Knowledge-based changes to health systems: the Thai experience in policy development
Viroj Tangcharoensathien,1 Suwit Wibulpholprasert,2 & Sanguan Nitayaramphong3

Abstract Over the past two decades the government in Thailand has adopted an incremental approach to extending health-care coverage to the population. It first offered coverage to government employees and their dependants, and then introduced a scheme under which low-income people were exempt from charges for health care. This scheme was later extended to include elderly people, children younger than 12 years of age and disabled people. A voluntary public insurance scheme was implemented to cover those who could afford to pay for their own care. Private sector employees were covered by the Social Health Insurance scheme, which was implemented in 1991. Despite these efforts, 30% of the population remained uninsured in 2001. In October of that year, the new government decided to embark on a programme to provide universal health-care coverage. This paper describes how research into health systems and health policy contributed to the move towards universal coverage.

Data on health systems financing and functioning had been gathered before and after the founding of the Health Systems Research Institute in early 1990. In 1991, a contract capitation model had been used to launch the Social Health Insurance scheme. The advantages of using a capitation model are that it contains costs and provides an acceptable quality of service as opposed to the cost escalation and inefficiency that occur under fee-for-service reimbursement models, such as the one used to provide medical benefits to civil servants.

An analysis of the implementation of universal coverage found that politics moved universal coverage onto the policy agenda during the general election campaign in January 2001. The capacity for research on health systems and policy to generate evidence guided the development of the policy and the design of the system at a later stage. Because the reformists who sought to bring about universal coverage (who were mostly civil servants in the Ministry of Public Health and members of nongovernmental organizations) were able to bridge the gap between researchers and politicians, an evidence-based political decision was made. Additionally, the media played a part in shaping the societal consensus on universal coverage.

Keywords Insurance, Health; Universal coverage; Evidence-based medicine; Policy making; Public policy; Health care reform; Cost control; Fee-for-service plans; Thailand (source: MeSH, INSERM).
Mots clés Assurance maladie; Assurance universelle santé; Médecine factuelle; Choix d’une politique; Politique gouvernementale; Réforme domaine santé; Contrôle coûts; Plan remboursement à l’acte; Thaïlande (source: MeSH, NLM).
Palabras clave Seguro de salud; Cobertura universal; Medicina basada en evidencia; Formulación de políticas; Política social; Reforma en atención de la salud; Control de costos; Tailandia (fuente: DeCS, BIREME).

Introduction
Household out-of-pocket payments for health services represent the largest source of financing for health-care services, especially in developing countries (1). Since direct payment places more of a burden on the poor than on the rich, developing countries have been striving to provide a social safety net to ensure equal access to health care. Only a few developing countries have been able to achieve universal coverage, primarily due to a lack of political commitment, a lack of financial resources to cover the whole population and a lack of capacity to manage such an insurance fund. Most middle-income countries introduced universal coverage by adopting a fee-for-service model as the primary mode for paying health-care providers. However, these countries are facing severe escalations in costs and resistance to reforms by medical professionals (2).

Having witnessed many reform processes in the past decade in Thailand, we describe the knowledge needed to support evidence-based reform and the process by which this knowledge can be translated into policies aimed at providing and implementing universal coverage.

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The development of health insurance in Thailand

For the past two decades, politicians in Thailand have used a piecemeal approach to gradually extend health insurance coverage. Government employees and their dependants (spouse, children and parents) were the first group covered by a tax-financed scheme (the Civil Servant Medical Benefit Scheme) (3). In 1975 low-income people were exempted from user charges under a tax-financed Medical Welfare (Low-Income) Scheme. In 1992 this scheme was extended to cover other groups, such as the elderly, children younger than 12 years old and disabled people (3). Those who were not eligible for the Low-Income Scheme were covered by a voluntary publicly subsidized health insurance scheme (known as the Voluntary Health Card), but this scheme was not financially viable because people who were ill joined but those who were healthy opted out (4).

A mandatory tripartite-financed Social Health Insurance (SHI) scheme was launched in 1990 to cover employees working in the private sector. (This was financed by employers, employees and the government.) The SHI scheme used a contract capitation model (5) whereby competing public and private providers were annually contracted with the Social Security Office on a fixed capitation fee to provide health care to all of the scheme’s registered members.

Despite these efforts, in 2001, 30% of population was not covered by any scheme. Therefore, with the strong political leadership of the government, reforms aimed at providing universal coverage were launched in October 2001. This new universal scheme replaces the Low-Income Scheme and the Voluntary Health Card and incorporates into a single scheme the 30% of the population that is uninsured. It is a tax-financed scheme and uses the contract capitation model. As a result of this reform, the entire population of Thailand now has health coverage.

Knowledge base for reform

Research into health systems, policy, economics and financing became important in Thailand in the early 1980s. In 1991 the Health Systems Research Institute (HSRI) was founded; it is an independent tax-funded public institution that has an arm’s-length relationship with the Ministry of Public Health. The Health Minister chairs the Governing Board of the HSRI. The institute is mandated to support research into health systems and to facilitate reforms of the health system. Through contributions made by HSRI and its partners, Thailand has accumulated evidence and built up a critical mass of research into health systems and policy. Thus, the research findings were ready to use when the window of opportunity opened.

Actors in the process

There were four groups of actors that played important roles in moving Thailand towards universal coverage: the researchers who produced the evidence and proposed the design of the system; the politicians who made the decision to adopt universal coverage, allocate resources and enact legislation; the reformists, who are mostly civil servants in the Ministry of Public Health and members of nongovernmental organizations, who bridged the gap between the researchers and the politicians; and finally the constituencies and civic organizations that exerted pressure on the politicians. Additionally, the media played an important part in shaping public opinion.

From evidence to reform

Impoverishment due to medical bills

Political attention was caught by the fact that impoverishment often resulted from the need to pay large medical bills. When the national poverty line was applied, the impact on poverty caused by medical bills was 0.65%. Medical bills pushed 11.52% of people under the poverty line, up from 10.87% prior to making payments for medical services (6). This reflected the inadequacy of the social safety net that had targeted low-income people. However, this message did not get through to the public, and it was not grasped by the reformists as a justification for universal coverage primarily because this evidence came out after the decision had been made to implement universal coverage. Later, the reformists regarded this as a key indicator of measuring the impact of universal coverage, especially in the context of poverty-reduction policies.

Catastrophic health expenditure

There is no defined level of household spending on health care that is considered to be catastrophic. For the purposes of our analysis, we assumed that a household that spent more than 25% of its income for non-food consumption on health care had reached a catastrophic level.

Before implementation of universal coverage, the proportion of households facing catastrophic health expenditures had gradually fallen from 4.9% in 1996 to 3.8% in 2000. This was the result of successive government policies, such as the Low-Income Scheme and the Voluntary Health Card Scheme. After universal coverage was introduced, this proportion dropped further to 3% (Table 1).

 Failures and successes

Cost containment is a major problem in fee-for-service reimbursement models, such as that used to fund the Civil Servant Medical Benefit Scheme (7). Fig. 1 shows there was a rapid increase in total expenditure from 1988 to 2002, despite the fact that there was stagnation and a decrease in the number of beneficiaries as a result of the government downsizing the public sector. The per capita expenditure in 2002 was approximately 4000 Thai baht (US$ 100.00), whereas the budget subsidy for the Low-Income Scheme in 2001 was around 400 Baht per person, a 10-fold difference.

Providers in fee-for-service schemes have a strong incentive to perform excess investigations and offer excess treatments. Evidence from prescription surveys confirmed that there was an excessive use of antibiotics, lipid-regulating drugs and non-essential items in the scheme (8). This finding sup-

<table>
<thead>
<tr>
<th>Year</th>
<th>% of non-food expenditure spent on health care</th>
</tr>
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<tbody>
<tr>
<td>0–0.5</td>
<td>31.9</td>
</tr>
<tr>
<td>0.5–10</td>
<td>51.3</td>
</tr>
<tr>
<td>10–25</td>
<td>11.9</td>
</tr>
<tr>
<td>25–50</td>
<td>3.5</td>
</tr>
<tr>
<td>&gt;50</td>
<td>1.4</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: 3.
ports international experiences that have shown fee-for-service models cannot contain costs (9).

Table 2 shows that in 2001 the average admission rate for patients covered by the civil servants’ scheme was higher than the rate for patients on the Low-Income Scheme, the Voluntary Health Card scheme and among the uninsured (0.107 admissions per person-year for civil servants’ scheme versus 0.092 for the Low-Income Scheme versus 0.085 for the Voluntary Health Card versus 0.054 for the uninsured) (10). This discrepancy was more evident among the elderly (Fig. 2).

After the 1997 economic crisis, fiscal constraints prompted a Cabinet resolution in 1998 endorsing co-payments for non-essential drugs and private room charges (beyond 13 days) and a curtailment of admissions to private hospitals except for life-threatening conditions. Evidence has shown that co-payments cannot contain costs. Although there was a temporary halt to cost increases in 1999 after the resolution was introduced, there was a rebound in 2000–03 because the co-payment process was poorly implemented (11). For example, a committee of three doctors could waive the co-payment if the committee deemed it appropriate to do so. In practice, this exception became the rule and thus the actual rule about co-payments was ignored. This was a major cause of the failure of the co-payment model.

Health policy researchers and the reformists learnt lessons from the capitation contract model of the SHI scheme (12, 13). Theoretically, capitation sends a strong signal to health-care providers to contain costs. They have to manage expenditure within a fixed budget. It leads to cost containment and the rational use of resources. The possible downsides are that providers may not offer all of the services that they should and may dump high-cost admissions onto low-cost ambulatory services. However, an acceptable quality of care in the SHI scheme was reported in a consumer satisfaction survey (14).

Three weaknesses of the scheme for civil servants made a strong case for reforming the system. These weaknesses were brought to the public’s attention repeatedly by the media and several reformists. These weaknesses were:

1. that there was a 10-fold difference between the budget subsidy for the programme for government employees and that for the Low-Income Scheme. Thus, there was a call for a convergence of the benefit packages and better allocation of resources;

Table 2. Admission rate per person per year in 2001 by age and type of insurance before introduction of universal health-care coverage in Thailand

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>No insurance</th>
<th>CSMBSa</th>
<th>SHIb</th>
<th>Voluntary Health Card</th>
<th>Low income</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–4</td>
<td>0.051</td>
<td>0.082</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5–9</td>
<td>0.027</td>
<td>0.044</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10–14</td>
<td>0.024</td>
<td>0.036</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15–24</td>
<td>0.047</td>
<td>0.055</td>
<td>0.060</td>
<td></td>
<td>0.034</td>
<td>0.040</td>
</tr>
<tr>
<td>25–44</td>
<td>0.051</td>
<td>0.074</td>
<td>0.066</td>
<td></td>
<td>0.083</td>
<td>0.074</td>
</tr>
<tr>
<td>45–59</td>
<td>0.069</td>
<td>0.110</td>
<td>0.054</td>
<td></td>
<td>0.108</td>
<td>0.138</td>
</tr>
<tr>
<td>60–69</td>
<td>0.121</td>
<td>0.226</td>
<td>0.167</td>
<td></td>
<td>0.111</td>
<td>0.167</td>
</tr>
<tr>
<td>≥70</td>
<td>0.163</td>
<td>0.324</td>
<td>0.193</td>
<td></td>
<td>0.184</td>
<td>0.235</td>
</tr>
<tr>
<td>All age groups</td>
<td>0.054</td>
<td>0.107</td>
<td>0.065</td>
<td>0.085</td>
<td>0.092</td>
<td>0.153</td>
</tr>
</tbody>
</table>

Source: 10.

a CSMBS = Civil Servant Medical Benefit Scheme.
b SHI = Social Health Insurance.
2. the inherent inability of fee-for-service models to contain costs. This shaped consensus towards a capitation contract model;
3. the failure of the co-payment plan: it did not curb expenditure.

The failure of the fee-for-services model of the Civil Servant Medical Benefit Scheme to contain costs and the success of capitation in containing costs and providing a reasonable quality of care under the SHI scheme helped almost all concerned parties to reach a consensus to move towards capitation model for universal coverage.

**Political processes in context**

In order to highlight the achievements of previous governments and to gain political support for universal coverage from members of the opposition parties, several reformists began discussing the improving trends in catastrophic expenditures on illnesses with the media. This was a “win–win” solution — that is, credit was given to the previous government (now the opposition) and the need to minimize spending on catastrophic illnesses was advocated by the current government.

The reformists played a pivotal role in bringing evidence to the political decision-making process because historically they had been closely linked with both researchers and politicians. The Thai Rak Thai (TRT) party, which went on to win the election, adopted the idea of universal coverage during the election campaign in January 2001. This was the first election to take place under the reformed constitution which was intended to move politics away from corruption and to encourage people to participate. Universal coverage was one of the three most populist policies offered by the TRT party (the other two were a three-year moratorium on the debts of poor farmers and the establishment of a Village Fund to generate income).

All surveys undertaken after implementation of universal coverage have shown that there is strong public support for this policy.

The HSRI commissioned a study on universal coverage and major health financing reform (15) six months before the January 2001 general election. The study indicated that universal coverage was financially feasible. Both the TRT party and the Democrat Party (now the opposition party) were informed of the feasibility of offering universal coverage, but the Democrat Party did not place the idea on its campaign agenda. The political leadership of the TRT made the decision on universal coverage. If the Democrat Party had won the election, it would not have taken the risk of introducing universal coverage.

We found that the political decision was made to adopt universal coverage after certain knowledge was made public — that is, the information on catastrophic expenditures, the inadequate access to care suffered by some people not covered by the Low-Income Scheme, the financial feasibility of universal coverage and its high social acceptance. Subsequently the design of the system and its implementation were influenced by evidence from research findings.

It was unanimously decided by the government, public and private providers, medical associations and beneficiaries to adopt the capitation contract model for universal coverage. The fee-for-service model was not affordable, especially because public debt in the first quarter of 2001 was 68% of the gross domestic product. Unlike what happened in Korea (2), the Thai Medical Professional Association and the Private
Hospital Association did not object to capitation because it had been used since 1991 as part of the social security scheme. The general public also welcomed capitation.

Thailand would never have implemented universal coverage so quickly if contributions by those who could afford to pay insurance premiums had been seen as the main source of financing. This is because collection and enforcement would have been difficult. The only feasible option was to use general tax revenue. There were concerns about using this revenue to subsidize both those who had low incomes and those who did not, but the counter-argument was that every citizen has, under the constitution, an equal right to health and health care.

Clearly, sustained economic growth with an increasing public budget and a reduction in debt repayment played a part in enabling universal coverage. Since the late 1980s, the national security budget has been reduced, thus providing more resources for social services, particularly education and public health (Fig. 3) (16).

Conclusion
Well informed politicians set the policy agenda on universal coverage but they were aided by the reformists who had a significant role in bridging the gap between the policy agenda and the formulation of a workable, acceptable policy. The comprehensive health-care infrastructure and capacity for health management facilitated the introduction of a contract capitation model and the smooth and rapid implementation of the programme. As a result of the societal desire to bring about universal coverage and to ensure the long-term sustainability of the policy, by November 2002 the National Health Security Act had been passed by the Parliament. The Act reinforces the universal coverage policy and ensures its sustainability by lifting the level of government policy to the level of legislation.

Knowledge can be useful in bringing about changes only when the window of opportunity opens. Social and political advocates can play a part in stimulating the opening of windows. An institutional umbrella, such as HSRI, a long-term commitment, and a desire to build capacity in research into health systems and policy are indispensable foundations for reforms.

In the Thai example, reformists worked hand in hand with researchers to ensure that changes were guided by strong evidence. In this case of universal coverage, political commitment was the fuel, evidence was the compass and the social movement was the catalyst of reform.

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Conflicts of interest: none declared.

Résumé
Modifications des systèmes de santé sur la base des connaissances acquises : l’expérience thaïlandaise dans le développement de politiques sanitaires
Au cours des deux dernières décennies, le gouvernement thaïlandais a adopté une démarche graduelle pour étendre la couverture médicale à l’ensemble de la population. Il a commencé par offrir une couverture aux employés du gouvernement et à leurs dépendants, puis il a introduit un système exemptant les personnes à faible revenu du paiement des soins de santé. Ce système a ensuite été étendu aux personnes âgées, aux enfants de moins de 12 ans et aux handicapés. Un système public d’assurance volontaire a été mis en place pour couvrir les travaux de recherche sur les systèmes et la politique de santé compagne d’élections générales en janvier 2001. Les données que les travaux de recherche sur les systèmes et la politique de santé sont parvenus à générer ont guidé le développement de la politique et la conception du système à une étape ultérieure. Les réformistes désireux d’introduire la couverture universelle (pour la plupart des fonctionnaires du Ministère de la santé publique et des membres d’organisations non gouvernementales) s’étant avérés capables de faire la liaison entre les chercheurs et les hommes politiques, une décision politique reposant sur les données de la recherche a été prise. Les médias ont en outre joué un rôle en façonnant le consensus social sur la couverture universelle.

Resumen
Cambiar los sistemas de salud a partir de la evidencia: la experiencia de Tailandia en la formulación de políticas
Durante las dos últimas décadas el gobierno de Tailandia ha adoptado un enfoque gradual para ampliar la cobertura sanitaria de la población. Primero ofreció cobertura a los funcionarios públicos y a sus familiares a cargo, y luego introdujo un sistema que eximía a las personas de bajos ingresos del pago de los gastos médicos. Este sistema se amplió posteriormente para...
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abracar a las personas de edad, los niños menores de 12 años y los discapacitados. Se implementó también un sistema de seguro público voluntario para cubrir a quienes podían pagar su propia atención. Los empleados del sector privado quedaron cubiertos por el sistema de la seguridad social, que entró en vigor en 1991. A pesar de estos esfuerzos, el 30% de la población seguía sin estar cubierta en 2001. En octubre de ese año, el nuevo gobierno decidió poner en marcha un programa para proporcionar cobertura sanitaria universal. En este artículo se describe la contribución de las investigaciones en sistemas de salud y políticas sanitarias a la decisión de instaurar la cobertura universal.

Antes y después de la fundación del Instituto de Investigaciones sobre Sistemas de Salud, a principios de 1990, se recogieron datos sobre la financiación y el funcionamiento de los sistemas de salud. En 1991 se usó un modelo de contratos de capitación para lanzar el sistema de la seguridad social. Las ventajas de un modelo de capitación son que contiene los costos y que ofrece un servicio de calidad aceptable, en contraposición al disparo de los costos y la ineficiencia que caracterizan a los modelos de reembolso basados en el pago de honorarios por servicios prestados, como el utilizado con las prestaciones médicas ofrecidas a los funcionarios públicos.

Al analizar la implementación de la cobertura universal, se observa que, por razones políticas, ésta pasó a figurar en la agenda de los partidos durante la campaña de las elecciones generales de enero de 2001. La evidencia obtenida gracias a la capacidad de investigación sobre sistemas y políticas de salud orientó la formulación de la política y el diseño del sistema en una fase ulterior. Los reformistas que deseaban instaurar la cobertura universal (en su mayoría funcionarios públicos del Ministerio de Salud Pública y miembros de organizaciones no gubernamentales) lograron cerrar la brecha entre los investigadores y los políticos, lo que permitió tomar decisiones políticas basadas en la evidencia. Además, los medios de comunicación contribuyeron a dar forma al consenso social sobre la cobertura universal.

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### WHO-sponsored Commission on Social Determinants of Health

**Public invitation to nominate Commissioners**

Throughout the world, poor people and those from socially disadvantaged groups become sicker, and die sooner than people in more privileged social positions. Income is a powerful predictor of health outcomes, but other social factors such as nutrition and diet, housing, education, working conditions, rural versus urban habitat, and gender and ethnic discrimination also determine a person’s chances of being healthy. Social factors have been found to account for the bulk of the global burden of disease and most health inequalities between and within countries.

WHO is launching a high-level Commission on Social Determinants of Health next year. The goal of the Commission is to increase vulnerable people’s chances of a healthy life.

The Commission will assemble relevant evidence and, most importantly, seek to spearhead a political process to drive change. By identifying potentially effective policies on the social determinants of health in various countries, it hopes to help countries implement such policies. The idea is to turn public health knowledge into political action.

The Call for Nominations for Commissioners has been disseminated through the WHO Governing Bodies and External Relations office in Geneva to Member States, nongovernmental and intergovernmental organizations and is available from [http://www.who.int/social_determinants](http://www.who.int/social_determinants) in all six official UN languages.