

# Clinical pharmacy practice in Thailand: roadmap toward integration into the national healthcare financing system



Assoc. Prof. Surakit Nathisuwan, PharmD, BCPS Dean, Faculty of Pharmacy, Mahidol University



# **Thailand: Basic Healthcare Facts**

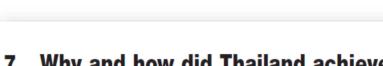
- Population: 65 million (14% > 60 years)
- Life expectancy: 75 (M), 84 (F)
- GDP (PPP): 7,298 USD/capita (Upper-middle income)
  - 4-5% of GDP spent on health
- Open Drug Distribution System
- Healthcare finance system: Universal healthcare coverage

#### **Thailand's Path to Universal Health Coverage** Evolution of National Health Insurance vs Gross National Income (GNI)

5,000 1997: \$2,700 1990: \$1,490 1978: \$710 Asian financial crisis 4,000 Social Security GNI per capita, US\$ **Civil Servant Medical** Scheme (SSS) Benefit Scheme (CSMBS) 2001: 3,000 30% uninsured 1983: \$760 1975: \$390 Voluntary Heatlh Card Medical Welfare 2,000 Scheme Scheme 2002: \$1,900 1,000 **Universal Coverage** Scheme (UCS) 0 1970 1980 1986 1988 1990 1996 1998 2006 2008 2010 972 1974 1976 1978 1982 1984 1992 1994 2000 2002 2004

Sources: GNI per capita from World Bank at http://data.worldbank.org/data-catalog/GNI-per-capita-Atlas-and-PPP-

table; chronological events were summarized by the authors.



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# 7 Why and how did Thailand achieve good health at low cost?

Walaiporn Patcharanarumol, Viroj Tangcharoensathien, Supon Limwattananon, Warisa Panichkriangkrai, Kumaree Pachanee, Waraporn Poungkantha, Lucy Gilson and Anne Mills

# THE **RECKEFELLER** FOUNDATION





https://ghlc.lshtm.ac.uk/



#### 'Good health at low cost' 25 years on

What makes a successful health system?

Edited by Dina Balabanova • Martin McKee • Anne Mills

# **Key Factors for Successful Implementation of UHC**

Long standing investment in health infrastructure focusing the poor and underserved

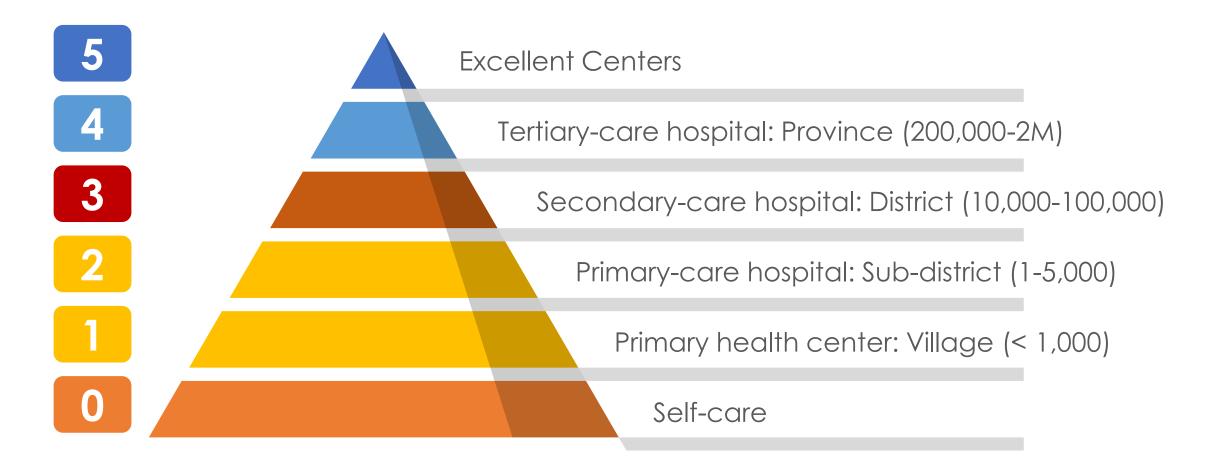
# Strategic placement

of primary healthcare centers and district hospitals to improve access

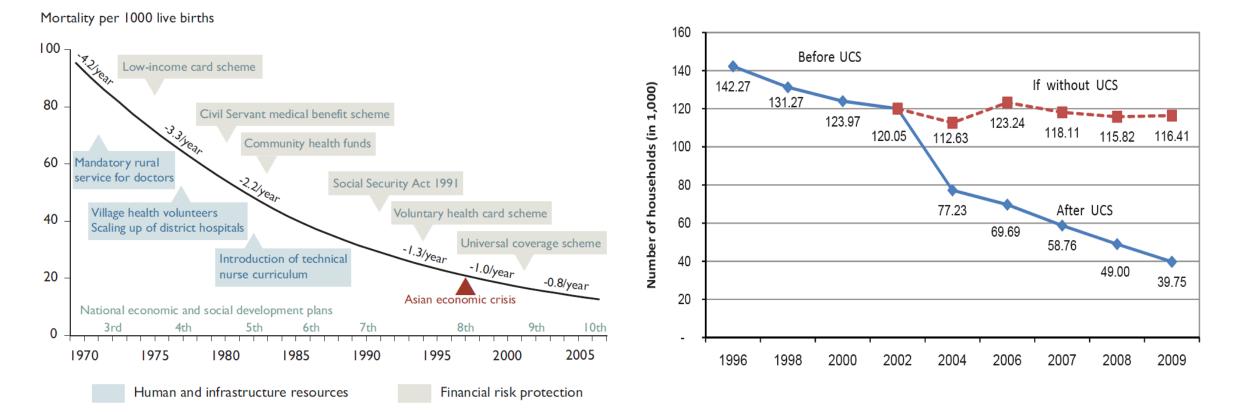
Mandatory deployment of healthcare graduates in district health system

Ability to generate evidence to inform policy

# Thailand's Health Service Infra-structure

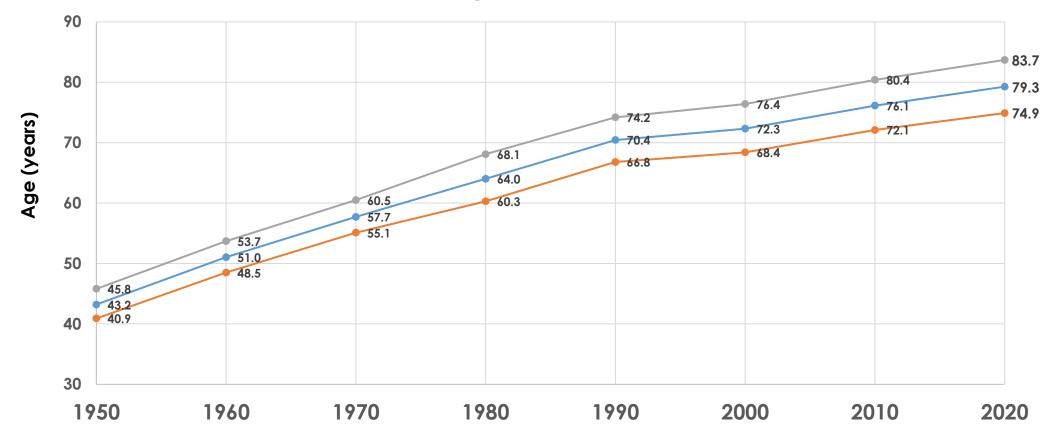


### Under-5 Mortality, Health Infrastructure Investment & Number of households Protected from health impoverishment: 1996-2009



# Thailand's Life Expectancy: 1950 - 2020

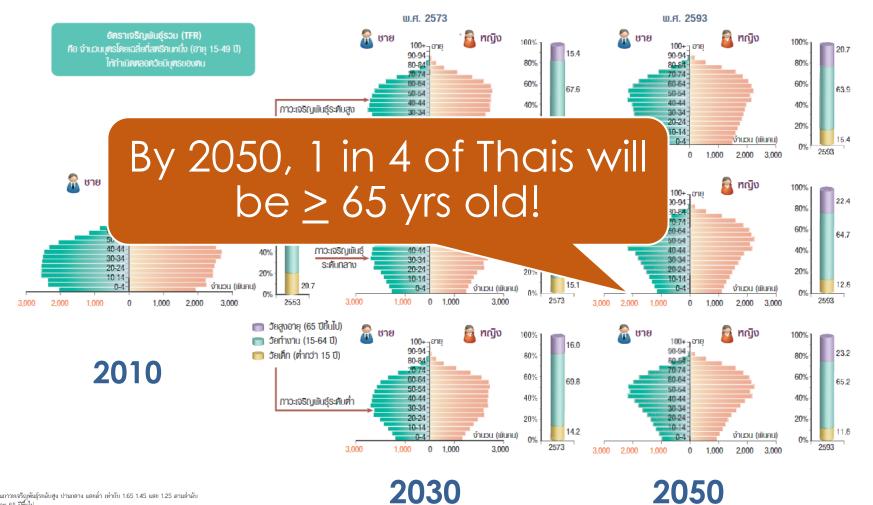
-Average --- Male --- Female



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University

# **Upcoming Change in Thailand's Population Pyramid**



ที่มา: สถาบันวิจัยประชากรและสังคม มหาวิทยาลัยมหิดล

หมายเหลุ: 1) อัตราเจริญพันธุ์รวม (TFR) เมื่อ พ.ศ. 2593 ในการะเจริญพันธุ์ระดับสูง ปานกลาง และด่ำ เท่ากับ 1.65 1.45 และ 1.25 ตามลำลับ 2) วัยสูงอายุ ที่ใช้ในการคาดประมาณ กำหนดที่อายุ 65 ปีขึ้นไป

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 เมื่องจากเป็นการคาดประมาณจากข้อมูล สำมะในประชากรและเคหะ พ.ศ. 2543 อาจทำให้ดัวเลขสัลส่วนประชากรใน พ.ศ. 2553 แดกด่างจาก ข้อมูลส่วนะในประชากรและเคหะ พ.ศ. 2553 ซึ่งยังไม่แล้วเสร็จสมบูรณ์ ณ ขณะจัดทำรายงานสุขภาพคนไทย

# **Current Challenges of Universal Health Coverage**

- Overuse of services
- Mismatch of demand-supply
- Aging population
- Growing budget
- Unfair budget allocation
- Level of standard of care
- Unpredictability of economic status



# Polypharmacy Congestion @ Public Hospital





# National Drug Policy: Key Objectives

- Access equitable availability & affordability of essential drugs (ED), including traditional medicine
- 2) Quality quality, safety, efficacy of all medicines
- **3)** Self-sustainability advancement of local pharmaceutical manufacturing capability
- 4) Rational Drug Use right drug, right time & duration, at the lowest cost to the patient & society

# **Roadmap of Clinical Pharmacy in Thailand**



# **Evolution of Thai's Clinical Pharmacy Education**

Changes in education & practice settings

Induction Period 1970-1990 Early introduction of concept Early adoption into practice Limited success & limited impact

Transition Period 1990 - 2008 Clinical pharmacy education gaining momentum (undergrad and graduate levels) Clinical practice started to grow

System Change 2009 Nation-wide adoption of PharmD Exponential rise in clinical practice Specializations started to grow

Rapid and continuous changes in health system/policy



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#### **CLINICAL PHARMACY FORUM**



#### U.S.-Thai Consortium for the development of pharmacy education in Thailand: History, progress, and impact

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Abstract

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Bangkok, Thailand

<sup>8</sup>School of Pharmacy, University of Maryland, Daltimore Mandand

In Thailand during the early 1990s, there was a need for an increased number of pharmacists and expansion of their knowledge and skills to address the need of the nation. Leaders of the Thai pharmacy education community at the time crafted a long-term plan aiming to expand the pharmacy educator workforce at a national scale through the financial support of the Royal Thai Government. This led to the establishment of the United States-Thai Consortium for the Development of Pharmacy Education in Thailand in 1994. The aim of the Consortium was to advance pharmacy education in Thailand through the support of leading U.S. pharmacy schools using both short-term and long-term trainings. Twenty plus years later, pharmacy education and practice in Thailand have changed dramatically. The number of faculties (schools) of pharmacy in Thailand has increased from 10 in 1993 to 19 in 2013. The

#### Publication documenting activities of the US-Thai Pharmacy Consortium

#### Journal of the American College of Clinical Pharmacy

#### https://accpjournals.onlinelibrary.wiley.com/doi/ 10.1002/jac5.1262



QR Code Link to the journal



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College of Pharmacy







THE UNIVERSITY OF ARIZONA
 R. Ken Coit
 College of Pharmacy







UNIVERSITY OF ILLINOIS AT CHICAGO PHARMACY



UNIVERSITY of MARYLAND School of Pharmacy

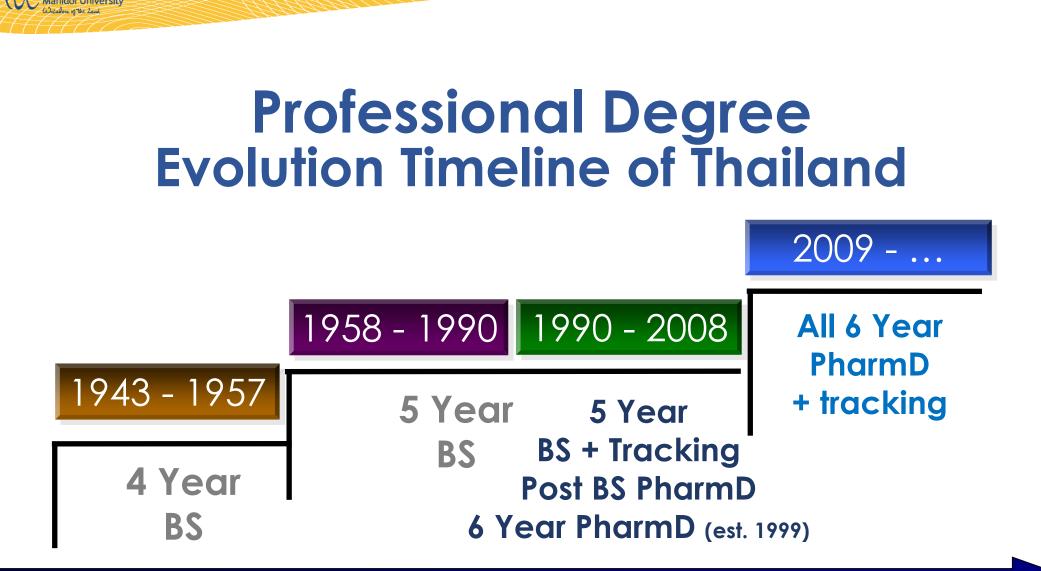


**COLLEGE OF PHARMACY** 

UNIVERSITY OF MINNESOTA



L. S. SKAGGS PHARMACY INSTITUTE

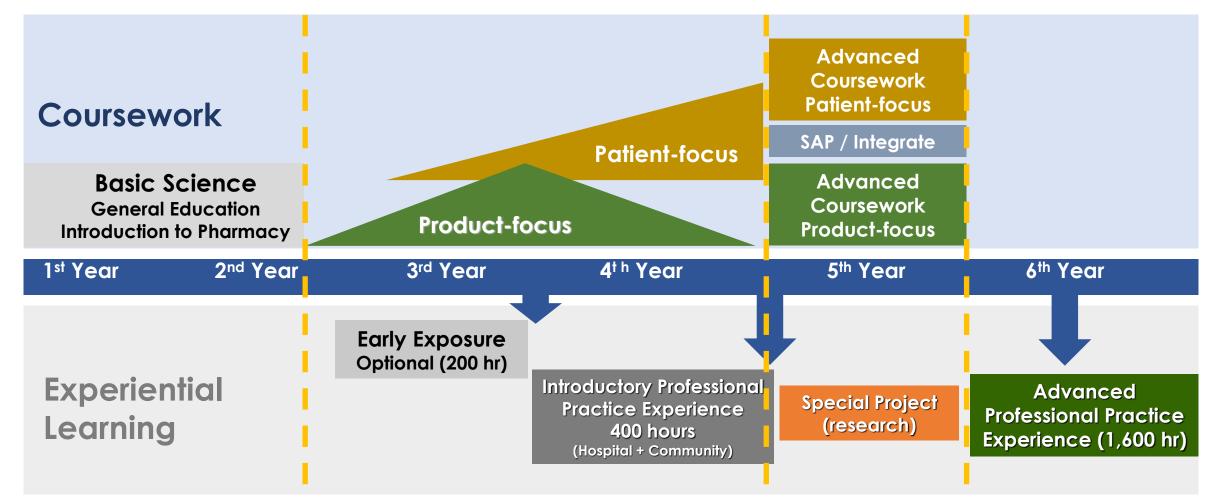


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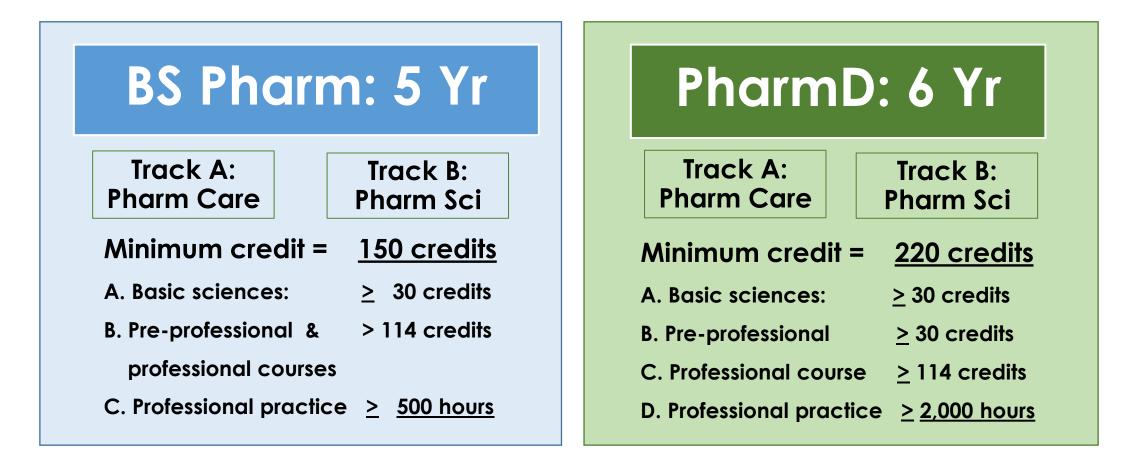


### Structure of Undergraduate Curriculum (Doctor of Pharmacy / PharmD) @ MUPY

Mahidol University



# Structure of BS Pharm vs PharmD



Sumpradit N, et al. Advances in Medical Education and Practice 2014:5 347-357

#### Year 5: Pharmaceutical Care

#### Semester 1

#### Year 5: Pharmaceutical Science

- Drug Information Round 1 (0-3-1)
- Pharmacy Practice Skills III 1 (0-3-1)
- Clinical Pharmacy/Therapeutics V 3 (3-0-6)
- Professional Practice I 4 (0-14-4)
- Professional Practice II 4 (0-14-4)
- Extemporaneous Compounding 2 (1-3-3)
- Special Project 3 (0-9-3)
- Free Elective 1 (1-0-2)

- Analytical Method Development 2 (1-3-3)
- Drug Discovery, Design & Development 2 (2-0-4)
- Phytopharmaceutical Science 2 (1-3-3)
- Professional Practice I 4 (0-14-4)
- Professional Practice II 4 (0-14-4)
- Extemporaneous Compounding 2 (1-3-3)
- Special Project 3 (0-9-3)
- Free Elective 1 (1-0-2)

### Semester 2

- Introduction to Clerkship 2 (1-3-3)
- Clinical Pharmacokinetics 3 (2-3-5)
- Drug Product Quality Assessment 2 (2-0-4)
- Evidence-based Phytotherapy 3 (3-0-6)
- Biological Products 2 (2-0-4)
- Special Project 3 (0-9-3)
- Professional Elective 3 (3-0-6)

- Pharmaceutical Product Development 2 (2-0-4)
- Pharmaceutical Product Development Lab 1 (0-3-1)
- Controlled-Release Drug Delivery System 2 (2-0-4)
- Principle in Pharmaceutical Engineering 2 (1-3-3)
- Pharmaceutical Quality Assurance 2 (1-3-3)
- Biological Products 2 (2-0-4)
- Special Project 3 (0-9-3)
- Professional Elective 3 (3-0-6)

# **Experiential Learning: PharmD**

Introductory Experience
(End of 4 <sup>th</sup> year)
400 hours

2 required introductory clerkships (core competencies)
Hospital pharmacy + Community pharmacy

Advanced Experience (6<sup>th</sup> year) 1,600 hours

# Pharmaceutical care

- Pharmaceutical sciences
- Faculty to Student Ratio
  - Overall ratio:
  - Professional practice: 1:4
- 1:8 Professional content: 1:6
  - Preceptor: 1:4

# Advanced Experiential Learning (Year 6)

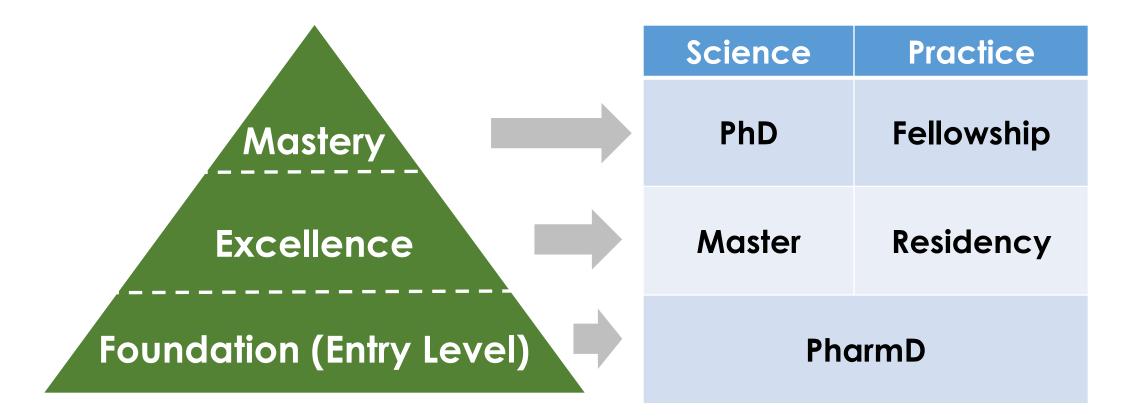
## **Pharmaceutical Care**

- Duration: 6 weeks
- Number of clerkships: 7
- Required clerkships (4)
  - Internal medicine
  - Ambulatory care
  - Community pharmacy
  - Medication management
- Elective clerkships (3)

# Pharmaceutical Science

- Duration: 6 weeks
- Number of rotations: 7
- Required rotations (2)
  - Production
  - Quality Control Quality Assurance
- Elective rotations (5)

### Pharmacy Education in Thailand: From Foundation to Mastery

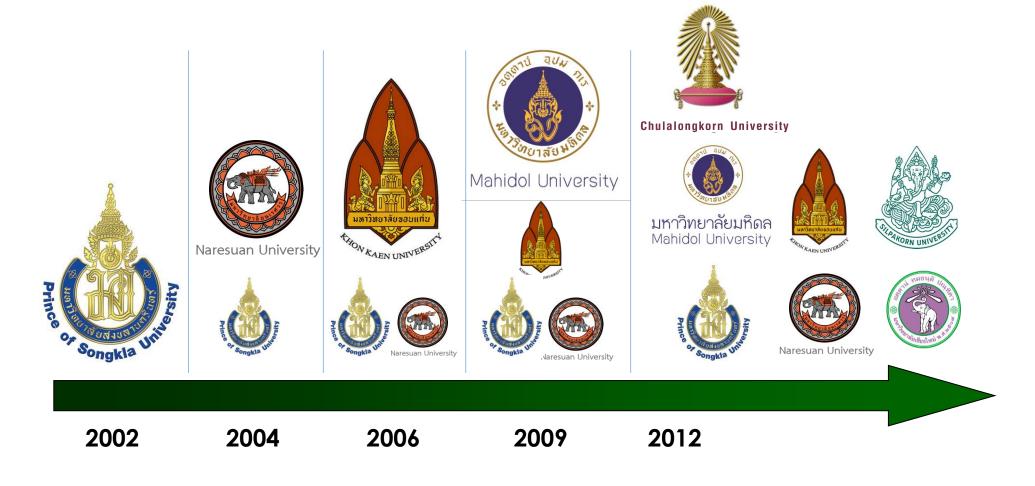


#### **Pyramid of Skill Levels**

**Degree / Qualification** 

# **TIMELINE: Residency Programs in Thailand**

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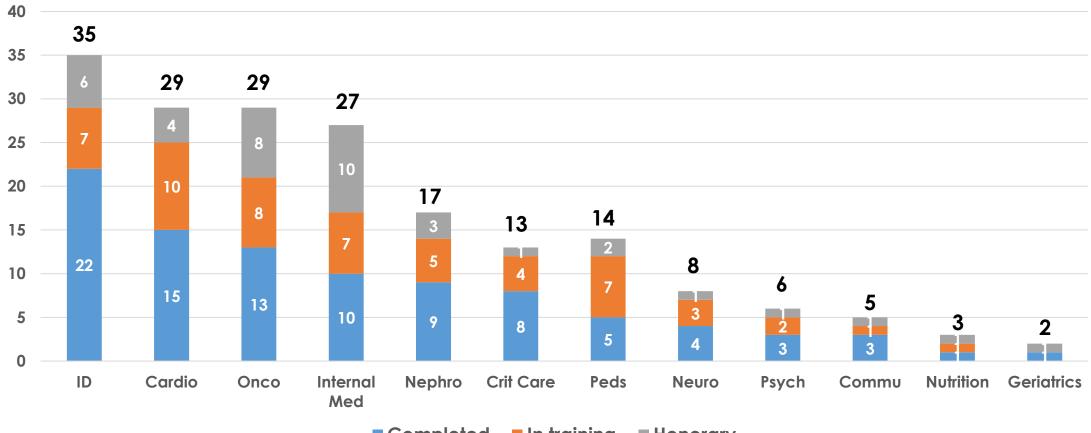


# **Available Specialties in Thailand**

- Ambulatory Care
- Cardiology
- Critical Care
- Geriatric
- Infectious Diseases
- Internal Medicine

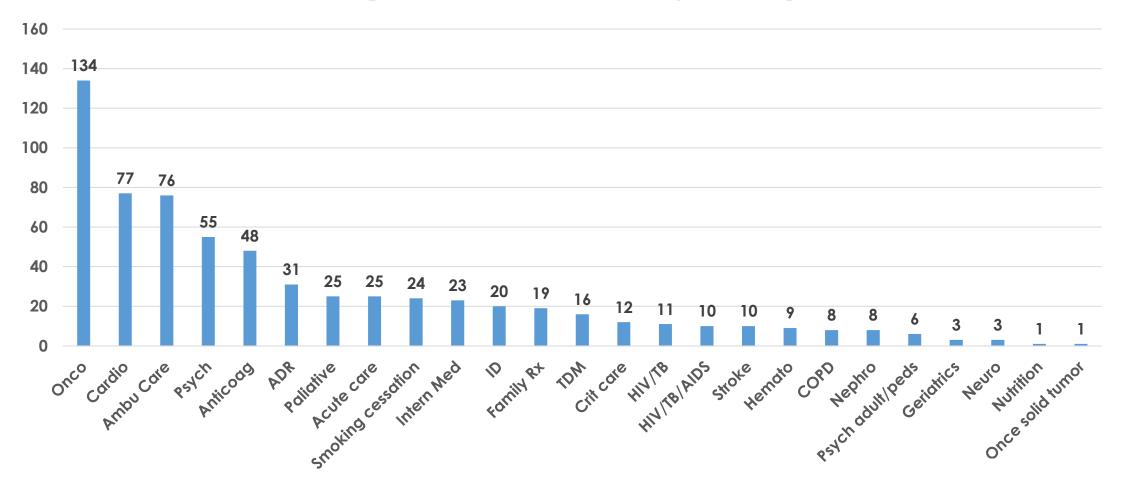
- Nutrition Support
- Oncology
- Pediatric
- Nephrology
- Neurology
- Psychiatry

### Current Status of Specialized Pharmacists in Thailand (2023)



Completed In training Honorary

### Number of Upskilled Pharmacists Through Short-course Training (N = 655 as of Aug 2023)



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### Drugstore as Key Player Against COVID-19 in Thai Health System

- Distribution point for ATK tests
- Distribution point for anti-COVID drugs
- Tele-pharmacy service for mild cases





# A Tectonic Shift in Universal Health Coverage Delivery From "Treats all diseases" to "Treatment Anywhere"





Dr. Jadej Thammatacharee, MD Secretary-General The National Health Security Office (NHSO)

#### **Previous Model of UHC**

Required to seek services at designated primary point of contact

Document is necessary, when seeking treatment outside designated points.

Reimbursement procedures relied on a paper-based system

Claims process possible only if patients visited their registered hospitals

Restricts healthcare rights due to issues of location / migration

#### **New Model of UHC**

Digital technology allows connecting health data nationwide, inter-hospital transfers can be recorded online

Trace where healthcare fees are incurred and reimburse them to health providers.

Online patients' health records, enabling continuous treatment, reducing duplication in care

Cover healthcare for beneficiaries "anywhere" using national ID cards at any service entry point.

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### เพียงพทบัตรประชาชนติดตัว ใช้สิทธิบัตรทอง **30 บาท** อย่างมั่นใจ





หน่วยบริการนี้ เข้าร่วมโครงการ

บัตรประชาชนใบเดียว รักษาทุกที

สามารถลงทะเบียนใช้งาน หมอพร้อม ได้ที่





BAHT

ใบเดียว

รักษาทุกที

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i Mational ID Card



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## Service @ Community

- ) Community Pharmacy
- 2) Medicine clinic
- 3) Dental clinic
- 4) Nursing clinic
- 5) Physical therapy clinic
- 6) Traditional medicine clinic
- 7) Lab test service

# **Digital Health Platform for Primary Care Service**

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#### A-MED CARE PLUS

A-MED CARE

PLUS

A-MED Care Plus แพลตฟอร์มสำหรับหน่วยบริการปฐมภูมิแบบครบวงจร ให้บริการดูแลรักษา โรคทั่วไป มีระบบเชื่อมต่อเครื่องอ่านบัตรประชาชนแบบ Smart Card รองรับการปิดสิทธิ์ มีระบบ API เชื่อมโยงระบบเบิกจ่ายบริการสุขภาพ (e-Claim) พร้อมระบบ Dashboard ติดตามผลการ เบิกจ่ายแบบ Real-time











## **Current Positions of Drugstores in Thai National Health System**



# **Thai Drugstores: Health Prevention & Promotion**



- 1. Free oral contraceptive drugs for women of reproductive age
- 2. Free emergency oral contraception for unprotected sex and counseling
- 3. Free condoms for Thai citizen of reproductive age
- 4. Free pregnancy test kit for women
- 5. Free iron & folic acid supplement for women age 13-45 years of age
- 6. Free disease screening (i.e., HTN, DM, CVD risk, smoking, alcohol, mental health)



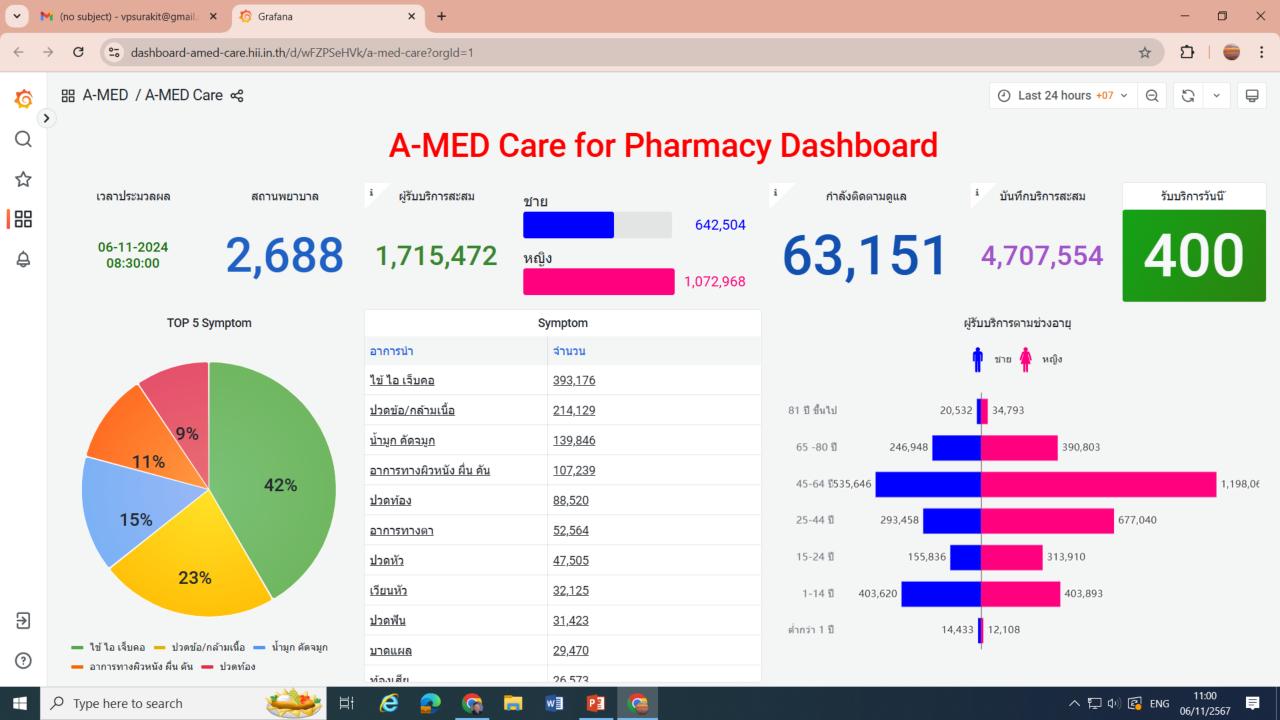
ต้องการสอบถามเรื่องยา แอดไลน์ @mypharmacist มีเกสัชกรตอบคำถาม

# 32 Common Illnesses Managed by Community Pharmacists

- Headache
- Vertigo
- Motion sickness
- Paresthesia
- Insomnia
- Joint pain
- Muscle ache
- Stomach ache
- Diarrhea
- Nausea / vomiting
- Anorexia
- Food poisoning
- Constipation

- Skin rash / itching
- Dandruff / Scalp issues
- Aphthous Ulcers
- Minor burns
- Uncomplicated skin infections
- Wound care
- Parasitic infection
- Scabies
- Fever
- Cough
- Sore throat
- Covid

- Eye problems
- Ear problems
- Dysmenorrhea
- Urinary symptoms
- Leucorrhoea
- Oral hygiene
- Toothache
- Gingivitis



### Community Pharmacist as Certified Health Providers Recognized & Reimbursed by Thailand's National Health Security Office (NHSO)





- Work collaboratively with hospital as extended outpatient pharmacy
  - Covered by universal health coverage
  - Received fee for professional services
  - 2,500 stores registered
  - Featured on national news / social media with positive reviews



'ร้านยา' 30 บ.รักษาทุกที่ ขยายเป็น '32 กลุ่มอาการ' สปสช.พิจารณาแล้ว รอ ประกาศ



• ปัญหาความแออัดของการใช้บริการในโรงพยาบาลถือเป็นปัญหาสำคัญมาช้านาน จนถึงช่วงการระบาดของโควิด–19 ยิ่งเป็นปัญหาที่ต้อง
เร่งแก้ไขเพื่อให้การรักษาดำเนินไปได้พร้อมควบคุมการระบาดของโควิด–19 ไปด้วย "โครงการนำร่องให้ผู้ป่วยรับยาที่ร้านยาเพื่อลดความแออัด
ในโรงพยาบาล" เป็นหนึ่งในทางเลือกดูแลผู้ป่วยโรคเรื้อรังในช่วงการระบาดของโควิด–19 ซึ่งผลการประเมินโครงการพบความสำเร็จหลาย
ประการ

Highlight

- โครงการนำร่องฯ ช่วยให้เกิดการพัฒนารูปแบบบริการร่วมระหว่างโรงพยาบาลและร้านยาในเครือข่าย เกิดความร่วมมือในการดูแลผู้ป่วย และเภสัชกรร้านยาพัฒนาบทบาทไปเน้นที่งานบริบาลเภสัชกรรมมากขึ้น ผู้ป่วยที่รับยาที่ร้านยามีความพึงพอใจ ขณะที่เภสัชกรก็ให้การ ตอบรับต่อโครงการเป็นอย่างดี
- อย่างไรก็ตาม ยังมีประเด็นท้าทายในหลายแง่มุมซึ่งต้องสนับสนุนเพื่อแก้ไขต่อไป



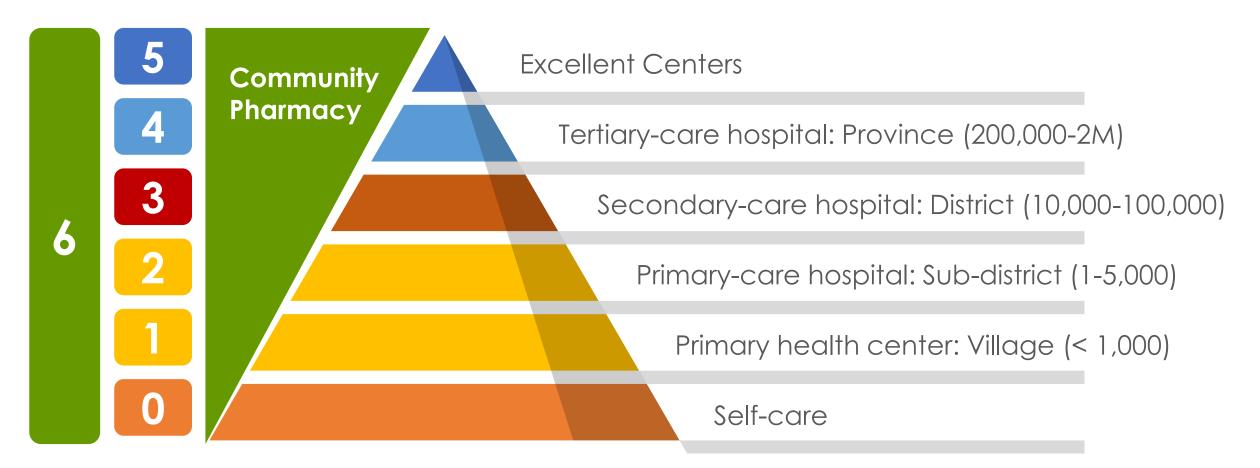


Benefits of Community Pharmacy to Support Longitudinal NCD Management in Thai Health System



- ลดเวลาเดินทางได้ 21 นาที (54%) Reduce travel time
- ลุดค่าใช้จ่ายด้านการเดินทางของผู้ป่วยได้ 50 บาท (50%) Reduce transportation cost
- ลุดค่าใช้จ่ายด้านการซื้ออาหาร 50 บาท (83%) โ๊๊๊ ( Reduce food cost
- มีเวลาปรึกษาผู้เชี่ยวชาญ (เภสัชกร) เพิ่มขึ้น 4 นาที (53%) ก็ได้ More time with pharmacists
- และลดความแออัดในโรงพยาบาลได้ (10-20%) ก็ Reduce congestion @ hospitals

# Thailand's Health Service Infra-structure





# Summary

- Continuous investment in building healthcare infrastructure and human resources are the key success factors for sustainability health system.
- Pharmacy education, practice and research needs to evolve to meet the current and future demand of the healthcare need.
- University must continuously improve quality of education and production of healthcare personnel to meet the country's need.
- Integrated pharmacy service throughout patient journey is the future of pharmacy service.



# Thank you for your attention

