Monitoring and Evaluation of National Action Plans on AMR

Suggested approaches
March 2017
Role of M&E section in AMR plan

- Help to clarify activities and outputs expected

- Identify how to monitor progress on priority aspects of the NAP

- Identify sources of information on progress – hopefully many already exist

- Set out the review process - who will review progress on planned activities, how often?
Scope of M&E in the National Action Plan

Immediate priority is to monitor the process of NAP implementation

- Have the most important planned activities been implemented? If not, what are barriers?
- Have planned outputs been achieved?

Consider how to monitor outcomes and impact

- Are we having the intended impact on levels of resistance? Reducing use of antibiotics in agriculture? Reducing stock outs of essential medicines in health facilities?
**Monitoring the implementation process: link indicators to planned activities**

**Example from a country**

**Specific Objective 3:** To build a network of laboratories capable of accurately detecting AMR.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator/ Means of Verification</th>
<th>Institutions/ Agencies Responsible</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prepare a list of all laboratories in the country capable of performing Antimicrobial Susceptibility Testing (AST).</td>
<td>Updated list of microbiology laboratories with AST capacity.</td>
<td>AMR WG, MoH, DAPH/MAFF.</td>
<td></td>
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<tr>
<td>2. Strengthen existing provincial hospital laboratories to serve as regional reference sites for laboratory diagnosis of AMR.</td>
<td>Rehabilitated infrastructure, improved equipment maintenance, provision of reagents and supplies, inUseervice</td>
<td>BMLS/MoH, NIPH</td>
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</tr>
</tbody>
</table>
Indicators linked to planned activities (2)

Another example

Specific Objective 7: To reduce antimicrobial use in food producing animals.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator/Means of Verification</th>
<th>Institutions/Agencies Responsible</th>
<th>Year 1</th>
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<th>Year 3</th>
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<tr>
<td>1. Develop guidelines for use of Antimicrobials in food producing animals based on the WHO list of Critically Important Antimicrobials.</td>
<td>Essential Medicines List for animal sector</td>
<td>MAFF</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. Establish a monitoring system for AMR in food producing animals</td>
<td>Standard Operating Procedures, policies, guidelines, reports.</td>
<td>MAFF</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3. Establish a strong regulatory framework for Authorization and control of the quality of Veterinary medicines.</td>
<td>Policy, guidelines</td>
<td>MAFF</td>
<td></td>
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<td></td>
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</tbody>
</table>
Framework for monitoring AMR
Global Action Plan

**Inputs**
- Country stakeholder engagement
- Situation analysis
- WHO support & guidance
- FAO & OIE guidance & standards
- Other international & national partners’ action
- Funding
- Technical expertise & support

**Activities/Outputs**
- Develop & implement national AMR plans in line with GAP
- Surveillance & research on resistance, infections and consumption
- Raise awareness & educate policy makers, farmers, vet & health workers, general public
- AM stewardship (national & facility levels), regulation, treatment guidelines
- Infection prevention & control in facilities, farms & community
- R&D incentives, R&D Facility, additional funding, coordination

**Outcomes**
- Use of data on infection prevalence, AM use and resistance
- Behaviour changes in antibiotic demand (in health & food chain)
- Appropriate prescribing of AMs by professionals (health workers & vets, public & private)
- AMs available are of assured quality, on approved list. Growth promotion phased out
- Lower incidence of infection in health facilities; higher WASH and vaccine coverage
- Increased R&D related to priority infections including diagnostics, vaccines, meds

**Impact**
- More appropriate consumption of antimicrobials
- Slower development of resistance

**Goal**
- Effective & safe medicines are available for infectious diseases
- Lower mortality & morbidity from infectious diseases

(World Health Organization)
## Monitoring each level of the NAP

<table>
<thead>
<tr>
<th>Input Basic resources</th>
<th>Process Activities</th>
<th>Output Results at level of the program</th>
<th>Outcome Results at level of populations</th>
<th>Impact and Goals Ultimate effect in long term</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g. Policies, guidelines, standards; funding; human resources; laboratory facilities; equipment and consumables...</td>
<td>e.g. Awareness campaigns, training, surveillance, infection prevention and control measures, drug quality assurance, developing new legislation for stewardship</td>
<td>e.g. Implemented programmes and coordination mechanisms, improved laboratory capacity, good laboratory and epidemiological data, trained staff, educated public...</td>
<td>e.g. Greater awareness and knowledge, better behaviour, wider population coverage and access, sustainable financing, moderated consumption, stewardship , use of surveillance data...</td>
<td>Impact: access to antimicrobials, appropriate use, prevalence of AMR and preventable infections, Goals: estimated morbidity and mortality, effective medicines available and affordable, social impact, economic impact</td>
</tr>
</tbody>
</table>
### Example for key prevention strategies – select indicators and sources

<table>
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<th>Plan</th>
<th>Activities</th>
<th>Outputs</th>
<th>Outcomes</th>
</tr>
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<tr>
<td>Promote farm hygiene, vaccination, biosecurity and appropriate handling of sick animals to prevent transmission of resistant bacteria</td>
<td>Develop materials on prevention for large farming enterprises and train trainers Training conducted <strong>Source: MOA program report</strong></td>
<td>Number of large farming enterprises reached with training <strong>Source: reporting from districts</strong></td>
<td>% of large animal health facilities with improved hygiene practices, vaccination coverage <strong>Source: Sample survey</strong></td>
</tr>
<tr>
<td>Watsan program for health facilities and schools expanded and funded</td>
<td>Progress against plan for building or refurbishing watsan facilities by district <strong>Source: watsan program data</strong></td>
<td>Number of additional health facilities and schools that have new or refurbished safe water, hygiene and sanitation facilities <strong>Source: watsan program data</strong></td>
<td>% of health facilities and schools with functional safe water supply, hygiene and sanitation on the premises <strong>Source: National facility surveys or HMIS/EMIS</strong></td>
</tr>
</tbody>
</table>
Indicators & tools are available to select from, e.g.

- **AMR surveillance system indicators** – see GLASS guide to planning, implementation, monitoring and evaluation (WHO, 2016, http://apps.who.int/iris/bitstream/10665/251554/1/WHO-DGO-AMR-2016.4-eng.pdf?ua=1)

- Water and sanitation coverage (SDG indicators)

- Water and sanitation in health facilities ([washinhcf.org](http://washinhcf.org) indicators, 2016)

- Core health system indicators (e.g. stock outs, vaccine coverage)

- WHO new tool for surveys of antimicrobial use in hospitals and pharmacies

- WHO is working on standard AMR outcome and impact indicators

- OIE data collection for antimicrobial consumption in animals

- FAO veterinary laboratory mapping tool
Key messages (1)

Priority steps for countries suggested for now:

- Select priority strategies and activities in the National Action Plan to be implemented first to tackle AMR

- Identify a manageable number of indicators / measures of progress for these actions, and sources

- Capture progress that may be happening in other projects and programs not directly under AMR
Key messages (2)

Suggested approach (continued):

- Agree how often to monitor and review progress
  - e.g. 6 monthly review against implementation plan by AMR Core Group, annual review by Advisory Committee?

- As much as possible, draw on standard tools and information systems available

*In many countries, it may make sense to get started on a few priority activities and monitor these; developing comprehensive implementation plans can come at a later stage*