

# Resilient and people-centred health systems: Progress, challenges and future directions in Asia

Editors: Helena Legido-Quigley and Nima Asgari-Jirhandeh



Asia Pacific Observatory  
on Health Systems and Policies




International Council  
Yong Loo Lin School of Medicine



# Chapter 10. Thailand

Walaiporn Patcharanarumol, Suladda Pongutta, Woranan Witthayapipopsakul, Shaheda Viriyathorn, and Viroj Tangcharoensathien



Many parts of this mini-HiT chapter are excerpted from the chapters' summary and contents of *Thailand Health Systems in Transition 2015* with some modification and update of data. A major contribution was made by the late Dr Pongpisut Jongudomsuk, who was an author of the *Thailand HiT 2015*.

## 10.1 Introduction

Thailand, a founding member of ASEAN, is at the centre of the Indochina peninsula and is bordered by Cambodia, Lao People's Democratic Republic, Malaysia and Myanmar. Thailand's population in 2017 was 68.9 million with 96% being of Thai ethnicity. The country's official language is Thai and 93% of the population is Buddhist. As of 2011, there were approximately 3.5 million migrants (Tangcharoensathien, Thwin and Patcharanarumol, 2017) residing in the country. The adult literacy rate is high at 93.5% with a small gender gap – men 95.6% and women 91.5%.

### 10.1.1 Economic context

Thailand has been one of the fastest-growing economies in Asia and in South-East Asia. It experienced rapid growth between 1985 and 1996, and is presently a newly industrialized country and a major exporter. Thailand faced the Asian financial crisis in 1997 and subsequently took 10 years to recover from the crisis; the gross national income (GNI) per capita in 2006 was equal to that in 1997. Thailand has become an upper-middle-income country since 2011 and its GNI per capita was at US\$ 5640 in 2016 (World Bank, 2018a).

When the ASEAN Economic Community emerged in 2015 to integrate the regional economies for better competitiveness with the rest of the world, Thailand was less competitive than other ASEAN members, such as Cambodia, Lao People's Democratic Republic and Viet Nam, especially on labour costs. However, the size of the labour force in Thailand has been steadily increasing. The number of registered unemployed reduced to 1.3% in 2005. Although the unemployment rate in Thailand is reported at less than 1% and despite favourable economic growth, income distribution has not improved much with the Gini index at 45.3 in 1990 and 39.4 in 2010 (World Bank, 2018a).

The Government of Thailand is moving the country to "Thailand 4.0", which could help the country escape the middle-income trap and growing disparities. Thailand is adopting various measures to shift from a production-based to a service-based economy, moving from producing commodities to innovative products, emphasizing promotion of technology, creativity and innovation in selected industries (Royal Thai Embassy, n.d.).

**Table 10.1 Thailand: Socioeconomic indicators, 1980–2017**

Indicators	1980	1990	2000	2010	2015	2017
Population, total (in millions)	47.4	56.6	63.0	67.2	68.7	69.0
Population density (people per sq.km of land area)	92.8	110.8	123.2	131.6	134.4	135.1
Population growth (annual %)	2.1	1.4	1.0	0.5	0.4	0.3
Population ages 65 and above (% of total)	3.7	4.5	6.5	8.9	10.6	11.4
Age dependency ratio, old (% of working-age population)	6.6	6.9	9.4	12.4	14.8	15.9
Age dependency ratio, young (% of working-age population)	69.4	46.3	34.5	26.7	25.2	24.3
GDP (current US\$, billions)	32.4	85.3	126.4	341.1	401.4	455.2
GDP per capita (current US\$)	682.8	1508.3	2007.6	5075.3	5846.4	6593.8
GDP growth (annual %)	5.2	11.2	4.5	7.5	3.0	3.9
Gross national expenditure (% of GDP)	106.3	107.5	91.6	94.3	88.5	85.4 (2016)
Tax revenue (% of GDP)	13.1	16.9	13.0	14.9	16.0	15.5 (2016)
Central Government debt, total (% of GDP)	..	18.4	22.0	26.9	35.3	..
Industry, value added (% of GDP)	28.7	37.2	36.8	40.0	36.2	35.0
Agriculture, forestry and fishing, value added (% of GDP)	23.2	12.5	8.5	10.5	9.0	8.7
Services, value added (% of GDP)	..	..	54.7	49.5	54.8	56.3
Labour force, total (in millions)		29.9	35.14	39.3	38.89	39.14
Unemployment, total (% of total labour force) (modelled ILO estimate)	..	..	2.4	0.6	0.6	1.1
Poverty headcount ratio at \$1.90 a day (2011 purchasing power parity) (% of population)	..	9.4	2.5	0.1	0	..
Income inequality (Gini coefficient; World Bank estimate)	..	45.3	42.8	39.4	36.0	..
Personal remittances, received (% of GDP)	1.2	1.1	1.3	1.3	1.5	1.5
Current health expenditure (% of GDP)	..	..	3.2	3.6	3.8	..

Key: GDP: gross domestic product; ILO: International Labour Organization; PPP: purchasing power parity

Source: World Bank, 2018a

### 10.1.2 Political context

Thailand's first Constitution was endorsed in 1932, immediately after the democratic revolution that transformed Thailand from an absolute to a constitutional monarchy. Since then, there have been eighteen charters or constitutions, reflecting a high degree of political instability with frequent military takeovers. There have been eight coups d'état and 12 rebellions. Thailand has a multiparty system; it usually has a multiparty coalition government. The current military government has been in power since 2014.

According to the Constitution, the three independent and counterbalanced powers are executive, legislative and judicial. The King under the Constitution is a symbol of national identity and unity. The late King Bhumibol commanded a great deal of respect and moral authority among the population to resolve various political crises.

According to the worldwide governance indicators, political stability has deteriorated, with the percentile rank down from 65 in 2000 to 16 in 2016 (indicates the rank of a country among all countries in the world). The ranking for control of corruption has declined from 51 in 2000 to 40 in 2016. The ranking of its effectiveness increased only from 63 to 66 during the same period<sup>3</sup> (World Bank, 2018c).

### 10.1.3 Natural and human-induced disasters

Between 1994 to 2015, the top three natural disasters in Thailand in terms of frequency were floods, storms and drought, while in terms of total deaths were earthquakes, floods and storms (UN Office for Disaster Risk Reduction, n.d.). The Indian Ocean tsunami hit the west coast of southern Thailand in December 2004, resulting in 4812 confirmed deaths, 8458 injuries and 4499 persons missing. One of the most severe and long periods of flooding happened between July 2011 and January 2012; affecting 65 out of the 76 provinces and resulting in 815 confirmed deaths, damage to 21 000 sq.km of farmland and an estimated economic loss of 1425 billion baht. Drought has also occasionally had a serious impact; the April 2008 and

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<sup>3</sup> 0 corresponds to the lowest rank, 100 corresponds to the highest rank.

March 2010 draughts affected approximately 10 million and 6.48 million people, respectively.

Human-induced disasters occur periodically. In October 2004, a massive explosion at a fireworks factory in the ancient Thai capital of Ayuthaya killed 14 people. The factory was operating illegally. In May 2006, eight people were killed and 56 were injured in a fire at a nightclub in a resort in Pattaya. The fire broke out shortly before the club was to open. All the victims were Thai and most of them worked at the club. In January 2009, 66 people were killed and more than 200 were injured in a fire at the upscale Santika nightclub in Bangkok on New Year's Day. Police charged the singer of a pop group called Burn with negligence for lighting fireworks that set off the fire (Hays, 2014).

## 10.2 Health status and risk factors

### 10.2.1 Health status

#### Life expectancy

The overall health status of Thai people has improved over the years. During the period 1990–2016, the world development indicators (World Bank, 2018a) show increasing life expectancy at birth from 67.2 to 71.6 years for men and 73.4 to 79.1 years for women. During the same period, the adult mortality rate for men and women decreased overall, although there was an increase in mortality among men during 1990–2000 due to HIV/AIDS. World Health Organization reports that, in 2016, Thailand's healthy life expectancy at birth was 66.8 years; 64.0 for men and 69.8 years for women (WHO, 2018a). Thailand is fast becoming an ageing society as the percentage of the population aged 60 years and above reached 15.8% in 2015 and is projected to reach 26.9% in 2030 (UN Department of Economic and Social Affairs, Population Division, 2015).

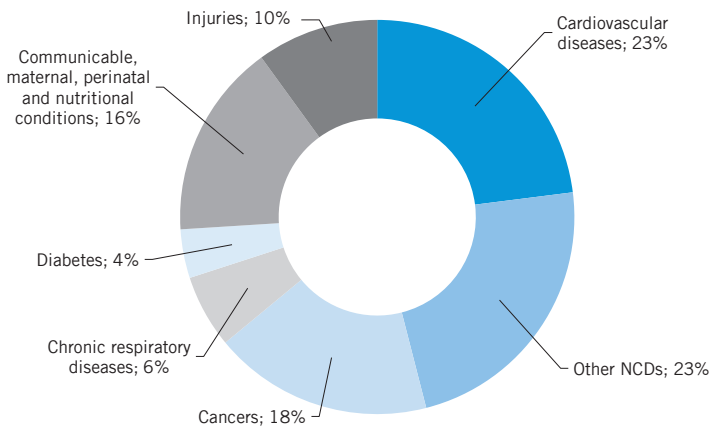
**Table 10.2 Thailand: Life expectancy at birth and adult mortality rate, 1990–2016**

Indicators	1990	1995	2000	2005	2010	2016
Life expectancy at birth (in years)						
Total	70.2	70.2	70.6	72.1	73.9	75.3
Male	67.2	66.6	66.9	68.8	70.4	71.6
Female	73.4	74	74.5	75.3	77.6	79.1
Fertility rate, total (births per woman)	2.1	1.9	1.7	1.6	1.5	1.4
Birth rate, crude (per 1000 people)	19.2	16.9	14.5	12.9	11.8	10.3
Death rate, crude (per 1000 people)	5.7	6.3	6.8	7.1	7.3	7.8
Adult mortality rate						
Male (per 1000 male adults)	227.6	253.7	257.7	234.4	215.5	201.7
Female (per 1000 female adults)	135.5	135.1	137.1	124.3	104.8	92.5

Source: World Bank, 2018a

### Main causes of death

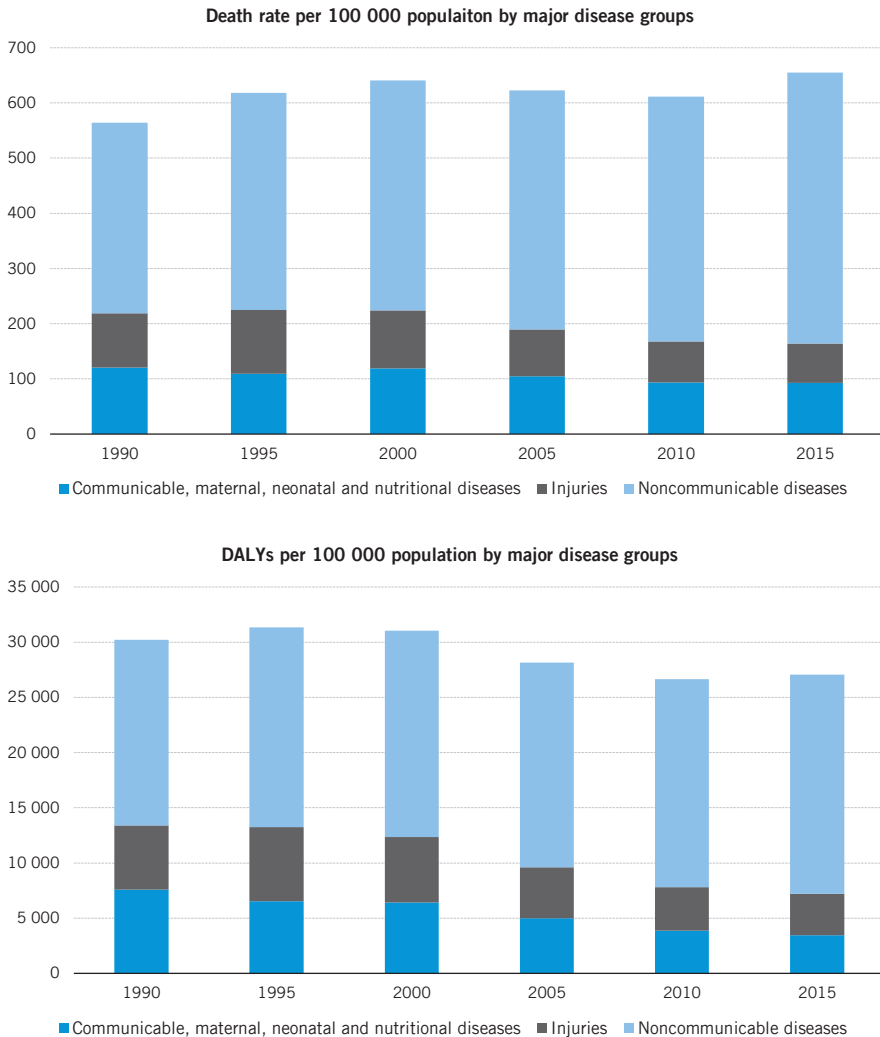
WHO reports a total number of about 539 000 deaths in Thailand in 2016 and NCDs are estimated to account for 74% of the total deaths (WHO, 2018b) (Fig. 10.1).

**Fig. 10.1 Thailand: Proportional mortality (% of total deaths, all ages, both sexes) by cause, 2016**

Source: WHO, 2018b

This ratio has been stable for the past 25 years although slowly a rise in total death rates can be seen as the country is ageing, and a slow shift in causes of death, with injuries becoming the second cause of DALYs (Fig. 10.2).

**Fig. 10.2 Thailand: Deaths and DALYs per 100 000 populations by major disease groups, 1990–2015**

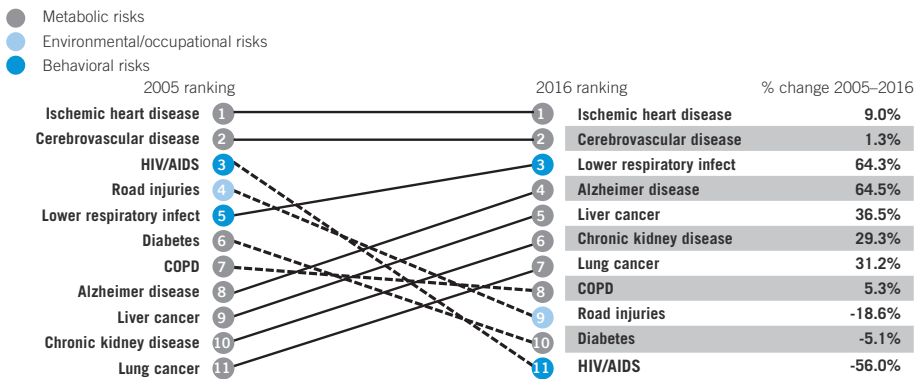


Source: Institute for Health Metrics and Evaluation, 2017



HIV/AIDS contributed to a stagnation in reduction of the mortality due to infectious diseases until universal access to ART was launched in 2004 (Aungkulanon et al., 2012). HIV/AIDS was still the main cause of death in Thailand in 2005 but it was the eleventh rank in 2016, with -56.0% change between 2005 and 2016 (Institute for Health Metrics and Evaluation, 2018) (Fig. 10.3).

**Fig. 10.3 Thailand: Top 10 causes of death and percent change, all ages, 2005 and 2016**



Source: Institute for Health Metrics and Evaluation, 2018

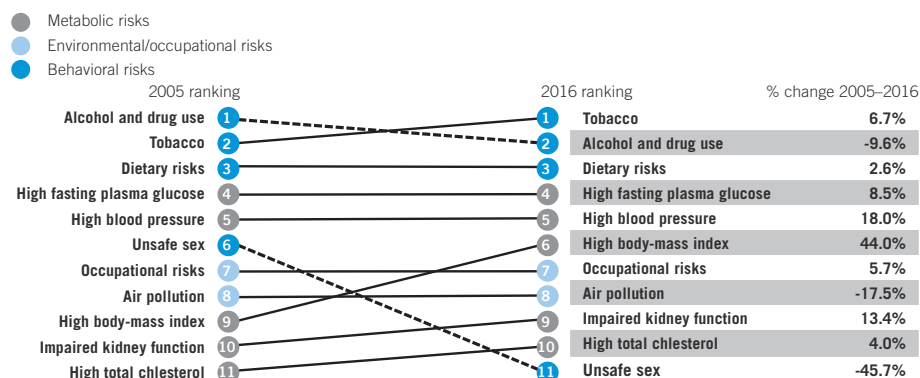
The Institute for Health Metrics and Evaluation (2018) identified the top 10 causes of DALYs in Thailand compared to other countries relative to the group average based on the regional classification of the Global Burden of Disease, known trade partnership and sociodemographic indicators. Road injuries are the most serious problem contributing to DALYs, despite active policies to curb traffic injuries and mortality, such as the national speed limit law, drink-driving law, motorcycle helmet law and seat-belt law; however, law enforcement was not effective at the score of only 3, 6, 6 and 6, respectively (0 minimum and 10 maximum) (WHO Regional Office for South-East Asia, 2015).

### 10.2.2 Risk factors

During 2005–2016, risk factors continued to be the same. Alcohol and drug use, tobacco and dietary habits were the top three behavioural risks contributing to DALYs while high fasting plasma glucose and high blood

pressure were the top fourth and fifth. Notably, high BMI shifted from the ninth up to the sixth rank (Fig. 10.4).

**Fig. 10.4 Thailand: Top 10 risks contributing to DALYs and percent change, all ages, 2005 and 2016**



Source: Institute for Health Metrics and Evaluation, 2018

Table 10.3 presents the risk factors of Thai adults. Alcohol consumption, tobacco smoking and adult obesity are higher in men than women, while Thai women are less active than men (WHO, 2018b). Although Thailand has tried many policies and strategies to fight tobacco use, the prevalence of adult smoking has stagnated at around 20%.

**Table 10.3 Thailand: Prevalence of adult risk factors by sex**

Indicators	Males	Females	Total
Alcohol per capita consumption, in litres of pure alcohol (2016)	14	3	8
Tobacco smoking (2016)	40%	2%	21%
Raised blood pressure (2015)	26%	24%	25%
Adult obesity (2016)	12%	7%	10%
Physical inactivity (2016)	23%	28%	25%

Source: WHO, 2018b

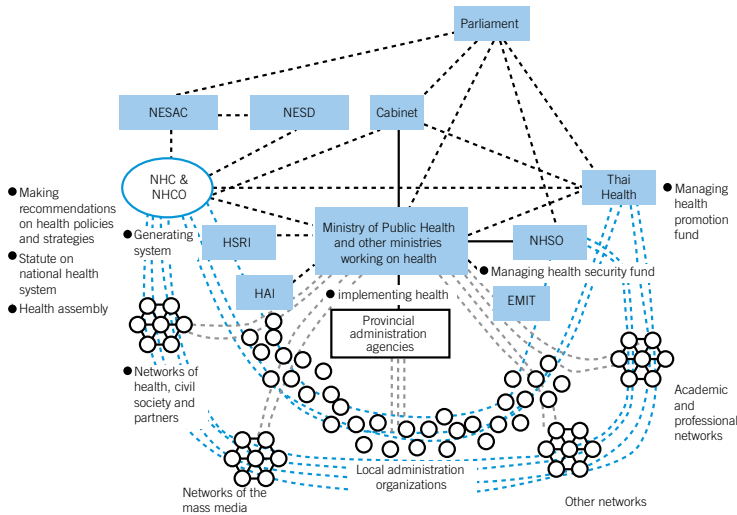
## 10.3 The health system

### 10.3.1 Organization and governance

The Ministry of Public Health (MoPH) is the national health authority responsible for formulating, implementing and monitoring health policies. Over the years, the role of the MoPH has changed, as several semi-autonomous and autonomous health agencies have been established by legislation. These include the Health Systems Research Institute (1992), Healthcare Accreditation Institute (1999), the Thai Health Promotion Foundation (2001), the National Health Security Office (2002) and the National Health Commission Office (2007).

The MoPH and these independent agencies work together and form a complex interdependent governing structure (Fig. 10.5). In addition, non-State actors and civic groups are actively involved in health through

**Fig. 10.5 Thailand: Linkages of governance mechanisms in the national health system**



*Key:* NESDB: National Economic and Social Development Board; NHSO: National Health Security Office; NHC: National Health Commission; NHCO: National Health Commission Office; ThaiHealth: Thai Health Promotion Foundation; HSRI: Health Systems Research Institute; EMIT: Emergency Medical Institute of Thailand

*Note:* Solid lines refer to the line of command, reporting and direct accountability, while dotted lines depict intersectoral coordination.

*Source:* Wibulpolprasert, 2011

various approaches. By law, the National Health Commission Office is mandated to convene an annual National Health Assembly (NHA), ensuring active participation by all governments, nongovernments and people in formulating health policy through deliberations during the NHA, and finally through NHA Resolutions.

The advent of the National Health Security Office (NHSO) has had a major impact in transforming the integrated model of the MoPH as both the purchaser and service provider, to NHSO as the purchaser and MoPH as the service provider.

Thailand has a long history of decentralization of health management to the provincial health offices (PHOs). All public hospitals under the MoPH have the financial power to retain and use revenue according to regulations, subject to a regular audit by the auditor-general. The PHO also holds regulatory power, such as issuance of new licences or renewal of annual licences of private pharmacies and private clinics, and consumer protection on food, drugs and cosmetics in the respective provinces.

The Decentralization Act, 1999 requested the MoPH to devolve all public health facilities to the local elected government units, i.e. health centres to tambon (subdistrict) administration organizations (TAOs), district hospitals to municipalities and provincial hospitals to provincial administration organizations. Progress in implementing the Decentralization Act has been slow, only 51 health centres out of a total of 9762 (0.52%) have been devolved and only one MoPH district hospital is an autonomous hospital.

Multiple factors contributed to the non-progress in devolving health centres to TAOs, such as shift in the Central Government priority, readiness of the MoPH to devolve authority to TAOs and, at the same time, the readiness of TAOs to take on the responsibility of health centres and health-related issues (Kulthanmanusorn et al., 2017). In practice, the current integrated model of primary health care consisting of health centres and district hospital can contribute to equitable access and efficiency of health systems. In pursuing this shift, what is not clear is the underlying cause for change: what is wrong with the current situation? Why is there a need to devolve all health centres to more than 5000 TAOs and all district hospitals to municipalities? How will the people benefit? And what is the value added due to such decentralization?

### 10.3.2 Patient-centredness

The extensive geographical coverage of primary health care and hospital services with proper referral mechanisms (both refer up and down) that patients are able to access and use of health services is the foundation for patient-centredness in Thailand.

#### Box 10.1 Thailand: Declaration of Patient Rights<sup>4</sup>

1. The right to use essential health services without discrimination by social status, race, nationality, religion and other factors.
2. The right to get adequate information before obtaining a health service and the right to consent or refuse treatment except in the case of an emergency or life-threatening situation.
3. The right to get urgent attention and immediate relief in the case of critical conditions or near death, regardless of the patient's requests or no request for assistance.
4. The right to know the full name and family name and specialty of the health-care provider who provides health service to them.
5. The right to request a second opinion and opt for another health-care provider.
6. The right to request that their personal health information shall be kept confidential and the only exception being with the consent of patient or due to legal obligation.
7. The right to demand complete information regarding their role as subjects in research and the associated risk, in order to make an informed decision to participate in, or withdraw from, the research carried out by the health-care provider.
8. The right to know and demand the full and current information about their medical treatment as in the medical record as requested.
9. The father/mother or legal representative may use their rights on behalf of a child under the age of 18 years or who is physically or mentally disadvantaged due to which they could not exercise their rights.

“Patient rights” are guaranteed by several mechanisms. Access to essential health services has been considered as a basic right since the promulgation of the Thai Constitution in 1997. Professional organizations, including the Medical Council, the Nursing and Midwifery Council, the Pharmacy Council and the Dental Council have adopted the “Declaration of Patient Rights” (Box 10.1) since 1998 and request all health-care providers to ensure

<sup>4</sup> This is an unofficial translation of the Declaration of Patient Rights.

that patient rights are fully observed in their clinical and professional practices. The Declaration of Patient Rights is posted publicly at every place that provides health care.

### **10.3.3 Financing**

Since 2002, Thailand has achieved UHC for the Thai citizens, provided by three public health insurance schemes. Civil servants and their dependents are covered by the Civil Servant Medical Benefit Scheme (CSMBS); private sector employees are covered by the Social Health Insurance (SHI) Scheme and the rest of the population by Universal Coverage Scheme (UCS). These three public health insurance schemes are managed by three different agencies, namely, the Ministry of Finance, Ministry of Labour and NHSO, respectively, which resulted in a purchaser–provider split. A combination of provider payment methods is applied. Closed-ended provider payments, using a combination of capitation and Diagnostic Related Group (DRG) play a dominant role, notably, capitation for outpatient payment is applied by the SHI and UCS, while fee for service is used by the CSMBS outpatient payment. DRG use for inpatient payment was widely applied by the CSMBS and UCS though with some variations, and partially applied by the SHI. Private health insurance comprises an insignificant proportion as people could pay for it on a voluntary basis on top of the three main public health insurance schemes.

Thailand has about 3.5 million migrant workers, as estimated in 2011. Less than 9% of them are covered by the SHI scheme, while in 2016, about 33.7% (or 1.1 million) were covered by the voluntary migrant health insurance scheme managed by the MoPH. Thailand still needs to scale up the coverage of voluntary migrant health insurance as well as migrant-friendly services (Tangcharoensathien, Thwin and Patcharanarumol, 2017).

The current health expenditure was about 3.1% of the GDP during 2001 and increased to 3.77% of the GDP in 2015. Public expenditure on health has gradually increased from 56% in 2001 to 77% of the current health expenditure in 2015. At the same time, out-of-pocket expenditure reduced from 33.1% to 11.7% during the same period. The major sources of funds are from general tax; followed by direct out-of-pocket payment, premiums

of SHI and private insurance. External sources were insignificant, at 0.3% of the current health expenditure in 2015 (World Bank, 2018a).

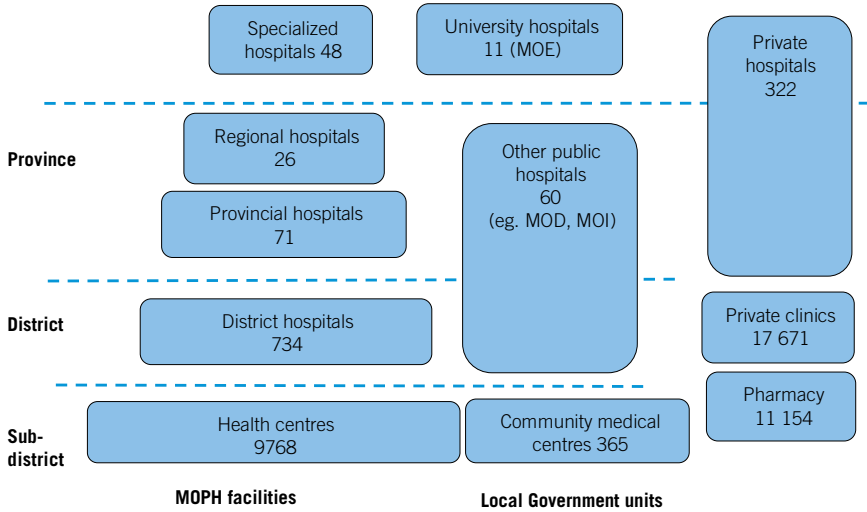
There was a significant increase in general government health expenditure from 11% to 13% in 2001–2003, which increased to 16.6% in 2015. At about 70%, curative expenditure dominates total health spending, of which 30% is utilized for inpatient services and 40% for outpatient services. Expenditure for prevention and public health services was a small proportion of the overall health expenses (National Health Accounts Working Team, 2017).

Thailand legislated an earmarked sin tax of 2% additional surcharge on tobacco and alcohol excise duty since 2001. This is pooled and managed by the Thai Health Promotion Foundation for health promotion activities, mainly to deal with key health risks such as alcohol and tobacco use, HIV/AIDS, NCD and road safety.

### **10.3.4 Physical and human resources**

Since 1980, the Thai Government has had a high political commitment to invest in health infrastructure and expand health facilities to all areas in Thailand. Every subdistrict (tambon) has at least one health centre covering an average of 5000 people and every district has a district hospital, with a range of 30–120 hospital beds, covering an average of 50 000 people in a district. The district hospital and all health centres in a district collectively work as a network of the district health system. Every province has a provincial hospital with a range of 150 to more than 1000 beds. A regional hospital acts as a referral hub for many provincial hospitals in the region (Fig. 10.6). The health delivery system in Thailand is dominated by public health facilities; only 21% of total beds are in private hospitals. More than two thirds of the total private hospitals have less than 100 beds. Private hospitals with more than 100 beds are located in urban areas. Some of them are registered in the stock market and provide services to international patients in Bangkok. The widespread availability of public health facilities throughout the country and, importantly, the linkage among them has acted as a prerequisite for the implementation of UHC.

**Fig. 10.6 Thailand: Number of healthcare facilities, 2015**



*Key:* MOE: Ministry of Education; MOD: Ministry of Defence; MOI: Ministry of Interior; MOPH: Ministry of Public Health

*Source:* By the authors

In parallel with the expansion of health infrastructure, the required health workforce could be produced domestically; with the quality being guaranteed through use of standard curriculums, and national licensing examinations of all health cadres. In 2015, Thailand had 2.8 physicians, nurses and midwives per 1000 population (World Bank, 2018b), slightly higher than the 2.28 minimum threshold required by WHO (2006). In addition, the Government has made various policy interventions for retention of the rural health workforce in public health facilities, such as the recruitment of local students for local training and local placement, especially for mandatory government rural services of all new health professional graduates. Both financial and non-financial incentives are offered, for example, special allowances for those who work in rural areas, free housing, and social recognition of the best rural doctor award every year.



High geographical coverage of functioning primary health care with adequate numbers of a competent health workforce made the rapid rolling out of UHC in 2001–2002 successful without additional government investment in public health infrastructure and workforce. However, the public sector reform in 2002 resulted in a freeze in the number of staff in the public sector with abolishment of all posts that became vacant due to retirement. The health sector was also impacted by the negative consequences of this downsizing policy. The mandatory postgraduation requirement to join government service for nurses and pharmacists was terminated since there were no posts available in public hospitals and the graduates were on short-term contracts in public hospitals. This created job uncertainty and offered no incentive for them to remain in public hospitals. Currently, only doctors and dentists are obligated to do mandatory rural service after graduation. Presently, the Government still meets the demand for new nursing posts on an ad-hoc basis.

Apart from health professionals, there are more than 1 million village health volunteers who support health activities in communities throughout the country. They have made a significant contribution to the management of NCDs (Treerutkuarkul, 2008).

### **10.3.5 Provision of services**

The Thai health delivery system is multidimensional and aims to improve geographical access to the population and enhance the efficiency of the health system. Health centres and district hospitals, together with provincial hospitals distributed throughout the country, are crucial for providing essential health services to the people. The name “health centre” in Thailand has been changed to “Subdistrict Health Promotion Hospital” to emphasize health promotion activities, including a focus on disease prevention, such as screening for diabetes mellitus, hypertension and cervical cancer.

Specialized health services and high-cost interventions are improved in several public health facilities under the management of UCS to ensure equitable access for beneficiaries of the UCS. Examples include ART for patients with HIV/AIDS, open-heart surgery, renal replacement therapy for all peritoneal dialysis, haemodialysis and kidney transplant. Public

hospitals are encouraged to meet the hospital accreditation requirement provided by the independent Healthcare Accreditation Institute.

Although much has been done, there is still room for considerable improvement, particularly in the areas of mental health care, palliative care, long-term and intermediate care to meet the demands of an ageing society and concomitant increase in NCDs.

### **Management of NCDs**

Curative services for NCDs are covered under each public health insurance scheme. The basic prevention of NCDs, e.g. screening and health promotion services, are covered for all the Thai population under the management of the UCS. The prevention of NCDs covers routine health check-up, risk and disease screening for diabetes, hypertension, cervical cancer, etc. These services are covered by the per capita budget for health facilities with some top-up payments. Basically, most of the services are provided by hospitals and health centres for the catchment population in each area.

Contracting units for primary care, which are mainly district hospitals and their network of primary care units and health centres, are key health-care providers responsible for providing health promotion and prevention services to the targeted populations in their locality, including community health promotion activities and campaigns. These activities include promotion of good behaviour, such as exercise, healthy diet, safe sex, control of alcohol drinking and smoking as well as environmental control. The behavioural risk factors surveillance system has been conducted by the Bureau of Non-Communicable Diseases under the Disease Control Department, MoPH, to monitor risk behaviours contributing to chronic diseases. In addition, a health exam survey is routinely conducted every five years.

In 2004, the Local Health Fund initiative was piloted. Under this Fund, matching amounts from the NHSO and local government units were pooled to tackle community health problems and ensure that community health services reach underprivileged groups or meet specific health needs in the community. The scheme has now been expanded to almost all local governments (about 7700 local government units throughout the country).

The health workforce at the primary health care level is critical to provision of basic health services, particularly in the era of chronic NCDs and an ageing society. Most health centres are supervised by professional nurses and four-year trained public health officers. There are currently plans to develop an adequate number of staff with the competency and skill mix to manage NCDs, cater to the changing health needs of the ageing population with increasing disabilities and need for home health-care services, as well as primary prevention and screening.

### **Management of communicable diseases including emerging diseases**

Control of communicable diseases is the responsibility of the Department of Disease Control (DDC), MoPH. Routine disease surveillance is conducted by public health facilities in collaboration with the DDC. For specific communicable diseases, health facilities notify patients and then send a report to the provincial level and ministry level, respectively. Most infectious diseases are managed effectively but managing TB is a big challenge, with 117 000 new TB cases and 1200 deaths in 2015, making Thailand one of the 30 highest TB-, TB/HIV- and MDR-TB-burden countries (WHO Regional Office for South-East Asia, 2017). Outbreak detection is the responsibility of the Bureau of Epidemiology, DDC. Normally, district and provincial health authorities in collaboration with the local government unit primarily manage outbreak control with supervision of the DDC. Some outbreak investigations for emerging diseases are centrally managed by the MoPH.

The DDC, MoPH implements the IHR by strengthening the requirement for core capacity, e.g. laboratory, surveillance, response and human resources. Thailand has also adopted the “One Health” concept (Sommanustweechai et al., 2017) to address the threat of emerging infectious diseases. To this end, it has implemented multidisciplinary approaches to disease detection and response as well as further strengthened the public health emergency response, laboratory capacity and biosafety, and modelling. Recently, Thailand responded suitably to importation of MERS-CoV (Middle East respiratory syndrome coronavirus) infections. Thailand has also collaborated well with other countries in the region through enhanced animal surveillance of influenza A (H7N9).

## Management of MCH

Thailand achieved MDGs 4 and 5 on maternal and child mortality. Improvements in MCH services, including high vaccine coverage, have halved the MMR from 40 in 1990 to 20 per 100 000 live births in 2015. The IMR and under-five mortality rate also significantly decreased to 10.5 and 12.2 per 1000 live births in 2016.

However, Thailand is facing new challenges. The fertility rate is getting lower; at 1.482 births per woman it is lower than the replacement fertility rate. At the same time, the teenage pregnancy rate was the highest in South-East Asia. Babies born to girls aged 15–19 years accounted for 32 out of every 1000 live births in 2002 but 54 out of every 1000 live births (United Nations Population Fund, n.d.) in 2014. Teenage pregnancies result in a poorer quality of life for both the mother and the child throughout their life-course.

**Table 10.4 Thailand: Maternal, child and adolescent health indicators, 1990–2016**

Indicators	1990	1995	2000	2005	2010	2016
Adolescent birth rate (per 1000 women aged 15–19 years)	51.4	47.5	43.4	42.2	47.9	51.8
Infant mortality rate (per 1000 live births)	30.9	24.4	19.6	15.6	12.8	10.5
Under-five mortality rate (per 1000 live births)	37.8	29.2	23.1	18.2	14.9	12.2
Maternal mortality ratio (per 100 000 live births)	40.0	23.0	25.0	26.0	23.0	20.0 (2015)

Source: World Bank, 2018a

Accessibility and demand for basic MCH services such as ANC, pregnancy, childbirth, neonatal care, family planning, child immunization and well-baby clinics are generally high. Child immunization coverage has been above 90% for decades with 99% coverage for measles, diphtheria–tetanus–pertussis (DTP) and hepatitis B vaccine in 2017 (World Bank, 2018a). This high coverage outperforms many of the high-income developed countries in Europe and Asia Pacific (WHO Regional Office for the Western Pacific, 2015). ART coverage for prevention of mother-to-child transmission (PMTCT) was at 94–95% of pregnant women living with HIV during 2010–2016 (World Bank, 2018a). Thailand became the first country in Asia to

eliminate mother-to-child transmission of HIV and syphilis (WHO Regional Office for South-East Asia, 2016).

The Thailand chapter in a book entitled *Good health at low cost* (Patcharanarumol et al., 2011) clearly indicates that all essential interventions for MCH services, which are effective in addressing nine major causes of under-five mortality (diarrhoea, pneumonia, measles, malaria, HIV/AIDS, birth asphyxia, preterm delivery, neonatal tetanus and neonatal sepsis) and desirable for the mother's survival, have been fully integrated into primary health-care networks of district hospitals and health centres. Nurses at district hospitals and health centres are crucial for providing MCH services. They provide ANC services as well as advice on and counselling for PMTCT, whereas high-risk pregnancies such as among women with diabetes, a history of preterm labour and hypertension, and complicated cases would be referred to a doctor.

Nurses and public health staff are key providers of family planning services, e.g. birth control pills and condoms, while doctors at district hospitals provide permanent family planning services for men and women. Child immunizations are mainly provided by nurses and public health staff in the public sector.

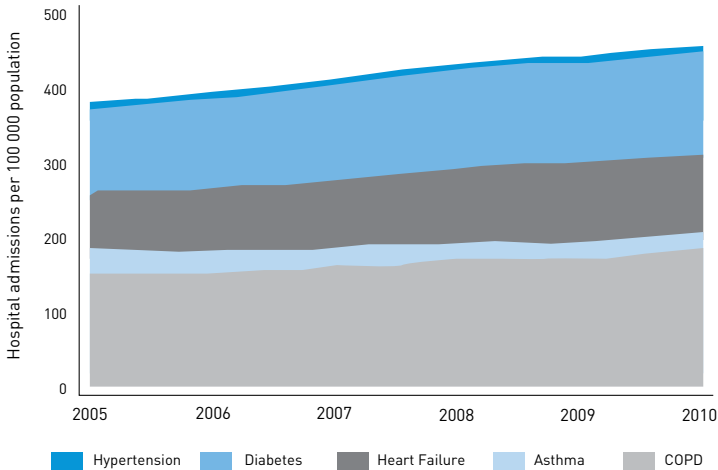
## 10.4 Performance of the health system

### 10.4.1 Effectiveness and quality

#### **Avoidable hospital admission for chronic conditions**

Hospital admission for a chronic condition could be reduced when effective interventions are performed well at the primary care level or through provision of ambulatory care. Ambulatory care-sensitive conditions (ACSC) have been measured for hospital admissions of chronic conditions. The prevalence of hospitalization due to ACSC of five illnesses (hypertension, diabetes, heart failure, asthma and COPD) increased from 378.7 in 2005 to 453.0 per 100 000 members in 2010. The most common were COPD, diabetes and heart failure (Fig. 10.7). These admissions due to ACSC would have huge cost implications for public hospitals. On the contrary, there would be gains in efficiency for the health system as a whole when these chronic conditions are well controlled at the primary care level.

**Fig. 10.7 Thailand: Hospital admissions with conditions deemed controllable with ambulatory care, 15–74 years, 2005–2010**

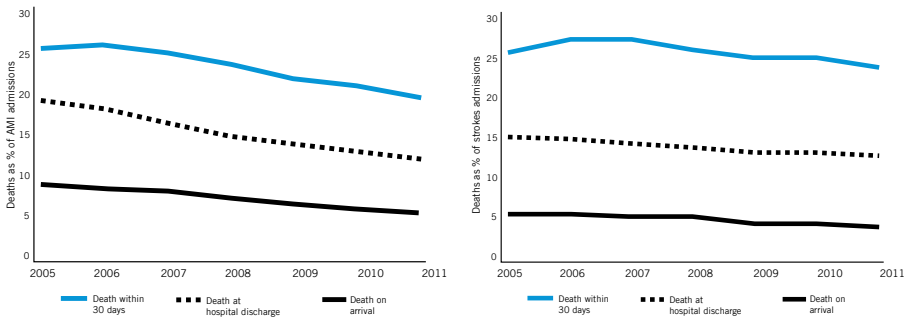


Source: WHO Regional Office for the Western Pacific, 2015

### Reducing deaths from AMI and hospitalization due to ischaemic and haemorrhagic strokes

Fig. 10.8 shows that deaths following hospitalization due to acute myocardial infarction (AMI), ischaemic and haemorrhagic strokes have reduced during 2005–2011. The reduction in deaths from AMI had a better

**Fig. 10.8 Thailand: Deaths from AMI (left) and strokes (right) on hospital arrival, at discharge and within 30 days of UCS patients, 2005–2011**



Key: UCS: universal coverage scheme

Source: WHO Regional Office for the Western Pacific, 2015

trend than those due to ischaemic and haemorrhagic strokes during the same period. This reflects better progress in treatment outcomes of AMI than of ischaemic and haemorrhagic strokes, which could mirror an improvement in the quality of hospital services for AMI, ischaemic and haemorrhagic strokes.

### **10.4.2 Accessibility**

Utilization of curative services; as reported by NHSO-the agency that manages UCS, has increased after the reform in UHC. The total annual number of outpatient visits by UCS members increased from 111.9 million in 2003 to 153.4 million in 2010 to 184.3 million in 2017 (National Health Security Office, 2017). Furthermore, the total annual inpatient admissions increased from 4.3 to 5.6 million to 6.0 million, whereas the total number of UCS members increased slightly from 46.0 to 47.7 million to 48.1 million over the same period, reflecting better access and increased per capita rate of utilization. The rate of outpatient use has grown more than that of admissions.

Data from national household surveys reveal that for all public-private facility types, approximately 87.8% and 60.7% of UCS patients exercised their insurance entitlement using outpatient services and hospital admissions, respectively, in 2017. Uptake of the UCS entitlement when using outpatient visits at district hospitals and health centres was more common than that for provincial hospitals. Uptake of the UCS entitlement using hospital admissions in public hospitals was much higher than that in private hospitals (Patcharanarumol et al., 2011).

For high-cost interventions, especially for renal replacement therapy, between 2013 and 2017, the number of patients with chronic kidney failure who got peritoneal dialysis increased from 14 225 to 28 258 cases; the number on haemodialysis increased from 7855 to 16 527 cases and kidney transplant increased from 86 to 208 cases (Patcharanarumol et al., 2011).

Screening for diabetes by measuring fasting blood sugar among Thai adults (35–74 years) increased from 56.3% in 2016 to 59.3% in 2017 and screening for hypertension increased from 58.5% in 2016 to 60.9% in 2017. However,

these screening outputs were much lower than the target of at least 90% for both diabetes and hypertension (Patcharanarumol et al., 2011).

The evidence reveals that UCS resulted in pro-poor use of health services; the lower socioeconomic status of UCS members, and higher access to health services, particularly in district hospitals and health centres. The book *Thai health systems in transition* (WHO Regional Office for the Western Pacific, 2015) indicates that “across the gradient of household’s living standard measured by asset quintiles, the poorest quintile used outpatient services disproportionately more (26–28% vs 8–10% of total national outpatient services) than the richest counterpart during the first decade after UC reform. To a similar degree, inpatient admissions were concentrated more among the poor than the rich over the same period.”

### **10.4.3 Resilience**

The Thai health systems have proven resilience to many large-scale natural and human-induced disasters and policy reforms. These include Asian Economic Crisis (1997), sin tax for Thai Health Promotion Foundation (2001), health financing reforms for UHC policy (2002), H5N1 outbreak (2004), Tsunami (2006), National Health Commission Office (2007), severe flood (2011) and cases of MERS-CoV in 2016. In addition, the governance system for health has changed dramatically with the establishment of new autonomous agencies in health. It is noteworthy that the health systems of Thailand responded well to those crises and reforms in a positive way so that health outcomes continued to improve and the system has remained sustainable.

Political commitment and sufficient domestic resources were crucial factors for supporting the resilience of the health systems. Importantly, a competent health workforce and village health volunteers, who were committed to serving people for better health, were indispensable factors. Their implementing capacity to implement and translate policy reforms into real actions was incredible, as they could adjust and adapt themselves sufficiently to respond to major disasters and pandemics. Collaboration with and support of the non-health sectors, e.g. during the severe flood in 2011, Army-supported mobile hospitals and transportation were used to deliver peritoneal dialysis solution to patients’ homes in flooded areas.



Furthermore, Thai society is unique as Thai citizens actively support others, even when they are not rich. These are foundations for the resilience of health systems.

## 10.5 Conclusions

Thailand became an ageing society in 2015 when the proportion of people aged above 60 years reached 15.82% of total population. In addition, between 1970 and 2016, the percentage of the population aged 65 years and above more than tripled from 3.1% to 10.9%. The health-care system in Thailand is organized to manage acute episodic care while an ageing population needs long-term care, which involved integration of the health and social services. Almost all the elderly in Thailand who need long-term care receive informal care from their family members or relatives. There are some institutionalized long-term care centres organized by private for-profit organizations. However, many issues, including standards of care and living, level of training needed for carers and care managers, and licensing and accreditation still need to be clarified. Even then, most of these long-term care facilities are prohibitively expensive for the majority of the people. The health-care system also needs to be strengthened, especially at the primary health care level to support community-oriented long-term care. There is an urgent need for effective collaboration between the health and social welfare sectors to develop family- and community-based systems that can respond to the needs of the elderly.

While rural health services are well established and maintained, and have contributed significantly to the UHC goals of equitable access and financial risk protection; urban health systems are dominated by hospital-oriented care, private clinics and hospitals, and suffer from weak municipality health systems characterized by ineffective primary health care infrastructure, ill-suited to cater to the needs of patients with chronic diseases. There is great scope for strengthening urban primary health care systems and the feasibility should be explored of contracting out to qualified private clinics for not just curative but also preventive and health promotion services.

Increased prevalence of chronic disabling conditions in the elderly results in an increasing demand for rehabilitation services. Rehabilitation personnel are concentrated in tertiary urban hospitals not reachable by the majority of

rural people in need of care. Increased training capacity, redistribution of rehabilitation personnel and redesigning community-based and secondary health care are some of the challenges for future reforms. Future reforms are also needed to develop palliative care services. There is currently no specific organization responsible for delivering palliative care, while there is exponential growth in demand. A particular challenge is the strengthening of home-based palliative care to which most terminally ill patients have access.

Mental health care should be organized through a network in which primary health care provides community-based mental health promotion and prevention. Primary health care has to ensure regular supplies of antipsychotic drugs and adherence to medication with support from families and the community. Strengthening primary health care and referral processes with an adequate number of skilled staff is a key success factor for effective management of mental health care in the society.

Many of the risk factors that impact NCDs are multisectoral and are supported by strong industrial lobbies. The health and non-health sectors have to work together to tackle these issues. Since 2007, Thailand has had an annual NHA. Working across sectors, including public, private, academia and civil society, the NHA uses the “Health in All Policies” philosophy to pass resolutions that often deal with the economic and social determinants of health. However, ownership and capacity of intersectoral partners and agencies charged with implementing these resolutions has been a major challenge, resulting in poor downstream enactment. Although the NHA is a good mechanism for multisectoral and intersectoral collaboration on health-related issues that are of concern to the population, much more work is needed to improve implementation of its resolutions by line agencies and ministries (Kanchanachitra et al., 2018).

## References

Aungkulanon S, McCarron M, Lertiendumrong J, Olsen SJ, Bundhamcharoen K (2012). Infectious disease mortality rates, Thailand, 1958–2009. *Emerg Infect Dis.* 18 (11):1794–801.

Hays J (2014). Natural disasters and man-made disasters in Thailand: Fires, floods and earthquakes. Facts and details ([http://factsanddetails.com/southeast-asia/Thailand/sub5\\_8h/entry-3324.html](http://factsanddetails.com/southeast-asia/Thailand/sub5_8h/entry-3324.html), accessed 20 October 2018).

Institute for Health Metrics and Evaluation (2017). Global Burden of Disease Study 2016 (GBD 2016) results. Global Burden of Disease Collaborative Network. Seattle, United States (<http://ghdx.healthdata.org/gbd-results-tool>, accessed 9 October 2018).

Institute for Health Metrics and Evaluation (2018). Thailand. Seattle, United States (<http://www.healthdata.org/thailand>, accessed 9 June 2018).

Kanchanachitra C, Tangcharoensathien V, Patcharanarumol W, Posayanonda T (2018). Multisectoral governance for health: Challenges in implementing a total ban on chrysotile asbestos in Thailand. *BMJ Glob Health.* 3:e000383.

Kulthanmanusorn A, Saengruang N, Wanwong Y, Kosiyaporn H, Witthayapipopsakul W, Srisasalux J et al. (2017). Evaluation of the devolved health centers: Synthesis lesson learnt from 51 health centers and policy option. Nonthaburi, International Health Policy Program.

National Health Accounts Working Team (2017). National health accounts 2015. Nonthaburi, International Health Policy Program.

National Health Security Office (2017). NHSO annual report 2017. Bangkok, Thailand.

Patcharanarumol W, Tangcharoensathien V, Limwattananon S, Panichkriangkrai W, Pachanee K, Pounghantha W et al. (2011). Why and how did Thailand achieve good health at low cost? In: Balabanova D,

McKee M, Mills A (eds.). Good health at low cost 25 years on. What makes a successful health system? United Kingdom, London School of Hygiene and Tropical Medicine. pp.193–233.

Royal Thai Embassy (n.d.). Thailand 4.0. Washington DC (<http://thaiembdc.org/thailand-4-0-2/>, accessed 20 October 2018).

Sommanustweechai A, Iamsirithaworn S, Patcharanarumol W, Kalpravidh W, Tangcharoensathien V (2017). Adoption of One Health in Thailand's national strategic plan for emerging infectious diseases. *J Public Health Policy*. 38:121–36.

Tangcharoensathien V, Thwin AA, Patcharanarumol W (2017). Implementing health insurance for migrants, Thailand. *Bull World Health Organ*. 95(2):146–51.

Treerutkuarkul A (2008). Thailand's unsung heroes. *Bull World Health Organ*. 86:5–6.

UN Office for Disaster Risk Reduction (n.d.). Thailand disaster and risk profile. Prevention Web. Geneva (<https://www.preventionweb.net/countries/tha/data/>, accessed 20 October 2018).

United Nations Population Fund (n.d.). UNFPA Thailand (<http://thailand.unfpa.org/th/node/15266>, accessed 20 October 2018).

United Nations Department of Economic and Social Affairs, Population Division (2015). World Population Ageing 2015. ST/ESA/SER.A/390. New York ([http://www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2015\\_Report.pdf](http://www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2015_Report.pdf), accessed 20 October 2018).

Wibulpolprasert S (ed.) (2011). Thailand health profile 2008–2010. Thailand, Bureau of Policy and Strategy, Ministry of Public Health ([http://wops.moph.go.th/ops/thp/thp/en/index.php?id=288&group\\_=05&page=view\\_doc](http://wops.moph.go.th/ops/thp/thp/en/index.php?id=288&group_=05&page=view_doc), accessed 20 October 2018).

World Bank (2018a). World development indicators. Washington DC (<http://data.worldbank.org/indicator/>, accessed 31 July 2018).

World Bank (2018b). Health, nutrition and population – health dashboard. Washington DC (<http://datatopics.worldbank.org/health/health>, accessed 9 October 2018).

World Bank (2018c). Worldwide governance indicators. Washington DC (<http://info.worldbank.org/governance/wgi/#home>, accessed 20 October 2018).

World Health Organization (2006). The world health report 2006 – working together for health. Geneva (<http://www.who.int/whr/2006/en/>, accessed 20 October 2018).

World Health Organization (2018a). Healthy life expectancy (HALE) data by country. Global health observatory data repository (<http://apps.who.int/gho/data/view.main.HALEXv?lang=en>, accessed 20 October 2018).

World Health Organization (2018b). WHO – noncommunicable diseases (NCD) country profile. Geneva ([http://www.who.int/nmh/countries/tha\\_en.pdf](http://www.who.int/nmh/countries/tha_en.pdf), accessed 9 October 2018).

World Health Organization Regional Office for South-East Asia (2015). Road safety in the South-East Asia Region 2015. New Delhi ([http://www.who.int/violence\\_injury\\_prevention/road\\_safety\\_status/2015/Road\\_Safety\\_SEAR\\_3\\_for\\_web.pdf](http://www.who.int/violence_injury_prevention/road_safety_status/2015/Road_Safety_SEAR_3_for_web.pdf), accessed 20 October 2018).

World Health Organization Regional Office for South-East Asia (2016). Press Release: Thailand is first country in Asia to eliminate mother to child transmission of HIV and syphilis. New Delhi (<http://www.searo.who.int/mediacentre/releases/2016/1627/en/>, accessed 12 October 2018)

World Health Organization Regional Office for South-East Asia (2017). Bending the curve – ending TB: Annual report 2017. New Delhi (<http://www.who.int/iris/handle/10665/254762>, accessed 20 October 2018).

World Health Organization Regional Office for the Western Pacific (2015). The Kingdom of Thailand health system review. Manila (<http://www.who.int/iris/handle/10665/208216>, accessed 20 October 2018).

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