Ensuring to access essential medicines in Thai UHC lesson learned from Thailand

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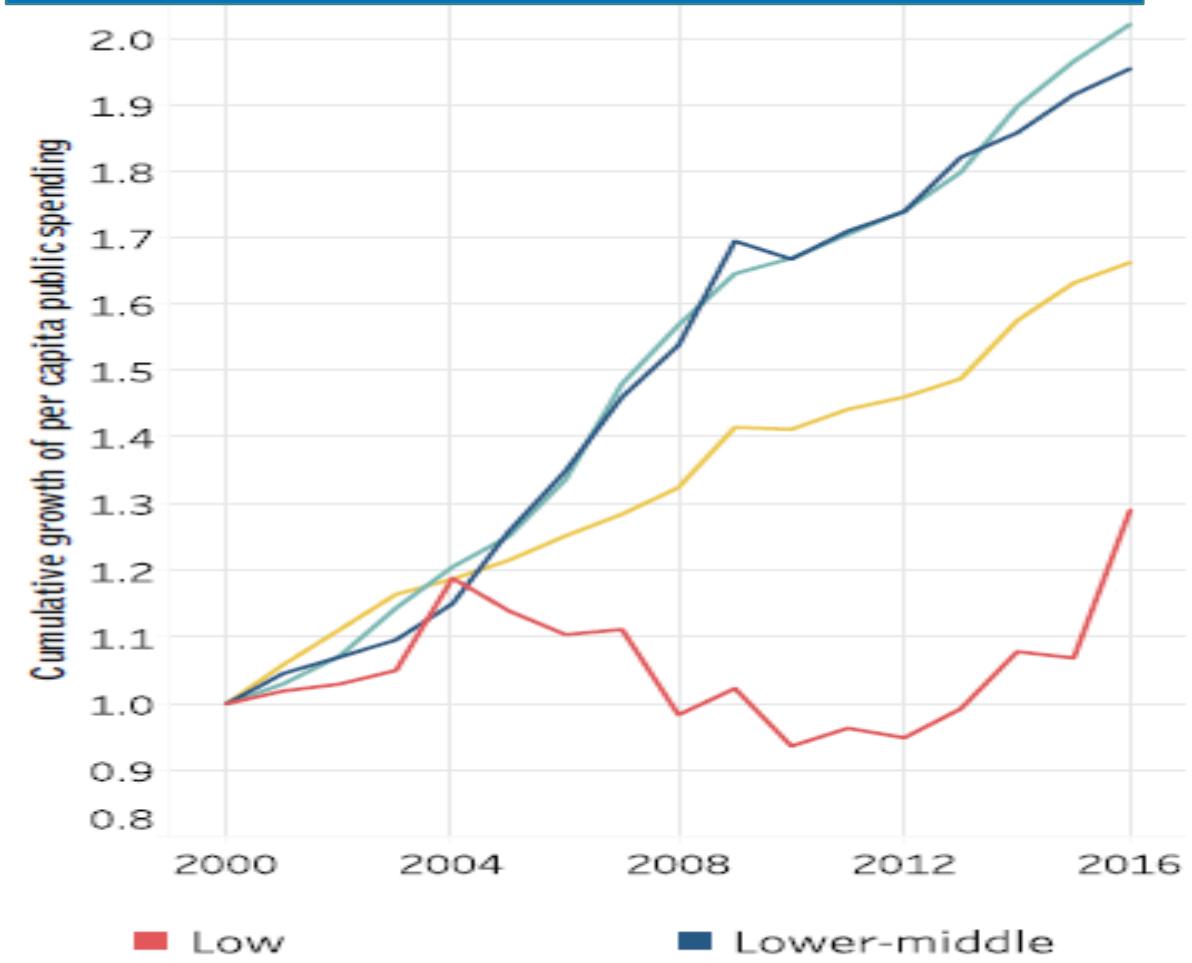
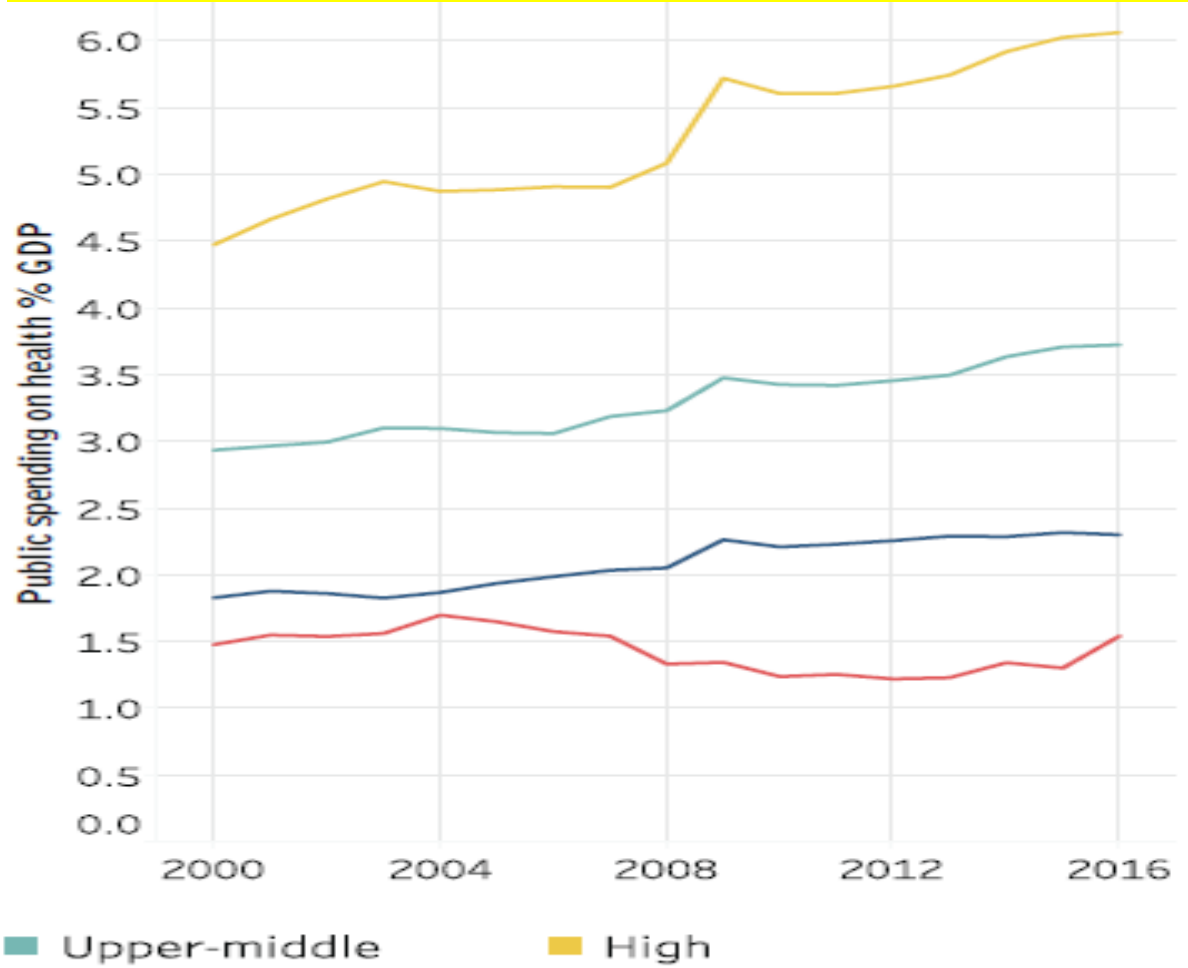
Trends of public health expenditure between 2000-2016

The cumulative growth rate



The ratio of public spending on health to GDP



Low Lower-middle Upper-middle High

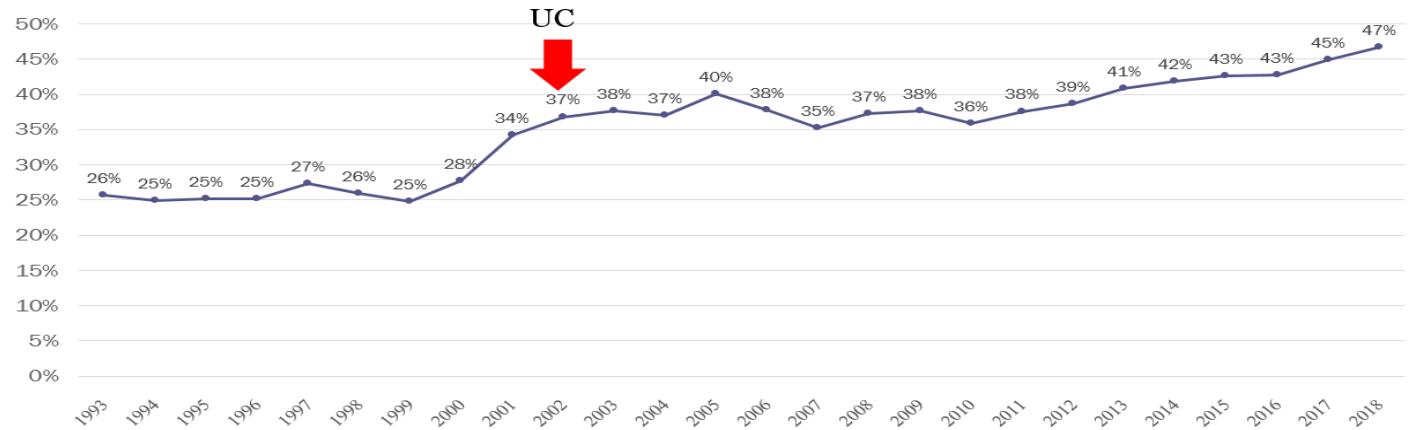
Note: The cumulative growth rate is calculated using the average of per capita public spending on health from domestic sources, in 2016 constant US$, by income group and year. Base year 2000 = 1.0.

2002

Universal Health Coverage

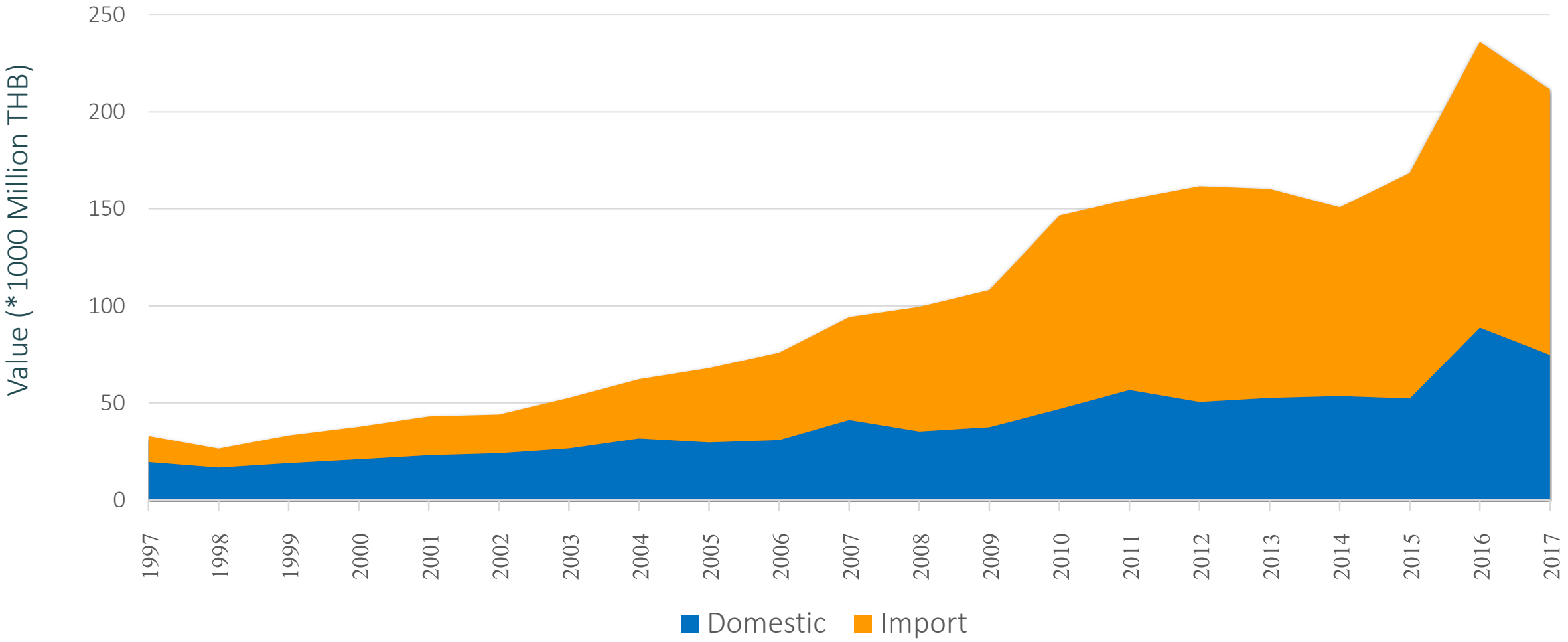
Comparing health expenditures among 3 main health insurance schemes during 2003-2014

The percentage of medicine costs in relation to overall health care expenses (1993-2018)

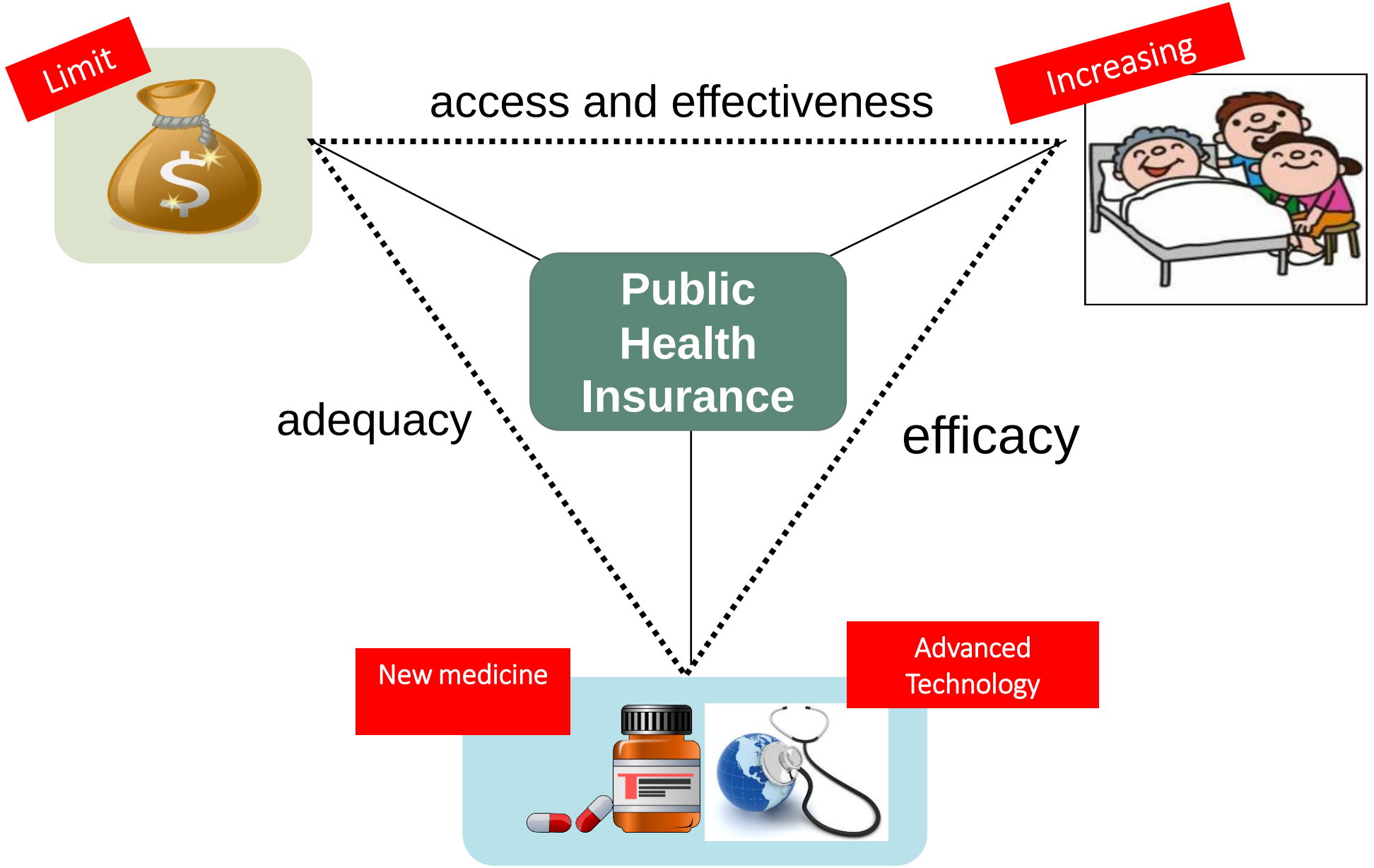


Source: Office of the National Economic and Social Development Council

Compare production of domestic and import values of medicines during 1997-2017



pressure to consider the value for money of health investment



Policy makers need more evidences

Global

Faster acccess
- new drug
- Advanced technology
- Expensive intervention

don't always get better outcomes

country

organization

- Momentum of UHC & private insurance
- Moral hazard
- Demographic change : aging population
- Emerging new diseases, new technology

Payment mechanism in UCs

- **Capitation in OP**
- **DRG with global budget in IP**

Development of National List of Essential Medicines

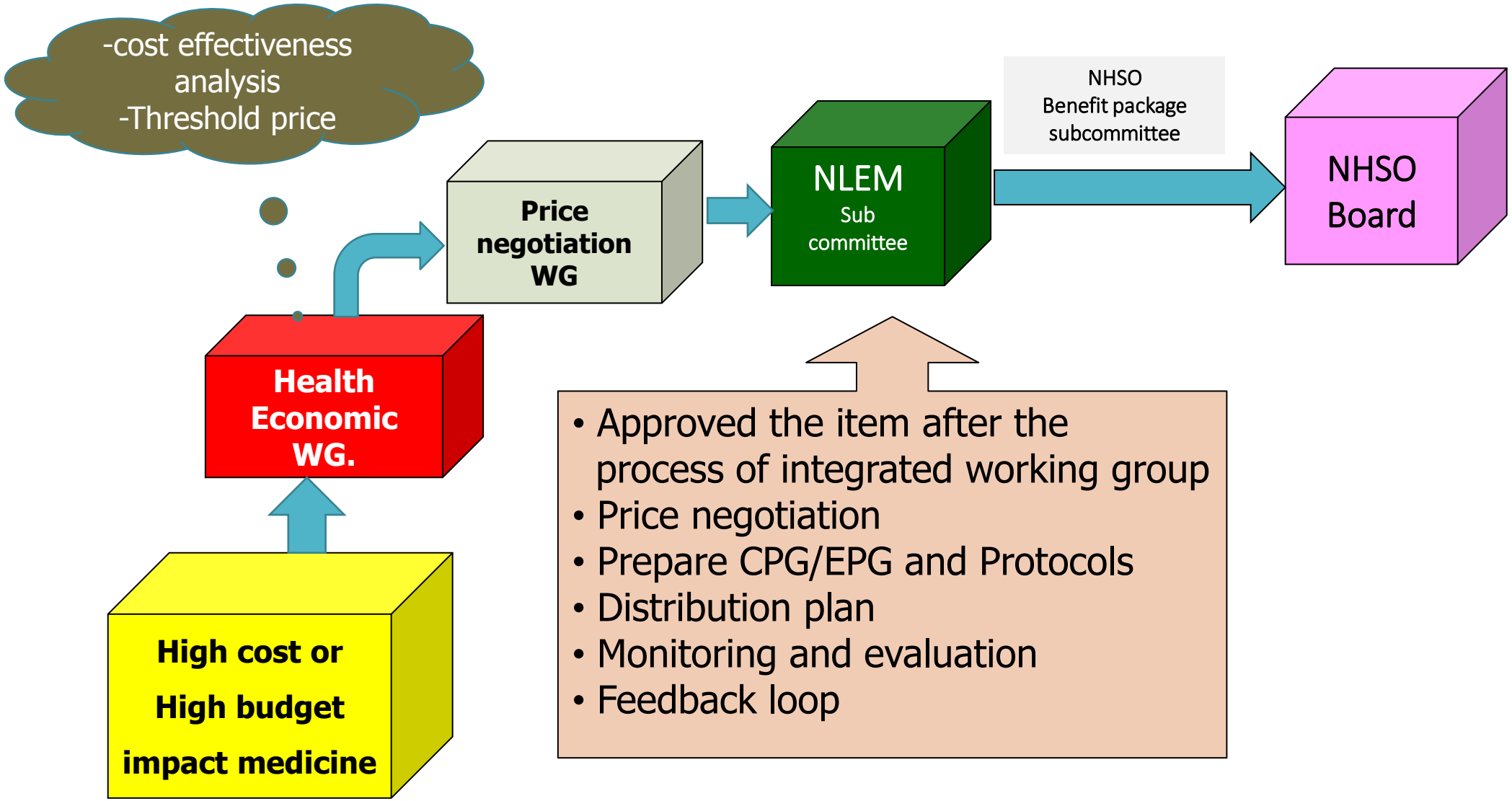
- ❑ 1981 NLEM was first introduced

  criteria : only cost, safety, efficacy

UHC was established in 2002

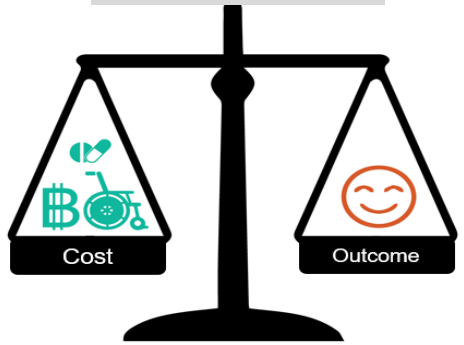
- ❑ 2004 ***added criteria*** : effectiveness
- ❑ 2008 ***added criteria*** : cost-effectiveness

Medicines' journey before becoming the benefit package under UCs



Cost-Effectiveness threshold and price negotiation

ICER



$$\frac{Cost_{new} - Cost_{base}}{Outcomes_{new} - Outcomes_{base}}$$

Incremental Cost (THB)

500,000

1. ICER 300,000 THB/QALY at current price

2. Negotiated price based on CE threshold

C

5

5

Incremental QALY

3. Final negotiated price based on budget impact and affordability of 3 schemes

Accept the technology if ICER < 160,000 THB/QALY*

-500,000

*5,000 USD (1 USD = 35 THB)

Price negotiation model for NLEM

Disease	Drug name	model	% discount
Hep C	Peginterferon	Value based pricing	72 %
Hep B	Tenofovir	Thai GPO manufactured	83%
Breast cancer (HER2+)	Trastuzumab (440mg)	Volume purchase under Managed entry agreement	42%
Prostate Cancer	Leuprorelin/Triptorelin	Choose one price	13% -69%
CA colon	Oxaliplatin	Market competition	82%
Gaucher type1	Imiglucerase	Risk sharing under Managed entry agreement	46%
Diffused large B-cell lymphoma	Rituximab	Managed entry agreement	20%(100mg) 60% (500mg)

Drug Policy intervention

Disease	Drug name	model	% discount
Breast cancer	letrozole	Compulsory licensing	93%
Breast cancer	Doxetaxel	Compul	96%
			89%
ART			**93%**
ART			**92%**
ART		ompulsory licensing	**82%**
Antiplatelet dru	pidogrel	Compulsory licensing	95%
Hep C	Sofosbuvir, ledipasvir	Voluntary licensing	91%(sof) 92%(sof+ledi)

Save more than 740 million USD during 2009-2018 and increased more than 60,000 patients for accessing the high cost medicines

Appraisal results and decision making

Table 4 – The relationship between assessment and appraisal results.

Policy	Assessment results*		
		Not cost-effective (ICER >1 per-capita GDP/QALY)	
		Low budget impact	High budget impact
		• Imiglucerase for Gaucher type 1	• PD-first policy for ESRD
	2a	—	• Anti-immunoglobulin E for severe asthma
		oled	

ICER, incremental cost-effectiveness ratio; GDP, gross domestic product; QALY, quality-adjusted life-year; THB, Thai baht.

* Two cost analysis studies, that is, screening for risk factors for leukemia in people living in the industrial areas, and system for screening, treatment, and rehabilitation of alcoholism, are not included in this table.

† High budget impact >THB 200 million per annum; low budget impact ≤THB 200 million per year.

Multi criteria decision making for policy makers

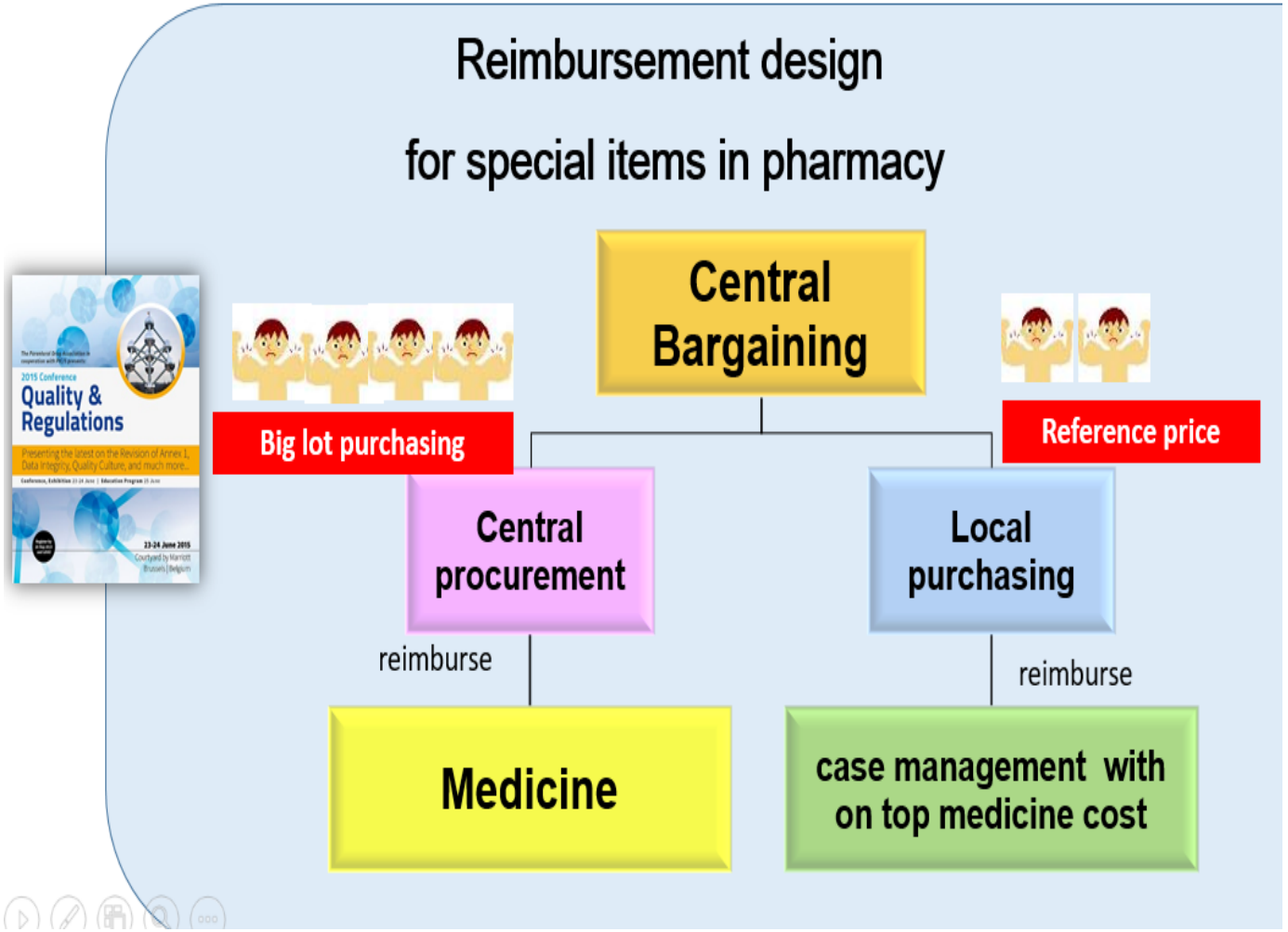
- Subsidy considered on the basis of Cost effectiveness, incremental cost effectiveness ratio (ICER)

  →*Cost effectiveness is a key, but not sole criterion* for listing
- Catastrophic prevention
- Medium to long term budget impact assessment
- Ethical concerns
- Supply side capacity to scale up new interventions
- Equity consideration

NHSO (payer)

Special drug management for tackling the medical access problems in Thailand

1. High cost medicines
2. ARV & TB
3. Peritoneal dialysis solution
4. Orphan drugs
   - *Antidotes*
   - *Serum*
   - *Vaccine*

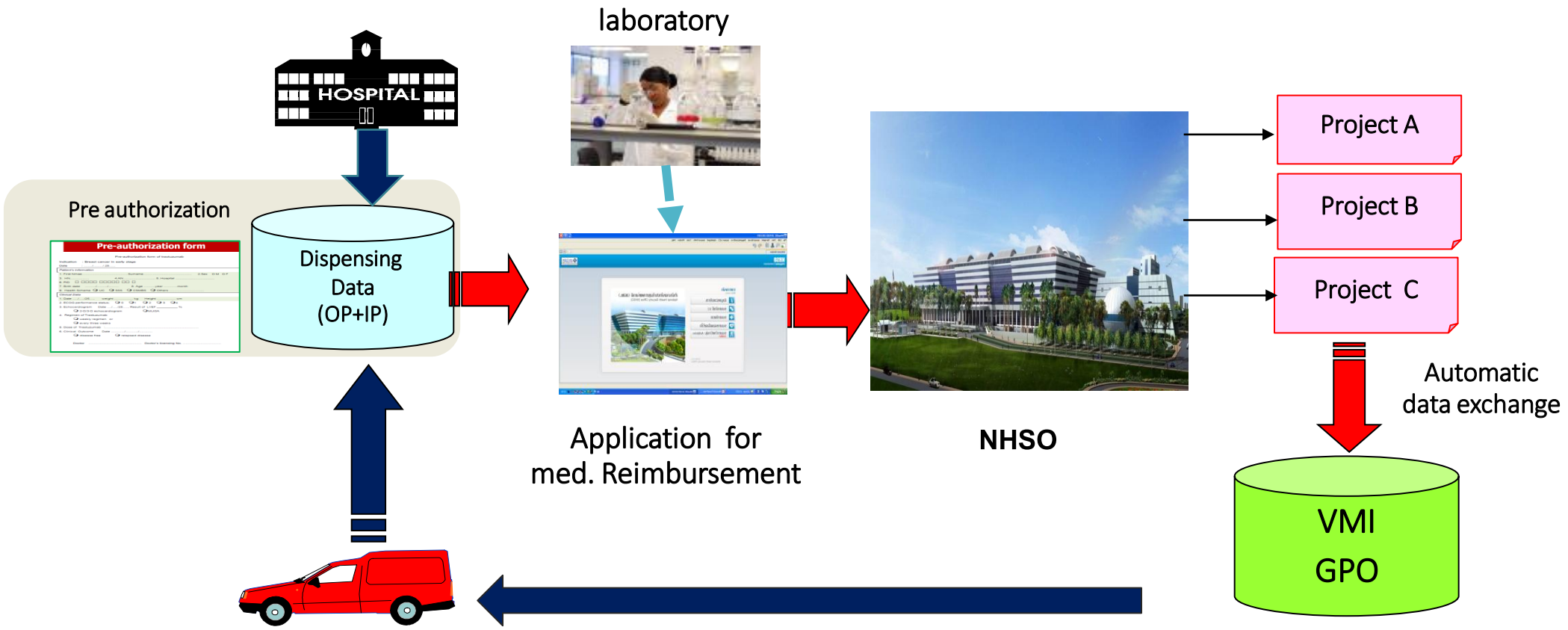


Quality concerns to make reliability to the products

- Every item has to be prepared the qualified medical Specification before the national bargaining
- Multiple source of data provided for medical specification management referenced from
  1. *Pharmacopeia such as USP, BP, Europian Pharmacopeia*
  2. *Expert's opinion*
  3. *Stakeholder's opinion*
- Pre marketing surveillance from third party lab such as MOPH's medical science center or international lab for Government used licensing medicines
- Post marketing surveillance for product analysis with the collaboration with Thai FDA

Enhancing the logistic system using

Smart vendor managed inventory (VMI)



Tracking process

The beneficiary enrollment and provider registration is needed.

Continuous Ambulatory Peritoneal Dialysis

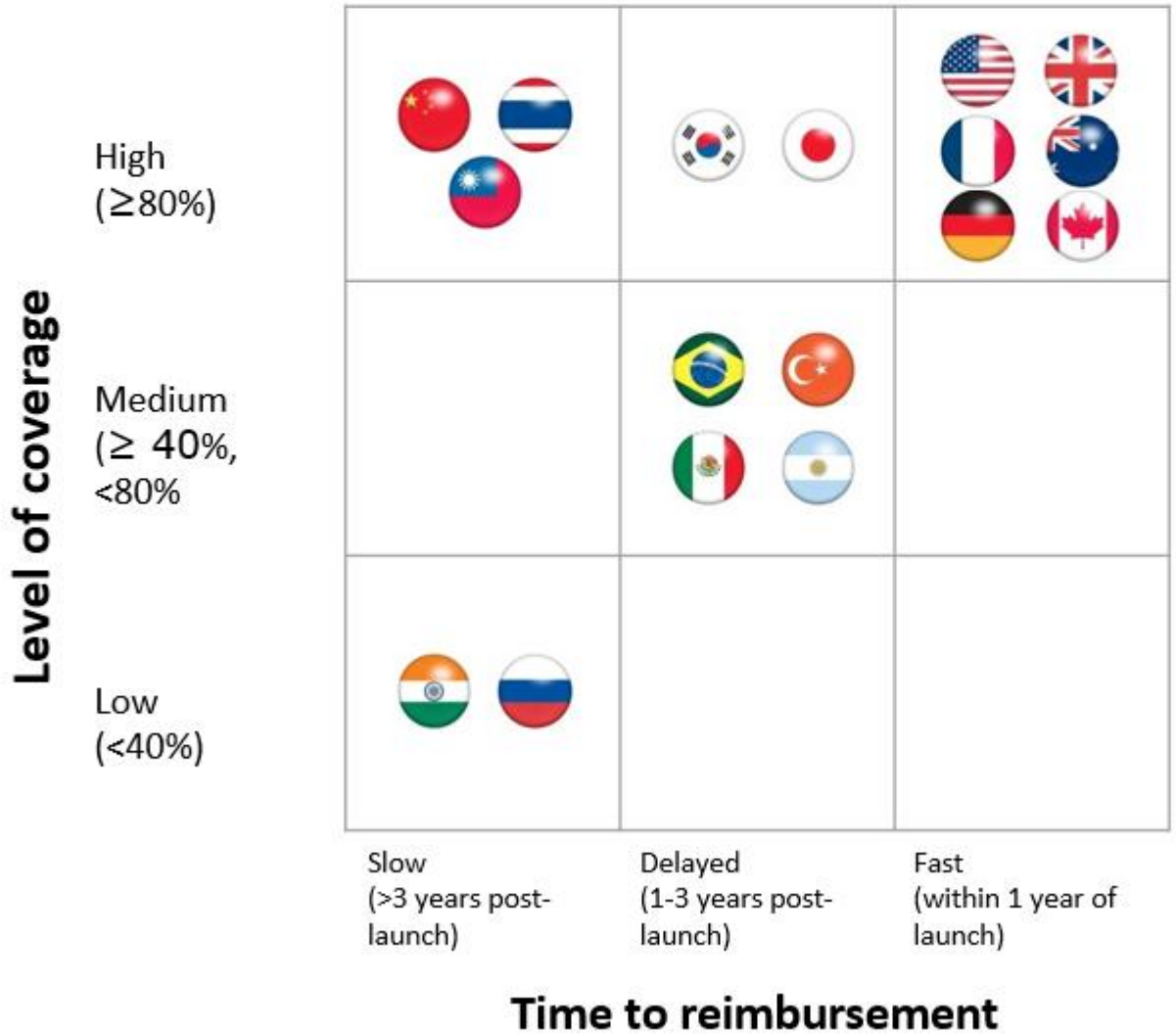
หมู่บ้านห้วยปูด

Pt.HOME

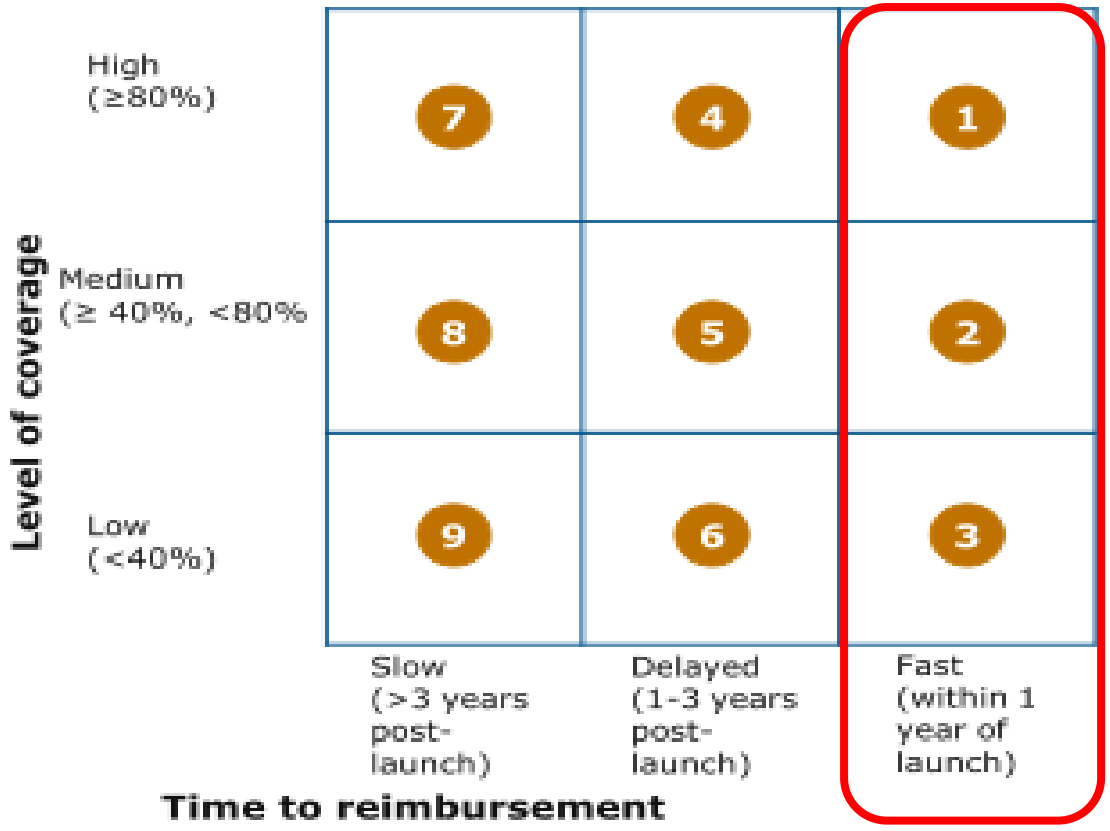
Health Center

HOME VISIT PROGRAM

Coverage and speed of access to innovative medicines



Using HTA to determine the value and prioritize each new product



1. Product **of high clinical/economic value to the whole population**; e.g., vaccines
2. Product of **high clinical value to a large sub-population**; e.g. HIV anti-virals
3. Product of **high clinical value to a small population**; e.g., post chemo oncolos
4. Product of **value to whole population, but not an imminent priority**; e.g. anti-bacterials where alternatives exist
5. Product of **value to a large sub-population**, but not an imminent priority; e.g. novel anti-diabetics,
6. Product of **value to a small population**, but not an imminent priority; e.g. anti-TNFs after DMARD failure
7. Product useful to whole population, however **several low-cost alternatives exist**; e.g., statins with generics
8. Product useful to **large sub-population**, and **several low-cost alternatives exist** e.g., cvd drugs
9. Product useful to **small sub-population**, and **several low-cost alternatives exist**

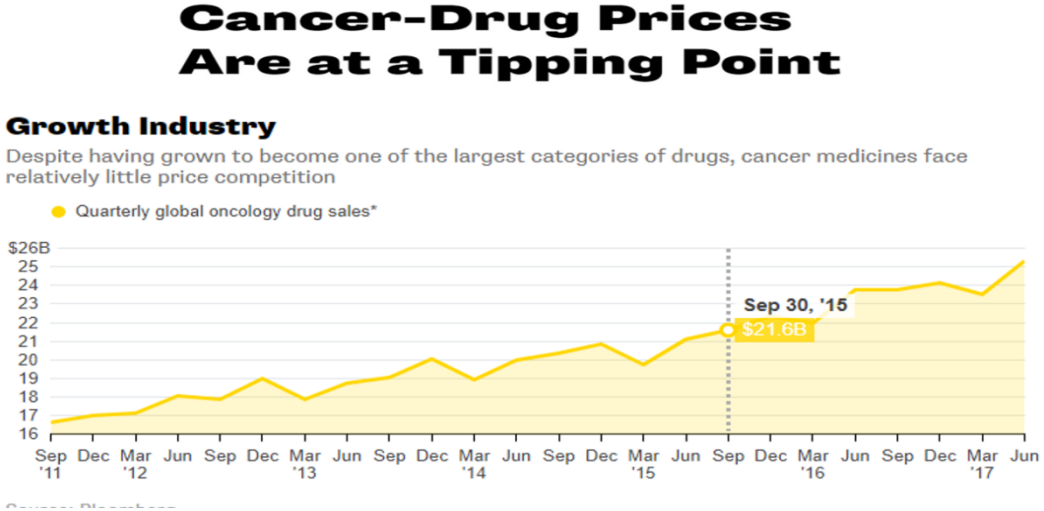
Sofosbuvir

SOF+Ledipasvir

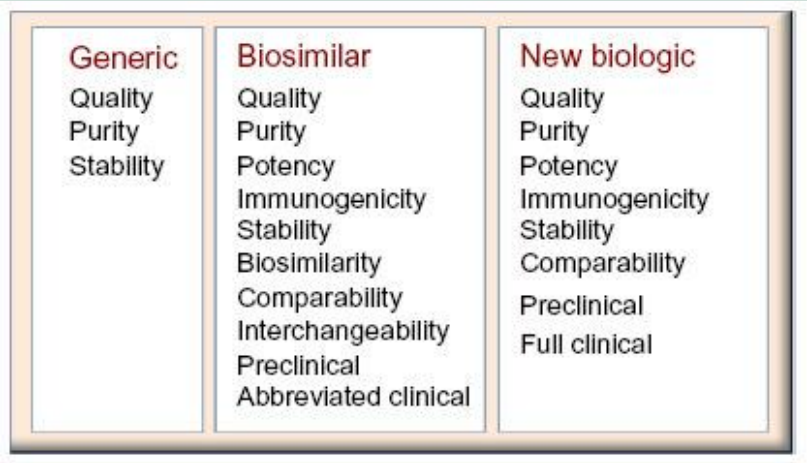
Raltegravir

Dolutegravir

Ref. IRP project with IMS



1. Interchangeable of biosimilar products



2. Indication-based pricing from HTA impact

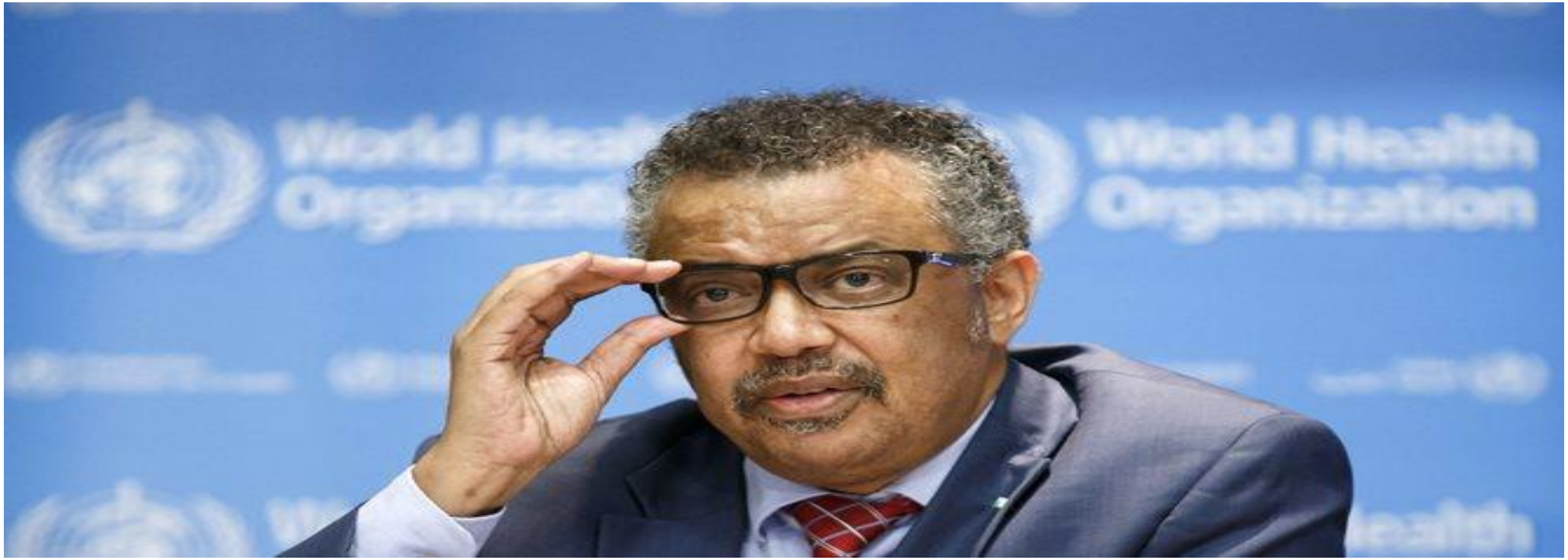
Welcome to the Jumble

Several cancer types are getting increasingly crowded with immuno-oncology drug approvals

Drug	Approval status: Lung cancer	Skin cancer	Bladder cancer	Head and neck cancer
Opdivo	2nd line	1st line for melanoma	2nd line	2nd line
Keytruda	1st line	1st line for melanoma	1st (some) and 2nd line	2nd line
Tecentriq	2nd line	In late stage trial	1st (some) and 2nd line	In early stage trials
Imfinzi	In late stage trials	In early stage trials	2nd line	In late stage trials
Bavencio	In late stage trial	1st line for Merkel cell carcinoma	2nd line	In late stage trials

3 . co-dependent technology

World Health Organization Is Mistaken on Drug Price Controls



Source: Salvatore Di Nolfi/Keystone via AP (9 April 2019)

- The World Health Organization thinks that drug companies are ripping off cancer patients
- 99 cancer therapies, underestimates the risk, expense, and length of drug development.
- The price of cancer drugs simply reflects those realities -- and the value they offer patients.

Challenges of HTA for rare disease

- Estimate of total number of rare disease patients and budget impact that should be calculated from all relevant technologies (co-dependent technology)
- Clinical and other evidence needed for HTA e.g. efficacy, cost, health quality of life
- Uncertainty of result
- Feasibility and preparedness of health services e.g. medical specialist, registry system, payment mechanism

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Health Intervention and Technology Assessment Program

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