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A Report

WORKSHOP ON HEALTH ECONOMICS RESEARCH AND TRAINING  
IN SUPPORT OF PRIMARY HEALTH CARE IN THAILAND

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12-14 March 1986  
Asia Pataya Hotel, Pataya, Chonburi

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The Workshop on Health Economics Research and Training in Support of Primary Health Care in Thailand, 12-14 March 1986, Asia Pattaya Hotel, Chonburi, was organized by the Coordinating Center for Health and Medical Affairs, Ministry of Public Health, in collaboration with Mahidol University Center for Health Policy Studies, with financial support of the World Health Organization. The Workshop was participated by 19 university economists, 14 MOPH officials, and 15 representatives from other government and international organizations including WHO and USAID. The Workshop was inaugurated by Dr. Amorn Nontrasutra, the Permanent Under-Secretary for Public Health, who also participated throughout the meeting. Professor Brian Abel-Smith who came to Thailand under a WHO consultancy assignment with the Health Planning Division, MOPH, also actively participated in the Workshop.

## 1. INAUGURATION

In reporting to the inauguration session chairman, Dr. Prawase Vasi, stressed the needs for health economics research and training in support of Primary Health Care. Firstly, the health system have been deploying markedly increasing amount of national resources, but the behavior of medical and health personnels who are the key decision makers in health services is still guided by traditional medical mentality. Secondly, economics coupled with ethics in PHC should be considered as an effective mean to attain the social goal of Health For All. Thirdly, since the central focus of PHC is the individuals, the families and the communities, health economics should particularly address the issue of community self-reliance in health development. Economic analysis may explore the best possible alternative community financing schemes which are economically feasible and culturally acceptable. Health and economic development is inter-linked. Community self-reliance in health cannot do without parallel efforts in securing community economic self-reliance. In view of the potential contributions of health economics to HFA/2000 based on the PHC approach, the present Workshop aims to develop health economics research agenda relevant to Thailand, and to identify needs and guidelines for training.

In his opening address, Dr. Amorn Nontrasutra indicated that during the Fourth (1977-1981) and the Fifth (1982-1986) National Health Development Plans, Thailand has successfully tried out various PHC strategies which shall be assuringly continued to be implemented in the longer run of achieving HFA/2000. Thus it is timely that Thailand now needs to formulate financial plan for HFA/2000, and seriously start to apply economics in national health development planning, particularly in the Sixth Plan which is now being under preparation. He hoped that deliberations from the Workshop would be beneficial to the formulation of the Sixth (1987-1992) and subsequent plans.

Mr. Walter J. Machann, Acting WHO Programme Coordinator and Representative for Thailand, in his addressing speech reiterated WHO's collaboration in the application and use of health economics in health planning to meet the health needs of the people. He stressed that there are three basic requirements for effective application of health economics. Involvement of decision-makers and health personnels at all levels in the application of health economics is necessary in both research and training activities. Attention should be placed on selection of appropriate health economic concepts, approaches, tools and instruments which are relevant to the present situation of health development, and understandable and sustainable by those in the health system who have to use them. Lastly, close collaboration among academics, researchers, research institutions, and the Ministry is very critical for this important endeavour.

## 2. PROCEEDINGS OF THE WORKSHOP

The three-day workshop was facilitated greatly by technical inputs through working papers carefully prepared for the Workshop. Pre-workshop meetings attended by authors of planned working papers were held to discuss important issues and scope of each paper. Altogether eight papers were presented in the Workshop under four related agenda items. The presentation of each paper was followed by invited discussion and comments from the floor. After the eight papers, participants worked in three small groups to formulate health economics research agenda, to formulate health economics research promotion strategies, and to develop guidelines for health economics training for MOPH officials. Results of group works formed the basis for the Workshop recommendations. The Presentation of group-work results was followed by comments of three panelists representing MOPH, medical schools, and economists, respectively.

## 3. THE NEED FOR HEALTH ECONOMICS RESEARCH AND TRAINING

The need for health economics research and training was expressed by Professor Brian Abel-Smith, representing WHO's views, Dr. Amorn Nontrasutra, the Ministry's views, and Dr. Medhi Krongkaew, the economist's views.

In his key-note paper "How Health Economics Can Contribute to the Achievement of Health for All by the Year 2000? - The Approach of the World Health Organization", Professor Abel-Smith indicated that the present World Economic Crisis which started in 1981 posed a threat to the hopes of attaining HFA/2000 for many Member States. WHO regarded such world economic situation as a challenge which urgently calls for economic aspects of planning Health For All. That is why over the past two years health economics has come to play a much larger role in the policies and programmes of WHO. The Economic Strategy in Support of Health

For All has been selected as the subject for the Technical Discussions at the World Health Assembly in May 1987.

The World Health Organization believes that health economics research and training can contribute significantly in two major ways to national efforts to achieve HFA. Firstly, health economics can be used to secure greater efficiency in the use of resources to promote national health strategies. Here the aim is to secure the maximum health gain for each Baht devoted to the health effort. Secondly health economics can contribute to the longer term planning of national Health For All Programme. Specifically this is the long term financial plan for the use of all resources to support national HFA strategies. A financial plan for HFA includes estimated full cost (capital and recurrent) of planned activities for the period up to the year 2000, and specifies realistically what funds are going to pay for it.

Making a financial master plan for HFA requires specially trained manpower and that this training needs to be followed up by guidance and help in putting the skills and techniques learnt into practice. Moreover research and skills in data processing and data handling also have an important part to play. It is for this reason that WHO has recognized the need to provide support to Member States for research and training in financial planning and health economics generally.

In presenting the Ministry's views on "Economic Aspects of Health Development in Thailand", Dr. Amorn stressed that during the Forth and the Fifth Five-Year Health Development Plans, the Ministry has innovated various PHC strategies. In the process of formulating and testing those strategies, economic considerations were given due regard. Now that the strategies were successfully tried out, they would be systematically planned and implemented with the long run view of achieving HFA/2000. He categorically said, only now that Thailand needs to formulate financial plan for HFA. In his view, financial plan for HFA is truly useful only when national HFA strategies were carefully formulated and successfully put into practice.

At the village level, PHC development is based on a strategy called "development triad" (*sarn gor*)-that is the use of volunteers, community organization and management, and community financing or funds. Implicit in the strategy is the recognition that HFA is possible only if untapped community resources (human, financial, and other) are effectively mobilized. This has been an important economic basis of community-based PHC development in Thailand.

At the tambon and district level, there is an urgent need to strengthen the performance of the health center and community hospital as referral facilities in support of village PHC, and at the same time strengthen the referral system. This has significant economic implication of saving resources formerly

wasted in big hospitals in the provincial towns or even in Bangkok due to the behavior of unnecessary by-passing tambon and district health facilities. A scheme to effect such change was already introduced. That is the "Health Card Project" which is a kind of pre-paid health insurance scheme with built-in referral requirements. So far the scheme is successful in reducing the number of out-patients at provincial general hospitals.

At the provincial level, the government hospitals should take necessary measures to reduce the unit cost of patient care. This could be done by more extensive use of essential drugs, improved hospital management efficiency, and cutting down the use of expensive medical technologies.

Dr. Medhi Krongkaew, an economist from Thammasat University, suggested in his key-note paper ("Contributions of Economics to Health Development") that provision of health services would benefit from the application of economic rationality to the choices of utilizing scarce resources in the health sector. There are three major areas where the application of economics can contribute to health development. First, the economic theory of demand and supply could be used to analyze and predict behavior of patients and health care providers. Second, the economic tools of cost-benefit and cost-effectiveness analyses are useful in guiding for more efficient use of limited resources. Lastly, normative economics offers more systematic framework for choosing health policy alternatives such as the policy issue of public-private mix in health services provision.

#### 4. ECONOMIC ASPECTS OF PHC

The session aims to review existing studies relating to PHC in Thailand and discuss major problem areas associated with PHC implementation where health economic issues are crucial. Four major problem areas were included: a) resource allocation and PHC; b) the pharmaceutical system; c) village health funds and community involvement; and d) health card project.

##### a) Resource Allocation and PHC

The working paper prepared for the discussion drew heavily on a recent USAID-supported study on financing health services and medical care in Thailand.\* It is pointed out that over the period 1981 to 1985 the allocation of MOPH budgets have been gradually shifting in favor of primary health care. In term

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\* Myers, C.H., Dow M., and Causino, N. Financing Health Services and Medical Care in Thailand, USAID, Bangkok, 1985.

of level of care, the proportion of MOPH annual budget devoted to primary health care level increased from 30 per cent in 1981 to 39 per cent in 1985. Geographical distribution revealed the same tendency. The MOPH budget, excluding general service and drug and food control, allocated to rural area increased from 43 to 56 per cent in the same period. It appeared that such shift in the resources in favor of PHC was made possible mainly out of the annual increase in the MOPH budget which was approximately 7 per cent. Granted the expected zero growth budget for the MOPH, the author anticipated more difficulty for the past trend of resource allocation to continue unless there are structural changes in financial policies of the MOPH.

Although the MOPH budget allocation has been in favor of PHC, the same may not be true for the total health expenditure. The MOPH budget accounted for only 19 per cent of annual total health expenditure. The share of other ministries was about 11 per cent, the rest came from households and other private sources. No detailed information is available for health budget of other ministries, but it can be presumed that a large proportion was for tertiary care in Bangkok. The dearth of financial information was more acute for private health expenditure, however, Granted that the MOPH budget was only a tiny portion of total health expenditure, it can be expected that allocation of resources in the health system may not have changed significantly in favor of PHC. This is partly indicated by the maldistribution of health manpower and facilities concentrating mainly in Bangkok and other urban area, which has not been significantly improved since the advent of PHC approach.

The invited discussant cautioned about the use of geographical distribution of some health resources as indicator of health services inequality, particularly the distribution between Bangkok and other areas. The ideal inequality index should account for population size, demand for health care, and types of health services provided in different areas. Ultimately geographical comparison in terms of surplus or deficit in health resources in relation to needs and functions of health facilities is more meaningful than indicators in absolute measurement. In addition, the discussant pointed out that the classification of health expenditure in the paper was not exhaustive enough. One potentially useful classification of interest in Thailand is by types of health service suppliers, particularly public versus private health care suppliers.

Many participants raised an issue about definitions of and the breakdown of MOPH budget into primary, secondary, and tertiary care. It was felt that utmost care should be given to definition and classification problems in health financing study for PHC.



## b. Pharmaceutical System

The value of drug consumption in Thailand has been increasing very rapidly during the last ten years. In 1984 total drug consumption was estimated to be 25 thousand million Bath, representing 30 per cent of the country total health expenditure. It was indicated in the working paper that a large proportion of such huge amount of drug consumption was economically wasteful. Over-consumption and over-pricing of drugs were the two major factors contributing to the high value of total drug consumption. The unregulated drug industry and market with more than 25,000 registered formularies and unethical marketing practices led to artificially created demand for and over-consumption of drugs. The prevalent use of brand names rather than generic names led to more consumption of expensive drugs. Prescribing behavior of physicians and traditional practice of combining consultation fee with the cost of drug prescribed and distributed by the physician himself were responsible for the problems of over-prescription and use of unnecessarily expensive drugs. The practice of transfer-pricing found in local subsidiaries of pharmaceutical transnational companies contributed directly to higher price of a number of drugs in the market. The existing local drug firms were producing much below their full capacities. Yet it was a great paradox that each year 550 million Baht of drugs which could be locally produced was imported. This represents another source of economic waste in the national pharmaceutical system. Still another waste was the mismanagement of drug stock in various government hospitals resulting in heavy loss due to large amount of out-of-date drugs in the stock. The essential drugs policy implemented since 1981 to rationalize the use of drugs has been met with strong resistance from the private drug industry. The distribution of drugs according to real medical need at a reasonable price still has a long way to go.

The invited discussant noted that although several inefficiency problems were mentioned in the paper, the authors failed to prioritize them and discuss the existing state of knowledge of each problem. The definition of "economic waste" in the pharmaceutical system should be more clearly defined. She cautioned that in the private market, brand name is a form of product differentiation which can not be easily eliminated without jeopardizing the free enterprise spirits. A possible alternative solution was to provide more education to the consumers.

Among many of the participants there seemed to be a general agreement that in the pharmaceutical system, market mechanism simply failed to operate effectively; therefore, regulations and efforts to change behavior of the suppliers were necessary. Various factors responsible for over consumption and over pricing of drugs including marketing practices of drug industry and prescribing behavior of physicians were discussed. It was stressed that more research into the problems of over consumption

and pricing of drugs is urgently needed, and such research endeavours should involve both the economists and other concerned disciplines.

### c. Village Health Funds and Community Involvement

During the last ten years community financing and involvement have become the most popular development strategies. Altogether there are 21 different community financing schemes implemented by various ministries in different parts of the country. Under the MOPH alone, there are 8 schemes the majority of which focus on specific single activity such as drug cooperative, nutrition fund, water and sanitation fund, health card fund, etc. Recently there were attempts to combine some of these specific village funds into multiple-purpose village health development fund. On the average, there were 2.5 village funds per village. Some village have the highest number of 6 different types of village funds in operation. A recent study by the NESDB reported that the more was the number of village community financing schemes in a village, the heavier was the financial burden on the villagers.

Drawing on previous studies by Mahidol University Center for Health Policy Studies and the NESDB, the author of the working paper concluded that about 50 per cent of the total village drug cooperatives throughout the country were working satisfactorily. Although no relevant information is available, the author was convinced that cost-effectiveness of the drug cooperatives should be relatively high. In comparison to other types of health funds at the village level, the performance of village nutrition funds was rather poor, however. Although the author was rather optimistic about the performance so far of the majority of village health funds, he expressed reservations about their viability. There are good reasons for this. Previous studies consistently indicated that community participation in planning and implementation of village health funds was extremely limited. This was attributed mainly to bureaucratic attitudes and approaches of most health workers in working with the communities and the too rapid expansion of the coverage of the village health funds. The limited voluntary participation which was confined mainly to village health volunteers and few others, over years tended to diminish as their opportunity cost of participation was increasingly felt.

The invited discussant argued that the conclusion relating to high cost-effectiveness for village health funds, particularly the village drug cooperative, suggested in the working paper could not be taken for granted unless the effects of those health funds were defined and measured. The working paper did not adequately cover the multi-purpose village (health) development fund which was the most recent innovation by the MOPH. The multi-purpose fund was formed by merging various uni-purpose health funds in the village. It normally operates a grocery shop where

other commodities in addition to drugs (formerly under the drug cooperative) are on sale. There has been an increasing concern that relatively large share of the total revenue of many multi-purpose funds came from selling commodities which are not good for health, such as spirits, cigarettes, coca-cola, etc. Such unintended negative effects need further studies. The question of sustainability of the many types of village health funds was indeed crucial. Again research is needed to find ways and means to sustain community financing schemes already started. The floor discussion focused mainly on the objectives of those village health funds which were very crucial in any attempts to evaluate them no matter by the techniques of cost-effectiveness or cost-benefit analyses. It was mentioned that the objectives of village health funds were not limited only to mobilization of local resources. Indeed another important objective is to improve financial and management skills of the villagers.

#### d. Health Card Project

The Health Card Project can be considered as a pre-paid health insurance scheme with built-in referral requirement aiming to reduce the number of out-patients at the provincial hospital. The subscribers paid 200 Baht for a health card which enable four registered family members eligible for 8 visits free of charge at any government health facilities in the referral system. The collected fund was distributed as followed: 40% for revolving fund (Health Card Fund) at village and tambon level, 15% for administrative cost of the health card fund at village and tambon level, 5% for tambon health center, 15% each for district and provincial hospitals, and another 10% for compensations for health workers. Such benefit structure was effective in 1985. The working paper was prepared based on a study in 1985 by Mahidol University Center for Health Policy Studies.

It was pointed out in the working paper that the health card scheme contributed to significant increase in effective demand for services at the district hospital, and reduction in the number of out-patients at the provincial hospital. The existing benefit structure of the Scheme which did not differentiate benefits of medical care according to level of referral facilities encouraged the beneficiaries to by-pass the health center. Yet substantial increase in over-all demand for medical care among the beneficiaries was not found. The number of health facilities visits was averagely 3-4 per card. The percentage of non-use cards was surprisingly high (40-60 per cent). Renewability of the card if not used at all for free medical care in a year was found to be the major incentive for the non-use.

The health card funds at the village and tambon level were found not effective in utilizing the revolving funds for health development activities. The health center was over compensated by the scheme. Yet the hospitals, particularly the district hospitals, were heavily at loss. Financially the overall health

card scheme was apparently operating at heavy loss to the Ministry. Increasing financial concerns led to changes in the card price from 200 to 300 Baht and other benefit reductions (6 instead of 8 visits, non-renewal of the card after one year) in 1986. In effect, the changes in the price and benefits of the health card already discouraged many villagers to participate in the scheme.

The invited discussant pointed out that frequent changes in the price and benefits of the Scheme within a short span of time, indicated that the Scheme was implemented on a large scale without adequate feasibility studies and careful planning. More importantly, it was not clear whether the MOPH considered the health card as a welfare or a health insurance scheme. If indeed it was the latter objective, cost recovery should be the most important criterion for operations, and expectedly the whole health card project may have to be reformulated. The discussant personally believed that voluntary insurance might not be feasible in Thailand. Compulsory insurance has a better chance of success. He agreed with the speaker that the planned nation-wide implementation of the Scheme in 1987 should be delayed pending for more systematic economic research into the problem.

Dr. Amorn offered more clarifications relating to the health card scheme, and commented that whether to delay or continue with the planned nation-wide expansion targeted in 1987 could not be decided on economic reasons alone. Political situation is extremely important and has to be accounted for. Political climate now is favorable, so we have to move now and get the health card scheme firmly rooted as soon as possible. Most participants agreed that the objectives of the Scheme are apparently sound. The Scheme has enormous potential effects on expanding health services coverage for the poor and enhancing equity in health. However, concern over the scheme implementation was widely shared among the participants. It was strongly felt that more research to improve implementation of the health card scheme was urgently needed.

##### 5. HEALTH ECONOMICS RESEARCH AGENDA AND PROMOTION

It was proposed in the working paper that formulation of relevant and adequate research agenda for health economics should take into serious considerations the basic health economy problems of the country, and broad policy guidelines and strategies outlined in the up-coming Sixth National Health Development Plan (1987-1991). The health economy situation of the country has been characterized by the presence resource allocation inefficiency in coexistence with inequality. As far as health services distribution is concerned, there was a dualism of health care deprivation for the majority population and affluence and wastage among the middle and high income class. The loosely structured health system and its financing characterized by a

relatively large private sector has been a major source of health service dualism. The government health sector itself is rather fragmented and also an important source of inefficient use and inequitable distribution of resource. Use of expensive medical technologies was prevalent in both the public and private health establishments. Policies and strategies in the Sixth Plan more or less reflects the Ministry's concerns with inefficiency and inequity issues. On the basis of defined national health economy problems and in light of the policies and strategies contained in the Sixth Plan, nine priority research areas for health economics were suggested. In view of limited number of health economists in the country, It was proposed that the MOPH establish a health economic research programme and involve university economists in an concerted effort to efficiently produce research timely to the needs of the Ministry. Other promotion activities such as seminar and group educational activities should also be carried out with a long run view of stimulating concerns for application of economics in health services and primary health care development.

The invited discussion concentrated on utilization of research results. It was emphasized that health economics research should not be just an academic endeavour, rather it should aim to meet the needs of the users, particularly the Ministry of Public Health. Thus policy relevance and operational value should be important criteria for choice of research topics and research strategies in health economics. It was also suggested that political parties and the Parliament should be considered as potential users of research results. Some participants pointed out that health economics research may need inter-disciplinary research team approach. Regarding priority research areas, it was felt that the relationship between social and economic factors and health should receive more attention. The proposed research agenda focused almost entirely on the supply side. Studies on the demand for health care ought to be included as well. One participant advised that economic research on certain expensive medical technology such C.T. Scan and Ultra Sound may not be needed because such studies were already done in western countries, and the results are applicable to any countries.

## 6. HEALTH ECONOMICS TRAINING NEEDS AND GUIDELINE

The working paper attempted to identify the needs for health economics training of various categories of health personnels in the MOPH. It was suggested that health personnels whose jobs were related to policy making, planning, budgeting, and evaluation of health services which involved resource use should receive health economics training. The MOPH officials who played supportive role in providing information and training services to decision-makers and health administrators was another potential trainee group. On the basis of varying amount of resources under the control of these health personnels and hence the impact of

their decisions on resource allocation, order of health personnels in priority needs for health economics training was proposed as: 1) central level senior officials in Health Planning Division, Provincial Hospitals Division, Regional Health Division, Office of Primary Health Care, and Technical Divisions in various Departments; 2) Hospital administrators at all levels; 3) Provincial Medical Officers and head of planning and evaluation section in the PMO's Office 4) Technical and Health Service Director under the PMO's Office, officials in Health Statistics Division, Training Division, and other training officers. As for training curriculum guideline, it should cover basic economic concepts and their applications to health planning, budgeting, and evaluation which are the major tasks common to all the first three potential trainee groups. Case studies ought to be provided to demonstrate concrete applications of economic concepts and methods. In universities health economics courses were rarely offered. Economics undergraduate students were not interested in health economics or economics of health. In some medical schools and schools of public health where introductory courses in health economics were offered, they were not successful either. The problems lie in limited experience and exposure to medical and health problems on the part of teaching staff, as well as limited research materials in Thai health economics.

The two invited discussant agreed with the urgent needs of health personnels for health economics training. It was stressed, however, that such training should aim toward improved performance of health personnels. Decision makers ought to be included as targeted trainees as well. Two approaches in health economics training are possible. First is to integrate health economics into existing management training courses offered by the Ministry, and other university MPH courses. Second is to go for special training course in health economics. One participant suggested that the training curriculum should also include economics of clinical decision-making and demand for medical care.

## 7. RECOMMENDATIONS

### 7.1 Health Economics Research Agenda

The research agenda, which sets the main areas/topics in health economics which should be researched, is based on the results of research into the problems of the country's health economy and the country's major policies in the Sixth Health Plan (1987-1991). The order of priority is based on three broad principles, namely, 1) it is a problem concerning equity and the accessibility of public health services by a majority of the population, especially the poor; 2) it is a fundamental problem which requires urgent attention in the Sixth Plan, the results of the research being of use directly in public health planning; and 3) it is a problem which requires the utilisation of a great deal of resources.

## 1. Health Sector Finance

A. Study the sources and uses of public and private health expenditure. Emphasis should be on private expenditure as data is still scanty or unreliable. Research should aim at assessing the use and allocation of health expenditure in various sectors of the health system, pinpointing areas where resources are being inefficiently utilised and where the potential of pooling resources is high, such as health insurance.

B. Study of the possibilities and alternatives of health insurance schemes for various groups, in particular the disadvantaged such as the rural and urban poor and manual workers. In addition, the various forms of health insurance schemes currently available should be assessed, particularly as to cost and fairness, e.g. the health card project; free medical treatment scheme for low-income earners; health insurance schemes for large state enterprise employees; medical treatment for government officials and employees; and so forth. Urgent attention should be given to research into ways of improving the efficiency of the health card project.

C. Assessment of the cost of services at government hospitals to enable the development of a pricing policy with the aim of reducing expenditure, offsetting the cost of unnecessary medical services, while at the same time provide a greater degree of fairness to low-income patients who should receive subsidy from the state. Consequently, the pricing of medical services must be linked to the relevant referral system and health insurance scheme.

## 2. The Economics of Hospitals

Hospitals utilise a great deal of resources and therefore provide opportunities for economising if wastage can be identified and plugged. The major topics of research here are formulated for state hospitals but may be applied to private hospitals as well.

A. Analyse the functions, performance and management of various sections of the hospital, with the aim of improving management efficiency in such areas as inventory control, medical supplies, out- and in-patient systems, and so forth.

B. Analysis of Hospital Cost for the purpose of pricing medical and hospital care, and improving financial and cost accounting so as to increase the efficiency of hospital management, as well as creating a data base for monitoring costs of services in hospitals.

C. Analyse the cost-effectiveness of different diagnostic and therapeutic technologies, as well as clinical and other medical procedures to enable hospital administrators, doctors and concerned officials to select the most appropriate and economical technologies, methods of diagnosis and treatment.

### 3. The Economics of Pharmaceuticals

The use, distribution and manufacture of pharmaceuticals are major problems for the Thai health system. They are problems relating to business and professional interests. Any changes in these areas require data from thorough economic research. However, there has been very little research by Thai economists in to the economics of pharmaceuticals. Topics which should be researched are:

A. Drug consumption behavior of households and expenditure. So far there is very little data. Detailed studies concerning the private expenditure on pharmaceuticals and medical supplies will give a clearer picture of private health expenditure.

B. Physicians' prescribing behavior in state and private hospitals. The use of expensive pharmaceuticals, overdoses, and so forth, are problems arising in the main from physicians' prescribing behavior through clinics, hospitals and other medical institutions. The study of doctors' prescribing behavior will provide part of the answer as to why the cost of pharmaceuticals forms about 30 per cent of Thailand's total health expenditure.

C. Price of pharmaceuticals. The Sixth Health Plan clearly states the need for a policy concerning pricing of pharmaceuticals. The policy should be based on research investigation on current drug pricing practices so as to determine whether there is overpricing, whether there should be price controls and if so how this should be implemented.

D. Production, distribution and use of essential drugs. At present there are many obstacles in carrying out essential drugs policy. Research should be carried out on the efficiency of essential drugs production and distribution system, particularly that of the Government Pharmaceutical Organisation so as to find ways of improving efficiency. There should also be an assessment of the use of essential drugs in state and private hospitals to find out what rules and regulations, monetary incentives, and so forth, are required to encourage more use of essential drugs.

E. The effects of certain practices in the pharmaceutical industry on the price levels of pharmaceuticals. Important cases are whether there is transfer pricing in the pharmaceutical industry and how this affects prices? how patents affect the price of pharmaceuticals? marketing costs and how this affects pricing? and so forth.



#### 4. Studies to formulate policies towards private sector

Policy towards private involvement in provision of health services in the Sixth Plan is still unclear, particularly regarding private hospitals and clinics. The overall trend appears to be to encourage the private sector to provide medical services as a means of reducing pressure on the state health services. However, an economic study should be carried out to determine whether, if this trend continues, social efficiency in the use of resources will be achieved; whether patients be enticed from state hospitals to private hospitals; or will demand for medical services be stimulated; and what is the state of private medical services at present. In addition, topics for research proposed for state hospitals may be adapted for profit-oriented private hospitals.

#### 5. Demand for health care

Research into demand for health services, including its determinants, permits a projection of future demand which is an extremely helpful aid to health services planning. There are at present few such studies.

#### 6. The Economic cost of an uncoordinated health system structure

The public health system is composed of many agencies, lacking unified control and coordination. Therefore basic studies should be carried out on the structure of the public health system, especially where overlapping and lack of coordination occur, and whether these effect the allocation of health resources to complement primary health care, and whether this leads to economic loss. These studies should form the groundwork for the development of policies to improve the structure of the public health system.

#### 7. The economics of health manpower

The Sixth Plan has very little to say about health manpower issues, particularly from the economic angle. Here it is advised that health manpower is an area where health economics research is needed.

A. Projection of manpower demand and supply of various categories of health manpower. Economic techniques should be applied in such projections, taking into account the present manpower distribution and future trends. Such research would significantly aid health manpower plannings.

B. The cost of training health personnel and the substitution of various types of personnel. The cost of training various types of health personnel, particularly doctors, is of interest to people in the medical and health professions, but no studies have been conducted by economists. The problem is related to education policies and management. It is also closely related to productivity of health personnels which may be increased through possible substitution of various types of personnel. No economic studies have been made on productivity of health personnels, possible substitution of personnels and its effects on service provision.

### 8. The Economics of community involvement

Community involvement is an important policy in both the Fifth and Sixth Health Plans. The and economic effects of PHC activities at the community level should be systematically and continuously assessed to guarantee that the community derives maximum benefit.

A. Studies should be conducted to determine and assess cost effectiveness of alternative methods of PHC implementation at community level. Often the opportunity cost of participation, which is an economic cost for a community or an individual taking part in PHC activities is not taken into account. Thus some externally introduced community-based PHC activities resulted in failure because the villagers considered the project to be more of a burden than a benefit.

B. Villagers' decision-making process and their behavior towards primary health care activities. Various activities which are proposed from outside the community often require certain behavioral patterns for the villagers to follow. Such requirement may bear no relation to reality and which could be the cause of the project not achieving full success. For example, what are the people's reactions to the benefits structure and rules in the health card project?. The people's decision-making process and behavior can not be considered solely from the economic point of view but must also take into account social, cultural and other factors. Such research studies should be undertaken for each PHC project in a continuous manner to ensure that each activity truly benefits the people.

C. The effects of economic and social changes on the community due to primary health care activities. Various primary health care projects, particularly those concerned with various types of village health fund introduced into the community by the authorities, may have (unintentional) effects on the community. For example, the grocery shop run by the multi-purpose village development fund may increase consumption of rather useless goods; the fund may cause the community to adopt a

capitalistic mentality and become more selfish. These are possible side effects which should be assessed and a decision reached as to their desirability.

#### 9. Relationship between economic and social factors and health

This is an important research area but is placed last because it is intimately related to other economic sectors. Yet considering the role of intersectoral collaboration in PHC, this research area deserves special attention.

A. Study the impact of economic factors on health of various groups. Special attention should be paid to the effects of certain economic variables such as the degree of poverty, unemployment, income distribution, land ownership, and occupation on the incidence of illness, death rate and other health indices.

B. Study to identify alternative economic and social development policies which satisfy basic human needs and contribute to people's health, such as foods and pharmaceutical policies.

#### 7.2 Research Promotion Strategies

1. Necessary steps and measures should be urgently taken to promote health economics research which would be of benefit to the Ministry of Public Health.
2. To effectively acceterate health economic research activities, a Health Economics Research Programme should be set up under the Coordinating Centre for Medical and Health Affairs, Ministry of Public Health. It would have the duty of setting research priority, raising research funds and recruiting researchers from universities and elsewhere.
3. A committee should be formed by April, 1986 to be responsible for implementing the Health Economics Research Programme. The committee has the following terms of reference:
  - set priorities for research projects, monitoring and evaluation of research activities;
  - raise funds;
  - recruit researchers;
  - liaise between the source of research funds, the researchers and concerned agencies;
  - follow up on research projects;
  - promote practical use of research findings.

4. The Health Economics Research Programme Committee should be composed of the following members:
  - five university health economists;
  - four public health experts;
  - one MOPH administrator;
  - one secretariat.
5. Set up a secretariat for the Health Economics Research Programme to carry out activities outlined by the Committee, and provide necessary technical and secretarial support to the Committee.
6. To ensure cooperation from various universities, committee members should be chosen from a broad range of faculties and research institutions.
7. Drafting of research protocols and selection of researchers should be completed by July or August 1986.

### 7.3 Health Economics Training

1. It is deemed necessary that health economics training for practising MOPH officials is of utmost urgency.
2. The MOPH officials in priority need of training, arranged according to amount of resources at their disposals and potential impacts of their decisions on resource use and allocation, are as follows:
  - policy makers, planners, budget directors and assessors
  - hospital administrators
  - provincial health administrators
  - those responsible for supporting other groups, as data analysers, trainers
3. There are two alternative approaches in health economics teaching/training for health personnels. Firist is to integrate health economics materials into existing training courses. Second is to go for special training course in health economics. Such training course should be regarded as a pilot training programe aiming to develop and test training curriculum, materials, and modules to be used in subsequent training activities.

4. As experience is still lacking in health economics training, priority should be given to special training courses.
5. The first special training course in health economics should be conducted by the end of 1986. To limit the scope of course contents to a level at which training modules/materials relevant to the trainees can be carefully developed within the above-mentioned time-frame, it is recommended that the first course should be confined mainly to hospital economics and management, and trainees be the provincial and district hospital administrators/doctors/workers.
6. Such training course should be in the form of training workshops which places emphasis on active participation of the trainees in the training process. The training course consists of two parts, basic principles and health economics tools and their application in analysing and solving real problems involved in running a hospital.
7. Teaching materials and training modules should be carefully prepared for the proposed training course. It is advised that one district hospital and one provincial hospital be selected to serve as data base from which to develop exercises illustrating application of economics concepts and analytical tools.
8. The training course should be conducted in close cooperation between the Ministry of Public Health and the concerned universities, in particular Thammasat, Chulalongkorn and Mahidol universities.

Annex 1

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Annex 2

AGENDA

Wednesday, 12 March 1986

09.30-10.00 Registration  
10.00-10.20 Inaugural Session  
- opening address Dr. Amorn Nontrasutra  
- address Mr. Walter J. Machann  
Acting WPC&R, Thailand  
10.20-10.30 COFFEE/TEA BREAK

Agenda 1 : The Need for Health Economics Research and Training  
for Health Development

10.30-11.00 Key-note paper : How Health Economics Can Contribute to HFA/2000 and Approach by WHO Prof. Brian Abel-Smith.  
WHO. Consultant  
11.00-11.30 Key-note paper : Economic Aspects of Health Development in Thailand Dr. Amorn Nontrasutra  
11.30-12.00 Key-note paper : Contributions of Economics to Health Development Dr. Medhi Krongkaew  
12.00-12.30 Plenary discussion  
12.30-13.30 LUNCH BREAK

Agenda 2 : Review of Existing Studies Relating to Economic Aspects of PHC.

13.30-14.00 Paper : Resource Allocation and PHC. Development Mrs. Kusol Soonthorntada

14.00-14.20	Invited discussion	Dr. Tieanchai Keerananta
14.20-15.00	Plenary discussion	
15.00-15.15	COFFEE/TEA BREAK	
15.15-15.45	Paper : Economic Waste in the Pharmaceutical System	Ms.Samlee Jaidee Ms.Chanpen Vivatana
15.45-16.05	Invited discussion	Dr. Mingsan Santikarn
16.05-16.45	Plenary discussion	

Thursday, 13 March 1986

08.30-09.00	Paper : Village Health Funds and Community Involvement in PHC : An Economic Analysis	Mr.Chanet W. Kumthong
09.00-09.20	Invited discussion	Dr. Sa-nguan Nittayarampong
09.20-10.00	Plenary discussion	
10.00-10.15	COFFEE/TEA BREAK	
10.15-10.45	Paper : Health Card Project : Economic and Policy Analysis	Mr.Peera Tantiseranee Mr.Sommart Promphakdi
10.45-11.15	Invited discussion	Dr. Medhi Krongkaew
11.15-12.00	Plenary discussion	
12.00-13.00	LUNCH BREAK	

Agenda 3 : Health Economics Research Agenda and Research Strategies

13.00-13.30	Paper : Health Economics Research Agenda and Promotion Strategies for Thailand	Dr. Thavitong Hongvivatana Dr. Voravit Chalearnlert Dr. Somsak Chunharas
13.30-14.10	Invited discussion	Dr. Boorong Boonyuen Mr. Poonsap Piya-ananta
14.10-14.50	Plenary discussion	
14.50-15.00	COFFEE/TEA BREAK	

Agenda 4 : Health Economics Training Need/Programme/Curriculum

- |             |   |  |
|-------------|---|--|
| 15.00-15.30 | Paper : The Need for and Contents of Health Economics Trainings | Dr. Dow Mongkolsmai<br>Dr. Sirilucksana Jutikul<br>Dr. Plearnpise Satayasa-nguan |
| 15.30-16.10 | Invited discussion  | Dr. Domrong Boonyuen<br>Dr. Srivong Havanonta                                    |
| 16.10-16.40 | Plenary discussion  |  |

Friday, 14 March 1986

- |             |   |   |
|-------------|---|---|
| 08.30-11.00 | Small group discussion on proposed health economics research and training agendas       |   |
| 11.00-12.30 | Presentation of group work  |   |
| 12.00-13.30 | LUNCH BREAK   |   |
| 13.30-15.30 | Panel discussion : Reactions to Proposed Health Economics Research and Training Agendas | Dr. Phaijit Phavadbutra<br>Dr. Wichan Panich<br>Dr. Nipon Poapongsaporn<br>Dr. Prawase Vasi |
| 15.30-16.00 | Closing Session   |   |