Evidence-Based Health Financing Reform in Thailand

Pongpisut Jongudomsuk, Supon Limwattananon, Phusit Prakongsai, Samrit Srithamrongswat, Kumaree Pachanee, Adun Mohara, Walaiporn Patcharanarumol, and Viroj Tangcharoensathien

OVERVIEW OF HEALTH CARE SYSTEM AND REFORMS

Thailand is a lower-middle-income country in Southeast Asia with a GDP per capita of $4,720 in 2010. Complete geographical coverage of the health care infrastructure was achieved through an intensive investment in public health care infrastructures by the early 2000s, although an inequitable distribution of health resources remains a problem. Public hospitals, mainly owned by the Ministry of Public Health, accounted for 75.6 percent of total hospitals and 79.8 percent of total hospital beds in 2005 (Wibulpolprasert, 2008).

The health care system is financed through a mix of sources, namely, general taxes, social health insurance contributions, private insurance premiums, and a low level of direct out-of-pocket payments constituting approximately 18 percent of total health expenditure in 2008. The share of public financing increased gradually from 45 percent in 1994 to 56 percent in 2001. After universal coverage was achieved in 2002, the share of public financing increased substantially and had by 2008 reached 75 percent. In addition, average government spending on health had also increased from 18 percent of the total government budget during 1995–2000 to 20.3 percent during 2001–07. In 2008, total health expenditure per capita was $178 or 4 percent of GDP (Tangcharoensathien, Patcharanaruomol, and others, 2010).

A recent study showed that two key strands of reform—investment in primary care services at district and subdistrict levels and expansion of financial risk protection—contributed to the significant improvement in health outcomes, in particular, maternal and child health indicators (Patcharanarumol and others, 2011). Figure 16.1 plots the changes in the under-five mortality rate per 1,000 live births, chronologically by five-year National Economic and Social Development Plans from 1970 to 2007. During the early 1970s, when the under-five mortality rate was high, the rate of annual reduction was higher, 4.2 per 1,000 live births, than when the under-five mortality rate was low. The annual...
rate of reduction was 0.8 per 1,000 live births in the early 2000s. Various policy interventions noted below the curve in the figure are health infrastructure and human resources developments, whereas those above the curve describe the extensions of financial risk protection to different target populations. Thailand had the highest annual rate of reduction in child mortality among 30 low- and middle-income countries between 1990 and 2006 (Rohde and others, 2008) and the second-lowest level of child mortality in 2006.

Thailand achieved universal coverage in 2002 after a 27-year-long march of expanding financial risk protection for targeted populations—from low-income households in 1975 to the informal sector in 1984 and to private-sector employees in 1990 (Tangcharoensathien, Teokul, and Chanwongpaisarn, 2005; Tangcharoensathien and others, 2009a). Reforms moving toward universal coverage have been incremental, with a range of organizational arrangements and different combinations of sources of financing.

The two parallel financing approaches were payroll taxes for the formal sector employees, the top layer, covered by a social health insurance (SHI) scheme, and a general-tax-financed scheme for the poor, the bottom layer. The coverage of the informal sector, made up of a nonpoor and “not-so-poor” population—the middle layer—has been the most difficult challenge. The two parallel approaches were described at a recent conference as the way to cover the informal sector in the middle layer (Philhealth, 2007). Because Thailand had “squeezed up from the bottom,” this meant coverage for the middle layer (the informal sector) was fully financed by general taxation similar to the way the poor were financed. By contrast, the Philippines chose to “squeeze from the top”—the informal sector there is financed by a fixed-rate premium contribution by members (Tangcharoensathien

![Figure 16.1](image-url)
In 2001, one year prior to 2002’s universal coverage achievement, 29 percent of Thailand’s total population was still uninsured, while 71 percent were covered by different insurance schemes as a result of the historical application of targeting approaches (Table 16.1).

By 2002, the entire population was covered by one of the three public health insurance schemes: SHI for private sector employees, the Civil Servant Medical Benefit Scheme (CSMBS) for government employees, and the universal coverage scheme for the rest of the population.

Critical enabling factors in achieving universal coverage were the political and financial commitment of successive governments, national income, and the structure of the economy, which determined the size of the formal employment sector and hence the introduction of SHI in 1990. The size of SHI was small—it covered fewer than 2 million people or 4 percent of the country’s population of 54.5 million in 1990, and 10 million or 15 percent of the total population of 65 million in 2010. The achievement of universal coverage in Thailand rested on the bold decision in 2002 to cover the informal sector, which would never have been fully covered by SHI because of the sector’s sheer size—more than 75 percent of the population—through a tax-financed scheme.

The extensive geographical coverage of primary care services with qualified health workers was part of the foundation for ensuring that services would be available and accessible to the whole population when universal coverage was achieved (Tangcharoensathien, Teokul, and Chanwongpaisarn, 2005). The universal coverage achievement in Thailand helped reach a convincing outcome in terms of improved utilization of health services by the poor and rural population and as measured by benefit incidence analysis (Prakongsai, Limwattananon, and Tangcharoensathien, 2009).

Table 16.2 provides key economic and health financing indicators among seven member countries of the Association of Southeast Asian Nations, excluding those with high incomes (Singapore and Brunei) and Myanmar, for which data are not available. There is a wide variation in economic and poverty indicators among the countries. Fiscal space—the government tax as a percentage of GDP—in 2000 ranged from 8.2 percent in Cambodia to 16.8 percent in

<table>
<thead>
<tr>
<th>Scheme</th>
<th>1991</th>
<th>1996</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social welfare for the poor, the elderly,</td>
<td>12.7</td>
<td>12.6</td>
<td>32.4</td>
</tr>
<tr>
<td>and socially disadvantaged groups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civil Servant Medical Benefit Scheme</td>
<td>15.3</td>
<td>10.2</td>
<td>8.5</td>
</tr>
<tr>
<td>Social health insurance</td>
<td>—</td>
<td>5.6</td>
<td>7.2</td>
</tr>
<tr>
<td>Voluntary health card</td>
<td>1.4</td>
<td>15.3</td>
<td>20.8</td>
</tr>
<tr>
<td>Private health insurance</td>
<td>4.0</td>
<td>1.8</td>
<td>2.1</td>
</tr>
<tr>
<td>Total insured</td>
<td>33.4</td>
<td>45.5</td>
<td>71.0</td>
</tr>
<tr>
<td>Total uninsured</td>
<td>66.6</td>
<td>54.5</td>
<td>29.0</td>
</tr>
</tbody>
</table>

Sources: National Statistical Office, Health and Welfare Surveys (various years).
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Thailand, in contrast to the Organization for Economic Cooperation and Development average of 37.4 percent (World Bank, 2010).

To exemplify and draw lessons on evidence-based health financing reform, this chapter reviews how institutional capacities in health policy and systems research in Thailand were gradually built up, strengthened, and sustained and describes evidence-guided financing reforms using two policy reforms as illustrations: the provider payment reform of CSMBS, and the inclusion of new health interventions in the benefit package of the universal coverage scheme.

DEVELOPMENT OF INSTITUTIONAL CAPACITY TO GENERATE EVIDENCE

Melgaard (2004) described the strong technical skill and research capacity in Thailand that have backed up reforms and guided sound policy formulation. The effective interfaces between research communities and policymakers made key contributions to evidence-based policy decision making, not only for the universal coverage scheme designs, but for other public health initiatives. These included the establishment of the Thai Health Promotion Foundation, which was financed through an earmarked fund mandated by law, generated from a 2 percent surcharge on tobacco and an alcohol excise tax. This “sin tax”—among the very few in the world specifically earmarked for health—was dedicated to the foundation for its active campaign against the epidemic use of tobacco and alcohol and other health risks (Tangcharoensathien and others, 2009b).

<table>
<thead>
<tr>
<th>TABLE 16.2</th>
<th>Key Background Indicators for Seven Member Countries of the Association of Southeast Asian Nations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Malaysia</td>
</tr>
<tr>
<td>Gross national income per capita (dollars at purchasing power parity) (2008)</td>
<td>13,740</td>
</tr>
<tr>
<td>Annual GDP growth (percent)</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>8.9</td>
</tr>
<tr>
<td>2005</td>
<td>5.3</td>
</tr>
<tr>
<td>2008</td>
<td>4.6</td>
</tr>
<tr>
<td>Fiscal space: government tax (percent of GDP)</td>
<td>16.6</td>
</tr>
<tr>
<td>Poverty incidence (percent below national poverty line)</td>
<td>8.7</td>
</tr>
<tr>
<td>Poverty headcount (percent)</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Source: Tangcharoensathien and others (2011).
Note: n.a. = not available.
The capacity for health policy and health systems research has been systematically built up through the promulgation of the 1992 Health Systems Research Institute Act and the establishment of the Health Systems Research Institute (HSRI), an autonomous agency with an arm’s-length relation to the Ministry of Public Health, also in 1992. HSRI, receiving annual government budget support, is mandated to generate and promulgate knowledge on health systems in support of policy decisions. Over the past decade, HSRI established a number of associated institutions focusing on research in specific areas (Green, 2007). Some of the outstanding associate institutions are the Office for Hospital Quality Improvement and Accreditation, the International Health Policy Program (IHPP), the Central Office for Health Care Information, the Health Insurance System Research Office (HISRO), the National Health System Reform Office, and the Health Intervention and Technology Assessment Program (HITAP), all of which have contributed significantly to informed policy decisions. The evolution of these institutions and their contributions to health system reforms are highlighted below.

The Introduction of Research Institutes

Hospital accreditation, jointly supported by HSRI and the Thailand Research Fund, was launched in 1997 as pilot research in 35 hospitals. It was well accepted by hospital managers and policymakers and has had a significant impact on quality improvement (Pauls and others, 2002). In 1999, HSRI upgraded the program to the Office for Hospital Quality Improvement and Accreditation. When the universal coverage scheme was launched in 2002, accreditation by the Office for Hospital Quality Improvement and Accreditation gained wide acceptance as a quality standard required by all hospitals in providing services to members participating in the universal coverage. In 2009, the Office for Hospital Quality Improvement and Accreditation gained legal status as an autonomous public agency, established by a royal decree, with reference to the Public Organization Act of 1999 (Thailand, Secretariat of the Cabinet, 2009).

The fee-for-services payment approach resulted in cost escalation within CSMBS. It was not until the 1997 Asian economic crunch that policymakers in the Comptroller General Department of the Finance Ministry, which was responsible for CSMBS, called for cost containment measures. Having worked closely with the Comptroller General Department, HSRI made a number of recommendations that were endorsed by the department in 2000 to apply global budgeting and diagnosis-related group methods for paying for inpatient services, establishing a beneficiaries’ database, and direct disbursement to hospitals for chronic outpatient services.

A spinoff of CSMBS reform was the establishment of two agencies: the Central Office for Health Care Information and the Office for Medical Audit (Jongudomsuk, 2010). The Central Office for Health Care Information supported the development of diagnosis-related groups, managing hospital discharges to diagnosis-related groups and advising the Comptroller General Department for payment to hospitals. When diagnosis-related groups were applied widely by two other schemes—SHI and the universal coverage scheme—
the Central Office for Health Care Information extended its service to cover all three public health insurance schemes and became a national data repository for hospital admissions. This national IP data set, covering almost all admissions, is the most valuable one, contributing to knowledge on hospital morbidity and mortality of the Thai population.

Following the introduction of the universal coverage policy in 2002, HSRI launched a research plan on universal coverage monitoring and evaluation. Several studies were undertaken to provide evidence on the impact of universal coverage on both the health system and households (HSRI, 2003; Na Ranong, Na Ranong, and Vongmontha, 2004; Pannarunothai, Patmasiriwat, and Kongswatt, 2004; Srithamrongsawat and Lapying, 2002; Na Ranong, 2005).

In the early 2000s, there were several further reforms, such as

- decentralization;
- increased resources to address determinants of ill health such as tobacco, alcohol and road traffic accidents, as a result of the emergence of Thai Health Promotion Foundation;
- participatory public policy development, enabled by the advent of the National Health Commission Office; and
- downsizing of the public sector.

All these reforms had major effects on health systems.

Recognizing the need for monitoring the impacts of these reforms on health systems, HSRI established HISRO in 2005. HISRO not only mandated the monitoring of the reforms’ impacts, but also conducts research on health insurance and contributes to normative work, such as maintaining various national data repositories for monitoring and evaluation.

These institutions have worked closely with national and international partners to generate evidence and translate evidence to reform decisions (Figure 16.2). Multisectoral partnerships with the Ministry of Public Health, the National Statistical Office, and academia have fostered networking at the country level. At the same time, the London School of Hygiene and Tropical Medicine was one of the long-term international partners that contributed substantially to research capacity development in Thailand (Boseley and Mills, 2010).

IHPP was established in 1998 as a semiautonomous body under the Ministry of Public Health, aimed at strengthening health policy and systems research capacity. Almost all IHPP fellows were recruited from among health professionals working in the health system. They underwent a research apprenticeship in IHPP for a few years, under the close mentoring of senior researchers, before placement in a master’s or doctoral training program abroad. All fellows returned after graduation, and more than 95 percent have continued their research or academic careers (Bennett and others, 2008).

In the last decade, in conjunction with and with support from partners, IHPP has made noteworthy strides in developing and sustaining individual and institutional capacities in health systems and undertaken important policy research (Pitayarangsarit and Tangcharoensathien, 2009). A number of these
policy-relevant studies have contributed to policy decisions—for example, work on estimates of the capitation contracting model for the universal coverage scheme (Mills and others, 2000; Tangcharoensathien, Swasdiworn, Jongudomsuk, Srithamrongswat, Patcharanarumol, and Thammatach-Aree, 2010a), development and sustaining the National Health Account since 1994 (Tangcharoensathien and others, 1999), universal renal replacement therapy for universal coverage members (Kasemsup, Prakongsai, and Tangcharoensathien, 2006), assessment of financial sustainability (Tangcharoensathien, Swasdiworn, Jongudomsuk, Srithamrongswat, Patcharanarumol, Prakongsai, and Thammatach-Aree, 2010), and an equity outcome assessment of the universal coverage policy (Limwattananon, Tangcharoensathien, and Prakongsai, 2010; Tangcharoensathien, Swasdiworn, Jongudomsuk, Srithamrongswat, Patcharanarumol, Prakongsai, and Thammatach-Aree, 2010; Limwattananon, Tangcharoensathien, and Prakongsai, 2007).
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The Health Intervention and Technology Assessment Program, established in 2007 as a nonprofit organization, is mandated to appraise a wide range of health technologies and programs, including pharmaceuticals, medical devices, interventions, and individual and community health promotion and disease prevention. HITAP is an associate organization under the auspices of IHPP.¹

HITAP received its main funding support from four public institutions, namely, the Thai Health Promotion Foundation, the Health Systems Research Institute, the National Health Security Office, and the Bureau of Policy and Strategy of the Ministry of Public Health, as well as other nonprofit organizations such as the World Health Organization, the World Bank, the Center for Alcohol Studies, and the Global Development Network. To avoid conflict of interest, HITAP has refrained from receiving grants from profit-making organizations or institutes funded by profit-making organizations such as pharmaceutical companies.

HITAP has contributed to a number of studies having a major policy impact, including studies of cervical cancer screening in the light of a high-cost human papillomavirus vaccine campaign by the industry (Yothasamut and others, 2010); the social costs of alcohol consumption (Thavorncharoensap and others, 2006); policy on the role of provider-initiated HIV/AIDS counseling and testing (Teerawattananon and others, 2009); and the national agreement on the use of gross national income per quality-adjusted life-year gain as a benchmark for public investment in health (Tantivess, Teerawattananon, and Mills, 2009).

The Introduction of National Data Platforms

In addition to relevant policy-linked research, a number of other studies that helped lay the foundation for regular monitoring of the population’s health and the impact of policy on households to guide informed decisions are worth mentioning. Thailand launched its first National Health Examination Survey in 1991–92 through the collective effort of the Ministry of Public Health, the National Epidemiological Board of Thailand, and a number of universities. Though costly, the survey contributed to a deeper understanding of the health status of the Thai population. Subsequent surveys have been conducted every five years, in 1996–97, 2003–04, and 2008–09, with the active leadership of HSRI and the Ministry of Public Health. Recognizing the need to institutionalize this process, since the resulting information is essential for decisions on investing in the health sector and ad hoc surveys are not sustainable, HSRI established the National Health Examination Survey Office, responsible for conducting this survey over the long term.

The National Health Account (NHA) was established in 1994. The most recent data available are for 2010. The NHA provided estimates on how much was spent by different financing agencies, such as the Ministry of Public Health, other

ministries, insurance funds, households, and donors; on what types of services the money was spent, such as outpatient and inpatient care, prevention, and public health activities; and where the money was spent on public and private providers. A long series of NHA data from 1994 to 2006 was used as the basis for long-term financial projections that assessed whether health spending would be affordable over the longer term (Tangcharoensathien, Swasdiworn, Jongudomsuk, Srithamrongswat, Patcharanarumol, Prakongsai, and Thammatach-Aree, 2010; Sakunphanit and others, 2009). IHPP is the national focal point and technical secretariat to the Thai working group on the NHA. Capacity to generate and update and technical capacities on methodological advancements were well rooted and became institutionalized by the early 2000s (Tangcharoensathien, Vasavid, and others, 2010).

Since 1999, the capacity to generate evidence on the burden of diseases has been gradually developed and became institutionalized by 2010. IHPP is the national focal point and served as technical secretariat of the Thai working group on the burden of disease. Three versions of burden-of-disease data were produced, for 1999, 2004, and 2009, depicting the decade of changes in the disability-adjusted life-year loss per thousand of population between 1999 and 2009; the top 10 priorities in terms of annual total deaths; years of life loss; years lived in disability; priority risk factors contributing to the disability-adjusted life-year loss; and estimates of healthy adjusted life expectancy for this period (Bundhamcharoen and others, 2011). The burden-of-disease data contributed to priority setting for policy interventions.

In conjunction with its partners, IHPP worked closely with the National Statistical Office on improving national representative household surveys, such as the Socioeconomic Survey and the Health and Welfare Survey, to facilitate routine monitoring of the utilization of health services by wealth quintiles. In the questionnaires for all these household surveys, a standard module of ownership of durables and housing characteristics was introduced as routine for health equity monitoring in terms of wealth (Tangcharoensathien, Limwattananon, and Prakongsai, 2007). This is one of the most important intellectual assets for the Thai health system.

Lessons: Capacity Building

Key factors behind Thailand’s success were its strong ownership and self-initiative in the health reform program, as well as external support from international partners, long-term fellowship programs from various sources, and research networking in the phase of capacity development. The latter positioned the IHPP research portfolio within the current international debates (Bennett and others, 2008).

A number of factors have led to success in building capacity. These included the equitable sharing of benefits, both financial and nonfinancial; the creation of a critical mass of researchers; the production of policy relevant research; political impartiality; programmatic and financial accountability; and a collegial environment that encouraged networking. Scientific linkages with stronger partner institutes played a crucial role in sustaining capacity. Although these lessons are
context specific, the principles in sustaining health policy and systems research capacity are applicable to other developing countries (Pitayarangsarit and Tângcharoensathien, 2009).

The development and retention of a critical mass of researchers within institutions with the ability to do high-quality research, attract external research funding, and gain national and international recognition have also been important. The genuine partnership with the National Statistical Office was a real asset in achieving national representative household surveys and in contributing to regular monitoring of the reform’s progress and its equity impact on households. Other normative work, although difficult to publish in peer-reviewed journals, contributed to regular monitoring and helped guide reforms.

TRANSLATING EVIDENCE TO POLICY DECISIONS

Two case studies on the way evidence fed into decision making are highlighted next. The first is the reform of CSMBS, and the second is the determination of the benefit package in view of the advancement of medical technologies, new interventions, and drugs.

CSMBS: Controlling the Use of Nonessential Drugs

Over the last two decades, CSMBS has been the only public insurance scheme experiencing a continued double-digit cost growth, except for a short period right after the demand-side interventions (for example, copayment for private room and board and limitation of private hospital admission to accidents and emergencies only) following the 1997 Asian financial crisis (Figure 16.3). These interventions had the temporary effect of halting expenditure growth in 1998 and 1999, but growth rebounded in 2000; expenditures started to grow more rapidly between 2001 and 2005, and grew sharply between 2005 and 2009, notably as a result of outpatient expenditure. Demand-side interventions, such as copay, were not effective as long as the scheme applied fee for service for outpatient care.

In light of asymmetric information, the open-ended fee-for-service payment applied by CSMBS sent a perverse signal that encouraged overprescription and excessive use of technologies. Clinical practice variation was reported (Limwattananon and others, 2009) in regard to length of hospital stay, use of drugs, and surgical procedures across the three insurance schemes. CSMBS tended to use more health resources than the other two schemes.

In 2007, reforms were introduced in regard to provider payments: diagnosis-related groups were introduced for paying for inpatient services, as well as direct disbursement to hospitals for outpatient services. Expenditure on outpatient services outpaced inpatient services, which was probably explainable by the effects of direct disbursement, while the diagnosis-related group system contained inpatient expenditure growth. A major (80–85 percent) share of the outpatient expenditure pertained to drugs, especially those administered in large public hospitals, the typical providers for CSMBS beneficiaries.
Recognizing the high proportion and increasing outpatient expenditure, the Comptroller General Department introduced a negative drug list, as recommended by two HISRO-led studies. There was overuse of nonessential medicines outside the National Lists of Essential Medicines. In the 34 hospitals most visited by CSMBS beneficiaries in 2009 and 2010, use of nonessential items accounted, respectively, for 66 percent and 67 percent of total medicine expenditure, or 34 percent and 41 percent of total prescriptions. For high-cost medicines, non-essential items ranged from 43.9 percent and 47 percent for anticancer medications to 97.2 and 98.0 percent for antiosteoarthritis medications, respectively (HISRO, 2010, 2011); see Figure 16.4.

The 2009 hospital-specific profile of the use of nonessential items was fed back to the management of all 34 hospitals. As a result of such simple interventions, the use of nonessential medicines declined in almost all 23 hospitals for which comparable data before and after are available, while drug expenditure on non-essential items in almost all military hospitals in 2010 dropped from the level in 2009 (see Figure 16.5). Total CSMBS expenditure in 2010 experienced a negative real growth of 1.7 percent (see Figure 16.3).

In December 2010, the Comptroller General Department prohibited reimbursement for four nonessential drugs that were shown to be cost-ineffective for the treatment of osteoarthritis (Thailand, Comptroller General Department, 2010). Glucosamine alone shared 43 percent and 45 percent of the total expenditure on drugs of the same class in 2009 and 2010, respectively (HISRO, 2010, 2011; Tangcharoensathien, Limwattananon, and Prakongsai, 2007). Two months after the imposition of the negative list, consumption dropped, and
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Figure 16.4  Civil Servant Medical Benefit Scheme Expenditures on Essential and Nonessential Drugs in the Top Five Outpatient Prescriptions, 2009–10 (Millions of baht)
Note: ACEI-ARB = Angiotensin converting enzyme inhibitor and angiotensin-2 receptor blockers (antihypertensive drugs).

Figure 16.5  Share of Nonessential Drugs in Expenditures and Prescriptions, 2009 and 2010
interest groups such as orthopedic surgeons and government pensioners voiced their opposition through mass media and pressured the Comptroller General Department to withdraw enforcement.

There is ample evidence that pharmaceutical industries have been behind the scenes in the movement against this decision. Debates in a number of newspapers have been heated. For example:

- The Royal College of Orthopedic Surgeons of Thailand (2011) said there are clinical indications for the use of glucosamine.
- The government said that, in light of concerns raised by retirees who are members of CSMBS, it might reconsider the bar on reimbursement.
- The Osteoporosis Foundation expressed its disagreement with the nonreimbursement of glucosamine for CSMBS beneficiaries.

Glucosamine's blacklisted status remained enforced until June 2011, a month before the 2011 general election, when the Comptroller General Department changed its decision as a result of political pressure to allow reimbursement of glucosamine once again, but with strict criteria.

**Fine-Tuning the Benefit Package for the Universal Coverage Scheme**

The scope of the benefit package and the level of copayment were two factors contributing to the degree of financial risk protection for beneficiaries against catastrophic health payments by members of the universal coverage scheme. With the application of the negative list approach, the universal coverage scheme package in 2002 was comprehensive, covering diagnostics, treatment, and medicines for outpatient and inpatient services, health promotion and disease prevention, accidents and emergencies, major surgeries, dental services, and a wide range of other high-cost medical services.

However, technological advancement and the proliferation of new medicines, diagnostics, and interventions called for the introduction of systematic and transparent mechanisms for making decisions on which interventions would be covered in the package.

In response to policy demands, in 2009, having reviewed the international experience on the development of benefit packages in seven health technology assessment agencies, a draft guideline was produced and finally adopted after several rounds of stakeholder consultations. IHPP and HITAP, in collaboration with national partners, were involved closely in this process.

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4In Naew Nar, March 10, 2011.
5In the Thai Post, April 11, 2011.
6This approach meant that all conditions and interventions were covered except those items on the negative list, which were mostly nonessential services such as cosmetic surgery and interventions that had proven ineffective or were under trial.
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The guideline covered (1) selection of topics for appraisal, with full engagement by stakeholders\(^7\) in a transparent manner; (2) economic appraisal of selected interventions using incremental cost-effectiveness ratios; and (3) budget impact analysis. The incremental cost-effectiveness ratio threshold of one gross national income per capita for a quality-adjusted life-year gained has been applied by the Benefit Package Subcommittee of the universal coverage scheme. This subcommittee is a platform for decision making prior to adoption by the National Health Security Board, which is chaired by the Health Minister.

Six criteria for prioritizing topics proposed by stakeholders were adopted by consensus through stakeholder consultations:

1. magnitude of the population affected by disease or health problems;
2. severity of disease or health problems in terms of quality of life;
3. effectiveness of health technology or intervention;
4. variations in clinical practice across three public health insurance schemes;
5. impact on household livelihood; and
6. equity and ethical implications.

In fiscal years 2010 and 2011, this guideline was successfully applied twice a year for topic selection, economic appraisal, and recommendations to the subcommittee and then transmitted to the National Health Security Board for its final decision. Table 16.3 summarizes the outcome.

It is noteworthy that this initiative not only produced and applied evidence-informed decisions in a transparent manner, it also strengthened and sustained institutional capacities in generating evidence on incremental cost-effectiveness ratios, budget impact assessment, and other ethical social considerations. The subcommittee is the platform for interchange between evidence and policies.

**LESSONS: EVIDENCE-INFORMED POLICY**

A number of enabling factors were identified. First, a transparent and participatory process in topic submissions by all seven key stakeholders legitimized the process. This is well accepted by Thai society. The process prevents direct submission by any patient or concerned individual or company to the subcommittee that may imply nepotism and favoritism.

Second, the individual and institutional capacity to generate evidence on incremental cost-effectiveness ratios, budget impact assessment, and other considerations was important, contributing to informed policy decision in a deliberate way. This was possible in Thailand, as there is a critical mass of qualified researchers in pharmaco-economics, as well as institutional umbrellas such as HITAP and IHPP

\(^{7}\)Topics of new interventions are proposed by seven groups of stakeholders: (1) policymakers, (2) medical specialists or representatives from royal colleges, (3) public health experts, (4) medical device and pharmaceutical industry representatives, (5) civil society organizations, (6) patient groups, and (7) the general public.
### TABLE 16.3

<table>
<thead>
<tr>
<th>Year and round</th>
<th>Topic submissions by seven stakeholder groups</th>
<th>Topics selected for appraisal chaired by Health Systems Research Institute Director</th>
<th>Considerations by the Benefit Package Subcommittee</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010, round 1</td>
<td>18</td>
<td>9</td>
<td>Six rejected. Three deferred: Tobacco cessation services: pending more information on scaling up and financial feasibility. Pampers for elderly patients: pending for effectiveness of different brand and long-term financial implications to the National Health Security Office. Leukemia in Rayong industrial estate: required evidence from more sites.</td>
</tr>
<tr>
<td>2011, round 1</td>
<td>14</td>
<td>5</td>
<td>In the process of being submitted to the subcommittee for consideration.</td>
</tr>
<tr>
<td>2011, round 2</td>
<td>Process commenced 15 July 2011</td>
<td>5</td>
<td>In the process of being submitted to the subcommittee for consideration.</td>
</tr>
</tbody>
</table>

through which they can contribute in a sustainable way. Furthermore, IHPP and HITAP researchers who conducted economic appraisals were free from conflicts of interest in so doing. The funding for economic appraisals is solely supported by the National Health Security Office. Increasingly, a skill mix on health systems research is required for appraisals such as the assessment of supply-side capacities and their resilience in accommodating new interventions and for the assessment of system requirements for new interventions.

Third, a forum that allowed the evidence to be presented to policymakers in a transparent and deliberate manner was essential to Thailand’s success. This was provided by the subcommittee on the benefits package. A lesson emerges: there is a need for a national forum in which evidence interacts with policy decisions in a deliberate and transparent manner.

Fourth, in the case of the CSMBS reform, rigorous evidence speaks for itself: the excessive use of nonessential drugs and its huge financial implications called for a total ban on glucosamine reimbursement. Understandably, this was resisted...
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by professionals in the pharmaceutical industry. The negative drug list approach can be ineffective and may face resistance. Policymakers may consider provider payment reforms toward capping spending, such as through capitation.

Lessons from Health Care Reforms

Many lessons can be drawn from the long experience of health care reform in Thailand.

Evidence Matters

Evidence marshals the right direction and the right decisions. It should be noted that normative work is equally as important as policy-linked research and that both are key inputs for reform. Additional efforts are needed to improve the quality of routine data as well as establish new data platforms. In the universal coverage scheme analysis of administrative data, generating information for health care purchasers to use in paying health care providers, doing auditing, and providing feedback proved to improve data quality (Pongsanon and others, 2008).

Evidence-Based Decision Platform Matters

Policymaking is not, in fact, a matter of taking action on the basis of the best available empirical evidence (Sue and Fitzgerald, 2005). Policy cannot be linked to research simply through a presentation of research findings to policymakers (Sudsawad, 2007). The participation of users in the research management process, as well as involvement of civic groups, was a critical success factor for promoting the use of evidence from research.

Institutionalization of Capacity to Generate Evidence and Translate Evidence to Policy Decisions Matters

This institutionalization aims to sustain evidence-based health care reform, which is context specific and cannot rely only on external technical support. The establishment of HSRI by law in 1992 was a starting point for the process of institutionalization. Subsequently, associated institutions such as IHPP, HISRO, and HITAP played a pivotal role in building up research capacity and translating evidence to policy decisions with the support of international partners.

Health Systems Capacity and Resilience Matters

Intensive investment in health care infrastructure, as well as human resources for health, were both prerequisites for health financing reform's achieving universal coverage. Many policy measures have been implemented to retain physicians in rural areas, including mandatory rural services, rural recruitment and hometown placement, and additional financial incentives for physicians working in remote areas. In addition, district hospitals worked closely with networks of health centers to form effective district health systems to serve the majority of the rural poor.
CONCLUSION

This chapter illustrates how capacity was built in Thailand to generate evidence for policy decisions. Undeniably, national ownership, local initiative, and self-reliance in terms of funding for capacity building and policy research are the basis for Thailand's success in this area. In the last two decades, exponential growth of capacity in health systems and policy research has been observed in terms of the number of qualified researchers. This was made possible through national networking, international collaboration, and consistent support by strategic partners such as the London School of Hygiene and Tropical Medicine in capacity building. Also essential for success was the high quality of research, its production in a timely manner, and the fact that it was provided in an environment that was free from conflict of interest.

Translating technical evidence to health systems and policy decisions requires a systematic, transparent, and participatory process to gain full societal support and boost immunity against political manipulation. The official subcommittee provided a strategic forum in which evidence helped shape policy decisions.

The reform of Thailand's health financing system was necessary but not sufficient to ensure universal access to essential and quality health services. Adequate investment in good geographic coverage of health care infrastructure, including human resources for health care with a strong and functioning local health system, is also needed. Without the extensive district health system, the policy of universal coverage would be merely a rhetorical statement: the poor would be unable to access and use health services, and health care would be enjoyed only by the urban elite minority.

Demographic and epidemiological transitions have created another challenge. The increasing number of the elderly in an aging society, as well as the increasing burden of chronic noncommunicable diseases, demands the development of intermediate and long-term care models. The rapid advancement of medical technology also demands an effective assessment of the cost-effectiveness of different health technologies to ensure that the health care system remains fiscally sustainable.

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