Universal Health Coverage for Inclusive and Sustainable Development

Country Summary Report for Thailand

Walaiporn Patcharanarumol, Viroj Tangcharoensathien, Suwit Wibulpolprasert, and Peerapol Suthiwisesak

Health, Nutrition and Population Global Practice
World Bank Group
September 2014
<table>
<thead>
<tr>
<th>Acronyms</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARV</td>
<td>Anti-retroviral treatment for HIV/AIDS</td>
</tr>
<tr>
<td>CMBS</td>
<td>Civil Servant Medical Benefit Scheme</td>
</tr>
<tr>
<td>CUP</td>
<td>Contracting Unit for Primary health care</td>
</tr>
<tr>
<td>DRG</td>
<td>Diagnostic-Related Group</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GNI</td>
<td>Gross National Income</td>
</tr>
<tr>
<td>HISRO</td>
<td>Health Insurance System Research Office</td>
</tr>
<tr>
<td>HRH</td>
<td>Human Resources for Health</td>
</tr>
<tr>
<td>LICS</td>
<td>Low Income Card Scheme</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-governmental organization</td>
</tr>
<tr>
<td>NHSO</td>
<td>National Health Security Office</td>
</tr>
<tr>
<td>OOP</td>
<td>Out of pocket health spending</td>
</tr>
<tr>
<td>PPP</td>
<td>Purchasing power parity</td>
</tr>
<tr>
<td>SHI</td>
<td>Mandatory Social Health Insurance under the Social Security Act</td>
</tr>
<tr>
<td>SSO</td>
<td>Social Security Office</td>
</tr>
<tr>
<td>THE</td>
<td>Total Health Expenditure</td>
</tr>
<tr>
<td>UCS</td>
<td>Universal Coverage Scheme</td>
</tr>
<tr>
<td>UHC</td>
<td>Universal Health Coverage</td>
</tr>
<tr>
<td>VHC</td>
<td>Voluntary Health Card</td>
</tr>
</tbody>
</table>
Preface

In 2011, Japan celebrated the 50th anniversary of achieving universal health coverage (UHC). To mark the occasion, the government of Japan and the World Bank conceived the idea of undertaking a multicountry study to respond to this growing demand by sharing rich and varied country experiences from countries at different stages of adopting and implementing strategies for UHC, including Japan itself. This led to the formation of a joint Japan–World Bank research team under The Japan–World Bank Partnership Program for Universal Health Coverage. The Program was set up as a two-year multicountry study to help fill the gap in knowledge about the policy decisions and implementation processes that countries undertake when they adopt the UHC goals. The Program was funded through the generous support of the Government of Japan.

This Country Summary Report on Thailand is one of the 11 country studies on UHC that was commissioned under the Japan–World Bank Partnership Program. The other participating countries are Bangladesh, Brazil, Ethiopia, France, Ghana, Indonesia, Japan, Peru, Turkey, and Vietnam. A synthesis of these country reports is in the publication “Universal Health Coverage for Inclusive and Sustainable Development: A Synthesis of 11 Country Case Studies,” available at:


These reports are intended to provide an overview of the country experiences and some key lessons that may be shared with other countries aspiring to adopt, achieve, and sustain UHC. The goals of UHC are to ensure that all people can access quality health services, to safeguard all people from public health risks, and to protect all people from impoverishment due to illness, whether from out-of-pocket payments or loss of income when a household member falls sick. Although the path to UHC is specific to each country, it is hoped that countries can benefit from the experiences of others in learning about different approaches and avoiding potential risks.
Acknowledgments

This study was supported through the PHRD Grant (Japan) as a joint Partnership Program between the government of Japan and the World Bank. The Program was steered by the Program Coordination Committee, co-chaired by Keizo Takemi, Member of the House of Councilors of the National Diet of Japan, and Timothy Grant Evans, Director of Health, Nutrition and Population Network of the World Bank.

The Program was led by a team comprising Akiko Maeda, Lead Health Specialist and Task Team Leader for the World Bank, and co-Team Leaders, Professor Naoki Ikegami, Department of Health Policy and Management, Keio University School of Medicine and Professor Michael Reich, Taro Takemi Professor of International Health Policy, Harvard School of Public Health.

This Country Summary Report was financed by the government of Thailand, and prepared by a team of Thai experts comprising Walaiporn Patcharanarumol, Viroj Tangcharoensathien, and Suwit Wibulpolpraserth, International Health Policy Program, Thailand; and Peerapol Suthiwisesak, National Health Security Office, Thailand.

The report was edited by Jonathan Aspin.

Disclaimer: The findings, interpretations and conclusions expressed in this work are entirely those of the authors, and do not necessarily reflect the views of The World Bank Group, its Board of Executive Directors, or the governments they represent.
Country Summary Report for Thailand

Overview

Thailand, an upper-middle-income country with a population of 69.5 million in 2012, achieved its health-related Millennium Development Goals by the early 2000s. The health care delivery system has received significant investments in the past three or four decades and now offers extensive health infrastructure coverage that reaches even the most rural and remote areas, in a publicly dominated health system. However, ensuring equity among the three main public insurance programs and assuring fiscal sustainability are the major challenges facing the current system.

Table 1. Data overview

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>64.6 million * (2012)</td>
</tr>
<tr>
<td>GDP</td>
<td>$345.7 billion ** (2011)</td>
</tr>
<tr>
<td>GNI per capita in PPP</td>
<td>8,360 current international $ ** (2011)</td>
</tr>
<tr>
<td>Total health expenditure (THE) as % of GDP</td>
<td>4.1–6.6% *** (2010)</td>
</tr>
<tr>
<td>THE per capita (in current exchange rate dollars)</td>
<td>$217–353 *** (2010) (calculated from the above data)</td>
</tr>
<tr>
<td>Public expenditure ratio of THE</td>
<td>60–75% *** (2010)</td>
</tr>
<tr>
<td>Life expectancy at birth, total population</td>
<td>74 years ** (2011)</td>
</tr>
<tr>
<td>Hospital beds per 1,000 people</td>
<td>2.1 hospital beds per 1,000 people ** (2010)</td>
</tr>
</tbody>
</table>


PART I. UNIVERSAL COVERAGE—STATUS AND SEQUENCING

A. Overview of current status

1. Legal and Statutory Basis

Thailand has three main legal instruments for universal health coverage (UHC). The National Health Security Act adopted by Parliament in 2002 states that the “Thai population shall be entitled to a health service with such standards and efficiency as prescribed in this Act”.

1
The 2007 Constitution provides equal rights of citizens to receive standard appropriate public health services, while indigents have the right to receive free medical treatment from public health facilities (Section 51); and mandates the state's obligation of promoting pluralistic health service provision (Section 80).

The 2009 Statute on the National Health System, as mandated by the National Health Act 2007, was endorsed by the Cabinet in December 2009. It serves as a guide for national health system development, in particular Chapter 3 on provision of health security and protection.

Two other legal instruments contribute to Thai UHC: the Social Security Act 1990 and the Royal Decree on Civil Servant Medical Benefit Schemes 1980.

2. What is the current status of coverage along the key dimensions of UHC?

   a. Population

   By 2002, the entire population was entitled to access to essential health services covered by one of the Civil Servant Medical Benefit Scheme (CSMBS); the mandatory Social Health Insurance (SHI) under the Social Security Act; or the Universal Coverage Scheme (UCS), which covers around 75% percent of the population.

   b. Services

   UCS, SHI, and CSMBS beneficiaries are entitled to a comprehensive benefit package, including both inpatient and outpatient care (with some exclusion lists, e.g. cosmetic surgery). In addition to curative services, the UCS manages provision of preventive care for all citizens, focused on health promotion and disease prevention at individual and family levels (e.g. immunizations, annual physical checkups, premarital counseling, antenatal care, and family planning services). Comprehensive services also cover high-cost care like chemotherapy for cancer patients, heart surgery, ARV treatment for HIV/AIDS, high-cost essential drugs, and renal replacement therapy.

   The benefit packages across the three health insurance programs are more or less the same, with some exceptions. For example, all three programs cover all drugs in the national essential drugs list, but the CSMBS also covers nonessential drugs that doctors deem necessary. It also covers some other some high-cost care treatment not covered by the other two programs. In summary the UCS and the SHI have more or less the same benefit packages, but the CSMBS offers a bit more.

   c. Financial protection

   In 2010, the share of public financing sources was around 60-75 percent of THE, nongovernment sources the balance. Household out-of-pocket payments accounted for 14–30 percent of THE.¹ Copayments are not required under the three programs when patients get health services at his or her registered health facilities or via the referral mechanism. Patients going directly to nonregistered facilities without referral pay full charge. Every income group has spent less on household catastrophic health expenditure over time. In 2008 the poor faced a smaller catastrophic incidence (2.8 percent of total households in the poorest quintile) than the rich (3.7 percent in the richest quintile) (HISRO 2012). As a customary practice, patients may offer “gifts” to physicians in particular for delivering a baby, but this is not practiced with other

¹ THE has two series of estimation. One is from National Health Account and another is from Thailand Health Profile.
categories of health workers. Unofficial billing to patients is prohibited and thus illegal. Health workers in public hospitals, as civil servants, are prohibited to do it.

3. How is governance structured?

a. Goal setting

The UCS is managed by the National Health Security Office (NHSO), an autonomous public agency that was established by the National Health Security Act of 2002. The UCS is governed by the National Health Security Board chaired by the Minister of Public Health. The board has 30 members, five of whom are from civil society organizations. Copayments, benefit package, standards guidelines, quality standards, contract processes, and payment mechanisms are all decided by the Board, including strategic goal setting.

Thailand’s UCS has a goal to promote primary care services by requiring UCS beneficiaries to register with a contracting unit for primary care (CUP) and receive care in their home or working catchment area. The CUP serves as the “closest to client services”. High-cost new interventions, pharmaceutical products, and medical devices are prioritized, and put into the benefit package, based on Thai cost-effectiveness studies with the application of one gross national income per capita for one quality-adjusted life-year gain as the national benchmark for public investment in health; in addition to cost-effectiveness, inclusion of new interventions in the benefit package is also decided by the budget impact, fiscal capacities, and other equity considerations.

SHI is managed by Social Security Office (SSO), Ministry of Labor and governed by the SSO tripartite Board (represented by five members appointed from employers, employees, and the government). CSMBS is managed by the Comptroller General Department, Ministry of Finance under the rules and regulations of the bureaucratic mechanism. The benefit package of the three programs is not much different in terms of essential health services (see section 2b above).

b. Financing

The UCS and CSMBS are solely financed by general tax revenues while SHI is tripartite contributory program, paid equally by the government, employer, and employee. Nonetheless, there is no defined percentage of national government expenditure earmarked for the UCS, as it is based on cost and utilization data. CSMBS financing is based on historical expenditures and the fee-for-service payment mechanism.

In 2010, government health expenditure was around 14 percent of total government spending. Thailand has a Health Promotion Foundation funded through “Sin Tax”, collected as 2 percent additional levy on top of the tobacco and alcohol excise tax. This amounted to around $120 million, or around 1.5 percent of total public spending on health. This fund is exclusively for health promotion and disease prevention activities (non-clinical), focusing on social determinants of health and major risk factors. The UCS has established more than 6,000 community health development funds funded equally from the local government and the UCS. This amounted to about $200 million for community activities in health development.

---

2 CUP refers to a network of healthcare provider at district level, including health centre and a district hospital where the UCS member reside
Since the entire population is covered by UHC under one of the three programs, there has been no targeted program for the poor or for the informal sector since 2002. Universality is intended to reduce social stigma and discrimination.

c. Payment

It is not only the governance structure but also the provider payment mechanism applied by the programs that influences accountability for efficiency of the health care providers. Purchasers play a key role in ensuring that payments are aligned with policy objectives and incentives to providers.

A purchaser–provider split has been applied by all three health insurance programs to varying degrees. The UCS has a partial purchaser–provider split because health care providers also sit on the board of the NHSO and at the regional level. UCS uses a closed-end budget system with a capitation contract model for outpatient and promotion/prevention services, and Diagnostic Related Group (DRG) case-based payments for hospital inpatients, within a defined budget, to public and private health care providers. UCS also has a fixed fee schedule for some selected services for which the Board would like to increase service availability, as well as demand.

SHI applies a single capitation fee inclusive for outpatient and inpatient services with competing public and private contracted providers. It too applies more or less a closed-end budget system. CSMBS does not use capitation payment system, and relies on fee for service as the main provider payment mechanism for outpatient services. CSMBS recently introduced DRG (without a defined budget) for inpatient payment.

While payment methods differ, the benefit packages across three programs are very similar. However, CSMBS per capita outpatient expenditure was much higher than those of UCS and SHI, due to excessive prescriptions of medicines (especially high-cost branded medicines and those not on the national essential drugs list) and excessive use of diagnostics. Further studies on outcomes across the three programs will need to be undertaken, taking into account the variation on demand side characteristics of the beneficiaries, as well as the impact of the payment systems on provider behavior.

d. Service delivery

The UCS service delivery network includes public and private facilities (though public providers dominate as UCS covers the rural population where the private sector has a small role). Prior to registration, private health facilities must submit documents and are assessed against standard requirements by the NHSO. No similar process exists for public health care facilities and they are automatically registered in the delivery network. For UCS in particular, primary care units (PCUs) have been designated “gatekeepers”, as the first contact that provides care for UCS beneficiaries in their catchment areas. When the clinical condition requires a higher level of care, patients are referred to secondary or tertiary health care providers.

B. Current status of health financing

1. How sustainable is current coverage?

a. Fiscal space

Public health spending as a share of total government expenditure increased gradually from 5 percent in 1985 to 14 percent in 2010. Fiscal space was created from proportionate
reductions, respectively, in the security budget (due to achievement of internal peace) and public debt services (due to rapid economic growth from international trade). Fiscal space within the UCS program has been achieved through strategic purchasing with extensive cost reductions, for example, in essential drugs and medical devices. Together these efforts allowed for gradual expansion of benefit packages under UCS while maintaining fiscal control.

UCS is financed by an annual budget allocation: the budget is estimated based on expected cost of services (unit cost times the utilization rate, adjusted for profiles of health service). The annual outpatient budget is fully allocated to contracted health care providers based on a capitation rate and number of registered members; while a defined budget for inpatients would be fully spent by the end of the year based on DRG reimbursement. Therefore budget and expenditure is in balance. In addition, NHSO is not allowed to keep a positive balance or carried it over. Fiscal sustainability has been supported by close-ended provider payment which has been introduced to contain costs, and by cautious and judicious introduction of any new, high-cost medical interventions into the benefit package through the rigorous evaluation of evidence on cost effectiveness and long-term fiscal implications.

The payment system under SHI program is based on a capitation system, with a limited selection of specific services paid by fee for services. This payment system has helped to contain and control costs of SHI.

It is the CSMBS, with its generous fee-for-service benefit package, that is facing greatest difficulties in containing costs, and presents threats to financial sustainability. Recent attempts at cost containment, e.g., through payments based on DRG and limitations on drug reimbursements, seem to have, at least temporarily, halted rapid rises in spending.

**b. Cost management and value for money**

Health system efficiency picked up when the NHSO, the largest purchaser among the three programs, achieved adequate capacities in strategic purchasing and adopted close-end payment and contractual agreements with the primary health care network, and when the CUP started to function as the primary care gatekeeper. The NHSO is the single purchaser for 75 percent of Thailand’s population (around 48 million), giving it very high purchasing and bargaining power. It has negotiated to bring down the price of medicines, medical products, and interventions resulting in huge annual cost savings.

For example, the price of hemodialysis decreased from $67 to $50 per cycle, which could save $170 million a year. A closed-end budget system using mix payment methods, capitation for outpatients and DRG within a defined budget for inpatients and some fee-for-service for prevention and promotion interventions (to stimulate service provision) contained costs. Closed-end payment sends a strong signal to health care providers who command resources to gain efficiency, such as prescribing generic medicines, appropriate dispensing of medical technologies, and effective preventive interventions.

At the same time, to counteract potential underservicing—the downside of close-end payments—the NHSO established various mechanisms. They include a complaint management mechanism through the work of a call center, with NHSO staff on hand 24 hours a day; encouraging quality assurance through hospital accreditation mechanisms; a routine auditing system by random medical audit with financial penalties; reviews to monitor utilization rates; and annual poll survey of consumers’ and providers’ satisfaction (outsourced to independent poll institutes). Primary health care orientation of the UCS (with a proper referral mechanism)
support rational use of health services by level, and the use of close-to-client services lowers patients’ transport costs. However, monitoring of unmet needs among UCS members by national household surveys is poor.

2. How equitable is coverage?

   a. Solidarity and redistribution

There is no clear evidence of effective redistribution mechanisms across the three programs. The UCS balanced budget and expenditure results in zero reserves; the CSMBS always overspends its budget owing to uncontrolled fees-for-service outpatient payments (and thus no reserves). Despite this excessive use of public resources and inefficiency, reforms to introduce global capping or close-ended payment in the CSMBS has been strongly resisted by medical professionals and the pharmaceutical industry. Since SHI spends its funds only on curative services only, health promotion and prevention are totally dependent on funding through the UCS.

Government subsidies per beneficiary across the three programs are inequitable: in 2011, about $366 for the CSMBS, $97 for the UCS, and $71 for the SHI. Efficiency and equity across these programs are the main remaining challenges for UHC reform in Thailand.
### C. Human resources for health (HRH) policies

#### 1. Current status of HRH

<table>
<thead>
<tr>
<th>Qualifications</th>
<th>Government determines the number of new entrants</th>
<th>Entrants per year (2009)</th>
<th>Years of education required</th>
<th>Number of newly licensed per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 12 high school students through competitive national entrance exam and special programs to promote rural recruitment e.g. One District One Doctor, Collaborative Project to Increase Production of Rural Doctor</td>
<td>Yes in public schools, there is only one private medical school outside government control on number of entrants</td>
<td>2,521</td>
<td>6</td>
<td>1,363 graduated in 2009 (1,476 entrants in 2003). Graduate rate is almost 100%; national license exam pass rate was almost 100%</td>
</tr>
<tr>
<td>Grade 12 high school students</td>
<td>Yes in public schools and universities</td>
<td>7,770</td>
<td>4</td>
<td>5,864 graduated in 2009 (5,175 entrants in 2005). Successful national license exam rate was almost 100% for public schools and 90% for private schools after 2nd round of exam convened by Thai Nurse Council.</td>
</tr>
</tbody>
</table>

Source: Thailand Health Profile 2008-2010 and interviews with Ministry of Health officials.

Note: Midwives are not applicable as a separate category because the midwife curriculum was integrated into the nurse and midwife bachelor education program.

Although the government has adopted policies that increased the number of health personnel, there are still challenges in the health workforce to population ratio compared with other upper-middle-income countries, as well as maldistribution between urban and rural areas.

---

3 HRH includes physicians (specialists, primary care), midwives, nurses (according to level if applicable) and community health workers (as defined in each country).
Trends toward specialty training are worrying. The proportion of specialists climbed sharply from less than 3 percent of all medical doctors in 1971 to 73 percent in 2003 and then to 85 percent in 2009. Promotions of primary health care and family medicine services were hampered by huge demand for specialization among medical professionals.

Professional councils (medical, nurse, pharmacist, and dentist) are mandated by law to ensure quality of their members through licensing—a life-time license for physicians, but a license renewal for nurses every five years through mandatory continuing professional education. Curriculum and training institutes are approved and accredited by councils and universities respectively. The professional councils are responsible for ethical conduct.

2. Labor market dynamics

Since 1975, financial incentives have been introduced; a monthly hardship allowance was provided for rural retention ($60–88); in 1997, the rate was adjusted for inflation and to differentiate hardship levels: $55 for normal areas, $250 for remote areas, and $500 for very remote areas. A nonprivate practice incentive of $350 per month was introduced in 1995 to cope with the heavy “brain drain” from the public to private sector in light of rapid economic growth. A special monthly allowance of $125 for those who had worked for more than 3 years was introduced in 2005, and $250 per month was given to those working in the four southernmost provinces suffering from unrest.

3. Flexibility of HRH workforce

Professional career ladders are defined within professional groups, but moving between them is difficult. However, clinicians can be appointed hospital managers or provincial chief medical officers in the administrative career path. There is, though, much task shifting among health professionals, such as nurse practitioners trained and employed in public hospitals and rural health centers who take care of patients with simple illnesses.

D. Sequencing of reforms

1. How and why were the relevant UHC reforms put into effect?

Government employees and their dependents (parents, spouse, and up to two children) were historically covered in the CSMBS before 1975; medical bills were reimbursable by the Finance Ministry.

In 1975 the Low Income Card Scheme (LICS) was started by the first democratic government after a long period of military government. It was fully subsidized by the government budget, guaranteeing free health services at public health facilities to poor households. The LICS expanded coverage, under successive democratic government especially with rapid economic growth, beyond the low income households to children under 12 years old, elderly, veterans, handicapped, and religious and community Leaders.

In 1983, the Ministry of Public Health initiated a publicly subsidized voluntary community-based health insurance program, the Voluntary Health Card (VHC). However, due to its voluntary nature, it faced common problems of adverse selection and moral hazard and it was not able to effectively expand the population coverage for the entire population.

Since 1990, formal private employees were obligated to join the SHI. All four of these programs (LICS, CSMBS, SHI, and VHC) provided a comprehensive outpatient and inpatient package,
except a few high-cost services; CSMBS has was the best package. UHC was achieved in 2002 when the LICS and VHC were combined and covered the remaining 30 percent of uninsured people under the UCS (SHI and CSMBS remained unchanged). Financial risk protection expanded according to different population groups—a pragmatic and politically feasible approach.

2. Actors

The UHC national agenda was a political decision by Prime Minister Chinnawat Chhaksin’s administration after its January 2001 general election victory. However, the policy formulation including the designs and key features of the UCS were evidence based driven by technocrats in favor of the poor, public-contract model offering primary health services via the district health system network. The reformists played a bridging role between the research team who generated evidence and the political decision makers at prime ministerial level.

During the transitional period, the main opposition to the UCS came from the MOPH, which lost its financing power. As a result of the purchaser-provider split model, the MOPH played a major service provision role, while the NHSO played a purchasing role. Private hospitals lost market share when the 30 percent uninsured population was covered by the UCS; the transnational pharmaceutical industry had more difficulty in expanding its market share due to the closed-end budget-dominated capitation contracting model.

Given the strong political decision and evidence-based design, such opposition could not exert much power, while the UCS gained public support as it demonstrated tangible benefits to members, such as better access and greater financial risk protection. As UCS beneficiaries were mostly in rural areas, contractors are de facto public health care providers. They have aligned themselves with these reforms, which have been consistent with nonprofit-orientation and based on professional ethos for public services. The private sector and major hospitals have resisted these changes, and have tried to gain control over the medical council and some board member seats on the NHSB.

3. Economic context

The move to UHC was a bold political decision. It had become one of the main issues for political campaigning in the 2000 general election, and the new government decided to move from 71 percent to full population coverage in 2002. Around that time GDP per capita was less than $2,000, and only a few years after the Asian financial crisis. The UCS was introduced and has been run sustainably not only because of economic feasibility but also the application of suitable strategies like the “Triangle that Moves the Mountain.” This refers to the interaction of the power of wisdom—creation and management of relevant knowledge; social power—strong social engagement, ownership, and movements; and political power—political involvement. Beyond high-level political leadership, evidence-based policy making, and a budget design that ensured the government financial affordability at the start and ensured long-term financial sustainability, helped to gain widespread support among the public for UCS.

PART II. LESSONS TO BE SHARED

As described above, Thailand has made significant progress toward UHC through a series of reforms that addressed the many challenges along the way. However, the lesson to be shared
is that the process is a continuous process that requires long-term commitment and political support.

In terms of the achievements, access to essential health services has become an entitlement under the Thai UHC era. Thailand applied a pathway of moving toward UHC by providing a comprehensive health benefit package to specific population groups (the beneficiaries of CSMBS and SHI) and subsequently a similar comprehensive package was expanded to cover the entire population (the beneficiaries of UCS). This is possible because of the readiness of health service delivery systems to absorb the increases of health utilization by UC beneficiaries.

In terms of the remaining challenges, the most pressing challenges for Thai UHC are redressing inequity in health expenditure and government subsidies across three public health insurance programs; aligning policy of HRH production with a primary health care orientation, including urgent reform of HRH education; and an effective mechanism to manage UCS well in light of globalization and interests of medical tourism as well as the ASEAN Economic Community in the next few years.
Bibliography


