

## Group III: Antimicrobial resistance (AMR)

Thursday 7<sup>th</sup> May 2015; 13:30 – 17:30

Country profile on AMR containment

These following questions will be used as an input for the discussion session

	Does your country have the following systems or activities in place?	Country	Yes	No	If yes, please briefly elaborate in terms of specifics of system effectiveness of implementation
1	National action plan on AMR [if yes, please indicate name of national action plan and year]				
		Australia	√		National Antimicrobial Resistance Strategy 2015-2019. An implementation plan for the Strategy is under development.
		Thailand	√		Two major policies are (a) National strategic plans for preparation, prevention, and resolving re-emerging infectious diseases B.E. 2556-2559 (2013-2016) emphasizing strategies to prevent and contain re-emerging infectious including AMR and (b) National Medicine Policy B.E. 2554 (2011) emphasizing strategies to preserve and prolong effectiveness of antimicrobials for human and animals.
		Bangladesh	√		Draft National Strategic Plan for Antimicrobial Resistance Containment 2011-2016 (Already submitted to National Steering Committee headed by Hon'ble Health Minister for getting final approval. National Technical committee and Core working Group for ARC has already been approved by MOHFW and working from November 2012.
		Bhutan		√	
		Malaysia		√	Coordinated plan is not yet available
		Philippines	√		National Action Plan To Combat AMR – One Health Approach (2014-2016)
		Vietnam	√		National Action Plan on AMR period from 2013 to 2020, 2013
2	National focal point or National coordinating mechanism on AMR [if yes, please indicate name of organization and focal point person. Are they full-time staff?]				
		Australia	√		The Australian AMR Prevention and Containment

					Steering Group, which is co-chaired by the Secretaries of the Federal Departments of Health and Agriculture.
		Thailand		√	
		Bangladesh	√		DIRECTOR, Disease control DGHS,DHAKA
		Bhutan	√		Dr. Tshokey, Clinical Microbiologist and Head of Laboratory services, JDW National Referral Hospital Dept. of medical services, Ministry of Health is the focal person and is coordinating the AMR activities on time sharing basis
		Malaysia	√		National Infection and Antibiotic Control Committee – Mainly between the Medical Development Services for infection control, Institut medical Research for lab surveillance and Pharmaceutical Practice and Development, PSD for antibiotic utilization.
		Philippines	√		Interagency Committee on AMR composed of Department of Health, Department of Agriculture, Department of Science and Technology, Department of Interior and Local Government and Department of Trade
		Vietnam	√		Administration of Medical Service, MoH, NGO THI BICH HA
3	National regulation or legislation requiring a prescription for antimicrobials				
		Australia	√		Most antibiotics are 'Schedule 4' medicines in Australia, which means that they legally can only be supplied on prescription from a registered medical or veterinary professional.
		Thailand	√		These regulations are under Drug Act B.E.2510 (1967) and its amendments.
		Bangladesh		√	
		Bhutan	√		Drug regulatory authority prohibits sale of antibiotics without prescription
		Malaysia	√		Poison Act 1952-prohibits sale of antibiotics without prescriptions
		Philippines	√		Provided in the laws and administrative orders issued by the government
		Vietnam		√	National legislation on prescribe medicine
4	Prohibition of antibiotic use as growth promoter				
		Australia		√	

		Thailand	√		The regulation will be announced by government at the end of 2015.
		Bangladesh	√		
		Bhutan		√	
		Malaysia		√	
		Philippines	√		The regulatory agency does not allow the use of antibiotic as growth promoter and a policy will be issued on this matter. However, this is not monitored to determine compliance.
		Vietnam		√	
5	National public campaign on antibiotic use and AMR				
		Australia	√		NPS MedicineWise provides information on antibiotic use and AMR for the public and for health professionals <a href="http://www.nps.org.au/medicines/infections-and-infestations/antibiotics/">http://www.nps.org.au/medicines/infections-and-infestations/antibiotics/</a> . Antibiotic Awareness Week is a national focal point for increasing awareness of antibiotic use and resistance.
		Thailand	√		Public campaigns are conducted from small to large scales and from community to nationwide levels by many organizations such as FDA, MOPH hospitals, schools of medicine, schools of pharmacy and civil society organizations.  The Antibiotic Awareness Day, was first launched in 2013.
		Bangladesh	√		Yes but limited
		Bhutan	√		Public education materials under process (AV clip completed and will be broadcasted soon), Observation of national antibiotic awareness week planned from 2015
		Malaysia	√		ASMAR(Annual Scientific meeting on Antibiotic Resistance) is done. Promotional activities done occasionally in media
		Philippines	√		Info materials and conduct of advocacy seminars
		Vietnam	√		Ongoing
	<b>Human sector</b>				
1	National AMR surveillance system				
		Australia		√	A national surveillance system is under development.
		Thailand	√		The national AMR surveillance network is operated by the National Antimicrobial Resistance Surveillance Thailand (NARST), Department of Medical Sciences (DMSc) since 1998.

		Bangladesh		√	
		Bhutan	√		Involves 4 larger hospitals in Bhutan, produces antibiograms every 6 months
		Malaysia	√		39 hospitals contributed the data; 16 being state hospitals and tertiary referral centre, 2 from university hospitals UMMC and PPUKM, the others are specialist hospitals and district hospitals.
		Philippines	√		
		Vietnam	√		Ongoing
2	National reference laboratory for AMR testing/surveillance				
		Australia		√	Australia has an informal network of reference laboratories. A formal linking of laboratories into a national framework is being considered.
		Thailand	√		NARST, DMSc plays a role as reference laboratory for AMR training / surveillance.
		Bangladesh		√	
		Bhutan		√	JDWNRH is the focal point for AMR surveillance but not yet designated a reference lab.
		Malaysia	√		
		Philippines	√		
		Vietnam	√		Ongoing
3	National guidelines for AMR testing/surveillance				
		Australia		√	
		Thailand	√		In January, 2015, the laboratory guideline for clinical bacteria and fungi which includes standard methodology for AMR tests/surveillance has been distributed to all hospital laboratories.
		Bangladesh		√	
		Bhutan		√	
		Malaysia	√		
		Philippines	√		
		Vietnam	√		Ongoing
4	National infection prevention and control program				
		Australia	√		The Australian Commission on Safety and Quality in Health Care (ACSQHC) is developing a Healthcare Associated Infection (HAI) Prevention

					Program, which builds on facility and jurisdictional initiatives to provide a national approach to reducing HAIs. The program will identify and correct systemic problems and gaps, and ensure comprehensive actions are undertaken in a nationally coordinated way by leaders and decision makers in both public and private health care sectors.
		Thailand	√		The program is hosted by National Infection Control Committee (NICC) in collaboration with the Health care Accreditation institute.
		Bangladesh		√	Initiative but limited(some institute)
		Bhutan			
		Malaysia	√		
		Philippines	√		
		Vietnam	√		National Action Plan on infection control until 2015 (Decision No 1014/QD-BYT date March 30, 2012)
5	National infection prevention and control guideline				
		Australia	√		The Australian Guidelines for the Prevention and Control of Infections in Health Care 2010. These are presently being reviewed.
		Thailand	√		The infectious control guidelines are developed and revised by the subcommittee under the National Infection Control Committee (NICC).
		Bangladesh		√	Initiative but limited(some institute)
		Bhutan		√	
		Malaysia	√		
		Philippines	√		
		Vietnam	√		<ul style="list-style-type: none"> <li>- on sterilization, disinfection in healthcare facilities</li> <li>- on the prevention of sepsis for patients catheters intravascular</li> <li>- on prevention of pneumonia in hospital</li> <li>- Prevent infection of surgical site</li> <li>- Guidance safe injection</li> </ul>
6	National system for monitoring antimicrobial consumption				
		Australia		√	A national system for monitoring antimicrobial consumption is under development. The national system will build onto existing systems that separately monitor antibiotic consumption in participating hospitals and dispensed through

				community pharmacies.
		Thailand	√	Establishment of the national network on monitoring antibiotic use is in process.
		Bangladesh		√
		Bhutan		√
				No system for consumption but here was some cost analysis by the pharmacy department
		Malaysia	√	National surveillance of antibiotic- 26 types of antibiotic for inpatient use(injections) done since 2003/2001. Contributors in 2014 are 44hospitals from MOH, 3 from University hospitals, army hospital and 25 private hospitals more than 100 bedded.  NMUS/MSOM- procurement data for all medicines including antibiotic since 2005
		Philippines	√	
		Vietnam	√	Ongoing
7	National guidelines for antibiotic stewardship			
		Australia	√	The publication Antimicrobial Stewardship in Australian Hospitals 2011 assists hospitals develop and implement antimicrobial stewardship programs.
		Thailand		√
		Bangladesh		√
		Bhutan		√
				Activity initiated
		Malaysia	√	Launched in September 2014
		Philippines	√	
		Vietnam	√	Ongoing
8	Secured source of financing to implement AMR containment [if yes, is it adequate?]			
		Australia		√
		Thailand	√	Adequate
		Bangladesh		√
				Initiative but under process , some allocation for National strategy
		Bhutan		√
		Malaysia		√
				Using existing budget
		Philippines	√	As to adequacy, I am not sure.
		Vietnam		√
				Financial resources are very few
	<b>Animal sector</b>			
1	National AMR surveillance system			

		Australia		√	
		Thailand		√	
		Bangladesh		√	
		Bhutan		√	
		Malaysia			No data
		Philippines		√	For drafting
		Vietnam			No data
2	National reference laboratory for AMR testing/surveillance				
		Australia		√	
		Thailand	√		
		Bangladesh		√	
		Bhutan	√		At national level, there is facility for Antibiotic sensitivity testing (ABST)
		Malaysia			No data
		Philippines	√		
		Vietnam			No data
3	National guidelines for AMR testing/surveillance				
		Australia	√		National Standard Definitions and Rules for Antimicrobial Susceptibility Testing in Animals
		Thailand		√	
		Bangladesh		√	
		Bhutan		√	
		Malaysia			No data
		Philippines		√	For drafting
		Vietnam			No data
4	National infection prevention and control program				
		Australia		√	
		Thailand		√	
		Bangladesh		√	
		Bhutan		√	
		Malaysia			No data
		Philippines		√	
		Vietnam			No data

5	National infection prevention and control guideline				
		Australia		√	
		Thailand		√	
		Bangladesh		√	
		Bhutan		√	
		Malaysia			No data
		Philippines		√	
		Vietnam			No data
6	National system for monitoring antimicrobial consumption				
		Australia	√		Australian Pesticides and Veterinary Medicines Authority legislated requirement for reporting on sales of antimicrobial products in Australia
		Thailand		√	
		Bangladesh		√	
		Bhutan		√	
		Malaysia			No data
		Philippines		√	
		Vietnam			No data
7	National guidelines for antimicrobial use in animals				
		Australia	√		Australian Veterinary Association Prescribing and Dispensing Guidelines (2005)
		Thailand	√		
		Bangladesh		√	
		Bhutan		√	
		Malaysia			No data
		Philippines	√		
		Vietnam			No data
8	Secured source of financing to implement AMR containment [if yes, is it adequate?]				
		Australia		√	
		Thailand		√	



	Bangladesh		✓	
	Bhutan		✓	
	Malaysia			No data
	Philippines		✓	
	Vietnam			No data

1. What are the most serious AMR microbes in your country?	Sweden	1)MRSA 2) VRE 3)MDR-TB
	Australia	1) <i>E. coli</i> and <i>Klebsiella</i> species 2) <i>Enterococcus</i> species 3) <i>Staphylococcus aureus</i>
	Thailand	1) Carbapenem resistant <i>Acinetobacter</i> spp 2) Carbapenem resistance Enterobacteriaceae 3)Methicillin resistant Staphylococci
	Bangladesh	1) Nalidixic acid resistance <i>Salmonella</i> Typhi 2) MRSA 3) ESBL
	Bhutan	1) <i>Salmonella Enteridis</i> in chicken 2) <i>Salmonella typhimurium</i> in pork 3)MDR Gram negatives, ESBL producers 4) MDR TB
	Malaysia	1) <i>Acinetobacter</i> species 2) <i>Klebsiella pneumonia</i> 3) <i>E. coli</i>
	Philippines	No data
	Vietnam	1 <i>Acinetobacter</i> spp. 2) <i>Pseudomonas aeruginose</i> 3) <i>E.coli, Klebsiella pneumoniae</i>
2. What site the most affected by AMR? (Please choose one)	Sweden	Hospital
	Australia	Hospital
	Thailand	Hospital
	Bangladesh	Hospital
	Bhutan	Hospital
	Malaysia	Hospital
	Philippines	No data
	Vietnam	Hospital
3. What are the strengths in your AMR containment systems?	Sweden	-
	Australia	1)National Safety and Quality Health Service Standards 2)Well-developed laboratory capability and capacity 3)Prescription-only supply of antibiotics

	Thailand	<ul style="list-style-type: none"> <li>1) AMR surveillance system</li> <li>2) Monitoring of antimicrobial use in human</li> <li>3) Monitoring of antimicrobial use in animal growth promoter</li> </ul>
	Bangladesh	<ul style="list-style-type: none"> <li>1) National strategy for AMR has been formulated</li> <li>2) &gt;350 trained Clinical Microbiologist are available</li> <li>3) Availability of Microbiology lab in medical colleges, tertiary referral teaching hospitals</li> </ul>
	Bhutan	<ul style="list-style-type: none"> <li>1) A strong collaboration among Ministry of Health (MOH) and Ministry of Agriculture &amp; Forests (MOAF)</li> <li>2) Facilities for ABST at national referral labs at both MOH &amp; MOAF</li> <li>3) Increased awareness and steps taken at the laboratory perspectives</li> </ul>
	Malaysia	<ul style="list-style-type: none"> <li>1) National Antimicrobial Stewardship Program was established last year with the standardize protocol launched in 2014</li> <li>2) Good surveillance system in human sector</li> </ul>
	Philippines	<ul style="list-style-type: none"> <li>1) There is collaboration among agencies concerned.</li> <li>2) There is support from the government.</li> <li>3) There are laboratory facilities for the surveillance activities.</li> </ul>
	Vietnam	No data
4. What are the challenges in your AMR containment systems?	Sweden	-
	Australia	<ul style="list-style-type: none"> <li>1) Less well development in residential aged care facilities</li> <li>2) High antibiotic consumption</li> <li>3) GPs responsible for high rates of inappropriate prescribing</li> <li>4) Establishing a comprehensive national surveillance system</li> </ul>
	Thailand	<ul style="list-style-type: none"> <li>1) Epidemiological response to AMR distribution</li> <li>2) Information sharing system among multi-sectors organizations</li> </ul>
	Bangladesh	<ul style="list-style-type: none"> <li>1) No national action plan</li> <li>2) No Reference laboratory for AMRC</li> <li>3) No surveillance system for AMR</li> <li>4) No legislation for prescription of antimicrobials</li> </ul>
	Bhutan	<ul style="list-style-type: none"> <li>1) AMR policy is just on draft stage</li> <li>2) National action plan is yet to be developed (drafted)</li> <li>3) Lack of adequate fund in both the ministries</li> </ul>
	Malaysia	<ul style="list-style-type: none"> <li>1) Activities for Human and food AMR are not yet</li> </ul>

		<p>integrated</p> <p>2) Lack of funding and in need of capacity development for manpower</p> <p>3) Injudicious use of antibiotics in MOH hospitals, primary care as well as private health facilities</p> <p>4) Lapses in infection control practices</p> <p>5) Inadequate surveillance of veterinary usage of antibiotics</p>
	Philippines	<p>1) Allocation of funds.</p> <p>2) Capability and adequacy of personnel</p> <p>3) Cooperation of the Local governments units, stakeholders, and the public</p>
	Vietnam	<p>1) Resources limited</p> <p>2) Awareness on AMR is still low</p> <p>3) Legal compliance is low</p>
5. What linkages or collaborations does your country have with countries in Asia-Pacific region on AMR containment?	Sweden	<p>1) through GHSAG</p> <p>2) Bilateral work with China</p>
6. What linkages or collaborations does your country have with the international development partners for AMR containment?	Australia	<p>1) Animal health/agriculture – links with OIE, FAO (APHGA), OECD</p> <p>2) Human health – assistance to WHO Headquarters for the development of the GAP; and to the WHO Western Pacific Regional Office to support regional AMR containment efforts</p>
	Thailand	<p>1) WHO Collaborating Center for AMR surveillance and training in SEAR</p> <p>2) Center for Antimicrobial Resistance Monitoring in Foodborne pathogen (in cooperation with WHO)</p> <p>3) with FAO</p>
	Bangladesh	No
	Bhutan	<p>1) MOH has linkage with WHO</p> <p>2) MOAF has linkage with world animal health organization (OIE)</p>
	Malaysia	1) WHO, WPRO
	Philippines	<p>1) linkage and collaboration with WHO</p> <p>2) with OIE</p> <p>3) with EU Trade Related Technical Activities</p>
	Vietnam	<p>1) WHO</p> <p>2) One of the small components of GHS of CDC.US.</p> <p>3) Would be one of the small part of Wellcome trust collaboration of UK</p>

7. What would be potential areas of multi-country collaboration in Asia-Pacific region on AMR containment?	Sweden	<ul style="list-style-type: none"> <li>1)enhanced surveillance</li> <li>2)sharing best practices</li> <li>3)joint development projects</li> </ul>
	Australia	<ul style="list-style-type: none"> <li>1)surveillance</li> <li>2)laboratory capability and capacity</li> <li>3)research collaboration</li> </ul>
	Thailand	<ul style="list-style-type: none"> <li>1)Strengthen laboratory capacity and quality system</li> <li>2)Enhance Capacity to recognize and report new, emerging, spreading AMR</li> </ul>
	Bangladesh	<ul style="list-style-type: none"> <li>1)establish reference laboratory for AMR</li> <li>2) establish National surveillance system for AMR</li> <li>3) develop technical collaboration for AMR</li> </ul>
	Bhutan	<ul style="list-style-type: none"> <li>1) Surveillance activities &amp; Networking on AMR information</li> <li>2) Funding for AMR activities in both the ministries</li> <li>3) Training and capacity development in terms of human resources since human resource is the main constraints in anything in both the ministries.</li> </ul>
	Malaysia	<ul style="list-style-type: none"> <li>1)Promotion and awareness kit /tools for public and healthcare providers</li> <li>2)Networking and exchange of information on AMR and other surveillance activities</li> <li>3)Training and manpower development</li> <li>4) IT packages for easier analysis and collection of data</li> </ul>
	Philippines	<ul style="list-style-type: none"> <li>1)Training and Capacity Building.</li> <li>2)Exchange of information or networking</li> <li>3)Harmonized System of AMR Containment</li> </ul>
	Vietnam	<ul style="list-style-type: none"> <li>1)To share experiences and update database on AMR</li> <li>2)Technical and financial support</li> <li>3) Training for health workers</li> </ul>