HEALTH FINANCE DEVELOPMENT PROJECT

HFDP Monograph No. 3
March 1993

Department of Health
Republic of the Philippines

United States Agency for
International Development
(USAID)

UPecon Foundation

Health Sector Review : Philippines

Alejandro N. Herrin
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This report could not have been prepared quickly enough to respond to the Department of Health's request to have information regarding the health sector that could be useful in its Strategic Planning Exercise were it not for the availability of two recent studies, namely: Solon, O., R. Gamboa, B. Schwartz and A. Herrin, *Health Sector Financing in the Philippines*, Monograph No. 2, Health Policy Development Program, 1992; and Herrin, A., G. Russo and M. Pons, "Health Care Utilization in the Philippines," East-West Population Institute, February 1992. These studies contained many of the necessary information, which this report built on. The first study provided estimates of health care expenditures and sources of financing for 1985 and 1988; this report updates such estimates for 1991. The second study contained information on health outcomes and health care utilization patterns. This report updates the information on health outcomes with the inclusion of the most recent estimates of infant mortality up to 1990, estimates of provincial and regional mortality for 1980, morbidity rates and causes of deaths up to 1989, and disability rates based on preliminary 1990 census tabulations. There are no recent national data on health care utilization other than those obtained by the 1987 National Health Survey. This report, therefore, drew liberally upon the data compiled from this source by the second study.

To provide other perspectives on health sector outcomes and performance, this study commissioned several special papers, the abstracts of which appear in Annex A. We wish to thank the contributors for their valuable assistance in preparing these papers on short notice.

The "Summary of Major Findings" contained in this report partly reflects the results of discussions with high-level officials of the Department of Health of the findings and implications based on earlier versions of this report. We found the discussions and consultations productive: they provided us a better understanding of what the data actually represented, and by sharpening our focus on key issues, they guided us in a subsequent search for additional information that bear on such issues. We wish to thank those who participated in the discussions, notably Secretary Juan Flavier and Undersecretary and Chief of Staff Jaime Galvez Tan. Needless to say, the responsibility for errors of interpretation of the points raised in the discussions as summarized in this report remains solely with the authors.

We also wish to gratefully acknowledge the research assistance of Marina Fe B. Durano-Quebral, Ma. Peregrina Makabenta and Ermi Amor F. Yap, the editorial assistance of Regina M. Capuno, and the general assistance of the staff of the Health Policy Development Program in the preparation of this report. ■

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Summary of Major Findings and Implications for DOH

Health Outcomes: Recent Trends

Little Progress in Mortality Reduction in the 1980s

While the Philippines has achieved significant progress in reducing mortality from 1960 to 1980, such progress falls short of the achievements made by the other ASEAN countries, some of which have started with higher mortality rates than the Philippines in the 1960s. In addition, recent data suggest that progress in infant mortality reduction has stalled during the first half of the 1980s and that it may have increased during the second half of the decade (See Figure 1.1 and Figure 1.2a).

There is an urgent need for DOH to bring this information to the attention of the President, the Cabinet and Congress as an input to mobilizing greater support for health initiatives.

Persisting Area Differences in Mortality Levels and Reversal of Mortality Trends in Some Regions in the 1980s

The large differentials in life expectancy and infant mortality among regions and provinces persisted up to 1990 (Figures 1.3a and 1.3b; Figures 1.4a through 1.4l). Between 1980 and 1990, several regions (Regions VIII, IX, X, XI and XII) experienced infant mortality rate increases which more than negated the declines in other regions (See Figure 1.2b).

There is a need to emphasize more focused infant mortality reduction interventions to reverse mortality trends in certain disadvantaged regions. Local government units need to be guided and advised regarding resource allocations that are area-specific and based on known levels of mortality and health problems.

Changing Disease Patterns

Although progress has been made in controlling infectious diseases, pneumonia, tuberculosis and diarrhea continue to be major causes of death. Side by side with the continuing burden of infectious diseases is the increasing problem of chronic diseases such as diseases of the heart, diseases of the vascular system and malignant neoplasm, as major causes of death (Table 1.2; Figures 1.6a and 1.6b).

There is a need now to develop the health personnel appropriate for managing non-communicable disease control programs even as current efforts to control communicable diseases, especially among infants and children, are being strengthened.

Poor Nutritional Status of a Large Group of the Population

As of 1987, chronic dietary energy deficiency continued to be a major problem, and was particularly alarming among preschool children, and among pregnant and lactating women (Table 1.7).

Although some progress has been made in reducing undernutrition among preschoolers and young children between 1987 and 1989-90, the rates of child malnutrition based on anthropometric measures were still high as of 1989-90 (Table 1.8; Figures 1.9a to 1.9b; Figures 1.10a and 1.10b). Undernutrition among preschool and school children is highest in Bicol and Eastern Visayas.

Intakes are deficient for most micronutrients but particularly for iron and iodine. Iodine deficiency is highest among pregnant and lactating women. Iron deficiency is high across all age groups and gender, but is much higher among infants and among females, particularly pregnant and lactating women (Table 1.9).

In view of the current nutrition situation, there is a need to focus on the 1.0 to 1.5 million children afflicted with undernutrition and to plan with DECS the management of the health and education needs of these children as they move through the preschool and school age years. There is a need to focus interventions on specific geographic areas where undernutrition rates are highest. There is a need to plan for micronutrient supplementation at the appropriate scale. On the whole, there is a need to review the whole range of public sector nutrition interventions to find out which ones are most cost-effective and to see whether a smaller set of interventions that can be adequately funded and implemented would be more effective than the current set of interventions.

High Rates of Disability

National data on disability are available for the first time from the 1990 census of population. Preliminary

"While the Philippines has achieved significant progress in reducing mortality from 1960 to 1980, such progress falls short of the achievements made by the other ASEAN countries...."

analysis of the data reveals that 11 persons per 1,000 population have some form of disability. The major forms of disability are orthopedic handicap (2.3 per 1,000), blindness (1.1 per 1,000), deafness (1.1 per 1,000) and mental retardation (1.0 per 1,000). The other forms of disability are muteness, deafness/muteness, speech impairment, mental illness, multiple disability and others.

For each type of disability, the disability rate is generally higher for males than for females, for older age groups starting age 60 years than for younger age groups, and in the Cordilleras, Ilocos, Bicol, Eastern Visayas, Eastern Visayas and Northern Mindanao than in the rest of the regions (See Figures 1.11a and 1.11b; Figures 1.12a through 1.12j; and Figures 1.13a through 1.13j).

There is a need to review what are being done to deal with each type of disability, to determine whether something ought to be done by the public sector, and to determine what ought to be done to rehabilitate disabled persons or to prevent disability-causing illnesses or injuries.

Proximate Determinants of Health Outcomes

Slow Fertility Decline

Fertility levels in the Philippines have declined slowly compared to those of neighboring countries such as South Korea and Thailand. The slow decline in fertility rate is due primarily to low levels of contraceptive use, particularly of the more effective methods of contraception. The trend reveals very slow progress in increasing contraceptive use of program methods (artificial as well as natural) from 1978 to 1986, and practically no progress from 1986 to 1988 when the national family planning program was non-operational (Figure 1.14).

There is a need to bring this information to the attention of the President, the Cabinet and Congress as basis for renewed and more vigorous commitment to accelerate and widen family planning program coverage, particularly the effective methods.

Decline in the Prevalence and Duration of Breastfeeding

In addition to chronic deficiencies in dietary and micronutrient intake, breastfeeding, an important factor in the health and nutrition of infants, has declined. Available national survey data indicate that the prevalence and duration of breastfeeding have declined between 1978 and 1983, especially among younger women, among women with low level of education, and among women in the rural areas (Table 1.10). There is no available information to indicate that this decline has been arrested in the most recent period.

Promotion of breastfeeding needs to focus on increasing duration and raising breastfeeding prevalence among younger, less educated women in the rural areas, women whose infants would gain the most from breastfeeding.

Poor Environmental Sanitation

Environmental sanitation has remained poor for a large proportion of households as indicated by low coverage of safe water supply and sanitary toilets (Figures 1.16 and 1.17). Moreover, there exist large variations among regions, and most likely, provinces, with respect to these indicators. More recent data from the 1990 census are not yet available.

There is a need to advise local government units on the specific locations where to expand coverage of safe water and sanitary toilet facilities.

Macroeconomic and Social Factors Affecting Health and Health Sector Performance

Slow Economic Growth and Continued High Poverty Rates

Slow economic growth combined with rapid population growth resulted in slow growth in per capita incomes. Real per capita GNP grew at an average annual rate of not more than 3.0 percent from the 1950s through the 1970s. With this growth rate, real per capita incomes would double only every 23 years. In the 1980s, per capita GNP even declined by an average of 1.7 percent annually. As of 1990, per capita GNP was 1,792 pesos in 1972 prices, which is still 7.3 percent lower than the level achieved in 1981 (Figure 1.18). In this sense, the economy has not yet fully recovered.

"The shift in the distribution of employment from low productivity sectors like agriculture to high productivity sectors like modern industry which normally accompanies economic growth and development has been extremely slow in the case of the Philippines."

The slow growth in per capita incomes means slow growth in the capacity of the population to pay for health-promoting goods and services. The slow growth of the economy also means slow growth of government resources to finance the provision of basic health care and other health-promoting social services.

There is a need to bring this information, together with information on continued high poverty rates and high inflation rates (Figures 1.20 and 1.21), to the attention of the Cabinet and Congress to argue for increased allocations for health in the total government expenditures. Moreover, given the already low levels of public sector spending on health (See Figure 1.19), further reductions during fiscal crisis are likely to have serious health consequences. Thus, in such situations, there is a need to argue for exemptions from budget-cutting measures.

Slow Structural Transformation of the Economy

The shift in the distribution of employment from low productivity sectors like agriculture to high productivity sectors like modern industry which normally accompanies economic growth and development has been ex-

tremely slow in the case of the Philippines (Figure 1.22). Structural transformation has not occurred in spite of the purported intent of all the major economic policies to achieve rapid industrialization.

One consequence of this slow structural transformation of the economy is that it makes the expansion of the social insurance program (Medicare) much more difficult and costly to undertake. As a temporary measure, there is a need to quickly develop risk coverage schemes for the larger segment of the population which is not yet covered by Medicare or comparable types of schemes.

Slow Improvements in Education

While the literacy rate of the country's population 10 years old and over was 90 percent in 1989, the "functional" literacy rate (defined as those who can read and write and compute) was only 73 percent (Figure 1.23). It is likely that the functional literacy rate for older people, say, those 25 years old and over who currently represent the parents, is even lower. This situation is likely to pose a serious constraint to the efficient use of health care services for infants and children and to the more effective promotion of health for the entire family.

There is a need to focus attention of IEC efforts on population groups who might need specific information and knowledge of appropriate health practices and behaviors on account of their lack of formal education and basic learning skills.

Health Care Utilization Patterns

Low Proportion of Deaths With Medical Attendance

Despite the expansion of public and private health care services, utilization of health services remains low. This is evidenced by a very large proportion of reported deaths (60 percent in 1989) without medical (physician) attendance (Figure 2.1 and Figure 2.2). This suggests that a large percentage of the population with serious illness or injury do not have easy access to the needed professional medical care. Moreover, little is known about this population.

There is a need to expand knowledge about the conditions and behavior of the non-medically attended population in order to develop specific strategies for reaching out to this population with the needed care.

Continued Reliance on Traditional Birth Attendants

A large proportion of all reported births are still delivered by traditional birth attendants called hilots. In 1989, 41 percent of births were delivered by hilots, 26 percent by physicians and another 31 percent by nurses/midwives. Several factors account for the *hilot's* popularity: easy access, less expense and provision of additional personal services and rituals (See Table 2.1).

There is a need to review the conditions of *hilot* practice, their training and support in order to ensure safe and healthy deliveries among those unable to obtain modern delivery care. The planning and supervision of safe motherhood provisions also need to consider the range of alternative sources of service available in communities.

Increased Pre-Natal Care But Continued Low Post-Natal Care Utilization

Data from the National Health Surveys reveal that while the percentage of women who had pre-natal care in connection with the last live birth rose from 73 percent in 1981 to 82 percent in 1987, the percentage of the same women who had post-natal care remained low at around 45 percent (Figure 2.6).

A large majority of women who did not have post-natal care (66 percent) said they were not aware of the need for such services, while another 13 percent said they were not convinced of the importance of such service (Figure 2.8).

Among women who had given birth during the seven years prior to the 1987 National Health Survey, 54 percent said they were aware of tetanus toxoid immunization, but only 38 percent actually received such immunization (Figure 2.9a). Among those who were aware but were not immunized, 37 percent mentioned "fear of adverse reaction," while another 22 percent mentioned "no access to a health facility" as the reason for non-immunization. Only eight percent believed immunization was of no use (Figure 2.9b).

There is a need to take advantage of the opportunity presented by high pre-natal care coverage of mothers in order to provide these same mothers with post-natal care, family planning information and services, and breastfeeding and nutrition education. There is also a need to improve information and motivational efforts to increase coverage and utilization of specific pre-natal services such as tetanus toxoid immunization.

Large Gap in Knowledge and Use of Modern Therapy for Diarrhea

With respect to the utilization of oral rehydration therapy for the management of diarrhea, large gaps exist between awareness and use, and between knowledge of source and actual access. Data from the 1987 National Health Survey reveal that 62 percent of household respondents said they had heard of ORESOL (mainly from home visit and consultation with DOH personnel) but only 30 percent had used it to treat diarrhea cases among household members (Figure 2.10a). Moreover, 56 percent of the respondents said they knew where to get ORESOL but only 46 percent said they could get it when needed (Figure 2.10b).

The DOH's Control of Diarrheal Disease Program is based on the use of the simple and low-cost oral rehydration therapy in place of expensive intravenous therapy or sometimes ineffective anti-diarrheal and antibiotic therapy. This program could be further strengthened by providing better information on the effectiveness and appropriateness of ORESOL relative to other therapeutic means and widening the access of households to supplies of ORESOL packets.

"Despite the expansion of public and private health care services, utilization of health services remains low."

Low Level of Preventive Dental Care

Tooth decay and missing teeth are the two major dental problems. The 1987 National Health Survey revealed that more than a third of the population aged six years and over had tooth decay and 14 percent had missing teeth. Dental care service utilization is largely oriented towards extraction (Figure 2.12b).

There is a need review the national dental care program and to reorient dental care towards prevention and early treatment.

Lower Level of Satisfaction with Services in Government Health Facilities than in Private Health Facilities

Of the total households who used various health facilities in the 12 months prior to the 1987 National Health Survey, about 10 percent on the average said they were dissatisfied with the services provided in government health facilities (hospitals and primary care units) while only four percent said they were dissatisfied with the services provided in private hospitals (Figure 2.15). It appears that private hospitals are perceived to provide relatively better service on the whole compared to government facilities, particularly government hospitals, and this may account for the former's greater utilization by households as their income rises.

Among the major reasons for dissatisfaction with services provided in government health facilities are the lack of medicine, poor service delivery, lack of equipment and facilities, relative unavailability of health personnel when needed, and impersonal or indifferent health personnel. The extent of each problem, however, varies by type of facility. The lack of medicine is a more persistent reason for dissatisfaction with services in Barangay Health Stations while the indifference and impersonality of health personnel are prevalent reasons for dissatisfaction with services in government hospitals.

The sources of public dissatisfaction with services received in government facilities provide clues for improving service delivery. The lack of medicine and facilities signals the need to review the composition of health service inputs to promote greater efficiency in service provision and to produce better quality of services. The indifference of personnel and their non-availability when needed point to the need for reviewing the staffing, training and supervision policies to promote greater staff responsiveness and operational efficiency.

"A large part of total health sector expenditures... is financed by the private sector, mainly from household out-of-pocket payments...."

Health Care Financing

Low Level of Spending

The total amount of health care expenditures for 1991 is estimated not to have exceeded two percent of GNP, a figure that is lower than those found in other ASEAN countries (Table 3.1). The low percent of GNP spent for health is due to the low priority given to health by both government and households (Figure 1.19 and Table 3.3).

There is a need to bring this information (together with the information of the lack of progress in mortality reduction and the large unmet health service needs of the population) to the attention of the President, the Cabinet and Congress as a basis for arguing that the health sector be given higher priority in the allocation of budgetary resources on the one hand, and for undertaking efforts to inculcate the importance of household investments in preventive and promotive health care, on the other.

Health Sector Expenditures Are Financed Largely from Direct Household Spending

A large part of total health sector expenditures (close to two thirds) is financed by the private sector, mainly from household out-of-pocket payments to providers (see Table 3.1 and Table 3.2). While this implies, on the one hand, that households can and do pay for health services, it also means that those without money incomes to pay for services could not easily get access to such services. Moreover, among the very poor, paying for health services would likely involve shifting present or future resources away from alternative uses that could have both short-run and long-run adverse consequences, e.g., borrowing money to pay for health care now could mean less consumption in the future or less investment in other forms of human capital, such as the education of children, in the future.

Of the total public sector spending, 85 percent is financed from taxes. In view of the regressiveness of the current tax structure, the burden of financing public sector expenditures actually falls heavier among lower income groups than among the highest income groups.

Medicare Still a Minor Source of Health Sector Financing

Social insurance through Medicare is still a minor source of health sector financing, constituting eight percent of total health sector financing, in spite of its having operated for 20 years. A major factor in the slow growth of social insurance is the slow structural transformation of the economy which makes it extremely costly to expand Medicare coverage to the rest of the population outside of the formal employment sector.

In generating additional resources for health, there is a need to support reforms both within and outside the health sector. Outside the health sector, there is a need to support tax reforms that improve the efficiency and equity of the tax system. There is also a need to support policies that foster faster and sustained economic growth with rapid structural transformation. Within the health sector, there is a need to study and adopt various options for reforms in the current Medicare program with respect to both the contribution and benefit structures, and for enrolling an increasingly large portion of the uncovered population to Medicare, e.g., through cooperatives. A politically and economically viable health sector financing strategy that seeks to increase pooling of risks, expand available funding, provide an appropriate role for public spending, feature payment mechanisms that encourage efficient provision of services, and provide universal coverage is clearly a priority. ■

1
Trends in Health Outcomes and Determinants

Trends in health outcomes are presented below. Four aspects are reviewed, namely: mortality, morbidity, nutritional status and disability. Trends in the important determinants of health outcomes also follow. Three proximate determinants are reviewed, namely: fertility, breastfeeding and environmental sanitation. A fourth group of proximate determinant, namely, health care utilization, is discussed in Section 2. Five important socioeconomic determinants are also reviewed, namely: economic growth, poverty, inflation, structural transformation of the economy, and education.

Trends in Health Outcomes

Mortality

National Mortality Trends. The Philippines has achieved significant progress in reducing mortality in the Philippines from 1960 to 1980. Life expectancy at birth rose from 56.9 years in 1960 to 62.6 years in 1980, while infant mortality rate declined from 106.4 in 1960 to 58.7 in 1980 (Table 1.1). However, this progress falls short of the achievements made by neighboring countries, some of which started with higher mortality rates than the Philippines in the 1960s (Figure 1.1).

Data on mortality trends in the 1980s are incomplete. The available data on infant mortality, however, suggest that progress in infant mortality reduction stalled during the first half of the 1980s and that the infant mortality rate may even have been higher by the middle of the 1980s. However, a slight decline may have occurred in the later half of the 1980s to bring the infant mortality rate back to the level of 1980 (Figure 1.2a).

Regional and Provincial Mortality Differentials. Large regional and provincial mortality differentials persisted up to 1980 (Figures 1.3a and 1.3b; Figures 1.4a to 1.4l; and Figures 1.5a through 1.5l). In 1980, life expectancy varied from a low of 56.9 years in Eastern Visayas to a high of 66.0 years in Central Luzon. This difference of 9 years is larger than the difference in the national life expectancy at birth between 1960 and 1980. Regional infant mortality rates follow a similar pattern as that of the life expectancy at birth (Figures 1.5a to 1.5l). Comparable data for 1990 are not yet available.

Data from the national demographic surveys show an increase in infant mortality rate for the country as a whole between 1980 and 1990, a reversal of trends from the 1970s. Several regions (Regions VIII, IX, X, XI and XII) experienced infant mortality rate increases which more than negated the declines in other regions (Figure 1.2b).

Leading Causes of Death. Although progress has been made in controlling infectious diseases, pneumonia and tuberculosis continue to be the leading causes of death at all ages. Diarrheal diseases also continue to be a major cause of death together with nutrition-related diseases and measles. Side by side with infectious diseases, are chronic diseases, such as diseases of the heart, diseases of the vascular system and malignant neoplasms, which continue to gain in importance as major causes of deaths (Table 1.2; Figures 1.6a and 1.6b).

Death among infants is a major concern partly because infant deaths alone constitute about 15 percent of all reported deaths. Among the leading causes of infant deaths, pneumonia is the single most important cause. In 1989, 26 percent of all reported infant deaths were due to pneumonia. Other respiratory diseases account for another 16 percent of total infant deaths, while diarrheas, nutritional deficiencies and measles account for still another 11 percent. Altogether, these interrelated diseases, which are preventable by known public health measures, account for half of all infant deaths (Table 1.3).

Death Rates By Age and Gender and By Cause of Death. Death rates by age follow the typical U-shaped or J-shaped pattern where death rates tend to be very high at infancy and early childhood, decline sharply by age 10 years, remain low over a broad age range, start to climb at around age 40 years, and accelerate beyond 50 years and over. Moreover, male death rates are generally higher than female death rates in all age groups.

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These well-known patterns of age-gender mortality differentials, however, vary by cause of death. Certain causes of death such as measles and diarrhea affect infants and young children more than adults while other causes such as tuberculosis, heart diseases and malignant neoplasms are more important causes of death for older adults than for children (Figures 1.7a to 1.7f).

Fetal Deaths and Maternal Mortality. Data for 1989 based on reported cases show that the fetal death rate was 7.3 deaths per 1,000 live births while the maternal mortality rate was 1.0 death per 1,000 live births. Even allowing for under-reporting, the data appear to demonstrate certain known patterns, i.e., the J-shaped relationships between fetal death and age of mother, fetal death and birth order, and maternal mortality and age of mother.

The two major causes of reported fetal deaths are complications of placenta cord and membranes, and disorders relating to short gestation, both of which accounted for one third of all reported fetal deaths (Table 1.4). The two major causes of maternal mortality, on the other hand, include hypertension complicating pregnancy, childbirth and puerperium, and postpartum hemorrhage, both of which accounted for 58 percent of all reported maternal deaths in 1989 (Table 1.5).

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Morbidity

National Profile: Leading Causes of Morbidity. With the exception of bronchitis and influenza, the leading causes of morbidity are also the leading causes of mortality. Infectious and communicable diseases figure prominently as major causes, the top five being bronchitis, diarrheas, influenza, pneumonia and tuberculosis (Table 1.6).

Based on the average rates during the preceding five-year period 1983-1987, there appears to be an increase in morbidity rates among the ten leading causes in 1988 and again in 1989. This apparent increase in morbidity rates is more likely the result of better (or a different way of) reporting than to an actual increase in morbid conditions.

Regional Morbidity Differentials. There are large variations in morbidity rates by type of morbid condition among regions. Part of these differences, however, may be due to differences in reporting. Nevertheless, the regional pattern of several types of morbid conditions is roughly consistent with known socioeconomic and ecological characteristics of regions. A clear example is the morbidity differentials for certain endemic diseases such as malaria and schistosomiasis. Morbidity from malaria is concentrated in Cagayan Valley and to some extent in three regions of Mindanao, while morbidity from schistosomiasis is concentrated in Eastern Visayas and in the four Mindanao regions (Figures 1.8a and 1.8b).

Morbidity Rate by Age and Gender. The age and gender patterns in rates by specific cause of morbidity generally follow the age and gender patterns of mortality from the corresponding specific causes, with the exception of the pattern depicted for influenza and pneumonia, which shows low morbidity but high mortality from these causes among the oldest age groups.

HIV Infection and AIDS. As of July 1991, the DOH reported that a total of 165,514 HIV antibody tests had been performed yielding 253 HIV antibody-positive cases. Of these, 53 were diagnosed as full-blown AIDS cases, 32 of whom have already died. Most of those who were identified to be HIV-infected were female commercial sex workers. Others included overseas contract workers and homosexual/bisexual men. The primary mode of HIV infection was through sexual intercourse between heterosexuals.

The HIV surveillance in the Philippines thus far has been concentrated among female commercial sex workers in Olongapo City, Angeles City and Metro Manila. The DOH, however, is developing a national AIDS surveillance system in selected sentinel sites nationwide among female commercial sex workers, male STD patients, pregnant women, and overseas contract workers.

Nutritional Status

The most common forms of malnutrition affecting Filipinos are (a) chronic dietary energy deficiency particularly among young children, and pregnant and lactating women; (b) protein-energy undernutrition as manifested by growth deficits among preschool and school children; and (c) micronutrient deficiencies particularly in Vitamin A, iron and iodine among a large group of the population of all ages.

Dietary Energy Deficiency. Data from national nutrition surveys conducted by the Food and Nutrition Research Institute reveal that the adequacy of energy intake, on the average, was only 87 percent in 1987, down from around 89 percent in 1978 and 1982 (Table 1.7).

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The low level of energy intake is due to a low proportion of fat in the diet which comprises only 15 percent of dietary intake vis-a-vis the "ideal" proportion of from 20 to 25 percent (NNC, 1991).

Chronic dietary energy deficiency is particularly alarming among preschool children and among pregnant and lactating women. Data for 1987 show that the dietary intake of children 6 months to 6 years old (excluding those who were fully or partially breastfed) was only about 65 percent of their daily requirements. The mean dietary intakes of pregnant and lactating women, likewise, were only 69 percent and 65 percent adequate, respectively (NNC, 1991).

Growth Deficits Among Children. Data on the nutritional status of preschoolers and young children reveal that although there have been some improvements since 1987, the rates of child malnutrition remain high. Data from the 1989-1990 National Anthropometric Survey conducted by the Food and Nutrition Research Institute reveal that among preschool children, 14 percent were underweight, 11.6 percent were stunted and 9.0 percent were wasted (Table 1.8). Moreover, the malnutrition rates among female preschoolers, in terms of these three indicators, are much higher than males suggesting possible bias in intrahousehold allocation of food. On the other hand, since male mortality exceeds that of female mortality among preschoolers, the data also suggest that more male preschoolers die from diseases aggravated by poor nutrition than females.

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The nutritional status of preschool and school children in terms of growth deficits varies widely among regions (Figures 1.9a to 1.9c; Figures 1.10a and 1.10b). Highest rates of undernutrition are found in Bicol and Eastern Visayas and lowest in the National Capital Region, Ilocos and Cagayan Valley. Moreover, within regions, higher undernutrition rates are found for female than for male children in most cases.

Micronutrient Deficiency. Intakes are deficient for most micronutrients. Micronutrient deficiencies, however, vary by type of nutrient and specific age groups (Table 1.9). For example, in 1987 (the latest year where data are available) 70 percent of preschoolers, 45 percent of pregnant women, 51 percent of lactating women, and 47 percent of the elderly suffered from anemia. Moreover, pregnant and lactating women suffered high prevalence rates of goiter: 12 percent for pregnant women and 11 percent for lactating women.

Disability

National data on disabilities are available for the first time from the 1990 census. The data based on preliminary census tabulations are summarized in Figures 1.11, 1.12 and 1.13.

The data reveal that 11 persons per 1,000 population have some form of disability. The disability rate is generally higher for males than for females, for older age groups starting age 60 years than for younger age groups, and for the Cordillera Autonomous Region, Ilocos, Bicol, Western Visayas, Eastern Visayas and Northern Mindanao than the rest of the regions. (See Figures 1.11a and 1.11b).

The major forms of disability are orthopedic handicap (2.3 per 1,000 population), blindness (1.1 per 1,000), deafness (1.1 per 1,000) and mental retardation (1.0 per 1,000). The other forms of disability are muteness, deafness/muteness, speech impairment, mental illness, multiple disability and others. Disability rates by region and by age and gender are shown in Figures 1.12 (a through j) and Figures 1.13 (a through j), respectively.

Determinants of Health Improvements

In order to better understand the trends in health status improvements over the past 30 years, and particularly the trends in the last 10 years, it is necessary to examine the trends in both proximate and underlying socioeconomic determinants. The major proximate determinants are fertility, nutrient intake, environmental sanitation, and health care utilization. On the other hand, the major socioeconomic determinants include household income and level of education as affected by the underlying macroeconomic trends in income, employment and prices.

Proximate Determinants

Fertility. It is well known that high fertility is associated with high risk of infant and child mortality and malnutrition. Fertility levels in the Philippines have declined slowly compared to those of neighboring countries, particularly South Korea and Thailand. The slow decline in fertility rate can be traced mainly to low levels of contraceptive use, especially of the more effective methods of contraception. The trend reveals very slow progress in increasing contraceptive use of program methods (artificial as well as natural) from 1978 to 1986, and practically no progress from 1986 to 1988 when the national family planning program was practically non-operational (Figure 1.14).

Fertility rate varies by region, with the National Capital Region and the more urbanized and highly developed

regions showing lower fertility rates than the rest of the regions (Figure 1.15). This indicates that progress in narrowing regional fertility differentials can contribute to overall national decline, as well as reduced regional differentials, in infant and child mortality.

Breastfeeding. Data showing inadequacies in per capita household and individual dietary and nutrient intake have been shown earlier. In addition, it is important to note the trends in breastfeeding. Breastfeeding (practice, exclusiveness and duration) is a significant determinant of the nutritional and health status of infants. Available data indicate that the prevalence and duration of breastfeeding have declined between 1976 and 1983, particularly among younger women, women with low level of education, and women in the rural areas (Table 1.10).

Environmental Sanitation. The continued high prevalence of diarrheal diseases as a major cause of morbidity and mortality suggests the importance of environmental sanitation and personal hygiene as determinants affecting overall morbidity and mortality. Data for two major environmental sanitation indicators, i.e., the percentage of households with access to safe water supply and the percentage of households with sanitary toilet facilities, suggest that environmental sanitation conditions remain poor for a large proportion of households.

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Less than 70 percent of households in 1987 had access to safe water supply (tap and deep well). Moreover, there exist large variations among regions (Figure 1.16). More recent data from the 1990 census have not yet been made available.

While significant improvements appear to have occurred with respect to the percentage of households with sanitary toilet facilities as can be gleaned from the 1981 and 1987 National Health Survey data (57 percent in 1981 vs. 73 percent in 1987), there still exist wide variations among regions. Thus while 94 percent of households in the National Capital Region have sanitary toilet facilities, only 51 percent in Central Mindanao and 61 percent in Eastern Visayas have similar facilities (Figure 1.17).

Health Care Utilization. Utilization of health care services is a major determinant of health status. The data indicate many important trends in this area of concern. These are presented and discussed in Section 2 of this report.

Macroenvironment: Underlying Socioeconomic Factors Affecting Health and Health Sector Performance

Economic Growth. The growth of the Philippine economy is characterized as slow and uneven (Figure 1.18). Real GNP grew at an average annual rate of 6.1 percent in the 1950s, 5.1 percent in the 1960s, and 6.2 percent in the 1970s. In the 1980s, the average annual growth rate fell to only 1.7 percent. The generally poor economic performance in the 1980s was aggravated by the economic crisis of 1984-1985 when the economy contracted instead of growing. Philippine postwar growth rates, even the relatively high rates in the 1950s through the 1970s, pale in comparison with the rates of economic growth achieved by neighboring countries in Asia, i.e., South Korea and the other ASEAN countries during the same period.

The slow economic growth combined with rapid population growth resulted in slow growth in per capita incomes. Real per capita GNP grew at an average annual rate of not more than 3.0 percent from the 1950s through the 1970s. With this growth rate, real per capita incomes would double only every 23 years. In the 1980s, the average per capita GNP

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even declined by 1.7 percent annually! In 1990, real per capita GNP was 1,792 pesos, which is 7.3 percent lower than the level achieved in 1981.

The slow growth in per capita incomes means a correspondingly slow growth in the capacity of the population to pay for health-promoting goods and services, including health care. From the standpoint of the government, the slow growth of the economy means slow growth in government resources to finance the provision of basic health care and other health-promoting social services.

Based on available data, however, the economic contraction did not lead to government expenditures for health being reduced more than other items of government expenditures. Apparently, government health expenditures per capita were not drastically cut during such times relative to other items of expenditure. What the data show, however, is that government health expenditures per capita did not rise during economic recovery, and that per capita expenditures remained very low to start with, about 15 pesos in 1972 prices, throughout the last decade (Figure 1.19).

Poverty. The poor performance of the Philippine economy over the last 20 years is reflected in continued high rates of poverty (Figure 1.20). In 1971, the poverty rate, i.e., the percentage of families whose incomes fall below threshold levels, was 49 percent. This rate rose to 59 percent in 1985, and hovered around 50 percent in 1988. Poverty rates for 1985 and 1988 by region show that poverty rates were as

high as 73 percent in such regions as Bicol and Western Visayas in 1985. The same regions experienced high poverty rates in 1988. Recent data from the 1991 FIES have not yet been officially published.

The high poverty rates over the past 20 years and the lack of signs of sustained reductions mean continued low capacities of households to pay for health-promoting goods and services, including health care, with potential adverse consequences on their health status. It also implies poor prospects for cost recovery of publicly-provided social services, including health services.

Inflation. The rate of increase in consumer prices was particularly rapid in the early part of the decade and in the crisis years of 1984-1985 (Figure 1.21). Since 1988, the inflation rate has risen again to double-digit figures reaching 18 percent in the first half of 1991. In August 1991, the National Statistics Office reported an inflation rate of 19 percent. Presently, the inflation rate has decelerated to less than 10 percent.

For households, high rates of inflation means declining purchasing power of the peso to finance health-promoting goods and services, including health care. This could lead to, among other ill effects, a decline in health service utilization, particularly for preventive care, and therefore, adversely affecting health status.

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Failure to expand health budgets to account for inflation means less actual services made available to the growing population. The coverage of publicly-provided health services is, thus, likely to become more limited if budgets are not increased at least to cover inflation.

Structural Transformation of the Economy. The structural transformation of the economy, i.e., the shift in the distribution of employment from low productivity sectors like agriculture to high productivity sectors like modern industry, has been extremely slow (Figure 1.22). The data on the distribution of employed persons by major industry group generally show that the share of employment in industry, and the manufacturing sector in particular, has barely changed since the 1950s, indicating that this sector has not been absorbing labor as fast as expected. This is worth noting considering that all the major economic policies of government were designed to achieve rapid industrialization so that the labor force displaced in agriculture could be absorbed into more productive employment in the industrial or manufacturing sector. As the data reveal, this has not happened.

The slow structural transformation of the economy has several implications. One is that economic mobility of households is limited, leading to a concentration of households in low productivity, and therefore, low income occupations. Secondly, options for adopting more efficient health care financing systems to expand access to health services become more limited, and the expansion of financing schemes such as the Medicare Program becomes even more difficult.

Education. Education, especially of mothers, has been found in both international and national studies to be a major determinant of the health and nutritional status of children. Education represents better knowledge and information on health and nutrition and, therefore, affects both the efficiency of households in producing better health and nutrition as well as in consuming health and nutrition services.

The literacy rate among females aged 25 years and over (which comprise the group who would currently be mothers) was only 77 percent in 1980: 90 percent in urban and only 69 percent in rural areas. Comparable census data for 1990 are not yet available. However, the latest report from the National Statistics Office based on the 1989 Survey of Functional Literacy, Education and Mass Media reveals that the literacy rate of the country's population 10 years old and over is 90 percent, but the "functional literacy rate" (defined as those who can read and write and compute) is only 73 percent (Figure 1.23). It is likely that the functional literacy rate of older people, say, those 25 years and over, is even lower. If the pattern revealed by the literacy of women in 1980 holds, then the functional literacy rate for women aged 25 years and over would be even less. This suggests that the functional literacy among current mothers is much lower than one might expect, and such a situation is likely to pose serious constraints to rapid improvements in the health and nutrition of children. ■

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Health Care Utilization Patterns

Recent patterns of use of various health care services are presented below. Utilization of seven groups of services are reviewed, namely: medical attendance of deaths, attendance and consultation of illness, attendance of births, pre-natal and post-natal care, tetanus toxoid immunization, case management of childhood diarrhea, and dental care. In addition, various aspects of health facility access and use are examined.

Deaths By Medical Attendance

Data on reported deaths reveal that a large percentage of deaths are not medically attended, i.e., not attended by a physician (Figure 2.1 and Figure 2.2). In 1980, only 31 percent of reported deaths were medically attended. While this figure improved to 40 percent in 1989, this still means that a majority of deaths occur without benefit of a physician's ministrations. Considering that reported deaths already understate the actual number of deaths, more than 60 percent of Filipinos dying from illness or injury do not have access to needed professional medical care.

The situation varies greatly among regions. In 1989, the percentages for the National Capital Region (NCR) and Central Luzon were better than the national (62 percent and 46 percent, respectively). Eastern Visayas with 26 percent and Bicol with 27 percent had much worse. It should be noted that eight regions had levels of medical attendance at deaths worse than the national average, and it is really only NCR that had a majority of deaths medically attended. It is, however, heartening to note that between 1980 and 1988, the regions with the lowest percentages of medically attended deaths, also showed the greatest improvements (Region II, V and VIII).

While these levels and differentials contain a significant element of reporting artifacts (e.g., varying degrees of reporting completeness, problems in definition of medical attendance, changes in reporting procedures between years), it is probable that the general pattern suggested by these figures is valid.

Attendance of Illnesses

Data from the 1987 National Health Survey show that only 37 percent of those reported ill utilized medical care. Up to 77 percent of those who sought medical care obtained such care from physicians (43 percent from private; 34 percent from government physicians). The remaining 23 percent were attended by midwives (17 percent), and nurses (6 percent) (Figure 2.3).

As in the large percentage of unattended deaths, the large percentage of unattended illnesses demands further investigation and study. Unlike the deaths, however, which can safely be regarded as needing medical attendance, not all illnesses are likely to require attendance by a physician. Thus, lacking information on the nature and severity of the illnesses of those who sought treatment and those who were unable to obtain care, no definite conclusions can be made about the appropriateness and efficiency of these patterns of use.

Place of Consultation

Data from the 1987 NHS indicate that clinics accounted for 43 percent of consultations (23 percent private and 20 percent rural health unit); hospitals were the setting of 38 percent of consultations (almost equally divided between public and private hospitals); and only 19 percent of consultations occurred in barangay health stations, puericulture centers and homes (Figure 2.4)

Again, lacking information about the nature and frequency of these consultations, it is difficult to draw any conclusions from this data. One observation of note is that among those ill who obtain care of some kind, there is almost an equal sharing between public and private hospitals and

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clinics. This suggests that the private sector accounts for an important proportion of actual utilization. While data exist about the number and distribution of private hospitals, no reliable and comprehensive data are available about the number and distribution of private clinics. It is likely that private clinics are as widespread and as accessible as rural health units.

Attendance of Births

Data indicate that a large proportion of births (98 percent) are attended by a health worker or traditional birth attendant. At least in this particular health need (delivery), the health care system demonstrates an ability to reach and attend to the needs of the population. There are indications, however, that the modern medical system has just barely supplanted the traditional system in this area. Data for 1989 show that 41 percent of births are still attended by traditional birth attendants, called *hilots*, versus 57 percent attended by modern health professionals such as physicians (26 percent) and nurses/midwives (31 percent) (Figure 2.5).

The regions with the lowest percentages of medical attendance of deaths also had the highest proportions of births attended by *hilots* (Regions II, V, VIII, X and XI), suggesting that *hilots* fill an important gap in service utilization. Only NCR and Region III have overwhelming percentages of births attended by the modern medical system, and even in these regions, the *hilot* continues to play an important although minor role.

The 1981 NHS provides data which can help explain the continued importance of *hilots* in childbirth care (see Table 2.1). Apparently *hilots* are not only easy to access (resides nearby, available at night, responds immediately) but they are also less expensive and, in addition, they provide other services like helping around the house.

These data indicate that as far as households are concerned, they regard *hilots*, midwives, nurses, doctors and hospitals (public and private) as real alternatives and substitutes to some degree in their utilization of health care.

Pre-Natal and Post-Natal Care

The data obtained by the 1981 and 1987 NHS provide some insights into the patterns of use of pre-natal and post-natal care. Between 1981 and 1987, pre-natal coverage rose from 73 percent to 82 percent, while post-natal care coverage remained at around 45 percent. It is a matter of concern that there is such a large gap between pre- and post- natal care coverage, and that the gap even widened from 1981 to 1987 (from 26 percent to 37 percent) (Figure 2.6). This gap between pre- and post-natal care appears to be the same for both rural and urban areas, even as the levels of pre- and post-natal care are generally higher in urban compared to rural areas (87 percent pre-natal and 52 percent post-natal or a 35-percentage-point differential for urban areas; 79 percent pre-natal and 41 percent post-natal or a 38-percentage-point differential for rural areas) (Figures 2.7a and 2.7b).

In addition to the lower pre-natal care coverage in rural areas as compared to urban areas, midwives and nurses accounted for 73 percent of pre-natal care in rural areas while they provided for only 43 percent in urban areas. Physicians accounted for only 21 percent of pre-natal care in rural areas while providing 54 percent of such care in urban areas. As far as physician-provided pre-natal care is concerned, public and private physicians accounted for almost equal shares in urban as well as rural settings. As far as pre-natal care is concerned, these data highlight the importance of midwives in rural and to a lesser degree in urban areas, and the almost equal sharing between public and private physicians. Significantly, *hilots* accounted for only a small portion of pre-natal care.

Returning to the pre-natal and post-natal coverage differential, data from the 1987 NHS provide some information why women who obtained pre-natal care did not obtain post-natal care (Figure 2.8). Apparently, 66 percent of women who did not obtain post-natal care were not aware of the need for such services and another 13 percent were not convinced of its importance. These perceptions remained the same in urban and rural areas as well as in different regions. It is probable that a significant proportion of these women who had pre-natal care but no post-natal care were attended at birth by *hilots*, hence, their lack of awareness is understandable. But a large proportion were likely to have been attended by midwives, nurses and physicians considering that these workers account for 57 percent of all deliveries. It seems significant that despite such qualified attendance at birth, a high proportion of mothers who gave birth were unaware or unconvinced of the need for post-natal care.

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Tetanus Toxoid Immunization

The 1987 NHS also provides data on tetanus toxoid (TT) immunization of pregnant women. Despite the 82 percent coverage of pre-natal care, which should have included TT immunization, only 54 percent of women who delivered were aware of such immunization and only 38 percent actually received such immunization. This information reveals the extent of missed opportunities: first to inform, then to serve (Figure 2.9a).

Among those who were aware of TT immunization but were not immunized, 37 percent mentioned as reason "fear of adverse reaction," another 22 percent reported "no access to a health facility" and 8 percent believed immunization was of no use (Figure 2.9b).

The extent of missed opportunities, measured by the gap between pre-natal coverage and awareness of TT immunization and actual TT immunization, varies from region to region. NCR has the largest gap between pre-natal coverage (85 percent) and awareness of TT immunization (28 percent), and actual TT immunization level (18 percent). Region IX has the narrowest gap with pre-natal coverage at 71 percent, awareness of TT at 68 percent, and actual immunization at 52 percent (Figures 2.6 and 2.9a compared).

Case Management of Childhood Diarrhea

The use of simple and low-cost oral rehydration therapy in the management of diarrhea cases, instead of expensive intravenous therapy or ineffective anti-diarrheal or antibiotic treatment, is a central thrust in the national Control of Diarrheal Disease (CDD) Program. The 1987 NHS generated some data on the patterns of case management of diarrhea, which indicate some progress in implementing the program, but also some outstanding problems.

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With respect to "usual treatment given when household members get diarrhea," 30 percent were given ORESOL (the DOH-produced and distributed packet of oral rehydration powder used to make a solution for diarrhea treatment). With respect to "treatment given to the last diarrhea episode among children," 40 percent were given ORESOL and another 9 percent other ORT preparations. This indicates that ORT is at least a major, but not yet a dominant, mode of diarrhea treatment at the household level.

Other data provide insights into the possible problems facing the wider adoption of ORT. First, not all who are aware of ORESOL use it for diarrhea treatment. In fact, 62 percent of women had heard of ORESOL but only 30 percent had used it (Figure 2.10a). This awareness-practice gap, while common among health practices, is high. Second, compared to those who know where to get ORESOL (56 percent of women), those who can actually get it when needed (46 percent) is less (Figure 2.10a). This gap between informational access and physical access is also a common difficulty. Third, there is apparently a different pattern in knowledge, use and access of ORESOL between NCR and the rest of the Philippines. The DOH, traditionally a major provider of health information and services outside of Metro Manila, has apparently reached the various regions but has been less successful in Metro Manila. NCR had 34 percent awareness of ORESOL (versus 62 percent nationwide), 20 percent use (versus 30 percent nationwide), and 20 percent actual access (versus 45 percent nationwide). This gap between NCR and the rest of the Philippines is quite unusual.

Aside from the above-cited gaps, there are also indications of problems relative to other behaviors competing with ORT. In 1987, there were 1,609,000 reported child diarrhea episodes. Allowing for multiple types of treatment, 49 percent were treated with ORT, while 58 percent were treated with suspension or tablet, the treatment sought to be supplanted by ORT. The competition between ORT and other treatment modalities is particularly revealing in those diarrhea cases referred to a health facility, which comprise about 43 percent of all reported cases.

In general, the diarrhea treatment patterns in facilities parallel that in the home, with the addition of intravenous therapy as another treatment mode used. About 64 percent of cases use ORESOL and other ORT, 67 percent use suspension or tablets, and 15 percent use intravenous therapy. But an examination of patterns by type of facility reveals some insights into the diffusion of ORT case management skills in facilities as seen from the experience of households.

"The 1987 NHS ...data on the patterns of case management of diarrhea ...indicated that ORT was at least a major, but not yet a dominant, mode of diarrhea treatment at the household level. ...These patterns show the possible inroads of the CDD Program, but also highlight the difficulty of supplanting suspension/tablet in diarrhea treatment and the adoption of ORT practices in private facilities."

Based on data shown in Figure 2.11, three patterns emerge. The first type is exemplified by the RHU and BHS where ORESOL and other ORT are already the dominant treatment mode, but suspension/tablet remains a strong companion treatment. In these settings, herbal medicine is a minor but significant type of treatment and intravenous therapy is insignificant. The second type, exemplified by community and government hospitals, uses ORT in almost equal frequency as suspension/tablet, with intravenous therapy a minor but significant option and herbal medicine pushed to the background. The third type, exemplified by private hospitals, still has suspension/tablet as the dominant treatment mode, with ORS a much less utilized mode, and intravenous therapy a minor but significant option. These patterns, while showing the possible inroads of the CDD Program, also highlight the difficulty of supplanting suspension/tablet in diarrhea treatment and the adoption of ORT practices in private facilities.

Dental Care

Information obtained from the 1987 NHS indicates that half of the population aged six years and over mentioned no dental problem or were not aware of any problems. The other half with problems had tooth decay and missing teeth as their major complaints. More than a third had tooth decay, another 14 percent had missing teeth, and the other dental problems included bleeding gums or loosened teeth, crooked teeth, growth or unhealing sore in mouth, and chalky white, brownish or blackened stains.

About 21 percent of the population aged six years and over sought dental treatment during the 12 months prior to survey date. For 56 percent of these dental care seekers, government dental professionals at RHUs (22 percent), at public schools (19 percent) and at government hospitals (15 percent) were the principal care providers. Private dentists were consulted by 37 percent of the population (Figure 2.12a). Tooth extraction, dental check-up and cleaning of teeth were the principal services sought by the population (Figure 2.12b).

These data seem to describe low levels of dental care service utilization. With half of the population with some dental problem, only about a fifth (21 percent) seek care. Even those who do seek care utilize a limited set of services. Public dental practitioners, which are less numerous than private professionals, are the main providers.

"...data seem to describe low levels of dental care service utilization. With half of the population with some dental problem, only about a fifth (21 percent) sought care. Even those who did seek care utilized a limited set of services."

Services of Health Facilities

The 1987 National Health Survey generated data on the use of services from four principal types of facilities namely, government hospital, private hospital, rural health unit, and barangay health station. About a third of all households reported use of a government hospital facility during the past year and about the same percentage reported use of a private hospital. The same proportions of households (a third of all households each) said they used an RHU or BHS (Figure 2.13). Since the data allowed for multiple answers, and did not provide indications of frequency of use, it is difficult to draw definitive conclusions about the efficiency of these utilization patterns. Given the knowledge about the low level of coverage in medical attendance at deaths and on illnesses, however, and the unlikely possibility that the use of the different types of facilities is rigidly segmented among population groups, it is probable that relative to the use of these facilities, two groups of population exist. One group has access to a range of facilities (BHS, RHS, government hospital and private hospital, solely or in combination) while the other group does not even have access to any type of facility. The above data hint at the limitations of static service provisions, public or private, and the possible problems of expanding service coverage for the population using only the existing network of public and private providers.

With regard to the use of facilities across income groups, three patterns seem to emerge from Figure 2.13. Use of private hospital is directly associated with income. Use of government hospitals does not really vary with income, indicative of possible inefficiency in public subsidies at the higher levels of income. And the RHU and BHS exhibit the third pattern of slightly declining use as income rises, which may indicate possible shifting to hospitals or private clinics, or alternatively, possible lesser need for basic primary care services at higher income levels.

With respect to the pattern of services in these facilities, four observations can be drawn from the data shown in Figure 2.14. First, the levels of use of the "curative type" of services (treatment and check-up) are generally higher than the use of the "preventive type" of services (family planning, health education and MCH). Immunization seems to be the most utilized preventive type of service, and even then, it does not match the levels of curative care use. Second, the utilization pattern varies much more between hospitals (public and private) and RHU/BHS, than between public and private facilities. Third, households tend to utilize RHU/BHS facilities more than hospitals for their relatively low level of use of preventive care services (immunization, family planning, health education and MCH). Finally, households seem to use all four facilities equally in obtaining check-up services, a possible indication of a non-functioning referral system.

With regard to satisfaction with services utilized, the 1987 National Health Survey data show fairly high levels of satisfaction, with only at most 13 percent of households showing dissatisfaction with any facility (Figure 2.15). Surprisingly, levels of dissatisfaction are slightly higher in rural than in urban areas. There also appears to be significantly lower levels of dissatisfaction with private hospitals as opposed to all other facilities (government hospital, RHU, BHS, and community hospital). ■

"About a third of all households reported use of a government hospital facility during the past year ...about the same percentage reported use of a private hospital. ...it is probable that relative to the use of ...facilities, two groups of population exist. One group has access to a range of facilities ...while the other group does not even have access to any type of facility."

3
Health Care Financing

The monograph *Health Sector Financing in the Philippines* by O. Solon, R. Gamboa, B. Schwartz and A. Herrin provided a baseline description, estimates and analyses of health care financing. Presented below are some updates of the estimates, and some additional observations.

Total Health Care Expenditures

"Despite ...nominal growth, health care expenditures probably remained at around 2 percent of GNP through all the years covered by the estimates...."

Estimates of total health care expenditures for 1985, 1988 and 1991 place annual expenditures at around P10 billion, P14 billion and P20 billion, respectively. Despite this nominal growth, health care expenditures probably remained at around 2 percent of GNP through all the years covered by the estimates (Table 3.1).

In the light of the lack of service coverage documented in the first two parts of this report, and in comparison with health care spending of other ASEAN countries, the level of Philippine health care expenditures is low.

Sources of Health Care Financing: The Family

Almost 55 percent of total health care spending is accounted for by out-of-pocket payments by families, largely for service fees and drug purchases. The dominance of this type of financing is one of the central concerns of Philippine health care financing.

In an economic setting of inequitable wealth and income distribution patterns marked by mass poverty, cash-poor households would have difficulties in accessing health care goods and services when financing is mainly through out-of-pocket payments on fee-for-service basis. This creates inequities as the distribution of illnesses and health needs is not likely to match the distribution of the means to pay for health care. Wher consumers utilize health care according to capacity to pay cash for services, inefficiencies arise leading to wrong prices being paid, wrong goods and services and wrong quantities being consumed, and wrong timing of consumption. On the other hand, when providers deliver health care according to capacity to pay cash, inefficiencies are likewise created leading to wrong costs, wrong scale of operations, wrong choice of technologies, wrong investment, and limited pooling of risks among the population and through time.

"Almost 55 percent of total health care spending is accounted for by out-of-pocket payments by families...."

A look at the household budgets indicates that medical care expenditures account for only around 2 percent of total expenditures, less than the 3 percent being spent on tobacco and alcohol (Table 3.3). Clearly, the limited options for more equitable and efficient financing of private sector health expenditures are related to the limited resources allocated for such expenditures. This indicates the potential of expanding resources for health by utilizing new schemes for paying for health care which mobilize additional household resources.

Sources of Health Care Financing: The Public Sector

"The public sector accounts for a little more than a third of total expenditures...."

The public sector accounts for a little more than a third of total expenditures (36 percent in 1991). The bulk of this goes to direct production and delivery of health services. Major changes are expected to occur in this area due to the devolution of health care delivery from the national to the local government, and the corresponding decentralization of financing responsibilities.

On the service output side, devolution introduces new pressures and processes affecting the equity and efficiency of public health service production and delivery. It is still unclear on balance what could be the outcome.

On the financing side, public sector health expenditures, as for all its other expenditures, are supported largely by taxes which are generated by a regressive tax system. This is not likely to change with devolution. Thus, the problems in the equity and efficiency of financing are likely to remain.

A look at the government budget also shows that health care expenditures account for a minor share of the total. As Figure 1.19 indicates, real per capita government expenditures for health remained at less than 20 pesos during the 1980s compared to the doubling for education from around 30 pesos to 60 pesos.

Sources of Health Care Financing: Social Insurance

Social insurance or Medicare accounts for only 8 percent of total financing. Despite its existence spanning the efforts of more than 20 years, Medicare covers only about 20 percent of the total employed labor force. The failure to cover more and thereby mobilize financing in magnitudes greater than 8 percent is directly traceable to the slow structural transformation of the economy. A large proportion of the labor force remains in hard-to-cover/hard-to-enroll agricultural and service sectors of employment.

The efficiency and equity aspects of the existing Medicare Program have been subjects of recent analyses. It appears that there are many viable options for expanding coverage, expanding benefits, improving efficiency of financing, and improving efficiency of management.

Prospects

There appears to be many good prospects for achieving health care financing reforms to address the concerns identified in the first two parts of this report. The following have been identified in various fora:

1. *Increasing the DOH budget and improving the targeting of its spending by type of activity (Program), by geographic areas, and by socio-economic groups.* The two-fold expansion and improved targeting of budgetary resources will be a major public policy tool.

2. *Influencing the increase and better targeting of health expenditures at individual local governments.* National government could impact favorably on LGUs' budget priorities and execution to make these more supportive of health priorities in such areas.

3. *Influencing the increase and better use of household health care expenditures.* By creating demand for preventions and promotion, by regulations (e.g., breastfeeding and AIDS), and by promoting risk-sharing and health care financing schemes, household expenditures for health can expand in the right direction.

4. *Reforming Medicare.* By modifying some of the strategies and processes, and by adopting certain policies related to its operations, Medicare could be a central strategy to expand resource base, improve payment mechanism and mobilize broader participation. ■

"Social insurance or Medicare accounts for only 8 percent of total financing."

"...prospects of achieving health care financing reforms....
1. Increasing the DOH budget and improving the targeting of its spending....
2. Influencing the increase and better targeting of health expenditures at individual local governments....
3. Influencing the increase and better use of household health care expenditures....
4. Reforming Medicare."

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Tables

Table 1.1 Life Expectancy at Birth and Infant Mortality Rate, Various Sources

Source and Year	Life Expectancy at Birth : e(o)			Infant Mortality Rate : q(o)		
	Male	Female	Both Sexes	Male	Female	Both Sexes
Cabigon (1990)						
1960	55.0	58.8	56.9	117.4	94.8	106.4
1970	57.3	61.5	59.3	93.8	83.2	88.6
1975	58.6	62.5	60.5	79.5	67.7	73.7
1980	59.7	65.6	62.6	65.2	52.0	58.7
Flieger, et al. (1981)						
1960	51.0	54.5	52.7	126.1	99.9	113.3
1970	54.2	57.5	55.8	99.0	87.1	93.2
1975	56.9	61.8	59.3	85.4	67.4	76.6
de Guzman (1989)						
1975	59.5	63.1	61.3	62.1	58.4	60.3
1980	60.0	64.7	62.3	64.6	48.8	56.9
1984	60.0	65.7	62.9	72.4	52.7	62.8
National Statistics Office (1990)						
1980	--	--	61.6	--	--	63.2
1985proj.	--	--	63.1	--	--	56.6
1990proj.	--	--	64.6	--	--	50.3
Task Force on Infant Mortality Rate (1992)						
1976	--	--	--	--	--	64.0
1978	--	--	--	--	--	57.0
1980	--	--	--	--	--	59.0
1982	--	--	--	--	--	57.0
1984	--	--	--	--	--	63.0
1986	--	--	--	--	--	63.0
1990p	--	--	--	--	--	60.0

proj. = projected rates
p = preliminary estimates

Table 1.2 Leading Causes of Death : 1968, 1978, 1988 and 1989 (Rate Per 100,000 Population)

Cause of Death	1968	1978	1988	1989
Pneumonias	122.9	100.3	80.8	77.0
Tuberculosis, all forms	79.5	62.4	46.0	43.8
Diarrheal diseases	41.9	34.5	17.9	13.5
Avitaminoses and other nutritional deficiencies	--	19.2	17.6	17.1
Measles	5.9	12.3	13.2	11.2
Diseases of the heart	34.4	56.6	69.1	74.6

SOURCES: DEPARTMENT OF HEALTH. PHILIPPINE HEALTH STATISTICS 1988. MANILA. 1991. PHILIPPINE HEALTH STATISTICS 1989. MANILA. 1992.

Table 1.3 Leading Causes of Infant Death : 1981-85, 1986, 1987, 1988 and 1989

Cause of Death	1981-85		1986		1987		1988		1989	
	Rate	%	Rate	%	Rate	%	Rate	%	Rate	%
Pneumonias	10.2	24.8	10.0	25.5	8.5	26.3	8.0	26.7	7.1	26.0
Respiratory conditions of fetus and newborn	5.5	13.4	5.3	13.6	4.6	14.3	4.1	13.5	4.0	14.6
Diarrheas	3.6	8.7	3.1	7.8	2.1	6.4	2.0	6.6	1.4	5.0
Congenital anomalies	1.9	4.6	1.8	4.5	1.4	4.4	1.5	4.8	1.3	4.9
Avitaminoses and other nutritional deficiencies	1.7	4.1	1.6	4.1	1.1	3.4	1.0	3.4	0.9	3.1
Measles	1.3	3.1	1.2	3.0	1.5	4.6	1.0	3.3	0.8	2.9
Birth injury and difficult labor	1.1	2.8	1.0	2.6	0.9	2.7	1.0	3.3	0.8	2.8
Acute bronchitis and bronchiolitis	0.7	1.8	0.7	1.7	0.5	1.5	0.4	1.4	0.3	1.0
Septicemia	0.6	1.5	0.7	1.7	0.6	2.0	0.8	2.5	0.8	2.8
Meningitis	0.5	1.3	0.5	1.3	0.4	1.2	0.4	1.4	1.3	1.0

SOURCE: DEPARTMENT OF HEALTH. PHILIPPINE HEALTH STATISTICS. VARIOUS YEARS.

Table 1.4 Fetal Deaths By Cause : 1988 and 1989

Cause	1988		1989	
	Number	Percent	Number	Percent
Fetus affected by complications of placenta, cord and membrane	2206	20.7	2557	22.4
Disorders relating to short gestation and unspecified low birth weight	1427	13.4	1351	11.8
Fetus affected by other complications of labor and delivery	557	5.2	515	4.5
Intrauterine hypoxia and birth asphyxia	478	4.5	821	7.2
Fetus affected by maternal conditions which may be unrelated to present pregnancy	378	3.6	372	3.3
Fetus affected by maternal complications of pregnancy	226	2.1	192	1.7
Respiratory distress syndrome	213	2.0	325	2.8
Others	5156	48.5	5290	46.3
Total	10641	100.0	11423	100.0

SOURCE : DEPARTMENT OF HEALTH PHILIPPINE HEALTH STATISTICS 1988 AND 1989

Table 1.5 Maternal Deaths By Main Cause, 1988 and 1989 (Rate : Deaths Per 1,000 Livebirths)

Cause	1988			1989		
	Number	Rate	Percent	Number	Rate	Percent
Pregnancy with abortive outcome	146	0.09	8.4	162	0.1	10.3
Hemorrhages related to pregnancy	120	0.08	6.9	103	0.07	6.5
Hypertension complicating pregnancy, childbirth and puerperium	543	0.3	31.1	483	0.3	30.6
Postpartum hemorrhages	441	0.3	25.3	429	0.3	25.3
Normal delivery and other complications related to pregnancy occurring in the course of labor, delivery and puerperium	295	0.3	28.3	402	0.3	25.4
Total	1745	1.1	100.0	1579	1.0	100.0

SOURCE : DEPARTMENT OF HEALTH PHILIPPINE HEALTH STATISTICS 1988 AND 1989

Table 1.6 Ten Leading Causes of Morbidity : 1983-87, 1988 and 1989 (Rate : Cases Per 100,000 Population)

Cause	5-Year Ave. (1983-87)		1988		1989	
	Number	Rate	Number	Rate	Number	Rate
Bronchitis	558276	950.7	659511	1293.4	893550	1486.8
Diarrheal diseases	511268	870.6	640185	1090.2	741733	1234.2
Influenza	410177	698.5	576404	981.6	773802	1287.5
Pneumonias	179150	305.1	201902	343.8	232056	386.1
Tuberculosis	146119	248.8	183133	311.8	210272	349.9
Malaria	105945	180.4	114679	195.3	125114	208.2
Accidents	80330	136.8	110805	188.7	150257	250.0
Diseases of the heart	59713	101.7	76211	129.8	98813	164.4
Measles	64641	110.1	70801	120.6	68496	114.0
Malignant neoplasm	25696	43.8	28940	49.3	33777	56.2

SOURCE DEPARTMENT OF HEALTH PHILIPPINE HEALTH STATISTICS 1988 AND 1989

Table 1.7 Mean One-Day Per Capita Energy Intake from Carbohydrates, Protein and Fat Sources : 1978, 1982 and 1987

Source	1978		1982		1987	
	Energy intake	% of total	Energy intake	% of total	Energy intake	% of total
Carbohydrates						
MJ	5.73	75.9	5.67	74.9	5.43	74.0
kcal.	1369		1355		1298	
Protein						
MJ	0.80	10.6	0.84	11.1	0.81	11.0
kcal.	192		200		193	
Fats						
MJ	7.55	100.0	7.56	100.0	7.33	100.0
kcal.	1804		1808		1753	
Percent adequacy	88.6		89.0		87.1	

SOURCE FOOD AND NUTRITION RESEARCH INSTITUTE, NATIONAL NUTRITION SURVEYS OF 1978, 1982 1987 AS REPORTED IN NATIONAL NUTRITION COUNCIL, COUNTRY REPORT, 1991

Table 1.8 Undernutrition Among Children : 1978, 1982, 1987 and 1989-90 (Percent of children in age group)

Type of Undernutrition	1978	1982	1987	1989-90 Both Sexes	1989-90 Male	1989-90 Female
Underweight (below 75% of standard weight-for-age)						
1-6 years	21.9	17.2	17.7	14	9.8	17
7-10 years	--	12.4	9	5.5	4.1	6.3
Stunted (below 90% of standard height-for-age)						
1-6 years	--	20.6	14.1	11.6	11.8	11.6
7-10 years	--	22.4	12.1	14.2	12.7	15.6
Wasted (below 85% of standard weight-for-height)						
1-6 years	13.8	9.5	12.7	9.0	6.7	11.4

SOURCE: FOOD AND NUTRITION RESEARCH INSTITUTE, NATIONAL NUTRITION SURVEYS OF 1978, 1982, 1987 AND 1989-90 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Table 1.9 Micronutrient Deficiencies By Type of Nutrient, 1987 (Percent of population group)

Nutrient and Population Group	1987
A. Vitamin A deficiency	
1. Night blindness	
6 months - 6 years	0.7
7 years - 14 years	0.9
15 years - 19 years	1
2. Bito's spot	
6 months - 6 years	0.2
B. Iodine deficiency (with goiter)	
7 - 14 years (male)	0.8
7 - 14 years (female)	6.4
15 - 20 years (male)	0.2
15 - 20 years (female)	6.2
21 years and over (male)	0.7
21 years and over (female)	7.1
Pregnant women (21 - 49 years)	12.4
Lactating women (21 - 49 years)	10.7
C. Iron deficiency (with anemia)	
6 - 11 months	70.4
1 - 6 years	38.7
7 - 12 years	41.2
13 - 19 years (male)	26.3
13 - 19 years (female)	36.9
20 - 59 years (male)	21.3
20 - 59 years (female)	38.9
60 years and over	46.9
Pregnant women	45.3
Lactating women	50.6

SOURCE : FOOD AND NUTRITION RESEARCH INSTITUTE, NATIONAL NUTRITION SURVEY, 1987 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Table 1.10 Breastfeeding Behavior : 1978, 1983 and 1988

	1978 RPFS	1983 NDS	1988 NDS
Total			
Percentage breastfed /*	84.0	83.6	83.2
Mean duration (months)	13.3	12.0	9.9
Place of Residence			
Urban			
Percentage breastfed	71.5	70.7	73.8
Mean duration (months)	9.1	8.6	7.8
Rural			
Percentage breastfed	88.7	90.3	85.9
Mean duration (months)	14.9	13.8	11.9
Years of Schooling Completed			
Primary (0 - 5 years)			
Percentage breastfed	91.3	91.3	90.7
Mean duration (months)	16.2	15.1	12.4
Elementary graduate (6 years)			
Percentage breastfed	86.4	88.1	89.5
Mean duration (months)	13.9	13.6	11.6
High School (7 - 11 years)			
Percentage breastfed	76.4	80.0	81.9
Mean duration (months)	10.5	10.9	9.4
College (12 years & over)			
Percentage breastfed	67.4	70.0	71.4
Mean duration (months)	7.2	6.5	5.9

/* Percentage breastfed among births during the past 12 months.
RPFS = Republic of the Philippines Fertility Survey
NDS = National Demographic Survey

SOURCE: CASTERLINE (1990) AND ZABLAN (1983) AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Table 2.1 **Percent Distribution of Mothers Who Gave Birth (1979-1981) and Attended by Hilot By Reason For Seeking Services of Hilot : 1981**

Reason	Philippines	Urban	Rural
Access			
Lives nearest house	69.5	62.2	70.0
Easy to call at night	25.5	20.2	26.7
No ride to call medical person	19.2	10.8	21.0
Attends immediately	13.7	11.6	14.1
Financial			
Less expensive	22.1	22.3	29.0
Service			
Serves as helpers	12.8	23.3	10.5
Gives daily massage	11.2	10.8	21.0
Makes daily visits	8.1	9.5	7.8
Others			
Trust and confidence	21.5	19.1	21.6
Related to mother	16.9	16.0	17.1
Performs traditional ritual	10.6	10.4	10.7

SOURCE : DEPARTMENT OF HEALTH, NATIONAL HEALTH SURVEY, 1981

Table 3.1 Estimated Total Health Care Expenditures By Source of Financing: 1985, 1988 an (In Current Prices)

SOURCE	1985 Billion Pesos	1985 Percent of Total	1988 Billion Pesos	1988 Percent of Total	1991 Billion Pesos	1991 Percent of Total
Public	3.78	38.4	6.87	50.4	7.42	36.3
Family	5.36	54.5	5.82	42.7	10.94	53.6
Compulsory Insurance	0.55	5.6	0.71	5.2	1.73	8.5
Private Insurance	0.15	1.5	0.24	1.7	0.33	1.6
Total	9.83	100.0	13.65	100.0	20.09	100.0
Percent of GNP	1.64		1.66		1.63	

Note: 1988 figures for family spending exclude data for Rizal province.

SOURCE SOLON, O., R. GAMBOA, B. SCHWARTZ, AND A. HERRIN (1992) FOR 1985 AND 1988. 1991 FIGURES ARE PRELIMINARY

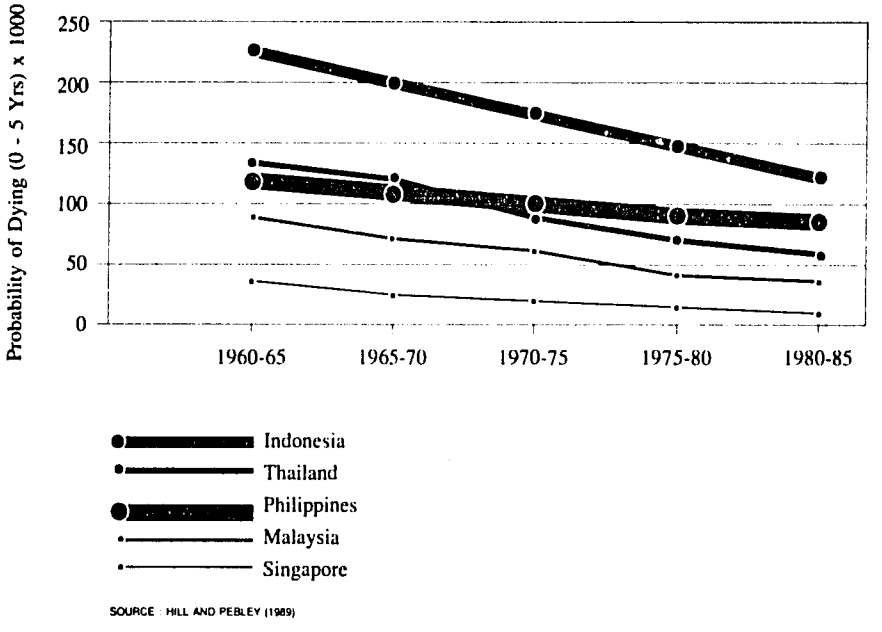
Table 3.2 Percentage Distribution of Total Family Expenditure By Major Expenditure Group, 1985, 1988 and 1991

	1985	1988	1991
Food	51.9	50.7	47.6
Alcoholic Beverages	1.1	1.1	1.1
Tobacco	2.3	2.1	1.7
Housing	12.7	12.8	13.2
Fuel, Light & Water	5.5	5.2	5.8
Household Furnishings & Equipment	1.9	2.2	2.5
Household Operations	2.4	2.5	2.7
Clothing, Footware & Other Wear	3.6	4.2	3.7
Personal Care & Effects	2.1	3.3	3.6
Medical Care	2.1	1.7	1.8
Transport & Communications	4.4	4.7	5.5
Recreation	0.4	0.5	0.4
Education	3.5	2.9	3.0
Gifts & Contributions	1.0	1.0	0.9
Taxes	1.0	1.1	1.4
Special Occasions	2.2	2.3	2.4
Other Expenditures	1.8	1.8	2.9

SOURCE FIES, 1988 FIGURES EXCLUDE DATA FOR RIZAL PROVINCE. 1991 FIGURES ARE PRELIMINARY

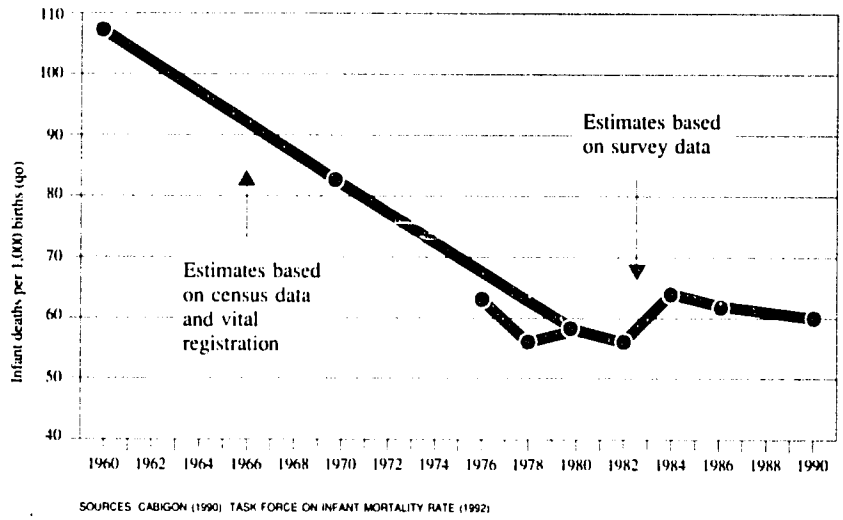
Figures

Figure 1.1 Child Mortality in Selected Countries



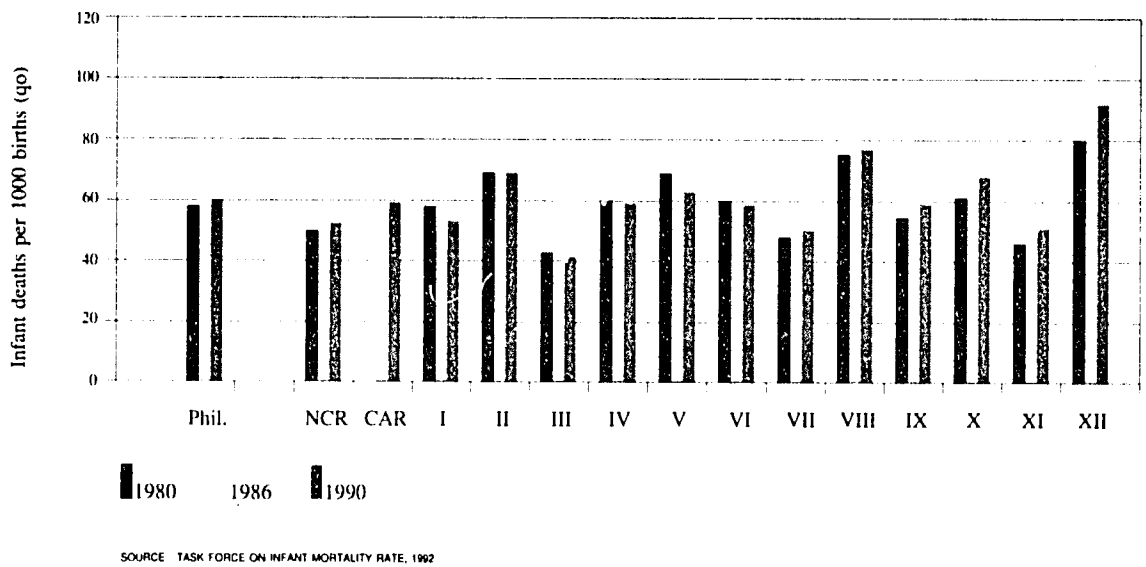
SOURCE : HILL AND PEBLEY (1989)

Figure 1.2a Infant Mortality Rate : 1960 - 1990



SOURCES CABIGON (1990) TASK FORCE ON INFANT MORTALITY RATE (1992)

Figure 1.2b Infant Mortality Rate : 1980, 1986 and 1990 by Region



SOURCE TASK FORCE ON INFANT MORTALITY RATE, 1992

Figure 1.3a Life Expectancy at Birth, 1980 By Gender and Region

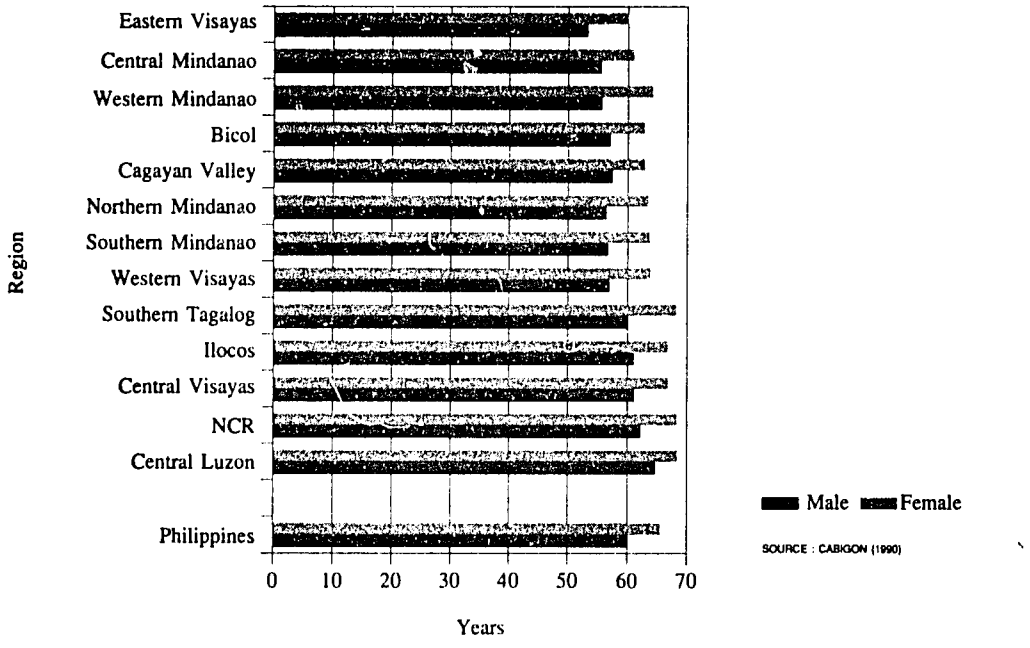


Figure 1.3b Infant Mortality Probability, 1980 By Gender and Region

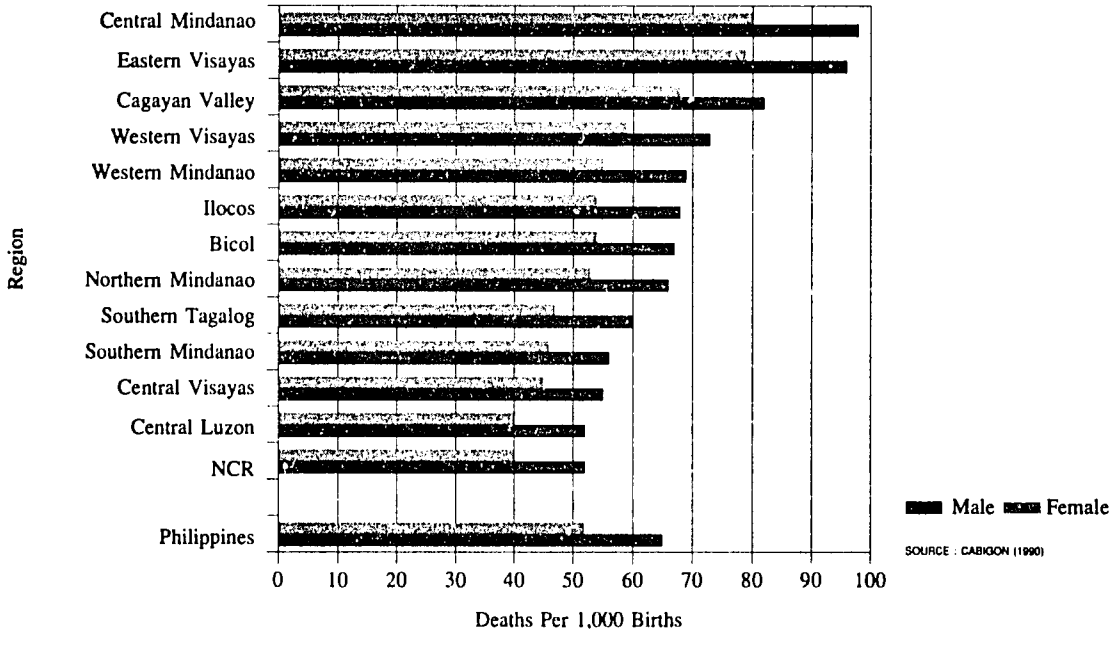


Figure 1.4a Life Expectancy at Birth, 1980 By Gender & Province : Ilocos Region

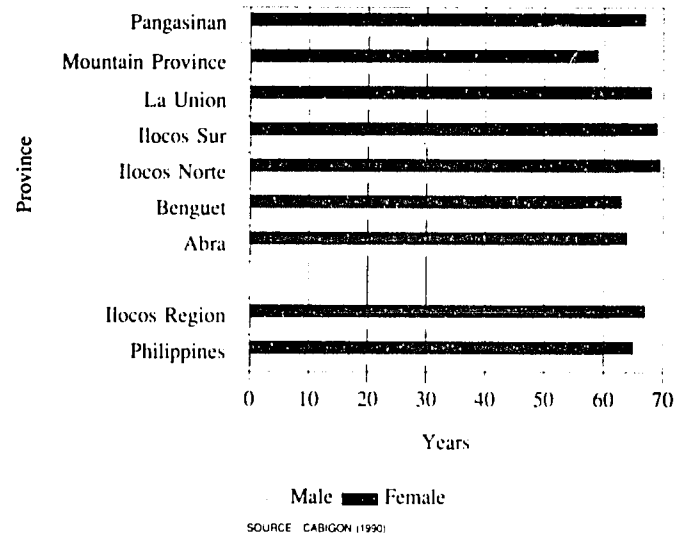


Figure 1.4b Life Expectancy at Birth, 1980 By Gender & Province : Cagayan Valley

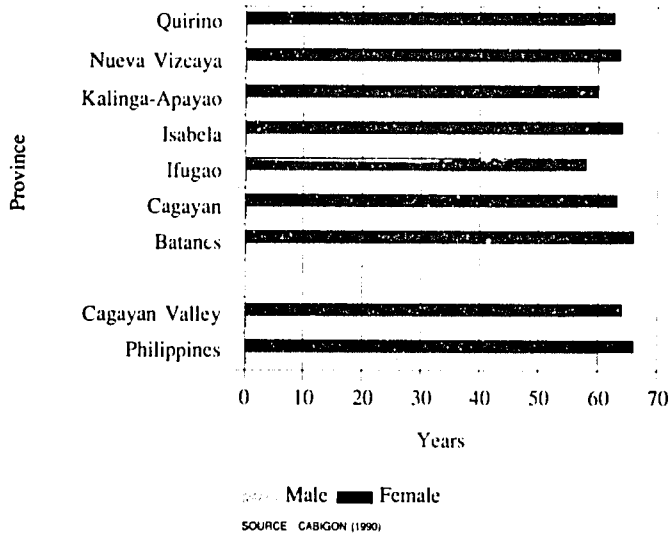


Figure 1.4c Life Expectancy at Birth, 1980 By Gender & Province : Central Luzon

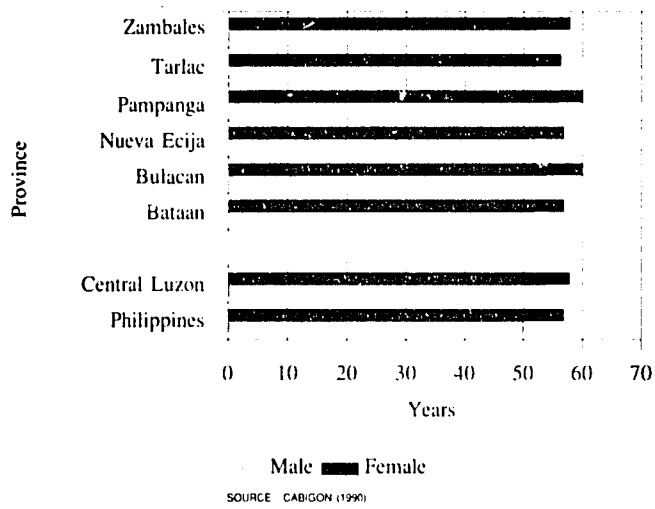


Figure 1.4d Life Expectancy at Birth, 1980 By Gender & Province : Southern Tagalog

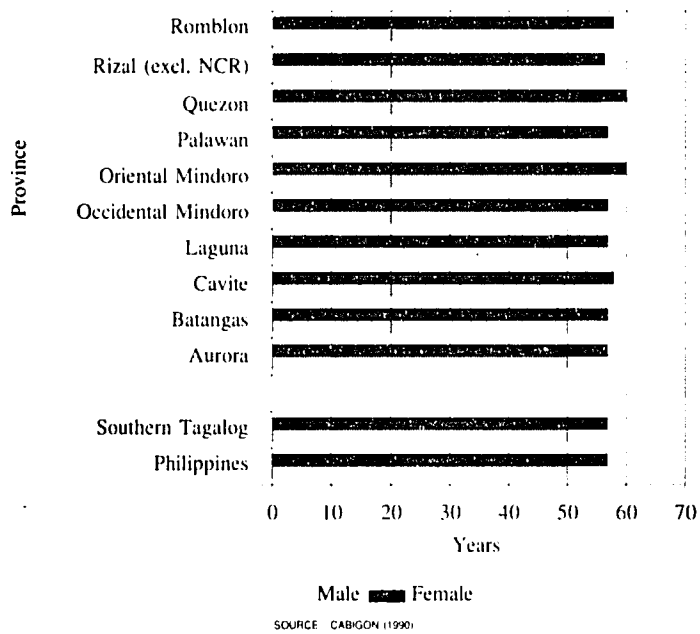


Figure 1.4e Life Expectancy at Birth, 1980 By Gender & Province : Bicol

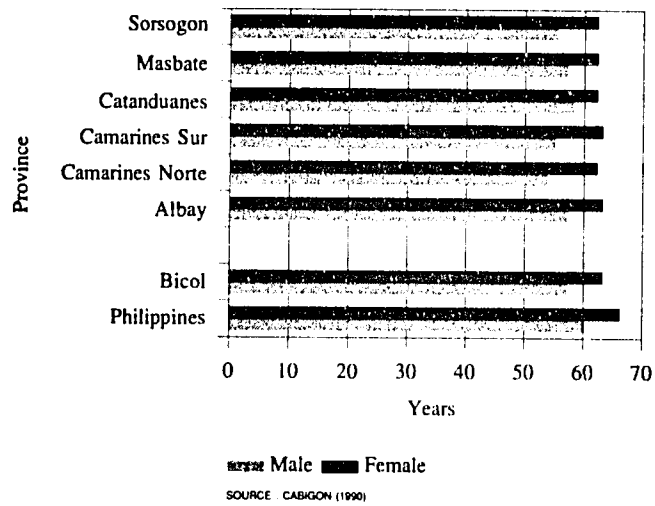


Figure 1.4f Life Expectancy at Birth, 1980 By Gender & Province : Western Visayas

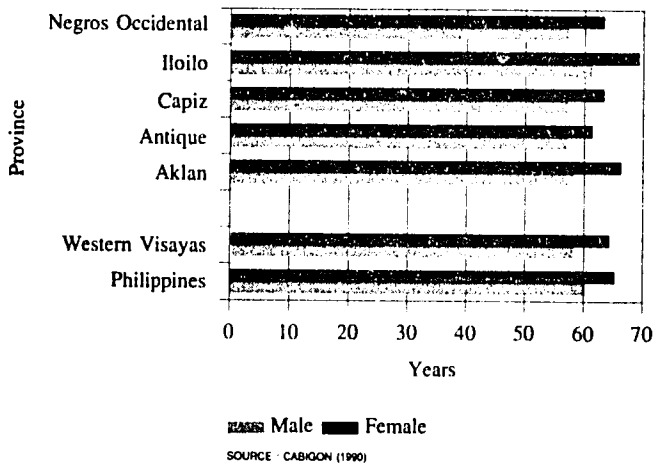


Figure 1.4g Life Expectancy at Birth, 1980 By Gender & Province : Central Visayas

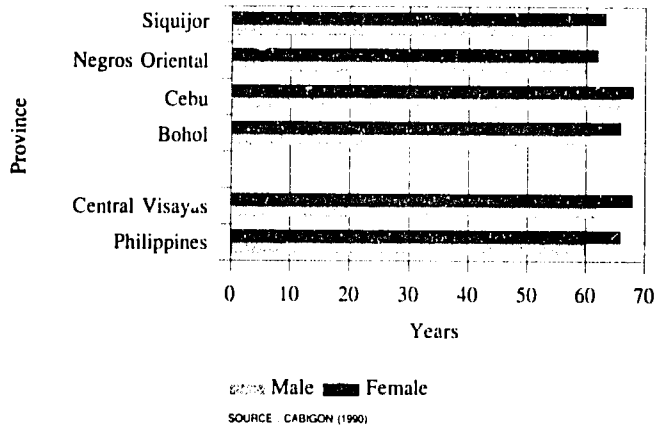


Figure 1.4h Life Expectancy at Birth, 1980 By Gender & Province : Eastern Visayas

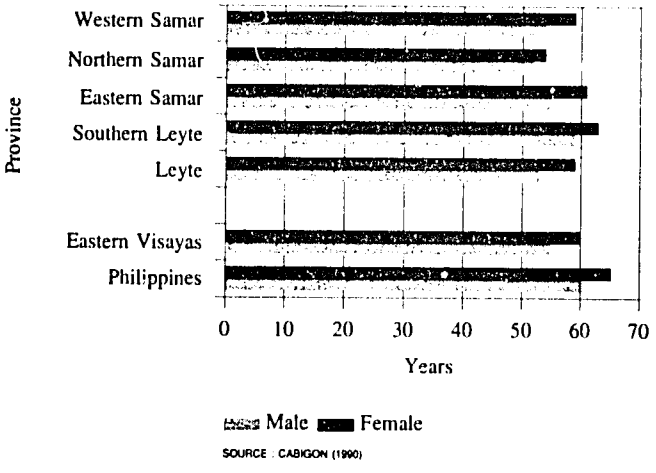
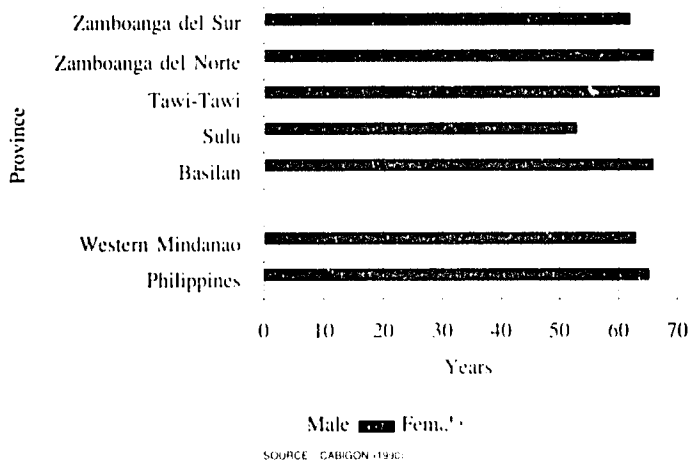
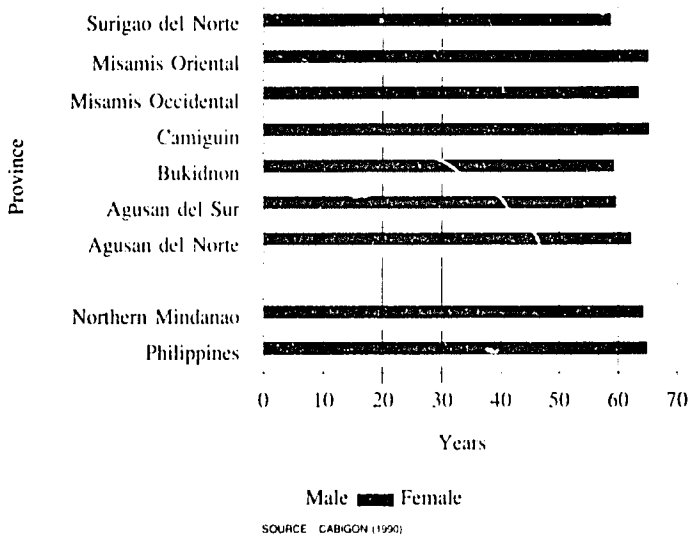


Figure 1.4i Life Expectancy at Birth, 1980 By Gender & Province : Western Mindanao



SOURCE CABIGON (1990)

Figure 1.4j Life Expectancy at Birth, 1980 By Gender & Province : Northern Mindanao



SOURCE CABIGON (1990)

Figure 1.4k Life Expectancy at Birth, 1980 By Gender & Province : Southern Mindanao

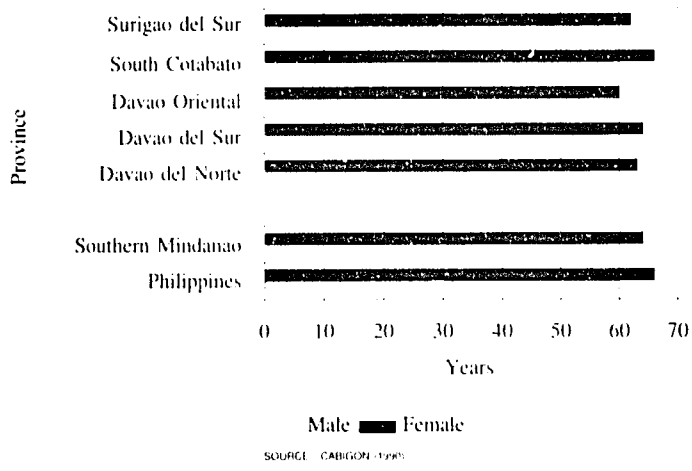


Figure 1.4l Life Expectancy at Birth, 1980 By Gender & Province : Central Mindanao

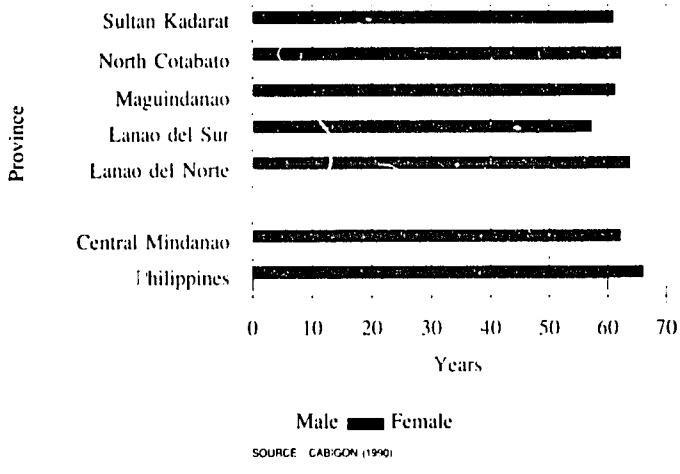


Figure 1.5a Infant Mortality Probability, 1980 By Gender & Province : Ilocos Region

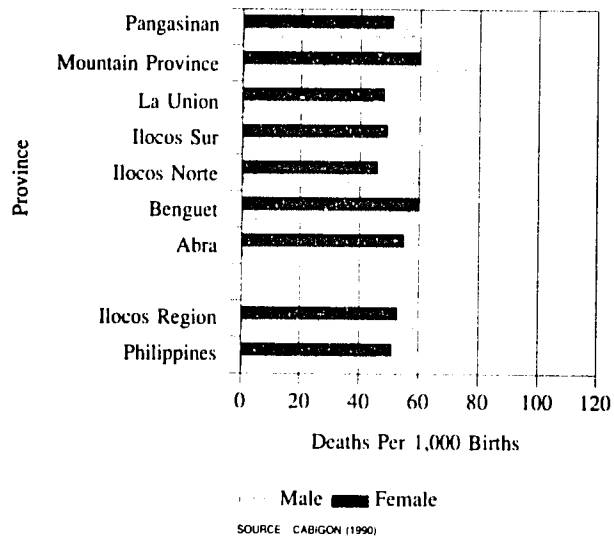


Figure 1.5b Infant Mortality Probability, 1980 By Gender & Province : Cagayan Valley

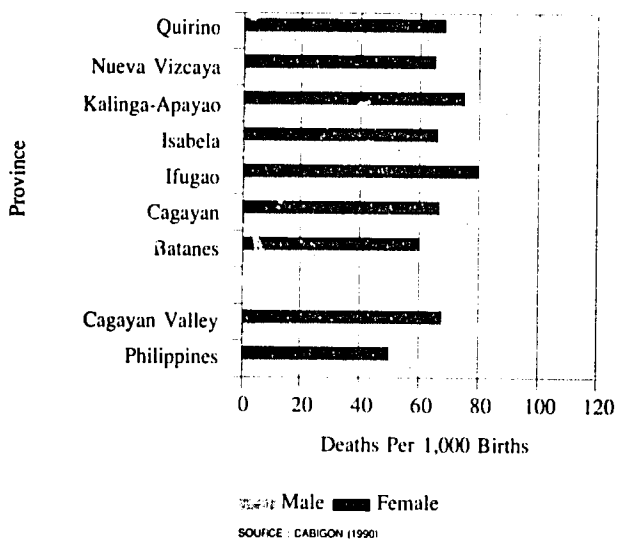


Figure 1.5c **Infant Mortality Probability, 1980 By Gender & Province : Central Luzon**

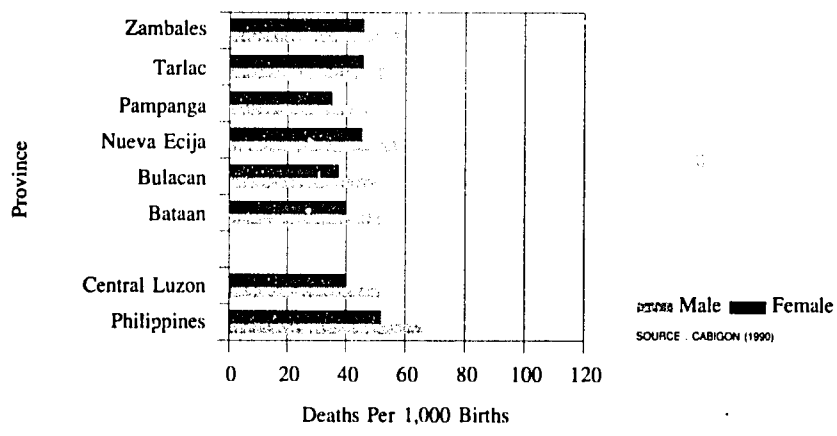


Figure 1.5d **Infant Mortality Probability, 1980 By Gender & Province : Southern Tagalog**

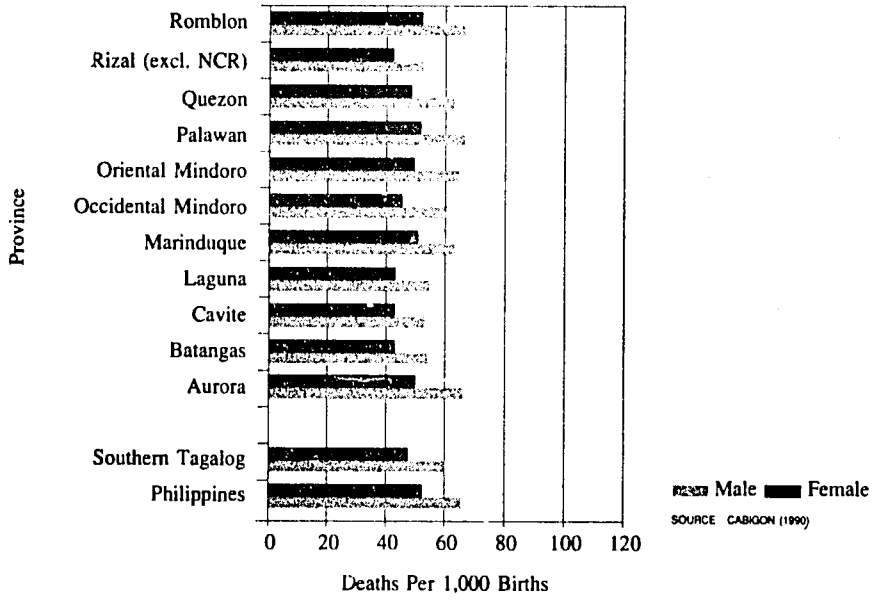


Figure 1.5e Infant Mortality Probability, 1980 By Gender & Province : Bicol

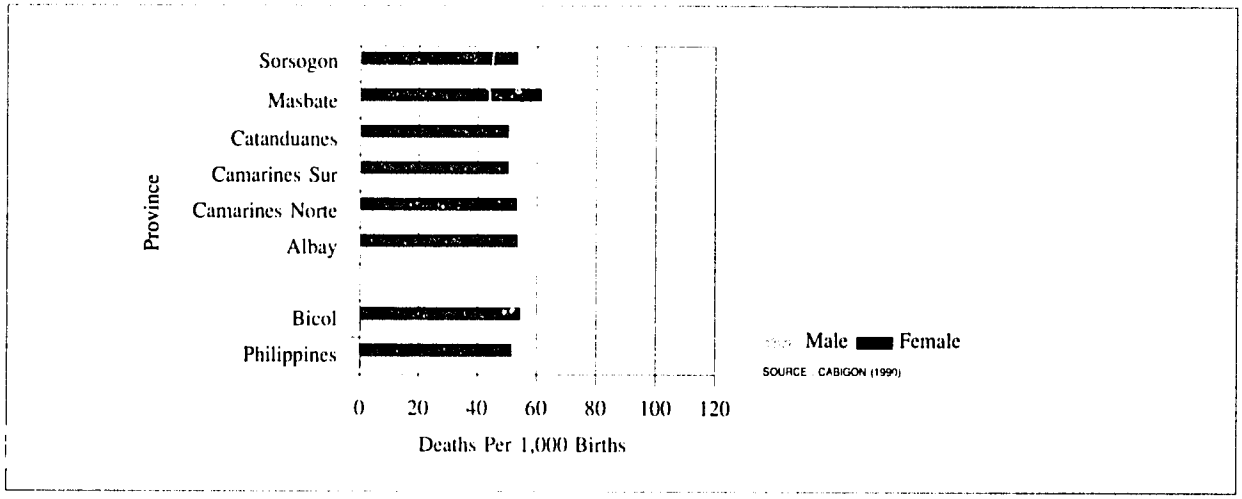


Figure 1.5f Infant Mortality Probability, 1980 By Gender & Province : Western Visayas

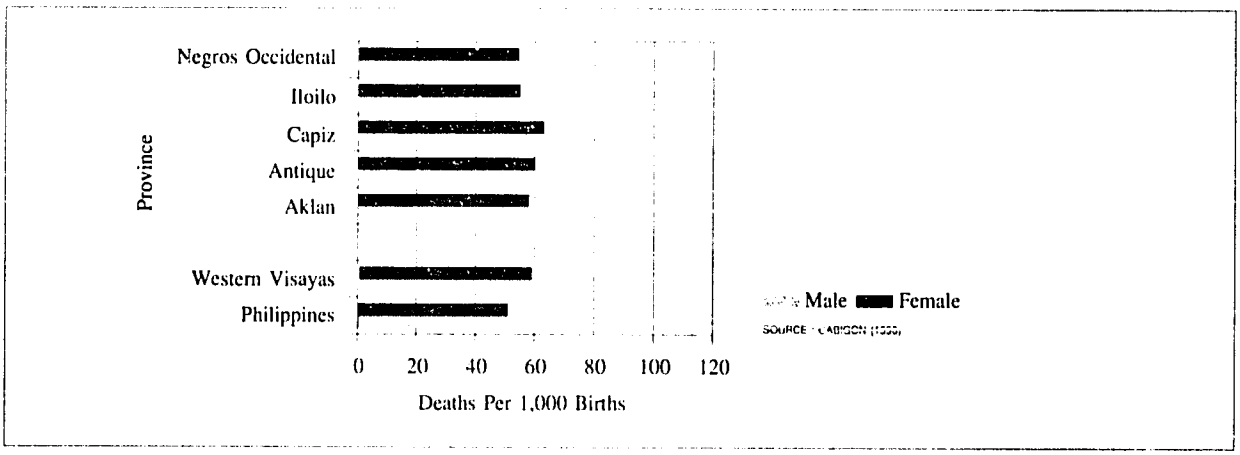


Figure 1.5g Infant Mortality Probability, 1980 By Gender & Province : Central Visayas

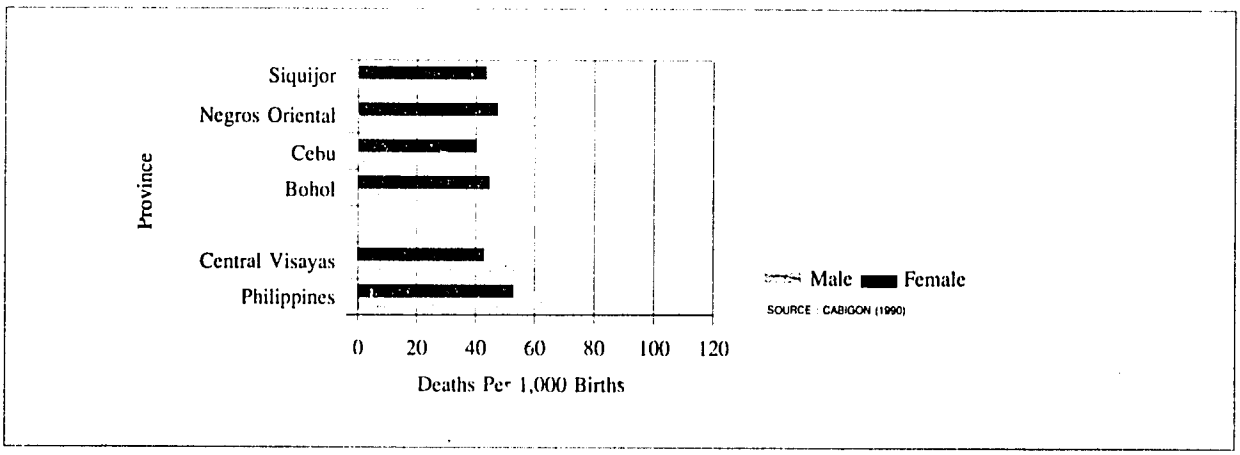


Figure 1.5h Infant Mortality Probability, 1980 By Gender & Province : Eastern Visayas

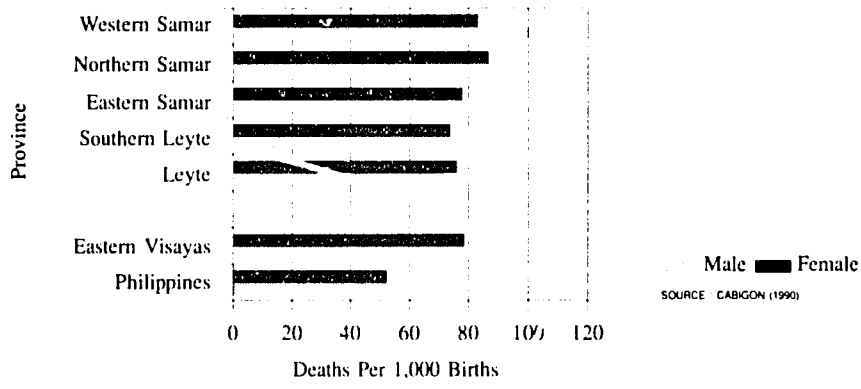


Figure 1.5i Infant Mortality Probability, 1980 By Gender & Province : Western Mindanao

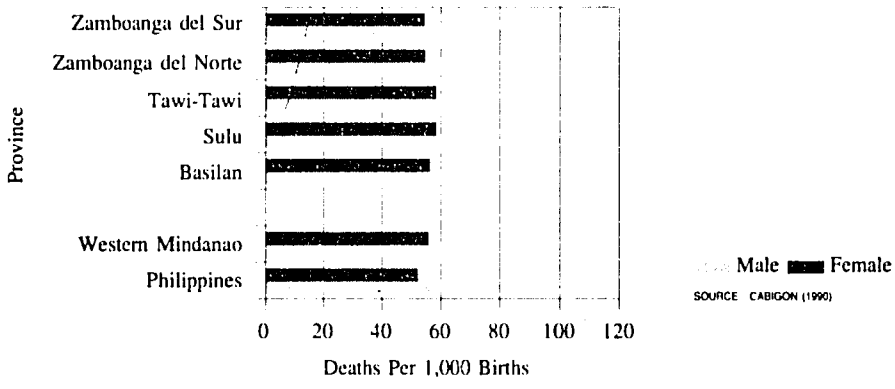


Figure 1.5j Infant Mortality Probability, 1980 By Gender & Province : Northern Mindanao

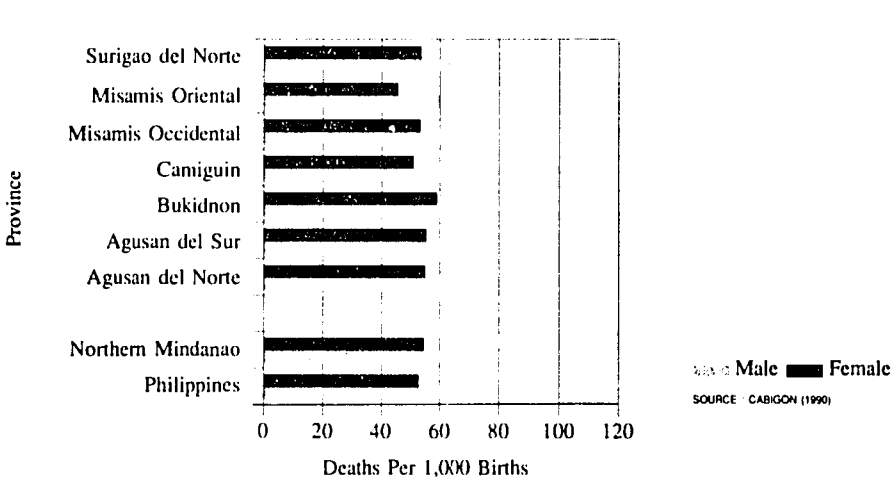


Figure 1.5k Infant Mortality Probability, 1980 By Gender & Province : Southern Mindanao

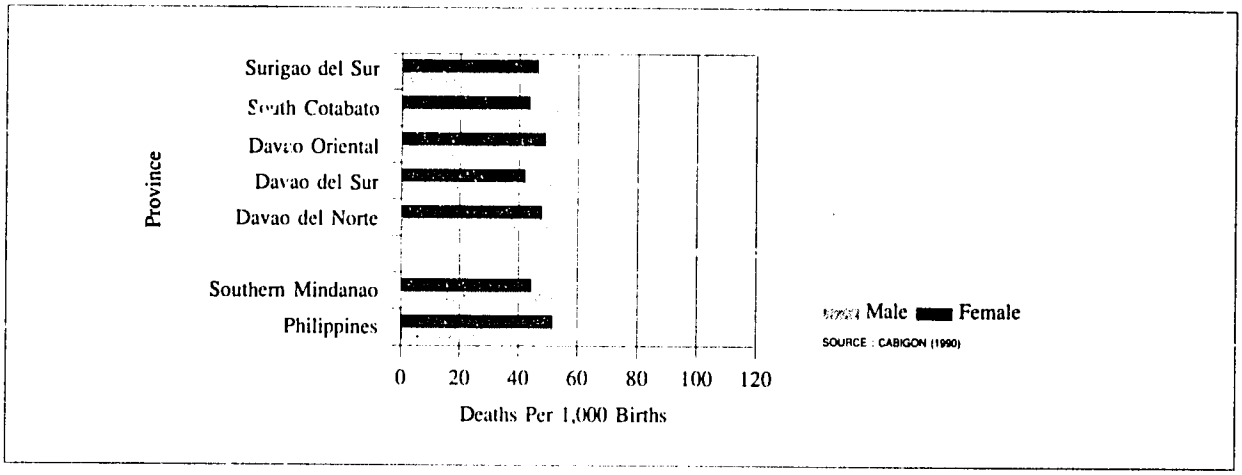


Figure 1.5l Infant Mortality Probability, 1980 By Gender & Province : Central Mindanao

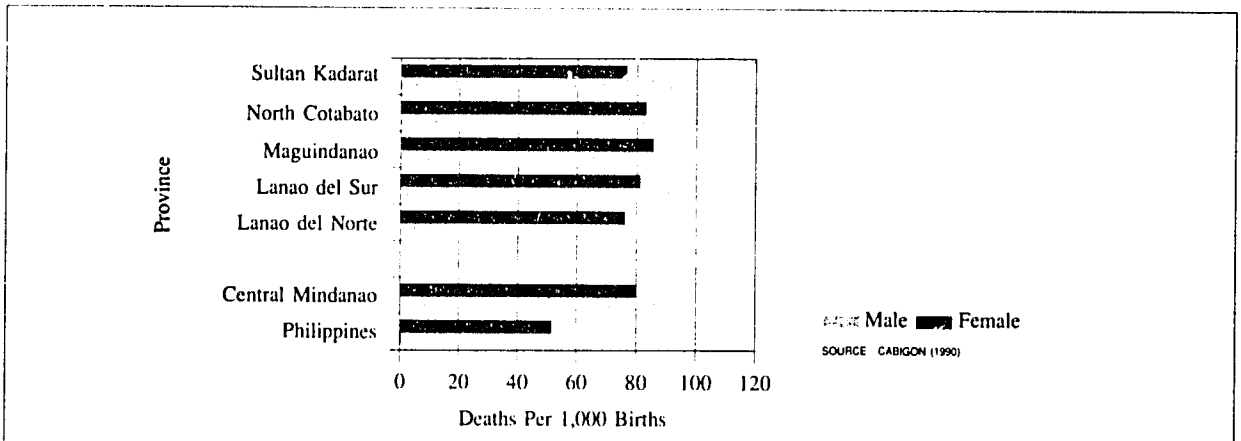
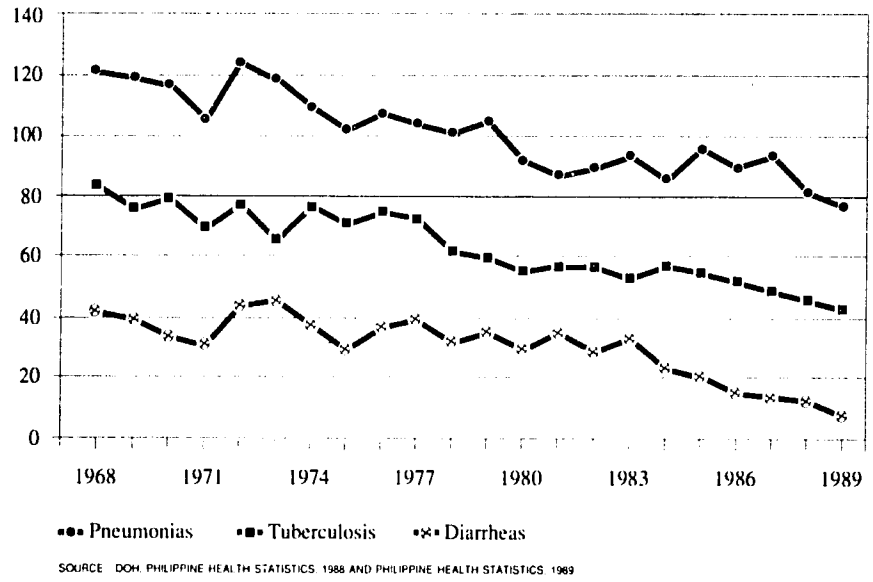
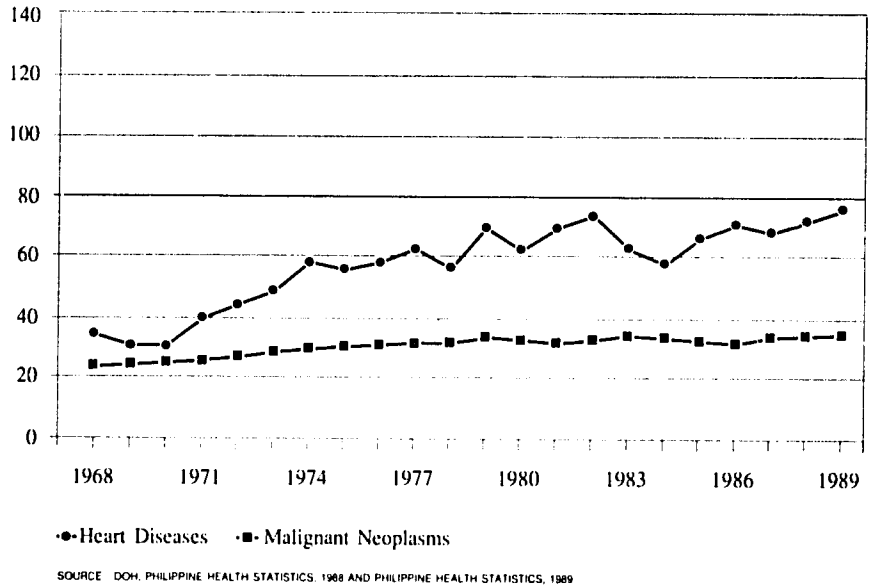


Figure 1.6a Death Rates From Major Causes : 1968 - 1989



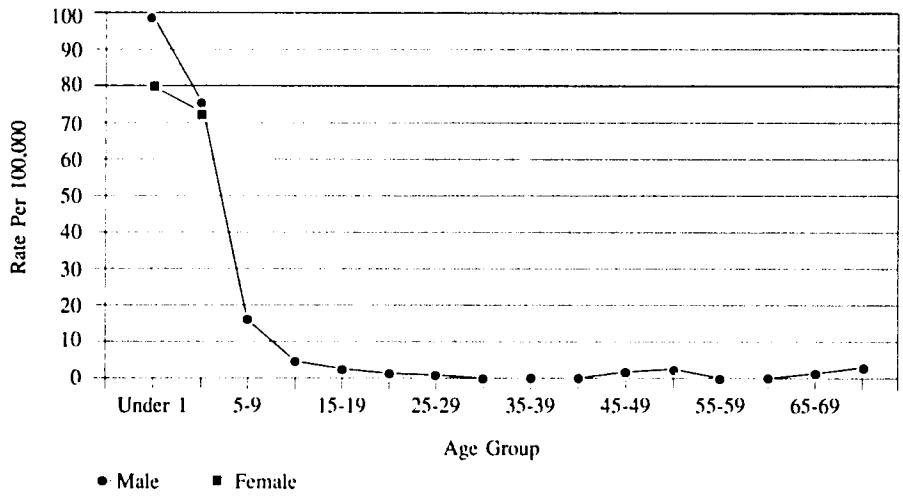
SOURCE: DOH, PHILIPPINE HEALTH STATISTICS, 1988 AND PHILIPPINE HEALTH STATISTICS, 1989

Figure 1.6b Death Rates From Major Causes : 1968 - 1989



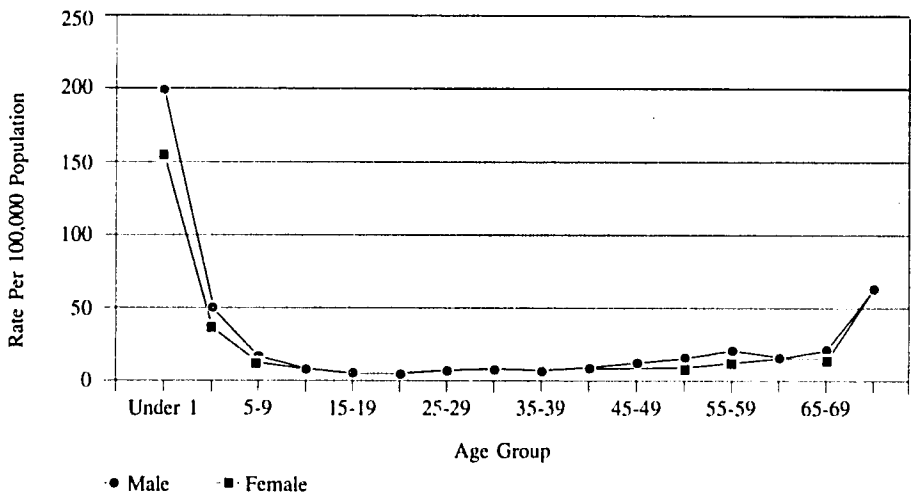
SOURCE: DOH, PHILIPPINE HEALTH STATISTICS, 1988 AND PHILIPPINE HEALTH STATISTICS, 1989

Figure 1.7a Death Rate from Measles, 1988 By Age and Gender



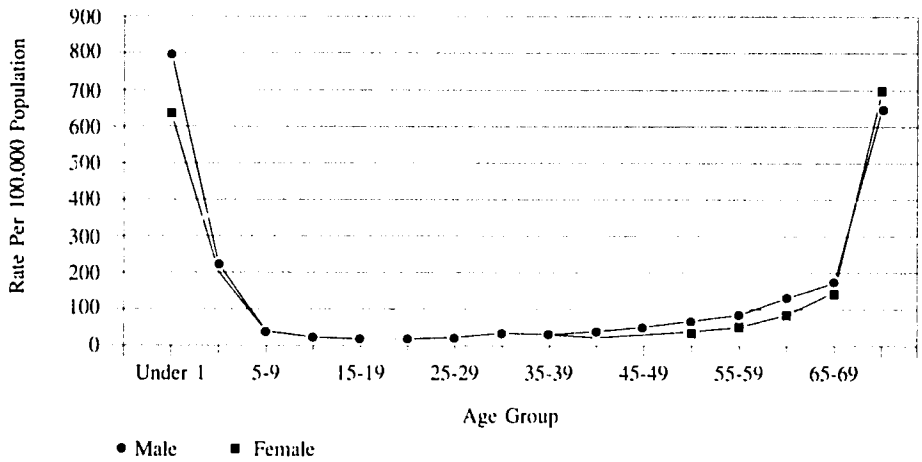
SOURCE: DOH, PHILIPPINE HEALTH STATISTICS, 1988 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 1.7b Death Rate from Diarrhea, 1988 By Age and Gender



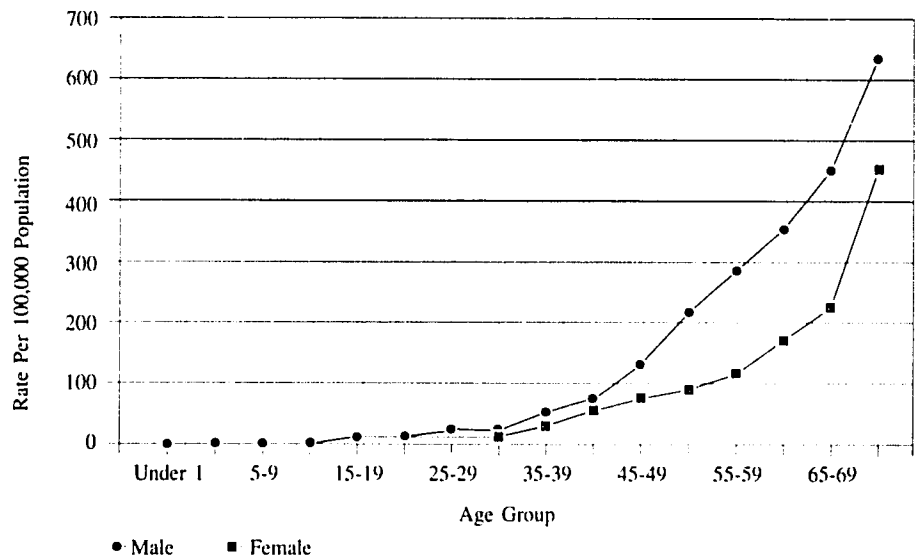
SOURCE: DOH PHILIPPINE HEALTH STATISTICS, 1988 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 1.7c Death Rate from Pneumonias, 1988 By Age and Gender



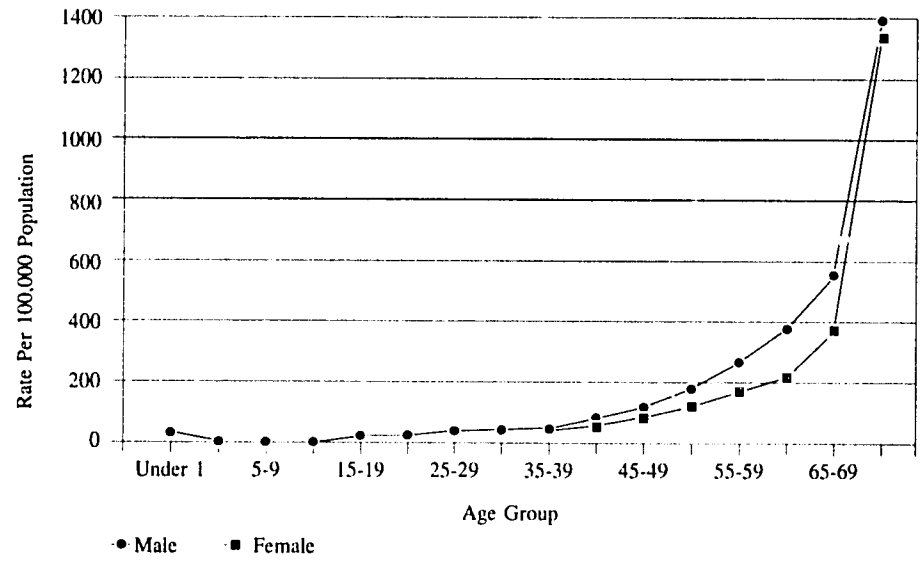
SOURCE: DOH, PHILIPPINE HEALTH STATISTICS 1988 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 1.7d Death Rate from Tuberculosis, 1988 By Age and Gender



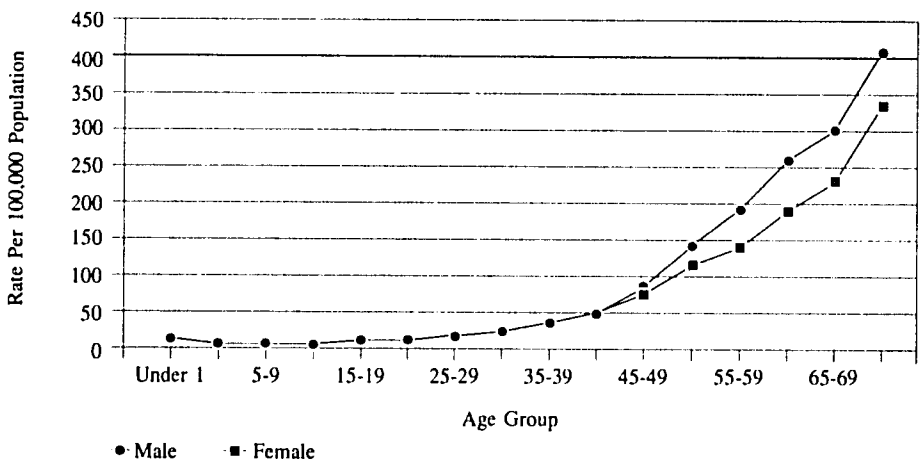
SOURCE: DOH, PHILIPPINE HEALTH STATISTICS, 1988 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 1.7e Death Rate from Heart Diseases, 1988 By Age and Gender



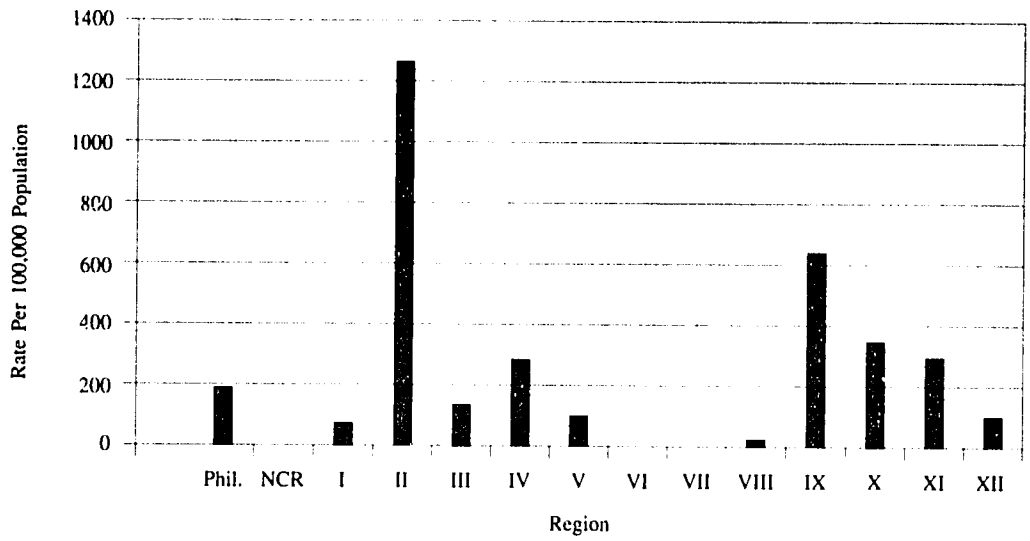
SOURCE : DOH, PHILIPPINE HEALTH STATISTICS, 1988 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 1.7f Death Rate from M. Neoplasms, 1988 By Age and Gender



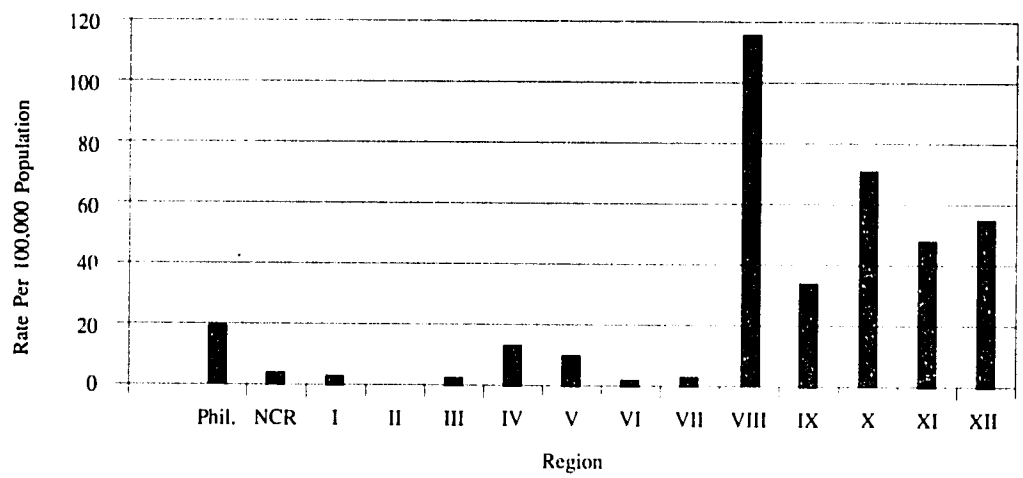
SOURCE : DOH, PHILIPPINE HEALTH STATISTICS, 1988 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 1.8a Morbidity Rate from Malaria, 1988



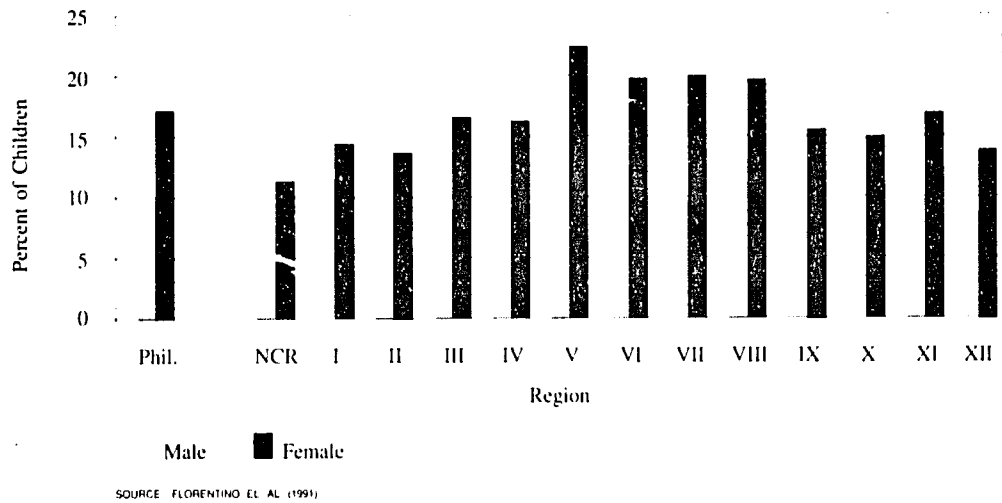
SOURCE DOH PHILIPPINE HEALTH STATISTICS, 1988 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 1.8b Morbidity from Schistosomiasis, 1980



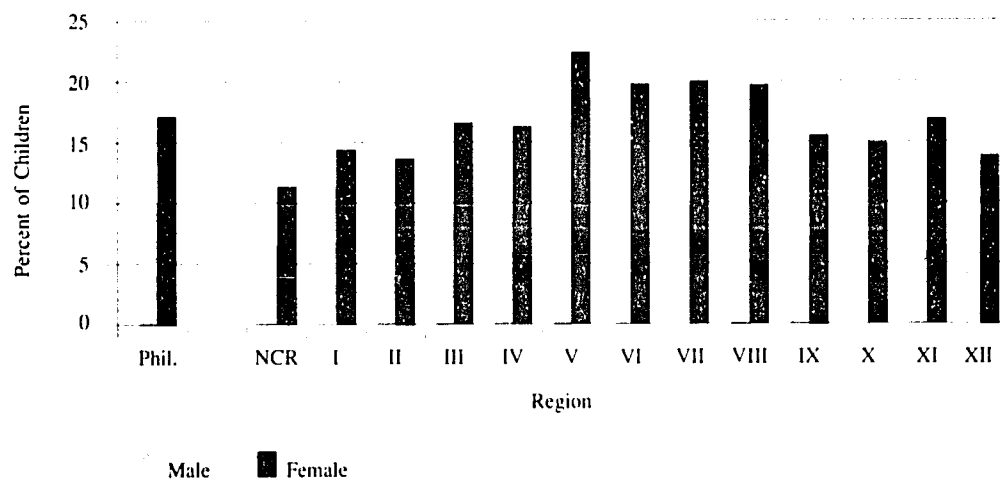
SOURCE DOH, PHILIPPINE HEALTH STATISTICS, 1988 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 1.9a Underweight Children 0-6 Years, 1989-90 By Gender and Region



SOURCE FLORENTINO ET AL (1991)

Figure 1.9b Stunted Children 0-6 Years Old, 1989-90 By Gender and Region



SOURCE FLORENTINO ET AL (1991)

Figure 1.9c Wasting Children 0-6 Years Old, 1989-90 By Gender and Region

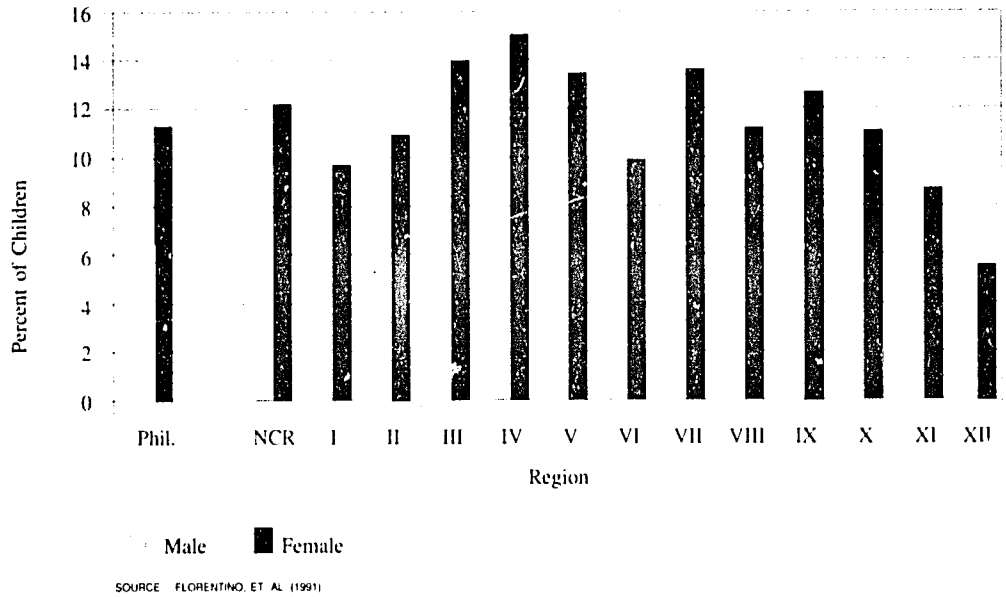


Figure 1.10a Underweight Children 7 - 10 Years Old By Gender and Region, 1989 -90

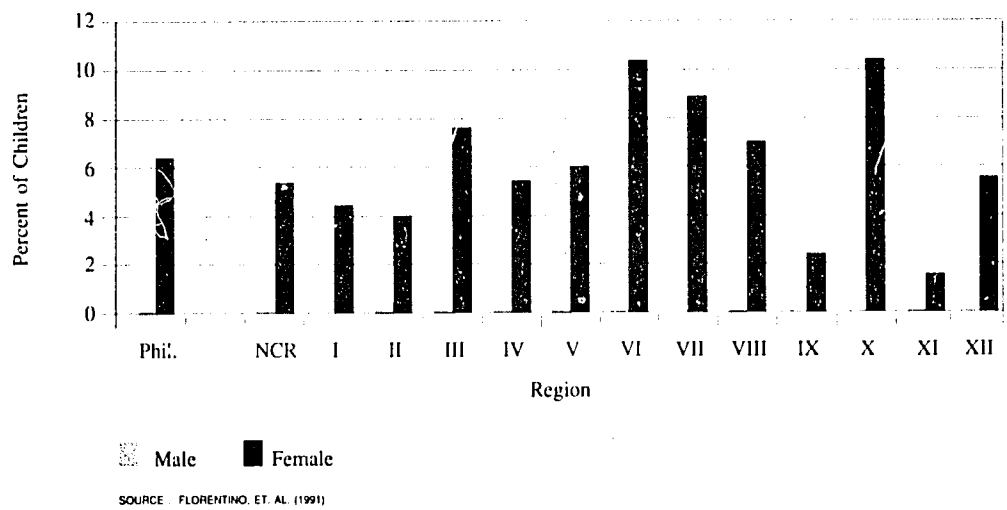
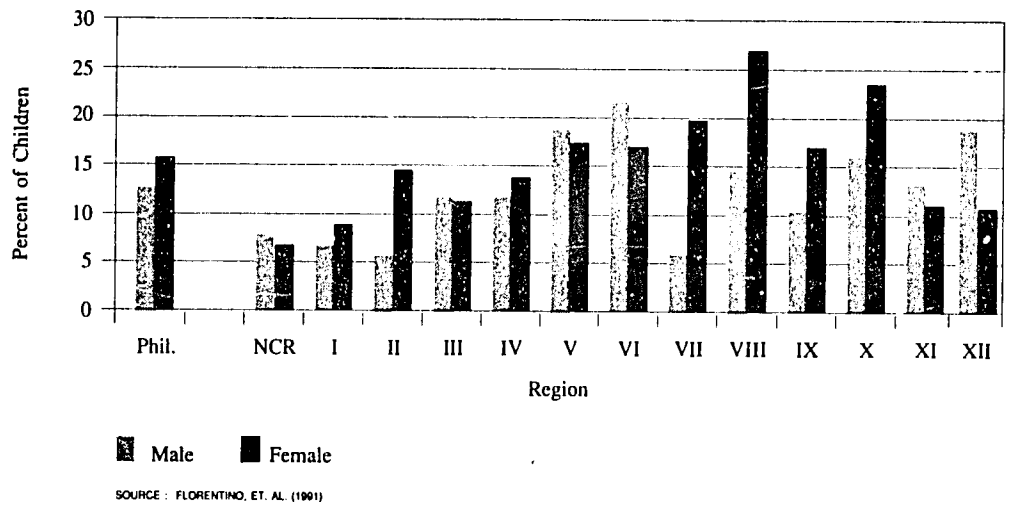
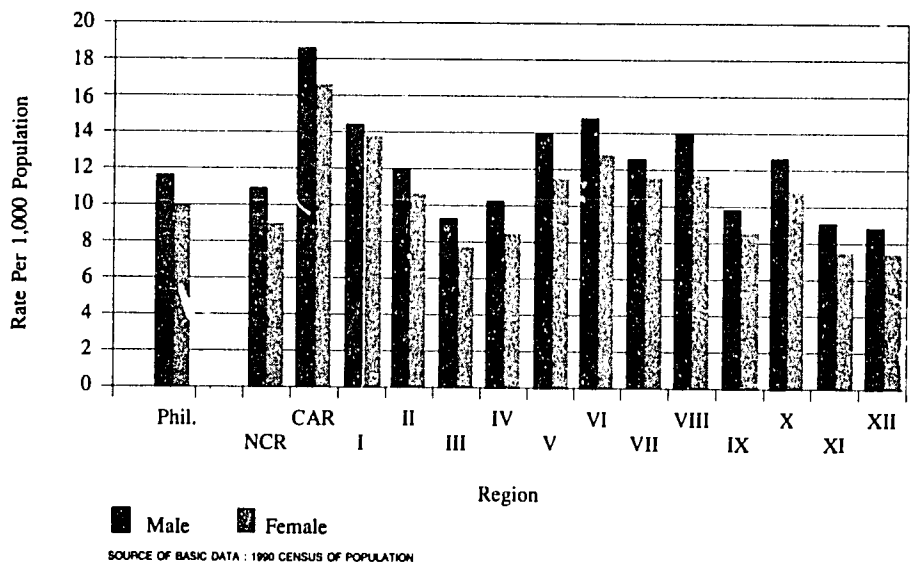


Figure 1.10b Stunted Children 7 - 10 Years Old By Gender and Region, 1989 - 90



SOURCE : FLORENTINO, ET. AL. (1991)

Figure 1.11a Any Disability By Region, 1990



SOURCE OF BASIC DATA : 1990 CENSUS OF POPULATION

Figure 1.11b Persons With Any Disability, 1990

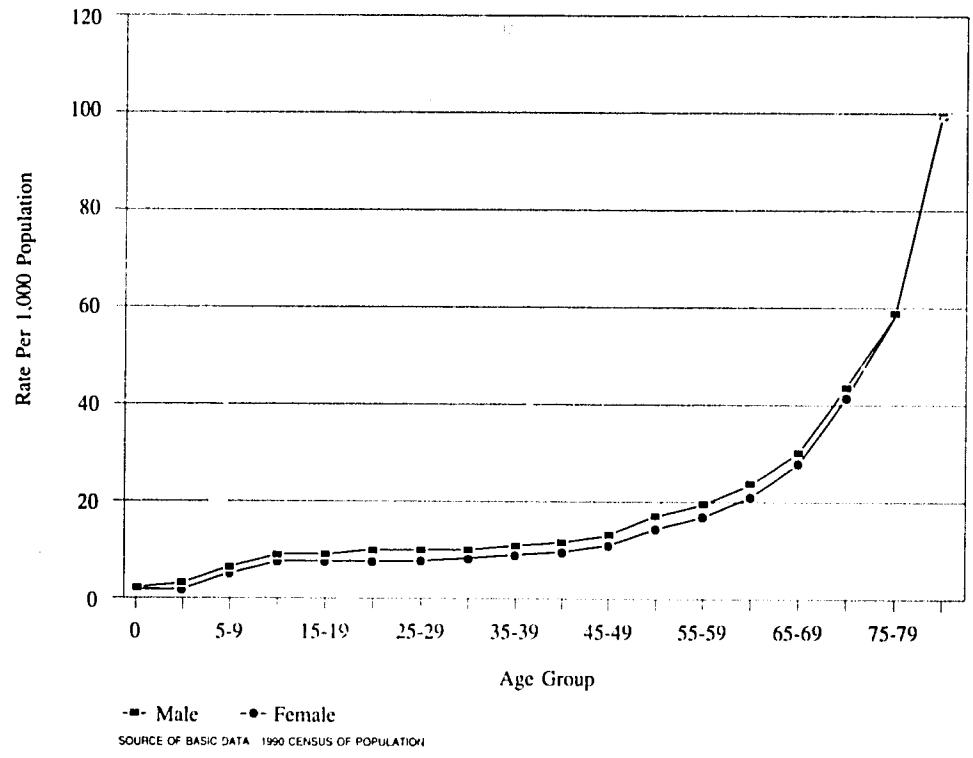


Figure 1.12a Blindness By Region, 1990

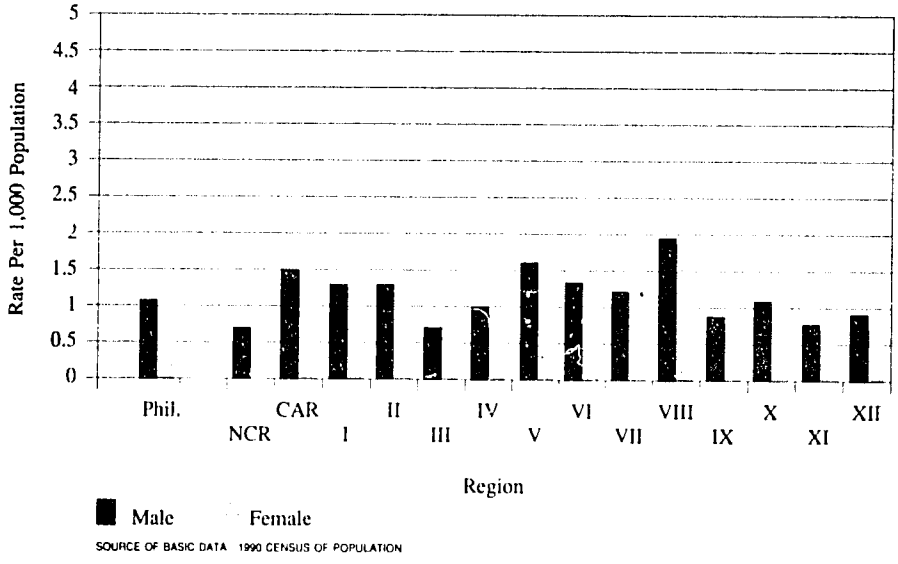


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Figure 1.12b Deafness By Region, 1990

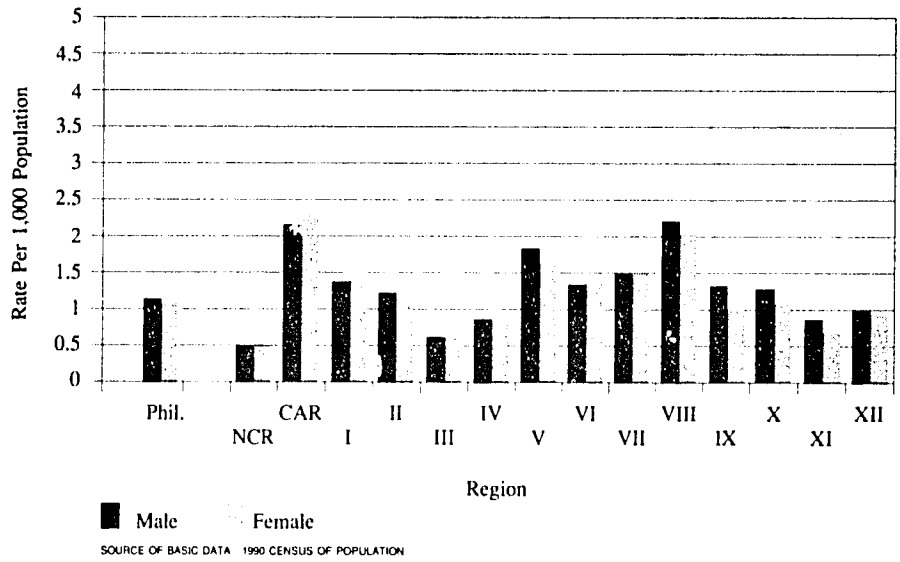

Figure 1.12c Muteness By Region, 1990

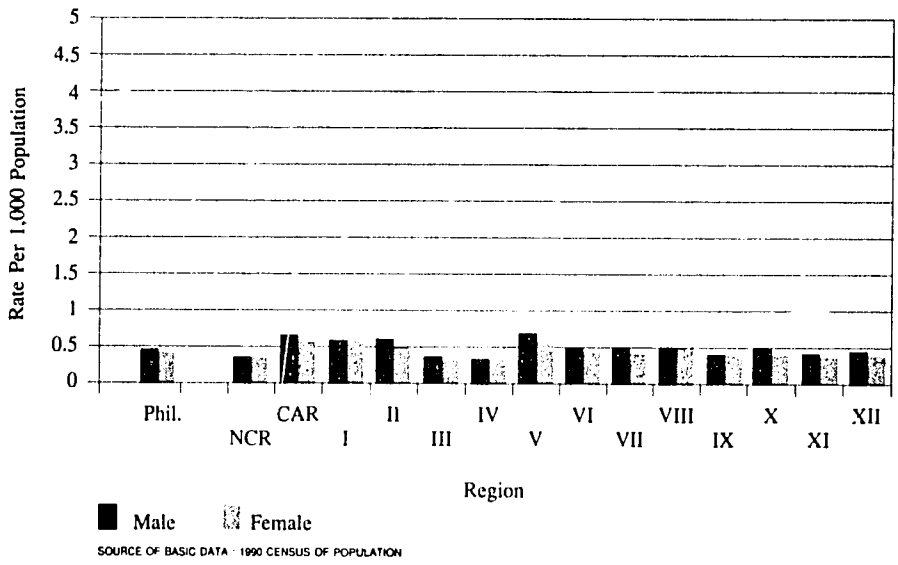

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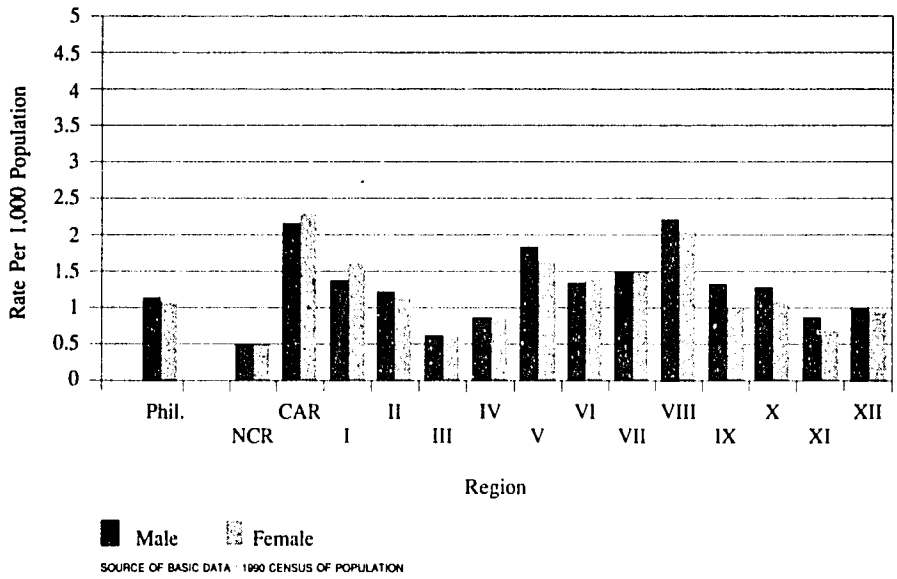
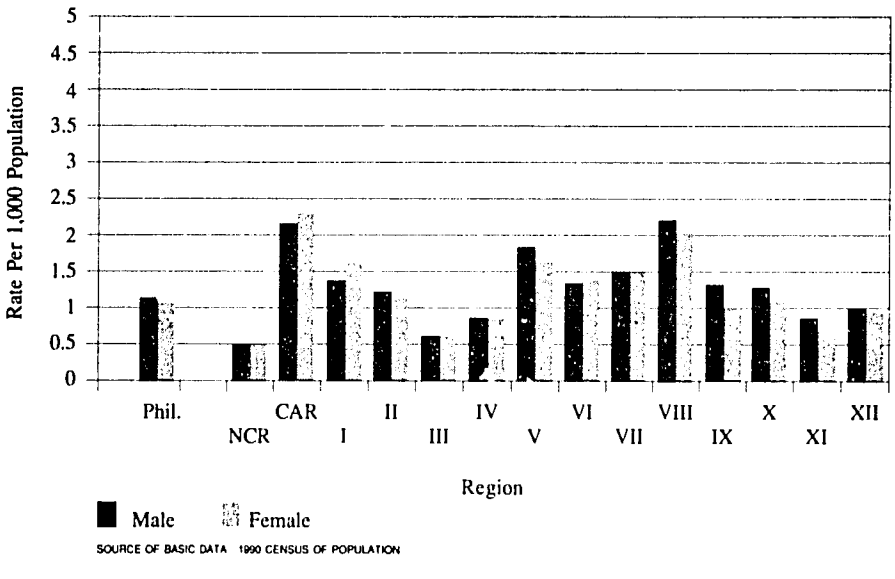
Figure 1.12d **Deafness/ Muteness By Region, 1990**



SOURCE OF BASIC DATA : 1990 CENSUS OF POPULATION

Figure 1.12e **Speech Impairment By Region, 1990**



SOURCE OF BASIC DATA : 1990 CENSUS OF POPULATION

Figure 1.12f Orthopedic Handicap By Region, 1990

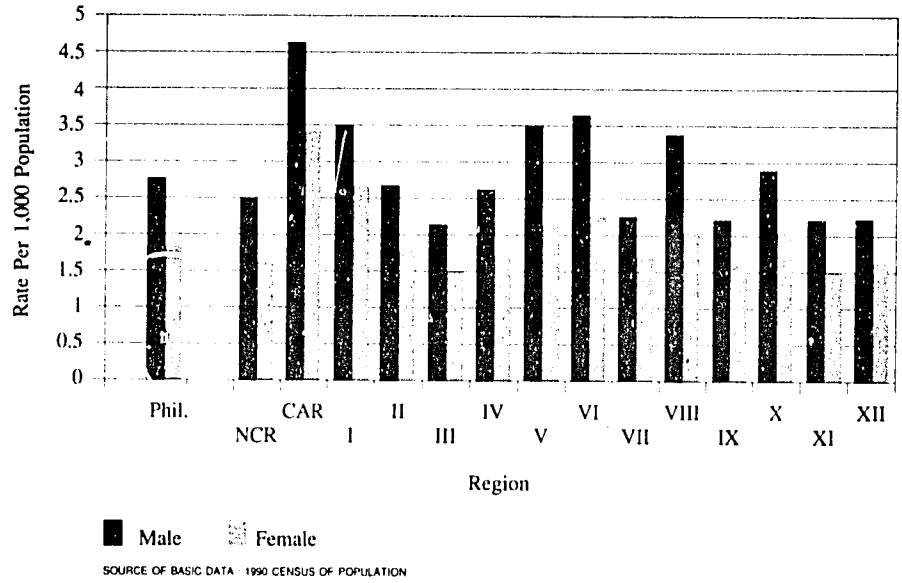


Figure 1.12g Multiple Disability By Region, 1990

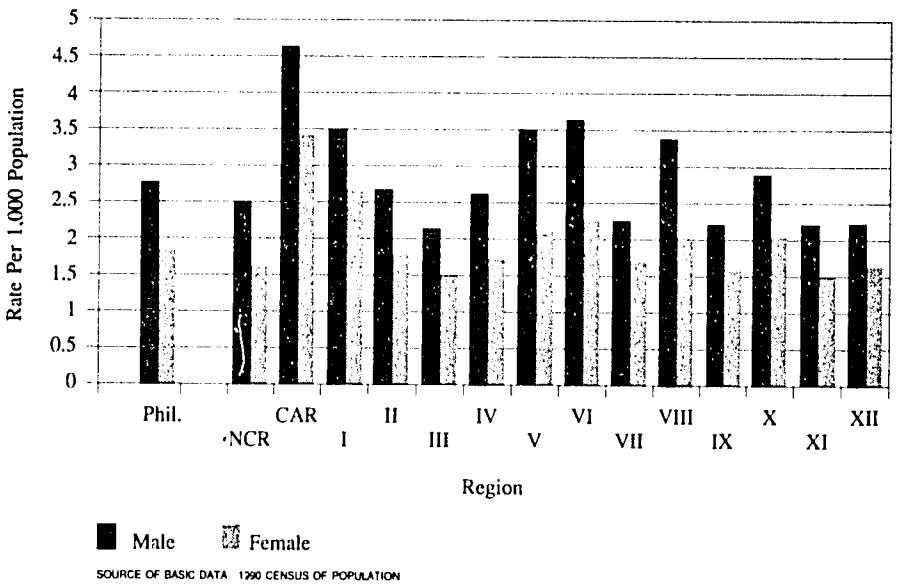
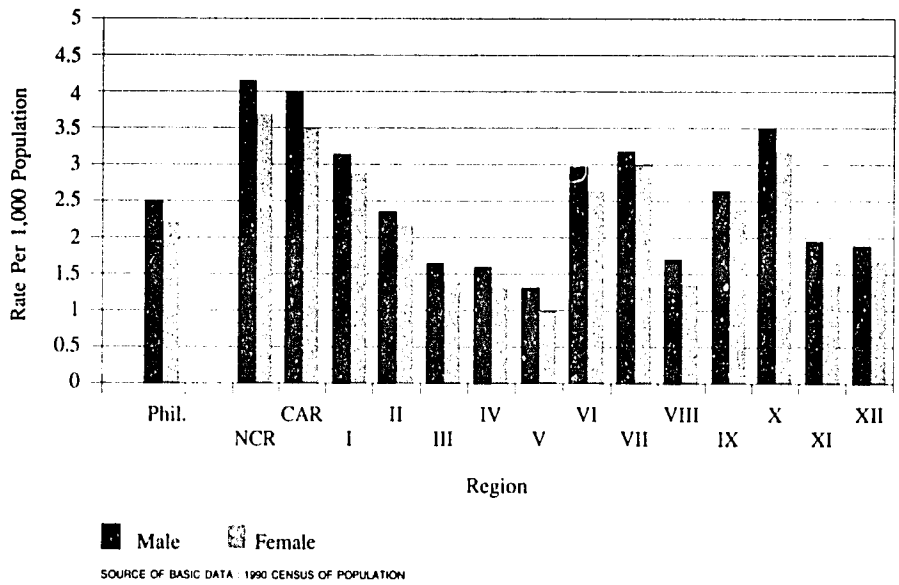
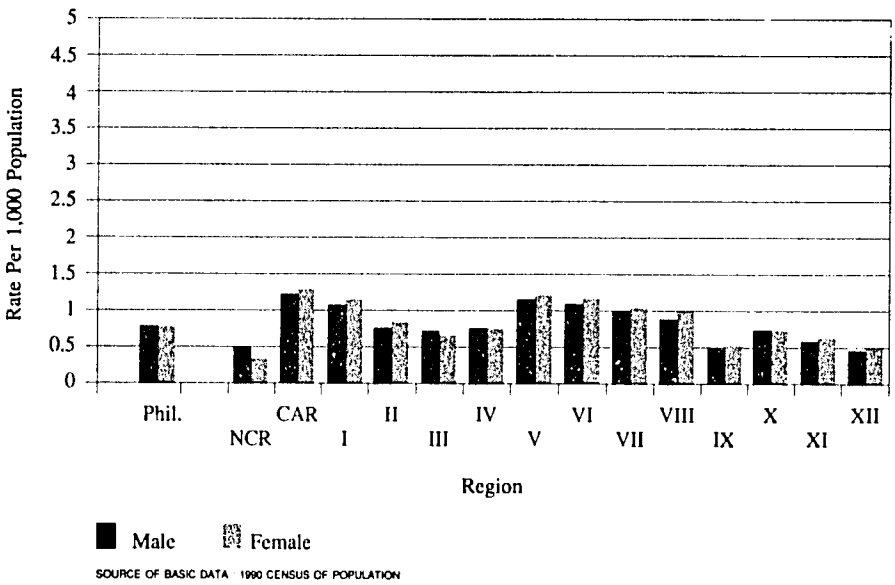


Figure 1.12h Other Disabilities By Region, 1990



SOURCE OF BASIC DATA : 1990 CENSUS OF POPULATION

Figure 1.12i Mental Illness By Region, 1990



SOURCE OF BASIC DATA : 1990 CENSUS OF POPULATION

Figure 1.12j Mental Retardation By Region, 1990

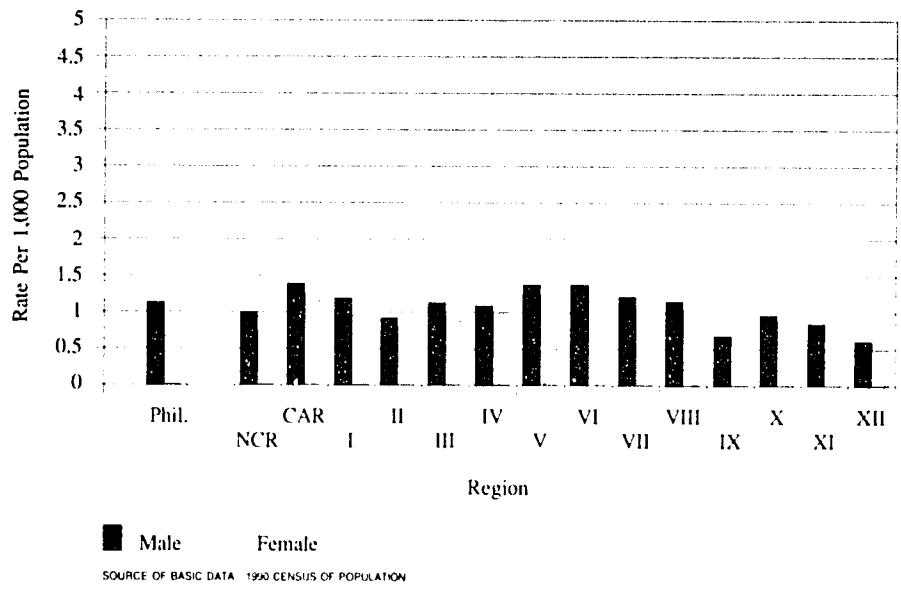


Figure 1.13a Blindness By Age and Gender, 1990

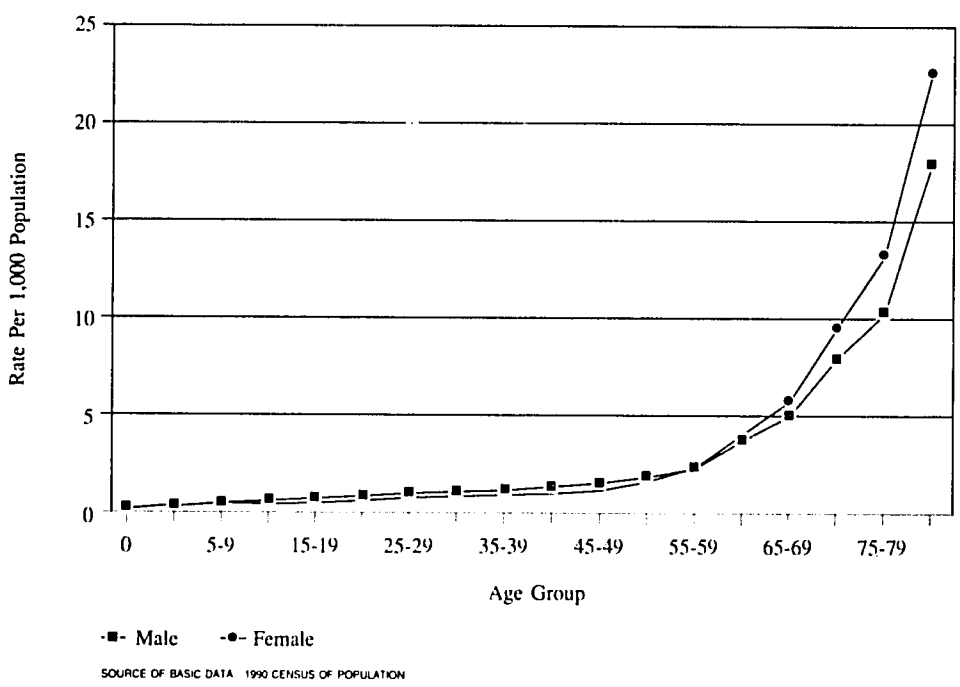


Figure 1.13b Deafness By Age and Gender, 1990

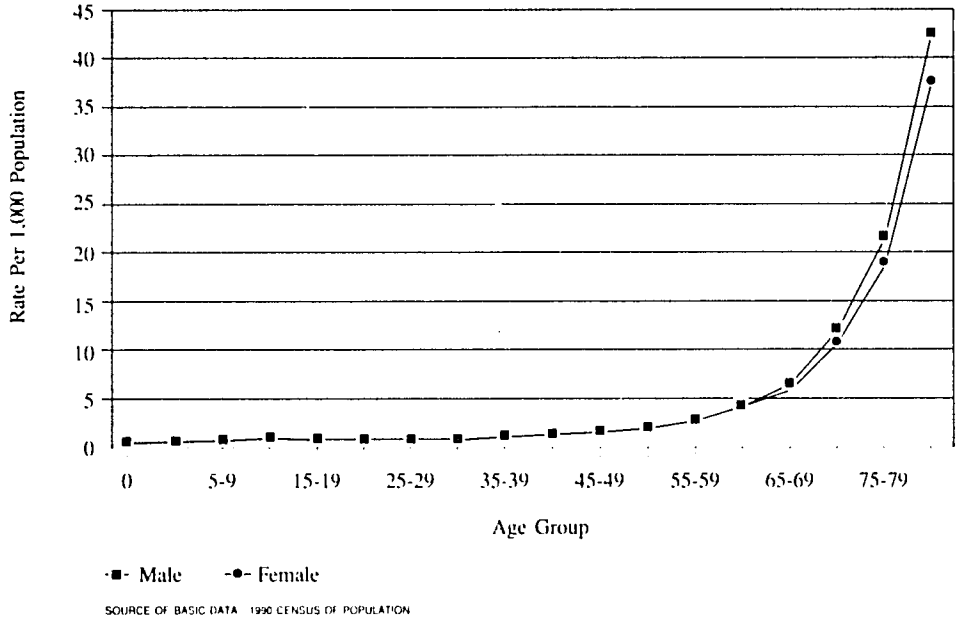


Figure 1.13c Muteness By Age and Gender, 1990

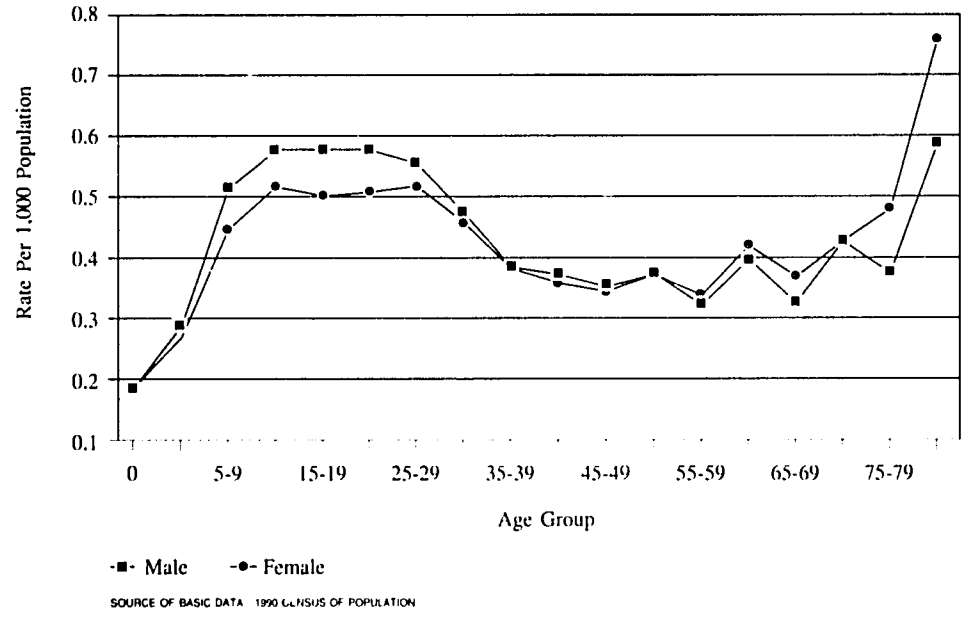
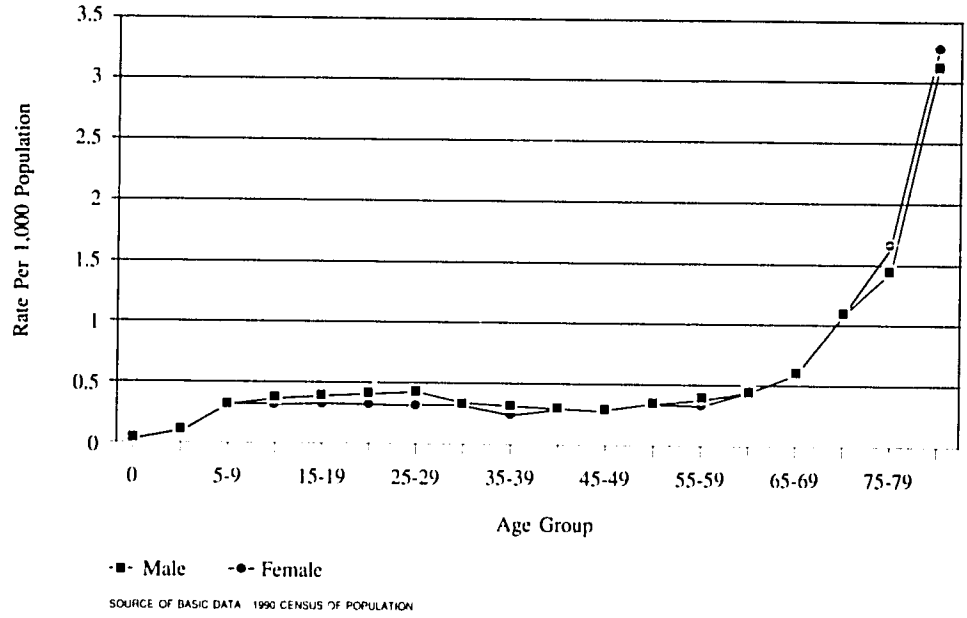
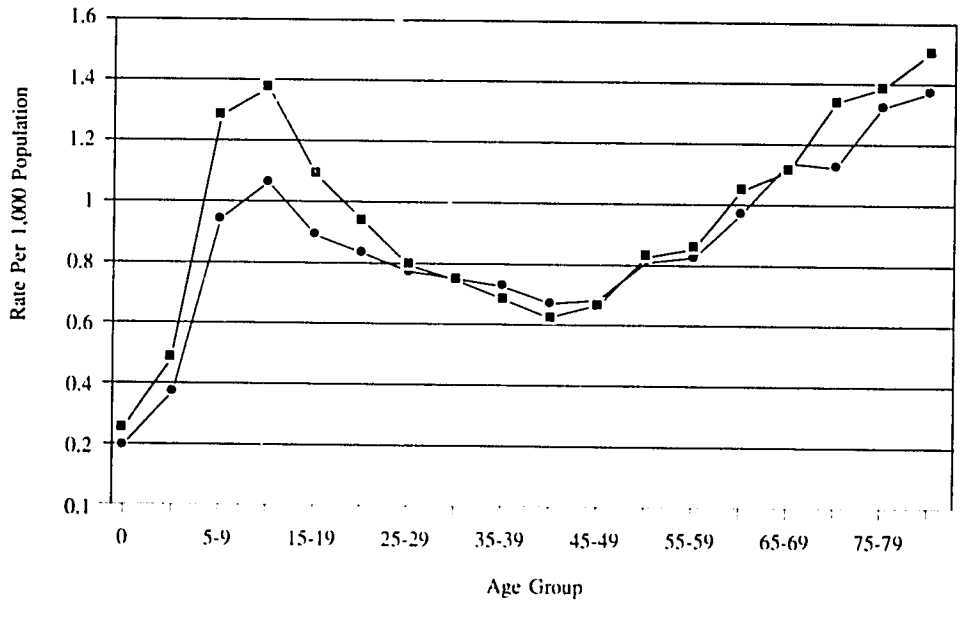


Figure 1.13d Deaf/ Mute By Age and Gender, 1990



SOURCE OF BASIC DATA 1990 CENSUS OF POPULATION

Figure 1.13e Speech Impairment : Age and Gender, 1990



SOURCE OF BASIC DATA 1990 CENSUS OF POPULATION

Figure 1.13f Orthopedic Handicap : Age & Gender, 1990

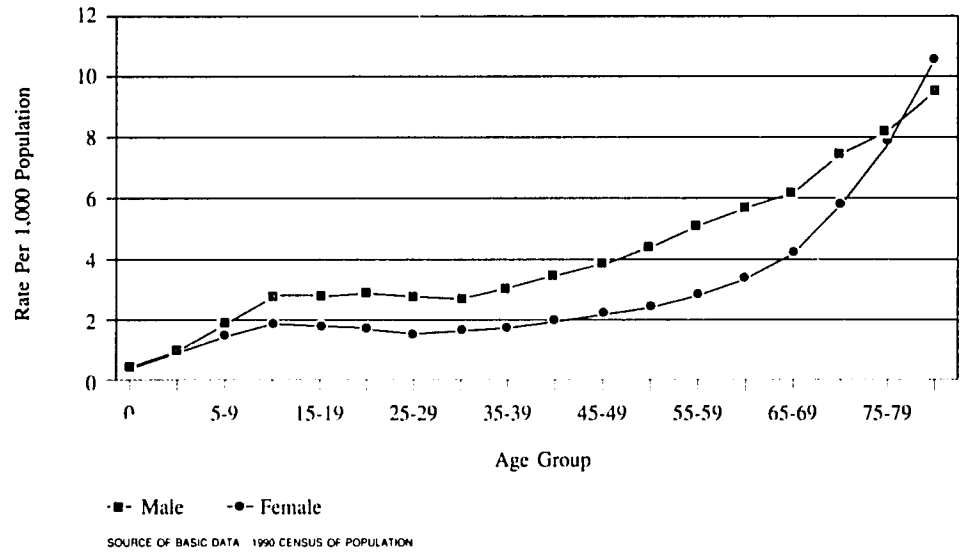


Figure 1.13g Multiple Disability : Age and Gender, 1990

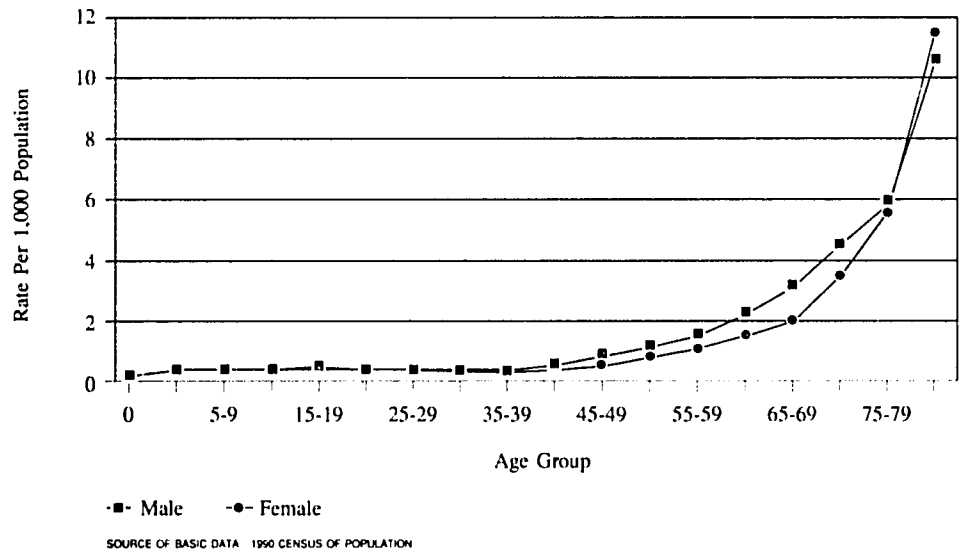
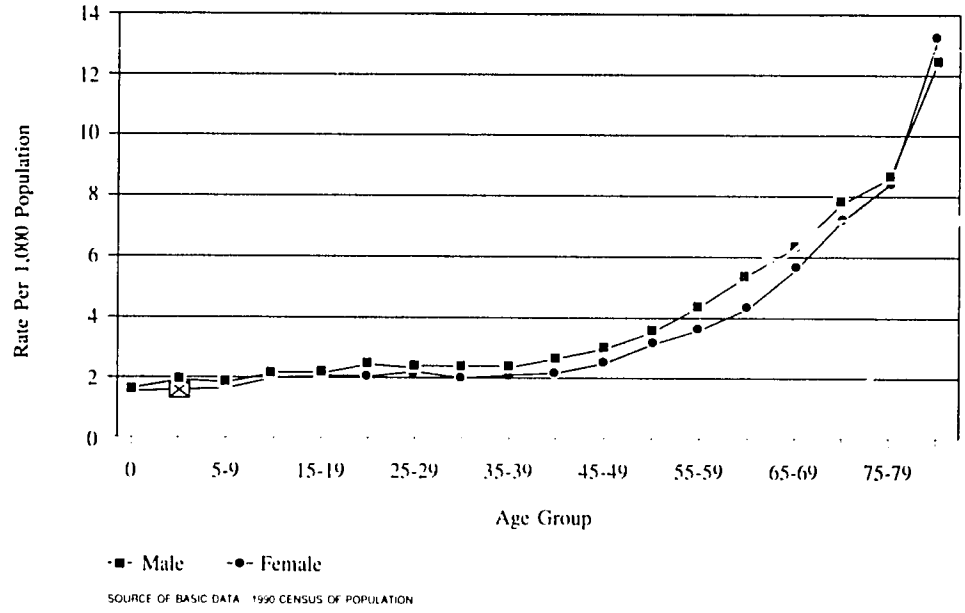
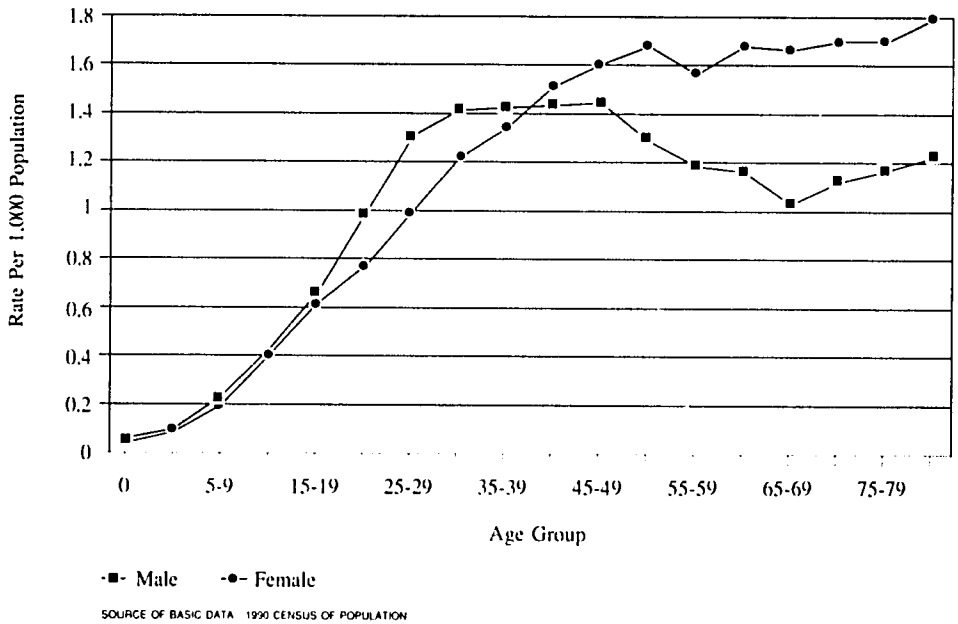


Figure 1.13h Other Disability : Age & Gender, 1990



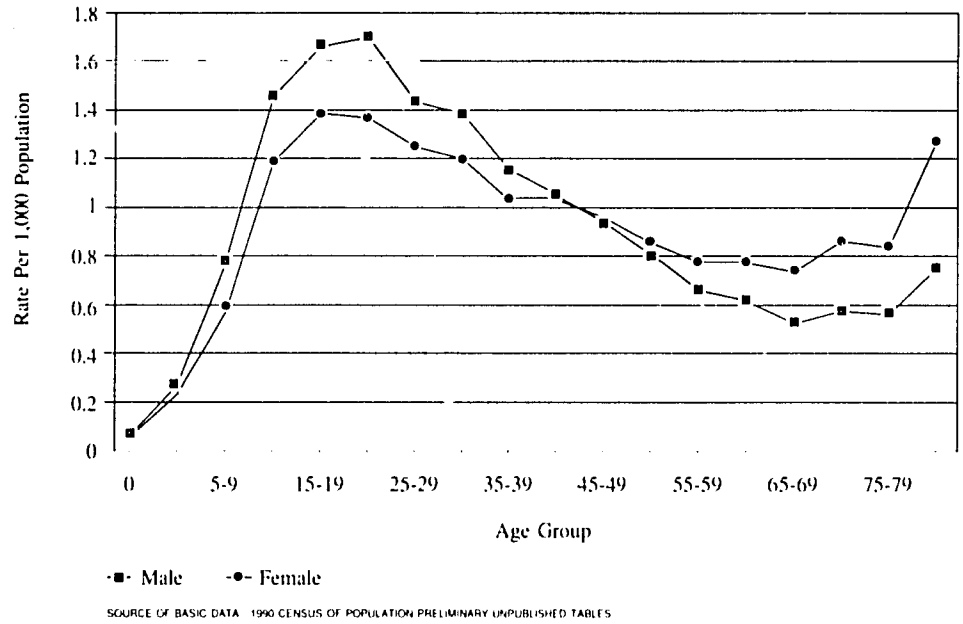
SOURCE OF BASIC DATA 1990 CENSUS OF POPULATION

Figure 1.13i Mental Illness By Age and Gender, 1990



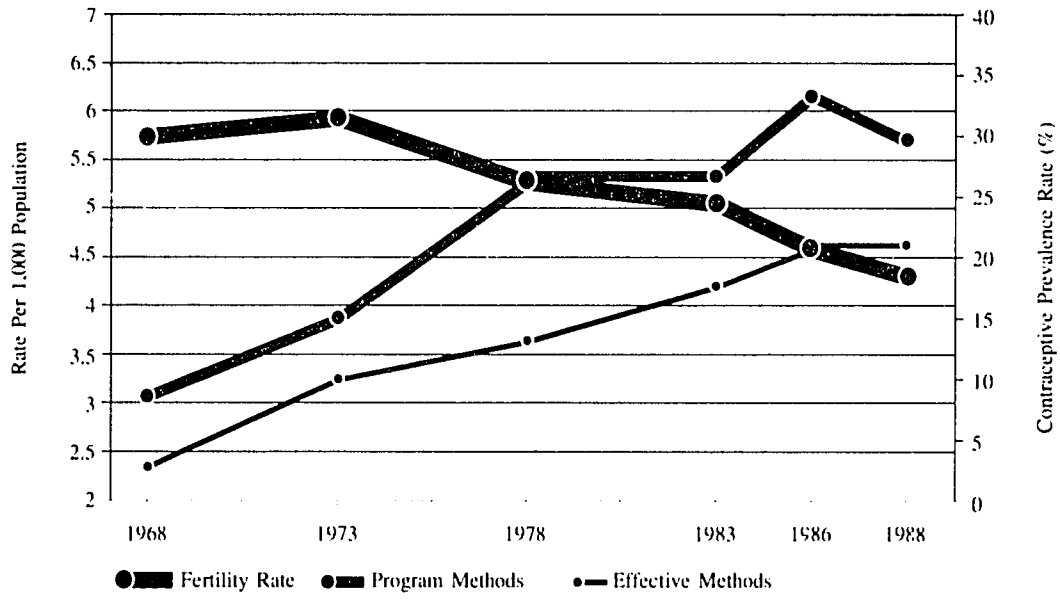
SOURCE OF BASIC DATA 1990 CENSUS OF POPULATION

Figure 1.13j Mental Retardation : Age and Gender, 1990



SOURCE OF BASIC DATA: 1990 CENSUS OF POPULATION PRELIMINARY UNPUBLISHED TABLES

Figure 1.14 Fertility and Contraceptive Practice Survey Years



SOURCE: NATIONAL DEMOGRAPHIC SURVEYS, VARIOUS YEARS AS REPORTED IN CASTERLINE (1991)

Figure 1.15 Total Fertility Rate By Region 1975 and 1984

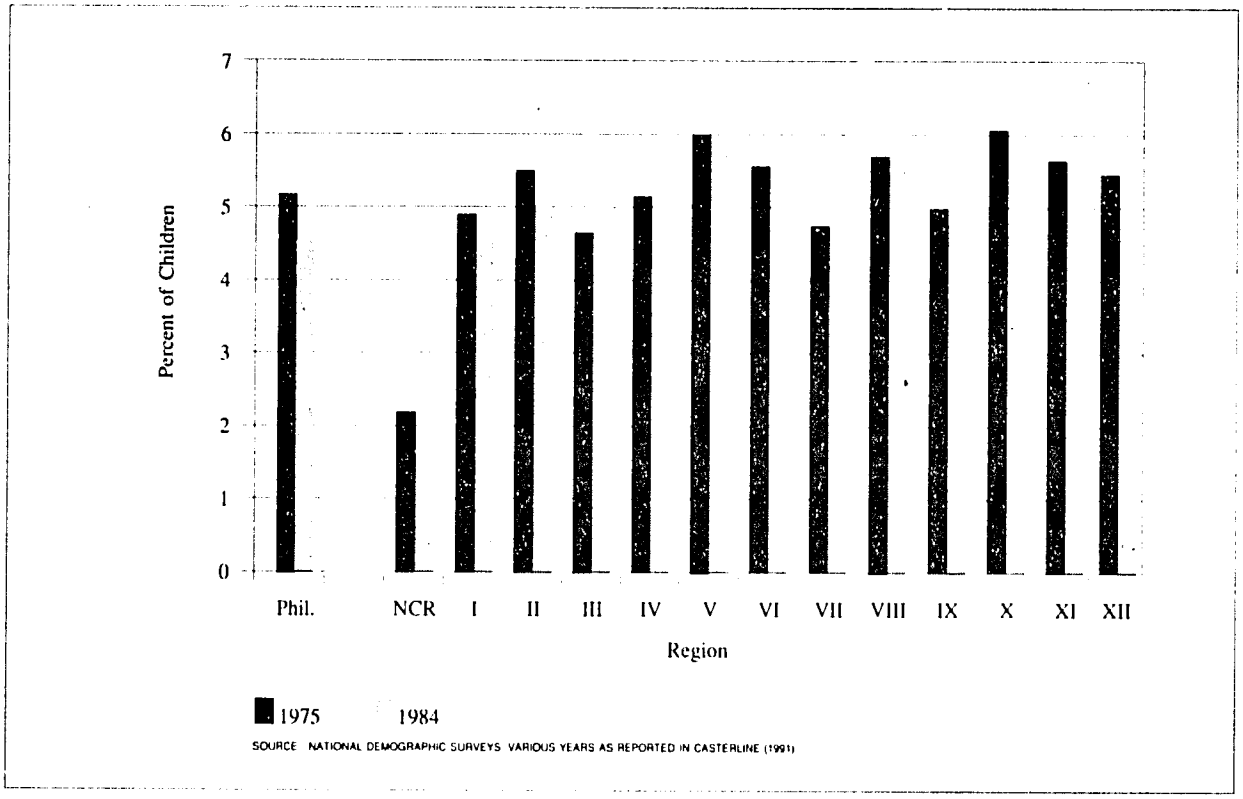


Figure 1.16 Households With Safe Water Source, 1987

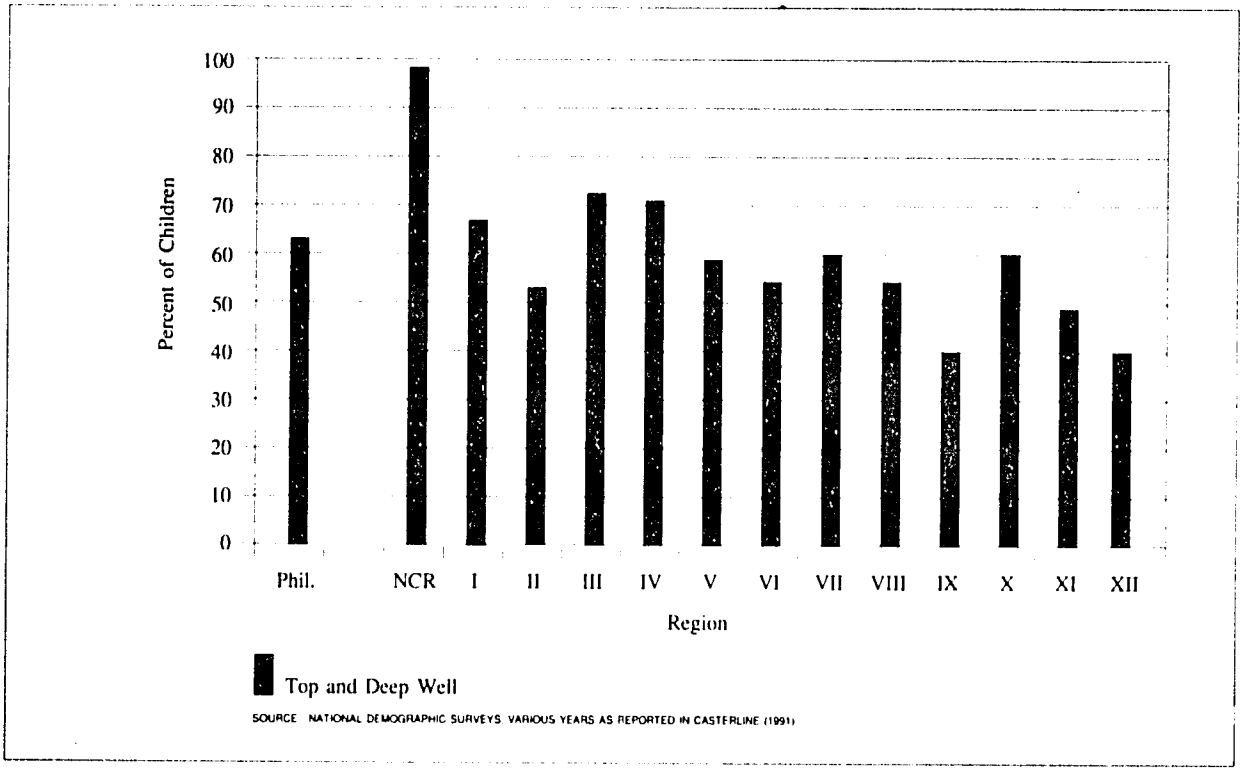
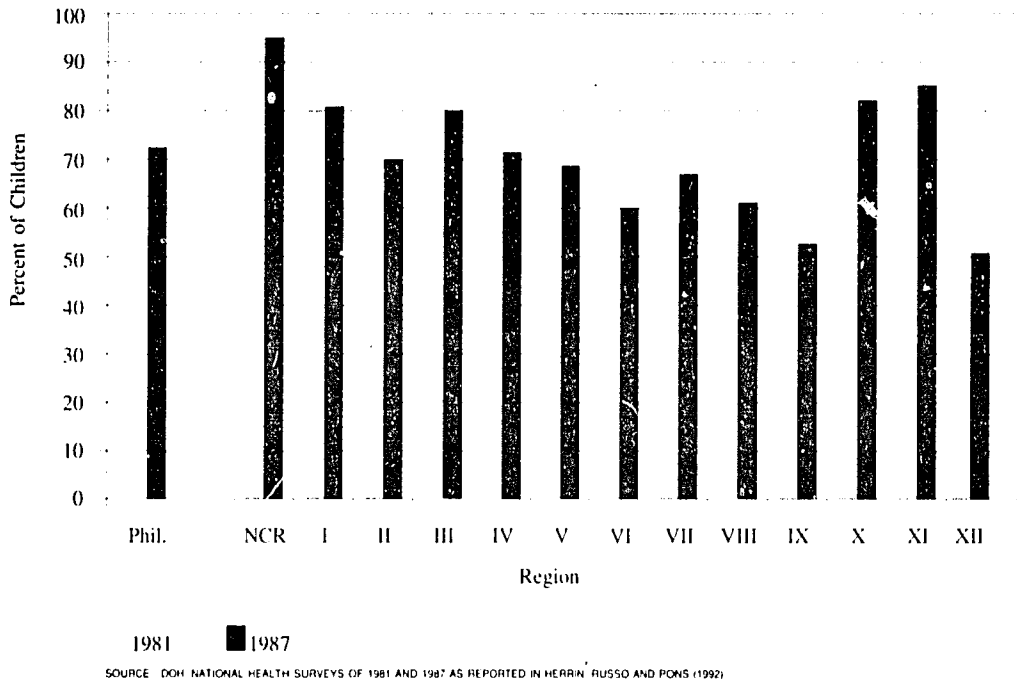
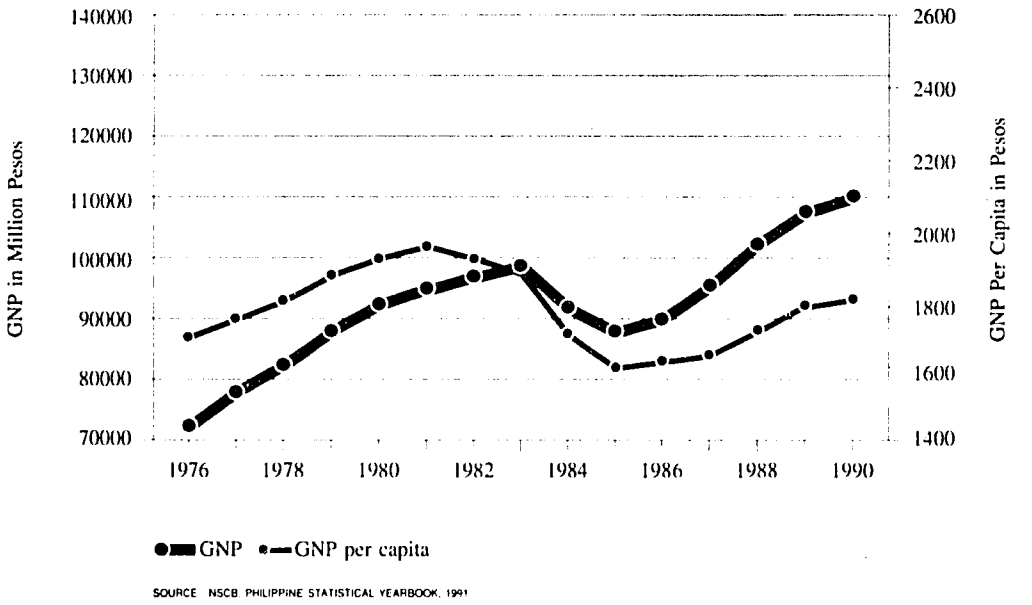


Figure 1.17 Households with Sanitary Toilets



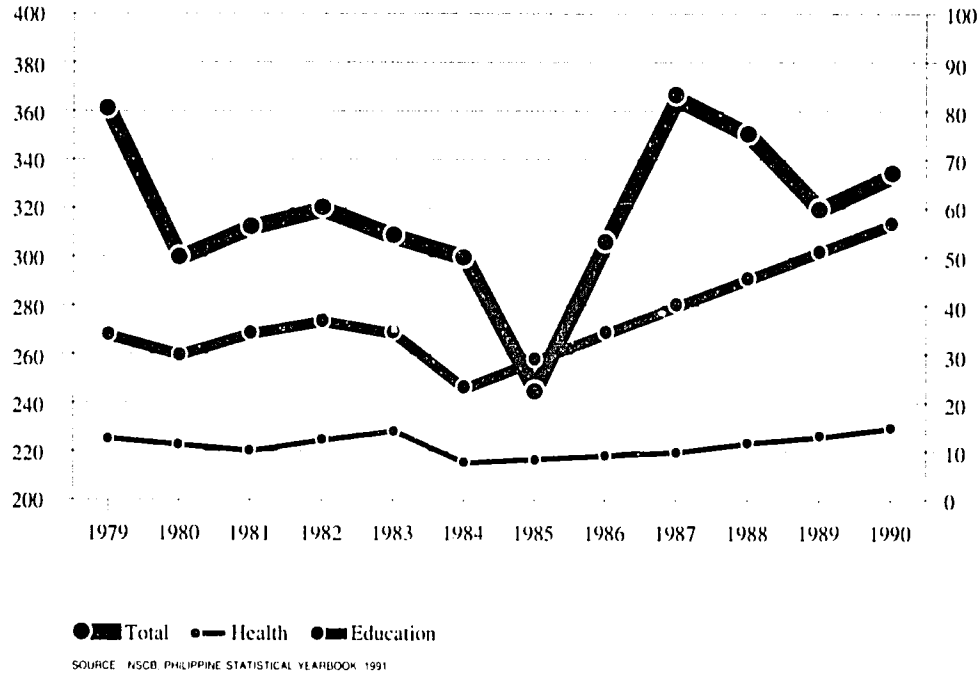
SOURCE: DOH NATIONAL HEALTH SURVEYS OF 1981 AND 1987 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 1.18 GNP and GNP Per Capita : 1976 - 1990 (In 1972 Pesos)



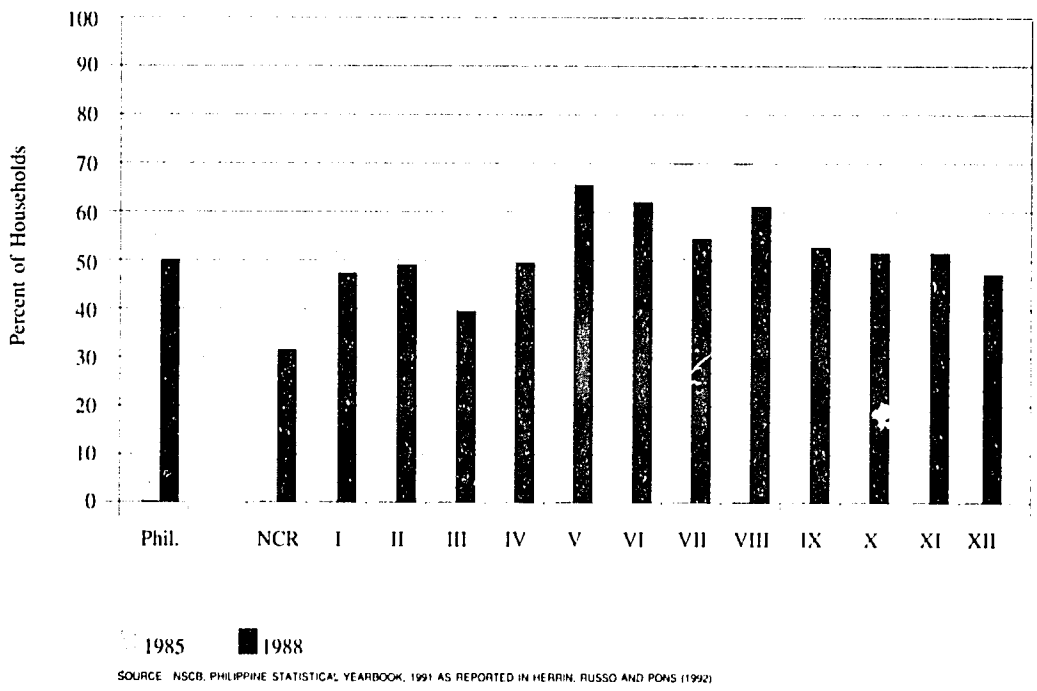
SOURCE: NSCB, PHILIPPINE STATISTICAL YEARBOOK, 1991

Figure 1.19 Per Capita Government Expenditures 1979 - 1990 (In 1972 Billion Pesos)



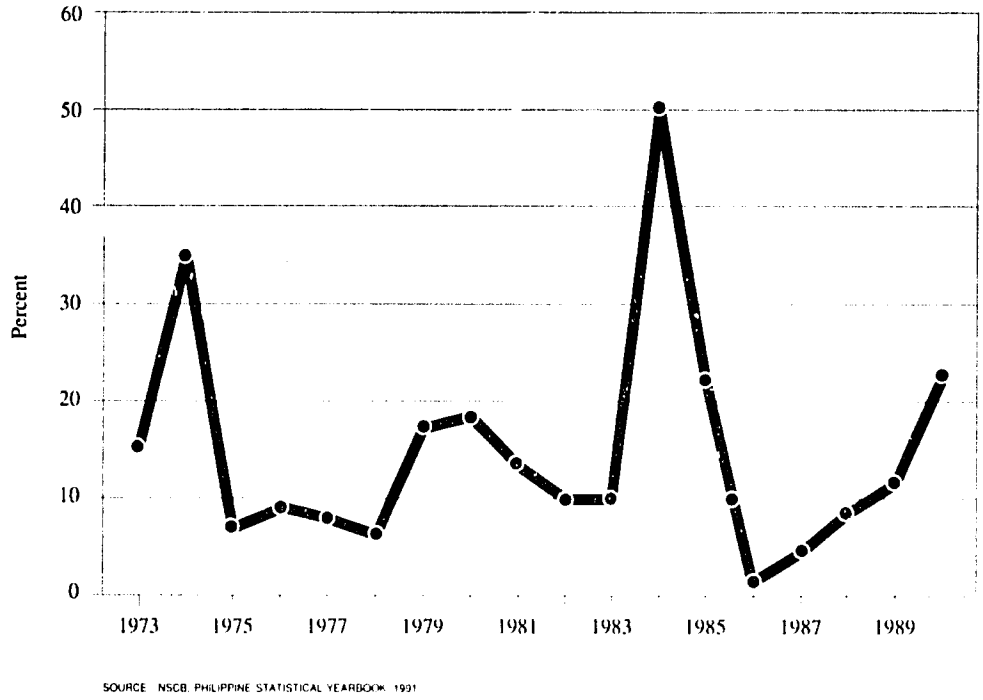
SOURCE NSCB, PHILIPPINE STATISTICAL YEARBOOK 1991

Figure 1.20 Poverty Rate By Region, 1985 and 1988



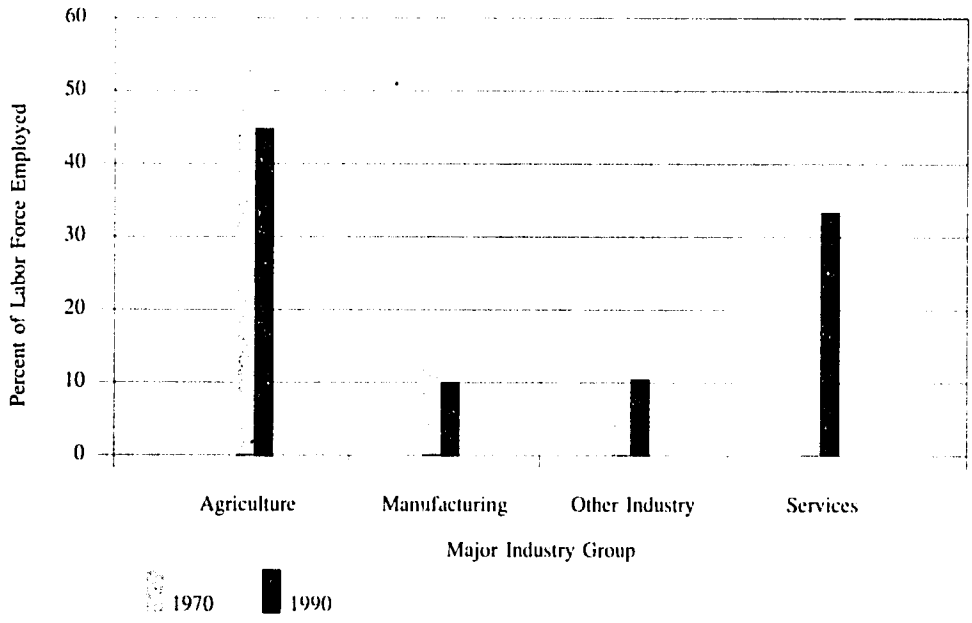
SOURCE NSCB, PHILIPPINE STATISTICAL YEARBOOK, 1991 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 1.21 Inflation Rate, 1973-1990



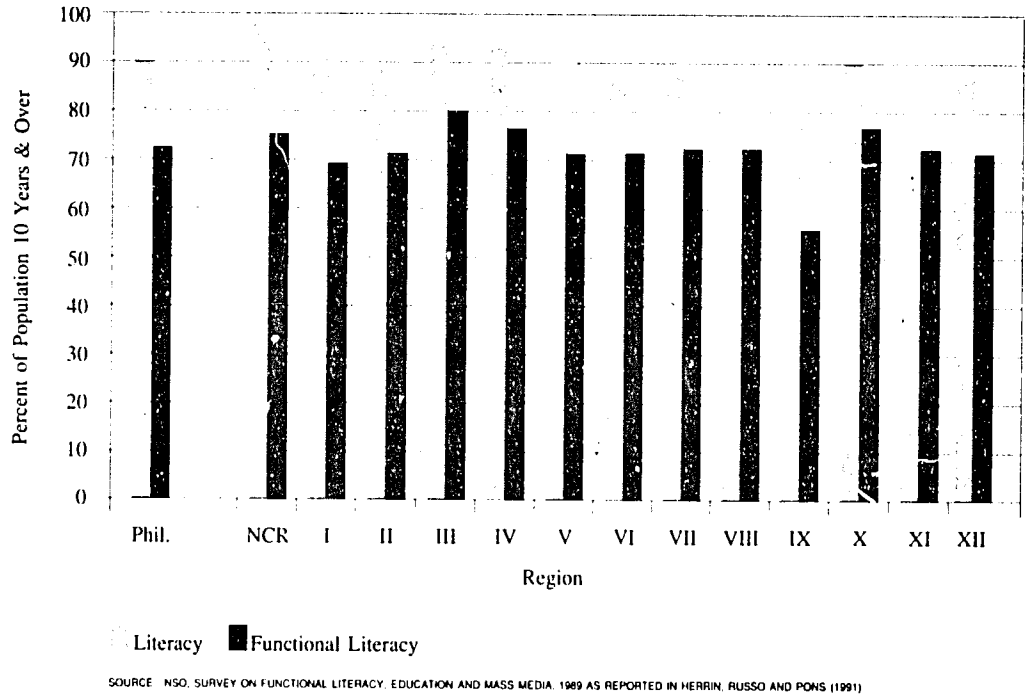
SOURCE NSCB, PHILIPPINE STATISTICAL YEARBOOK 1991

Figure 1.22 Employed Persons By Industry Group (15 years old and over)



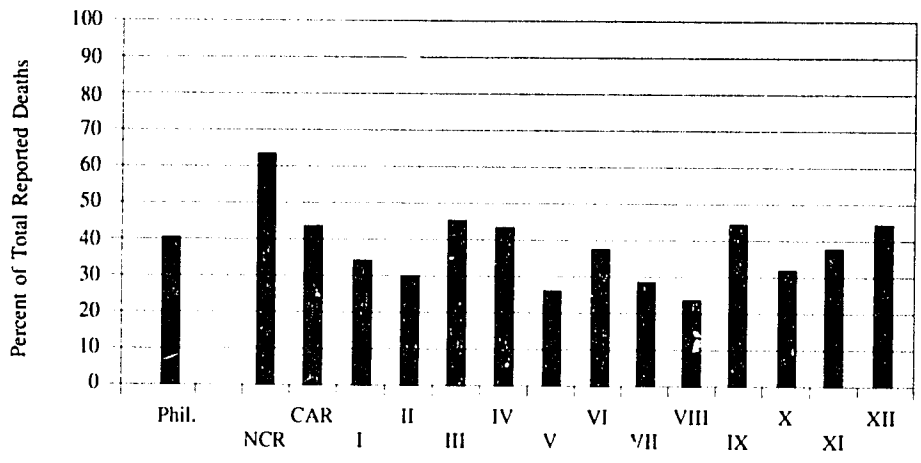
SOURCE NSCB, PHILIPPINE STATISTICAL YEARBOOK 1991

Figure 1.23 Literacy Vs. Functional Literacy, 1989



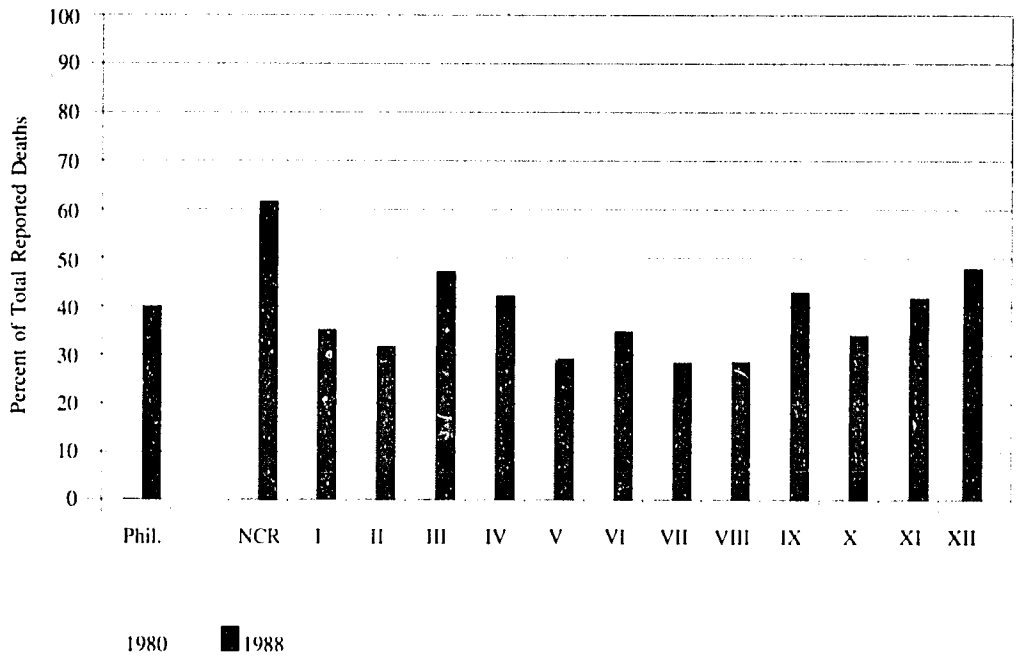
SOURCE: NSO, SURVEY ON FUNCTIONAL LITERACY, EDUCATION AND MASS MEDIA, 1989 AS REPORTED IN HERRIN, RUSSO AND PONS (1991)

Figure 2.1 Deaths with Medical Attendance, 1989



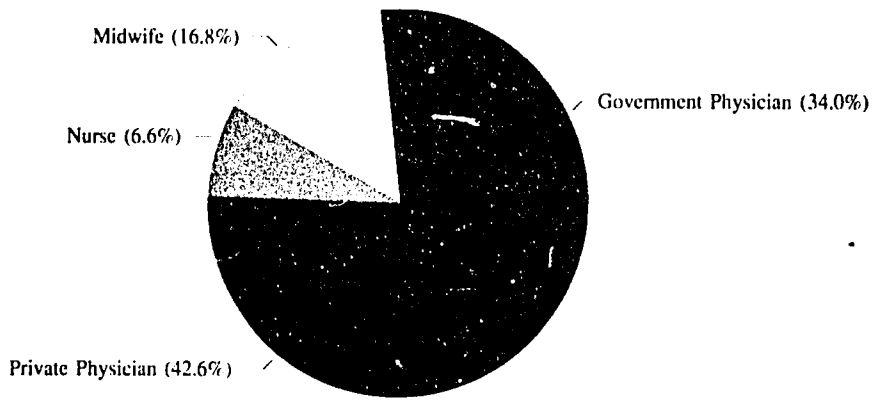
SOURCE: DOH, PHILIPPINE HEALTH STATISTICS, 1989

Figure 2.2 Deaths with Medical Attendance 1980 and 1988



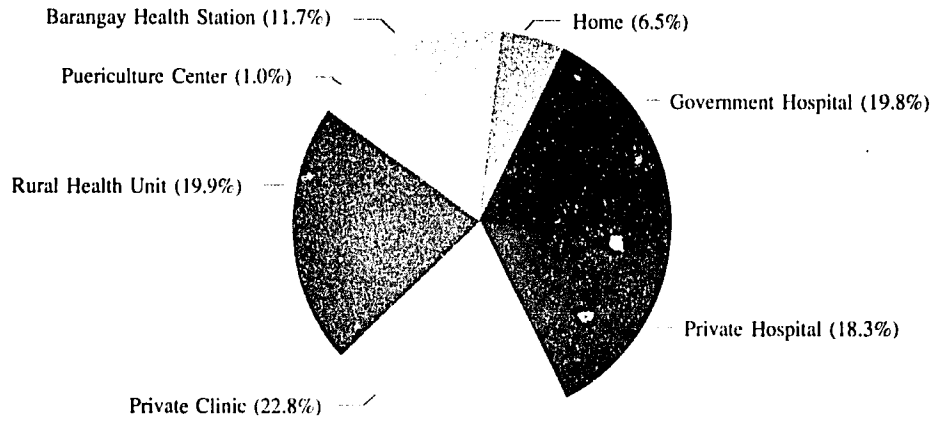
SOURCE: NEDA, 1988 COMPENDIUM OF PHILIPPINE SOCIAL STATISTICS AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 2.3 Type of Medical Attendant, 1987 Morbid Cases



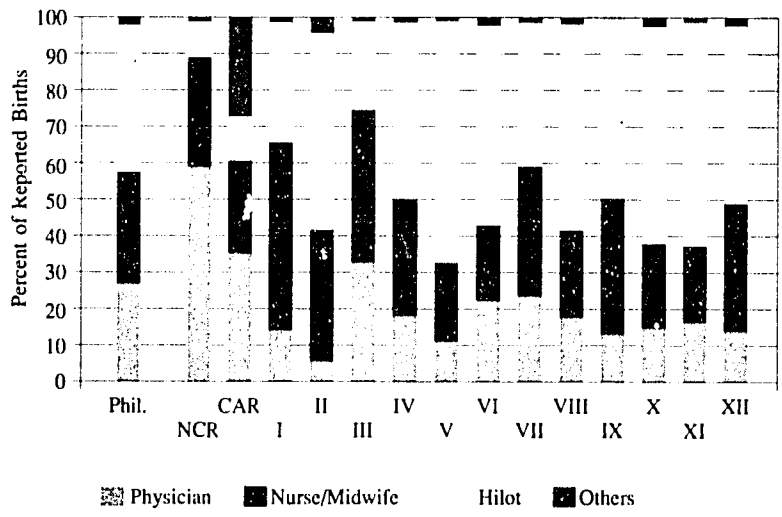
SOURCE: DOH, NATIONAL HEALTH SURVEY, 1987 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 2.4 Place of Consultation, 1987 Morbid Cases



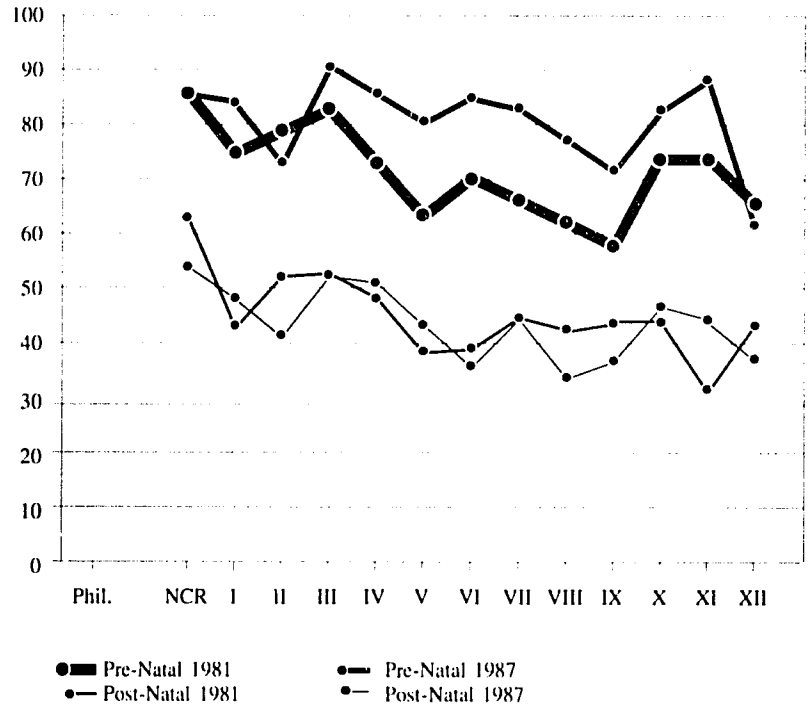
SOURCE : DOH, NATIONAL HEALTH SURVEY, 1987 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 2.5 Births By Type of Attendant, 1989



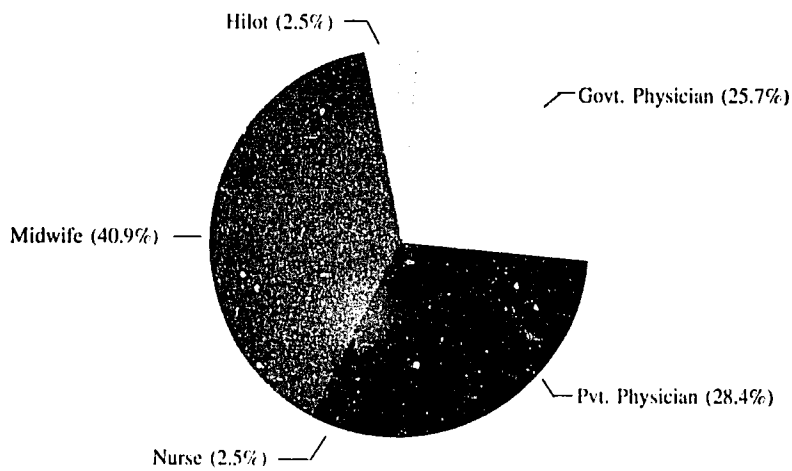
SOURCE: DOH, PHILIPPINE HEALTH STATISTICS, 1989

Figure 2.6 Pre-Natal & Post-Natal Care: 1981 & 1987



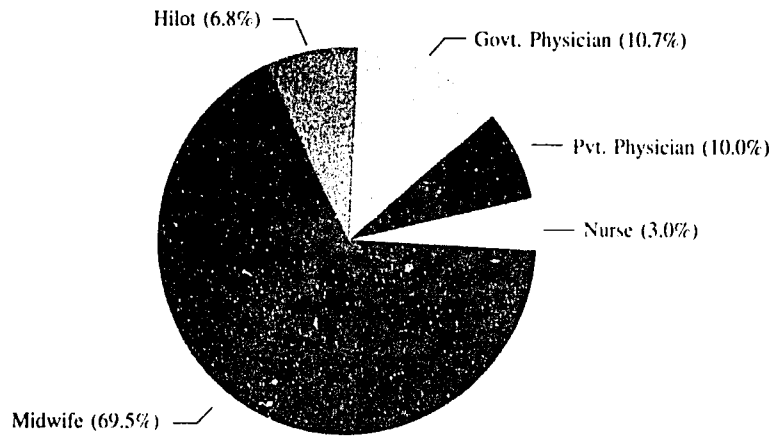
SOURCE DOH NATIONAL HEALTH SURVEYS OF 1981 AND 1987 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 2.7a Pre-Natal Consultant : Urban Areas, 1987



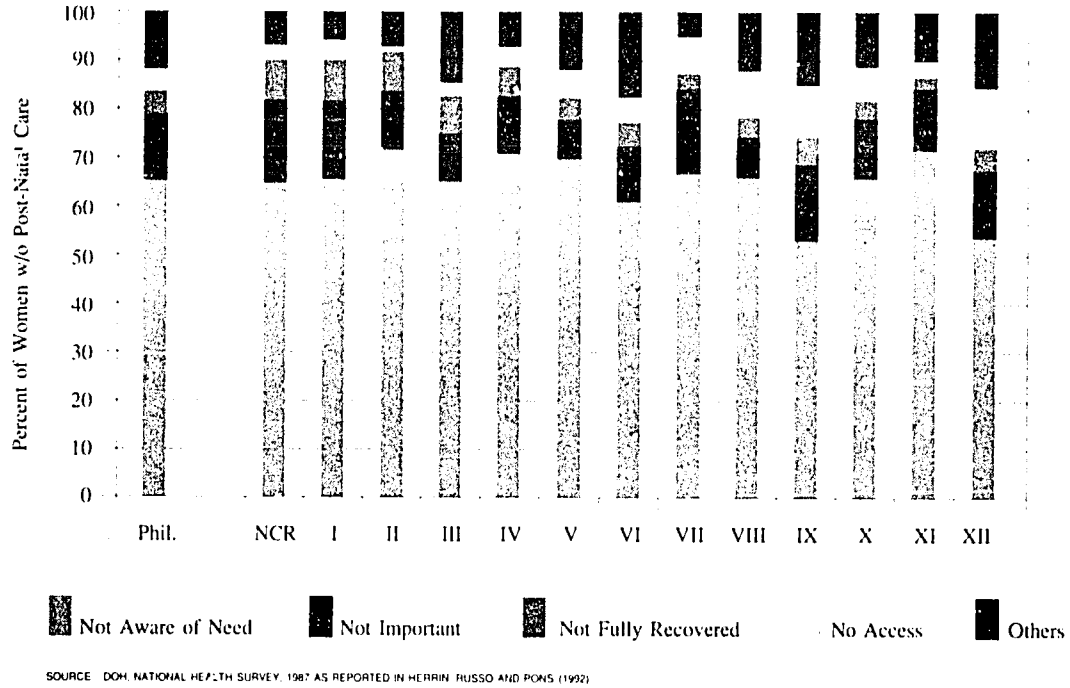
SOURCE DOH NATIONAL HEALTH SURVEY 1987

Figure 2.7b Pre-Natal Consultant : Rural Areas, 1987



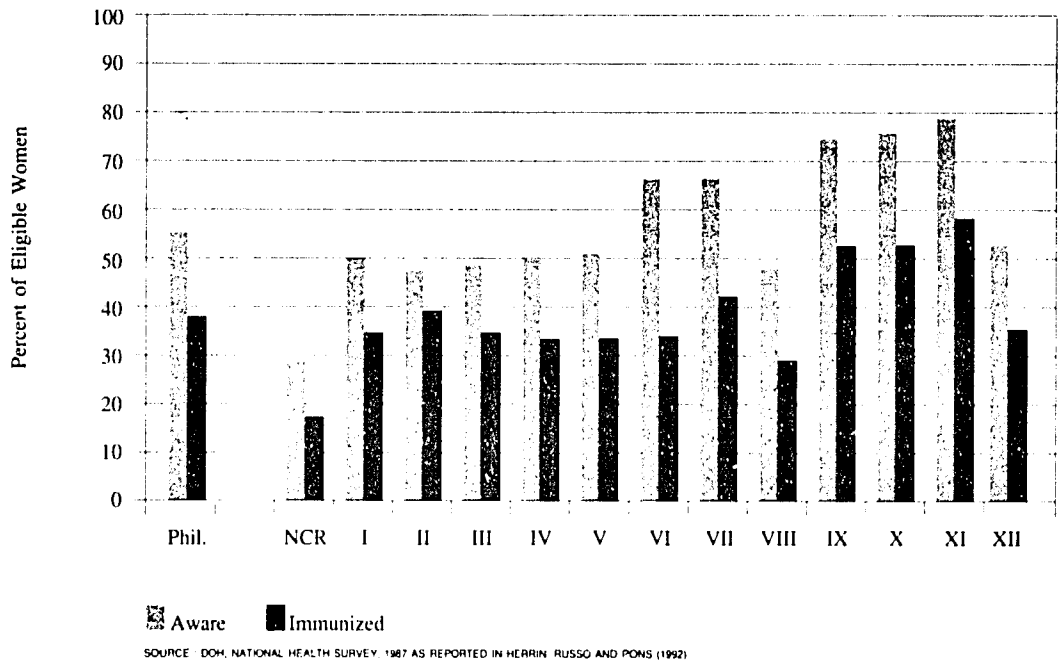
SOURCE: DOH, NATIONAL HEALTH SURVEY, 1987

Figure 2.8 Reason for Not Having Post-Natal Care By Region, 1987



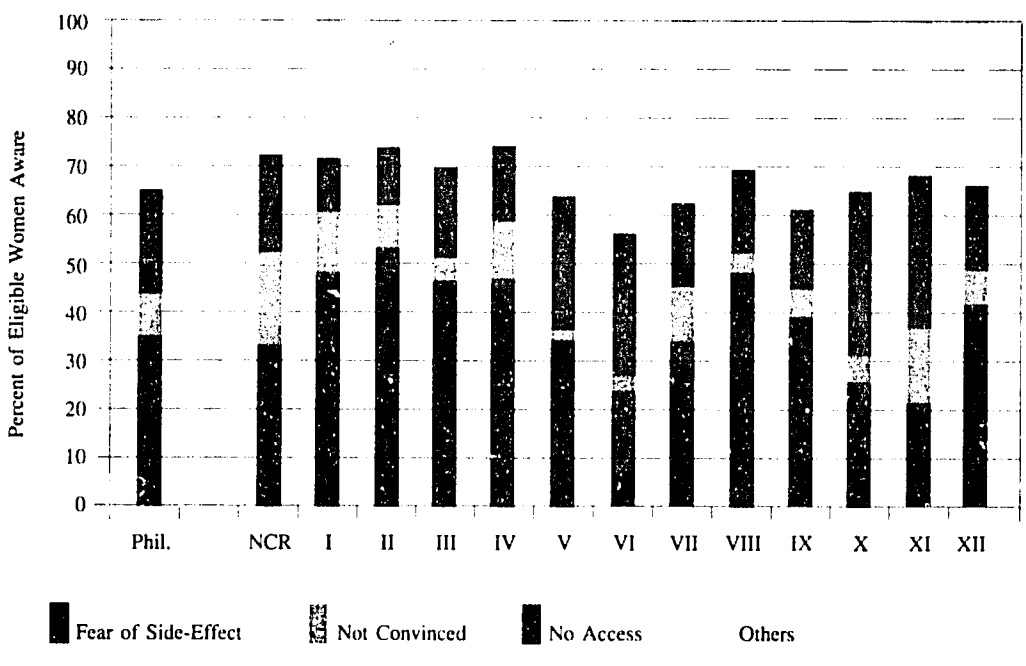
SOURCE: DOH, NATIONAL HEALTH SURVEY, 1987 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 2.9a Tetanus Toxoid Immunization, 1987 (Awareness and Actual Immunization)



SOURCE : DOH, NATIONAL HEALTH SURVEY, 1987 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 2.9b Reason for Non-Immunization, 1987 Tetanus Toxoid



SOURCE : DOH, NATIONAL HEALTH SURVEY, 1987 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 2.10a Awareness and Use of Oresol, 1987

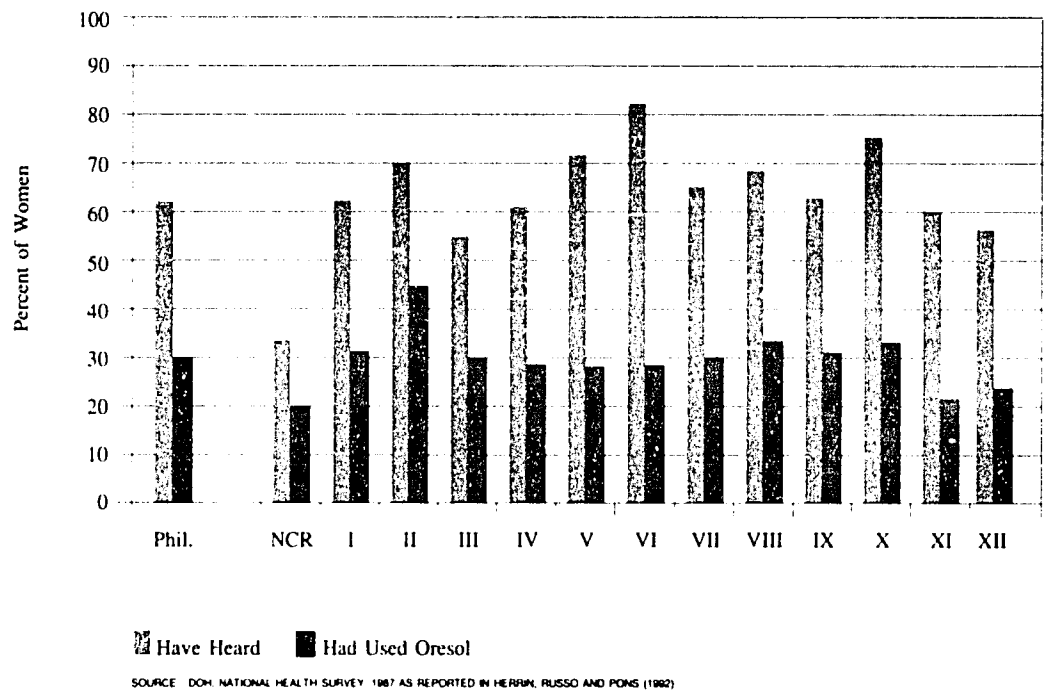


Figure 2.10b Access to Oresol, 1987

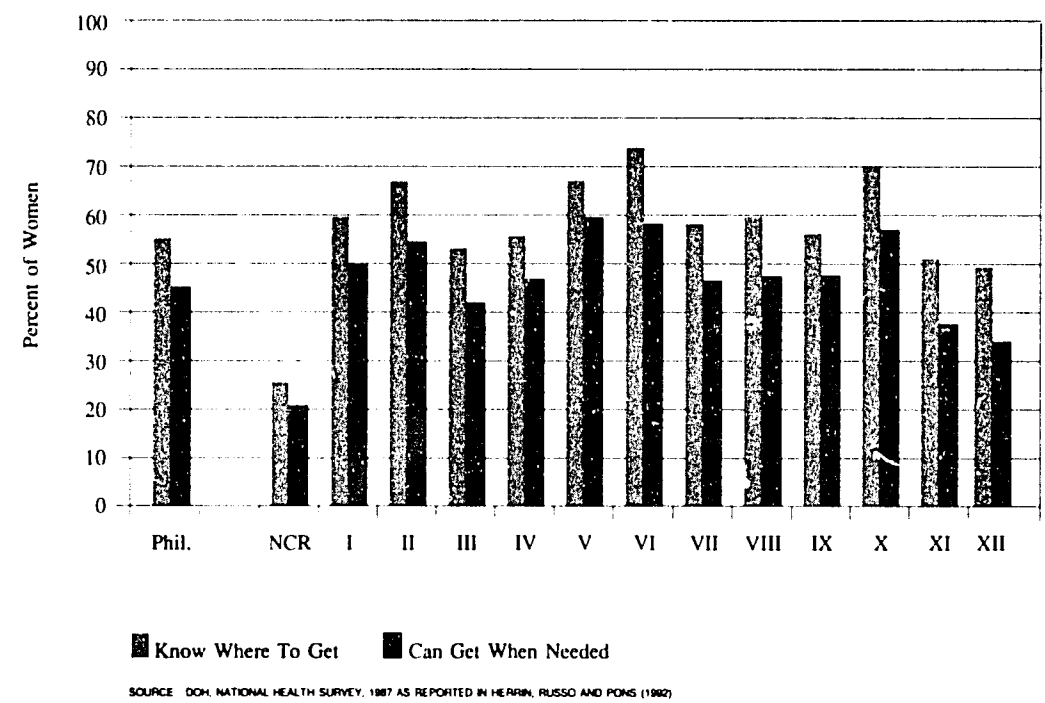
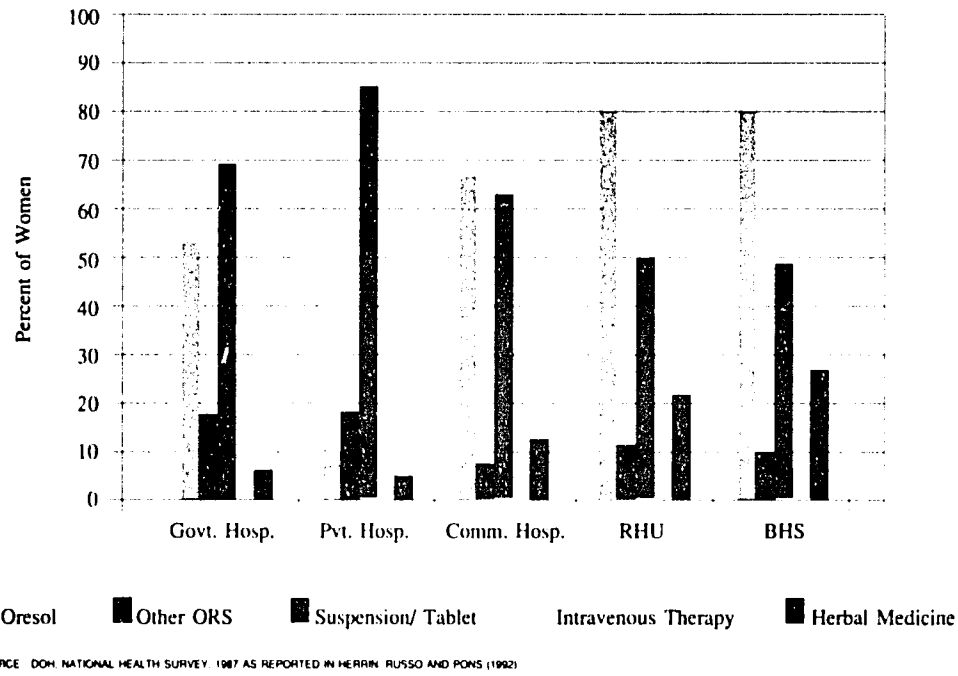
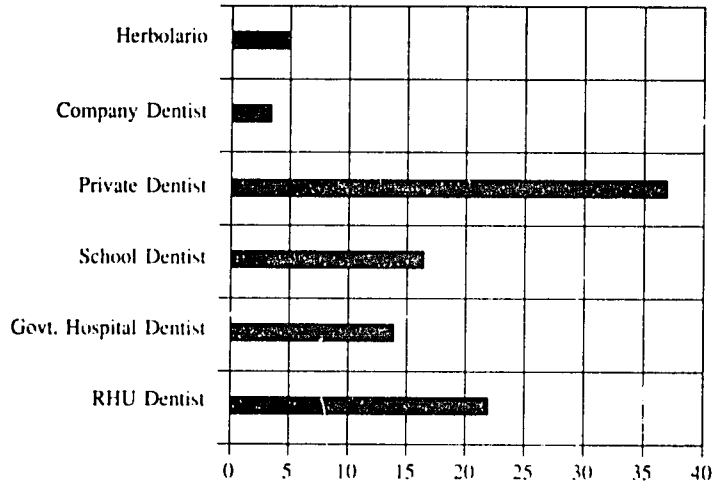


Figure 2.11 **Treatment : Last Diarrhea Episode, 1987**



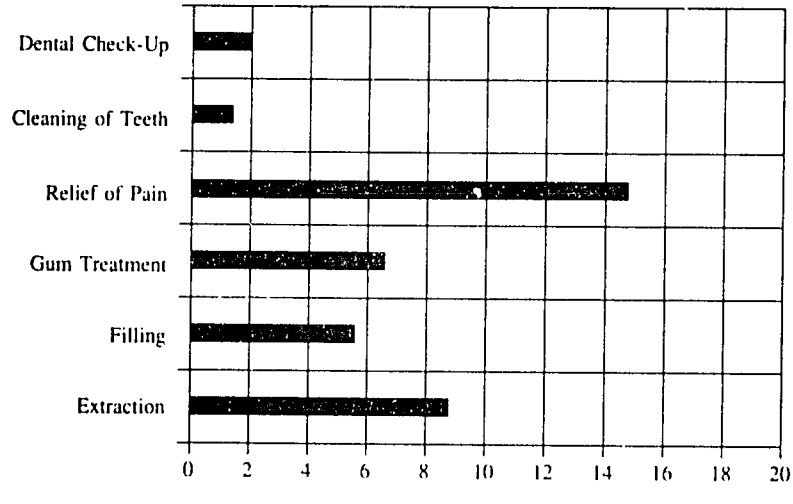
SOURCE: DOH, NATIONAL HEALTH SURVEY, 1987 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 2.12a Dental Practitioner Consulted, 1987



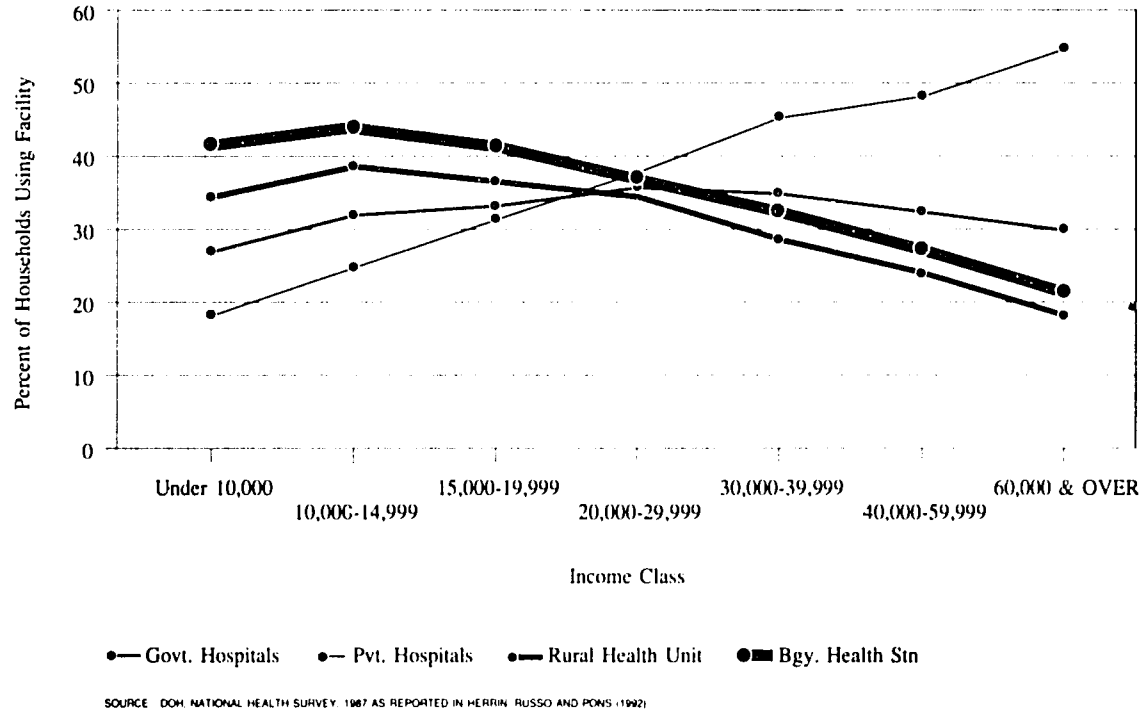
SOURCE: DOH NATIONAL HEALTH SURVEY 1987 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 2.12b Dental Visit By Type of Service, 1987



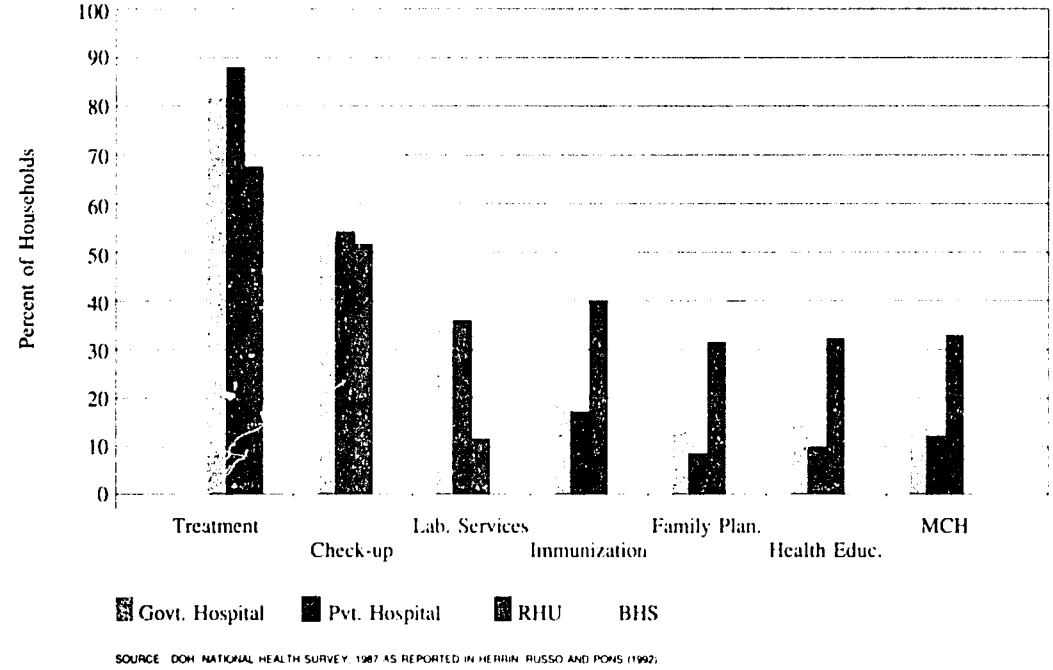
SOURCE: DOH NATIONAL HEALTH SURVEY 1987 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Figure 2.13 Households Using Health Facilities : 1987



SOURCE DOH NATIONAL HEALTH SURVEY 1987 AS REPORTED IN HERRIN RUSSO AND PONS (1992)

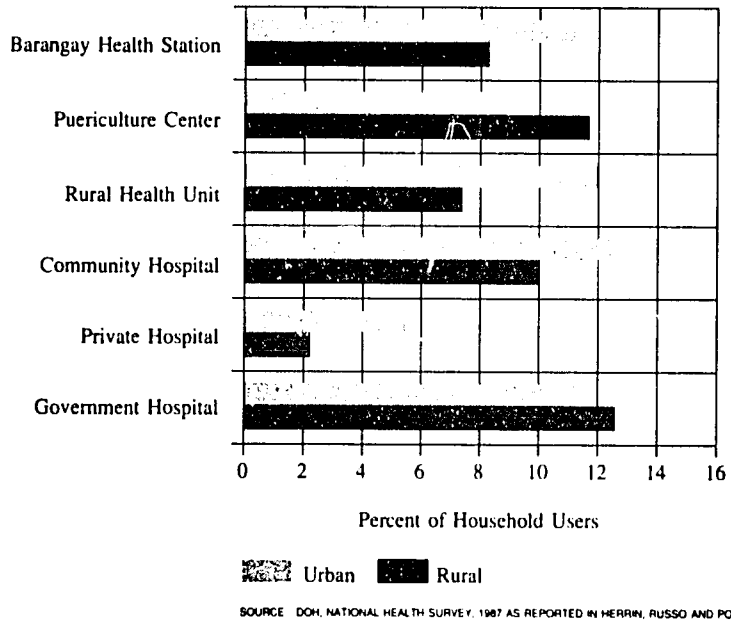
Figure 2.14 Services Received in Health Facilities



SOURCE DOH NATIONAL HEALTH SURVEY 1987 AS REPORTED IN HERRIN RUSSO AND PONS (1992)

80

Figure 2.15 **Households Dissatisfied With Services In Health Facilities, 1987**



SOURCE DOH, NATIONAL HEALTH SURVEY, 1987 AS REPORTED IN HERRIN, RUSSO AND PONS (1992)

Annex : Special Issues in the Health Sector

While undertaking the review, we recognized a number of specific issues and concerns that were important in assessing the performance of the Philippine health sector. Those that were directly relevant to the focus of the review have been integrated into the various chapters of the main report, the rest are presented as special papers. These papers are "stand alone" pieces, which should provide the reader a broader perspective of what has been happening to the Philippine health sector.

Presented in this section are abstracts of the special papers which focus on (1) specific issues in health policy, the health policy process and policy stakeholders; (2) health care financing; (3) specific diseases that have remained or have emerged as major health problems; and (4) an assortment of concerns including those on human resources for health, the public hospital system, medical technology, and traditional medicine.

In the area of health policy, the special papers cover a broad range of issues beginning with a typology and a discussion of health policies in the paper by Oscar F. Picazo. The papers by Emelina S. Almario and John Dioquino and by Emelina S. Almario and Irma B. Tan deal with public and private sector interaction, the former focusing on hospitals while the latter on special public health programs. Papers on the role of various policy stakeholders including Non-Governmental Organizations (NGOs) (papers by Michael L. Tan and Cora Anonuevo), the Philippine Medical Association (by Francisco P. Flores), and the Philippine Nurses Association (by Leda L. Danao) examine the history of the involvement of these institutions in health policy development.

The second group of papers focuses on various concerns in health care financing. The paper by Rhais Gamboa and Milagros Silva analyzes the DOH budget, especially the problems encountered in the budgetary process. Issues concerning local and national sharing of public sector health expenditures are presented in the paper by Bienvenido Alano, Jr. and Emelina S. Almario. The other papers (by Emelina S. Almario and Jose Lichauco and by Emelina S. Almario and Margarita F. Villalon) focus on two important sources of financing of government health expenditures, namely: user fees and foreign assistance.

The third group of special papers deals with two important diseases that confront the health sector: acute respiratory infections (ARI) and acquired immunodeficiency syndrome (AIDS). The ARI paper by Mediadora C. Saniel shows how solid research can be instrumental in the development of more effective and less costly approaches to disease control. The paper by Ofelia T. Monson presents the current situation and the potential for the spread of AIDS in the Philippines, while the paper of Orville Solon and Angelica Barrozo attempts to estimate the possible economic losses associated with the disease.

The final group of papers considers four areas which need much attention in health policy research. The manpower paper by Aleli Kraft emphasizes the need to build baseline data for basic policy analysis. The paper on the utilization of DOH hospitals by Ma. Socorro Zingapan shows some indicators of inequities in the access and utilization of public hospital services. The medical technology paper by Oscar F. Picazo sketches the state of technology used in public health programs in the Philippines. Lastly, the paper on traditional medicine by Marilyn N. Gorra shows that traditional medicine remains to be an important source of medical attention but is in great need of recognition and support from government especially in terms of scientific research.

Health Policies

Oscar F. Picazo

Health policies range from statutory and common laws on health as well as all the rules, regulations, procedures and guidelines governing the production, consumption and financing of health goods and services. Using this definition, the policy instruments are broadly classified under the following policy areas:

a) *public health and individual behavior* (policies on health protection; accident prevention and injury control; communicable disease prevention; family planning; substance abuse prevention; violence prevention; epidemiologic surveillance and health information)

b) *health care practitioners* (covers those in production, distribution, management and utilization; overseas employment; cost and quality of services)

c) *health care facilities* (policies on scope of activities and location; ownership and competition; investment and financing; relationship

between hospital and individual providers; relationship between hospital and employees; admission and discharge of patients; cost and quality of services)

d) *health and medical technology* (policies on importation, production, sale and distribution; promotion of proven public health technologies; local manufacture; capital investment in medical technology; organ transplants and autopsies)

e) *third-party payors* (policies regarding Medicare and Employees Compensation; private insurance and HMOs; employer-provided benefits; community financing schemes)

f) *government health programs* (policies on size and composition of the DOH budget; devolution; cost recovery; indigent care by private providers; role of nonprofit groups; privatization and corporatization of public hospitals; public-private networking arrangements

g) *environmental health* (policies on health in the workplace; air and water cleanliness; public sanitation).

MOM: Public and Private Sector Involvement in the Hospital System

Emelina S. Almario and
John Dioquino

The paper proposes the framework of a management-ownership matrix (MOM) to delineate public and private sector participation in the hospital system. Based on four components of a hospital organization, namely, ownership, governance, financing and management, a range of possible mixes of public and private sector participation is outlined along a spectrum that spans from fully public to fully private. Movements along the MOM have to be assessed not only for their effects on efficiency and equity/accessibility but also in consideration of the legal environment regulating a hospital's transformation from a public into a private institution. The MOM framework seems generally acceptable to both public and private sectors, and is seen to take on more interesting applications with the implementation of the Local Government Code.

Agenda for Public-Private Sector Collaboration (PPSC) in Health Care

Emelina S. Almario and
Irma B. Tan

A framework for public-private sector collaboration (PPSC) is developed wherein four modes of collaboration in the Department of Health are identified, namely, inputs provision, service delivery, support activity, and financing. Using this framework, PPSC in 19 DOH public health programs and services are examined, revealing the different patterns and nature of participation of private-sector partners which consist of both commercial and non-commercial organizations.

Based on the goal of a health care delivery system that builds on the inherent and respective strengths of the public and private sectors, PPSC is deemed desirable when premised on a health care delivery that is efficient, effective, equitable, acceptable and sustainable. To promote and intensify PPSC, the paper proposes strategies which call for, among others, the reduction of DOH involvement in areas wherein the private sector has adequately intervened and which have high cost recovery potential, and for the DOH to assume supportive roles and/or provide incentives for private sector organizations that serve unserved or underserved areas and groups.

NGOs and the Health Sector

Michael Lim Tan

Starting off with a historical review of health non-governmental organizations (NGOs) in the Philippines, the paper focuses on their roles as illustrated in their participation in the formulation of the National Drug Policy and the HIV/AIDS prevention. It highlights relationships among NGOs, and between NGOs and the government organizations since 1986.

For the National Drug Policy, the health NGOs provided technical support by gathering needed information from its foreign contacts as well as information from the field regarding the implementation of the Generics Act. Its advocacy efforts were channeled towards mobilizing support for the Department of Health before the legislative bodies, national and international forums, the media, the general public, and the participants by providing the basic facts with which the policy could be defended.

In the HIV/AIDS prevention program, the NGOs were mostly engaged in handling culturally sensitive strategies to reach out to socially marginalized groups, and mobilizing volunteers to beef up dwindling funds.

It was noted that the community-based nature of many health NGOs make them key participants in the implementation of the Local Government Code. The paper, however, cautions against creating a national federation of health NGOs, given the realities of sectarianism and competition prevailing among them. Instead, ad-hoc coalitions with loose structures are deemed advisable. Corrolarily, the paper stresses the need for government to draw the NGOs into policy planning and formulation, not just implementation, to encourage NGOs to collaborate and thus develop in them a sense of ownership and risk-sharing that would hopefully elicit from them higher levels of achievement. It also cites the need, in some instances, to create systems of accreditation to prevent NGOs with dubious intentions from competing with the limited financial resources.

The Role of NGOs in the Health Sector

Cora de los Angeles-Anonuevo

The paper contends that, despite the diversity of areas in which NGOs are involved, many NGOs have been active in changing the health situation of the people. Those not directly involved in health care still contribute in some way to the total well-being of their constituents by the very nature of their development work. The paper catalogues the contributions of NGOs to the health sector for the period 1986-1992 in the following areas:

a) *Policy and legislative advocacy* - drafting of the "Manifesto for People's Health;" promoting breastfeeding and women's participation in family planning and population program of the government; supporting the formulation of the National Drug Policy and the enactment of the Generics Act of 1988.

b) *Health sector organizing* - lobbying for the passage of the Magna Carta for Public Health Workers.

c) *Research and documentation* - conducting studies on appropriate health technology; disseminating technical information; analyzing of

health statistics.

d) *Health resource development* - community exposure/immersion or integration of medical students within depressed communities; workshops on primary health care; short courses on community medicine.

e) *Human rights advocacy* - providing health services and medical aid to the urban poor, striking workers, staffs of cause-oriented organizations, victims of human rights violations, internal refugees, torture survivors and detainees.

f) *Relief and disaster management* - sustained recruitment and organizing of volunteers as disaster response teams; regular solicitation and stockpiling of needed medicine and medical supplies, foods and other essentials.

g) *Networking* - periodic holding of conferences, consultations and information exchange among NGOs; maintaining linkages with international organizations to gain international support on health issues.

Finally, the paper notes the trend towards broader networking and bonding among NGOs, as well as a growing collaboration with the government.

The Role of the Philippine Medical Association: A Review from 1986 to 1992

Francisco P. Flores

Based on a review of the activities of the Philippine Medical Association from 1986-1992, the paper highlights four major roles, namely:

1. As a direct provider of medical services, its activities evolved from one-shot medical missions to the more permanent Adopt-a-Barangay program aimed at capacity-building among communities; from controlling disease of individuals and communities to controlling the destruction of the environment; and from services delivered in emergency rooms to the field in times of natural and man-made disasters.

2. As an agent in policy development, it spearheaded the campaign for a "Smoke-Free Philippines," organized public discussions on health policies and programs, and acted as technical advisers to local government units.

3. As an agent in the development of health manpower, it aimed for professional development by establishing the Center for Continuing Medical Education, organized training programs on leadership and management skills, and held scientific meetings, seminars and research activities. To promote its members' personal welfare, it pushed for better pay for physicians in government service, gave awards for outstanding performance in medical service, and made available legal assistance and disability and death benefits.

4. As a force to unify physicians and link them with other sectors, it has intensified its recruitment campaigns, increased its benefits to members, and created more venues in which the members could interact with one another. It has also forged links with international organizations as well as local non-governmental organizations.

An evaluation of how these roles were carried out gave rise to several recommendations foremost among which are: a) a more focused and comprehensive program planning; b) more expertise in advocacy and policy development; c) institutionalized manpower resource development programs for the physicians in private practice and the government, as well as allied health professionals in the DOH; and d) a more harmonious working relationship with DOH, marked by mutual respect.

The Role of the Philippine Nurses Association in Health and Development

Leda Layo-Danao

The paper is a detailed account of the multifarious capacities tackled by the Philippine Nurses Association, as manifested in the following activities:

1. Providing health services through its: primary health care projects, volunteer nurses, donations of health inputs as well as cash, and its publications on standards of nursing practice;

2. Providing technical resources by being the sole reviewer and accreditor of continuing education programs, by providing speakers and resource persons to interested groups, and by participating in various health and non-health organizations as well as international forums;

3. Spearheading public discussions on health policies and programs through its quarterly journal, its regular contributions to magazines and newspapers of general circulation, its conferences and conventions tackling issues in health and development, and its guestings on public service TV programs;

4. Advocating for policy positions in the health sector by lobbying for the passage of the Philippine Nursing Act of 1991, and making known its stand on diverse issues through its weekly columns.

To strengthen existing linkages among its members, the paper proposes a network of project leaders of PHC projects and coordinators of continuing education programs; monthly newsletters; and monthly meetings. To beef up linkages between PNA and the government, it recommends maintaining a liaison with the Department of Health at the policymaking level; with the Department of Interior and Local Government at both policy and operations levels, with the Department of Education and Culture for more say in improving nursing education; and with the POEA and Department of Labor and Employment to promote the interests of nurses working overseas.

The National Budgeting Process and the DOH Budget

Rhais M. Gamboa and
Mila Silva

This paper has three main sections. The first describes in general terms the national budget process. The second analyzes the DOH budget in terms of its growth and allocation. The final section identifies some budgetary policies and regulations that negatively impinge on DOH operations.

The implicit premise of the DOH budget is to use the entire appropriation as efficiently and effectively as possible. However, the ability to utilize the budget properly, regardless of the amount appropriated by Congress, presupposes accessing the budget. In turn, accessing the budget requires an understanding of the national budgeting system and how it affects the DOH.

The budget process has four phases, namely: (1) budget preparation, (2) budget legislation or authorization, (3) budget execution, and (4) budget accountability and review. This is a cyclical process that takes about nine months to complete, although there are certain stages within the year when some phases overlap.

Overall, the yearly growth rate of the DOH budget has been uneven. As a percentage of the total national budget, the DOH budget has ranged from a minimum of 3.6 percent in 1981 to a high of 5.8 percent in 1989. In real per capita terms, the 1992 DOH budget is only about equal to the P85 level in 1982.

Among the budgetary policies and regulations that adversely affect the utilization of the DOH budget, and consequently the planning and implementation of DOH programs, are: (1) delay in the implementation of the General Appropriation Act at the start of the year; (2) automatic lapse of the Notice of Cash Allocation at year end; (3) unpredictability of, and delays in, fund releases; and (4) limitations in the use of savings of appropriated funds.

In conclusion, there might be a need to consider the peculiarity of operations of individual departments without compromising the integrity of the government's overall budgetary process. The fact that the DOH has unique obligations in terms of saving lives under conditions of emergencies may argue for some flexibility in some of the budgetary rules and regulations. Such flexibilities will avoid jeopardizing the implementation of emergency operations such as purchases of dietary supplies or the sustainability of remotely-situated DOH hospitals.

National and Local Government Shares in Health Care Financing

Bienvenido Alano, Jr. and
Emelina S. Almario

In examining the government's funding for health care for the period 1986-1989, the paper shows that health received the lowest priority, accounting for only 3 percent of the national government's budget and 5 percent of the local government's budget. Of the total amount of P22 billion expended for health during the period, 88 to 90 percent was shouldered by the national government and the remaining 10 to 12 percent by the local government.

Public health spending for the period grew on the average at 22 percent annually or 11 percent in real terms. The health expenditures of the national government grew nearly twice as much as that of the local governments'. With this increase in health spending, per capita expenditures on health improved during the period, growing by 19 percent annually in nominal terms or 11 percent in real terms. In the distribution of the health budget, the amount allocated by the national government for hospital services was more than twice that for field health services, while the opposite was true at the local government level.

With the implementation of the Local Government Code, the paper argues for : a) a positive shift towards health priorities; b) an emphasis on the Department of Health's responsibility to neutralize the inequitable distribution of health resources; and c) the tapping of alternative sources of health care financing to assist lower-income local government units in financing devolved personnel and functions.

User Fees: An Option for Government Hospitals?

Emelina S. Almario and
Jose Antonio Lichauco

Based on a framework tapping the potential of user fees in government hospitals to generate alternative financing, the paper proposes an action plan whose main features are: (1) an effective referral system to correctly channel health resources, and thus ensure maximum utilization and reduced capacity strains in major hospitals; (2) an improvised pricing and costing infrastructure which imposes a common design of cost analyses and management infrastructure for public hospitals, accurately evaluates patients' willingness and ability to pay, strikes a balance between cost recovery and equity, and formulates clear guidelines on rate setting; and (3) income retention to encourage hospitals to be more aggressive in charging and collecting fees.

Although the legal mandate for charging user fees is clearly set by the Local Government Code, government hospitals have to make a smooth transition from the current system of subsidized hospital care to a sharing of hospitalization costs by both the government and the market. This can be done through a) a stronger patient selection process that identifies the patient's appropriate level of health care facility based on his needs, affordability and informed choices; and b) a reorientation of hospital management to ascertain the market's willingness and ability to pay for hospital services, to generate additional revenue, and shoulder both direct and indirect costs with the aid of a cost-finding system and a control system ensuring that all recovered costs are used appropriately.

Foreign Assistance in Health Care

Emelina S. Almario and
Margarita F. Villalon

The paper examines the role of foreign assistance in health care as exemplified by the various forms of assistance emanating from multilateral and bilateral agencies and non-governmental organizations (NGOs) to the five child survival interventions sponsored by the Department of Health. Reaching a high of P1067 million in 1991, foreign assistance to these projects is projected to gradually decrease from 1992 onwards. To further understand the role of foreign assistance, the paper also discusses its hidden costs which the Philippine government has to shoulder in the form of counterpart funding, bureaucratic infrastructure, overlapping of functions within the DOH, and the unreasonably long period of time required in securing foreign financing and fund disbursement. More than these issues, the danger of dependence on foreign assistance may loom even larger with the impending end of the programs in 1994.

The Acute Respiratory Infection (ARI) Research Program: Eleven Years of Relevant Research

Mediadora C. Saniel

The Department of Health's Research Institute for Tropical Medicine has generated substantial findings that would serve as useful inputs to the control of acute respiratory infection (ARI) in the country. Pneumonia incidence was placed at 0.5 per child per year -- a rate considerably higher than that in developed countries -- with the low socioeconomic group exposed to the greatest risk. The risk factors for ARI morbidity include parental smoking, lack of breastfeeding, and household crowding. The risk factors for ARI mortality, as gleaned from an urban hospital-based study, include severe complicated illness, presence of measles, and severe malnutrition, while those from a community-based study include births attended by hilots, low birthweight, lack of breastfeeding, no immunization, and low or no education of mother. Specifically, the inadequate knowledge and inappropriate behavior of mothers, which limit the child's chances for survival, argue for a massive educational campaign geared toward mothers who may be taught to recognize fast breathing as

an early predictor of pneumonia and to make immediate referrals for antibiotic medication within two days of onset of fast breathing.

The ARI case management strategy was developed and implemented in Bohol Island from 1985 to 1991. This program was found to have rational and scientific bases, and resulted in mortality reduction as well as the promotion of rational and reduced inappropriate antibiotic usage. Findings reveal that an ARI control program could be successfully integrated into the existing and functional primary health care structure of the Department of Health.

AIDS and its Potential Economic Impact on the Health Sector in the Philippines

Ofelia T. Monson

The paper presents information showing that the HIV infection has established a firm hold in the Philippines, with a total of 333 recorded HIV-infected/AIDS cases as of June 30, 1992. The progression of HIV infection into AIDS will be influenced by the co-existence of diseases prevalent in the Philippines, notably tuberculous infections. The paper contends that the threat of a widespread epidemic is real given (a) the low level of awareness about the disease among policymakers and the public; and (b) the inadequate means to control the spread of infection in terms of the needed medical information to identify and manage the HIV-infected patient among medical practitioners and other health providers, the appropriate behavioral change among the population, and the adequate infrastructure and supplies.

Considering the tremendous costs required to contain the transmission of the HIV infection/AIDS, the paper recommends a massive educational campaign for both the public and medical practitioners, and intensive research. The former, to be spearheaded by the Department of Health, should involve both public and private, health and non-health sectors; should target wider groups; and should aim for actual information dissemination. For more effective HIV disease management, all medical and paramedical personnel must undergo educational preparation, and HIV-related social support services must be expanded. Secondly, research must be pursued to estimate the medical costs of HIV care, the cost-effectiveness of HIV programs, the economic costs of AIDS on the family and the community, and the therapeutic modalities that will reduce morbidity while maintaining the quality of life on a out-patient basis. Finally, it is proposed that the output of these and all other research studies on HIV infection be collected by a DOH clearinghouse, and subsequently disseminated and implemented as a cost-effective way to utilize information.

Overseas Contract Workers and the Economic Consequences of HIV and AIDS in the Philippines

Orville Solon and
Angelica O. Barrozo

Data on reported HIV cases suggest that Filipino overseas contract workers (OCWs) are at high risk of contracting HIV. Overseas work is an important factor in mitigating the domestic unemployment problems the Filipino workforce faces. In addition, remittance by OCWs account for nearly eight percent of foreign exchange inflows in the Philippines. Thus, the AIDS epidemic may have a significant impact on the Philippine economy by its effect on OCWs. This paper focuses on two types of costs. First, costs of a macroeconomic nature could result owing to a reduction in a source of foreign exchange earnings and employment. These costs take the form of significant increases in unemployment as remittances from abroad dry up. Second, the AIDS epidemic could impose costs at the micro level in the form of medical care costs and income foregone by OCWs. This latter set of cost calculations is extended to include (a) the external cost imposed by HIV-positive individuals who infect others, and (b) the declining employment opportunities abroad for OCWs as both demand-and-supply-side responses occur in the OCW market as a reaction to the epidemic.

Human Resources for Health

Aleli dela Paz Kraft

Given the dearth of data on the stock of health manpower in the Philippines, the paper describes recent trends in the growth and distribution of medical professionals, with the use of available but incomplete counts as well as selected indicators. Based on the number of newly registered practitioners for 1988-1991, minus the number of workers who have permanently migrated or are on work contracts abroad, the paper estimates that there are possibly no net additions to the stock of health manpower practicing in the country.

In terms of employment status, 67 percent of nurses and 73 percent of midwives are employed in the government sector while most physicians and dentists are with the private sector. The number of professionals employed by the Department of Health for 1986-1991 registered increases on the whole. On a regional basis, population per manpower ratios for physicians, dentists, midwives and nurses declined in Region 1 but increased in Region 4. Significant increases were recorded in the NCR for population per physician and per nurse; in Regions 7 and 11 for population per midwife; and Regions 2 and 3 for population per dentist.

The paper diverges from the use of professionally determined population to professional ratios to interpret these trends in health manpower. Instead, it relates the requirements for health professionals with the overall demand for health care services. An indicator of demand which the paper explores is the willingness to pay for health services, as evidenced in the exodus of health professionals to other countries where prevailing salary rates are higher, or domestically, in the concentration of physicians in regions where consultation fees are higher. Using health care expenditures as indicator of demand, current data indicate that lower population to physician ratios are associated with higher health care expenditures. Also, figures associating higher number of beds with higher number of physicians tend to support the hypothesis that physicians gravitate towards areas where medical support facilities are greater in number.

Utilization Pattern of DOH Hospitals: A Brief Review Based on the DOH-HOMS 1989 Data Set

Ma. Socorro Zingapan

This review and analysis of 1989 data yielded the following utilization patterns:

1. Based on bed occupancy rates, the average utilization for all hospitals was 77 percent, with hospitals in Region 8 being least utilized at 60.4 percent, while those in Region 6 posted the highest occupancy rate at 93.5 percent. Across hospital types, classified by bed capacity, municipal hospitals (which have the lowest bed capacity) were most utilized at 96 per-

cent while the special hospitals (with the largest capacity) recorded the lowest rates at 63.7 percent.

2. The catchment areas of regional hospitals extend beyond their officially defined boundaries, serving as substitutes for the services of other regional hospitals.

3. In terms of subsidy received on a per bed and per patient-day bases, the smallest -- municipal hospitals -- received the largest subsidy while the Medicare hospitals, the next to the smallest, received the least. Although there were wide variations for the same hospital types across regions, overall, Region 12 and the National Capital Region received the most sizable subsidy while hospitals in Region 8 received the lowest.

4. The regional occupancy rate rose initially as per capita gross regional domestic product increased but after a certain level of GRDP, the occupancy rate decreased.

The paper stressed the need for greater access to more and better information on the operation of DOH hospitals, noting a number of missing or inconsistent records in the data set reviewed.

Medical Technology

Oscar F. Picazo

The paper sketches mainly the current technological status of public health programs in the Philippines. The technologies in support of these programs are available but the financial viability and sustainability of the established ones like the Extended Program of Immunization (EPI) and Control of Diarrhoeal Diseases (CDD) are threatened by declining foreign assistance and the impending devolution of public health services. On the other hand, the expansion of programs for the treatment of tropical diseases, and that of other non-communicable diseases, is hampered by expensive technology. Other shortcomings of the public health technologies are the vague program locus of the micronutrient supplementation programs; the possible misuse of the inexpensive antibiotics on which the Acute Respiratory Infection interventions are based; and the lack of information documenting which maternal care initiatives or technologies work or don't work. Briefly, the paper also dwells on the issues impinging on hospital care technologies for which data are unavailable, and the health product development for which no policy or supportive environment exists.

Traditional Medicine in the Philippines

Marilyn N. Gorra

As a parallel system of health care, traditional medicine in the Philippines is catered to by more than half of the population, especially the poorer segments. Of the traditional healers, hilots or traditional birth attendants are the most widely recognized and patronized. In 1989, hilots still attended the largest proportion of births in the country, except in the National Capital Region and the Cordillera Autonomous Region. Some micro studies tended to show that they are less utilized in areas where professional practitioners are more accessible. A significant proportion of households have also resorted to traditional home remedies. Some commonly used herbal remedies have been tested and empirically proven effective in relieving symptoms of ailments such as fever, cough and diarrhea. Many of these have been adopted by the DOH for propagation under the herbal medicine program of the government.

Unlike those of China and India, however, traditional health practice in the Philippines is not a highly developed academic system. The paper recommends long-term and short-term strategies to realize the potentials of traditional medicine in producing alternative medicine and healing techniques which are affordable and readily available to the people, as well as in expanding the stock of practical medical and health knowledge. The long-term strategy involves developing traditional medicine as a systematic body of knowledge on health care, capable of being taught through theoretical and practical methods, while the short-term strategy requires dissemination of information on the herbal medicines proven effective for the more common ailments afflicting majority of the population; and the refinement of means to enhance the medicinal value of herbs. ■