Lessons learned from the AMR program in Thailand

29 May 2014
Thailand Profile

- 63.3 millions population
- Universal health care coverage achieved in 2002
- Drug expenditures: 35% of health expenditures.
- By law, antibiotics have to dispensed by a pharmacist.
- National Antimicrobial Resistance Surveillance (NARST)
- National plans and strategies on AMR: partial & scatter implemented.

Adapted from Sumpradith et al 2011
Impact of Antimicrobial Resistant Infections in Thailand 2010

Health Impact

✓ patients with nosocomial infections ~ 270,000 persons
✓ patients with AMR infections ~ 90,000 persons
✓ Increase days of hospitalization ~ 3 million days
✓ Death from AMR infections ~ 30,000 persons

Economic impact

✓ Cost of antibiotics to treat AMR infections ~ 6,000 million Baht (200 million USD)
✓ Indirect costs of AMR at least 40,000 million Baht (1,300 million USD)
S-E Asia Strategy on Prevention & Containment of AMR 2010 - 2015

Objectives
1. Establish national alliance for prevention & control of AMR
2. Institute a surveillance system that captures emergence of resistance, trends in its spread and utilization of antimicrobial agents in different settings
3. Promote rational use of antimicrobial agents at all levels of healthcare & veterinary settings
4. Strengthen infection control measures to reduce the disease burden
5. Support research to develop and/or improve use of antimicrobial agents
AMR prevention and control system: 5 system

1. Surveillance
   - Drug Resistance
   - Drug utilization

2. Infection Control
   - prevent & control infection and dissemination

3. Rational Use of antimicrobials
   - Hospitals
   - Community
   - animal, plant, environment

4. Social awareness on AMR and Promote rational use of antimicrobials

5. Research & development on AMR
   - prevent, control and treatment
Rational drug use

Prevent and control AMR

Rational use of antimicrobials in human

Rational use of antimicrobials in animals

- Surveillance of antimicrobial resistance
- Infection Control
- Others
Drug system

Emerging disease

National coordinating centre to prevent and control antimicrobial resistance

Essential Drugs List

R&D

Rational Drug Use

- AMR subcommittee
- RUD subcommittee

Internationals e.g. WHO

Research Program on prevent and contain AMR in Thailand 2012 - 2016

National Alliance for AMR Prevention & Control
Four Measures to prevent & control AMR

1. Law and regulation
2. Education & training
3. Reward & Punishment
4. Social measures & behavior
1. Surveillance
   - Drug Resistance
   - Drug utilization

2. Infection Control
   - prevent & control infection and dissemination

National Strategic Plan to prevent and solve emerging communicable diseases 2013-2016
1. Surveillance
   - Drug Resistance
   - Drug utilization

3. Rational Use of antimicrobials
   - Hospitals
   - Community
   - animal, plant, environment

4. Social awareness on AMR and Promote rational use of antimicrobials


Irrational use of antimicrobial decrease at least 50%
5 Indicators and targets

- Number of countries with legislation banning OTC sale of selected antimicrobial agents
  **Target:** All countries of the SEA Region by 2015

- Number of countries with a ban in place on non-therapeutic use of antimicrobial agents in animals
  **Target:** All countries of the SEA Region by 2015

- Number of antimicrobial agents of which annual use has declined by 25% as indicated by DDD by 1000 patient days
  **Target:** At least 5 antimicrobial agents with annual utilization reduced by 25% as indicated by DDD by 2013

- Number of countries with national Hospital Accreditation schemes with rational use of antimicrobials as an essential requirement for accreditation
  **Target:** All countries of the SEA Region by 2015
National intervention on AMR

- Ban non-therapeutic use of antimicrobial agents in animals
- Rational use of antibiotic as one indicator of P4P by Universal Coverage (2 steps) (2009, 2012)
- National Ethical Criteria on Drug Promotion
- Hospital Accreditation 2014
- Revised regulations as measures to contain AMR
- Antibiotics reclassification & re-evaluation 2013
- Restricted use of high priority antimicrobials.
Hospital Accreditation policy

1. Hospitals regularly monitor AMR rate in hospitals

2. Plan to solve AMR and self assessment report esp. MRSA rate (*S.aureus*), Imipenem resistance (*E.coli*), *K.pneumoniae*, *P.aeruginosa*, *A.baumannii*


4. Promote rational antibiotic use for surgical prophylaxis to be based on evidence, opportunity of infection and local sensitivity. Monitor and perform self assessment report

Standard for Hospital Accreditation (start 2014)

Indicators for quality of health care service 10 items e.g.

- Value of essential drugs/Value of non-essential drugs
- Rate of antibiotics use in common cold
- Rate of antibiotic use in acute diarrhea
National intervention on AMR

Regulation on Registration 2012
• Restrict distribution channel of antimicrobial products

Regulation on API 2012
• Must sale API to drug manufacturers only.
• Allow surveillance on API sale and distribution

Regulation on license to sale modern drugs
• GPP
• Criteria to restrict antimicrobials use
• Criteria to renewal drug license
National intervention on AMR

Antimicrobial use in animals & agriculture
- Ban non-therapeutic use of antimicrobial agents in animals
- Reclassified all medicated premix, quinolones, cephalosporins, macrolides, polymyxins to prescription only

Antimicrobial use in human
- Reclassify priorities antimicrobials to prescription only e.g. injection, quinolones and derivative.
- Restrict distribution channel and use of certain medicines e.g. norfloxacin,

API in animals & agriculture
- Must sale for medicine production only
- Reporting system and surveillance system for API sale