

AMR containment in Thailand

Dr. Phusit Prakongsai
Bureau of International Health
Ministry of Public Health, Thailand

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Outline

- A brief background on AMR burden & situation of antibiotic consumption
- Containment measures & results
- Conclusion & challenges
- The way forward

Magnitude of AMR burden

- **Population** ~ 64 millions
- **Health burden** (based on data in 2010)
 - AMR infections ~ 88,000 cases
 - Mortality due to AMR infections ~ 38,000 cases
- **Economic burden**
 - Antibiotic use for AMR treatment ~ 200 million USD
 - Indirect costs due to AMR > 1 billion USD

Phumart P, et al. Health and Economic Impacts of Antimicrobial Resistant Infections in Thailand : A Preliminary Study. *Journal of Health Systems Research*. 2012;6:352-60.

Important resistant bacteria

- Extended-spectrum beta-lactamase (ESBL)-producing Enterobacteriaceae *e.g.*, *K. pneumoniae* & *E. coli*
- *Acinetobacter* spp., and *Pseudomonas aeruginosa* in hospital settings especially ICU
- Multi-drug resistance Staphylococcus เช่น Methicillin-resistant *S. aureus* (MRSA) and Methicillin-resistant *S. coagulase-negative staphylococci* (MRCoNS)
- Carbapenem resistant Enterobacteriaceae (CRE) *e.g.*, NDM-1
- Vancomycin-resistant enterococci (VRE)
- MDR-TB, XDR-TB etc.

Antibiotic consumption

Year	Total drug consumption (Million USD)	Antibiotics (Million USD)
2009	3,600	370
2012	5,400	570

- Three antibiotics with highest consumption costs:
Penicillins, Cephalosporins and Carbapenems (2009)

Note: Proxy from the values of antibiotic production and importation
Source: Thai FDA

AMR containment measures

Multi-level: Global, Regional, National and Local

Multi-faceted: Education, Regulation, Incentive and Management

Mutli-sectoral: Human, animal, and non-human sectors

Global & Regional policies on AMR

GHSA, GAP-AMR, Jaipur Declaration, ASEAN Post-2015

National policies related to AMR

- National Drug Policy and strategies 2012-2016
 - Rational use of medicine strategy
 - Antimicrobial resistance
- National Strategies on EID 2013-2016
 - One Health Approach
 - Antimicrobial resistance

National level (Implementation)

AMR surveillance

Infection control program and committee

Regulation:

- Antibiotic reclassification (Rx drugs, in process)
- Prohibition of antibiotics as growth promoter

Incentive & Administrative:

- P4P policy by NHSO
- Hospital accreditation
- Pharmacy accreditation

Education:

- Curriculum revision of health professionals inc. vet

Horizontal structure: 10 committees, 8 sub-committees

Vertical structure: DDC, DMSc, FDA, DLD, ...

Programs/Projects/Partnerships

- Antibiotic Smart Use project (2007)
- AMR containment program (2012)
- RDU hospital project (2014)
- Public campaign & network strengthening by CSO (2010)

Healthcare setting/Community / Farm

(Targets of change & implementation)

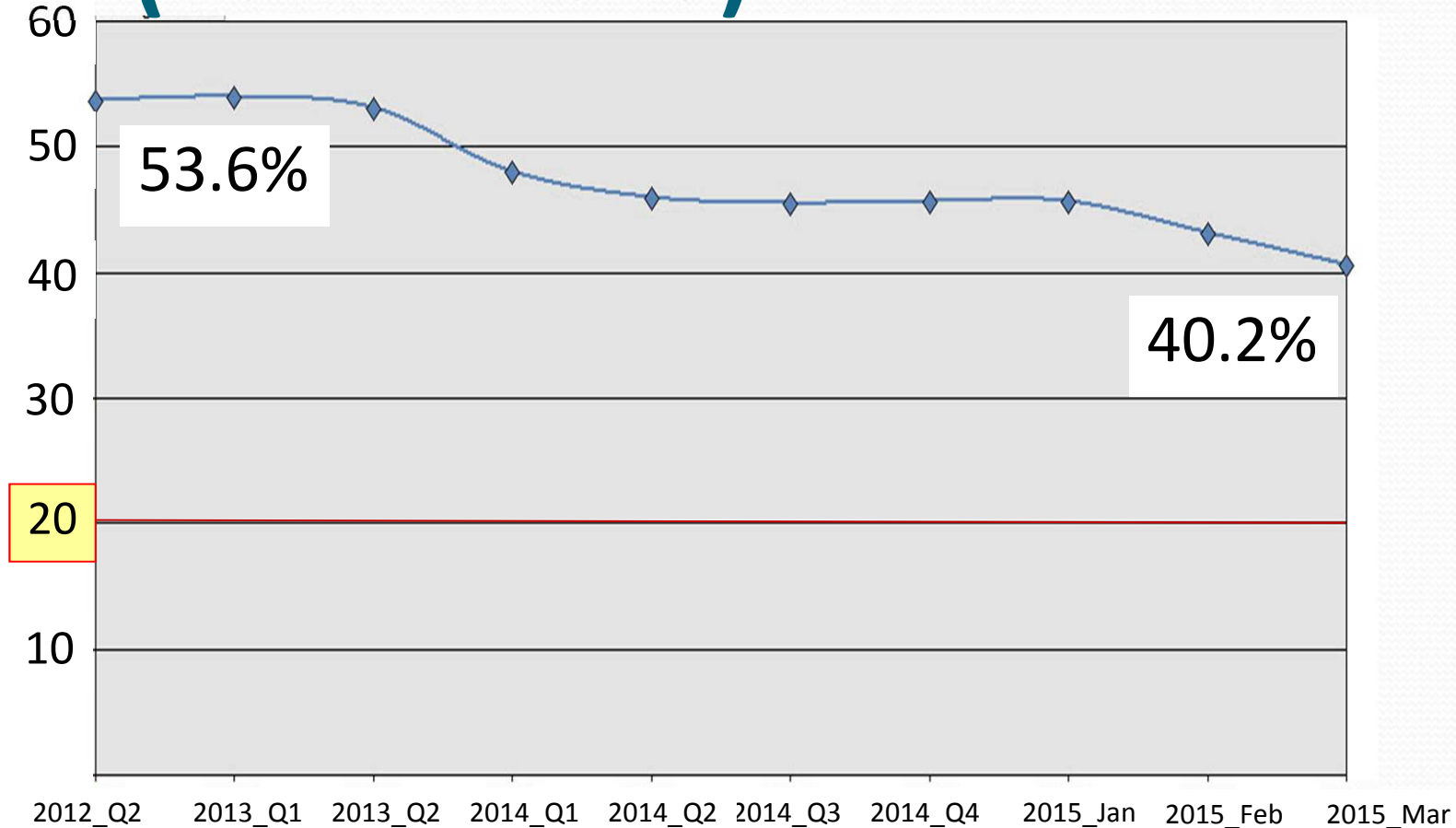
- Hospitals & Clinics
- Pharmacies
- Communities

Results

Population-based data are limited.

- ✓The available data are the rates of antibiotic prescription in out-patient department for URI and acute diarrhea.
- ✓Data from IPD, pharmacy and community are scattered.

Rate of antibiotic prescription in URI (2012 – 2015)



Data sources: 892 hospitals; OP VISIT = 344,054,775 VISIT; DIAG_URI = 25,299,389 VISIT; ATB USED = 12,373,774 VISIT

Source: National Health Security Office (Trithape Fongthong, 2015)

Conclusion

- Availability of stakeholders, agencies, projects and programs on AMR containment
- Availability of laws, regulations and policies
- Availability of evidence (domestic & international) to support AMR containment

Challenges

- Need for collaborating mechanisms and action plans among AMR stakeholders
- Lack of population-based data on antimicrobial use
- Unawareness of AMR problems
- Need policy/political support

The ways forward



Photo from: <http://www.irishchamberorchestra.com/press/press-releases/>

- **Melody notes** = National Action Plan on AMR (Integrated)
- **Conductors** = Political leadership & Coordination structure
- **Keep practicing** = Long walk together toward the shared goal