Examples of best practices to reduce antibiotic resistance

18 Nov 2016

WELCOME
2016:
A historical year in the fight against antibiotic resistance

Herman Goossens
Chair BAPCOC
Chair Technical Advisory Committee EAAD
2014
Antimicrobial resistance a 'greater threat than cancer by 2050'

UK chancellor George Osborne to tell IMF that 10m people a year could die without radical action

Deaths attributable to AMR every year compared to other major causes of death

AMR now 700,000 (low estimate)

- Tetanus 60,000
- Road traffic accidents 1.2 million
- Measles 130,000
- Diarrhoeal disease 1.4 million
- Cholera 100,000–120,000
- Cancer 8.2 million
- Diabetes 1.5 million

AMR in 2050 10 million
Antimicrobial resistance is a major public health threat in LMIC

Deaths attributable to antimicrobial resistance every year by 2050

- Asia: 4,730,000
- Europe: 390,000
- North America: 317,000
- Latin America: 392,000
- Africa: 4,150,000
- Oceania: 22,000

Source: Review on Antimicrobial Resistance 2014
2015
Three World Leaders in a One Health Collaboration

Global leader for food and agriculture

Global leader for animal health and welfare standards

Global leader for human health
68th World Health Assembly (May 2015)

Adoption of the Global Action Plan (GAP) on antimicrobial resistance
Key areas in Global Action Plan and National Action Plans

1. Improve awareness and understanding of AMR
   - Risk communication
   - Education
   - National AMR surveillance
   - Laboratory capacities
   - Research and development

2. Strengthen knowledge through surveillance and research
   - IPC in health care
   - Community level prevention
   - Animal health: prevention and control

3. Reduce the incidence of infection through effective hygiene & IPC
   - Access to qualified antimicrobial medicines, regulation, AMS
   - Use in veterinary and agriculture

4. Optimize the use of antimicrobial medicines in human & animal health
   - Measuring the burden of AMR
   - Assessing investment needs
   - Establishing procedures for participation

5. Ensure sustainable investment through research & development
83rd World Assembly of the OIE Delegates (May 2015)

Adoption of the Resolution No. 26 on AMR
The 39th Session of FAO's governing Conference (June 2015)

Adoption of the Resolution 4/2015 on AMR
2016
A year of intense awareness-raising among political leaders culminated on 21 September 2016 at the United Nations General Assembly high-level meeting on AMR.
Unprecedented level of attention.

For the first time, Heads of State committed to taking a broad, coordinated approach to address the root causes of AMR across multiple sectors, especially human health, animal health and agriculture.

Recognized “One Health” approach as overarching principle for addressing AMR and emphasized that this requires coherent, comprehensive and integrated multi-sectoral action.

Recognized that human, animal and environmental health are interconnected.
Countries reaffirmed their commitment to develop national action plans on AMR, based on the Global Action Plan on Antimicrobial Resistance developed in 2015 by the World Health Organization (WHO) in coordination with the Food and Agriculture Organization of the United Nations (FAO) and the World Organisation for Animal Health (OIE).

UNGA called upon the Tripartite (and other intergovernmental organizations), to support the development and implementation of national action plans and antimicrobial resistance activities at the national, regional and global levels.

Leaders at the UN meeting called on WHO, FAO and OIE, in collaboration with development banks such the World Bank other relevant stakeholders, to coordinate their planning and actions and to report back to the UN General Assembly in September 2018.
2016

More, More, More,
“We affirm the need to explore in an inclusive manner to fight antimicrobial resistance by developing evidence-based ways to prevent and mitigate resistance, and unlock research and development into new and existing antimicrobials from a G20 value-added perspective, ….”
G7 Health Ministers’ Communique  
Kobé Meeting, 11-12 September 2016

“we encourage governments to consider the need for establishing a global clinical studies network on drug resistance that provides access to a large clinical research infrastructure for the design, coordination and conducting of clinical trials and studies in cooperation with the existing global experts networks to ensure the common benefit of the outcomes”

“… we commit to:
Support the creation of open and sustainable clinical trial networks globally, with our expertise and experience. As proposed by the AMR Review, this would build on work started in Europe and US with the goal of improving the speed and efficiency of conducting clinical trials”
Most significant attention ever from senior global political leadership in 2016
2017
Two world leaders and AMR advocacies will have disappeared.

UK lost global AMR leadership in 2016.

Future role of US unclear.
• The current tripartite arrangement among WHO, FAO and OIE offers promise but is unlikely to be sustainable given their other priorities.
• We need a new High-Level Coordinating Mechanism (HLCM).
• The HLCM should consist of WHO, FAO, OIE, the World Bank, relevant UN agencies and other international organizations, major multisectoral stakeholders, and global experts
• We need an organization leading this HLCM (Wellcome?)
• We need a G20 country taking forward the G20 recommendations (Germany?)
ECRAID
European Clinical Research Alliance on Infectious Diseases
Our purpose and vision

Our purpose is to reduce the impact of infectious diseases on individual and population health.

Our vision is to efficiently generate rigorous evidence for new or improved diagnosis, prevention and treatment of infections and to better respond to infectious disease threats. This is facilitated by a European multidisciplinary clinical research network and innovative research approaches.
Focus on AMR and EID

Antimicrobial resistance

- Fast completion of clinical studies;
- Largest need in bacterial infections (antibiotic resistance)

Emerging Infectious Diseases

- Rapid initiation and completion of clinical studies;
- Mostly virus infections

Need for operational high quality large-scale clinical research infrastructure with European coverage

Similar non-scientific barriers

Overlapping stakeholders
ECRAID Core Group

Coordination Team

- Herman Goossens
  University Antwerp
  Coordinator PREPARE

- Marc Bonten
  UMC Utrecht
  Coordinator COMBACTE

- Frank Deege
  Consulting

- Chantal van Litsenburg
  Consulting

Working Group

- Christopher Butler
  University of Oxford

- Oliver Cornely
  University Hospital Cologne

- Bruno François
  University Medical Center Limoges

- Stephan Harbarth
  University Hospital Geneva

- Jesús Rodríguez Baño
  University of Sevilla

- Evelina Tacconelli
  University of Tuebingen

- Peter Horby
  University of Oxford

- Menno de Jong
  Academic Medical Center
Our services

Study execution
- Site selection and training
- End point quality assurance
- Data management
- Site monitoring
- Safety monitoring
- Trial progress review
- Recruitment/retention strategies
- Protocol modification
- Protocol deviation review
- SAP validation

Study design
- Protocol
- Statistical analysis plan (SAP)
- Database
- Training materials
- Interaction with regulatory agencies

Study report
- Statistical analysis
- Study report
- Manuscript

Clinical research

Supporting services
- Laboratory research and support
- Epidemiological research and support
- Statistical analyses and support

Service enabling capabilities
- Training, education and capacity building
- Biobanking
- ICT and datamanagement
Clinical research

**Phases:** Phase I - IV

**Scope:** Prospective and retrospective

**Source:** industry-driven and investigator driven

**Pathogens:** viruses, bacteria, protozoa

**Interventions:** vaccines, diagnostics, therapeutics, medical devices, routine care, etc.

**Objectives:** Prevention, treatment, diagnosis, screening, quality of life, health economic evaluation, epidemiological, etc.

**Types:** randomized controlled trials, observational (analytical and descriptive), database, perpetual, platform trials, etc.
High-level Roadmap

I. HIGH LEVEL DESIGN
   - High Level design completed: 1/11

II. DETAILED DESIGN
   - Detailed Design completed: 31/12

III. CONSTRUCTION

IV. IMPLEMENTATION
   - ECRAID full launch: 1/1

Strategic priorities:
- Stakeholder engagement and commitment
- Secure sufficient stable sources of funding
- Embedment of ECRAID in international relevant initiatives
‘European Antibiotics Awareness Day’ wins ‘European Health Award 2016’ accolade

Correspondence: Eurosurveillance editorial team (eurosurveillance@ecdc.europa.eu)

Citation style for this article:

Article published on 29 September 2016
Examples of 2016 Activities

- **Conversations:**
  - On Friday, 18 Nov: Join the [24-hour Global Twitter Chat](#) hosted by ECDC, WHO HQ, WHO Europe, and CDC

- **Sign up & Pledge:**
  - Sign [FAO’s and WHO WPRO’s AMR Pledge](#) (“I Use Antibiotics Responsibly”);
  - Become an [Antibiotic Guardian](#)! (Public Health England / WHO Euro / ECDC)

- **Events:**
  - On Monday, 14 Nov: [Teleclass](#) on new WHO recommendations to fight antimicrobial resistance; [Livestream](#) of FAO’s “Antibiotics and You” awareness raising get together
  - On Tuesday, 15 Nov: [CDC’s webinar](#) on the “Core Elements of Outpatient Antibiotic Stewardship”; [Facebook Live event](#) hosted by Global Moms Challenge and Every Woman Every Child
  - On Wednesday, 16 Nov: WHO-UN’s World Antibiotic Awareness Week event: “[Advocating for Appropriate Antibiotic Use](#)”
  - On Friday, 18 Nov: [Livestream](#) of EU-level launch event in Brussels
ANTIBIOTICA
GEbruik Ze Goed
En Enkel Als Het Moet!
Les antibiotiques
Prenez-les comme il faut et uniquement quand il le faut!

Une mauvaise utilisation des antibiotiques rend les bactéries plus résistantes. Par conséquent, les maladies graves ne peuvent plus être traitées correctement. Veillez donc à ce que les antibiotiques agissent encore lorsque vous en aurez réellement besoin.

www.usagecorrectantibiotiques.be/fr
VERMIJD ANTIBIOTICARESISTENTIE!

...OOK BIJ DIEREN

www.amcra.be
WORD OOK EEN ANTIBIOTIC GUARDIAN
KIES JOUW BELOFTE NU!

IK BEN EEN

ZORGVERLENER OF LEIDINGGEVENDE IN DE GEZONDHEIDSZORG
Kies uit onderstaande lijst

LID VAN DE BEVOLKING
Kies uit onderstaande lijst

STUDENTEN OF OPLEIDER
Kies uit onderstaande lijst


Achievements in 2016

• One health approach: integrated programmes and datasets on antimicrobial utilisation and resistance
  – Project multi-resistentie door het mobile gen cfr-MUMOC
  – Prevalentie van colistin resistentie en plasmid-located mcr gene(s) bij enterobacteria van dier, mens en omgeving

• Targets for outpatients, inpatient and veterinary antibiotic use
  – Campagne sensibilisatie voor verantwoord antibioticagebruik bij dier en mens
  – E-learning module: preventie en behandeling van CA-UTI
  – Overleg FOD/RIZIV/BAPCOC targets ambulante praktijk (Hoofdstuk IV, Accreditatie, aflevering pillen i.p.v. verpakkingen…)


Geographical distribution of the consumption of Third-Generation Quinolones (ATC group J01M) in the community and hospital sector in Europe, reporting year 2014

See: ESAC-Net

Achievements in 2016

• Quality measures/Audits
  – Audit antibioticaprophylaxe in de chirurgie (eind 2016)
  – ECDC en Global-PPS - doel: elk ZH zal aan één van de twee protocollen deelnemen in 2017

• Education and Training
  – Cours interuniversitaire gestion de l’antibiothérapie UCL/ULB/ULG

• Engage with stakeholders
  – PAQs en VIP²

• Develop methods to monitor effects of antimicrobial stewardship strategies, policy and guidance interventions across the healthcare economy
  - UWI subgroep: UWI surveillance in ziekenhuizen begin 2017
Budget 2016 (18 November 2016)

- Sensibilisatiecampagne ter promotie van het verantwoord antibioticagebruik – winter 2016-2017 [RIZIV : 400.000€]
- Campagne handhygiëne [ BFM B4: 125.000€]
- Financiering antibiotherapiebeleidsgroepen [BFM B5: 4.346.371€]
- Financiering ziekennuishhygiëne [BFM B4]:
  - verpleegkundigen: 9.748.327€
  - artsen: 6.968.890€
- Financiering regionale platformen [BFM B4: 22.310€]
- Financiering Noso-info [BFM B4: 35.000€]
- Studie PPS MDRO in WZC [RIZIV art 56: 125.135€]
- Updaten guidelines ziekennuiskunde BVKM [RIZIV art 56: 50.000€]
- Sensibilisatiecampagne AMCRA [RIZIV art 56: 38.600€]
Message of the 7th campaign

All together, we can prevent infections!
Reflections of past year’s initiatives and activities

• Very dedicated chairs and members of the BAPCOC working groups: THANK YOU!
• Very dedicated FOD staff: THANK YOU!
• Good financial support
• Lot’s of frustrations
• Many problems and obstacles:
  – Burocratic country and regions
  – Lack of accountability
  – Rules, rules, rules
  – Structures, structures, structures
• But we will not give up.
Thank you