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Discussion Paper: Enhancing Innovative Healthcare Financing in Pursuit of Sustainable Healthcare

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DISCUSSION PAPER

Enhancing Innovative Healthcare Financing in Pursuit of Sustainable Healthcare



January 2019



Acknowledgements

This discussion paper was prepared for the Ministry of Finance of Thailand under a work stream established by the Asia-Pacific Economic Cooperation (APEC) Life Sciences Innovation Forum (LSIF), APEC Business Advisory Council (ABAC), and the Asia-Pacific Financial Forum (APFF). Principal authors include Dr. Ryan MacFarlane, PhD, Mr. Eric Obscherning, and Mr. Michael Schmitz of C&M International. The discussion was overseen by Ms. Erika Elvander of the U.S. Department of Health and Human Services and APEC LSIF Planning Group, and the Ministry of Finance of Thailand.



Executive Summary

The Asia-Pacific Economic Cooperation (APEC) Life Sciences Innovation Forum (LSIF), APEC Business Advisory Council (ABAC), and the Asia-Pacific Financial Forum (APFF) have established a work stream to help Thailand in its pursuit of better health and economic outcomes. Specifically, this work is designed to help Thailand increase access to healthcare by expanding the role of the private sector and exploring the use of innovative and alternative financing models to deepen the level of coverage provided under Universal Healthcare. The following paper and recommendations are presented to the Government of Thailand based on the results of the dialogue on November 5, 2018.



Recommendations

1. Review health budget allocation for non-communicable diseases (NCDs) and vaccination to ensure spending is in line with increased incidence and that calculations of returns on investments include secondary and tertiary benefits of good health.
2. Undertake an analysis of the extent of coverage of Universal Healthcare (UHC) for NCDs in Thailand in order to review inequalities in access to high-quality care and innovation and to provide evidence for assessing which innovative funding mechanisms may fill funding and access gaps.
3. Consider utilizing the *APEC Checklist of Enablers for Alternative Health Financing* or aspects of it to evaluate the enabling environment for alternative healthcare financing mechanisms.
4. Work with public and private funders to initiate and/or enable innovative approaches to healthcare financing, exploring partnerships that will fill funding and access gaps and cover populations or services not yet reached or delivered by existing mechanisms. For example:
 - Expand the use of private health insurance markets and encourage private markets to increase options and facilitate greater participation to create sustainable health outcomes and greater service coverage.
 - Accelerate the insurance product approval process and allow insurers to engage in activities to provide more efficient care and promote innovation.
 - Consider joining the Mutual Exchange Forum on Inclusive Insurance Network (MEFIN) which could help in expanding access to insurance products.
5. Establish a task force or working group so that the APEC LSIF can continue to partner with Thailand and help deliver capacity-building, provide recommendations and guidance, and develop new partnerships to improve health outcomes.

Background

Studies commissioned by the APEC Business Advisory Council (ABAC) and the APEC Life Sciences Innovation Forum (LSIF) show that APEC economies[†] face losses in gross domestic product (GDP) between 6 and 8.5 percent by 2030 due to the current and projected rise in non-communicable diseases (NCDs), notably cancer, cardiovascular disease (CVD), and mental illness, coupled with aging populations.^{1,2} To address this challenge, APEC Leaders called for work on the fiscal and economic impacts of ill health, and APEC Ministers recommended convening a cross-fora dialogue.

At the APEC Finance Ministers' Process Meetings in October 2016, a discussion was initiated with the APEC LSIF and APEC Health Working Group (HWG). At that meeting, officials discussed the productivity gains from investing in health and that health should be viewed as an asset with measurable returns on public (and private) investment. It was noted that there have been numerous studies on the returns on investments in education and officials remarked that similar quantitative analyses in the health sector were groundbreaking and that additional analysis would be welcomed.

Officials agreed on the firm links between health financing challenges and APEC's broader objectives regarding fiscal reform, financial resilience, and financial inclusion as included in the Cebu Action Plan launched by Finance Ministers. Officials also agreed that APEC with its strong links to the private sector and ability to address multidisciplinary challenges was well-suited to address the topic, particularly how public and private sector funds could be leveraged together as well as the possibility of scaling up innovative pilot programs from the public and private spheres.

In 2017, experts from the APEC LSIF and APEC HWG met with high-level APEC officials during the APEC Finance Ministers Meeting and reviewed how APEC economies are applying the concept of social investment to the health sector and thus measuring returns on public investment in health; the status of health spending in APEC economies; the need to more accurately measure the returns on investments in health; and the importance of alternative financing mechanisms to support greater access (see insert, "2017 Finance Ministers Statement"). Subsequently, Thailand's Vice Minister for Finance requested that an initiative be conducted between the APEC LSIF and the Ministry of Finance to address healthcare financing challenges.

[†]*Australia; Brunei Darussalam; Canada; Indonesia; Japan; Republic of Korea; Malaysia; New Zealand; The Philippines; Singapore; Thailand; The United States; Chinese Taipei; Hong Kong, China; People's Republic of China; Mexico; Papua New Guinea; Chile; Peru; Russia; and Viet Nam.*

“We welcome the exploratory dialogues between senior finance officials, Life Sciences and Innovation Forum (LSIF) and Health Working Group (HWG) to address the fiscal and economic impacts of the steep rise in chronic disease and of aging societies in APEC economies. We encourage further dialogue with interested economies to share best practices and explore innovative, sustainable health financing solutions”

- 2017 Finance Ministers Statement

Demographic Challenges & Burden of Disease

In Thailand, declining fertility, birth, and mortality rates and rapid demographic transition have and continue to reduce the size of the working-age population and increase the size of the aging population. The number of older persons (OPs) in Thailand as a percent of the total population is expected to double from 15 to 30 percent within 20 years. In fact, Thailand will be a so-called “completely aged society” with 13.8 million OPs or 20 percent of the population by 2021 and a “super-aged society” with 20.9 million OPs or 30 percent of the population by 2035.³

Data from the UN World Population Prospects suggests Thailand is experiencing a speed of population aging which may be significantly faster than other aging economies such as Hong Kong, China; Japan; Republic of Korea; Singapore; and Chinese Taipei. While the aging population gets larger, the proportion of children and proportion of working-age persons continue to decline. The proportion of populations age 0-14 and age 15-59 have been decreasing since 2005, the former since 1970.

In addition to the stresses of a growing elderly population, Thailand also faces the challenge of an increasingly dependent elderly population. For example, children were the main source of income among persons 60 and older in 2016 ahead of work and spouse. But with the declining availability of children, this source of support for OPs grows increasingly unstable and unsustainable. In 2007 there were 8.7 working-age people for every 1 older person while in 2037 there will be only 2.2 working-age people for every 1 older person.

These demographic shifts have significant impacts on the burden of disease in Thailand. The leading causes of death are quickly becoming chronic, degenerative, and complex diseases. Morbidity is expanding. The percent of OPs with self-assessed “poor health” and prevalence of disability are both increasing.⁴ All of these are increasing the demand for long-term care and trained caregivers.^{5,6} This changing burden of disease places

upward pressure on health and social care expenditures, presenting a challenge for families, communities, and the economy as a whole as OPs require more care for their welfare and assistance in their daily lives.⁷

Non-communicable diseases (NCDs) alone in Thailand claim over 75 percent of the disability-adjusted life-years (DALYs) lost and result in 12.9 billion THB (\$404 million USD) in annual economic losses.^{8,9} The short-term budget implications of health and aging are alarming, but the costs related to productivity are much more significant and have the potential to derail needed development gains and economic growth.



Value of Investments in Healthcare

The benefits of population-level public health expenditure tend to be long term and in many cases accruing after the policymakers that put them in place have moved on in careers. Thus, the political backing for public health intervention is often lacking and many interventions with a high return on investment (ROI) are not funded.

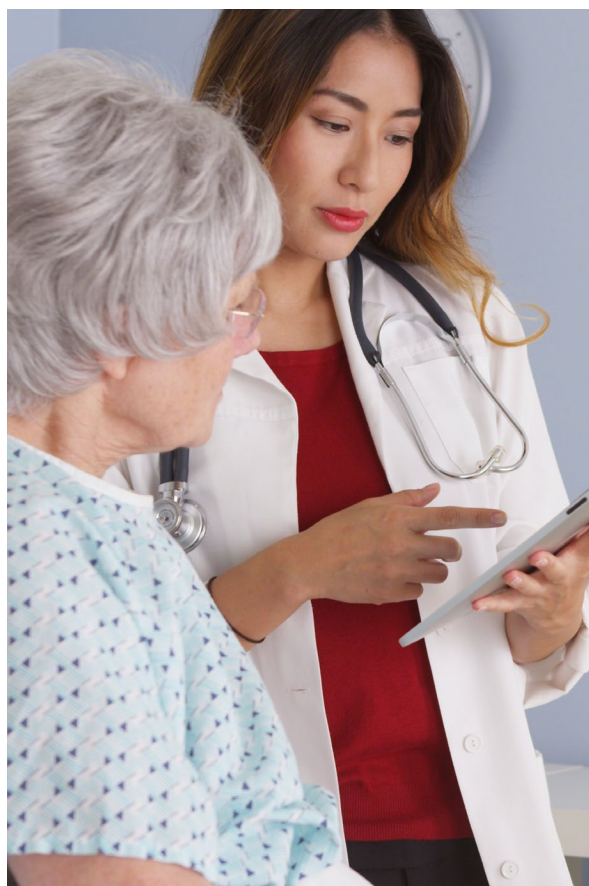
Systematic reviews of multiple studies indicate very high cost-benefit ratios and ROI in health and that the interventions are highly cost-saving.¹⁰ Thus, cuts to public health budgets are likely to generate additional costs to health services and the wider economy. One study found that Thailand's Universal Coverage Scheme (UCS) generated additional economic activity which exceeded the cost of UCS and positively impacted the economic returns of the chemical, trade, electricity, water, mining and quarrying, transportation, and communication sectors in Thailand.¹¹ Another study looked systematically at the returns on public health investment and found a median value of 14:1.¹² An additional set of studies looked at child and maternal health, mental health, and adolescent health and found cost-benefit ratios of between 4.0 and 10.2.^{13, 14, 15}

Intervention	Cost Benefit Ratio
Child and maternal health	8.7
Mental health	4.0 to 5.3
Adolescent health	10.2

Government Spending on Healthcare

The metric used most often when studying health-care spending is to specify government spending on health relative to the total economy or gross domestic product (GDP). Researchers at the London School of Hygiene and Tropical Medicine have argued for this metric. While recommended level of expenditure varies, a range of studies projecting the financial resource requirements to achieve universal health systems, using detailed health service cost data and modeling techniques, indicate that public health expenditure should be 6 to 7 percent of GDP.

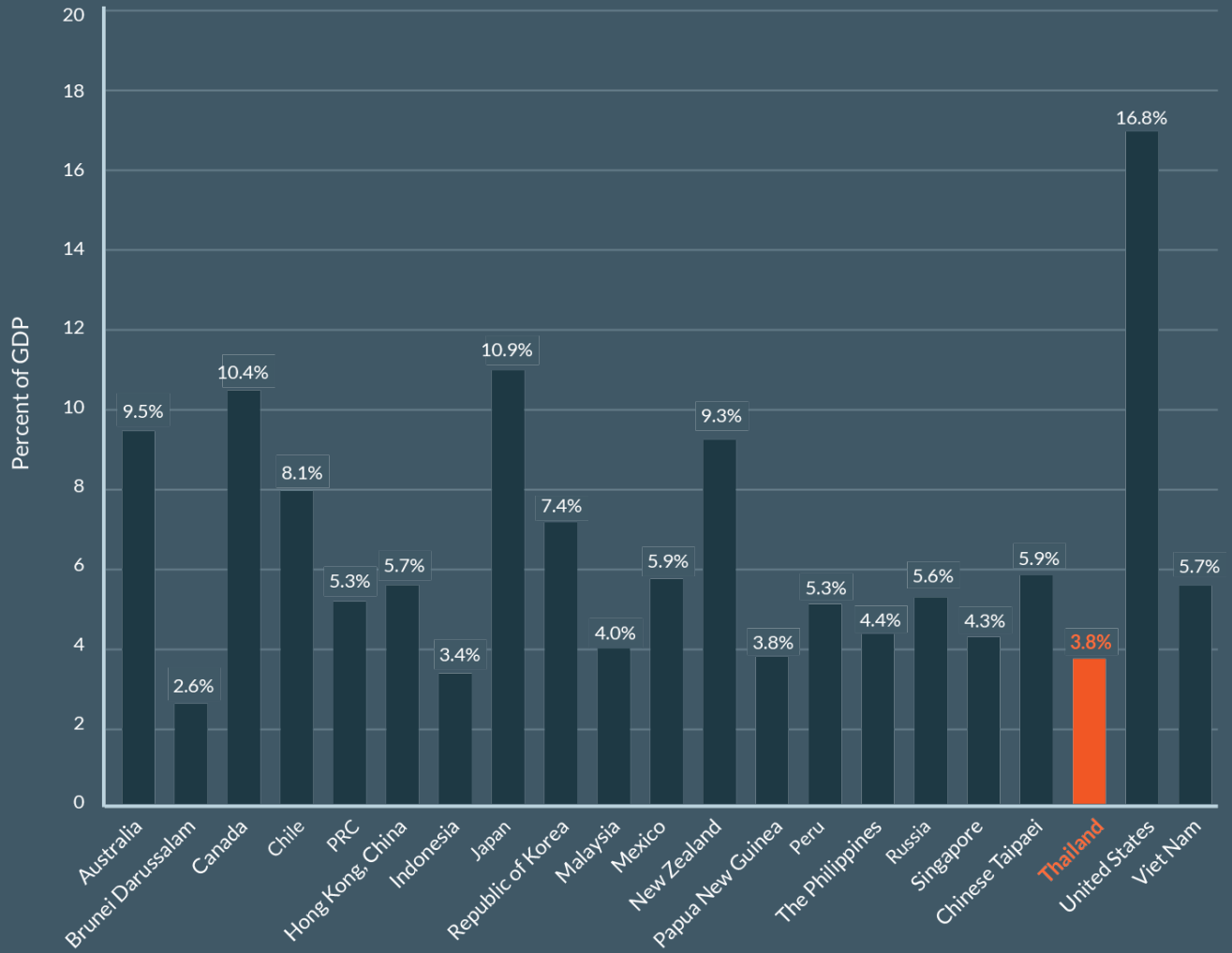
Research also suggests spending of more than 5 percent of GDP is required to achieve a conservative target of 90 percent coverage of maternal and child health services. According to data from the *World Health Report* in 2010, public spending of about 6 percent of GDP on health will limit out-of-pocket payments (OPPs) to an amount that makes the incidence of financial catastrophe negligible.¹⁶ The figure below shows health expenditures as a percent of GDP based on data from the World Health Organization (WHO) Global Health Expenditure Database as presented by the World Bank Group (WBG).¹⁷



RECOMMENDATION 1:

Review health budget allocation for non-communicable diseases (NCDs) and vaccination to ensure spending is in line with increased incidence and that calculations of returns on investments include secondary and tertiary benefits of good health.

Health Expenditure (% of GDP)



Innovative Healthcare Financing Mechanisms

While not a replacement for government-funded programs, innovative and alternative health financing mechanisms can allow economies to leverage their limited resources to expand health coverage. The table below shows innovative financing options that can be used to expand health coverage.¹⁸

Fiscal Measures	Financing	Insurance
<p>Sin Taxes Tobacco, Sugar, Salt, Alcohol</p>	<p>Grants Global financing facilities Crowdfunding</p>	<p>Universal / long-term healthcare insurance</p>
<p>Airline ticket levies</p>	<p>Bonds Health impact bonds Development bonds</p>	<p>Partial / limited / micro health insurance</p>
<p>Financial transaction tax</p>	<p>Blended Capital Buffer funds Product development partnerships Loan facilities</p>	<p>Health Savings Account</p>

Health Impact Bonds

Development or social impact bonds are an emerging area of innovative financing to achieve social and development outcomes by bringing together private investors, implementers, governments and donors to pave the way for a more results-oriented and sustainable approach to supporting health and economic prosperity, especially in growing markets. Impact bonds blend tenets of impact investing, private sector partnership, and results-based contracting. They enable donors to pay for what works and offer impact investors a gateway to social impact investing. The risk of failure is shifted to investors, allowing governments and other donors to spend resources more effectively.

These instruments also allow for greater innovation and uptake of new solutions as well as accelerated knowledge exchange. The impact bond structure can be used to drive efficiencies and harness the novel commercial perspective of investors to improve performance in service delivery. As understood from MSD for Mothers in India and other early adopters and innovators of health impact bonds, the pillars for a successful health impact bond program are evidence, partnerships, and sustainability. Understanding and building an evidence-base for the social and economic return on investment (ROI), finding the right stakeholders and mix of expertise, and building sustainability into the strategy upfront rather than later are all keys (see Case Studies #1, “MSD for Mothers Health Impact Bond”; #2, “Development Impact Bond for HER-2+ breast cancer patients”; #3, “Impact Bond for Mental Health in New Zealand”).

CASE STUDY #1:MSD for Mothers Health Impact Bond

WHAT:

MSD for Mothers aims to improve the quality of maternal and newborn health services provided through private facilities.

HOW:

The success of the impact bond is judged on whether these healthcare facilities are ready to achieve the new certification standard.

WHO:

The upfront funder, UBS Optimus Foundation, provides the initial working capital so the service providers can begin their work with the private facilities in Rajasthan, India. The outcome payers—USAID and MSD for Mothers—pay back the investor the original amount invested, plus additional returns if predetermined targets are met. Progress is assessed regularly by an independent verifier.

More information may be found at: www.msdformothers.com

CASE STUDY #2:Development Impact Bond for HER-2+ breast cancer patients

WHAT:

The bond aims to reduce per patient cost of treatment for breast cancer through financial support for patients unable to pay out of pocket or through insurance. The bond also supports hospitals to increase the success rate of breast cancer treatment, creates awareness of breast cancer screening, and provides post-care follow-up services for five years.

More information may be found at: www.koisinvest.com

WHO:

The bond was developed by Kois Invest in collaboration with Roche and Tata Memorial Hospital.

HOW:

The bond is currently at the feasibility study phase with the governments of Assam and Karnataka showing interest in the model.

CASE STUDY #3:

Mental health impact bond in New Zealand

WHAT:

New Zealand's first impact bond pilot which focuses on improving mental health outcomes for New Zealanders through rapid placement into competitive work at market wages, 'real world' training, and integrates vocational and mental health support to build skills, resilience and work capacity.

HOW:

APM Workforce has solid track record of using a supported employment approach in Australia and New Zealand to help people with mental health concerns find work. If they achieve agreed results, the government will pay the investors back their investment.

WHO:

Janssen invested alongside two other Class A investors. An established Australian-owned service provider, APM Workforce, has been selected as the provider and an outcome-based contract with them is in place. APM Workforce also contributed as a Class B investor.

More information may be found at: www.health.govt.nz

APEC economies are also developing innovative mechanisms to increase and direct funds towards improving access to healthcare. Economies can increase revenues through new value-added taxes (VAT), environmental taxes, property or land taxes, security transaction or capital gains taxes, and income taxes with earmarked allocations for healthcare. Taxes on unhealthy consumption of sugar, tobacco, and salt and other lifestyle elements that incentivize healthy behaviors may be some of the most valuable mechanisms. These sin taxes can increase revenues in the short-term and reduce long-term costs associated with NCDs. Thailand is one of the leaders in the region in the use of excise and sin taxes for health promotion activities. Other economies have experimented with airport passenger levies and lotteries (see Case Study #4, "Philippine Charity Sweepstakes Office").

CASE STUDY #4:

Philippine Charity Sweepstakes Office

WHO:

The Philippine Charity Sweepstakes Office is a government agency responsible for providing funds for domestic health initiatives, medical assistance programs, and charities that provide health services.

WHAT:

Charitable sweepstakes, races, and lotteries, are conducted to maintain and expand the government's capability to provide a sustainable source of funding for health and welfare related projects.

More information may be found at: www.pcso.gov.ph

HOW:

The program has several projects that provide financial assistance to people affected by catastrophic diseases. For example, the Individual Medical Assistance Program provides funding for cancer treatment by issuing guarantee letters to hospitals or partner health facilities and shouldering a certain amount of medical expenditure that would otherwise come from patients.



RECOMMENDATION 2:

Undertake an analysis of the extent of coverage of Universal Healthcare (UHC) for NCDs in Thailand in order to review inequalities in access to high-quality care and innovation and to provide evidence for assessing which innovative funding mechanisms may fill funding and access gaps.

APEC Checklist of Enablers for Alternative Health Financing

Scientific advances are improving survival and quality of life but more must be done to increase access to healthcare in line with the growing burden of aging populations and NCDs. The need to increase the funds available for healthcare and develop policy tools for officials was the impetus behind the development of the *APEC Checklist of Enablers for Alternative Health Financing mechanisms*.

While not a replacement for government-funded programs, innovative and alternative health financing mechanisms, such as health promotion funds using sin-taxes, health savings accounts, donor seed

funds, blended financing, long-term insurance and micro-insurance, buffer funds, health impact bonds, product development funds, among others, would allow economies to leverage their limited resources to expand health coverage.

The private sector has the potential to provide complementary financing tools and initiatives to improve health. An enabling policy, legal, and regulatory environment can help promote and facilitate the deployment of these mechanisms.

The overarching principles of the APEC Checklist of Enablers for Alternative Health Financing include:

- 1. Political will and government coordination:**
Make improving health outcomes a priority.
- 2. Good Governance:**
Maximize efficiency in public healthcare investment.
- 3. Private Sector Engagement:**
Promote engagement with the private sector in developing healthcare solutions.
- 4. Legal & Regulatory Frameworks:**
Adopt clear, non-discriminatory, consistent, yet flexible frameworks.
- 5. Health and Financial Literacy:**
Foster a growth in cultural norms and societal beliefs around the importance of health care, value of insurance, and role of government and the private sector.
- 6. Quality Data and Evidence:**
Improve the quantity and quality of health data.



RECOMMENDATION 3:

Consider utilizing the *APEC Checklist of Enablers for Alternative Health Financing* or aspects of it to evaluate the enabling environment for alternative healthcare financing mechanisms.

Maximizing Efficiencies in Public Healthcare Investment

Increased pressures on healthcare resources have led policymakers, administrators and clinicians to search for more efficient ways to deliver health services. Increasing public resources for health—or more precisely, expanding “fiscal space” for health—can be accomplished by increasing budgets as well as increasing the efficiency with which those funds are used. Efficiency improvements in the health sector, even in small amounts, can yield considerable cost savings and even facilitate the expansion of services for the community. Minimizing waste, corruption and other forms of inefficiency—estimated between 20-40 percent of total health spending by the World Health Report 2010—means that economies’ health systems can achieve better outcomes if the funds are used more efficiently.

Economists from Chulalongkorn University suggest that Thailand could save 5-7 billion THB (\$157-219 million USD) in 5 years with reform focused on rational drug use, preventable high-cost diseases, new chronic care management, appropriate usage of medical services, prevention of hospital-acquired illnesses, and prevention of disability. Rational drug use in particular may not contribute to a significant proportion of those savings, but may have co-benefits in curbing antimicrobial resistance.

Work can also be done to update treatment protocols, especially for high-cost medicines, with consideration of value and the maximum benefit to the patient. Lessons may be learned from Singapore’s hybrid financing model where “shared responsibility” between public and private systems and market-based incentives have not only contributed to efficiency gains but also have led to better access and health outcomes. Similarly, quality of care and management efficiency can both be improved with better cooperation among the Universal Coverage Scheme (UCS), SSS (Social Security Scheme (SSS), and Civil Service Medical Benefit Scheme (CSMBS), especially if focused on four key levers: high-cost disease management, reimbursement systems, auditing systems, and process streamlining for overhead reduction.



TOOL:

USAID Collecting Taxes Database

USAID maintains a **database**¹⁹ with over 20 indicators that economies can use to measure their efficiency in collecting and utilizing tax revenue.



Investing in Prevention

An old adage states that “an ounce of prevention is worth a pound of cure.” However expenditures on treatment often dwarfs expenditures on prevention despite there being significant value in preventing ill health rather than subsequently treating it. For example, most OECD countries spend only about 3 percent of their overall health budget on promotion and prevention, while the majority goes to treatment.²⁰ In Thailand on the other hand, promotion and prevention represents about 13 percent of the National Health Security Office budget for 2019.²¹ Evidence shows that prevention can be cost-effective, provide value for money and give significant returns on investment in both the short and longer terms.²² Interventions that promote physical activity and healthy employment together with vaccinations and screening programs can yield significant savings. Vaccination has made a fundamental contribution to the prevention of numerous infectious diseases and is often considered the most cost-effective public health intervention after clean water. Whether the benefits are reported in terms of avoided deaths, life-years saved, disability-adjusted life years (DALYs) avoided or quality adjusted life years (QALYs) gained, vaccination is universally considered to provide important public health benefits.²³ These health effects translate into positive economic outcomes. Vaccination can provide significant savings by avoiding the health costs associated with treating diseases. Investments in enabling innovation can be overly focused on treatment; so considerations should be made for investing in innovation for prevention.

Addressing Barriers to New Financial Products

Encouraging Expansion of the Insurance Market

Insurance products can provide consumers with additional options and complement government-provided healthcare, easing the burden on public financing of health. Private insurance can supplement public insurance by encouraging greater advancement in care, and drawing more funding into the healthcare system. Expanding public and private insurance is important to ensuring broad coverage and thus broad access to healthcare at affordable rates. Clear, consistent, and non-discriminatory regulatory frameworks are critical to increasing access to insurance and other financial products and thus access to affordable healthcare as well as ensuring that there are no unintended consequences of legislation or regulation that impedes innovative solutions.

Efforts to ease restrictions on foreign shareholding (now up to 100%) and board limits for life and non-life insurance companies in January 2017 are helping to promote stability for the insurance industry. Regulatory changes like these encourage reputable, sound, and financially strong international or regional insurers, with serious commitments to the Thai market, to expand in Thailand without foreign investment limits and complement the Office of the Insurance Commissioner's initiative to promote Thailand as the insurance hub of the ASEAN Economic Community.

Accelerating the insurance product approval process and allowing insurers to engage more in activities to provide more efficient care and promote innovation will also help increase access. For example, services such as telemedicine can help increase access to healthcare while providing cost and efficiency benefits.

Expanding Microinsurance

Microinsurance policies carry a low premium and limited coverage. The policies are largely standardized and have simpler wording (approved by the Office of the Insurance Commissioner), containing all possible information that the customer might need to know about the policy. The policies also have a simplified claims process and are available through more convenient channels of sale. However, the uptake of microinsurance in Thailand appears to be slower than neighboring APEC economies. [The Mutual Exchange Forum on Inclusive Insurance Network \(MEFIN\)](#) is a peer network of insurance regulatory authorities in Asia established as a platform for an effective and efficient exchange of relevant knowledge and best practices on inclusive insurance. Currently, there are now seven (7) member economies in MEFIN: Indonesia, Mongolia, Nepal, Pakistan, the Philippines, Sri Lanka, and Viet Nam..



RECOMMENDATION 4:

Work with public and private funders to initiate and/or enable innovative approaches to healthcare financing, exploring partnerships that will fill funding and access gaps and cover populations or services not yet reached or delivered by existing mechanisms. For example:

- Expand the use of private health insurance markets and encourage private markets to increase options and facilitate greater participation to create sustainable health outcomes and greater service coverage.
- Accelerate the insurance product approval process and allow insurers to engage in activities to provide more efficient care and promote innovation.
- Consider joining the Mutual Exchange Forum on Inclusive Insurance Network (MEFIN) which could help in expanding access to insurance products.

Quality Data and Evidence

The collection of quality data is one of the cornerstones of increasing and optimizing public and private investment in health services. Ministries of Health need to provide evidence of performance efficiency to defend their annual budget requests and in turn, advocate for greater resources for health. Requests that are not grounded in hard evidence are unlikely to be funded as the health sector must compete for funds with other sectors. Complementing such requests with information derived from health sector assessments can provide better informed budget requests and budget change proposals, and increase the likeliness for expanding the fiscal space for health.

When calculating returns on investment (ROI) for healthcare expenditures, a broad view must be taken which takes into account more of the benefits that are accrued to society. For example, economic evaluations often only consider health care costs, overlooking the lost income of patients or caregivers during an illness. The true cost of a disease and, conversely, the benefit of its alleviation should be considered. Expenditures on health should be viewed as investments, similar to investments in infrastructure or education.

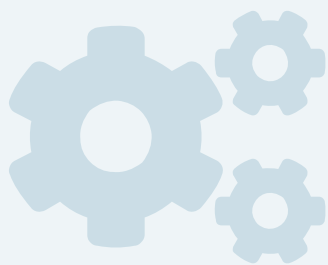
Victoria Institute for Strategic Studies suggests the costs for each disease area should include identified best practice interventions, estimated health outcomes (reduced deaths and morbidity), estimated costs per patient per intervention, and estimated relevant infrastructure costs. The benefits and ROI should include lives saved, reduced morbidity, improved productivity, estimated increase in workforce, impact on absenteeism and presenteeism, estimated early retirement, reduced maternal deaths and morbidity, and estimated increased social investment.

Public-Private Partnerships

The private sector can be a partner in helping to develop complementary financing to improve health and increase access to quality, innovative healthcare products, facilities and services as well as helping to develop domestic competencies. For example, the private sector can offer innovative and tailored health insurance products to supplement mandated public funding, provided the regulatory environment allows such mechanisms to be adopted and operationally deployed in an economy.

Private investors can partner with governments and development agencies to provide innovative complementary health financing packages. As such, the private sector can be a source of disruptive innovation, developing simpler and cheaper delivery models that enable the participation of new consumers previously excluded from traditional markets. The private sector also has resources and data that can help economies in APEC make the best and most informed decisions.

In addition to private sector commitment, government leadership is also a key to effective public-private partnerships. One area where Thailand is making progress is the establishment and support of the State Enterprise Policy Office (SEPO) in the Ministry of Finance which has decreased the time of public-private partnerships approvals from 25 months to 9 months. But with 94 percent of SEPO projects related to transportation, the Office could do more to pursue, incentivize, or encourage more health-related projects.



TOOL:

APEC Capacity Building Programs

APEC offers numerous capacity building programs through the LSIF Regulatory Harmonization Steering Committee, Investment Experts Group, and Intellectual Property Experts Group.

More information may be found at: www.apec.org

Thailand's Competitiveness

Home to hundreds of biotechnology firms, Thailand's life sciences and biotechnology sector is rapidly expanding. The consulting firm GlobalData expects the kingdom's pharmaceutical market to increase from 189 billion THB (\$5.9 billion USD) in 2015 to 303 billion THB (\$9.5 billion USD) by 2020. Thailand's climate, excellent geographic location and status as a regional medical hub all contribute to the strength of its biotechnology industry. Institutions such as the Center for Genetic Engineering and Biotechnology (BIOTEC) and the Thailand Center for Excellence in Life Sciences (TCELS) have been instrumental in supporting development of the biotechnology sector and Thailand's clinical research capacity as one of the economy's core strengths.



To encourage additional investment and emerge as a regional leader Thailand could:

- Accelerate clinical trial approvals;
- Boost regulatory capacity for review, monitoring, and approval of medicines (particularly for innovative and biosimilar drugs);
- Increase access to cutting-edge treatments through private reimbursement schemes and more transparent and predictable pricing and reimbursement schemes; and,
- Increase patent enforcement, reduce patent review backlogs, and increase regulatory data protection.

Frameworks to Enable Increased Access

Ground-breaking advances in medical science are only meaningful when they reach the people who need them. The current movement in healthcare is to focus on outcomes for an episode of care, rather than separate procedures in care delivery. There are various payment mechanisms that can be used to increase access such as indication-based pricing, amortization, outcomes-based pricing, as well as other innovative purchasing agreements.

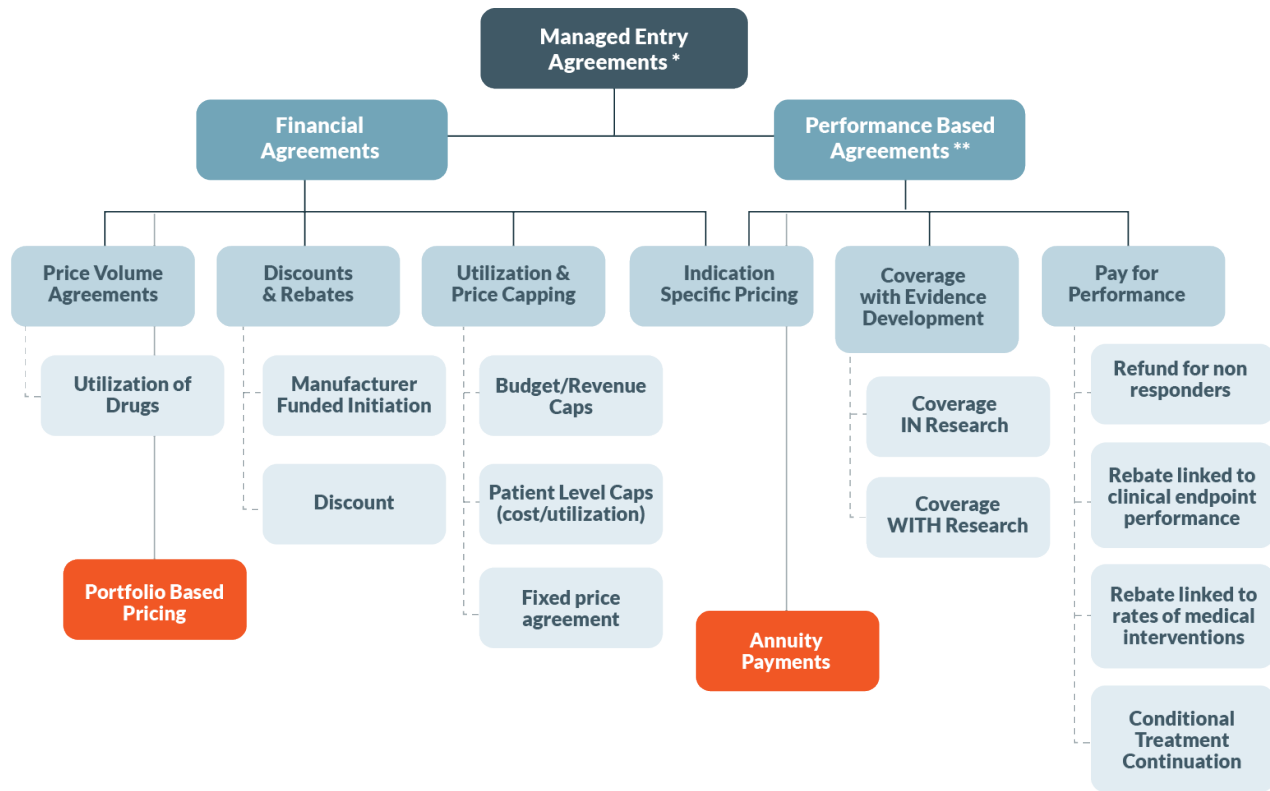
Alternative and Value-Based Payments	
Indication-based pricing	The price of a drug varies depending on how it is used. Indications that show high value receive higher payments; those with lower value receive less.
Amortization	Payments for a drug are made over time instead of one payment up front.
Outcomes-based pricing	The price of a drug varies depending on whether or not the patient reaches or exceeds certain clinical milestones.
Innovative purchasing arrangements	Drug makers and payers agree on more efficient ways to deliver drugs to patients outside of traditional supply channels.

Irrespective of the model used, alignment of stakeholder expectations is important and can be achieved by prospectively mapping all potential results and clearly defining at the start what the consequences for the price and coverage status of the product will be per the different scenarios.

Risk Sharing Agreements

A risk sharing agreement (RSA) is an arrangement between a manufacturer and payer/provider that enables access to a health technology subject to specified conditions. These arrangements can use a variety of mechanisms to address uncertainty about the performance of technologies or to manage the adoption of technologies in order to maximize effectiveness of their use, or limit their budget impact. There is considerable international experience regarding the use of RSAs to draw upon. The use of RSAs should be selective and based on negotiation between the manufacturer and the payers. In general, simple agreements are generally preferred. These mechanisms can improve access but when RSAs are used as a cost containment process on top of other cost containment processes, they can increase delays with little benefit. RSAs can be used to address challenges in the market and economies should assess the impact of RSAs periodically to ensure that they are working as intended. Predictability, defined timelines and confidentiality are key components to the RSA process.

Taxonomy of Managed Entry Agreements



Value-based procurement via Managed Entry Agreements (MEAs) expands the basis for purchasing decisions beyond the up-front purchase costs to include performance, outcomes, and most importantly value. Manufacturers agree to share risk with payers and/or providers for measurable medical or economic outcomes that both parties are trying to achieve; broader access for a specific treatment or technology with the expectation of a reduction in the need for costly health care interventions; and any unexpected costs of providing a medicine to a patient (e.g., higher utilization). Performance-based MEAs can be an effective procurement tool when paired with a number of technical features, including strong IT and accessible patient outcome data.



RECOMMENDATION 5:

Establish a task force or working group so that the APEC LSIF can continue to partner with Thailand and help deliver capacity-building, provide recommendations and guidance, and develop new partnerships to improve health outcomes.

Conclusion

Thailand has made tremendous strides in its pursuit of universal healthcare. The Universal Coverage Scheme (UCS) has been described as one of the most ambitious healthcare reforms ever undertaken in a developing economy. However with the projected steep rise in non-communicable diseases (NCDs), coupled with aging populations, governments, including Thailand, need to be ever more efficient with their healthcare expenditures and develop more effective strategies for healthcare financing as well as mechanisms to increase access to innovative products and services. Access to healthcare is a multidimensional challenge and there is no 'one size fits all' solution. The Life Sciences Innovation Forum with its partners in academia, industry and other groups can help Thailand as it seeks to develop alternative payment schemes and revenue sources to improve health and economic outcomes. This is truly a case where more can be achieved when different stakeholders come together.

“There has been enormous progress in addressing health problems in the developing world in the past 25 years and much more can be accomplished with greater involvement by major pharmaceutical companies and start-ups”

- Bill Gates, Microsoft cofounder

- ¹ The impact of Health on Worker Attendance and Productivity in the APEC region, Final Report, ABAC/LSIF Study, Victoria Institute of Strategic Economic Studies, Victoria University, Melbourne, Australia, July 2014.
- ² Rasmussen, B., Sweeny, K. and Sheehan, P. 2015, Cost of Early Retirement Due to Ill Health, Report to the APEC Business Advisory Council, VISES, Victoria University, Melbourne.
- ³ <http://www.nationmultimedia.com/detail/Economy/30333636>
- ⁴ College of Population Studies, Chulalongkorn University. 2018. The Population Change and Wellbeing in the Context of Ageing Society Project, 2016.
- ⁵ Prachuabmoh, V. and others. 2011. The Project on Monitoring and Evaluation of the Second National Plan for Older Person (2002-2021), Round 2.
- ⁶ Pothisiri, W. and others. 2016. The Project on Monitoring and Evaluation of the Second National Plan for Older Person (2002-2021) Round 3.
- ⁷ Hsu M, Huang X, Yupho S. The development of universal health insurance coverage in Thailand: challenges of population aging and informal economy. *Soc Sci Med* 2015; 145: 227–36.
- ⁸ Bundhamcharoen K, Tangcharoensathien V. Burden of diseases: disability adjusted life year and health adjusted life expectancy in Thailand. *J Health Sci* 2016; 25: 342–50 (in Thai).
- ⁹ Teerawattananon Y, Luz A. Obesity in Thailand and its economic cost estimation. ADBI Working Paper 703. Tokyo: Asian Development Bank Institute, 2017.
- ¹⁰ Return on investment (ROI) and cost-benefit ratio (CBR) are two forms of economic evaluation that value the financial return, or benefits, of an intervention against the total costs of its delivery. The CBR is the benefit divided by the cost, and the ROI is the benefit minus the cost expressed as a proportion of the cost, that is, the CBR–1.
- ¹¹ Manprasert and Suwanrada, 2013.
- ¹² Masters, Rebecca et al. “Return on Investment of Public Health Interventions: A Systematic Review.” *Journal of Epidemiology and Community Health* 71.8 (2017): 827–834. PMC. Web. 31 Aug. 2018.
- ¹³ Stenberg, Axelson, Sheehan et al. 2014, ‘Advancing social and economic development by investing in women’s and children’s health: a new Global Investment Framework’, *Lancet*, 383: 1333–1354.
- ¹⁴ Chisholm, Sweeny, Sheehan, Rasmussen et al. 2016, ‘Scaling-up treatment of depression and anxiety: A global return on investment analysis’, *Lancet Psychiatry*, 3: 415–424.
- ¹⁵ Sheehan, Sweeny, Rasmussen et al. 2017, ‘Building the foundations for sustainable development’, *Lancet*, online 19 April 2017, DOI: [http://dx.doi.org/10.1016/S0140-6736\(17\)30872-3](http://dx.doi.org/10.1016/S0140-6736(17)30872-3)
- ¹⁶ <https://www.who.int/whr/2010/en/>
- ¹⁷ <https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS>
- ¹⁸ Adapted from B. Rasmussen, Victoria Institute of Strategic Economic Studies.
- ¹⁹ <https://www.usaid.gov/what-we-do/economic-growth-and-trade/domestic-resource-mobilization/collecting-taxes-database>
- ²⁰ <https://data.oecd.org/healthres/health-spending.htm>, OECD, 2019.
- ²¹ 2019 Budget, National Health Security Office, Kingdom of Thailand, 2019.
- ²² http://www.euro.who.int/_data/assets/pdf_file/0009/278073/Case-Investing-Public-Health.pdf
- ²³ Rémy V, Zöllner Y, Heckmann U. Vaccination: the cornerstone of an efficient healthcare system. *Journal of Market Access & Health Policy*. 2015;3:10.3402/jmahp.v3.27041. doi:10.3402/jmahp.v3.27041.