Global Action Plan on Antimicrobial Resistance

Technical Consultation 13 November 2015

Global Antibiotic Research & Development Facility

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World Health Organization
When are we entering the post-antibiotic era?

For some diseases we have already entered!

Fatal pneumonia because antibiotics are not working (*K. pneumoniae*)

Fatal infection with *Neisseria gonorrhoeae*
13/38 countries reported inter-regional spread of or an endemic situation for CPE

Epidemiological stages, 2014-2015
- Countries not participating
- No case reported (Stage 0)
- Sporadic occurrence (Stage 1)
- Single hospital outbreak (Stage 2a)
- Sporadic hospital outbreaks (Stage 2b)
- Regional spread (Stage 3)
- Inter-regional spread (Stage 4)
- Endemic situation (Stage 5)
What is the cost of not taking action?

By 2050, AMR could lead to

- 10 million deaths every year
- reduction of 2%-3.5% in GDP globally

*AMR Review*

Between now and 2050, the world can expect to lose US$ 600 to US$ 100 trillion worth of economic output
Global Action Plan on Antimicrobial Resistance
One year in development

World Health Assembly, May 2014
Requests the Director General to develop a global plan

WHO leads development of the plan, May to Dec 2014
With advice from experts, Member States, forums and web consultations

WHO Executive Board, Jan 2015
Expresses strong support to take plan to World Health Assembly

World Health Assembly, May 2015
Adopts the Global Action Plan – over 50 supporting statements
Passes new resolution to support action – over 60 country sponsors
Increase in WHO organization-wide budget for AMR

Global action plan on antimicrobial resistance
Financial projections for 2016-2017: distribution by WHO Regional Office

Total: USD 53,792,873
Five strategic objectives:

1. Improve awareness and understanding (WAAW)
2. Strengthen knowledge through surveillance & research
3. Reduce the incidence of infection (IPC)
4. Optimize the use of antimicrobial medicines
5. Ensure sustainable investment (R&D)

National Action Plans
Implementation GAP: Guiding Principles

1. Realistic & achievable objectives
2. Take into account different capacities of Member States
3. Involve FAO and OIE, where appropriate
4. All-inclusive approach (HIV, TB and malaria)
5. Joint ownership between HQ and Regions
6. Communication!
Core value: together aligned
GAP is a big thing
Global action plan on antimicrobial resistance

GAP organizational structure

Global Technical Coordination Group
- HQ & RO staff

Global Policy Group

Steering Group
- ADGs & DPMs

AMR Coordinating Secretariat
- Marc Sprenger, Director
- Liz Taylor, Monitoring & Reporting Officer
- Eileen Jameson, Management Officer
- Ellen Attafuah, Assistant
- Pravarsha Prakash, Technical Officer
- Katie Barker, Technical Officer
AMR Steering Group

1. Agree WHO work plan
2. Implementation plan proposal for donors & partners
3. Organization-wide resource mobilization strategy
4. Prioritize activities and budget and funding allocation

Meet quarterly
Implementation GAP: 10 work streams

1. Global communications campaign (Liv Lawe-Davies)
2. Support National Action Plans of MS (Carmem Pessoa)
3. Global Antimicrobial Resistance Surv System (Carmem Pessoa)
4. Support measures to improve IPC (Benedetta Allegranzi)
5. Monitor use & enhance stewardship of antibiotic use (Gilles Forte)
Implementation GAP: 10 work streams

6. Encourage R&D and explore new business models (Peter Beyer)
7. Improve point of care diagnostics (Francis Moussy)
8. Address the environmental drivers (Kate Medlicott)
9. Engage the United Nations General Assembly
10. Vaccines in order to prevent AMR (Martin Friede)

One Health liaison: Awa Aidara
Additional: HTM, STI, Maternal Health, etc
**ANTIBIOTIC RESISTANCE**

Antibiotic resistance happens when bacteria change and become resistant to the antibiotics used to treat the infections they cause. This is compromising our ability to treat infectious diseases and undermining many advances in medicine.

We must handle antibiotics with care so they remain effective for as long as possible.

**WHAT YOU CAN DO**

1. Only use antibiotics when prescribed by a certified health professional
2. Always take the full prescription, even if you feel better
3. Never use left over antibiotics
4. Never share antibiotics with others
5. Prevent infections by regularly washing your hands, avoiding close contact with sick people and keeping your vaccinations up to date

[www.who.int/drugresistance](http://www.who.int/drugresistance)

#AntibioticResistance

**WHAT HEALTH WORKERS CAN DO**

1. Prevent infections by ensuring your hands, instruments and environment are clean
2. Keep your patients’ vaccinations up to date
3. If you think a patient might need antibiotics, where possible, test to confirm and find out which one
4. Only prescribe and dispense antibiotics when they are truly needed
5. Prescribe and dispense the right antibiotic at the right dose for the right duration

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World Health Organization
Global action plan on antimicrobial resistance

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**WHAT POLICY MAKERS CAN DO**

1. Ensure you have a robust national action plan to tackle antibiotic resistance
2. Improve surveillance of antibiotic-resistant infections
3. Strengthen policies and implementation of infection prevention and control measures
4. Regulate and promote the appropriate use of quality medicines
5. Make information on the impact of antibiotic resistance available

[www.who.int/drugresistance](http://www.who.int/drugresistance)

#AntibioticResistance

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**CAUSES OF ANTIBIOTIC RESISTANCE**

Antibiotic resistance happens when bacteria change and become resistant to the antibiotics used to treat the infections they cause.

- Over-prescribing of antibiotics
- Patients not finishing their treatment
- Over-use of antibiotics in livestock and fish farming
- Poor infection control in hospitals and clinics
- Lack of hygiene and poor sanitation
- Lack of new antibiotics being developed

[www.who.int/drugresistance](http://www.who.int/drugresistance)

#AntibioticResistance
Global Antimicrobial Resistance Surveillance System (GLASS)
Lead: Carmem Pessoa

Goal
To achieve a monitoring capacity to capture essential information on the global situation of antimicrobial resistance and inform decision making.
Global Antimicrobial Resistance Surveillance System (GLASS)
Lead: Carmem Pessoa
GLASS future directions

- Integrated foodborne AMR surveillance
  - Food-animals
  - Food
  - Humans

- Monitoring of antimicrobial use or consumption

- Environmental AMR surveillance

- Surveillance of bacterial resistance in humans

- … other types of AMR surveillance
R&D and explore new business models
Lead: Peter Beyer

Global Antibiotic Research and Development Facility
In a decade of R&D, 6 new treatments developed

- 30 projects, 6 diseases areas
- 15 entirely new chemical entities (NCEs)
- Over 130 partnerships, most in endemic countries
- 150 staff, half in endemic countries & 600 people working on DNDi projects
- Over EUR 350 million raised equally from public and private sources
- 3 regional disease-specific clinical trial platforms and 2 technology transfers

✓ Easy to use
✓ Affordable
✓ Field-adapted
✓ Non-patented
DNDi’s success is only possible through innovative partnerships

**CRITERIA FOR SUCCESS**
- Share the same vision
- Mutual understanding
- Involvement throughout the whole process
Improve point of care diagnostics
Lead: Francis Moussy

Point-of-Care Dx for LMICs for treatment, surveillance
Many areas with no elec, no refrige, no trained medical staff…
New PoC Dx suitable for LMICs need to be developed
New approach Dx Local Health Care Centres

Low-cost, robust and open PoC diagnostics platforms

Instrument including Reader/transmitter

Cartridges for multiple diseases and health conditions
Engage United Nations General Assembly
Global action plan on antimicrobial resistance
Shift Words into Action

ON PLANET-SAVING RHETORIC

ON ISSUES OF EMISSIONS LEVELS AND MONEY...

Global action plan on antimicrobial resistance
Shift Words into Action

Global action plan on antimicrobial resistance
Shift Words into Action: UN General Assembly 2016
One Health, liaison FAO / OIE
Lead: Awa Aidara
ANTIBIOTIC RESISTANCE

Antibiotic resistance happens when bacteria change and become resistant to the antibiotics used to treat the infections they cause.

The over-use and misuse of antibiotics in livestock, aquaculture and crops is contributing to antibiotic resistance and its spread into the environment, food chain and humans. This is compromising our ability to treat infectious diseases and undermining many advances in medicine.

We must handle antibiotics with care so they remain effective for as long as possible.

WHAT THE AGRICULTURE SECTOR CAN DO

1. Ensure that antibiotics given to animals— including food-producing and companion animals—are only used to treat infectious diseases and under veterinary supervision
2. Vaccinate animals to reduce the need for antibiotics and develop alternatives to the use of antibiotics in plants
3. Promote and apply good practices at all steps of production and processing of foods from animal and plant sources
4. Adopt sustainable systems with improved hygiene, biosecurity and stress-free handling of animals
5. Implement international standards for the responsible use of antibiotics, set out by OIE, FAO and WHO
International context

1. Global Health Security Agenda
2. G7
3. TATFAR
4. AMR review
5. Joint Programming Initiative AMR
6. Etc
7. Etc
International Initiatives: align
After 20h flight: reality check
No prescription needed, just take 2
No knowledge, no instruction
After 10h flight: reality check

Courtesy: FAO, HJ Ormel DVM
After 10h flight: reality check

Courtesy: FAO, HJ Ormel DVM
What did they tell me...

No medical microbiology lab in main hospital
No infection and prevention control in hospital
No drug regulation
No knowledge, no awareness
No money for GP

But committed local people and Country Office WHO
She is the champion!
No comment....
 Miracle...after 1 day

Global Antibiotic R&D Facility
Conclusion

1. Global Action Plan AMR is ambitious
2. Global Action Plan AMR: joint responsibility
Thank you