

Name of country Bermuda Date of completion March 27, 2018

1. Name and email of existing AMR focal points for relevant sectors:

- Human Health [Redacted]
- Animal Health (terrestrial and aquatic) [Redacted]
- Plant Health [Redacted]
- Food Production [Redacted]
- Food Safety [Redacted]
- Environment [Redacted]

2. Name(s) and contact details of person(s) who coordinated the national response to this self-assessment

[Redacted]

3. Name and email of AMR Focal point in WHO country office

Name and email of AMR Focal Point in FAO country or regional office

Name and email of OIE National Focal Point on veterinary products

4. Multi-sectoral approach to addressing AMR

Please select one rating that most closely matches the country situation.

4.1 Multi-sector and One Health collaboration/coordination		
<input type="radio"/>	A	No formal multi-sectoral governance or coordination mechanism exists.
<input checked="" type="radio"/>	B	Multi-sectoral working group(s) or coordination committee on AMR established with Government leadership.
<input type="radio"/>	C	Multi-sectoral working group(s) is (are) functional, with clear terms of reference; regular meetings, and funding for working group(s). Activities and reporting/accountability arrangements are defined.
<input type="radio"/>	D	Joint working on issues including agreement on common objectives, including restriction of use of critically important antimicrobials.
<input type="radio"/>	E	Integrated approaches used to implement the national AMR action plan.

4.2 Which sectors are actively involved in developing and implementing the AMR National Action Plan?

- Human Health
- Animal Health (terrestrial and aquatic)
- Plant Health
- Food Production
- Food Safety
- Environment

5. Country progress with development of a national action plan on antimicrobial resistance (AMR)

Please select one rating that most closely matches the country situation.

5.1 Country progress with development of a national action plan on AMR		
<input type="radio"/>	A	No national AMR action plan.
<input checked="" type="radio"/>	B	National AMR action plan under development.
<input type="radio"/>	C	National AMR action plan developed.

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<input type="radio"/>	D	National AMR action plan approved by government that reflects Global Action Plan objectives, with an operational plan and monitoring arrangements.
<input type="radio"/>	E	National AMR action plan has funding sources identified, is being implemented and has relevant sectors involved with a defined monitoring and evaluation process in place.

5.2 Is your country's national action plan on AMR linked to any other existing action plans, strategies or targets related to HIV, tuberculosis, malaria or neglected tropical diseases?

- Yes. If so, please select the relevant item from the drop-down menu (mark all diseases that are relevant):
 - HIV
 - Tuberculosis
 - Malaria
 - Neglected tropical diseases

No

5.3 If you have published your AMR national action plan, please insert a link here.

6. Country progress on strategic objective 1: Improve awareness and understanding of AMR through effective communication, education and training.

Please select the rating (A-E) for each question that most closely matches the country situation. Please note that for each question, higher ratings are expected to have achieved the progress level covered in lower ratings (e.g. countries selecting "D" will have achieved progress listed in both "B" and "C" as well as "D"). For questions covering multiple sectors, please select the appropriate rating for each sector separately, as indicated.

6.1 Raising awareness and understanding of antibiotic resistance risks and response in human health	
<input type="radio"/>	A No significant awareness-raising activities on antibiotic resistance.
<input type="radio"/>	B Some activities in parts of the country to raise awareness about risks of antibiotic resistance and actions that can be taken to address it.
<input checked="" type="radio"/>	C Limited or small-scale antibiotic resistance awareness campaign targeting some, but not all, relevant stakeholders (e.g. general public, doctors, pharmacists, nurses, medicine sellers).
<input type="radio"/>	D Nationwide, government-supported antibiotic awareness campaign targeting all or the majority of stakeholders.
<input type="radio"/>	E Focused, national scale government-supported activities implemented to change behaviour regarding antibiotic resistance in target groups in human health, both public and private sectors, with monitoring undertaken of their awareness and behaviour change over last 5 years.

6.2 Raising awareness and understanding of AMR risks and response in animal health, plant health, food production, food safety, and environment sectors	
A	No significant awareness-raising activities on relevant aspects of risks of antimicrobial resistance.
B	Some activities in parts of the country to raise awareness about risks of antimicrobial resistance and actions that can be taken to address it.
<input checked="" type="radio"/>	C Limited or small-scale antimicrobial resistance awareness campaign targeting some but not all relevant stakeholders within sector.
D	Nationwide, government-supported antimicrobial resistance awareness campaign targeting all or the majority of relevant stakeholders within sector.
E	Focused, national scale government supported activities implemented to change behavior of relevant stakeholders within sector, with monitoring undertaken of their awareness and behaviour change over last 2-5 years.

For each of the following sectors, please indicate which statement in 6.2 above (A-E) is applicable:

Animal Health (terrestrial and aquatic).....C.....

Plant Health.....A.....

Food Production.....B.....

Food Safety.....C.....

Environment.....C.....

6.3 Training and professional education on AMR in the human health sector	
<input type="radio"/>	A No training for human health workers on AMR.
<input checked="" type="radio"/>	B Ad hoc AMR training courses in some human health related disciplines.
<input type="radio"/>	C AMR is covered in 1) some pre-service training and in 2) some in-service training or other continuing professional development (CPD) for human health workers.
<input type="radio"/>	D AMR is covered in pre-service training for all relevant cadres. In-service training or other CPD covering AMR is available for all types of human health workers nationwide.
<input type="radio"/>	E AMR is systematically and formally incorporated in pre-service training curricula for all relevant human health cadres. In-service training or other CPD on AMR is taken up by relevant groups for human health nationwide, in public and private sectors.

6.4 Training and professional education on AMR in the veterinary sector	
<input type="radio"/>	A No training of veterinary related professionals (veterinarians and veterinary paraprofessionals) related to AMR.
<input checked="" type="radio"/>	B Ad hoc AMR training courses available for veterinary related professionals.

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<input type="radio"/>	C	AMR and appropriate use is covered in core curricula for graduating veterinarians and for veterinary paraprofessionals when relevant.
<input type="radio"/>	D	Continuing professional training on antimicrobial resistance and antimicrobial use is available nationwide for veterinary related professionals.
<input type="radio"/>	E	AMR is systematically and formally incorporated in curricula for graduating veterinarians and veterinary paraprofessionals when relevant and continuing professional training is a formal requirement.

6.5 Training and professional education on AMR in farming sector (animal and plant), food production, food safety and the environment		
<input checked="" type="radio"/>	A	No training provision on AMR for key stakeholders, e.g. farmers and farm workers, extension workers, food and feed processors and retailers, environmental specialists.
<input type="radio"/>	B	Tailored ad hoc AMR training courses available for at least two groups of key stakeholders.
<input type="radio"/>	C	Tailored ad hoc AMR training courses are available for all or the majority of key stakeholders.
<input type="radio"/>	D	Tailored AMR training courses are routinely available nationwide for all key stakeholders and completion of training is a formal requirement for at least two groups of key stakeholders.
<input type="radio"/>	E	Tailored AMR training courses are routinely available nationwide and completion of training is a formal requirement for all key stakeholders.

6.6 Progress with strengthening veterinary services		
<input checked="" type="radio"/>	A	No systematic approach at national level to strengthening Veterinary Services.
<input type="radio"/>	B	Veterinary services assessed and plans developed to improve capacity, through a structured approach such as OIE Performance of Veterinary Services (PVS) Evaluation and PVS Gap Analysis missions.
<input type="radio"/>	C	Implementation of plan to strengthen capacity gaps in Veterinary Services underway.
<input type="radio"/>	D	Monitoring of Veterinary Services performance carried out regularly, e.g. through PVS Evaluation Follow Up missions.
<input type="radio"/>	E	Documented evidence of strong capacity in compliance with OIE standards on the quality of Veterinary Services ³ .

³ http://www.oie.int/index.php?id=169&L=0&htmfile=chapitre_vet_serv.htm

7. Country progress on strategic objective 2: Strengthen the knowledge and evidence base through surveillance and research.

Please select one rating for each question that most closely matches the country situation.

7.1 National monitoring system for consumption and rational use of antimicrobials in human health		
<input checked="" type="radio"/>	A	No national plan or system for monitoring use of antimicrobials.
<input type="radio"/>	B	System designed for surveillance of antimicrobial use, that includes monitoring national level sales or consumption of antibiotics in health services.
<input type="radio"/>	C	Total sales of antimicrobials are monitored at national level and/or some monitoring of antibiotic use at sub-national level.
<input type="radio"/>	D	Prescribing practices and quality of antibiotic use are monitored in a national sample of healthcare settings.
<input type="radio"/>	E	On a regular basis (every year/two years) data is collected and reported on: a) Antimicrobial sales or consumption at national level for human use; and b) Antibiotic prescribing and appropriate/rational use, in a representative sample of health facilities, public and private.

7.2 National monitoring system for antimicrobials intended to be used in animals (sales/use)		
<input checked="" type="radio"/>	A	No national plan or system for monitoring sales/use of antimicrobials in animals.
<input type="radio"/>	B	Plan agreed for monitoring quantities of antimicrobials sold for/used in animals, based on OIE standards ⁴ .
<input type="radio"/>	C	Data collected and reported on total quantity of AMs sold for/used in animals and their intended type of use (therapeutic or growth promotion).
<input type="radio"/>	D	On a regular basis, data is collected and reported to the OIE on the total quantity of antimicrobials sold for/used in animals nationally, by antimicrobial class, by species (aquatic or terrestrial), method of administration, and by type of use (therapeutic or growth promotion).
<input type="radio"/>	E	Data on antimicrobials used under veterinary supervision in animals are available at farm level, for individual animal species.

7.3 National monitoring system for antimicrobial use ⁵ in plant production		
<input checked="" type="radio"/>	A	No national plan or system for monitoring use of antimicrobials in plants.
<input type="radio"/>	B	Plan agreed for monitoring quantities of antimicrobial sales or use in plant production.
<input type="radio"/>	C	Data collected and reported on quantity of AM used in some subsectors of plant production.
<input type="radio"/>	D	Data collected and reported on total quantity of AM used nationally in plant production.
<input type="radio"/>	E	On a regular basis, data is collected and reported on total quantity of AM use in crop production, by AM class.

7.4 National surveillance system for antimicrobial resistance (AMR) in humans		
<input type="radio"/>	A	No capacity for generating data and reporting on antibiotic resistance (antibiotic susceptibility testing and accompanying clinical and epidemiological data collection).
<input type="radio"/>	B	AMR data is collated locally for common bacteria, but may not use a standardized approach and lacks national coordination and/or quality management.
<input checked="" type="radio"/>	C	National AMR surveillance activities are in place for common bacterial pathogens that link patient information with susceptibility testing, with a national reference laboratory that participates in external quality assurance.
<input type="radio"/>	D	There is a functioning national AMR surveillance system covering antibiotics in hospitals and outpatient clinics, with external quality assurance, and a national coordinating centre producing reports on resistance levels.
<input type="radio"/>	E	The national AMR surveillance system integrates surveillance of AMR across sectors, and generates regular reports.

⁴ http://www.oie.int/index.php?id=169&L=0&htmfile=chapitre_antibio_monitoring.htm ;

http://www.oie.int/index.php?id=171&L=0&htmfile=chapitre_antibio_quantities_usage_patterns.htm

⁵ antibiotic and antifungal agents

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7.5 National surveillance system for antimicrobial resistance (AMR) in animals, plants, foods and environment	
A	No national plan for a system of monitoring of AMR is available.
B	National plan for monitoring AMR but capacity (including laboratory) for surveillance and reporting data on AMR is lacking.
C	Some AMR data is collected locally but may not use a standardised approach and lacks national coordination and/or quality management.
D	Priority pathogenic/ commensal bacterial species have been identified for surveillance. Data systematically collected and reported on levels of resistance in at least 2 of those bacterial species, involving a laboratory that follows quality management processes, e.g. proficiency testing.
E	National system of surveillance of AMR established for priority pathogens and for relevant commensal bacteria which follows quality assurance processes in line with intergovernmental standards. Laboratories that report for AMR surveillance follow quality assurance processes.

For each of the following sources of bacteria, please indicate which statement in 7.5 above (A-E) is applicable:

Animals (terrestrial and aquatic) ^A

Plants ^A

Food ^A

Environment..... ^A

8. Country progress on strategic objective 3: Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures.

Please select one rating for each question that most closely matches the country situation.

8.1 Infection Prevention and Control (IPC) in human health care		
<input type="radio"/>	A	No national IPC programme or operational plan is available.
<input type="radio"/>	B	A national IPC programme or operational plan is available. National IPC and water, sanitation and hygiene (WASH) and environmental health standards exist but are not fully implemented.
<input checked="" type="radio"/>	C	A national IPC programme and operational plan are available and national guidelines for health care IPC are available and disseminated. Selected health facilities are implementing the guidelines, with monitoring and feedback in place.
<input type="radio"/>	D	National IPC programme available according to the WHO IPC core components guidelines ⁶ and IPC plans and guidelines implemented nationwide. All health care facilities have a functional built environment (including water and sanitation), and necessary materials and equipment to perform IPC, per national standards.
<input type="radio"/>	E	IPC programmes are in place and functioning at national and health facility levels according to the WHO IPC core components guidelines ⁷ . Compliance and effectiveness are regularly evaluated and published. Plans and guidance are updated in response to monitoring.

8.2 Good health, management and hygiene practices to reduce the use of antimicrobials in animal and plant production and AMR transmission in food production		
	A	No systematic efforts to improve good production practices to reduce the need to use antimicrobials.
	B	Some activities in place to develop and promote good production practices.
	C	National plan agreed to ensure good production practices in line with international standards (e.g. OIE Terrestrial and Aquatic Codes, Codex Alimentarius). Nationally agreed guidance for good production practices developed, adapted for implementation at local farm and food production level.
	D	Nationwide implementation of plan to ensure good production practices and national guidance published and disseminated.
	E	Nationwide implementation of plan to ensure good production practices and monitoring of impact on level of AM use, on animal health and welfare, and on production, with updating of plans and guidance in response to findings.

For each of the following sectors, please indicate which statement in 8.2 above (A-E) is applicable:

Animal Health.....B.....
 Plant Health.....B.....
 Food Production.....B.....
 Food Safety.....C.....
 Environment.....C.....

8.3 Coverage with critical measures (water supplies, sanitation, hygiene and immunization) to reduce spread of infections in communities and health care facilities⁸

⁶ WHO Guidelines on core components of IPC programmes at the national and acute health care facility level, <http://www.who.int/infection-prevention/publications/core-components/en/>

⁷ As per footnote #5.

⁸ These issues are critical to AMR containment, but the relevant data is already being submitted to WHO through other channels in most instances. If this questionnaire is being used to review country progress at national level, we recommend that at a minimum the data is downloaded and reviewed from the following websites. Ideally local data should be reviewed and discussed, and if appropriate included in the return. This data will not be displayed on the global returns to avoid confusion with other data submissions.

http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index4.html

<https://www.washinhcf.org/home/>

Estimated national coverage with critical measures (water supplies, hygiene and immunization) to reduce spread of infections in communities and health care facilities.	Latest national coverage rate (in %)	Year
Immunisation coverage rate of pneumococcus vaccine.	94.7%	2016
Immunisation coverage rate of Haemophilus influenzae type b (Hib) vaccine.	93.7%	2016
Proportion of health care facilities with basic ⁹ water supplies.	100%	
Proportion of health care facilities with basic ¹⁰ hand hygiene facilities.	100%	
Proportion of health care facilities with functional sanitation facilities	100%	

9. Country progress on strategic objective 4: Optimize the use of antimicrobial medicines in human, animal and plant health.

Please select one rating for each question that most closely matches the country situation.

9.1 Optimizing antimicrobial use in human health	
<input checked="" type="radio"/> A	No/weak national policy & regulations for appropriate use.
<input type="radio"/> B	National policy for antimicrobial governance and regulation developed for the community and health care settings.
<input type="radio"/> C	Practices to assure appropriate antimicrobial use being implemented in some health care facilities and guidelines for appropriate use of antimicrobials available.
<input type="radio"/> D	Guidelines and other practices to enable appropriate use are implemented in most health facilities nationwide. Monitoring and surveillance results are used to inform action and to update treatment guidelines and essential medicines lists.
<input type="radio"/> E	Guidelines on optimizing antibiotic use are implemented for all major syndromes and data on use is systematically fed back to prescribers.

9.2 Optimizing antimicrobial use in animal and plant health	
A	No national policy or legislation regarding the quality, safety and efficacy of antimicrobial products, and their distribution, sale or use.
B	National legislation covers some aspects of national manufacture, import, marketing authorization, control of safety, quality and efficacy and distribution of antimicrobial products.
C	National legislation covers all aspects of national manufacture, import, marketing authorization, control of safety, quality and efficacy and distribution of antimicrobial products.
D	Effective enforcement processes and control are in place to ensure compliance with legislation.
E	Guidelines for responsible and prudent use of antimicrobials based on international standards (e.g. OIE Terrestrial and Aquatic Codes, Codex Alimentarius) are available according to animal species and/or production sector and include restriction of specific antimicrobial classes listed as Critically Important for humans and animals.

For each of the following sectors, please indicate which statement in 9.2 above (A-E) is applicable:

Animal Health (terrestrial and aquatic).....A.....

Plant Health.....C.....

9.3 Legislation and/or regulations to prevent contamination of the environment with antimicrobials*	
<input type="radio"/> A	No legislation regarding control of waste discharge (sewage, health facilities, agriculture, manure and industrial effluent) into the environment.
<input type="radio"/> B	Legislation and/or regulations are in place to control at least the release of human sewage into the environment.
<input type="radio"/> C	Legislation and/or regulations encompass release of sewage, discharge of wastewater from health facilities, manure from intensive animal production, and industrial effluent to the environment.
<input checked="" type="radio"/> D	There is a functioning system for monitoring regulatory compliance of discharge to the environment for some types of waste (sewage, health facilities, agriculture, manure and/or industrial effluent).

⁹ "Basic" as defined in WASH in health care facilities standards or national standards. See <https://www.washinhc.org/home/>

¹⁰ As per footnote #7.

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O	E	There is a functioning system for monitoring regulatory compliance of all waste discharge to the environment (sewage, health facilities, agriculture, manure and industrial effluent). Regulations are in place that limit discharge of all antimicrobial residues into the environment, including in municipal and pharmaceutical industry waste and wastewater.
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*Please note that domains A-D refer to regulatory control in general, while only E is AMR-specific

Country use policies and regulation snapshot

Please tick boxes below that apply to your country.

9.4 Country use policy and regulatory status	
<input checked="" type="checkbox"/>	Country has regulations on prescription and sale of antimicrobials, including requirements for prescriptions for human use.
<input checked="" type="checkbox"/>	Country does not authorize use of human and animal critically Important antimicrobials for growth promotion. ¹¹

¹¹ If your country has no regulation or legislation relating to the use of antibiotics in growth promotion do not tick this box.