HEALTH PRIORITIES
REGION 3

EVELYN B. YUMIACO, MD
Angeles University Foundation

Table of Contents

EXECUTIVE SUMMARY

Introduction

Region III also known as Central Luzon is composed of seven provinces, namely: Aurora, Bataan, Nueva Ecija, Pampanga, Tarlac and Zambales. There are twelve cities, namely: Angeles, Balanga, Olongapo, Cabanatuan, Gapan, Palayan, San Jose, San Fernando, San Jose Del Monte, Munoz, Malolos and Tarlac. It has 118 municipalities, 21 congressional district and 3,102 barangays.

According to the 2000 census, Central Luzon has an estimated population of 8,200,151, males slightly outnumbering the females with 58.34% of the population belonging to the 0-24 year old age bracket. The poverty incidence is 20.9% which is the lowest among the regions excluding the NCR. Among the provinces, Nueva Ecija has the highest number of poor families at 31% followed by Tarlac, Pampanga, Zambales and Bulacan at 24%, 18%, 12% and 7% respectively. Bataan and Aurora has the least number of poor families at 4%.

There was a decreased in the crude birth rate, infant mortality rate and maternal death from 1998 to 2004. However, the health conditions in the provinces differ with Zambales having the highest infant mortality rate (18.63/1000) and Angeles City the lowest (2.37/1000).

The leading causes of morbidity have not changed much since 1998 to 2004. The rate of acute respiratory tract infection, diarrhea and bronchitis decreased from 1998 to 2003 but they still maintained their position as the top three leading cause of morbidity. The rate of Influenza, Parasitism and TB at number 7, 8 and 10 respectively also went down in 2003. Other disease conditions in the top ten whose rate increased from 1998 to 2003 were pneumonia, hypertension, and skin disease at number 4, 5 and 6, respectively and urinary tract infection at number 9.

From 1998 to 2004 the top five leading causes of mortality were still the same, namely: heart disease, cancer, pneumonia, cardiovascular disease and TB. COPD went up to number 6 followed by diabetes, hypertension, kidney disease and accidents.

Region 3 has a total of 208 hospitals of which 71 were controlled by the government. It has three retained hospitals (PJGM, JRMC, JBLMRH), one mental ward (Mariveles mental ward), one extension (Talavera Extension Hospital), 5 provincial hospitals (Bulacan, Nueva Ecija,Pampanga, Tarlac and Zambales), 26 district hospitals, 250 rural health units, 1356 Barangay Health Stations, and 33 birthing stations (DOH Annual report 2001). There were 137 privately-owned hospitals, 29% are primary,   56% are secondary and 12% are tertiary hospitals (DOH 2002) . The hospital bed population ratio is 1 bed per 1,197 population (DOH 2000).

Philhealth has a total membership of 6,312,770 with an estimated coverage of 45% among the indigent population. Bulacan and Pampanga has the highest population coverage by Philhealth and 86% of government and privately owned hospitals were accredited by Philhealth .

Methodology

The health situation in Region 3 was evaluated from September to October 2005, Documents from government agencies were reviewed followed by a survey conducted among provincial and city health officers to identify health priorities. Consultations with the health officers, directors and representatives of agencies were also done to elaborate on the health priorities identified in the survey. Two other surveys were conducted among Hospitals

and universities. The hospital survey aimed to identify the top ten causes of mortality and morbidity in the different hospitals, problems encountered, services offered, equipments available and research capability of the institution. The survey among universities was also aimed to identify the research capability of the institutions. All problems identified in the surveys and consultations were collated and classified according to the broad research and development area. This was presented for validation and ranking through a regional consultation and prioritization workshop done in November 8, 2005 attended by 32 participants from Government, Non government organizations and the academe.

Research Priority Areas

The top 10 priority areas identified were: 1. TB, 2. Dengue, 3. Healthy Lifestyle (nutritional practice), 4. Research and Research Ethics, 5. Degenerative Diseases (malignancy), 6. Environmental Health Risk and Occupational Health, 7. Health Information System, 8. Mental Health, Behavioral Diseases and Autism, 9. Health Care Delivery, and 10. Family planning

Regional Profile

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

Table 1. Number of Barangays, Municipality and District by Province/City in Region 3

PROVINCE	NO OF BARANGAYS	NO OF MUNICIPALITY	NO OF CONGRESSIONAL DISTRICT	INCOME CLASSIFICATION
AURORA	151	8	1	3RD
BATAAN	212	11	2	1ST
BULACAN	459	22	4	1ST
NUEVA ECIJA	642	27	4	1ST
PAMPNGA	470	20	4	1ST
TARLAC	435	17	3	1ST
ZAMBLES	230	13	2	2ND
ANGELES CITY	33	1		1ST
CABANATUAN	89	1		1ST
BALANGA	25	1		5TH
GAPAN	23	1		5TH
MALOLOS	51	1		1ST
SAN FERNANDO	35	1		3RD
SAN JOSE DEL MONTE	59	1		3RD
TARLAC	76	1		3RD
OLONGAPO	17	1		1ST
PALAYAN	20	11		4TH
SAN JOSE	38	1		2ND
MUNOZ	37	1		5TH
TOTAL	3,102	118MUN /12 CITIES	21	

Population Size

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

Table 2. Age and Sex Distribution in Region 3

AGE GROUP	MALE	FEMALE	TOTAL	%
0-2	331442	328670	660112	8.05
3-5	345223	342335	687558	8.38
6-12	711786	705832	1417618	17.29
13-17	467132	463224	930356	11.35
18-24	546534	541962	1088496	13.27
25-29	1490955	1478484	2969439	36.21
60 AND ABOVE	224224	222348	446572	5.45
TOTAL	4117296	4082855	8200151	100

Poverty Incidence

Poverty incidence refers to the proportion of families whose monthly income falls below the over all poverty line or threshold. In region 3 the poverty incidence is 20.9% which is the lowest among the regions excluding the NCR. The annual per capita poverty threshold was Php 13,843 while the annual per capita food threshold was 8,797 in 2000.

There were 332,238 reported number of poor families in Region 3 as of CY 2000. This represents 20% of the total families in the region. Among the region Nueva Ecija has the highest number of poor families at 31% followed by Tarlac , Pampanga, Zambales and Bulacan at 24%, 18%, 12% and 7% respectively. Bataan and Aurora has the least number of poor families at 4%.

Health Indicators

There was a decrease in the health indices from 2000 to 2004. The maternal death increased slightly then stabilized from 2001 to 2003 but decrease in 2004. Among the provinces, Nueva Ecija has the lowest CBR and Aurora the highest. Among the cities, Munoz has the lowest CBR and Balanga the highest in 2003. The health conditions in the provinces differ with Zambales having the highest infant mortality rate (18.63).

Table 3. Health Indicators from 2000 to 2004, Region 3

	2000	2001	2002	2003	2004
*CRUDE BIRTH RATE	22.2	20.42	20.5	21.67	19.89
*CRUDE DEATH RATE	3.9	3.9	4.4	4.16	3.88
**MATERNAL MORTALITY RATE	0.2	0.3	0.3	0.3	0.28
INFANT MORTALITY RATE	7.3	8.1	7.2	7.49	5.98

*Per 1000 population
**Per 1000 livebirths

Table 4. Live Births, Total Deaths, Maternal and Infant Mortality Rate in Region 3

	POPULATION	LIVE BIRTHS	RATE	INFANT DEATHS	RATE	MATERNAL DEATHS	RATE	TOTAL DEATHS	
AURORA	195,015	3,881	19.90	34	8.76	2	0.52	676	3.47
BATAAN	526,697	16,726	31.76	147	8.79	7	0.42	3,263	6.20
BULACAN	1,670,832	40,085	23.99	351	8.76	8	0.20	7,803	4.67
NUEVA ECIJA	1,199,438	21,285	17.75	169	7.94	2	0.09	3,488	2.91
PAMPANGA	1,586,012	24,770	15.62	94	3.79	6	0.24	4,558	2.87
TARLAC	860,949	16,650	19.34	99	5.95	5	0.30	3,828	4.45
ZAMBALES	460,102	7,730	16.80	144	18.63	4	0.52	2,202	4.79
ANGELES	318,094	11,377	35.77	27	2.37	1	0.09	1,800	5.66
BALANGA	78,520	5,361	68.28	76	14.18	5	0.93	984	12.53
CABANATUAN	246,754	3,682	14.92	22	5.98	3	0.81	1,108	4.49
GAPAN	92,354	1,218	13.19	0	0.00	0	0.00	148	1.60
MALOLOS	167,794	3,930	23.42	17	4.33	0	0.00	791	4.71
MUÑOZ	65,586	747	11.39	4	5.35	1	1.34	118	1.80
OLONGAPO	204,158	4,476	21.92	34	7.60	1	0.22	919	4.50
PALAYAN	27,193	409	15.04	0	0.00	0	0.00	41	1.51
SAN FERNANDO	218,870	5,127	23.42	41	8.00	1	0.20	898	4.10
SAN JOSE	114,637	2,385	20.80	38	15.93	2	0.84	698	6.09
SAN JOSE D.M.	317,837	9,662	30.40	31	3.21	4	0.41	1,110	3.49
TARLAC CITY	280,271	7,570	27.01	74	9.78	4	0.53	1,510	5.39
TOTAL	**8,631,113**	**187,071**	**21.67**	**1,402**	**7.49**	**56**	**0.30**	**35,943**	**4.16**

DOH 2003

Table 5. Live Births and Total Deaths, Region 3

	TOTAL POPULATION	LIVE BIRTHS	RATE	TOTAL DEATHS	RATE
AURORA	199,347	4,552	22.8	784	3.9
BATAAN	540,852	11,793	21.8	2,913	5.39
BULACAN	2,047,888	45,358	22.15	10,944	5.34
NUEVA ECIJA	1,218,082	20,578	16.89	2,363	1.9
PAMPANGA	1,632,229	29,372	18	16,484	10.1
TARLAC	879,632	16,569	18.8	3,491	3.97
ZAMBALES	464,363	8,171	17.6	2,218	4.78
ANGELES	325,410	11,475	35.26	1,690	5.19
BALANGA	81,166	5,323	65.58	986	12
CABANATUAN	255,520	5,337	20.88	1,062	4.2
GAPAN	86,974	1,799	20.68	429	4.9
MUÑOZ	199,343	1,321	6.6	360	1.8
OLONGAPO	207,184	4,841	23.36	908	4.38
PALAYAN	27,737	403	14.52	36	1.3
SAN JOSE	116,802	2,691	23.03	2,354	20.15
TARLAC CITY	286,353			0	
	9,274,390				

DOH 2004

The top 10 leading cause of mortality from 1998 to 2003 are shown in table 6. Although the rate of heart disease decreased from 1998 to 2003, it still occupied the top position.

In 2004 the top five leading causes of morbidity were still the same, namely: heart disease, cancer, pneumonia ,cardiovascular disease and TB. Number 6 was replaced by COPD followed by diabetes, hypertension, kidney disease and accidents.

Table 6. Mortality, Leading Causes Number and Rate per 100,000 Population , A Five-Year Report 1998-2002 & 2003 for Region 3

	FIVE YEAR REPORT 1998-2002		2003	
	NUMBER	RATE	NUMBER	RATE
1. HEART DISEASES	6,047	75.48	5,716	66.23
2. CANCER (ALL FORMS)	3,314	41.37	3,789	43.90
3. PNEUMONIA	3,181	39.71	2,963	34.33
4. CARDIO-VASCULAR DISEASE	2,303	28.75	5,008	58.02
5. TB RESPIRATORY	1,555	19.41	1,757	20.36
6. DIABETES MELLITUS	850	10.61	1,015	11.76
7. HYPERTENSION	692	8.64	718	8.32
8. CHRONIC OBSTRUCTIVE	1,169	14.59	1,609	18.64
9. KIDNEY DISEASES	594	7.42	947	10.97
10. ACCIDENTS	2,003	25.00	1,211	14.03

DOH 2003

The top 10 leading cause of morbidity were mostly infectious in origin namely acute respiratory tract infection, diarrhea, bronchitis , pneumonia, parasitism, UTI and TB. Hypertension a lifestyle condition ranks number 5.

In 2004 the top four cause of morbidity were still the same but number five was replaced by influenza followed by hypertension, skin disease, diseases of the heart , TB and UTI.

Table 7. Morbidity, Leading Causes, Number and Rate per 100,000 Population, 5-Year Average (1998-2002 and 2003)

	FIVE YEAR AVERAGE 1998 TO 2002		2003	
	NUMBER	RATE	NUMBER	RATE
1. ARI	247,030	3,083.75	211,715	2,452.93
2. DIARRHEA	101,804	1,270.85	85,477	990.34
3. BRONCHITIS	57,282	715.07	54,593	632.51
4. PNEUMONIA	32,868	410.30	36,647	424.59
5. HYPERTENSION	27,093	338.20	30,073	394.77
6. SKIN DISEASES	20,741	258.92	30,054	348.21
7. INFLUENZA	23,818	297.33	23,308	270.05
8. PARASITISM	17,023	212.50	17,267	200.05
9. URINARY TRACT INFECTION	5,011	71.30	12,561	145.53
10.TB RESPIRATORY	13,292	165.93	11,025	127.74

Table 8. Leading Causes of Infant Mortality, Number and Rate per 1000 Livebirths, 5-Year Average (1998-2002 and 2003), Region 3

	FIVE YEAR AVERAGE 1998-2002		2003	
	NUMBER	RATE	NUMBER	RATE
1. PNEUMONIA	291	1.74	266	1.42
2. PREMATURITY	159	0.95	174	0.93
3. CONGENITAL ANOMALY	148	0.88	97	0.52
4. SEPTICEMIA	169	1.01	73	0.39
5. RESPIRATORY DISTRESS SYNDROME	150	0.89	72	0.38
6. HEART DISEASE	51	0.31	60	0.32
7. PERINATAL MORBIDITY/MORTALITY CAUSE*			35	0.19
8. STILLBIRTH	34	0.34	33	0.18
9. DIARRHEA	48	0.29	32	0.17
10. ASPHYXIA	42	0.25	27	0.14

Table 8. Leading Cause of Maternal Mortality and Morbidity, Region 3, Five-Year Average 1998-2002 & 2003

CAUSES	FIVE YEAR AVERAGE 1998-2002		2003	
	NUMBER	RATE	NUMBER	RATE
1. Post Partum Hemorrhage	12	0.071	14	0.074
2. Hypertension Complicating Pregnancy Child Birth And Puerperium	9	0.053	13	0.070
3. Septicemia	4	0.023	11	0.059
4. Uterine Atony	4	0.023	5	0.027
5. Hemorrhages Related To Pregnancy	3	0.017	5	0.027
6. Ectopic Pregnancy	2	0.011	1	0.005
7. Placenta Previa	2	0.011	1	0.005
8. Embolism	2	0.011	1	0.005
9. Ruptured Uterus	1	0.005	1	0.005
10. Prolonged Labor	1	0.005	1	0.005

Result of the Survey in the Provinces and Cities of Region 3 Conducted in October 2005

Table 9. Health Concerns Identified per Provice/City

Province/City	Category	Health Concerns
ANGELES CITY	INFECTIOUS DISEASES	-**TB** is still a problem because of the drop outs, none availability of drugs and adherence of physicians to the NTP. -Pneumonia -The city is preparing for the South East Asian Games (SEAG) and AVIAN FLU is one of the considerations.
	HEALTHY LIFESTYLE	Garbage is disposed of by digging a pit. The city is looking at the feasibility of getting a private contractor to handle garbage disposal.
	RESEARCH	There is no budget allotted to research. No researches done by the LGU
CABANATUAN CITY	INFECTIOUS DISEASES	-TB -PNEUMONIA -DENGUE -The city has a database on 14 communicable diseases use for surveillance purposes
	FAMILY HEALTH	The pull out of support from family planning is a big problem because it can lead to unwanted pregnancy. Unwanted pregnancy is a problem because caring for the unwanted child will be affected leading to increase social services, education, increase crime rate and prostitution.
	DEGENERATIVE DISEASES	Degenerative diseases is not given due attention by the community
	HEALTH CARE DELIVERY	There is also the problem of low budget for supplies and transportation expenses for health workers which affects mobility and health services.
	REGULATION	Strict implementation of regulation. Monitoring of GRO.
	HEALTH CARE FINANCING	No one is registered in the indigency program of PHILHEALTH because the city can provide for the needs of the community. Recognizing the value of PHILHEALTH indigency program the LGU is working on the enrollment of its indigent constituents in the program.
	RESEARCH	The funds from the LGU is for manpower development through training there is no budget for research. No health researches done at the LGU.
	HEALTHY LIFESTYLE	-No data on substance abuse -No data on older persons -There is data on disabled but not updated
NUEVA ECIJA	INFECTIOUS	-There is misinformation on the availability of drugs for **TB**. They say there are no drugs but in fact drugs are available -**FOOD AND WATER BORNE diseases** is due to unavailability of clean water supply -There is an ordinance on responsible pet ownership to control **RABIES** but the community does not comply. -There is lack of dental supplies -Pneumonia /ARI -There is a problem on the attitude of the community

		leading to increase dengue cases. -Information dissemination on the availability of vaccine and misevaluation of stocks -PARASITIC/HELMINTHIC INFECTION
	DEGENERATIVE DISEASES	-CARDIOVASCULAR -HYPERTENSISON -DIABETES -CANCER -COPD
	FAMILY HEALTH	Orientation of newly married couple affects family health
	HEALTHY LIFESTYLE	-Dental caries/ Nutritional- none availability of supplies -Tobacco/substance abuse/accidents injury occupational health risk – information dissemination is needed.
	HEALTH EDUCATION	Health workers attitude towards work affects quality of health education in the community
	HEALTH LEGISLATION	Magna Carta implementation
	HOSPITAL SYSTEM	Standardize policies and increase plantilla
	INFORMATION SYSTEM	Health information system was launched but non functional. Revision and re orientation is needed
PAMPANGA	DEGENERATIVE DISEASES	The food in Pampanga is high in cholesterol hence the increase incidence of cardiovascular conditions
	INFECTIOUS DISEASES	-There is an ordinance regarding stray dogs and cats to control **RABIES** but there is a problem with its implementation. The strays are still uncontrolled. - There are government agencies monitoring the problem of **AVIAN FLU** like Department of Agriculture and DOH. We recognize the fact that the hospitals are not equipped to handle an epidemic. We want to control the poultry industry but there is no alternative work for the people.
	HEALTHY LIFESTYLE	Waste disposals of hospital garbage is a problem in Mabalacat town. Scavengers were exposed to hypodermic needles due to hospital garbage. They are planning to get a private institution to handle the garbage disposal.
	HEALTH CARE DELIVERY SYSTEM	Thirty dialysis units were donated to the province but only ten were operational. It was distributed to the different hospitals however the problem now is funds for the medicine and manpower .
	LOCAL HEALTH SYSTEM	Devolution is still a problem. Some items have to be collapsed to accommodate for the item of some other staff like doctors. So the services on the collapsed items suffered.
	RESEARCH	There is no budget for research but the province is willing to support research proposals
TARLAC	FAMILY HEALTH	The priority is the welfare of the family and social aspect of health.
	DEGENERATIVE DISEASES	"There is an increase incidence of malignant neoplasm probably due to the insecticides used by farmers. The wind direction in the province might have something to do with this".
	INFECTIOUS DISEASES	-The provincial hospital has a tie up with St Lukes Medical center on **Japanese Encephalitis** -The province is not equipped to handle emerging

		infections like cases of SARS and **AVIAN FLU.** No infectious ward.
	LOCAL HEALTH SYSTEM	-Devolution a. health managers of devolved hospitals are given the responsibility of delivering quality health service with its accompanying liability but without the full authority in the management of resources. b. difference in the application of COA regulation c. hiring and promotion is tainted with political considerations which affects quality of service and demoralization of work force d. Magna carta for health is not implemented e. poor working conditions leading to doctors becoming nurses

	HEALTH CARE FINANCING	- Problems encountered with PHILHEALTH
		  a. Claims are not given right away.
		  b. A lot of paper work, duplicate copies have to be done leading to delay in processing.
		  c. The professional fee of doctors are not given on time

	RESEARCH	"It would be better to have a coordinating body for the region. The workshop would be a good venue to start. The provincial hospital is trying to strengthen its research capability. Tarlac provincial hospital has a lot of materials for research. A collaboration between the provinces of region 3 is recommended to strengthen research and improve health care delivery."
	HEALTHY LIFESTYLE	No data on substance abuse
ZAMBALES	INFECTIOUS DISEASES	-**DENGUE** is a problem because the people are not participating in the programs. There is lack of social mobilization. They are instructed to maintain a clean environment but they do not cooperate. If there is an increase in the incidence of diseases they blame the government for it. -There is a good task force for **RABIES**. The provincial health officer is advocating "responsible ownership" however the people do not participate. Instead of the pet owner bringing the pet to the vet they wanted the vet get the dogs themselves for vaccination. -**ACUTE RESPIRATORY INFECTION** is also high because of the frequent sandstorm. - "There is also lack of vaccine against SNAKE BITES. For this year there were only 4 vaccines available. There were 4 cases of snake bite, 2 were given vaccine , 2 were just observed fortunately no one died". -"Regarding **IMMUNIZATION** the targets of the Government are too high. Example there are only 100 babies here in my province and the target is 1000 vaccination. We will not be able to reach the target which is set too high".
	FAMILY HEALTH	-The LGU will have to set aside funds for family planning in the event of a pull out of funds.
	HEALTH CARE DELIVERY SYSTEM	-The provincial health office is in charge of 4 hospitals. There are a lot of vacancies in the position for doctors and nurses but there were applicants. The nurses go on duty every 12 hours

		due to lack of manpower. -In some municipalities health is not a priority of the mayors hence there is a problem.
	RESEARCH	No budget for research

Health Facilities

Region 3 has a total of 208 hospitals of which 71 were managed by the government. It has three retained hospitals (PJGM, JRMC, JBLMRH), one mental ward (Mariveles mental ward), one extension (Talavera extension Hospital), 5 provincial hospitals (Bulacan, Nueva Ecija,Pampanga, Tarlac and Zambales), 26 district hospitals, 250 rural health units, 1356 Barangay Health Stations, and 33 birthing stations (DOH Annual report 2001). There were 137 privately-owned hospitals, 29% are primary,   56% are secondary and 15% are tertiary hospitals (DOH 2002). There was one bed per 1,197 population (DOH 2000).

Table 10. Private Health Facilities and Hospital-Type, Region 3

	PRIMARY	SECONDARY	TERTIARY
BATAAN	1	5	0
BULACAN	17	41	3
NUEVA ECIJA	3	4	1
CABANATUAN CITY			3
PAMPANGA	6	8	0
SAN FERNANDO CITY	2	1	3
ANGELES CITY	3	4	5
TARLAC	7	8	3
OLONGAPO CITY	1	7	2

DOH 2002

Bulacan has the highest number of secondary hospitals (41) and primary hospitals (17) while Angeles City has the highest number of tertiary hospitals (5). There was one bed for every 1,197 population. Aurora has the highest bed population ratio (1:6952) and Angeles city has the lowest (1:362).

Table 11. Health Care Service Facility (2000), Region 3

	TOTAL POPULATION	BED CAPACITY		TOTAL	BED: POPULATION RATIO
		GOVT	PRIVATE		
AURORA	173797	25		25	1: 6952
ANGELES CITY	263971	120	460	730	1: 362
BATAAN	557659	335	183	518	1:1077
BULACAN	2234088	581	1199	1780	1:2758
CABANATUAN CITY		520	290	810	
NUEVA ECIJA	1659883	223	434	657	1: 2526
PALAYAN		54		54	
PAMPANGA	1614942	400	214	614	1;2630
CITY OF SAN FERNANDO		275	304	579	
SAN JOSE		50	35	85	
SAN JOSE DEL MONTE CITY			20	20	
TARLAC	1068783	390	231	621	1:1721
TARLAC CITY			250	250	
ZAMBALES	433542	245	238	483	1:897
OLONGAPO CITY	194260	155		155	1:1253
TOTAL	7963325			6651	1:1197

A hospital survey was done from October 1-30, 2005 to obtain information on the following:

a. To determine the services offered in a primary, secondary and tertiary hospitals in terms of
   i. Diagnostic capability
   ii. Equipments
   iii. Specialist practicing in the province/city
   iv. Other special services offered
b. To identify the top ten causes of mortality and morbidity
c. Enumerate the problems encountered by the different hospitals in the region.

Questionnaires were mailed or delivered to 101 hospital directors listed in the 2002 DOH database. The response rate was 11% (11), 6 responded by mail and 5 were retrieved by a research assistant assigned to the project. Some of the hospitals did not return or answer the questionnaires in spite of repeated follow up.

Table 12. Hospitals Engaged in Research in Region 3

ANGELES CITY	ANGELES UNIVERSITY FOUNDATION MEDICAL CENTER
PAMPANGA	JOSE B LINGAD MEMORIAL REGIONAL HOSPITAL
NUEVA ECIJA	DR J. PAULINO RESEARCH AND MEMORIAL HOSPITAL
TARLAC	TARLAC PROVINCIAL HOSPITAL

According to a key informant in one of the hospital above, the hospital holds research paper contest twice year. Each Department has a Research Committee who supervises the paper of the residents and gives lectures on research methodology. They do not have a statistician but they have an ethics committee. Each Department is provided with a computer with internet access. The residents are aware that the hospital provides funding for research but they use their own money to fund their researches. Most of the topics presented in the paper contest were surveys on knowledge and attitudes but there was one research on herbal medicine.

Table 13. Mortality Data from Hospitals in Region 3

PROVINCE/CITY	CATEGORY/TYPE	CASES
SAN FERNANDO	PRIVATE SECONDARY	PTB CRF CAD DIABETES MELLITUS HYPERTENSION AGE PNEUMONIA
	PRIVATE TERTIARY	CVA CAD HCVD CRF COPD TB PNEUMONIA LEUKEMIA CA OF THE LIVER CA OF THE PANCREAS COLONIC CA VA
PAMPANGA	PRIVATE SECONDARY	MI
NUEVA ECIJA	GOVERNMENT TERTIARY	SEPSIS CVA BLEED COPD HYPERTENSION PERINATAL ASPHYXIA ACUTE MYOCARDIAL INFARCTION

		PTB
		BRONCHOPNEUMONIA
	PRIVATE SECONDARY	SEVERE PNEUMONIA
		UPPER GI BLEED
		PREMATURITY
TARLAC	PRIVATE SECONDARY	PTB
		CVA BLEED
		HYPERTENSION
		ASTHMA
		POISONING
		RENAL FAILURE
		MYOCARDIAL INFARCTION
		HCVD
		PNEUMONIA
		DIABETES MELLITUS
ZAMBALES	GOVERNMENT TERTIARY	HEART DISEASE
		PHYSICAL INJURIES
		PNEUMONIA
		PTB/COPD
		PREMATURITY/RDS
		CANCER OF BREAST/LUNGS
		AND CERVICAL

Based on the data provided by 7 hospitals the most common cause of mortality is pneumonia followed by tuberculosis. The number three position is a tie between chronic renal failure, hypertension, cerebrovascular disease, COPD and myocardial infarction.

Table 14. Morbidity Data from Hospitals in Region 3

PROVINCE/CITY	CATEGORY/TYPE	CASES
	PRIVATE SECONDARY	PTB
		CAD
		DM
SN FERNANDO		HYPERTENSION
		AGE
		PNEUMONIA
	PRIVATE TERTIARY	PNEUMONIA
		CVA
		VA
		DHF
		NEPHROTIC SYNDROME
		CHF
		FUO
		CA
		CAD
		COPD
PAMPANGA	PRIVATE SECONDARY	RTI
		PTB
		AGE
NUEVA ECIJA	GOVERNMENT TERTIARY	DENGUE
		SEPSIS
		BRONCHOPNEUMONIA
		ACUTE APPENDICITIS
		CVA INFARCT
		COPD
		CHRONIC RENAL FAILURE
		UPPER GI BLEED
		PULMONARY TB
	PRIVATE SECONDARY	PROLONGED LABOR
		PROM
		NSD
		NIDDM
TARLAC	PRIVATE SECONDARY	HYPERTENSION
		ASTHMA
		AGE WITH DHN
		UPPER GI BLEEDING

		CANCER TYPHOID FEVER DENGUE FEVER ACUTE PYELONEPHRITIS PETIC ULCER DISEASE
ZAMBALES		AGE HEART DISEASE PNEUMONIA PTB RESPIRATORY INFECTION

The most common cause of morbidity among the 7 hospitals were tuberculosis and pneumonia followed by acute gastroenteritis, dengue fever, coronary artery disease and COPD.

Table 15. Problems Encountered by the Hospitals in Region 3

PROVINCE/CITY	CATEGORY/TYPE	PROBLEMS
ANGELES CITY	PRIVATE SECONDARY	LACK OF MANPOWER(NURSES) INTERRUPTION OF POWER SUPPLY STERILIZATION OF OPERATING ROOM
SAN FERNANDO	PRIVATE TERTIARY	-GARBAGE COLLECTION SCAVENGERS OPEN THE GARBAGE CONTAINERS THEN FILE COMPLAINTS WHEN INJURED -NON PAYING PATIENTS -NURSES DEMAND FOR 2 MONTH LEAVE THEN RESIGNS IF NOT GIVEN A LEAVE THE GOVERNMENT SHOULD IMPLEMENT A MINIMUM NUMBER OF YEARS OF SERVICE BEFORE LEAVING. STANDARDIZE THE SALARY OF NURSES NURSES GOING ABROAD ARE BEING TAKEN ADVANTAGE BY RECRUITING AGENCIES.
PAMPANGA	PRIVATE SECONDARY	ABSENTEEISM OF STAFF ABSENCE WITHOUT LEAVE TARDINESS EXCESSIVE CONSULTANT FEE IRREGULAR/LATE CONSULTANTS PACKAGE ON PROFESSIONAL FEE
NUEVA ECIJA	PRIVATE SECONDARY	MANPOWER SUPPLIES EQUIPMENTS
TARLAC	PRIVATE SECONDARY	LACK OF RADIOLOGIST NEED TO TRANSFER PATIENT TO A TERTIARY HOSPITAL FOR CT SCAN INCOMPLETE LABORATORY

Lack of manpower specifically the nursing staff and waste disposal are common problems encountered by the hospitals.

Table 16. Services Offered by the Hospitals per Province/City

PROVINCE /CITY	CATEGORY/ TYPE	SERVICES	EQUIPMENT	SPECIALTY
ANGELES CITY	PRIVATE SECONDARY	BLOOD CHEMISTRIES MEDICO LEGAL RABIES CENTER	AMBUBAG SURGICAL SET ECG XRAY OXYMETER SUCTION MACHINE NEBULIZER	ENT IM OPHTHA PEDIATRICS PATHOLOGIST RADIOLOGIST UROLOGIST DERMATOLOGIST
	PRIVATE	BLOOD AND URINE	CARDIAC MONITOR	ENT

	TERTIARY	CHEMISTRIES CULTURE ER, DR, OR, NICU,ICU NURSERY DIALYSIS TRAUMA CENTER CANCER CLINIC PHYSICAL REHAB CENTER MEDICO LEGAL AMBULANCE AUTOPSY	AMBUBAG SURGICAL SET INTUBATIONSET DEFIBRILLATOR INCUBATOR PORTABLE X RAY 2 D ECHO ECG TREADMILL CT SCAN MRI ULTRASOUND PULMONARY FUNCTION TEST MAMOGRAPHY BLOOD GAS VENTILATOR SUCTION MACHINE OXYMETER NEBULIZER FETAL MONITOR CATH LAB	IM (ALL SPECIALTY) OB GYNE OPHTHA PEDIATRICS (ALL SPECIALTY) PATHOLOGIST RADIOLOGIST SURGERY (ALL SPECIALTY) PSYCHIATRY OCCUPATIONAL MEDICINE DERMATOLOGIST ANESTHESIOLOGIST
SAN FERNAND O	PRIVATE TERTIARY	BLOOD CHEMISTRIES ER, DR, OR, NICU,ICU NURSERY DIALYSIS AMBULANCE	CARDIAC MONITOR AMBUBAG SURGICAL SET INTUBATIONSET DEFIBRILLATOR INCUBATOR 2D ECHO CT SCAN X RAY VENTILATOR SUCTION MACHINE OXYMETER NEBULIZER FETAL MONITOR	ENT IM (ALL SPECIALTY) OB GYNE OPHTHA PEDIATRICS (ALL SPECIALTY EXCEPT ENDO, NEPHRO, NEURO) PATHOLOGIST RADIOLOGIST SURGERY (ALL SPECIALTY) PSYCHIATRY DERMATOLOGIST ANESTHESIOLOGIST PHYSICAL THERAPY AND REHAB
PAMPANG A	PRIVATE SECONDARY	ER,NURSERY, DR, OR, LABORATORY AMBULANCE	CARDIAC MONITOR AMBUBAG SURGICAL SET INTUBATION SET DEFIBRILLATOR INCUBATOR ECG ULTRASOUND X RAY VENTILATOR SUCTION MACHINE OXYMETER NEBULIZER FETAL MONITOR	IM (NEPHRO AND PULMO) OB GYNE PEDIATRICS PATHOLOGIST RADIOLOGIST SURGERY (GENERAL SURGERY, URO, ORTHO) ANESTHESIOLOGIST
NUEVA ECIJA	PRIVATE SECONDARY	ER,NURSERY, DR, OR, LABORATORY AMBULANCE	CARDIAC MONITOR AMBUBAG SURGICAL SET INTUBATIONSET DEFIBRILLATOR INCUBATOR ECG ULTRASOUND X RAY SUCTION MACHINE OXYMETER NEBULIZER FETAL MONITOR	ENT IM OB GYNE PEDIATRICS PATHOLOGIST RADIOLOGIST SURGERY (GENERAL SURGERY) ANESTHESIOLOGIST
	TERTIARY GOVERNMENT	LABORATORY ER, DR, OR, NICU,ICU	CARDIAC MONITOR AMBUBAG	ENT IM (ALL SPECIALTY)

		NURSERY DIALYSIS TRAUMA CENTER CANCER CLINIC RABIES CENTER POISON CENTER TB DOT CENTER MEDICO LEGAL AMBULANCE AUTOPSY	SURGICAL SET INTUBATIONSET DEFIBRILLATOR INCUBATOR PORTABLE X RAY ECG TREADMILL CT SCAN ULTRASOUND PULMONARY FUNCTION TEST MAMOGRAPHY VENTILATOR SUCTION MACHINE OXYMETER NEBULIZER FETAL MONITOR CATH LAB	OB GYNE OPHTHA PEDIATRICS (ALL SPECIALTY) PATHOLOGIST RADIOLOGIST SURGERY PSYCHIATRY OCCUPATIONAL MEDICINE ANESTHESIOLOGIST
TARLAC	PRIVATE SECONDARY	ER, DR, OR BLOOD AND URINE CHEM MEDICO LEGAL AMBULANCE	AMBUBAG SURGICAL SET INTUBATIONSET DEFIBRILLATOR INCUBATOR PORTABLE X RAY ECG X RAY SUCTION MACHINE OXYMETER NEBULIZER FETAL MONITOR	ENT IM (GASTRO) OB GYNE PEDIATRICS PATHOLOGIST RADIOLOGIST SURGERY (UROLOGY AND GENERAL SURGERY) ANESTHESIOLOGIST
ZAMBALES	GOVERNMENT TERTIARY	ER, NURSERY, ICU, DR, OR LABORATORY AMBULANCE	CARDIAC MONITOR AMBUBAG SURGICAL SET INTUBATIONSET INCUBATOR ECG CT SCAN ULTRAOUND X RAY SUCTION MACHINE NEBULIZER FETAL MONITOR	ENT IM (PULMO) OB GYNE PEDIATRICS PATHOLOGIST SURGERY (UROLOGY AND ORTHOPEDIC) ANESTHESIOLOGIST

According to hospital representatives who answered the questionnaires, the tertiary hospitals in Angeles city and Nueva Ecija were offering a complete line up of almost all the medical and surgical specialty services as well as a trauma , cancer, physical rehabilitation , rabies and TB DOT center. Only four tertiary training hospitals were engaged in research activities one private and three government institutions.

Table 17. Population Barangay Health Station Ratio

PROVINCES/CITIES	TOTAL POPULATION	NO. OF BRGY	NO. OF BHSs	RATIO TO POPULATION
AURORA	199,347	151	59	1:3378
BATAAN	540,852	212	155	1:3489
BULACAN	2,047,888	456	410	1:4994
PAMPANGA	1,632,229	470	324	1:5037
ZAMBALES	464,363	230	169	1:2748
ANGELES	325,410	33	27	1:12052
BALANGA	81,166	25	22	1:3689
MALOLOS	199,343	51	45	1:4429
SAN JOSE D.M.	450,210	59	51	1:8827

DOH 2004

Health Care Financing

In Region 3, Philhealth has a total membership of 6,312,770 with an estimated coverage of 45% among the indigent population. Bulacan and Pampanga has the highest population coverage by Philhealth and 86% of Government and privately owned hospitals were accredited by Philhealth .

Table 18. Membership Category of Philhealth (2005), Region 3

PROVINCE	GOV'T	PRIVATE	IPP	HOUSEHOLD	INDIGENT	NPM	
BATAAN	71380	233935	154040	15	27990	5255	492,615
BULACAN	226715	871365	494240	140	172165	18595	1,783,220
N. ECIJA	171750	226185	281095	15	88680	8565	776,290
PAMP.	186400	666660	605345	120	172940	25825	1,657,280
TARLAC	107800	308535	226530	140	341125	9050	993,180
ZAMBALES	70045	235105	133635	40	66750	9115	514,790
AURORA	24720	11745	30045		28225	660	95,395
TOTAL	858,810	2,553,630	1,924,930	470	897,875	77,055	6,312,770

PHILHEALTH SEPTEMBER 2005

Province Name	Population (Projected Popn 2005)	Pov. Incidence 2000 (per province) %	Poor Popn (based on 2000 provincial poverty incidence)	PhilHealth's Sponsored Program (Principal Members as of Sept 2005)	PhilHealth's Sponsored Program (Principal Members and Dependents as of Sept 2005)	Estimated Rate of Coverage (Poor Population)
REGION III	**8,650,509**		**1,984,140**	**179,575**	**897,875**	**45.0%**
Bataan	603,618	12.1	73,038	5,598	27,990	38.3%
Bulacan	2,250,620	7.5	168,797	34,433	172,165	45.0%
Nueva Ecija	1,784,519	32.0	571,046	17,736	88,680	16.0%
Pampanga	2,017,264	18.2	367,142	34,588	172,940	47.6%
Tarlac	1,124,673	33.6	377,890	68,225	341,125	90.3%
Zambales	666,142	28.0	186,520	13,350	66,750	38.5%
Aurora	203,673	33.2	67,619	5,645	28,225	46.2%

PHILHEALTH REGION 3 November 2005

Table 19. Hospitals Accredited By Philhealth Region 3

PROVINCES	GOVERNMENT				PRIVATE				TOTAL
	P	S	T	TOTAL	P	S	T	TOTAL	
AURORA	2	1	0	3	0	0	0	0	3
BATAAN	1	3	1	5	0	5	0	5	10
BULACAN	2	7	1	9	13	42	3	56	66
PAMPANGA	1	12	1	14	8	13	8	29	43
N. ECIJA	3	8	1	12	3	4	4	12	24
TARLAC	1	3	1	5	4	8	4	16	21
ZAMBALES	1	3	1	6	0	6	1	7	12
TOTAL	11	37	6	54	28	77	19	126	179

PHILHEALTH NOVEMBER 2005

Providers of Health Product

There are 1659 establishments providing health care products in Region 3 with majority of them located in Bulacan and Nueva Ecija. There were also 919 Botica sa Barangay established whose objective is to promote equity in health by

ensuring the availability accessibility of affordable, safe, effective and quality essential drugs to all especially the marginalized and underserved populace in the most remote areas. However, only 16% have license to operate.

Table 20. List of Drug Establishments, Region 3

PROVINCE/CITY	NO. OF DRUG ESTABLISHMENT
PAMPANGA	211
SAN FERNANDO	101
ANGELES	100
AURORA	29
BATAAN	49
BULACAN	477
NUEVA ECIJA	373
TARLAC	159
ZAMBALES	106
OLONGAPO	54
TOTAL	1659

BFAD OCTOBER 2005

Table 21. Botica Sa Barangay with License to Operate, Region 3

PROVINCE	NUMBER
BATAAN	47
BULACAN	29
PAMPANGA	54
TARLAC	22
TOTAL	152

BFAD OCTOBER 2005

Table 22. Botica Sa Barangay without License to Operate

PROVINCE	NUMBER
AURORA	55
BATAAN	26
BULACAN	172
NUEVA ECIJA	205
PAMPNGA	80
TARLAC	136
ZAMBALES	93
TOT	767

BFAD OCTOBER 2005

Schools Offering Medical and Allied Medical Courses

Angeles University Foundation is the only school offering medical education in central Luzon. There were 31 schools offering Nursing education in Region 3 with Cabanatuan city having the highest number of nursing schools (7) followed by Bulacan (6).

A survey was conducted among universities in region 3 to determine the research capabilities of the institutions.. .Questionnaires were sent by mail to 12 Universities previously identified to have engaged in research activities. Only 25% (3) answered the questionnaire.

Table 23. Research Capability of Universities in Region 3

PROVINCE /CITY	CRITERIA	
ANGELES CITY AND BULACAN (ANGELES UNIVERSITY FOUNDATION AND BALIUAG UNIVERSITY)	RESEARCH ADMINISTRATION	A WELL STRUCTURED RESEARCH ORGANIZATION IS IN PLACE WITH WELL DEVELOPED PLANNING SYSTEM
	RESEARCH IMPLEMENTATION	TRAINING PROGRAMS ARE REGULARLY CONDUCTED AGENDA FORMULATION IS UNDERTAKEN RESEARCH OUTPUT ARE REVIEWED BY A TECHNICAL COMMITTEE FOR PUBLICATION IN A JOURNAL
	RESOURCES	THERE IS AN ADEQUATELY STOCKED LIBRARY WITH INTERNET ACCESS SOFTWARE FOR STATISTICAL ANALYSIS THERE IS A BUDGET FOR RESEARCH PROVIDED BY THE ADMINISTRATION THERE IS ALSO DELIBERATE EFFORT TO SECURE EXTERNAL GRANTS
	LINKAGES	THE RESEARCHES ARE INVOLVED IN COLLABORATIVE RESEARCH WITH LOCAL AND INTERNATIONAL GROUPS
	INCENTIVES	THE SCHOOL PROVIDES MONETARY INCENTIVES TO RESEACHERS, GIVE RECOGNITION AND IS A CRITERIA FOR PROMOTION
SAN FERNANDO CITY (ASSUMPTION COLLEGE)	RESEARCH ADMINISTRATION	A STRUCTURED RESEARCH ORGANIZATION IS IN PLACE
	RESEARCH IMPLEMENTATION	-ESTABLISHED A REVITALIZED RESEARCH CULTURE IN THE UNIVERSITY -FORMULATE , IMPLEMENT, MONITOR FACULTY RESEARCH PROGRAM -PROVIDE ASSITANCE TO AND MONITOR PROJECTS OF THE UNIVERSITY -ENSURE PROPER AND UNIFORM - IMPLEMENTATION OF GUIDELINES AND POLICIES -SERVE AS CLEARING HOUSE FOR RESEARCH PROJECTS/UNDERTAKING -ASSIST IN SUPERVISING RESEARCH CLASSES
	LINKAGES	ENGAGED IN RESEARCHES ORGANIZED BY GOVERNMENT AGENCIES LINKAGES WITH OTHER UNIVERSITIES ENGAGED IN RESEARCH ACTIVITIES

Table 24. Schools Offering Medical and Allied Medical Courses, Region 3

	NUMBER
DOCTOR OF MEDICINE	1
MS NURSING	7
NURSING	31
MIDWIFERY	12
PHYSICAL THERAPY	5
PULMONARY THERAPY	7
RADIOLOGY TECHNOLOGY	2

PHARMACY	5
MED TECH	2
NURSING AIDE	5
DENTISTRY	2
NUTRITION	5
ASSOCITE IN PULMONARY THERAPY	1
ASSOCIATE IN REDIOLOGIC TECHNOLOGY	2
PRE DENTISTRY	1

DOH 2004

Table 25. Care Giver School Accredited by TESDA

PROVINCE	CATEGORY	NUMBER	YEAR
BATAAN	PRIVATE	4	2003
	PRIVATE	4	2004
BULACAN	PRIVATE	9	2003
	PRIVATE	11	2004
	PRIVATE	1	2005
NUEVA ECIJA	PRIVATE	6	2003
	PRIVATE	10	2004
PAMPANGA	PRIVATE	4	2003
	PRIVATE	14	2004
TARLAC	PRIVATE	12	2004
ZAMBALES	PRIVATE	7	2003
	PRIVATE	6	2004
TOTAL		88	

TESDA JANUARY 31, 2005

Table 26. Number of Enrolees and Graduates under the Health Sector Program 2004-2005

	2004		AS OF SEPTEMBER 2005	
PROGRAM/VENUE	ENROLLMENT	GRADUATES	ENROLLMENT	GRADUATES
REGULAR PROGRAM	6931	2500	4265	1882
SHORT TERM EXTENSION PROGRAM	4056	2928	4334	1802
NON SCHOOL BASED PROGRAM	2183	2114	2197	2078
GRAND TOTAL	13170	7542	10796	5762

TESDA REGION 3

METHODOLOGY

The health situation in Region 3 was assessed based on publications and documents obtained from government agencies from September to October 2005. The health profile of the region from 2003 to 2004 was provided by the Department of Health through the Regional Epidemiology Surveillance Unit (RESU). Demographic data were obtained from the National Statistics Yearbook. The DOLE, DSWD, TESDA, DOST, BFAD and Philhealth also provided pertinent data.

In addition to the review of available data three simultaneous surveys to identify the priorities of each province/city using a questionnaire were conducted from October 1-30, 2005. The questionnaires were mailed, faxed or delivered personally to 10 provinces/cities namely Aurora, Angeles City, Bataan, Bulacan, Cabanatuan city, Nueva Ecija, Olongapo, Zambales, Pampanga and San Fernando City. The questionnaire contained information on the following:
   a. Health concerns of the province or city as well as possible solutions and recommendation.
   b. Information on the budget allotted by the local government on research

      c. Funding agencies or linkages
      d. Ongoing researches

On the same months as above, consultations were also done from Provincial and City health officers, as well as Directors or representatives of some agencies to elaborate on the priorities identified in the survey. However, only six provinces / cities were covered due to financial and time constraints. Some of the key informant identified were not accessible through telephone or were not available during the time of visit.

Two other surveys were also conducted among hospitals and universities. The hospital survey aimed to identify the top ten mortality and morbidity in the different hospitals, problems encountered as well as services offered, equipments available and research capability. The survey among universities also aimed to assess their research capability of the institutions.

All problems identified in the survey and consultations were collated and classified according to broad research and development area. These were presented during the plenary session of the regional consultation workshop in November 8, 2005. The objectives of the workshop were as follows:
•to validate the research priority areas in Region 3
•to rank the priority areas identified in Region 3
•to determine the types of research for the areas identified in Region 3

All government agencies involved in health care, Provincial and city health officers, key informants, Hospital directors in secondary and tertiary hospitals who responded to the survey as well as those who did not answer the survey were invited. Representatives of Universities who were previously identified to have engaged in research activities were also invited, non-government organization, professional societies, heads of the different health related Departments of the Angeles University Foundation as well as the Director of the Center for Research and Development (CRD- AUF) were invited. There were 32 participants from various sectors (PCHRD, regional and zonal facilitators were excluded), namely: PHILHEALTH, DENR, NEDA, DOST, DOH, CHED, POPCOM, local government (Angeles City, San Fernando City, Tarlac), hospital representatives (Bataan, Pampanga, Angeles City), academe, professional society, and NGO who attended the workshop.

All participants were provided with a profile of Region 3 which included the summary of health concerns in the region identified through surveys and consultations, demographic characteristics, poverty incidence, health services, health indices, mortality and morbidity data .An overview on the Philippine National Health Research System and the objectives and rationale for a unified research agenda was presented followed by the health situation, Philhealth coverage and programs of DOST in Region 3. The summary of health concerns gathered from the survey and consultations were presented for validation and ranking in the workshop. The criteria for prioritization were emphasized during the presentation, namely:
      a. Urgency/magnitude of the issue to the Region
      b. Feasibility based on existing capability
      c. Impact on the greater number of population/cost to health care
      d. Impact of research on the health issue concerned
      e. Areas neglected or not well funded.

After the presentation, the participants were divided into two groups facilitated by faculty members of the AUF College of Medicine whose function were as follows:
1. To guide the participants on how to accomplish the research prioritization form for presentation in the plenary
2. To guide the participants on the health concerns to be validated
3. To encourage all the participants to contribute in the discussion

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

During the plenary, local health system which was originally ranked number 4 was replaced by research and was brought down to number 12. According to one participant improving the research capability of the Institutions is a higher priority. Autism was merged with mental health disorders in number 8. Herbal medicine was ranked 11 however some members of the plenary suggested that it should be elevated to number 6 instead of Environmental health risk which was only localized in Bulacan. Other members pointed out that occupational health risk is combined with environmental risk which is also a very important issue hence herbal medicine remained in number 11. Health information system was merged with documentation in number 4.

The top 10 priority areas identified were: 1. TB, 2. Dengue, 3. Healthy Lifestyle (nutritional practice), 4. Research and Research Ethics, 5. Degenerative Diseases (malignancy), 6. Environmental Health Risk and Occupational Health, 7. Health Information System, 8. Mental Health, Behavioral Diseases and Autism, 9. Health Care Delivery, and 10. Family planning

RESEARCH PRIORITIES OF REGION 3

Final Ranking

BROAD R&D AREA[1]	SPECIFIC TOPIC[2]	RATIONALE[3]	OBJECTIVE[4]	RESPONSIBLE AGENCY[5]	FUNDING SOURCE[6]
1. TB	INCREASE NUMBER OF TB DEATHS	REFERRAL SYSTEM	TO EVALUATE THE REFERRAL SYSTEM OF TB PATIENTS	DOH	DOH/PHILHEALTH
2. DENGUE	PREDICTORS OF SHOCK IN DENGUE	CLINICAL AND LABORATORY FACTORS RELATED TO SHOCK	TO DETERMINE THE PREDICTORS OF DENGUE SHOCK	DOH/DOST	WHO/DOST
3. NUTRITION	NUTRITIONAL STATUS OF REGION 3	NUTRITION IN THE PREVENTION OF MORTALITY AND MORBIDITY	TO DETERMINE THE NUTRITIONAL STATUS OF REGION 3	DEPED/EDUCATIONAL INSTITUTION	DEPED/EDUCATIONAL INSTITUTION
4. RESEARCH	CAPABILITY OF INSTITUTIONS IN DOING RESEARCH	A. DEFICIENT IN RESEARCH CAPABILITY B. LACK OF INCENTIVES TO CONDUCT RESEARCH C. LACK OF MANPOWER D. LACK OF FUNDING	TO DETERMINE THE RESEARCH CAPABILITY OF INSTITUTIONS IN REGION 3	ched	ched
4. ETHICS	COMPLIANCE OF RESEARCHERS ON ETHICAL PRACTICE	A. INFORMED CONSENT B. CONFIDENTIALITY C. RIGHTS OF THE RESPONDENTS D. PLAGIARISM	TO DETERMINE THE COMPLIANCE OF RESEARCHERS ON ETHICAL PRACTICE		
5. MALIGNANCY	INCREASING INCIDENCE	CAUSES OF MALIGNANCY	TO IDENTIFY THE FACTORS RESPONSIBLE FOR INCREASED INCIDENCE OF MALIGNANCY REGION 3	DOH/DENR	DOHDENR
6. ENVIRONMENTAL HEALTH RISK	INCREASE LEVELS OF LEAD IN AMBIENT AIR	MAGNITUDE OF THE PROBLEM	TO DETERMINE THE PROPORTION OF THE POPULATION AFFECTED BY THE HIGH LEVELS OF LEAD AS WELL AS THE EFFECTS ON CHILDREN	LGU/DENR	LGU/DENR
6. OCCUPATIONAL HEALTH RISK	GUIDELINES REGARDING HEALTH OF WORKERS BEFORE AND AFTER EMPLOYMENT	THERE ARE NO EXISTING GUIDELINES ON HEALTH OF WORKERS BEFORE AND AFTER EMPLOYMENT	TO DEVELOP A UNIFIED OCCUPATIONAL HEALTH PROGRAM	DOLE	DOLE/DOH
7. HEALTH INFORMATION SYSTEM	KNOWLEDGE	A. LACK OF AWARENESS ABOUT PHILHEALTH BENEFITS B. LACK OF INFORMATION DISSEMINATION ABOUT HEALTH BENEFITS C. LACK OF DATA BASE ON THE AVAILABLE HEALTH SERVICES OFFERED BY DIFFERENT HEALTH AGENCIES IN THE REGION	TO STANDARDIZE THE DATABASE ON INFORMATION SYSTEM	Philhealth Doh	Philhealth Doh
8. MENTAL DISEASES AND BEHAVIORAL DISORDER	PROFILE OF PATIENTS WITH MENTAL DISORDERS	NO EXISTING PROFILE	TO DETERMINE THE PROFILE OF PATIENTS WITH MENTAL DISORDERS	DOH	DOH
8. AUSTISTIC SPECTRUM DISORDER	GENERAL PROFILE OF CHILDREN WITH AUTISM	DESCRIPTION OF THE GENERAL PROFILE OF AUTISTIC CHILDREN IN THE PHILIPPINES	TO DETERMINE THE GENERAL PROFILE OF AUTISTIC CHILDREN IN THE PHILIPPINES	AUTISM SOCIETY OF THE PHILIPPINES	AUTISM SOCIETY OF THE PHILIPPINES
9. HEALTH CARE DELIVERY SYSTEM / HEALTH CARE FINANCING SYSTEM	EXPANSION OF PHILHEALTH COVERAGE	A. HIGH COST OF HOSPITALIZATION B. POSSIBILITY OF EXTENDING PHILHEALTH COVERAGE TO HOME CARE CASES (DOMICILIARY MEDICAL SERVICES)	TO DETERMINE THE FEASIBILITY OF EXPANDING PHILHEALTH COVERAGE TO INCLUDE DOMICILIARY MEDICAL SERVICES	Philhealth	Philhealth
10. FAMILY PLANNING	CONSEQUENCE OF SUPPORT PULLOUT FROM FAMILY PLANNING PROGRAMS	LACK OF BUDGET	TO DETERMINE THE CONSEQUENCE OF SUPPORT PULLOUT FROM FAMILY PLANNING PROGRAMS	POPCOME	LGU
11. HERBAL MEDICINE	KNOWLEDGE EFFICACY	A. OTHER HERBAL MEDS USED HAVE NOT UNDERGONE CLINICAL TRIAL TO PROVE THEIR THERAPEUTIC EFFECTS B. LACK OF AWARENESS ABOUT THE HERBAL MEDS INCLUDED IN THE LIST OF THE PNDF (PHIL. NATIONAL DRUGS FORMULARY)	TO CONDUCT CLINICAL TRIALS ON AVAILABLE HERBAL MEDICINE TO DETERMINE THE AWARENESS OF THE COMMUNITY ON THE AVAILABILITY OF HERBAL MEDICINE	Doh institutions	Doh ched
12. LOCAL GOVERNMENT CODE (DEVOLUTION)	IMPLEMENTATION	EFFECTIVE AND EFFICIENT MANAGEMENT	TO EVALUATE THE IMPLEMENTATION OF THE LOCAL GOVERNMENT CODE	LGU	**LGU**

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Field Health Information System

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Master list of Drug Establishments and Botika sa Barangay updated 2004
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Status of TVET Program registration January 31, 2005

Master List of NGO accredited by DSWD

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Directory of Universities offering Medical And Allied medical profession Region 3
    Directory of Hospitals Region 3

Comparative Figures of Claims from July 1999 to September 2005. PHILHEALTH
    REGION 3

DOLE Program Indicators as of December 2004

DOST Annual Report Region 3

ANNEXES

Demographic Characteristics by Province and City in Region 3

ANGELES CITY

POPULATION CHARACTERISTICS

The total population of Angeles city as of May 1, 2000 was 267,788 persons. This represented an increase of 33,777 persons over the figure in the 1995 census of population with September 1, 1995 as the reference date.

The annual growth rate recorded during the 1995 to 2000 period was 2.93 % . This was 3.14 percentage points higher than the annual growth rate during the 1990 to 1995 period. If the current population growth rate continues, the population is expected to double in 24 years.

Table 1. Population Distribution of Top 10 Barangays of Angeles City, 2000

	NUMBER	PERCENT
ANGELES CITY	267788	100
BALIBAGO	31731	11.85
CUTCUT	22462	8.39
MALABANIAS	19169	7.16
PULUNG CACUTUD	17167	6.41
SANTO DOMINGO	14139	5.28
NINOY AQUINO	12511	4.67
PULUNGBULU	12009	4.48
LOURDES NORTH WEST	11429	4.27
PANDAN	10545	3.94
PULUNG MARAGUL	9738	3.64

The number of households went up to 56,575 in 2000, an increase of 9,723 households over the 1995 census. However, the average household size slightly decrease from 4.98 persons in 1995 to 4.72 persons in 2000.

Females outnumbered males with a sex ratio of 99 males for every 100 female. Males dominated the age group 0-14 years and 40 to 44 years while females dominated the rest of the age groups. The median age is 23 years old which means that the population is below 23 years.

The dependency ratio is 60 which means that every 100 person in the working age group (15-64) had to support 55 young dependents and five old dependents. Young dependents comprised 34.5%, old dependents comprised 3.2% and the working group is 62.3%. Married persons made up 46.72% of the household population while 42.41 % were reported to be single. The remaining 10.87 % were either with other marital arrangements, widowed, separated, divorced or with unknown marital status.The proportion of single individual was higher for males (52.19%) than females (47.81%). The proportion of widowed was higher in female 80.44%.

Among the household population five years and older 34.5% attended/graduated from high school, 34.42 % attended/finished elementary, 12.17% were college undergraduates, 5.11% were academic degree holders and 0.09% with post baccalaureate courses. Females dominated higher levels of education at 52.21% for academic degree holders and 51.66% with post secondary courses. Most of the households were headed by

males 83.3% with the largest proportion of household heads age 30-39 years (28.49%) followed by age 40-49 (24.69%).

Females were more likely to head smaller households while males larger ones. The household size with the highest proportion of household headed by males was four persons(20.31%) while that of females was three persons(19.26%)

Majority of the population in Angeles city were Filipino (96.66%) And about 0.56% were either Chinese, Americans, British and others.

Of the total population 1811 persons have disabilities. Low vision was the most common disability (22.53%) followed by loss of one or both arms/hands (14.74) mental retardation (11.26) and partial blindness (97.95). The proportion of low vision is higher in females (59.07%) and the proportion of those with oral defect is higher among males(61.43%).

Majority of the household population were literate (95.68%) with more females than males(95.74% vs 95.62)The highest proportion of literate persons are in the 30-34 year age group. (97.82%)

About 10.92% of women 15-49 years old got married at the age of 20 years, 10.25% at 18 years and 9.31% at 19 years. The average age at first marriage is 21 years.Of the total ever married women 15-49 years old 21.58 % had two children 18.72 had three children and 18.02 had no children. The average number of children born to an ever married woman is 2.41.

The number of overseas workers decreased from 3821 in 1995 to 3608 in 2000. There was a higher proportion of male over seas workers than female overseas workers (57.18 vs 42.82) the highest proportion of overseas worker is the age group 45 years and over.(23.64). About 16% of the overseas worker attended /completed elementary 35.17 % reached high school, 21.81% were college undergraduates, 35.17 % reached high school, 21.81% college undergraduate 10.78% were academic degree holder and 0.14% with post baccalaureate courses. Among the academic degree holders, the proportion was higher in male (65.81%) than female. The same is true for those with post secondary courses (61.97%).

HOUSEHOLD CHARACTERISTICS
Electricity was the most common type of fuel used for lighting household (93.83%) while 1.91% used kerosene. The remaining used either liquefied petroleum gas, oil or other types of fuel or lighting.

More than 2/3 of the household got water from own use faucet connected to a community water system for drinking/cooking. Other sources were shared faucet also connected to a community water system (12.02) shared tube/piped deep well (9.19) and own use tubed/piped deep well 95.37). The same is true for main source of water for laundry and or bathing.

About 79.6% use LPG for cooking this proportion was higher than 10 years ago by 25.7 percentage points. The proportion of households that use wood for cooking decreased by 9.95 percentage points. About 74% of the households had an exclusive use of water sealed sewer/septic tank. Water sealed sewer shared with other households at 9.49% and water sealed depository used exclusively by the household 8.82%, 0.46% had an open pit type of toilet facility.

The usual manner of garbage disposal is garbage collection by truck 83.03% Dumping in individual pit 6.95% and burning 6.8% The remaining household either had their garbage buried, fed to the animals, composted or used other types of garbage disposal.
Most household had television set (83%) radio cassette (82.55). 50.41% had refrigerator/freezer , 45. 56 had washing machine and 36.81 had video cassette recorder.

LEADING CAUSES OF MORTALITY, Number and Rate per 100,000 Population
C.Y. 2004
ANGELES CITY

CAUSES	NUMBER	RATE
Heart Disease	483	148.43
Cancer	164	50.40
Renal Failure	131	40.26
Multi Organ Failure/Old age	127	39.03
Pneumonia	124	38.11
Hypertension	92	28.27
PTB	86	26.43
COPD	64	19.67
Diabetes Mellitus	57	17.52
Cerebro-vascular Accident	48	14.75

LEADING CAUSES OF MORBIDITY, Number and Rate per 100,000 Population

C.Y. 2004

ANGELES CITY

CAUSES	NUMBER	RATE
HYPERTENSION	4,062	1,248.27
DIARRHEAS	3,546	1,089.70
PNEUMONIAS	2,774	852.46
DISEASES OF THE HEART	2,441	750.13
INFLUENZA	1,527	469.25
BRONCHITIS/BRONCHIOLITIS	1,478	454.20
PTB	1,104	339.26
MALIGNANT NEOPLASM	352	108.17
DENGUE FEVER	265	81.44
SORE EYES	163	50.09

OLONGAPO CITY
Olongapo City was converted into a city on June 1, 1966. It was once the site of the biggest US naval base (Subic Naval Base) in Asia for over three quarters of a century. The base was turned over to the Philippine Government when the Americans left in 1992 and was converted into an industrial and tourism zone under the Subic Bay Metropolitan Authority (SBMA). Since then, its huge area including docking facilities and an international airport has attracted foreign investors.

POPULATION CHARACTERISTICS

Based on the census of population and housing, the total population of Olongapo City as of may 1, 200 was 194,260 persons. This represented an increase of 14506 persons over the figure in the 1995 census of population with September 1, 1995 as the reference date.

The average annual population growth rate recorded during the 1995 to 2000 period was 1.68 %. This was 3.03 percentage points higher than the annual growth rate recorded during the 1990 to 1995 period.

The highest population growth rate recorded for Olongapo City since 1970 was during the intercensal period 1970 to 1975 at 6.44% while the lowest was during the 1990 to 1995 period at –1.35%. If the current growth rate of the population continues, the population of Olongapo city is expected to double in 41 years.

Olongapo city	194,260	100
Santa Rita	33477	17.23
Gordon Heights	21536	11.09
East Bajac Bajac	18725	9.64
New Cabalan	18167	9.35
Barretp	15816	8.14
Old cabalan	12348	6.36
Kalaklan	10340	5.32
Mabayuan	10305	5.30
East Tapinac	10058	5.18
New Kalalake	8718	4.49
West Bajac Bajac	8015	4.13
West Tapinac	7420	3.82
Banicain	6654	3.43
Pagasa	5716	2.94
Asinan	3389	1.74
New Kababae	2092	1.08
New Ilalim	1484	0.76

The number of households went up to 43107 households in 2000, an increase of 4124 households over the 1995 census. On the other hand, the average household size went down to 4.49 persons from 4.60 in 1995.

There were more female than male with a sex ratio of 97 male for every 100 female. Males dominated the younger age group (0-14 years) while females the older age group (15 years and over).The sex ratio in 1995 was also recorded at 97.

Young dependents (0-14) constituted 34.58 % of the total population while old dependents (65 years old and over) accounted for 3% thus the working group (15-64) comprised 62.42%.The 2000 dependency ration was 60. This means that for every 100 persons in the working age group, they had to support 55 young dependents and 5 old dependents. It was also 60 in 1995.

Children ages 4 years and below had the largest population with 12.63%. This was followed by those aged 5-9 years (11.69%) and 10-14 years (10.69%) Generally the age structure of Olongapo City followed the typical broad based pyramid consisting of large proportion of children and a narrow top made up of relatively small proportion of elderly. There is a higher proportion of female in the 20-24 years old. The median age is 23 years old and was 22 five years ago. Married persons made up 42.57% of the household

population while 42.3% were reported single. The remaining 14.3% were either with their marital arrangements, widowed or separated.

Among single persons the proportion was higher for males 51.18% than female 48.82%. In contrast the proportion of widowed was higher for female (81.35) than for male (18.65).

Among the household population aged 5 years and above 38.47% attended/completed high school 28.7% elementary 12.9% were college undergraduates and 4.98% were academic degree holders.

Majority of the households were headed by male (80.7) The largest proportion of household heads were 30-39 years (27.72) followed by those 40-49 years(25.04) Females were more likely to head a smaller household while male larger ones. The household size with the largest proportion of household headed b ales was four persons (21.33) while two persons for the females (20.44).

Majority of the people were Filipinos (94.49). The remaining 2.87% were either Bahraini, Americans, British, Chinese.

Of the total population in Olongapo City 2,145 persons (1.1) had disability. Low vision constituted the highest proportion of persons with disability (42.24) followed by mental illness (10.07) mental retardation (9.18) and partial blindness (5.45).

Among persons with low vision the proportion was higher for females (58.94) than males (41.06). On the contrary the proportion of those with mental illness was higher for males (57.41) than female (42.59).

Of the household population 10 years and over 98.74% were literate. Literacy rate for males (98.71) and females (98.76) posted almost the same proportion.

The proportion of literate people was in the age group 20-24 years (99.58) and 25-29 (99.49).

There were 33.29 ever married women 15-49 years old in Olongapo City about 10-50% of the m got married at the age of 20 years, 8.98% at 18 years 8.2% at 19 years. The average age at first marriage was recorded at 22 years.

Of the total ever married women 15 to 49 years old 22.95% had two children, 19.65% had one child and 15.82% had three children. The average number of children to an ever married woman was two.

The number of overseas workers decreased from 3,872 in 1995 to 3468 in 2000. There was a higher proportion of males 968.28) than females (31.72) among overseas workers. The highest proportion of overseas workers were 45 years and above (26.1).

More than one in three (35.58) overseas workers attended or completed high school 21.97% were college undergraduates and 11.68% were academic degree holders.

HOUSEHOLD CHARACTERISTICS
Electricity was the common fuel (90.24) used for lighting by households. About 6.57% used kerosene and the remaining 3.19% used other types of fuel for lighting by households.

Households got water from own use faucet connected to a community water system (66.17). Other sources were shared faucet also connected to a community water system (17.33), spring ,lake, river, rain (7.26) and tube/pipe deep well shared with other households.

About 75.65% of household used LPG for cooking. This proportion was higher by 18.51% points than the figure ten years ago. On the contrary, the proportion of households that used kerosene (11.54), electricity (4.73), wood (4.49), all decreased after ten years.

Three out of four households had an exclusive use of water sealed sewers/septic tank. 74.14% household that had water sealed sewer/septic tank shared with other households (12.58) and water sealed other depository used exclusively by the household (4.75) followed. About 0.67 % of households still had no toilet facility at all.

The most common manner of garbage disposal was by truck collection (86.45) Burning (7.54) and feeding to animals (2.86) followed. The remaining 3.14% of household either had their garbage buried , fed to animals, composted, dumped in individual pit or used other types of garbage disposal.

LEADING CAUSES OF MORTALITY, Number and Rate per 100,000 Population

C.Y. 2004

OLONGAPO CITY

CAUSES	NUMBER	RATE
Heart Disease	167	78.89
Hypertension	127	60.00
Malignant Neoplasm	72	34.01
PTB	57	26.93
Pneumonia	51	24.09
Diabetes Mellitus	36	17.01
Renal Failure	27	12.76
COPD	24	11.34
Multi Organ Failure/Old age	15	7.09
Accident	14	6.61

AURORA

POPULATION CHARACTERISTICS
Population size
The total population of Aurora as of May 1, 2000 was 173,797 persons. This implied an increase of 14,176 persons over the 1995 figure (with September 1995 as reference date) or an average annual population growth rate of 1.8 percent.

Population growth
The growth rate of the province showed an erratic trend in between censal periods since 1918 until 1980. Beginning in the 1990's the growth rate of the province continued to decline. If the average annual growth rate of the population continues at 1.8 percent, the population is expected to double in about 38 years, increasing by more than 3,000 persons every year or one person for every three hours.

Population distribution by Municipality, Aurora , 2000

Municipality	Number	Percent
Aurora	173,797	100
Baler	29,923	17.2
Casiguran	21,459	12.4
Dilasag	14,676	8.4
Dinalungan	9,711	5.6
Dingalan	20,157	11.6
Dipaculao	23,064	13.3
Maria Aurora	33,551	19.3
San Luis	21,256	12.2

Household size

The number of household in the province rose to 35,024 household registering an increase of 3,684 households as compared to the 1995 figure. The average household size in 2000 slightly decline to five persons from 5.1 persons in 1995.

Age sex composition

There are more male than female with a sex ratio of 107 males for every 100 females slightly lower than the sex ration reported in 1995 at 108. There were more males than female in the age bracket of 0 to 64. as the age advance from 65 onwards, the females dominated the male. The overall dependency ratio is 79.8. The population of each age group decreases with increase in age resulting in a pyramidal form. Children under five years old made up 13.7% of the total population of the province lower than the percentage for the age group 5-9 years (14.2%).

Marital status

There are more married than single individuals at 48.5%. The proportion of married individuals was lower than the 1995 figure (50.9%). The proportion of widowed individuals slightly increased to 4.07 % in 2000 from 3.97% in 1995. Those who were either divorced/separated, with other marital arrangements, or unknown marital status comprised 9.2%. Among the single individuals, a higher percentage were male (56.4%) than female (43.6%). On the other hand, more female are widowed (74%) compared to male (26%).

Highest grade completed

Nearly half (46.9%) of the household population five years old and over attended or completed elementary education. This is lower than the 1995 figure of 49.4%. Those who reached or completed secondary education constitute 29.7% which is higher by 2.3% as compared to the 1995 figure. Those who had post baccalaureate courses were 0.3% and those who had not completed any grade made up 4.9% lower by 2% points from that of the 1995 figures

Household head

Majority of the households were headed by males (89.1%) percent wit only 10.9% headed by female. Among males, headship rate peaked at 30-39 years (31.3%) while headship rate for female was highest at 50-59 yeas (24.5%).

HOUSEHOLD CHARACTERISTICS

Electricity was the common source of lighting (60%) while 36% used kerosene and 3% used other source of fuel. Tubed /pipe shallow well was the source of water supply for drinking and/or cooking (27.9%). The proportion of household whose water for drinking or cooking came from own use and shared faucet, community water system were recorded at

18.1% and 19.6% respectively , while 6.8% from spring, lake, river, rain, etc. Wood is utilized as fuel for cooking by 40.9%, liquefied petroleum gas (LPG) at 38.3%, and 18% used other fuel. The improper disposal of human waste leads to a public health hazard. About 30% of the households had own water sealed sewer/septic tank type toilet facility and 6.1% still had no toilet. Burning was the usual manner of garbage disposal by households (80.4%) The rest either dispose their garbage through picked up by garbage truck, dumping in individual pit, burying or other types of garbage disposal. Majority own a radio/radio cassette (65.8%) an increase of 9.3% points over the 1990 figure.

LEADING CAUSES OF MORTALITY, Number and Rate per 100,000 Population

C.Y. 2004

AURORA

CAUSES	NUMBER	RATE
Victim of Flood of Cataclismic Nature	124	62.20
Heart Disease	71	35.62
Chronic Degenerative Disease	58	29.09
Cancer	49	24.58
PTB	41	20.57
Pneumonia	33	16.55
Accident	28	14.05
CVD	27	13.54
Myocardial Infarction	23	11.54
Bleeding Peptic Ulcer	23	11.54
Congestive Heart Failure	23	11.54
COPD	22	11.04

LEADING CAUSES OF MORBIDITY, Number and Rate per 100,000 Population

C.Y. 2004

AURORA

CAUSES	NUMBER	RATE
ARI	13,479	6,761.58
HYPERTENSION	969	486.09
INFLUENZA	782	392.28
DIARRHEAS	775	388.77
PNEUMONIAS	758	380.24
WOUNDS	383	192.13
BRONCHIAL ASTHMA	293	146.98
ANEMIA	224	112.37
BRONCHITIS/BRONCHIOLITIS	215	107.85
SKIN DISEASES	171	85.78

BATAAN

The province is divided into two by a pass that separates the northern mountains dominated by Mt Natib at 1253 meters and the southern Mariveles mountains at 1388 meters which include Mt Samat.

Population size
Bataan has a total population of 557659 persons as of May 2000. This was up by 66,200 persons over the 1995 census of population results.The population translated to an average annual growth rate of 2.74 % 0.02 percentage points higher than the 2.72% growth rate during the 1990 to 1995 period. If the growth rate continues at 2.74% the population is expected to double in about 25 years.

BATAAN	557659	100
ABUCAY	31801	5.7
BAGAC	22353	4.01
BALANGA	71088	12.75
DINALUPIHAN	76145	13.65
HERMOSA	46254	8.29
LIMAY	46620	8.36
MARIVELES	85779	15.38
MORONG	21273	3.81
ORANI	52501	9.41
ORION	44067	7.9
PILAR	32368	5.8
SAMAL	27410	4.92

Household size
There was an increase in the number of households from 98499 in 1995 to 113 674 in 2000. with the average household size at 4.9 persons. The overall dependency ratio is at 62 which means that for every 100 persons in the working age group 15-64 years there were 62 dependents that is 57 young dependents (0-14 years) and 5 old dependents (65 years and above). The working age group comprises 61.6% of the population 0-14 years constituted 34.9% and 65 years and above 3.5%.

Age and sex composition
In 2000 males slightly outnumber females registering a sex ration of 100.87 males for every 100 females. The age structure followed he usual pyramid shape where children aged 4 yeas and below dominated the province with 12.19 % share to the total population and those aged 5-9 years followed at 11.63 %.

Marital status
Of the 423,747 household population 10 years old and over 42.75 % were single and 47.23% were married. Both registered a decrease from the 1995 figures (44.87% single and 48.36% married). The widowed, divorced/separated and those in other marital arrangements made up 3.83 % 1.25 % and 4.4 %. Higher proportion of males among single persons (52.84) and among those in other marital arrangements (50.31) were reported. On the other hand, females dominated the married (50.32), widowed (78.85), and divorced /separated (67.21).

Highest grade completed
Of the household population five years and over 37.17 % attended or completed elementary education and 34 % high school. Those who were college undergraduates comprise 9.36% while 4.89% constituted the academic degree holders.

Types of disability

About 8074 persons or 1.45% of the population had disability. Low vision was the most common type of disability (46.07). Other types were mental illness (10.24), partial blindness (7.27), mental retardation (6.17), and quadriplegic (5.93).
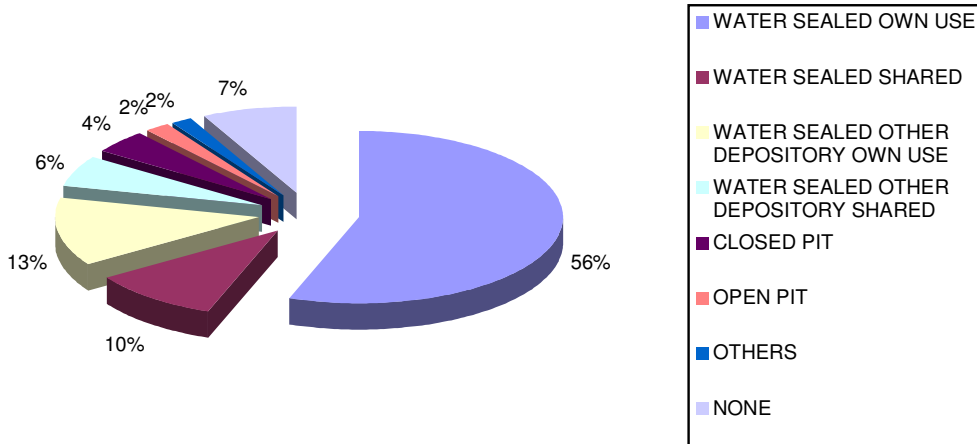
Household head

The average number of children ever born was 2.66. The proportion of ever married women who were still childless by the end of their reproductive life (45 to 49) was 1.24%. The average age at first marriage was 22.About 12.65 % of women 15-49 years old got married before they reached the legal age of marriage (18) 72.64 % 18-29 years and 4.83% 30 years and over. The number of overseas workers in this province in 2000 was 11097 persons. This registered an increase of 666 persons from the number reported in 1995 (10431). Majority (73.15%) were males. The highest percentage of overseas workers belongs to the age group 45 years and over. 22.63% followed by those aged 30-34 years (16.3) and 35 to 39 years (15.69)

More than one third of the households had own faucet connected to a community water system for drinking and cooking (35.71) up by 4.64percentage points from the 1990. Households with shared faucet connected to a community water system constituted 20.18 % while 17.44% had shared tubed/piped deep well.
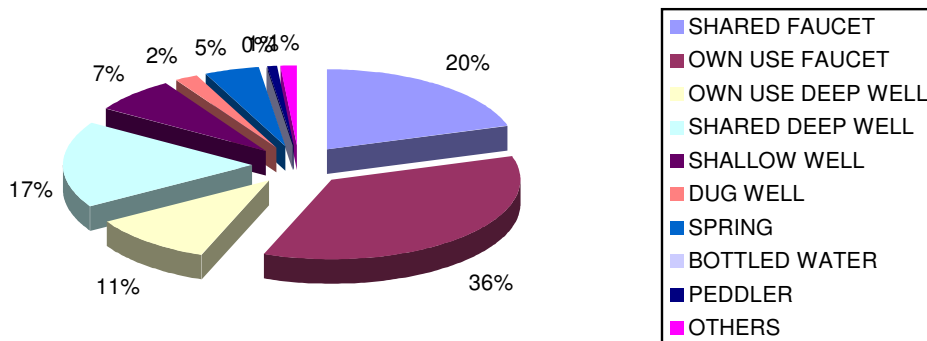
Majority of the population used LPG for cooking while the use of kerosene declined to 10.33% from 16.39% in 1990. Other households use wood in 2000.

Majority of the households use water sealed sewer/septic tank (55.55).

WATER SEALED OWN USE

WATER SEALED SHARED

WATER SEALED OTHER DEPOSITORY OWN USE

WATER SEALED OTHER DEPOSITORY SHARED

CLOSED PIT

OPEN PIT

OTHERS

NONE

Majority of the population utilized pick up by garbage truck as the manner of garbage disposal (57.75)
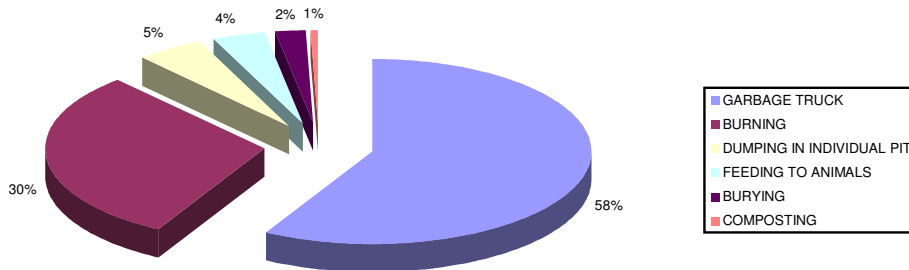
GARBAGE TRUCK
BURNING
DUMPING IN INDIVIDUAL PIT
FEEDING TO ANIMALS
BURYING
COMPOSTING

LEADING CAUSES OF MORTALITY, Number and Rate per 100,000 Population
C.Y. 2004
BATAAN

CAUSES	NUMBER	RATE
Cancer	336	62.12
Pneumonia	269	49.74
Heart Disease	219	40.49
Myocardial Infarction	188	34.76
PTB	181	33.47
Diabetes Mellitus	130	24.04
COPD	121	22.37
CVD	117	21.63
Hypertension	108	19.97
Renal Failure	107	19.78

LEADING CAUSES OF MORBIDITY, Number and Rate per 100,000 Population

C.Y. 2004

BATAAN

CAUSES	NUMBER	RATE
ARI	37,245	6,886.36
PNEUMONIAS	11,013	2,036.23
DIARRHEAS	9,597	1,774.42
HYPERTENSION	4,717	872.14
UTI	2,422	447.81
SKIN DISEASES	1,852	342.42
PARASITISM	1,763	325.97
CONJUNCTIVITIS	1,482	274.01
ACUTE TONSILLOPHARYNGITIS	1,431	264.58
PTB	1,257	232.41

BULACAN

Bulacan has a total population of 2234088 persons as of May 1, 2000. The population growth was at 4.93% in 2000. Among the 24 municipalities in Bulacan, San Jose del Monte was the fastest growing having a population growth rate of 10.11%. The municipalities of Norzagaray and Marilao followed with an average annual population growth rate of 0.21% and 8.59%, respectively. The municipality of Obando has the lowest growth rate at 0.58%.

BULACAN	2234088	100	MEYCAUAYAN	163037	7.3
ANGAT	46033	2.06	NORZAGARAY	76978	3.45
BALAGTAS	56945	2.55	OBANDO	52906	2.37
BALIUAG	119675	5.36	PANDI	48088	2.15
BOCAUE	86994	3.89	PAOMBONG	41077	1.84
BULACAN	62903	2.82	PLARIDEL	80841	3.6
BUSTOS	47091	2.11	PULILAN	68188	3.05
CALUMPIT	81113	3.63	SAN ILDEFONSO	79956	3.58
DONA REMEDIOS TRINIDAD	13636	0.61	SAN JOSE DEL MONTE	315807	14.14
GUIGUINTO	67571	3.02	SAN MIGUEL	123824	5.54
HAGONOY	111425	4.99	SAN RAFAEL	69770	3.12
MALOLOS	175291	7.85	SANTA MARIA	144282	6.46
MARILAO	101017	4.52			

There was an increase in the household size from 359613 in 1995 to 463886 in 2000. On the other hand a slight decrease in the average household size was recorded from 5 persons in 1995 to 4.8 persons in 2000.

The overall dependency ratio was registered at 64. This means that for every 100 persons in the working age group, there were 64 dependents, that is, 58 young dependents and 6 year old dependents. The working age group is 61.16% of the total population. Individuals aged 0-14 years constituted 35.28 % and those aged 65 years and above (3.56).

Females outnumber males registering a sex ratio of 99.96 males for every 100 female. The age structure follows the usual pyramid shape that is as the age increases the population of the corresponding age group decreases. Children aged 4 years and below had 12.75% share to the total population while those aged 5-9 years 12.01%.

Of the 1680922 household population 10 years old and over, 48.33% were married and 41.3 % were single. Both registered a decrease from the 1995 figures. The proportion of widowed (4.01), divorced/separated (1.27), and those with other marital arrangements (4.32), all registered an increase from the 1995 figures (3.94%, 0.73%, 1.66%).

There was a higher proportion of males among single persons (52.51) and among those who had other marital arrangements (50.70). On the other hand, females dominated the married (50.24) widowed (78.31) and divorced /separated populace (66.3).

Of the household population five years and over 40.46% attended or completed elementary education and 30.93% high school. Those who were college undergraduates comprised 10.77% while those who were academic degree holders 5.07%. Those who have not completed any grade made up 3.21% of which more than half 51.74% were males.

LEADING CAUSES OF MORBIDITY, Number and Rate per 100,000 Population

C.Y. 2004

BULACAN

CAUSES	NUMBER	RATE
DIARRHEAS	29,507	1,440.85
BRONCHITIS/BRONCHIOLITIS	16,417	801.66
PNEUMONIAS	14,899	727.53
INFLUENZA	5,578	272.38
DISEASES OF THE HEART	3,371	164.61
PTB	2,965	144.78
CHICKEN POX	781	38.14
MEASLES	346	16.90
DENGUE FEVER	344	16.80
TYPHOID/PARATYPHOID	210	10.25

NUEVA ECIJA

Nueva Ecija has a total population of 1659883 persons as of May 1, 2000 .This recorded a 9.28% increase over the 1995 census. The population translated to an average annual growth rate of 2.11%, 0.5 percentage points lower than the 2.61% growth rate during the 1990 to 1995 period. If the growth rate continues at 2.11 %, the population of Nueva Ecija is expected to double in about 33 years.

Among the 29 municipalities and 3 cities in Nueva Ecija, Gapan was the fastest growing area having a population growth rate of 2.99 %. Cabanatuan City was the most populated area.

NUEVA ECIJA	1659883	100	MUNOZ	65586	3.95
ALIAGA	50004	3.01	NAMPICUAN	11033	0.66

BONGABON	49255	2.97	PALAYAN CITY	31253	1.88
CABANATUAN CITY	222859	13.43	PANTABANGAN	23868	1.44
CABIAO	62624	3.77	PENARANDA	24749	1.49
CARRANGALAN	31720	1.91	QUEZON	31720	1.91
CUYAPO	51366	3.09	RIZAL	48166	2.9
GABALDON	28324	1.71	SAN ANTONIO	63672	3.84
GAPAN	89199	5.37	SAN ISIDRO	40984	2.47
GEN MAMERTO NATIVIDAD	29195	1.76	SAN JOSE CITY	108254	6.52
GEN TINIO	35352	2.13	SAN LEONARDO	50478	3.04
GUIMBA	87295	5.26	SANTA ROSA	51804	3.12
JAEN	58274	3.51	SANTO DOMINGO	45934	2.77
LAUR	26902	1.62	TALAVERA	97329	5.86
LICAB	21593	1.3	TALUGTUG	18895	1.14
LLANERA	30361	1.83	ZARAGOZA	37645	2.27
LUPAO	34190	2.06			

The average household size declined from 5.01 persons in 1995 to 4.88 persons in 2000. The working age group comprises 60.3% of the total population. Individuals aged 0-14 years constituted 35.4% and those aged 65 years 4.3%.

The dependency ratio was 66 lower than the 1995 figure at 70. This means that for every 100 persons in the working age group there were 66 dependents, that is, 59 young dependents and seven old dependents.

The males outnumbered females with a sex ration of 103 males for every 100 females. Males dominated the younger age group while females in the 55 years and above age.

Children aged 5 to 9 years comprised 12.19% share to the total population. This was followed by those aged four years and below (11.91%). This made the age structure of Nueva Ecija to deviate from the usual pyramid shape that is the population decreases as age decreases.

Of the 1,258,483 household population 10 years and over, 50.15% were married and 40.86% were single. Both registered a decrease from the 1995 figure. On the other hand, the proportion of widowed /divorced separated all registered an increase from the 1995 figure.

A higher proportion of males among the single person (54.52) and among those with other marital arrangements (51.1) was reported. On the other hand, females dominated the married (50.32) widowed (76.38) divorced /separated (63).

Of the household population five years old and over, 44.66 percent attended or completed elementary and 30.18 percent high school. The college undergraduates comprised 10.17% while those with academic degree holder 3.9%.

Those who had not completed any grade made up 3.98%, of which more than half 51.33% were males.

There were more headed households (87.42) ages 30-39 (29.88). Headship for females was highest at 60-69 years (23.21).

About 20,640 persons (1.24) of the population had disabilities. Among those with disability female is higher than male. The most reported type of disability was low vision

(44.45). About 7.94% suffered from mental illness, 6.67% from mental retardation, 6.41% from partial blindness, and 5.61% from oral defect. About 93.47% of the population were literate.

There were 276,224 ever married women aged 15 to 49 years of which 29.36% had four or more children and 55.04% had one to three children. The average number of children for never married women in this province was three. The proportion of ever married woman aged 45 to 49 years who were childless was 1.26%

The average age at first marriage was 21 years. About 13.51 % of women 15 to 49 years old got married before they reached the legal age of marriage (18), 0.81% below 15 years, 70.17 % at 18-29 years, and 3.6% at 30 years and over.

The number of overseas workers in this province in 2000 was 24,465 persons or 1.47 % of the total population. This registered an increase of 7539 persons from the number reported in 1995 More than half of them were females.

The highest proportion of overseas workers belong to the age group 19 years and below (17.41) followed by age group 30-34 years (15.57) and 25 to 29 years (15.41)

Shared tubed/piped deep well was the households main source of water supply for drinking and cooking.
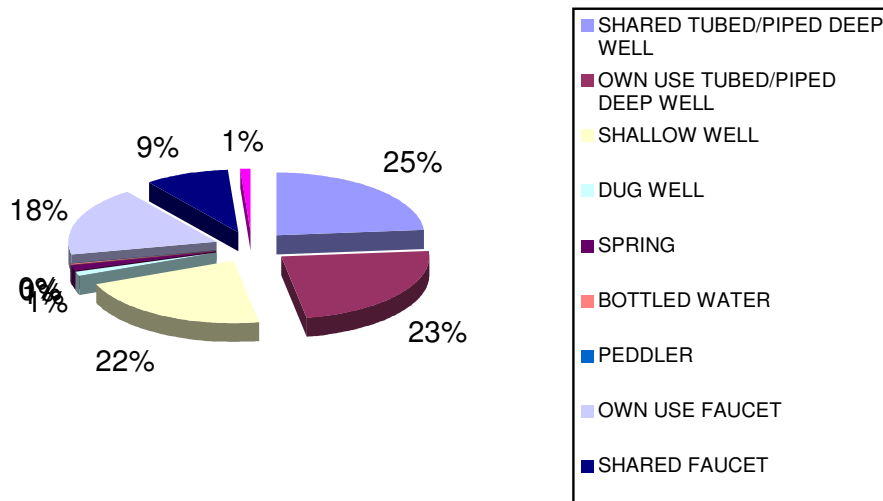
The proportion of households that used LPG for cooking rose to 61.98% in 2000 with the decline in the use of wood and kerosene.

The most common toilet facility was water sealed sewer/septic tank exclusively used by the households (34.78) up to 2.99percentage pints over the 1990 figure.

About 27.8% had an excusive use of water sealed other depository and 12.42% water sealed depository used by other households.

The proportion of households without toilet facility decreased by 3.76 percentage points (6.98 and 3.22).

Legend:
- WATER SEALED SEWER/SEPTIC TANK SHARED
- WATER SEALED USED ECLUSIVELY
- WATER SELAED OTHER DEOPISTORY
- WATER SEALED OTHER DEPOSITORY SHARED
- CLOSED PIT
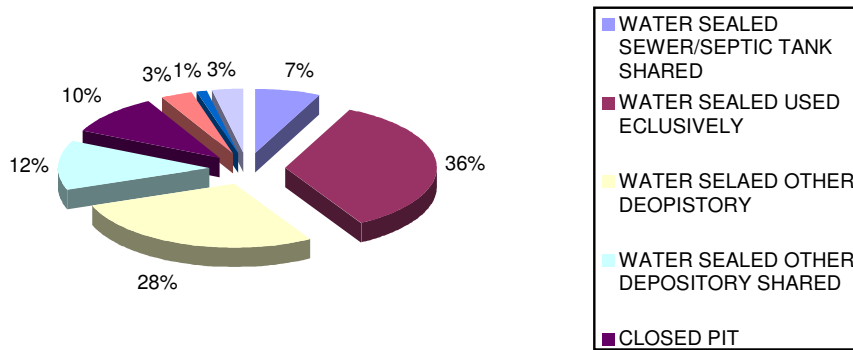
Majority of the households dispose their garbage through burning.
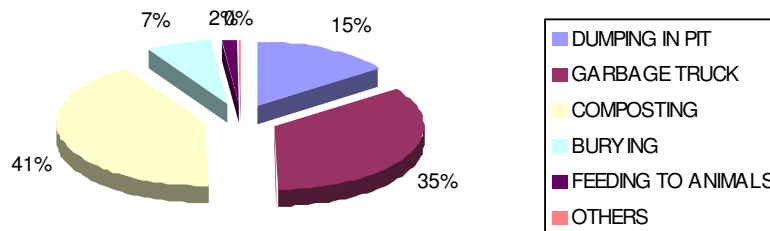
Legend:
- DUMPING IN PIT
- GARBAGE TRUCK
- COMPOSTING
- BURYING
- FEEDING TO ANIMALS
- OTHERS

LEADING CAUSES OF MORTALITY, Number and Rate per 100,000 Population
C.Y. 2004
NUEVA ECIJA

CAUSES	NUMBER	RATE
CVD	596	48.93
Heart Disease	507	41.62
Cancer	306	25.12
Pneumonia	284	23.32
PTB	144	11.82
COPD	121	9.93
Accident	108	8.87
Diabetes Mellitus	75	6.16
Renal Failure	33	2.71
Septicemia	31	2.54

LEADING CAUSES OF MORBIDITY, Number and Rate per 100,000 Population

C.Y. 2004

NUEVA ECIJA

CAUSES	NUMBER	RATE

ARI	27,382	2,247.96
DIARRHEAS	4,447	365.08
HYPERTENSION	4,111	337.50
BRONCHITIS/BRONCHIOLITIS	3,306	271.41
PNEUMONIAS	2,053	168.54
PARASITISM	1,560	128.07
SKIN DISEASES	1,105	90.72
INFLUENZA	1,000	82.10
UTI	933	76.60
ACCIDENTS	690	56.65

LEADING CAUSES OF MORTALITY, Number and Rate per 100,000 Population
C.Y. 2004
CABANATUAN CITY

CAUSES	NUMBER	RATE
Cancer	183	71.62
Heart Disease	156	61.05
Hypertension	142	55.57
Diabetes Mellitus	120	46.96
Myocardial Infarction	107	41.88
PTB	84	32.87
Malnutrition	73	28.57
Pneumonia	64	25.05
COPD	54	21.13

LEADING CAUSES OF MORTALITY, Number and Rate per 100,000 Population
C.Y. 2004
GAPAN CITY

CAUSES	NUMBER	RATE
Pneumonia	56	64.39
Heart Disease	35	40.24
Cancer	30	34.49
Victim of Flood of Cataclismic Nature	15	17.25
Hypertension	14	16.10
PTB	13	14.95
Accident	8	9.20
Diabetes Mellitus	7	8.05
Asphyxia	6	6.90
Renal Failure	3	3.45

LEADING CAUSES OF MORTALITY, Number and Rate per 100,000 Population

C.Y. 2004

PALAYAN CITY

CAUSES	NUMBER	RATE
Heart Disease	7	25.24
Pneumonia	6	21.63
Cancer	4	14.42
Myocardial Infarction	2	7.21
PTB	2	7.21
CVD	2	7.21
Diabetes Mellitus	1	3.61
Renal Failure	1	3.61
Electricution	1	3.61

LEADING CAUSES OF MORBIDITY, Number and Rate per 100,000 Population

C.Y. 2004

CABANATUAN

CAUSES	NUMBER	RATE
BRONCHITIS/BRONCHIOLITIS	1,867	730.67
PNEUMONIAS	348	136.19
DIARRHEAS	294	115.06
PTB	261	102.14
DENGUE FEVER	96	37.57
HYPERTENSION	58	22.70
BRONCHIAL ASTHMA	24	9.39
MEASLES	18	7.04
DISEASES OF THE HEART	17	6.65
TB OTHER FORMS	17	6.65

LEADING CAUSES OF MORBIDITY, Number and Rate per 100,000 Population

C.Y. 2004

GAPAN

CAUSES	NUMBER	RATE
DIARRHEAS	484	556.49
HYPERTENSION	423	486.35
DENGUE FEVER	6	6.90
CHICKEN POX	4	4.60

BRONCHITIS/BRONCHIOLITIS	2	2.30
TONSILITIS	2	2.30
PNEUMONIAS	1	1.15
MUMPS	1	1.15

PAMPANGA

Pampanga has a total population of 1,614,942 persons as of May 1, 2000. This recorded a 15.21% increase over the 1995 census. It has an average annual growth rate of 3.08% from an average growth rate of 1.48% from the 1995 period.

If the growth rate continues at 3.08 % the population of Pampanga is expected to double in 23 years.

Among the 20 municipalities and one city in Pampanga, Magalang was the fastest growing municipality with a growth rate of 8.66%, followed by Mabalacat (6.05) and Bacolor (4.58). Sasmuan was the slowest growing municipality in Pampanga (0.2) while Minalin had a negative growth rate (-0.3).

	NUMBER	%		NUMBER	%
PAMPANGA	1614942	100	MASANTOL	48120	2.98
APALIT	78295	4.85	MEXICO	109481	6.78
ARAYAT	101792	6.3	MINALIN	35150	2.18
BACOLOR	16147	1.00	PORAC	80757	5.00
CANDABA	86066	5.33	CITY OF SAN FERNANDO	221857	13.74
FLORIDABLANCA	85394	5.29	SAN LUIS	41554	2.57
GUAGUA	97632	6.05	SAN SIMON	41253	2.55
LUBAO	125699	7.78	SANTA ANA	42990	2.66
MABALACAT	171045	10.59	SANTA RITA	32780	2.03
MACABEBE	65346	4.05	SANTO TOMAS	32695	2.02
MAGALANG	77530	4.80	SASMUAN	23359	1.45

San Fernando city was the most populated area in Pampanga and Bacolor is the least populated.

There was a corresponding increase in the number of households from 255,303 in 1995 to 307,639 in 2000. The average household size declined from 5.49 persons in 1995 to 5.25 persons in 2000. The working age group is 60.7% of the total population. Individuals aged 0-14 constitute 35.4% and 65 years old constitute 3.9%.

The dependency ratio is 64 lower than that in 1995. It means that for every 100 persons in the working age group there are 64 dependents, that is, 58 young dependents and 6 old dependents.

In 2000, males outnumbered females with a sex ration of 102.57 males for every 100 females. Males dominated the age group 49 years and below while females in the age group 50 years and above.

Children 4 years and below dominated the province with 12.47 % of the total population. This was followed by ages 5 to 9 years at 11.88% and 10-14 years at 11.02%. This made the age structure of Pampanga to form the usual pyramid shape that is as age increases population decreases.

Out of the 11,220,612 household population 10 years old and over, 49.71% were married and 42.52% were single. The proportion of widowed (3.89), divorced/separated (0.92), and those with marital arrangements (2.08) all registered an increase from the 1995 figures.

There was a higher proportion of males among the single persons (54.24) and among those with marital arrangements (51.71). On the other hand, females dominated the married (50.41) widowed (76.93) and divorced/separated populace (67.71)

Of the household population five years old and over 41.2 % attended or completed elementary 30.96 % high school 10.07 % were college undergraduates 4.97% with post secondary education and 4.22 % were academic degree holders.

Majority of the households in Pampanga were headed by males (87.57). Among the male headship rate peaked at ages 30-39 years (29.82) while headship rate for females was the highest at ages 60-69 years. (23.29).

The most reported type of disability is low vision 34.48%. About 10% suffered from mental retardation 7.66% loss one or both arms and hands. 6.59% total blindness and 6.53% quadriplegic.

About 93.94% of the household population 10 years old and over were literate.

There were 267,292 ever married women aged 15 to 49 years in Pampanga, of which 28.57% had four or more children and 51.4% had one to three children. The average number of children ever married woman in this province was three. The proportion of ever married aged 45 to 49 years who were still childless was 1.57%.

The average age at first marriage was 22 years old. About 9.99% of women 15 to 49 years old got married before they reach the legal age of marriage (18). The proportion of women who got married at the age of 18 to 29 years was 68.84 % while 4.11% at 30 years and over.

The number of over seas workers in the province is 2000 was 30,413 persons or 1.88 % of the total population. This registered an increase of 2011 persons from the number reported in 1995. More the half (60.08) of them were males. More than 1/3 of these overseas workers (34.36) had attended or completed high school 17.87% were college undergraduates and 10.12% with academic degree. The highest percentage of overseas workers were 45 years old and above (19.79) followed by those aged 30-34 years (15.8) and 25 to 29 years (14.7)

In 2000, electricity (90.44) was the main fuel used by households for lighting. The proportion of households that used this fuel increased from 87.4 % in 1990. On the other hand, kerosene usage declined from 11.28 % in 1990 to 3.89% in 2000. Households that used LPG comprised 1.35%

Own faucet connected to a community water system was the households' main source of water supply for drinking and or cooking.

About 27.2% of the households used own faucet connected to a community water system for drinking and or cooking, 26.44% used own tubed/piped deep well and 23.37% used shared tubed/piped deep well. About 27.39% of the households in this province used own faucet connected to a community water system for laundry and or cooking 26.56% used own tubed/pied deep well and 23% used shared tubed/piped deep well.

45

☐	SHARED FAUCET
■	OWN USE TUBED/PIPED
☐	SHARED TUBED/PIPED
☐	TUBED/PIPED SHALLOW WELL
■	DUG WELL
■	SPRING,LAKE ETC
■	PEDDLER
☐	OWN USE FAUCET COMMUNITY WATER
■	SHARED FAUCET, COMMUNITY WATER
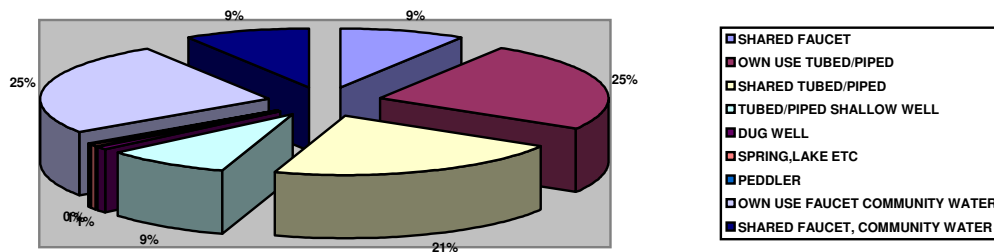
The proportion of household that used LPG for cooking rose to 76.8% in 2000 from only 37.65% in 1990.

On the other hand, the use of wood declined to 7.53% from 38.68% in 1990. Likewise less household used kerosene (7.95) compared to that of 1990 (15.25)

☐	**CHARCOAL**
■	**WOOD**
☐	**OTHERS**
☐	**NONE**
■	**ELECTRICITY**
■	**KEROSENE**
■	**LPG**
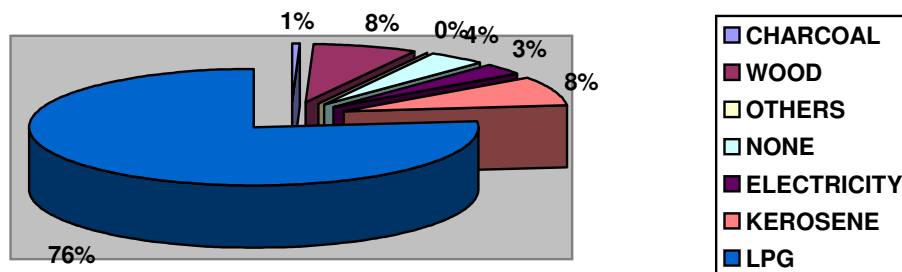
The most reported kind of toilet facility was water sealed sewer/septic tank used exclusively by the households (48.24) up by 9.02 % points over the 1990 figure (39.22)

About 24.1% had water sealed other depository exclusively used by the households while 7.76% had water sealed sewer/septic tank shared with other households.

The proportion of households with no toilet facility at all decreased by 9.95 percentage points from 14.6% in 1990 to 4.65% in 2000.

About 45.06% of households disposed their garbage through burning. It registered a 26.93perentage points decrease from the 1990 figure of 71.99% On the other hand a 32.69 percentage point increase in the proportion of household whose garbage was being picked up by a garbage truck was reported in 2000 that is 7.58 % in 1990 and 40.27% in 2000. About 9.33% resorted to dumping in individual pit while 2.81% to burying.
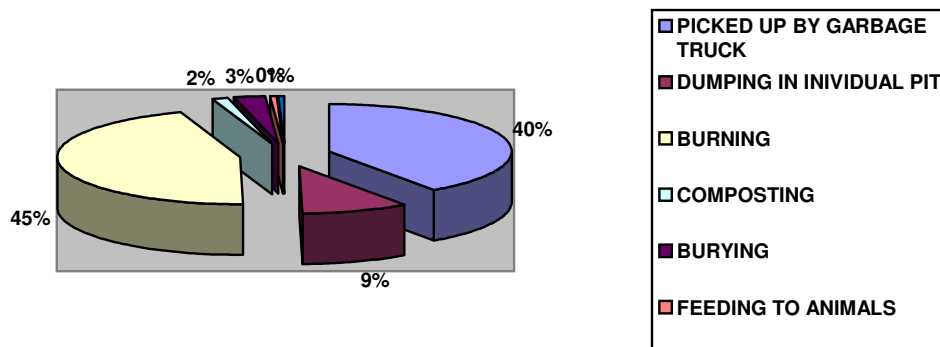
Legend:
- PICKED UP BY GARBAGE TRUCK
- DUMPING IN INIVIDUAL PIT
- BURNING
- COMPOSTING
- BURYING
- FEEDING TO ANIMALS

LEADING CAUSES OF MORTALITY, Number and Rate per 100,000 Population
C.Y. 2004
PAMPANGA

CAUSES	NUMBER	RATE
Heart Disease	2,175	133.25
Cancer	795	48.71
Pneumonia	341	20.89
Renal Failure	221	13.54
Diabetes Mellitus	200	12.25
PTB	190	11.64
Accident	140	8.58
COPD	61	3.74
Septicemia	53	3.25
Asphyxia	43	2.63

LEADING CAUSES OF MORBIDITY, Number and Rate per 100,000 Population

C.Y. 2004

PAMPANGA

CAUSES	NUMBER	RATE
ARI	27,536	1,687.02
DIARRHEAS	16,416	1,005.74
HYPERTENSION	16,048	983.20
PNEUMONIAS	10,180	623.69
BRONCHITIS/BRONCHIOLITIS	3,434	210.39
SKIN DISEASES	3,222	197.40
INFLUENZA	2,454	150.35
PTB	2,281	139.75
DISEASES OF THE HEART	1,731	106.05
CHICKEN POX	735	45.03

TARLAC

Tarlac has a population of 1,068,783 persons as of May 1, 2000. This recorded an 11.51 % increase over the 1995 census.

The population of Tarlac has an average annual growth rate of 2.65%. If the growth rate continues at 2.65% the population of Tarlac is expected to double in 26 years. Among the 17 municipalities and one city in Tarlac. Bamban was the fastest growing having a population growth rate of 4.88%

TARLAC	1068783	100			
ANAO	10045	0.94	PANIQUI	78883	7.38
BAMBAN	46360	4.34	PURA	21081	1.97
CAMILING	71598	6.7	RAMOS	16889	1.58
CAPAS	95219	8.91	SAN CLEMENTE	11703	1.09
CONCEPTION	115171	10.78	SAN JOSE	29440	2.75
GERONA	72618	6.79	SAN MANUEL	20857	1.95
LA PAZ	52907	4.95	SANTA IGNACIA	38301	3.58
MAYANTOC	24693	2.31	TARLAC CITY	262481	24.56
MONCADA	49607	4.64	VICTORIA	50930	4.77

The number of household increased to 215395 households in 2000 from 185477 households in 199 to 4.96 persons in 2000.

The overall dependency ration was 66 which means that for every 100 persons in the working age group there were 66 dependents that is 59 young dependents and seven old dependents.

In 2000, males outnumbered females with a sex ratio of 102.72 males for every 100 females. Males dominated the age group 49 years and below while females in the age group 50 years and above.

Children aged four years and below dominated the province with 12.11% share to the total population. This was followed by those aged 5 to 9 years (12.04) 10 to 14 years (11.32). This made the age structure of Tarlac to follow the usual pyramid shape that is as age increases population decreases.

Married persons outnumbered single persons. Out of the 809,877 household population 10 years old and over 49.41% were married 42.14 5 were single 4.45% widowed 0.925 divorced/separated.

There was a higher proportion of males among the single persons (54.27) and among those with other marital arrangements (50.75). On the other hand, female dominated the married (50.34), widowed (77.04), and divorced /separated (64.62).

Of the household population five years and over, 41.91% attended or completed elementary education and 32.37% reached high school. Those who were college undergraduates comprised 9.3 %, with post secondary education 4.57%, and were academic degree holders 3.56%.

Those who had not completed any grade made up 3.92%. More than half of them (51.88) were males.

Majority of the households in Tarlac were headed by males. Among males, headship rate peaked at ages 30-39 years (29.31) while headship rate for females was the highest at ages 60-69 years (23.59).

About 10,260 persons had disability. Among those with disability there were more females (51.19) than males.

The most reported type of disability was low vision with 29.55% about 9.82 % suffered from mental retardation. 7.71 % oral defect 6.6% quadriplegic 6.47 % hard of hearing.

Of the 280,071 household population five years old and over who were attending school at anytime from June 1999 to March 2000. Majority (92.96) were studying in the same city/municipality where they resided, 3.43% in Tarlac city or in the municipality outside of their residence but within Tarlac, 2.61% in other provinces, and 0.03% in foreign countries.

About 94% of the household population 10 years old ad over in Tarlac were literate, down by 2..62% points from the 1990 figure. Literacy rate among males (94.02) was almost equal with that of the females (93.99). The age group 25 to 29 years registered the highest population. (96.37). This was followed by the age group 20 to 24 years (96.12) and 15 to 19 (96.03).

There were 172,808 ever married women aged 15 to 49 years 30.34 % of which had four or more children and 54.24% had one to three children. The proportion of ever married women aged 45 to 49 years who were still childless was 1.35%.

The average number of children ever born was three.

The average age at first marriage is 22 years. About 11.61% of women 15-49 years old got married before they reached the legal age of marriage (18), 72.04% at 18 to 29 years, and 4.51% at 30 years and over.

The number of overseas workers in this province in 2000 was 20,015 persons or 1.87 % of the total population. This registered an increase of 5066 persons from the number reported in 1995 (14949). More than half (55.48) of them were females.

The highest percentage of overseas workers were 45 years old and above (16.79) followed by those aged 25 to 29 years (16.16), and 30-34 years (15.99).

The highest percentage of overseas workers (36.67) had attended or completed high school. Overseas workers who were college undergraduates constituted 18.35% and those with academic degree, 9.54%.
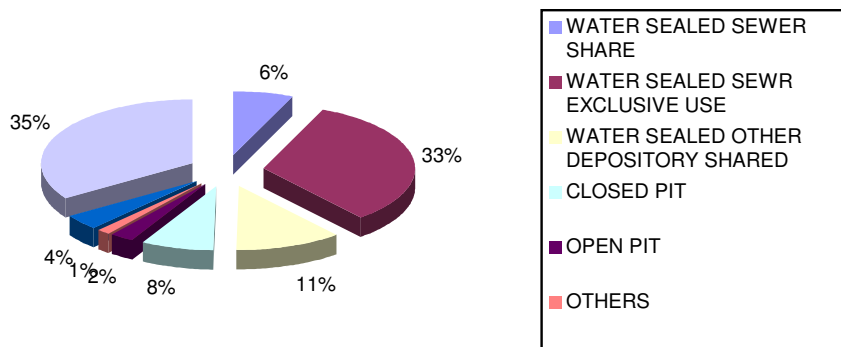
About 27.34% of the household used own tube/piped deep well and 23.85% utilized shared tubed/piped deep well for drinking and or cooking. Household that used own faucet connected to a community water system comprised 19.86 % and tubed/piped shallow well, 18.41%.
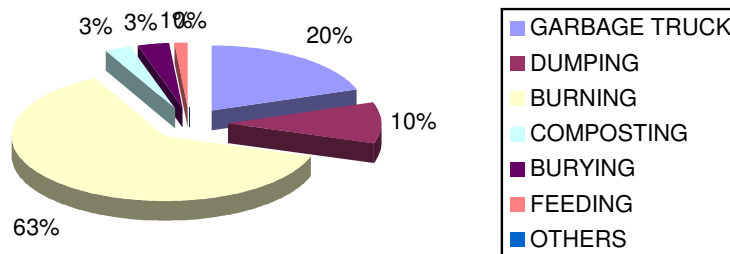
49

Legend:
- OWN USE DEEP WELL
- SHARED DEEP WELL
- TUBED SHALLOW WELL
- DUG WELL
- SPRING WELL
- PEDDLER
- BOTTLED WATER
- OWN USE FAUCET
- SHARED FAUCET
- OTHERS
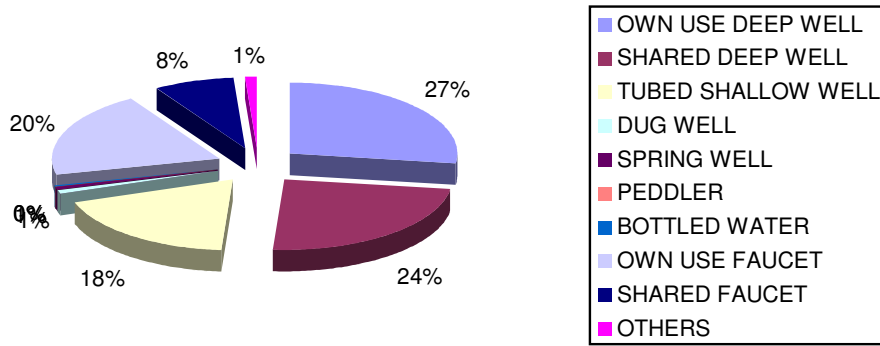
The proportion of households that used LPG for cooking rose to 61.19% in 2000 from only 16.02% in 1990.
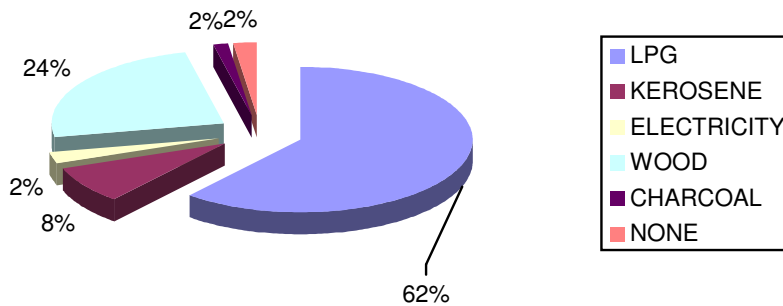
Legend:
- LPG
- KEROSENE
- ELECTRICITY
- WOOD
- CHARCOAL
- NONE

The most reported kind of toilet facility was water sealed sewer/septic tank exclusively used by the households (34.20)

Legend:
- WATER SEALED SEWER SHARE
- WATER SEALED SEWR EXCLUSIVE USE
- WATER SEALED OTHER DEPOSITORY SHARED
- CLOSED PIT
- OPEN PIT
- OTHERS

Majority of the household dispose their garbage through burning.

50

Pie chart legend:
- GARBAGE TRUCK
- DUMPING
- BURNING
- COMPOSTING
- BURYING
- FEEDING
- OTHERS

Pie chart values: 3%, 3%, 1%, 0%, 20%, 10%, 63%

ZAMBALES

Zambales posted a total population of 433,542 persons as of May 1, 2000. This recorded an 11.3%increase over the 1995 census. This translated to an average growth rate 2.32% during the 1995 to 2000 period or a 1.34 percentage points 9nrease from the 1990 to 1995 period. If the growth rate continues at 2.32% the population of Zambales is expected to double in about 30 years.

MUNICIPALITY	NUMBER	%
ZAMBALES	433542	100
BOTOLAN	46602	10.75
CABANGAN	18848	4.35
CANDELARIA	23399	5.4
CASTILLEJOS	33108	7.64
IBA	34678	8
MASINLOC	39724	9.16
PALAUIG	29983	6.92
SAN ANTONIO	28248	6.52
SAN FELIFE	17702	4.08
SAN MARCELINO	25440	5.87
SAN NARCISO	23522	5.43
SANTA CRUZ	29469	11.36
SUBIC	63019	14.54

The number of households increased to 91,613 households in 2000 from 80,918 households in 1995. On the other hand, the average household size slightly declined from 4.8 persons in 1995 to 4.73 persons in 2000.

In Zambales, 60.12 % of the total population comprised the working age group (15-64). Individuals aged 0-14 years constituted 35.44% and those aged 65 and above, 4.44%.

Dependency ratio in 2000 was registered at 66, lower than the 1995 figure of 71. This means that for every 100 persons in the working age group 15 to 64 years, there were 6 dependents. That is, 59 young dependents (0-14) and 7 old dependents 965 and above).

In 2000, males outnumbered females with a sex ratio of 10.21 males for every 100 females. Males dominated the age group 54 years and below while females dominated in the 55 years and above age group.

Children aged four years and below dominated the province with 12.07 % share to the total population followed by those aged 5 to 9 years at 11.89 % and 10-14 years at 11.48%. The age structure of Zambales followed the usual pyramid shape, that is, as age increases the population decreases.

Married persons outnumber the single person (46.08). The proportion of widowed (4.56), divorced/separated (1.150), and those with marital arrangements (5.84), all registered an increase from the 1995 figures (4.35, 0.08, 4.3).

A higher proportion of males among single persons (54.68) was reported. On the other hand, females dominated the married individuals (50.39), widowed (77.96), divorced/separated (64.73), and those with other marital arrangements (50.08).

Of the household population five years old and over, 38.85% attended or completed elementary education and 34.41% completed high school. Those who were college undergraduates comprised 8.22%, those with post secondary education included 6.21%, and those with academic degree holders encompassed 3.52%. Those who had not completed any grade made up 4.25%, of which more than half (51.67%) were males. Almost all of the population were Filipino (94.02), Bahraini (0.24), Americans, (0.12) Chinese (0.06), and others (2.81)

About 1.11% of the population had disability. The most reported type of disability was low vision (32.9). About 7.53% suffered from mental retardation, 7.28% are quadriplegic, 7.26% are with oral defect, and 6.93% have mental illness.

About 95.82% of the household population 10 years and old and over in Zambales were literate, down by 1.15 % points from the 1990 figure of 96.97%. Literacy rate among males (96.05) was almost the same among females (95.57).

The age group 15-19 years registered the highest proportion (97.38) of literate persons. The age groups 20-24 years (97.36), 25 to 29 (97.23), and 30 to 34 years (97.23) followed.

There were 71,324 ever married women aged 15 to 49 years in Zambales, of which 29.02 % had four or more children and 56 % had one to three children. The average number of children for an ever married woman in this province was three while the proportion of ever married women who were still childless by the end of their reproductive life (45-49) was 10.11%.

Ever married women 15-49 years old recorded an average age at first marriage of 22 years. About 10.07% of women 15 to 49 years got married before they reach the legal age of marriage (18 years), 0.79 % below 15 years, 73% at 18-29 yeas, and 5.18 % at 30 years and over.

The number of overseas workers in this province in 2000 was 6858 persons or 1.585 of the total population. This registered an increase of 56 persons from the number reported in 1995 (6802). More than half (60.19) of them were males. The highest percentage of overseas workers belonged to the age group 45 and above.
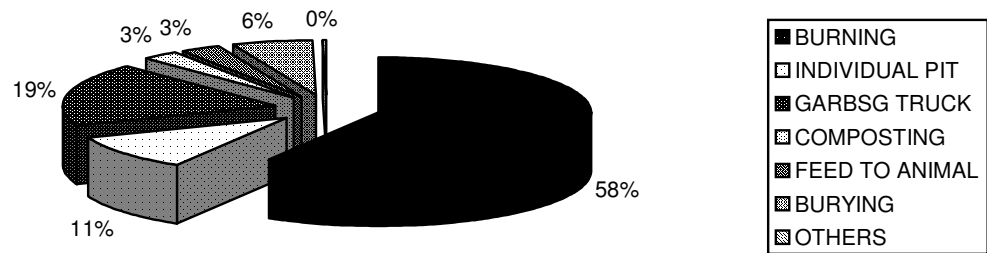
The main source of water supply is own tube/piped deep well (26.56), faucet connected to a community water system (20.78), shared tubed/piped deep well usage (16.53), and tubed/piped shallow well (16.26).

Most households used LPG for cooking (52.58%).The use of wood decline to 29.85% from 60.33% in 1990. Kerosene usage comprised 9.74% of the households.

Households without toilet facilities declined to 5.23%. The most common type of toilet facility was water sealed sewer/septic tank exclusively used by a single household (42.89)
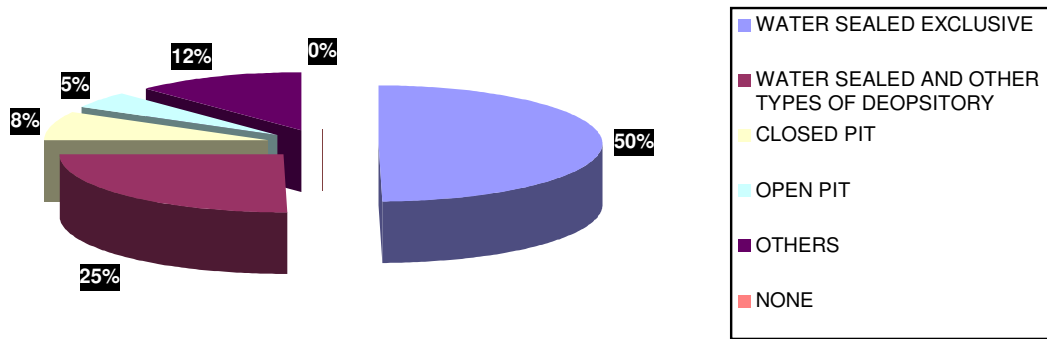
Legend:
- WATER SEALED EXCLUSIVE
- WATER SEALED AND OTHER TYPES OF DEOPSITORY
- CLOSED PIT
- OPEN PIT
- OTHERS
- NONE

Majority of the households disposed their garbage through burning (58.6).

Legend:
- BURNING
- INDIVIDUAL PIT
- GARBSG TRUCK
- COMPOSTING
- FEED TO ANIMAL
- BURYING
- OTHERS

LEADING CAUSES OF MORTALITY, Number and Rate per 100,000 Population
C.Y. 2004
ZAMBALES

CAUSES	NUMBER	RATE
Pneumonia	386	83.12
Heart Disease	366	78.82
Malignant Neoplasm	248	53.41
Hypertension	216	46.52
PTB	167	35.96
COPD	99	21.32
Accident	91	19.60
Diabetes Mellitus	79	17.01
Renal Failure	58	12.49
Bronchial Asthma	46	9.91

LEADING CAUSES OF MORBIDITY, Number and Rate per 100,000 Population

C.Y. 2004

ZAMBALES

CAUSES	NUMBER	RATE
ARI	27,586	5,940.61
BRONCHITIS/BRONCHIOLITIS	3,903	840.51
HYPERTENSION	2,809	604.91
PARASITISM	2,553	549.79
DIARRHEAS	2,310	497.46
SKIN DISEASES	1,807	389.14
ANEMIA	1,356	292.01
DISEASES OF THE HEART	1,352	291.15
PTB	1,352	291.15
UTI	1,065	229.35

Summary of Health Concerns Identified through Regional Consultation

TOPIC	SPECIFIC CONDITIONS
1.PUBLIC HEALTH ISSUES	
a. INFECTIOUS DISEASES	❑ Tuberculosis - Patient dropout - Misinformation on availability of drugs - Poor physician compliance to dots - Non referral to dot center ❑ Pneumonia ❑ Vaccine preventable disease - Information dissemination - Misevaluation of supplies ❑ Malaria ❑ Dengue - Lack of participation in government program ❑ Rabies - Lack of participation in government program ❑ Diarrhea - availability of clean water supply ❑ Parasitic And Other Helminthiasis ❑ Acure Respiratory Tract Infection - sandstorm due to Pinatubo dust ❑ Emerging And Reemerging Infections - Inadequacy of health facilities to handle emerging infections like avian flu
b. HEALTHY LIFESTYLE CONCERNS	❑ Accidents and injury ❑ Garbage disposal ❑ None availability of supplies for dental services ❑ Occupational health risk and accidents

	❑ Toxic waste in resettlement areas ❑ Effect of malaria insecticide on community ❑ Smoking

c. FAMILY HEALTH AND HEALTH OF SPECIAL POPULATIONS	❑ Mother and new born
	  – Education
	  – Family planning practice
	  – Contraceptive prevalence
	  – Unmet needs
	
	❑ Pull out of support for family planning programs
	❑ Adolescent and youth
	  – No data on substance abuse
	  – Factory workers health conditions needs evaluation

d. DEGENERATIVE DISEASES	❑ Cardiovascular
	  – Diet
	  – Not given due attention by the community
	❑ Hypertension
	❑ Malignant Neoplasm
	  – Insecticide Use
	❑ Diabetes Mellitus
	❑ Pulmonary Diseases
	  – Chronic Obstructive Pulmonary Disease
	❑ Kidney Disease
	❑ Cerebro Vascular Accident
	❑ Git Disease
	  – PUD

2. HEALTH CARE DELIVERY SYSTEM	❑ Low budget for supplies and transportation expense affects mobility ❑ Lack of manpower due to exodus of nurses and doctors taking up Nursing ❑ Health is not a priority of some municipalities
3. HEALTH REGULATORY SYSTEM	❑ Stronger regulation on food and drugs ❑ No data on counterfeit and fake drugs ❑ Increased number of unlicensed Botika Sa Barangay ❑ Strict implementation of existing laws on smoking, responsible pet ownership, workers
4. QUALITY OF HEALTH EDUCATION	❑ Attitude of health care providers
6. HEALTH POLICIES/LEGISLATION	❑ Drug policy has to be updated ❑ No strong government policy to support Health Research And Development ❑ Implementation of Magna Carta
7. HEALTH CARE FINANCING SYSTEM	❑ Slow release of claims ❑ Delay in processing due to paper work (several copies required) ❑ Non-payment of Doctor's Professional Fee ❑ Senior Citizen and Indigent not aware of Philhealth benefit
8.HOSPITAL SYSTEM	❑ Shortage of nurses

9.RESEARCH	❑ No strong institutional policy on research and development ❑ Inadequate research capability of hospitals ❑ No data on research capability of universities ❑ Need for a regional collaboration to address health problem through research
12. LOCAL HEALTH SYSTEM	❑ Devolution
13. HEALTH INFORMATION SYSTEM	❑ Inadequate information dissemination on government services ❑ No registries in hospitals ❑ Database not fully utilized
14. HEALTH TECHNOLOGIES AND PRODUCTS	
15.HERBAL MEDICINE	❑ Not beneficial to manufacture

Problems of Agencies and Individuals Gathered through Key Informant Interview

POPCOM	-Efforts not appreciated by LGU -lack of manpower -no funding for research
BFAD	-Transportation service to increase mobility -lack of manpower -some laws are obsolete
DOH	-Manufacturing of herbal medicine by DOH is not economically feasible -no funds for research Priorities for research -study on toxic waste in resettlement areas should be a continuing study -surveillance on avian flu -effect of insecticide for malarial control on the community
DOST	-No strong government policy to support research -no application of researches done -no proposals on health research submitted
SENIOR CITIZEN	-Negative attitude towards government services -not aware of government services offered

SURVEY FORM
CURRENT HEALTH PROBLEMS ENCOUNTERED BY THE CITY

Instruction: Identify and check the box of specific problems and rank each category according to importance.
EXAMPLE:

RANK	PROBLEM	REASONS	SOLUTION
1	INFECTIOUS DISEASES ❑ TB ☑ PNEUMONIA MALARIA	DRUG RESISTANCE	NEW DRUGS DOTS
3	FAMILY HEALTH ☑ MOTHER AND NEWBORN ❑ ADULTS	POOR EDUCATION	IMPROVE PROGRAMS TO EDUCATE
2	DRUGS	PROLIFERATION OF FAKE DRUGS	BETTER REGULATION

RANK ACDG TO IMPORTANCE OF CATEGORY WITH 1 AS THE HIGHEST	PROBLEMS ACCORDING TO CATEGORY AND SPECIFIC CONDITIONS	REASONS FOR THE PERSISTENCE OF THE PROBLEM	POSSIBLE SOLUTIONS
	INFECTIOUS DISEASES ❑ TUBERCULOSIS ❑ PNEUMONIA ❑ VACCINE PREVENTABLE DISEASE ❑ MALARIA ❑ DENGUE ❑ FILARIASIS ❑ SCHISTOSOMIASIS ❑ RABIES ❑ LEPROSY ❑ FOOD AND WATER BORNE DISEASES ❑ DIARRHEA ❑ PARASITIC AND OTHER HELMINTHIASIS ❑ DENTL CARIES AND OTHER PERIODONTAL DISEASE ❑ HEPATITIS ❑ ACURE RESPIRATORY TRACT INFECTION ❑ EMERGING AND REEMERGING INFECTIONS ❑ STD/HIV/AIDS		
	HEALTHY LIFESTYLE CONCERNS ❑ NUTRITIONAL CONCERNS ❑ MENTAL HEALTH RISK AND BEHAVIORAL DISORDER ❑ SUBSTANCE ABUSE ❑ TOBACCO SMOKING ❑ PHYSICAL INACTIVITY ❑ ACCIDENTS AND INJURY ❑ ENVIRONMENTAL HEALTH RISK ❑ DISASTER MANAGEMENT ❑ OCCUPATIONAL HEALTH RISK		

	FAMILY HEALTH AND HEALTH OF SPECIAL POPULATION ❑ MOTHER AND NEWBORN ❑ INFANTS AND CHILDREN ❑ ADOLESCENT AND YOUTH ❑ ADULTS ❑ OLDER PERSONS ❑ WOMEN IN DIFFICULT CIRCUMSTANCES (VIOLENCE AND DOMESTIC ABUSE) ❑ CHILDREN IN DIFFICULT CIRCUMSTANCE (VIOLENCE AND DOMESTIC ABUSE) ❑ PERSONS WITH DISABILITY ❑ MIGRANT WORKERS ❑ URBAN AND RURAL POOR ❑ INDIGENOUS PEOPLE		
	DEGENERATIVE DISEASES ❑ CARDIOVASCULAR ❑ HYPERTENSION ❑ MALIGNANT NEOPLASM ❑ DIABETES MELLITUS ❑ CHRONIC OBSTRUCTIVE PULMONARY DISEASE ❑ KIDNEY DISEASES ❑ OTHER DISEASES		
	HEALTH CARE DELIVERY SYSTEM		
	HEALTH REGULATORY SYSTEM		
	QUALITY OF HEALTH EDUCATION		
	TRADITIONAL HEALTH CARE PRACTICE/NORM		
	HEALTH POLICIES/LEGISLATION		
	HEALTH CARE FINANCING		
	HOSPITAL SYSTEM		
	RESEARCH ETHICS		
	NATURAL/ORGANIC METHODS OF HEALING		
	HEALTH EQUITY		
	LOCAL HEALTH SYSTEMS		
	HEALTH INFORMATION SYSTEMS		
	HEALTH TECHNOLOGIES AND PRODUCTS		
	HERBAL MEDICINE		
	OTHER CONCERNS		

ONGOING RESEARCHES	RESEARCH PRIORITIES	FUNDING AGENCY
1	1	1
2	2	2
3	3	3
4	4	4

RESEARCH BUDGET	2001	2002	2003	2004	2005

HOSPITAL QUESTIONNAIRE

A. The following questions pertain to the **HEALTH CARE SERVICE FACILITY** in your hospital. Please answer as accurately as possible.

_____1. Hospital type
_____2. Hospital classification
_____3. Hospital category
_____4. Total bed capacity
_____5. Average occupancy rate per day (average in patient per day/ bed capacity)

  6. Services offered (please check if offered)
- ❑ OUTPATIENT CONSULTATION
  - ❑ ENT
  - ❑ Internal Medicine
  - ❑ OB Gynecology
  - ❑ Ophthalmology
  - ❑ Pediatrics
  - ❑ Surgery
  - ❑ Psychiatry
  - ❑ Others please specify _____
    _____
- ❑ EMERGENCY SERVICES
- ❑ NURSERY SERVICE
- ❑ ICU
- ❑ DELIVERY ROOM
- ❑ OPERATING ROOM
- ❑ LABORATORY SERVICE
  - ❑ Blood chemistries
  - ❑ Urine chemistries
  - ❑ Culture and sensitivity for Tuberculosis
  - ❑ Culture and sensitivity for bacteria, virus, fungi
  - ❑ EEG
  - ❑ ECG
  - ❑ Treadmill
  - ❑ 2 D Echocardiography
  - ❑ CT scan
  - ❑ MRI
  - ❑ Ultrasound
  - ❑ Pulmonary function test
  - ❑ X ray
  - ❑ Mammography
  - ❑ Blood gas analyzer
  - ❑ OTHERS, PLEASE SPECIFY:
    _____

SPECIAL AREAS
- ❑ Trauma center
- ❑ Cancer clinic
- ❑ Dialysis unit
- ❑ Medico Legal
- ❑ Poison center
- ❑ Rabies center
- ❑ Physical Rehabilitation center
- ❑ Drug rehabilitation center
- ❑ TB DOT center

□   Others, PLEASE SPECIFY:

           _____

□   Ambulance
□   Autopsy

Equipments

□   Cardiac monitor
□   Ambubag
□   Surgical set
□   Intubation set
□   defibrillator
□   portable x ray
□   incubator
□   OTHERS, PLEASE SPECIFY:

           _____

B. The following questions will assess the **health care manpower** in your hospital.

_____1. Total number of employees

_____2. Total number of Resident Physicians

        BREAK DOWN OF RESIDENT PHYSICIANS

          _____a. General Practice

          _____b. ER Medicine

          _____c. Family Medicine

          _____d. Internal Medicine

          _____e. Surgery

          _____f. Pediatrics

          _____g. OB Gynecology

          _____h. ENT

          _____i. Ophthalmology

          _____j. Pathology

          _____k. Radiology

          _____l. Psychiatry

          _____m. Anesthesia

_____3. Nurses

_____4. average AGE OF NURSES in your institution

How often do your hire new batch of nurses?

□   Every 6 months
□   Once a year
□   Every two years
□   Others Please specify_____

_____4. Midwife

_____5. Nurse assistant

_____6. Radiology Technician

_____7. Medical technologist

_____8. Respiratory therapist

_____9. Dentist

_____10. Nutritionist

_____11. Sanitary and ventilation engineer

_____12. Pharmacist

_____13. Epidemiologist

Number of specialist connected with the hospital

_____1. ENT

_____2. Internal Medicine

_____a. Cardiologist
_____b. Endocrinologist
_____c. Hematologist and oncologist
_____d. Infectious disease specialist
_____e.Gastroenterologist
_____f. Nephrologist
_____g. Pulmonologist
_____h. Neurologist
_____i. Rheumatologist
_____3. OB Gynecology
_____4. Opthalmology
_____5. Pediatrics
_____a. Cardiologist
_____b. Endocrinologist
_____c. Hematologist and oncologist
_____d. Infectious disease specialist
_____e. Gastroenterologist
_____f. Nephrologist
_____g. Pulmonologist
_____h. Neurologist
_____i. Neonatologist
_____6. Pathologist
_____7. Radiologist
_____8. Surgery
_____a. General surgery
_____b. cardiothoracic
_____c. Urologist
_____d. Oncologist
_____e. Nurosurgeon
_____f. Orthopedic
_____9. Psychiatry
_____10. Pharmacologist
_____11. Epidemiologist
_____12. Occupational medicine
_____13. Dermatologist

For training hospital and other institutions engaged in research, please answer the following questions as accurately as possible (adopted from the **PCHRD Assessment for the Research Capability of Universities, 2004**)

Assessment Form

       The evaluation is subdivided into sections. The evaluation form consists of series of statements delineating traits or conditions which pertain to the aspect being evaluated. Each statement will be scored in a scale of 0 to 5, with 0 being the least desirable condition and 5 the most desirable. A rating of "3" is considered "good".

       After each section, space is provided for comments or remarks that the rater may wish to make. This feature should be particularly helpful to the self-evaluation committee.

       The user of this form must rate all statements without exception.

       Below is the rating scale which should be used:

0	the provision or condition does not exist.
1 – Poor:	the provision or condition is limited and functioning poorly
2 – Fair:	the provision or condition is limited and functioning minimally
3 – Good:	the provision or condition is met and functioning adequately
4 – Very Good:	the provision or condition is moderately extensive and functioning well
5 – Excellent:	the provision or condition is very extensive and functioning perfectly

Assessment Form

Rating (0 to 5)

  I.   Research Administration

_____ 1. There is a well-structured research organization
_____ 2. The staffing pattern of the research unit is adequate.
        3. The research unit has the following committees:
_____   a. technical review
_____   b. ethics
_____   c. training
_____   d. publication
_____   e. finance
_____4. A well-developed planning system for research is in place.
_____5. The research unit and its program are evaluated annually.
_____6. There is a systematic process of evaluating and approving of research projects and proposals.
_____ 7. The ethical standards conforms with the National Guidelines for Biomedical Research
_____8. There are adequate policies in research approved by the Board of Trustees/Regents/LGU
_____9. The Board of Trustees/Regents/LGU allocates sufficient budget for research annually.

REMARKS.

II.   Research Implementation

    1. Well-designed training programs are regularly conducted for
_____   a. residents and fellows
_____   b. consultants
_____   c. non-medical personnel
    2. The training provides adequate attention to skills development in:
_____   a. the selection of appropriate research problems
_____   b. the statement of problems, hypotheses, and objectives
_____   c. selecting appropriate research designs, study subjects, and methods and tools
        of data collection, processing, analysis and interpretation.
_____   d. writing a research report
_____3. Agenda formulation is undertaken annually.
_____4. The agenda conforms with the national/regional research agenda.
    5. Researches are oriented towards:
_____a. promoting values
_____b. promoting social uplift of the people and their access to health care
_____c. enriching Philippine medicine and culture
_____d. promoting the use of local materials and appropriate technology
_____e. adding to existing knowledge in the field.
_____6. The research proposal contains all the standard items.
    7. The conduct of research follows scientific and ethical standards.
_____   a. measures are taken to insure integrity in research
_____   b. ethical principles are observed when undertaking research
_____   c. documentation standards are strictly followed
_____8. All research outputs are reviewed by the technical review/publication
        committee.
_____ 9. There is a venue for oral presentation of research output.
__ ___10. There is a venue for publication of research output in the school.
__ ___11. Faculty generated researches are published in peer-reviewed journals, local and
        international.
__ ___12. The research findings are utilized by the appropriate agencies.

    REMARKS :.

III.   Resources

_____1. Percentage of consultants doing research.
_____2. The research director is a competent research manager.
_____3. There is adequate technical support staff such as biostatistician, technicians,
        etc.
    4. The following facilities are available
_____   a. office of research unit
_____   b. specialized research laboratories
_____   c. animal house
_____   d. adequately stocked library
_____   e. internet access
_____   f. computers and software for statistical analysis
_____5. There is a budget for research provided by the administration.
_____ 6. There is deliberate effort to secure external grants.

IV.   Linkages

_____ 1. The researchers work in partnership with other researchers within and outside
           the university.
_____ 2. The researchers are involved in collaborative research with local and
           international groups.
_____ 3. The researchers obtain contract research from the Department of Health or other
           agencies.

V.   Incentives and Rewards

_____1. The hospital provides monetary incentives to researchers.
_____2. There are non-monetary ways to give recognition to the researchers.
_____3. Performance in research is included among the criteria for promotion

Table 1. Key Informant by Province and City

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

Table 2. Key Informant by Agency, Hospital

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

THE REGIONAL CONSULTATION WORKSHOP
NOVEMBER 8, 2005
8:00 AM TO 6:30 PM

An overview on the Philippine National Health Research System and the objectives and rationale for a unified research agenda was presented by Dr. Charles Yu. This was followed by Dr. Maila Rostrata from the DOH who presented the mortality and morbidity data in Region 3. The participants raised questions on the terms being used in reporting the mortality and morbidity data. It was pointed out that some of the disease conditions were similar like cardiovascular disease and heart disease which might be due to inaccurate reporting. They suggested that the reporting of data should be standardized following the ICD 10. Dr. Danilo Reynes from PHILHEALTH presented their programs and coverage in Region 3 followed by a short talk by Dr. Conrado Oliveros on the programs of DOST.

The summary of health concerns gathered from the survey and consultations were presented by the regional facilitator (Dr. Evelyn Yumiaco) for validation and ranking in the workshop. The criteria for prioritization were also emphasized during the presentation, namely:

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

After the presentation, the participants were divided into two groups. Two facilitators namely Dr. Anita S. Sanchez (Assistant Dean- College of Medicine) and Dr. Jocelyn Cordero were assigned to each group. The facilitator's function is to:

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

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

The top 10 priority areas identified were: 1. TB, 2. dengue, 3. healthy lifestyle (nutrition), 4. research and research ethics, 5. degenerative diseases (malignancy), 6. environmental health and occupational health, 7. mental health, behavioral diseases and Autism, 8. family planning, 9. health information and health care delivery, 10. herbal medicine, and 11. local health system. During the plenary, local health system was originally ranked number 4 but was brought down to number 11 and research was elevated to number 4 position. According to one participant improving the research capability of the Institutions is a higher priority. Health care delivery system originally ranked number 12 but it was merged with health information system in number 9. Autism was originally ranked number 8 however it is not so common so they suggested that it should be merged with mental health disorders in number 7. Herbal medicine was ranked 10 however, some members of the plenary suggested to elevate it to number 6 instead of environmental health risk which was only

localized in Bulacan. It was pointed out that occupational health risk is combined with environmental risk which is also a very important issue hence herbal medicine remained in number 10 position.

GROUP 1
Research Priority Areas

BROAD R&D AREA[1]	SPECIFIC TOPIC[2]	RATIONALE[3]	OBJECTIVE[4]	RESPONSIBLE AGENCY[5]	FUNDING SOURCE[6]
LOCAL GOVERNMENT CODE	IMPLEMENTATION	EFFECTIVE AND EFFICIENT MANAGEMENT	TO EVALUATE THE IMPLEMENTATION OF THE LOCAL GOVERNMENT CODE	LGU	LGU
RABIES	PROLIFERATION OF STRAY DOGS	EVALUATE IMPLEMENTATION OF ORDINANCE	TO DECREASE THE INCIDENCE OF RABIES	LGU/DOH	LGU/DOH
TB	INCREASE NUMBER OF TB DEATHS	REFERRAL SYSTEM	TO EVALUATE THE REFERRAL SYSTEM OF TB PATIENTS	DOH	DOH/PHILHEALTH
DENGUE	PREDICTORS OF SHOCK IN DENGUE	CLINICAL AND LABORATORY FACTORS RELATED TO SHOCK	TO DETERMINE THE PREDICTORS OF DENGUE SHOCK	DOH/DOST	WHO/DOST
PREMATURITY	PREVENTION OF PREMATURE DELIVERY	VARIOUS STRATEGY TO PREVENT PREMATURE BIRTH AND DELIVERY	TO DETERMINE FACTORS ASSOCIATED WITH PREMATURE BIRTH AND DELIVERY	DOH	DOH
AUSTISTIC SPECTRUM DISORDER	GENERAL PROFILE OF CHILDREN WITH AUTISM	DESCRIPTION OF THE GENERAL PROFILE OF AUTISTIC CHILDREN IN THE PHILIPPINES	TO DETERMINE THE GENERAL PROFILE OF AUTISTIC CHILDREN IN THE PHILIPPINES	AUTISM SOCIETY OF THE PHILIPPINES	AUTISM SOCIETY OF THE PHILIPPINES
MENTAL DISEASES AND BEHAVIORAL DISORDER	PROFILE OF PATIENTS WITH MENTAL DISORDERS	NO EXISTING PROFILE	TO DETERMINE THE PROFILE OF PATIENTS WITH MENTAL DISORDERS	DOH	DOH
NUTRITIONAL	NUTRITIONAL STATUS OF REGION 3	NUTRITION IN THE PREVENTION OF MORTALITY AND MORBIDITY	TO DETERMINE THE NUTRITIONAL STATUS OF REGION 3	DEPED/EDUCATIONAL INSTITUTION	DEPED/EDUCATIONAL INSTITUTION
OCCUPATIONAL HEALTH RISK	GUIDELINES REGARDING HEALTH OF WORKERS BEFORE AND AFTER EMPLOYMENT	THERE ARE NO EXISTING GUIDELINES ON HEALTH OF WORKERS BEFORE AND AFTER EMPLOYMENT	TO DEVELOP A UNIFIED OCCUPATIONAL HEALTH PROGRAM	DOLE	DOLE/DOH
MALIGNANCY	INCREASING INCIDENCE	CAUSES OF MALIGNANCY	TO IDENTIFY THE FACTORS RESPONSIBLE FOR INCREASED INCIDENCE OF MALIGNANCY REGION 3	DOH/DENR	DOHDENR
ENVIRONMENTAL HEALTH RISK	INCREASE LEVELS OF LEAD IN AMBIENT AIR	MAGNITUDE OF THE PROBLEM	TO DETERMINE THE PROPORTION OF THE POPULATION AFFECTED BY THE HIGH LEVELS OF LEAD AS WELL AS THE EFFECTS ON CHILDREN	LGU/DENR	LGU/DENR

Prioritizia Criteria

ISSUE OF CONCERN	MAGNITUDE OF THE PROBLEM BASED ON EXTENT OF PREVALENCE/ URGENCY, BURDEN TO THE COMMUNITY RANK THE PROBLEM	REASON FOR PERSISTENCE OF THE PROBLEM? LACK OF TOOLS/POOR UTILIZATION/POOR KNOWLEDGE?	CAN THE PROBLEM BE SOLVED BY RESEARCH AND DEVELOPMENT? YES/NO	IS RESEARCH FEASIBLE BASED ON EXISTING RESOURCES OF THE REGION? YES/NO	IMPACT OF R&D ON COST OF HEALTH/POPULATION? YES/NO	IS RESEARCH AREA WELL FUNDED? YES/NO	PRIORITY STATUS HIGH MEDIUM LOW
TB	1	POOR COMPLIANCE OF PATIENTS AND PHYSICIANS	YES	NO	YES	NO	HIGH
DENGUE	2	SANITATION	YES	NO	YES	NO	HIGH
NUTRITIONAL PRACTICES	3	LACK OF AWARENESS	YES	NO	YES	NO	HIGH
LOCAL GOVERNMENT CODE (DEVOLUTION)	4	NO RESEARCH ON THE EFFECTS OF THE PROGRAM	YES	NO	YES	NO	HIGH
CANCER	5	POOR KNOWLEDGE	YES	NO	YES	NO	HIGH
ENVIRONMENTAL HEALTH RISK	6	INDUSTRIALIZATION AND NON IMPLEMENTATION OF POLICIES	YES	NO	YES	NO	MEDIUM
MENTAL HEALTH RISK AND BEHAVIORAL DISORDERS	7	LACK OF CONCERN AND SOCIAL STIGMA	YES	NO	YES	NO	MEDIUM
AUTISM	8	LACK OF AWARENESS	YES	NO	YES	NO	LOW
FAMILY PLANNING	9	LACK OF BUDGET	YES	NO	YES	NO	LOW

Types of Research Suggested for the Major Issues Identified

ISSUE OF CONCERN	TYPE OF RESEARCH (CHECK THE APPROPRIATE BOX BELOW)					
	BIOMEDICAL/ SOCIAL	PRODUCT DEVELOPMENT	OPERATIONS	EDUCATION/ COMMUNICATION	LEGISLATION	MARKET
TB	+		+			
DENGUE	+					
NUTRITIONAL PRACTICES				+		
LOCAL GOVERNMENT CODE (DEVOLUTION)			+			
CANCER	+					
ENVIRONMENTAL HEALTH RISK	GUIDELINES					
MENTAL HEALTH RISK AND BEHAVIORAL DISORDERS	+					
AUTISM	+					
FAMILY PLANNING			+			

Facilitator: Dr Anita Sanchez (Assistant Dean- AUF College of Medicine)
Presenter: Mr Raldy Pagador (DENR)
        Dr Andrew Angeles (Assistant Hospital Director- AUF Medical Center)
Members:
Dr Pedro Papio (Jose B Lingad Memorial Regional Hospital)
Dr Ricardo Ramos (Tarlac Provincial Hospital)
Dr Rodolfo Ng (Head –Department Of Pediatrics, AUF Medical Center)
Dr Jennelyn Badiola (LGU-RHU -Pandan)
Dr Luciele Ayuyao (LGU- City Health Office-Angeles City)
Ms Elsa Rodriguez (Aweca Foundation)
Dr Arnel Syquia (President – Philippine College of Occupational Diseases)
Dr Rey Espiritu (Head – Department of Pharmacology, AUF College of Medicine)
Ms Ligaya Dungca (POPCOM)

GROUP 2
Research Priority Areas

BROAD R&D AREA[1]	SPECIFIC TOPIC[2]	RATIONALE[3]	OBJECTIVE[4]	RESPONSIBLE AGENCY[5]	FUNDING SOURCE[6]
1. HEALTH INFORMATION SYSTEM	KNOWLEDGE	D. LACK OF AWARENESS ABOUT PHILHEALTH BENEFITS E. LACK OF INFORMATION DISSEMINATION ABOUT HEALTH BENEFITS F. LACK OF DATA BASE ON THE AVAILABLE HEALTH SERVICES OFFERED BY DIFFERENT HEALTH AGENCIES IN THE REGION	TO STANDARDIZE THE DATABASE ON INFORMATION SYSTEM	Philhealth Doh	Philhealth Doh
2. HEALTH CARE DELIVERY SYSTEM / HEALTH CARE FINANCING SYSTEM	EXPANSION OF PHILHEALTH COVERAGE	C. HIGH COST OF HOSPITALIZATION D. POSSIBILITY OF EXTENDING PHILHEALTH COVERAGE TO HOME CARE CASES (DOMICILIARY MEDICAL SERVICES)	TO DETERMINE THE FEASIBILITY OF EXPANDING PHILHEALTH COVERAGE TO INCLUDE DOMICILIARY MEDICAL SERVICES	Philhealth	Philhealth
3. HERBAL MEDICINE	KNOWLEDGE EFFICACY	B. OTHER HERBAL MEDS USED HAVE NOT UNDERGONE CLINICAL TRIAL TO PROVE THEIR THERAPEUTIC EFFECTS B. LACK OF AWARENESS ABOUT THE HERBAL MEDS INCLUDED IN THE LIST OF THE PNDF (PHIL. NATIONAL DRUGS FORMULARY)	TO CONDUCT CLINICAL TRIALS ON AVAILABLE HERBAL MEDICINE TO DETERMINE THE AWARENESS OF THE COMMUNITY ON THE AVAILABILITY OF HERBAL MEDICINE	Doh institutions	Doh ched
4. RESEARCH	CAPABILITY OF INSTITUTIONS IN DOING RESEARCH	D. DEFICIENT IN RESEARCH CAPABILITY E. LACK OF INCENTIVES TO CONDUCT RESEARCH F. LACK OF MANPOWER LACK OF FUNDING	TO DETERMINE THE RESEARCH CAPABILITY OF INSTITUTIONS IN REGION 3	ched	ched
5. ETHICS	COMPLIANCE OF RESEARCHERS ON ETHICAL PRACTICE	D. INFORMED CONSENT E. CONFIDENTIALITY F. RIGHTS OF THE RESPONDENTS D. PLAGIARISM	TO DETERMINE THE COMPLIANCE OF RESEARCHERS ON ETHICAL PRACTICE		

Prioritization Criteria

SSUE OF CONCERN	MAGNITUDE OF THE PROBLEM BASED ON EXTENT OF PREVALENCE/ URGENCY , BURDEN TO THE COMMUNITY RANK THE PROBLEM	REASON FOR PERSISTENCE OF THE PROBLEM? LACK OF TOOLS/POOR UTILIZATION/POOR KNOWLEDGE?	CAN THE PROBLEM BE SOLVED BY RESEARCH AND DEVELOPMENT? YES/NO	IS RESEARCH FEASIBLE BASED ON EXISTING RESOURCES OF THE REGION? YES/NO	IMPACT OF R&D ON COST OF HEALTH/POPULATION? YES/NO	IS RESEARCH AREA WELL FUNDED? YES/NO	PRIORITY STATUS HIGH MEDIUM LOW
1. Health Information System	1	Lack of knowledge	Yes	Yes	Yes	No	High
2. Health Care Delivery System/ Health Care Financing	2	Lack of knowledge/Poor utilization	Yes	Yes	Yes	No	High
3. Herbal Medicine	3	Lack of tools	Yes	Yes	Yes	No	High
4. Research	4	Lack of tools Poor knowledge	Yes	Yes	Yes	Yes	High
5. Ethics	5	Poor knowledge	Yes	Yes	Yes	No	High

1. Health information system

   Doctors are not trained to fill up forms using ICD 10 hence the reporting is not accurate and in some cases the cause of death is not confirmed

2. Health care delivery system

   Due to the high cost of hospitalization the possibility of a domiciliary medical service should be looked into. This will decrease the cost of hospitalization and is more convenient to the patient. This will also solve the problem of lack of hospital beds.This will ensure extension of benefits to the poor members of PHILHEALTH. There should be a mechanism to prevent abuse.

3. Herbal medicine

   Clinical trials to determine the efficacy and possible side effects of herbal medicine available should be done. Some might contain alkaloids which might have toxic effect.

Types of Research Suggested for the Major Issues Identified

ISSUE OF CONCERN	TYPE OF RESEARCH (CHECK THE APPROPRIATE BOX BELOW)					
	BIOMEDICAL	PRODUCT DEVELOPMENT	OPERATIONS	EDUCATION/ COMMUNICATION	LEGISLATION	MARKET
1. Health Information System			+		+	
2. Health Care Delivery System/ Health Care Financing			+		+	
3. Herbal Medicine	+	+				+
4. Research			+		+	
5. Ethics			+		+	

Facilitator: Dr Joy Cordero (AUF College oF Medicine)
Presentor: Dr Ruben Henson (HEAD ENT, AUF Medical Center)
Members:
Ms Maria Theresa Tuazon (NEDA)
Mr Leopoldo Cortez (CHED)
Dr Danilo Reynes (PHILHEALTH)
Dr Roberto Quinones (BPSC)
Dr. Reynan P Calderon (BPSC)
Ms. Julieta Damian (Baliuag University)
Ms Lumen Abad (Holy Angel University)
Ms Melanie Junio (Assumption College)
Dr Lucena Cacho (James Gordon Memorial Hospital)
Dr Ma Donna Bernal (James Gordon Memorial Hospital)

FINAL RANKING

1	TB
2	DENGUE
3	NUTRITIONAL PRACTICES
4	RESEARCH
5	CANCER
6	ENVIRONMENTAL HEALTH RISK/OCCUPATIONAL HEALTH
7	HEALTH DELIVERY SYSTEM/HEALTH INFORMATION SYSTEM
8	MENTAL HEALTH RISK AND BEHAVIORAL DISORDERS, AUTISM
9	FAMILY PLANNING
10	HERBAL
11	LOCAL GOVERNMENT CODE (DEVOLUTION)