สถานการณ์ระบบยาประเทศไทย
รู้เท่าทันกระแสโลก

สุพล ลิมวัฒนานนท์ ภบ. MPHM, PhD

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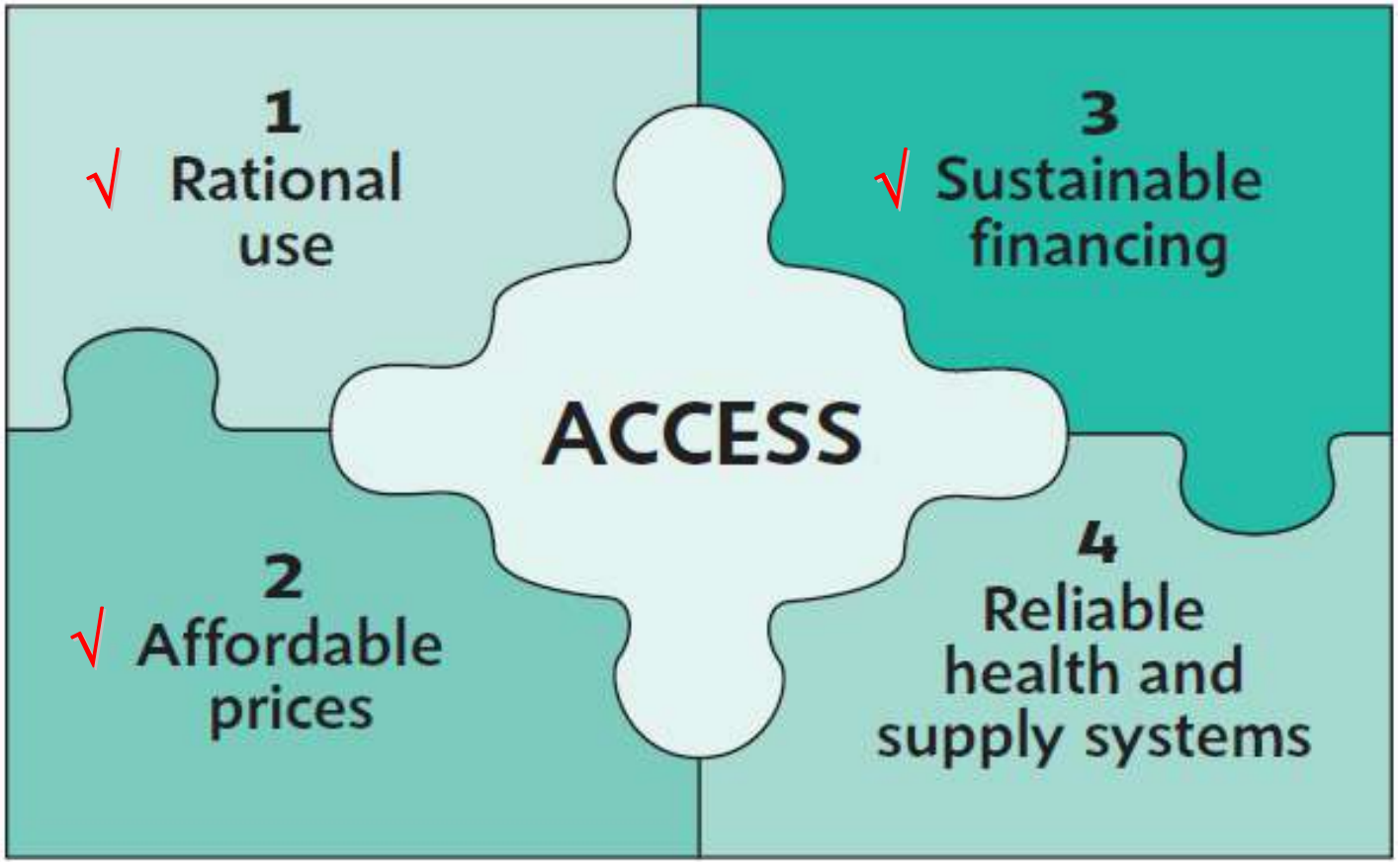
นักวิจัยอาวุโส International Health Policy Program (IHPP)

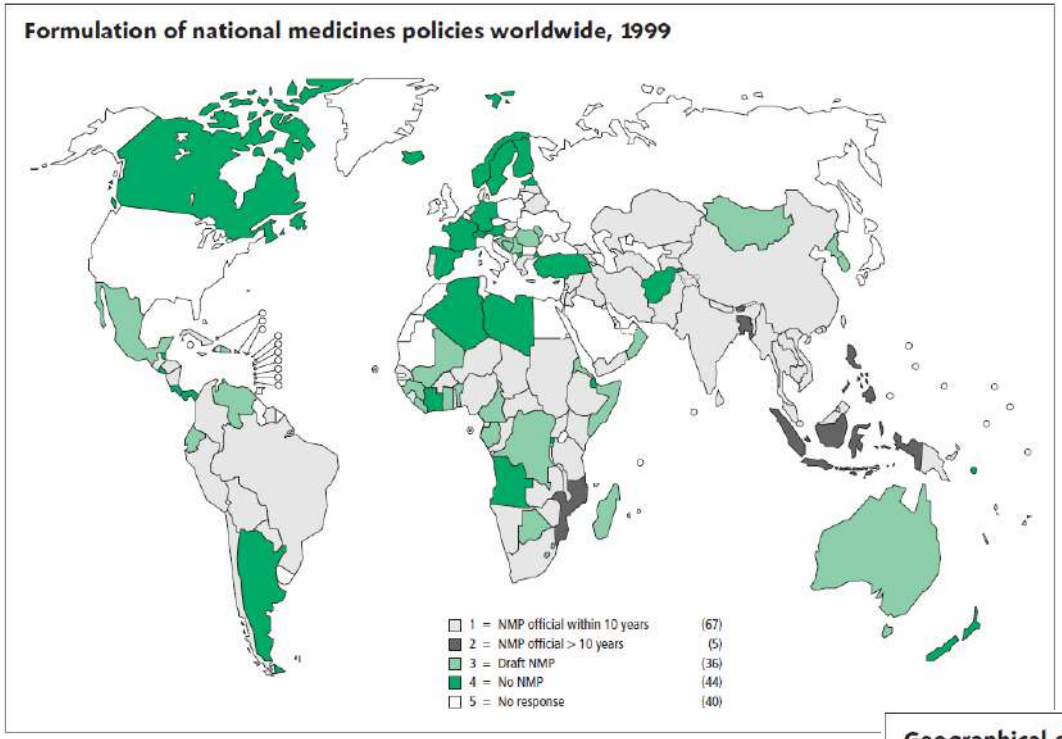
ยุทธศาสตร์การเข้าถึงยาถ้วนหน้า
องค์การอนามัยโลก



WHO medicines strategy: framework for action in essential drugs and medicines policy 2000-2003. Geneva, World Health Organization, 2000.

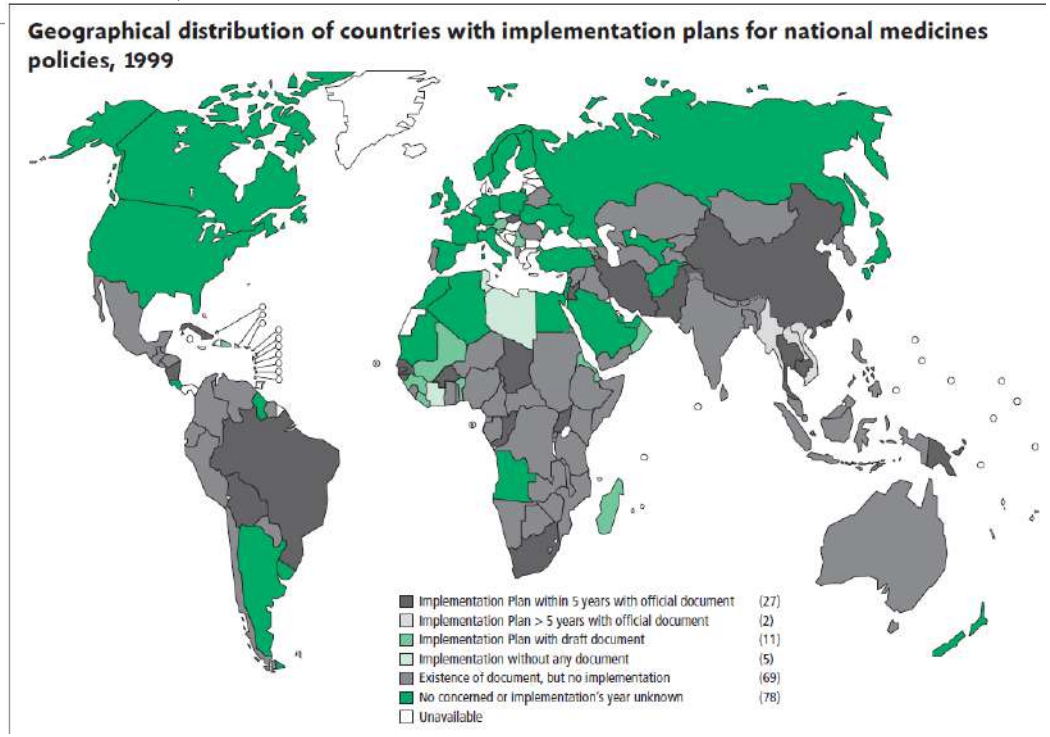
National Medicines Policies

(NMP)



From **formulation** of the policies

To **implementation** of the NMP plans



Interventions to improve rational use of medicines ‘To do’ lists

Since 1988, a number of intervention studies have been undertaken to identify effective methods to improve rational use of medicines. These findings represent a major improvement in the world drug situation. A recent WHO publication proposed 12 core policies to promote more rational use of medicines.[3] These include:

- √ a mandated multi-disciplinary national body to coordinate medicine use policies
- √ clinical guidelines
- √ essential medicines list based on treatment choice
- √ drug and therapeutics committees in districts and hospitals
- √ problem-based learning in pharmacotherapy in undergraduate curricula
- √ continuing in-service medical education as a licensure requirement
- √ supervision, audit and feedback
- √ independent information on medicines
- √ public education about medicines
- √ avoidance of perverse financial incentives
- √ appropriate and enforced regulation
- √ sufficient government expenditure to ensure availability of medicines and staff

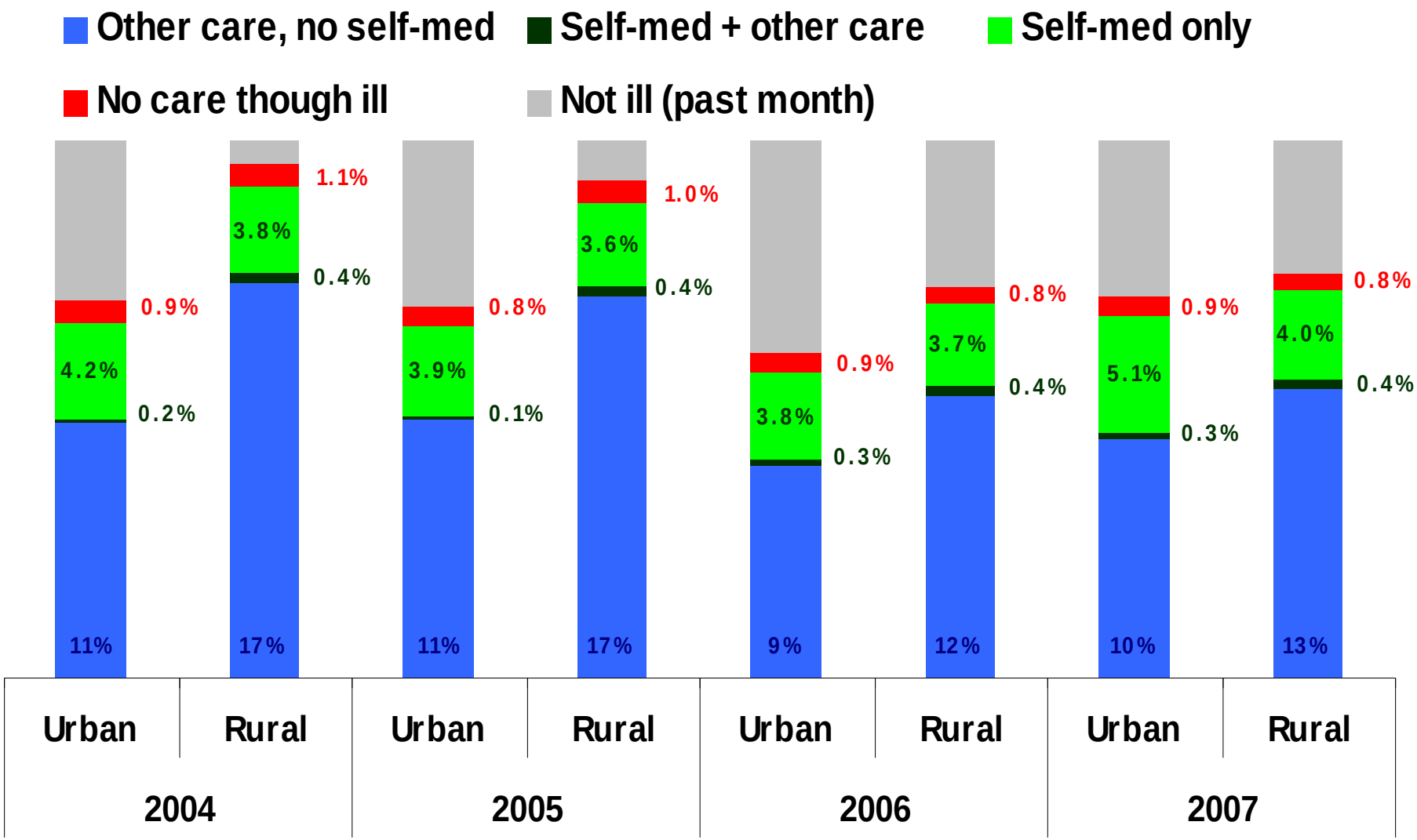
√ ทำแล้ว ได้ผล?

√ ทำบ้างไม่ทำบ้าง

√ น่าทำและจะทำ

Source: The World Medicines Situation (WHO, 2004)

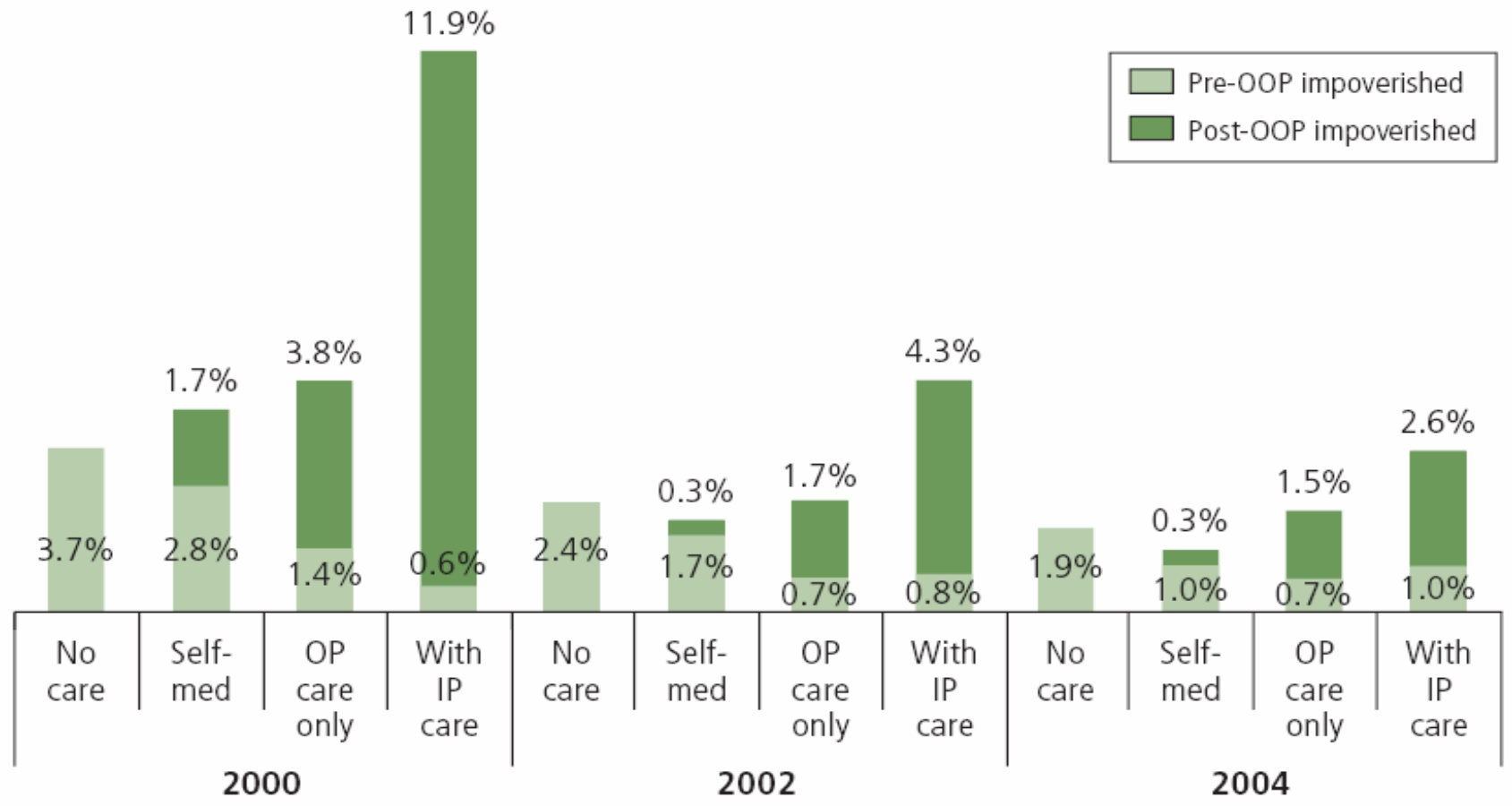
การตัดสินใจใช้บริการสุขภาพของครัวเรือน



Source: Health and Welfare Survey (various years)

ความยากจนลงของครัวเรือนจากการใช้บริการสุขภาพ อะไรคือสาเหตุ?

Fig. 2. **Incidence of household impoverishment[a] by types of health care**

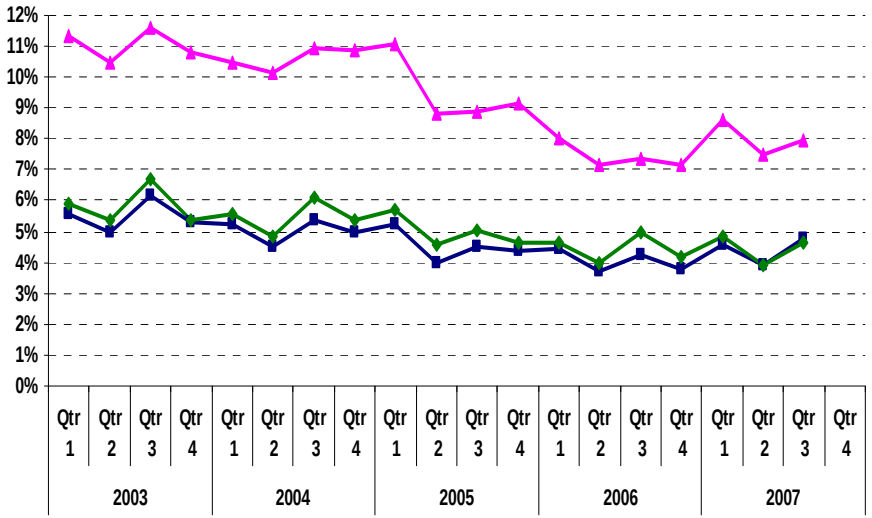


Source: Limwattananon *et al.* (*Bulletin of the World Health Organization*, 2007)

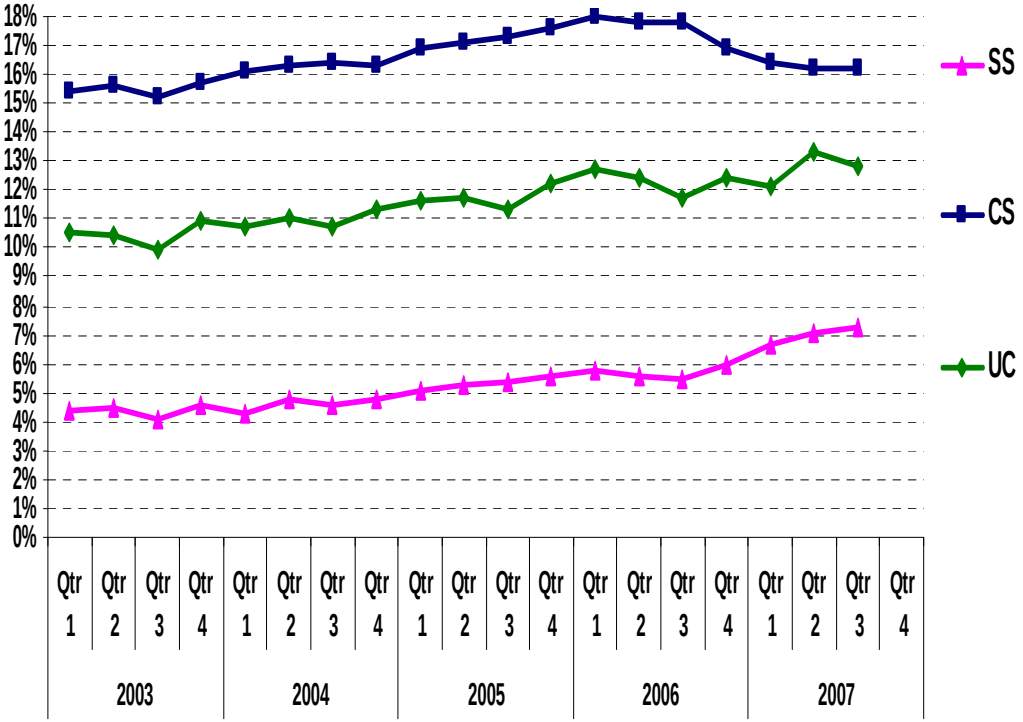
Outpatient visits

A dilemma for tertiary care hospitals: Symptomatic *versus* chronic care

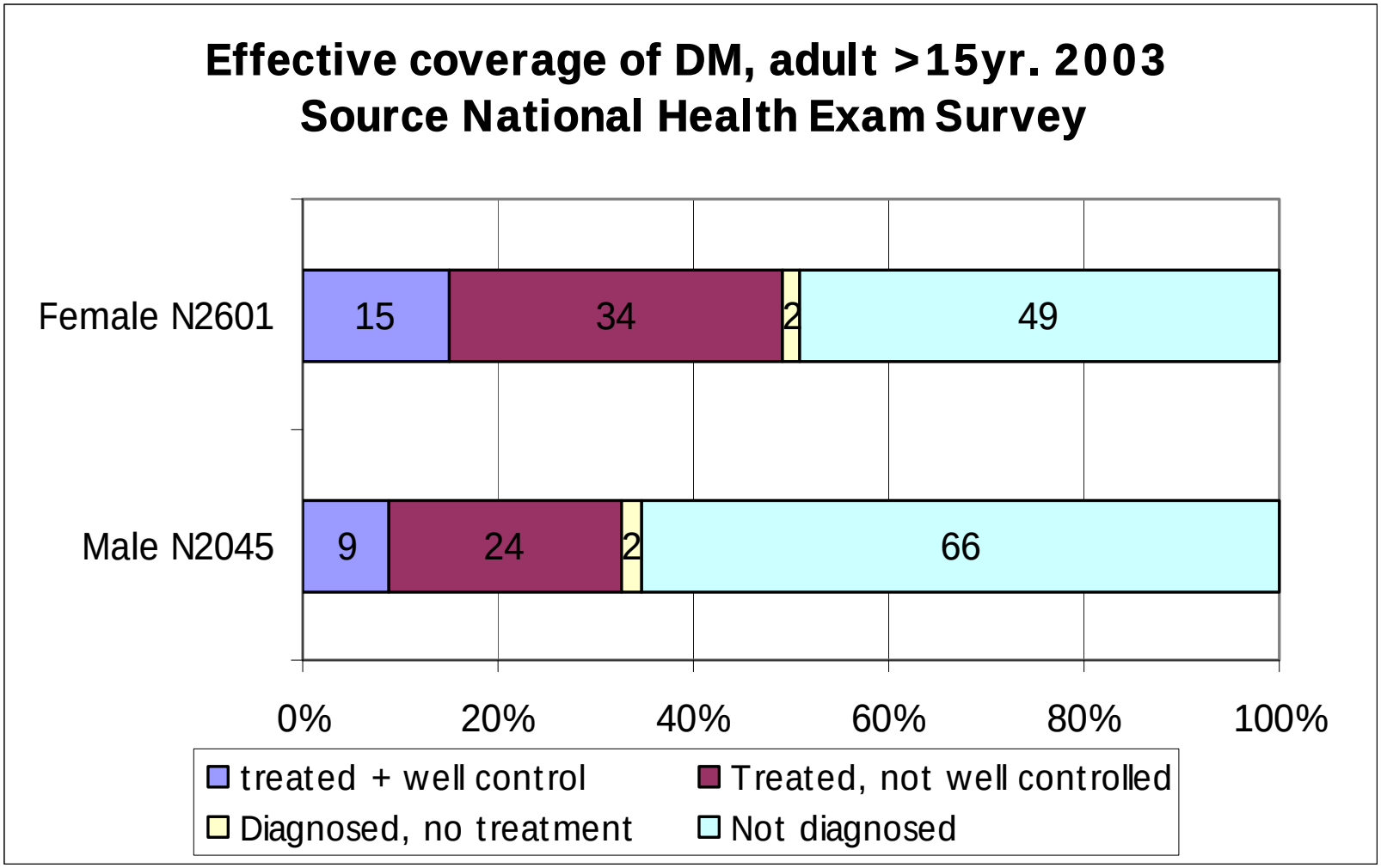
Headache, dizziness, myalgia, dyspepsia, ARI



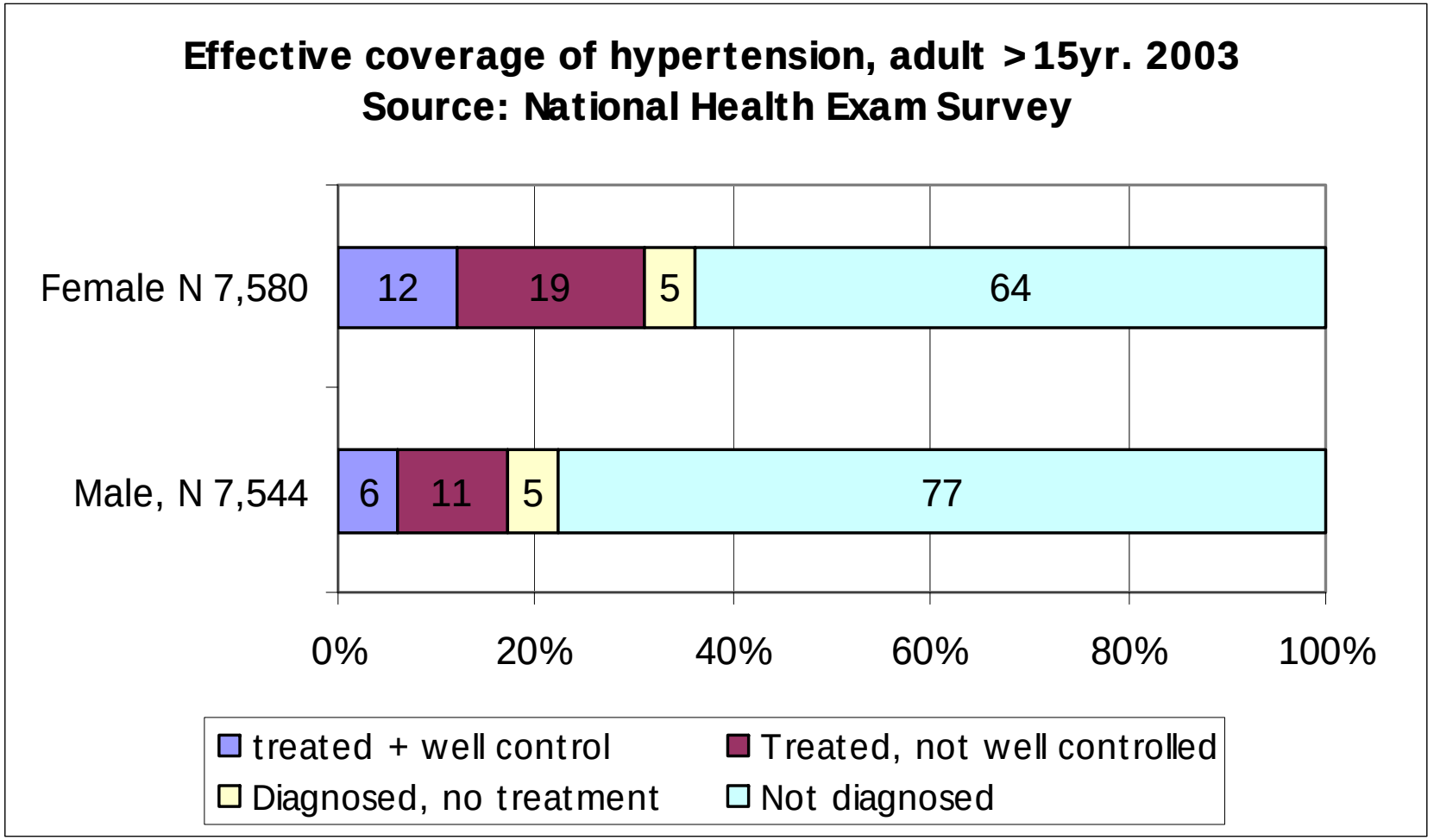
Diabetes and hypertension



Source: Author analysis based on electronic OP databases from 11 provincial hospitals

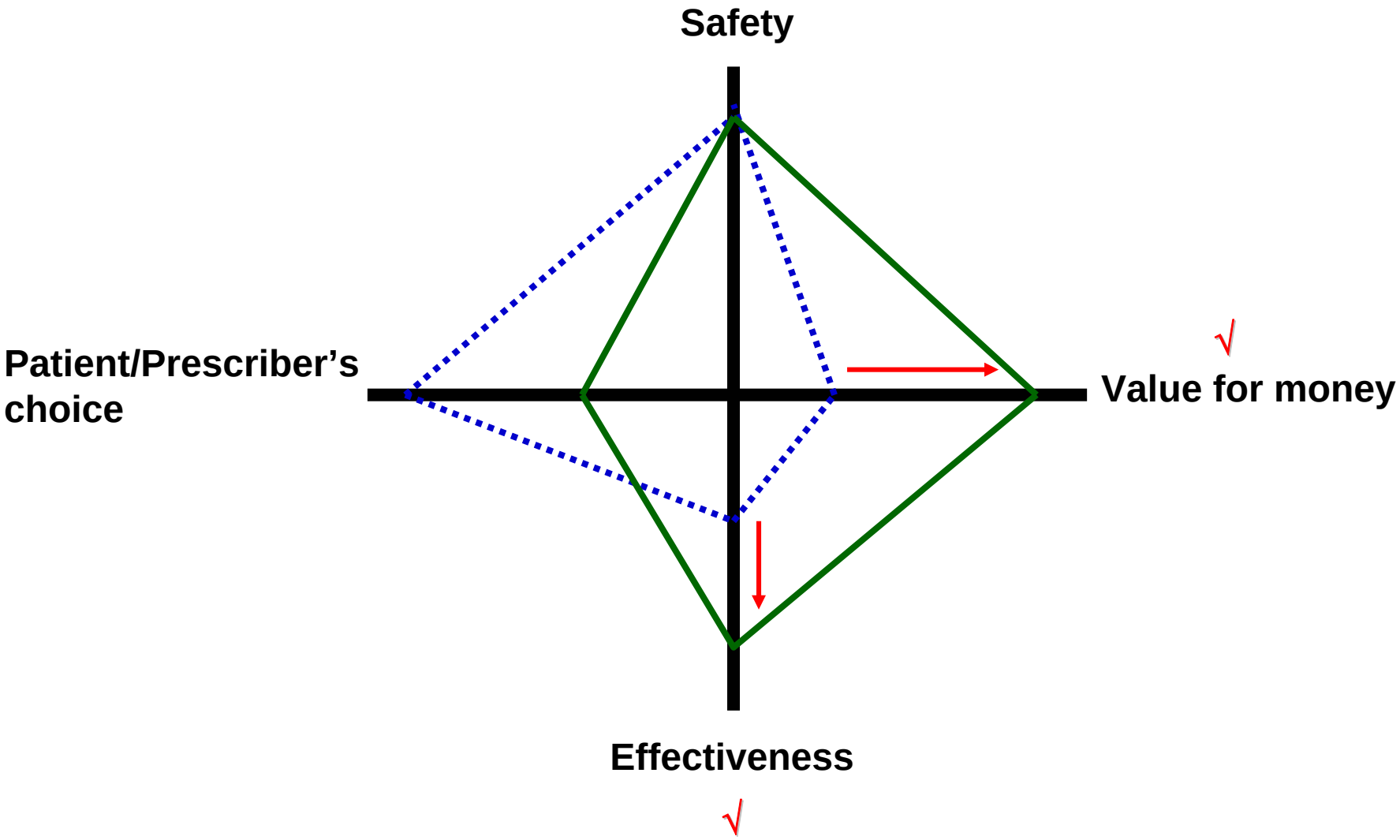


Prevalence DM: 6% male, 7% female
All samples have FBS, >126 mg/dl



Prevalence Hypertension: 23% male, 21% female
All samples are hypertensive, >140/90 mmHg,

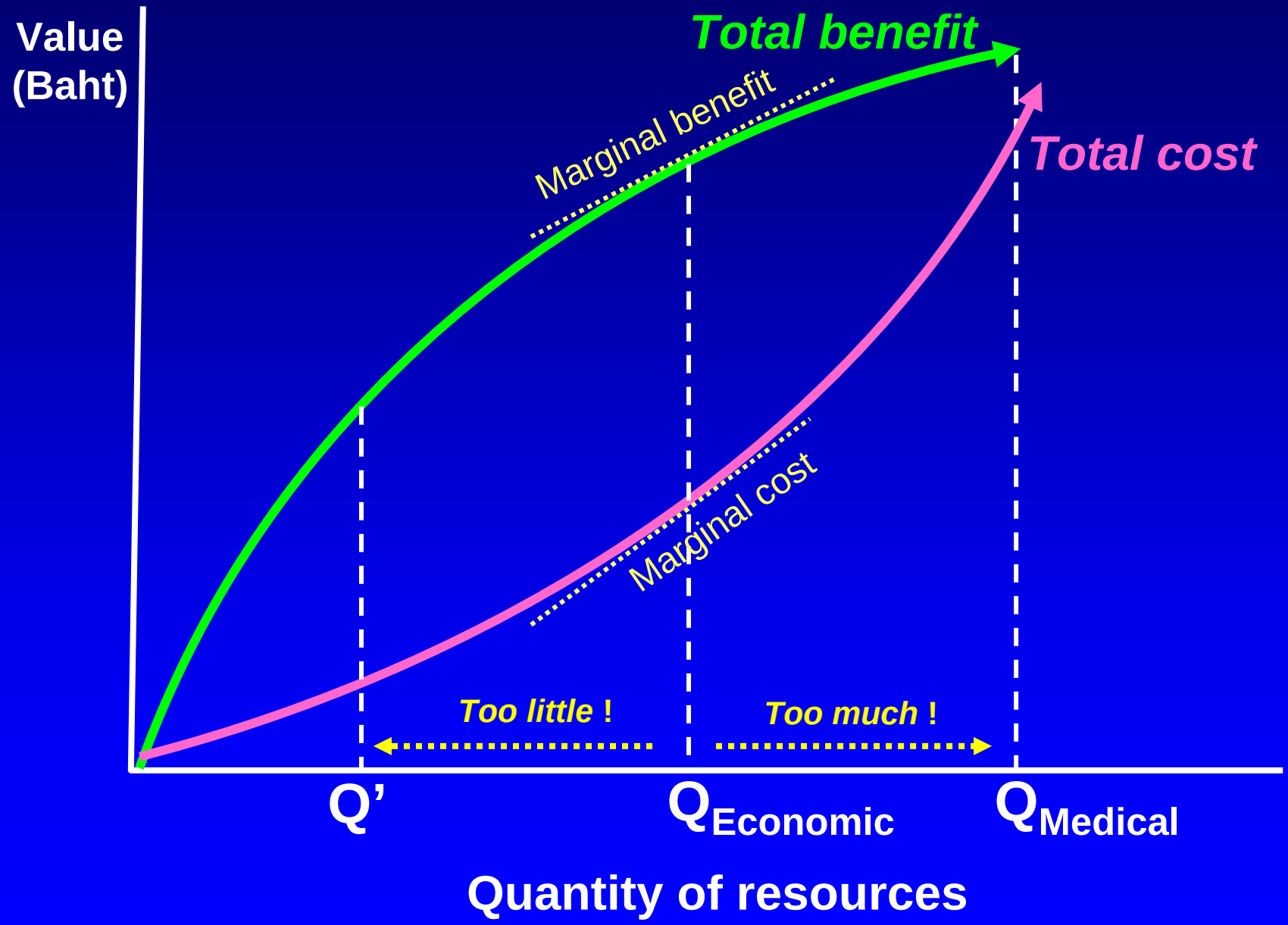
Dynamic tension of good prescribing practice



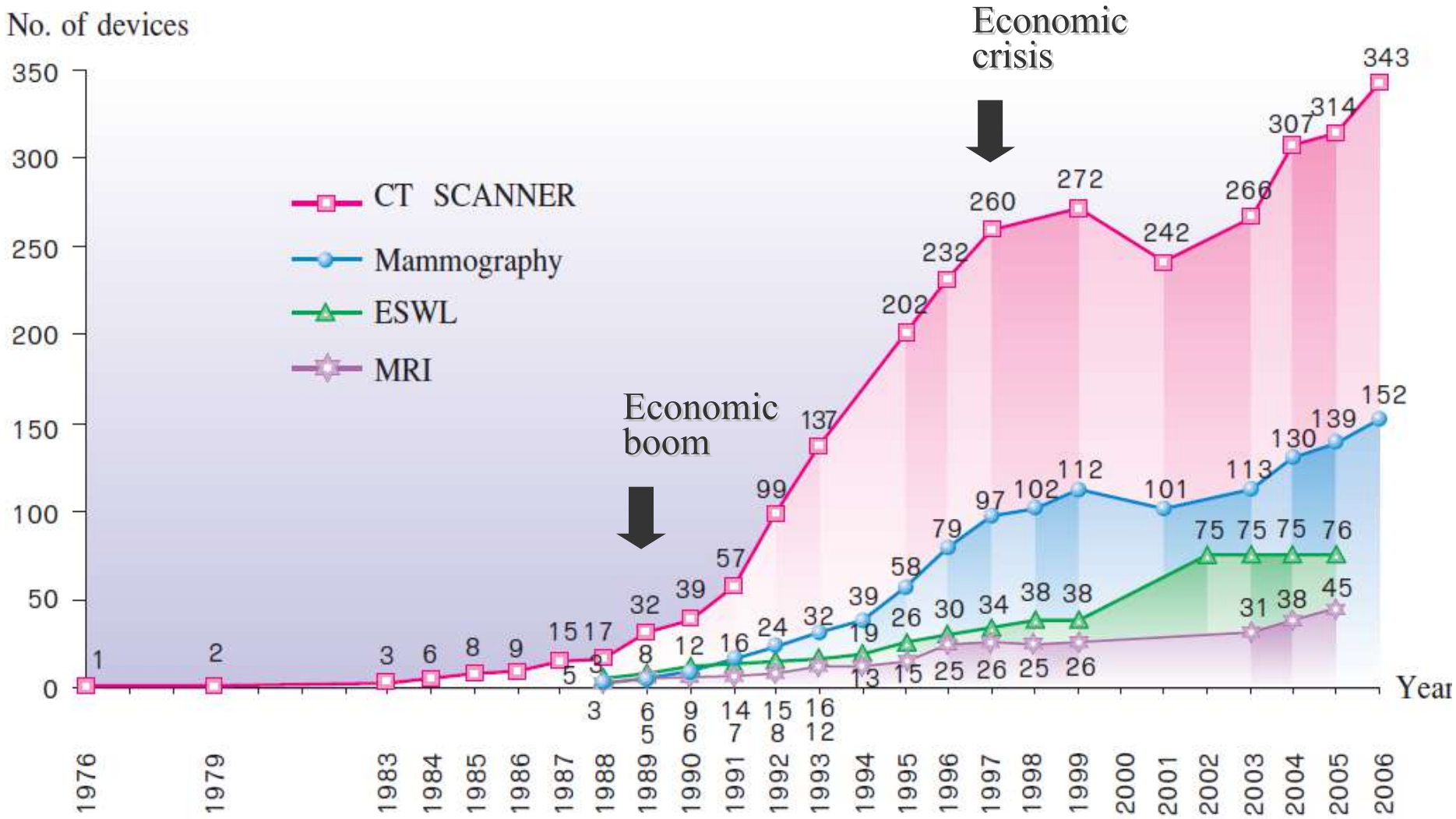
Source: Barber's prescribing model (1995)

Efficient use of health resources

Economic criteria vs. medical criteria



Penetration of 'Big Ticket' Medical Technology



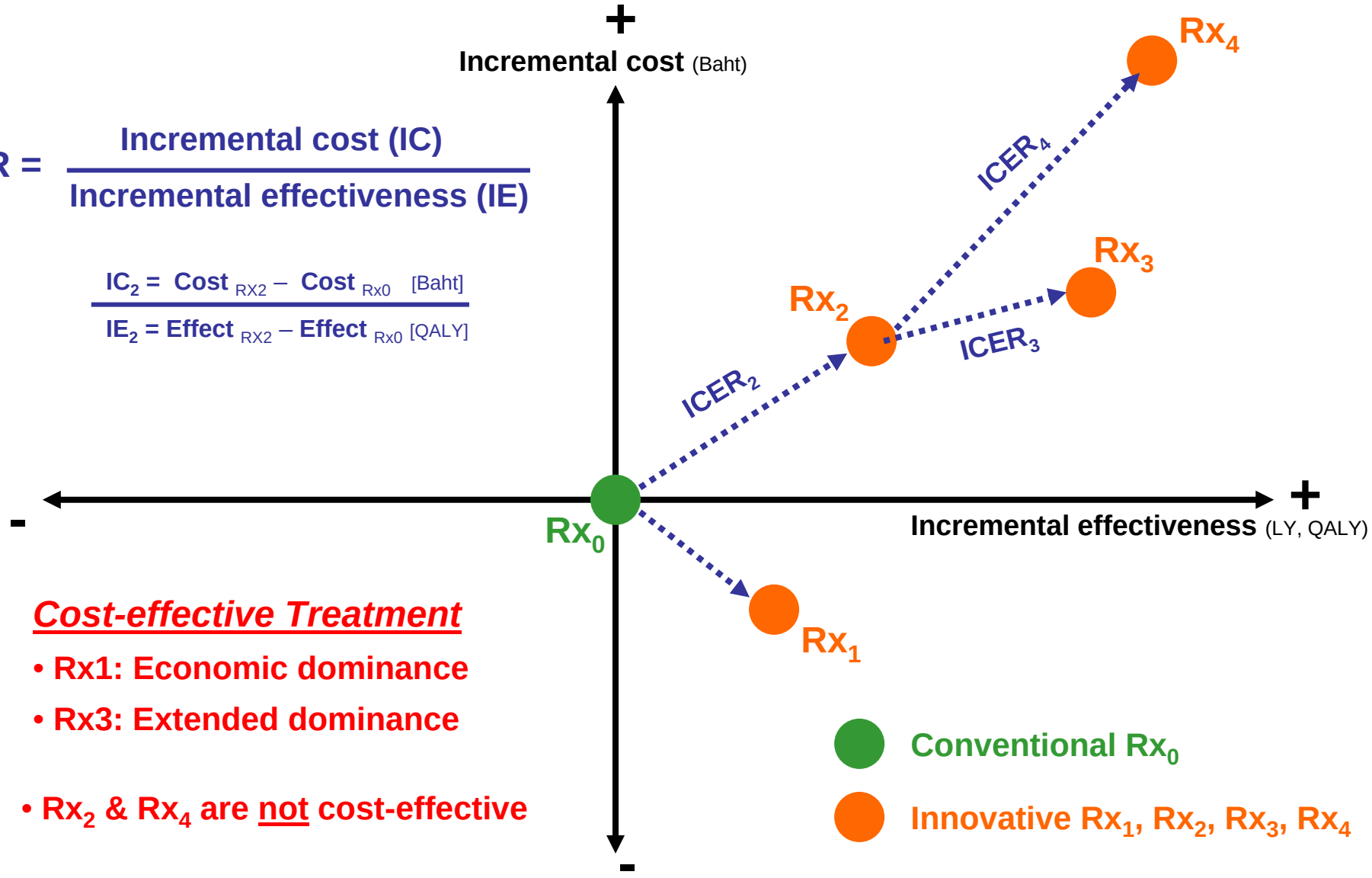
Sources: - Wongduern Jindawatthana et al. High-cost Medical Devices in Thailand: Distribution, Utilization and Accessibility, (2001)
For 2002-2006, data were derived from reports on health resources of the Bureau of Policy and Strategy and Department of Medical Sciences, MoPH. (in Thailand Health Profiles 2005-2007)

Is an Innovative Treatment Cost-Effective?

Economic dominance vs. Extended dominance

$$ICER = \frac{\text{Incremental cost (IC)}}{\text{Incremental effectiveness (IE)}}$$

$$\frac{IC_2 = \text{Cost}_{RX2} - \text{Cost}_{Rx0} \text{ [Baht]}}{IE_2 = \text{Effect}_{RX2} - \text{Effect}_{Rx0} \text{ [QALY]}}$$



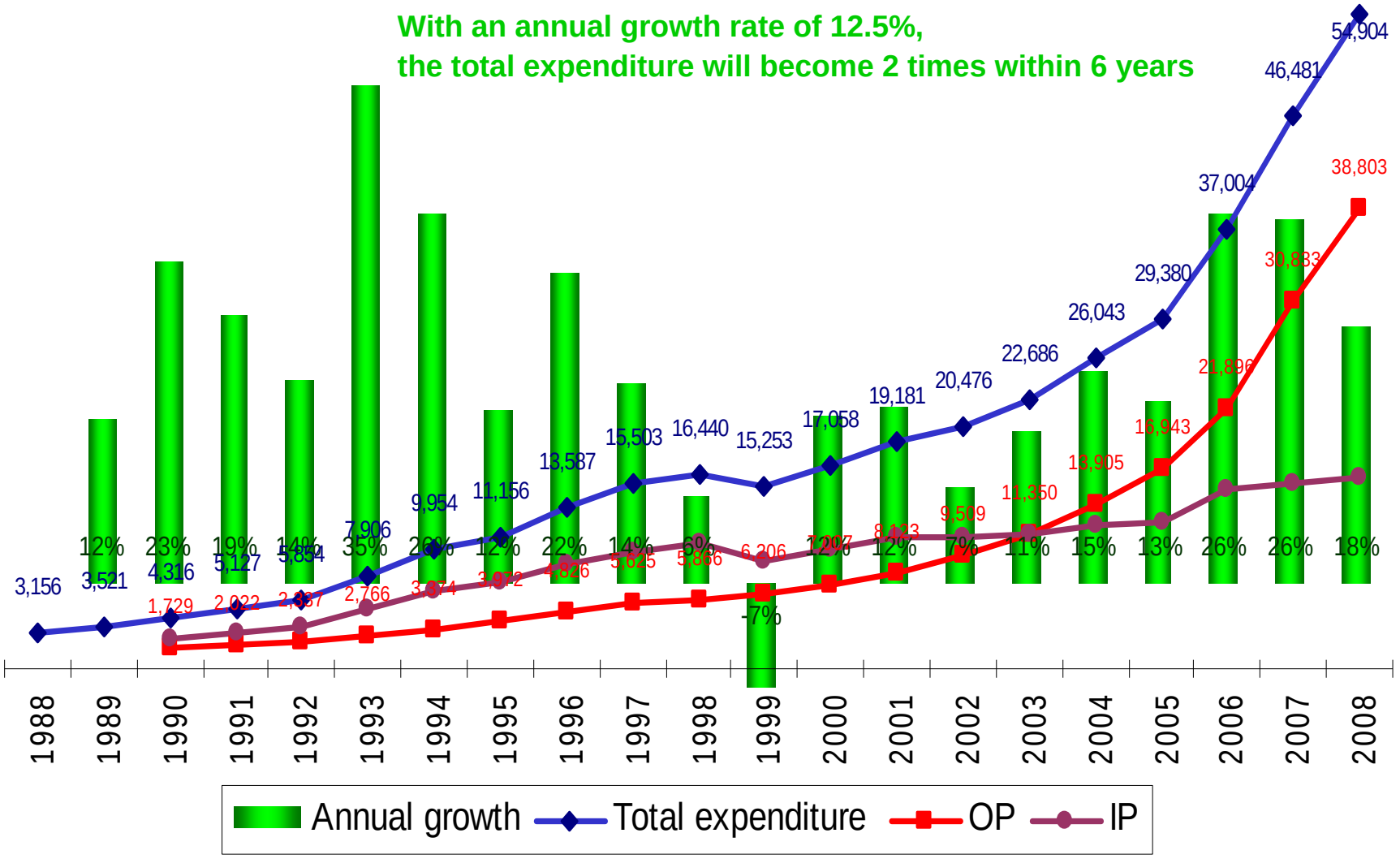
Cost-effective Treatment

- Rx1: Economic dominance
- Rx3: Extended dominance

- Rx_2 & Rx_4 are not cost-effective

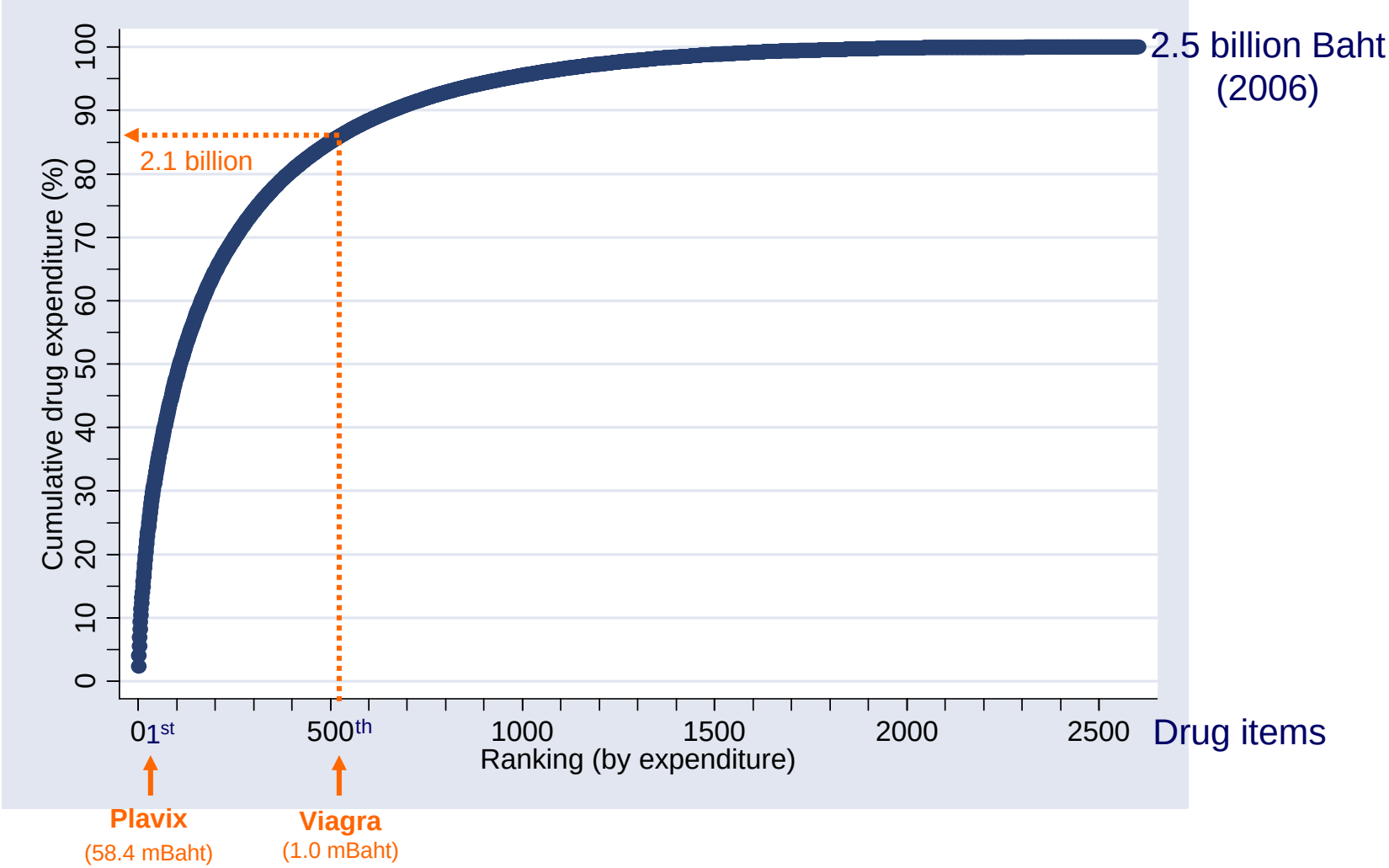
CSMBS expenditure growth, 1988-2008

nominal price

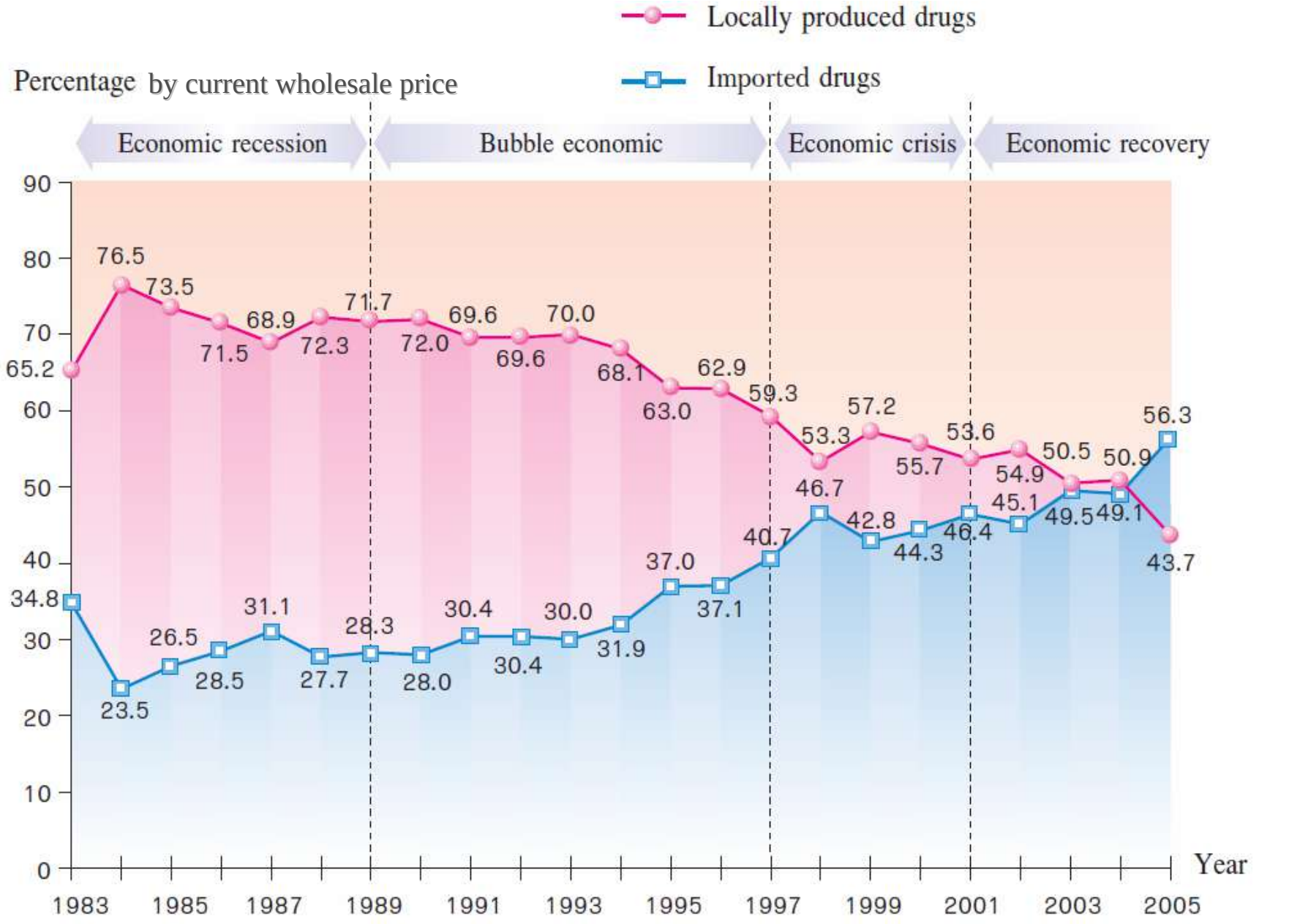


20/80 Rule

Top 20% items = 80% total drug expenditure in a university hospital



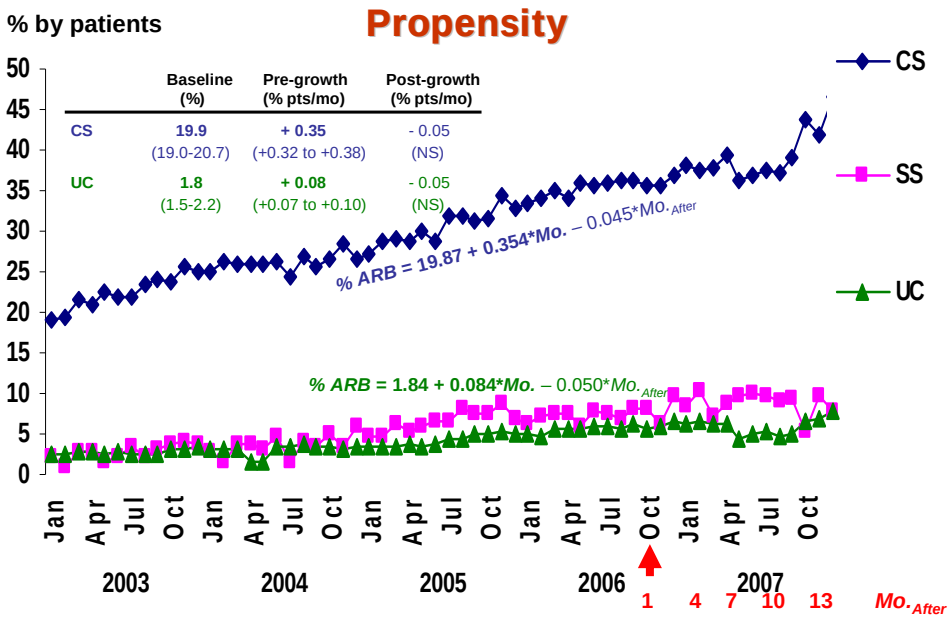
Penetration of Imported, Single-Source Drugs



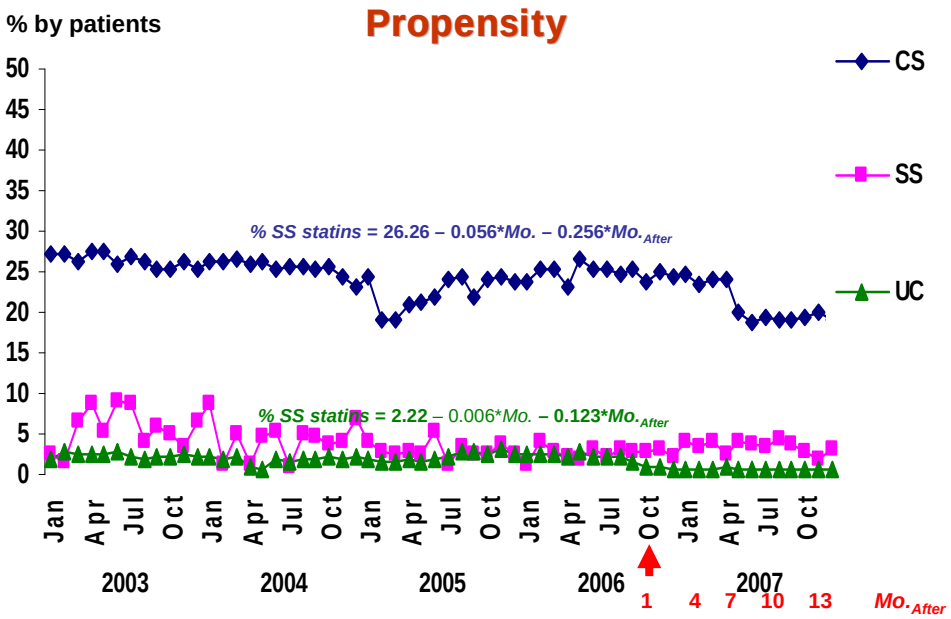
Source: Drug Control Division, Food and Drug Administration, MOPH -Thailand (in Thailand Health Profiles 2005-2007)

(e.g., Atorvastatin)

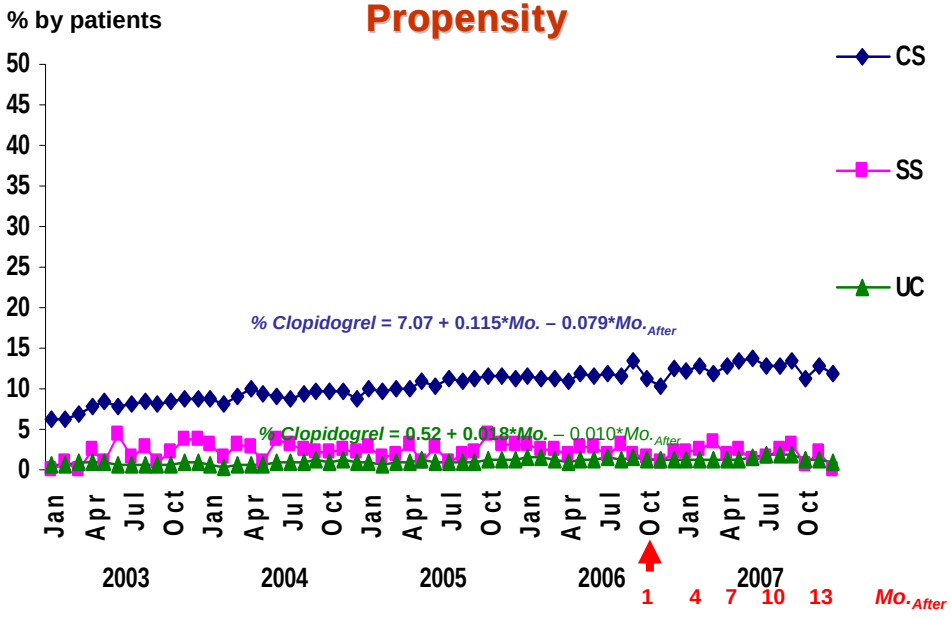
Angiotensin II receptor blockers (ARB)



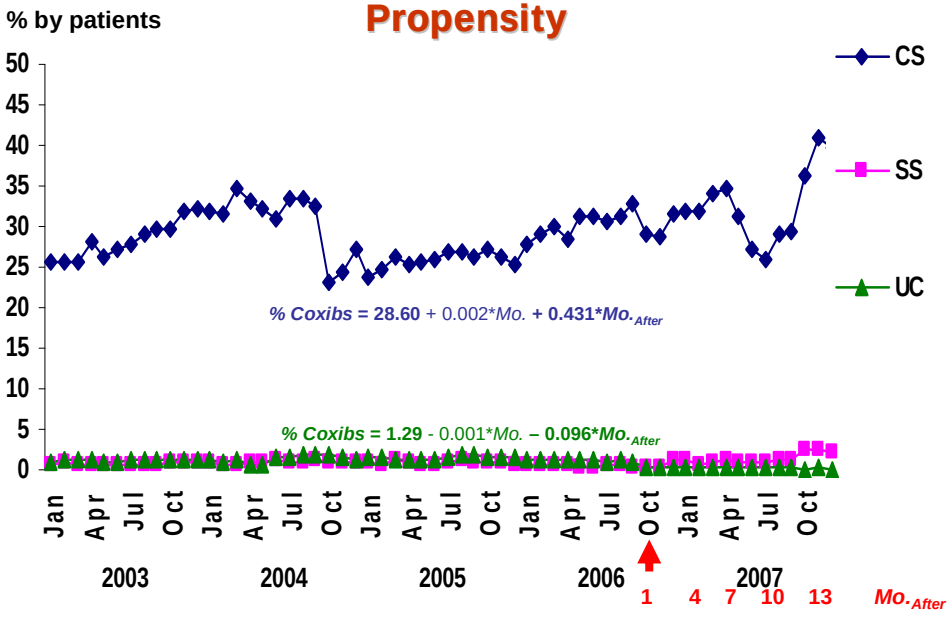
Single source statins and new antihyperlipidemia



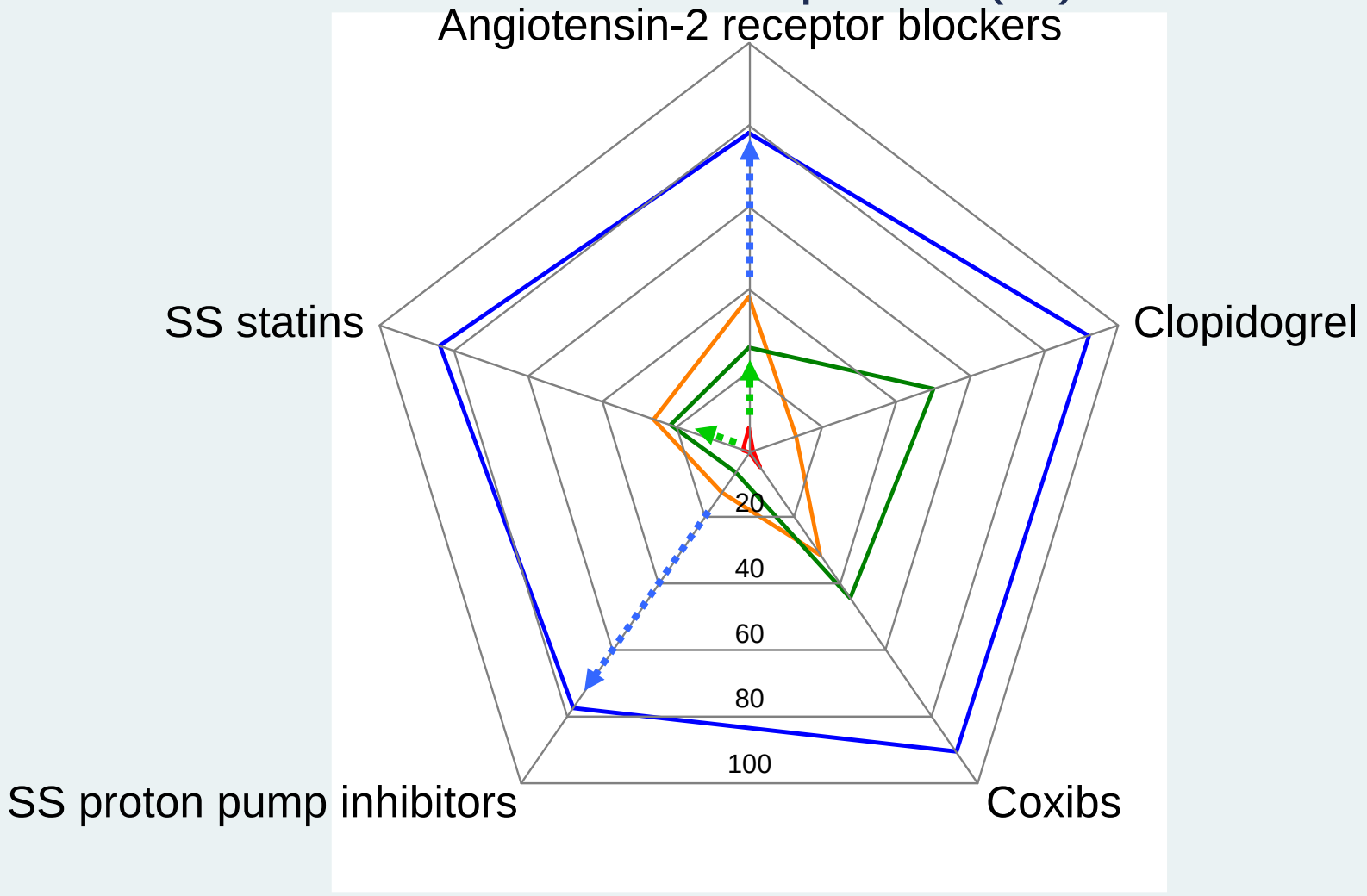
Clopidogrel



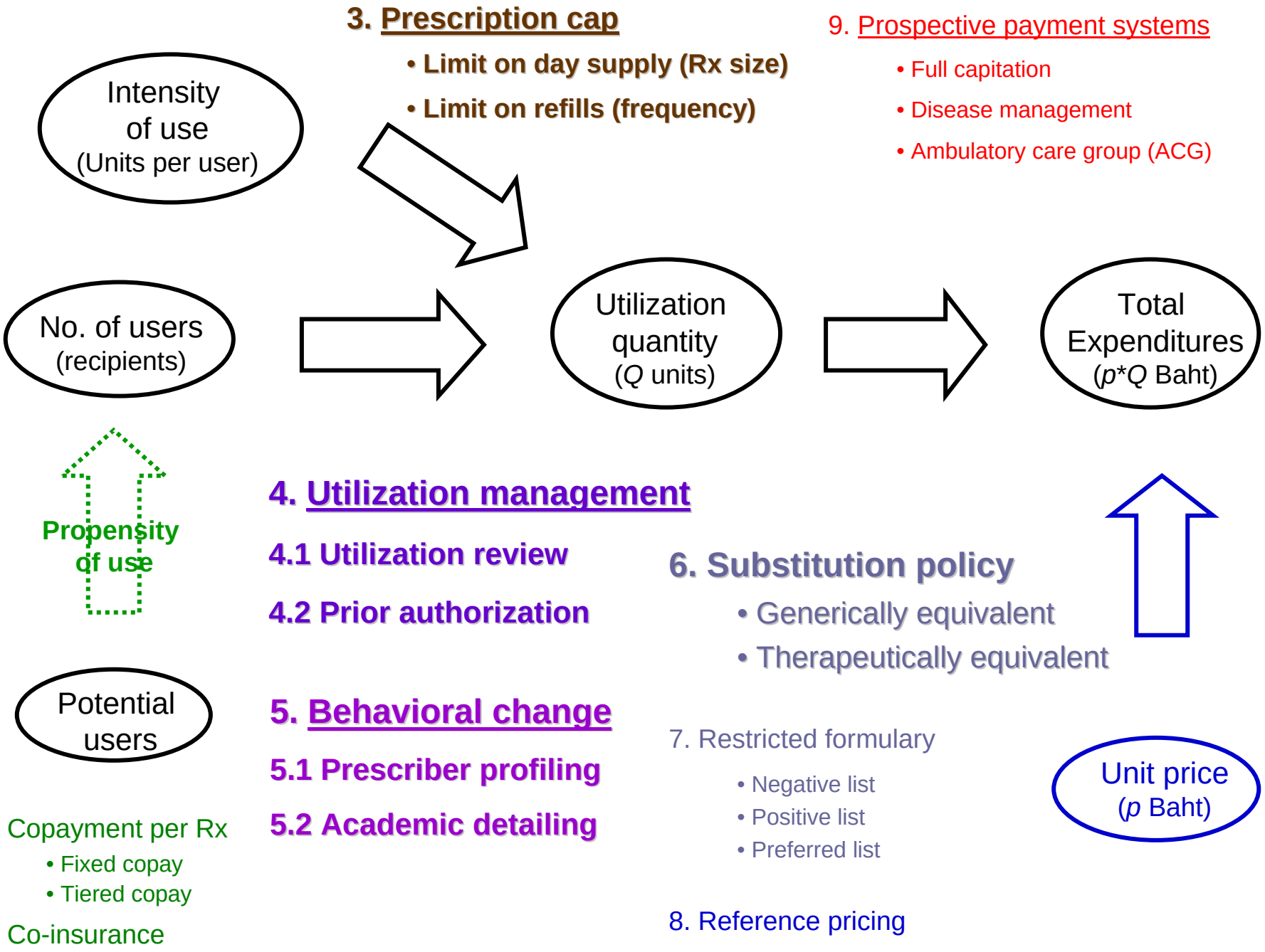
Coxibs



Share of use and expense (%), 2007



SS: Single-source


3. Prescription cap
• Limit on day supply (Rx size)
• Limit on refills (frequency)
9. Prospective payment systems
• Full capitation
• Disease management
• Ambulatory care group (ACG)
Intensity of use (Units per user)
No. of users (recipients)
Utilization quantity (Q units)
Total Expenditures (p*Q Baht)
Propensity of use
4. Utilization management
4.1 Utilization review
4.2 Prior authorization
6. Substitution policy
• Generically equivalent
• Therapeutically equivalent
Potential users
5. Behavioral change
5.1 Prescriber profiling
5.2 Academic detailing
7. Restricted formulary
• Negative list
• Positive list
• Preferred list
Unit price (p Baht)
1. Copayment per Rx
• Fixed copay
• Tiered copay
2. Co-insurance
8. Reference pricing

Evidences on effectiveness of the reference pricing policies are mostly from developed countries

Pharmaceutical policies: effects of reference pricing, other pricing, and purchasing policies (Review)

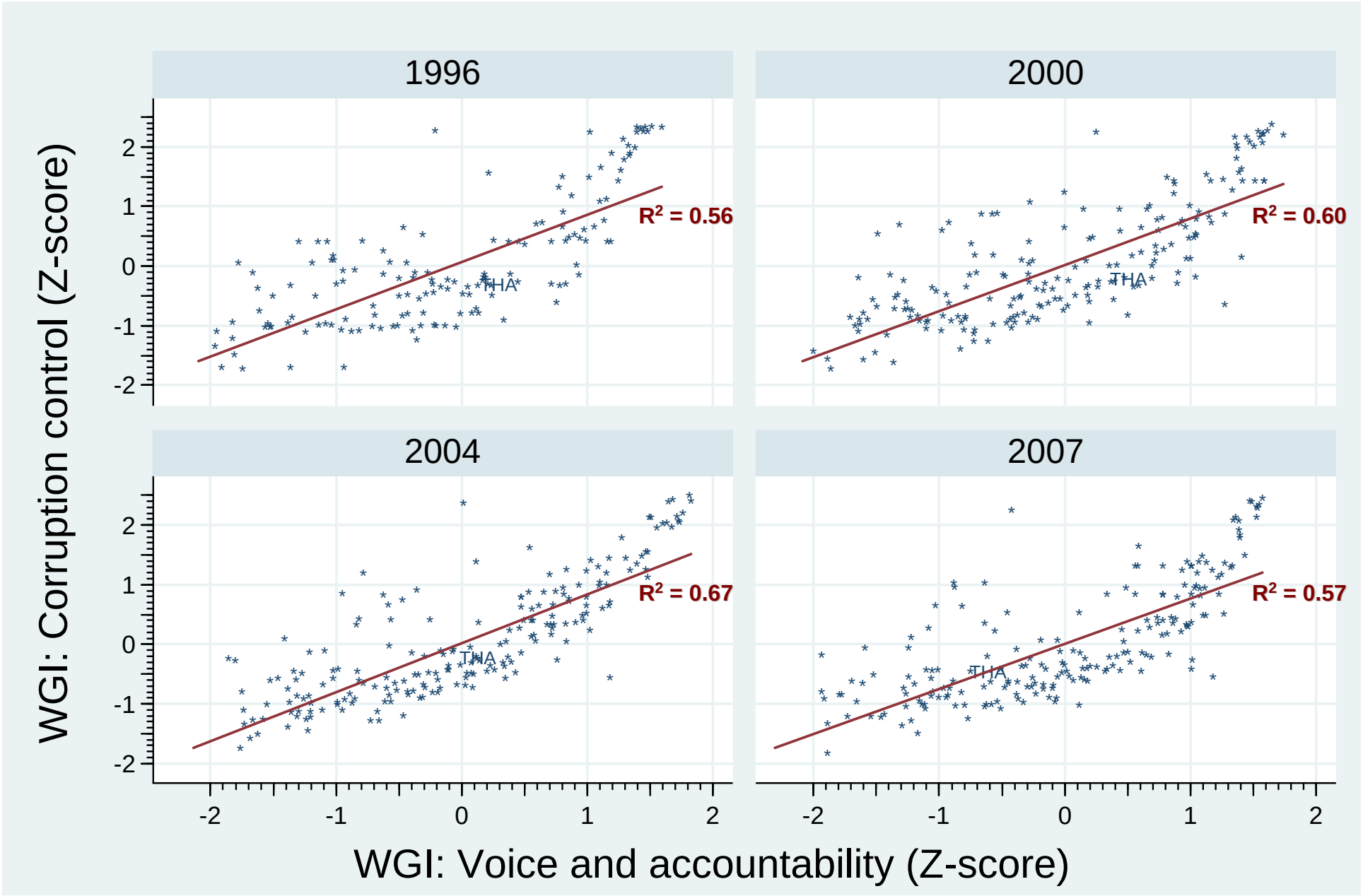
Aaserud M, Dahlgren AT, Kösters JP, Oxman AD, Ramsay C, Sturm H

***The Cochrane Library* 2006, Issue 2**

THE COCHRANE COLLABORATION®

Good governance

Transparency/disclosure is an enemy of corruption



A long march of ‘small area variations’ (SAV)

SCIENCE, VOL. 182
14 DECEMBER 1973

Small Area Variations in Health Care Delivery

A population-based health information system can guide planning and regulatory decision-making.

John Wennberg and Alan Gittelsohn

THE DARTMOUTH INSTITUTE
FOR HEALTH POLICY & CLINICAL PRACTICE
Where Knowledge Informs Change

1982 – *Scientific American*

“Variations in medical care among small areas”

– *New England Journal of Medicine*

“Small-area variations in the use of common surgical procedures: an international comparison of New England, England, and Norway”

HEALTH AFFAIRS - *Web Exclusive*
7 October 2004

Use Of Medicare Claims Data To Monitor Provider-Specific Performance Among Patients With Severe Chronic Illness

Analyses of seventy-seven of America’s “best hospitals” document extensive variation in the amount of care provided to patients with three common chronic conditions.

by John E. Wennberg, Elliott S. Fisher, Thérèse A. Stukel, and Sandra M. Sharp

What Is Too Much Variation? The Null Hypothesis in Small-Area Analysis

Paula Diehr, Kevin Cain, Frederick Connell, M.D., and Ernest Volinn

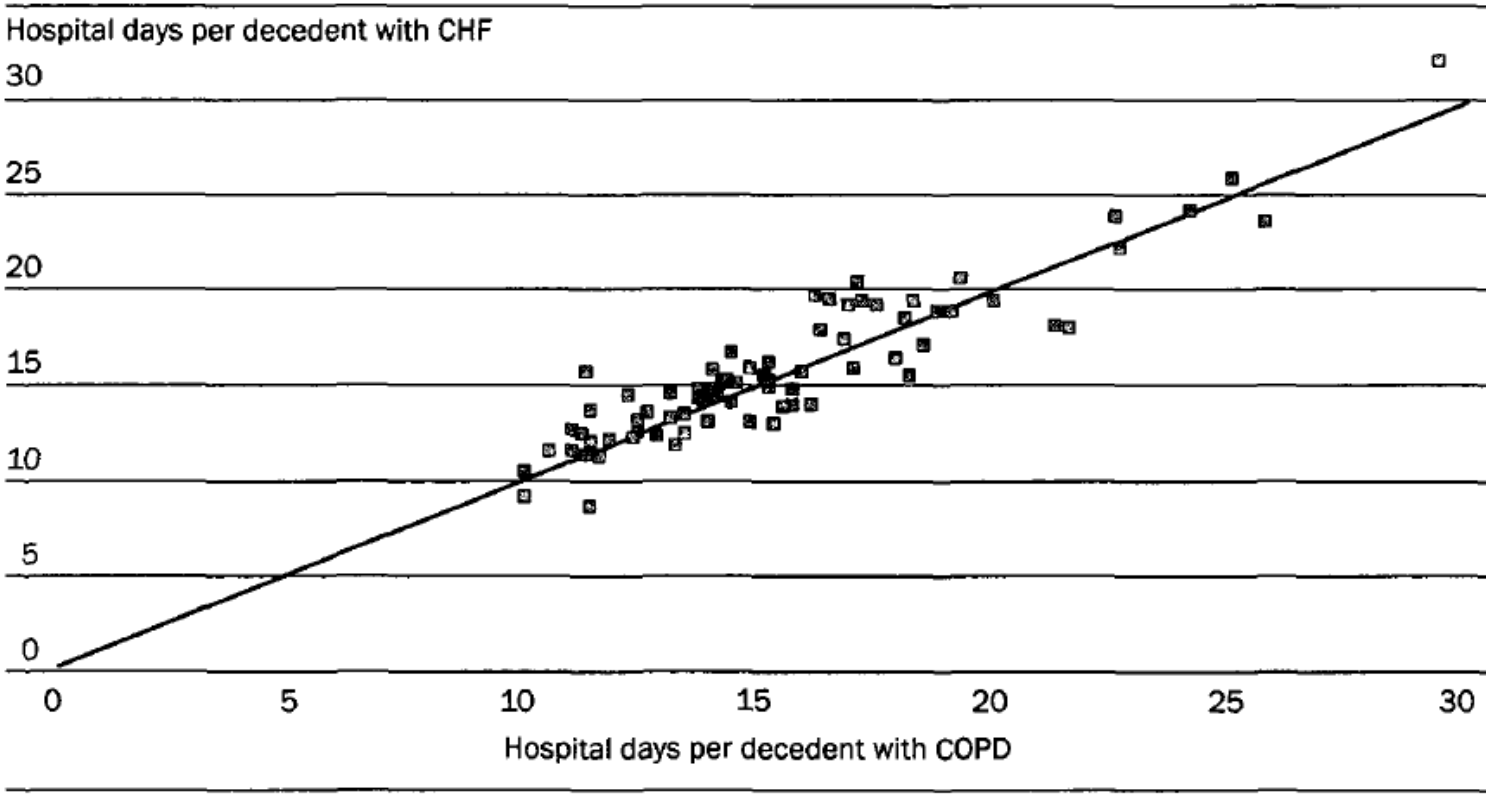
HSR: Health Services Research 24:6 (February 1990)

Small Area Statistics: Large Statistical Problems

© 1984 American Journal of Public Health EDITORIALS *Paula Diehr, PhD*

The system of care *is much more important than* ***the nature of the patient's chronic illness*** *in determining the frequency of use of care*

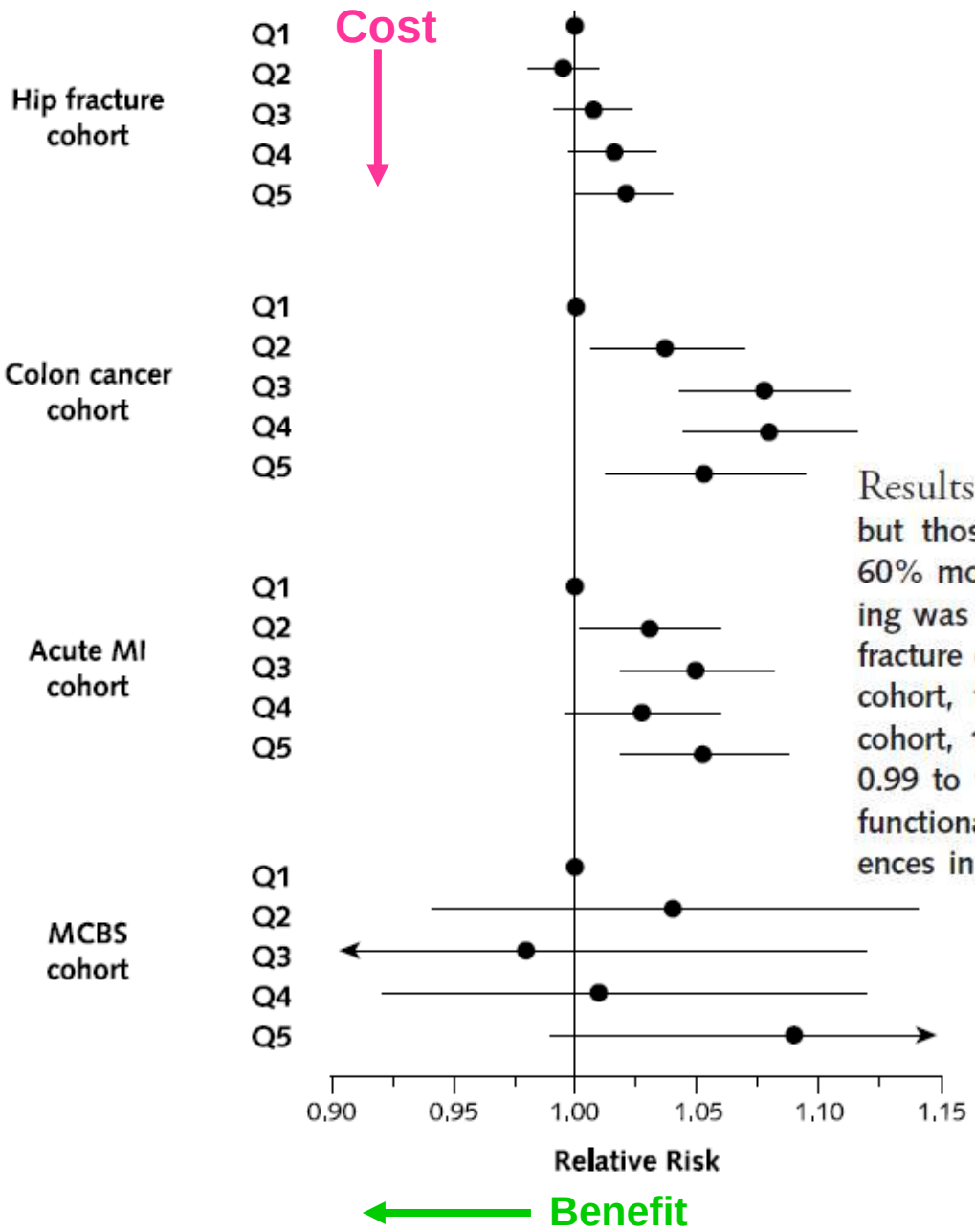
Hospital-Specific Cohort Rates For Hospital Days Per Decedent During The Last Six Months Of Life: Correlation Between Congestive Heart Failure (CHF) Patients And Chronic Obstructive Pulmonary Disease (COPD) Patients, 1999–2000



SOURCE: *Authors' analysis of Medicare claims data from 1999–2000.*
NOTES: Among patients assigned to seventy-seven selected hospitals. $R^2 = .85$.

Ref: Wennberg *et al*., Health Affairs (2004)

Adjusted RR for death during follow up across quintiles (Q)* of Medicare spending



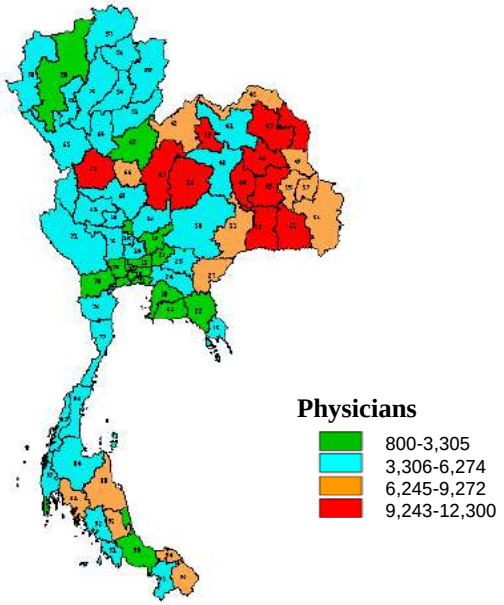
* Quintile of the End-of-Life Expenditure Index among residents of **hospital referral regions**

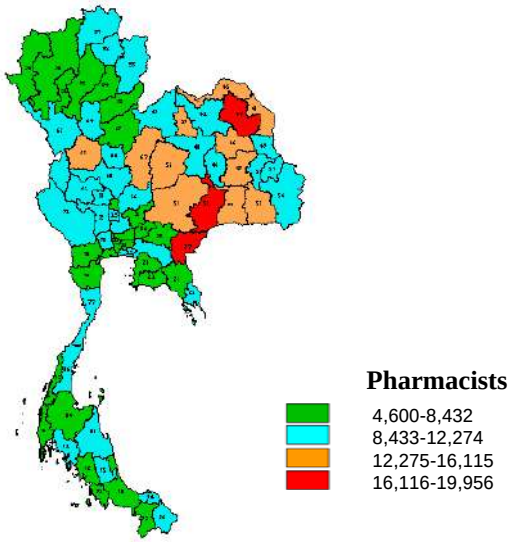
Results: Cohort members were similar in baseline health status, but those in regions with higher end-of-life spending received 60% more care. Each 10% increase in regional end-of-life spending was associated with the following relative risks for death: hip fracture cohort, 1.003 (95% CI, 0.999 to 1.006); colorectal cancer cohort, 1.012 (CI, 1.004 to 1.019); acute myocardial infarction cohort, 1.007 (CI, 1.001 to 1.014); and MCBS cohort, 1.01 (CI, 0.99 to 1.03). There were no differences in the rate of decline in functional status across spending levels and no consistent differences in satisfaction.

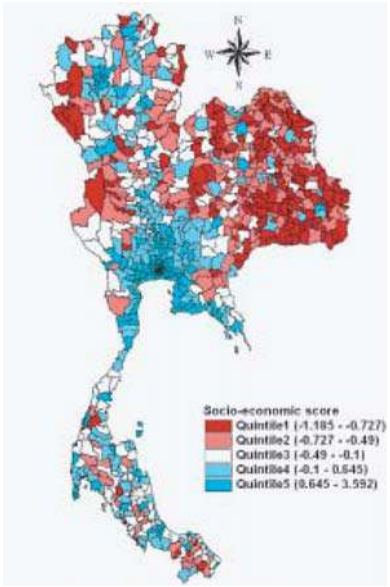
Source: Fisher *et al*. *Ann Intern Med* (2003)

The close link between supply and demand variations

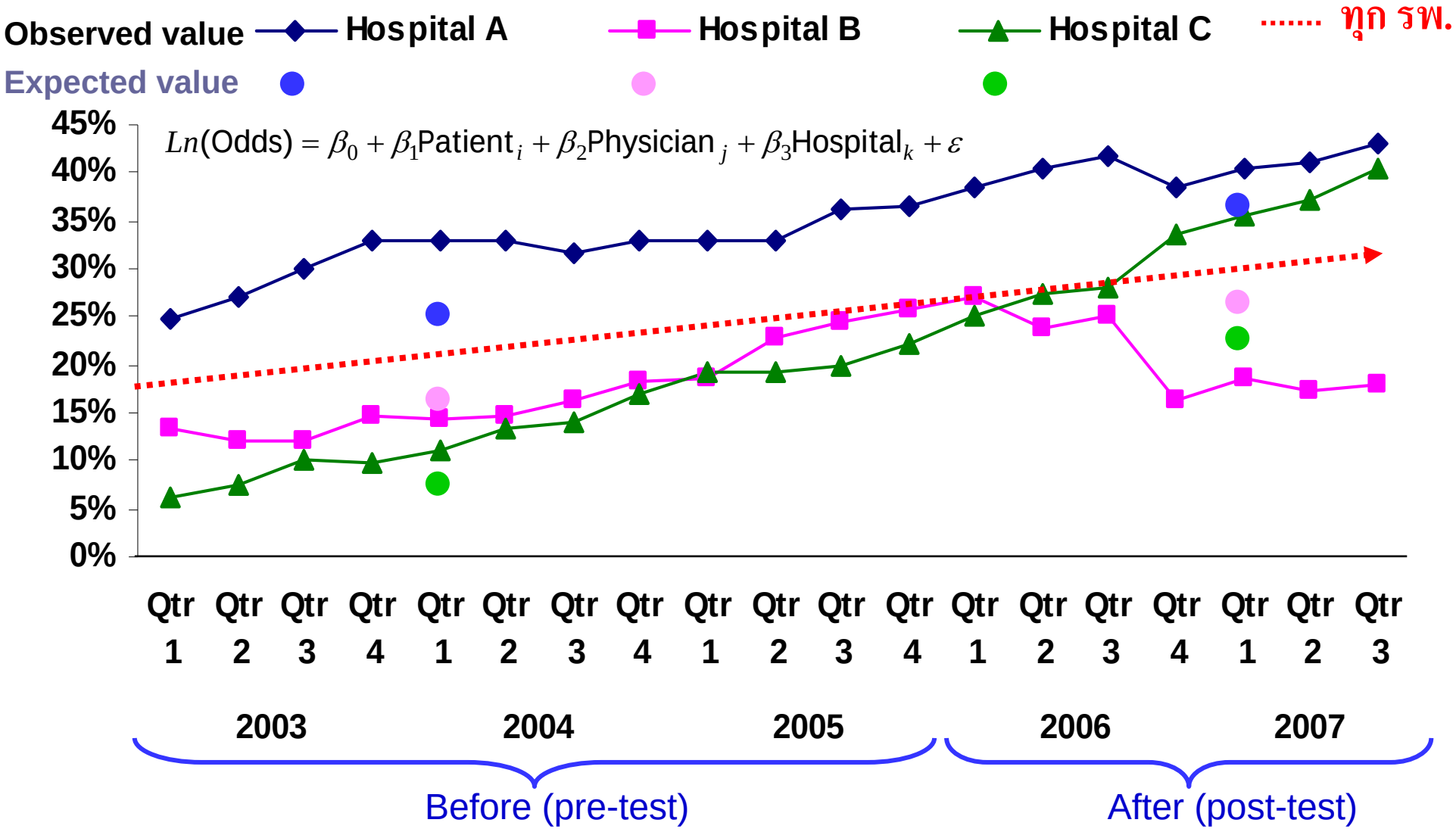
Geographic variations in MDs and RPhs vs. household wealth



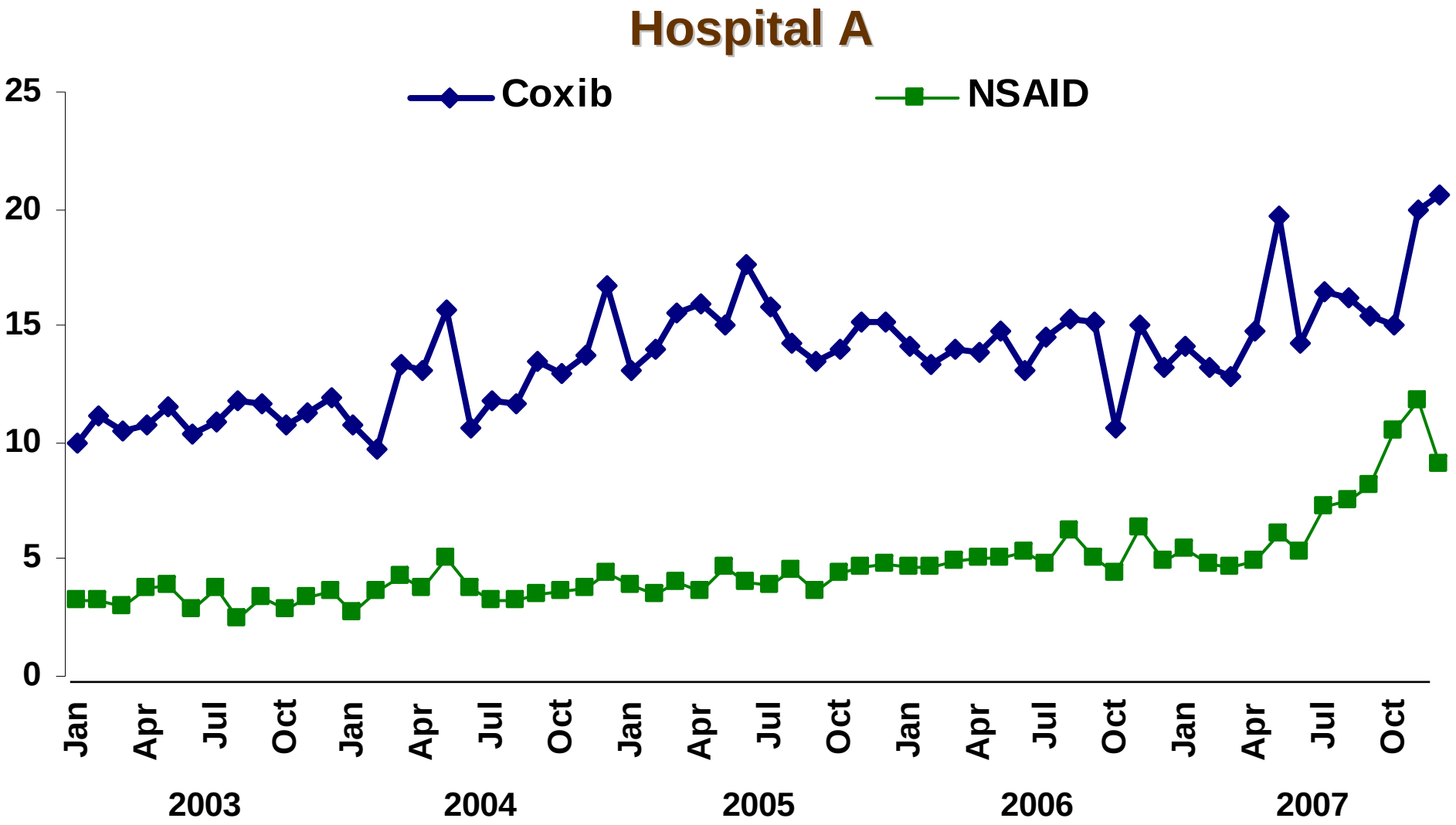


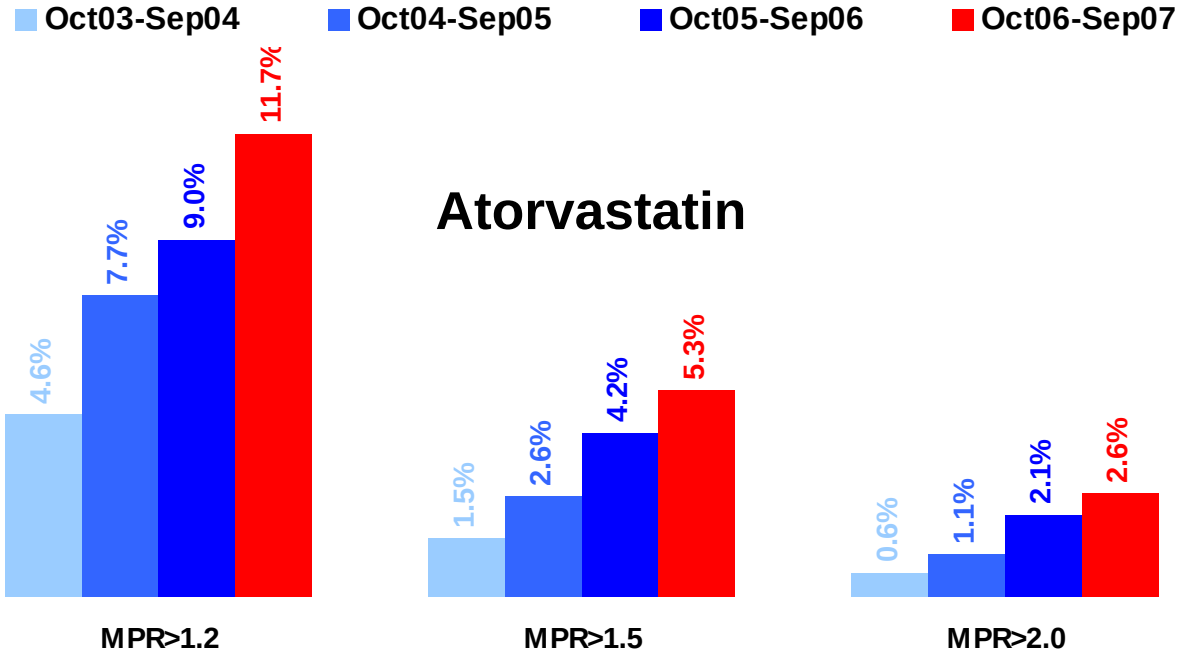


สัดส่วนจำนวนผู้ป่วยที่ได้รับการสั่งใช้ยาเป้าหมาย (Propensity)



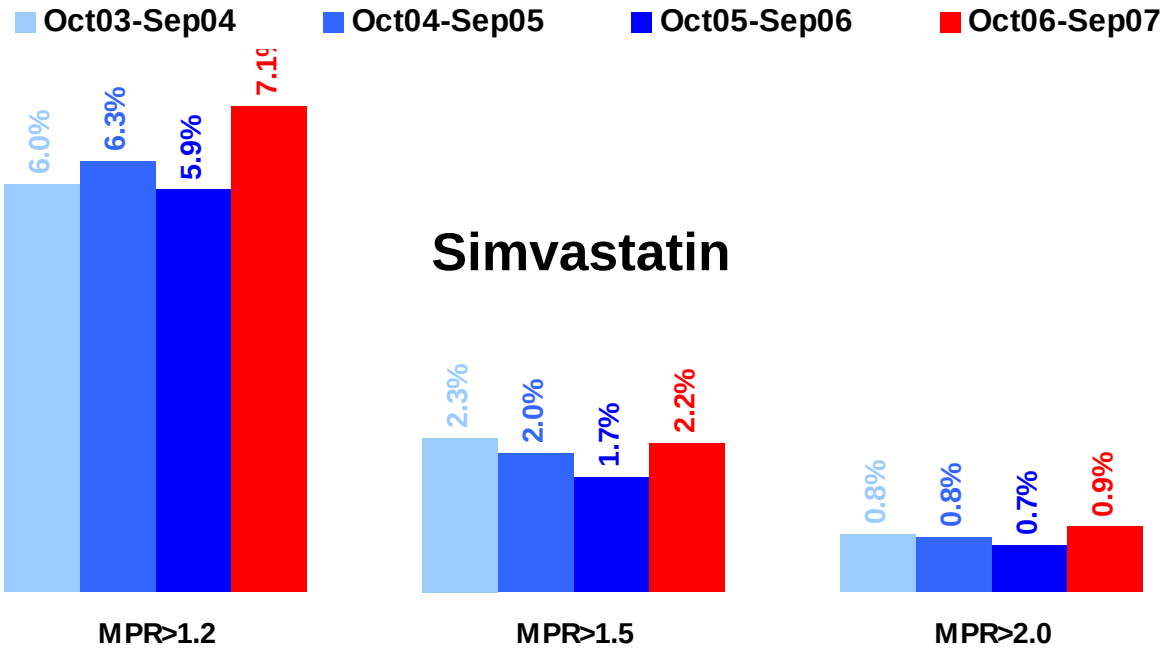
สัดส่วนจำนวนใบสั่งยา ที่สั่งใช้นานกว่า threshold 30 วัน (Intensity)





Hospital A

สัดส่วนจำนวนผู้ป่วยที่ครอบครองยามากเกิน (over possession)

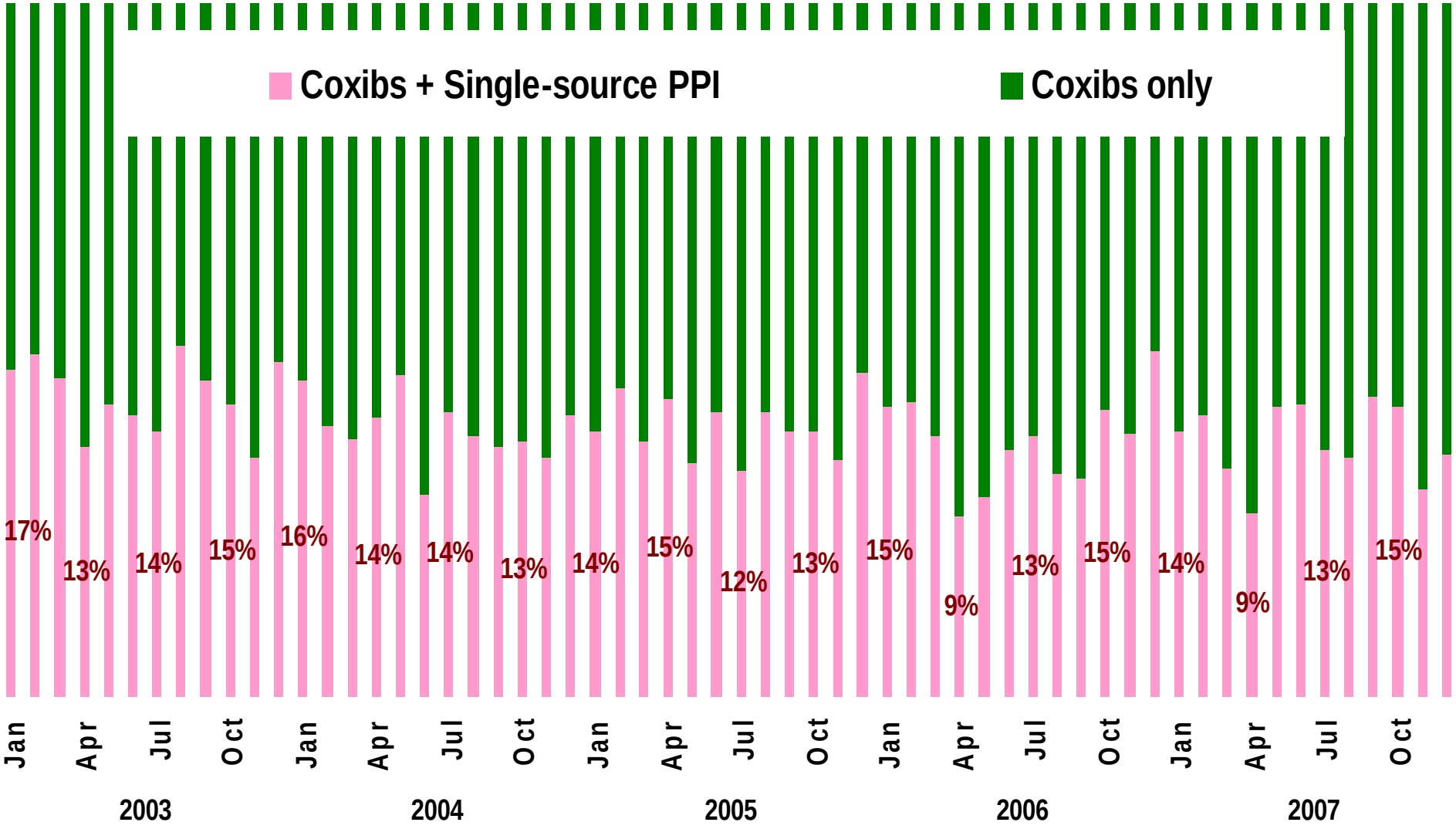


Medicine possession ratio

- MPR over 20% or 1.2 times
- MPR over 50% or 1.5 times
- MPR over 100% or 2 times

สัดส่วนจำนวนใบสั่งยา ที่เป็น polypharmacy

Hospital A



Historical development of health systems

15 **provincial hospitals**
300+ **health centers**
MOPH established **1942**

User fee

1st-3rd NHP (1962-76)
100% provincial hospitals
Exodus of 1.5K new MDs
Govt.-contracted new MDs

1970

Informal exemption of user fee

Free care for the poor

4th -5th NHP (1977-86)
Expansion of district hospitals and health centers

Govt.-contracted new RPhs, DDS

LIC 1975

CSMB 1980

1980

CHF 1983

SS 1991

1990

VHC 1994

2000

UC 2001-02

2. Health payment mechanisms

Prospective payment system (PPS)
- Capitation for SSS (OP-IP inclusive)
- Diagnostic-related groups (DRG) for VHC/LIC (IP)

PPS expansion
- Capitation for UC (OP)
- DRG for UC (IP)

- Disease management for UC
- Direct billing for CSMBS (OP)
- DRG for CSMBS (IP)
- Performance-based payment
- ACG for OP

1. Health Infrastructure & human resources

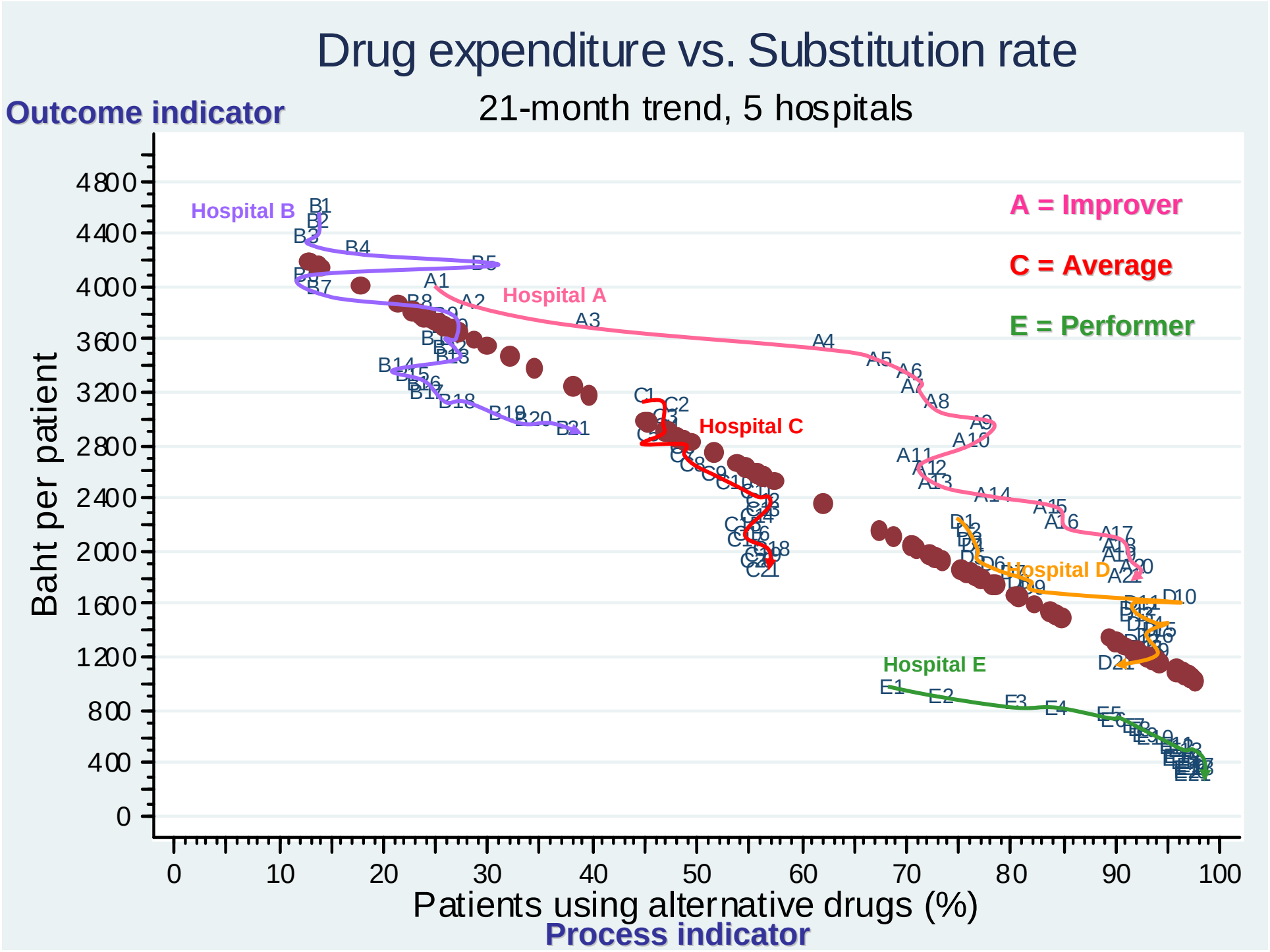
Strategic purchasing for health

1. Contracting

- In developing countries, mostly are trust-based, lifetime, relational contract

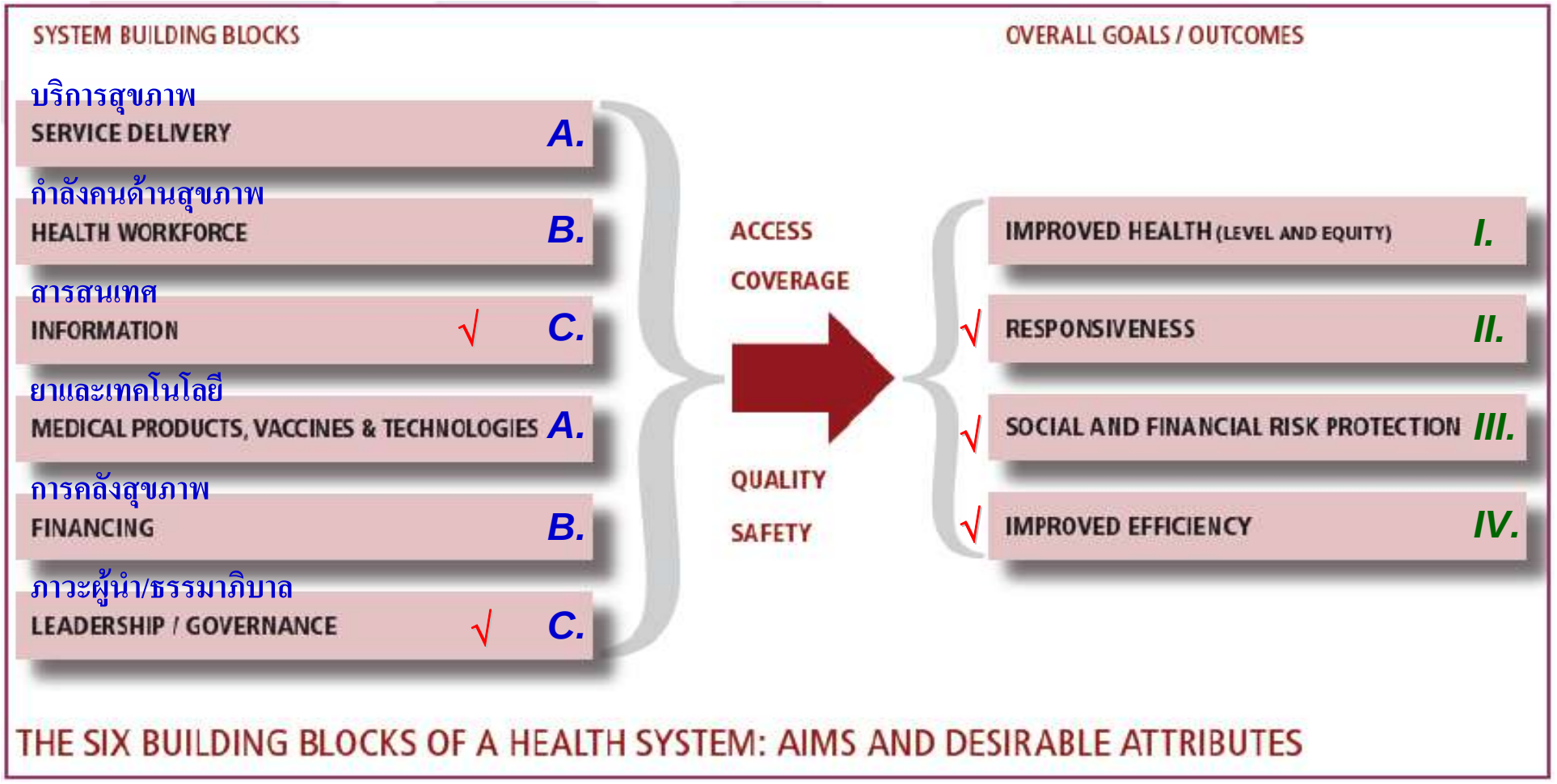
2. Pay for performance (P4P)

- *Pay for what and to whom?*


Drug expenditure vs. Substitution rate
21-month trend, 5 hospitals
Outcome indicator
Baht per patient
4800
4400
4000
3600
3200
2800
2400
2000
1600
1200
800
400
0
0
10
20
30
40
50
60
70
80
90
100
Patients using alternative drugs (%)
Process indicator
Hospital B
Hospital A
Hospital C
Hospital D
Hospital E
A = Improver
C = Average
E = Performer

ระบบสุขภาพ (The BIG picture)

องค์ประกอบและเป้าหมาย



Source: WHO (2007)

A. Output

B. Input

C. Crosscutting

Drugs and drug use in health systems

Potential research issues

√ • Formulation and implementation of drug-related policies

√ • Health behaviors of consumers and households

• Drug use behaviors of patients

• Drug dispensing by informal care providers and retailed pharmacies

√ • Drug prescribing by physicians and in formal care settings

• Drug promotion by pharmaceutical industries

• Clinical drug-related and drug use problems

• Clinical and patient outcomes of drug use

√ • Economic outcomes of health service delivery and technologies