolution of powers from the national to local government as an opportunity to improve the public health service in the country. According to her, this opportunity will provide local executives to utilize indigenous resources that could enhance local capacities. Devolution can provide impetus for the better utilization of established and tested frameworks and sectors, such as, local civil society, Minimum Basic Needs approach, the Millennium Development Goals, and other national and foreign-funded programs,

Ramon U. Ponce echoes the same sentiments expressed by Bautista in her article regarding the lack or difficulty of access of the poor to health services. In his article, "Alternative Health Delivery System Through NGO-managed Cost-Effective Regional Medical Centers," he presents a more detailed picture of how the common Filipino is virtually left to fend for himself when it comes to taking care of his health. He reveals alarming data on inefficient and insufficient public health facilities and the exodus of health professionals in the country which aggravate the disenfranchisement of the poor. As a solution, he proposes that the nonprofit sector fill the gap. He proposes the establishment of a comprehensive public health program managed by nonprofit organizations. The coverage of this program shall include not only the delivery of health services, but also the training and development of medical practitioners.

The lantern industry in the province of Pampanga is popular throughout the country. Christopher M. Sanguyu observes, however, that this decades-old industry has yet to develop the mechanisms to be globally competitive or at least make significant contributions to the national economy. He notes that it has lost to China in terms of market share; thus, it has to employ appropriate marketing stance in order to produce and sell premium products focusing on design and craftsmanship. He identifies the unsynchronized nature of production in the industry and the lack of supporting administrative policies as some of the factors that beset the industry. In his article "Innovation in the Lantern Industry of Pampanga," he presents an innovation strategy based on his assessment of the industry and a relevant innovation theory.

In relation to the matter of public health which is the focus of Bautista and Ponce in their respective articles, Republic Act 7305, or the "Magna Carta of Public Health Workers" is reprinted.

Mapping ICT4D Projects in the Philippines

ERWIN A. ALAMPAY AND NORIEL C. TIGLAO*

The potential of information communications technology (ICT), as a vehicle of communication, is now largely maximized to effect development. Development pertains to activities that relate to the socioeconomic well-being of the country. Current initiatives involving ICT for development (ICT4D) are characterized by ICT projects that have direct impact on people empowerment particularly those in poor communities, help alleviate poverty and address key millennium development goals. Concrete programs on ICT4D in the country include e-agriculture, e-business, e-employment, e-government, e-science, e-health and e-learning. An inventory of ICT4D projects in the Philippines to help achieve the objectives of the World Summit on the Information Society (WSIS) in promoting ICT4D concludes the article.

Introduction

The objective of this article is to make an inventory of Information and Communication Technology for Development (ICT4D) projects in the Philippines. It serves as an initial step, prior to determining the criteria for choosing exemplary cases of ICT4D applications in the country. In so doing, the article helps to achieve the World Summit on the Information Society's (WSIS) objective of promoting ICTs for Development (Section C1 of the WSIS Plan of Action 2003): by developing reliable information on successful experiences of mainstreaming ICTs and the development of a website where best practices and success stories can be compiled (Sec E28-e, WSIS Plan of Action 2003).

Defining ICT4D

"ICTs" refer to "technologies that facilitate the creation, storage, management and dissemination of information through electronic means." Broadly defined, it includes the use of the radio, television, telephone and

*Assistant Professors, National College of Public Administration and Governance, University of the Philippines Diliman.

cell phone. One consideration was that the use of "old" or traditional ICTs should have a digital interface; however, excluding television, radio and the telephone from other digital devices may not necessarily be useful given how the development of technologies has converged, where radio can be played in computers and TV shows on cable are digitally delivered.

This definition was used by the Digital Opportunities Task Force (2002), and is consistent with recent research on ICT4D initiatives in India (MCIT 2004) and the Asia Pacific (Curtain 2004), which also included the use of community-radio. The old and new types of ICTs can be seen as a vehicle for communication rather than simply a means for processing information (Curtain 2004).

Development projects, on the other hand, pertain to activities that relate to the socioeconomic well-being of the country or the community. They involve activities related to health, education, commerce, the environment and governance. They are projects that are administered within the context of an organization; hence, applications by individuals are excluded.

This study initially classified the projects according to four categories: 1) Political/Governance/Empowerment; 2) Economic/Livelihood; 3) Social/Education; and 4) Infrastructure/Access. Given that these categories by themselves may be too broad to be useful, the project broke the categories further according to the ICT applications mentioned in WSIS section C7 (see Annex A). How the typology in the terms of references matches with the WSIS classification of ICT applications is shown in Table 1.

Table 1. Reclassification of ICT4D Typology according to WSIS

ICT4D Typology	ICT Application
Political/Governance/Empowerment	E-government (total)
Economic/Livelihood	E-business
	E-employment
	E-agriculture
Social/Education	E-learning
	E-health
	E-environment
Infrastructure/Access	E-science

What then is ICT4D ?

In an ICT4D conference held in Cebu in 2004, it was explained that the definition of ICT4D greatly varies, from the expansive view that all ICT projects are ICT4D to the restrictive that focuses only on community-based projects that increase access and use of ICT by marginalized communities. A middle-ground that was proposed was to identify projects that directly lead to the empowerment of people (Lallana 2004b). Another consideration is whether a project serves the needs of the poor especially with respect to dimensions of poverty, such as poor health, lack of voice, and lack of information (Curtain 2004).

Given the above consideration of what ICT4D is and the objectives of the *ict4d.ph*, the ICT4D.ph Steering Committee has agreed that the ICT projects that have a direct impact on empowering people in poor communities, help alleviate poverty, or address key Millennium Development Goals should be highlighted. In this sense, over the course of the ICT4D road show, the criteria for selecting ICT4D cases have slowly crystallized; however, even though a stricter definition of what ICT4D has evolved over the course of this project, the information from the initial database has been kept intact, or unfiltered. This is because the information contained therein remains valuable in the overall context of what the ICT4D program intends to accomplish. Keeping the database intact will also be useful for people who would subscribe a broader definition of ICT4D.

For this article, a short summary of what the database contains will be presented first. It will then be followed by a short sampling of projects that have been presented in the previous ICT4D conferences, as well as some projects in the database that closely subscribe to the evolving criteria of *ICT4D.ph*.

Methodology

Mapping the ICT4D projects in the country started with existing databases from different organizations involved in the field. Databases were obtained from the Foundation for Media Alternatives (FMA), National Computer Center (NCC), National Economic Development Authority (NEDA), National Mapping Resource Information Authority (NAMRIA), and the Congressional Oversight Committee on E-commerce (COCEC). Since the information provided by these organizations overlap and provide different data sets, the database was cleaned for double-entries, especially for projects conducted by multiple organizations.

The database was then supplemented by desk reviews of ICT4D related articles, dissertations and theses from different universities in Metro Manila (UP, Ateneo, La Salle, AIM, UAP). E-mail surveys were also sent to ICT Foundations and organizations listed in the NCC directory. Survey forms were also distributed in ICT conferences, including the Philippine Summit on the Information Society (PSIS). Response rates for the surveys, however, were low.

The initial results of the mapping were presented in a series of conferences in the Philippines, starting with Mindanao, then the Visayas, and, finally, culminating in two Luzon conferences. Cases and projects were collected from the regions through information gathered from regional partners (i.e., RITECC, NEDA, and DOST), and the conference workshop participants.

After noting the lack of cases from NGOs, a follow-up survey was sent via fax/email to the mailing list provided by the Non-Profit Sector Project of the NCPAG; however, again, very few responses were generated from this survey.

Results

As of 10 February 2005, the research had 490 ICT projects in its database. Some projects were classified in multiple categories. A majority of the projects listed were government initiatives. Fifty six per cent (56.6% or 277) of the projects in the database were classified as an e-government/governance project. The next most common category was e-learning applications (26.4% or 129). (Refer to Table 2).

Table 2. Category and Frequency of ICT4D projects in the Philippines (n=490)

<i>Category</i>	<i>Number of Projects</i>	<i>%</i>
e-Agriculture	24	4.9%
e-Business	44	9.0%
e-Employment	15	3.1%
e-Environment	32	6.5%
e-Government	277	56.6%
e-Health	23	4.7%
e-Learning	129	26.4%
e-Science	59	12.1%

ICT4D Applications

E-government/e-governance

Most of the projects listed in the database were classified as e-government (N=277). One explanation is that it is easier to access government information, and governance, in general, encompasses many activities. Government is also the largest contributor to the local economy. This being the case, there is also diversity in e-governance projects. For one, the e-governance list would show at least one project that deals with other areas (e.g., health, learning, business, and science). Second, there is a diversity in the technologies used. Some are web-based, others use SMS, and others pertain to management information systems and local area networks.

Websites

Notable websites that have won awards from the National Computer Center (NCC) are Naga City, Nueva Ecija Province, Zamboanga del Sur Province, and the municipalities of Gerona, Tarlac, and Abra de Ilog, Occidental Mindoro. Abra de Ilog and Nueva Ecija are websites that used the NCC's template. Among the features that can be seen in some of these websites are services for job-placement, e-mail, community consultation/polling and feedback mechanisms. Some agencies and LGUs also allow for downloading and online submission of forms and have posted relevant local ordinances.

SMS

The use of Short Messaging Systems (SMS) has also become a popular medium. The Congressional Oversight Committee on e-Commerce study revealed that 50 percent of national government agencies surveyed used SMS based services, either for complaints, suggestions, and requests for information (Lallana and Samanodi 2004). Examples of these services include Patrol 117, the Department of Education's DETxt, TextSSS, Patrol 2920 and Text CSC.

Computerization and specialized databases

An example of a successful introduction of ICTs at the local level is Naga City, which has been cited by the United Nations Development Programme (UNDP) as an exemplar and their I-gov program is one of the more well-documented cases in the country today (Robredo 1999, Rodriguez and Min 2003, Alampay et al. 2003). The city's website updates and informs the citizens on city services, financial and bidding reports,

city legislation, investments data, statistics and the procedures in the local bureaucracy. Among the tangible results of the program was improvement in local finances with revenues reaching Php 132M in 2002 from only Php 13M in 1988. Transparency in bidding procedures helped reduce procurement costs. Service delivery has become more efficient with determination of business taxes processing reduced from four hours to only one minute, birth certificate issuance, from one week to only 30 minutes, processing of mayor's permit from four hours to only 30 minutes, and obtaining a building permit from 15 days to only 5 days during Mayor Robredo's term (Rodriguez and Min 2003).

Another database system is the Special Zone of Peace And Development (SZOPAD) of NEDA. This is an interactive web-based database system that allows the other government offices and the NEDA regional offices in Mindanao to directly post and update data and information on their respective programs and projects. The system is accessible through the NEDA website. Through the website, the public can access and view information on SZOPAD programs and activities in Mindanao.

Geographic Information Systems

Two cases on the replication and use of geographic information systems (GIS) for local governance were presented in Cagayan de Oro City and Cebu City, respectively. The first pertained to an "internally" developed Revenue Generation System by Cagayan de Oro City that in three years, has been successfully replicated in four provinces, eight cities, 125 municipalities, and one corporation since 1998. The other case is a "Backyard GIS" system that was introduced in Capiz using basic computers, and built on data generated from previous Social Reform Agenda-Minimum Basic Needs (SRA-MBN) Surveys. The SRA is the most available and extensive making it a viable choice for pilot application development. Maps generated from the GIS system were then used in a Participatory Barangay Planning Budgeting Workshop. This was helpful in identifying the barangay's infrastructure and investment plans and projects, as well as helped in developing a shopping list of priorities for funding.

Emergency response

ICTs have also been very useful for LGU emergency services. Davao City has a Central Communication and Emergency Response Center that uses a special computer software to help authorities respond to distress calls. It was developed to help fight crime and lawlessness in the city.

Using the 911 system, Davao Light and Power Company, Inc. uses a modified Geographic Information System—and called it the "Emergency Computer Aided Dispatch" (ECAD) to help authorities locate the origin of emergency calls. The system also tracks how fast the police could respond to the emergency calls. It uses color-coded icons to monitor movement and location of police mobile units. Marikina City and Cavite City have similar programs, and, in Marikina's case, they guarantee a five-minute response rate to any emergency in the city (Alampay 2001).

E-business

Forty-four (44) e-business applications were included in the database; however, most of the projects listed failed the strict ICT4D criteria.

Most of the applications were meant to improve services solely to their customers, or to tap a new market; for instance, Aboitiz has an e-ticketing/SMS ticketing service that provides a channel for passengers to directly book and pay for their own tickets and allows ticketing agents to issue any accommodation for any Super Ferry voyage online. It also provides the Easy Card, a pre-paid, reloadable and refundable card for passengers that provides the safety and security of not having to carry around cash while on its vessels. The web is also being used for information on tourist sites, commodities price watch, and as electronic yellow pages (e.g., EYP.ph).

There are also different business-to-business (B2B) models like b2bpricenow, bayantrade and sourecphilippines.com. There are also virtual malls that cater to selling local products abroad especially to OFWs (e.g., Divisoria.com; turoturo.com), or getting Filipinos abroad to buy local products for relatives in the Philippines (e.g., myAyala.com; PadalaKo.com).

Some projects are specifically geared for small and medium sized enterprises; for instance, eastASEANbiz.net project involves capability-building for Small and Medium Enterprises (SMEs). Another project is by the Asia Pacific Economic Council (APEC) called the APEC Centre for Technology Exchange for Small and Medium Enterprises (ACTETSME). The program intends to accelerate the development of SMEs in the region through information, technology and training exchange and make them more competitive both in local and foreign markets. The Center operates as a resources hub with capability for information networking, organizing special activities to facilitate technology transfer projects and HRD development through training.

E-learning

E-learning is the second most common application (N=129) of ICTs. Among the education related projects were: (a) distance learning; (b) ICT skills development; (c) networking knowledge institutions; and (d) providing access and exposure to new technologies.

Distance learning is delivered through various technologies; for instance, Fr. Francis Lucas (1999) has documented a radio broadcasting model for teaching rural women and households in Quezon Province about farming technologies. On the other hand, the National Broadcasting Network (NBN) and the National Institute for Science and Math Education (NISMED) use the television in their Continuing Science Education for Teachers via Television (CONSTEL) project. It made use of the latest broadcast satellite technology combined with well-researched and carefully produced tele-lessons. This project could be used to train elementary and secondary school teachers in teaching English, Science and Mathematics. Also, UNDP has the Text2Teach program that has been piloted in 40 elementary public schools in poorer areas in the Philippines. It enables schools to order science videos from electronic libraries using SMS technology. Other courses and topics delivered on a distance learning mode are courses on journalism (Konrad Adenauer Center for Journalism), on social health insurance (Institute of Public Health Management), among others.

The Children and Youth Foundation of the Philippines (CYFP) and the Center for Industrial Technology and Enterprise (CITE) run the e-Skills Learning Project. The eSkills is an innovative approach in training students in trade and livelihood skills. The goal of the project is to improve the quality and reach of technical training and education. Selected courses demanded by the market and successfully run by training institutions are converted into web-based formats and interactive modules. A portal hosts the developed curricula, which are accessible through the Internet. Compact discs (CDs) are made available to those with no Internet connections. Interested training institutions and organizations link with CYFP to access the developed modules. They can be used to run new training programs/courses, as replacements of current programs or as supplements to existing ones. The project provides web-based educational content, online testing, instructor training and technical support.

ICTs are also being used to enhance teaching skills and techniques. For instance, the Diliman Interactive Learning Center (DILC) provides technical support and facilities for faculty members to develop digital instructional resources. De La Salle University (DLSU), on the other

hand, uses the Virtual Classroom which was licensed by the National University of Singapore to use its online learning system, called Integrated Virtual Learning Environment (IVLE). Through the IVLE, teachers are able to enhance or complement their teaching by making courses available in cyberspace.

In Region 8, Information Technology Training and Development Centers have been institutionalized in seven partner state universities and colleges (SUCs) in the region. They have effectively empowered the host SUCs with the capability to provide the countryside with relevant and efficient ICT education and services needed to improve the quality of life of its people.

Another e-learning application is the linking together of research and educational institutions, through a common infrastructure; for instance, the Philippine Research, Education and Government Information Network (PREGINET) involved the establishment of a nationwide broadband network for research and education institutions involved in the development and demonstration of new technologies, services and applications with connectivity to international research and education networks. The E-library project, on the other hand, integrates the current libraries and information sources into a single network, with focus on Philippine materials to serve a wide range of clients. Other materials and links, such as online library database systems, are also made available and accessible by subscription.

The Department of Transportation and Communications (DOTC) in partnership with Science Education Institute and Intel Philippines, on the other hand, provides Mobile Information Technology Classrooms (MITCs) that use an air-conditioned 32-seat bus equipped with 17 laptops, television sets, two VHS players, two LCD projectors, two projector screens, public address system, printer and generator set. They are equipped with the latest in education technology facilities, computers and audio-visuals and instructional materials in science and technology. They provide science and mathematics coursewares in CD and VHS formats. There are similar projects in Bulacan Province and by the DOST.

E-health

As of now, there are only 23 health projects listed in the database. E-health initiatives can be classified into two main categories. One is for health information and education which can be transmitted through the internet, SMS and dedicated hotlines; the other is for specialized databases and information systems.

Examples of health information projects include the Department of Health's SARS Hotlines and Textlines. Med Info. Inc., on the other hand, provides an SMS service that allows users to ask about disease symptoms and medication information (such as dosage). Another project is the Information and Communication Technology Capacity Building for Asia Network (ITCAN) project which is an Internet-based communication service (i.e., mailing lists and a central portal with all training materials an online resource database of best ICT practices). ITCAN's objective is to transfer knowledge and create skills on best Internet practices for providing quality HIV/AIDS and sexual and reproductive health services and information as well as ICT-enhanced management information systems.

The Institute for Popular Culture (IPC), based in Ateneo de Manila University, has been conducting a series of e-conferences on health issues called Qu4Rad (www.qu4rad.net). The QU4RAD network is an international collaboration that aims to assist people (providers, users, citizens) to improve their management of medicines for health care by facilitating communication, learning and experimentation and combining scientific, cultural and moral-ethical reasoning in a glocal (global and local) context. Among the e-conferences that they have hosted are on social health insurance, quantifying medical requirement of community health programs and the role of social insurance in pricing essential medicines. Similarly, the Institute for Public Health Management (IPHM) (www.iphm.org) offers distance education services for local public health managers. Among the topics they offer are courses on health micro insurance, strategic management, and health leadership. Health education and providing social health insurance were actually pioneered by Kapwa Ko Mahal Ko, which used the TV as media for reaching people (Alampay and Ong 2003).

As far as databases are concerned, a notable project is the Infectious Disease Data Management System which captures, analyzes and shows health data, specifically on tuberculosis and rabies, through the use of maps through its GIS modules.

Although not included in the database, a previous *Galing Pook* entry from Pangasinan Province reported how linking information about hospital medical needs of all government hospitals in the province helped reduce the cost of medicine purchases by 50 percent. This is especially important ever since devolution eliminated the economies of scale provided by a centralized purchasing body performed by the Department of Health (Alampay 2001).

E-employment

There are fifteen e-employment projects listed in the database. Most of them deal with employment opportunities both local and abroad, money remittance and workers' safety.

The use of the web for job-matching is being done at the national, local, and even by non-governmental organizations; for instance, the Department of Labor and Employment (DOLE) has a web-based job matching service (<http://phil-jobnet2.dole.gov.ph>) for individual job applicants and interested establishments. It matches skills needed and location (or area of operation) of the establishment. It also provides an online service for Overseas Filipino Workers (OFW) applicants to check the status of the recruitment agency facilitating their employment.

Similarly, some local government units provide local job postings on their websites. Among them are Naga City, Bulacan Province, and Bohol Province. Non-profit organizations also make use of the Internet to find volunteers to field for local non-governmental organizations. I-volunteer.ph, for instance, claims to be the Philippines' first volunteer portal where NGOs can post their volunteer requirements.

These online job-matching services can be investigated on whether they really expand opportunities for people, or whether they simply mirror real life preferences by establishments and employers (Niles and Hanson 2003).

Given the huge numbers of Filipinos working abroad, another common use of ICTs is to provide the needed social support for their families; for instance, ATIKHA's BaliKabayani has a multiservice center in San Pablo City that brings the latest communication technologies to the OFW and their families to help bridge the communication gap and address family relations problems brought about by prolonged separation. They also offer free tutorials to children and relatives of OFW on the use of internet, e-mail, net meeting, cyber photos and cyber greeting cards which they can use in communicating with their parents or brothers/sisters abroad. Similarly, the Overseas Workers Welfare Administration (OWWA), during the Iraq war, provided "Tele-Ugnayan Centers" around the country, which served as pseudo-calling centers to link OFWs in the Middle East with their families at home. In Cebu Province, the "Friends of Pedro Foundation" provides psycho-spiritual services for OFW families through the Internet.

E-environment

Twenty-one environmental programs were listed in the database. Most of the projects listed involved Geographic Information System (GIS) applications. Geographic information systems applications have also been used to map out contour, hydrology, land use, soil type, erosion, land cover, population, among others.

Use of ICTs for the environment also involved empowering people to report cases of environmental pollution or degradation. Notable is the use of SMS to link up citizens with government in monitoring the environment. Among them are *Bantay Usok*, *Bantay Dagat* and *Bantay Kalikasan*, which allow citizens to directly report to authorities via special phone numbers any environmental concerns.

Radio and television, on the other hand, have been very useful in raising awareness of and pushing for environmental causes. An example of this was Miriam College's local radio program called "Radio Kalikasan" which was aired over DZXQ as early as 1991.

Although it was not included in the database, the National Disaster Coordinating Center (NDCC) and the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAG-ASA) use satellite technology to monitor the weather and environmental disturbances. The Bureau of Agricultural Statistics (www.bas.gov.ph) has a link to updated PAG-ASA weather forecasts that also show predicted mean sea level pressure and wind and updated satellite photos of the country.

E-agriculture

There were twenty-four (24) e-agriculture projects in the database. Among the ICT applications used for agriculture were database of research applications such as the Agriculture and Fisheries Research and Development Information System (AFRDIS) project of the Bureau of Agricultural Research (BAR). It interconnects 56 research and development agencies nationwide into 11 clusters. It provides a virtual data backbone for the government R&D sector that will be linked to the National Information Network (NIN) of the Department of Agriculture (DA), as specified in Republic Act (RA) 8457 or the Agriculture and Fisheries Modernization Act of 1997. It enables the general public and media to access research and technology information from all these agencies. A similar program is being implemented by the Department of Science and Technology (DOST) called the Agriculture and Natural Resources Information Network (AGRINET)³. PCCARD also has the

Farmers' Information and Technology Services (FITS)/TechnoPinoy Databases. They are used to facilitate faster access to information and fast track the delivery of services at the provincial and municipal levels related to the clients' information and technology needs in agriculture, forestry and natural resources. Connected to this is the "Open Academy for Philippine Agriculture" project. Also called the "Internet ng Magsasaka," it aims to provide information on new technologies to farmers and extension workers through the Internet and will initially contain information on rice.

PH Domain Foundation has a different approach towards knowledge-sharing agricultural and rural development technology. This is through the formation of its own e-groups and mail lists. It also provides an online consultancy program that gives users access to agriculturists, lawyers, bankers and women's rights advocates, among others.

Another important agricultural application of ICTs is with respect to the dissemination of farm prices, via the Internet and through fax and radio that is done by the Bureau of Agricultural Statistics. Its website (www.bas.gov.ph) has a daily updated price watch and a link with Pag-asa regarding the weather situation. Land Bank also has a marketing program called "*Palengke sa ere*" (Market on the Air) that is also radio-based and airs from 5-7 am and 6-8 pm.

Last, geographic information system (GIS) is also being used in agriculture to identify soil patterns and topographies and mapping properties disposed of in agrarian reform communities.

E-science

According to Hamelink (2003), one dimension of the interaction of informational developments and society pertains to technology. Among the basic human rights that people have is to benefit equally from technological developments; hence, projects that pertain to the access of the ICT infrastructure were included under e-science. Among the projects that provide access are the Multipurpose Community Telecenter project (www.barangayconnect.ph); ATIKHA's use of video phones for OFW families (Diamond 1993; Doyo 2002); OWWA's Tele Ugnayan project during the Iraq war (Alampay 2003); broadband access, such as in PREGINET and CATNet and Ivatan Foundation for Development Communication's use of satellite and omni directional antennas (Hocson 2002). In addition to these projects, the Advanced Science and Technology Institute of DOST, has been at the forefront of developing open source software through such

programs as Open Source Systems for Workstations and Servers and Linux Terminal Server Project and the Bayanihan linux (<http://bayanihan.gov.ph>). These projects will optimize the use of open-source and freeware software without sacrificing the integrity of hardware specification of the system at a lower cost.

An interesting program for providing access to the disabled is called "Computer Eyes." This program is implemented by IBM Philippines together with Resources for the Blind. More than 80 blind students coming from special education centers from Metro Manila and various provinces participate in a camp. Participants are taught new skills and access to information through the Internet. Over a span of two weeks, they are taught how the computer works, learn word processing, and build and upload their personal websites. Students are aided by a screen reader program that speaks, through a sound card, the text displayed on the screen.

E-science projects also include linking together research and educational institutions and knowledge which were also previously mentioned under e-learning. Among these are the e-library project, and research database on agriculture and fisheries.

Limitations

By being more inclusive in the database, the research would rather err on the side of including a project that is in the end classified as "Not ICT4D" (Type I error), rather than start with a restrictive definition and make the mistake of excluding a worthwhile project that is actually ICT4D (Type II error). The research did, however, make minor exclusions; for example, it excluded purchasing of computers, although it included computer donation. It also excluded the creation of technoparks for investments.

The database is also far from being exhaustive. For one, the researchers realized that there are "common" projects that have been replicated many times over, such that putting them in the database will be an endless undertaking; for instance, the database does not list all the local government units (LGUs) with websites, considering that the NCC estimates that 99% of all LGUs already have websites. Instead, it only included some websites that have been cited for awards and in publications. Likewise, the use of GIS, and computerization of tax mapping has also become a pervasive application; hence, only the use and examples of LGUs using them were placed in the database. The use of

SMS, for feedback and basic information, has also been common, and the list provided is not exhaustive.

Mapping ICT4D projects will always be a work in progress. Given that the definition of ICT4D, and the criteria for selecting cases that fit that definition are also evolving, the database has kept its initial mapping intact until definitive criteria are agreed upon.

Conclusion

By the end of ICT4D conference series, the criteria for selecting the best ICT4D cases eventually took shape. Among the criteria considered were the following:

1. The contribution and relevance of the project in people's lives.
2. The innovativeness, creativity and appropriateness in the use of ICT infrastructure to deliver services to the disadvantaged.
3. How the project is able to build the capacity of the community/ organization, and evidence that it can be sustained and replicated.
4. The relevance of the case to ICT for development research, practice and policies.

Given that the concept of ICT4D is relatively new, development practitioners who are using ICTs in their work may remain isolated from people doing ICT4D research. With this, much work remains to be done in connecting practitioners with ICT4D researchers in the country, and in developing the skills for empirically evaluating the impact of ICT4D projects.

Endnotes

¹ Presented at the ICT4D conference series in July-December 2004, with database last updated on 10 February 2005.

² We would like to acknowledge the help provided by our research assistants, Jessica Tecson and Dyanne Sedeno, in gathering most of the ICT4D projects in the database.

³ AGRINET is a convergence of four agencies: DA-PhilRice, DOST-PCARRD, DAR and DAP.

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ANNEX A – WSIS Definition of ICT4ED Applications

ICT applications: benefits in all aspects of life

ICT applications can support sustainable development, in the fields of public administration, business, education and training, health, employment, environment, agriculture and science within the framework of national e-strategies. This would include actions within the following sectors:

1) *E-government*

- a) Implement e-government strategies focusing on applications aimed at innovating and promoting transparency in public administrations and democratic processes, improving efficiency and strengthening relations with citizens.
- b) Develop national e-government initiatives and services, at all levels, adapted to the needs of citizens and business, to achieve a more efficient allocation of resources and public goods.
- c) Support international cooperation initiatives in the field of e-government, in order to enhance transparency, accountability and efficiency at all levels of government.

2) *E-business*

- a) Governments, international organizations and the private sector, are encouraged to promote the benefits of international trade and the use of e-business, and promote the use of e-business models in developing countries and countries with economies in transition.
- b) Through the adoption of an enabling environment, and based on widely available Internet access, governments should seek to stimulate private sector investment, foster new applications, content development and public/private partnerships.
- c) Government policies should favor assistance to, and growth of SMEs, in the ICT industry, as well as their entry into e-business, to stimulate economic growth and job creation as an element of a strategy for poverty reduction through wealth creation.

3) *E-learning*

- a) Develop domestic policies to ensure that ICTs are fully integrated in education and training at all levels, including in curriculum

- development, teacher training, institutional administration and management, and in support of the concept of lifelong learning.
- b) Develop and promote programs to eradicate illiteracy using ICTs at national, regional and international levels.
 - c) Promote e-literacy skills for all, for example by designing and offering courses for public administration, taking advantage of existing facilities such as libraries, multipurpose community centers, public access points and by establishing local ICT training centers with the cooperation of all stakeholders. Special attention should be paid to disadvantaged and vulnerable groups.
 - d) In the context of national educational policies, and taking into account the need to eradicate adult illiteracy, ensure that young people are equipped with knowledge and skills to use ICTs, including the capacity to analyse and treat information in creative and innovative ways, share their expertise and participate fully in the Information Society.
 - e) Governments, in cooperation with other stakeholders, should create programs for capacity building with an emphasis on creating a critical mass of qualified and skilled ICT professionals and experts.
 - f) Develop pilot projects to demonstrate the impact of ICT-based alternative educational delivery systems, notably for achieving Education for All targets, including basic literacy targets.
 - g) Work on removing the gender barriers to ICT education and training and promoting equal training opportunities in ICT-related fields for women and girls. Early intervention programs in science and technology should target young girls with the aim of increasing the number of women in ICT careers. Promote the exchange of best practices on the integration of gender perspectives in ICT education.
 - h) Empower local communities, especially those in rural and underserved areas, in ICT use and promote the production of useful and socially meaningful content for the benefit of all.
 - i) Launch education and training programs, where possible, using information networks of traditional nomadic and indigenous peoples, which provide opportunities to fully participate in the Information Society.

- j) Design and implement regional and international cooperation activities to enhance the capacity, notably of leaders and operational staff in developing countries and LDCs, to apply ICTs effectively in the whole range of educational activities. This should include delivery of education outside the educational structure, such as the workplace and at home.
- k) Design specific training programs in the use of ICTs in order to meet the educational needs of information professionals, such as archivists, librarians, museum professionals, scientists, teachers, journalists, postal workers and other relevant professional groups. Training of information professionals should focus not only on new methods and techniques for the development and provision of information and communication services, but also on relevant management skills to ensure the best use of technologies. Training of teachers should focus on the technical aspects of ICTs, on development of content, and on the potential possibilities and challenges of ICTs.
- l) Develop distance learning, training and other forms of education and training as part of capacity building programs. Give special attention to developing countries and especially LDCs in different levels of human resources development.
- m) Promote international and regional cooperation in the field of capacity building, including country programs developed by the United Nations and its Specialized Agencies
- n) Launch pilot projects to design new forms of ICT-based networking, linking education, training and research institutions between and among developed and developing countries and countries with economies in transition.
- o) Volunteering, if conducted in harmony with national policies and local cultures, can be a valuable asset for raising human capacity to make productive use of ICT tools and build a more inclusive Information Society. Activate volunteer programs to provide capacity building on ICT for development, particularly in developing countries.
- p) Design programs to train users to develop self-learning and self-development capacities.

4) *E-health*

- a) Promote collaborative efforts of governments, planners, health professionals, and other agencies along with the participation of international organizations for creating a reliable, timely, high quality and affordable health care and health information system and for promoting continuous medical training, education, and research through the use of ICTs, while respecting and protecting citizens' right to privacy.
- b) Facilitate access to the world's medical knowledge and locally-relevant content resources for strengthening public health research and prevention programs and promoting women's and men's health, such as content on sexual and reproductive health and sexually transmitted infections, and for diseases that attract full attention of the world including HIV/AIDS, malaria and tuberculosis.
- c) Alert, monitor and control the spread of communicable diseases, through the improvement of common information systems.
- d) Promote the development of international standards for the exchange of health data, taking due account of privacy concerns.
- e) Encourage the adoption of ICTs to improve and extend health care and health information systems to remote and underserved areas and vulnerable populations, recognizing women's roles as health providers in their families and communities.
- f) Strengthen and expand ICT-based initiatives for providing medical and humanitarian assistance in disasters and emergencies.

5) *E-employment*

- a) Encourage the development of best practices for e-workers and e-employers built, at the national level, on principles of fairness and gender equality, respecting all relevant international norms.
- b) Promote new ways of organizing work and business with the aim of raising productivity, growth and well-being through investment in ICTs and human resources.
- c) Promote teleworking to allow citizens, particularly in the developing countries, LDCs, and small economies, to live in their societies and work anywhere, and to increase employment

opportunities for women, and for those with disabilities. In promoting teleworking, special attention should be given to strategies promoting job creation and the retention of the skilled working force.

- d) Promote early intervention programs in science and technology that should target young girls to increase the number of women in ICT carriers.

6) *E-environment*

- a) Governments, in cooperation with other stakeholders, are encouraged to use and promote ICTs as an instrument for environmental protection and the sustainable use of natural resources.
- b) Government, civil society and the private sector are encouraged to initiate actions and implement projects and programs for sustainable production and consumption and the environmentally safe disposal and recycling of discarded hardware and components used in ICTs.
- c) Establish monitoring systems, using ICTs, to forecast and monitor the impact of natural and man-made disasters, particularly in developing countries, LDCs and small economies.

7) *E-agriculture*

- a) Ensure the systematic dissemination of information using ICTs on agriculture, animal husbandry, fisheries, forestry and food, in order to provide ready access to comprehensive, up-to-date and detailed knowledge and information, particularly in rural areas.
- b) Public-private partnerships should seek to maximize the use of ICTs as an instrument to improve production (quantity and quality).

8) *E-science*

- a) Promote affordable and reliable high-speed Internet connection for all universities and research institutions to support their critical

role in information and knowledge production, education and training, and to support the establishment of partnerships, cooperation and networking between these institutions.

- b) Promote electronic publishing, differential pricing and open access initiatives to make scientific information affordable and accessible in all countries on an equitable basis.
- c) Promote the use of peer-to-peer technology to share scientific knowledge and pre-prints and reprints written by scientific authors who have waived their right to payment.
- d) Promote the long-term systematic and efficient collection, dissemination and preservation of essential scientific digital data, for example, population and meteorological data in all countries.
- e) Promote principles and metadata standards to facilitate cooperation and effective use of collected scientific information and data as appropriate to conduct scientific research.

Opportunities and Challenges in Philippine Local Governance of Public Health

VICTORIA A. BAUTISTA*

Public health is one of the primary concerns in the Philippines, especially in the marginalized sector. It does not only entail the curative aspect of health but the promotion and prevention of diseases. There are opportunities in governance of public health in local government units (LGUs) and challenges for improvements. Devolution of powers, institution of basic needs approach and popularization of the empowerment approach at the local level are some of the opportunities. The role of local executives in delivering quality services and budget allocation are the priority areas for improvement. There is a need for convergence of LGUs, civil society groups, nongovernment organizations in pursuing public health advocacy and mitigating the prevailing problems and threats.

Introduction

Poverty has remained as a persistent problem in the Philippines. While poverty incidence has declined in terms of percentages from 49.2 percent in 1985 to 39.5 percent in 2000 as reported by the National Statistical Coordination Board (cited by Reyes 2003: 10-11), the magnitude of poor population has increased over time from 26.7 million in 1985 to 30.8 million in 2000. This increase could be attributed to the high population growth rate in the Philippines of 2.36 from 1995 to 2000 (Reyes 2003: 5). Regional disparity in poverty is also existent with many of those found in Mindanao and Visayas regions having more than 40 percent of their population as poor, with the highest being registered in the Autonomous Region in Muslim Mindanao (ARMM) at 71.3 percent of the total population, while most of the regions in Luzon are below 40 percent, except for the Bicol region.

Appreciating the governance of public health service in the Philippines is relevant for the Filipinos, especially the poor, as they often rely upon this system for their needs. Often, public health is cheaper in

*Professor, National College of Public Administration and Governance, University of the Philippines Diliman.

terms of cost of services, if not available for free. Reliance on public health delivery system is borne out by studies on the use of these facilities such as the ones conducted by the National Demographic Survey of 2003 and by the Social Weather Station for the World Bank in 2001 (cited by Olarte and Chua 2005). Public health is normally concerned with

threats to the overall health of a community... (and) includes surveillance and control of infectious disease and promotion of healthy behaviors among members of the community (www.answers.com/topic/public-health).

Public health service can be distinguished from clinical health professions as doctors treat patients on a one-on-one basis for a specific disease or injury (www.answers.com/topic/public-health); thus, public health does not only entail the curative aspect of health for the entire community but also the promotion and prevention of diseases.

With this discussion as the context, two key topics figure in this article. These are:

- What are the opportunities in governance of public health in local government units (LGUs); and
- What are the challenges or areas where improvements still have to be made?

What are the Opportunities?

Devolution as an Opportunity

Devolution is one of the opportunities in public health. For one thing, devolution is able to provide local executives and implementers a direct hand in designing relevant projects and approaches according to the needs and requirements of the constituents in their respective areas. This mode veers away from the traditional mode of management where national planners and implementers design program and project packages for local government units which may not be suitable to their condition.

It also provides local executives and implementers an opportunity to utilize indigenous resources that could enhance local capacities and energies. Knowledge of local residents on herbal medicines to treat ailments could be maximized to generate local enterprise and hence, redound to the improvement of local economy.

Then, of course, devolving decisionmaking on health to local government engages the citizenry to witness more closely how decisions are made and enables them to directly express their demands, and more importantly, to be more actively involved in the different phases of the management cycle of: situation analysis, planning, implementation and monitoring/evaluation. Translating the real essence of participatory governance is made possible by lodging jurisdiction over development programs under the local chief executives (LCEs) where there is direct access by the people, instead of having decisionmaking rest mainly on national decisionmakers and their regional counterparts.

The *Local Government Code of 1991* stipulates that the maintenance of health centers will be the key responsibility of the *barangay*, the lowest level of local government unit. At the municipal level, the responsibility for health services shall include the implementation of programs and projects on primary health care, maternal and child care, and communicable and noncommunicable disease control services. It is also expected to provide access to secondary and tertiary health services, purchase of medicines, medical supplies and equipment needed to carry out these services. On the other hand, the provincial level assumes responsibility for the provision of health services in hospitals and tertiary health services.

These services are to be funded from the share of the LGU in the proceeds from national taxes and local revenues and funding support from the national government and its instrumentalities and government-owned and controlled corporations.

Volunteerism is Vibrant

One of the most significant contributions in the advocacy to implement the primary health care (PHC) strategy is to motivate community health volunteers. Barangay health workers (BHWs) have emerged as partners of government health workers since the early 1980s as the first persons in the chain of the referral system, in the provision of first aid, the mobilization of community participants in public health projects and the provision of basic information on health. Even after devolution, volunteerism among BHWs is vibrant. In fact, BHWs are not only active in public health, they serve in many community development projects, such as gathering information on local poverty indicator monitoring system being advocated nationwide to assess quality of life of the community in poverty programs like the Comprehensive and Integrated Delivery of Social Services (CIDSS), a poverty program led by the Department of Social Welfare and Development (DSWD) until 2004,

and later a foreign funded project such as the *Kapit-Bisig Laban sa Kahirapan*¹-CIDSS (or KALAHI-CIDSS Project) also led by the DSWD at present.

BHWs may also be witnesses in community-based health programs managed by nongovernment organizations (NGOs), such as Plan International Philippines through its advocacy for community-managed health program and the World Vision's advocacy to combat tuberculosis called *Kusog Baga* Program.

The legacy of the Department of Health (DOH) in steering volunteerism in the community could still be felt and witnessed until today. If properly steered, the volunteers constitute a significant force in public health advocacy and serve as key mobilizers in harnessing community participation in the decisionmaking process.

There are federations of Barangay Health Workers around the country which could be a channel for social mobilization and advocacy.

Institution of Basic Needs Approach

The institution of the basic needs approach to assess quality of life and even to measure poverty is a comparative advantage for public health. This approach incorporates health indicators as tools for planning and determining what services have to be prioritized. Furthermore, it is an effective tool for targeting individuals and families who should be given more attention. Basic needs indicators have already been institutionalized in the Social Reform and Poverty Alleviation Act (Republic Act 8425) passed in December 1997. The indicators were advocated and implemented in the national program as the Comprehensive and Integrated Delivery of Social Services (CIDSS). Nevertheless, the Department of the Interior and Local Government (DILG) has directed LGUs to formulate Local Poverty Reduction Action Agenda (LPRAA) through Memorandum Circular 2001-109 on 21 August 2001 that institutionalizes the application of the modified version of the basic needs indicators.

While the indicators in the LPRAA have been reduced to 14 (with 6 indicators related to health), from the original 33 indicators popularly called *Minimum Basic Needs*, advocacy of these indicators to LGUs reinforces the mandate on health as embodied in the *Local Government Code*. These indicators signify the parameters where resources have to be channeled, a tool for ascertaining the progress made across the different LGUs.

An improvement in the new set of indicators is its focus on impact concerns rather than a combination of inputs, outputs and impact, which

the set of 33 indicators is composed of. Furthermore, the 14 indicators focus on every household member and, therefore, make a count of the persons affected as against the focus on the household as the unit of analysis in the original set of 33 indicators. (See the set of indicators compared in Appendix A.)

Both sets of indicators, however, highlight the importance of enabling members of the community to identify the relevant programs to respond to their needs rather than providing packaged services to respond to each problem.

Institutionalization of Empowerment Approach at the Local Level

An important feature of LPRAA is the recognition of people's organizations (POs) as participants in the decisionmaking process. In the *Guidebook on Local Diagnosis and Planning* prepared by the DILG, National Economic and Development Authority (NEDA), National Anti-Poverty Commission (NAPC) and the United Nations Development Programme (UNDP), basic sectors (i.e., farmers, fisherfolk, women, children, youth, senior citizens, persons with disabilities, indigenous peoples, informal labor, formal labor, urban poor, victims of calamities, cooperatives, and NGOs), mostly from the marginalized groups, are expected to be included in the Local Poverty Reduction Action Team (LPRAT) (DILG, NEDA, NAPC and UNDP 2002). In effect, this directive reinforces the expectation to forge a participatory approach in health management, as mandated in the PHC approach, a devolved responsibility in the *1991 Local Government Code*. The advantage of the poverty reduction planning focus is the holistic view of development which PHC is expected to underscore.

In addition, NGOs and POs can participate in local planning bodies with at least one-fourth of the council to involve group representatives.

Basic Respect for Local Government Unit's Role in National and Foreign Funded Programs

There is a basic recognition on the part of many national and foreign-funded programs or projects in health that local government has to be a partner or work convergently with national and international mobilizers. Some examples include the CIDSS and the KALAHI-CIDSS programs in poverty alleviation (as national programs). Both these programs take into

consideration the participation of local chief executives, as they ultimately have to commit their own resources and people in projects that are considered urgent in these localities. In the latter example, local executives in the municipal level assume an important role in chairing an interbarangay forum where proposals are evaluated for consideration as possible recipients of funding support from the World Bank, with counterpart funding from the local government unit. The interbarangay forum is also a unit that is responsible for formulating criteria for assessing what proposals from the different barangays will be given priority consideration. The interbarangay forum consists of representatives from the national and LGUs involved in social development, POs, NGOs and the basic sectors.

An example of a foreign-funded project is the Family Health for poor settlers funded by German Technical Cooperation (GTZ) which embarks on the mobilization of LGUs to participate in the improvement of family health self-management activities and the enhancement of family and reproductive health by target groups; the organization and support of the community center for family health; and the development of family health workers (DOH Bureau of International Health Cooperation 2001).

Working in convergence with LGUs ensures local ownership and sustainability of programs as this could ensure transfer of technology and eventual phase out of national and international intervention modalities.

Application of Community-based Approach and Integrated Planning Strategies in National and Foreign Funded Projects Consistent with PHC

Many national- and foreign-funded projects which operate in different LGUs boast of the commitment to implement community mobilization to ensure empowerment of communities, as well as convergence with other civil society groups, especially NGOs. Furthermore, there is a concern to weave in a multidimensional view in development process where health is often one of the concerns; for instance, there is the UNDP which supports the promotion of multisectoral and community-based approach towards Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) prevention through grants in the amount of P14 million, targeting urban areas in the National Capital Region, Region IV, Cordillera Administrative Region and Region VI (DOH-Bureau of International Health Cooperation 2001).

The Canadian International Development Agency (CIDA) extends a grant for community mobilization as a scheme towards the reduction of the prevalence of tuberculosis in the amount of P1,234 million to target areas

covered in previous community-based program of World Vision in four regions (DOH Website 2005).

Australian Agency for International Development (AusAID) also extends support in the form of P49,882,000.00 grant for the implementation and evaluation of self-sustaining community-based projects on malaria eradication. This grant entails mobilization of volunteers, setting up of health insurance, conduct of health education, and setting up of surveillance system (DOH Website 2005); thus, in 36 foreign-funded projects listed by DOH-BIHC in 2001 (DOH Website in 2005), 13 respond to PHC as community mobilization being on top of their respective agenda.

Local Innovations Given Recognition by Award-giving Bodies

Award-giving bodies have given recognition to innovative approaches and strategies in governance of LGUs. An award specific to local health development is the provision by "Sentrong Sigla" seal of the Department of Health if LGUs meet standards to ensure the delivery of quality healthcare to the populace as they demonstrate compliance with indicators pertinent to the physical and human resources available in their facility. Standards revolve around areas of infrastructure/amenities, services, attitudes and behavior of health workers, human resources, equipment, drugs/medicines/supplies, health information system, and community intervention (Bautista, Legaspi, et al. 2002: 32). These standards have been improved lately to incorporate not only input indicators but process and outcome indicators. Sentrong Sigla LGUs are given monetary rewards by DOH to assist them in responding to some gaps in the operations of their respective facilities (Interview of Technical Staff 6 June 2003).

The Galing Pook Foundation annual awards program, conducted since 1993, has been pioneering incentive on innovation and excellence in local governance in the Philippines. It has recognized 195 outstanding local governance programs that now serve as models of effective local governance from 1994 to 2004 (Galing Pook Website 2005). This award system is part of an international network of local governance award mechanisms in eight countries (i.e., United States, Brazil, Chile, China, Mexico, Peru, Philippines, and South Africa) assisted by Ford Foundation (Rodriguez 2003). Innovations in governance with direct or indirect implication to health can be readily witnessed in the roster of winners. In 2002-2004, the year 2002 registered the highest number of awards in the health sector with half of the ten garnering this recognition. They all encouraged the basic principles in participatory governance which is subscribed to in PHC (Galing Pook Foundation 2002); for instance, there was the clean-up

drive of the coastline of Bataan which helped in the prevention of diseases, participated in by civil society groups that include POs. There was the constituent-responsive program in Bulacan which applied the survey research method to get a representative citizens' feedback on projects which led to the setting up of health insurance or *Medicare Para sa Masa*. There was also the initiative on the part of the provincial governor of Davao del Norte to institutionalize basic needs indicators, with health as one of the indicators. These indicators served as tool for planning and prioritization of projects. While Davao del Norte was not a priority province targeted in the application of basic needs indicators, its implementation was nevertheless considered as a platform by the governor (Galing Pook Foundation 2002). This stance reflected his social development commitment in governance.

Another recent awardee was the inter-LGU-NGO partnership in healthcare delivery in the province of Negros Oriental in the city of Bayawan and the municipalities of Basay and Sta. Rita. Each awardee set up hospital boards that capitalized on the partnership of the different stakeholders outside of government in order to take part in the creative and resourceful ways to address concerns in healthcare delivery. Inter-local health zones were formed to further devolve program management to district levels, another administrative layer between the province and the municipalities.

These award systems motivate LGUs to be innovative in governance of their local development.

International Commitments Reinforce Prioritization of Health

Another opportunity is the commitment of global networks to prioritize health; for instance, the 20-20 Agreement is a commitment fostered in the World Summit for Social Development of the different countries of the world. This Agreement stipulates that 20 percent of government resources shall be allocated to the so-called human priority expenditures to assure the attainment of decent levels of human development. Another 20 percent will also be allocated by official development assistance. The services are mainly in primary health care such as: reproductive health, basic nutrition, low cost water supply and sanitation. The others pertain to basic education, early childcare and basic social welfare. This commitment calls the attention of governments and foreign funding institutions to commit resources to ensure human development concerns.

The 20-20 initiative is reinforced by the Millennium Development Goals (MDGs) passed in a Special Session of the United Nation General Assembly in September 2000. There are four out of ten health goals in the MDGs with quantitative targets up to the year 2015 as basis for assessing whether the goals are achieved. Corresponding programs of action have been incorporated by the Philippines in its Medium Term Development Plan to address each goal. The goals which are consistent with health concerns are:

- reduction of child mortality (among under five-year-old children) by two-thirds;
- improvement of maternal health to be indicated by reduction of maternal mortality by three-fourths;
- combating HIV/AIDS, malaria and other diseases as indicated by halting/reversing their spread; and
- ensuring environmental sustainability to be indicated by such health concerns as halving the proportion of people without sustainable access to safe drinking water and integrating the principles of sustainable development into country policies and programs to reverse the loss of environmental resources (United Nations 2000, Manasan 2002).

The institutionalization of these goals in the Philippines steered the adoption of the Local Poverty Indicator Monitoring System (LPIMS) by some local government units like Pasay City and the provinces of Marinduque, Camiguin and Masbate in order to assess the extent of attainment of the MDGs (Panadero 2005).

Challenges

Role of Local Chief Executives (LCEs)

The most critical challenge to forge public health is the commitment of local chief executives. Public health as a devolved responsibility does not guarantee the executives' understanding and commitment. The most problematic aspect is the appreciation of the meaning of primary health care (PHC) since this is not well-defined, even in the implementing rules and regulations of the *Local Government Code*; hence, the traditional notion of curative health is what is normally seen as their perceived responsibility, not its promotive and preventive dimension, and especially the need for community mobilization and people participation in governance.

The most difficult challenge to public health workers is the three-year term of local executives. Change in political leadership could mean a change in commitment to health programs. Continuity of projects could be a nagging problem especially if there is a change in political party leadership whose winning candidate may aspire to change the thrust of his/her administration for the constituency to remember him/her by.

A change in political leadership is a challenge to public health workers. Each change in administration necessitates advocacy and orientation for the new leaders.

The DILG and local universities can be considered as allies in undertaking an orientation program especially for new local chief executives on the real essence and implication of public health, for them to commit and invest in public health.

Career Path and Mobility for Public Health Workers

There is a need to assess how public health workers in LGUs can be motivated as the career path is not clearly spelled out in the *Magna Carta for Health Workers*. This fact is considered to be a key problem by the national office unless innovative mechanisms for mobility are instituted in LGUs (Bautista 2001: 13) and a source of demoralization among health workers who are not certain how much professional growth is open to them.

The *Magna Carta for Health Workers* has also stipulated benefits and incentives for devolved health workers that include hazard pay, laundry allowance, holiday pay and even remote allowance and medico-legal allowance (Olarde and Chua 2005); however, many LGUs have reportedly failed to fully implement its provisions resulting in said health workers transferring to Manila or going abroad in search of greener pastures.

Need to Motivate and Orient BHWs

There is a need to continuously motivate BHWs to be apprised of recent developments and challenges in health. Devolved health workers play a big role in harnessing, orienting and motivating BHWs; however, maximizing BHWs can be open to political intervention as local officials have the power and control to identify recipients and how much hazard and subsistence allowances can be given to them, based on Republic Act 7883 of 15 February 1995 or the BHW Benefits and Incentives Act. One of the observations noted in a recent study on Directly-Observed Treatment

Short Course Strategy (DOTS) among tubercular patients is the appointment by LCEs of BHWs replacing well-trained and knowledgeable BHWs as they are not political allies (Bautista and Gervacio 2003).

Need to Appreciate / Adopt Focused Targeting Technology in Health

In conducting training programs of LCEs by the National College of Public Administration and Governance (NCPAG) of the University of the Philippines (UP), trainers realize that local executives consider health programs not only as curative service, but as a means to deal with health problems in a universal way. But public health management should be able to consider focused-targeting technology, as this technology will enable health workers to determine who can be given priority attention; thus, it is important to institute a system where those who can afford are segregated from those who do not have the economic means to fend for themselves so that the burden of dispensing health services can prioritize the most marginalized. Those who can afford to pay for medicines, immunization and laboratory work should not get them for free.

The application of focused-targeting technology hinges on the adoption of a set of indicators to assess deprivation. At the moment, only selected barangays which had been targeted for poverty alleviation have implemented the methodology as part of the national government priority and in areas where LCEs took the initiative to adopt the system.

Advocacy of the indicators as the basis for the Local Poverty Reduction Action Agenda has to be fast-tracked to be able to cover LGUs.

Having a reliable set of indicators could also be helpful in setting up a health insurance system which was disclosed recently in a National Conference for Community-Based Monitoring System (Angelo King Institute for Economics and Business Studies of the De La Salle University 2005) where participants from different provinces discussed the applicability of the indicators for targeting families and individuals who should be given priority attention.

The Challenge for Community Mobilization

The extent to which community mobilization is undertaken remains as an issue. As a devolved responsibility, this mobilization has been transferred to local health workers. The question is who assumes this

responsibility and is community mobilization undertaken in a continuous manner?

In a study conducted on the impact of Plan International Philippines, the NGO which advocated community-managed health systems and partner communities demonstrated a better performance among LGUs in mobilization for people participation in governance, after the advocacy was made by its own mobilizers showing improvement prior to this intervention (Bautista, Nicolas et al. 2004). This assessment demonstrates the importance of continuously undertaking advocacy to ensure that the participatory approach is institutionalized.

Financial Allocation for Public Health

One of the prevailing problems affecting the national government is the annual budget that channels huge expenditures to debt servicing resulting from government borrowing to supplement revenue deficit. This debt servicing has a big implication on the amount of money left available for development projects and directly impinges on public health. Since 1999, the national budget for social development declined from a high of 33.2 percent to a low of 29.6 percent in 2003, where health is a component. Economic services also suffered a decline, from 24 percent to 20.2 percent. On the other hand, debt servicing increased from 18.3 percent to 27.8 percent for the same period (Briones 2002).

Another issue is the extent of priority given to public healthcare. In a report on health spending by Simbulan (2001), it was disclosed that curative services got the major chunk of the national allocation for the years 1986 to 2000 as 20 to 73 percent of the budget was spent for hospital and regional operations/services/maintenance. On the other hand, promotive/preventive healthcare only got a measly 1.3 percent to at most 30 percent.

This is further confirmed by Gañac and Amoranto (2001: 23) who disclosed that for the year 1999, 16.8 percent of the total health care expenditure of DOH went to public health as against 67.54 percent for curative services.

In LGUs where basic health services were devolved, Gañac and Amoranto (2001) showed a bigger percentage going to public health (47.39 percent) while curative care got 26.35 percent in 1999; however, the average expenditure per public health facility translated to P147,000 as against P1,720,000 per hospital.

Healthcare spending was below 5% of GNP, a standard set by the World Health Organization (WHO), with the Philippines showing an expenditure of 3.4 percent of GNP in 1999 (Gañac and Amoranto 2001). The current Secretary of the Department of Health believes that a budget of P86 billion is needed to comply with WHO recommendation from its present level of P10 billion (Crisostomo 2005).

Poor Appreciation of Health Insurance

There is very low appreciation of health insurance to date that leaves the poor at the mercy of government health facilities. Per capita expenditure in 1999 was P1,449 with P70 (or 0.5 percent) for social insurance; P549 came from government (or 37.9 percent). Private spending constituted 57.2 percent or P829, with 46 percent of total health spending from out-of-pocket (NSCB 2001). This pattern implies that the financial burden of health on individual families remains heavy, leaving access to care highly inequitable (NSCB 2001).

Preventable Diseases Still Prevalent

A raging public health concern is the burden of managing and controlling infectious diseases which can be prevented or avoided.

Statistical data of the DOH on leading causes of morbidity show eight out of ten being preventable (i.e., diarrhea, bronchitis, pneumonia, influenza, tuberculosis, malaria, measles and chickenpox) for the year 2001 (DOH Website 2005). Two others are hypertension and heart diseases. (See Appendix B)

As for mortality rate, two of the ten causes were preventable (pneumonia and tuberculosis) for the year 1997 (DOH Website 2005). The others were: diseases of the heart and vascular system, malignant neoplasms, accidents, chronic obstructive pulmonary diseases and allied conditions, certain conditions originating in the perinatal period, diabetes mellitus and nephritis/nephritic syndrome/nephrosis) (DOH Website 2005). (See Appendix B.)

Clearly, there is need to invest more effort on promotive and preventive healthcare.

The burden of health management is aggravated by the fact that annual growth rate of population (2.36) remains higher than that of other neighboring countries for the years 1995-2000 (Reyes 2003 citing National Statistics Office data). In 1997, Indonesia registered 1.6; Republic of Korea, 0.9; Bangladesh, 1.9; and, China, 1.9 (Government of the

Philippines and United Nations Fund for Population 1999: 10). Then new diseases, like bird flu which have to be dealt with, are becoming a global threat and drain local resources.

Conclusion

On the whole, the issues and challenges raised in this article generate expectation of added effort on the part of the national and local governments to improve the implementation of public health services.

More specifically, national and local health offices play a big role in continuously performing their advocacy role for local officials to commit to the delivery of health services, consistent with the needs and demands of the community, abiding by the principles of primary healthcare approach. This situation means that not only the health programs are advocated but also the basic principles of participatory governance which PHC is all about. This implies the need to orient a breed of public health practitioners who have to excel not only in technical dimension of health but in social mobilization, policy advocacy and alliance building. This group can foster partnership for convergent endeavors with civil society groups, the private sector and LGUs, on more urgent ways to contribute to public health. More importantly, this means orienting this breed to develop skills to mobilize the community to be involved in governance.

Public health service planning and implementation could be facilitated by setting up an information dissemination network to provide updated data on the most recent technical developments on diseases to prevent an outbreak.

National and local health offices should also recognize the opportunity to utilize existing technologies for governance that could objectively and rationally define the needs of the community such as the importance of setting up local information system. This could also mean using this technology for focused targeting of beneficiaries, apart from planning and monitoring and evaluation, consistent with global commitments like the Millennium Development Goals.

Furthermore, strengthening the capacities for local government units to seek new sources of revenues to supplement what they are able to generate apart from what the national government is able to transfer to LGUs, is an area where advocacy can be made.

NGOs and multinational bodies have as much responsibility to consider the capabilities of the localities and recognize their role in

governance of development projects. In keeping with the spirit of primary health care, they should involve people's organizations in local governance to ensure that programs and services are appreciated and sustained.

Endnote

¹ Meaning, convergent effort to address poverty

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Appendix A. MBN indicators

<i>Basic Needs</i>	<i>MBN Indicators</i>	<i>LPIMS</i>
Survival		
A. Food and Nutrition	1. Newborns with birthweight of at least 2.5 kg. 2. No severely and moderately underweight children under five years old 3. Pregnant and lactating mothers provided with iron and iodine supplements 4. Infants breastfed for at least four months	1. Malnutrition prevalence- Proportion of children 0-5 years old who are moderately and severely underweight
B. Health	5. Deliveries attended by trained personnel 6. 0-1 years old fully immunized 7. Pregnant women given at least 2 doses of tetanus toxoid 8. Not more than one diarrhea episode per child below five 9. No deaths in the family due to preventable causes 10. Couples with access to family planning 11. Couples practicing family planning in the last six months 12. Solo parent availing of health services	2. Proportion of children aged 0-5 years old who died to the sum of children 0-5 years old 3. Proportion of women deaths due to pregnancy related causes
C. Water and Sanitation	13. Access to potable water (faucet/deep well within 250 meters) 14. Access to sanitary toilets	4. Proportion of households without access to safe water 5. Proportion of households without access to sanitary toilet facilities
D. Clothing	15. Family members with basic clothing (at least three sets of internal and external clothing)	6. Proportion of households who are squatters 7. Proportion of households who are living in makeshift housing

Appendix A concluded

Security		
A. Shelter	16. House owned, rented or shared 17. Housing durable for at least five years	
B. Peace and Order/ Public Safety	18. No family member victimized by crime against person 19. No family member victimized by crime against property 20. No family member displaced by natural disaster 21. No family member victimized by armed conflict	8. Proportion of households victimized by crime
C. Income and Employment	22. Head of family employed 23. Other family members 15 years old and above employed 24. Families with income above subsistence threshold level	9. Poverty incidence— Proportion of households which have income lesser than the poverty threshold 10. Subsistence incidence – Proportion of households which have income lesser than the food threshold 11. Proportion of households which have three meals a day 12. Unemployment rate
Enabling		
A. Basic Education and Literacy	25. Children aged 3-6 attending day care/preschool 26. Children 6-12 years old in elementary school 27. Children 13-16 years old in high school 28. Family members 10 years old above able to read and write and do simple calculation	13. Proportion of 6-12 children who are not in elementary school 14. Proportion of 13-16 year olds who are not in secondary schools
B. People's participation	29. Family members involved in at least one people's organization 30. Family members able to vote in elections	
C. Family Care/Psychosocial Needs	31. Children 18 years old and below not engaged in hazardous occupation 32. No incidence of domestic violence 33. No child below seven years old left unattended	

Appendix B. Health Statistics

Ten Leading Causes of Morbidity, Rate per 100,000 Population, 2001	
Causes	Rate
Diarrhea	1085.0
Bronchitis/Bronchiolitis	891.7
Pneumonia	837.4
Influenza	641.5
Hypertension	408.7
T.B. Respiratory	142.2
Diseases of the Heart	60.4
Malaria	52.0
Measles	31.4
Chickenpox	31.3
Ten Leading Causes of Mortality And Rate per 100,000 Population, 1999	
Causes	Rate
Diseases of the Heart	78.4
Diseases of the Vascular System	58.4
Malignant Neoplasms	45.8
Pneumonia	44.0
Accidents	40.2
Tuberculosis, all forms	38.7
Chronic obstructive pulmonary diseases and allied conditions	20.3
Certain conditions originating in the perinatal period	17.1
Diabetes mellitus	13.0
Nephritis, Nephrotic Syndrome and Nephrosis	10.1

Alternative Health Delivery System Through NGO-Managed Cost-Effective Regional Medical Centers

RAMON U. PONCE*

The common Filipino needing proper medical treatment can not afford the expensive medical tests, medicines, hospital fees and professional fees which characterize the well-equipped private hospitals concentrated in the national capital region. On the other hand, the government hospitals mostly with limited medical equipment and staffed with underpaid but overworked salaried doctors and nurses can only do so much. The continuing exodus of well-trained and highly-skilled medical professionals like doctors and nurses for better compensation in other countries aggravates the problem. Thus, the need to provide accessible quality health care to meet the medical needs of all Filipinos, especially the poor, through an alternative health delivery system characterized by the establishment of NGO-managed cost-effective regional medical centers using public financial support together with comprehensive medical scholarship and continuing career development program.

Overview of Philippine Healthcare System

Article II, Section 5 of the 1987 *Philippine Constitution* recognizes health as a basic human right in a country having a population of 88.6 million as of August 2007 (National Statistics Office 2008). Like in most countries, the healthcare system is composed of the medical institutions and available medical facilities in medical centers, hospitals and specialty clinics, the medical practitioners in terms of general physicians and specialists and supporting medical staff of nurses. The country has a dual health care system consisting of the 1) public sector which is largely funded from the government tax revenues at the national and local government levels and 2) private sector which is largely market-oriented and healthcare is paid in user fees (i.e., professional fees, medical procedures and hospital room accommodation). The Department of Health (DOH) is the lead agency in health with a mandate to provide national policy direction and develop national plans, technical standards and

*Assistant Professor, UP Extension Program in Pampanga, University of the Philippines Diliman.

guidelines on health issues (DOH 2007). In the Philippines, the cost of health is financed mostly through out of pocket costs and augmented whenever covered by the National Health Insurance (Philhealth) and private health insurance coverage if available to the concerned patients. The pharmaceutical industry players in the country to a large extent determine the availability and price of needed medicines.

Department of Health

The mission of the Department of Health is to guarantee equitable, sustainable and quality healthcare for all Filipinos, especially the poor and to lead the quest for excellence in health. The DOH is made up of 17 regional offices, 16 Centers for Health Development located in various regions, 70 public hospitals and 4 attached agencies (DOH 2008). The implementation of the Local Government Code in 1991 led to the transfer of certain functions of the DOH to the Local Government Units (LGUs).

Health Sector and DOH Budget

Health Sector Allocation. The entire Health Sector (which includes the DOH) got a total budget of P 14.45 billion for fiscal year 2007. (National Budget 2007:95) While the amount may appear big, this represents only 1.28% of the National Budget and only 0.22% of the Gross Domestic Product (GDP). The highest percentage of this sector in recent years was in 2000 when the health budget was 2.15% of the national budget. The health sector continues to get marginal support from the Philippine government. This figure is far off from the minimum WHO benchmark of 5% of GDP. In fact, developing countries generally spend 4 % on health, while Europe and Japan set aside at least 7%.

The WHO, based on its 2002 data, estimated that total health expenditure in the Philippines amounted to 115.4 billion pesos. For the same year, the total Philippine government expenditure on health reached only 16.7 billion pesos (or only 14.47%) of the total expenditure on health. These figures reflect how much of the bulk of actual medical expenses are shouldered by the paying private sector (i.e., patients) aided by the costs shouldered by Philhealth and private medical insurances if available.

According to the Philippine National Health Account 2003, the total health expenditure reached PhP 136 billion. Only 16.7% were funds provided by the national government and 17.5% by the local governments while the social Health Insurance only accounted for 9.5%. The biggest

chunk representing out-of-pocket expenses amounted to 44% with the remaining 12.3% classified as "Others." (DOH National Objectives for Health 2005-2010)

Department of Health (DOH) Budget Allocation. Based on the 2007 national budget figures, the DOH alone got P11.4 billion . The Personnel Services (PS, i.e., salaries) got 54.55% of the DOH budget while the Maintenance and Other Operating Expenses (MOOE) got 38.94% of the amount. This left only 6.51% of the DOH budget for Capital Outlay (CO) amounting to only P760 million (National Budget 2007:98). Just like the pattern of DOH budget distribution in the past, the hospital services got the biggest chunk of P7.1 billion or 65% of the total budget. The health sector budget was supplemented by the local government units as a result of the devolution of some health functions from the DOH to the LGUs .

Philippine Hospitals

The Philippine hospital system is basically patterned after the American model. There is the private sector comprised of fiscally independent medical centers, hospitals, clinics and health practitioners. On the other hand, there is the public sector made up of government-owned medical centers and hospitals with salaried health workers. Both sectors are highly regulated by the government. The Bureau of Health Facilities and Services (BHFS) and the National Center for Health Facilities Development (NFHFD) regulate all medical facilities. The Professional Regulatory Commission (PRC) and the various subspecialty medical boards regulate the health practitioners.

Total Hospital Census in the Philippines

The Philippine Medical Association (PMA) reported that the number of public and private hospitals in the country dropped by as much as 55% in the past 20 years, from around 2,000 in 1987 to only 890 in 2007. (*The Manila Times* 2007) The PMA committee on legislation cited several reasons for the decline, including the decreased number of nurses, high cost of medicine, bankruptcy and insufficient government funding for public health care.

The Private Hospitals Association of the Philippines (PHAP) has expressed that the departure of Filipino medical practitioners for foreign countries for higher paying jobs remains unchecked. Lack of medical personnel has reportedly forced the closure of 1,000 private hospitals since 2000. (Gov.ph News 2005)

In July 1996, Republic Act 8344 was passed which prohibits the demand of deposits or advance payments for the confinement or treatment of patients and support in emergency or serious cases. In further support of the patients' interest and rights, the government passed Republic Act 9439— an Act prohibiting the detention of patients in hospitals and medical clinics on grounds of non-payment of hospital bills or medical expenses.

In 1999, the DOH reported that the country had 1,794 hospitals with 83,491 beds nationwide. By 2002, total hospitals were reduced to 1,738 with a total bed capacity of 85,166 broken down into 661 government hospitals with 45,395 bed capacity and 1,077 private hospitals with a bed capacity of 39,771. (Department of Health 2006)

Distribution of Hospitals in the Country

Based on the DOH list of licensed government and private hospitals as of 31 December 2005, the National Capital Region was home to the biggest concentration of hospitals, most importantly tertiary hospitals. The presence of tertiary hospitals is strategic in health delivery system because they are the most capable of healing curative and life-threatening illnesses. This article compares NCR with Region 3 because it is considered a growth region not only because it has a population of 9,720,982, but for being high industrial growth area with the presence of the Clark Freeport together with the Diosdado Macapagal International Airport in Pampanga and the nearby Subic Freeport now linked by the Subic Clark Tarlac Expressway (SCTex).

National Capital Region (NCR) Hospitals

Based on the 2005 DOH-Licensed Hospitals and Other Health Facilities, there are a total of 205 government hospitals/facilities with a total Approved Bed Capacity (ABC) of 27,757 beds in Metro Manila. This figure is composed of 53 public medical hospitals (ABC 16,236) and 152 private hospitals (ABC 11,521). These figures translate to 416 people to bed ratio when the National Statistics Office (NSO) August 2007 National Capital Region population census count of 11,553,427 is applied. Quezon City, with 55 hospitals had the highest concentration of hospitals (primary to tertiary level) in the NCR with a population-bed ratio of 319 residents to one bed.

In NCR, there are a total of 59 tertiary care level hospitals composed of 26 government tertiary hospitals and 33 private tertiary hospitals. The Department of Health defines "Tertiary Care Hospitals" (also known as third level referral hospital) as "teaching and training

hospitals that provide [sic] clinical care and management of prevalent diseases in the locality as well as specialized and subspecialized forms of treatment, surgical procedure and intensive care."

In 2007 the government through DOH allocated PhP2.7 billion for Special Hospitals and Medical Centers (all in the National Capital Region) with the National Center for Mental Health getting PhP454.7 million with the smallest going to Amang Rodriguez Medical Center at PhP 115 million (Department of Budget and Management 2008).

Region III (Central Luzon) Hospitals

Central Luzon, with its NSO Census of Population of 9,720,982 as of August 2007, is composed of seven provinces (including Bulacan and Pampanga) and has a total of 199 hospitals (combined 7466 ABC). This is broken down into 56 government hospitals/facilities with 3,128 ABC and 143 private hospitals with 4,338 ABC. These figures translate to a population-bed ratio of 1,302 residents per bed for the entire Region III.

The province of Bulacan (Aug 2007 NSO Population of 2,826,926) has the highest count of 72 hospitals/medical facilities (combined 1,703 ABC). However, Pampanga (Aug. 2007 NSO Population of 1,911,951) has only 51 hospitals but with 2,341 ABC; thus, Pampanga has the best ratio of 951 residents per hospital bed.

In 2005, the entire Region III had only 10 hospitals categorized as tertiary care level. Cabanatuan City in the province of Nueva Ecija had a total of four (4) tertiary hospitals while Pampanga had three.

The two private tertiary hospitals in Pampanga are the 150-bed Angeles University Foundation Medical Center in Angeles City and the 108-bed Our Lady of Mt. Carmel Medical Center in San Fernando City. The lone government tertiary hospital in Pampanga is the 250-bed Jose B. Lingad General Memorial Hospital located in San Fernando City, which got a total of P103 million; P69 million going to personal services and P34 million to operating expenses and no budget allocated for capital outlay (Department of Budget and Management 2007).

Medical Service Capability in relation to Available Medical Equipment/ Facilities and Hospital Accreditation

All tertiary hospitals are expected to have necessary medical equipment and apparatus with the state of the art technology. This includes but is not limited to diagnostic equipment, such as, imaging

facilities like X-ray, CT Scan, MRI, Mammography and Ultrasonography as well as medical treatment facilities, such as Linear Accelerator and Brachytherapy.

These modern medical equipment do not come cheap. Reconditioned HP SONOS 7500 Ultrasound machines have a retail price of \$79,999.00 (www.absolutemed.com). On the less expensive side, a cardiac defibrillator (used to revive a patient's heart that has stopped) is selling at \$1,299.00. The availability of modern medical equipment affects directly the medical service level the hospital can provide. The U.S. Commercial Service reported that in 2006 the Philippines imported a total value of USD\$125 million of medical equipment with 42% coming/imported from US. (U.S. Commercial Service 2007)

Hospital Accreditation

The Philippine Council for Accreditation of Hospital Organizations (PCAHO) handles the local accreditation for Philippine hospitals.

Moving to the next and tougher level, international accreditation such as done by Joint Commission International (JCI) allows a hospital to establish ties with the world-wide network of insurance companies and medical institutions.

JCI is a branch of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). To gain JCI accreditation, Philippine hospitals must meet the stringent standards, comparable to the JCAHO-accredited hospitals in U.S. (www.medtripinfo.com) As of today, only two hospitals in Metro Manila have gotten the U.S.-based/recognized Joint Commission International Accreditation: St. Luke's Medical Center and Medical City. All other tertiary hospitals in the NCR and other regions have acquired international accreditation.

Medical Professionals in the Philippines

Philippine Medical Academic/Training Model

The medical and post-graduate medical education in the country follows the American system. Doctors complete standard four years of undergraduate college degree such as B.S. Pre-Med or any related degree like Zoology; then one takes the rigid four years in medical school and one year of medical internship in a hospital before he/she is allowed to take the Philippine licensure examination. This is followed by a 3-5 year

residency training in a chosen clinical specialty. Thereafter, physicians undergo fellowship training in various subspecialties for at least 2 years. Post-graduate medical training is usually done in the US, Singapore and other foreign-based medical institutions known for their excellence in their chosen field.

As a result, medical specialists in the Philippines are among the best educated and trained and skilled medical practitioners in Asia. Many Filipino doctors are, at the very least as qualified as, if not even better than their counterparts in developed countries like the United States.

Medical Doctors in the Philippines

In the Philippines the Philippine Medical Association (PMA) is the umbrella organization with a current membership of 60,000 spread out among its 118 component societies in 17 regions. It has eight specialty divisions, 63 specialty societies and 37 affiliate societies.

In 2002, the World Health Organization recorded 93,862 doctors in the country. According to an article in *SGV Review* June 2006 issue, there were 95,016 doctors in the Philippines based on December 2003 statistics (Garcia 2006).

According to Senator Juan Ponce Enrile, the ideal ratio is one doctor for every 6,000 Filipinos. In the 2001 Philippine Special Report on the Healthcare System in the Philippines, the Asian Development Bank estimated that there is only one doctor for every 9,689 Filipinos (Virtual-Asia.com 2001). By 2003, the doctor-patient ratio in the country continued to worsen at one doctor per 28,643 patients. (Manny Villar 2006)

Concentration of Medical Practice

Bernardo M. Villegas, Vice President for Research of the University of Asia and the Pacific, in a talk entitled "Cross-Border Health and Awareness Services : Economic and Social Impact on Medical Tourism" at the 1st Philippine Medical Tourism Congress held 20 November 2006 at the PICC Manila, emphasized the concentration of medical specialists in the National Capital Region. According to Villegas, more than 70% of medical specialists in areas like oncology, ophthalmology and neurology are operating in the National Capital Region. A minimum of 45% of all medical specialists are operating in Metro Manila.

Filipino Doctors' Migration

Almost 4,000 physicians migrated to the United States between 1996 and 2002, an average attrition of about 700 a year (Chua 2005). In one cabinet meeting in Malacanang, Commission of Higher Education (CHED) Chairman Carlito Puno said that "for every three doctors who leave the country every year for greener pastures, our medical schools can only produce two doctors, or a net drain of one doctor every year." (Gov.Ph News 12 November 2006)

Moves to Reverse Medical Exodus

Some dedicated medical practitioners have initiated moves to stem the flow of doctors out of the country. The recent anti-exodus pact signed by around 6000 specialists in internal medicine at the recently concluded 16th mid-year convention of the Philippine College of Physicians in Bacolod is a welcome and laudable band-aid on the large and gaping wound in our system (Chua 2005).

Some government officials believe that extant laws can control the exodus of medical doctors. Department of Health Secretary Francisco Duque III cites Section 5 of the Migrant Workers and Overseas Filipinos Act of 1995 (Republic Act No. 8043), which allows the government to impose a ban on the deployment of the migrant workers in pursuit of national interest (Dizon 2007).

Senator Enrile filed Senate Bill No. 2125 to replace the Medical Act of 1959 in order to revitalize, develop and sustain the practice of medicine in the Philippines. (Enrile 2006)

State of Medical Education in the Philippines

Number of Philippine Medical Schools

According to Philip S. Chua, there are 36 medical schools in the nation, 12 of them in Metro Manila area alone. For a country the size of the Philippines with its 86.2 million population, it needs no more than ten medical schools to adequately serve the nation and its people. Of these 36 schools only 19 (or 52%) have their own teaching hospital as required by law.

Quality of Medical Schools

According to Jose Ramirez, head of the Philippine Regulation Commission's (PRC) Board of Medicine, the PRC Board is worried that the quality of medical education in the country may have deteriorated in recent years, influenced by the unchecked proliferation of "fly-by-night medical schools and their pirating of faculty members from established schools." The PRC chief explains the decline to be partly a result of the "deterioration in the admission and screening of prospective medical student applicants" (Chua 2005).

According to Chan, other factors that contribute to the decline of the quality of medical education in the country are (1) admission of poor quality students; (2) lack of competent fulltime faculty, aggravated by piracy of teachers and unattractive salary for fulltime faculty members, discouraging many qualified ones from teaching; and (3) inadequate facilities and clinical exposure.

Medical Board Exam Passers

The trend of percentage of passing medical board takers shows a declining passing rate. Only 51.4% passed the medical licensure board examination in August 2004; 51.94% in February 2004; 55.69% in August 2003; 57.23% in February 2003; 59.11% in August 2002; 66.03% in February 2002; and 64.3% in August 2001. This trend of lower passing rate year after year reflects the performance of all graduates from the various medical schools. (Chua 2005)

Declining Enrolment in Medical Schools

Medical schools enrolment are on a decline. In 2004 only 4,186 aspiring medical students took the National Medical Admissions Test (NMAT). This represents more than a 32% drop from the 6,245 who took the same admissions test a year earlier. (Dela Pena 2005)

Filipino Nurse Migration

The exodus started with the nurses. Between 1994 and 2003, 84,843 registered nurses left for abroad, an average of about 9,500 annually. The pay abroad is so irresistible that even doctors will go back to school to study Nursing in order to have a well-paying job abroad. Government records show that in the last three years, more than 50,000 nurses have left the Philippines, mainly for Asia, the Middle East, Europe and the United States (Conde 2006).

Making matters worst, it is reported that around 80 % of government doctors are now enrolled in nursing schools nationwide so that they can get higher paying jobs as nurses abroad (Villar 2007). The government health department had some 2,848 doctors and 4,389 nurses in its payroll as of 1998 (Virtual Asia.com 2001). A little more than 1,500 doctors passed the national nurse licensure examinations in 2003 and 2004 (Department of Health 2005).

According to Senator Manuel Villar, doctors who work as nurses in the U.S. earn the equivalent of P200,000.00 a month or about 16 times more than what government doctors get here (Villar 2007). According to the Private Hospitals Association of the Philippines (PHAP), 687 private hospitals have stopped operating since 1998, mainly because of not being able to get enough medical personnel. According to Antonio A. Chang, PHAP President, the figure is estimated to increase to 1,000 four years from now in 2010. (Conde 2006)

Cost of Medical Healthcare in the Philippines

Medical Tourism

The cost of comparable quality medical care in some countries like the Philippines is much lower than the skyrocketing cost of medical care in the United States and other wealthy and developed countries. Medical treatment is performed by qualified and experienced medical practitioners in the Philippines at a fraction of the cost abroad. The cost savings would be enough to cover the airfare and other travel-related expenses. As such, the medical tourist will most likely go to any country, not only Asian countries where the total medical treatment costs in such country are significantly less than in his/her home country.

International Competitiveness of Philippine Healthcare Costs

Lasik, for example, would cost about US\$2,500.00 when performed in a reputable hospital in the United States. At the American Eye Center in the Philippines, it would only cost about a third (US \$800.00)—no more than P35,000.00 (Salientes-Narisma 2008).

In 2006, the Department of Tourism spearheaded the move to market the country as a medical destination. Elizabeth Nelle of the DOT Office of Product Research presented a comparative health cost of rooms and selected treatments to show that the prices in the Philippines are competitive (Table 2). For example, Nelle said a face lift would cost

\$1,900.00 in the Philippines but only \$1,700.00 and \$5,500.00 in Thailand and Singapore, respectively (Marcelo 2005).

Philippine hospitals have started using the world-wide web to market medical packages. One leading hospital has a P33,959.00 package cost for an executive check-up with an overnight stay in a private room; upgrading to a suite will increase the price to P42,696.00.

Recapitulation of the Problem of Philippine Healthcare System: From the Stakeholders' Perspective

The stakeholders in the Philippine Health Care Industry are the Filipinos needing medical care and their family members, the doctors, nurses and the other allied medical workers, the national government through the Department of Health and the Local Government Units, Philhealth, pharmaceutical companies, medical equipment suppliers and hospital owners and administrators.

Lack of Government Priority on Public Health

The 1.28% of the National Budget for public health is a small share by any measure. This figure literally reflects the low degree of importance given by the national government to the delivery of public health services vis-à-vis other agencies of the government such as the military sector. This is far off from the minimum WHO benchmark of 5% of GDP. In fact, developing countries generally spend 4% on health, while Europe and Japan set aside at least 7%. "Health is wealth" and every citizen should have the right to have access to medical care. Unless the government gives higher priority to health care, its public health care system will remain incapable of giving affordable and accessible quality medical services to the Filipino, especially the poor.

Built-in limitation of DOH Budget

Small as it is, the DOH budget is handicapped in terms of service capability to meet the health needs of the growing Philippine population.

Typical of past years, over 92% of the 2007 DOH budget has been set aside for personnel services and maintenance and other operating expenses. Only very little is left to expand the service capability in terms of new hospitals buying the latest equipment in the field of medical technology. With its present salary scale for government doctors and nurses, the DOH will have difficulty in retaining experienced medical professionals. The medical brain drain will continue.

With limited budget, despite the increase in population, the number of doctors and nurses employed in government hospitals and facilities has not increased. (Table 3A and 3B)

Overconcentration of Healthcare Service in National Capital Region

Extent of healthcare can be assessed by looking at the distribution of the quantity and quality of hospitals, bed capacity, medical equipment available and number of experienced medical professionals (i.e., medical specialists and nurse and support staff) in the system. The 416 bed-to-population ratio for Metro Manila versus the 1,302 bed-to-population ratio for Central Luzon shows how imbalanced the availability of health care in the national Capital Region vis-à-vis other regions like Central Luzon. In fact, Pampanga with the best figure of 951 bed-to-population ratio does not come close to NCR's ratio. In terms of international accreditation, the only two JCI-accredited Philippine hospitals are based in Metro Manila. As for the number of skilled medical specialists, at the very least 45% of them are based in Metro Manila which accounts only for about 13% of the entire Philippine population of about 88.5 million. The Local Government Units, like the provincial government of Pampanga are pressured to cope with the growing medical needs of their constituents, given the limited number of government hospitals in their jurisdiction.

Philippine Healthcare Cost Not Affordable For Most Filipinos

Even if there is reason to believe that the medical cost in the country is low compared to that in many developed countries like the United States and relatively cheaper than in some of our Asian neighbors, the health care services are still beyond reach of many Filipinos, especially if one gets such services from the private health delivery system. The price of branded medicine remains higher than that of the same item with the same brand in other countries like India.

In 2004, a common antihypertension drug that would cost P37.56 would cost only P1.50 in India. In 2003, the pharmaceutical market grew to at least P65 billion. The pharmaceutical companies should give more weight to the noble mission of providing affordable medicines than to running a profit-oriented concern. The drug companies should consider the cheaper generic alternative as an option whenever possible. The cost of an executive checkup (on an out-patient basis) is priced at the level of P11,000.00 or about 6% of the average annual family income for a single procedure. For many Filipinos, unless under a charity program, a coronary bypass operation costing the peso equivalent of US\$ 15,000.00 is

out of the question. The medical practitioners should make their professional fees more affordable in line with their noble mission of improving the health and quality of life of fellow Filipinos, especially the financially-challenged. Limited as it is, a closer look at the comparative medical costs presented in this article shows that Philippine medical costs are not the cheapest in the region. The national health insurance program (Philhealth) would be hard put to effectively assist medical patients defray the cost of medical services if the medical procedures, professional fees and medicines continue to be on the high side.

The financial burden of medical care falls mainly on the individual patient and his/her family in a country where the average annual family income was only P172,000.00 in 2005 (NSO). Sourcing medical payments through out-of-pocket expenditure by the patient and family is certainly not the most reliable and efficient way to insure one's health and wellness. The financial stress could even affect the well-being and health of other family members.

In Search of a Cost-Effective Health Delivery Strategy

Looking at the overall total cost of healthcare in the Philippines, the government should find ways to reduce each cost component including medicine, consultation fees, medical procedures and corresponding professional fees which go up simply based on the cost of the available room and length of stay in case of hospital confinement, the costs attributable to the use of medical equipment, among others. Explorations should be made to cut down costs of needless transportation and accommodation costs of patients and family members having to go to Metro Manila by making the same quality medical care available in the regions outside the National Capital Region.

Government Health Delivery Compromised

With the perennially limited budget, the government hospitals' facilities are not properly maintained at all and most definitely not upgraded with the newer models of the latest medical technology. The government medical personnel covered by the government's Salary Standardization Law remain underpaid in relation to the workload required, especially in the tertiary level hospitals. The exodus of nurses and government doctors to other countries for better pay can really undermine the public health delivery system.

Present and Worsening Crisis in Philippine Healthcare

The healthcare delivery system in the country is at a crisis stage. With the high cost of medicines, the Filipinos with medical needs are in a bind when they have to choose between the limited public health service characterized by insufficient budgetary support and sub-optimal service, and the perceived better quality service of high cost, fee-based, profit-oriented private medical practitioners and hospitals. It is common practice that the cost of even a simple medical procedure like a complete blood count (CBC) will vary depending on the hospital room where the patient has been placed. But because of room shortages, an arriving patient will be forced to take a more expensive room than what he could afford. All the other professional and hospital charges would most likely go up automatically.

With the continuing exodus of medical professionals, even quality medical service may be short of supply not only in the public but even in the private health delivery system. The declining enrolment in medical schools and the proliferation of substandard medical and nursing schools and the low passing rate in the medical board exam will raise the crisis level higher and tougher in the near future. In this situation, even the medical and nursing students who have no intentions of leaving the country will be affected by the quality of education available.

Policy Recommendations

There is a need to explore new and innovative approaches to address the multifaceted crisis we are facing in the country's health delivery system.

The government must address the problem with an appropriate strategic policy that will achieve the following end results:

1. Rationalize the country's healthcare system by developing and improving the delivery system outside the National Capital Region.
2. Development of free or affordable but quality health care services at the regional level for the benefit of the local residents.
3. Reduction of overall cost of availing medical care even in the private healthcare sector.

4. Long term development and retention of highly-skilled medical professionals in the country.

Instead of those needing medical attention being forced to make a hard choice between the public and private medical sectors everytime, and with the above objectives in mind, an alternative health delivery system should be set up, characterized by an active working public-private partnership through the establishment of NGO-managed cost-effective regional medical centers with redirection of public financial support fund and a long-term medical scholarship and career development program.

Public-Private Partnership in Regional Medical Centers

The vision is the establishment of cost-effective quality healthcare centers in each region outside the National Capital Region. It is like having autonomous branches of the Philippine General Hospital that can provide internationally-acceptable medical care service primarily for the benefit of the local residents of the region.

This concept will empower a bonafide NGO to manage the regional medical center while the Department of Health continues its monitoring and regulatory functions to insure adherence to acceptable standards of medical and hospital facilities, and professional practice.

Innovative Funding Mechanism

In order to get out of the self-limiting budgetary system affecting the Health Sector in general and the Department of Health in particular, the government should have the political will for the following:

1. Tax-deductible donations for an accredited NGO that will manage the Regional Medical Center.
 - 1.1 To ensure that adequate funds will be raised for the Regional Medical Centers, business entities and individual taxpayers be required to make a minimum of 5% of their income tax payable as tax-deductible donations to the center applicable the following year.
 - 1.2 Such donations to be certified by the recipient NGO and the Bureau of Internal Revenue.
2. Requiring revenue-generating agencies like the PAGCOR to remit a minimum percentage of its earnings as donations in favor of NGO-run Regional Medical Centers.

3. Once fully-operational, nonprofit NGO-run medical facility be allowed to charge affordable fees based on a full cost recovery system and to keep the funds for its own use.
4. All donations and revenues and expenses to be subject to standard business audit procedures.

The collected funds are for the purpose of building the medical center physical infrastructure, medical equipment, facilities as well as personnel and operating expenses and the support and maintenance of the Medical Scholarship and Career Development Program (MSCDP).

Medical Scholarship and Career Development Program (MSCDP)

In the short run, the MSCDP will target promising government medical professionals (doctors, nurses and medical technical staff) to enhance their skills through advanced and continuing education and training programs. The MSCDP is ultimately designed to provide full financial support to promising students in the field of medicine and healthcare services.

For doctor beneficiaries, training will include priority placement in further residency training in leading government and private hospitals here and abroad.

There should be full cost-coverage of all medical school-related expenses including but not limited to:

1. medical tuition fees and other fees;
2. book and research expenses;
3. living expenses such as dormitory accommodation and monthly stipend;
4. medical internship-related expenses (with priority/reserved slots in key government hospitals such as Philippine General Hospital and public specialty hospitals, such as the Philippine Heart Center and the National Kidney and Transplant Institute);
5. specialty and subspecialty training-related cost (including travel, accommodation and per diem) in local or foreign hospital;

6. continuing education thru participation in local and foreign conferences and exchange programs.

Employment : Upon graduation, they will be more than adequately compensated as salaried medical specialists not covered by the Salary Standardization Law.

Return Service : Required length of service to be determined by the DOH and NGO to sustain supply of skilled medical professionals.

Cost-Effective Healthcare Service Delivery System

1. The cost of acquisition of modern medical equipment will be kept to a minimum by being granted tax-free importation of such equipment in economic zones like the Clark Freeport Zone. In case of location outside such zones, the government should exempt their importation from all taxes.

2. Medical professionals hired and assigned in the Regional Medical Centers shall not be covered by the Salary Standardization Law and shall be well compensated with fixed salaries.

3. Whenever the Regional Medical Centers shall decide to charge reasonable fees, they will be based on cost recovery and not on profit-oriented objectives. This will serve as a reality check for those players in the healthcare industry who would charge unreasonably high user and professional fees.

4. The NGO-run Regional Medical Centers shall follow a standard health facility management manual of guidelines to maintain cost-effective operations such as through proper ordering and use of supplies, avoidance of pilferage, and bulk-purchase of generic drugs, whenever possible.

5. The NGO-run Regional Medical Centers shall be non-profit and exempt from tax, except the personal income tax of their personnel.

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ANNEX

Table 1. Deployment of Filipino Nurses 1999-2003

Year	Volume
1994	6,699
1995	7,584
1996	4,734
1997	4,242
1998	4,591
1999	5,413
2000	7,683
2001	13,536
2002	11,911
2003	5,628
TOTAL	84,843

Table 2. Comparative Healthcare Cost

Country/Medical Facility	Room Rate	Check-up Rate	Heart Bypass	Facelift
THAILAND (BUMRUNGRUD)	\$ 49	\$ 290	\$ 7,500	\$ 2,700
MALAYSIA (SUNWAY MEDICAL)	\$ 51	\$ 300	\$ 10,000	\$ 2,600
SINGAPORE (MT. ELIZABETH)	\$ 200	Data Not Available	\$ 19,000	\$ 5,500
INDIA	Data Not Available	\$ 55	\$ 10,000	Data Not Available
PHILIPPINES	\$ 23 (Lowest)	\$ 218 (2nd Lowest)	\$ 15,000 (3rd Lowest)	\$ 1,900 (Lowest)

Table 3A. Doctors in Philippine Government Hospitals/Facilities 1998-2005

Year	Total	NCR	CAR	1	2	3	4	5	6	7	8	9	10	11	12	Caraga	ARMM
1998	2648	714	75	159	83	203	395	147	227	239	141	66	82	100	79	63	75
1999	2948	696	73	162	117	236	318	159	251	245	136	87	80	197	59	69	63
2000	2943	702	75	157	115	246	334	155	252	230	139	88	87	155	61	73	74
2001	2957	685	79	159	116	229	340	181	263	244	134	97	117	118	61	69	65
2002	3021	658	85	158	175	297	350	190	226	229	153	90	99	79	84	79	69
2003	3064	678	84	161	96	294	327	191	227	223	162	94	138	68	163	81	75
2004	2969	648	80	167	107	290	332	184	236	213	160	87	137	71	114	90	53
2005	2967	661	79	167	111	263	349	155	247	233	151	92	113	72	115	84	75

Table 3B. Nurses in Government Hospitals/Facilities 1998-2005

YEAR	TOTAL	NCR	CAR	1	2	3	4	5	6	7	8	9	10	11	12	Caraga	ARMM
1998	4389	838	140	227	158	265	620	257	385	431	203	180	124	160	154	83	134
1999	4945	849	138	217	202	605	613	279	424	423	217	173	152	301	126	148	78
2000	4724	881	138	216	210	349	653	275	411	399	221	204	172	244	119	109	142
2001	4819	823	140	214	206	372	638	326	467	416	226	205	242	198	132	134	80
2002	4720	745	159	203	267	382	648	338	433	379	233	196	189	161	158	130	99
2003	4735	757	159	192	172	456	589	350	410	348	229	200	285	128	245	126	111
2004	4435	888	150	231	204	443	585	247	393	313	220	182	252	139	190	117	83
2005	4519	719	151	231	208	390	623	259	451	335	213	192	209	120	200	111	107

Innovation in the Lantern Industry of Pampanga

CHRISTOPHER M. SANGUYU*

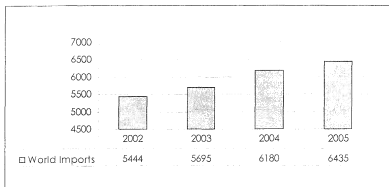
Pampanga's lantern industry lacks the impetus for innovation strategy to become globally competitive, and make significant contributions to local economy. It has lost to China in terms of market share; thus, it has to employ appropriate marketing strategy in order to produce and sell premium products focusing on design and craftsmanship. Furthermore, the lantern industry in Pampanga is dominated by micro enterprises with a few which can be classified as small to medium enterprises. Despite the spanning production and sale of holiday decor for several decades already, the product is still in the transitional stage. This can be attributed to the state and condition of the firms in the industry, the small-scale production capabilities of the firms, and the lack of significant local government support through policy. Given these factors, an innovation strategy is developed in the following contexts: the characteristics of the firms, the environment of the firms, and the technology available to the firms. This innovation strategy is also developed using a relevant innovation theory.

Introduction

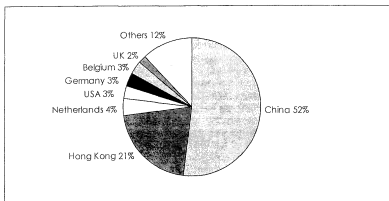
This article addresses the need for an innovation strategy for firms in the lantern industry of Pampanga. The impetuses for an innovation strategy derive from desire to thrive, need to become competitive globally, and urge to make significant economic contributions to the local economy. During the study of the University of the Philippines Extension Program in Pampanga (UPEPP) regarding the lantern industry of Pampanga, the proponents of the research found that the economic contribution of the said industry to the region is very minimal and on the decline. In addition, threats to the industry generated by globalization will possibly lead to the demise of the industry unless the firms adapt. Ironically, world import of holiday decors is increasing but the firms are not able to take advantage of this opportunity as only a small proportion of firms exports their products (see Figure 1).

*Assistant Professor, UP Extension Program in Pampanga, University of the Philippines Diliman.

**Figure 1. World Imports of Holiday Decor, 2002-2005
(in US\$ million)**



**Figure 2. World Exports of Holiday Decor, 2005
(in percentage)**



Note: The above data cover only HS nos. 9405.3000, 9505.1000, and 9505.9000.¹

According to the Canadian International Development Agency's (CIDA) 2006 State of the Sector Report regarding Philippine holiday décor, the Philippines had a very minimal market share in the holiday décor market dominated by China (see Figure 2). The report said that an appropriate marketing stance is to produce and sell premium products focusing on design and craftsmanship. If this marketing strategy is undertaken, the premium products will not compete directly with the cheaper products of other countries.

Given these facts, an innovation strategy should be developed in the following contexts: the characteristics of the firms, the environment of the firms, and the technology available to the firms. This innovation strategy should also be developed using a relevant innovation theory.

The Lantern Industry

This section has two parts: the first gives a general profile of the industry on a national level; the second discusses the local lantern industry in Pampanga, provides specific information regarding some of the practices of lantern-making firms, and focuses on the lantern industry in light of government policies.

The Lantern Industry in the Philippines

The previously mentioned *State of the Sector Report—Philippine Holiday Décor 2006* of the Canadian International Development Agency notes that one of the oldest industries in the country is the production of holiday decor, with the rich natural resources of the Philippines and the ingenuity of local craftsmen encouraging its growth. The report states that in 1999, the Philippines was among the world's top 10 exporters of holiday decor, the main markets being the United States, Hong Kong, the United Kingdom, Germany, France and the Netherlands, but that during the past few years, Philippine exports have been fluctuating despite the increase in world imports of holiday decor. Due to competition from neighboring countries China, Vietnam, Bangladesh, and Taiwan, the industry was forced to be more creative: manufacturers started using a wider variety of materials, they geared their Research and Development (R&D) programs to mid-range and high-end markets, and they became more "environmentally conscious" in their products. Most holiday decor firms are based in Luzon, with Cordillera Autonomous Region, Central Luzon, Southern Tagalog and the National Capital Region being the major producing areas. There are also exporters in Pampanga, Laguna, Bicol,

Cebu and Negros Island. Quoting from the report: "Based on Department of Trade and Industry (DTI) estimates, the industry comprises some 2,000 firms, including subcontractors. About 50 of these companies are considered big producers; the rest range from micro, small and medium-sized firms. Most firms are family-owned and may be informal in structure. Nationwide, the sector employs about 250,000 workers."

The Lantern Industry of Pampanga

The UPEPP on-going study entitled *Advancing Growth, Competitiveness and Innovation in Pampanga's Trade and Industry: Pampanga Industry Studies from a Stakeholder Perspective (Lantern Industry)*, details several aspects of the Pampanga lantern-making industry including product coverage and description, factors of production, local sales performance and market, and exports performance.

The initial research report shows that the lanterns are locally distributed entirely through stalls in areas where lanterns of commercial scale are displayed during the months of September to December. In addition to the commercial production of lanterns, there are a few firms that get contracts from hotels, malls and Local Government Units, among others, by offering different types of services, such as decoration of lobby, and installation of decors along roads. These contracts enable them to start their production as early as March.

The research report also notes that exports of Christmas lanterns are mostly "informal and unrecorded." This being the case, penetrating the international market is still "seen as a big opportunity for producers to expand their production for the whole year.... Particularly, the Pampanga lanterns have big potential in the export market specifically in the US." In fact, the promotion of Pampanga lanterns at the Parol Lantern Festival held in San Francisco, California in 2005 led to market tie-ups with prospective dealers in the Bay Area. As a result, the San Fernando City government started work on the accreditation of lanterns with United Laboratories International of Taiwan, something the US market strictly requires.

According to the research, the firms in the lantern industry do not have technical requirements in the acceptance of new employees. Since the industry is seasonal, the workers are engaged in other lines of employment during the off-peak season. The workers learn the trade during the actual production runs through their own volition and the guidance by the owner of the firm and the more experienced employees.

There is no formal training for the new employees either in-house or via the help of government offices. Majority of the firms do not even have resident artists developing new variations for the different product lines. Sources of new designs are the print media, broadcast media, clients, and the resident artist. Interestingly, the artists developing the designs are self-taught with no formal training. New designs are developed using the traditional pencil and paper approach; not one firm employs the use of computers in the design process. According to the firms, their competitive advantages over Chinese manufacturers are creativity of the designs and the degree of craftsmanship of the products. The firms also mentioned the need for acquisition of knowledge in the development of new designs as an aspect in need of attention in their operations to remain competitive.

The national government does have policies pertaining to the acquisition and diffusion of technology. As discussed by Patalinghug (2003), the Philippine government has actively supported the diffusion and application of high technology in industry. In addition, government departments and agencies are mandated to contribute to the country's socioeconomic development towards the end of transforming the country into a newly industrialized country. The Department of Science and Technology has contributed through the initiative Science and Technology Agenda for National Development which is an improvement on the 1990 Science and Technology Master Plan. The Master Plan "lays the framework for the pursuit of programs consistent with the designed strategies and policies and effective coordination among the private sector, the government agencies, and the academe involved in science and technology activities." One of the guidelines for the implementation of the Master Plan is the "modernization of the production sectors through massive technology transfer from domestic and foreign sources." Clearly, broad policies at the national level exist for technological innovations of firms. In the case of the lantern industry of Pampanga and typically small low-tech firms and industries, barriers to adoption and diffusion of technology are too great to be hurdled by the firms or industries alone; thus, the local government has to play an active role in crafting and implementing policies to help such industries.

The following table gives data from the on-going UPEPP research on the lantern industry of Pampanga, reflecting the support of the government to the firms in the industry.

Table 1. Participation of the Government in the Lantern Industry of Pampanga

<i>Activity</i>	<i>Yes</i>	<i>No</i>
Provided subsidy from the government	21%	79%
Provided training programs from the government	14%	86%
Provided tax incentives from the government	0%	100%
Provided financial support from the government for local and international trade fairs	36%	64%
Provided financial support from the government for technical process improvements	21%	79%
Provided support from the government for marketing and promotion	50%	50%

Unfortunately, contrary to the policies of the national government, not one lantern-making firm received any technical assistance regarding operations from any government office, although a small proportion of the firms received financial support for technical process improvements. A small proportion received training programs in strategic planning and financial support in their participation in trade fairs, but they did not receive direct help in the technical aspect of the production process in the form of training, seminar, or workshop. Half of the firms received support in marketing and promotion of the lanterns from the government.

Innovation

An effective innovation strategy is important in an organization. An organization exists for a purpose which is often stated in its mission and vision. For-profit organizations can have several reasons for being but the common denominator of these is maximization of the wealth of the owners by the increase in value of the organization. The value of the organization is a function of several variables, the most important of which are profit and level of spending in research and development; and there is a positive correlation between level of spending in R&D and the ability of the organization to satisfy the changing needs and wants of the very dynamic market. For an organization to succeed and thrive, it has to adapt to the opportunities and threats in its environment. The ability of the

organization to respond quickly to demand or opportunities in the market gives the organization competitive advantage over its competitors. The bottom line is that the organization has to keep on making profits even if shifts occur in the market; therefore, it is imperative for an organization to have institutional processes enabling it to adapt to changing conditions.

Innovation has existed and has been employed by organizations throughout time. At its simplest, innovation is the introduction of something new. Due to the complexity of innovation as a phenomenon, it can be characterized in a lot of ways depending on the perspective. The 2005 Oslo Manual prepared by the Organization for Economic Cooperation and Development (OECD) states that whenever something new or novel is introduced or used in any aspect of the organization, may it be product related, process related, marketing related, and even structural or work systems related, then the organization has innovated. Innovations are also responses to the changing market or an exploitation of opportunities in the market. The concept innovation in organizations is always juxtaposed with strategy; this is not surprising since innovation can be a source of competitive advantage and it could be a strategy for the organization. Previously, the trend was for organizations to have innovation as the implementation or realization of the strategies of the organization. But now organizations adopt innovation as the overall organizational strategy. This approach enables the institutionalization of innovation processes in all aspects of the organization. It creates a culture that fosters innovation.

There are a lot of theories about innovation. These theories center on variables that can explain which organizations are in a better position to innovate and under what circumstances. Because of the complex nature of innovation and the nuances and variances of different organizations in different industries, there is no universally accepted typology or theory regarding them. Suffice it to say that there is no universal innovation theory that caters to all organizations.

The first thing that usually comes to mind when innovation is mentioned is risk. Although innovation and risk are interrelated, innovation can be viewed in a more positive light since innovation can also yield high returns. Depending on the level of imitability of the innovation and the application of Intellectual Property Rights, an organization can gain monopoly of the industry for a period of time because of innovation.

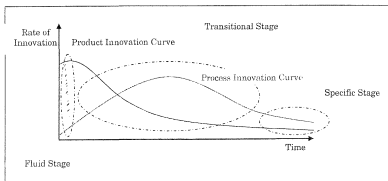
Innovation enables an organization to take advantage of opportunities and counter threats in its environment. It is thus very important for organizations to innovate.

Abernathy-Utterback Innovation Model

W. J. Abernathy and J. M. Utterback (1978) formulated an innovation model which they discussed in their article *Patterns of Industrial Innovation* (1978). The basic premise of the model is that capacity for and methods of innovation are dynamic and are dependent on the stage of evolution of a firm. The model was selected as the framework for analysis because it is the most complete model encountered by the author. Other models are static in nature and just consider the factors affecting innovation under a fixed perspective without transitions or dynamicity, whereas this model relates patterns of innovation to competitive strategy, production capabilities, and organizational characteristics.

According to this innovation model, there are three stages in the evolution of a firm: its initial period of flexibility or *fluid stage*, its intermediate stage or *transitional stage*, and its maturity or *specific stage*; each stage may have different impacts on firms, and on the capabilities and resources required to develop innovations.

Figure 3. Relationship between Product and Process Innovations



In the initial stage, where technological and market uncertainties persist, the production process is characterized by flexible but inefficient systems relying on high-skilled labor and general purpose equipment. At this stage, the basis for competition is the functional performance of products. In this scenario, radical product innovations abound and there

is almost no process innovation. Competing firms in the fluid phase base their advantage on differentiated product features.

In the mature stage, where the characteristics of the products and the needs of the customers are well-defined, the production process is characterized by highly integrated systems and the basis for competition is price. In such a scenario, change is costly and innovation is typically incremental in nature, thus having a gradual cumulative effect on productivity.

The transition from the initial stage to the mature stage is characterized by the shift from radical to evolutionary product innovation. The emergence of a dominant design signals this shift. In this transition stage, there is an increased emphasis on process innovation.

Analysis

The lantern industry of Pampanga, despite its decades-long existence, is still in the process of reaching its mature state as described by the above model. J. M. Utterback (1994) explains that in this *transitional stage*, characterized mainly by the emergence of a dominant design, the basis for competition is product differentiation. He adds that dominant design has product features that firms must replicate so as to capture a significant market share.

According to Utterback (1994), in this stage, a dominant design appears which may be standardized. Also, the firms' production processes become more rigid and the organizational structure becomes more mechanistic. This stage is described by significant process changes. In the previous stage, the *fluid stage*, manufacturers did not employ specialization, since one person did everything to finish a product. In the *transitional stage*, the process is decomposed into logical parts so as to take advantage of specialization and produce greater volume. The different areas of specialization include assembly of the frame (subtasks include cutting of the steel wires, shaping of the steel wires into different shapes, soldering and assembly of the lantern frame), wiring and installation of bulbs and sequencer (subtasks include cutting of the copper wire, wiring onto the lantern framework, soldering, installation of the bulb sockets, bulb, and sequencer), covering of the lantern frame with colored paper or colored plastic (subtasks include making patterns, cutting of the material, pasting of the material), and finally covering of the lantern with clear plastic for protection. The adoption of specialization in the production process entails an organization with a more formal

structure and clearly defined work systems. Because of the changes in the production process, there exists little differentiation in the products due to greater volume of production. Supposedly, after the emergence of the dominant design, competitor firms with other designs will fold and wither. But since the industry is low-tech¹ and there is no strong application for Intellectual Property Rights in the industry; competitors can easily copy and replicate the dominant design. Likewise, imitators and new entrants can easily penetrate the industry. The basic strategy for organizations in this phase is to focus on process innovations so that production capacity is increased.

Recommendations to Lantern-making Firms

In the case of the lantern industry where a dominant design has emerged, firms should focus more on process innovations than on radical product innovations. The following are recommended:

Lobby for and participate in standardizations of lantern products

According to the Bureau of Product Safety (BPS) of the Department of Trade and Industry (DTI), the lantern is not included in the Mandatory Product Certification of the bureau. Products under the Mandatory Product Certification are subject to inspection and testing of the BPS prior to distribution and selling in the market. The BPS uses the Philippine National Standards (PNS) or some other internationally accepted standard in issuing Product Certification. The PNS does not even include lanterns in its list. The closest standard is PNS 189:2000 which covers lighting sets using miniature and subminiature lamps for decorative purposes for indoor use. Product Certification provides a license to a manufacturer which has capability to consistently manufacture products in accordance with a Philippine National Standard or an internationally accepted foreign standard. Therefore, even if manufacturers want their product certified by the DTI, the system and process would not be able to accomplish it since the standard to follow is non-existent.

At the moment the best thing the BPS can do, short of testing lanterns against a proper standard, is seeing to it that all the components comprising the lantern (electric bulbs, electrical wires, bulb sockets, plug, sequencer) have product certification. Even if all the components have quality and safety certifications, the integration of these components into a lantern will introduce new quality and safety issues requiring a standard for the composite product, the lantern.

UPEPP in coordination with the Office of the Vice Chancellor for Research and Development, University of the Philippines Diliman and the Department of Science and Technology is pushing for the creation of a national standard governing light decors which covers lanterns (research in progress). The process will include the participation of DTI-BPS, manufacturers, and other industry stakeholders. The standardization which will lead to eventual Product Certification will benefit the consumers because of product quality, safety, reliability, and warranty. The benefits will not just be to the consumers but to manufacturers as well. Adherence to standards of the products would enhance the competitiveness of the products thus improving sales and the overall financial health of manufacturing organizations. It will create as well a barrier to entry for new entrants, thus giving industry incumbents advantage.

Employ Computer-Aided Design in the design process

A very significant strategy that the firms can undertake is the adoption of Computer-Aided Design (CAD) in the design process of lanterns. Currently, manufacturers use the traditional approach of paper and pen in the design of lanterns. The reasons for this recommendation are:

- 1) It will speed up the design process (note: it is assumed that the user/operator/designer is already in the steady-state stage, that is, the hump in the learning curve is already hurdled);
- 2) CAD process is more dynamic in nature than the traditional pen/paper process for several reasons. First, the designer can view the product from any angle instantaneously through CAD. Although this is also possible with the pen/paper method, it is tedious since each and every view or angle has to be done separately. Second, the coordination of colors is easily adjusted/changed. This is also possible with the previous method but again it is more tedious. Third, the light show/display is easily adjusted/changed and can be simulated, something that is impossible in the traditional approach;
- 3) The number of persons in the labor market capable of using/operating/learning computer/CAD software is increasing; and
- 4) The cost of computers, computer peripherals, and technical support for computers is decreasing.

Of course, there are disadvantages in adopting CAD. Some of these would be:

- 1) Increase in costs (salary of CAD operators, training/education of employees in the new technology, purchase of computer/s and peripherals); and
- 2) A possibly slower design process (compared to the traditional pen paper method) in the initial stage of the adoption of the technology. But these disadvantages are short-run in nature. In the long-run the adoption of CAD in the design process would give the firms increased profitability and ability to address quickly the changing demands of the market.

Employ a Formal Quality Control System in the Production Process

A quality control system is a feedback mechanism where the output is compared to a defined standard and corrective measures are undertaken if the deviation of the output from the standard is significant. A quality control system has the following objectives: understand the exact demand of consumers through a set of quality standards or specifications, produce the products with the stated quality and specification, and finally give consumer satisfaction. The quality of a product mainly refers to some property or performance of a product, but to achieve consumer satisfaction the following dimensions need to be added to the definition: cost, promptness of delivery, and safety.

The purpose of quality control is not the reinforcement of the examination and inspection activities to select acceptable products, but the stabilization of the production system, through feedback, in its ability to output acceptable goods using tools and techniques for quality improvement.

The lantern industry would benefit immensely and gain competitive advantage even in the global scene if a philosophy of quality is adopted and the tools for quality improvement are adopted and implemented.

Recommendations to the Local Government

In line with the innovation programs of the national government, the local government has to do its part in helping the local industries. The following are recommended:

Enforce and facilitate DTI or SEC recognition

Recognition is the first step in benefiting and acquiring of government support. Through it, formal sources of financing will be opened, participation in government-led trainings, seminars, and workshops will be facilitated. Likewise, economic data become more representative of the industry if all firms have their activities documented which leads to correct and accurate interpretation of the condition in the industry, and thus better recommendations later on.

Promote and participate in the national standardization of products of identified industries

Standardization of products offers benefits to both manufacturers and consumers. Consumers benefit through improved product quality, safety, reliability, and warranty. With the presence of standards, manufacturers can easily improve product quality and easily penetrate the global market especially if they are adhering to internationally accepted standards.

Institute programs that help the diffusion of technology to the industries

The adoption and diffusion of technology to firms oftentimes need a catalyst. Small low-tech firms do not have the capabilities (personnel and equipment) to adopt and implement technological changes. Thus, the role of the local government as catalyst in the diffusion of technology is very vital.

Facilitate the communication and interaction between the industries and relevant government agencies and the academe

The infrastructure of communication and interaction has to be in place, not just physical infrastructure but programs as well that encourage and enhance communication and interaction between the industries and government agencies, and the academe. These programs will foster the transfer and diffusion of knowledge to the industries, thereby empowering the industries through competitive advantage.

Conclusion

The economic impact of the lantern industry in Pampanga is believed to be very minimal to insignificant as evidenced by the lack and absence of economic data. This condition may be explained by the state and condition of the firms in the industry: most are micro enterprises with the exception of a very few which can be classified as small to medium enterprises and

majority of these organizations are not registered with the DTI or Securities and Exchange Commission. Although the production and sale of lanterns has spanned decades, relative to the Abernathy-Utterback model (1978), the product is still in the *transitional stage*. This can be attributed to the aforementioned state and condition of the firms in the industry, the small-scale production capabilities of the firms, and the lack of significant local government support through policy. Thus, the potential demand is not being met because of limited supply.

Given that micro and small to medium enterprises can contribute a lot to growth and employ the bulk of manufacturing people, it is therefore imperative for them to get government support. This will start with the collaboration of the industry, government and academe in the push for the definition and adoption of a national standard for lanterns. The manufacturers then can implement the recommended strategies to increase the economic contribution of the industry to the province.

Endnotes

¹ Harmonized System and Philippine Standard Commodity Classification for Holiday Décor Products

HS CODE	PSCC	DESCRIPTION
9505.1000	894.45.00	Other articles for Christmas festivities (e.g. artificial Christmas tree decorations, imitation Yule logs, nativity scenes and figures excluding lighting fittings and bulbs)
9505.9000	894.49.09	Other entertainment articles including carnival articles
9505.9000	894.49.01	Articles for Easter activities
9405.3000	894.41.00	Lighting sets of a kind used for Christmas trees

Source: Department of Trade and Industry

² The term low-tech is used here according to the 1994 OECD classification:

Industry	Turnover : Research & Development
High-tech	>5%
Medium high-tech	5%-3%
Medium low-tech	3%-0.9%
Low-tech	<0.9%

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Document Section

**Republic Act No. 7305
The Magna Carta
of Public Health Workers**

SECTION 1. *Title.* - This Act shall be known as the "*Magna Carta of Public Health Workers.*"

SEC. 2. *Declaration of the Policy.* - The State shall instill health consciousness among our people to effectively carry out the health programs and projects of the government essential for the growth and health of the nation. Towards this end, this Act aims:

- (a) to promote and improve the social and economic well-being of the health workers, their living and working conditions and terms of employment;
- (b) to develop their skills and capabilities in order that they will be more responsive and better equipped to deliver health projects and programs; and
- (c) to encourage those with proper qualifications and excellent abilities to join and remain in government service.

SEC. 3. *Definition.* - For purposes of this Act, "*health workers*" shall mean all persons who are engaged in health and health-related work, and all persons employed in all hospitals, sanitarium, health infirmaries, health centers, rural health units, barangay health stations, clinics and other health-related establishments owned and operated by the Government or its political subdivisions with original charters and shall include medical, allied health professional, administrative and support personnel employed regardless of their employment status.

SEC. 4. *Recruitment and Qualification.* - Recruitment policy and minimum requirements with respect to the selection and appointment of a public worker shall be developed and implemented by the appropriate

government agencies concerned in accordance with policies and standards of the Civil Service Commission: *Provided*, That in the absence of appropriate eligibles and it becomes necessary in the public interest to fill a vacancy, a temporary appointment shall be issued to the person who meets all the requirements for the position to which he/she is being appointed except the appropriate civil service eligibility: *Provided, further*, That such temporary appointment shall not exceed twelve (12) months nor be less than three (3) months renewal thereafter but that the appointee may be replaced sooner if (a) qualified civil service eligible becomes available, or (b) the appointee is found wanting in performance or conduct befitting a government employee.

SEC. 5. Performance Evaluation an Merit Promotion. - The Secretary of Health, upon consultation with the proper government agency concerned and the Management-Health Workers' Consultative Councils, as established under Section 33 of this Act, shall prepare a uniform career and personnel development plan applicable to all public health personnel. Such career and personnel development plan shall include provisions on merit promotion, performance evaluation, inservice training grants, job rotation, suggestions and incentive award system.

The performance evaluation plan shall consider foremost the improvement of individual employee efficiency and organizational effectiveness: *Provided*, That each employee shall be informed regularly by his/her supervisor of his/her performance evaluation.

The merit promotion plan shall be in consonance with the rules of the Civil Service Commission.

SEC. 6. Transfer or Geographical Reassignment of Public health Workers.

- (a) a transfer is a movement from one position to another which is of equivalent rank, level or salary without break in service;
- (b) a geographical reassignment, hereinafter referred to as "reassignment," is a movement from one geographical location to another; and
- (c) a public health worker shall not be transferred and or reassigned, except when made in the interest of public service, in which case, the employee concerned shall be informed of the reasons therefor in writing. If the public health worker believes that there is no justification for the transfer and/or reassignment, he/she may

appeal his/her case to the Civil Service Commission, which shall cause his/her reassignment to be held in abeyance; *Provided*, That no transfer and/or reassignment whatsoever shall be made three (3) months before any local or national elections: *Provided, further*, That the necessary expenses of the transfer and/or reassignment of the public health worker and his/her immediate family shall be paid for by the Government.

SEC. 7. *Married Public Health Workers.* - Whenever possible, the proper authorities shall take steps to enable married couples, both of whom are public health workers, to be employed or assigned in the same municipality, but not in the same office.

SEC. 8. *Security of Tenure.* - In case of regular employment of public health workers, their services shall not be terminated except for cause provided by law and after due process: *Provided*, That if a public health worker is found by the Civil Service Commission to be unjustly dismissed from work, he/she shall be entitled to reinstatement without loss of seniority rights and to his/her back wages with twelve percent (12%) interest computed from the time his/her compensation was withheld from his/her up to time of reinstatement.

SEC. 9. *Discrimination Prohibited.* - A public worker shall not be discriminated against with regard to gender, civil status, creed, religious or political beliefs and ethnic groupings in the exercise of his/her profession.

SEC. 10. *No Understaffing/Overloading of Health Staff.* - There shall be no understaffing or overloading of public health workers. The ratio of health staff to patient load shall be such as to reasonably effect a sustained delivery of quality health care at all times without overworking the public health worker and over extending his/her duty and service. Health students and apprentices shall be allowed only for purposes of training and education.

In line with the above policy, substitute officers or employees shall be provided in place of officers or employees who are on leave for over three (3) months. Likewise, the Secretary of Health or the proper government official shall assign a medico-legal officer in every province.

In places where there is no such medico-legal officer, rural physicians who are required to render medico-legal services shall be entitled to additional honorarium and allowances.

SEC. 11. *Administration Charges.* - Administrative charges against a public health worker shall be heard by a committee composed of the

provincial health officer of the province where the public health worker belongs, as chairperson, a representative of any existing national or provincial public health workers' organization or in its absence its local counterpart and a supervisor of the district, the last two (2) to be designated by the provincial health officer mentioned above. The committee shall submit its findings and recommendations to the Secretary of Health within thirty (30) days from the termination of the hearings. Where the provincial health officer is an interested party, all the members of the committee shall be appointed by the Secretary of Health.

SEC. 12. *Safeguards in Disciplinary Procedures* - In every disciplinary proceeding, the public health worker shall have:

- (a) the right to be informed, in writing, of the charges;
- (b) the right to full access to the evidence in the case;
- (c) the right to defend himself/herself and to be defended by a representative of his/her choice and/or by his/her organization, adequate time being given to the public health worker for the preparation of his/her defense;
- (d) the right to confront witnesses presented against him/her and summon witnesses in his/her behalf;
- (e) the right to appeal to designated authorities;
- (f) the right to reimbursement of reasonable expenses incurred in his/her defense in case of exoneration or dismissal of the charges; and
- (g) such other rights as will ensure fairness and impartiality during proceedings.

SEC. 13. *Duties and Obligations*. - The public health workers shall:

- (a) discharge his/her duty humanely with conscience and dignity;
- (b) perform his/her duty with utmost respect for life, race, gender, religion, nationality, party policies, social standing or capacity to pay.

SEC. 14. *Code of Conduct.* - Within six (6) months from the approval of this Act, the Secretary of Health, upon consultation with other appropriate agencies, professional and health workers' organizations, shall formulate and prepare a Code of Conduct for Public Health Workers, which shall be disseminated as widely as possible.

SEC. 15. *Normal Hours of Work.* - The normal hours of work of any public health worker shall not exceed eight (8) hours a day or forty (40) hours a week. Hours worked shall include:

- (a) all the time during which a public health worker is required to be on active duty or to be at a prescribed workplace; and
- (b) all the time during which a public health worker is suffered or permitted to work. *Provided,* That the time when the public health worker is placed on "On Call" status shall not be considered as hours worked but shall entitle the public health worker to an "On Call" pay equivalent to fifty percent (50%) of his/her regular wage. "On Call" status refers to a condition when public health workers are called upon to respond to urgent or immediate need for health/medical assistance or relief work during emergencies such that he/she cannot devote the time for his/her own use.

SEC. 16. *Overtime Work.* - Where the exigencies of the service so require, any public health worker may be required to render service beyond the normal eight (8) hours a day. In such a case, the workers shall be paid an additional compensation in accordance with existing laws and prevailing practices.

SEC. 17. *Work During Rest Day.*

- (a) Where a public health worker is made to work on his/her scheduled rest day, he/she shall be paid an additional compensation in accordance with existing laws; and
- (b) Where a public health worker is made to work on any special holiday he/she shall be paid an additional compensation in accordance with existing laws. Where such holiday work falls on the workers' scheduled rest day, he/she shall be entitled to an additional compensation as may be provided by existing laws.

SEC. 18. *Night-Shift Differential.*

- (a) Every public health worker shall be paid night-shift differential of ten percent (10%) of his/her regular wage for each hour of work performed during the night-shifts customarily adopted by hospitals.
- (b) Every health worker required to work on the period covered after his/her regular schedule shall be entitled to his/her regular wage plus the regular overtime rate and an additional amount of ten percent (10%) of such overtime rate for each hour of work performed between ten (10) o'clock in the evening to six (6) o'clock in the morning.

SEC. 19. *Salaries.* - In the determination of the salary scale of public health workers, the provisions of Republic Act No. 6758 shall govern, except that the benchmark for Rural Health Physicians shall be upgraded to Grade 24.

- (a) *Salary Scale* - Salary Scales of public health workers shall be provided progression: *Provided*, That the progression from the minimum to maximum of the salary scale shall not extend over a period of ten (10) years: *Provided, further*, That the efficiency rating of the public health worker concerned is at least satisfactory.
- (b) *Equality in Salary Scale* - The salary scales of public health workers whose salaries are appropriated by a city, municipality, district, or provincial government shall not be less than those provided for public health workers of the National Government: *Provided*, That the National Government shall subsidize the amount necessary to pay the difference between that received by nationally-paid and locally-paid health workers of equivalent positions.
- (c) *Salaries to be Paid in Legal Tender.* - Salaries of public health workers shall be paid in legal tender of the Philippines or the equivalent in checks or treasury warrants: *Provided, however*, That such checks or treasury warrants shall be convertible to cash in any national, provincial, city or municipal treasurer's office or any banking institution operating under the laws of the Republic of the Philippines.
- (d) *Deductions Prohibited* - No person shall make any deduction whatsoever from the salaries of public health workers except

under specific provision of law authorizing such deductions: *Provided, however,* That upon written authority executed by the public health worker concerned, (a) lawful dues or fees owing to any organization/association where such public health worker is an officer or member, and (b) premium properly due all insurance policies, retirement and medicare shall be considered deductible.

SEC. 20. *Additional Compensation.* - Notwithstanding Section 12 of Republic Act No. 6758, public workers shall receive the following allowances: hazard allowance, subsistence allowance, longevity pay, laundry allowance and remote assignment allowance.

SEC. 21. *Hazard Allowance.* - Public health workers in hospitals, sanitarium, rural health units, main centers, health infirmaries, barangay health stations, clinics and other health-related establishments located in difficult areas, strife-torn or embattled areas, distressed or isolated stations, prisons camps, mental hospitals, radiation-exposed clinics, laboratories or disease-infested areas or in areas declared under state of calamity or emergency for the duration thereof which expose them to great danger, contagion, radiation, volcanic activity/eruption, occupational risks or perils to life as determined by the Secretary of Health or the Head of the unit with the approval of the Secretary of Health, shall be compensated hazard allowance equivalent to at least twenty-five percent (25%) of the monthly basic salary of health workers receiving salary grade 19 and below, and five percent (5%) for health workers with salary grade 20 and above.

SEC. 22. *Subsistence Allowance.* - Public health workers who are required to render service within the premises of hospitals, sanitarium, health infirmaries, main health centers, rural health units and barangay health stations, or clinics, and other health-related establishments in order to make their services available at any and all times, shall be entitled to full subsistence allowance of three (3) meals which may be computed in accordance with prevailing circumstances as determined by the Secretary of Health in consultation with the Management Health Workers' Consultative Councils, as established under Section 33 of this Act: *Provided,* That representation and travel allowance shall be given to rural health physicians as enjoyed by municipal agriculturists, municipal planning and development officers and budget officers.

SEC. *Longevity Pay.* - A monthly longevity pay equivalent to five percent (5%) of the monthly basic pay shall be paid to a health worker for every five (5) years of continuous, efficient and meritorious services rendered as certified by the chief of office concerned commencing with the service after the approval of this Act.

SEC. 24. *Laundry Allowance.* - All public health workers who are required to wear uniforms regularly shall be entitled to laundry allowance equivalent to one hundred twenty-five pesos (P125.00) per month: *Provided,* That this rate shall be reviewed periodically and increased accordingly by the Secretary of Health in consultation with the appropriate government agencies concerned taking into account existing laws and prevailing practices.

SEC. 25. *Remote Assignment Allowance.* - Doctors, dentists, nurses, and midwives who accept assignments as such in remote areas or isolated stations, which for reasons of far distance or hard accessibility such positions had not been filled for the last two (2) years prior to the approval of this Act, shall be entitled to an incentive bonus in the form of remote assignment allowance equivalent to fifty percent (50%) of their basic pay, and shall be entitled to reimbursement of the cost of reasonable transportation to and from and during official trips.

In addition to the above, such doctors, dentists, nurses, and midwives mentioned in the preceding paragraph shall be given priority in promotion or assignment to better areas. Their tour of duties in the remote areas shall not exceed two (2) years, except when there are no positions for their transfer or they prefer to stay in such posts in excess of two (2) years.

SEC. 26. *Housing.* - All public health workers who are on tour of duty and those who, because of unavoidable circumstances are forced to stay in the hospital, sanitarium or health infirmary premises, shall be entitled to free living quarters within the hospital, sanitarium or health infirmary or if such quarters are not available, shall receive quarters allowance as may be determined by the Secretary of Health and other appropriate government agencies concerned: *Provided,* That this rate shall be reviewed periodically and increased accordingly by the Secretary of Health in consultation with the appropriate government agencies concerned.

For purposes of this Section, the Department of Health is authorized to develop housing projects in its own lands, not otherwise devoted for other uses, for public health workers, in coordination with appropriate government agencies.

SEC. 27. *Medical Examination.* - Compulsory medical examination shall be provided free of charge to all public health workers before entering the service in the Government or its subdivisions and shall be repeated once a year during the tenure of employment of all public health workers: *Provided,* That where medical examination shows that medical treatment and/or hospitalization is necessary for those already in government service, the treatment and/or hospitalization including

medicines shall be provided free either in a government or a private hospital by the government entity paying the salary of the health worker: *Provided, further*, That the cost of such medical examination and treatment shall be included as automatic appropriation in said entity's annual budget.

SEC. 28. *Compensation of Injuries.* - Public health workers shall be protected against the consequences of employment injuries in accordance with existing laws. Injuries incurred while doing overtime work shall be presumed work-connected.

SEC. 29. *Leave Benefits for Public Health Workers.* - Public health workers are entitled to such vacation and sick leaves as provided by existing laws and prevailing practices: *Provided*, That in addition to the leave privilege now enjoyed by public health, women health workers are entitled to such maternity leaves provided by existing laws and prevailing practices: *Provided, further*, That upon separation of the public health workers from services, they shall be entitled to all accumulated leave credits with pay.

SEC. 30. *Highest Basic Salary Upon Retirement* - Three (3) months prior to the compulsory retirement, the public health worker shall automatically be granted one (1) salary range or grade higher than his/her basic salary and his/her retirement benefits thereafter, computed on the basis of his/her highest salary: *Provided*, That he/she has reached the age and fulfilled service requirements under existing laws.

SEC. 31. *Right to Self-Organization.* - Public health workers shall have the right to freely form, join or assist organizations or unions for purposes not contrary to law in order to defend and protect their mutual interests and to obtain redress of their grievances through peaceful concerned activities.

However, meanwhile the State recognizes the right of public health workers to organize or join organization, public health workers on-duty cannot declare, stage or join any strike or cessation of their service to patients in the interest of public health, safety or survival of patients.

SEC. 32. *Freedom from Interference or Coercion.* - It shall be unlawful for any person to commit any of the following acts of interference or coercion:

- (a) to require as a condition of employment that a public health worker shall not join a health workers' organization or union or shall relinquish membership therein;

- (b) to discriminate in regard to hiring or tenure of employment or any item or condition of employment in order to encourage or discourage membership in any health workers' organization or union;
- (c) to prevent a health worker from carrying out duties laid upon him/her by his/her position in the organization or union, or to penalize him/her for the action undertaken in such capacity;
- (d) to harness or interfere with the discharge of the functions of the health worker when these are calculated to intimidate or to prevent the performance of his/her duties and responsibilities; and
- (e) to otherwise interfere in the establishment, functioning, or administration of health workers organization or unions through acts designed to place such organization or union under the control of government authority.

SEC. 33. *Consultation With Health Worker's Organization.* - In the formulation of national policies governing the social security of public health workers, professional and health workers, organizations or unions as well as other appropriate government agencies concerned shall be consulted by the Secretary of Health. For this purpose, Management Health Worker's Consultative Councils for national, regional and other appropriate levels shall be established and operationalized.

SEC. 34. *Health Human Resource Development/Management Study.* The Department of Health shall conduct a periodic health human resource development/management study into, among others, the following areas;

- (a) adequacy of facilities and supplies to render quality health care to patients and other client population;
- (b) opportunity for health workers to grow and develop their potentials and experience a sense of worth and dignity in their work. Public health workers who undertake postgraduate studies in a degree course shall be entitled to an upgrading in their position or raise in pay: *Provided*, That it shall not be more than every two (2) years;
- (c) mechanisms for democratic consultation in government health institutions;
- (d) staffing patterns and standards of health care to ensure that the

people receive quality care. Existing recommendations on staffing and standards of health care shall be immediately and strictly enforced;

- (e) ways and means of enabling the rank-and-file workers to avail of education opportunities for personal growth and development;
- (f) upgrading of working conditions, reclassification of positions and salaries of public health workers to correct disparity *vis-a-vis* other professions such that positions requiring longer study be upgraded and given corresponding pay scale; and
- (g) assessment of the national policy on exportation of skilled health human resource to focus on how these resources could instead be utilized productively for the country's needs.

There is hereby created a Congressional Commission on Health (HEALTHCOM) to review and assess health human resource development, particularly on continuing professional education and training and the other areas described above. The Commission shall be composed of five (5) members of the House of Representatives and five (5) members of the Senate. It shall be co-chaired by the chairpersons of the Committee on health of both houses. It shall render a report and recommendation to Congress which shall be the basis for policy legislation in the field of health. Such a congressional review shall be undertaken once every five (5) years.

SEC. 35. *Rules and Regulations.* - The Secretary of Health after consultation with appropriate agencies of the Government as well as professional and health workers' organizations or unions, shall formulate and prepare the necessary rules and regulations to implement the provisions of this Act. Rules and regulations issued pursuant to this section shall take effect thirty (30) days after publication in a newspaper of general circulation.

SEC. 36. *Prohibition Against Double Recovery of Benefits.* - Whenever other laws provide for the same benefits covered by this Act, the public health worker shall have the option to choose which benefits will be paid to him/her. However, in the event that the benefits chosen are less than that provided under this Act, the worker shall be paid only the difference.

SEC. 37. *Prohibition Against Elimination and/or Diminution.* - Nothing in this law shall be construed to eliminate or in any way diminish benefits being enjoyed by public health workers at the time of the effectivity of this Act.

SEC. 38. *Budgetary Estimates.* - The Secretary of Health shall submit annually the necessary budgetary estimates to implement the provisions of this Act in staggered basis of implementation of the proposed benefits until the total of nine hundred forty-six million six hundred sixty-four thousand pesos (P946,664,000.00) is attained within five (5) years.

Budgetary estimates for the succeeding years should be reviewed and increased accordingly by the Secretary of Health in consultation with the Department of Budget and Management and the Congressional Commission on Health (HEALTHCOM).

SEC. 39. *Penal Provision.* - Any person who shall willfully interfere with, restrain or coerce any public health worker in the exercise of his/her rights or shall in any manner commit any act in violation of any of the provisions of this Act, upon conviction, shall be punished by a fine of not less than Twenty thousand Pesos (P20,000.00) but not more than Forty thousand Pesos or imprisonment of not more than one (1) year or both at the discretion of the court.

If the offender is a public official, the court, in addition to the penalties provided in the preceding paragraph, may impose the additional penalty of disqualification from office.

SEC. 40. *Separability Clause.* - If any provision of this Act is declared invalid, the remainder of this Act or any provision not affected thereby shall remain in force and effect.

SEC. 41. *Repealing Clause.* - All laws, presidential decrees, executive orders and their implementing rules, inconsistent with the provisions of this act are hereby repealed, amended or modified accordingly.

SEC. 42. *Effectivity.* - This Act shall take effect fifteen (15) days after its publication in at least two (2) national newspapers of general circulation.

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FACULTY
NATIONAL COLLEGE OF PUBLIC ADMINISTRATION AND GOVERNANCE
UNIVERSITY OF THE PHILIPPINES

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