Moving towards a national policy for management of antibiotic resistance

Experiences from Thailand

Based on information provided by Dr. Niyada Kiatying-Angsulee, Chulalongkorn University and Dr. Nithima Sumpradit, MoH

Bangkok, Thailand

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Thailand

- Population: 67 million (24 million)
- Population growth rate: 0.65% (1.86 %)
- Infant mortality rate: 16.7/1000 live births (49.9/1000 live births)
- Urban population: 33 % of total (50 %)
- Middle-income country, well developed infrastructure
- GDP/capita: $8,700 ($1,600)

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Background

- Increasing recognition of the problem
- High AB consumption; national AB use 16-22% of total drug use
- Increase AB use rate 11 % per annum
- Increasing rates of resistance infections in hospitals and health care facilities
- Inappropriate use in teaching hospitals (30-90%)
- Community AB use for cold 30-80%

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Background II

- AB Available in rural shops
- Dispensing AB without Rx common
- Topical AB, combination AB
- Higher rate of ADR from AB
- AB use in feed, farm, fishery, etc.

- SCATTERED STUDIES, NO COMPREHENSIVE DATABASE SYSTEM

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OTC sale of antibiotics in SEA

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Historic process

- National Drug Policies in 1981 and 1993

  Did not mention ABR
- The first ABR policy was drafted by academia in 1987 without any implication
- Most recent ABR policy draft (2010) well received – encouraging environment

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Antibiotic Smart Use

National effort

Aim: to reduce unnecessary antibiotic use

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To create societal change on rational use of medicines, we need to find a common area that **everybody** can work together.

Shared issues

ที่มา: ปกหนังสือกระบวนทัศน์ใหม่ฯ
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AMR- Actors in Thailand

- National Antimicrobial Resistance Surveillance Center, Thailand (NARST) – Hospital based surveillance
- FDA - Protecting consumer's health, National Drug Policy
- Antibiotic Smart Use – Network/Campaign to promote RUD – academic, government
- International Health Policy Programme - leading institute in Health Policy and System Research for evidence-based policy making (MoH).
- International Health Policy Program, Thailand (IHPP), Government
- Health Systems Research Institute (HSRI) - support health system development by working corporately with research alliances and engagement of stakeholders including policy-decision makers, potential research users, the media and the general public. Government

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AMR-Actors in Thailand II

- Pediatric Infectious Disease Society of Thailand - professional org
- Infectious Disease Association of Thailand – professional org
- Thai Health Promotion Foundation - Autonomous state agency support activities related to risk factors to health
- Drug System Monitoring and Development Program – Academic, monitors rational drug use, Chulalongkorn University
- Center Antimicrobial Resistance Monitoring Food- borne Pathogens, Faculty of Veterinary Science, Chulalongkorn University

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Antibiotic Smart Use Programme

- Seeks to change behaviour
  - Prescriber (Doctor, nurse, pharmacist)
  - Patient/consumer
- Evaluation of effect after project execution
- In primary health care:
  - Common cold
  - Diarrhoea
  - Wound infections

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Antibiotic Smart Use

- ASU concept
  - *Knowledge is the first step, but not enough to change behaviour*

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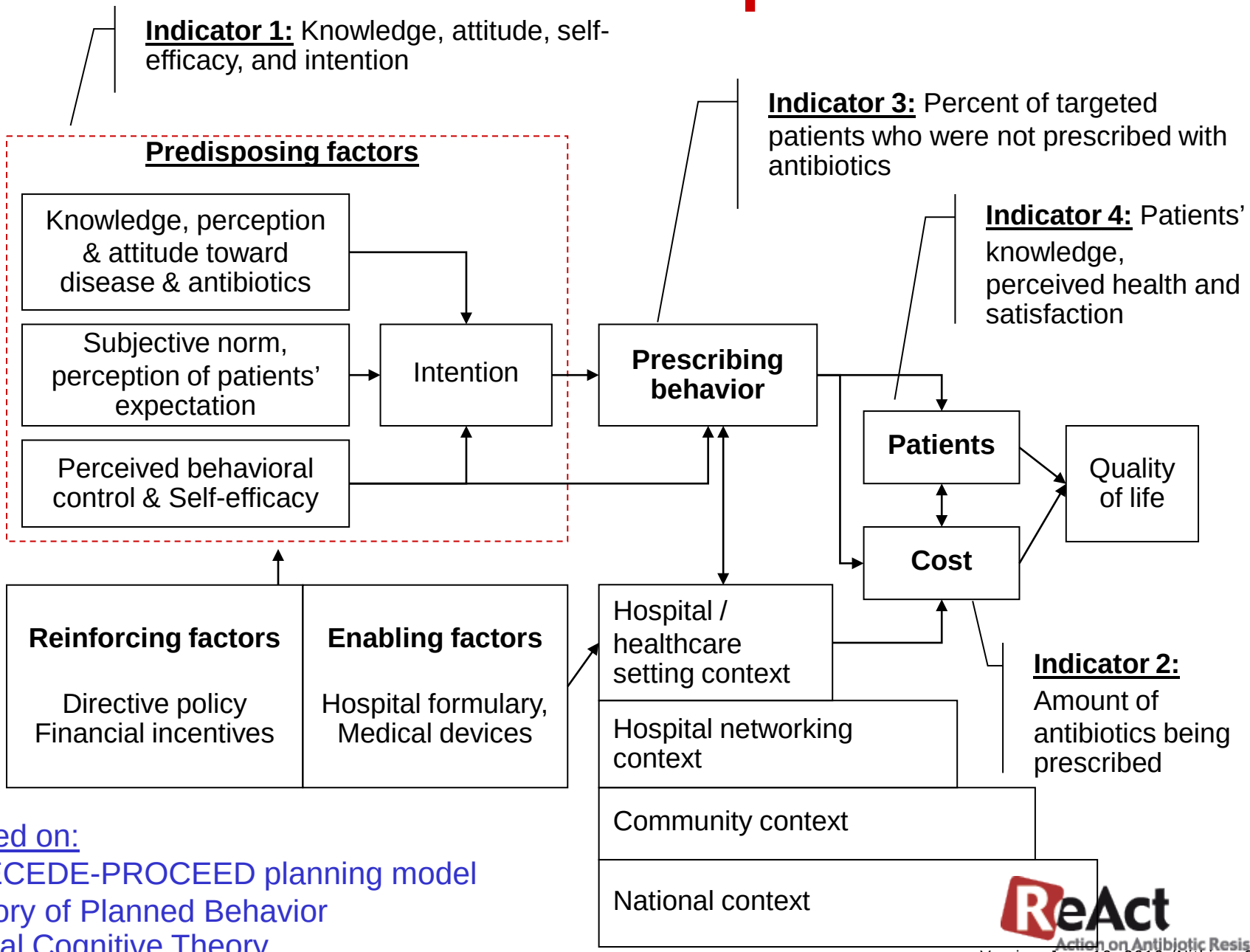
ASU Conceptual framework



Based on:
PRECEDE-PROCEED planning model
Theory of Planned Behavior
Social Cognitive Theory

Intervention implementation

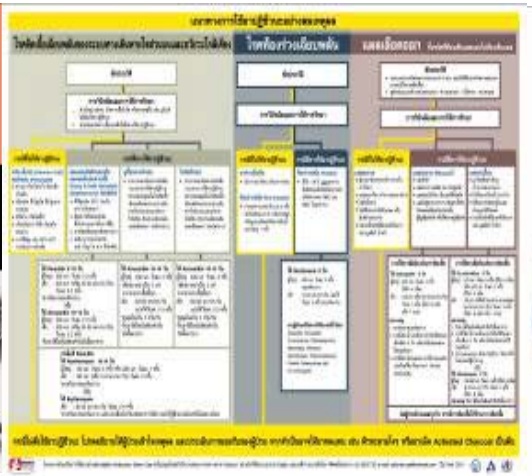
- ASU is a voluntary program with an incentive policy support from NHSO.
  - 10 good reasons to join ASU
- Local healthcare team (LHT) in each province or setting plans their own ASU project and can name their own project (sense of ownership).

- LHT can request support from the ASU program e.g., materials, speakers and technical support. Example of materials to be shown.

- LHT implements the program. Activities are for example:
  - Training or group discussion
  - Herbal medicine substitution
  - Local/Provincial policy
  - Positive competition / Campaign
  - Reminder (e.g., salary pay slip)
  - etc.
- The ASU program monitor progress from LHT and provide support to LHT.

Examples of ASU tools

Tools for prescribers (to educate and increase confidence)



Tools for patients (to lower expectation on antibiotics)

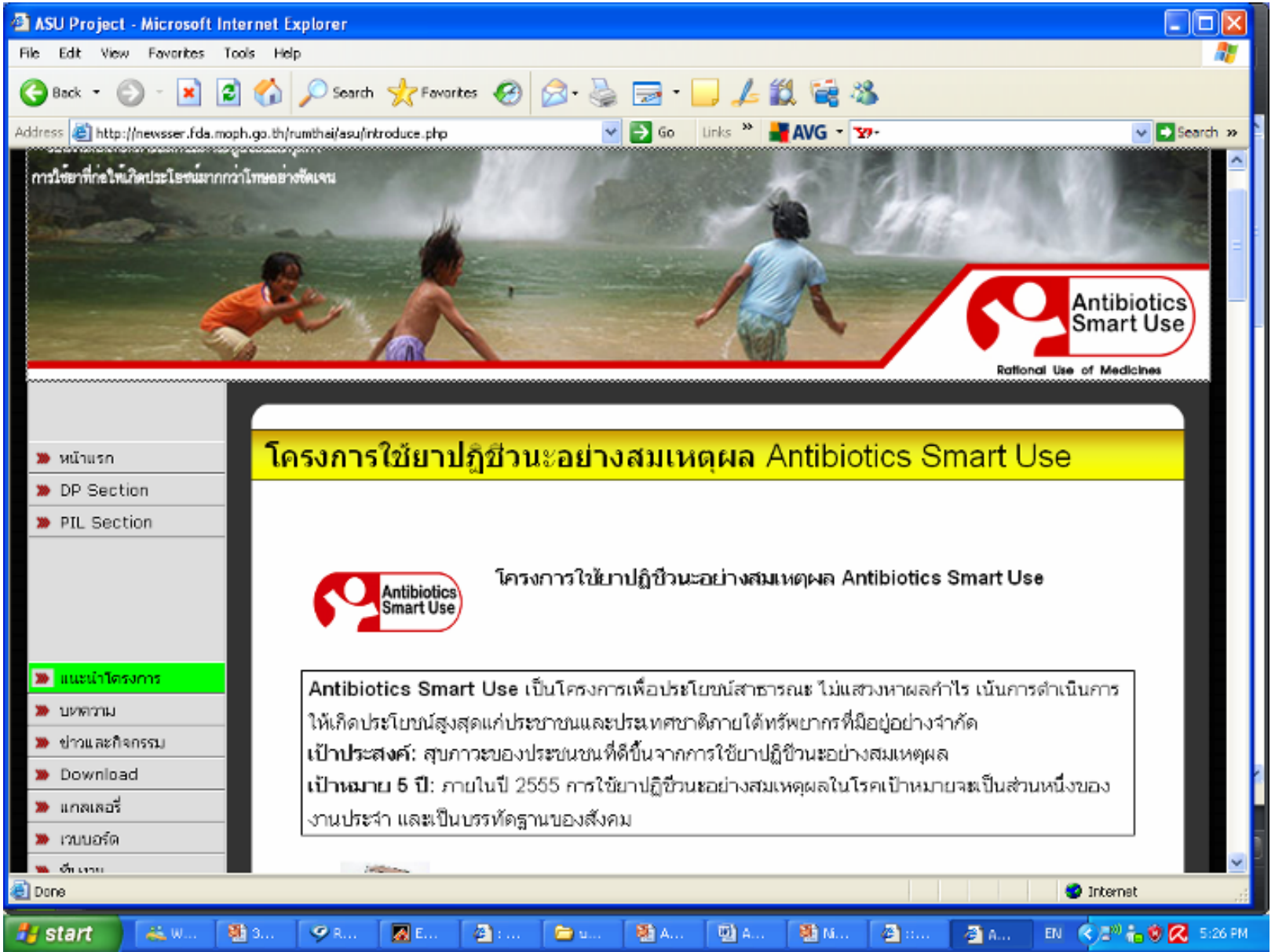
Antibiotics Smart Use
Rational Use of Medicine

ntibiotic Resistance


Antibiotics
Smart Use
The Saraburi Project
สถานีอนามัยในโครงการส่งเสริมการใช้ยาอย่างสมเหตุผล
Antibiotics Smart Use
ในความร่วมมือของจังหวัดสระบุรี สำนักงานสาธารณสุขจังหวัดสระบุรี
สำนักงานคณะกรรมการอาหารและยา และองค์การอนามัยโลก

All supportive materials can be download from

http://newsser.fda.moph.go.th/rumthai/



Antibiotics Smart Use
Rational Use of Medicine

Example of ASU activities

- ASU exhibition at OPD hall for patients & public
- Physician & Patient Discussion
- Hospital hygiene, hand wash training & reward programme
- Conferences, seminars
- Public awareness campaigns – theatre plays, door-knocking, in OPD, in temples etc
- Work with private pharmacies

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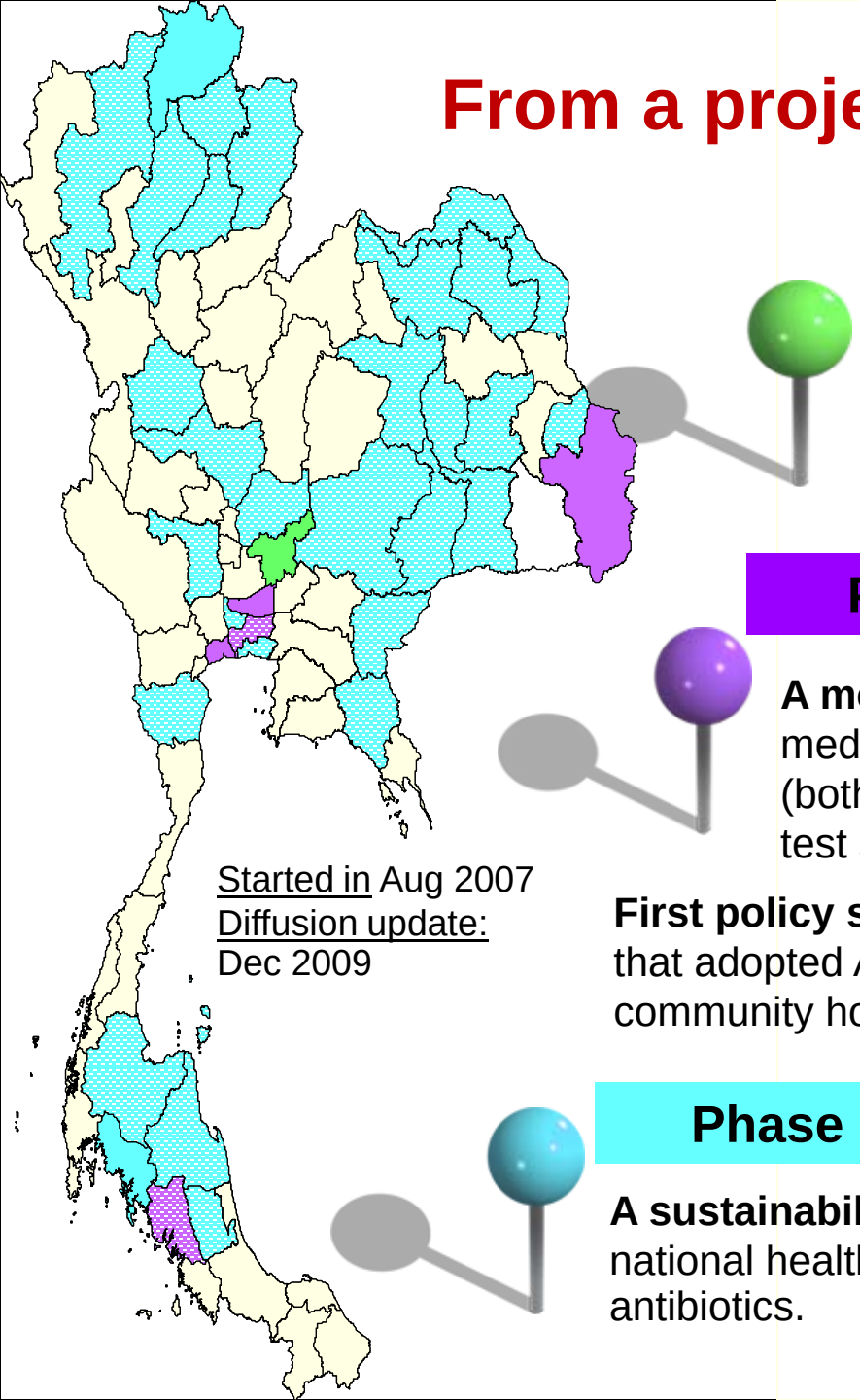
From a project to a national program



Started in Aug 2007
Diffusion update:
Dec 2009

Phase 1: Intervention to change behavior

A pilot phase in 10 community hospitals and 87 Primary health centers in Saraburi province in 2007-2008 to test interventions on antibiotic-prescribing behavior

Phase 2: To test scaling up feasibility

A model expansion phase in three provinces (i.e., large, medium and small provinces) and two hospital networks (both public and private hospitals) during 2008-2009 to test scaling up feasibilities

First policy support was from the National Health Security Office that adopted ASU as a pay-for-performance criterion for community hospitals. **(March 2009)**

Phase 3: To promote program sustainability

A sustainability phase in 2009-2012 to integrate ASU into national health agenda and create social norms on proper use of antibiotics.

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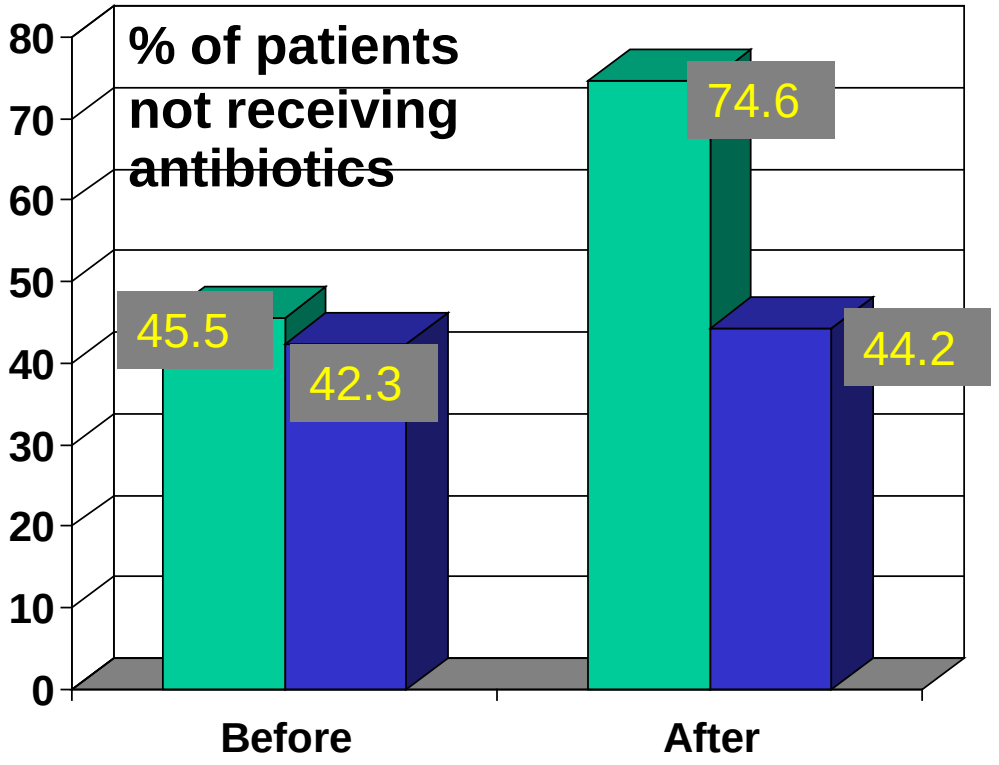
Results

Effects on prescribing behavior

Indicator 3: Percent of targeted patients who did not receive ABO (Goal: 20% increase)

Sample: Two community hospitals and 4 primary health centers from an intervention province and the control province

Data analysis: Chi-square (before - after) (May–Oct 07 vs. Dec 07–May 08)



Intervention, N 8,099

Control, N 5,865

Source: Kunyada Anuwong & Somying Pumtong

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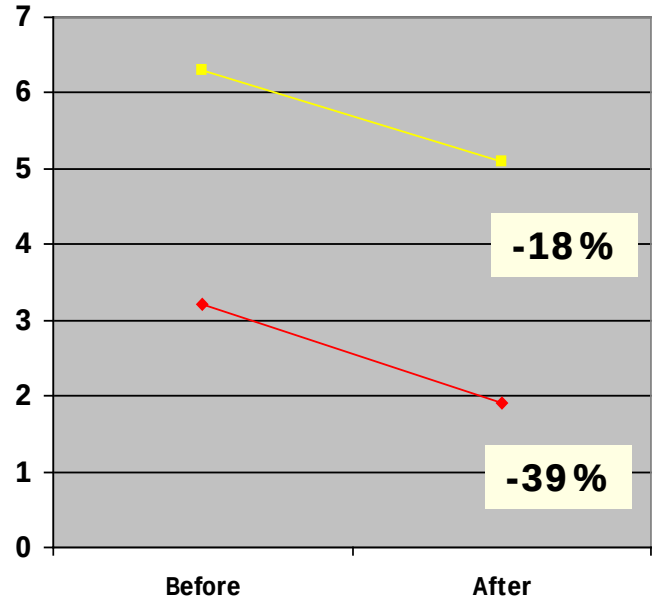
Indicator 2: Change in antibiotics use (Goal: 10% reduction)

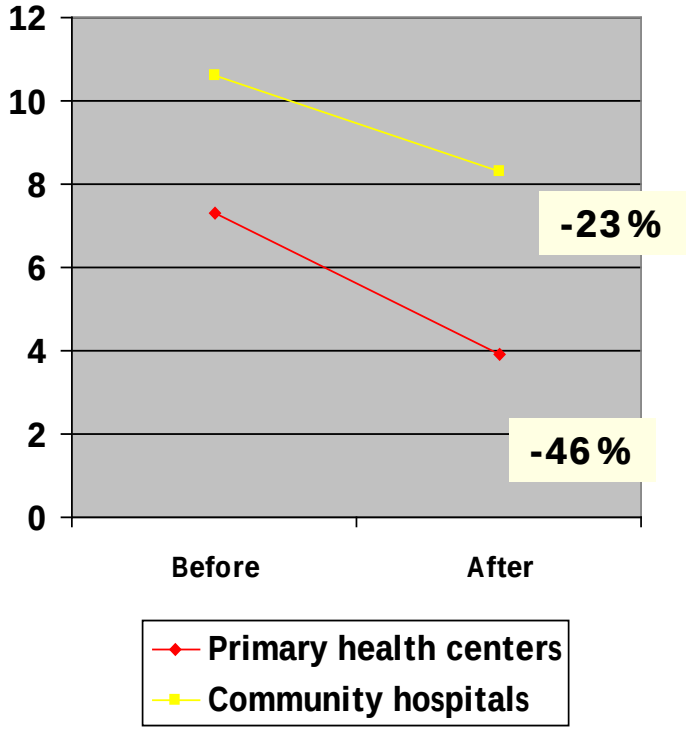
Data collection: Before (Dec 06–Oct 07) vs. After (Dec 07–Oct 08)

Sample: All 10 community hospitals and 87 primary health centers in Saraburi (RR = 50%)

Amount of ABO (Capsules/Tablets)



Amount of ABO (Bottles)



- Result: antibiotics reduction is accounted for approximately 34,000 US$/year

Source: Kunyada Anuwong & Somying Pumtong

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Effects on patients' health and satisfaction

Indicator 4: Patients' perception of health status and satisfaction despite no antibiotics prescription (Goal: 70%)

Data collection: Telephone interviews targeted patients after their hospital visit for 7-10 days

Sample: 3 settings (N = 2,286): Sarabuti province (n=1,200), Samutsongkarn province (n = 151), Srivichai private hospital (n = 917)

- Almost all patients (97.1%, 96% and 99.3%, respectively) were fully recovered or felt better.
- Over 80-90% were satisfied with medical services and treatment outcome and intended to return to this healthcare setting for the next medical visit.

Source: Kunyada Anuwong & Somying Pumtong

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Developing decentralized, collaborative network between national and local stakeholders

- At the end of 2nd year, more than 10,000 people/ health professionals was trained and involved in this program
- Some local teams started to apply the ASU framework to irrational use of other medicines e.g., NSAIDs
- Local materials and media were initiated.
- Strengthening research capacity of local teams via their own ASU program (22 local projects on ASU in 2010)

Saraburi province team "R2R Outstanding Award"

Ayutthaya province team "Excellence Poster Award"

- International collaboration opportunity e.g., exchange program and joined project

Antibiotics Smart Use
Rational Use of Medicine

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Decentralized ASU networks

Primary health center

Local community leaders

Villagers learning about ASU

Training session

Home visit

ASU team @ community hospital

ASU & partners

Project's grand opening

Singing contest

Strengths and limitations

- Strengths:
  - Characteristics of the program
    - ASU concept is not complex and it is part of their routine work
    - Relatively advantage e.g., cost saving
    - Compatible with health professionals' values e.g., patient safety
    - Observable outcomes e.g., patients' recovery
  - Multisectoral partners
  - Supportive mechanism for local healthcare teams
  - Autonomy "decentralization – sense of ownership"
- Limitations:
  - Limited resources
  - Resistance to change
  - Application to big hospitals or private healthcare setting

Progress

National level

- Draft AB policy but with no implementation
- NARST: surveil ABR but no link to policy
- AB RUD intervention studies
- EDL: certain AB in the list
- EDL: require Drug Use Evaluation = some AB
- UC: P4P incentive for AB RUD policy
- ASU: 3 yr (WHO+HSRI+DMD)
- Policy Week (2009): AB RUD

DMD specific activities

- Literature review of the situation of ABR and control system
- Workshop to compile experience/ concept/plan
- Media awareness on ABR
- Support ASU
- ABR issues as technical discussion in National Health Assembly (Dec 2009)
- Preparation for next phase

No comprehensive AB policy at national level

No audit and intervention system

Network of networks

WHO HQ

FDA

HSRI Health System Research Institute

DMD Drug System Monitoring &

DMD

ASU Project

Antibiotic Smart Use Project

SEARO

-Strategy set up
-Network
-Protocol for IC in hospital
-Media production

First phase

- Testing the model

Second phase

- Scale up community work
- Hospital program
- Public campaign
- Regulation on OTC
- RUD

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- Network
- Stakeholder seminars
- Twin city
- Curriculum
- International Conf

NARST

National Antimicrobial Resistance Surveillance of Thailand

National Policy

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Enabling factors

- Very comprehensive networking campaign during > 10 years
- Positive forces: Dedicated professional groups, national health insurance payers, the accrediting body, NGOs, the media, and international support
- Champions!

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Hurdles

- IMPLEMENTATION OF RECOMMENDATIONS AND POLICIES!
- Pharmaceutical industry, distributors, regulatory enforcement, and pharmacists at drugstores remain hard to convince

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Next steps and conclusions

- Sustained campaigning has opened the policy window
- Monitor the implementation process and evaluate the impact on ABR and rational use to maintain sustainability.
- Continue to work on policy implementation

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Swedish experiences in managing antibiotic resistance and opportunities for collaboration between China and Sweden

Andreas Heddini, MD, PhD

Strama
Samverkan mot antibiotikaresistens

SMITTSKYDDSINSTITUTET
Swedish Institute for Infectious Disease Control

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Strama

The Swedish Strategic programme against antibiotic resistance

From a voluntary network to mandated governmental body

- 1995: **National working group** initiated as a response to the rapid increase of PNSP in southern Sweden
- 1996: A network of local Strama groups formed in almost all counties through the county medical officers for communicable disease control
- 2000-2005: Some financial support for the national group via funds allocated for public health measures
- 2006: Strama receives a governmental mandate and a fixed appropriation of SEK10 million per year
- 2010: Strama becomes part of the Swedish Institute for Infectious Disease Control

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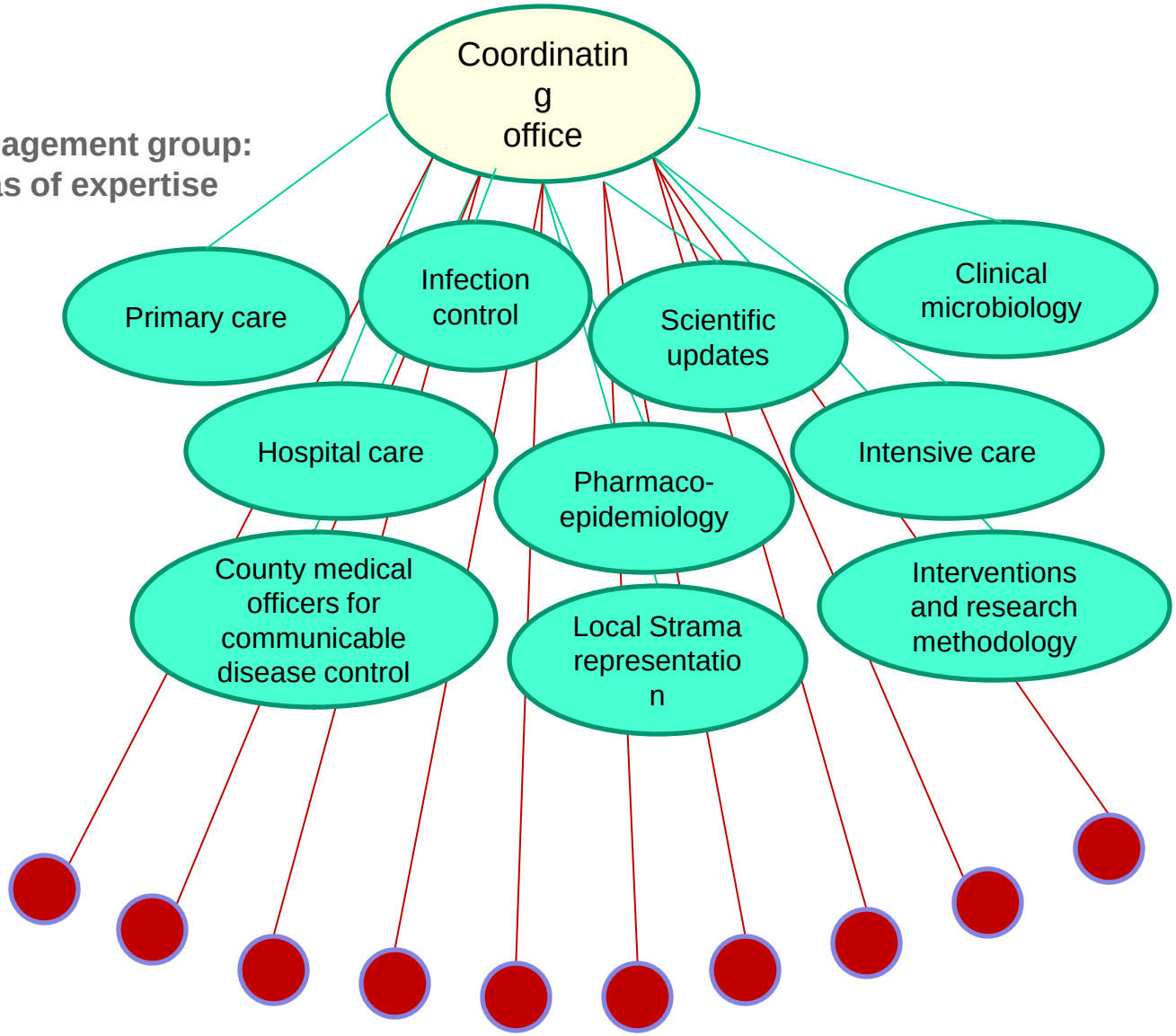
Management group: areas of expertise



Local Strama groups

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Stakeholders represented amongst Strama's collaborating partners:

- The Swedish Institute for Infectious Disease Control
- The National Board of Health and Welfare
- The Medical Products Agency
- The Association of County Medical Officers for Communicable Disease Control
- The Society of Medicine's Reference Group on Antibiotics
- The Infection Control Association
- Swedish Association of Local Authorities and Regions
- Apoteket AB (National Corporation of Swedish Pharmacies)
- The National Veterinary Institute

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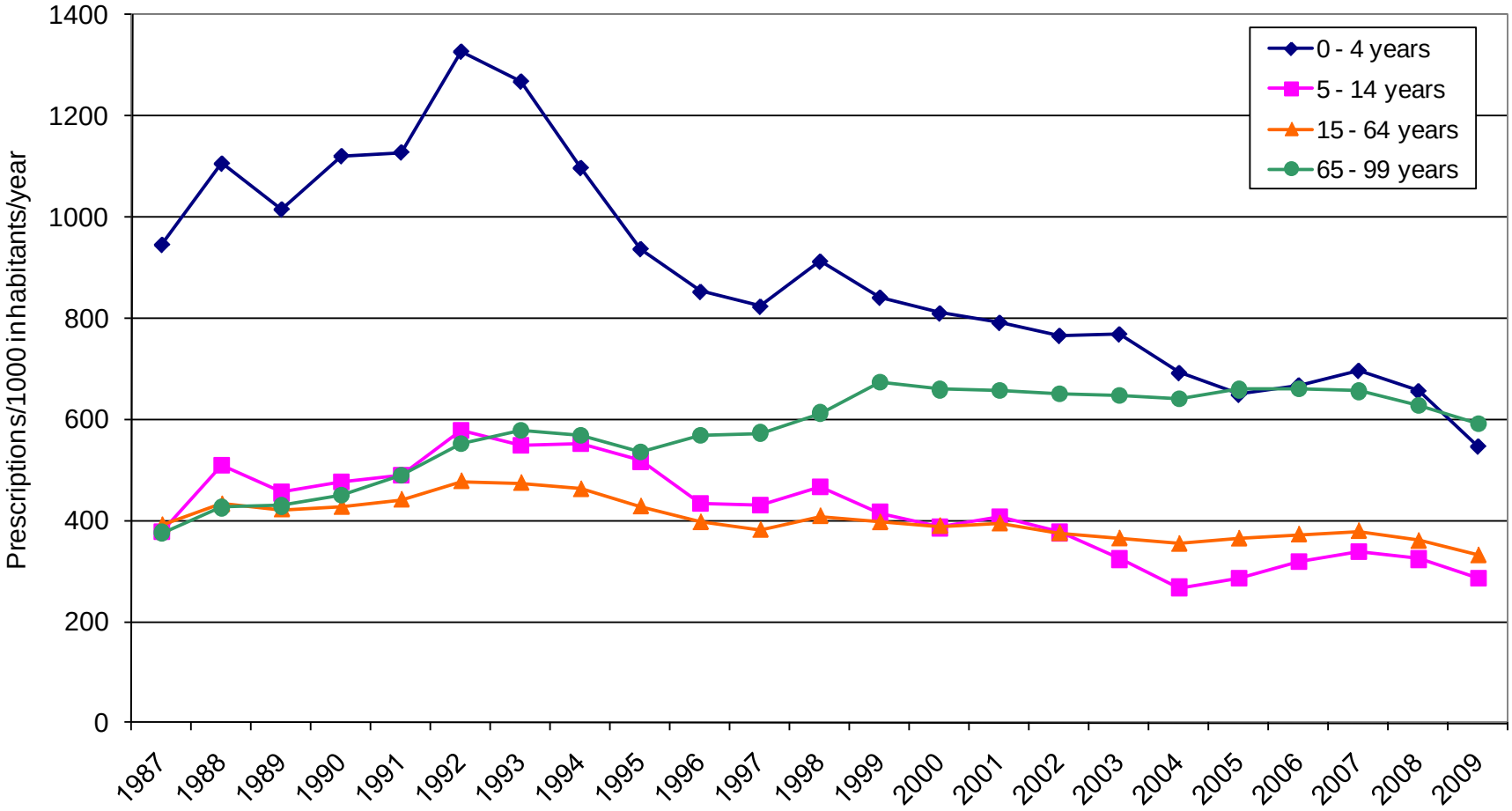
Antibiotic consumption (J01 exkl methenamine) in different age groups
Community care in Sweden 1987 - 2009, prescriptions per 1000 inhabitants and year

Data source: The National Board of Heatlh and Welfare and The National Corp. of Swedish Pharacies



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Multifaceted approach

- **Education**- multiple target groups
- **National and regional meetings** to catalyze multisectoral collaboration
- **Workshops** to produce treatment guidelines
- **Campaigns** to improve prescribing
- **Studies** e.g. on diagnosis-prescribing
- **Local implementation** of treatment guidelines
- **Monitoring** the international scientific literature and media
- **Increasing awareness** among professionals politicians and the public
- **Regular information** to Swedish media

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Strama´s goal is *not* to reduce antibiotic use but to make it rational.

Definition of rational use: Compliance with treatment guidelines

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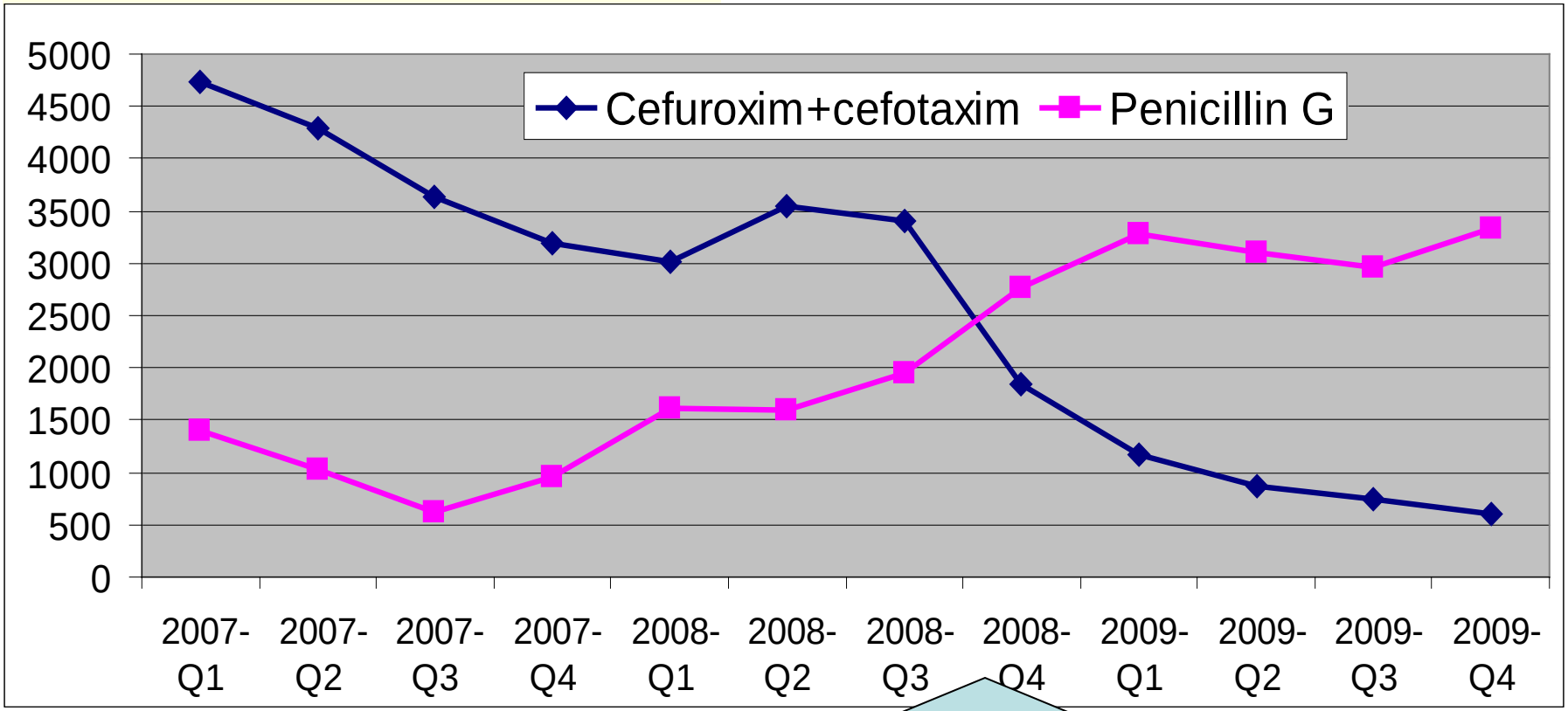
DDD (defined daily doses)



Implementation of SAI
A user friendly system coupling prescriptions to diagnosis in hospitals

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Education Materials for the education of new parents, to be coordinated by children's healthcare centers

Snoriga näsor!

- Tjock, gul-grön snuva kan innehålla bakterier, men färgen är ingen grund för att sätta in antibiotika
- Besvären lindras med koksalt eller nässpray
- Förkylningar sprids lätt och är svåra att undvika i en barngrupp.
- Handhygien är viktigt

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Samverkan mot antibiotikaresistens

Infektioner är "normalt"

- Förskolebarn har fler infektioner än "hemmabarn"
- Barn är friska bärare av många bakterier
- Immunförsvaret "tränas"
- Småbarn är ofta sjuka i infektioner (6-8 ggr/år) – det är "normalt"

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Samverkan mot antibiotikaresistens

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Samverkan mot antibiotikaresistens

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Workshops

ESBL resistance in enteric bacteria

PROPOSED ACTION PLAN – NOVEMBER 2007

Strama

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Campaigns to improve prescribing: A multi-faceted approach. The example of lower urinary tract infections

Information från Läkemedelsverket

ÅRGÅNG 18 • NUMMER 2 • MARS 2007

Expert workshops producing treatment guidelines arranged together with MPA


DEBATT OCH BREV

Förkorta behandlingstiderna vid nedre urinvägsinfektion hos kvinnor och använd inte kinoloner!

Antibiotikaresistens hos urinvägsbakterier ökar. Kinolonresistensen har passerat 10-procentsnivån, och frekvensen ESBL-bärande E coli stiger kraftigt. Nu krävs ett ansvarstagande för att begränsa antibiotikaresistensproblemet! Läkemedelsverkets och Stramas nya rekommendationer för behandling av urinvägsinfektion måste omsättas i praxis, och läkemedelsindustrin måste anpassa förpackningsstorlekarna

I en studie i Läkartidningen 4/2008 (sidorna 210–4) av Anders Österlund och Åsa Carlsson jämfördes förskrivningen av antibiotika bland primärvårdsläkare

Kinolonresistensen hos E coli har ökat från några få procent till över 11 procent under den senaste 10-årsperioden i Sverige.


Kvinna
-Babben Larsson
-Karin Ahlborg
-Rosa Bandet
-Rädda kvinnohjärtat
-Rädda mammorna
-Forum
Nyheter
Sportbladet
Sportbladet Spel
Nöjesliv
Klick!
Sofis Mode
USA-valet
Kvinna
Läsarbladet
Plus
TV

Läkare skriver ofta ut fel recept till kvinnor som drabbats av urinvägsinfektion.

Foto: COLOURBOX

Kvinnor med blåskatarr

Continuous information on prescribing patterns at Strama´s website

Pocket format guidelines sent to all doctors

Discusssions at Primary Health Care Centres

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MRSA

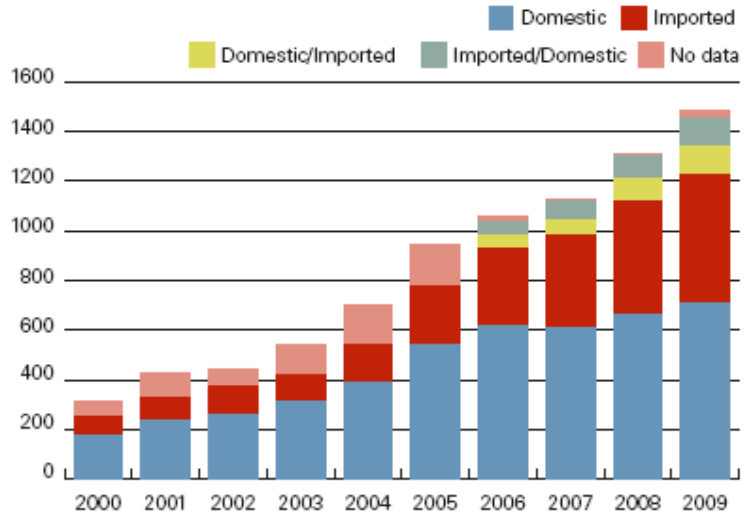

FIGURE 4.2. Number of MRSA notified annually by country of infection, Sweden 2000-2009. "Domestic/Imported" and "Imported/Domestic" indicate several mentioned countries of infection with the most likely mentioned first.

- 13 % increase in cases from 2008 to 2009

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ESBL

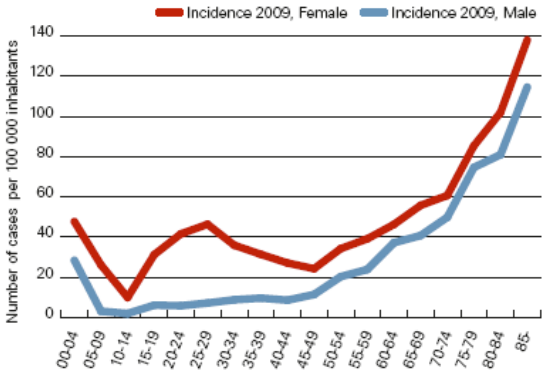

FIGURE 4.17. Age and gender distribution of *E. coli* ESBL cases 2009.

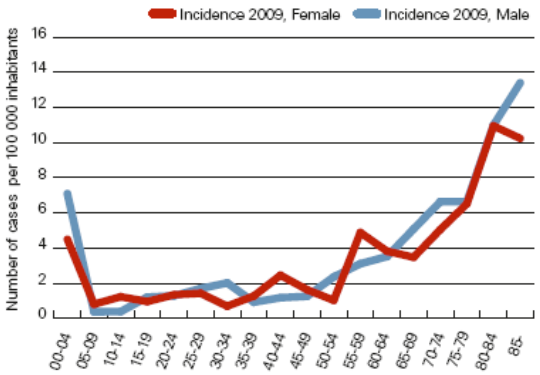

FIGURE 4.18. Age and gender distribution of *K. pneumoniae* ESBL cases 2009.

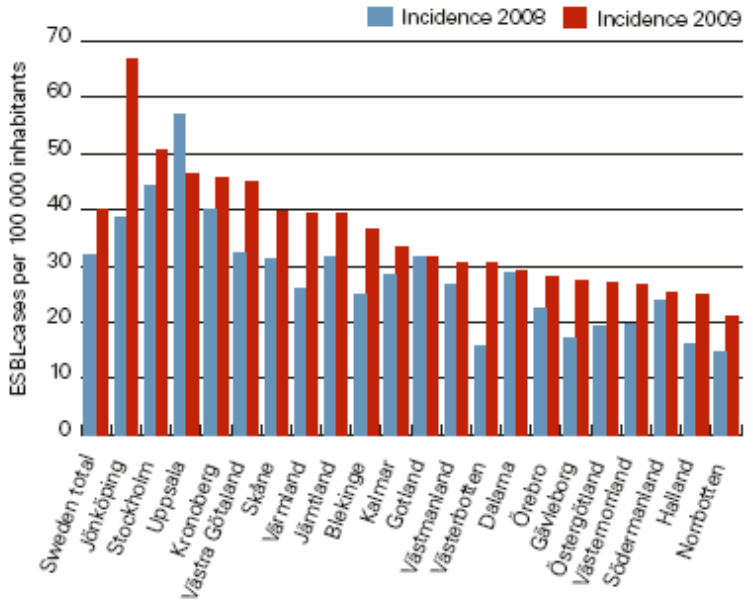

FIGURE 4.16. The incidence of ESBL in Swedish counties 2008-2009, arranged according to incidence 2009.

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