THAILAND:
HEALTH MANAGEMENT AND FINANCING STUDY PROJECT
ADB No. 2997-THA

FINAL INTEGRATED REPORT

Management Sciences for Health
Health Systems Research Institute, Ministry of Public Health

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CONTENTS

PREFACE

This report is the culmination of technical assistance financed by the Asian Development Bank and carried out by consultants from Management Sciences for Health (MSH) and the Health Systems Research Institute (HSRI) for the Ministry of Public Health of Thailand. The team has worked with MOPH steering committees and working groups to develop research plans, analyze data, and discuss possible recommendations. In addition, a Technical Advisory Group (TAG) of five expatriates met with the team and the MOPH in October 1998 to discuss the work in progress.

To address the terms of reference, the team prepared four technical reports:

- "Human Resources for Health Deployment in Thailand"
- "Referral System Improvement in Thailand"
- "Thai Autonomous Hospitals: Operations Manual"
- "Health Financing in Thailand"

The TAG advisors, Thai reviewers outside of the MOPH, staff of the MOPH, and staff of the ADB reviewed these reports. Their comments are reflected in Chapter II of this report, which summarizes the contents and recommendations of the four technical reports.

During the course of this work, the team continually discussed how the specific aspects under study were part of the evolving health care system in Thailand. The team endeavored to understand these factors and their implications for the future structure and functioning of the health sector. The recommendations of the four previous technical reports aimed to facilitate positive change. This final integrated report brings together information about issues with the health sector and factors promoting change at this time, principles or objectives for a reformed health system, and description of proposals to improve the health sector in Thailand over the next 10 years. These proposals not only present *what* the team envisions but also explain *why* these models are proposed and *how*—or by what steps—the MOPH and Government of Thailand might move in the direction of these changes.

Every effort has been made to collect accurate data and to substantiate conclusions with appropriate analysis. Reviewers have had the opportunity to comment on the draft reports and their suggestions have been incorporated. Nevertheless, the authors take full responsibility for any remaining errors.

ACKNOWLEDGMENTS

The **Thailand Health Management and Financing Study Project** has benefited from the input of officials of the Thai Ministry of Public Health and other ministries, university professors, CEOs of private hospitals, a team of five external advisors, and staff of the Asian Development Bank. Annex A lists the persons contacted during the course of this study, and who were instrumental in shaping the thinking of the team.

Several people deserve special recognition. At the central Ministry of Public Health, we appreciate the interest that first Dr. Prakom Vuthipongse, the Permanent Secretary, and later Dr. Sutcharit Sriprapandh, the acting Permanent Secretary, showed in participating in technical meetings of the project and providing guidance for the team's work. We also wish to acknowledge the assistance of Dr. Narongsakdi Aungkasuvapala and Dr. Supachai Kunaratanapruk, who provided technical and administrative guidance. The Office of Policy and Planning, specifically Dr. Porntep Siriwanarangsun and Dr. Songpran Singkaew, provided day-to-day oversight and assistance. Other central ministry personnel who were active in the project include Dr. Chatri Banchuin, Dr. Veera Engkapasakorn, Dr. Amnuay Gajeena, and Dr. Chanwit Tarathept.

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EXECUTIVE SUMMARY

Thailand's health care system has benefited and continues to benefit from the wise policy decisions and effective program management of Thai physicians, other health care providers, and others involved in the health sector. Over the past 30 years, the health of the Thai people has improved significantly, while service provision has moved towards greater equality, as reflected in the distribution of health personnel and facilities. Nevertheless, it is widely accepted that health services in Thailand will have to undergo reform in organization and financing because of the need to improve the health sector's performance, and changes in Thailand's demographic, social, political, and economic factors.

There are eight principles that should guide the evaluation of health sector performance: orientation towards health rather than disease, equity, efficiency, decentralization, quality, accountability and transparency, active participation on the part of the people, and collaboration in the production of health services between the public and the private sectors. There is room for improvement in each of these areas. A higher level of education, urbanization, and improved communications all lead the population to expect more and better services–and the opportunity to choose their providers. Recent political changes, most notably the passage of the Constitution, point towards the decentralization of health services, greater accountability and transparency in the conduct of government, and greater participation by the population. The development of the private sector has not been guided by overarching public sector planning but by a laissez faire attitude. This resulted in the "brain drain" of health personnel from public to private institutions and uncontrolled acquisition of high tech diagnostic equipment during the economic boom of the early 1990s.

The arrival of the economic crisis in 1997 drastically changed the financing available for the health sector. The per capita government budget for the Ministry of Public Health (MOPH) declined by 25 percent in real terms between 1997 and 1999 to 777 baht. The MOPH responded by cutting capital expenditure, rationalizing the use and procurement of drugs, and reducing expenditure for utilities and travel. Benefits under the Civil Servants Medical Benefits Scheme were restricted to care from public sector facilities. In addition, household expenditures declined. Household expenditure for institutional care declined between 1996 and 1998 by 36 percent in real terms (to 2,316 baht), while increasing for self-treatment from pharmacies by 12 percent (to 552 baht). This change in patient behavior reversed a long term trend away from self-treatment towards treatment by trained health providers. In addition, due to the debt exposure and low occupancy rates of hospitals in the private sector, a significant number of these hospitals are expected to close.

The Asian Development Bank (ADB), in response to the economic crisis, is providing a loan of $500 million dollars for the social sectors. Loan funds were used to support such important health programs as HIV/AIDS prevention and to increase the funding available through the Voluntary Health Card Scheme (VHCS). In addition to the loan, the ADB contracted with three technical assistance teams to provide analysis and recommendations

regarding the education sector, the health sector, and the planning and monitoring functions of the National Economic and Social Development Board (NESDB). Management Sciences for Health (MSH) a Boston-based nonprofit organization, teamed with the Health Systems Research Institute (HSRI) of Thailand to provide technical assistance to the MOPH on:

- how to improve the deployment of health personnel;
- how to improve the use of the referral system;
- developing a model of hospital autonomy for Thailand and writing an operations manual for a Thai hospital;
- responding to several questions about health insurance schemes, such as how to control costs of the Civil Servants' Medical Benefits Scheme (CSMBS); how to merge the Social Security Scheme (SSS) and Workman's Compensation Scheme (WCS); how to increase coverage under the VHCS; and how to improve targeting of the Low Income Card Scheme (LICS).

The technical assistance team started work in late June 1998 and will complete the project by the end of May 1999. There were four phases to the project. The *first phase* consisted of interviews with significant persons involved in the health sector, a review of documents, and design of research questions and methods. The *second phase* consisted of the collection and synthesis of research data. The *third phase* consisted of processing the team's findings during a meeting with a five-person expatriate Technical Advisory Group, and during other meetings with the Steering Committee and the subject-specific Working Groups. By the end of this phase, technical reports were written in all of the areas of focus. Expatriates and Thais external to the project, officials of the MOPH, and representatives of the ADB reviewed these reports. Based on the technical reports, the MOPH developed action plans in the areas of health personnel deployment, and hospital autonomy. The *fourth phase* consisted of efforts to consolidate the thinking of the team not only about the four interrelated technical areas but also about the larger issues of reform of the organization and financing of the sector over the next 10 years. This integrated report distills the findings and recommendations of the team and their views of the future.

The technical assistance team proposes that the problems with health personnel deployment and utilization of the referral system are inherent in developing a district health delivery system. First, many doctors and other providers do not wish to work in rural areas, given the opportunities for additional income, more complex medical cases, and better quality of life in the urban areas. This means that over 50 percent of doctors in rural areas are new medical graduates serving the term of their compulsory service. The population perceives that the care provided at the district level is poor, and they bypass district facilities for private clinics or provincial or regional hospitals.

The technical report "Human Resources for Health Deployment in Thailand" provides recommendations to increase the probability that these new doctors will remain in rural areas or return there after specialty training. Recommendations ranged from better assessment of provincial and district needs for additional health personnel, alteration of

remuneration during the compulsory period, improvement of remuneration to doctors who stay in rural areas, and increasing the responsibility of and flexibility for the provision of care at the district level. The report emphasized the need to develop a Secretariat to coordinate the many activities within the MOPH, the Ministry of University Affairs (MUA), the Civil Service Commission (CSC), the Ministry of Finance (MOF), professional associations, and other bodies in the planning, posting, and postgraduate training of health personnel.

"Referral System Improvement in Thailand" recommends both demand-side and supply-side measures. On the demand side, the technical assistance team recommended the adoption of a tiered system of user charges at different level facilities in the health system. In addition, higher fees should be levied against VHCS and LICS holders who do not adhere to the referral chain. On the supply side, measures to increase management responsibility and flexibility at the district level were recommended. The continuation of pilot experiments with models of district fund holding was encouraged. The team believes that these administrative challenges will attract some medical graduates to work in the rural areas. Nevertheless, evaluations of supply-side measures applied to date do not reveal any "magic cure" for the problem of bypassing the referral system. As rural facilities have become more available and more doctors have been posted to each facility, however, the population is gradually using lower level facilities at a higher rate.

Another issue related to the efficiency of the health sector is that of hospital autonomy. Thai hospitals enjoy some degree of management flexibility in that they can set, collect, retain, and use user fees (which form 50 percent of their recurrent budgets), and because they have flexibility in the use of non-salary recurrent budget lines. Thus, it was unclear to many why Thailand needed hospital autonomy, especially since the government did not want to fully privatize public hospitals. Promoting the concept of an autonomous hospital was one of the important outputs of the team. In part, the team was guided by the newly passed Public Organization Act, which is intended to allow ministries to "spin off" some of their activities into institutions with mixed public and private characteristics. The "Thai Autonomous Hospitals: Operations Manual" describes the governance, and human and other resources management aspects of the proposed autonomous hospitals. Seven hospitals of various sizes and complexity have been selected as pilots for implementation of autonomy. As hospital autonomy in various other countries has not always resulted in the hoped-for improvements in efficiency and other parameters, the MOPH will have to carefully implement the policy and monitor its effects on access to and delivery of health services.

Health financing is another complex area that the team examined. The multiple sources of health financing increase the financial resources of the sector, but they also increase administrative costs for financiers and service providers. The team analyzed trends in MOPH and household financing for health for the past 10 years. The "Health Financing in Thailand" technical report notes that, according to the most recent National Health Accounts, payments by the public and private sector for health are roughly equivalent. However, the distribution of payment is different, with public financing supporting public facilities, and private financing supporting private facilities and private drug purchases.

Public and private capital investment in the sector in the early 1990s was significant; however, its impact on recurrent health expenditure is less evident, perhaps because of the concurrent economic growth, or more recently the economic crisis. However, what is clear is that capital expenditure drives the structural and technological development of the sector, and thus is worthy of careful planning and regulation for both the public and private health sectors.

HSRI has been working with the Ministry of Finance (MOF) for some time to make changes in the CSMBS to control the costs of the program. Prior to the initiation of the project, the MOF had already instituted demand-side measures to control costs. Results from the province of Khon Kaen suggest that overall expenditure was reduced by 13 to 15 percent. HSRI will continue to work with the MOF to institute supply-side controls on costs, for example, moving the program under the SSS and establishing capitation payment of providers.

Regarding the SSS and WCS programs, many recommendations were made. Perhaps the most significant is that coverage under the SSS should be expanded, starting with dependents and the self-employed. Merger of the WCS program was considered a feasible option if (1) the capitation rate was increased to cover injuries, (2) a separate fund was created to cover care provided by facilities other than the one where the employee is registered, and (3) a separate fund was created to bring about improvements in workplace safety.

The VHCS is intended to provide insurance coverage for the near-poor. However, many non-poor buy the cards. In addition, the payment per card does not cover the provider's costs of care to the household. The team concurs with the TAG that the price of the card should be increased to cover the full costs of providing care, eliminating the government subsidy of the card. Efforts should be made to increase coverage to improve risk pooling and lower the premium required.

On the other hand, the LICS is intended to provide health insurance for the poor to increase their access to care. In 1994, coverage was extended to other groups that might not require additional insurance coverage. As with the VHCS, the LIC is not always distributed to the poor. Many of the poor, however, receive subsidized or free treatment, based on their ability to pay (LICS – Type B). The team recommended that the LICS apply the new poverty line as a criterion for card distribution and that local authorities manage distribution based on their knowledge of the patient's indigence. The allocation of LICS funds between regions has improved over the past few years due to changes in the allocation formula, which includes population, workload, and income variables.

Analysis of health personnel deployment, referral, hospital autonomy, and health financing led to questions about other structural problems facing the health sector. While the team focused on the province as the unit for analysis, it was clear that complementary reforms were also needed at the district and national levels.

The technical assistance team sees reform of the health system in Thailand taking place gradually. For example, reform might take place in two phases, the first over the next 2 to 3 years and the second over the next 5 to 10 years. The first phase would consist of pilot efforts to develop new institutions for the delivery and financing of health services. The second phase would involve the expansion of successful models to other districts and provinces, as well as lead to some organizational changes at the national level.

During Phase I, at the district level, the team recommends that the MOPH work to develop district health systems (DHSs), which will provide an integrated package of curative and health preventive and promotion services. Development of these systems in provinces where autonomous hospitals are to be developed is encouraged. The DHSs will be coordinated under the management of the district hospital. Current experiments with district fund holding should continue. Both types of pilot systems should receive capital and salary line item budgets, but block grants for all non-salary recurrent budget, including VHCS and LICS.

The institution allocating the block grants to the autonomous hospitals, DHSs and fund-holding districts would be a Provincial Health Board (PHB). The Provincial Health Office (PHO) would integrate several new functions into its current responsibilities and eventually become a PHB formed under the Public Organizations Act. The new functions would include improving health services planning, purchasing of health services rather than acting as a conduit for budget, and raising additional local revenues.

The creation of the Supportive Office for Development and Autonomous Hospitals (SODA) is critical for progress during and beyond Phase I. This body should undertake development of the necessary human capacities and of new financial and information systems and (with other programs) monitor and evaluate the pilot experiment of Phase I. The team strongly recommends that the SODA be created as a free-standing office, perhaps directly reporting to the Cabinet through the Minister of Health.

Phase II will be the expansion of the pilot efforts with DHSs, with fund-holding mechanisms (if found to be effective), establishment of autonomous hospitals, and reorientation of PHOs to PHBs. The most significant change proposed is the development of a National Health Financing Authority (NHFA), which would coordinate the various sources of government financing for health to be distributed to provinces as block grants.

Table 1 summarizes the recommendations of the team, indicating their priority, suggestions regarding the timing of implementation and their expected impact on the health system. Many details remain to be worked out about the future shape of the health care system in Thailand. It is hoped that the work of the technical assistance team has contributed to this ongoing discussion.

LIST OF ABBREVIATIONS

AH	Autonomous Hospital
BOB	Bureau of the Budget
CEO	Chief Executive Officer
CSC	Civil Service Commission
CSMBS	Civil Servants Medical Benefit Scheme
DRG	Diagnostic-Related Group
GC	Governing Committee of an Autonomous Hospital
HMIS	Health *or* Hospital Management Information System
IP	Inpatient
LICS	Low Income Card Scheme
MOF	Ministry of Finance
MOLSW	Ministry of Labor and Social Welfare
MOPH	Ministry of Public Health
MUA	Ministry of University Affairs
OP	Outpatient
PCMO	Provincial Chief Medical Officer
PCP	Provincial Health Service Provider
PHB	Provincial Health Board
PHC	Primary Health Care
PHO	Provincial Health Office
PMC	Primary Medical Care
PTC	Pharmaceutical and Therapeutic Committee
SEPA	Staff Evaluation and Performance Appraisal
SODA	Supportive Office for Development and Autonomous Hospitals
SSO	Social Security Office in the MOLSW
SSS	Social Security Scheme
TAP	Traffic Accident Protection Scheme
VHCS	Voluntary Health Card Scheme
WCS	Workman's Compensation Scheme

CHAPTER 1
PRINCIPLES, ISSUES, AND FACTORS INFLUENCING THE FUTURE THAI HEALTH SYSTEM

The MOPH has placed health sector development high on the national agenda and has stressed equity in several ways, including a focus on improving services in rural areas. The result is that the health status of Thai people has improved significantly during the last 30 years. During this period, the health system has undergone many changes. Recent contextual and environmental changes will require that the Thai health system undergo even further reform. Changes being considered must address the relationships between various stakeholders. At this time it seems appropriate that the MOPH reassess and confirm the basic principles that should influence the structure and functions of the Thai health system in the future and look at how environmental factors are influencing change today.

A. PRINCIPLES AND ISSUES

1. Orientation toward Health Rather than Disease

a. Principle

The orientation of the health system should be to promote health, rather than just respond to illness and disease. All efforts at policy formulation, organizational reform, and service delivery should be measured against this principle. The system should ensure that the promotion of good health is the first priority and that the treatment of disease is the second priority.

b. Issues

The Thai health system is focused to a great extent on the treatment of disease and on service provision in hospitals. Health personnel, particularly doctors, are trained with a focus on disease treatment rather than prevention. The MOPH budget reflects a bias towards curative care and hospitals, and many health workers are able to generate additional income only through treating illness. Even government-subsidized health insurance schemes focus on payment of the cost of curative care. The CSMBS could, in theory, cover preventive and promotive services, but there is little incentive to get beneficiaries to demand preventive and promotive services. The same holds true for any form of capitation payment. Revenues from prepaid capitation could cover preventive and promotive services, but seldom are funds used for this purpose.

2. Equity

a. Principle

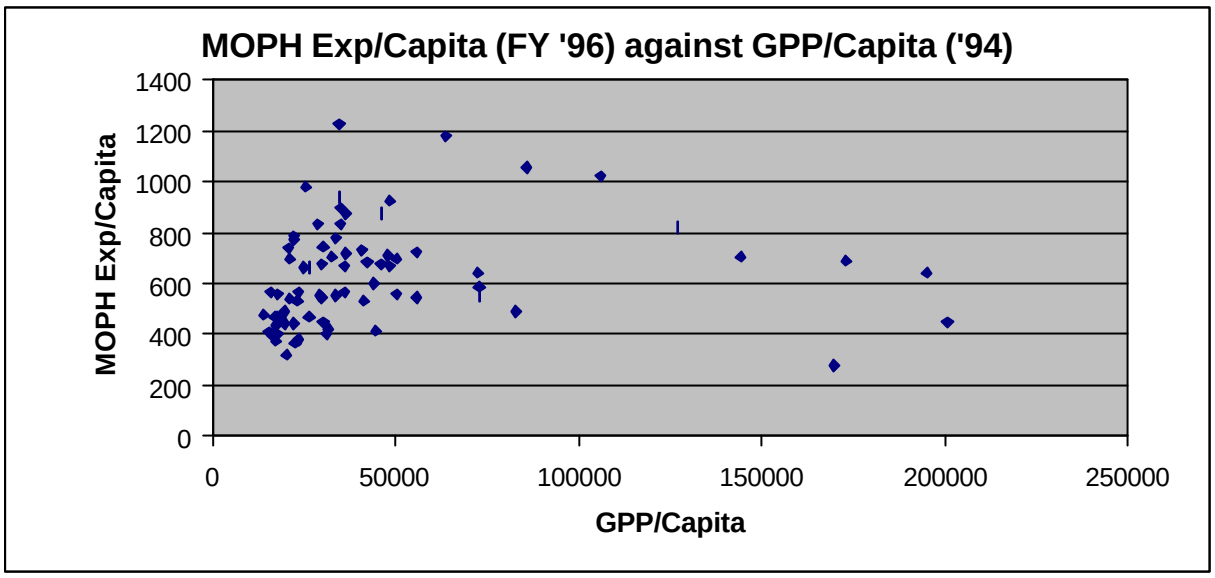
Assuring equity should be the most basic characteristic of the system. An operational definition of equity is needed. For example, equity can refer to equity of access. It can also refer to vertical equity–that is, that those who can afford to pay more do. It can also refer to horizontal equity–or that those who receive the same treatment pay the same amount. The task of the system should be to make this goal operational and monitor the extent to which it is achieved.

b. Issues

Sharp differences exist in the distribution of financial, human, and other public sector health resources between regions, provinces, and districts in the country. For example, when MOPH provincial expenditure (capital and recurrent) per capita for FY 1996 was compared to the gross provincial product (GPP) per capita for FY 1994,[1] it was found that there were fourfold differences in the allocation of health financial resources for provinces with the same income. Provinces with higher GPP per capita did not in most cases receive lower allocations of MOPH expenditure per capita (see Figure 1). If the MOPH allocated its budget equally on a per capita basis, or progressively to accommodate for differences in income between provinces, one would expect the plot to either look horizontal or slope downward from the upper left to the lower right. This figure demonstrates that the allocation of MOPH budget is not based on population and income, but on other factors such as historical patterns of expenditure.

[1] GPP figures for FY 1994 were used in this analysis, as these would have been the figures available for planning the FY 1996 budget.

Figure 1



Another example of inequitable allocation is that of health personnel by region. Regional gaps in human resources improved in all categories between 1970 and 1990, but during the 1990s they worsened, with Thailand experiencing an internal brain drain from rural to urban areas and the private sector. There are still significant differences in health personnel deployment between the regions and the Bangkok Metropolitan Area (BMA). Particularly significant are the differences between the BMA and the northeastern region in terms of doctors, nurses and hospital beds per population ratios (10.8, 6.5, and 3.4 times higher respectively).

3. Efficiency

a. Principle

Recent rapid increases in health expenditure require improved efficiency in the Thai health system's use of resources. Responding to efficiency concerns in the future should not be narrowly confined to the use of government expenditure for health. Attempts to improve efficiency should take a multisectoral or holistic approach.

b. Issues

Technical efficiency. The concept of technical efficiency means that any given output is produced at the lowest cost. Over the past decade, the growth in public and private expenditure for health placed few cost constraints on the development of the sector. The top-down, process-oriented budgeting system of government health services maintains inefficiency in resource allocation since there are no performance indicators for monitoring and evaluation and little development of local capacity in budget planning and management.

Current referral patterns also reflect technical inefficiency. People bypass lower level facilities because they lack confidence in the quality of care available at lower levels and attempts to change this behavior have not been successful.

The plethora of government subsidized insurance schemes has increased the administrative cost burden for the health system. Cost escalation (14 percent per annum) was particularly high under the CSMBS, where providers maximize utilization to raise revenue in order to cross-subsidize services for other patients.

Allocative efficiency. The term allocative efficiency in this report refers either to the least costly mix of inputs to produce a given output or the mix of programs that are least costly in producing a desirable health outcome.

Public hospitals do not have full authority over the mix of inputs they have to produce health services. Most hospital personnel are civil servants who cannot be hired or fired. Hospitals do have greater flexibility between line items for non-salary recurrent budget, and hospitals collect about half of their total expenditures from patient revenues. Other indicators of allocative inefficiency relate to the acquisition of high-tech diagnostic equipment, which may be overused because it can be imported tax-free.
The second form of allocative inefficiency is apparent in the fact that only 10 percent of total health sector expenditure (public and private) is used to finance preventive services.[2] Given the benefits of preventive behaviors on acute communicable diseases, problems of childbirth and infancy, and chronic illness such as heart disease, it is appropriate for additional resources to be allocated to health promotion and disease prevention programs.

4. Decentralization

a. Principle

Meeting local priorities and needs argues against a highly centralized, bureaucratic system. Measures to decentralize the planning and delivery of health and environmental services to the level of local administrations should be taken.

b. Issues

While the MOPH has been selected as one of the first ministries to shift from a budget based system to one based on block grants (under the guidance of the Decentralization Subcommittee of the National Commission on Public Sector Reform), many decisions remain to be made about the block grants. Should the MOPH develop both general equalization grants aimed at addressing geographic inequalities, or specific project grants aimed at support of specific programs, or a combination of both? Distribution formulas and the division of administrative and oversight functions between the central and local

[2] Thirty-four (34) percent of the MOPH budget allocation for the seventh Five Year Plan was allocated to prevention and promotion activities, specifically: health promotion (19 percen)t, disease control (12 percent), PHC (2 percent), and consumer protection (<1 percent).

levels remain to be determined. Once a design has been developed, a significant program of human resources development will need to be launched to facilitate the transition.

The decision to create autonomous hospitals as Autonomous Public Organizations is only a first step in this process, not the endpoint. Pilot efforts must be tried and the outcomes evaluated before hospital autonomy expands. An anticipated issue is the difficulty of shifting civil servants to hospital employee status. This is a desirable change, since then hospital staff should be more sensitive to local needs. However, because of population size and local incomes and fee schedules there is the potential for disparities in salaries and physicians' incomes to develop, making some facilities desirable and others less so. The government will need to monitor salaries and take action should this become a problem.

5. Quality

a. Principle

Concerns about the quality of care provided by the health system have increased as people have benefited from improved socioeconomic conditions. Quality should form one of the core characteristics of any good health system. At the same time, quality should not be interpreted only as making people feel better through the use of more sophisticated technologies, dispensing of pharmaceuticals, and other improvements in curative care; it should encompass improvement of psychosocial quality of life.

b. Issues

Consumers consider the quality of health services at district health centers to be low, since the personnel posted there (e.g., sanitarians, technical nurses, and midwives) do not have the same level of training as physicians. Fifty percent of doctors at district hospitals are recent graduates carrying out their compulsory service. There is a lack of continuity of care and management due to the high turnover rate of these doctors. While the staffing of provincial hospitals is better, the overuse of these hospitals reduces the quality of services that can be provided. Heavy workloads result in poor morale among staff. Even the care provided in the private sector may be of low quality, since staff often have less training than those at government facilities, and doctors work only part-time.

6. Accountability and Transparency

a. Principle

Increased democratization of Thai society has led to demands for improved public accountability and transparency. At the same time, the health system has become increasingly commercialized. The Thai health system and the mechanisms for its financing should be open to public scrutiny and the system should be accountable to the people it serves. Achieving greater accountability and transparency may require

legislative changes and implementation of mechanisms to increase public involvement in overseeing the health system.

Decentralization is one reform aimed at meeting the health needs of the population based on the above principles, while acknowledging that communities, civic groups, and others should have a voice in how the health system operates. By placing the responsibility for public health, health service delivery, and the financing of health care close to the Thai people, the objectives of improved transparency and accountability and improved quality of care will more likely occur.

b. Issues

Health system fraud and abuse are evident in Thailand. Insurance abuses often take the form of altering outpatient claims so that they can be submitted as inpatient claims, making false claims, and unnecessarily extending length of stay. The Auditor General and the Corruption Suppression Commission have limited capacity to handle all problem areas. But performance and impact evaluation can provide information against which providers can be held accountable.

7. Active Participation of the People

a. Principle

Local administration, community participation, and individual responsibility should be encouraged in the broadest sense. This implies that individuals should take some responsibility for their own health and that communities should participate in decision-making regarding health policy, service organization, and management. Although to some degree this aspect is included under the principle of decentralization, it is worth giving it separate emphasis, as it will reinforce other principles, such as efficiency and accountability.

Another important aspect of community participation is the financing of the health care system. Currently this includes financing through the taxation system, health insurance premiums, and fees-for-services. The balance among public sector sources such as taxation, private contributions, user charges, and insurance reimbursements needs to move towards greater insurance coverage and risk sharing. It is important to consider the effects of the method of financing on the equity and efficiency of health care, since health financing changes the incentives influencing the behavior of patients and providers, and the overall structure of the health system.

b. Issues

Participation of the individual and communities is important in achieving positive health outcomes. One significant issue facing the health sector is to identify strategies to build self-reliance and adoption of health-promoting lifestyles by individuals. The experiences of the country with the Basic Minimum Needs approach of the 1980s should be reviewed

for their applicability 15 years later. Another significant issue is how to promote community awareness and activism to improve environmental conditions in the community.

8. Public/Private Collaboration and the Role of Government

a. Principle

Economic reasons for a role for the state in markets include market failures (e.g., public goods and the free rider problem, externalities, failure in insurance markets, and asymmetric information) and considerations of equity (e.g., basic health services are merit goods).[3] While the health sector clearly has some of these attributes, it is less clear that all health services for everyone should be provided by the state.

In Thailand, the government should continue to play a significant role in health system development. However, maintaining a large government bureaucracy may not be necessary, and both public and private providers could serve societal objectives in an equitable and efficient manner. This could result in networks of public or public and private health service providers, with the MOPH overseeing and regulating how the system is being developed and holding providers accountable for achieving system goals.

b. Issues

The private health sector in Thailand has had few constraints placed upon it by government. To date the MOPH has adopted a laissez faire approach to private sector development. The only requirement has been for the MOPH to register and license private sector personnel and facilities. There have been few if any restrictions on location, service type, quality of care, or referral arrangements. The private health sector has grown considerably in the past 10 years and is now a key player in Thailand's national health system. The private sector, however, is facing a number of problems, including

- rapid and unplanned expansion of private providers particularly in urban areas and specifically in Bangkok Metropolitan Area (BMA);
- oversupply of private beds and medical equipment in the certain urban areas;
- inconsistent quality of care;
- cost escalation;
- occasional abuse of insurance and other prepayment schemes;

[3] Public goods are those goods for which the benefits cannot be ascribed to individuals (e.g. mosquito control) and thus it is difficult to charge for them. Externalities is the term used when the benefits to society are greater than to the individual and government subsidy is needed to cause creation of the necessary demand. Failure in insurance markets result because, without risk sharing schemes like insurance, it is difficult to charge the full costs of goods and services. Asymmetric information means that the patient is not fully informed about the benefits and costs of different treatments. Merit goods are goods that society deems important to provide to all citizens, regardless of ability to pay.

- frequent private practice by government physicians in private facilities;
- reduction in people's ability to pay higher private sector fees because of the recent economic crisis, resulting in low occupancy rates in urban private hospitals, many of which are facing closure.

Issues facing policymakers are whether the government should continue to take a laissez faire approach with respect to the private sector, and if not, in what way the government should intervene with respect to the growth and operations of private sector health services.

8. Competition and Consumer Choice

a. Principle

Competition between providers would be expected to increase efficiency and quality of care. Public and private providers, including traditional practitioners, should be allowed to make a contribution to the health system. In the future, competition and consumer choice will increasingly become important as the number of health care providers increases and the awareness of the population about health care becomes more sophisticated.

b. Issues

Two trends in the Thai health system, capitation and consumer choice, may conflict, as a consumer usually is required to pick a primary provider under capitation. While in urban areas consumers will have a variety of providers with whom to enroll, the population in rural areas will have fewer choices.

B. FACTORS PROMOTING CHANGE

1. Demographic and Social

From 1990 to 1996, population growth in Thailand was 1.3 percent per annum, equal to the rate in other East Asian and Pacific countries. Life expectancy has been increasing, the population is aging rapidly, and demand for services related to chronic illnesses, nursing care, and services for the elderly has increased dramatically. Employment in the industrial and service sectors has also increased, resulting in extensive urban migration and higher incomes. This has led to increased demand for curative care services, particularly in urban areas. Trends in employment and improvements in literacy have raised expectations of the population with respect to the sophistication of health services sought. Between 1986 and 1995, the demand for outpatient visits per capita doubled, while the rate of inpatient discharges remained constant.[4] Demand for public hospital treatment increased.

[4] There was considerable variability within the country, with the northeast region having consistently the lowest health service utilization of any area of the country.

2. Legal and Political

Recent electoral system reforms and the creation of stronger checks and balances have improved public accountability and led to greater public freedom to participate in the affairs of government. At the core of recent political reform is the new Constitution, which is based on seven principles (service, standards, equality, efficiency, accessibility, accountability, and participation).

The Constitution forms the base for health sector reform. Specifically, section 52, paragraph 2 of the new Constitution states that the state shall provide qualified public health services efficiently throughout the entire country and shall encourage local governments and the private sector to participate in the health sector to the maximum extent possible. Section 82, concerning state policy, indicates that the state will provide and promote public health services that meet standards with efficiency throughout the whole country. Section 283 also expresses the political will to decentralize government powers to local government. Moreover, section 284, paragraph 3 states that in order to develop decentralization, the state shall enact laws to empower local governments to provide public services, including health services.

The orientation of the eighth Five Year Plan (1997–2001) is congruent with the emphases of the Constitution. This is the first five-year plan to focus primarily on human-centered development, as opposed to economic development. Civil service reform calls for limiting the size of the present civil service, increasing the accountability of public servants and institutions, improving public service efficiency and use of public resources, and decentralizing to more peripheral agencies of the government. The education sector is undergoing similar changes.

Regarding decentralization, the Government has formed a Decentralization Subcommittee of the National Commission on Public Sector Reform. The reform agenda of this subcommittee calls for decentralization of budget management from 2003 onwards. This committee will encourage the use of block grants to fund provincial and lower levels of government. Some block grants may relate to the financing of specific programs (program grants), while others may be used to equalize the distribution of public resources in the country (general equalization grants). The MOPH is being considered to become one of the first Ministries to undertake a process of fiscal decentralization.

Another key legal and political change is the passage of the Public Organization Act (B.E. 2524), which allows government ministries to “spin off” some of their operations into independent public organizations if the proposal is passed by Royal Decree. A translation of the complete Public Organization Act appears as an appendix in “Hospital Autonomy in Thailand.”

3. Economic Growth and Crisis

From 1986 to 1995, Thailand's real GDP increased by 9.6 percent per annum. The percent of the population under the poverty line declined from 33 percent to 11 percent. From 1986 to 1996, household expenditure increased in real terms by 66 percent, to 134 baht per household per month in 1996 (approximately 5.2 percent per annum). Expenditure for private clinics and hospitals increased by 125 percent, to 148 baht per household per month (approximately 8.5 percent per annum). Other expenditures (e.g., for doctors' fees, dentists' fees, and eyeglasses) increased in real terms by 25 percent, to 20 baht per household per month. Thus, while household expenditures for health did not increase as rapidly as GDP growth, the figures support the observation that the population prefers private sector care–at least for ambulatory services.

The expanding demand for health services has been paralleled by changes in the way people pay for services. There are four comprehensive publicly subsidized health insurance schemes in Thailand. These schemes have varying benefit packages, eligibility determination policies, choices of provider, premium requirements, and levels of government subsidy; and they cover approximately 76 percent of Thailand's population. Growing coverage by health insurance, which lowers out-of-pocket payments at the time of service delivery, has contributed to increased utilization.

From 1986 to 1996, the budget of the MOPH increased by 258 percent in real terms, to 56.5 billion baht (922 baht per capita or US$ 36.90), at a rate of about 9.9 percent per annum–or a little faster than the rate of economic growth. This increase represented an increase of 171 percent in recurrent expenditure and 835 percent in capital expenditure. Between 1997 and 1998, the budget of the MOPH was cut by 9.4 billion baht–or 14 percent. The MOPH adopted a policy of "Good Health at Low Cost," including measures to economize on the costs of drugs, utilities, and travel and to increase emphasis on health promotion and disease prevention.

During the economic crisis, the financing picture changed. Household monthly expenditures for health fell from 343 baht per household in 1996 to 239 baht per household for the first quarter of 1998. Household expenditure for institutional care dropped by 36 percent, while self-treatment from pharmacies increased by 12 percent in real terms.

Private hospitals, many of which are financed with foreign capital, have high debt payments and are facing higher interest rates. Historic rapid expansion of the private sector during the economic boom period resulted in an oversupply of private beds, with private hospital occupancy rates ranging from only 42 to 60 percent. Between 1986 and 1996, the number of private clinics expanded from 7,100 to 15,700, private hospital beds increased from 11,000 to 35,000, and full-time private doctors expanded from 1,000 to 3,500. Movement of public workers into the private sector during this time was considerable. In this period of economic crisis, many Thais can no longer afford the higher fees in the private sector. Estimates have been made indicating that up to 35 percent of all private hospitals will be forced to close in the next three years due to the

economic crisis. Thus the economic crisis has reduced the demand for services, as well as provided significant impetus for public and private providers to become more efficient.

CHAPTER II
ELEMENTS OF REFORM FOR THE NEAR TERM

The terms of reference for the Thailand Health Management and Financing Study Project required the preparation of four technical reports, each concerned with a structural problem of the health sector. These reports relate to some of the principles and issues identified in Chapter I, as depicted in Table 2.

Table 2 shows that the component studies were oriented toward remedying problems of equity, efficiency, quality, and decentralization of health services; less oriented to the role of the consumer; and not at all focused on health promotion or the role of the private sector. Thus the studies do not offer a complete vision for the future of the health sector, but rather steps that the MOPH might adopt in the near term (2 to 5 years) to address some issues facing the sector.

The findings and recommendations from each of the component studies are summarized below. Readers with greater interest in any of the topics covered in these technical reports should contact Management Sciences for Health in Boston for English copies of the reports and the Health Systems Research Institute in Bangkok for Thai copies of the

Table 2: Principles for the Thai Health System Related to the Four Component Reports

Principles	Human Resources for Health	Referral	Hospital Autonomy	Health Financing
Health Orienta-tion				
Equity	X			X
Efficiency Technical Allocative	 X	 X 	 X X	 X X
Decentralizatn	X	X	X	X
Quality	X	X	X	
Accountability Transparency			 X	
People's Participation		 X	 X	
Public/Private Collaboration				
Consumer Choice		 X		 X

reports.[5] Chapter III lays out in broad terms approaches toward more comprehensive reform.

A. HUMAN RESOURCES FOR HEALTH

1. Issues

a. Distribution of Human Resources for Health

The distribution of human resources for health (HRH) to rural areas of Thailand has improved gradually. This is demonstrated by the increased number of selected categories of professionals in various regions of Thailand as compared to Bangkok. For example, in 1981 there was 1 doctor per 3,927 people in Bangkok, but only 1 doctor per 39,270 people in the south. By 1995, the ratio in Bangkok had increased to 1 doctor per 5,582 people, but there was only 1 doctor per 33,492 people (a 15 percent improvement) in the south. The difference in distribution of health personnel between Bangkok and the regions, particularly the northeast, remains an important problem with respect to providing equal access to health services (see Table 3).

Table 3: Ratios of Population to Health Personnel in the Regions as Compared to Greater Bangkok, Thailand, 1981–1995

	Pop/HRH Gtr BKK	Bangkok	Central	Northeast	North	South
Doctors						
1981	3,927	1	7	17	9	10
1995	5,582	1	4	11	6	6
Nurses						
1981	10,826	1	7	18	8	8
1995	16,089	1	3	6	4	3
Pharmacists						
1981	2,295	1	29	94	67	37
1995	2,446	1	3	15	9	7
Dentists						
1981	676	1	8	26	12	13
1995	1,077	1	4	9	7	5

Source: Chunharas, S. et al. (October 1998) Human Resources for Health Deployment Technical Report, MSH/HSRI.

[5] Health Reform and Financing Program, Management Sciences for Health, 165 Allandale Road, Boston, Massachusetts, 02130, USA, fax: 1-617-524-2825. Health Systems Research Institute, Building of Mental Health Department, Tiwanon Road, Nonthaburi 11000, Thailand, fax: (66-2) 951-1286/95.

The majority of doctors and nurses work in the public sector, while the majority of dentists and pharmacists work in the private sector, although not necessarily in private hospitals. The Ministry of Public Health (MOPH) is the major public provider, with more HRH working at the provincial level than the district level.

The level and distribution of HRH to rural districts is the major distributional problem. Over 50 percent of those working at the district level are doing so during their three year compulsory service period. There is a high turnover of doctors, pharmacists, and dentists at the district level when they have completed their compulsory service. Nurses at the district level have lower rates of turnover, in part because they are recruited from rural areas for nursing education and assigned to work in their home towns after graduation.

b. Coordination of HRH Policy

There are different institutions and national agencies involved in HRH deployment. The MOPH, through the Bureau of Health Policy and Planning, is responsible for specification of HRH needs, production of HRH, and utilization planning. However, the actual production of HRH lies mostly with the Ministry of University Affairs (MUA). The MOPH is allowed to produce only those nurses to be employed by the MOPH and also auxiliary health workers. The Office of Civil Service Commission (CSC) controls the staffing pattern of all health facilities in the public sector, and they assign posts for the MOPH as well as determining the salary scale (which is the same for all categories of civil servants). HRH in the public sector can receive additional remuneration from their additional workload [Does this mean working overtime?] in public facilities, and the types and rates of remuneration are controlled by the MOF. The source for such payments, however, can be either central government budget and/or from the hospital's own revenue. Graduates are required to undergo a compulsory service period of three to four years after graduation and there are committees comprised of all potential users of these graduates to decide on their distribution. The Medical Council is responsible to plan the residency training program for doctors. At the same time, the MOPH has a committee to decide how many of the MOPH's doctors can receive specialty training, and it determines where they are expected to work after completing the specialty training. There is no committee or department to oversee or coordinate these interrelated activities.

2. Recommendations

The technical assistance team proposes a number of recommendations for improving the deployment of health personnel. One of the most important is the need to *improve policy coordination*. The team recommends the formation of a full-time Secretariat, which will report to the Permanent Secretary, to plan, coordinate, implement, and monitor policies related to HRH deployment–especially to the rural areas. Major activities of the Secretariat will be identifying priority areas for HRH deployment based on revised norms and standards; revising policies related to compulsory service and assignment of recent graduates; allocating block grants to priority areas (discussed below); approving norms for additional remuneration of rural HRH; and planning and coordinating continuing

medical education (CME) and distance education. In addition to the Secretariat, Provincial Health Boards (described in Chapter III of this report) will determine the use of block grants to increase the distribution of rural HRH through part-time employment of provincial personnel or HRH working in the private sector.

Regarding the *identification of priority areas* for deployment of HRH, the team recommends the creation of a working group under the Secretariat to review and refine the staffing norms for rural health facilities. These norms will be used to estimate the shortage of HRH by district. The 25 percent of districts with the highest shortages of HRH should receive priority in the deployment of new graduates. The middle 50 percent of districts should only receive new graduates when existing posts are vacant. The lowest 25 percent of districts should not receive any new HRH. Districts should also be classified into four categories depending upon a hardship classification system used by the Ministry of Interior (MOI). The MOI classification system should help in identifying districts for HRH deployment of new graduates as well as allocation of incentive payments.

The technical assistance team also recommends that measures be taken to increase the *production of medical graduates with a rural orientation*. Since students selected from rural areas are more likely to return to rural areas after graduation, the admission policies of medical schools should be reviewed and modified to provide greater representation by students from rural areas.

The study found that medical students and their parents preferred compulsory service to self-financed medical education. The team made several recommendations with respect to *compulsory service*. The first recommendation is that new graduates should be assigned for their first postgraduate year to general hospitals, rather than to the more specialized regional hospitals. Subsequently, graduates should be required to work in a district hospital for a minimum of two years. Since compulsory service is, in effect, a means of repaying the costs of medical education, remuneration should be decreased. Licenses should be issued only to those completing their first year of compulsory service. Completion of compulsory service should be required before health personnel can proceed with more advanced training. Those performing exceptionally well during the compulsory service period should receive fellowships for postgraduate training.

The team recognizes that as universities move towards autonomy, and there are fewer placements for medical graduates, students must be able to *"opt out" of compulsory service*. The team recommends that students pay a fine of no less than the estimated 1.8 million baht required for their training.

Financial incentives may be required to retain HRH in the rural areas. However, the non-private practice allowance (10,000 baht/month) should be paid only to those doctors who perform up to a certain level of service, as determined by each of the provinces. The incentive structure would be in line with the overall classification of districts regarding hardship areas.

Improving service conditions in rural areas may also help to retain more HRH in rural areas. Recommendations for improving service conditions include developing a system of continuing education and providing more administrative and financial autonomy to the district level for the provision of primary medical care and PHC. The development of district hospitals as primary care fund holders may provide doctors with more challenges and job satisfaction. In addition, interaction between district and provincial levels should be encouraged for referral, educational, and program management purposes.

The team also recommends *increasing budgetary flexibility* for HRH deployment. Funds generated from the savings from allowances to new graduates, as well as from payments from students opting out of compulsory service, should be allocated to priority provinces to be further allocated to selected districts. The districts can use these funds to purchase additional temporary HRH from the provincial level or from the private sector.

B. REFERRAL SYSTEM

The referral pattern in Thailand has improved over the last 15 years, with increasing numbers of visits made to health centers in the place of district or provincial hospitals. However, many patients still bypass district level facilities, and provincial hospital outpatient clinics are overcrowded with patients who do not require advanced diagnosis or treatment. Bypassing continues to occur because people feel the quality of care at rural facilities is not good.

1. Objectives

An improved referral system should meet the following objectives, which encompass both health and economic concerns:

- *Cost-effective use of limited resources*: A referral system should ensure a seamless continuum of health service provision that allows the system to respond to various levels of need. More common problems should be handled lower in the system using manpower and facilities equipped to take care of such problems. More complex problems should be dealt with higher in the system, using manpower and facilities equipped to handle more sophisticated problems.

- *Good quality patient care*: Care should be of good quality, as measured through the eyes of the consumer as well as the provider. A good referral system will result in reduced travel and waiting times for the patient and permit greater patient participation and effective communication between the patient and provider.

- *Good preventive practices*: Access to good primary and preventive care should allow early detection and treatment and/or referral for all health problems.

2. Recommendations

Recognizing the referral system's problems and past efforts to improve the system, the technical assistance team made several recommendations. The first recommendation deals with *improvement in district autonomy regarding health financing*. It is proposed that district health systems (DHSs) managed by the district hospitals be created. These systems would receive block grants against which they would plan the provision of curative, preventive, and promotive services, and they would continue to receive government subsidies for the lower income groups. This increased flexibility in funding is expected to produce improvements in quality at the district level, which will lead to improvements in the referral pattern. In larger districts the block grant might be enhanced (through the inclusion of funds from the CSMBS, SSS, VHCS, and LICS) to allow the district health authority to serve as a fund holder that would purchase services for its population from the provincial level. As a fund holder, the district would have more direct control over the referral of patients to the provincial level since the district would pay for the referred case. A good deal of education of district hospitals and other district health managers would be necessary for this model to succeed.

The technical assistance team also outlined changes that could take place with respect to the *organization and financing of service delivery at the provincial level*. The central MOPH might block-grant recurrent budget to the province based on some allocation formula. Autonomous provincial hospitals might form vertically integrated networks of providers, including both public and private providers, and, using the block grant provided, manage this network under managed care principles. It is assumed that such provincial networks would foster better communication between providers at the district and provincial levels, enhancing appropriate referral patterns. In addition, the network might set tiered fees to encourage patients to use lower level facilities.

The financing and monitoring of provincial networks might take place under *revival of the Network of Multi-Level Health Services Facilities (Por-Bor-Saw or NMHS) Program.* This would involve providing incentives for good performance through greater use of performance appraisals. Management would need to be improved through the introduction of a regional manager who would oversee implementation of the program. Incentives to strengthen referral patterns within the larger network would be based on those outlined earlier for the district and provincial levels. Each region would be required to develop three-year plans with specific implementation targets. This would form the basis of negotiated support from the central level and become a framework for service delivery.

Universal coverage through collective financing would improve the capacity of the health system to negotiate and monitor service delivery and use in a comprehensive manner, without regard to the specific requirements of different (and numerous) programs as is the case today. Prospective payment mechanisms and the use of capitation would reduce administrative overhead and provide predictable revenue that could support development of good quality care and access. However, universal coverage would increase moral hazard and the tendency to seek more sophisticated care, since it would be

covered under insurance. Thus, measures like requiring registration with a primary care provider who would monitor referrals are recommended.

The above proposals have implications not only for the way the health system is financed at the provincial level and below but also for the management and system capacity and skills required at these levels. These recommendations imply that the role of the MOPH in micro-budgeting and financial management would be reduced and flows of resources changed to reflect greater financial and managerial autonomy at the provincial level. These recommendations also reflect the need for development and use of financial incentives and provider contracting as a means of altering supply side incentives. Finally, these recommendations are intertwined with the recommendations for system financing, hospital autonomy, and human resources deployment.

C. HOSPITAL AUTONOMY

An autonomous hospital's mission is to provide health services of the highest quality in the most efficient manner within available resources. Specifically, hospital autonomy is planned in order to achieve the following objectives: (1) improve communication and reduce administrative costs, (2) enhance the effectiveness and efficiency of management and service delivery, (3) improve resource mobilization and improve local knowledge of development priorities, and (4) achieve political objectives.

1. Definition of an Autonomous Hospital

A public autonomous hospital is one

- constituted under the Public Organization Act and operating under state supervision;
- primarily responsible for curative care provision but providing preventive and promotive health services and financed by state subsidies;
- responsible to the MOPH and meeting basic minimum standards for its technical and administrative functions;
- financed through a system of vertical block grants and/or transfers from the MOPH and locally generated revenue from insurance or fees (in that order of importance);
- able to retain surplus and fully responsible for all hospital resources and openly and transparently accounting for all resources regardless of source;
- governed by a Board of Directors and run by a Chief Executive Officer.

"Autonomy" refers to the extent of decentralized decision making in six main areas: (1) strategic management, (2) procurement, (3) financial management, (4) human resources management, (5) administration, and (6) clinical governance.

The Thai definition of hospital autonomy moves public hospitals one step away from "fully public" towards a "fully private" model. Autonomous public hospitals will be "public organizations" whose role it is to serve the community. The governance aspect of

autonomous hospitals shows greater movement towards the fully private model, while the financing aspect calls for support by a performance-based block grant: and so is closer to the fully public model (see Table 4). In this regard, the government will not be abdicating its responsibility for providing health services to the people of Thailand. Autonomous hospitals will continue to operate as part of a health system that is based on social equity principles, where fees will be set based on ability to pay and service use is based on need.

Table 4: Spectrum of Forms of Hospital Autonomy by Component

Degree → Component	**Fully Public**			**Fully Private**
Type	Fully government	Government corporate	Nonprofit institution	For-profit institution
	MOH	Board of trustees/Directors from Government	Board of Trustees/ Directors (from local* com-munity, government representatives, nonprofit or private sector)	Board of Directors (from private sector)
Management	Government employees	Contract or service agreement	Wage contract or profit sharing	Private employees
Capital financing	Full government subsidy	Partial government subsidy	Lease or lending of government assets	Sale of government assets
Recurrent financing	Full government subsidy (indirect or direct)	Revolving funds (retention of locally generated funds)	Regulated user charges retained with government subsidy and insurance	Cost plus pricing (profit) and insurance

Source: Modification of Newbrander, W. (February 1993) "Policy Options for Financing Health Services in Pakistan: Hospital Autonomy Financing Issues" Health Financing and Sustainability Project Technical Report.

2. Governance

A Board of Directors will govern each autonomous hospital.

3. Relationship to the Ministry of Public Health

With regard to autonomous hospitals, the MOPH will

- monitor implementation of autonomous hospitals;
- ensure core funding through any combination of matching or non-matching grants (conditional or unconditional), budget support, and other financial subsidies and/or transfers as appropriate;
- lead and monitor the transition of hospitals;
- develop a national plan for capital expenditure and issue "certificates of need";
- ensure transitional funding;
- finance and conduct development activities for key systems;
- conduct general monitoring activities;
- issue hospital operating licenses (and renewals) or accreditation.

4. Human Resources Management

Human resources management will initially be the most important aspect of establishing autonomous hospitals. The first issue is the transition of staff from their historical civil service positions to hospital employees. The second issue is the determination of benefits and levels of remuneration.

An underlying principle of granting the status of autonomous hospitals is the guarantee of a job for everyone who was an employee of the hospital prior to transition and who performs to a set standard of performance. There will be three staff types: (1) staff on hospital terms, (2) staff on secondment from civil service (during the transitional phase), (3) staff retaining their present status as members of the civil service (during the transitional phase). As staff move to hospital employee status, pay scales may diverge more from those at public facilities, leading to shifts of personnel towards successful autonomous hospitals. The MOPH should monitor this process and if the salary scales become too divergent regulatory measures may be required.

5. Planning and Budgeting

Autonomous hospitals (AHs) will be required to prepare biannual recurrent budget plans and biannual capital budget plans with MOPH guidance. Accounting guidelines, a chart of accounts, and a list of cost centers for AHs will be developed as part of the transition process. Each AH must register as a nonprofit entity under the Public Organization Act and apply for and receive Certificates of Need for capital items as they are proposed in a request for capital expenditure (primarily for large and sophisticated equipment and capital construction).

6. Revenue Generation: Rate/Fee Setting

The hospital should be allowed to generate revenue from service provision in order to (1) be more self reliant, (2) prevent reverse subsidy, (3) be able to provide incentives for staff, and (4) improve efficiency in consumption of hospital services. However, this should be undertaken on condition that all patients will be entitled to treatment, with arrangements for those without insurance coverage. A system of tiered fees would

improve the efficiency of the referral system. Each autonomous hospital's Board of Directors will have the authority to set its own fees within guidelines set by the MOPH.

7. Transitional Mechanism

It is envisioned that the transformation of current public hospitals into AHs will require strong commitment and support from many parties, such as financial support from the Bureau of the Budget (BOB), contributions from the Civil Service Commission during the transformation phase of personnel status, close involvement of the MOH in budget planning. New work systems will be needed to improve efficiency. All these functions must be set up and functional in a very short period of time. It is strongly recommended that a Supportive Office for Development and Autonomous Hospitals (SODA) be established as an Executive Agency to support this transition.

8. Monitoring and Evaluation

Two types of monitoring and evaluation will be necessary with regard to AHs. First, there must be an evaluation of the environment in which hospital autonomy has been implemented and the progress of the hospitals in becoming autonomous. Illustrative criteria are the establishment of the SODA, the selection of the hospitals and the formation of their Governing Committees and their actions concerning hospital mission and strategy, the transfer of staff from civil servants to hospital employees, the creation and installation of new financial and health information management systems, the creation of a block grant system, and the financial sustainability of the hospital.

A second type of monitoring and evaluation will be needed to determine the impact of the hospital on access, health status, and the performance of the overall health care system. For example, the shift to autonomous status should not decrease the number, type, location, or quality of health services delivered to the community. Performance indicators will need to be developed for each aspect of hospital operations.

As a new national program, it is proposed that SODA be held responsible for the evaluation of possible systemic impacts of autonomous hospitals while individual hospitals would be held responsible for monitoring individual performance on service quality, cost, and so forth. SODA should develop an initial set of minimum standard performance indicators and then, with individual autonomous hospitals, work towards identifying other indicators individual hospitals would like to use. Since hospital autonomy will be part of bureaucratic reform, the Bureaucratic Reform Committee, chaired by the Deputy Prime Minister, should assess the performance and achievements of autonomous hospitals.

D. HEALTH FINANCING AND INSURANCE

1. Overall Finance

Thailand's real GDP increased by 9.6 percent per annum between 1986 and 1996, to 3,000 baht per capita. During the same period real public sector expenditure for health increased 10 percent per annum, and real private sector health expenditure increased by 5.2 percent per annum.

The economic crisis has required the cutting of public sector expenditure for health. Specifically, the MOPH has cut capital expenditure significantly, has not filled vacant posts, has attempted to control drug costs through the development of hospital formularies, and has cut training and travel expenses. The economic crisis has also resulted in the decline of private sector financing for health services. Private household expenditures for institutional health care declined in real terms by 36 percent between 1996 and 1998. At the same time, expenditure for self-treatment at pharmacies increased by 12 percent.

One of the longer term issues raised in Chapter I is that the allocation of MOPH expenditure to provinces does not appear to be based on the desire to increase subsidies to provinces with lower incomes. Rather, allocations are based on the historical requirements for budget based on the existing and newly constructed infrastructure. Thus, there is a need for planning new capital investment to reflect the needs of underserved areas. Health facility to population or bed to population ratios would be a starting point for guiding allocation of capital investment in buildings. Medical equipment in both public and private hospitals should be inventoried to identify where needs exist and for what type of equipment. Regarding the recurrent budget, the technical assistance team recommends that the MOPH develop an allocation formula(s) for a block grant of recurrent budget to each province. Allocation formulas could be based on standard mortality ratios and the number of persons and their age and sex. At the provincial level the PHBs, made up of local stakeholders and community members, would manage the block grant funds. In addition to playing the traditional roles of the Provincial Health Offices, these PHBs would use the block grant funds to "purchase" health services for their populations rather than finance line items in public facilities' budgets.

Household expenditure patterns have implications for the level of maximum liability that households can cover for health services. Under the current system, whereby health facilities determine the fees to be paid by those not covered under insurance, there is due consideration of ability to pay. Any mechanism to change the financing of care for the self-paying proportion of the population should include consideration of the population's ability to do so.

Household expenditure at public sector health facilities forms a significant proportion of the operating costs of these facilities. Including salaries, hospital revenue constituted

about 50 percent of the operating costs of 89 provincial hospitals and 350 district hospitals between 1988 and 1990.[6]

2. Health Insurance

There are five major forms of comprehensive health insurance covering personal medical care in Thailand. Each program has its own beneficiaries, benefit coverage, amount of government subsidy, provider payment mechanism, utilization rates, and costs of care. Approximately 76 percent of the population is covered one of these health insurance programs, and the remaining 24 percent must either pay out-of-pocket fees for services or receive free or subsidized services from public health facilities. Key features of four of these insurance programs are presented in Table 5 and are reviewed below.

Table 5: Summary of Features of Comprehensive Health Insurance Schemes in Thailand

SCHEME NATURE	COVERAGE ('000,000)	(%)	POPULATION CHARACTER-ISTICS	PROVIDER PAYMENT MECHNSM	PER CAPITA SUBSIDY & COSTS (OP/IP)	SOURCE OF FUNDS	FINANCC BODY
CSMBS Fringe Benefit	6.6	11%	Civil Servants	Fee-for-Service	1,781 463/9,981	Gnrl Tax Revenue	MOF
SSS Compulsory	4.8	8%	Employees in Firms Larger than 10 Persons	Capitation	1,000 140/4,260	1.5% ea. Wages Employer & Employee	SSO
VHCS Voluntary	6.0	10%	Near Poor	Capitation	1,000 60/1,558	MOPH Fund	MOPH
LICS Social Welfare	27.0	45%	Indigent, Children < 12, Elderly, Veterans, Handicapped, Religious & Political Leaders	Global Budget	250 58/2,746	MOPH Fund	MOPH
Private Voluntary	1.2	2%		Fee-for-Service		Premium	Private Cos.
TOTAL	45.6	76%					

Source: Supachutikul, A. (July 1996) Situation Analysis on Health Insurance and Future Development, Bangkok: HSRI, 110 pp.

[6] It is important to analyze the proportion of hospital costs covered by revenues again to see if these charges are covering the additional recurrent costs resulting from the MOPH's heavy investment in the sector.

a. Civil Servants' Medical Benefits Scheme

The Civil Servants Medical Benefit Scheme (CSMBS) covers all government employees and pensioners, and their dependents. The scheme is tax financed and managed by the MOF. The workers themselves do not contribute to the fund; it is one of their fringe benefits. In real terms expenditures increased by about 14 percent per annum through 1997. As a consequence of the economic crisis, the MOF adopted some demand-side cost control measures such as copayments and elimination of the option to be reimbursed for care from private providers. Evidence from analysis of data collected in the Khon Kaen province suggests that these measures resulted in a 13 to 15 percent reduction in expenditure. Specifically cost savings were achieved by the use of essential drugs (there was a copayment requirement for nonessential drugs), reduction in the length of stay, reduction in use of the private wards, and reduced use of the private sector. Since income from CSMBS patients has been a source of funds with which to cross-subsidize care for the poor, it will be necessary to assess whether the access of the poor to care has also been restricted.

HSRI staff are now working with the MOF and other concerned parties to select and adopt supply-side measures to achieve further reductions in the CSMBS's cost. A series of meetings resulted in the selection of payment mechanisms, specifically capitation for outpatient care and DRGs[7] and global budget for IP care. Other options are also being discussed for the CSMBS, such as adoption of some type of medical savings account scheme along the lines of that in Singapore. Another option is for the CSMBS to be managed by the Ministry of Labor and Social Welfare (MOLSW) and have providers paid on an inclusive capitation basis.

b. Social Security Scheme and Workman's Compensation Scheme

The Social Security Scheme (SSS), a compulsory social health insurance scheme, and the Workman's Compensation Scheme (WCS), a compulsory work-related illness and injury payment scheme, are managed by the MOLSW. While the two schemes cover nearly the same population, that is, employees in firms of 10 or more workers, they collect premiums and pay providers in different ways. Specifically, the SSS collects 1.5 percent of an employee's wages from the employee and 1.5 percent from the employer and an equal contribution from the MOLSW and pays providers on a capitation basis. Recent changes have been the increase in the capitation amount from 700 to 1,000 baht and the suspension of the requirement that the MOLSW contribute an amount equal to that paid by the employee. The WCS collects from 0.2 to 2.0 percent of total wages from the employer only, depending upon the firm's workplace safety record. It is believed that the higher contribution rate is too low and does not affect workplace safety standards. Providers are paid on a fee-for-service basis up to 35,000 baht per case.

[7] DRG means Diagnosis-Related Group, a set of case types established under prospective reimbursement that identifies patients with similar conditions and processes of care. Each DRG is assigned a weight that compares its costs with the average for all DRGs.

There are several *recommendations* for improving these two programs. One is to merge the programs and increase the capitation amount to 1,162 baht total to cover the costs for treatment under workmen's compensation. Another is that funds be set aside (perhaps 3 percent of the total) to bring about improvements in occupational safety and health. In addition, the technical assistance team recommends expanding SSS coverage to the recently unemployed (up to 12 months); expanding coverage to dependents, extending coverage through retirement, and the self-employed; developing a registration system that tracks changes in hospital affiliations of patients; and developing a system to monitor and assure the quality of patient care.

The financial costs of extending SSS coverage were estimated. Information is available on real SSS expenditure during the period 1991-1996 for three types of sickness benefit. Basic care based on capitation was 97.7 percent of total expenditure on sickness benefits; expensive cases, 0.4 percent; and accident and emergency care from nonregistered hospitals, 2 percent. These proportions are used to estimate total expenditure for SSS sickness benefits for the four new population groups (excluding cash compensation for sick leave, and maternity benefits). Table 6 shows the estimates for each population group. The total additional financial requirement for the government in 1999 to extend SSS coverage is estimated at 3,152.3 million baht.

c. Voluntary Health Card Scheme

The Voluntary Health Card Scheme (VHCS) started in the mid-1980s as community revolving funds under the Primary Health Care initiative and has evolved into a voluntary health insurance program aimed at the near-poor. The premium is currently collected from three sources: households, the MOPH, and ADB loan funds, and totals 1,500 baht per card. There are several problems with the VHCS. The most important may be that it is not reaching its target population, as the wealthy also purchase the card. In addition, the premiums collected do not cover the costs of care provided to the household. The cards provide perverse incentives to providers who counsel patients to get cards to pay for hospital costs but charge additional patient fees on the side.

Recommendations for reform include:

- Improving targeting by having local authorities use the new poverty line definitions to target the poor;
- Raising the price of the card to cover costs. The estimated cost of care provided to card holding families is 2,137 baht per year. Currently, households and the MOPH each contribute 500 baht, and an additional 500 baht comes from the ADB's Social Sector Loan. In the future, assuming there is not the continuation of the loan, then households and the MOPH will have to pay more to cover the costs of care. The proposed price range for households is between 700 and 1,000 baht.

Table 6: Estimation of Additional Financial Requirements to Extend SSS Sickness Benefit Coverage, Thailand, 1999

	COVERAGE EXTENSION TO TARGET BENEFICIARY			
Type of expenses on sickness benefit	1. Non-working spouse of current SS workers	2. Dependents <18 yr., (not more than 2 persons)	3. Self-employed in urban area *	4. Recently retrenched
1. Estimate no. of target population (mil.)	~30% of 5 mil. Current workers, 1.5 mil.	~50% of 5 mil. x 1.5 persons = 3.75 mil.	0.98 mil.	Approximately 1 mil.
2. Sickness coverage for basic care, at 1,000 Bt capitation rate (mil. Bt)	1,000 Bt/capita x 1.5 mil. = 1,500 mil. Bt	1,000 Bt capita x 3.75 mil. = 3,750 Bt	0.98 x 1,000 = 980 mil. Bt	1 x 1,000 = 1,000 mil. Bt
3. Additional payment for high cost care (mil. Bt)	=1,500x0.4/97.7 = 6.1 mil. Bt	=3,750 x 0.4/97.7 = 15.4 mil. Bt	=980 x 0.4/97.7 = 4.0 mil. Bt	=1,000 x 0.4/97.7 = 4.1 mil. Bt
4. A&E in non-registered hospitals (mil. Bt)	=1,500 x 2/97.7 = 30.7 mil. Bt	=3,750 x 2/97.7 = 76.8 mil. Bt	=980 x 2/97.7 = 20.1 mil. Bt	=1,000 x 2/97.7 = 20.5 mil. Bt
5. Total expenditure (mil. Bt)	1,536.8	3,842.2	1,004.1	1,024.6
6. Government contribution to Social Security Fund (mil. Bt)	1/3 of 1,536.8 = 512.3 mil. Bt	1/3 of 3,842.2 = 1,280.7 mil. Bt	1/3 of 1,004.1 =334.7 mil. Bt	1/1 of 1,024.6 = 1,024.6 mil. Bt
Total government contribution	**3,152.3 mil. Bt**			

*It is unlikely that the SSO can introduce voluntary self-employed scheme in rural area, where the total number of self-employed was 4.34 million in 1996.

However, research suggests that at 1,000 baht, only 10 to 15 percent of the households currently purchasing cards would continue to do so. Nevertheless, it is suggested that the MOPH raise the price of the card to households. If this is done gradually over a number of years, there will be less drop-off in sales. Over time, demand for the card will increase at the new price, and meanwhile those previously covered will still contribute to the financing of the health system by paying fee-for-service and/or receiving cross-subsidized services from public sector health facilities. Since the costs of care would be higher in urban than rural

areas, the costs of cards sold in urban areas could be increased more than those sold in rural areas. The MOPH should also raise its contribution to 1,000 baht so that the program can be self-financing;

- Collecting premiums more frequently during the year to allow the card to be more affordable than if collected in one lump sum;
- Requiring patients to follow a referral line from the district level to the provincial level in order to avoid hospital fees;
- Decentralizing the sale of the card to local governments, which should be encouraged to add their own resources;
- Encouraging a qualifying period to reduce adverse selection.

d. Low Income Card Scheme

The Low Income Card Scheme (LICS) started in 1975 with the objective of reducing inequity by providing free medical care services to the poor. In 1994, five other types of individuals were added to those eligible to receive the low income card. These groups are the elderly, children under 12 years of age, veterans, religious and community leaders, and the handicapped. There is overlapping coverage between the LICS and other insurance such as the VHCS, e.g., coverage for children. The scheme has been criticized for not correctly targeting the low income population, not enforcing referral requirements, and underfunding the program.

Recommendations to improve the LICS include applying new poverty line definitions to serve as a means test for distribution of the card and having local authorities distribute the cards based on their information about indigence. What will distinguish this approach from that used previously is that the local authorities will add their own funds to increase the local LICS budget allocation. In addition, an information system should be set up to count the number eligible under the scheme. This will enable the MOPH to finance the LICS on a capitation basis, rather than by budgetary allocation. Referral patterns from the district to the provincial level should be reinforced by having those eligible for the low income card register with a primary care provider.

e. Simplifying Health Insurance

The process of moving away from Thailand's current pluralistic system of payments to a more unified system of payment for medical services[8] is problematic. This is because it has evolved over a long time, and different stakeholders will defend their established benefits and payment mechanisms, even though at the institutional (hospital) level, these payments cross-subsidize care for the less fortunate. Given the current system of cross-subsidization, there are dangers to changing the payment mechanism for one scheme, e.g., the CSMBS, without having unwanted effects on the care provided to other patients. Efforts must be made on many fronts at the same time to ensure that the net result is an improvement over the system.

[8] Public health services are not considered here, as it is assumed that they will continue to be primarily subsidized through the government budget. Equity can be achieved by allocating budget for preventive and promotive services based on population, health need (Standard Mortality Ratios - SMRs), and local income.

Several recommendations can be made. First, it will be important for the government to establish what care its budget allocation will be used for, and for whom. Second, efforts should be made to move towards capitation adjusted by DRGs, or based on additional criteria like age and sex, for the CSMBS as is the case for the SSS. This will bring the CSMBS program closer to the SSS programs in terms of benefits and payment levels. In addition, the SSO should expand coverage to dependents and make efforts to cover the self-employed. The greatest challenge will be to get those paying user fees to pool their risks by enrolling in the VHCS. The Technical Advisory Group (TAG) advised that hospitals should not subsidize this program, but that the contribution level should be raised to achieve full cost recovery. However, there is great variation in the income of various groups and likewise in their health expenditures. To ensure greater equality, different capitation amounts might be charged to individuals in urban and rural areas. It is likely that urban dwellers will consume more sophisticated and hence expensive services, and therefore they should pay a higher capitation rate.

Implicit in these recommendations are the assumptions that

- adjusted capitation will be politically palatable to the Thai population and to Thai providers. Capitation under the SSS has gained a poor reputation because of low quality of care. The MOPH must strengthen its regulatory and monitoring functions to ensure that good quality care is provided to those covered under capitated insurance;
- the private sector will be allowed to continue to compete to serve the capitated population. To reduce their tendency to “cream skim” (i.e., accept the healthy, low risk populations), there should be an annual open enrollment period during which households can decide with which facility to enroll. To maintain the option of self-treatment and the viability of private pharmacies, the capitation amount might cover the costs of drugs only over a maximum limit per year.

It is also important to consider what mechanism(s) is necessary to bring about changes in health financing policy and strategy. An interministerial committee might be developed to address these broad issues. There seems to be consensus among MOPH professionals about the need to develop universal health coverage for all Thais. Given the experience in other countries, there is much to be said for development of policy options by a small technical group working under a committed and dynamic leader within the MOPH. The actual adoption of a specific policy change will require extensive publicity and consultation with stakeholders. Legislation can be developed after this process has taken place.

CHAPTER III
OUTLINE OF FUTURE LONGER TERM REFORMS

A. INTRODUCTION AND OVERVIEW

Looking at provinces as the unit of analysis, it is evident among the 75 provinces that there is considerable variation in health problems, their health service systems, and their socioeconomic situations. For instance, the prevalence of illnesses and injuries varies by a factor of 25 percent between the region with the highest prevalence and the lowest.[9] Provinces have different mixes of public versus private providers. Hospitalization rates vary from 34.1 per 1,000 population to 65.6 per 1,000.[10] The percentage of households with monthly incomes above 30,000 baht varies from 63.7 in Bangkok to 22.7 in the northeast.

Ironically, the way each provincial health system responds to its health challenges is homogeneous, due to rigid control through distribution of health personnel, budget allocation, and rules and regulations. As a consequence, at the provincial level there is limited capacity for planning and budgeting for health services, taking into account the varying health needs and related factors. Budget forms are usually submitted based on historical allocations. A diagram of the current organization and financing of the health sector in Thailand can be found in Annex C, Figure 1.

Recognizing this structural problem, the technical assistance team, since the start of the project, has explored ideas about how provincial health services delivery, management, and financing might be transformed in the future to better achieve the principles outlined in Chapter I. In the conduct of the four component studies, it became clear that other and complementary reforms were also needed at the district and national levels.

The technical assistance team sees the reform of the health system taking place in a gradual, phased manner. For example, health sector reform in Thailand might be conceptualized as taking place in two phases: the first over the next 2 to 3 years and the second over the next 5 to 10 years. In addition, the reform would involve changes at the three levels of the health system–district, provincial, and national—and involve both the public and the private sectors. Phase I might consist of pilot efforts to develop new institutions for the delivery and financing of health services. Based on the lessons learned during Phase I, Phase II could involve the expansion of the pilot efforts to more districts and provinces, as well as lead to some organizational changes at the national level. The changes the team foresees for each phase, and the rationale for such changes, are presented below.

The process of health sector reform is at least as much a political issue as a technical one. Factors that will contribute to successful adoption of change include (1) strong public

[9] National Epidemiology Board of Thailand (1996) Review of the Health Situation in Thailand, Priority Ranking of Diseases.

[10] Choprapawan, C. eds. (1997) Working Group of Elderly Survey in Thailand, B.E. 2538, Survey of Thai People aged 50 and Above, Health Services Research Institute.

support for the proposal(s), (2) continuation of concerns with efficiency–in the face of economic crisis or better fortunes, and (3) clear and strong leadership in the political sector. It is hoped that this report contributes ideas for reform and means of adopting these ideas to the public and political debate.

B. PHASE I: GAINING EXPERIENCE THROUGH PILOT PROJECTS

1. District Level Changes

The technical reports "Human Resources for Health Deployment in Thailand" and "Referral System Improvement in Thailand" both argued that efforts must be made to improve the service delivery system at the district level. The district hospital and health centers should be the first point of patient contact with the system, providing *primary medical care* (PMC) and *primary health care* (PHC). The team believes that the strengthening of district health services requires the provision of more local autonomy and administrative flexibility to organize them. The team recommends that in provinces in which hospital autonomy will be piloted that efforts be made to develop district health systems (DHSs), which would include the district hospital, the health centers (HCs), and the public health functions of the District Health Office (DHO). DHSs may also be created in districts of other provinces and urban districts where the managerial capacity exists to carry out the activity. Details about the management structure for the DHSs remain to be worked out. However, the team recommends that the district hospital play the leadership role (or the provincial hospital in the case of urban health centers), perhaps by mobilizing the services of HCs and/or private providers (or the municipality health services units in the case of urban areas) through service contracts.

The technical assistance team strongly opposes shifting the management of district health services to municipalities. Reasons include:

- Municipalities do not operate more efficiently than the central government, and since they do not generate a significant amount of local revenue, they rely on central government support. This central financing is controlled by the Bureau of the Budget, which applies rigid rules and regulations. In addition, municipalities have to conform to Civil Service Commission rules and regulations regarding such issues as staff salary, appointment, and recruitment.
- Health is not municipalitites' concern. Rather they are concerned with the development of infrastructure, piped water, roads, slum upgrading, sanitation of markets, etc.
- The transfer of MOPH services to local government could suddenly and severely disrupt program operations, as has been the case in the Philippines [11].

Some district health systems are already experimenting with district fund holding. Particular to these systems is the feature that the patient selects a primary care provider who coordinates the health services for the patient within the district based on the

[11] Kolehmainen-Aitken, Riitta-Liisa, ed. (1999) *Myths and Realities about the Decentralization of Health Systems,* Boston, MA: Management Sciences for Health.

principle of good health and for referral to provincial hospitals when necessary. To realize the benefits of this model for district health services, incentives must be directed at providers to have patients treated at the appropriate level and not to skimp on the provision of care to make more profit but to provide services that will keep their enrolled population healthy. Concurrently, patients should be made aware of the benefits of keeping themselves healthy and taking active roles in illness management, and the consequences of not following the referral system (having to pay higher costs for health services). In theory, a fund holding model works best when there is competition between providers for patients. This competition serves to make providers compete with each other with respect to the quality of the care they provide—including referral—since the capitation amount provided per capita is the same, which means they cannot compete on price.[12] Thus, the traditional model of district fund holding may work best in urban areas of Thailand. To make a rural model of fund holding work, new incentives for providers to refer patients when appropriate must be developed. Training on financial management skills and development of a monitoring system will also be needed to ensure that desirable health objectives are reached and undesirable consequences prevented or minimized. Educational programs will be needed to clarify principles, expectations, and assumptions among patients and providers.

In the pilot provinces, in addition to piloting hospital autonomy, the team proposes that Provincial Health Boards (PHBs) be developed, which would provide block grant funding to the autonomous hospitals and pilot DHSs. Criteria for allocating block grant funds to these service providing institutions (whether fund holding or not) remain to be developed, but might include weighted capitation (based on the total number of the covered population, rather than selected target population groups), and/or performance budgets based on the production of public health activities and achievement of health outcome objectives.

2. Provincial Level Changes

As is already the plan of the MOPH, seven hospitals will begin the process of becoming autonomous public organizations.[13] The PHBs would also be autonomous public organizations. Table 7 compares the functions of the current PHOs and proposed PHBs. The principal differences are that the PHB would purchase health services, rather than act as a conduit for the health budget; that the PHB would raise additional funding from local resources; and that the oversight of the PHB would allow for more community participation in decision-making regarding health services in the provinces. To start with, the team recommends that the PHO in the seven provinces with autonomous hospitals take up the additional tasks of a PHB, and, over time, evolve into a truly autonomous organization.

[12] However, providers will also have a tendency to "cream skim"–that is to select the best health risks, in order to avoid patients with costly care needs.

[13] Details about the autonomous hospitals can be found in "Thai Autonomous Hospitals: Operations Manual."

Table 7: Comparison of the Roles of the PHO with Those Proposed for a PHB

CURRENT ROLES OF THE PHO	PROPOSED ROLES OF A PHB
Health promotion Disease control	Public health functions
Health care reform & health insurance	Health services purchasing and allocation of financing
	Legal enforcement*
Pharmacy	
Planning and evaluation	Planning, monitoring, & evaluation
Administration PCMO and deputy	Administration Raising additional financing from local sources Including local participation in decision-making

*Special legislation, e.g., consumer protection laws, would have to be written to allow the PHB to enforce health legislation.

The team believes that the best form for the PHB is an autonomous public organization, which can balance the needs of the central MOPH and the local administration. It should be emphasized that the PHB would not be a part of local administrative bureaucracy but would receive a block grant from the central MOPH for health needs in the province. For the autonomous hospital, the PHB would receive from the MOPH a line item budget for capital expenditure and a block grant for salary and non-salary recurrent expenditures. For DHSs, the PHB would receive line item budgets for both capital and salaries, and a block grant for non-salary recurrent expenditure. The sources of the block grant funds would be the budget for non-salary recurrent inputs to the province from the six departments of the MOPH, and the budgetary allocation for the LICS and the VHCS.

Many of the governance and personnel management issues related to the PHB were not developed by the team. However, the policies outlined in the "Thai Autonomous Hospitals: Operations Manual" can provide guidance on the oversight of the PHB, the selection of a CEO/PCMO, and the employment status of PHB staff.

Reforming a PHO into a PHB is expected to improve efficiency in resource use and health outcomes by reducing duplication in the use of budgetary resources and increasing the synergy between programs. In addition, the PHB is expected to be more responsible and accountable to the needs of the community. Finally, the development of formulas for the allocation of budgetary resources at the national level between provinces, and at the provincial level between autonomous hospitals, DHSs, and other delivery networks, should bring about a more transparent allocation process and greater equity in the distribution of public resources.

3. National Level Changes

Key to the success of the development of the PHBs, autonomous hospitals, and DHSs is the creation of the Supportive Office for Development and Autonomous Hospitals (SODA). The team proposes that this organization be developed as a special arm of the

MOPH to provide technical guidance in all areas of management and to function during the transitional period when these new institutions and service provider networks are being developed. This office will help to minimize "red tape" and undesirable political interference, and develop and retain needed expertise. In addition, the SODA would work with other projects and institutions, such as the EU Project on Health Sector Reform, the Health Systems Research Institute, and the Thai Research Foundation, to evaluate the impact of these sectoral changes relative to the principles for the health sector outlined in Chapter I. The SODA should not be buried in the bureaucracy of the MOPH but be as independent as possible.

Another change at the national level would be the way in which the PHBs and the institutions they purchase services from, are funded by the MOPH. Rather than allocating funds according to line item budgets, the use of block grants is recommended. During this first phase, the MOPH would allocate capital and salary expenditures according to line item budgets, as is currently the case. However, other non-salary recurrent expenditure budgets from the six MOPH departments, as well as the budget allocations from the LICS and VHCS, will be block granted to the PHB. This merging of funds is intended to increase the allocative efficiency with which resources are used to produce public health and health services.

For a summary of the changes proposed for Phase I, refer to Table 8 and Annex C, Figure 2.

Table 8: Proposed Changes in Health Services Delivery, Administration, and Financing, Phase 1

	District Level	**Provincial Level**	**National Level**
Health Services Delivery	- Create District Health Systems (DHSs) - Continue Fund Holding Experiments	- Autonomous Hospitals	Not applicable
Administration	Combine DH, DHO, and HC into a DHS	Convert PHO to a Provincial Health Board (PHB)	- BHPP and BOB develop block grants for AHs and DHSs - Expand role of SODA to support all reform efforts
Financing	Capital and salary by line item budget. Non-salary recurrent block grant from PHB.	AH – Capital by line item budget. All recurrent block grant from PHB. PHB – Block grant from MOPH.	Merge MOPH all recurrent budget, LICS, and VHCS into block grants through PHB.

Anticipated benefits of undertaking Phase I actions are:

- District Health Systems (DHSs) will provide doctors with more professional challenges and increase the retention rate of physicians at the district level.

- DHSs will receive additional funds to procure additional needed health personnel.
- DHSs will provide better organized quality health services that reduce bypassing to the provincial level. Fund holding may also be found to reduce bypassing.
- Provincial Health Boards (PHBs) will be professionally managed, Provincial Chief Medical Officers (PCMOs) will receive additional training to implement new PHB functions.
- PHBs will develop a greater capacity to plan for local needs and to develop financing for institutions and programs.

Problems that might arise from the recommendations for Phase I are:

- Historical tensions between the district hospital physicians and the District Health Office (usually managed by a sanitarian) may cause friction.
- Loss of doctors after compulsory service may not be reduced, and DHSs may be too difficult for inexperienced new physicians.
- Local government may attempt to take administrative and financial control over DHSs.

One element of an implementation strategy for Phase I is working through the SODA to develop the pilot DHSs, autonomous hospitals (AHs), and PHBs. The SODA should be staffed with personnel with the appropriate skills in hospital management, financial management, information technology experts, organizational change experts, etc. Given the financial strictures on the MOPH at this time the Ministry should seek donor funding for piloting new district and provincial organizations. In addition, the Ministry may wish to engage specialized technical assistance to deal with design, implementation, and evaluation issues. Finally, the SODA, the EU project, HSRI, and the Thai Research Council should conduct monitoring and evaluation activities.

C. PHASE II: EXPANSION OF DELIVERY NETWORKS AND CONSOLIDATION OF PUBLIC FINANCING FOR HEALTH

Phase II is expected to be a natural extension of the pilot efforts begun during Phase I. It is expected that additional hospitals will become autonomous, and additional districts will form district health systems. If found to be successful, the concept of district fund holding will be applied in a greater number of districts. Phase I provinces will have fully shifted to PHBs, and more provinces will be in the transition to forming PHBs. However, there are some additional changes the team recommends that the MOPH begin developing. Key changes in Phase II include

- development of vertically integrated Provincial Health Services Providers (PSPs);
- merger of public financial resources at the national level for public health and health service delivery into provincial health block grants;
- development of a National Health Financing Authority (NHFA).

It is expected that as provider payment moves towards block grants, particularly if they are based on weighted capitation, providers will find it in their financial interest to form

vertically integrated networks so that a patient can be treated at the most cost-efficient point of service. Any number of combinations between providers in the province may form, for example:

- AH + district hospital (DH) + HC + private clinics
- AH + DH + HC
- Private hospitals and clinics
- DH (fund holding) + HC + private clinics
- DH + HC + private clinics
- DH + HC

To the extent that the operations of these networks result in shifts of workload between the provincial hospital and district facilities, appropriate adjustments in staffing will be required. Formation of provincial networks will also provide an opportunity to improve the quality of health service delivery by increasing the flow of technical information and commodities between the district and the provincial levels. These exchanges might take the form of regular conferences, outreach from the provincial hospital, in-service training, rotation between the two levels, and the provision of drugs and other medical supplies. Expanding the two-way flow of information about referred and returned patients would also be a benefit of forming provincial health networks. In addition to improving service planning and coordination at the provincial level, the PSPs would be in a better position to plan for public health functions and health service provision among the concerned agencies.

To increase technical and allocative efficiency, all public financial resources for public health and health services activities should be merged. This would include salaries, other non-salary recurrent budget, and budget for the VHCS and LICS. Budget for capital investment would be handled separately, as discussed below. A National Health Financing Authority (NHFA) should be created to, at a minimum, coordinate all public financing for the health sector (whether budget or insurance) for better efficiency and equity and, at a maximum, actually merge the various sources of public financing for public health and health services to the PHBs. Creation of this organization will also help the country to move towards a policy of universal coverage through collective financing for health.

For a summary of the changes proposed for Phase II, refer to Table 9 and Annex C, Figure 3.

Table 9: Proposed Changes in Health Services Delivery, Administration, and Financing, Phase 1I

	District Level	**Provincial Level**	**National Level**
Health Services Delivery	- Expand DHS to new districts - Expand fund holding to new DHS	- Expand AHs - Develop vertically integrated Provincial Health Services Providers (PSP)	Not applicable
Administration	Same as Phase I but expanded to more districts	PHB expanded to more provinces	Creation of National Health Financing Authority (NHFA)
Financing	- Capital by line item budget - All recurrent by block grant from PHB	- AH: Capital by line item budget - AH: All recurrent by block grant from PHB - PHB gets block grant from NHFA	Funds from all publicly subsidized insurance programs coordinated/merged and block granted to the provinces

Anticipated benefits from changes proposed for Phase II are:

- Health service delivery networks will provide more comprehensive services.
- Networks will be more efficient as they reduce overlapping functions.
- Networks will be more efficient as they will reinforce referral behaviors on the part of consumers and providers.
- The NHFA will reduce inefficiency in health financing by reducing the number of payors and payment systems with which a province must deal.
- The NHFA will reduce inequity by reducing discrimination by providers based on their payment source.

Problems that might arise from the recommendations for Phase II are:

- Providers may not form networks if they believe they can maximize profits better as free-standing organizations. Analysis will be needed to convince them.
- If the NHFA is only allowed to coordinate funds from various sources, it will lessen its ability to negotiate with provinces.
- Stakeholders may resist the merger of their funds into the NHFA.
- Delineation will be required to determine what of the government's budget for health goes to the MOPH and what goes to the NHFA.
- The NHFA may be subjected to intense political pressure to allocate funds in ways that are not efficient or equitable.

The proposals for Phase II are too preliminary to discuss implementation steps here. The team recommends that the HSRI prepare more detailed analyses of forming provider networks and creating an NHFA. These analyses should be presented and discussed with all stakeholders and revised as needed.

D. THE CENTRAL MOPH: MAJOR ROLES AND FUNCTIONS TO BE REINFORCED OR REORIENTED

Changing the organization and financing of health services delivery and financing has implications for the central MOPH. Some of these were described above. The team believes that future developments will require the MOPH to respond to new situations and challenges. Four areas in which changes may be needed are health policy development, health personnel development, allocation of capital expenditure, and guided development of the public and private sectors.

1. Health Policy Development

As the health system becomes more decentralized, it will become increasingly important for the Bureau of Health Policy and Planning (BHPP) to ensure that these independent developments occur within an overall policy framework for the sector. To carry out policy and planning functions, the BHPP should be oriented to play a more active role in national health policy development and avoid focusing only on the policies of the MOPH. It must also have access to a whole range of health information from various groups of service providers, private or public, central or local. The MOPH will have to define its data requirements under a decentralized system, in which the role of the province in data analysis and use should be strengthened. At the central level, data will have to be collected that relates to longer term policies and strategic planning based on health statistics and other key socioeconomic indicators; as well as for the assessment and evaluation of equity, efficiency, and overall impact of the allocation of resources for health.

2. Health Personnel Development

Strategies for improving the distribution of health personnel are covered in detail in the technical report on human resources for health deployment in Thailand. As human resource management becomes increasingly decentralized, the MOPH will still have a major role in identifying shortage areas and in developing strategies to address the problem of retention of health personnel in rural areas. The human resources plan should take into account the health personnel needs of both the public and the private sectors. In addition, the MOPH will have to play an active role to ensure the continuous learning and capacity development of health personnel. Such a role might be played by professional associations and universities, but coordination of these efforts would still benefit from MOPH coordination.

The SODA, described above, is just one type of institution that can strengthen human capacity to manage changes in the health system. For example, the SODA could develop

the skills of health personnel in contracting and purchasing between financing and provider organizations. Such agreements will have to specify what level of resources is to be allocated and the output/outcome expected.

3. Allocation of Capital Expenditure

The technical assistance team strongly recommends that the MOPH develop a unified and comprehensive national plan for health sector investment (i.e., buildings as well as major equipment) that would cover both the public and the private sectors. The MOPH should take part in supporting technology assessment through coordination with research agencies, funding agencies, and academic institutions. The SODA might carry out specific health facility planning for the autonomous hospitals. The MOPH will have to work out criteria for new investment based on efficiency and equity concerns. A process of applying for a Certificate of Need should be established whereby facilities might obtain approval to use their own revenues and fund balances to undertake capital investment. If a provider does not comply with this process, then government financing, either as budget support or through insurance mechanisms, should be withheld.

4. Guided Development of the Public and Private Sectors

To date, the MOPH has planned and controlled the growth and distribution of public sector health services through five year plans and annual budgets, and the provision of services was controlled largely through rules and regulations. At the same time, the government took a relatively laissez faire approach to the development of the private health sector, involving itself only in the licensure of providers. This laissez faire approach has led to excess in technology acquisition, shifting of public sector physicians to the private sector–at least for after-hours practice—and high user charges for private sector health care. Given the economic crisis and the need to utilize resources more efficiently, the technical assistance team recommends that the MOPH take broader control over development of the private sector.

Specific principles to guide the development of the relationship between the public and private sector that have not been covered earlier are:

- Public and private providers should be encouraged to develop coordinated service provision networks.[14]
- Provider payment mechanisms should encourage the efficient production of medical services and provide incentives for correct provider behavior, e.g., capitation should be encouraged.

[14] Several types of contracts might be developed: (1) contract with private clinics to provide PMC and PHC services, (2) contract to provide services to a specific target population, and (3) contract to provide diagnostic or ancillary services for government facilities. Private providers might receive a number of benefits from participating in a public/private network. Such benefits would include (1) access to a wider patient base, (2) participation in government sponsored in-service training, (3) access to rotating clinicians, (4) preferential treatment in the awarding of Certificates of Need, (5) preferential referrals from government providers, and (6) access to out-sourcing contracts from government providers.

- Both public and private providers should be required to submit a minimum set of information on the performance to the district, province, or MOPH headquarters, to satisfy requirements for accreditation, quality of care monitoring, and assessment of cost and efficiency.

Another area of concern is quality assurance. Currently, the MOPH does not have any direct control over service quality. However, the ongoing Hospital Accreditation Mechanism, involving the MOPH, professional associations, and various public and private providers, can play this role. The MOPH should continue to oversee and support this mechanism, without creating any new units within the bureaucracy. Nevertheless, the licensing of providers will continue to remain with the MOPH and serve as a means of control over some aspects of the quality of care.

E. HEALTH SECTOR FINANCING

One of the major goals for the future health system in Thailand is to ensure good health for the population through access to high quality services. To achieve this goal, there is a need to enlarge coverage and rationalize the current mechanisms for collective health financing.

There are at least six dimensions of the choice of health financing policies:

- identification of beneficiaries
- benefits covered by insurance
- source(s) of financing
- methods for provider payment
- institutions that pay providers
- role of public and private sectors in the delivery of services.[15]

The section below presents information about Thailand's current position on the continuum for each of the six dimensions, and the change in status that would occur after implementation of changes in Phase I and Phase II.

1. Beneficiaries

Twenty-four percent of Thailand's population is not covered under any health insurance. However, there is implicitly 100 percent coverage through the provision of services for Type B LICS patients.[16] These patients may pay some fees-for-service; however, the staff of the hospital determines their maximum liability based on the perceived ability to pay.

Ideally, all of Thailand's population would be covered under some insurance program.

[15] The spectrum of options for each of these six dimensions, the advantages and disadvantages of being at any particular point on the spectrum, the current position of Thailand with respect to these dimensions, and the proposed changes in position due to adoption of Phases I and II are shown in Annex B, Table 1.
[16] Type B LICS patients are indigent persons who do not have an LIC.

In part, this could be achieved by merging the CSMBS and SSS programs under SSO management and capitation. Extension of SSS coverage to dependents, the self-employed, retirees, and the recently retrenched would be desirable. Another element of the strategy would be to merge the VHCS and LICS programs and make enrollment mandatory if not covered by the CSMBS or SSS.

2. Benefit Package

Currently in Thailand, the policy aims to provide full benefits for the entire population; however, care is rationed by virtue of the inequities in the distribution of personnel and facilities and in the public subsidies allocated for those covered by different insurance programs.

An appropriate question to ask is whether universal coverage, with a complete benefit package (all preventive, and health promotive and curative services), is financially feasible for Thailand. One can start to answer this question by referring to the calculations in the annex of "Referral System Improvement in Thailand," one of the technical reports prepared for this study project. The calculations in this annex estimate that the annual per capita cost of a basic essential package of services (preventive, promotive, and basic curative services) would be 835 baht. If the estimated annual per capita cost for coverage for catastrophic illness of 205 baht is added to this, the total annual per capita cost comes to 1,040 baht. Multiplying by a population of 60 million, the total annual cost is estimated to be 62.4 billion baht.

Another approach is to take the highest estimated cost to the government and households under a model called the SST of 56.5 billion baht (see Annex D). Add to this the cost of providing care to CSMBS beneficiaries of 16.3 billion baht, the cost of providing care to SSS beneficiaries of 3.9 billion baht, and 3.2 billion baht for the purchase of drugs by patients, for a total of estimated direct patient care costs of 79.5 billion baht. Then add to this an estimated expenditure for administration of 4.8 billion baht (6 percent), and for preventive and promotive care of 8.0 billion baht (10 percent), for an estimated full cost to provide health services to the Thai population of 92.3 billion baht. This is only 86 percent of the total public and private health expenditure of 107.9 billion baht estimated in the 1994 national health accounts. This analysis suggests that, between public and private sector health expenditures, *enough resources exist to provide everyone with a rather comprehensive health benefits package*. Thus the challenge is to improve the efficiency of health expenditures and the equitable distribution of financial resources.

3. Institution That Provides Services

Both the public and private sectors provide health services in Thailand. Private sector services are principally located in the urban areas, while public services dominate in rural areas. Competition between the two providers for patients, particularly under a system of capitation, is healthy, in that the providers cannot compete on price, so they must

compete on the quality of the services they provide.[17] On the other hand, the public and private sectors might collaborate in the provision of services, sharing personnel and technology in efficient ways. The degree of competition or collaboration will depend on the rules and regulations guiding the use of public and private funds, and the incentives to form partnerships.

4. Provider Payment Mechanisms

There are many provider payment mechanisms currently in use in Thailand. MOPH facilities receive government budget paid out of general tax revenue and collect fees for services. The CSMBS and WCS pay on a fee-for-service basis. The SSS and VHCS pay on a capitated basis and DRGs are used to determine the reimbursement for high cost cases. Provinces receive a lump sum budget for the LICS. Each payment mechanism has advantages and disadvantages in terms of its effect on consumers' and particularly providers' behavior. In general, the health insurance programs in Thailand are moving to reimburse based on weighted capitation. The team recommends that the determination of the budget subsidy for government health facilities take the form of a block grant, which would be based on criteria such as capitation. In addition, small tiered user fees are recommended to provide some deterrent to unnecessary utilization.

5. Financing Sources

Financing sources can include central government and local taxes, insurance premiums, and fees-for-service. Even if the CSMBS and SSS are merged, and the VHCS and LICS are merged, and coverage is mandatory, there will still be a combination of tax, insurance premiums, and fee-for-service payments. The team proposes that in the longer run the main sources of financing for a compulsory scheme be general taxes raised at the national level and property-linked taxes raised by local governments. It is estimated that the nominal user fees will raise 20 percent of the needed revenue for this compulsory program–thus the remaining 80 percent must come from taxes (see Annex D of "Referral System Improvement in Thailand").

6. Institution That Pays Providers

Currently Thailand has many "payors," each with their own set of prices. As the country moves towards a more unified set of prices through capitation, it is also possible to move towards a single payor–a National Health Financing Authority (NHFA). Advantages of this move are that it gives the financing agent greater power in negotiating with provider organizations over benefits packages and payments and the ability to more equitably distribute financial resources and to reduce administrative costs. Disadvantages are that there will be the need to delineate which funds go to the single payor and which to the

[17] This assumes that the private sector cannot "cream skim" – that is, select the best health risks and therefore maximuze profits by minimizing costs. If all providers were required to have open enrollment periods, during which they could not refuse to enroll anyone who selected them as provider, then cream skimming would be minimized.

central MOPH; and that the single payor might be subjected to intense political pressure to allocate funds in ways that are neither efficient nor equitable.

7. The SST Model

The Swedish-Singapore-Thai (SST) model is a proposed future health financing model for Thailand that draws on aspects of the Swedish and Singaporean systems but retains some elements of the current Thai system. Under the SST model there would be three major populations: the CSMBS beneficiaries, the SSS beneficiaries, and all of the remaining population (or the SST population). Key features of the proposed system are that it is primarily tax financed, with minimal copayments and a maximal household liability to protect those with high cost illnesses. If a household is too poor to pay the copayment, then the local government will make funds available to cover these costs. A schedule of proposed copayment charges is provided in Table 10. Consumers, however, will have a choice of health care, paying more for amenities if they want them. In this way, the scheme reflects the Singaporean system. It is estimated that approximately 80 percent of the total costs will come from tax revenue, with 20 percent made up from the copayments.

Table 10: Suggested Charge Schedule for Accredited Service Providers under SST

	Average Cost	Copayment
Ambulatory visit at registered PHC	150 baht	50 baht
Ambulatory visit at accredited hospitals	300 baht	150 baht
Admission in Ward A (luxury) per day*	800 baht*	1000 baht*
Admission in Ward B (semi-private)/day	1200 baht	900 baht
Admission in Ward C (common)	800 baht	200 baht

*Only routine service costs and payment are shown above. Ward A patients must pay all additional charges for room, board, and clinical services at full cost.

Another aspect of the system is that all public and private hospitals can apply to be accredited. Once accredited, the hospitals must report on services provided in order to get payment on a contractual basis.

The above presentation of the technical assistance team's recommendations of changes to be undertaken in the financing of the health sector relate to Phases I and II in the following way. During Phase I, merger of the CSMBS with the SSS programs and merger of the VHCS with the LICS might be undertaken. Differential benefit packages may need to be sustained during this initial period due to the current constraints on public and private resources. Coverage by the VHCS and LICS would remain voluntary, with those not covered either paying fee-for-service or receiving subsidized care from the hospital. Funds from the CSMBS and SSS would flow from the merged scheme to specific health institutions on a capitation basis, while funds from the MOPH (including VHCS and LICS) would flow through the PHO/PHB block grants. In the case of the provinces, the

PHO/PHBs are expected to increase their financial base through the addition of local funds.

During Phase II, the technical assistance team proposes that the benefits of the CSMBS/SSS and VHCS/LICS schemes be equalized. By that time, it is hoped that Thailand's macroeconomic situation will have improved and that there will be sufficient growth in public resources to extend coverage to the population not already covered by one of the schemes. In addition, the team proposes that a National Health Financing Authority be created to coordinate the funds and manage their allocation to the provinces on a capitated basis.

F. SUMMARY

As is evident from the many questions and issues this chapter raises but does not answer, the MOPH and the individuals and institutions with which it consults will have to carry out a significant amount of additional analysis and debate before the system can transition from its current state through Phases I and II. Creation of bodies like the SODA can ensure that a concerted and consistent effort is focused on these questions and issues, assisting pilot efforts, and that the necessary experience from pilots in the provinces is incorporated into future government policy.

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ANNEX A
LIST OF PERSONS CONTACTED

Prime Minister's Office

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Khun Dhipavadee Meksawan – Secretary General, Office of the Civil Service Commission
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Dr. Sutcharit Sriprapandh – Acting Permanent Secretary
Dr. Narongsakdi Aungkasuvapala – Deputy Permanent Secretary
Dr. Thawat Suntrajarn – Deputy Permanent Secretary
Dr. Suwit Wibulpolprasert – Assistant Permanent Secretary
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Dr. Thienchay Kiranandana – President, Chulalongkorn University

ANNEX C
ANNEX FIGURES

Figure 1: Current Health Financing System, Thailand, 1994

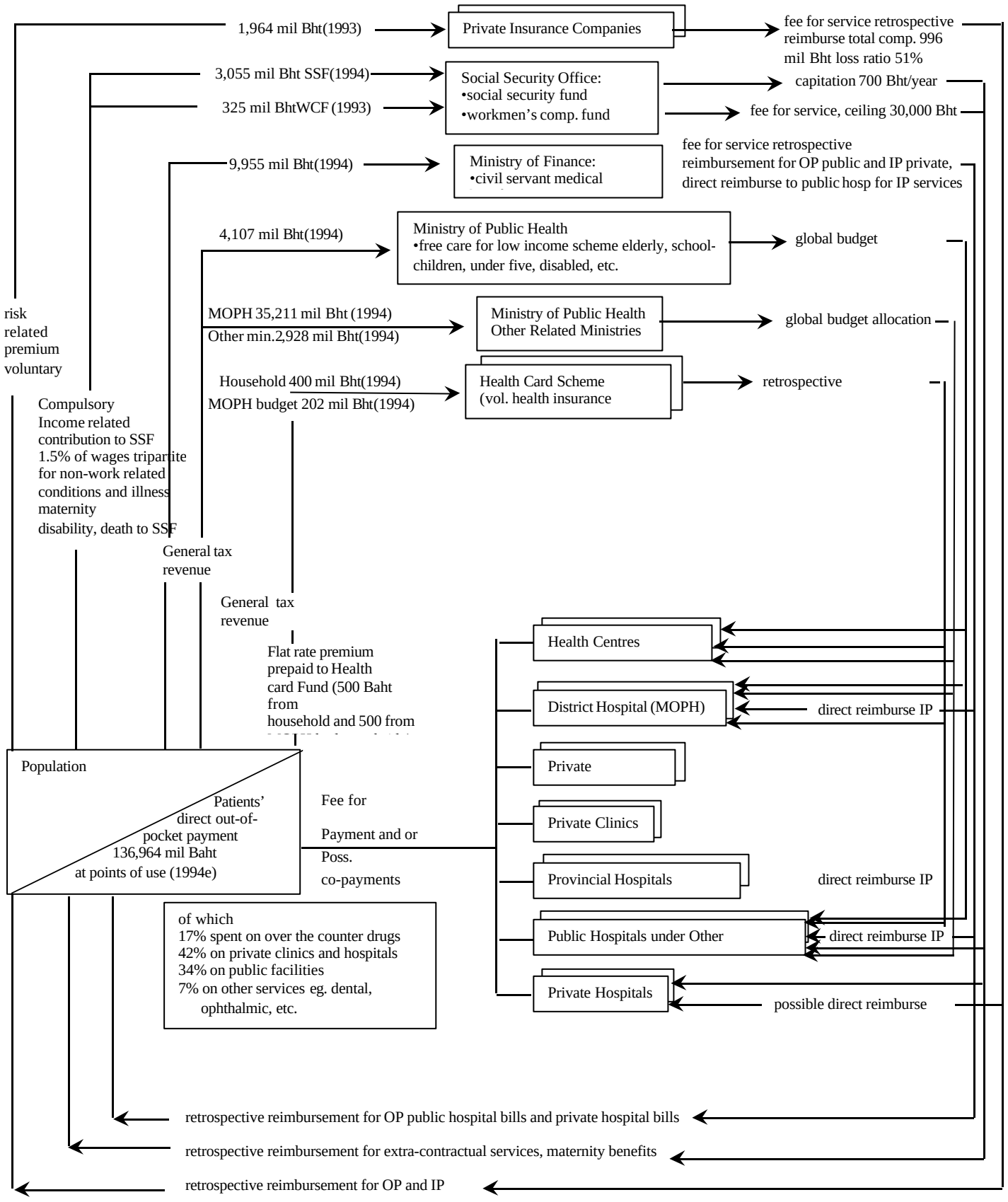
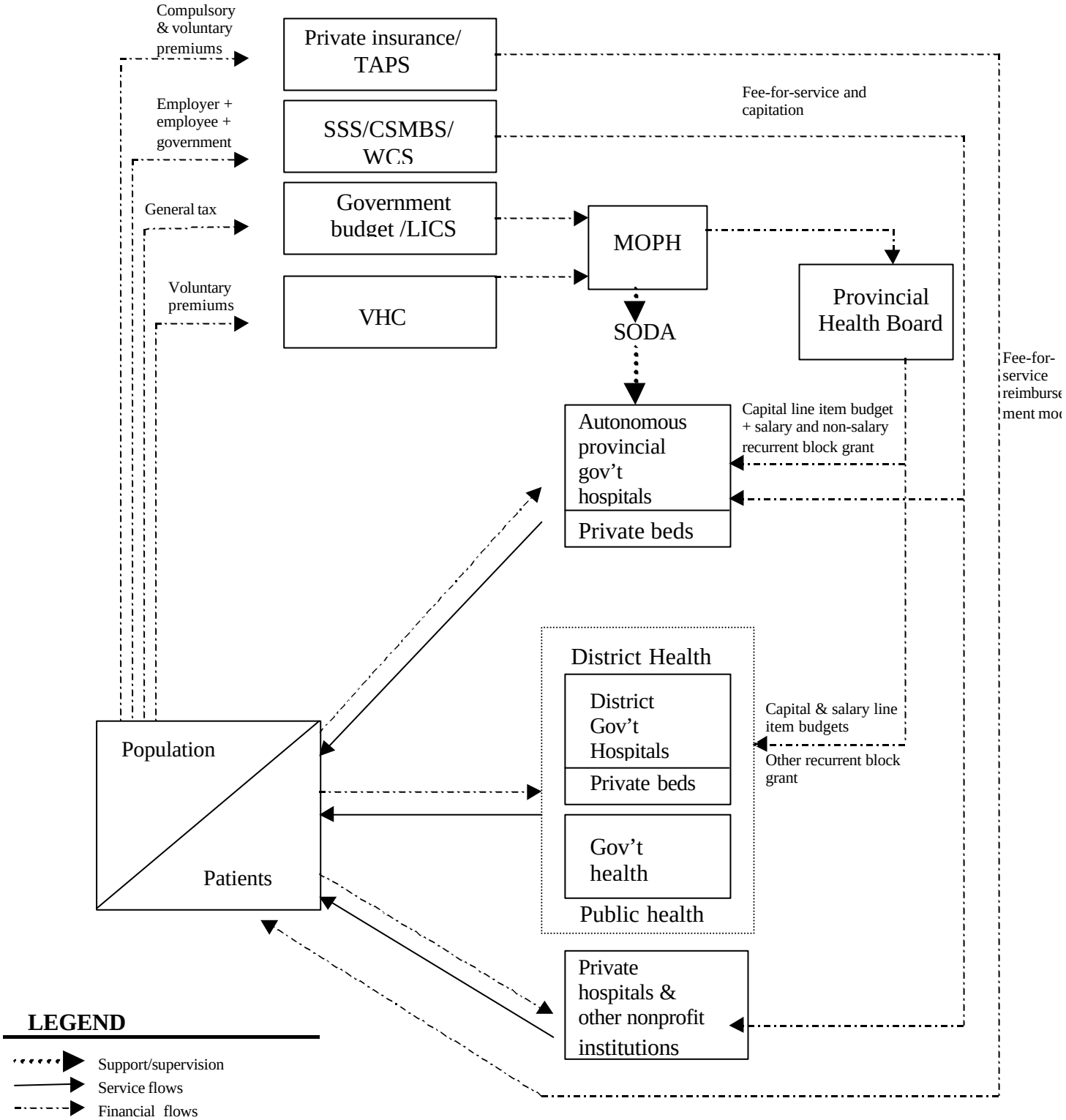


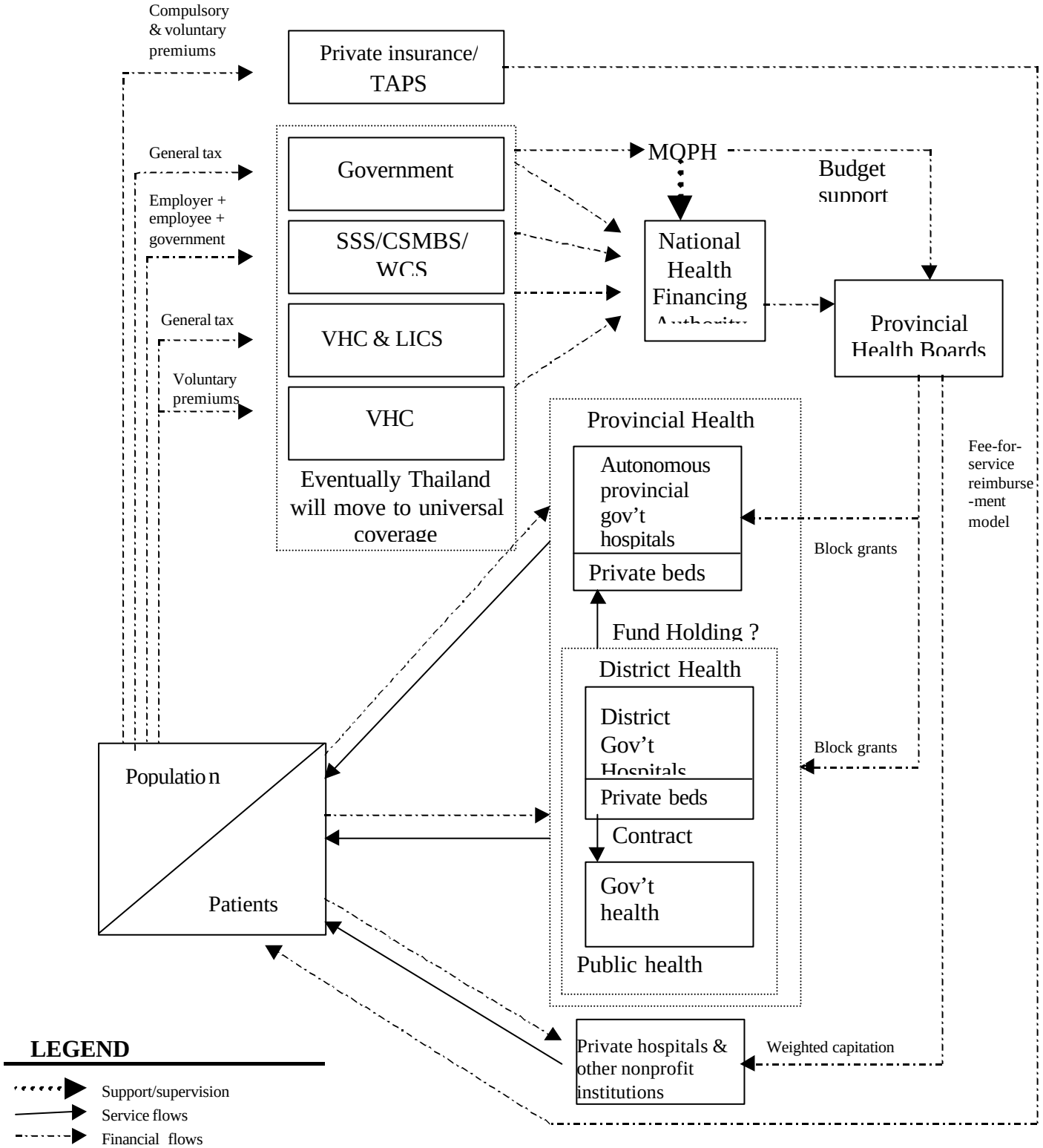
Figure 2: Proposed Health Financing System, Phase I



FFS = fee for service
CSMBS = Civil Service Medical Benefit Scheme
SSS = Social Security Scheme
VHC = Voluntary Health Card
LICS = Low Income Card Scheme
TAPS = Traffic Accident Protection Scheme
WCS = Workmen's Compensation Scheme

NOTES:
Copayments between patients & providers
Full cost recovery in private beds/hospitals
District Health Office is part of District Coordinated System
Urban & rural districts treated the same
No decentralization to municipalities

Figure 3: Proposed Health Financing System, Phase II



LEGEND

- Support/supervision
- Service flows
- Financial flows

FFS = fee for service
CSMBS = Civil Service Medical Benefit Scheme
SSS = Social Security Scheme
VHC = Voluntary Health Card
LICS = Low Income Card Scheme
TAPS = Traffic Accident Protection Scheme
WCS = Workmen's Compensation Scheme

NOTES:

Copayments between patients & providers
Full cost recovery in private beds/hospitals
Provincial & District Health Office is part of Provincial Coordinated System
Urban and rural provinces & districts treated the same
Need for law to authorize and give authority for this model to be implemented

Expected service package in a district health system

Services that should be provided in a district health system can be grouped into 4 categories as follow.

(Note: IC = individual care, FC = family care, CC = community care, T1 = primary level treatment, T2 = hospital level treatment, PH1 = basic public health, PH2 =Supprotive activities in the wider context, M1 = basic management in primary care, M2 = management at the district level)

1. Basic services according for the target population **(IC + FC +CC+ T1 +PH1+ M1)**		**2. Hospital care and primary care support** **(T2 + A1+ M2)**	**3. Special health programme according to local health needs** **(CC + PH 1_)**	**4. Health Management and Intelligence as well as Technical Supports in the wider context of community** **(PH2 + A1 + M2)**
Type of services	**activities**			
curative service	Out patient care + counseling	treatment of complicated cases	needs assessment of community	* planning, monitoring and evaluation
	(acute and chronic)	child deliveries	planning	* techanical support and quality assurance
	minor surgery	surgical operation	implement the plan according to the needs	* coordinate the district information network
	home care	emergency care	with community participation	* district health problems surveillance
	refer	care of admitted patients	monitoring and evaluation	
preventive services	vaccination for pregnant women	rehabillitative services	Health promotion	* coordiante with other relating units to execute health programs
		laboratory services	Disease prevention	
promotive services	antenatal care	diagnostic procedurres	Mental health care	*oversee and coordinate the overall health programs i.e. consumer protection, disease prevetion and control, public health promotion , drug abuse
	vaccination for 0-5 yrs children	blood bank	Alternative health	
		sterilization	consumer protection	
	child development check up family planning		HIV/AIDS preveention and control	
	educative services in centers	* support primary care units	Drug abuse prevention and control	* technical support and development for some specific isuues i.e. alternative health care
	educative services in community	* technical development and modification to local		
schools health	health screening and surveillance	* establish district information network	others acccording to local problems	* others according to local health needs
rehabilitative services	basic physical therapy counselling		* coordinating with other sectors to execute the planned helaht programs	* monitor and assure the quality of overall services in the responsible district
Home visit	visit the risk group and households according to the plan for care and prevention,, promotion program			*general administration and personnel management *budgeting and financial managment * Logistic Support

1. Basic services according for the target population **(IC + FC +CC+ T1 +PH1+ M1)**	**2. Hospital care and primary care support** **(T2 + A1+ M2)**	**3. Special health programme according to local health needs** **(CC + PH 1_)**	**4. Health Management and Intelligence as well as Technical Supports in the wider context of community** **(PH2 + A1 + M2)**
Type of health personnel needed Registered nurses or anothers who have medical and nursing knowledge with psycho-social concern and good communication * have ability to work with communities * can assess the situation of individual , family and communities of their catchment.	**Type of health personnel needed** hospital manager medical doctors, nurses laboratory technicians general administrators health system specialists public health specialists	**Personnel needed** personnel for implement this part should be integrated with the basic services according to population in part 1.	**Personnel needed** Public health managers Technical experts for health promotion, disease prevention, health service management, consumer pretection, information system, qualtiy assuarance, and evaluation. clerks and financial staff

Budgeting method for supporting a district health system

1. Basic health services by groups of population	**2. Hospital care**	**3. Local health needs**	**4. Public Health Programs and district health management**
* The budget support of these services should be based on capitation of the responsibled population with age and risk adjustment. * Additional remuneration for those who can execute good outcome * Budget for service and personnel development	* Minimum bloc budget for basic hospital services as defined by contracts. * Budget for addtional services based on DRG system * Other bloc budget for supporting primary care development under the network with this hospital should be calculated based on the number of primary care units and adjusted with their performance.	* Minimum bloc budget i.e 50 baht per capita or 2.5 millions baht for 50,000 population and then adjust by the detail proposal of local health units for 1, 3, and 5 years plan * Additional budget according to approved proposals	* Minimum bloc budget for basic minimum services in a district * Addtional budget can be requested through the detailed proposal approved by the provincial and central level. * Budget for health promotion and local health needs is included in the proposal of part 3. which should be differentiated for primary care units and district health units * Budget for research, service development, evaluation and personnel development. * Special bloc budget for solving personnel shortage in some remote areas

HRH required for primary care services

By calculating total time used for each service and full time equivalent per one personnel, then the number of total health personnel required in a primary unit is estimated as detail in the followed tabel.

Type of services	services	Target population	Target services/yr	Time used/visit	time used for		no of hrs/FTE	FTE required	
					5,000 pop.	50,000 pop.		5,000 pop.	50,000 pop.
curative service	Out patient and counseling	every population	2 visits/person/yr	10 minutes	1,666.7	16,666.7	8 x 240	0.9	8.7
	minor surgery						1,920		
	home care	prev. of chronic diseases							
	refer	5 % of OPD cases							
preventive services	vaccination to pregnant women, antenatal care	birth rate 1.7%	4 times/pregnant	40 minutes	226.7	2,266.7	1,920	0.1	1.2
promotive services	vaccination to 0-5 yrs children	birth rate 1.7%	4 times/child	1 hour	340.0	3,400.0	1,920	0.2	1.8
	check child development								
	family planning	50% of fertility women	4 times/person	15 minutes	400.0	4,000.0	1,920	0.2	2.1
	educative services in center	50 % of sick		3 minutes	250.0	2,500.0	1,920	0.1	1.3
	educative services in community		one/com/month	integrate with community work					
schools health	health screening and suveillance	40 elementary schools, 2 secondary schools	1 time/semester /schoool .	6 days 3 person per school	720.0	6,048.0	1,920	0.4	3.2
consumer protection									
rehabilitative services	basic physical therapy counselling	prev. of disease * ave.days 10 % of users		integrate with OP					
Home visit	visit the risk group and households		1 /house/month						
	according to the plan								

Type of services	services	Target population	Target services/yr	Time used/visit	time used for		no of hrs/FTE	FTE required			
					5,000 pop.	50,000 pop.		5,000 pop.		50,000 pop.	
community work	needs assessment	2 per year	1 time/week /com.	4 hrs/com./wk	2,080	20,800.	1,920	1.1		10.8	
	planning	1 per year		8hrs./com./wk	4,160.	41,600.	1,920		2.2		21.7
	implement the plan according to the needs with community participation	~5 programs/yr									
	monitoring and evaluation	every 1, 3 months									
office management	information, HRH management, finance, stock			2 hrs / day	530.0	5,300.0	1,920	0.3		2.8	
Grand total					6,213.3	60,981.3	1,920	3.2	4.3	31.8	42.6
	vacation 2 days per month										
	10 % more for rotation							0.3	0.4	3.2	4.3
Total HRH required								3.5	4.7	34.9	46.9
		50 % of total are register nurses						1.8	2.4	17.5	23.4
		the other are technical nurses or similar qualification						1.8	2.4	17.5	23.4
		Total HRH required for 45 millions pop.									
			RN					16,019	21,381	15,722	21,084
			other staff					16,019	21,381	15,722	21,084

HRH required in a district hospital

Nurses

Table Number of nures required in a district hospital with various population covered

population covered		30,000-50,000				60,000-80,000			
		30 beds				**60 beds**			
Services	**Rotation**	**GN**	**TN&PN**	**other**	**Total**	**GN**	**TN&PN**	**other**	**Total**
In patient ward	4 for morning session , 3 for afternoon and night 5 person for rotation and 1 GN for every session	10	5		15	20	10		30
Delivery room	birth rate 1.7%, therefore 2-3 deliveries/day 1 person per session	3			3	3	1		4
Emergency room	2 person per session, 1 GN 1 TN	3	3		6	5	5		10
Major operation room	1 GN 1 TN for morning, afternoon and night use on call 1 anaesthetic nure	1	1	1 anaes.	3	1	1	1-2 anaes.	4
Out patient services	30 % of total sickness of population 1 nure for management	1			1	1	1		2
General administration		1			1	2			2
Total		**19**	**9**	1 anaes.	**29**	**32**	**18**	1-2 anaes.	**52**

Doctors

Estimation number of general practitioners required in a district hospital calcuation by time used for total services and full time equivalent as follow:

	Activities	Frequencies	time used per case	FTE hours for 1 doctor	Number of GP required					
					50,000			60,000		
					OPD 50 %	OPD 30 %	OPD 10 %	OPD 50 %	OPD 30 %	OPD 10 %
1	Curative services									
	1.1 Out patients	total sickness = 2 visits/pop/yr	5 minutes	1920	2.17	1.30	0.43	2.60	1.56	0.52
	1.2 In patients	7 % of total sickness per year		(8 x 240 days)						
		3 hospital day / 1 IP	10 min./pt-day							
	1.3 Care before death	Death rate 6.7/1000 pop.								
	Out patient	60 % of these go to hospitals	20 mins.							
		80 % of these admitted	60 mins/1 pt-day							
		use 7 hospital days								
	1.3 Major operations	3 / 1000 pop.	2 hours							
	1.4 Complicated deliveries	5% of births(17/1000)	1 hour							
	total 1.2 - 1.4				2.01	2.01	2.01	2.42	2.42	2.42
	total			1,920	4.18	3.32	2.45	5.02	3.98	2.94
2	Health promotion and disease prevention									
	2.1 Antenatal care	5 % of total preganants								
		(5 % of 1.7 %)	10 mins		0.015	0.015	0.015	0.018	0.018	0.018
	2.2 Well baby clinics	5 % of total children								

	Activities	Frequencies	time used per case	FTE hours for 1 doctor	Number of GP required					
					50,000			60,000		
		(5 % of 1.7 %)	10 mins		0.015	0.015	0.015	0.018	0.018	0.018
	2.3 other health promotion	4 days/month			0.20	0.20	0.20	0.20	0.20	0.20
3	primary care support and development									
	supervision	1 visit/month x no.of primary care units	1 day							
	general administration	10 days/month								
		Total			1	1	1	1.1	1.1	1.1
4	Academic and training	30 days/person/yr								
	Grand total				5.41	4.55	3.68	6.36	5.31	4.27
	**** Add 1 more doctor for rotation and replacement during vacation and sickness**				6	6	5	7	6	5
	Total GP required									
			number of beds (ave. stay 3 days)		36	36	36	43	43	43
			number of beds (ave. stay 5 days)					72	72	72

HRH required in a district health management unit

Number of health personel and remuneration needed for a district health management unit

				population	
Activities	Frequencies	person-time	no. of FTE	50,000	60,000
supervision	1 visit/primary care/month	1*12/240*PMC.*2person	0.1		
planning	2 months/yr-2 person	2/12 *2	0.33		
evaluation	2 months/yr-2 person	2/12*2	0.33		
implementation the programs	3 days/wk - 2 person	(3*52)/240*2	0.87		
research and service development	1 day per wk	(1*52/240)*2	0.43		
general administration	2 hrs/days- 2 person	(2*2*240)/1920	0.5		
meetings	5 days/month	5*12/240	0.25		
			2.72		
	Total	2.72+0.1*no.of PMC		3.7	3.9
number of personnel required				4	4
Type of personnel	monthly remuneration (baht)				
Public health manger	30000			1	1
Assistant manger	20000			1	1
technical experts	15000			1	1
supporting staff	8000			1	1

Budget required for personnel remuneration		
Public health manger	30000	30000
Assistant manger	20000	20000
technical experts	15000	15000
supporting staff	8000	8000
Total	73,000	73,000

Total number of personnel needed in each level of services

The number of personnel needed in each unit is calculated based on types of services and the size of population under responsibility as follow:

	Number of responsibled population										
	10,000	**20,000**	**30,000**	**40,000**	**50,000**	**60,000**	**80,000**	**100,000**	**120,000**	**140,000**	**160,000**
1 **Pimary care unit**											
*registered nusrse / technical nusres /or similar capabilities Total (minimum-maximum)	8,10	16-20	21-24-30	32-40	35-40-50	42-48-60	64-80	70-80-100	84-96-120	98-112-140	107-128-160
2 **Hospital care and supporting servies by hospitals**											
*doctors (OPD 10-30-50 %)	2, 2,3	3,3,4	3, 4, 5	4, 5, 5	5, 6, 6	5,6,7	6,8,9	8,9,11	9,11,13	10,12,15	11,14,17
*register nurses	11	11	19	19	19	32	32-45	45	57	57-69	69
*technical nusres	8	8	9	9	9	18	18-25	25	32	32-38	38
* others (anaesthetic nurses)	0	0	1	1	1	2	2	2	2	2	2
total nuses (only for curative)	19	19	29	29	29	52	52-72	72	91	91-109	109
* dentists	1	1	1	1	1	2	2	2	2	2	3
* dental nurses	1	1	1	2	2	2	2	2	2	2	3
*number of hospital beds (length of stay 3-5 days)	7	14	22	29	36	43-72	58-96	72-120	86-144	101-168	115-192
3 **Public health management**											
*Public health managers		1	1	2	2	2	2	2	2	2	2
*Technical experts (1)		1	1	1	1	1	1	2	2	2	2
*supporting staff		1	1	1	1	1	1	1	1	1	2

Note: (1) technical experts for health promotion, disease prevention, consumer protection, health service management, evaluation and information system.

Buget for primary care services

Based on the unit cost of the urban health center (1 medical doctors 3 nures) that heve been implemented in Thailand, the total cost for primary care services is calculated as follow.

Table: Cost of basic services by groups of population (IC + FC +CC+ T1 +PH1+ M1)

Type of services	**services**		unit cost (Urban health center)	cost for 5,000 pop.	cost for 50,000 pop.
curative service	Out patient and counseling	LC	50	500,000	5,000,000
	minor surgery	MC	40	400,000	4,000,000
	home care	Total	90	900,000	9,000,000
	refer		baht/visit		
preventive services	vaccination for pregnant women	LC	122	41,480	414,800
promotive services	antenatal care	MC	28	9,520	95,200
		Total	150	51,000	510,000
	vaccination for 0-5 yrs children	LC	48	16,320	163,200
	child development check up	MC	92	31,280	312,800
		Total	140	47,600	476,000
	family planning	LC	70	112,000	1,120,000
		MC	65	104,000	1,040,000
		Total	135	216,000	2,160,000
	individual and family education	LC	1	5,000	50,000
	in the centers	MC	5	25,000	250,000
	community education	Total	6.00	30,000	300,000

Type of services	services		unit cost (Urban health center)	cost for 5,000 pop.	cost for 50,000 pop.
School health	heath screeing and education	LC	14	14,000	140,000
Rehabilitation	physical therapy and basic rehab.	MC	14	14,000	140,000
	counselling	Total	28	28,000	280,000
Community work	home visits according to the plan	LC	85	42,500	425,000
		MC	2	1,000	10,000
		Total	87	43,500	435,000
Total cost for basic primary care services		LC		731,300	7,313,000
		MC		584,800	5,848,000
		Total		1,316,100	13,161,000

Budget for a district hospital

Table :**Cost for hopital services and supporting services by hospitals**

services	frequencies			unit cost	cost per1 capita	total cost for 50,000 pop.	total cost for 60,000 pop.
1 Curative services							
1.1 Out patients	30 % of total sickness seen by health	0.6	LC	68	40.8	2,040,000	
	institutions (.3*2 visit/yr)	0.6	MC	74	44.4	2,220,000	
1.2 In patients	7 % of total sickness per year	0.21	LC	414	86.94	4,347,000	
	3 hospital day / 1 IP	0.21	MC	303	63.63	3,181,500	
1.3 Care before death	Death rate 6.7/1000 pop.						

services	frequencies			unit cost	cost per1 capita	total cost for 50,000 pop.	total cost for 60,000 pop.
Out patient	60 % of hospital visits	0.00402	LC	128	0.51456	25,728	
		0.00402	MC	83	0.33366	16,683	
In patient	80% of out patient admitted	0.022512	LC	414	9.319968	465,998	
	7 hospital days	0.022512	MC	303	6.821136	341,057	
1.3 Surgical operation	3 / 1000 pop.						
1.4 Complicated deliveries	5% of total births						
2 Health promotion and disease prevention							
2.1 Antenatal care	5 % of total preganants	0.00085	LC	134	0.1139	5,695	
	(5 % of 1.7 %)	0.00085	MC	24	0.0204	1,020	
2.2 Well baby clinics	5 % of total children	0.00085	LC	40	0.034	1,700	
	(5 % of 1.7 %)	0.00085	MC	23	0.01955	978	
3 Dental care	dental nurese care 42 % of elementary students	0.132	LC	108	14.256	712,800	855,360
depending on number of	Dentists care 10 % of pop.	0.132	MC	79	10.428	521,400	625,680
available personnel							
	Total		LC		152.0	7,598,921	9,118,706
	Total		MC		125.7	6,282,637	7,539,165
Total		0.970			277.6	13,881,559	16,657,870
4 Support primary care		0.004167	LC	100000	416.67	50,000	60,000
supervision and development	1 time/month x number of priamry care units		MC		25,000	250,000	300,000

services	frequencies		unit cost	cost per1 capita	total cost for 50,000 pop.	total cost for 60,000 pop.
5 Technical support and information	5 days per month	LC	30000 bht/month		180,000	180,000
General administration	5days per month	MC	2 % of basic budget	55,526	277,631	333,157
Grand total		LC			7,828,921	9,358,706
		MC			6,810,268	8,172,322
Grand total		TC			14,639,190	17,531,028
6 Additional budget for extra services					x	x

Note * budget for primary care services under the responsibility of the hospital is calculated seperately in budget for primary care services

Total Amount of Budget Required for a District Health System

Amount of budget required for a district health system is summed up from buget for each group of expected services in a district system i.e priamary care services, hospital care, primary support and development by a hospital and public health management at the district level.

Level of services / type of services			Number of responsibled population		
			5,000 pop.	50,000 pop.	60,000 pop.
1 **Primary care**					
1.1 Basic services for every group of population		**Total Cost**	**1,316,100**	13,161,000	15,793,200
		Labor cost	720,000	7,200,000	8,640,000
		Material Cost	584,800	5,848,000	7,017,600
1.2 local problem solving program 20 %		LC+MC	263,220	2,632,200	3,158,640
1.3 Administration and Information system 5 %		LC+MC	65,805	658,050	789,660
	Total	LC	720,000	7,200,000	8,640,000
	Total	LC+MC	913,825	9,138,250	10,965,900
Total		TC	1,633,825	16,338,250	19,605,900
2 **Hospital care and supporting services by hospitals**					
2.1 Basic hosptial care		MC		6,282,637	7,539,165
2.2 support primary care		MC		250,000	300,000

Level of services / type of services			Number of responsibled population		
			5,000 pop.	**50,000 pop.**	**60,000 pop.**
2.3 administration and information system		MC		277,631	333,157
2.4 Additional hospital services					
				30 beds 4 drs.	60 beds 4 drs.
2.5 Total labor cost for a hospital	Total	LC		13,002,000	18,528,000
* Total material cost for a hospital (2.1-2.4)	Total	MC		6,810,268	8,172,322
Total		TC		19,812,268	26,700,322
3 **Public Health Services (PH2+M2+A1)**					
3.1 basic personnel		LC		73,000	73,000
3.2 planning	1% of total expense	LC+MC		361,505	463,062
3.3 evaluation and quality assurance					
3.4 local problem solving programme	5 % of total expense	LC+MC		1,807,526	2,315,311
3.5 Research, service and personnel developement	1% of total expense	LC+MC		361,505	463,062
3.6 general administration and support	1% of total expense	LC+MC		361,505	463,062
	Total	LC		73,000	73,000
	Total	LC + MC		2,892,041	3,704,498
Total		**TC**		2,965,041	3,777,498
Grand Total		**TC**	1,633,825	39,115,560	50,083,720
	Total	**LC**	720,000	20,275,000	27,241,000
	Total	**MC**	913,825	18,840,560	22,842,720
Average expense per capita per year			327	782	835