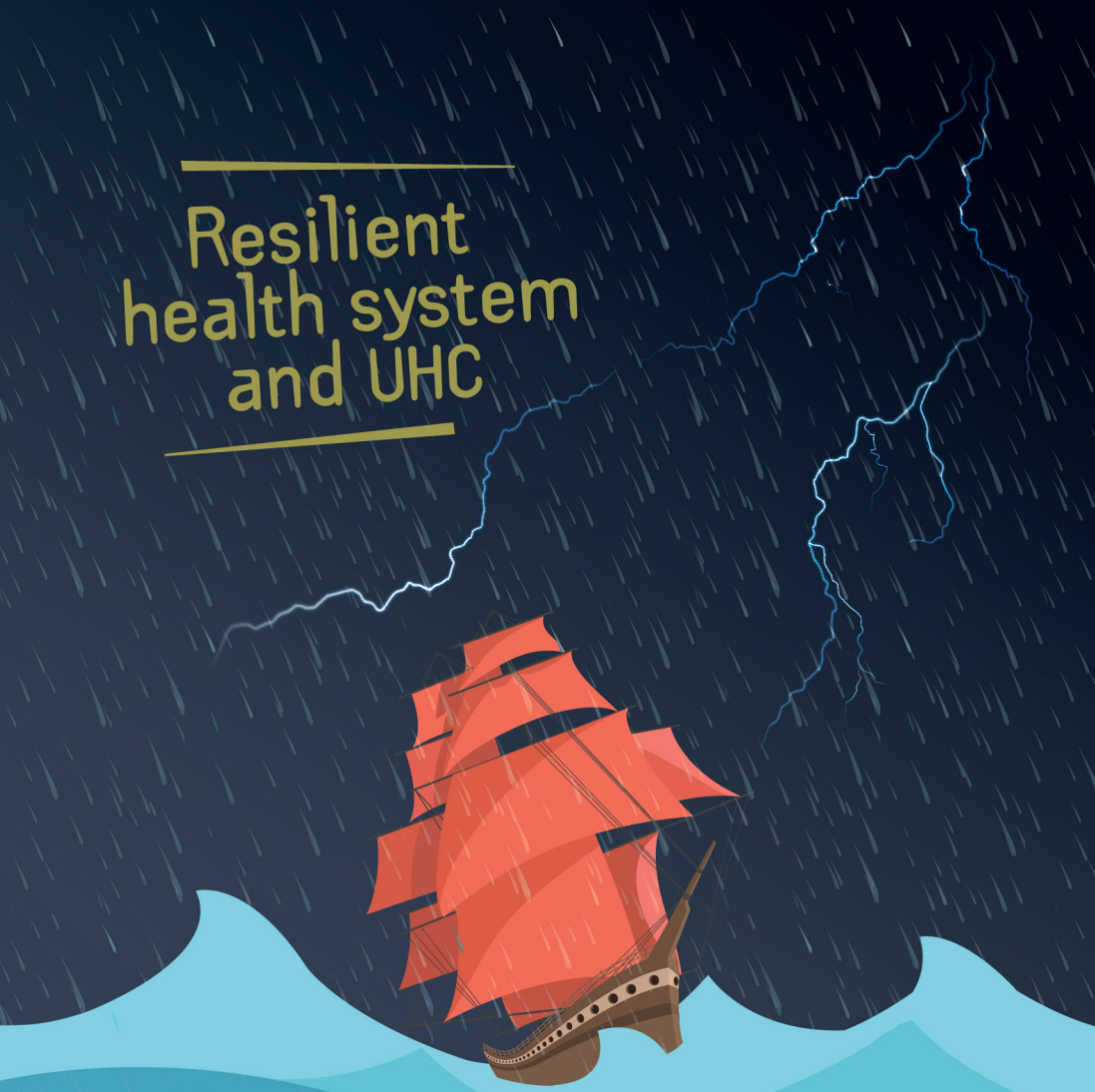
Resilient health system and UHC



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Bellagio Center, Rockefeller Foundation, Italy

Preface

Preface

This book highlights the importance of the relationship between health system resilience and Universal Health Coverage (UHC) sustainability. We look at the concept of resilience as applied to health systems and argue that despite all the importance and focus of attention on the financing aspects of UHC sustainability, a resilient health system is as important if not more so, than the financing aspect. There is no such thing as adequate resources to fulfill the unlimited demand for health care. How much money is needed is also determined by the size of the benefit package that is deemed acceptable by those using the services, as well as the willingness and ability to contribute part of the money needed to finance it. A resilient health system will make it easier to strike a balance at a given time in the health system's evolution to bring acceptable health benefits within the available resources, while taking actions necessary to create more health beyond the health service delivery system and other health system components such as human resources for health, health information system.

We explore Thailand's experiences to better understand health system resilience and map this analysis against the ongoing political economy of Thai UHC where various groups express their opinion and exert their influences to shape the future of UHC. We analyse Thailand's health system, which has undergone

a continuous process of change over the last five decades, and as a result is more resilient and sustained until today. The start of UHC is a test for such resilience, and at the same time extends to the resilience of the Thai health system. Resilience of a health system is a long-term quality. Once developed, it will grow with age and experience. Resilience of the health system can also decrease with age. We propose an analysis framework based on three sets of factors: namely actors, characteristics and processes, which together influence health system resilience. Experience from Thailand shows that the combination and interactions of these three sets in a health system will determine the growth or demise of its resilience. It is worth mentioning that health system resilience itself can itself be resilient and not merely present or absent; it can also have a dynamic bi-directional growth.

A historical account of the Thai health system is provided to allow readers to follow the thought and analysis made about Thai health system resilience. Thailand has made significant investments in its health system ever since the first Western medicine hospital was established through the Royal patronage in 1888. Since then investments have been made to improve access for rural populations through a combination of strengthening primary healthcare infrastructure, increasing service packages

and health programmers, increasing human resources, creating innovative financial mechanisms, improving facilities and making drugs and technologies available. The most important paradigm shift is the expansion of the concept of health from a disease focus to general health and wellbeing.

We also provide an account of UHC development over nearly two decades (2002-2018) in the light of Thailand's health service delivery system and the relationship with new financing approaches and institutions, along with the political economic dimension that followed. When the UHC policy was launched in 2002, the dynamic and gradually-improved health care system was fundamental to the successful implementation of the ambitious policy. It made it possible to merge other fragmented healthcare schemes and to cover the remaining 30% or so of the uninsured population through the third largest healthcare scheme, the Universal Coverage Scheme (UC Scheme), which was newly established and rolled out throughout the country in less than a year in 2001-2002. Combined with the other two previously existing health insurance schemes (Civil Servant Medical Benefit Scheme and Social Health Insurance Scheme), Thai UHC is able to cover almost 100% of the population with health services and financial risk protection.

The importance of a good health care delivery system is undoubtedly an integral part of a successful UHC policy. More importantly, the dynamics and interaction of various groups

and institutions within the health system, beyond mere health care delivery system, are key to the sustainability of a good UHC policy and system. It would not be too difficult to cover everyone with some sort of health benefits, but it would be meaningless if the benefits were too small and the quality too low. Building UHC with a reasonable good quality and sustainable benefit package goes beyond the mandate of technical inputs in defining cost-benefit packages and developing good purchasing methods. It is more important to build leadership, engagement and sense of ownership by all those concerned, guided by overall system values about life and social harmony, which in turn will have impact on demand for health care. We identify some key actors, key characters and key processes within the Thai health system that we believe have been playing crucial roles in making UHC sustainable while also adding to its resilience.

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Chapter 1
Introduction

Introduction: What do we mean health system resilience?[i] Why is it important? What can it contribute to universal health coverage (UHC) sustainability?

What is resilience?

Resilience is necessary for any individual or system existing in an ever-changing and increasingly-challenging environment which at times might become extreme and disruptive. System resilience is the result of characteristics of individual system components, shaped through their interactive processes. From a system evolutionary point of view, interactions between system components and between one sub-system and another can enable the overall system to cope, adapt and transform. However, not all interactions lead to positive evolutionary outcomes. Developing resilience is key to sustainability.[1]

[i] *In this paper we will use the term "health system" to cover both health care systems and other health-related systems which include the other socio-political and economic systems and those sectors responsible for various public policies. At times we will make differentiation between health care systems (health sector) resilience and other systems just to reflect some of the actual actions/incidents described and to highlight the fact that health care system/sector resiliences exist in a different degree from broader societal resilience.*

Health system resilience is linked to equity[2] as it can help to ensure continuation of services at times of crisis and recovery and renewal after the crisis is over. The very components and characteristics giving rise to resilience in times of crisis can also be beneficial in other ways. Kruk et al refer to a double benefit of resilience as seen during the Ebola crisis in Africa in 2015. They propose five characteristics of a resilient health system that apply not only to a system under crisis but also in day-to-day operations and as an important part of system transformation.[3] Resilience is not only "reactive" but can also be "proactive". A resilient health system can be expected to not only respond to survive and revive after extreme disruptive conditions but also continuously take into consideration various challenges that can be less extreme but eventually disruptive if ignored. This means flexibility to adapt according to multiple changes including reorientation, redesign or even reform.

A health system that has undergone periodic health system reforms with positive impact on people's health is also making itself more and more resilient and can be expected to manage conditions of extreme disruptive forces, whether natural or man-made. The resilience of a system is not static, and a system can be less resilient or more resilient at different times. As it can change quickly through interactions of the system components, it is important also to understand and look at resilience from a process point of view. A process for resilience helps to make the system cope, adapt or transform depending on the context of the system. For a system to be resilient, it is therefore useful to identify and can create or bring about process for resilience.

Health system resilience and UHC sustainability

The two key aspects of UHC - equity in access and use of health services and financial risk protection - are highly desirable and agreeable but turning them into practice can be laden with different, often opposing, ideas and expectations. A societal and political context giving rise to UHC never stays static or fixed.

A resilient society and a resilient health system can ensure that UHC is evolving and sustainable while remaining productive; rather than serving as mere political propaganda which does not see genuine equity in access and use of health services nor financial risk protection, and even worse is wasteful in overall health care spending.[4,5] While we may like to believe that the evolution and sustainability of UHC are the results of interactions between political leadership, knowledge generation and use of evidence, the reality could be more complex than this. For example, the engagement of active citizens, the influence of the private sector and the interventions of development partners can influence the evolution and sustainability of UHC.

We propose that the sustainability of UHC is closely linked to health system resilience, with health systems co-existing with other social systems. While, "Adequate and broad-based financing sources may be viewed as most crucial to UHC sustainability,

a resilient health system will help bring about mutually agreed levels of spending with reasonably good outcomes and thus further guarantee UHC sustainability".[3] The health system itself (with or without UHC policy) is shaped by various factors, and three sets of factors – namely, actors, characters and processes - play important roles in making the system resilient. Moreover, there is a two-way relationship between health system resilience and UHC sustainability.[6]

In understanding health system resilience, we can look at its dynamicity through multiple system reforms or transformations (without it necessarily going through health system crises). We can look at its system actors, characters and interactive processes to identify what make the system able to evolve and constantly improve to cope with external or internal changes, thus reflecting the system's resilience. We can also try to look for system resilience in health systems facing health crises such as pandemics and natural or man-made disasters. A health system trying to reform itself in order to implement highly challenging policy demands such as UHC is another context where we may be able to learn about health system resilience.

In these different system contexts, the nature, the relationship and the interactions within each situation and between the three sets of factors vary. These interactions and relationships make the system more or less resilient. It is natural to assume that most health systems have the opportunity (and actual experience) to build up resilience before meeting with

challenging and demanding policies such as UHC.[7] With its resilience gradually built up, health systems are better equipped to take up such challenges. However, this is only the first step. Continuation will also require many other processes and interactions and even new mechanisms, some of which will lead directly to ensure UHC sustainability while also adding to health system resilience.

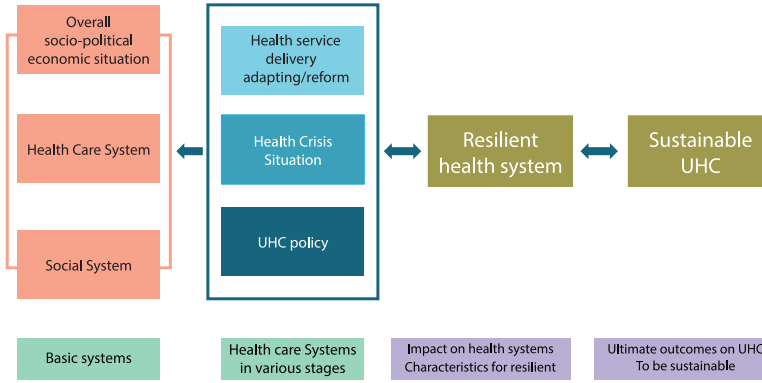

Figure 1-1 *Framework for Resilient Health System by authors*

In search of health system resilience and UHC sustainability

Looking at its transformative history, the Thai health system (health care and other related social systems) is quite resilient, including at times of crisis. The introduction of Thailand's UHC implemented over the last decade (since 2001) brought forward a very clear challenge to Thai health system resilience. While the positive outcomes in terms of improving equity in access and use of health services and offering financial risk protection has been well demonstrated[8], the resistance to change and the desire to bring the system back to where it was remains high. There are concerns that UHC policy as it is will not be sustainable, at least financially. It is obvious that if the benefits under UHC are to continue, the way to finance and to deliver services will have to change from at present. A resilient health system will be able to find alternatives that bring about equity in access and use of health services and financial risk protection, rather than allowing differences to grow, the system to stand still or the goals of UHC reduced to a mere political slogan.

This book attempts to answer two key questions in relation to health system resilience and sustaining UHC:

1. What constitutes a resilient health system (regardless of UHC policy)?

2. What is crucial to the sustainability of UHC and how can health system resilience contribute to the sustainability of UHC?

This book considers the evolution of the Thai health system over the past few decades since the establishment of the Ministry of Public Health (MOPH) in 1942. Many changes and reforms and the capacity to launch and implement UHC reflect the resilient nature of the Thai health system. Its resilience has also been tested through some severe disruptive forces of nature such as a tsunami, emerging diseases with potential global pandemics and big floods. We will also look at the overall societal resilience of the country that might contribute to or affect health system resilience.

For UHC sustainability, we will chart various forces and recent discontent and criticism about UHC which has grown stronger (but not without prior expression) since the policy began in 2001, against the various achievements and varying degree of political support. We will also review a range of policy options proposed by different sectors in society as well as some that have been implemented in order to accommodate some of the arguments and efforts to shape the policy implementation. Finally, we will compare our findings on factors and forces shaping UHC sustainability with findings about health system resilience and identify crucial policy recommendations or health system strengthening reforms that might contribute to making the Thai health system more resilient and therefore increasing the sustainability of UHC. We will also discuss and propose policy options on issues affecting UHC sustainability; specifically the financing of UHC in terms of sources and utilization and out-of-pocket payments at the point of services. This is of the utmost importance as Thailand's UHC cannot continue to function properly without resolving this difficult and controversial policy dilemma.

Health system resilience and health system blocks

As clear from the two questions above, health system resilience and UHC sustainability are related. While UHC sustainability needs to take into consideration many other factors - in particular financing sources, pooling, allocation and service utilization - how the health system makes use of whatever amount of financial resources available is highly critical to the sustainability of UHC. Ultimately, this will offer the expected outcomes of equity in health service utilization and financial risk protection. In order to understand and identify what makes the health system resilient, and thus better ensuring UHC sustainability, we look at system dynamics from a qualitative perspective, and do not yet attempt system modeling.

Rather than analyzing system dynamics through the six building blocks proposed by WHO[9], we look at institutions and actors interactions and some embedded yet dynamic health system characteristics and processes that shape those interactions. While the six building blocks of health system implicitly include the various institutions, actors and key processes, it is clearer to consider the latter through the lens of health system resilience. Resilience is a system 'property' and requires a more in-depth analysis beyond the broad framework of system building blocks. We therefore discuss health system resilience through health system actors, characters and processes.

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Chapter 2

Thai Health System evolution and the gradual cultivation of system resilience

Initial stage of Thai health system development

The health system that existed in Thailand before the introduction of Western medicine was a fragmented system based on Thai traditional medicine. Traditional healers learnt their craft through various forms of apprenticeship and some documented practices and manuals. They took care of people's health on demand and as opportunities arose. People acquired some knowledge, gained access to certain herbs and received care in time of ill health from relatives and friends who were technically "untrained". The most established form of systematic transfer of knowledge and training in the art of traditional medicine existed only among "Royal healers" who worked to care for the dignitaries. Those outside of this circle found and trained their own students at will and quite randomly.

With the introduction of Western medicine through missionaries and the eventual establishment of a hospital (Siriraj) in 1888, efforts were made to systematically make services and technologies available to broader group of people.[1] King Chulalongkorn and later King Mongkutkloa, as well as establishing the first Western medicine hospital, also created medical and nursing schools to train Thai people to further propagate knowledge and access to western medicine alongside previously existing Thai traditional medicine. Moreover, the King established a health services authority responsible for building infrastructure and manpower to provide Western medicine to the broader segment of rural populations and those beyond the confines of the royal palaces and the capital.

Expansion of the public sector in providing health care to the people

After this, the Thai health system started to grow to better care for people across the country. After the monarchy changed to democratically elected governments, most services were made available by public resources and provided by public servants employed by the Government. Health centers were the most peripheral health care units employing only midwives to improve maternal and child health. Originally, small pox vaccinations were available. Public hospitals existed initially in the capitals and some big cities. It was not until the mid 1950s that public hospitals were built in all provincial towns and the Thai population nationwide had access to medical services through Western medicine. Initially there were limited human resources and technologies but later this developed as the economy grew and the country opened up to receiving help from donors.[2]

The active system reforms of the public sector and beyond

The Thai health system has seen at least eight major system and policy reforms in 50 years (1963-2017) as well as smaller changes that have contributed to making the system more dynamic and resilient. All these major reforms had one thing in common: they brought to the fore the differences in ideas and expectations of multiple key actors and institutions in the health system, thus testing as well as shaping the system's resilience.[3]

1. The merging of preventive and curative service systems

Ever since its establishment in 1942, the Thai Ministry of Public Health (MOPH) has focused on providing health services in rural areas of Thailand through two major departments. Firstly, the department of medical services in charge of all major hospitals under the MOPH, including some in Bangkok but mostly in the provincial towns outside Bangkok. Secondly, the department of health in charge of all health centres at district and sub-district level in all provinces. Such a structure has led to competition for a limited budget to the detriment of support for health promotion and prevention services. In 1964, the MOPH, through the leadership of the Minister of Public Health, then decided to merge the separated health facilities into a single line of command under the office of permanent secretary, with the two departments of health and medical services playing technical support roles.

The reform led to reactions and resistance from high officials in the central Ministries with some support from those at the peripheral level. However, the leadership at the policy level stood firm and the new structure at the central Ministry and provincial level has become more integrated and comprehensive as the health facilities at the provincial level (which is curative oriented) work more closely to support those at the district and sub-district levels. Budget allocation, supervision and human resource management for these two sets of facilities lay with the provincial health offices. The reform for better integrated and more comprehensive service delivery in 1960 was a milestone in making the

Thai health system better responsive to health needs and demands of the Thai people. It reduced vertically-separated disease control activities provided under separated health facilities, and district and sub-district levels remained limited to few preventive services such as sanitation and maternal and child health. The closer working relationship between hospitals at provincial levels and health centres at the lower level also lead to increased capacity as well as a better-distributed operational budget. It was also the beginning of a more resilient health care delivery system through the new relationship made possible by the reform.

2. Contributions of educational institutions to health system performance and policy development This subtle shift and evolution of the roles of educational institutions includes the production and continuous education of various categories of human resources for health (HRH), most notably doctors and nurses and auxiliary health personnel. It is also a reflection of the close working relationship and readiness to collaborate between the Ministry of Education and the Ministry of Public Health. There are at least three key policies reforms that both benefited from and contributed to the strengthening of health system resilience.[4–6]

a. Agreement between the Ministry of Education and overall Government policies that allowed the MOPH to produce nurses (with a two-year curriculum) and junior sanitarians to be posted to work in rural areas. This policy also allowed the MOPH to work more closely with the community in each province where there was a problem of nurse shortages, in order to locally recruit

students. They trained them so that, once graduated, they could go back and serve in their respective provinces including at the district and sub-district level. It has also provided the MOPH with a set of experiences in developing curricula and manage education processes based on local recruitment, training and hometown placement as well as HRH management with the concept of task shifting and team work between professionals and para health personnel. The important impact is the alleviation of nurse's shortages in rural areas and boosting the capacity of health services facilities in normally understaffed rural areas; although it should be noted that the proportion of staff to population was still much lower than in the urban areas.

b. The gradual development of formal professional schools to be self-reliant in training for more specialized categories of medical doctors, nurses, dentists and other health professionals. Medical schools have been very much tuned to the needs for periodic education reform. The regular medical education conference takes place every seven to eight years, from the early 1960s up to the present (2018) and has helped make medical education dynamic and relevant to the needs of the health care system. For example, the policy of curriculum reform to make Thai medical doctors play more proactive and positive roles as primary health care supporters resulted from the medical education conference in 1980 after the country adopted the policy of Health for All and Primary Health care (PHC). Training of specialists managed by the Thai medical council also prioritised areas of higher need and gave preference to select those who were designated to serve in rural areas as opposed to those with free training.

c. The development of nursing education to help upgrade technical nurses to become registered nurses, ensuring they are equipped with knowledge and opportunities for more advanced nursing careers. At the same time the Thai nursing council has supported the development of community nursing as a specialized tract in the undergraduate nursing curriculum in order to produce nurses that can better work with communities and become more community-oriented.

These three major changes in the education and production of HRH in the Thai health system reflected three important characteristics that make the system more and more resilient; (1) the sharing of common goals among different institutions, (2) the opportunity and ability to work collaboratively, and (3) self-reliance in HRH productions.

3. The strengthening of the district health system by establishing community hospitals at district level as an important link between prevention and curative services at the district level. 'Community hospital' and 'district hospital' is used interchangeably, to ensure the emphasis on community health and balance of preventive and curative roles. In 1975, the Government decided to change health centres in all district towns into district hospitals. The MOPH set up service standards and predicted human resource requirements (quantitative as well as qualitative) to match the size of district hospitals. One important decision was to make district hospitals a service facility that provided both curative and preventive services and established health promotion departments and sanitation

departments. Each had clear positions for the health workforces such as health promotion nurses and sanitarians being part of hospitals with medical doctors and nurses to provide both curative services for outpatients and inpatients (originally with only 10 or 30 beds).[7,8]

The establishment of district hospitals further enhanced the roles of sub-district health centres (with only auxiliary health workers) and led to subsequent closer working relationships that formed the basic unit of the district health system. This played the role of primary health care provision once the primary health care policy was in place in the late 1970s. The budget allocated to the district and sub-district level also increased with district hospitals being more capable of providing curative services closer to where people lived, while also increasing coverage of preventive services such as vaccination and family planning.

Subsequent Governments through the leadership of MOPH senior officials made significant expansion of the infrastructure at district level. During certain periods when the economy was not good and limited budget was available for increases in infrastructure investment, decisions favoured district hospitals rather than big tertiary care hospitals at the provincial level. The district levels have grown gradually with now 100% coverage and hospital sizes ranging from 10 to 120 beds, and the majority being 10 to 30 beds.

4. The beginning of free medical services for the indigent population At the same time as the establishment of district hospitals, the Government introduced free medical services

for the poor (along with many other free public services such as public transportation). This helped increase the share of the health budget within the overall Government budget plan, especially budget available to the district level. It also further enhanced the capacity of district hospitals and the sub-district health centres to better respond to people's health demands. Due to the success in increasing access at the peripheral level, rather than requiring people travel to big towns and hospitals, the budget for the indigent card policy kept increasing after its initiation in 1975 until it was replaced by the Universal Coverage Scheme (UCS) in 2002.[9]

The success of the indigent card policy (or Medical Welfare Scheme in some other literatures) has been a result of combined forces of policy decisions and the bureaucratic system in policy implementation, which capitalized on the then more dynamic infrastructure and functions resulting from the earlier system reform. At the same time, the policy led to a stronger district health system and a health system based on primary health care, although the concept and policy of primary health care was implemented much later.[10] Tensions existed among certain groups of public healthcare providers who rejected the idea of making free services available; it was seen as unnecessary increasing of workload due to "irrational care seeking behavior" or "moral hazard from the demand side" and they were concerned it weakened efforts to promote self-care and prevention. However, public healthcare providers learned to be more responsive to people's demands and made health care provision more efficient through the available limited budget. At the same

time, many public health facilities learnt about mobilization and management of additional resources from user charges as well as working more closely with the community to mobilize financial resources to cross-subsidize the budget needed to serve the poor. The provincial health offices also played significant roles to balance budget needs. They helped with the redistribution of limited budget for needy hospitals and shape the relationship between bigger and smaller hospitals to be more supplementary and collaborative rather than competitors for budgets. In that period, Government budgets were allocated to hospitals mainly based on the number of hospital beds.

5. Public participation in health and primary health care policy In 1979 the Government adopted a policy of health for all and a strategy on primary health care. MOPH leaders had done operational research to find ways of involving people in health care before the Alma Ata declaration and had been receptive to the policy before the WHO resolution was adopted in 1979. The MOPH decided to introduce two types of lay health actors namely 'village health communicators' and 'village health volunteers' (VHVs) playing different roles; the former focused on communication while the later played more active service coordinator and provision roles. The MOPH introduced regulation to allow village health volunteers to provide treatment under the supervision of medical professionals. This led to controversies and reactions from health personnel citing the fear of low quality health care or even abuse of powers

allowing unqualified practices to be legitimized. The regular training and supervision of more than one million VHVs has been implemented to ensure that no such consequences ensued. On the contrary, VHVs have become an important workforce to bridge the gaps between people's health needs and the formal health care system through various roles.

The development of VHVs with regular training and supervision has helped shaped the Thai health system to be more dynamic, responsive and resilient. VHVs have led to the creation of a large corps of communicators and coordinators who helped to supplement the care provided by health personnel at facility level by encouraging self-care provided at home (or home-based care). This has contributed to meeting changing epidemiological and demographic challenges.[11] The relationship between VHVs with their local health personnel at the subdistrict and district level (or even in bigger towns and cities) has helped to better focus on services for the more needy groups as well as ensure continuity of care. In many instances, VHVs have also been instrumental in further mobilizing community participation on action for health. This helped facilitating health services provision provided by the health personnel. This latter role of VHVs and emphasis on broader community participation in health has led to many other aspects of people's participation in health. Together, this has helped to make the Thai health system more comprehensive, going beyond health care provision into policy development and making the health care system more sensitive to people's demands.

6. Strengthening institutions for knowledge and intelligence

as a part of policy and system changes. The Thai MOPH established a health planning division and a health statistics division as well as systematic five-year and annual planning processes back in the early 1960's with support from WHO. This was the first step to establish more systematic evidence generation for planning, policy and program monitoring and evaluation and the capacity to do strategic planning and budgeting.

Many departments adopted the role of technical departments after the integrated system reform in 1965, and generated evidence and knowledge; over time capacity increased to use this more systematically to guide policy decisions and program developments within the MOPH.

Many health policies from the 1960s to 1980s benefited from the generation and use of evidence and information at the stages of policy formulation and implementation. Examples include policies on primary health care, malaria control, vaccination and Expanded Program on Immunization (EPI), family planning and maternal and child health.

In the late 1980s Thailand's health economics capacity increased and in 1992 the Health System Research Institute (HSRI) was established as a formal mechanism to promote and fund health system research using Government budget rather than external funding agencies. This has helped to ensure better health system research opportunities. At the same time a number of non-governmental organizations started to play the role of

evidence-based policy advocators. Many key policies after 1990 benefited from health policy and system research. For example, cost containment of civil servant medical benefit schemes, capitation contracting models for social security health insurance, the development and use of Diagnostic Related Group (DGR) as resource allocation model, unit cost analysis of various kinds. This included the studies leading to the subsequent policy decisions and implementation of UCS.

Of most importance is the fact that policy development processes are increasingly evidence-based. The emphasis on and demand for evidence-based policy decisions has come from both within and outside the formal policy making mechanism. The HSRI being a formal mechanism with independent management acts as a link to communicate and translate knowledge for policy decisions. Academic and research groups within the MOPH such as International Health Policy Program (IHPP) since 2001, Health Intervention and Technology Assessment Program (HITAP) since 2007 as well as research from universities all contribute to the policy decision-making. Funding for these studies comes from beyond HSRI. Consumer groups and active citizen groups such as HIV-peer groups and patient groups became policy advocators making use of evidence to support their causes and act as policy watch dogs, demanding evidence about certain policy issues. UCS policies, with debates over the benefit package and sources of finances, especially the attempt to include copayment at points of services, have led to demand for evidence to support policy decision-making.

On the whole, the presence of evidence generation opportunities and capacity and active civil society groups and researchers demanding evidence-based policy decisions, have made policy development process dynamic and interactive rather than rigid and one-sided. Decisions are ultimately more evidence-based and the debates on policy alternatives more intense and dynamic as well as more resilient.

7. The establishment of mechanisms to broaden active public participation in health policy and system development. The Thai government enacted the National Health Act in 2007.[12] The act laid down basic principles for health and health systems policy for the country. This meant guarantee of the right to health, equity in health, the emphasis on health rather than health services as ultimate policy goal, and the opportunity for participation in the policy process. A secretariat office was established to enforce these principles and to manage two key mechanisms to bring public participation in the policy development process. The first mechanism was the multi-sectoral national health committee chaired by the Prime Minister to look into important public policy issues to ensure they do not negatively affect the health of the population. The other mechanism was the annual national health assembly which provided a platform for broader participation of various stakeholders groups in society to discuss and recommend key policy issues. This might be things such as agricultural policies related to use of pesticides and other chemicals, industrialization and health impact or pollution, public financing and health etc.

Both mechanisms helped to bring the general population closer to policy decision- making and built a bottom-up approach to policy formulation. Although the final decision is still made by the formal authority body, opportunities for the public and concerned citizens to consider and discuss certain policies at length with proper support from the secretariat who are mandated to bring in evidence and multiple stakeholders, have helped to provide more insights into people's needs and the perspectives of various groups in the society. In addition, opportunities are provided for provinces to organize a provincial health assembly with technical support from the secretariat office.

This mechanism and the regular participatory policy forum supported by evidence has proved to be a very interesting platform for policy debates and communication to decision makers and will have roles in making the health system resilient and dynamic in the long run because of its highly participatory nature.

8. The daring policy of UHC despite Thailand's relatively low economic status.[13] In 2002, the government introduced the policy of UHC by establishing the UCS using general tax money. This guaranteed access to health services for around 75% of the total population (with the merging of previous public health insurance schemes and 30% uninsured people) together with 25% of the total population under the existing civil servant and social security health insurance schemes. This meant almost all Thai population are entitled to health services with financial

risk protection. The policy was established while the country's GDP was around 5,000 USD (12,000 USD with PPP), a level of lower middle-income country. Policy implementation has been reasonably successful to ensure decent quality health care with a comprehensive benefit package accessible to all Thai populations. The policy brought with it a number of controversies and disagreements from various groups, especially professionals and the business sector but was welcomed and loved by the general population so much that it earned the Government that introduced the policy a successive win of a majority in the house at the following election. The process was also interesting in that both technical inputs and the views of consumer groups and civil society in health contributed to the policy framework and the establishment of the strategic purchasing body, which has a participatory governing mechanism to guarantee transparency and accountability to the public.

The implementation of the policy proved to be ultimately successful reflecting the cooperative spirit of the health care providers in general and the public providers in particular. The policy has however brought two major strains to the health care delivery system. The public providers have no option of opting out of the implementation processes, and the increases in workload were significant (out-patient visits and in-patient admissions almost doubled in the first 10-year period). The financial constraints of close-ended provider payment methods of capitation for out-patient services and Diagnostic Related Group (DRG) with a global budget for in-patient admissions sharply decreased opportunity to charge for user's fees.

Despite these pressures, public providers continued to provide services according to the policy. At the same time, policy makers allocated more and more budget to the health sector, accounting for 14% of the total Government spending annually. However, it became a macro policy concern now that UHC sustainability promotes using tax as the sole course of finance. There is a need to explore policy options and approaches for how to mobilize additional funding from the contributions of those who can afford to pay but are now included/covered with taxes, while continuing to protect the majority of the population from excessive financial risks. Furthermore, there is a need for innovations and efficient approaches of dealing with high demands for health services by the alarming demographic and epidemiological transitions as a result of an aging society and non-communicable diseases (NCDs).

These major policy and system reform events in the Thai health system over the last 50 years reflect the resilient nature of the Thai health system. It demonstrates some of the resilient system characteristics which can be found in other health crisis, such as in the case of pandemics or other disasters (man-made or natural). The participatory nature of the policy processes along with the use of evidence from before the policy adoption through to the process of policy implementation and monitoring and evaluation has made the policy debates and considerations about the various controversial issues highly interactive and interesting. This is a way to test the resilience of the Thai health system while also showing the way forward for the sustainability of the policy. Two key major observations should be pointed out here.

- **Awareness and communication:** All the above policy and system reforms reflect the fact that Thai health system has been very much receptive to changes in the health system environment as well as changes in health problems facing the health system. It is also receptive to ideas and recommendations from outside such as from global health policy debates. Such receptivity and awareness exist at the policy level as well as other levels in the health system and the broader stakeholder's groups. Such existence is not given but rather shaped by communication and interaction among the various groups and stakeholders. The gradual development of information systems, as well as knowledge and evidence generation, contribute to this awareness to make the system more proactive and alert and it can be therefore forward looking and transformative rather than merely reactive (as in the case of emergency responses).

- **The existence of multiple sub-units with autonomy:** The Thai health system is anything but a vertical single command system. While the MOPH seemed to have been a change initiator in many reforms in the early years, it was also evident that many of these leadership initiatives were shaped or influenced by outside forces such as those from political leaders as well as academic inputs and civil societies. Moreover the health care providers within the MOPH also have certain degrees of autonomy in terms of decision making and the ability to mobilize and make use of available resources to respond to people's health needs and demands.

In between these major policy and system reforms there were also some basic system strengthening activities that were significant. They were not related directly to these major

policy or system reform movements but certainly added to the system's ability to reform and transform and thus increased system resilience.

a. The introduction of user charges in public facilities with financial management autonomy for services delivery Thai public providers under the MOPH were allowed to impose user charges where possible. Of most importance is that public health facilities are allowed to keep 100% of the revenues and use them to provide health services within more flexible rules and regulations (called Ngen Bumroong), and not under the same rules and regulations of the government budget (called Ngen Ngobpraman). The use of revenues was regulated through the MOPH with the in-house accounting system and regular reporting to prevent abuse. These rules and regulatory requirements have made it possible for public health care providers to innovate as well as be more responsive to the needs of the population. This leads to multiple opportunities to build partnerships and mobilize cooperation as well as carry out activities at various levels in the health system. This autonomy is definitely contributing to enforcing as well as creating the resilience of the health system in various aspects.

b. The establishment of health planning and health statistics divisions in the MOPH As mentioned, the health planning and health statistics divisions within the MOPH, although the result of international supports, have laid down an evidence-based culture within the health system governing mechanism and policy and planning processes; this is crucial to health system resilience in the long run.

c. The establishment of Field Epidemiology Training Program (FETP) to build up capacity in disease surveillance and control and eventual establishment of rapid response teams at the local level This has been another key institution within the Thai health system that has contributed further to the evidence-based culture, further strengthening of the early warning and rapid response system that are crucial to the timely response to emergency and crisis situations.

d. Decentralization of public administration system with the view to strengthening sub-district (Tambon) local authority with more autonomy in policy and finances The overall public administration decentrali-zation trend has led to more active local administration as well as an engaged civil society. This was partly the result of a changing overall political atmosphere that has become more and more open and encouraging of public participation, and the emergence of multiple civil society groups in health and other social movements such as environment and clean energy. It has helped to make social mechanisms more complex and interactive, a basic ingredient for a resilient health system.

e. The establishment and continuous development of civil registration and vital statistics system by the Ministry of Interior The ability to capture population databases and make use of them to provide better social services is another important sub-component of the intelligence system that contributes to system resilience.

f. The presence of and continuously evolving infrastructure for Information Technology (IT) and telecommunication by the private sector Thai society has been able to adopt and make use of IT to further boost performance in various sectors, public and private. It has also changed the communication and learning landscape of the population as a whole as well as changing the relationship of and interaction between various groups of stakeholders in the health system. While it opens up more opportunities for closer and more timely communication, it can also help propagate information that might bring misunderstanding and conflict and thus both sides have an impact on system resilience.

g. The emergence of active civil society groups, especially in the areas of health and consumer protection such as rational use of drugs, tobacco control, UHC advocacy, peer-to-peer self-help groups, etc. The presence of civil society groups has made the health policy and system landscape more dynamic and kept at bay single command and control, a system behavior that might make the system less resilient.

System evolution, national leadership and beyond

It is worth noting that the various system reforms, major or minor, described above can be viewed from a 2x2 matrix (leadership x scale) reflecting the changing context surrounding the various reforms.

Table 2-1 *Leadership X Scale Matrix*

	National leadership	Broader participation/ influences
MOPH-based	MOPH leaders and reorganization within the MOPH boundary (1, 3, 6)	Leaders/advocators from outside MOPH with implications on MOPH organizational reform (2, 4-8, and a-g)
Broader health system organizations	MOPH leadership initiating reforms beyond MOPH organizational boundary (4-8)	Broader leaders/advocates leading to changes/reforms both within and beyond MOPH (2, 4-8 and a-g)

From a system resilience point of view, it is important to understand the relationship between the directly responsible health authority and the rest of the health system actors and beneficiaries (NGO's, civil society, people, local government, international partners, business sector, private providers, etc.). A system that evolves by a single source of power such as the Ministry of Health (which changed with the change in its

leadership) is certainly not as resilient as a system malleable by other forces. In the case of the Thai health system viewed through these eight major reforms and seven minor reforms, the MOPH is not the only source of power and initiatives for many of these reforms. Global health players such as WHO and US Centre for Disease Control (CDC) played crucial roles in initiating many innovative policies and institutions such as primary health care (PHC) and Field of Epidemiology Training Program (FETP). Other ministries such as the Ministry of Interior, and the Ministry of Information, Communication and Technology played key roles in the vital registration and telecommunication infrastructure and information system. Political parties introduced free medical services for the poor, decentralization and supported political reform and creation of public participatory policy platforms. Civil society and health system researchers advocated for changes such as the creation of health system research support and UHC policy.

It is also worth noting that although some of the reforms were confined within the MOPH, the leadership in the MOPH, although it may not have completely complied or welcomed all the proposals, was not resistant to outside influences. Political leadership from elected politicians has sometimes contributed to the major reforms that have widespread effects and demands for (policy, structural and functional) change both within the MOPH, other Governmental machineries as well as the society. Academics and civil society could expect to exert some influences over major reforms due to the relatively open political environment and relatively stable economy that allow the middle class to

grow and become an active policy player in the society. This ultimately created a more complex interaction in policy and system development.

Analyzing health system dynamic forces for system resilience

This book adopts the concept that health system resilience is the property of a health system that evolves over time. A system that shows or undergoes periodic changes in its organization and management while producing improving health outcome is a resilient health system. As a property of a health system, resilience exists (to a varying degree) and expresses itself not only in the day-to-day operation but more so at times of system adaption or large-scale system reform/transformation. Resilience is also gradually built up (and at times deteriorates) through actions and development (learning) of its key actors (both on the supply and demand side as well as its system stewards and other contextual factors). Disastrous situations, natural or manmade, are incidents to test its resilience and the benefits of health system resilience can be seen without having to face extreme disruption. Reflecting on the Thai health system changes over the last five decades (before the beginning of UHC policy), we identified the following actors and factors as well as interactions and processes that are involved in system changes. We propose that they be considered as crucial for health system resilience.

1. Structurally, the following **actors and organizations** have been found to play different roles in health system changes.

1.1. **The Ministry of Public Health** with its dynamic leaders and leadership was armed with a set of values about health and wellbeing, concerns for the poor and trust in people' potential and participation.

1.2. The leaders and leadership in **other government sectors** such as the Ministry of Interior held a value of beliefs in people's potential and participation.

1.3. **Political leaders** and leadership played roles in certain key important system changes such as the strengthening of the district health system, free medical services for indigents and national health assembly platforms for participatory policy process.

1.4. The relatively larger **public healthcare providers**, with well-designed and continuous refining and reorienting towards an integrated health system based on primary health care, has been an important part of the system reform that both contributed to system reform as well as resulting in more health system resilience. It is also worth noting that continuous improvement in both quantitative and qualitative (value, knowledge and skills) aspects of human resources for health (HRH) in the public sector is also a key characteristic of the Thai public provider sector.

1.5. **Civil society and active citizen** have also been an increasing group of actors in the system changes over the last 3 decades.

1.6. Mechanisms and **institutions involved in knowledge production** for health system changes such as health system research institutes, and policy analysts both in the Ministry of Public Health and universities also played active roles in system reforms at various stages.

1.7. **Local administration and community-based organizations** which are more officially sanctioned played roles in realizing the participatory aspect of the system reform and contributed to making the health system more diverse and resilient.

1.8. **Media and communication technology and telecommunication infrastructure**, which are more recent, contributed to the participatory dimension of the system reform and resilience.

1.9. **Professional organizations** have been crucial as partners supporting many of the reforms, albeit it with initial skepticism if not resistance. This shows the importance of such organizations in determining system resilience.

1.10. **The business sector**, including private providers, is another group of actors that are important to system changes although they might be playing roles only in relation to a few instances of overall system reform, especially in dealing with public participation in policy development. The way in which the business sector exerts its influence in various policy agendas certainly has impact on the final health system outcome as well as determining health system resilience.

2. From the interactions of these actors and institutions over the five decades of health system development, with periodic system changes and reforms, the following characteristics (values, attitudes, behaviors, capacity) can be identified as key to health system resilience.

2.1. **Leadership** of the various actors and institutions, not limited to only top level positional leaders of the system steward.[13] Although many earlier changes took place within the Ministry of Public Health leading to better coverage and performance in terms of service delivery to the population, more recent changes brought forward two clear lessons about leadership and health system changes in an increasingly complex society. The first is that leadership for change could and needs to come also from the non-positional leaders. The other is that even with "positions and authorities", changes cannot be through command and control but rather through communication and collaboration. All leaders therefore need to practice participatory leadership.

2.2. The importance of **values and a clear concept about health and equity**. The Thai health system reforms over the last five decades had goals of making the health system more comprehensive or holistic for a healthier population, not to merely treat sick patients. The other value is the concern for equity, as can be seen by the continuous expansion of health services facilities and capacities of the district health system and building close links with higher levels of health care facilities; this is the concept of a health system based on primary health care with

a strong primary health care network at the district level. It can be argued that multiple actors and institutions as identified in the first point above did not necessarily share these values and may even refuse or oppose them. Nevertheless, values and concepts about equity and health have played key roles in many of the major reforms and are important for a resilient health system where the interests and beliefs of various population groups need to be heard and attended to.

2.3. **The enabling environment** surrounding most of the public providers in health care delivery and policy implementation is another key characteristic of the Thai health care system. This is a possible important ingredient for health system resilience. There are at least three concrete settings that are worth highlighting. The first is the financial autonomy of public hospitals to keep and make use of the revenues generated through user fees under certain sets of principles and regulations and with close monitoring and enforcement to avoid overuse of such autonomy. The second is the flexibility in top-down programmed and project executions. Although national targets and even suggested interventions might be set from central Ministry of Public Health, workers at the peripheral level were allowed a certain degree of flexibility for some programs to suit the local reality. This has helped to encourage innovation as well as avoid rigid following of orders. While abuse of such flexibility did exist with examples of false reporting, overall the flexibility has led to better-motivated health workers with a stronger sense of ownership and the involvement of local communities. The third is the participatory learning environment created through the establishment of

provincial and district health system managers with programmed management and supervision. On-the-job training and learning have been an important driver to make health workers in the public system dynamic and updated. Other forms have been introduced more recently such as context-based learning and research to address routine work (routine to research – R2R).

2.4. **An open society and vibrant political and economic environment** The last five decades of the last biennium has seen a rapidly changing socio-economic and political environment in Thai society. Although Thailand has become a democratic country since 1932, it was governed mainly by military leaders. It was not until 1973 when the military leadership was challenged and toppled. Society became more open and optimistic with a growing middle class and a more active political environment. While the political establishment did not change much, people and society at large became more active and demanding in many ways and the economy became more vibrant due to changing geopolitics since the mid-1980s. Health system reforms over the last five decades benefited a lot from these macro societal changes with subsequent changes in the roles of the public sector in general, the political establishment and most importantly communities and civil societies, not to mention people working in the health sector. A more open society and demanding public are factors leading to a major reform in the health sector, which was the establishment of the national health assembly. These two aspects also contributed to the performance and impact of health promotion funds by attracting many active non-governmental groups working in health promotion.

2.5. **Fiscal space and increasing investment in health** While this could be a subset of the vibrant economy described above, it is worth mentioning that political leadership has made it more possible for the health sector to introduce new mechanisms, programs and services to better serve the general population even before the beginning of the UHC policy. The increasing interest and concern over health, demands for better health and access to health care in general, coupled with the relatively good return on investment (through reasonably good performance of the health sector) has contributed to the overall increase in fiscal space and budgetary support for health sector, even before the UHC.

2.6. **The roles of knowledge and demand for evidence-based policy development** The major events and minor changes above already clearly indicate the need for evidence and the translation of knowledge and evidence into policy and practice processes. The country-led and home-grown health policy and system research capacities in Thailand are outstanding. Health System Research Institute (HSRI), International Health Policy Program (IHPP), Health Intervention and Technology Assessment Program (HITAP), and other research agencies, were originally initiated by Thai health professionals with financial support from the Government budget and other sources. These capacities have been sustained until today.

3. In addition to the visible system actors and mechanism described in point one and the relatively invisible system environment described in point two, it might be useful to include within the system resilient framework a certain number of

processes for resilience that have taken place over the last five decades of health system reform. It is worth noting that processes for resilience might exist and become obvious in times of conflicts or crisis. It can be seen through times of reforms or continuous system evolution where people with different backgrounds and mental models interact to find the way forward for the common good. Here are some processes identified from the reform efforts over the last five decades.

3.1. The process of community participation in health

This is the most prominent feature of Thai health system reforms since 1980, taking place around the time of the goal of health for all and the Alma Ata declaration. Various types of processes have been introduced to increase and improve peoples' participation in health.[14,15] Training and working with village health volunteers is the most basic process for participation, starting with the early phases of primary health care policy in the early 1980s. Since then there have been many other possibilities and processes for public participation in health through community groups and civil society engaged in community action for health, supported by health workers and other local development agencies and NGOs. These include consumer and academic groups advocating for rational use of drugs, peer or patient groups for self-help as well as policy advocacy and active citizens for health policy and related public policies for better health. This has included marketing and use of pesticides, food safety, and the right to safe and healthy environments etc. These processes did not necessarily emulate from health workers but were more spontaneous and self-organized. While such initiatives can be essential for and

contribute to health system resilience, they still require much effort, learning and practice to become collaborative rather than confrontational in many instances.

3.2. **The process of evidence-based policy development from policy and program formulation and budgeting to implementation and policy evaluation** It is interesting to note that many of the reforms mentioned above have benefited from evidence generation and the use of evidence for policy decisions.[16,17] The mechanisms and people involved in evidence generation and use varied from one issue to another. While the process for evidence-based policy formulation and decision making may not yet be as participatory as it should be, the process within the Ministry of Public Health has been quite evidence-based and sensitive to criticism for calls for more solid or reliable evidence. The ability to generate evidence and communicate to the public in terms of policy outcomes and impact, if not policy recommendations, has also been another interesting feature within Thai health system reform experiences. Academic groups active in health policy and system research or policy evaluation might still be inadequate but they have been able to institutionalize evidence-based policy within the policy-making mechanisms so that it is more dynamic and adaptive to external feedback. The most important aspect may be the process of policy implementation, which entails reporting, monitoring and supervision from various levels. This could become rigid and ritualized but has actually been one of the processes where ideas and innovations has played a crucial role in reshaping the policy implementation. These processes are institutionalized, practiced and improved upon through mechanisms at the provincial and district level leadership.

3.3. **The process of HRH production and capacity building** Education institutions in health sciences have played important roles in health system reforms both in terms of adapting to demand for quantity as well as quality and even demand for more equal distribution. This happened through regular processes of dialogue between the Ministry of Public Health and education institutions. Although still far from perfect (there have been periodic breakdowns of these processes), they enabled the education sector to play an active role in the adaptation and transformations in health system reform and thus to making the system more resilient. Examples include the periodic national conferences on medical education which contributed significantly to the concept of community participation in health and primary health care (the fourth national conference on medical education). There is also a platform for coordination between the users and producers of health professionals that gave rise to new program to better address the demand for health personnel in rural areas and the need for more primary care physicians. There were also mechanisms and processes for discussions about the need to target the production of specialists to the needy provinces.

The process of capacity building for those already working in the system also existed in many forms and allowed the health personnel working in the system to remain updated and confident in doing their jobs, and able to coordinate with those at different levels in the system, especially within their own locality. Such processes have been made possible because of the increased capacity of educational institutions at the regional or provincial levels, without having to depend completely on centralized curriculum and programs that could be very limited

in number and less able to meet the context specificity. This also helped build up working relationships between various levels, a process very much needed, and helped to make the system more resilient. It reinforced collaboration and reduced the conflict that often existed between providers at various levels in the patient referral and resources sharing process.

3.4. **The process of HR management of the public sector** While the public sector played an important role in continuously increasing accesses and quality of health services for many of the Thai population, its system of HRH management needs to be reviewed and reformed. Providers attempted to control the increase in the size of the body of civil servants without providing new, effective and efficient options. There was limited autonomy given to the health services providers (in the public sector) to attract more staffs and incentivize for better performances. All this meant that the public providers might not have been able to continue playing their roles effectively. This threatens the resilience of the health system in serving the rural population and improving equity in health.

3.5. **The process of health system stewardship and management** Leadership in multiple groups and institutions are crucial for health system resilience. The history and experiences in Thai health system reform demonstrate that good processes in overall health system stewardship and effective process of internal management of the public sectors contributed significantly to the continuous reform and improvement of health policy and system redesign in general. It also contributed to the performance of the public providers in particular. A mechanism like the health planning division

allowed system stewards to look at changing environments as well as performance gaps and possible mismatches between new challenges and the existing system. The five-yearly planning process with subsequent opportunity to introduce new programs and approaches to health development in Thailand has helped to keep the health system dynamic. Annual planning with continuous monitoring of existing health resources in the system (mainly confined to public providers in the Ministry of Public Health and less well developed to monitor those in other groups of providers) allowed the periodic review of the needs for facilities, HRH and technologies and the building up of effective information and communication systems. The regular monitoring of the financial status of individual public hospitals produced information to prevent sudden disruption of service provision capability and introduced timely interventions to support service provision undisturbed. While processes such as these did exist and contributed to smooth health system functioning and opportunities for periodic system reforms, they are still far from perfect and require lots of improvement.

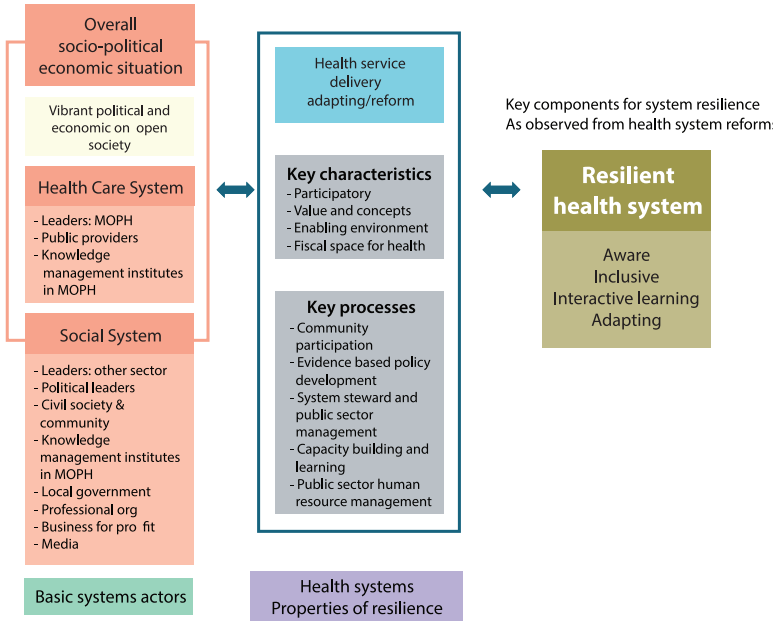

Figure 2-1 *Framework for Resilient Health System: Health service delivery adapting/reform*

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Chapter 3
Health system resilience in times of crisis

In chapter 1 we looked at Thai health system resilience through the continuous evolution and periodic reforms that took place in the past five decades, not only resulting from the actions of the Ministry of Public Health but also other stakeholders, and the overall economic and social development plan.

In Guinea, Sierra Leone and Liberia in 2014, the impact of the Ebola epidemic on health systems elevated major concerns about health system resilience in other countries[1], including Thailand. If we understand resilience as a property of any health system that evolves over time, resilience is integral during times of crisis. It is therefore important to consider resilience in crises.

The Thai health system has faced many crises that have threated to disrupt regular operations. Crises have led to a surge of demand for health care and disruption to existing infrastructure and regular service provision. The surges in demand and degree of disruption to service provision varied from one incident to another. Fortunately, they took place in limited locations, yet they are useful examples to reflect on the resilience of the Thai health system in crisis situations. They help us to identify critical factors and actors that might support continued growth of resilience in the Thai health system. This book selects three major incidents as examples which are: the Tsunami in the southern provinces in 2004; controlling emerging diseases with potential global pandemic such as H5N1 in 2004-2005 and MERS CoV in 2016; and providing health services in a wide spread flooded area 2011.

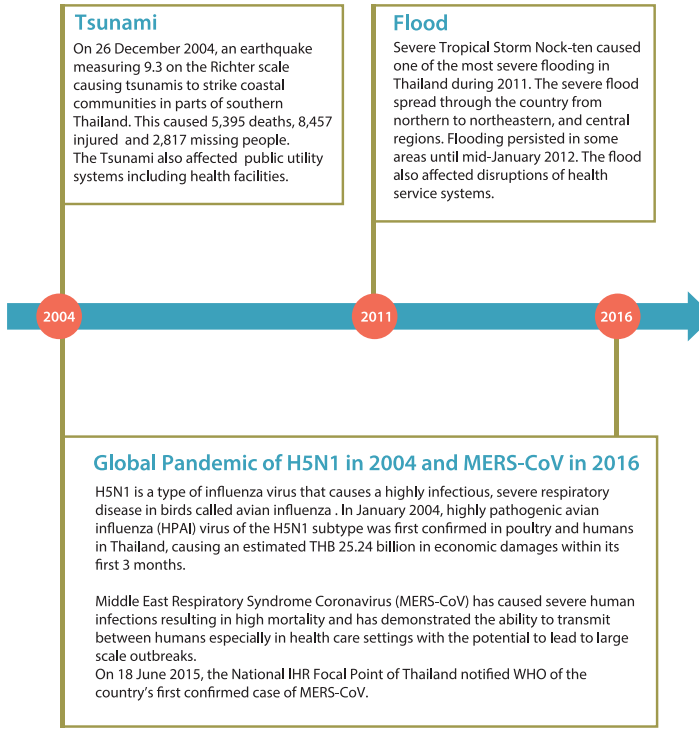

Figure 3-1 *Timeline of three major incidents*

Actors and actions reflecting Thai health system resilience

These three Thai incidents described may not be comparable to the extraordinary situation that the three West African nations faced in the Ebola crisis in 2014-2016. However, there are some common characteristics that might help learn more about health

system resilience in crisis situations. In all three incidents, there was a rapid surge in demand for services coupled with disruption to regular service provision and facilities, necessitating a systemic response beyond the normal response. There was a need for coordinated actions under time pressure, the need to communicate widely and effectively with the public to allay fears and the need to identify demand for services and supports. While the initial stages of the crisis were quite chaotic and confusing, the responses and the subsequent outcomes in terms of health damage containment, outbreak prevention, public confidence and providers' satisfaction were impressive and positive. From a system (actors, actions, tools and relationship) point of view, the following lessons were found to be crucial:

- The presence of sub-units with a reasonable degree of autonomy at the peripheral level was key to the immediate response, helping to contain damage and mobilize further support. Who were the sub-units? What kind of autonomy existed? What made them able to use their autonomy to respond positively to the challenges facing them? The district health system with tambon (sub-district) health-promoting hospitals at the tambon (sub-district) level backed up by the community hospital at the district level were crucial in the initial response to provide much needed medical and health care to those people affected.[2]

- The ability of the central commanding unit to launch a widespread response while also being able to coordinate them (to a certain extent) was beneficial.

- It was crucial to have availability of certain legal and regulatory frameworks and structural relationships that allowed various organizations to understand and define their roles in conjunction with others. This also provided a backbone for coordinating the resources and support needed.

- The readiness of the higher level of health facilities to act as great support to the work at the frontline enabled the response. The immediate response at the front line for medical relief and hospitalization during the Tsunami in 2004 was effectively supported by two general hospitals and another two referral hospitals within a 100 kilometer radius, thus helping to reduce unnecessary delay for treatment and the amount of death and complications. The floods in Bangkok in 2011 led to many local health facilities being flooded and non-operational, but the ability of the system to mobilize teams from nearby provinces and set up temporary service points and mobile health services meant the system was able to cope. Although the private sector was not a part of the response network, the later development of an emergency medical service network (see 6 below) and Universal Health Coverage (UHC) has made it possible for private hospitals to play a more active role in the emergency relief operation.

- The existence of various modes and means (infrastructure) of telecommunication made the responses and coordination by the central units to the peripheral sub-units more concerted and timely.

- The capacity needed to respond to health and related services at times of crisis or emergency have been gradually built up.

a. The most notable capacity is in diseases surveillance and its rapid response team.

b. Emergency medical services capacity has also been developed in the health services system, with training and capacity for basic life support teams (BLS) in more than 50% of all the tambon[i] (sub-districts) and advanced life support teams (ALS) through public and private hospitals networks.

c. Emergency relief and mitigation teams have also built up under the command of the Disaster Relief Office under the Ministry of Interior and can be mobilized in natural and man-made disaster responses.[3]

d. Regular drills have also been put in place enforced by both the Ministry of Public Health and the Ministry of Interior (at the local level).[4]

- Establishing intelligence and information systems that help to detect the problem early, respond effectively and efficiently and monitor closely allows for flexible modifications of plans and actions. This involves gathering and making use of data and information in the health sector (diseases surveillance and health service data) and other sectors (police, relief operation, etc.).

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[i] *1 tambon has an average population of 5,000. There are 7,000+ tambon in all 77 provinces (excluding Bangkok).*

- International connection is one of the essential parts of the Thai health system which has made it more resilient in different ways. In terms of its ability to respond in times of crisis, global linkages have contributed to the preparedness of the Thai health system by providing the legal framework of the International Health Regulation (IHR)[5]. This has made the Thai health authority aware of the need to establish certain infrastructure, rules and capacity as a part of global diseases surveillance and responses. At the same time, the global network helped in investigations and mobilized external teams when needed. In efforts to cope with emerging threats of global pandemics, Thailand has not yet needed the actual mobilization of relief operative teams from outside the country. However, the preparedness, intelligence and laboratory supports have helped make the health system more resilient in responding to any future crises.

System characteristics of the Thai health system in times of crisis

Taking into consideration the characteristics of a resilient health system proposed by Kruk et al[6] - aware, diverse, self-regulating, integrated and adaptive - we can see various types of interactions between different groups of actors during the Thai crises.

Aware – through Thailand's diseases surveillance network and information about various health facilities in the public and private system, responses to crises were made early and timely.

The international community also provided some needed information and early warning through the International Health Regulation (IHR) network. Telecommunication channels helped to make the awareness spread more readily to the peripheral units as well as to various organizations providing support. As for the floods and Tsunami, the awareness of the looming crisis and responses to crisis may not have been as well established as that for diseases surveillance. Response in times of crisis need coordination and actions from various sectors beyond health, and the mechanisms and tools to create awareness within the health sector may be closely linked and dependent on actions and investment from other sectors. It was not until after Tsunami in 2004 and the big floods in 2011 that related agencies set up a more systematic network of monitoring and warning. Nevertheless, various units in the system could afford to respond based on their own sources of information without having to wait for a central warning system. The awareness that diffuses to various units in the system may be more crucial than awareness existing at the top level, despite its capacity to trigger down quite readily. It is most important to keep in mind that awareness of a system is a characteristic resulting from human factors rather than hardware and information flow.

Diverse – the existence of multiple groups of actor's readiness to respond individually and coordinate concertedly is what happened in all three Thai cases. The district health system in Thailand developed over a period of more than four decades to provide a diverse range of services rather than deal with

specific problems defined by the central Ministry or donors. Thus, diversity refers both to structure and functions. UHC also made the system better and more able to serve the community[7], not only reducing health risks in non-crisis time but also helping to ensure community support and trust in time of crisis.

Self-regulating – the sub-units at the district and sub-district levels of the health system and public administration system, including local NGO's and private foundations, despite its small size and limited resources and capacity, were the first to respond to the crises. Together, they provided the first level of care and support without having to wait for orders or approvals. The units also proactively communicated with higher levels asking for additional support. The central coordination mechanism made the self-regulating characteristics more effective in addressing the problems and need for help.

Integrated – the mechanisms and tools for integrating various actors, resources and expertise such as the disaster commanding team at the provincial level or the central war room set up in the Ministry of Public Health are examples of the system's ability to create and work with integration. Many laws and regulations aiming at equipping certain organizations with the mandate and ability to function as coordinating units have been put in place. It helps make the health system ready to respond in an integrated manner by mobilizing various autonomous sub-units.

Adaptive – the responses in times of crisis varied according to the changing situation and reality in the field. This was made possible by continuous monitoring of the situation coupled with effective communication and the ability of the system to organize teams and actions accordingly. Moreover, lessons from one crisis can also be learnt and applied to another by responsible institutions and teams, so that they are better prepared or make necessary structural changes and networking arrangements for another situation. Many of these adaptations also contribute to the day-to-day service provision such as the health facility-based record system and the telecommunication infrastructure and human resources. The budgetary system and the extent of autonomy granted to various sub-units at the district level and below have also changed as a result of previous experiences.

Key actors and their characteristics for health system resilience in times of crisis

As described in chapter 1, we identified ten groups of actors, and referred to six important characteristics and five key processes. All this adds up to a resilient health system that is aware of the need for change, inclusive of multiple actors, self-regulating with autonomy to act, integrated with the ability to mobilize and learn, and adaptive through readiness to take actions necessary for change. During times of crisis in the health system we can see that certain groups of actors with certain types of characteristics and certain types of processes are crucial and reflect system resilience. Most notable, is the ability of the health system to act independently yet collaboratively.

It is worth highlighting some additional points that make the system resilient and able to cope in times of crisis. From a structural point of view, actors playing key roles in times of crisis are fewer in number than for the reform purposes; and some play more crucial roles than others

- The central and national leaders in the health sector played key roles all throughout the time of the three crises.[8]

- The teams at the local level consisting of the district health system, local administration and communities played equally important roles, especially for the rapid response and relief operation, without having to wait for orders or commands from a national or higher level.[9]

- Leaders from other sectors, especially emergency relief mechanisms which are usually situated outside of the health sector, played important roles to coordinate with the top leaders in the health sector to command and coordinate help and support.

- Intelligence units at various levels enabled the coordination of actions to be on target, timely and effective. In the case of the Thai health system, such units existed mostly at the national level with some degree of capacity at the provincial and district level.

- International partners played important roles at times of crisis. International organizations provided not only information support and helped to increase system awareness but also provided much-needed resources (human and financial) to prevent system disruption. They also helped call for and build up capacity for preparedness.

- Legal frameworks and organizational lines of responsibility for command and response are crucial to allow leaders in various sectors in the system to act in coordinated fashion.

- The media played crucial roles to increase or decreased system resilience in times of crisis, as it can create panic or vigilance among the public depending on their messaging.

- Other groups of actors played relatively minor and supportive roles in response to crises, yet their values, attitudes and capacity remained key to make the system more resilient and able to cope with the crisis.

Many key characteristics of certain groups of actors were crucial in responding to the crises and contributing to system resilience.

- **The leadership style** in response to crisis is quite different from that required for system reform. While it remained important to be able to exert leadership beyond the direct line of command, the decisions needed to be quicker but also quick to adapt when needed. The leadership required is therefore decisive yet attentive and adaptive. The ability to communicate effectively to convince people to act and to agree with you or trust decision-making is also very important. It is clear that there is more than one style of leadership needed for a resilient health system.
- **Values** Though not explicitly obvious, societal values played an important role for the system to be responsive and resilient, however this does not happen spontaneously without effective leadership. These values emphasize the good and wellbeing of others, sympathy and compassion, and health and

equity. More than one set of societal values are at play in a resilient health system.

- **The enabling environment** needed for a resilient health system in response to crisis should allow the free flow of information. Three interlinked dimensions constituted such an environment; the infrastructure that allowed effective and wide reach of information; institutions with human resources capable of generating needed information (the intelligence units); and most importantly a socio-political environment that allowed information to flow freely, not only within Thailand but also between countries internationally.

The following processes contributed to the system's ability to respond to crisis. Such processes are also crucial for system resilience.

- **System steward and public system management** The process of preparedness planning, regular drilling and public communication led to vigilance and not panic. All three processes are key to building up system resilience and elicit rapid and effective responses in times of crisis.
- **Community and societal participation** The type of participation in times of crisis was radically different from that during times of system reform. Public participation came quite spontaneously and mostly uncoordinated. A system that cannot manage such participation effectively could drown in the process rather than being able to invest and mobilize relevant resources to respond well. Another aspect which fell into this category of public participation was the demand for information

at times of crisis. Effective communication channels and adequate resources were crucial supports for the general public's inquiries. It helped to allay fears and reduce chaos, an important aspect to test system resilience in time of crisis.

- **Capacity building** Thailand's responses in times of crisis needed specific sets of knowledge and skills that were present in lay or ordinary people and manageable by a wide range of organizations at the local level. Systematic and regular training and drilling were key to transfer and maintain capacity to make it resilient and responsive in times of crisis. This also applies to capacity with respect to intelligence acquisition and public communication. The institutionalization of this capacity is crucial for system resilience.
- **Real time coordination using timely information** The presence of a 'war room' was crucial to the health system's response to crisis and strengthening resilience. The main function of the war room was to coordinate actions, not merely acquire information. The ability to put this process in place as soon as possible helped to ensure that damages were rapidly contained, needed were identified and resources well targeted and coordinated. Such processes of real time coordination benefitted from and were more effective through the legal framework in place. In some instances, such as control of diseases within a potential global pandemic, the process will need to involve many relevant international partners.

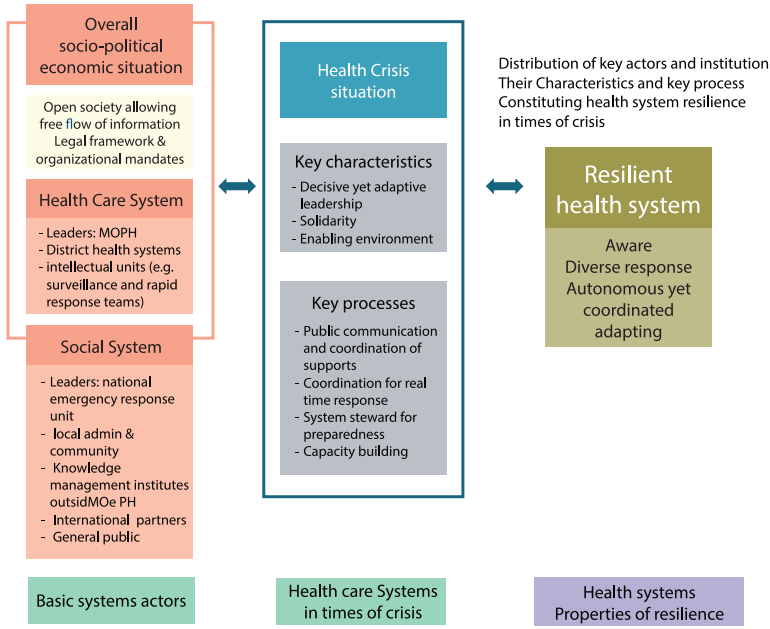

Figure 3-2 *Framework for Resilient Health System: Health Crisis Situation*

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Chapter 4
Implementation of UC Scheme in Thailand

The development of Thai universal health coverage (UHC) can be traced back to 1974 when it established a workmen compensation fund to cover private employees who were injured from working. The coverage for employees who had illness not related to work came later in 1990, and was the Social Security Scheme (SSS), where Social Health Insurance (SHI) was one among other benefits. At the beginning, it covered only companies with more than 20 employees and in 1994, it expanded to cover those with more than 10 employees. In 2002, the benefit covered every company with more than one employee. Another public health insurance scheme, the Civil Servant Medical Benefit Scheme (CSMBS) was set up in 1978 covering all government employees and dependents including spouses, parents and not more than two children under 18. At the same time, the Government set up the low-income card scheme (LICS) for the poor in 1975 and expanded it to the community-based health insurance scheme (CBHI) based on maternal and child health in 1983. This led to the change from community-based financing to voluntary health insurance by moving the management of funds from village level to involvement in sub-district level by introducing the health card scheme (HCS) in 1991. The newest scheme; the Universal coverage scheme (UC Scheme), was set up in 2001 and covered around 75% of the total population in 2002 by combining LICS, HCS, fee exemption groups and uninsured people. Consequently, since 2001, Thailand's healthcare coverage was mainly three schemes including SSS, CSMBS, and the UC scheme.

UHC set up, implementation and sustainability framework

Setting up and running UHC in Thailand can be explained by the approach of moving public policies, as proposed by Professor Prawase Wasi in a model called the 'Triangle that moves a mountain'.[1] The Mountain represents a tough problem while the Triangle stands for a system consisting of three components working together to push forward the mountain. They include 1) research-based knowledge; 2) social movement or social learning; and 3) political movement. With effort and synergy of these three components together, the difficult problem can be solved and even a mountain can be moved. In the example of UHC specifically, the UC Scheme needed to be established in order to achieve 100% population coverage in Thailand. This meant convincing politicians that UHC was the key policy to lead to equity in health care for all citizens by providing evidence from research. Politicians needed ensure that UHC was a matter of political commitment. Social movement played an important role to respond to politicians that UHC was a good policy and could gain popularity among ordinary people.

To move to UHC is a hard job; to implement and sustain UHC is harder. Dr. Sanguan Nitayarumphong was the very first campaigner of UHC in Thailand. In his book, "Struggling along the path to universal health care for all", he expanded the

movement to achieve UHC from Wasi's model into further phases, implementation and sustainability as shown in the diagram below.[2]

In order to ensure successful implementation of the UC Scheme, the three major components, namely 1) designing of service delivery; 2) financing and participatory governance; and 3) engaging the public were the key components. Financing without service would lead to failed implementation and implementation without support by the people would also be unsuccessful.

Since the UC Scheme was successfully rolled out throughout the country in 2002, it has been continuously implemented until today nearly two decades later (2002-2018). In this era of epidemiological and demographical transition, the sustainability of the UC Scheme in the longer term becomes a high concern. Questions about what makes UHC sustainable in the long term frequently arise. Three components contribute to the sustainability of UHC: 1) effective management by the Government; 2) access to quality health services; and 3) satisfaction of health care providers. The Government must ensure that individuals enjoy their rights to access essential health services when they need them without financial hardship. It is even better if people know that the health services they receive are continuously improving. Improvements of health services, however, need actions and participation from health care providers. In the health sector, job satisfaction is a crucial factor to produce the intended

outputs, and is highly associated with quality of services and patient satisfaction. We propose a diagram of how to move, implement and sustain UHC (Figure 4-1).

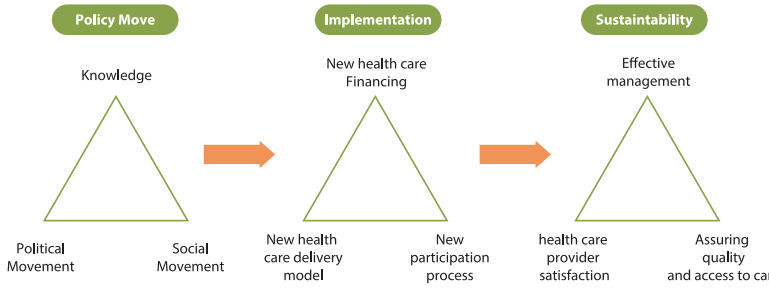

Figure 4-1 Framework of how Thailand implements and sustains UHC

This section shares Thailand's experiences on moving to achieve UHC, in particular 'what works' and 'what doesn't work' at each stage of development. Referring to the framework, we identified three different phases of UHC development; policy movement, implementation and sustainable UHC. We share our real experience of each phase based on the three different angles in the framework.

Phase I. Policy movement

The most critical part of any policy movement is to convince politicians about the importance of the issue. UHC is an example showing that political will and commitment are key to the

adoption of new laws and regulations for reforming health care. However, policymakers may hold beliefs against implementing UHC, for example, commonly;

"We haven't got enough budget. Countries achieving UHC must be very rich."

"We haven't got enough infrastructure and medicines, they are poorly distributed."

"We haven't got enough health workers, there's no capacity to create more."

The movement for UHC is therefore a challenge to countries which have limited budgets and health care resources, although there are several global commitments to support countries trying to achieve UHC since 2005, such as the World Health Assembly Resolution 58.33 and also the efforts in 2012.[3,4]

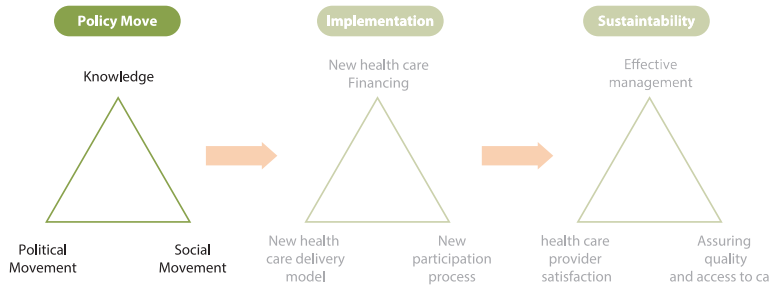

Figure 4-2 *Framework of how Thailand implements UCS: Policy move*

1. Knowledge generation

Building knowledge was a basis to push forward UHC. Thailand's experience showed that research and research capacities were crucial.[5] Conducting action research in health policy and systems in the Thai context was vital to support the policy design of the UC Scheme. Prior to the launch of the UC Scheme in 2001, there were action research and pilot projects in several topics, for example, provider payment methods, diagnosis-related group (DRG) systems, service delivery and quality improvement. One important project was the Health Care Reform Project in five pilot provinces supported by the European Union which allowed Thai health workers, researchers and reformists to understand the health financing and equity dimension in great detail. Thailand accumulated knowledge and experience of provider payment methods, in particular the fee for service in CSMBS and the capitation contracting model in SSS; these were crucial for introducing the capitation model in the UC scheme.[6] Thailand has strong domestic capacities to do high quality health policy and system research and the majority of research is financed by domestic funds with a bit of support from international experts.

Building our own capacities on health policy and system research using our own resources ensures the sustainability of research capacity. Thailand invested in research and capacity building long before the Health System Research Institute (HSRI) was established in 1992 as an organization for generating knowledge about health policy and systems. There were more

than 40 Master and PhD graduates under the program of the International Health Policy Program (IHPP) working on health care financing and health system research. These research capacities are home-grown and have been institutionalized and sustained until today.

Learning from other country experiences, both successes and failures have been beneficial. For example, how the UK, Japan and Germany achieved UHC, what obstacles existed and how they were overcome has broadened country-level knowledge. Knowledge and understanding about health system building blocks focusing on health financing (in particular provider payment methods), service delivery and legislation, were also essential issues to understand in order to move towards UHC. Some examples are below.

- **Health financing and payment mechanisms**

Adequate investment in health was essential. We needed to understand feasible sources of funds, how to mobilize funding from various sources to create equity in financing and which contribute to the system as a whole. Pooling functions can make money more powerful; the bigger pool, the higher the power. Allocation function by appropriate mix of provider payment methods could make UHC efficient and sustainable in the long run. From the Thai experience, our UHC was and is funded by domestic sources. (Using international sources of funds for UHC can be a failure from the beginning.)

- **Service delivery**

Service delivery design is based on a country's context and how it wants to serve the needs of its population. In Thailand, we expanded the number of primary care units over a long period Since the early 1980s, the Government undertook large scale investments in public health service infrastructure at district and sub-district levels focusing on the appropriate distribution of these health facilities. By the mid-1990s, each sub-district had a health centre, and each district had a district hospital. It is believed that a health facility located close to patients gains patients' trust and therefore improves patients' access to care. Registered nurses and well-trained health volunteers are our biggest health workforces. Since the 1980s, we have recruited and maintain more than one million village health volunteers.

- **Legislation**

The legislation of UHC is a must to make it legal, and ensure that it belongs to the people. Legalized UHC helps make UHC more viable in the long term, in particular when there are difficult situations in a country such as political instability and economic insecurity. In addition, health becomes peoples' entitlement supported by law, which is not easy for any group or political party to remove.

2. Social movement and advocacy

Social movement has been a collective force that supports many policy developments. A range of different groups contributed to the start of UHC in Thailand. For example:

- **Champions or prime movers on UHC policy** Dr.Sanguan Nittayarumpong, a father of the Thai UC Scheme, proposed a UHC policy to the Thai Rak Thai party in 2001 and the party grasped it as a political campaign. Finally, the party won the general election and formed the Government. This led UHC to happen in Thailand in 2002 by establishing the UC Scheme for about 75% of total population. He dedicated his working life to pushing for UHC; he understood the realities as he worked in a rural district hospital in Thailand until he moved to work at the MOPH and then finally he was the first Secretary General of the National Health Security Office. He was able to connect and work with various groups in the network and encourage collective change. In addition, many other champions also contributed to UHC.
- **Patient groups** In Thailand in particular, HIV patients and chronic renal failure patients played a key role to propose an essential benefit package for their own groups and pushed for other important issues to improve the health system before Thailand achieved UHC. Before the launch of the UC scheme in 2001, active citizens with support from 50,000 people petitioned the cabinet to propose a UHC law. Unfortunately, the draft bill was not passed, but it shows the active movement of citizens on UHC.
- **Consumer protection groups** These groups provided peoples' voice to the Government on the quality of services. Consumer protection groups in Thailand have a voice on consumer goods but also health services and right to access the services.

- **Scholars and researchers from universities and research institutes** They conducted research studies and provided policy recommendations on UHC.
- **Health professionals** They delivered effective and efficient health services especially primary care services. They can be a site of study for other areas on how to improve service in UHC. Before UHC implementation, there was a primary care network model and autonomous hospital model, which were models of implementation on service delivery during the UHC implementation.
- **News reporters** They were key people presenting information and messaging on UHC to the public.

3. Political Movement

Political movement can be viewed as the step that combines the results of knowledge generation and social movement and which moves to government policy in practice.[7,8] A window of opportunity to push forward a policy may only be available for a short time; a golden period is normally not for long and does not happen often. From the Thai experiences, a general election period was the perfect occasion to introduce UHC to politicians. This is because they sought to announce manifestos in the election campaign. The key was to convince politicians about the importance of UHC, and make them feel like UHC was their promise and responsibility. This is what we learnt about the types of questions that can help convince politicians and allay any fears they might have.

- What is the feasibility of the project and how to do it in practice? A list of things can help plan ahead: the source of budget, estimates of budget need, management feasibility by the Government, reform of the service delivery system, and contributions (any form) from the general population.
- What should be done to reduce conflicts when UHC is implemented? From many countries' experiences, at the start of UHC, some stakeholders or interest groups disagree on the system reform. For example, physicians may feel they have less autonomy when treating patients.

Working on issue with international experts may help push forward UHC. Most countries are a member state of global organizations such as the United Nations and World Health Organization. Proposing policies through a mechanism such as resolutions of UN, SDG or WHA may be beneficial to policy makers as it helps to have a better understanding on a topic when making an intervention. Target 3.8 of the SDG includes two indicators on UHC, and they can facilitate policies on UHC.[9]

Box 4-1 *Example of Health Care Reform Project before implementation of UCS in Thailand*

In 1995, Thailand implemented the Health Care Reform Project, supported by the EU. The Thai research team worked closely with international experts and found three findings regarding the service system and financing system.[2,10]

i. Reform of the health service system: It focused on the location of the health facilities. The location should be within the reach of patients to create trust among patients and health workers.

ii. Reform of the financing system: A pilot study asked patients to pay a contribution of 30 Baht (approximately 1 USD) to convince a patient of the value of accessing health services and to reduce 'shopping around' behaviour.

iii. Reform of the local work system: It engaged the local health authority and asked them to participate in the designing of the service system and how services are reimbursed.

Box 4-2 *Movements for UHC policy advocacy*

A law about UHC was made in 1993 by the subcommittee of public health. It did not pass the cabinet resolution because there was an argument that the available budget may not be enough.

On the political side, the 1997 Thai constitution and the subsequent 2007 constitution [Constitution of the Kingdom of Thailand B.E.2550 (2007)] emphasizes human rights and equality, stating that everyone will receive equal benefits and protection from the Government. Equality, therefore, became a mindset of political promises. The new Governments led by Thaksin Shinawatra, and the public health co-operator, Dr. Surapong Suebwonglee, received the principle of UHC as the party manifesto for general election 2001. They called it '30 Baht treats all diseases'.

In 2002, there was strong social movement led by NGOs from various disciplines, and 50,000 individuals signed a petition to support UHC. Later, the UCS was approved and the scheme supported by the National Health Security Act B.E. 2545 (2002).

The UC Scheme is well designed and evidence-based. These characteristics protect the UC Scheme from outside threats. The World Bank once suggested to the Thai government that UHC should not be implemented at that time due to lack of budget. The Government did not take account of the World Bank's suggestion, instead believing in the evidence-based recommendations to start UHC.

Phase II. Implementation period

The Universal Coverage Scheme (or UC Scheme in short) was established with new designs in various dimensions. The UC Scheme is managed by the National Health Security Office, a new organization set up by law in 2002. Its responsibility is to manage the fund to ensure equitable access to decent quality health services for its members. Three key reforms were: 1) new health care financing; 2) new health care delivery; and 3) new participatory governance.[2,11] These three reforms have now been implemented.

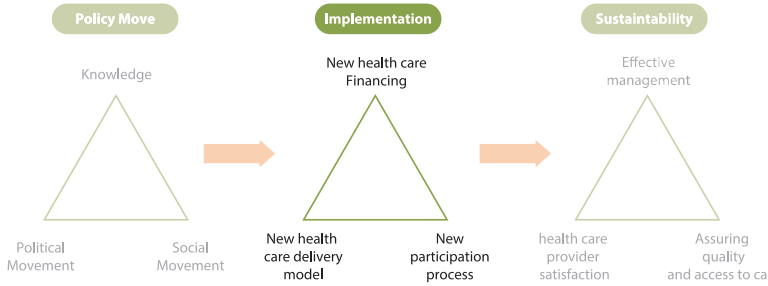

Figure 4-3 *Framework of how Thailand implements UCS: Implementation*

1. New health care financing

Health care financing is one of the most important issues to think about when implementing UHC. We used Murray and Frenk 1999's framework to understand and explain the financing of the UC Scheme. The framework consists of collecting, pooling and purchasing.[12] Collecting refers to how the money is collected and obtained from source. Pooling is at the level of collecting the budget, and at what amount to balance the risk and benefit of system efficiency. Purchasing is the method of paying for health services.

1.1. Collecting

In Thailand, pre-paid contributions and taxation (both general tax and earmarked tax) were considered for the UC Scheme. Each type has advantages and disadvantages; see the table below.

Table 4-1 *Advantage and disadvantage of pre-paid contributions and taxation*

Items	Advantage	Disadvantage
Pre-paid contributions	• Contributors whole heartedly feel they have rights in the benefits • Combination sources of finance • Creates ownership of the contributors • Promotes social solidarity when the rate of contribution is based on capacity to pay	• Pre-paid contributions based on voluntary basis are not able to achieve UHC because of selection bias (only the ill person will pay while the healthy will not). Financial sustainability of the scheme will be in trouble because majority will be ill members. • Pre-paid contributions based on compulsory basis is possible to achieve UHC. However, it will be extremely difficult to collect contributions in a large informal sector. Administrative costs will be expensive. The collectable monies could be uncertain and financial sustainability could be problematic. • Not easy to implement, especially for different rates of contribution by socio-economic status of households or members; have to prepare criteria of who is paying which rate of contributions

Items	Advantage	Disadvantage
General tax	• Easier to manage and collect than contributions, in particular in countries where there are lots of informal sectors. This type can be used at the beginning of UHC • It shows political commitment for UHC • The close ended budget model would make it feasible and sustainable.	• Members may feel less about their rights and responsibilities in the services they have • It may not be fair to the poor if the country's taxation is regressive.
Earmarked tax	• The source of budget is guaranteed	• Adequacy is a high concern • Not easy to convince the government about earmarked tax

Thailand has been using general taxation as the basis of UC Scheme budget, because of political decision-making. The general tax has zero additional cost for collection, low management costs and guarantees the budget. The most important reason is that there are many informal sectors in Thailand, and therefore collecting contributions is unlikely to be successful. From Thailand's experiences, when selecting which type of financing source, it is important to consider:

1. How many people are in the informal sector and do contributions pose a burden on them? What is the country's taxation system? If it is progressive, collecting by general taxation is a way to redistribute resources between the rich and the poor. However if the government decides to use contributions as

the source of UHC budget, various points need to be considered. There must be a compulsory contribution from every member; if not it is likely that majority of contributors will avoid paying.

2. Experience from the Social Security Scheme demonstrates the positive effect of tri-partite contributions equally from the Government, the employers and the employees. Law enforcement is crucial to make all potential contributors comply with the law. The contribution rates should be affordable.

3. Co-payment at the point of services should be avoided, since this may create barriers in accessing health care. Therefore co-payments should be set up merely to prevent unnecessary episodes or moral hazard from the demand side.

4. There are some suggestions on using earmarked tax as the main source of the budget, which is a way to constantly receive the budget from the Government.[13] Thailand uses earmarked or 'sin' tax as a fixed percentage of the tobacco and alcohol tax (2% surcharge). The budget is pooled at the Thai Health Promotion Foundation which manages the fund for various activities to promote the health and wellbeing of the people. In Thailand, the most important concept of earmarked tax is not used for curative services but for health promotion. (It is possible that earmarked tax can also be employed for some educational purposes such as sugar tax in the USA.[14])

5. UHC is "health investment not health expenditure".[15] This is because governments can sometimes worry that paying for UHC is a large burden on country's budget. The truth is that

it is an investment in good health of citizens, which means greater productivity of people and the country overall. In addition to the good health, the poor have more ability to pay and drive country's economy. A study of the World Bank found that investment of UHC in Thailand has led to more spending on essential items and increased household consumption.[16]

1.2. Pooling

In Thailand, risk pooling looked at two main issues. Firstly, how many schemes should be set up to manage the budget? Secondly, at what level should risk pooling take place? At central level, regional level, or facility level? In Thailand we have three main public health insurance schemes, each of which has its own characteristics due to differences in origins and payment methods, see the table below.[17,18]

Table 4-2 *Characteristics of three public health insurance schemes*

	CSMBS	SSS	UC scheme
Scheme nature	Fringe benefit	Mandatory	Citizen entitlement
Population	Government employees, pensioners and their dependants (parents, spouse, children under 18) 5 Million (8%)	Formal-sector private employees, establishments/ firms of more than one worker since 2002 9.84 Million (15.8%)	The rest of population who are not covered by SSS and CSMBS 47 Million (75%)
Source of finance	General tax (~400 US$/Cap*)	Tripartite from employer, employee, government rate 1.5% of salary (maximum salary: 500 US$) (health care 106 US$ /Cap, total 397 US$/Cap)	General tax (84 US$/Cap)
Management organization	Comptroller general under ministry of finance	Social security office under ministry of labor and welfare	National Health Security Office (NHSO)
Benefit package	No preventive care No explicit exclusion Special bed	Small number of limited condition e.g. Non-medical plastic surgery	Small number of limited condition Prevention & promotion
Providers	Public provider only, Private in emergency, selected disease (2011)	Public and private hospital more than 100 beds (50% private)	Public and private contracting unit for primary care (CUP)
Choice of provider	Free choice public	Contracted hospital and its network	Primary care contractor services, plus referral
Payment	OP: Fee-for-service IP: DRGs (2year)	Capitation OP and IP (DRG for IP DRG RW> 2)	OP: Capitation IP: DRGs with global budget

In the UC Scheme, the provider payment method for simple illnesses goes to the smallest level of health facilities. The UC Scheme uses capitation to pay for health services of out-patient visits provided by primary care facilities. Inpatients are paid by Diagnosis Related Groups (DRG) with a global budget where its risk pooling is set at the regional level. For costly conditions, such as heart bypass surgery or cataract surgery, the risk pooling level is at the central level for a bigger pool, rather than a small pool of risk sharing at the facility level. Also, special designed payment methods such as a fixed fee schedule should be applied in order to ensure adequate finance to those health facilities providing high cost services. This ensures people can access needed high-cost services without incurring a financial burden to the household.

1.3. Purchasing or allocating resources to health facilities

The purchasing of health services is one of the most important parts of financing functions. It influences behaviours of providers and therefore the quality of health care. A list of recommendations based on Thailand's experience is as follows:

1.3.1. A purchaser-provider split is applicable. A purchaser unit which separate their roles from that of providers is believed to lead to efficiency gains and improved quality of care. There should be an organization, on behalf of all patients/members to design, negotiate and exercise purchasing power for better health services within the same amount of money. The organization should have an authority to manage the mechanism for these following functions.[17,18]

- Work separately from providers
- Create transparency at work and be feasible to auditing processes
- Ensure participation from all stakeholders
- Promote access to essential services when there are needs from beneficiaries
- Provide a system to protect beneficiaries' rights
- Know the basic of actuarial science to manage the budget.

The purchasers should create a mechanism which combines collective negotiations on the required service delivery, budget allocation and monitoring and evaluation system. The mechanism can be in the form of a committee or meetings aiming to create discussion and negotiations among the purchaser and providers. It should be able to balance the power of managing and providing services, without too much focus on any side causing stagnation in the system. Since the beginning of the UC Scheme, a private company has never been hired to act as a fund manager or a purchaser of the UC Scheme because of its inefficiency. Thailand has one scheme to protect victims from traffic accidents which is called the Traffic Accident Protection Scheme and this is managed by private companies. The Scheme spends more than 50% of total premiums on the administration expenses of private companies and their profit, while the claim processes are slow and complicated. This is another inefficiency in the health insurance scheme in Thai health system.

1.3.2. Close-ended provider payment methods such as capitation and DRG with global budget are recommended and should be introduced at the introduction of the scheme. This should be in line with the design and planning for backup systems such as databases, technology assessments, and monitoring systems. Applying capitation as a provider payment method requires few databases with fewer administrative costs. In contrast, open-ended payments like fee-for-service needs serious investment in the data system with detailed records of individual patients ; fee-for-service creates expensive transactions and administrative costs. Importantly, fee-for-service leads to overuse of services and results in high expenditures. In the UC Scheme, outpatient services and promotion and prevention programmes are paid by capitation while inpatient services are reimbursed by DRG with the global budget. At the beginning, the global budget for inpatient services was at the national level and subsequently, after five years of the implementation, it was at the regional level for better risk management. We learnt that risk pooling of inpatient services at the regional level could be at an optimal level.

All together these three main items of services (outpatient, inpatient and prevention/promotion services) consume approximately 90% of the total UC Scheme budget. For the rest of the budget, 10% is managed at the national level applying fixed fee schedule for selected expensive services in order to ensure adequate services provided to the UC Scheme's beneficiaries. The fixed fee schedule is set in advance since the beginning of the year and it will be allocated to health facilities who provide services.[19] This is to guarantee providers the amount of money they will receive after caring for patients.

1.3.3. Purchaser and healthcare providers must have adequate knowledge capacities to understand and manage these close-ended provider payment methods and fixed fee schedules and should be able to take responsibility in containing costs efficiently. For example, through paying by capitation, the government and providers know how much the budget will be allocated to a type of service. In addition to this, risks are allocated to providers as they have a budget ceiling. Numbers of health services provided must be in line with the predefined budget. Importantly, they must adhere to the goal of UHC to ensure equitable access, use of health services and financial risk protection of the people.

1.3.4. Copayment at the point of service should be allowed only for explicit and uncomplicated conditions at fixed amounts. In addition, patients should be informed prior to the time they have to pay. Examples of these include extra payment for luxurious services such as air-conditioned or private rooms.

1.3.5. Some mechanisms are needed for continued development of the budget allocation. These include:

- Individual records are essential to monitor the claims. In particular, if using capitation, purchasers have to invest in beneficiary and provider registration systems. This is to calculate precisely the budget for providers and monitor the payment.
- In the very first phases of implementation, there might be extra pre-defined payments to healthcare providers who submit claims properly (e.g. correct data and timely submission). This acts as an incentive as well as acknowledgement

of healthcare providers' contributions to the movement of UHC. Recognition of everyone's contribution to the same goal of UHC is important.

- In the planning stage, before or just after real implementation, there may be a lack of essential information to calculate the budget needs. In this case, surveys can be beneficial. These might include:

(1) National health accounts to monitor incomes, expenditures and fiscal space of the government;

(2) Household surveys like the Health and Welfare Survey to gain information of key variables e.g. illness rate, health seeking behavior, utilization rate of outpatient and inpatient services by different level of health facilities;

(3) Patient and provider satisfaction survey to measure attitudes and receive feedback on the overall system;

(4) Hospital costings, which are is essential for budget plan each year. This can be conducted for some selected items and increase to cover more items later on.

(5) Hospital profiles, which provide insight on estimates of budget allocation

1.3.6. Health technology assessment is another input for the priority setting of the benefit package. It provides information on what health services are cost-effective and should be put in the basket.[20] In addition, the information can be used in negotiation for cheaper prices e.g. price negotiation of cheaper peritoneal dialysis solution with guaranteed amount purchased per year. Price negotiation is essential particularly in countries that have no or limited capacity in medicine or

medical product manufacturing. Most new technologies and drugs are costly, and bargaining with manufacturers can lead to massive cost savings.

1.3.7. Hospital accreditation by a third party (Healthcare Accreditation Institute) is a tool to ensure beneficiaries the quality services they need. Post payment audit processes managed by NHSO are key to prevent fraud and over-claiming. This is because if a hospital makes a false claim, it affects the amount of budget allocation. The aim of the hospital accreditation and post payment audit process is to encourage positive behaviours of providers. NHSO has set up the post payment audit process with systematical sampling of both outpatient and inpatient services as well as claiming of fixed fee schedules for high cost services. In parallel, in order to promote transparency of the budget estimation and allocation, healthcare providers should have a chance to involve and review budget calculation methods as well as get feedback from the claim audit.

1.3.8. Things could be avoided when designing payment mechanisms. Voluntary insurance cannot achieve UHC and it leads to selection bias. This means individuals buy insurance only when they fall ill; otherwise they do not. Importantly, only those who can afford to pay premiums can buy insurance. Building up UHC must be compulsory and cover everyone regardless of their socio-economic and illness status. Fee for service reimbursement must be strictly avoided and fee schedules should be used limitedly because it would lead to uncontrollable cost.

2. New health care delivery model

Health care financing and care delivery models must work together. A decent financing system should be able to serve the function of a service delivery system. Things to consider when designing a service delivery system include primary care as the gatekeeper that provides basic health services to build good health for the population. It has to be located within the reach of people in a community and be well-developed at low cost. Budget allocation to cover the services of primary care is a way to increase the development of primary care resources. The word 'primary care' may refer to different components based upon the setting. For example, primary care in urban areas consists of private clinics as the main provider of care whereas in rural areas, health centers and community hospitals have dominant roles. The budget has to be able to go to these facilities. Prevention and health promotion programs have to be integrated into the UHC benefit package and adequately supported by financing mechanisms.[21] These programs should focus on individuals and their families' care, for example vaccination for different age groups, cancer screening, and behavior change in people with risk factors of non-communicable diseases. Moreover, there has to be a mechanism to connect community resources and the needs of people in these communities. This is to generate local participation in health care and promote individual self-care.

Mobilising community resources to strengthen good health may be supported by other organizations. In Thailand we have the Thai Health Promotion Foundation, which receives

earmarked taxes to organize various campaigns regarding health promotion. Setting up a service delivery system is best if we are able to use all available resources efficiently. They can be a mixture of public-private entities at all care levels where they are willing to participate as a contracting unit within UHC. Private facilities have advantages in that they are likely to work efficiently and be available where there is a lack of public facilities. However, in dealing with private partners, the payer may need a clear contract, in particular, when they unexpectedly resign from being a contracting unit which then affects service delivery in that area. Networking is a key issue when arranging service delivery. Primary care should be able to connect various professionals involved in a patient's journey. In the UC Scheme, the budget for primary care is to promote the 'district health system'. The budget is allocated to a community hospital and then it is allocated further to health centers in the catchment area. This sends a strong signal for better collaboration between community hospitals and health centers. They then collaborate with their responsible health centres to provide primary care services. This makes the roles of primary care possible and gains economies of scale.

3. New participation process

Building up a UC Scheme in Thailand required participation from all stakeholders. It started from just a notification about the policies, actions, or invitation to collaborate until everyone felt ownership and wanted to protect the UC Scheme. There are several stakeholders involved in the UC Scheme.

1) Patients: There is a need to facilitate them into a group of health conditions in order to strengthen patients' voice to reflect specific needs and feedback about services provided. For example, HIV patient groups, renal failure patient groups, and diabetic patient groups. In addition, they could learn and share among themselves as a peer group.

2) NGOs: The UC Scheme engages five NGO representatives into the policy process as they are the board members of the UC Scheme (five out of a total thirty board members).

3) Community: Local government should participate in activities in their community, in particular on health promotion and disease prevention. In Thailand , sub-district health promotion funds are set up which receive budget from two co-funders; the local administrative authority and NHSO. Their aim is to use local capacity to strengthen the health of people in the community.

Health professionals: They are directly affected by the new management systems of the UC Scheme. They are the key persons who translate the UHC or the UC Scheme into real actions of health services to reach patients. Without health professionals, UHC and the UC Scheme will not be happening. They should have opportunities to express their opinions and concerns, which can be beneficial in shaping the system, in particular service delivery system, such as treatment guidelines.

4) Academia and researchers: Knowledge and evidence, in particular implementation research, are important not only for the policy design and implementation but also for the monitoring and evaluation of the policy. They provide research findings or evidence as inputs into policy process.

5) Policy makers at the Ministry level and political level: Policy makers are key stakeholders. They should be well informed about policy options and consequences of each policy option based on trusted evidence. For example, what will be or should be new health benefits and what is the implication on government budget? This is to promote evidence-based policy decision-making processes.

Regarding the processes, various processes are useful to be mention here:

1) Budgeting process:

- If using general taxes as the main source, setting up the UC Scheme budget is a trade-off between health care and other public services. Therefore, budget negotiation should be disclosed and made it public, based on public national interest.
- It is essential to frame the budget preparation process as the Government's commitment to invest in the population's health. This is to shift the thinking from 'expenditure' of health services to 'investment' in the population's health.
- Budget estimation should be based on evidence of the demand side, that is, the number of beneficiaries who have health needs and the cost of health services.
- The budget estimate has to be justified by the cabinet which also consists of other Ministries.

2) Budget allocation process: There is a need to work closely between a purchaser and all providers especially the Ministry of Health. The purchaser should be open-minded on what the healthcare providers think.

3) Setting up a mechanism to allocate funding to NGOs to function: This may include supporting patients to receive care properly or organizing themselves into marginalized patient groups.

4) Voices of the people process: The UC Scheme in Thailand has set up a call centre, which operates 24 hours a day and seven days a week. This is a channel for hearing voices from everyone, both patient and provider. The majority of calls to the call center are for asking information while some are for complaints and for problem solving; such as where is the registered health facility, and whether or not a particular service is in the benefit package? In addition, the call center of the UC Scheme acts as a match maker of available hospital beds for needy patients.

5) Public hearing process: By law, the UC Scheme in Thailand has to conduct an annual public hearing to get feedback from all stakeholders such as patients, beneficiaries, providers, doctors, nurses, local government units, communities etc.

Phase III. Sustainability of UHC

After Thailand has achieved UHC as a result of implementing the UC Scheme in 2002, it had two decades of implementing the UC Scheme. It will start its third decade in 2022, and as it covers 75% of the population, sustainability of the UC Scheme directly links to the sustainability of UHC in Thailand. With real experiences of managing the UC Scheme for nearly two decades, we can identify three key components affecting

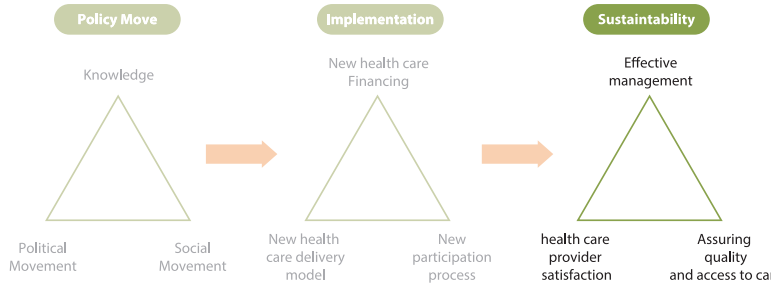

Figure 4-4 *Framework of how Thailand implements UCS: Sustainability*

sustainability of the UC Scheme. These are: 1) effective management; 2) assured quality and access to care; and 3) health care provider satisfaction.

1. Effective management

The agency responsible for delivering UHC has to prove efficiency and productivity in the health system. This might be achieved in a number of ways:

- In ensuring equitable access, use of health services and financial risk protection, Thai UHC needs to prove that beneficiaries under the three main public health insurance schemes have achieved these UHC goals. They can be monitored by measuring indicators of effective coverage and incidences of catastrophic health expenditures and impoverishment by medical bills. These indicators must be disaggregated by geographical areas and socio-economic status of households for equity monitoring. Household surveys are essential for providing data for analysis of these indicators. The UC Scheme regularly monitors and reports against these indicators.

In addition, the UC Scheme conducts an annual satisfaction survey of beneficiaries and healthcare providers as part of a routine monitoring system and results have been reported to the board of the UC Scheme, the cabinet and the parliament.

- The management authority needs to be accountable and transparent. Its streamline operational processes should be accepted by all partners and stakeholders. This can be done by incorporating clear work procedures and audit process with rewards and penalties to healthcare providers.
- The Government is able to receive information that enables them to oversee health spending. In Thailand, the National Health Security Act 2002 requires the NHSO to report to the cabinet each year, its planning, budgeting, programme evaluations and spending as a percentage of the overall Government budget. The law's intent is to hold the NHSO accountable for achieving program results and for improving budget formulation and the cabinet's decision-making.

2. Health care provider satisfaction

Healthcare providers are key players who provides services to beneficiaries; their work therefore influences the system sustainability. Important issues to enhance providers' willingness to deliver services include:

- Workloads which are paid fairly taking into account the differences in geographical areas, professionals, those who work hard and those who do not.
- Mechanisms to compromise when there are conflicts between providers and patients.

3. Assuring accessibility and quality of care

Assuring that people receive benefits from UHC[22] is another key to sustainable UHC. It includes ensuring that people know their rights and responsibilities, enjoy their rights and are able to use health services, even expensive care, when they need to. How far this is achieved is reflected in people's views on satisfaction with services. The UC Scheme conducts a satisfaction survey annually. The results show high ratings of more than 90%.[23] There is also public participation in the policy and monitoring process and the call centre for feedback as previously mentioned. In addition, utilization rates of out-patient services and in-patient admissions must be monitored annually. The utilization rates can be from either routine administrative data of health facilities or household surveys or both. Unmet health needs should also be regularly measured by national household representative surveys or some small-scale data collection for specific diseases.

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Chapter 5
The politics of UHC and health system resilience

The politics of Thai UHC

There is much evidence to demonstrate the achievements of Thailand's UHC; however there have been doubts or even contradictions about the outcomes of UHC policy and its implementation. Some are at a philosophical level, while others concentrate on the counter-interpretation of evidence or presentation of counter-evidence. Incidents of reactions and interactions linked to UHC policy and its implementation over the last decade have become more intense recently with widespread public debates and criticism; this has created a degree of reluctance and doubt in the ruling Government about providing continuous support.

As mentioned in previous chapters, the Thai health system employed several mechanisms at different levels to strengthen health system resiliency. However, mechanisms alone are not enough as the characteristics and behaviors of those mechanisms shift with changing socio-political and economic situations, societal values and human factors.

Taking into consideration some of the key actors and factors contributing to system resilience, we explore actions and interactions around UHC over nearly two decades and in more recent debates, in order to shed light on the challenges to UHC sustainability and health system resilience.

The critics and proposals for the future

1. Initial phase of doubts and reluctance When UHC started in 2002, the leading ruling political party launched the UC Scheme with full commitment. It created a seeming consensus in Thai society, but it hid away a fair amount of skepticism and criticisms. One of the major immediate questions is financial adequacy and long-term affordability (tax-financed).[1,2] The affordability concern came mainly from outside the health sector while the adequacy concern came from providers within the health sector. Once the policy was implemented all over the country in the following year, the reluctance faded but the skepticism remained, and the criticism got louder from other sides.

2. Disagreement of the MOPH[3] The establishment of the NHSO as the strategic purchasing body of the UC Scheme took away the direct financing role of the MOPH to health facilities. Most of the budget available for the UC Scheme used to be allocated to MOPH solely for MOPH facilities distributed all over the country. The purchaser-provider relationship between the NHSO and MOPH service facilities created another level of change to the MOPH at the operational level.[4,5] The MOPH saw no need for a new strategic purchasing body, though it was clear of the inherent conflict of interest if the MOPH plays the role of a purchaser, while also having a large network of providers under its direct responsibility. There was an attempt to consider the option of reforming the MOPH by separating its roles of system steward from its role as service provider, while keeping the newly established NHSO. This would mean three

interrelated but independent public bodies for more effective system governance, financial planning and management, with public providers operating as a part of the service delivery network of the UC Scheme. The MOPH insisted on being the purchasing body without reform. It remains an issue.

3. Criticism from the supply side Even with full implementation that went relatively smoothly, the supply side continued to have mixed reactions to the policy.[6] While agreeing that the policy has created good benefits for people in terms of improving equity and offering financial risk protection to families[7,8], some issues are still of concern. These include the increasing workload to healthcare providers with limited budget (despite rapid increase in Government investment for health) and increasing patient expectations and the need to submit detailed information in the claim process with alleged lack of transparency; this creates dissatisfaction among the providers.[9] Today, some providers under the MOPH face financial difficulties while some gain more than before the UC Scheme era; this results from the new allocation criteria and requirements based on the number of UC Scheme members in a catchment area. On top of all this, are the increasing conflicts between providers and patients, which have been unjustifiably blamed on the UC Scheme. More specifically, the introduction of no-fault compensation for patients under the UC Scheme has been criticized of creating unreasonable expectations and blame on healthcare providers to be entitled to the compensation and using them as basis for taut litigation. The Medical Council was particularly vocal about the increasing conflicts as a result of the no-fault compensation system under the UC Scheme.

4. Reactions from drug companies Though all three systems under Thai UHC use the national list of essential medicines (NLEM) to limit pharmaceutical benefits (with exceptions varying from one system to another), there have been no reactions from pharmaceutical companies. Such practices existed before the UC Scheme. The NHSO through its attempt to maximize the use of its limited budget introduced two important measures, pooled procurement and compulsory licensing. Though they were applied only under special circumstances, pharmaceutical companies felt threatened and protested to a varying degree to both measures. The more recent introduction of health technology assessment as a tool for priority setting of a new benefit package based on cost-per-QALY gained also led to reactions from pharmaceutical companies.[10]

5. Efforts from ruling governments to have more direct control of the purchasing power The establishment of the NHSO as a purchasing body, with a hope of performing strategic purchasing functions, was made in such a way that it is neither under the direct control of the political forces nor the bureaucratic system.[11,12] Even though the Minister of Health sits as the Chair, the composition of the governing board consisted of parties from various ministries as well as representatives from local governments and civil societies. Its CEO is also selected to work for a fixed term with agreed TORs and strict performance evaluation hoping to solicit professional management with accountability to the board rather than the minister or the permanent secretary of the MOPH.[13] With the years passing, it became clear that such arrangements made it difficult for ruling

political parties to have direct and easy control of operations, especially with vigilant and active civil society members in the board and public interest in the scheme (from a potential abuse of budget point of view). The efforts of certain ruling governments to gain more direct control though interfering with management or even to changes the law did not yield the results they might have expected. The design and management of the strategic purchasing body has been and will continue to be an issue for the sustainability of the UC Scheme.

6. The NHSO was being investigated In 2015 the Government launched an in-depth investigation accusing the strategic purchasing body of the UC Scheme (NHSO), but not the other two purchasing agencies of CSMBS and SSS, of many wrong doings. Even though the investigation found no corruption, there were conclusions from the investigation team that certain practices such as pooled purchasing and allocating budget to NGO's were cautioned as "unruly" and a "possible breach of scope of authority stipulated by the law". This might be another attempt to gain direct control of the NHSO; but some expressed concern that it could also mean disagreement with the goal and principles of UHC and a step towards discontinuing UHC. However, the Government was quick to dismiss the allegations, claiming that it needed the system to be efficient and free of corruption and abuse of power. The investigation led subsequently to the effort to determine what the purchasing body should do, which might have a strategic or non-strategic function. Another team set up by the then Minister of Public Health came up with the conclusion that legitimate and useful functions should be stated clearer in the law. Some academics, who were mostly university professors, together with some

providers in MOPH who resented the purchasing practices of NHSO, captured this opportunity to openly attack the NHSO and certain independent public organizations promoting the roles of civil society and NGO's in health. This took several forms in public conferences, press conferences, and on social media.[14–16] At the height of conflict, the then secretary general of the NHSO was transferred to an inactive post through an executive order.

7. Skeptics' voice The skeptics who might have kept silent after the policy proved to yield good outcomes became more vocal. Some held influential positions in the legislative body and proposed an amendment of the law. There were several changes reflecting the various concerns and disagreements with the initial design and management. For example, one proposed copayment at point of service (as opposed to free service), another called for a change in the composition of the governing board. Another proposal was about limiting the sphere of influences of the NHSO. Some even wanted to dismantle all together the need for a strategic purchasing body. It is worth noting no one denies UHC policy. All the proposals seemed to have two common purposes: limiting the openness and effectiveness of the strategic body of the UC Scheme and limiting tax burdens while imposing more financial burdens on the UC Scheme members. Some social critics saw this as hidden agendas with only one reason: the rejection of UHC principles and goals, and the possibility of having a UHC without any or very little financial risk protection or improvement of access to care. One such model is the reversal to only help poor people, based on the Government's willingness to spend and not a system based on the right to health.[17]

The advocates, fact-finding processes and proposals for the future

Long-standing and cumulative skepticism and criticism, coupled with a more recent shift in political support for this direction, seems to have dealt quite a strong blow to UHC, especially through the efforts to change the way the UC Scheme has been operated using a strategic purchasing body. While there were concerns that the proposed alternative system may lead to a future that will not be as effective to meet the two goals of UHC, it is interesting to note that discourse in society has not been one-sided. While the criticism seemed to center mainly on the organization of a purchasing body, there have been efforts to point to a more important issue which is the effectiveness and sustainability of the UHC policy. This goes far beyond the survival of the UC Scheme and NHSO as an organization, or the existing financing model as a fixed and ideal future. Several actors suggested doing things differently, reflecting the diversity of opinion, which points to some basic features of a resilient health system. Here are some of the groups, actions and proposals that have tried to counteract or address the concerns and criticism of both the UC Scheme and NHSO, as well address the UHC policy.

1. Active citizens and NGOs According to the National Health Security Act 2002, a limited number of NGOs (5 out of 30 members) were elected to the Board of NHSO, giving them an opportunity to exert their opposition at the policy level.

It was apparent that their presence and commitment to support the goals and principles of UHC, and calls for a professionally-managed strategic purchasing body with good governance, have been strong. One of their concerns about the alternative proposal was copayment at the point of service, citing that it would bring back the same barrier to care which has effectively reduced to a large extent as a result of the UC Scheme. Another issue of concern was the double standards across many insurance schemes and inequities in Government support to each scheme. They expressed this within the governing mechanism and in public. Some of their concerns were aimed at supporting the practices of NHSO in order to reach the goal of the UC Scheme and the UHC policy. Some were aimed at counter-proposing alternatives for the future of UHC as well as recommending government policies, especially in reducing inequities across 3 insurance schemes. In many cases, they brought in specific case examples of people benefiting directly from the UC Scheme. At the same time, they also demanded that the NHSO did a better job in different aspects. Some patient advocate groups called for increasing and optimizing the benefit package for their own conditions. People with chronic kidney disease (CKD) and HIV-infected people were the two earliest groups of patient advocates who succeeded in pushing through renal replacement therapy for continuous peritoneal dialysis (CPD), hemodialysis and kidney transplant, and anti-retro viral (ARV) therapy.

2. Importance of global partners and international perspectives Thai experiences of UHC policies received attention and interest from various global partners in health

and development. There was an evaluation led by a group of international experts that found many significant concrete achievements and made recommendations for further improvement. Though skeptics chose to ignore the evaluation findings, regular contact with various global organizations made the Government and politicians aware of others' perception and they became more careful in becoming overly critical or threatening towards the continuity of UHC. At the UN general assembly in September 2015, the Prime Minister was invited to give a speech. The preparatory process allowed top policy makers around the world to be informed about Thailand's UHC. Part of his speech was about the Government policy in support of UHC. Subsequently, the PM declared to the general public many times that all the efforts launched by the Government were aimed at improving the system.

3. Role of fact-finding, evidence-generation and effective credible people with integrity In any debate reflecting different values and expectations, or any public discourses threated by possible biased and doubtful information, it is important for society to have mechanisms to carry out the function of fact-finding or evidence generation that the public can trust. Differences in interpretation of legislation are another serious concern that needed clarity in order to prevent interruption of possible effective and useful roles and functions of an organization. The then Minister of MOPH (2014-5) set up a special committee chaired by a respected ex-attorney to consider the questions raised by the Commission for Transparency Practices. The Committee found that the

interpretations and the execution of those "Questionable roles and purchasing practices" were indeed within the jurisdiction of the NHSO and should resume. Although there was some initial reluctance to agree with the Committee's conclusion, the PM finally issued another executive order that enabled many of those questionable actions to resume, pending revision of the UHC act by the National Legislative Assembly.

4. Mechanism and capacity to look for alternative constructive solutions or ways forward Many of the debates or arguments about the existing model of financing for UHC should not be surprising given the fact that they have been implemented for around nearly two decades. The reluctance by responsible persons to make big changes also should not be a surprise, given the positive outcomes and widespread support from people who experienced positive concrete outcomes in terms of financial risk protection against high-cost illnesses. There is a clear need for independent technical teams to examine all the debates and criticism and assess proposals for changes to improve the system, in light of all the disagreements and countering proposals.

There are at least three examples of issues that benefitted from such technical evidence-based recommendations.

i. Debates over the tax burden and copayments to mobilize supplementary financing sources in addition to using tax, the tools and model for more efficient monitoring and disbursement of funds, and the status and burden of public hospitals. The then Minister of Public Health (2014-5) set up a Committee on

Resource Mobilization for Sustainable Universal Health Coverage, comprising multiple stakeholders : purchasers, providers, relevant Government officers, and officers from another two major health insurance schemes and NGOs.[18] They submitted the report on January 2016 and it was used for subsequent identification of solutions.[19]

ii. Another committee for the harmonization of the three main public health insurance schemes was set up at the early stage by the PM himself. This produced another report on mechanisms for UHC system harmonization through participation of relevant stakeholders from all three schemes: the MOPH, providers from both public and private sectors, NGOs and local governments.[20] Though the latter report has not yet been seriously considered by decision makers, it has allowed different parties to look systematically into this highly contentious issue, to dismiss some confusion as well as enable a critical look at some of the possible options.[21] One of the important confusions is the fact that harmonization does not mean merging all funds into a single pool of one purchaser and reducing different benefits into the sheer minimum for all population groups. It was an attempt to ensure equity and efficient use of limited resources and avoid multiple standards of payment that can eventually lead to unnecessary and unjust multiple standards of care. Moreover, the proposed way forward is not a set of fixed rules to be followed by all three schemes but a mechanism that will allow the three schemes and the Government and the Ministry of Finance to sit together and decide on crucial issues to ensure that future decisions will make UHC affordable and sustainable.

iii. The third example is the Financial Management Sub-Committee set up to develop good accounting systems for public hospitals. This aimed to allow all parties to monitor both the financial health of public hospitals and transparent and good financial management practices at hospital level.[22] This committee was set up to settle the debates about the negative impact of the UC Scheme purchasing model on certain public hospitals, assuming that a good accounting system will allow each hospital to at least manage itself to prevent or avoid financial hardship. At the same time it should be able to negotiate and communicate to the relevant purchasing body, especially the UC Scheme or the MOPH and the Ministry of Finance to modify certain resource allocation criteria if the financial hardship was not the result of poor management but structurally embedded in the allocation formula. The committee submitted their report on January 2016 but it has not yet been implemented.[23]

5. Healthcare workforce In the first decade of UHC implementation, health care workforces in both private and public sectors had different reactions and attitudes about UHC and the UC Scheme in particular. It was quite clear that leaders at Ministerial levels, as well as some hospitals managers and practitioners, were quite skeptical and critical about the UC Scheme. Big private providers were also indifferent to the UC Scheme's invitation to participate as a provider in the system. Middle-sized and small-sized private providers were quite enthusiastic and many private providers welcomed certain purchasing models such as hemodialysis, cardiac catheterization laboratories, contracted clinic laboratories, etc. Health care

workers at the district level mostly welcomed the new financing model partly because of the per capita allocation formula for outpatient visits. The district health system with the number of population smaller than a certain economy of scale, suffered from their high expenditure which could not be covered by per capita formula; it led to criticism about the system. The community health funds model (50% from the UC Scheme and 50% from the local government authority) created resistance by the tambon (sub district) level at the initial stages, but has now evolved to create more interactive and collaborative working relationships between health workers and local administration units in many parts of the country. Overall, it became clear that the UC Scheme with all its criticisms and weaknesses (in both the purchaser and provider sides) was implemented effectively due to the positive attitudes and dedication of many healthcare workers, especially within the public sector.

6. Hospital accreditation system The Hospital Accreditation Institute (HAI) in Thailand is an independent public organization established recently but with a history of working with various stakeholders in health service provision for over two decade. It has been a pioneer in improving the quality of care of hospitals through a combination of internal quality management supported by external assessors based on each hospital's continuous quality improvement capability. Amidst all the controversies about UHC, HAI has played a crucial role and is able to motivate providers and purchasers to continuously improve their quality of care. Hospitals' work has been financially supported by the UC Scheme (although not to a great

degree) to ensure that providers contracted by the UC Scheme continue to improve the quality of health services, which ultimately leads to certified hospital accreditation. The US Scheme thus plays a crucial role in motivating the providers and purchasers in the system, as well as building up public trust. Improved quality will certainly lead to a reduction in healthcare costs and increased productivity.

7. No-fault compensation within UCS Article 41 of the National Health Security Act provided monetary compensation to patients who had adverse outcomes from medical treatments with no need for fault findings. It was meant to be an instrument to help patients and prevent further litigation. The relatively lack of common understanding among various parties and the inability to make a clear clause in the law became a double-edge sword. While it did help many people affected by undesirable consequences from medical treatment and create positive relationships between patients and hospitals, it has also led to mistrust and conflicts in some cases. Most significantly, it became a contentious issue and caused controversies when there was a proposal put forward to create a no-fault compensation system to cover all patients under UHC and not limited only to the UC Scheme members.

8. Public human resource (HR) administration system While many rules and regulations have allowed public providers to have autonomy and flexibility and increase their capacity over the five decades of reform including in times of crisis, certain regulations and policies such as those dealing with HR seemed to be adding to the controversies and difficulties of UC Scheme implementation. This is especially so within the public

system and multi-government policies to downsize the public sector. Under the UC Scheme, in the context of increasing workload and competition for HRH from the private sector (in particular nurses), public providers were faced with difficulties to recruit new staff except those under compulsory service agreements (which was also contracting in categories and numbers).[24] While hospitals would like to have used their revenue to pay extra to motivate their limited numbers of staff to work more hours and therefore cope with increasing workloads resulting from the increase access and demands, public regulation limited such autonomy. The MOPH in its attempt to ensure autonomy while containing irrational and unscrupulous decisions about additional payments for staff, imposed a pay for performance (P4P) model which led to controversies and doubtful productivity rather than increasing consensus and productivity. All these limitations and controversies brought them back to the basic driver of increased workloads, which was a result of the UC Scheme. It therefore became one of the reasons for resentment and criticism of the relatively generous and populist nature of the UC Scheme and UHC policy.

Learning about health system resilience from a decade of UHC

The health system in Thailand is shown to be resilient by its gradual evolution over multiple decades with episodes of system reforms, and the introduction of UHC has shown that UHC, properly managed, can actually help to increase system

resilience. It can help reduce health and social inequities, as well as build up public trust and support.[25] A resilient health system, with public sector providers ready to take up the challenge of the ambitious goal of UHC under strong political leadership and widespread public support, has made the implementation of UHC more effective and innovative.

However, the implementation of UHC did not happen without a certain amount of resistance and resentment. There were at least three important concerns held by some at the beginning of the policy, all of which in some way actually contributed to increasing health system resilience. The first was about the role of the MOPH as health system steward of UHC, with the establishment of a purchasing body and the concept of purchaser-provider split. The second was about the survival of public providers under the policy which threatened to deplete their revenues while increasing their workload. The third was about the ability of the Government to continue supporting this policy through tax with the possible increase of demand and expectations and subsequent service load to the system.

Using the framework of health system resilience and examining a decade of UHC implementation in Thailand, we view the following actors and institutions, along with their characteristics and processes, in relation to building system resilience.

From a structural (actors and institutions) point of view, many of the actors and institutions in the health care and social system remained more or less the same. However, new institutions were established and some existing organizations or groups played increasing or decreasing roles. Some institutions were faced

with the need to adapt or transform themselves significantly. Here are some of the key actors and institutions whose roles contributed to health system resilience.

1. Strategic purchasing bodies With the introduction of UHC, these are new players in the health system. The Thai Government, when introducing UHC, decided to pass a law to establish strategic purchasing bodies as semi-independent public organizations different and detached from the direct control of the Ministry of Public Health, with the Minister of Health being the chair of the broad-based participatory governing board drawn from non-governmental actors. The NHSO was tasked to manage the budget used to buy services for around 75% of the Thai population under the largest health insurance scheme, (previously known as the 30-baht cure all diseases or the 30-baht scheme) which became the universal coverage scheme (UC Scheme) as described in the first part of this chapter. This took away the financial resource allocation function of the MOPH for the simple reason that the UC Scheme need to purchase services from both the public and private sectors and the MOPH was seen as the largest service provider from which services needed to be purchased. This would constitute a basic conflict of interest affecting the final outcome of the policy.

2. The MOPH The MOPH still played a crucial role in UHC policy implementation and tried to argue for the role of purchaser, claiming that it was the responsibility of the MOPH to oversee health system performance and be the system steward. Its role as the largest provider in the system, it was argued, could eventually be managed and taken care of through

a participatory broad-based governing body or the eventual detachment of public providers to become autonomous, each with its own governing body. Whatever the arguments, it was clear that the MOPH needed to change its roles in the context of UHC policy implementation if the available Government budget for the UC Scheme needed to purchase services from beyond the MOPH.

3. Political leaders Political leaders played significant roles only periodically through the five decades of health system reform and did not seem to play significant roles in the fight against crisis. However, they were quite crucial in initiating and ensuring the implementation of the UC Scheme. Many political leaders were skeptical at the beginning but turned to support the scheme a few years after effective implementation and having witnessed obvious benefits of reducing barriers to care, especially for relatively costly, if not financially catastrophic, conditions.

4. Government offices dealing with tax and budgets In Thailand, Government offices dealing with budgets play significant roles in the realization of any new policy and program, even though it may come from a politically motivated initiative. The significance of their roles in UHC implementation depended on the degree of commitment and capability of each government department.

5. Civil society Civil society organizations or active citizens played small roles in most of the health system reforms over the last five decades, however some of them played key roles in initial responses to health crises and natural disasters. A big

alliance of public policy advocates played a significant role in supporting the UHC and the UC Scheme. They continued to do so by being a part of the governing body while keeping vigilant watch over the policy. Some played advocacy roles for specific problems relevant to them, and influenced the ultimate benefit packages of the UC Scheme and other two main public health insurance schemes. They also advocated for harmonizing the three UHC schemes, hoping to create better equity for all Thai populations and bring about more efficient use of public money. This is believed important to the sustainability of the overall UHC policy and the UC Scheme in particular.

6. Professional organizations Professional organizations played quite prominent roles in the implementation of UHC and the UC Scheme. Each professional organization had different attitudes and reactions to UHC. The medical council was the most vocal against UHC, citing that such a protective policy would increase the burden on the health system as people were made to feel indifferent to their own personal financial burden. It also linked the increasing patient-doctor conflicts and confrontations to the rights-based philosophy underpinning UHC. The increasing workload in public hospitals and increasing expectations of the population seemed to have shifted most professional organizations to be more sympathetic to their members and critical towards UHC, and in particular the UC Scheme.

7. Private providers Private providers played increasing roles in the Thai health care system to serve the general population under UHC, especially in the UC Scheme. While larger private hospitals, catering mostly for international

patients, were not interested in joining the UC Scheme and SHI, they were interested in the CSMBS due to its fee-for-service nature. Medium-sized private hospitals and private clinics are more likely to play active roles in caring for patients under the UC Scheme. Close monitoring of the quality of services by private providers was needed to avoid abuse of the system and any barriers of access as well as poor patient outcomes.

8. Business sectors Business sectors, especially those manufacturing and distributing medical technologies, were overtly critical about the UC Scheme in particular. While it was clear that all three schemes under overall UHC were not yet harmonized, all business sectors showed special caution about how they paid for medical technologies such as drugs, vaccines and various diagnostic tests. All schemes covered only medicines in the national list of essential medicines (with some exceptions). The UC Scheme had a policy on central procurement of certain technologies in its attempt to maximize use of limited resources and at times requested the Government to implement compulsory licensing; this led to more critical attitudes from related business sectors.

9. Local governments Local governments played key roles in making the health system more resilient, and this was seen when there were health crises. It is partly the result of decentralization policies starting from 1998 where tambon (sub district) administrative units (TAU) were formally established and carried out a wide range of public functions with autonomy in budget decisions and issuance of certain regulatory frameworks. Though the process was intermittently interrupted, the UC Scheme tried to systematically mobilize local administrative

units to help with the UC Scheme by allocating a small portion of per capita allocations for health to all TAUs. Despite the relatively small budget, TAU have been playing more active roles in health with subsequent closer interactions between the district health system, in particular primary care at the tambon (sub-district) level, with the TAU improving trust and creating concrete collaborative models.

10. Media The media has played a key role in the implementation of the UHC policy and the UC Scheme. There will always be media attention on the outcome, actions and decisions related to an important policy such as UHC, especially coming from central policy actors. Importantly, this policy was the result of a daring policy decision introduced by a highly controversial political party, implemented amidst skepticism and reluctance from a number of actors in the supply chain. With the growing reach and use of electronic and social media, skepticism and criticism can be expressed and disseminated more easily. Much electronic and social media is experiential, subjective, if not emotional in nature. Investigative journalism, on the other hand, was still under-developed in Thai society and evidence-based debate hardly found its way into the media, whether conventional or new. There are high hopes that wide access to electronic and social media can increase understandings and create better-informed citizens and society. Well-informed and engaged citizens in society are critical elements in any resilient health system, but the positive role of the media and social media in relation to societal resilience in general and health system resilience in particular remains to be seen in Thailand.

The following characteristics were evident during a decade of UC Scheme implementation and the attempt to create a harmonized UHC approach

1. Societal values Values about health and equity were put to test on UHC. Creating a society with more equity in health care can be interpreted in several different versions. One simple version is to aid the poor. Here, providing UHC that includes the 'non-poor' is assumed to be wasteful, if not unfair. The most that society should do to help the non-poor is limited to catastrophic illnesses. Other versions and interpretations of a more equitable society were a mixture of ideologies and concerned practicalities and affordability. The most controversial value debates were more about "rights-based" with the preferred version being "rights with responsibility".

2. Leadership UHC was a good opportunity to reflect on the need for new kind of leadership at all levels. It was clear that political leadership could jump-start the policy but it could hardly maintain or sustain it in the long run in a complex society such as Thailand. Leaders from multiple fronts played key roles either for or against for different aspects of UHC and positions changed with changing contexts. The important thing is to have strong and high quality leadership within the system's organizations in order to bring various groups to work together towards the best possible UHC model that will guarantee equity and financial risks protection. Reflecting on the 2 styles of leadership ("command

and control" and "communication and collaboration") in 2 different settings (MOPH based and broader health system organizations) mentioned in chapter 1 and 2, participatory and decisive. It would need more than 2 styles to ensure positive dialogues and engagement of all stakeholders in the march towards UHC sustainability.

3. Overall socio-economic and political environment

The overall environment is key to system resiliency and helps to make UHC sustainable. An open society and a non-stagnant economic status is required to implement a policy that is controversial yet which has the potential to bring about equity and other social and economic impacts (as witnessed in the case of Thailand). Demands and expectations for better health care will always increase, yet the ability to make efficient use of limited resources allows countries to do more with the same or even fewer resources.[26,27] Both the demand and supply side need to work together[28] through constant monitoring and feedback which is only possible in an open society. In Thailand, it took new leadership to make the best use of the openness and prevent it from leading to chaos.

4. Enabling environment UC Scheme implementation showed that more groups in society could be brought in to increase health equity and offer financial risk protection. The enabling environment that existed before the UHC policy was implemented, could be boosted through strategic purchasing aimed at enabling more stakeholders to join in. The purchasing mechanism and model needed to ensure and support an enabling environment through expanding partners to deliver more health and equity. It was well understood that rigidly tying

service items to financial disbursement can stifle innovation and sense of control as well as learning. Care was also taken not to disrupt existing enabling environments. Thailand was adaptable about the need for possible changes in certain sets of rules and regulations, both within the purchasing body itself to those of other sectors, to allow new ways to make use of financial resources made available through UHC.

Process for resilient in UHC implementation

UHC policy, through the implementation of the UC Scheme, progressed from an initial phase of doubt and skepticism to producing significant impact, all the while trying to accommodate diverse viewpoints and expectations. Although consensus and support from all stakeholders is far from reliable, Thailand's experiences showed that certain processes might contribute to making the system more resilient if they allow adaptation and coping with various groups of actors, even if there is not yet system-wide transformation.

1. **Processes of priority-setting at different levels** The most difficult yet important part of making UHC productive is deciding where to use the limited resources. In Thailand, experiences of such decision-making processes existed not only in the Board of the UC Scheme but also at the executive level and in other mechanisms outside of NHSO control, such as the Committee on the national list of essential medicines. Decisions affecting the benefit packages have subsequent impact on equity and financial risk protection and have implications for the Government

as well as health service users. An exclusive mechanism and non-transparent process will only create doubt and dissent. It is best to make sure that processes are participatory and open, supported with reliable evidence and sound scientific knowledge, as well as sensitivity to the reality on the ground.

2. Processes of strategic purchasing In Thailand, the purchaser provider split might have allowed new relationships to emerge to ensure more value for money. The downside was the overutilization of the purchasing process to the extent that rigid vertical relationships then followed and conflicts and confrontation erupted from time to time. The purchasing or paying of outcomes is an important concept but the process of purchasing is as, if not more, crucial for creating a resilient health system and therefore sustainable UHC.

3. System stewardship Stewardship is important for such a complex policy. System stewardship for UHC goes beyond system stewardship that led to periodic system reforms. It is beyond the remit of the MOPH or the NHSO as it involves the other two main public health insurance schemes and has implications on tax burdens and government budgeting processes. Thailand experiences show that the process by which the system is steered and governed is critical to produce public trust and makes it possible for various stakeholders to collaborate for the greater good. The process of stewardship that allows the balance of participatory and authoritative leadership to interact and emerge is crucial for UHC sustainability and for health system sustainability.

4. Social communication Although the UC Scheme has been implemented for nearly two decades with relatively good indicators of success, it is still very much vulnerable to

counter-factual discourses taking place in open fora or on social and electronic media. The conventional media model that focus on highlighting conflicts, blame and shame (and vice versa) needs to be replaced or at least balanced by unbiased evidence and investigative reporting with the view to empower informed citizens. This should not be done for political gain, either for political parties to gain popularity or for selected interest and advocate groups to gain an upper hand in influencing policy decisions. Evidence-based communication may take several forms and use channels such as virtual spaces and existing online media platforms, mainstream media such as broadcast or tv, or electronic or social media. Actual face-to-face communication in groups at different levels and locations is also positive. The ability of institutions to produce, manage and communicate unbiased evidences and facts contributes to healthy social communication processes.

5. Conflict resolution Based on Thailand's experiences of UHC, the conflict resolution process, especially between patients and service providers, is very important for a resilient health system. With more complex and potentially controversial situations such as the case under Thai UHC, it is worth rethinking how such a process can be built and managed as an integral part of the health system. Two such processes and mechanisms introduced in Thailand were conflict prevention at the facility level and no-fault compensation mechanism under the UC Scheme (which is not yet present for the other two main public health insurance schemes of SHI and CSMBS).

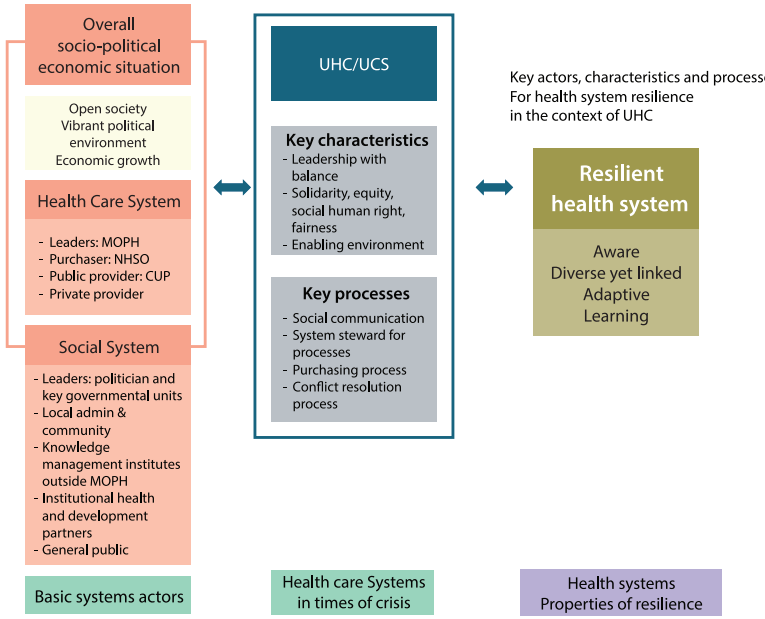

Figure 5-1 *Framework for Resilient Health System: UHC/UCS*

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Chapter 6

Making use of health system resilience to achieve UHC sustainability

The ten groups of key actors and institutions in a health system along with the six characteristics of the system and five key processes that contributed to health system resilience have been distilled from the three sets of experiences of Thai health system evolution including policy challenges such as UHC, and responses to crises.

While the challenges facing many countries relate to finding an effective starting point for UHC, it is equally important to keep in mind that there is no shortcut or single perfect model of UHC that will start and stay the same. This book emphasizes and proposes that a health system in pursuit of effective and sustainable UHC policy implementation will need to take into account actors, characters and processes. While these could serve as a useful general analytical framework for health system resilience, we found it necessary to look at these in the context of UHC sustainability.

We want to address the key question of what are the key strategic system components (beyond the WHO six building blocks) that will make UHC sustainable? We take into account immediate policy concerns such as financing strategies together with how some key system blocks and institutions could be further developed to make the health system more resilient. We also take into account aspects determining health system resilience as discussed and identified in the previous chapters.

Most of the focus on UHC sustainability has been dealing with the reality of resource limitation and tends to deal with some of the following technical questions such as:

1. How to mobilize as many financial resources as possible to best offer UHC? It is then a matter of deciding on the benefit package and the population to be covered either through public providers or private providers or both. In certain countries where such financial resources come from government departments through annual or biennial budgeting processes, it is often wise to come up with a ceiling of government share and push the rest to the society, population or other actors such as employers, as in the case of the USA, Taiwan or many other countries.[1–3] Whether this additional financial burden is pooled or not depends on each country's preference and political feasibility. However, the sustainability of UHC cannot be easily answered by determining the public sector (financial) responsibility while leaving the rest to the individual. The results could lead to dissatisfaction, inequity, weakening family livelihoods and poor health.

2. What are the most cost-effective interventions that should be included in the benefit package to make the best use of limited resources? This is another technical solution to the issue of UHC sustainability. While it is highly desirable to find the best way to make use of limited resources available in order to achieve UHC, it is also true that cost-effectiveness may not be the best criteria (along with its implicit value) for assessment.[4] Having technical tools and solutions such as this is only part of what might result in the sustainability of UHC.

3. How many more health services facilities and HRH are needed? Another attempt to make UHC sustainable and effective might be to do long-term HRH and health facilities planning based on some criteria (such as population to facility and HRH ratio).[5,6] Such advanced resources need calculation plus planning. Hoping to create a long-term solution to cope with the increasing demands and changing health risks could be very useful but is not enough for UHC sustainability. In addition, there is a need to change such plans very often to avoid them being outdated and irrelevant.

While resource constraints and limitations is the reality facing any health system, the concept of a resilient health system helps to highlight the issue of relationships between various key actors and stakeholders. We propose that a resilient health system will help to bring out the best of these relationships and interactions at any given point where resource constraints are evident. For example, a resilient health system helps to make the best use of any amount of limited resources for the benefit of the collective and common good. Using a framework for health system resilience will help better identify what might be necessary to allow the various actors, stakeholders, and institutions to mobilize and make use of key resources to best achieve UHC.[7]

The relationship between health system resilience and UHC sustainability is also bi-directional. A resilient health system helps to ensure UHC sustainability. Effective implementation of UHC also contributes to sustainability and makes the health system more resilient. In this chapter we propose a set of

strategies for UHC sustainability, making use of a resilient health system framework and working from the foundation of the six WHO health system building blocks. It could be argued that many of the strategies we propose can fit nicely into these six building blocks, but we believe it is more useful to go further in depth and highlight them in relation to health system resilience and UHC sustainability.

For example, while HRH is one of the 6 building blocks, we proposed to separate analysis of public and private providers when looking at health system resilience for UHC sustainability. The two providers pose different challenges and require different strategies and interventions, (which we proposed in the last chapter of the book). The overall governance dimension is also different from the basic system governance building block and worth fleshing out in more detail. Value plays a major role in a health system struggling to ensure UHC with limited resources and multiple competing priorities and expectations, but goes beyond the WHO finance building block as we see it.

We provide examples from Thai experience to illustrate how these relationships might be working towards UHC sustainability in Thailand. Value is one of the basic system characteristics contributing to health system resilience and we propose to take into account Sufficiency Economy Philosophy (SEP). This is a 'gift' from the late King Bhumibol of Thailand to Thai people and the world, meant for both macro and micro economic practices, and is highly relevant to the concept of health system resilience and ensuring UHC sustainability.[8]

Nine strategic system components for sustainable UHC

UHC sustainability implies health system adaptability or transformation in accordance with broader changing contexts and changes in the health care system itself. Health system resilience is therefore a major determinant for UHC sustainability. We have taken into account sustainability concerns relating to resources constraints along with the basic six systems building blocks and various system characters and processes that make the health system resilient. We therefore proposed the following nine strategic system components that make UHC sustainable:

1. Healthcare infrastructure
2. Human resources for health
3. Finance and strategic management mechanisms
4. Overall system stewardship for UHC
5. Information technology
6. Legislation and other policy tools to institutionalize UHC
7. Evidence-based policy making and decisions
8. Active citizens
9. Societal values for equity, solidarity, human dignity and moderation

1. Healthcare infrastructure

A good healthcare infrastructure is fundamental to any health care system and its resilience, and is therefore fundamental to UHC sustainability.[5] A health care system with a reasonably good mix and proportion of primary, secondary and tertiary care

enables the system to better cope with the various health needs of the population while achieving equity and efficiency. It is even better if the various levels of care are well coordinated to provide integrated care.[9] Primary care facilities should be easily accessed and widely distributed and referral systems should be designed in such a way that patients can be effectively referred to other facilities as necessary. Secondary care facilities should serve larger areas (provincial level in the case of Thailand) and be able to cover life-saving emergency management, for example acute coronary events or cerebrovascular accidents. Tertiary care facilities should serve patients with more complicated diseases. This is made possible by having strong and well-supported primary health care covering a well-defined population in a clear geographical location. It is even better if such a primary health unit works closely with the community to develop community health systems, working to address various social determinants and other determinants beyond health care.[10] While primary healthcare facilities are called "gate keepers", a better term is "gate openers". This reflects the fact that they do not work to "obstruct" or prevent people from gong for higher level of care but work to "facilitate" both the people and higher-level health care providers. An integrated health care system with strong primary health care working closely with the community will help to build up trust in the system, an ingredient important for a resilient health system.

In most developing countries, such a health care infrastructure often exists as public providers, managed either by a central ministry of health or local government health authority. It is also possible for a health care infrastructure to be well integrated

with a mixture of private-public partnerships, such as the case of General Practitioners and National Health Service (NHS) hospitals in the UK, which serve a first line of care before patients are sent to higher level of care if necessary.[11]

Reflections on the Thai health system

In 1828, Western medicine, (which started by disease prevention for small pox vaccination) began to play a key role in the healthcare of Thailand. The era of modern medical and health services (1917-1929) began in earnest when King Bhumibol's father, His Royal Highness Prince Mahidol of Songkla, who studied medicine and public health at Harvard University, returned to Thailand and established modern medicine and public health in the country. Since 1942, and with the establishment of the MOPH, the Thai Government gradually extended the coverage of health services to the population, starting at the tambon (sub-district) levels, the lowest level of public administrative unit, and establishing hospitals at the provincial level. The policy to construct one district hospital in every district was initiated in 1975 by PM Kirkrit Pramoj. This has made the district level better equipped with HRH, budget and technologies in order to play the role of primary health care provider and supporter links between the primary care and higher levels of care.[12]

The MOPH continued to play roles in further refining the health care system in Thailand by strengthening the public system under the MOPH. Despite advice from the World Bank during the 1990s (when the Thai economy was good) to reduce the roles of public providers and promote more private providers,

the MOPH continued to play major roles in health service provision. This was despite the natural growth of private providers resulting from a better economy and increase in household disposable incomes. Later in 2009-12 PM Abhisit Vejjajiva's Government issued a policy to increase the capability of primary care health centers at the tambon (sub-district level).

After UHC was implemented, two policies were initiated that supported primary health care. Firstly, the purchasing approach using prospective per capita payment from "contracting units for primary care – CUP" which provided per capita allocation to each district health system based on its population size. People are assigned to primary care service units within each district and follow lines of referral when needed. Secondly, the familycare team which better links the primary care level to higher-level facilities by forming a team of multi-level health workers to care for specific number of families within a defined geographical location. Although the UH Scheme purchases services from the private sectors, the number of private providers acting as primary care providers are still very limited, both quantitatively and qualitatively.[5,10,12]

This relatively uninterrupted emphasis on primary health care investment and strengthening can be seen throughout the history and evolution of the Thai health care system. While such arrangements of health care infrastructure and functions exist mostly in the rural areas, it has been key to improve the health status of the population at affordable cost. Even with clear policies over the last five decades and into the UHC system, tremendous challenges remain for the primary health care

system in Thailand, especially with growing economy and changing people's expectations that coincided with the introduction of UHC.

2. Human resources for health

Adequate numbers of HRH with reasonably good distribution, with capacity and attitudes to play various roles in an integrated health system are the most important characteristics of HRH for a resilient health system. From an actor and institution point of view, the educational institutes and the system for on-the job training are the key factors. But it is the enabling environment that promotes and stimulates continuous learning that has kept the health care system dynamic and resilient. Such capability and attitudes of HRH is enforced by various institutional arrangements and management practices that favour autonomy, flexibility and innovation.

The production of a sufficient number of HRH categories and skill mix are important to run a health system. A country should be able to produce its own human resources. This is not easy and requires long-term planning and investment by the government. At an initial stage, external aid help may be necessary. HRH production should consider the HRH utilization and needs of the country. Capacity building of a medical school, nursing school, public health school and others must be carefully planned. Demand for numbers and different types of specialties should be met to synchronize the healthcare infrastructure and healthcare delivery system of each country. Priority should be given to strengthening the healthcare workforce in primary care settings. Capable and well-supported

primary health care levels act as 'gate coordinator' of UHC that will allow good quality of care with efficient use of limited resources. The quality of graduates should be certified by a national accreditation process. Healthcare education should closely link to a national healthcare system. The graduates should be able to respond to the demand of the society and possess essential set of attributes, attitudes and skills to work across the disciplines to deliver good health to the people.[13]

The distribution of human resources requires appropriate policies with mechanisms and tools for implement that ensure key categories of HRH are distributed, supported and function effectively. It is important for health workers to have incentives, enabling tools and environments such as working conditions, income and the opportunity to initiate, innovate and learn from actions and experiences. HRH is an asset and workers should be supported, maintained and developed to the fullest. In some countries, internal loss of health workers from a public sector to a private system or abroad may be a serious problem.

Thai HRH experience

The capacity development of the healthcare workforce in Thailand has a long history with continuous improvement. Even though our healthcare workforce is still in short supply, currently, Thailand enjoys the privilege of self-dependent production. This includes all undergraduate healthcare professions and post-graduates training of specialists up to Diploma level of different specialties or subspecialties, or Masters and PhD level.

Table 6-1 *Number of Thailand's health workforce under the Ministry of Public Health (MOPH), 2016*[14]

No.	Position	Number of health workforce
1	Medical Physician	17,673
2	Dentist	4,956
3	Pharmacist	8,943
4	Registered Nurse	108,293
5	Technical Nurse	2,097
6	Public Health Technical Officer	28,000
7	Medical Technologist	3,847
8	Medical Scientist	1,497
9	Radiological Technologist	1,314
10	Physiotherapist	2,713
11	Psychologist	334
Total		**179,667**

Source: Strategy and Planning Division, Permanent Secretary Offices, MOPH

Table 6-2 *Number of Medical Specialists, Whole Country, 2017* [15]

No.	Medical Specialist	Number of Doctor
1	Medicine	6,223
2	Surgery	4,928
3	Pediatrics	2,721
4	Obstetrics	2,138
5	Pathology	388
6	Radiology	1,462
7	Anesthesiology	1,334
8	General Practitioner	3,462
9	Family Medicine	1,136
10	Prevention Medicine	511
11	Rehabilitation Medicine	437
12	Ophthalmology	1,065
13	Psychiatry	707
14	Forensic Medicine	134
15	Otolaryngology	980
Total		**27,626**

Source: Strategy and Planning Division, Permanent Secretary Offices, MOPH

Table 6-3 *Number of health school in Thailand* [16]

No.	Health School	Government	Private	Total
1	Medical School	20	2	22
2	Nursing School	72	23	95
3	Public Health School	66	27	93

The fact that patients from around the world come to seek medical care in Thailand, is in part a reflection of our qualified healthcare personnel. Another important experience of HRH has been efforts to make use of non-degree health workers, including village health volunteers and active community groups in health care with support from professionals. While such practices have led to certain disagreements, the formal educational institutes producing degree-level health personnel, and professional health worker organizations have been quite sensitive and sympathetic to support these policies. The MOPH, responsible for the majority of health facilities in rural areas, also has its own educational institutes to produce key categories of workers such as nurses, junior sanitarians, dental hygienists, nurse practitioners, etc.

In terms of HRH distribution, in 1971, the Government issued the policy that every new medical graduate must serve in the rural areas for three years. This was a milestone policy, which helped to replenish medical doctors in rural areas, especially in district hospitals. It synchronized with another policy to

construct community hospitals in every district of the country. The policy is still functioning today and enables the turnover of young doctors to pursue further training. After the three-year mandatory period expires, some doctors remain in the rural area and the MOPH has a supporting system to encourage this. It includes competitive remuneration, an opportunity for further training and improvement of working conditions. All are given a Government civil servant status with full welfare and benefits.

HRH production is also tied in with a distribution policy through the rural doctor production program which started in 1978. The Medical Education for Students in Rural Areas Project-MESRAP[17], was initiated by the Faculty of Medicine Chulalongkorn Hospital to co-operate with the MOPH for a new structural method of education. The students were recruited from rural areas and studied basic medical science at Chulalongkorn University. They later did clinical rotation at Chandraburi hospital, a tertiary care center of the MOPH. Although the original program was discontinued after ten years, it became a model for many other institutes; the latest is the Collaborative Project to Increase Rural Doctors (CPIRD) starting in 1994.[18] This is based on the same concept to pool the resources of the university and the MOPH. Students were recruited from rural areas and sat for separate entrance examinations different from the conventional track, and went on to study basic medical science at the university and clinical science at the tertiary care MOPH hospital. Initially, 7 universities and 12 MOPH hospitals participated. Now, the number of universities has increased to 15 and MOPH hospitals to 37. The program received support

from the Government and was successful in increasing the number of doctors to about half of 2,664 annual production of medical graduates in Thailand.

A recent survey indicated that maintenance of the graduates of CPIRD in rural areas was higher than graduates in conventional programs.[19] The graduates were also offered an in-training program to become specialists in family medicine, therefore, increasing the chance for them to remain in the community. At first, there were reservations that CPIRD would be successful because doctors in the MOPH were not prepared for teaching and had not elected for an academic career. However, critics were proved wrong when many MOPH doctors transformed into dedicated teachers. In addition, MOPH teaching centers were progressively developed due to support from the MOPH and of course, stimulation from the students. Many MOPH hospitals are now waiting to become a teaching center.

Additional innovation to increase the number of doctors in rural areas was the 'One District One Doctor', or the ODOD program, initiated in 2005 when students were proactively identified and given more support to enter CPIRD in return for longer a pay-back period working in the rural areas.[20] The CPIRD was an important innovation to pool the resources of the university and the MOPH, and created an opportunity for rural students to study medicine, both fostering the development of teaching staff and hospitals. The outcome was successful with increasing numbers and maintenance of doctors in rural areas.

Post-graduate specialty training is another policy geared to motivate and distribute specialists to the rural hospitals. Postgraduate medical education used to start in a university hospital when Thai doctors who, trained in the USA, Europe or Australia, returned home to establish specialty and subspecialty training. Thailand is now self-sufficient in post-graduate training.

Table 6-4 *Number of specialty and subspecialty trainings in Thailand, 1964-2017*

Subject Fielad	Total	Higher Diplomat	Diplomat
General Practitioner Specialist	**251**	**56**	**195**
Family Medicine Specialist	**6,936**	**6,308**	**628**
Surgery Specialist	**4,664**	**620**	**4,044**
Surgery	2,863	207	2,656
Surgery Subspecialist	1801	413	1388
Neurosurgery Specialist	**495**	**38**	**457**
Orthopedic Specialist	**2,306**	**127**	**2,179**
Internal Medicine Specialist	**11,610**	**1,744**	**9,866**
Internal Medicine	5,990	318	5,672
Internal Medicine Subspecialist	5,620	1,426	4,194
Obstetrics and Gynecology Specialist	**3,776**	**509**	**3,267**
Obstetrics and Gynecology	3,008	151	2,857
Obstetrics and Gynecology Subspecialist	768	358	410
Pediatric Specialist	**5,239**	**775**	**4,554**
Pediatric	3,891	254	3,637
Pediatric Subspecialist	1,348	521	917

Subject Fielad	Total	Higher Diplomat	Diplomat
Anesthesiology Specialist	**1,944**	**238**	**1,706**
Anesthesiology	1,665	79	1,586
Anesthesiology Subspecialist	279	159	120
Otolaryngology Specialist	**1,515**	**307**	**1,208**
Otolaryngology	1,341	163	1,178
Otolaryngology Subspecialist	174	144	30
Ophthalmology Specialist	**1,495**	**129**	**1,366**
Psychiatry Specialist	**1,030**	**162**	**868**
Psychiatry	809	98	711
Psychiatry Subspecialist	221	64	157
Radiology Specialist	**2,342**	**247**	**2,095**
General Radiology	706	52	654
Radiology Subspecialist	1,636	195	1,441
Pathology Specialist	**797**	**191**	**606**
General Pathology	63	33	30
Pathology Subspecialist	734	158	576
Rehabilitation Medicine Specialist	**590**	**39**	**551**
Preventive Medicine Specialist	**2,558**	**2,334**	**224**
Clinical Preventive Medicine	409	397	12
Preventive medicine Subspecialist	2,149	1,937	212

Source : The Medical Council of Thailand

Training quality is closely regulated by the respective Royal College of each specialty and the Medical Council of Thailand. The MOPH, the largest healthcare provider in the country, is consulted to match each specialty training to the demand. Recently, emphasis has been given to an increasing number of specialists in family medicine.[21] This will strengthen primary care

services and provide opportunities for new medical graduates, especially in CPIRD to become family physicians, and remain serving the community.

Public health capability was enhanced with the introduction of the Field Epidemiology Training program.[22] In 1980, the Field Epidemiology Training program, which trains residents on expertise in epidemiology, was founded by the MOPH along with the collaboration of the World Health Organization and the United States Centers for Disease Control and Prevention. Those trained are specialists in disease surveillance, data collection, and quarantine. They are instrumental in disease containment especially during epidemics and work in line with International Health Regulations (IHR).[23]

Many types of non-professional categories of HRH have been introduced in the health system, and have played tremendous roles in improving rural health services while simultaneously working with the communities. Most notable are the training and posting of midwives, technical nurses and junior sanitarians at the tambon (sub-district) level to provide a wide range of health promotion and disease prevention services, which took place at the beginning of establishing rural health services. This has evolved and at present most of these health worker positions have been upgraded to degree level. However, many other categories of health workers are still trained to meet particular health needs such as dental care, or to provide task-shifting opportunities to allow scarce categories to cover larger populations, for example, anesthetic nurses. The most significant

use of non-degree and non-professional HRH has been the training and participation of community members acting at first as health volunteers.

Village health volunteers (VHV) are an important workforce in rural areas.[24] They are from all walks of life, but particularly farmers make up a large proportion. They are trained to distribute health information, participate in health promotion and prevention, rehabilitation, and care of the elderly and the disabled. Currently, there are 1,040,000 volunteers distributed across every village in the country. The success of VHV gradually expanded into various community groups active in health affairs and community development, enabling community participation in health to address social determinants and other health-related interventions, such as supplementary food production to address malnutrition.

Enabling environment for HRH performance and learning from practice

Public administration frameworks, HRH management, policy implementation, and on-the-job continuous capacity building are important to ensure health workers in the public sector can initiate, innovate and learn from their work. Hospitals are equipped with the ability to make use of their own revenue for service improvement as well as HRH remuneration (in accordance with some centrally-imposed rates and rules). National programs are introduced with targets and suggested lines of action but allow local health workers to modify and innovate at regional, provincial and district levels. Supervision or regular meetings

to discuss progress of work and problem solving take place periodically at the provincial level. Certain innovations for on-the-job learning have been introduced more recently, such as sharing and learning from tacit knowledge (Knowledge Management or KM), context-based learning at the district level (CBL), and routine-to-research (R2R).[25] The MOPH also organize annual research competitions that encourage their staff to do research to address priority health problems such as NCDs. The most significant and widespread enabling environment is the hospital accreditation program, which began in 1999 and is currently organized by the Healthcare Accreditation Institute. It works to stimulate internal quality management improvements along with external assessment for periodic hospital accreditation of both private and public hospitals.[26]

3. Finance and mechanisms for strategic purchasing

Sustainable UHC requires a sustainable financing model that takes into consideration both financial inputs and financial management that can maximize the use of limited resources to achieve the goals of health equity and financial risk protection. Some countries finance UHC from tax with clear requirements for supplementary payments from patients for different types of services and technologies. Many countries also seek to mobilize additional funding from pooled contributions to increase the size of collective purchasing power, rather than using only tax which might be limited. The budget for public sources may also vary from less than 1% to more than 5% of GDP. From a financial protection point of view, it is crucial not to leave an open-ended burden to patients when it comes to

asking patients to co-pay at the point of service. It is important therefore, not only to pay attention to who contributes to the UHC scheme and how much, but also to also ensure an effective mechanism to oversee the financial burden and equity resulting from such a model. There should be overall monitoring of system performance so that adjustments can be made to the model, as well as negotiations with providers.[27]

While it is undeniable that adequate and affordable financial inputs are key to sustainable UHC, the presence of a strategic purchasing body is key to ensure the best use of available resources. This is critical to the sustainability of UHC. A properly designed and capable purchasing body will help countries start UHC despite relatively low GDP. Many purchasing methods and tools have been developed and used to fund basic outpatient (OP) and in-patient (IP) services, for example prospective per capita global budget for OP and Diagnosis Related Group (DRG) for IP.[27] A strategic purchasing body embedded with good practice also helps to make the system more resilient, prevents conflicts and produces results at reasonable cost and minimal undesirable consequences. Such a body should be free from political interference. At the same time, it should be professional in its work. It is most beneficial if established not as a bureaucratic department but under a conventional public system. It should be accountable within the vertical bureaucratic system, its governing body should be multi-party and able to set up its own proper management system with responsibility for evaluation and accountability checks. Such a mechanism to manage the funds for UHC varies from country to country but

some of the above characteristics and roles and functions are important for effectiveness, regardless of where the money comes from or the size of funds available. Good governance, professional management, transparency and accountability are key for a good strategic purchasing body.

Thailand's experience

Thailand achieved Universal Health Coverage (UHC) in 2002 by having three main public health insurance schemes for all Thai populations. Each scheme has its own mechanism to develop policies and manage available financial resources to meet the system goals. The civil servant medical benefit scheme (CSMBS) is the only one with no mechanism to proactively monitor the outcomes and problems faced.[10] The closest it comes is to have a medical committee to decide what should be included or excluded as benefits or entitlement for the civil servants and their dependents covered under the scheme. The social health insurance (SHI), one benefit among others in the social security scheme (SSS) and universal coverage scheme (UC Scheme) both have a policy board and an executive officer to manage the funds. The practices of both the governing board and the CEO of SHI and UC Scheme are quite different although the purchasing models are quite comparable.

The Civil Servant Medical Benefit Scheme (CSMBS)

There have been consecutive developments of the financing mechanisms of the CSMBS, the first healthcare coverage in the country for civil servants and their families and totally funded by the Government. It reimbursed providers with fee-for-service

for both OP and IP and no budget was set aside for heath prevention and health promotion. Until recently, DRG was used for the reimbursement of IP as an effort to reduce the progressive increase in the healthcare budget which exceeded the rate of economic growth of the country and reached 70,000 million Baht per year in 2016. This happened despite restrictions of some drugs outside the national list of essential medicines (NLEM).[28] CSMBS used 5.7 times more budget per capita in comparison to the UC Scheme. There is no governing board nor CEO because there is no fund to manage. The Director General of the comptroller general department saw the role of the department as merely reimbursing fees to providers per rules set by the medical committee. The Government has no plan to set a budget limit based on criteria, but draws on existing annual budgets and real expenditure incurred; it believes that it will be violating civil servants' rights if this fringe benefit to civil servants is managed as an insurance fund with clear cut annual financial inputs that varies according to the number of beneficiaries.[10]

The Social Health Insurance Scheme (SHI)

The Social Security Act came into effect in 1990. It covered only formal workers and did not extend to cover family members. Different to the CSMBS, the SHI has a well-defined fund for health (one among the seven benefits offered to the contributors of SSS); the overall governing body for all benefits also oversees the health benefits with a medical committee acting as its advisor. It has the Director General of the social security office

as its CEO who is also accountable to the Minister of Labor. Due to its insurance nature, it was the first to use 'per capita' and 'global budget' for out-patient (OP) services while fee-for-service was applied for in-patient (IP) admissions. Later, to curve spending, DRG was applied for in-patients. In comparison to the UC Scheme, SHI used 20% more budget per capita despite the working age beneficiary being the only profile (neither children nor elderly people are covered in the SHI scheme).[10,29]

The Universal Coverage Scheme (UC Scheme)

The UC Scheme was established by the UC Scheme Act. The organization which executes the UC Scheme is called the National Health Security Office (NHSO) and has a status of semi-autonomous government agency. This means it is a public organization, the same as a ministerial department, but it is governed by a Board as opposed to a Director General or the Minister. Its affairs are managed by a CEO, who is employed as a Government officer but not a civil servant. It is selected and appointed by the board and is accountable solely to the board. Funds for the UC Scheme come from general tax at a negotiated rate per capita. The governing board consists of four main groups – the Minister of Health (who is also the Chair), top-level civil servants from related departments, representatives from local governments and NGO's, and appointed knowledgeable individuals. From the start, the UC Scheme used per capita global budgets for OP and DRG for IP reimbursement.

While it started by providing similar health benefits to those under SHI, the UC Scheme under NHSO developed more complex purchasing methods and reimbursing requirements, which were at times unnecessary and inefficient. Some of the better initiatives included a dedication to prevention and health promotion by setting aside a certain percentage of overall budget for these areas. At the initial phase of operation, a new budgeting scheme was backed up by a contingency fund to support hospitals with inadequate funding. Later, a specific budget was set aside separately to fund particular health needs, for example anti-retroviral drug for HIV and AIDS patients, or renal replacement therapy. Another mechanism to curb spending was pooled purchasing for specific widely-used technologies, for example vaccines or catheters for cardiac angiography. In addition, the budget for management should be kept in the reasonable range and accordingly, the NHSO spent only 1% of its budget on management.[10]

Another innovation in financial mechanisms is designed to promote collaboration between the NHSO and local administrations by establishing a community healthcare fund, which receives contributions from both the NHSO and the local administration. The fund is used to promote health in the community.[30,31]

The use of systematic technology assessments to identify priority technologies and interventions that should be included within the preventative and curative benefit package is also useful tool in strategic purchasing. It allows for the possibility

of including new technologies and interventions, yet keeps them affordable and agreeable using technical analysis and clear evidence. This way, all parties can reach agreement on how the benefit package is regularly refined.

4. The importance of overall system stewards for UHC

High ranking MOPH administrators blamed the NHSO for the financial deficits of many hospitals; some of them even went on to bankruptcy.[32] This caused sensation in the media and public alike and prompted the then Minister of Public Health (2014-2015) to install the 'Committee for exploring financial problems and recommending financial and accounting system improvement for MOPH hospitals' to investigate and find resolution to this accusations.[33]

The Committee's findings indicated many causes of financial deficit of hospitals and included population numbers, geographical location, hospitals over capacity, over-investment, and patients bypassing services for hospitals with higher standards of care. The Committee also found that the financial and accounting processes of MOPH hospitals had different standards. The Committee recommended that hospitals should issue standards of operation for payment, including hospital income and reserve, a set policy on debt and debt management and methods of hospital debt payment. The price of services should be revised, especially to become more appropriate for visitors from abroad. Financial analysis should be more reflective by revising financial ratios analysis to include cash flow and

effectiveness of resource utilization. Unit cost analysis should be up-to-date. Accountancy methods were not standardized, accountancy protocol was not fully utilized, and personnel lacked accountancy skills. The committee recommended that the MOPH accountancy system should be overhauled.

The Committee also recommended some improvements to NHSO operations. NHSO payment methods should be more consistent and the NHSO should lay out a road map for payment without any abrupt changes. The date of payment should be fixed and payment should be itemized. The relationship with the provider should be improved, and a call centre should be established for providers to ring with queries; an online FAQ and trouble-shooter may also be helpful. A separate health promotion and prevention (PP) fund should be directed towards individuals and communities, with allocation of more PP budget.[34]

5. Information system for effective and efficient functioning of the UHC

The sustainability of UHC needs good and timely information for officials make both macro and micro-level policy and management decisions. More importantly, an information system should allow all stakeholders to see the real situation of UHC in terms of outputs and outcomes achieved, resources spent and current availability, equity gaps, and financial risk protection gaps.[35,36] Such information will allow various groups of stakeholders to concentrate on how best to meet real challenges rather than be engaged in debates emerging solely

from their own experiences and emotions about the system. More specifically, a good information system helps to facilitate the following areas in UHC while also making them more effective. Information system is needed for at least the following areas:

- Strategic planning
- Health service provider registration
- Beneficiary enrolment
- Fund management
- Health service quality control
- Consumer protection.

An IT system is used for strategic planning which includes annual budget planning requiring many demographic, economic, geographic and epidemiologic data inputs. Health-service utilization rates, health-service provider registration, and beneficiary registration data are also needed. The output of strategic planning is an amount of capitation per person per year and itemized fund allocation. The IT system will cover data on health service provider registration as well as beneficiary enrolment. The IT system is also required for fund management, health service quality control and consumer protection.[37]

Thailand's experience

Each healthcare fund provider in Thailand developed its own IT system to operate independently.[38] This has helped each of the schemes to carry out their core functions quite effectively. A nation-wide civil registration and vital registration system has

helped all three schemes to differentiate between beneficiaries for each scheme. However, in this three-scheme UHC, the health insurance status of an individual may change with age or employment status making the transition between funds difficult. Attempts are now underway to harmonize the data of the three schemes with a view not only to smooth the transition of a beneficiary but also to enable an overview of the country's UHC status to achieve better equity and financial risk protection across schemes, as well as efficient use of limited resources. Another benefit is reduced investment of IT and personnel that is required when providers have to respond to three separate schemes.

The most extensively developed IT system so far (but still far from perfect) is that of the UC Scheme under the NHSO. It covers the largest number of beneficiaries with more than 1,000 providers and contractors in 77 provinces. The system identifies various parts of the fund to track performances and fund transfers and usage. This includes per capita budget for OP, IP, PP, rehabilitation, specific funds for ARV drugs for HIV/AIDS, renal replacement therapy, chronic diseases (diabetes and hypertension), community-based long-term care, traditional medicine, high cost and orphan drugs and emergency medical services. The IT system is also responsible for data needed for DRG implementation. The NHSO IT system keeps track of every provider for registration. The UC Scheme is now linked with civil registration through a national citizen ID card. The member can use the citizen ID card to register and receive services from

designated hospitals.[39] Consumer protection is another major responsibility of the UC Scheme IT system. Their call center at #1330 provides a 24-hour service for information as well as handling of complaints.[40] It has performed well and received a national award for many consecutive years.

6. Policy tools to guarantee the goals and principles of UHC and ensure continuous political commitment

Political leadership is a critical element of UHC policy[41], but more is required. Political commitment should be made firm commitment through one or both of the following tools. In order to effectively implement UHC, the most basic tool is legislation to lay out principles, goals, mechanisms and requirements to ensure good practice and management.[42] The other tool is a financial framework to ensure continuity of UHC.[43] It can take several forms, such as putting financial commitment clearly in law, and establishing the mechanism and principles for UHC as part of the budgetary legislation, etc. Some key features of a law to firmly establish and ensure continuity of effective UHC include the following aspects: purchaser-provider split, source of funding, budgeting mechanism, governance including the governing board, organization of purchaser, characteristics of providers. In addition, the scope of authority of the purchaser, the establishment of the benefit package and the auditing mechanism should be clear. A recent survey indicated that 75 out of 192 countries have law which commits to universal health coverage. Among them, 58 countries have provided

healthcare coverage to more than 90% of their population. They include both developed and developing countries, for example: Argentina, Armenia, Australia, Canada, Croatia, Chile, Estonia, Iceland, Italy, Japan, Singapore, Slovenia, Taiwan, Tunisia, UK, Thailand.[43]

Japanese healthcare is a good example for a strong attempt to provide UHC to its people. Japan has had the Health Insurance Act since 1922 and provided UHC for its people since 1961, after Japan had recovered from the devastation of World War II. This was followed by the establishment of the Elderly Health Care System in 1983 and went on to establish the Long-term Care Insurance System in 2000 and the Health Insurance System for the Aged over 75 in 2008.[44, 45]

Thailand's experience

The effort to establish UHC and make it a continuous rather than single political party commitment came through multiple attempts of legislation processes. It started with the constitution of the Kingdom of Thailand BE 2540, where article 52 mandated that healthcare was basic right of Thai people. In addition, it also mandated that the Government should provide quality, equity and efficient healthcare to its people.

Attempts by many sides have been successful to issue the Health Act 2007 (BE 2550) that access to quality healthcare is basic right of the Thai people. Prior to that the National Health Security Act 2002 (BE 2545) was in effect to guarantee the continuation of UHC. The law has guided Thai UHC, especially the UC Scheme, for many years until 2015 when the Government launched

an in-depth investigation of the NHSO with the conclusion that there is a need to clarify some of the more ambiguous statements in the law. At the same time, there were criticisms from various groups on the performance of the NHSO and suggestions to amend the law. There was some early apprehension from UHC advocates in civil society that the real attempt was not in amending the law to improve performance but rather in either abolishing the goal and principles of UHC, or making the NHSO less effective in carrying out its functions. This would reduce UHC to merely a Government program to guarantee access to the poor rather than ensuring the broader goal of equity in health and financial risk protection for everyone.[46]

It is worth noting that the participatory process in legislation remains limited[47] and decision-making is still very much in the hands of politicians. While the public may influence their local politicians and hold them accountable and thus more attentive to the needs and voices of the public, the reality is that the legislative process is still far from being a factor for health system resilience.

7. Evidence-based policy making

Implementing effective UHC requires continuous improvement and adjustment in the overall design and expansion of the three UHC dimensions of population coverage, financial protection and benefit package.[48,49] All decisions need to be guided by evidence and the process should be sensitive and able to make use of evidence rather than merely using political calculation,

or personal preferences, experience, or ideas. Evidence-based policy making is needed not only at the initial stages of establishing UHC but more importantly throughout the life time of any UHC policy, which needs to operate within and respond to a society with diverse value-sets, opinions and expectations.[50, 51] After UHC has started, research should continue and serve as the back bone of adjustment, innovation or periodic reform of UHC.[52] A periodic evaluation of policy outcomes and management practices of the UHC system and use for broad-based participatory system review and modification is the most basic form of evidence-based policy process. This is crucial for the sustainability of UHC as well as health system resilience.

In most countries with UHC, decisions about the scope of benefit package (or at least the need to consider the inclusion or exclusion of new and old technologies and interventions) are policy process of concern to both providers and the beneficiaries. Such a process needs to be guided by evidence, or risk being a political fight for domination, thus reducing the chance for rational decision-making and increasing the chance of conflict and resistance.[53]

Thailand's experience

UHC in Thailand has been guided by continuous research studies. The first one was a health care reform project in five provinces including the Ayutthaya project which was based on participatory-action research.[54,55] The aim was to study the outcome of setting up a primary care health center outside a hospital. Later, a pilot study of insurance coverage for the poor

was undertaken and followed up with implementation of health insurance for the poor organized by MOPH. Research on financial mechanisms was also conducted and findings suggested that the UC Scheme should adopt per capita funding for OP, and DRG should be used for IP reimbursement. Research on DRG was also conducted before it was implemented.[56] Later, research was done on the outcomes of pooled purchasing. Many ongoing research projects are now being conducted to make adjustments and improve UHC.

To adjust NHSO operations, article 18 of the National Security Act 2002 mandated that a hearing session must be organized annually to obtain feedback from providers and the people. Conclusions from the session guide budget allocation.

The process of deciding priority new benefit packages for the UC Scheme is very well laid out. A subcommittee reviews the demand of new benefit packages considering many factors including the economic status of the country and the cost benefit ratios of new technologies or interventions to be introduced. The board makes a final decision which should heed policy from the Government.[57] Despite attempts to make the process transparent and participatory, the final decisions tend to create conflicts. For example, Peritoneal Dialysis is provided as the first option for patient who needs renal replacement therapy (called as PD First Policy) and the human papilloma virus (HPV) vaccine were excluded as they had too high costs per QALY.[58] When there are disagreements, evidence must be provided to mediate arguments from both sides.[59]

8. Active citizen

It is fair to say that UHC is a high-stakes policy where all sectors in the society are affected and therefore easily mobilized to express their preferences and concerns; in most cases expression is from groups with diverse opinions. On the other hand, the values of UHC bring home the differences in political ideology, societal values and mental models as well as personal preferences, bias, gains and losses. While beneficiaries of the policies may choose to be passive at the receiving end, those wanting to change or disrupt the policy are vigilant and at times aggressive. Examples are political leaders or Government officials with different values and ideologies, or business sectors who are threatened or affected by the policy. Public vigilance demanding transparency, participation and clear lines of accountability to avoid political interference or manipulations for political or monetary gains, should be encouraged or supported to safeguard against self-serving policies and ineffective, if not corrupting, management decisions. It is important to have a public that has this sense of ownership as it increases their ability to participate in multiple decision-making processes. This is crucial to avoid manipulation of the system for personal or group gain that will eventually reduce to the potential or opportunities to improve health equity and offer adequate financial risk protection. Representatives of various groups of active citizens should be given a chance to join in the decision-making processes of UHC and be vigilant to reduce or get rid of political interference that will negatively affect the ability of the system to serve the purposes of UHC.

The public must know their rights and have opportunities to participate in shaping the future of UHC[60] and they are certainly a strong force behind the sustainability of UHC. It is equally important to ensure that public participation is equipped with solid evidence and knowledge. Well informed public participation is key both to prevent harmful manipulation of the policy and management mechanism and decisions.[61] Participation is also an effective mechanism to engage the public in actions for health from health promotion to end-of-life care and help them understand cost-benefits and usefulness to meaningful life and living, of certain services.

Thailand experience

A group of citizens have been active since the formation stage of UHC.[62] They have participated in many seminars and workshops that prepared Thailand for UHC. They were a strong force behind the establishment of the National Health Security Act. When UHC began they participated in the governing structure of the UC Scheme. Some played roles of system watchdogs or patient advocates (such as an HIV-positive group). Many other patient peer groups emerged to express demands for access to specific types of services and drugs. Some succeeded while others did not. NHSO contracted technical units on technology assessments to help preparing data and do analysis to deal with some of these demands from patient groups. This included: patients with chronic renal failure demanding dialysis services; cancer patient groups demanding access to high-cost cancer drugs, people with Hepatitis C; and patient safety groups calling for expanded no-fault compensation and improved systems for patient safety etc.

Though not all groups got what they demanded, the NHSO with its broad-based governing structure, non-bureaucratic administration and the mandate to play strategic purchasing roles, allowed interactions between purchasers and consumers to take place through certain processes, including a general annual hearing that included both consumers and providers. It is natural that these groups emerged as voices to argue against unfounded accusations and to resist the governing structure becoming less open and more dominated by government officials and providers. They feared losing the opportunity to have fruitful and unbiased dialogues from the consumer/people side.[10,63]

9. Societal values and attitudes about equity, solidarity, human dignity and moderation - Sufficiency Economy Philosophy (SEP) and UHC

UHC can never be operated with unlimited resources. Nor can it be expected to respond to unlimited demands and expectations. While it is possible to design and establish mechanisms, task and equip human resources who are properly trained with constant capacity building and empowerment, the march towards UHC requires the presence of certain sets of values to guide all parties in their interactions to find the best way forward. Agreeing on the goal of UHC itself introduces certain values such as equity, solidarity and respect for human rights. Implementing it and making it sustainable and affordable requires another value.

Though it is natural that a society diverse enough to survive in the long term is comprised of people with diverse sets of values, ideas and opinions, it is also important for a society to continue and grow by agreeing on some common goals, which are hopefully, guided by a set of values and principles. While it is arguable that the most resilient system is the one that can continue to exist, and thrive despite the most diverse values of its individual members, it is equally important to try to converge on certain values dear to people's hearts and crucial for achieving common goals. In other words, a resilient society can never be realized with coping with extreme differences and opposing values. While values matter, it is important not to overuse or overemphasize them in political processes as it can also lead to discrimi-nation and condemnation rather than be a tool for consensus and harmony. From a practical point of view, it is important to realize that there are certain sets of values behind certain types of goals (such as UHC) rather than denying it. At the same time, it is important to realize that such values are not shared by all parties in a diverse society and there is no need to make everybody agree to these sets of goals before a society can move forward. It is most crucial to try to find processes that do not alienate or offend those with different sets of values in the process of achieving common societal goals laden with values.

Reflecting on Thai experiences and the Sufficient Economy Philosophy (SEP)[64]

Implementing UHC has certainly brought forward groups of people with diverse opinions about and needs from UHC. Skepticism, criticism and contradictions existed in various groups. Many of them resulted from personal bias, or concerns for personal loss and gains. Some reflected the differences in values of what is a desirable society, although they might not have been openly accepted. One of the arguments in the UHC public debate, is whether health is a basic human right or whether we should rather emphasize the need for responsibility when it comes to health. For example, does a rights-based approach to health bring out all types of irresponsible unhealthy behaviour, especially when it comes with free access to services? Some argue that responsibility should come before rights. UHC however emphasizes rights over responsibility. Another often-heard argument is that no society can ever be equal, and equity can only end up with a mediocre society where everyone lives with "average level of wellbeing". These examples show the extreme of debates. While it is useful to keep in mind that certain sets of values propel people to work towards achieving UHC, finding a practical way forward and trying to avoid communication that alienate certain groups is essential.

More positively, it is important to find ways to communicate with a range of groups who have varying values and concerns about how some features of UHC include their particular concerns. A good example is the debate about rights over responsibility. A practical version of UHC needs to moderate

demands rather than taking the concept of having the 'right' to mean everything demanded by an individual or group. Solidarity is often not brought forward to show the need of downplay the "right-based activism. The good side about Thai society is that such arguments stayed in limited group conversation and hardly went out as mainstream arguments as Thais are mostly utilitarian rather than fundamentalist.

An interesting development in Thailand is the introduction of sufficiency economy philosophy (SEP) by King Bhumibol Adulyadej of Thailand in 1974, as a path to wellbeing, happiness and sustainability.[8,65] SEP intends to provide balance of economic, societal, environmental and cultural values. The practice of SEP should include individuals, families, communities and societies based on virtue and knowledge and by following a middle path of decisions and actions that are moderate, reasonable and prudent. The outcome is self-sufficiency, sustainability and immunity to disruptive change. The ultimate outcome is the wellbeing of individuals, communities and society.[66] We believed that UHC sustainability can benefit from following the SEP and that it offers a good set of concepts and values which can make health system more resilient.[67]

The initiation, achievement and development of many components of UHC have unknowingly followed the SEP. Studying carefully how the SEP has influenced Thai health system experiences will help to identify how the system copes with certain challenges that affect UHC sustainability and health system resilience.

UHC is a noble program. It was built on social virtues and the values of civil society. A massive movement of people from all walks of life pledged support and committed to UHC during its formation stage. They participated in many seminars and workshops and were a force behind submitting the UHC Act to the legislative body.

Many years before the birth of Thai UHC, academics and MOPH personnel had done research on many aspects of alternative models of health service delivery, health insurance and alternative financial mechanisms. The conclusion was to have a system based on the principle of a purchaser-provider split. The purchaser would act on behalf of the people to provide essential healthcare. It was decided that UHC should focus more on health promotion and prevention rather than therapeutic services. Following research, the recommended financial mechanism was per capita global budget and DRG for in-patient reimbursement.

Strengthening the primary care infrastructure decades before UHC was achieved was of prime importance. The healthcare workforce needed to be properly prepared and maintained. Ministerial policies such as family care clusters or family care team, which took reach households proactively with health care were strongly reinforced. Establishing community foundations for virtue and knowledge helped lead to self-reliance and immunity. The active role of local administrations and health volunteers was continuously promoted.

In addition, employing local knowledge like Thai traditional medicine and its integration into medical practice was also an important asset.

CPIRD was an example of an innovation that followed the path of reasonableness and led to self-reliance. Collaboration between universities and the MOPH to use their respective assets led to increased production of medical doctors for rural areas. CPIRD graduates now contribute about half of the national annual production of medical doctors. Moreover, CPIRD graduates remained more in the rural areas in comparison to graduates from conventional tracks.

Attempts should be made to transform the education of healthcare personnel and arm them with essential competencies to connect with healthcare system and be responsive to social demands. Recruiting of medical students from rural areas and training them to become family physician should be continuously undertaken.

Social determinants of health should also be part of the curriculum of the health workforce and for other sectoral workforces. For example, in the transformation of cities to become healthier places, engineers, city planners and policy all contribute. Universal architectural design to accommodate the disabled, adequate street lighting, proper traffic design, and law enforcement all promote good health. The establishment of good health leads to reduced healthcare spending and

enhances sustainability of UHC. This effort will facilitate balanced economic, societal, environmental and cultural output leading to sustainability.

Another innovation was the establishment of the Thai Health Promotion Foundation Fund (called Thaihealth in short). The fund comes from the earmarked tax of a 2% surcharge of alcohol and tobacco sales and has supported many health promoting activities for healthy life styles in moderation and reasonableness. Thaihealth was instrumental in realizing UHC principles which gave priority to prevention rather than therapy.[67] In addition, health promotion and disease prevention (called PP in short) has been put in the benefit package in the UC Scheme. Most importantly, PP activities are designed and the PP budget prepared for all Thai populations; not only those beneficiaries of the UC Scheme but also CSMBS and SHI beneficiaries.

The SEP concept of knowledge also relates to innovation on cost containment. There are many strategies to contain costs. For management, the NHSO may employ a pool purchasing program for bulk acquisition; and central procurement and bargaining systems proved very efficient with annual savings of up to 350 million Baht. Provision of benefit packages followed the SEP concept on taking the middle path, reasonableness and prudence. The provision of the new benefit package was be guided by technology assessment. Up to 40% of drugs and technologies are irrationally used. We need correct information to make alternative choices possible.

The SEP concept that will guard against financial loss is moderation in clinical practice is relevant in drug prescriptions, reasonable use and the middle path in prescribing expensive drugs. Utilization of quality generic drugs should be promoted. Physicians should adhere to reasonableness and moderation in ordering necessary investigations.

Attempts should be made to provide quality medical care and minimize the danger of investigation and treatment for patients as much as possible. Hospital accreditation system is the key facilitator for this. Practicing medicine with virtues and morality will enhance patient-doctor relationships and result in less litigation.

The SEP concept of knowledge and moderation should prevent widely-used and irrational use of antibiotics which has led to major problem with antibiotic resistance and massive financial loss. More importantly, it is also an important principle for a healthy life by moderating consumption of various products to avoid health hazards, especially overconsumption of fatty and salty foods. It can also help to reflect on end-of-life care and service seeking and spending.

The SEP concept on innovation and self-reliance can be applied to effective use of hospital resources where sharing of health facilities in the district can be facilitated. Transforming a Government hospital to an autonomous hospital should be promoted when prerequisites are fulfilled. Research on public health and system needs is the foundation of development.

Good examples of applying the SEP concept on knowledge and innovation linked to moderation, reasonableness and prudence are not crucial to develop and deliver proper care of the elderly and terminally ill patients. Palliative care should be promoted to prevent unnecessary treatment and prevent patients from repeated readmission. Hospice care should be introduced to change public paradigm that terminally ill patients should die at home instead of in the hospital. Prolonged suffering can be avoided and they can die with dignity in the presence of their loved ones. Palliative and hospice care will help contain the rising cost of healthcare.

The practice of SEP can also be used to solve major conflicts like the proposal of co-payments to reduce government financial burden. SEP principles of knowledge, innovation, moderation, reasonableness, prudence and self-reliance should all be applied. On financial issues, co-payment at point of service or an introduction of additional private insurance needs scrutiny and public communication. The pre-payment of every scheme should be universal. Co-payment at the point of service can be reserved for the use of special hospitality services only. Importantly, co-payment at point of service should not apply to those who cannot afford it. Co-payment at the point of service should not lead to double standards of medical practice. Alternative funding from donations provides another avenue.

Practice of SEP by all parties under UHC including providers, consumers, and purchasers, should lead to self-reliance, resilience and immunity of health system.[68] Laying foundations

and investment in health security such as local production of vaccine and drugs are new paradigms that need support from the government.

Resilience is the capacity of individuals, communities and systems to survive, adapt, and grow and transform in the face of stress and shocks, or under less severe but real challenges demanding changes. Building resilience is about making people, communities and systems better prepared to withstand catastrophic events - both natural and manmade - and able to bounce back more quickly and emerge stronger from these shocks and stresses. It also makes the system sensitive to less extreme pressure for change or in the face of conflicts and confrontation due to diverse views and values. Health system resiliency is an integral part of sustainability of universal health coverage (UHC). UHC is subjected to many factors that may challenge its existence. UHC, therefore, must be designed with capacity to withstand insults and stresses.

Financial challenges happen inherently as the society continuously changes. Transforming population profile toward aging society, taking care of the terminally ills, embracing new expensive drugs and technologies are major escalating burdens.

Catastrophe, natural or manmade, can happen with limited warning. Tsunami in Japan, earthquake in Nepal, Ebola outbreak in western African countries or the Chernobyl incidence are classic examples. Possible threat of biological warfare or terrorist attack cannot be underestimated.

Additionally, UHC can be a political issue when national resources are limited and politicians are misinformed. The resiliency of UHC rests upon its strong infrastructure, proper use of technology, vigilant assessment of the situation and public understanding and support.

The practice of SEP will certainly bring resilience and immunity to cope with internal and external forces that may have a negative impact on the system.

With lack of prudence or good governance, with limited national resources and many stakeholders who need to benefit from the program, UHC certainly will not be sustainable.

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Chapter 7

What makes health system resilient? Lessons from the three selected crises in Thailand and the impact of UHC policy

We analysed Thailand's UHC policy from 2002 in relation to three major incidents of national crises: the Tsunami in 2004; controlling of emerging diseases (such as H5N1 in 2004-5 and MERS CoV in 2016) and the major flood of 2011. We considered the Thai health system over the last five decades through the three main interactive health system components of actors, characters and system processes. We have drawn conclusions about what makes the system resilient and sustainable (at least in relation to the past five decades). It is worth noting that despite the identification of ten groups of actors, not all of them exerted the same degree of influence over the past five decades. Depending on the challenges facing the health system and other system characters and processes, as explained below, they all played different roles at different times in relation to the various challenges at a given moment.

While many may view system resilience as 'neutral', (i.e. resilience does not necessarily lead to increasingly positive outcomes and at times can only prevent the system from being disintegrated[1]), in this analysis, we chose to look at incidents and efforts that made overall positive changes. Therefore the system characters and processes identified reflect 'positive system resilience', i.e. that system resilience contributed to increasingly better system performance in health outcomes, access, equity and even offering financial risk protection for all, despite some limitations.

In the next chapter in looking at UHC sustainability, we will draw on these lessons about actors, characters and processes, that

have contributed to system resilience and consider how they contributed to UHC sustainability along with other factors, especially those dealing with the availability of financial resources.

Key actors and their actions and characteristics contributing to health system resilience

Looking at Thai experiences since the implementation of UHC policy in 2002 and three selected crises namely the tsunami in 2004, control of emerging diseases and the major flood 2011 in Thailand, we can see that there are prominent roles for actors in these different events. Roles range from supporting to resisting change and the values, perceptions and many other characteristics that inform them are important to understand in the process towards a more resilient health system in order for the UHC to be sustainable in the long term.

1. The MOPH The MOPH has been a major driving force for change in the Thai health system and also played a significant role in response to health crises. Its leadership and network of public providers has brought about many changes. It has also played leading roles in convincing other groups of actors to agree on broader system changes, such as the educational institutions agreement to change the curriculum in support of PHC and the active participation of communities in local health and health-related matters.[2] Its leadership has also helped to

coordinate various levels of health facilities[3] including private sector response in times of crisis. Its reaction and resistance to the establishment of a strategic purchasing body, though understandable, is counter-productive and needs to be dealt with in order to resume the leadership of the MOPH as a positive force for change and system resilience.

2. Other government sector Key Ministries with roles and functions related to health and general public administration are also key to health system change and play roles in health system resilience. So far, their roles in health system reform were in line with overall government policies and were not decisive in particular policies. However, many mechanisms are crucial for health system resilience due to their central role in general public administration which influences the dynamics and relationships of various groups in the health system. Their contributions to system resilience and system changes need to be managed through various forms and channels of communication and coordination. While they are critical for implementation, their ignorance and reactions towards the goal of particular policies meant that much-needed support might get interrupted or even discontinued.

3. Political leaders Central and national leadership is important and in the earlier phase of health system changes came from the MOPH. With political environment changes since 1973, political parties started to play for leading roles in health system changes. The roles and characteristics of political parties have been mostly positive in their efforts to find new ways of working. However they depended on external inputs and drivers,

because the internal working mechanism of a Thai political party is still far from proactive. More recent political changes started around 1997 with a strong political reform movement by civil society which demanded the political establishment change and be an agent for country development. Subsequent years have seen more leadership coming from political leaders, which might have slowly and implicitly outgrown the leadership of the MOPH. The challenge for a country like Thailand in terms of political leadership and system resilience is the fact that progressive and responsible political establishment is still an exception rather than a norm. Political elites are still known as being corrupt and self-serving. Many of them are still very conservative. On the whole they could be easily motivated and mobilized by other actors in the system to play a counter-reform role. They could even build excuses to act on behalf of the more conservative part of society.

4. Public providers UHC implementation went ahead despite central MOPH reluctance and disagreement. This reflected partly strong leadership from the political side but also interesting features of the public sector that tends to be able to operate with some degree of freedom and autonomy from the central Ministry's command and control. Reflecting on the health system evolution as well as the system response in times of crisis confirmed the fact that public providers in the MOPH have been relatively autonomous not only in day-to-day operations but also innovation; they could be mobilized to play significant roles in policy implementation without waiting for or relying on the command of the central Ministry. The most

significant contribution coming from the relative autonomy (resulting from a number of enabling environment factors that will be discussed later) is that most public providers, especially at the tambon (sub-district) and district level can work and support the community to take actions relating to their own health. This line of community action for health received a strong boost from PHC policy as early as 1979 and since then has been a very important part of the Thai health system based on PHC with a number of innovations and evolutions to cope with changing local health issues such as non-communicable diseases (NCD), and aging populations. It is worth noting that public providers who were normally quite unified had different views and reactions about two major reforms. The first was internal MOPH departmental restructuring attempting to bring more integration of preventive and curative facilities; but it led to conflicts between big hospitals (at provincial level as well as central level) and smaller hospitals (then called first class health centers at the district level). The second conflict was when UHC was launched and this was due to its purchasing models and practices.

5. Civil society including active citizens at the grassroots level has been an important player in the health system for the last 3-4 decades. The emphasis on community participation with training of village health volunteers as part if the PHC policy since 1979 has been a significant milestone in gradually mobilizing more and more active citizen groups and civil society organizations to work on health, with several important outcomes contributing to health system resilience.

Close working relationships combined with positive attitudes about the roles of the community has bought the trust of people in the health care system and health care providers. Community players are seen as equal partners and not merely helping hands. The changing political and economic environment gave rise to a number of citizen groups, active beyond the confines of a single community but working and sharing with others and a number of consumer groups as a watchdog for consumer protection of different products including drugs and health services. The UHC policy therefore brought about a whole array of active citizen groups from policy advocates, policy watchdogs, patient safety groups, as well as patient peer groups, etc. These have made the dynamics of UHC implementation more complex and definitely contribute to the sustainability of UHC. Civil society and active citizens are an important group for health system resilience.

6. Health policy research and knowledge management groups Evidence and knowledge have contributed to many changes in the Thai health system. even though it might be argued that some policies and changes would have been introduced or made without heavily relying on evidence and the evidence played only a decorative part. Debates about lack of evidence or reliability of evidence or even demand for evidence in important policy decisions has been quite common in policy debates, especially during the first decade of UHC. Prior to UHC, the peoples' health assembly created by law to open up space for public participation in public policy development has been a forum for evidence-based policy

debates. Although it is not a formal policy decision platform, it has helped to boost the culture of evidence-based decision-making and created demand for evidence generation. The establishment of a health system research institute in 1992 kick started system-wide interest and opportunities for health policy and system research, although it is still far from adequate. With criticism and skepticism about UHC present since 2002, good research and evidence has been crucial in settling some debates. Another more recent development is the introduction of systematic priority setting processes to guide decisions on benefit package revisions using evidence from health technology assessments (HTA). The ability to package evidence and communicate with the public is crucial to add value to research groups and research institutes in their ability to making the health system more resilient through use of evidence in policy and system debates and decisions.

7. Local administration is a more recent development in the Thai public administration system starting from 1999. However, health issues have been of central interest to most local administrations. The UHC policy introduced a local health fund with the view to further empower and involve local administration in UHC. The role of the local administration in shaping the health agenda at the local level as well as mobilizing community support has made them an important part of health system resilience.

8. Media plays an increasingly important role in health system resilience. Many early changes in the health system had wide spread impact and concern and the media has been crucial

in spreading messages. However, the media did not contribute to health system resilience only when it communicated about health or health policy issues or debates. The media plays a more significant role in informing society. Active civil society is the result of and impacted by the way the media acted. Although the quality of media as a constructive force (creating informed citizens) is still far from ideal, the media in Thailand has certainly shown its influences in how people saw the system, politically, economically and even through the lens of health. The more recent emergence of social media and electronic media plays an even more influential role in shaping people's thinking and their mental model. There were times when media are highly partisan and biased creating radically opposing societal attitudes. The media is influential and is definitely an important player in shaping system resilience.

9. Professional organizations and academic institutions

From a health system resilience point of view, it is useful to look at the roles played by these two institutions. Their attitudes, if not actions, to health system reforms are crucial for creating the right kind of attitudes for those currently working in the system as well as educating future generations. In most health system reforms, these organizations and institutions played relatively passive roles and most of the time joined in changing curriculum or adopting certain practices in support of the changes (such as the change in medical curriculum in support of PHC in 1979).[4] However, the UHC policy with its efforts to contain cost while achieving more and more good quality coverage using various purchasing methods and tools, created a lot of resentment

among these institutions. In a longer-term perspective, it is normal to find an institution switching roles in the long course of system evolution. These institutions have been dynamic enough to change their positions and actions about certain health system reforms and this can be taken as a positive characteristic for health system resilience.

10. The business sector is crucial to health system development.[5] It normally plays passive roles in providing needed technologies and tools that will enable health service delivery and it also plays an important role introducing new technologies to the health system. Its practices are regulated by existing law and rules. While in most cases, business could be seen as playing supportive roles enhancing system resilience, making it more adaptive, certain business sectors could play a negatively disruptive role in defense of their own business interest if certain policies or system reforms threatened their usual or regular business practices. Pharmaceutical and technologies companies are particularly sensitive to policy and system changes that might regulate their market presence and influences. UHC with an aim to maximize return on limited resources always faced with challenges from business sectors, both pharmaceutical as well as manufacturers of health hazardous products such as alcohol and tobacco.[6] From a system resilience point of view they may act as threats to the system which is thus a test of its resilience. A resilient health system will develop ways and means to ensure that the business sector became an integral and positive partner for health system change rather than a threat to its progress, if not resilience.

It is worth mentioning private health care providers here. In most health systems, private providers exist and normally serve a different segment of population than the public providers and act as competitors in recruiting health workers which is normally a scarce resource in most system. A system that finds a way to make use of both private and public sector to serve the entire population could be a highly resilient health system. UHC policy with proper resources and management capacity can expect to do that. However, a system that tends to separate out the private providers may see private providers becoming a threat rather than a partner in its health system reform. Highly imbalanced and polarized private and public providers, both in terms of its number and the population they serve will create a tension in the system and will need to be properly cared for to ensure health system resilience. Thai UHC has succeeded to a certain extent in mobilizing a segment of private providers to play active roles in serving the population while the more advanced segment catering mostly for medical tourists[7] remain a challenge to find ways of making them contributing more to health system resilience towards sustainable UHC in the future.

11. The general public is another setting that we highlight here. The general public is a very vague entity and it is difficult to see and describe their role in health system resilience. Yet it is perhaps the most important group of players in determining health system resilience. Judging from the more recent political decisions expressed by the general public, it is clear that although unpredictable, they are not a group neglect. Crisis response is in fact a very good setting to also see the general

public at play. Informed by various kinds of media and complex communication channels, the public is mobilized to help victims. In many cases, this can be overwhelmingly and relatively poorly coordinated. At times of need for decision-making, especially in controversial issues, public opinions has always been sought. A society that allows widespread public consultation (if not referendum) is already quite a resilient society. It is therefore crucial to be able to do at least two things: listen to the public individually (through various means) and ask them to share their voices (and decisions) collectively. Debates about UHC will benefit from the health system's ability to listen to the general public (individually or collectively). Such ability to listen may not need to reside within or come only from the decision-making machinery, but rather from more diverse groups in the health system such as academic institutions or independent and reliable or unbiased media or polling institutes.

Key system characteristics crucial for health system resilience

There are at least four key characteristics identified here, which are crucial to make the system more resilient. They are not characteristics in any individual groups of actors but rather of the system as a whole. They are the results of the evolution of system design, interactions of system components and actors in the health system and socio-cultural behavior of society as a whole.

1. Leadership Leadership for a resilient health system does not confine itself to the top level. On the contrary, distributed leadership among various groups of key actors in the health system is key to system resilience. More important is the type of leadership that helps the system to be resilient. One key feature of a resilient system is the fact that the system operates through a diverse group of actors that are linked but not centrally controlled. The type of leadership needed is participatory leadership, ready to reach out and collaborate with those who might have different ideas and backgrounds or even opposing views of the same issues. Participatory leadership also means the ability to listen to and share views that could be "positively disruptive" and be engaged in the real changes of the process. Consequently, good participatory leadership means the willingness to act jointly, be responsible for outcomes and be ready to make corrections or take different options rather than become an observer and criticize from outside. Participatory leadership is about shared goals, processes, decisions, actions and responsibility.

2. Values It can be argued that a resilient health system means being flexible and resilient enough to take on any challenges and any courses of action as long as it leads the system to continue functioning and able to repair itself after facing those challenges. However, we also believe that a certain set of values is important to make health systems more resilient. Values such as solidarity, equity, respect for human rights and dignity are key to ensure concerted actions in time of crisis and make it easier for the system to embark on a path of reform or

adaptation when needed and allow the system to actively looking for threats or opportunities to boost common values. This is most evident when countries embark on the path towards UHC. It is normal to face the fact that no matter how much we wish our health system could hold such values, it is impossible for individual members in the system to have the same set of values. The challenge for a resilient health system is finding the way to move forward based on certain set of values without threatening those who did not share those values while also be able to prevent or safeguard itself against any possible damages or deterrents.

3. Socio-political environment While not entirely controllable by people in the health system, the socio-political environment is constantly shaping health system resilience. A tightly controlled political system renders the health system (or any systems in such environments) non-resilient, if not highly fragile, as it depends on a few people at the top. An open society creates a different environment that allows diversity to flourish, ideas to flow and differences to be appreciated and handled rather than hidden. A society facing constant conflict and violence can become less resilient as its physical and social resources are trapped in a chronic state of wading off fears, staying safe and struggling for survival. Thailand has been fortunate enough to go through long periods of peaceful coexistent and gradual development to a more open society with tolerance and reasonably good economic status. Although there are concerns about getting out of the middle-income trap, the economic inequity and poverty of the population has improved. Faced with the conflicts and confrontation of

different segments in society due to differences in political leaders' preferences, the overall socio-political environment has shifted somewhat. It is fortunate enough not to have slipped into a stage of constant conflict and violence.

4. Enabling environment Enabling environments exist in the Thai health system and have allowed the system to be more resilient, although this could expand furthers still. The following aspects are key:

a. Basic system design – an integrated health care system allowing and enabling private public partnership; telecommunication infrastructure that allows networking and rapid diffuse of information and communication.

b. Rules and regulations that encourage autonomy and innovation – retention and use of revenue of public hospitals, semi-autonomous public organizations with public participation in governance, and decentralization of roles and resources to local administration units all over the country.

c. Mechanisms and organizational management practices that encourage a working environment constantly looking for ways to improve quality of performances, create innovation and learn – hospital accreditation systems and its processes, on the job training at the local level, promoting tacit knowledge sharing and learning, CBL, flexible program implementation and learning oriented supervision practices, internal management practices that create learning environment in the workplace, R2R, etc.

d. Environments and platforms that allow public participatory decision-making, evidence-based debates and decision-making, conflict resolution.

Key processes for health system resilience

The Thai health system has benefited from a number of key processes, introduced gradually, that might have helped to bring people with different views and expectations into a process and conversation of dialogue. We highlight the following processes that are needed more in the future to make the health system more resilient.

1. Evidence-based policy development and decision making at various levels of health system development and policy implementation There have been a number of efforts using the conventional model of evidence-based policy development where researchers studied a policy issue of high priority and then found ways to communicate to policy makers and influence their decision-making. In certain instances it was the group in the decision-making position who also did the research. The most notable example is the development of PHC policy in Thailand, which was based on a research project on folk doctors in the Northern region. Although some significant policies with long-lasting impact such as free medical services for the poor might not have received inputs from research, many of the more recent policy and system developments were influenced by research studies. The UHC policy and implementation model is well known to be the result of a proposal by policy researchers and analysts to political parties; this led to its conception and nationwide implementation in a short period of time. Evidence-based decision-making continues in many aspects of UHC development, including many diseases control policies and strategies. Health promotion policies, strategies

and practices also benefited from a wide range of research and evaluation studies. So far there is no institutionalized course in health system and policy research within any educational institute in Thailand; the development of policy researchers has been the work of a few units in the MOPH such as the International Health Policy Program (IHPP), the Health Innovation and Technology Assessment Program (HITAP), and Health Insurance System Research Office (HISRO).

2. The process of participatory public policy development

While evidence is important to minimize the bias and preferences natural to a complex system, participation in policy and system development is as important if not more so than evidence. There have been calls for mechanisms and processes that work well. Examples in Thailand have included public hearing opportunities for communities affected by mega development projects with potential impact on health and the environment, and the opportunity to propose draft legislation with sizable signatories. The latest example, which is more specific about policies in health and wellbeing, is a formal mechanism introduced and implemented over the last 15 years called the people health assembly, held annually. An office acts as a Secretariat to identify priority policy issues of public concern and gather and synthesize evidence to be debated in the annual health assembly. Various stakeholders are invited including the general public, the business sector and related policy agencies. The deliberation from the assembly with its resolution is submitted to the national health committee where the PM sits as the Chair. It is not legally binding for the PM or the Government to follow or implement the policies coming

from the people health assembly; it is rather a platform for people to engage in policy debates and become better informed. It also helps the general public or particular interest groups and affected communities to get organized with evidence, and embark on less formal and ad-hoc platforms and forums. These have become more and more frequent with the changing political environment, complex interactions and potential confrontations and conflicts among different groups of stakeholders in society.

3. Social communication processes While a participatory process is basic to any resilient system, another complimentary process that mobilizes participation and helps to make better quality of participatory processes, and therefore health system resilience, is the social communication process. Communication between multiple sub-units in a complex system is critical. A resilient health system that can to respond to various threats and crises, and ensure desirable outcomes of complex and difficult policies such as UHC, will need effective social communication processes. Social communication processes that make a health system increasingly resilient should be proactive and goal and purpose-oriented, and allow two-way communication rather than one-way dissemination of information. It will also need to bring forth learning among various groups of actors and to guide their actions towards common goals.

4. Conflict resolution processes Potential conflicts in the health system are increasing, given the diverse opinions around UHC policy implementation. Conflicts and confrontations in care-seeking and service provision have been rare but hospitals

have been notified to create mechanisms that could detect potential cases of conflict and proactively manage perceptions and expectations rather than waiting for complaints. The UC Scheme introduced a no-fault compensation mechanism hoping to reduce unnecessary processes of litigation while at the same time building trust and better relationships between providers and patients. This mechanism, when employed properly, has actually helped to build trust and positive relationships, despite some unexpected consequences. There were also a few cases which led to conflicts and confrontations rather than trust and collaboration. At the same time, efforts to expand this to cover the entire health system covering beneficiaries in all three schemes faced resistance from professional organizations which citing the fact that all compensated cases are potential cases for further litigation. Although not supported by evidence, the resistance led to reluctance by policy makers to expand the system; therefore opportunities for conflict resolution are limited while capacity to handle conflict also remains low.

5. Process for collaborative action The most desirable feature of a resilient health system, where diverse ideas and values co-exist, is for different and opposing parties to find common ground for action and work towards a more desirable future. They should be jointly responsible for outcomes and make corrective actions where necessary. However, this is still very rare and experiences are limited. Participatory leadership and self-organized platforms (as opposed to those created by the Government) might serve this purpose and are a feature that will support resilience in the health system.

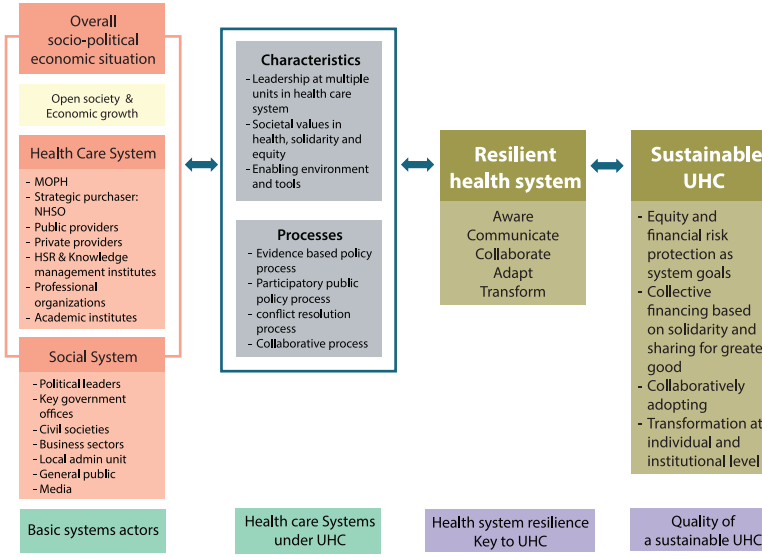

Figure 7-1 *Framework of Resilient Health System and Sustainable UHC*

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Chapter 8
Crystallization and the way forward

This book presents the experience of Thailand, a middle-income country, whose health system has evolved through multiple reforms and innovative policy changes over the last five decades, including the launching of UC Scheme in 2002, which made it possible for Thailand to achieve UHC for all its citizen. It should be emphasized that UHC cannot be accomplished on a short-term basis. It takes a long time to develop UHC, as the health system continuously changes and reaches maturity. The long march towards UHC requires strong determination and full commitment from all stakeholders.

In this book, we have analyzed the health system to identify what makes the system resilient and enables it to transform itself periodically; what allows it to respond effectively to crises that impose sudden demands for effective resource mobilization and then system recovery; and how to introduce and implement innovative policies which might be controversial, especially the UHC policy for the whole of Thailand in 2002.

It is our belief that Thai lessons about health system resilience and experience in UHC, in particular the UC Scheme, can serve as a model for other countries on the road to UHC. The look into the future of UHC with a view to find out what could and should be done to make UHC sustainable draws also on lessons about health system resilience; this will not only help us in Thailand but also other countries which are starting or well into actions for UHC. The system resilience lens reminds countries not to look merely at the financing dimension as the only factor threatening UHC sustainability, but rather see the need to

continuously develop or enable key system components and actors to be more resilient. It is important to take into account the fact that UHC is a highly dynamic and complex policy affecting a wide range of stakeholders and will naturally draw their attention and actions as they shape the future of the policy.

In previous chapters, we described what make a health system resilient by looking at three inter-related dimensions of the system – ten actors, six system characteristics and five key processes for resilience. At the same time, we described how those actors, characteristics and processes play important roles in shaping and influencing UHC sustainability.

In this last chapter, we propose ten strategic actions, drawn from the analysis of previous chapters, that will help ensure UHC sustainability while also making the system more resilient. While some of them are more specific to UHC sustainability, many of these strategic actions will contribute to both UHC sustainability and health system resilience in general and could be considered by countries with no UHC in place and might lay a good foundation for such countries to better embark on the path of UHC.

1. Setting the principle for proper mix of public and private financing

The Thai UHC policy with the introduction of UC Scheme financed from tax, although resulting in impressive impact on equity and financial risk protection, has also drawn skepticism and criticism in terms of affordability and sustainability. Original skepticism on affordability was gradually dismissed by an almost three-fold increase in budget for UHC over a ten-year period

accounting for around 4% GDP; the policy produced impressive outcomes and received widespread public support. However, the prospect of rapid increases in demand for the CSMBS and UC Scheme budgets raised concerns about the sustainability of these two schemes, which contribute to nearly 90% of population coverage in Thailand. They are financed solely from general tax. Efforts to introduce copayment of various forms has met with resistance from civil servants and UC Scheme advocates, who cite the potential hampering of access and lack of ability to protect people from financial risk.

An analysis of fiscal space for the UC Scheme under different economic scenarios showed that it might be possible to sustain the UC Scheme financed mainly from tax for only another decade or a few more years. Another commission appointed by the Government, which is not skeptical about the UC scheme being financed by tax, concluded that it is fair to cap the overall Government spending for UC Scheme to 4.5% GDP and that there is a need to introduce supplementary sources of finance that will not negatively affect the possibility to improve health equity and offer financial risk protection.[1] The recommendation to introduce copayment at point of services was cautioned. Alternative forms of supplementary finance need to be explored and analyzed to find the best appropriate model. Failing to do so will lead to much-debated issues about financial sustainability, create unnecessary instability in the UHC system and put it under attack. Any model arrived at should be adaptable and draw on the lessons and data gathered about the benefits and potential harm from the model.

2. Strengthening health system based on PHC

Through looking at health system resilience and linking it to UHC sustainability, we conclude that a well-functioning health care system is key to UHC sustainability. Whatever amount of money made available to UHC, through whichever combination of insurance schemes and sources of finance will produce impacts and outcomes through the health care system. Thailand's health care system has been evolving with an emphasis on primary health care, while also developing secondary and tertiary health care sub-systems. Although big cities, especially Bangkok or other large cities, remain a challenge, the model of the health system is based firmly on PHC; this means a district health system at its core, working closely with sub-district health facilities while also forming a seamless and effective referral relationship with higher levels of care. This has helped improved access to care even before the UHC policy was implemented, and has continued to do so since 2002. Given the increasing burden from NCDs and an aging society, a health system based on PHC is key for both good quality of care as well as efficient use of limited resources.

There are still many issues that need to be resolved and strengthened in the infrastructure and design of this model of the health care system. The district health system has been quite well integrated between community and public health capacities, especially at the district level. However, a better integration between the district health system and the higher level of health facilities (i.e. tertiary care hospitals) at the provincial level is needed. The present form of service-purchasing still needs to

be refined to create better links that will allow: the proactive outreach of providers; involvement of families in care such as long-term care; more ambulatory and intermediate care to replace hospitalization; and incentives for two-way referrals (referral to higher levels of care or lower levels to community) in caring for those with chronic conditions, etc.

At least five lines of action are needed to make the health care system more effective and resilient in order to ensure UHC sustainability:

1. The redesign and assignment of new roles, especially at the primary care level, and model of work between primary care and higher levels of care in the light of increasing chronic conditions and an aging population is required. An example is the need for coordinated home-based care and the role of community hospitals to play roles in intermediate care. The use of IT to better facilitate shared and continuous care is another example.

2. Capacity building and continuous learning of HRH need to be further strengthened, especially in enabling health workers to innovate to cope with changing health needs and health demands and learn from their own actions and contexts. Context-based learning within a district health system is an example and should be further extended to involve a higher level of care providers.[2] The problem of the shortage of doctors had been mitigated by the CPIRD program.[3,4] As well as its success in increasing the number of physicians and better retaining physi-cians in rural areas, the program is a potent catalyst for improving the quality of medical services through creating a learning environment leading to resiliency and system transformation.

To strengthen primary healthcare in Thailand, many more family physicians are needed. Even though the MOPH has promoted residency training, which could be either formal training or in-service training, too few young doctors have entered the training. The important actor in this regard was the committee to draft the new constitution BE 2560. Article 258. This was approved through national referendum and promulgated the mandate that there must be enough family physicians to strengthen primary care. The Royal College of Family Physicians should initiate new curriculum to respond at an increased demand of training and the Medical Council should amend any existing regulations which may impede the process. Meanwhile, the MOPH could offer motivation for promotion for training. The challenge of the MOPH is how to improve career ladders and the social recognition of family physicians. This mission synchronized with the World Health Assembly (WHA) in 2013 which argued that Member States should increase primary care human resources for health to support UHC.[5] This is a good example of resiliency that results in the transformation of the system. Leadership development of managers at various levels in the health system should be strengthened to allow more participatory leadership and collaboration with patients and families at center of care.

3. The present financing management arrangement between the three purchasers and providers needs to be improved; for example, a more consistent method of payment of the NHSO, and laying out a road map for payment without an abrupt change[6], and harmonization of payment methods and rates across the three main public health insurance schemes.

The date of payment should be fixed and then practiced regularly. The relationship between the three purchasers and providers should be improved; an online FAQ and trouble-shooter is helpful. A separate health promotion and prevention (PP) fund should be directed to individuals and communities and allocate more PP budget.[6] At the same time, there is a need to find a new strategic purchasing model (purchasing methods and rules) as well as streamline the purchasing model among the three main public health insurance schemes. This needs to incentivize providers at various levels to work together for better health of families and equity in society, rather than paying for different types of services separately at each level.

4. A good accounting system is another important addition to the already rich enabling environment that has allowed public providers to be autonomous in financial management and decision-making. Such a system is crucial. One of the problems facing most public providers is financial status stability, which needs to be efficiently monitored and used as a basis to identify proper solutions. This should be done in time to prevent avoidable disruption of services due to shortages in drug supply or inability to pay HRH for extra working hours to cope with potential workload increases.

3. Leadership development

We need to develop leadership within the health care system. From a system resilience point of view, active and constructive roles are needed from various groups of stakeholders in a health system that is becoming more and more complex in an open

society like Thailand. While leaders in the health sector have been found to play major roles, it is clear that a more complex sphere of influences comes from the ever-changing environment. Even leaders in the health sectors or those in decision-making positions need to develop new kinds of leadership to engage positively in the increasingly complex health system. UHC policy implementation and dynamics over the first decade are a good testimony to this need for new leadership. Leadership of civil society and local administration also need develop as they emerge as new active players in the health system and play increasing roles in improving health system resilience.

Leadership in professional organizations, academic institutions and policy research units are also important to be able to play proper leading roles in knowledge production and management and communicate crucial evidence and information that will help to guide good practice of different actors in the system and to find alternative ways for future evolution of the system. It is fair to conclude that there is a need for a widespread new type of leadership that is participatory, proactive but also positively disruptive, to allow new ideas and innovative ways of working to take shape. Given the need for more participatory modes of working, participatory leadership[7] will help ensure the willingness and ability to collaborate not only in planning but also in actions. Such actions should be jointly owned, while all parties are accountable, so that everyone is engaged as a part of a better future for UHC. Such a mode of relationship and collaboration has been called 'stretch collaboration'.[8]

4. Ensuring good governance and professional practices of strategic purchasing body

While it is debatable that there are several possible models for UHC, the key characteristics or basic requirements to achieve good and sustainable outcomes is the presence of a good strategic purchasing body. Thailand started its UC Scheme as the largest public health insurance scheme by establishing the National Health Security Office (NHSO) as a semi-Governmental body with a participatory governing structure and funding from tax. The purchasers of the other two schemes belong to Ministries: the Social Security Office under the Ministry of Labour as a fund manager for the Social Security Scheme and the Comptroller General under the Ministry of Finance as a fund manager for Civil Servant Medical Benefit Scheme. While Thailand still has three separate health insurance schemes, strategic purchasing functions should be applied to all three different purchasers.

This section focuses on the strategic purchasing of the UC Scheme, as it is the largest scheme. While outcomes of the UC Scheme during the first decade were impressive, there have been several criticisms about it, as well as suggestions for improvement drawn from evaluations. These are around the need to improve strategic purchasing practices, the governing structure and certain rules and regulation required to improve performance. It is undeniable that strategic purchasing practices need to be dynamic, and we can draw from both positive and negative feedback to find ways to improve them. A working group set up by the Public Health Minister in 2015 suggested some changes, described under the need for change to ensure

public providers' resilience. It is arguable as to how much should be changed in relation to the governing body composition and structure. One option is to make it less centralized and responsive to different regional demands. The other is to make sure that participatory decision-making (although it has more participatory processes than the other two schemes) is more common for many of the key decisions. This might include introducing a new benefit package, creating new requirements for reimbursement or in the need for closer communication between purchasers and providers that will allow for inquiries and requests for support in the financial management processes (which have often been an undue more recently).

Another good practice is evidence-based decision-making which is increasingly more important in a system where disagreement and different viewpoints exist among various stakeholder groups. Good examples are the benefit package review with the possibility of inclusion and exclusion, evidence needed to monitor and evaluate expected outcomes and quality monitoring of selected benefit packages to increase intended impact or value for money.

5. Promoting and strengthening participatory evidence-based policy development - capacity, platform and culture

One key aspect of the strategic purchasing body that needs further strengthening is evidence-based decision-making. There is also a need for evidence-based policy and decision-making in the broader context of health systems and UHC system development. Even though evidence-based decision-making

and policy development is one of the most important milestones in Thai health system development and has helped to increase system resilience, it still needs to be strengthened further. UHC policy has benefited from evidence and knowledge production, synthesis and management, yet the number of people and institutions dealing with health policy and system research in general and UHC research specifically is still far from reaching critical mass. Most universities still do not have a unit to do this kind of research or run a course or program to systematically do research, teach and grow the number of future health policy and system researchers. Funding is still scarce and the incentives to do such research are confined to special units within the MOPH. More important than merely adding more people and studies, or budget to support good studies is to address the demand side for evidence. This should be increased not through dissemination of individual studies but by creating policy processes that are participatory and support the development of evidence or studies. These platforms or processes should be regular rather than ad hoc and definitely not only on demand. In other words, a resilient health system will need a platform for and include a process of broad-based participation in public policy debates, with UHC being part of such a policy focus. Such platforms and processes should be well supported by relevant studies generated on a proactive basis and not be reactive or only when requested. Conducting research that will better prepare the health system for future challenges and creating a platform for broad-based debate and discussion is vital. Although the people's health assembly takes place annually and is good platform for UHC, it should also be complemented by

a platform and process for evidence and research that forms an integral part of the strategies for UHC sustainability. Given the dynamicity and potential controversy of UHC, which will remain an integral part of UHC policy and system development, this seems like a sensible solution.

6. Strengthening the information system for performance monitoring and financing aspects

In Thailand's experience, the computerized civil registration and vital statistic (CRVS) system by the Ministry of Interior has been critical in making it possible to identify and link each individual Thai citizen to a nearby health care system. The purchasing model also requires an information system that will enable effective reimbursement of funds, monitoring of overall system performance and individual contracting units' performances. It is ideal to develop an information system that can be used by all three main public health insurance schemes. The first challenge is to have a single information system for all three schemes for their management and performance monitoring. Another is for national policy makers to have a clearer picture about overall system performance and the resource needs for UHC, allowing them to make proper policy adjustments to gradually harmonize the three main public health insurance schemes. This should, at the same time, allow each scheme to have different benefit packages as well as certain degrees of variation of financial contributions and tax (budget) subsidy from the Government, and for each scheme to do their own quality and coverage monitoring within a single system framework and standard.

7. Ensuring and expanding the enabling environment and mechanisms for autonomy, innovation, participation, dialogue and collaboration

One of the key features of a resilient health system is the existence of diverse autonomous sub-units that can be linked and coordinated. The Thai health system is already quite diverse with multiple players in roles guided by their own group or organizational mandates that might not necessarily be in line with the goal and values of UHC. An enabling environment for a resilient health system implies the need for such an environment to work in different settings. We have discussed and recommended a few strategic actions that will help improve or increase the enabling environment within the public provider context. Within a larger system context, the following characteristics of an enabling environment in Thai society will help make the health system more resilient.

a. The empowerment of decentralized local administration units all around the country. Although local administration units have been established since 1999, they need to be better empowered through various forms of legislations and financial/tax rules that will allow them to develop the wellbeing of their people. The Thai health system has seen local administration as one of the active new players in the system since its formation in 1999. Yet many innovations initiated through local administration are still met with limiting rules and regulations imposed through the Ministry of Interior. Another aspect of an enabling environment is the need to have dedicated human resources development mechanisms

for continuous improvement of human resources for local administration. Leadership development is one of the key programs. The opportunity to be supported by a related central Ministry is crucial. The existence of the tambon (sub-district) health development fund has been a good example to mobilize health personnel at the tambon (sub-district) level to work more closely with the local administration; this should be further strengthened.

b. The mechanism to organize and manage various key processes for health system resilience and UHC sustainability. We identified five processes for health system resilience indicated in chapter 1 which are processes of: 1) community participation in health; 2) evidence-based policy development; 3) HRH production and capacity building; 4) HR management of the public sector; and 5) health system stewardship and management. It may look like some of these five processes might be an integral function of a related organization, for example the National Health Security Office to be responsible for evidence-based policy processes; the National Health Commission Office to be responsible for participatory policy processes. However, it is worth considering setting up a mechanism or providing support to multiple groups and institutions to take responsibility for organizing such processes on a more regular basis with an aim to be proactive while also effective in continuously communicating with various groups in society. Having an independent and credible dedicated mechanism to organize these processes will also be crucial to build trust. It will also be useful at times of conflict or serious

confrontation. Such a mechanism can hardly achieve these outcomes if set up within a bureaucratic setting or lacks credible governance.

8. Empowering active citizens for UHC and resilient health system

The role of active citizens in Thai society has increased in general and with regards to UHC. It is worth noting that Thailand still lacks a good framework or institutional support for active citizen engagement to support citizens to organize themselves and work responsibly for the good of the society. A framework exists only for business corporations, associations and non-profit foundations. Although people can get organized in groups outside of these mentioned settings, there is no supporting framework. There is still tight control and not enough incentives for individual or corporations to donate towards or set up a foundation for public benefit. Most incentives are for corporate social responsibility (CSR) aiming at polishing corporate image. Active citizens also need access to knowledge and information, for example to check on performance, transparency and accountability of related actors.

Existing frameworks and mechanism for legislation proposal, political rallies and freedom of speech are far from effective or empowering. While it may seem as though a single individual or a group can take a variety of actions within the framework of the law, it is not easy for people and groups to get together to be socially active, and there is no mechanism that will work to empower them once they are on that dedicated mission. The health promotion fund has been a good example of empowering

active citizens for health promotion. While there are many improvements that are needed and should be made, there is also a need for a comparable mechanism either coming from Government investment or initiatives or from the corporate and entrepreneurial sector.

9. Building a network of public communication that will allow better understanding, exchange and dialogue on UHC

An effective communication network can be one of the important societal enabling environments for resilience. However, it deserves a separate mention as the information and telecommunication infrastructure is certainly a crucial part of an equitable and resilient society, immediately linked to health system resilience. For sustainable UHC and health system resilience, the presence of mere infrastructure is not enough; the way the infrastructure permeates various segments of society is as important as the messages it carries. A resilient health system that contributes to UHC sustainability requires many features from a communication and information network besides physical penetration. An effective communication network means enabling health providers to work as teams in specific locations or settings, and the presence of and access to relevant and meaningful information that will help shape policy debates or guide individual or group decisions. Many countries prohibit public advertisement or marketing of pharmaceutical products as the health market is very sensitive to demand manipulation. There have also been examples of information flooding, fabrication of facts, and emotionally disturbing messages that can be highly misleading if not

damaging or negatively disruptive. While values are an integral part of a resilient health system and UHC sustainability, they are diffused through the system by communication in various ways. This is least effective through talking or reading about issues, but more through witnessing actions that reflecting certain set of values. In a resilient health system, actions and decisions leading or contributing to resilience occurred often without people noticing or perceiving missing the opportunity to have a higher level of impacts or impression on values.

10. Establishing a UHC system steward to better harmonize the three main public health insurance schemes and decide on key policy decisions about financing, purchasing, health care system reform and strengthening

The existence of Thailand's three main public health insurance schemes with very little coordination or synchronization is one of the threats to the sustainability of UHC. Multiple systems for reporting and monitoring have been mentioned above. Unequal government budget contributions raise concern about equity in general while different purchasing rules raise more specific concerns about equity in health care quality, the efficiency of the overall UHC system and the subsequent impact UHC will have on socio-economic dimension. In short, UHC sustainability will require some degree of harmonization of the three schemes. Efforts have been made to explore possible mechanisms and guiding principles for system harmonization that should be seriously considered and implemented, and evolve to better ensure UHC sustainability and health system resilience. Increased healthcare expenditures have always been a threat

to UHC. Understanding of the system architecture by all stakeholders, and stewardship to guide it through evidence-based policy is an essential process.

These proposed ten strategic directions which are able to accommodate and manage different ideas, values and expectations, will help to ensure UHC sustainability.

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