Role of Public Health in Health Development - Indonesian Experience

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Indonesian health development had substantially improved, prior to the economic and political crisis that began in 1997. These improvements were shown by a reduction in the infant mortality rate (IMR) and prevalence rates of diseases, such as diarrhea, neonatal tetanus, polio, measles, and malnutrition among children. This paper describes how public health programs have contributed to these improvements and, also, attempts to identify weaknesses in specific aspects of program management and implementation. Further, the impact of severe economic and political crises on health sectors is described, as well as the struggles to maintain public health programs, especially those protecting the poor.

Progress in Indonesian Health Development

In 1996, the year of the first Long-term Development Plan, Indonesia's population was 109 million. High CDR and IMR, as well as prevalence of infectious diseases and malnutrition, characterized the population's health status. Currently, Indonesia's total population is 201 million, ranking Indonesia as the fourth largest country in the world. During the last thirty years, significant improvements in health status have been achieved. Life expectancy has increased from 45.73 years in 1967 to 63.5 years in 1995. IMR has been reduced from 145 per 1,000 in 1967 to 55 per 1,000 in 1995. However, the Maternal Mortality Rate (MMR) figure for 1995 is much higher than the rate in several neighboring countries, such as Vietnam, the Philippines, Thailand, and Malaysia, indicating that Indonesia is challenged to accelerate its Save Motherhood Program. Another indicator of health improvement is the reduction of protein calorie malnutrition among children. The prevalence of PCM has declined from 18% (1978) to 14% (1992) among male children and from 17% (1978) to 9% (1992) among female children.

Public Health Program

The improvement in health indicators has been ascribed to various public health programs implemented during this period. Conceptually, public health programs are interventions on determinants of a population's health status. In Indonesia, the interventions cover five primary areas: environmental sanitation, health education and promotion, disease control (infectious and non-infectious), family planning, and health policy and administration. During the past twenty years, Indonesia has made great improvements in program access throughout the country.

1. **Environmental sanitation**: House floors, clean water, and toilets are closely related to family health status. Several studies have indicated that the prevalence of diarrhea and respiratory tract infections is much higher among families living in houses with soil floors, as compared to those living in homes with cement floors. Also, comparative studies in seven provinces indicate that IMR is correlated with household sanitation. In this regard, the percentage of households having soil floor has been reduced from 30.6% in 1993 to 28.1% in 1994, 26.8% in 1995, and 22% in 1997. Similarly, the percentage of households supplied with clean water also increased from 62.7% in 1993 to 68.3% in 1995.

2. **Health education**: The promotion of healthy lifestyles is the second important prevention measure in public health. For the past twenty years, the implementation of conventional health education programs has been integrated within public health services and practiced by health personnel

while serving their clients. In addition, mass health education has been implemented, using various media, with concepts of health promotion being recently adopted.

3. Disease Control:

Immunization: Indonesia achieved the Universal Child Immunization (UCI) status with its basic immunization program, consisting of measles, TT, DPT, BCG and polio. Hepatitis B vaccinations have also been initiated in some places. This achievement is primarily attributed to the 250,000 Integrated Health Posts (*Posyandu*) at the village level. These posts are organized by the communities and occur once monthly, with health workers from health centers coming to the *Posyandu* to provide immunizations. Despite the UCI, sporadic outbreaks still occur in certain areas, possibly due to unprotected villages in remote areas. The current focus of the immunization program is maintenance of achievement and improved service quality (such as assuring safe injection technique).

Communicable disease control: Indonesia is in a stage of early epidemiological transition. Currently, the chief cause of death is cardiovascular disease; tuberculosis has emerged as the second major cause of death. Tuberculosis, as well as malaria and dengue fever, are major challenges for Centers For Disease Control (CDC) programs in Indonesia. Patient compliance has been the major problem for tuberculosis control, and DOTS strategy is being implemented. Man-made breeding places, such as the opening of new plantation areas, shrimp farming, mining activities, and the cutting of mangrove trees in coastal areas have all contributed to malaria and DHF outbreaks and have constrained CDC programs.

Nutrition: The four major nutrition programs in Indonesia are treatment of Vitamin A deficiency, iron deficiency, iodine deficiency, and protein-calorie malnutrition. Again, the role of *Posyandu* (the Integrated Health Post) has been very important for implementing nutrition programs, especially iron pill distribution for pregnant women and vitamin A distribution for preschool children. Another component of *Posyandu* activity is supplementary food provision for children. Table salt fortification with iodine was initiated in 1974; however, problems occur because 70% of the salt is produced by traditional salt makers and the quality is substandard. Since 1972, the government has subsidized supplementary feeding for elementary school children located in poor villages.

Primary curative care: Provision of primary medical services is another important public health program in Indonesia. Early detection and prompt treatment of illness is performed by a network of health centers (*Puskesmas*), sub-health centers, and village midwives currently available in all six thousand districts and sixty thousand villages. These facilities render medical care services, such as the Integrated Management of Child Illness (IMCI), treatment and referral of maternity problems, and treatment of communicable and non-communicable diseases.

The health centers (*Puskesmas*) have been utilized mainly by the lower income households (based on a 1998 socioeconomic survey in North Sumatra Province), with the wealthier population segments using private medical clinics more than the poorer segments. The health workers' (paramedic) private clinics served all segments of the population equally.

4. Family Planning: Improvement of health status is also attributed to family planning programs, especially those related to safe motherhood issues. Family planning programs are conducted by the Family Planning Coordinating Board (BKKBN), a separate institution directed by the President. The two main family planning programs, Communication-Information-Education (CIE) and Family Planning Services, have been implemented since the early 1970s, with the current user level being over 80%. These services have helped reduce population growth from 2.34% in the 1970s to 1.5% in the 1990s.

5. Health Administration: Public health deals with the policy and administration of health development. In Indonesia, health policy and administration have been intensely centralized, with policy and planning being formulated and enacted in a hierarchical process. Many health programs were planned and budgeted separately with poor coordination between the respective programs, caus-

ing implementation problems at district levels. In some cases, goals established by the central level are not relevant to local situations. The District Health Office does not have the authority to shift and consolidate the budget, and slow administrative processes at the central level have delayed the disbursement of program budgets to district levels by two to three months.

Public Health Services Infrastructure:

The Department of Health has been working since 1990 to integrate the health programs, consolidate the budget, and decentralize health administration to the district level. The Decentralization Law, enacted in May 1999, will presumably include decentralization of health administration. The current plan is to disburse the central budget to district levels as a block grant. Concern has been voiced that, in the block grant system, the health sectors may suffer if the local (district) administration does not have a strong commitment to health. Therefore, some suggest that a specific amount in the block grant should be designated for health.

A network of health services performs all public health programs. The publicly provided health infrastructure are the 7,100 health centers (*Puskemas*) in every subdistrict, 19,000 sub-health centers and 54,000 midwives who serve people at the village level. In addition, 285 hospitals and 50 specialty hospitals are located in the district capitals. All of the health centers perform the following eighteen basic activities:

1 Maternal and child heath
2 Family planning
3 Nutrition
4 Environmental sanitation
5 Communicable diseases control
6 Curative care
7 Health education
8 School health
9 Sport health
10 Public health nursing
11 Occupational health
12 Oral and dental hygiene
13 Mental health
14 Eye health
15 Simple laboratory tests
16 Reporting and recording
17 Services for aged clients
18 Traditional medicine

Currently, in the spirit of decentralization, each region may establish its priority program, according to its local health needs. Consequently, the number and type of activities may vary among the health centers. Observations in specific health centers indicate that, on an average, only twelve of the eighteen programs were actually implemented. In the delivery system, the health centers' doctors and paramedics also render health services privately in their own clinics, usually after regular office hours.

In 1975, the government began mandatory placement of newly graduated medical doctors in health centers, with doctors serving between three to five years, depending on the location of the designated health center. In 1992, the policy was changed, due to the declining ability to recruit new staff. The doctors are now placed in health centers with contractual agreements for three years, with similar arrangements occurring for midwives.

Public health development in Indonesia is also characterized by the training of students for bachelor degrees in public health. There are five schools of public health in the entire country, and each year they produce approximately two hundred graduates. The main competency of this degree is in health planning and management, basic epidemiology, environmental health, health education, nutrition, occupational health and biostatistics, with many graduates of the program working in the government system.

Concerning financial issues, the country spent 2.5% of the GNP on health. Before the crisis, the

estimated health account was approximately $12 per capita per year. The government contributed 25-30% and non-governmental sources (out of pocket, private health spending, and health insurance) contributed 70-75%. Of the governmental health expenditures, 75% is from the central government and only 25% of the funding is from provincial and district governments. Health insurance has not been developed extensively. The current policy is to develop and expand the JPKM, a "managed care" pre-payment system. Despite a decade-long effort to develop JPKM, the progress has been slow. Lack of professional skill, high government subsidies to health centers, and hospital fees are possible factors related to delayed progress in JPKM development. In 1998, a number of JPKM organizations were established to channel down a portion of the Social Safety Net (SSN) fund. However, the government-driven JPKM may not be sustainable for two main reasons: lack of professional staff with knowledge of managed care administration and uncertainty on the continuity of the SSN fund.

Impact of Economic Crisis on Health Sector

Health development policy and programs have experienced rapid change since the 1997 economic crisis. Therefore, descriptions of past health development progress may not provide a reliable basis for predicting and planning future systems. Prior to mid-1997, the challenges and plans to undertake major reform were anticipated with high optimism because the country's economy had been growing satisfactorily (estimated growth at 7-8% annually). However, an unforeseen disaster occurred in June and July 1997; following an economic crisis in Thailand, the Indonesian currency (rupiah) began declining drastically against the United States dollar.

The Magnitude of the Crisis

The basis of the crisis was related to the debt of both governmental and private sectors, amounting up to $137.4 billion. Of this amount (in US dollars), $63.5 billion (46.2%) is government debt and $73.9 billion (53.8%) of the debt belongs to private firms. This debt has led to increased demand for US dollars and, consequently, resulted in substantial reduction of rupiah value against the US dollar. In June 1997, the rate was Rp 2,400 per US dollar. In January 1998, the rate declined to a "paralysed" level of Rp 15,000 per US dollar. According to the last figure (early November 1999), the rate had improved to Rp 7,500 per US dollar.

Impact on Medical Care Costs

Like many other sectors, the health sector has been severely affected by the economic crisis because many health products are imported, including basic material for drugs and medical supplies. On the average, health care costs have increased approximately 200-300% due to the economic crisis. The price of drugs has risen by 100-200%, reagents and X-ray films by 200-300%, and hemodialysis by more than 400%. As a result, by mid-February 1998 drug stocks were only sufficient for three months' demand; fortunately, International Monetary Fund (IMF) assistance included allocation for drugs.

Impact on the Ability to Pay

Many firms were forced to terminate their workers, some firms were even forced to close. Consequently, unemployment increased substantially. Per capita income fell from US $1,200 prior to the crisis to US $610. This estimate is made on the assumption that the exchange rate is Rp 5,000 per US dollar. If the current market rate is used (Rp 7,500 per US dollar), the real per capita income would actually be US $384. This economic decline is similar to the situation of the late 1960s.

Impact on Health Status

According to the Central Bureau of Statistics, the crisis has increased the number of poverty-stricken people from 22 million (11%) prior to the crisis, to 80 million (40%). In some areas, severe malnutrition among children has been reported. Also, evidence exists that malaria outbreaks in several areas of the southern part of Sumatra Island were related to a shrimp pond that had been abandoned

because of the financial crisis. Extensive cutting of mangrove trees in the southern part of Central Java has also led to malaria outbreaks. Concern exists that the crisis can also promote promiscuity, causing increased incidence of sexually transmitted diseases. To summarize, the economic crisis has hindered public health development in Indonesia; the recovery process depends on the country's economy being restored to normalcy.

Current and Future Issues

The government's decreasing ability to fund public health programs, escalating costs of medical products, and increasing poverty have placed a heavy burden on the public health system. On the other hand, the crisis has stimulated awareness and actions to increase partnerships among government, NGOs, professional associations, private sectors, and donor agencies. A number of seminars and workshops have occurred and produced several concepts and policies for future system development, as described later in the text.

Protecting the Poor

The government should focus its efforts on protecting the poor, with government subsidies targeting only the poor and avoiding subsidies to the non-poor, as currently found in hospitals and, to a certain extent, in the health sector. In public hospitals, appropriate fee structures for citizens of Class II and above will prevent government subsidy for the non-poor. In 1998, as a rescue action, the government initiated the Social Safety Net Program, using loan money for subsidies for food, health, and education. The current issues regarding protection of the poor follow:

- Individual targeting versus geographic targeting
- Direct subsidy to beneficiaries versus subsidy to providers or third parties (managed care)
- Criteria and mechanism for identification of poor families or areas

Setting up public health priorities

Given the limited budget, priorities should be established to determine the type of health services that the government should provide. The concept of "public goods" and "private goods" should be used to examine the varieties of health services, with the following list serving as an example. The programs that should be intensified are communicable disease control, tuberculosis and malaria control, and child respiratory infection and immunization programs. Within maternal child health programs, nutrition should be emphasized.

Furthermore, TB and malaria control and child respiratory infection and immunization programs should be intensified. Within the MCH, nutrition programs should also be given high priority.

Health Financing

In the current health financial system, especially the government health budget, improved efficiency is needed. For example, an economic feasibility study is needed for every investment in expensive medical equipment. The process of budgeting for investment should be integrated with the operation and maintenance budgets, and the implications of investment decisions on operational and maintenance budgets should be calculated. Also, since the concept of block grants from central levels to district levels will soon be implemented, the Ministry of Health must advocate for an "earmarked health block grant" to assure sufficient allocation for district-level health.

Government subsidy to the poor has been implemented in the SSN program and needs to be evaluated immediately to learn better targeting mechanisms. Health insurance and managed care policies should be developed professionally and should be established only after a feasibility study.

Decentralization

In 1999, two new laws on decentralization were enacted: Law No. 22 concerns decentralization of a large portion of central authority to the district-level, including health programs; Law No. 25 governs a balance of revenue between the central and district levels. Also, the administration of the district health office urgently needs to be increased.

Previous assessment concluded that, if decentralization is to be effective, the district health office must have experts in following fields:

- Field epidemiology and health informatics
- Health planning and health economics
- Health promotion

Public health Services as a "Public Enterprise"

The district public hospital and health center's inability to capture market potential and retain their revenues has caused an inability of public facilities to improve their coverage and quality, given the limited allocations from the government. One recommendation is to convert the hospital and health center into "public enterprises."

With this concept, the district hospital and health centers form an integrated network of health services and function as an "independent" enterprise owned by the district government. This "enterprise" has the responsibility to carry out all public health programs, as planned, and is funded by the district government health office. As an enterprise, the network is also allowed to render services beyond the publicly funded services, in order to generate revenues. This additional revenue is used to improve the quality and coverage of services—by paying for appropriate staff incentives, for example.

Vision and Strategy for the Twenty-first Century

The Department of Health established a new vision and strategy in early 1999. "Healthy Indonesia 2010" is to be achieved through four main strategies: health-oriented development policy, professionalism, decentralization, and development of JPKM, a managed care financial/delivery type of health service. The former Ministry of Health (MOH) clearly stated that, in order to achieve the new vision, Indonesia must reform its HRH policy by giving more resources for public health professionals in health development, primarily in planning and implementing health programs at the district and sub-district levels. The MOH estimated that the new strategy will require 22,000 professionals, who have received bachelors degrees in public health, to work in the district health offices and also act as CEOs of the 7,100 health centers. With only nine schools of public health (five public and four private), and assuming that each school can produce 75 graduates each year, more than 30 years will be needed to meet this demand. Therefore, new schools of public health should be established, and the productivity of the existing ones should be increased.

Conclusion

Public health has played a significant role in health development in Indonesia, especially since establishing a PHC infrastructure in the late 1960s. The primary roles have been in improving environmental sanitation, health education, disease control, family planning, health services delivery, and health policy and planning. Since health problems extend beyond the health sector, advocacy and health promotion are the most important roles of public health for the future. Without this strong advocacy, Indonesia's health development will continue to receive low priority for resource allocation.