National Health Financing for Sustainable Universal Health Coverage: Goals, Indicators and Targets

By
The Committee on Resource Mobilization for Sustainable Universal Health Coverage

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The Committee on
Resource Mobilization for
Sustainable Universal Health Coverage,
THAILAND

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Preface

The Universal Health Coverage has covered every Thai citizen since 2002. After 13 years of implementation, there are several important achievements:

We invested 4.6% of our GDP on health. Although this figure is not that high as compare to other countries at the same level of economic development, it is more than half a trillion Baht or $US 14 billions. The government investments contribute 80%, which is around 17% of general government spending. This is the evidence to show the high public commitment to UHC. The UHC has resulted in very low 'unmet needs' comparable to the OECD countries. The catastrophic illnesses and poverty from medical bills were reduced to near zero.

The Thai UHC has been globally recognized as a 'good practice'. The Thai Prime Minister was invited to present the case at the UNGA, together with the Japanese PM, in September 2015.
Nevertheless, with high public investment, there is a constant challenge of 'financial sustainability' and whether the Thai citizens should contribute more to the UHC, based on various 'cost sharing' models.

This report aims at responding to such a challenge based on evidences and experiences in Thailand and internationally, including extensive participation of experts and all stakeholders. The committee expects to see that the four proposed goals of S-A-F-E will soon be the 'national health financing goals' which sticks into the mind of all Thais. All partners and stakeholders would collectively and constructively implement the UHC, based on SAFE goals, to achieve more social equity and sustainability of the systems.

The Committee on Resource Mobilization
for Sustainable UHC, THAILAND
January 18, 2016

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S - Sustainability goal - Health investments from general government budget, pre-paid contribution and household spending on health are affordable by the overall economy, the government, tax payers and SHI contributors and are sustainable in the long run.

> **Indicator and Target 1:** By 2022, Total Health Expenditure (THE) does not exceed 5% of GDP
>
> **Indicator and Target 2:** By 2022, General Government Health Expenditure (GGHE) does not exceed 20% of General Government Expenditure (GGE)

A – Adequacy goal - Resources are adequate for ensuring universal access to essential health services including essential medicines and health technology, without catastrophic health expenditure and medical health impoverishment to the household.

Indicator and Target 3: Total health expenditure (THE) is not less than the status quo level of 4.6 % of GDP (NHA 2013)

Indicator and Target 4: GGHE as % of GGE is not less than the status quo level at 17% of GGE (NHA 2013)

Indicator and Target 5: Non-government health expenditure does not exceed 20% of THE and OOP does not exceed the current level of 11.3% THE (in 2013)

Indicator and Target 6: Incidence of catastrophic health expenditure does not exceed the current achievement of 2.3% of total Thai households

Indicator and Target 7: Health impoverishment does not exceed the current achievement (2013) of 0.47%

F - Fairness goal - Social solidarity between "healthy" and "unhealthy" and between "rich" and "poor" is the most important concept. Fairness in health financing refers to

- Fairness in financial contribution)pre-payment) within each health insurance scheme

  Indicator and Target 8: The gaps between social health insurance contribution by the minimum wage and high income SHI members is indexed annually at seven folds with reference to 6.25 folds in 1991

- Fairness in financial contribution)pre-payment) across the three schemes and copayment at point of service

  Indicator and Target 9:

  9.1 By 2022, two policy options are proposed for achieving fairness in financial contribution across the three schemes

  9.1.1 All Thai populations must pay contribution

  9.1.2 All Thai populations must not pay contribution

  9.2 Copayment at point of service based on strict criteria to ensure protection of the poor, services with externality and fair distribution of collected resources.

- Fairness of provider payment of the three schemes across healthcare providers by types of health facility and different levels of care

Indicator and Target 10: To achieve fairness of provider payment

10.1 Age-adjusted per capita expenditure by each of the three insurance schemes does not exceed or below 10% of the national average

10.2 Every public health insurance scheme applies the same provider payment method with single rate for the same service and the same level of care

E - Efficiency goal - The efficiency goal is to ensure value of money by achieving technical and allocative efficiency while taking into account timeliness and quality of services.

Indicator and Target 11: Efficiency improvement is seriously required. At the same time, quality of care must be concerned.

11.1 Every scheme applies “close ended budget”;

11.2 Every scheme applies an effective and efficient reimbursement and price monitoring and control system;

11.3 The three schemes should exercise appropriate collective purchasing power at all level;

11.4 Government interventions to control price, as appropriate

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National Health Financing for Sustainable Universal Health Coverage: Goals, Indicators and Targets

The Committee on Resource Mobilization for Sustainable UHC*, THAILAND

1. Background

1.1 Thailand is an upper middle income country, having reached Universal Health Coverage (UHC) since 2002 with favourable performance and pro-poor outcomes.

(1) The worse-off population got more benefit of UHC policy than the better-off [1, 2]

(2) Health utilization rate increased sharply, nearly double [1]

(3) Household out-of-pocket expenditure on health reduced significantly from 33% of total health expenditure in 2001 to only 11% in 2013 [3]

(4) Incidence of catastrophic illnesses dramatically reduced from 5.7% in 2000 to 2.3% in 2013

(5) Many global health leaders recognized Thai UHC for example the President of the World Bank, Dr. Jim Yong Kim, had his speech at the Prince Mahidol Award Conference in January 2012 [4] and other international forums:-

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* The official letter of Ministry of Public Health at 1020/2558, 24 June 2015

"The incidence (of catastrophic health expenditure) dropped from 6.8 percent in 1996 to 2.8 percent in 2008 among the poorest people in the program. The impact on province-specific incidence of impoverishment has been even more impressive: in the poorest rural northeast region of Thailand, the number of impoverished households dropped from 3.4 percent in 1996 to less than 1.3 percent in 2006-2009". [5]

1.2 In September 2015, at the United National General Assembly in New York, heads of state endorsed the Sustainable Development Goals (SDG) which replaced Millennium Development Goals (MDG). SDG comprises of the total of 17 goals where health is the SDG3 and UHC is the target 3.8.[†]

1.3 Evidence shows that health is income elastic, the more income people have the more demand for health. Evidence of time-series studies demonstrates that health has wide elasticity, ranged between 0.2 and 0.8. This means a 1 percent increase in income can lead to a 0.2 – 0.8 percent increase in the demand for health care. Phelp [6] estimated an income elasticity of 0.2 or less. Results from a number of observational studies are consistent with this finding [7, 8].

[†] SDG Target 3.8 achieve universal health coverage (UHC), including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all

Feldstein [9] used data from 1958 to 1967 to estimate an income elasticity of 0.5. Similarly, McLaughlin [10] found an income elasticity of 0.7 using data from 1972 to 1982. A recent study by DiMatteo and DiMatteo [11] used data from 10 provinces in Canada from 1965 through 1991 and found a similar income elasticity of 0.8. However, there is no recent literature on income elasticity of demand for healthcare especially in the context of developing countries.

Similar to other countries, Thailand is facing huge challenges in health, in particular explosion of high technology and expensive patented new drugs, chronic non-communicable diseases and aging society, which lead to an increase in health needs and health expenditures.

1.4 Although Thailand has achieved good progress and good performance of UHC policies, there is a high concern on financial sustainability of UHC.

- General Government Health Expenditure (GGHE) as % of General Government Expenditure (GGE) increased from 10.4% in 2001 [12] to 17% in 2013 (Table 1)
- Total Health Expenditure (THE) as % of GDP increased from 3.4% in 2001 [3] to 4.6% in 2013 (Table 1). Although THE as % of GDP was not high, THE growth was higher than economic growth.

1.5 As realized, an inequity in financial contribution still exists not only among beneficiaries within the same health insurance scheme but also among the three main public health insurance schemes in Thailand. In addition, an inequity in access and use of health services has been observed. At the same time, there is room for improvement in efficiency gain of health system as a whole.

1.6 Therefore, the Government assigned the Ministry of Public Health to conduct a study for proposing policy recommendations. So the Minister of Public Health officially established a committee on resource mobilization for sustainable UHC in order to fulfill the assignment. This report is the outcome of the works of the committee after public hearing, both of which include all stakeholders.

Table 1 Key economic and health financing parameter

	GNI per capita, US$	Tax, %GDP	Gov't revenue, %GDP	Life expectancy, years	THE, % GDP	THE per capita, US$	GGHE % THE	GGHE % GGE	OOP, %THE
Reference year	2014	2012	2012	2013	2013	2012	2013	2013	2013
Cuba	5,910	N/A	N/A	79	8.8	603	93	13.4	7.0
France	43,080	21.4	42.5	82	11.7	4,864	78	15.8	7.4
Japan	42,000	10.1	11.2	83	10.3	3,966	82	20.0	14.4
Republic of Korea	27,090	14.4 (2011)	21.6 (2011)	81	4.2	1,880	53		36.6
Mexico	9,980	9.9 (2000)	12.5 (2000)	77	6.2	664	52	15.4	44.1
Norway	103,050	26.8	48.2	81	9.6	9,715	85	18.3	13.9
Thailand	5,410	16.5	20.5	**74**	**4.6**	215	80	17.0	11.3
European Union	35,673	18.8	34.5	80	10.1	3,460	77	15.7	13.6
Upper middle income country	7,893	13.6 (2011)	19.4	74	6.3	446	56	NA	31.9
High income country group	38,392	14.3	23.7	79	11.9	4635	61	17.2	14.7
East Asia Pacific (developing country only)	6,122	10.9 (2011)	12.6 (2011)	74	5.3	260	55	NA	34.6
East Asia and Pacific (all income level)	9,698	11.8 (2011)	13.6 (2011)	75	7.0	630	66	NA	25.5

Source: World Development Indicators 2015 [12] available at http://data.worldbank.org/data-catalog/world-development-indicators [access 29 August 2015]

Abbreviation- GNI: Gross National Income GDP: Gross Domestic Product
THE: Total Health Expenditure GGHE: General Government Health Expenditure
GGE: General Government Expenditure OOP: Household Out of pocket payment

2. Recommended Goals, Indicators and Targets of National Health Financing for sustainable UHC

Based on extensive works of the Technical Working Group (TWG) by conducting literature reviews and series of consultations i.e. a total of 4 meetings of the Committee (annex 1), one public consultation with stakeholders and one session at the First National Conference on Thai UHC; the four Goals of **S-A-F-E** which stands for **S**ustainability, **A**dequacy, **F**airness and **E**fficiency are proposed.

S - Sustainability goal Health financing sources including general government budget, pre-paid contribution and household spending on health are affordable by the overall economy, the government, tax payers and SHI contributors and can be sustained in the long run.

A – Adequacy goal Resources are adequate for ensuring universal access to essential health services including essential medicines and health technology, without catastrophic health expenditure and medical health impoverishment to the household.

F - Fairness goal Social solidarity between "healthy" and "unhealthy" and between "rich" and "poor" is the most important concept. Fairness in health financing refers to

- Fairness of financial contribution of beneficiaries within and across the three main public health insurance

schemes which are Civil Servant Medical Benefit Scheme (CSMBS), Social Health Insurance (SHI) and Universal Coverage Scheme (UCS)

- Fairness of provider payment of the three schemes across healthcare providers by types of health facility and different levels of care

E - Efficiency goal The efficiency goal is to ensure value of money by achieving technical and allocative efficiency[‡] while take into account timeliness and quality of services

Goals, indicators and targets are set to be achieved by 2022. This is in line with the medium term (ten years) projection of total health expenditure by 2022.

[‡] Technical efficiency means maximize the outputs given the inputs, or using least inputs for a given level of output, such as keeping hospital length of stay down to a level that still ensures safe and appropriate discharge. Allocative efficiency refers to the capacity of government to distribute resources on the basis of the effectiveness of public programs in meeting its strategic objectives. It entails the capacity to shift resources from old priorities to new ones, and from less to more effective programs.

Goal 1 Sustainability

Health financing sources including general government budget, pre-paid contribution and household spending on health are affordable by the overall economy, the government, tax payers and SHI contributors can be sustained in the long run.

Indicator and Target 1

By 2022, Total Health Expenditure (THE) does not exceed 5% of GDP

Note:

1. The medium term (ten years) projection of total health expenditure between 2013 and 2022 by TWG referred to National Health Account (NHA) with an assumption of GDP growth at an average of 3% per annum.
2. Referring to indicator and target no. 2, GGHE was at 20% of GGE while GGE was at 20% of GDP. This means that GGHE was equivalent to 4% of GDP and out-of-pocket by households was 1% of GDP. THE at 5% of GDP (GGHE 4% and OOP 1%) is affordable by the government and households. In addition, this level of THE can protect household from catastrophic health spending and medical impoverishment.
3. An average of THE was at 6.3 % GDP among the upper middle income group, in which Thailand belong to.
4. The medium term projection of health expenditure found

that THE would be at 5% of GDP in 2022. Two approaches were used. One was an estimation based on age group and gender for health expenditures of the three main public schemes and another was an estimation based on NHA series for other sources of finance.

5. In order to ensure good performance of indicator and target 1, efficiency gain is required (more detail in Goal 3 Fairness and Goal 4 Efficiency).

Indicator and Target 2

By 2022, General Government Health Expenditure (GGHE) does not exceed 20% of General Government Expenditure (GGE)

Note:

The same of 1-5 of indicator and target 1

6. Thai NHA 2013 shows that GGHE was high at 17% of GGE and, with this level, Thailand demonstrates high public contribution at 90 percentile among other countries in the World. In case that GGHE would increase from 17% to 20%, an appropriate source of finance needs to be considered (See note of Indicator and Target 9.1)

Goal 2 Adequacy

Resources are adequate for ensuring universal access to essential health services including essential medicines and health technology, without catastrophic health expenditure and medical health impoverishment to the household.

Indicator and Target 3

Total health expenditure (THE) is not less than the status quo level of 4.6 % of GDP (NHA 2013)

Source: Thai National Health Account (NHA) 2013

Note:

1. Total Health Expenditure at 4.6% of GDP is at the status quo, which is adequate for comprehensive health service package covered by three main public health insurance schemes with a minimal incidence of catastrophic health expenditure and medical impoverishment of households. Therefore, THE at 4.6% of GDP is the minimum level which should be maintained.
2. The status quo has an assumption that THE growth rate is not different from GDP growth. The medium term projection in this report applied GDP growth at 3% per annum. Efficiency improvement is highly needed to accomplish this target.
3. Efficiency in health financing can be improved using many means for example effective cost containment strategies and more involvement of public sectors and other stakeholders in health e.g. local government unit which was accounted for 5.5% of THE in 2012 (See more detail in Goal 4 Efficiency).

Indicator and Target 4

GGHE as % of GGE is not less than the status quo level at 17% of GGE (NHA 2013)

Source: Thai NHA 2013

Note:

1. Thailand had high public contribution of GGHE at 17% of GGE (NHA 2013). This reflects government's commitment in improving health of the populations. Therefore, GGHE as % of GGE should not less than this status quo. If GGHE as % of GGE reduces, it will create higher financial burden to households.
2. Efficiency improvement is seriously required. (Goal 4 Efficiency)

Indicator and Target 5

By 2022, non-government health expenditure does not exceed 20% of THE **and** OOP does not exceed the current level of 11.3% THE (in 2013)

Source: Thai NHA 2013

Note: Thailand has achieved good performance of reducing OOP from 33% to 27% and to 11.3% of THE in 2001, 2002 and 2013 accordingly. OOP at 11.3 % of THE resulted in low incidence of household catastrophic health expenditure and medical impoverishment (Indicator and Target 6 and 7). The GGHE at 17-20% of GGE is required in order to maintain this low level of OOP, 11.3% of THE,

Indicator and Target 6

By 2022, incidence of catastrophic health expenditure does not exceed the current achievement of 2.3% of total Thai households.

Source: Analysis from Household Socio-Economic Survey 2013 conducted by National Statistical Office

Note:

1. Catastrophic health expenditure is measured by household health spending greater than 10% of household consumption expenditure. The current incidence of catastrophic health expenditure was 2.3% (2013), see Annex 2.
2. The UHC target 3.8 in the Sustainable Development Goal aims to achieve zero incidence of catastrophic health spending, as the current level is very low, it is difficult to further bring down this incidence.
3. However, low level of catastrophic health expenditure does not automatically equal to adequately access to and use of essential health services when needed. Households may not be able to use essential health services due to some other barriers. Therefore, there is a need to regularly monitor access to and use of health services as well as unmet need (which has been shown to be as low as OECD countries).

Indicator and Target 7

By 2022, health impoverishment does not exceed the current achievement (2013) of 0.47%

Source: Analysis from Household Socio-Economic Survey 2013 conducted by National Statistical Office and NESDB national poverty lines

Note:

1. Health impoverishment is measured by the number of non-poor households which are pushed below the national poverty line after health payment, previous incidence was 2.01% in 2000 while current achievement is 0.47% in 2013, see Annex 2.
2. The UHC target 3.8 in the Sustainable Development Goal aims to achieve zero incidence of health impoverishment, as the current level is very low 0.47% of total Thai households, it is difficult to further bring down this incidence.

Goal 3 Fairness

Social solidarity between “healthy” and “unhealthy” and between “rich” and “poor” is the most important concept. Fairness in health financing refers to

- Fairness of financial contribution of beneficiaries within and across the three main public health insurance schemes which are Civil Servant Medical Benefit Scheme (CSMBS), Social Health Insurance (SHI) and Universal Coverage Scheme (UCS)
- Fairness of provider payment of the three schemes across healthcare providers by types of health facility and different levels of care

3.1 Fairness in financial contribution)pre-payment) within each health insurance scheme

- Within CSMBS: using general tax as sole source of finance without contributions by CSMBS members, the Concentration Index of general tax is 0.6423 in 2006, which is most progressive. Hence, no fairness issues
- Within UCS: using general tax as sole source of finance without contributions by 48 million UCS members, the Concentration Index of general tax is 0.6423 in 2006, which is most progressive. Hence, no fairness issues
- Within SHI: SHI contribution is less progressive than direct and indirect tax; as ceiling for assessed contribution was set at 15,000 Baht per month since 1991 while minimum wage increase, hence the contribution gap between rich and poor becomes

narrow and less progressive and solidarity. Therefore, there is a need to revise ceiling for assessed contribution for improving fairness among SHI members.

Indicator and Target 8

The gaps between social health insurance contribution by the minimum wage and high income SHI members is indexed annually at seven folds with reference to 6.25 folds in 1991.

Source: TWG analyzed from SSO data

Note:

1. The maximum level, 15,000 Baht monthly payroll was set since 1991 for assessed contribution while the minimum level applied the daily minimum, 100 Baht in 1991 (2534BE) [13]. However, the minimum wage annually increased to 300 Baht in 2013 (2556BE) [14], a three fold increases between 1991 and 2013. The gap of assessed contribution between the minimum wage earners and the highest income SHI members was 6.25 times [15,000 B per month / (100 B/day *24 day per month)] in 1991. This gap reduces to 2.1 folds [15,000/(300*24)]. This results in limited risk sharing and solidarity. Increasing the ceiling of payroll for assessed contribution in line with changes in minimum wage, not only improve equity and solidarity, it mobilizes more resources to the Social Security Systems.
2. Seven folds would increase the ceiling of 15,000 Baht per month to 50,400 Baht per month
3. Employers and employees feel not afraid of increasing the level of assessed contribution. Social Security Office agrees in

principle and this proposal. Two further considerations are (a) increasing the ceiling of assessed contribution while maintaining contribution rate at 1.5%, this will increase higher amount of contributions which should be used for other benefits of SHI members or (b) increasing the ceiling of assessed contribution and reducing contribution rate in order to get the same amount of contribution.

4. Increasing the ceiling of assessed contribution does not affect indicators and targets 1-4. There are many benefits of increasing the ceiling e.g. reducing contribution of the poor or mobilizing more resources or increasing other benefits.

3.2 Fairness in financial contribution)pre-payment) across the three schemes and copayment at point of service

- SHI members pay twice, tax and SHI contribution at 1.5% of salary whereas members of CSMBS and UCS pay only tax, no obligation in paying contribution for health insurance schemes

Indicator and Target 9

9.1 By 2022, two policy options are proposed for achieving fairness in financial contribution across the three schemes

9.1.1 All Thai populations **must pay** contribution

9.1.2 All Thai populations **must not pay** contribution

Note: 1. Option 9.1.1 in the long run, only tax finance may be inadequate for funding health systems due to higher health expenditures required in response to demographical and

epidemiological changes. Apart from efficiency improvement, resource mobilization from pre-payment contribution by all Thai populations is critically required.

a. CSMBS members may apply a similar mechanism of an autonomous university, i.e. increase salary to 1.3-1.5 of the current salary and put them into SHI.
b. SHI member already paid the contribution
c. UCS introduces mandatory contributions by 47 million UCS members by applying Korean/Japanese experiences, using 3-5 bands of assessed income for contributions. Contribution rate is progressive and safeguard the poor who are partially subsidized by the government.
d. The representative of Comptroller General Department had an observation and concern that civil servants have low amount of salary. Pre-payment contribution may have negative consequences of paying contribution. Nonetheless, evidence of international experience shows that civil servants in Lao PDR, Cambodia, Vietnam, Indonesia and Philippines has paid contribution to health insurance scheme.
e. The representative from AIDS Access Foundation raised high concern of problems in identifying poor households for exemption the contribution (under-coverage of poor households and leakage to non-poor households).

Note 2. Option 9.1.2 Employers, employees and consumers have no objection if the government is ready to use tax finance for all Thai populations, including SHI contributors.

Note 3. Tax finance should be applied because tax is the most progressive. In case that resource mobilization is needed, VAT or personal income tax can be an option because of its feasibility. Other sources can be considered e.g. financial transaction tax. The government needs to ensure that the additional resources from these new tax should allow adequate financing for UHC.

Note 4. Pros and cons of two options in table below

	Pros	Cons
9.1.1 All Thai populations **must pay** contribution	• Promoting social solidarity • Radically solve the problem of fairness in financial contribution across the three schemes • Generate more fiscal space for health by the rich UCS members • Ownership of the health insurance scheme	• Operational challenges in collecting premium from the informal sector, which agencies are competent in collecting the premium • Enforcement challenges • Politically non-palatable • Actuarial is needed for calculation of contribution rate and ceiling of assessed contribution

9.1.2 All Thai populations **must not pay** contribution	• Tax finance, the most progressive • No need for contribution collection – easy	• Politically difficult • Loss of government revenue from the existing SHI contribution from employers and employees • Less social solidarity • less ownership in the health insurance scheme

9.2 Copayment at point of service which requires the following conditions, if applied:

a. No copayment for health services which have an externality effect for example vaccination, health promotion, prevention and control of communicable diseases

b. Need to protect the worse-off or patients with chronic diseases

c. Copayment for extra non-medical services for example private room; those who choose this option needs to also pay for health services (not use health insurance coverage). Major concerns are
    - Fee schedules must be established and announced publicly
    - Protecting catastrophic and impoverishment is needed
    - Clear guideline for returning to use public health insurance without copayment

d. Equity concern: a mechanism to prevent the rich, who has higher affordability, accesses and uses more health services than the poor e.g. fee schedule and regulation

e. Equalization of revenue from copayment: a mechanism for redistribution from better-off to worse-off health facilities

Indicator and Target 10

By 2022, to achieve fairness of provider payment

10.1 Age-adjusted per capita expenditure by each of the three insurance schemes does not exceed or below 10% of the national average; i.e. the maximum does not exceed 10% of national average, the minimum does not below 90% of national average.

Note: Tax finance is the majority. Therefore, government subsidy should not differ much.

10.2 Every public health insurance scheme applies the same provider payment method with single rate for the same service and the same level of care (e.g. medicines, medical devices, Relative Weight of Adjusted DRG)

Note: CSMB applies different rates of DRG payment i.e. tertiary care hospital will get higher rate per adjusted RW than secondary and primary care hospitals. In contrast, UCS and SHI apply the same rate for the same service to every level of care.

Goal 4 Efficiency

The efficiency goal is to ensure value of money by achieving technical and allocative efficiency while take into account timeliness and quality of services

Indicator and Target 11

Efficiency improvement is seriously required. At the same time, quality of care must be concerned.

11.1 Every public health insurance scheme applies "**close ended budget**" which is an effective intervention for cost containment and efficiency gain. An extra charge for balance billing is not allowed, except option 9.2.

11.2 Every public health insurance scheme should apply an effective and efficient **reimbursement and price monitoring and control system.**

11.3 The three public health insurance schemes should exercise **collective purchasing power** for collective bargaining and procurement of medicines and medical devices at all levels i.e. provincial, regional and national level, as appropriate.

11.3.1 Collective purchasing power at the national level can be exercised for medicines and medical devices which are high cost and low use.

11.3.2 Collective purchasing power at the provincial or regional levels can be exercised for other items.

11.4	**Government should consider implementing an appropriate intervention** for example an intervention to solve a problem of monopoly drug industry and compulsory licensing as appropriate.

Note: Annex 3 shows leading sources and possible approaches of addressing technical inefficiency

Efficiency goal and targets are very important in ensuring value of money. However, at the same time important context and environment need to be taken into account.

- Comprehensive health service delivery systems focusing on primary care, health promotion and disease prevention in particular in the urban areas; community based chronic care model; multi-disciplinary care team and engagement of all relevant stakeholders including private sector, civil society and local government unit;
- Good governance of public health facilities for improving efficiency, transparency and participation for example governing structure of social enterprise or independent organization;
- Promoting domestic initiative and innovative health interventions; this should be done at health insurance scheme level and national level such as effective palliative care, effective end of life care, community based elderly care;
- Equitably access and use of health services of all people, especially vulnerability;

- An effective mechanism for ensuring quality of services, medicines and medical supplies;
- Rational use of medicines and health technology by promoting use of National Drug List not less than 90% of total value; step wise approach can be applied according to level of health facilities for example not less than 90% at primary care level, xx% at secondary and tertiary care levels (there is a need to conduct feasibility study according to complexity and severity of diseases at different levels of care);
- Transparency and accountability of decision making process using evidence of cost-effectiveness analysis for the most efficient investment; for example transparent costing data of health services which can be verified by public

Table 2 **Summary goals, indicators and targets by 2022**

Goals	Indicators and targets
Goal 1 Sustainability	1. Total Health Expenditure (THE) does not exceed 5% of GDP
	2. General Government Health Expenditure (GGHE) does not exceed 20% of General Government Expenditure (GGE)
Goal 2 Adequacy	3. Total health expenditure (THE) is not less than the status quo level of 4.6 % of GDP (NHA 2013)
	4. GGHE as % of GGE is not less than the status quo level at 17% of GGE (NHA 2013)
	5. Non-government health expenditure does not exceed 20% of THE **and** OOP does not exceed the current level of 11.3% THE (in 2013)
	6. Incidence of catastrophic health expenditure does not exceed the current achievement of 2.3% of total Thai households
	7. Health impoverishment does not exceed the current achievement (2013) of 0.47% of total Thai households
Goal 3 Fairness	8. Fairness in financial contribution (pre-payment) within each health insurance scheme: the gaps between social health insurance contribution by the minimum wage and high income SHI members is indexed annually at seven folds with reference to 6.25 folds in 1991
	9. Fairness in financial contribution (pre-payment) across the three schemes and copayment at point of service

Goal 3 Fairness (Cont.)	9.1 Fairness in financial contribution across the three schemes 9.1.1 All Thai populations **must pay** contribution 9.1.2 All Thai populations **must not pay** contribution 9.2 Copayment at point of service for all Thai populations
	10. Fairness of provider payments by the three schemes 10.1 Age-adjusted per capita expenditure by each of the three insurance schemes does not exceed or below 10% of the national average; i.e. the maximum does not exceed 10% of national average, the minimum does not below 90% of national average 10.2 Every public health insurance scheme applies the same provider payment method with single rate for the same service and the same level of care (e.g. medicines, medical devices, Relative Weight of Adjusted DRG)
Goal 4 Efficiency	11. Efficiency improvement while take into account quality of care 11.1 Every public health insurance scheme applies **close ended budget** 11.2 Every public health insurance scheme should apply an effective and efficient **reimbursement and price monitoring and control system** 11.3 The three public health insurance schemes should exercise **collective purchasing power** 11.4 **Government interventions** as appropriate

Table 3 Indicators and targets which may respond to more than one goal

Indicators and targets	Goal 1 Sustainability	Goal 2 Adequacy	Goal 3 Fairness	Goal 4 Efficiency
1. Total Health Expenditure (THE) does not exceed 5% of GDP	✓			✓
2. General Government Health Expenditure (GGHE) does not exceed 20% of General Government Expenditure (GGE)	✓			✓
3. Total health expenditure (THE) is not less than the status quo level of 4.6 % of GDP (NHA 2013)		✓		
4. GGHE as % of GGE is not less than the status quo level at 17% of GGE (NHA 2013)		✓	✓	
5. Non-government health expenditure does not exceed 20% of THE **and** OOP does not exceed the current level of 11.3% THE (in 2013)		✓	✓	
6. Incidence of catastrophic health expenditure does not exceed the current achievement of 2.3% of total Thai households		✓	✓	
7. Health impoverishment does not exceed the current achievement (2013) of 0.47% of total Thai households		✓	✓	

Indicators and targets	Goal 1 Sustainability	Goal 2 Adequacy	Goal 3 Fairness	Goal 4 Efficiency
8. Fairness in financial contribution (pre-payment) within each health insurance scheme: the gaps between social health insurance contribution by the minimum wage and high income SHI members is indexed annually at seven folds with reference to 6.25 folds in 1991	✓	✓	✓	
9. Fairness in financial contribution (pre-payment) across the three schemes and copayment at point of service 9.1 Fairness in financial contribution across the three schemes 9.1.1 All Thai populations **must pay** contribution 9.1.2 All Thai populations **must not pay** contribution 9.2 Copayment at point of service for all Thai populations	✓	✓	✓	✓
10. Fairness of provider payments by the three schemes 10.1 Age-adjusted per capita expenditure by each of the three insurance schemes does not exceed or below 10% of the national average	✓		✓	✓

Indicators and targets	Goal 1 Sustainability	Goal 2 Adequacy	Goal 3 Fairness	Goal 4 Efficiency
10.2 Every public health insurance scheme applies the same provider payment method with single rate for the same service and the same level of care				
11. Efficiency improvement while take into account quality of care 11.1 Every public health insurance scheme applies **close ended budget** 11.2 Every public health insurance scheme should apply an effective and efficient **reimbursement and price monitoring and control system** 11.3 The three public health insurance schemes should exercise **collective purchasing power** 11.4 **Government interventions** as appropriate	✓			✓

Annex 1

The Committee on Resource Mobilization for Sustainability Universal Health Coverage, THAILAND

1.	Ammar Siamwalla	Adviser
2.	Suwit Wibulpolprasert	Chair
3.	Ministry of Public health	Committee member
4.	Secretary of the Office of the National Economic and Social Development Board	Committee member
5.	Director of the Bureau of the budget	Committee member
6.	Director of the Fiscal Policy Office	Committee member
7.	Director General of the Comptroller General's Department	Committee member
8.	Secretary of the Social Security Office	Committee member
9.	Secretary of the National Health Security Office	Committee member
10.	Director of the Health Systems Research Institute	Committee member
11.	Director of the International Health Policy Program	Committee member
12.	Director of the Aids Access Foundation	Committee member
13.	Board president of Thailand Department Research Institute	Committee member
14.	Director of the Health Intervention and Technology Assessment Program	Committee member
15.	Thaworn Sakunphanit	Committee secretary
16.	Jadej Thammatach-aree	Assistant committee secretary

Annex 2

Annex 2 Number and percent of households with catastrophic and impoverishment

SES year	Total number of households	Household with catastrophic health spending*, households	%	Household with medical impoverishment	%
1988	8,937,204	709,491	7.9%	210,502	2.36%
1990	10,889,455	769,587	7.1%	253,225	2.33%
1992	13,048,425	890,307	6.8%	301,546	2.31%
1994	13,596,556	923,688	6.8%	331,289	2.44%
1996	15,037,617	898,127	6.0%	328,285	2.18%
1998	15,758,118	835,471	5.3%	262,539	1.67%
2000	16,086,387	923,568	5.7%	323,026	2.01%
2002	16,322,888	663,254	4.1%	215,745	1.32%
2004	16,764,948	684,360	4.1%	184,007	1.10%
2006	18,051,154	695,492	3.9%	179,180	0.99%
2007	18,178,078	588,296	3.2%	166,095	0.91%

SES year	Total number of households	Household with catastrophic health spending*, households	%	Household with medical impoverishment	%
2008	18,993,685	594,215	3.1%	150,452	0.79%
2009	19,579,397	644,034	3.3%	154,735	0.79%
2010	19,740,665	567,733	2.9%	139,220	0.71%
2011	19,986,151	493,650	2.5%	109,670	0.55%
2012	20,068,041	528,780	2.6%	105,174	0.52%
2013	20,167,840	460,159	2.3%	93,858	0.47%

Source: analysis from Socio Economic Survey 1988 to 2013 conducted by National Statistical Office

Note * measured by >10% of household consumption expenditure on health

Annex 3

Annex 3 Leading sources of technical inefficiency relating to health system inputs

Source of inefficiency	Possible reasons for inefficiency	Evidence of inefficiency	Possible ways of addressing inefficiency	Evidence of efficiency gains
Health care workers: Inappropriate or costly staff mix	Conformity with pre-determined HR policies and procedures; resistance by medical profession; fixed / inflexible contracts	A Cochrane review found that primary care doctors produce no higher quality care or better health outcomes for patients than trained nurses	Needs-based assessment and training; revise remuneration policies; flexible contracts; performance-related pay	Health workers with less training performed as well as those with more training in assessing and managing childhood illness

Source of inefficiency	Possible reasons for inefficiency	Evidence of inefficiency	Possible ways of addressing inefficiency	Evidence of efficiency gains
Medicines: Under-use and over-pricing of generic drugs	Inadequate cost controls on prescribers; lower perceived efficacy / safety of generic drugs; historical prescribing patterns	Across WHO regions, availability of 15 key generic medicines in the public sector was 30-55%, and prices were 10% higher than global reference price	Improve prescribing guidance, information, training and practice; develop active purchasing; reduce mark-ups	A US survey estimated that $8.8 billion (11% of drug expenditure) could be saved by substituting generic for brand-name drugs.
Medicines: Irrational use of drugs	Consumer demand / expectation; limited knowledge about lack of therapeutic effect; inadequate regulatory	50-70% of drug spending in developing countries has no discernible impact on health	Improve prescribing guidance, information, training and practice; raise public awareness	A national-wide campaign in France reduced anti-biotic prescriptions by

Source of inefficiency	Possible reasons for inefficiency	Evidence of inefficiency	Possible ways of addressing inefficiency	Evidence of efficiency gains
	frameworks	outcome; 40% of prescriptions in Germany not needed		25% (35% among children) over five years.
Medicines: Sub-standard or counterfeit drugs	Weak drug regulatory structures; weak procurement mechanisms	In SE Asia, over 50% of samples of the anti-malarial artesunate were found to contain no active ingredient	Improve drug regulation and quality control; carry out product testing	Rapid product screening reduced anti-malarial drug failure rates by at least 50% in Lagos and Accra

Source of inefficiency	Possible reasons for inefficiency	Evidence of inefficiency	Possible ways of addressing inefficiency	Evidence of efficiency gains
Health care products: Over-use of procedures, investigations and equipment	Supplier-induced demand; Fee for service; fear of litigation ('defensive medicine'); inadequate guidelines / review	'Unwarranted use' of diagnostic tests and procedures has been estimated to account for 40% of overall waste in the US ($250-325 billion per year)	Reform incentive and payment structures (e.g. capitation); improve and disseminate guidelines for product use	Peer review and feedback reduced laboratory test orders among community physicians in Canada by 8% or 0.22 tests/visit
Health care services: Inappropriate hospital size	Uneven historical development of hospitals; inadequate planning, coordination	Provincial hospitals in Vietnam in 1996 (47% of total admissions)	Use input-output data to plan hospitals; match managerial capacity	Analysis of scale efficiency in Zambia identified hospitals that

Source of inefficiency	Possible reasons for inefficiency	Evidence of inefficiency	Possible ways of addressing inefficiency	Evidence of efficiency gains
	and control	exhibited notable diseconomies of scale	to size; raise occupancy	could be merged or down-graded
Health care services: Inappropriate hospital admissions or length of stay	Lack of alternative care arrangements; insufficient incentives to discharge; limited knowledge of best practice	A systematic review concluded that at least 20% of acute bed use among a wide range of settings was likely to be inappropriate	Provide alternative care (e.g. day care); alter incentives to hospital providers; raise knowledge about efficient admission practice	In 3 teaching hospitals in Spain, a physician-oriented feedback intervention led to a 45% reduction in inappropriate stays

Source of inefficiency	Possible reasons for inefficiency	Evidence of inefficiency	Possible ways of addressing inefficiency	Evidence of efficiency gains
Health system leakages: Corruption and fraud	Corruption; unclear resource allocation guidance; poor accountability mechanisms	In Chad, regions received 27% of the non-wage budget earmarked for them (18% rather than 67% of MoH budget)	Improve governance, including budgetary management; undertake expenditure surveys	Six years after creating a counter fraud service in the UK, NHS losses to fraud had fallen by 50%

Source [15]

Note: The primary source of allocative inefficiency relates to the sub-optimal mix of services and interventions currently provided. Key sources of technically inefficient use of resource inputs are for example sub-optimal or unnecessary use of resource inputs for a defined outcome, such as excessive hospitalization, unnecessarily high cost of intervention brought about by, among other things, a reliance on brand-name drugs or a top-heavy staff mix.

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