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Implementing a High Performing Immunization Program within the Context of National Health Insurance

What can we Learn from Thailand?

December 11, 2019

Panelists: Grace Chee Dr. Nakorn Premsri Dr. Tanapat Laowahutanon Dr. Chaninan Sonthichai

Q&A and Chat Tips

Questions

- We will be having a discussion with our panelists during this webinar.
- Please feel free to submit questions as they arise via the "Questions" panel on your screen.

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Agenda

- Webinar housekeeping
- Welcome and introductions
- Setting the stage
- Key contributions from NHSO
- Role of EPI and the MOPH
- Moderated Q&A



Immunization and UHC

LNCT Immunization and NHI workshop held on July 3rd, 2019, Tangerang Seven countries participated: Georgia, Ghana, Indonesia, Lao PDR,

Nigeria, Sudan, Vietnam

Takeaways from the workshop:

- NHI is not a panacea for immunization financing, it is not a new source of funding
- Important to maintain clear roles and responsibilities between the MOH and the insurance agency to ensure that critical immunization functions do not fall through the cracks
- Risks of integrating immunization into health insurance schemes with funding solvency issues and low population coverage may outweigh potential benefits





OVERVIEW OF IMMUNIZATION AND THAI HEALTH SYSTEM AND ROLE OF NATIONAL VACCINE INSTITUTE

Dr. Nakorn Premsri

Director of National Vaccine Institute (NVI) Thailand

PRESENTATION OUTLINE

- Development of Thailand's Healthcare System: The history of Thai's UC
- Overall and current of Thai's Health Schemes: Universal Health Coverage Scheme (UHCS), Social Security Scheme (SSS) and Civil Servant Medical Benefit Scheme (CSMBS)
- Introduction of National Health Security Office (NHSO) as purchaser of services
- UHC capitation and Proportion of prevention cost
- Immunization coverage rates through the UHC mechanism
- The key potential of UC transitioning: How Thailand implements and sustains UHC
- Role of National Vaccine Institute (NVI)



DEVELOPMENT OF NATIONAL HEALTH SCHEME DURING 1975 - 2016

Figure 1: Evolution of finance protection coverage towards UHC in Thailand



Source: SURIWAN THAIPRAYOON AND SUWIT WIBULPOLPRASERT. Political and Policy Lessons from Thailand's UHC Experience.



CURRENT THAILAND'S HEALTH INSURANCE SCHEMES (2019)

Insurance Schemes	Social Security Scheme	Civil Servant Medical Benefit Scheme	Universal Health Coverage
Population Coverage (as of Mar 2019)	16% (14.47 million)	12% (4.97 million)	72% (48.8 million)
Beneficiaries	Employees in public and private sectors	Civil servant, spouse and immediate relative*	Those not covered by the CSMBS and SSS (major population)
Source of finance (cost per capita)	Tri-parties; 1.5% of payroll each (2,500 B/capita), 82.56 USD	General tax revenue (15,000 B/capita), 495.38 USD	General tax revenue (3,427 B/capita), 113 USD
Financial supporter	Social Security Office , Ministry of Labour	Comptroller General's Department , Ministry of Finance	National Health Security Office (NHSO)
Benefit package	Social Security Office , Ministry of Labour	Comprehensive excluding prevention and promotion services	Comprehensive including extensive prevention and promotion service
Payment mechanism *DRG; Diagnosis-related group	Comprehensive including some specific prevention services	 OP: Fee for service IP: DRG without ceiling Open-ended budget 	 OP: Capitation IP: Global budget and DRG. There are some fixed fee schedules to reduce providers' risks and promote access Close-ended budget

Source: SURIWAN THAIPRAYOON AND SUWIT WIBULPOLPRASERT. Political and Policy Lessons from Thailand's UHC Experience.

The National Health Security Office (NHSO) was established in 2002 under The National Health Security Act (2002). The Act stipulates the role of the NHSO in various areas to ensure that the essential health needs of the population are met. NHSO is one of the 21st Century public organizations to respond to the public good management system in close collaboration with Ministry of Public Health.



Source: VIROJ TANGCHAROENSATHIEN *et.al.* Thailand Health Financing Review 2010



UHC CAPITATION SINCE 2002 TO 2019



Source: SURIWAN THAIPRAYOON AND SUWIT WIBULPOLPRASERT. Political and Policy Lessons from Thailand's UHC Experience.



PROPORTION OF PREVENTION COST IN CAPITATION



Source: SURIWAN THAIPRAYOON AND SUWIT WIBULPOLPRASERT. Political and Policy Lessons from Thailand's UHC Experience.



IMMUNIZATION ACCESS AND COVERAGE

- Thailand's success in providing care and coverage for all produces strong immunization outputs with nearly 100% coverage for all vaccines in the schedule (Department of Disease Control, 2018).
- Thailand officially launched Expanded Program on Immunization (EPI) in 1977 by expanding and strengthening the existing immunization service infrastructure. Start from just BCG and DTP, lateral expanded almost all of vaccine preventable diseases recommended by WHO (2019).
- Thailand's immunization is a centralized program and provided free of charge for the entire population through the UHC mechanism



FRAMEWORK OF HOW THAILAND IMPLEMENTS AND SUSTAINS UHC



Source: RAJATA RAJATANAVIN , SOMSAK CHUNHARAS et.al. Resilience Health system and UHC, 2019.



PHASE I POLICY MOVEMENT

The most critical part of any policy movement is to convince politicians about the importance of the issue through a social movement based on knowledge and effectively communication. These strategies were called **"The triangle that moves the mountain"**





PHASE II IMPLEMENTATION PERIOD (NHSO

NHSO's responsibility is to manage the fund to ensure equitable access to decent quality health services for its members. Three key reforms were: 1) new health care financing

2) new health care delivery 3) new participatory governance

1. NEW HEALTH CARE FINANCING through the "CPP"

C: Collecting refers to how the money is collected and obtained from source.

P: Pooling is at the level of collecting the budget, and at what amount to balance the risk and benefit of system efficiency.

P: Purchasing is the method of paying for health services.



PHASE II IMPLEMENTATION PERIOD (CONT.)

2. NEW HEALTH CARE DELIVERY MODEL

Health care financing and care delivery models must work together. A decent financing system should be able to serve the function of a service delivery system

3. NEW PARTICIPATION PROCESS

Building up a UC Scheme in Thailand required participation from all stakeholders include;

Patients: reflect specific needs and feedback about services provided
 NGOs: part of the board members of the UC Scheme

3) Community: Local government should participate in activities in their

community

4) Academia and researchers: They provide research findings or evidence as inputs into policy process

5) Policy makers at the Ministry level and political level



PHASE III SUSTAINABILITY OF UHC

Three key components affecting sustainability of the UC Scheme: 1) Effective management 2) Assured quality and access to care 3) Health care provider satisfaction

1. EFFECTIVE MANAGEMENT

The NHSO is an agency responsible for delivering UHC has to prove efficiency and productivity in the health system i.e.

- 1) Equitable access
- 2) Use of health services
- 3) Financial risk protection
- 4) Accountable and transparent
- 5) The Government is able to receive information that enables them to oversee health spending



PHASE III SUSTAINABILITY OF UHC (CONT.)

2. HEALTH CARE PROVIDER SATISFACTION

Important issues to enhance providers' willingness to deliver services include:

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

3. ASSURING ACCESSIBILITY AND QUALITY OF CARE

It includes ensuring that people know their rights and responsibilities, enjoy their rights and are able to use health services, even expensive care, when they need to. How far this is achieved is reflected in people's views on satisfaction with services.



ROLE OF NATIONAL VACCINE INSTITUTE

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NVI's chronological events





Duties and Authorities of NVI Mandated by the National Vaccine Security Act 2018





NVI's Strategic Plan





NVI's Work in Strengthening Vaccine Security







THANK YOU



How does Thailand's Immunization Program work with the National Health Security Office (NHSO) to ensure a high performing program?

Mr. Tanapat Laowahutanon ⁽¹⁾ Mr. Kanitsak Chantrapipat⁽²⁾ Ms. Jarawee Rattanayot⁽²⁾ Ms. Somruethai Supungul ⁽¹⁾ Mrs. Orathai Suwaranrak⁽¹⁾

(1) Bureau of Medicines and Medical supplyManagement, (2) Bureau of Primary care management

Contents

- 1. Universal Coverage Scheme (UCs) and vaccine funding
- 2. Vaccine procurement
- 3. Vaccine distribution
- 4. Vaccine security
 - Available of funding
 - Accurate forecasting
 - Appropriate contracting
- 5. Challenges



UCs and vaccine funding

1. National Health Security Act B.E. 2545 (A.D. 2002)

Determine sources of funds for services provision must come from the annual government budget and other incomes

- National Health Security board separate funds for services provision in 10 parts
 - 1) Prevention and Promotion: EPI vaccine
 - 2) Outpatient care
 - 3) Inpatient care
 - 4) Rehabilitation care
 - 5) HIV/AIDS
 - 6) End Stage Renal Disease
 - 7) NCD control/psychotic diseases in community



Funding for UCS

1. Source of finance: Tax-based financed

Pooling fund from general taxation; close-end budget

2. General principles for budget estimation

- a) Per capita budget is based on
 - Volume of services used
 - Unit cost of services provided
 - Projection of increases in service utilization and cost
- b) Data availability
 - Administrative database , hospital financial reports, beneficiary registration
- c) Policy direction
 - Increased access, standard protocol, new benefit packages as necessary (new EPI vaccine)



How to pay for services: Provider payment mechanism

Closed-end payment methods >> cost containment

- Capitation: OP (weighted by % ageing population and remoteness), prevention and health promotion (include EPI vaccine)
- Global budget for IP
 - DRG single-base rate for all providers
 - Fee schedule for high cost care, medical devices
- Risk of under-service provision, counteracted by
 - Complaint management through the 1330 hotline (call centre)
 - Quality assurance, accreditation, medical audit
- To ensure access to some specific diseases with high burden
 - Fee schedule with conditions e.g. cataract, stroke fast tract.





Sources: Vaccine procurement plan, NHSO



UCS has been managed to ensure.....

• Fiscal sustainability: cost containment, value of money

- Close-ended budget and capitation basis
- Inclusion of cost-effective medical innovations through HTA

Efficiency

- Gate keeping Primary Health Care as contracting unit for outpatient care and P&P
- Sending strong signal to use essential drug list
- Monopsonistic purchasing power: negotiation for the lowest possible price given assured quality results in substantial cost saving

Access to and quality of care provided

- Preventing under-provision of health services: additional payment for some high cost care
- Standard and Quality Control mechanism: Quality Board, CPG applied, Call Center 24 hrs., Complaint management, Auditing system (coding and quality)
- Working with The Healthcare Accreditation Institution (Hospital accreditation)





Percentage of UCS registered hospitals classified by level of accreditation 2003-2017

percentage

Source: Institute for Hospital Quality Assurance (RTD) Data as of September 30, 2017. Analysis by Bureau of Standards and Quality Support.

Note: status of accreditation quality process of sanatorium from institute of quality accreditation of hospital (Sor. Sor.) 30th September 2017 registration status of service From the NHSO Registration Office. As of 31 August 2017.







Vaccine procurement cycle



http://apps.who.int/medicinedocs/documents/s19595en/s19595en.pdf



Review medicine selection: Selection Process of Thai National List of Essential Medicines (NLEM)

Concept of NLEM

Covers drugs needed for protection & treatment of health problems of Thai people at essential level in an economic & cost-effective manner (Effective list)

Selection criteria

- 1. Efficacy , Effectiveness, Safety, Health need , Compliance
- 2. Efficiency : cost effectiveness
- 3. Budget impact (Affordability)


Review medicine selection: Selection Process of Thai National List of Essential Medicines (NLEM)





Economic evaluation: ICER¹ of vaccine

Vaccines	Societal perspective	Health service perspective	Price at Thai ICER threshold ²
Rotavirus ³	2,823.14 USD/QALY gained.	4,939.71 USD/QALY gained.	13.20 USD/dose
DTP-HB- Hib⁴	34 USD/QALY gain	-	3.1 USD/dose

- 1. ICER = An incremental cost-effectiveness ratio
- 2. Thailand's standard ceiling threshold (ICER)= 5,294.97 USD/QALY gained
- 3. Tharmaphornpilas P et al, 2015, Effectiveness and Cost-effectiveness of Rotavirus Vaccine in Pilot Provinces (Petchaboon and Sukhothai)
- 4. Surachai Kotirum et al, 2017, Economic Evaluation and Budget Impact Analysis of Vaccination against Haemophilus influenzae Type b Infection in Thailand



Specify quality standards

- 1. Vaccine specification
- 2. Sources of specification
 - 1) Pharmacopeia: USP, BP, European Pharmacopeia
 - 2) ACIP-Advisory Committee on Immunization Practice
 - 3) Ministry of Public Health
 - Thai FDA,
 - Department of Medical Sciences
 - Department of Disease Control
- 3. Post marketing surveillance for product analysis.: WHO report

All vaccine distributed in Thai had to got lot released certification from Department of Medical Sciences



Determines quantities needed

- **1**. Estimation method⁽¹⁾:
 - 1) Estimates based upon target population
 - 2) Estimates based upon previous consumption
- 2. Reconcile these 2 methods
- 3. Confirm with Ministry of public health and suppliers

Reference: 1 Vaccine forecasting and needs estimation

https://www.who.int/immunization/programmes_systems/supply_chain/resources/tools/en/index3.html



Reconcile needs and funds



(1)! WHO GUIDELINE ON COUNTRY PHARMACEUTICAL PRICING POLICIES: http://apps.who.int/medicinedocs/documents/s21016en/s21016en.pdf







Vendor managed Inventory (VMI)

- 1. Organized by Government Pharmaceutical Organization (GPO)
- 2. Web base application
- 3. GPO play role to manage vaccine stock of Rural hospital.
- 4. If vaccine stock less than reorder point (ROP), then GPO will deliver vaccine to hospital equal to maximum stock (max = ROP x 1.5)



Cold chain management

- **2012 FY:** MOPH support cold chain management training
- 2012 FY: NHSO support budget to Contracting unit for primary care (CUP) for
 - 1) Refrigerators
 - 2) Data loggers
 - 3) Vaccine carriers
- 2012 FY- Now: Temperature monitoring from central warehouse to primary care unit
- 2015 Now
 - 1) MOPH support cold chain management training
 - 2) CUP precure refrigerators, data loggers, vaccine carriers by themselves
 - Vaccine storage temperature were contained in The Healthcare Accreditation standard



Vaccine Security is based on 3 pillars

Vaccine Security



Political commitment: NHS act Electronic data: consumption rate

Central procurement, one year contract

Reference: https://www.unicef.org/supply/files/3._Overview_of_UNICEF_vaccine_procurement.pdf



Challenges: Adding new vaccines to the immunization schedule

- ACIP-Advisory Committee on Immunization Practice and National List of Essential Medicines (NLEM) committee are important mechanism to select new vaccines
- 2. Health Technology Assessment (HTA) e.g. ISAFE score and economic evaluation are evidence-based information to support cost effectiveness and budget impact of new vaccine.
- 3. Price negotiation committee including all stakeholders represent good governance to negotiate with suppliers



Challenges: Procuring quality vaccines at affordable prices

1. International strategic partnership to procure vaccine:

- 1) Pooled procurement
- 2) Price negotiations
- 3) Vaccine quality

2. Vaccine security

- 1) Multiyear contracts and pooled procurement
- 2) Local producers

3. Vaccine shortage management

- 1) Report vaccine shortage situation
- 2) Establish a way to manage vaccine stockpiles during shortages at the hospital level







หลอมรวมเครือข่าย...หลากหลายเพื่อหนึ่งเดียว : รวมพลังสร้างสรรค์หลักประกันสุขภาพที่ยั่งยืน





EPI and the MOPH

Division of Vaccine Preventable Diseases, Department of Disease Control, Ministry of Public Health, Thailand

Monitoring Coverage

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Target of Immunization Coverage in Thailand





Overview of immunization coverage estimation in Thailand





History of National Immunization Coverage Estimation in Thailand

- ¹⁹⁸⁰ National immunization coverage survey among
 children under 5 years old and pregnancy annually
 ¹⁹⁹⁶
- 1999Due to high immunization2003coverage result (85-90%)Survey frequency changed toevery 3-5 years

Include school children coverage

2008

2013



Immunization coverage survey

30-60 clusters technique

Conduct every 5 years

13 provinces in 13 health regions. (Bangkok and Deep-south included)

Latest survey in 2018

11,250 children

450 schools





National immunization coverage survey 2018

Vaccine	Average	Deep-south	Bangkok	Others	Target
BCG	99.8	98.7	97.7	100	90
HB1	99.6	99.3	96.2	99.8	90
DTP3	96.5	64.7	96.9	99.3	90
OPV3	96.5	64.7	96.9	99.3	90
HB3	96.5	64.7	96.9	99.3	90
IPV	88.4	50.7	70.8	94.5	90
M/MMR1	96.1	71.3	95.0	98.8	95
JE2/LAJE1	96.9	70.0	93.3	99.1	90
DTP4/OPV4	95.3	66.7	93.0	98.4	90
JE3/LAJE2	95.1	66.7	86.9	97.4	90
MMR2	86.6	66.7	78.0	90.8	95
DTP5/OPV5	87.2	58.0	76.2	91.4	90
HPV ป.5	98.1			98.1	90
dT ป.6	96.1			96.1	90



Immunization coverage among fully 1 year old children receiving BCG, HBV1, Polio3, MMR1, IPV

⊞ ความครอบคลุมของเด็กอายุครบ 1 ปีที่ได้รับวัคซีน BCG ,HBV1,DTP-HBV3,โปลิโอ3, MMR1,IPV รายไตรมาส ปี 2562





Main cause of unvaccination

- 1. Migration : Thai and foreigners
- 2. Living in hard-to-reach area : border, remote area, islands, hilltribe
- **3.** Deep-south : unrest situation, cultural and belief, vaccine hesitancy
- 4. Inconvenience to follow up



Way forward for coverage estimation





Training Providers

Roles in Provider Training

- National, regional and provincial level roles
 - Arrange training course for EPI staff under responsibility area
 - Support resource person for private providers training



EPI Training course in 2019

- Participant
 - EPI officer at regional and provincial level
 - Other agencies related to EPI work
- Duration
 - 4 days
- Contents
 - Immunization policy
 - Disease eradication and elimination program
 - Introduction of new vaccine
 - Adult immunization
 - Influenza immunization program
 - Routine immunization (Vaccine administration, Cold chain, Reporting system)



AEFI and VPD Surveillance

Communicable Diseases Surveillance in Thailand

Flowchart of Agencies in the National Communicable Disease Surveillance System





Currently available VPD surveillance reporting systems

- 1. Communicable disease surveillance
 - Information to be collected including demographic data, date of onset, outcome of treatment, and place where the patients get sick and place of treatment
 - No essential information for VPD surveillance and control e.g., laboratory data, vaccination history
 - Delay report (data were sent weekly to DoE)
- 2. Measles Elimination program launched in 2012
- 3. AFP surveillance



AEFI Surveillance and Investigation





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Situation of Measles and Polio around the world





Planning and Implementing Campaigns

- 1. MOPH role
 - Making decision to use campaign strategy to close immunity gaps.
 - Planning of the campaign (locations, dates, targets, logistics, HW training)
- 2. Financial support / vaccine were from;
 - Department of Disease Control (EPI)
 - Bureau of Budget (Government)
 - NHSO
 - WHO



OPV campaign conducted in 2019





Deep-south MCV immunization campaign to contain outbreaks in 2018



Learning Network for Countries in Transition

Benefits and Challenges of Working with NHSO

- Benefits of delivering immunization within a health insurance program.
 - Reduce workload on budget management, procurement process, logistics etc.
- Current coordination challenges
 - Allocation of vaccine stockpile (routine EPI, outbreak response, campaign, migrant)
 - Integration of vaccine management process, multi-agencies involvement



Moderated Q&A

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Thank you



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