“One Health Strategy” and International Initiatives

Herman Goossens
Voorzitter BAPCOC
Agenda

- International initiatives
- One health
- Belgium
- BAPCOC
International initiatives

- **Global:**
  - Review on Antimicrobial Resistance
  - WHO HQ - WHA, Global Action Plan => UN General Assembly September 2016
  - G7 and G20
  - Global AMR Policy Science Summit (28-29 April 2016)

- **Regional:**
  - WHO regions: e.g. WHO Euro
  - US, EU

- **Trans-regional:**
  - Transatlantic Task Force on Antimicrobial Resistance (TATFAR)
  - Global Health Security Agenda (GHSA)

- **Cross-country:**
  - E.g. Nordic

- **National**
  - E.g. EU Member States, Turkey, China …
GLOBAL
Review on Antimicrobial Resistance

David Cameron calls for action on antibiotic resistance
2 July 2014 Last updated at 02:14 BST
Prime Minister David Cameron has called for global action to tackle the growing threat of resistance to antibiotics
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
- Cancer 8.2 million
- Cholera 100,000 – 120,000
- Diabetes 1.5 million

AMR in 2050 10 million
G7 Summit, 7-8 June 2015

- Stimulate innovation
- Intensify dialogue with
  - the pharmaceutical, biotechnology and food industries
  - WHO, OIE, and FAO
- Pool national efforts
- Hold a G7-Meeting to promote responsible use of antibiotics
“Given the global nature of drug research, development and commercialisation and the global challenge antimicrobial resistance poses, we call for greater interaction and synergies between research initiatives. We see the need for global access to - and availability, affordability and rational use of - safe, effective and quality-assured antimicrobials. We will therefore explore the feasibility and need of setting up a global antibiotic product development partnership for new and urgently needed antibiotics, vaccine development, alternative therapies and rapid point of care diagnostics and seek collaboration with others such as WHO and Drugs for Neglected Disease Initiative (DNDi).
G7 Health ministers summit ctd.

We are committed to explore innovative economic incentives to enhance the research and development of new antibiotics, other therapeutic options, and diagnostics. We will investigate various instruments, such as a global antibiotic research fund and a market entry reward mechanism for truly new antibiotics targeting the most important pathogens and most needed for global public health. We recognise and commend the work of various reviews on AMR, such as the OECD, and other independent Reviews on AMR, tackling the lack of new antibiotics internationally and the initial proposals on how governments around the world could act collectively to stimulate innovation from a range of organisations, private or public, big or small.”

Next Meeting: Kobe September 2016
Partnerships:

- Coordination of initiatives
- Identifying priorities
- Securing and managing investments
- Affordable and equitable access
- Open collaborative models of R&D

National Action Plan in place by mid 2017
Global AMR Policy Science Summit

• Hosted by Wellcome Trust, supported by Department of Health, UK, and WHO
• Meeting 26 - 27 April 2016, London (tbc)
• **Purpose:** The purpose is to bring together key leaders in the global scientific community and the key relevant policy makers, with a view to exploring the robustness of the science and evidence base behind the detail of the global AMR policy initiatives covering both the human and animal sectors.

• **Participants:** About 100-150 scientific and policy representatives from: Wellcome Trust, Royal Society/Academy of Medical Sciences, MRC, ARHAI and DARC expert committees, Regulatory representative, PHE & VMD, WHO/FAO/OIE/European Food Safety Authority, CDC, Center for Disease Dynamics, Economics & Policy, Washington DC, BRICs countries, Commonwealth Secretariat, NGOs, Industry, Médecins Sans Frontières & Vétérinaires Sans Frontières

• **Outcome:** A formal report and recommendations, which will summarise the available scientific evidence base for setting specific targets for combating antimicrobial resistance within national action plans.
Joint Programming AMR

22 countries to date have joined forces to define a common vision, a strategic research agenda and joint planning as well as implementation of national research programmes.
Innovative Medicines Initiative (IMI): a new way to collaborate

- The largest public-private partnership in life science R&D
- IMI1 Started in 2008, ended in 2014
  - 11 Calls launched

EFPIA = European Federation of Pharmaceutical Industries and Associations
Infectious disease leads in first phase of Europe's IMI effort

**Partners**
- AiCuris
- Animal Health
- Division of Sanofi
- Astellas
- AstraZeneca
- AstraZeneca/MedImmune
- Basilea
- Boehringer
- Ingelheim Animal Health
- Cubist
- AstraZeneca
- Bayer
- Janssen
- Lundbeck
- Merck
- Abbott
- Abbvie
- AC Immune
- Amgen
- Astellas
- AstraZeneca
- Biogen Idec
- Boehringer
- Ingelheim
- Eisai
- GSK
- Janssen
- Johnson & Johnson
- MedImmune
- Merck
- Merck Sharp & Dohme
- Merial
- Novartis
- Pfizer
- Rempex
- Sanofi
- Novartis
- Pfizer
- Sanofi
- UCB
- Eli Lilly
- Esteve
- GRT
- GlaxoSmithKline
- HLU
- IDS
- Janssen
- Lundbeck
- Merck
- Sanofi
- Sharp
- Dohme
- Merial
- Novartis
- Pfizer
- Rempex
- Sanofi
- UCB
- Eli Lilly
- Esteve
- GRT
- GlaxoSmithKline
- HLU
- IDS
- Janssen
- Lundbeck
- Merck
- Sanofi
- Sharp
- Dohme
- Merial
- Novartis
- Pfizer
- Rempex
- Sanofi
- UCB

**Funding Breakdown**
- €711,963,033 Infectious diseases
- €214,136,227 Drug discovery
- €182,980,698 Brain disorders
- €116,880,300 Metabolic disorders
- €116,287,312 Drug safety
- €78,225,417 Stem cells
- €72,710,766 Cancer
- €30,691,655 Sustainable chemistry
- €37,978,289 Education and training
- €47,222,763 Vaccines
- €49,310,000 Geriatrics
- €55,930,958 Biologicals
- €69,739,527 Inflammatory disorders
- €70,310,746 Data management

**Source**: Innovative Medicines Initiative
ND4BB Programme

ND4BB cross topic collaboration and dissemination

- **TRANSLATION**
  - Research penetration and efflux Gram-negatives Data Hub and Learning from R&D experience

- **ENABLE**
  - Discovery & development of new drugs combating Gram-negative infections

- **COMBACTE**
  - a) Enabling Clinical Collaboration and Refining Clinical Trial Design
  - b) Clinical Development of compound(s) for Gram-positives
  - c) Clinical Development of MEDI4893

- **COMBACTE-CARE**
  - Clinical Development of antibacterial agents for Gram-negative antibiotic resistant pathogens

- **COMBACTE-MAGNET**
  - Systemic molecules against HAIs due to clinically challenging Gram-negative pathogens

- **iABC**
  - Inhaled Antibacterials in CF and non-CF

- **DRIVE-AB**
  - Driving re-investment in R&D and Responsible use of antibiotics

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**ND4BB Information Center**

All data generated is submitted and is accessible to all consortium partners

- Drug discovery
- Drug development Gram-negatives
- Drug development Gram-positives
- Economics and stewardship

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Kostyanev, J Antimicrob Chemother, 16 November 2015
Timeline and total budget estimation of the seven topics of the ND4BB programme.

Total: €643.6M
Meeting of Ministers of Health and Agriculture on Antimicrobial Resistance, February 9 and 10, 2016 in Amsterdam

Objectives formulated by the Dutch EU-presidency:

- One health leadership
- Solid national action plans
- Commit to EU Action
- Legislate prudent use of antibiotics in animals in the interest of public health
- A next step in the development of new antibiotics
US Presidential Initiatives: CARB

State of the Union
Jan 2014

PCAST Report & National Strategy
18 Sept 2014

Executive Order on CARB
18 Sept 2014

National Action Plan for CARB
27 March 2015

CARB Presidential Advisory Council
Sept 2015

Combating Antibiotic-Resistant Bacteria
USA National Targets (2014 - 2020)

• At least 95% of eligible hospitals will report antibiotic use data to the National Healthcare Safety Network (NHSN).
• Inappropriate inpatient antibiotic use for monitored conditions/agents will be reduced by 20% from 2014 levels.
• Inappropriate outpatient antibiotic use for monitored conditions/agents will be reduced by 50% from 2010 levels.
• Moreover: condition of Participation in Medicare
  Every hospital, ASC and LTC facility must have an antibiotic stewardship program by the end of 2017
Agency Actions: Agriculture

FDA Guidance 213 (Dec. 2013)
Voluntary, but has led to permanent label changes
Animal feed directive now requires prescribing by vet
USDA/agriculture well represented on CARB; 5/15 members
Leading companies are responding to consumer demand: Chipotle, McDonalds, Panera, Walmart & Sams Club US, Chick-Fil-A, Subway
TRANSREGIONAL
The EU-US Summit Declaration called for the establishment of “...a transatlantic task force on urgent antimicrobial resistance issues focused on appropriate therapeutic use of antimicrobial drugs in the medical and veterinary communities, prevention of both healthcare- and community-associated drug-resistant infections, and strategies for improving the pipeline of new antimicrobial drugs, which could be better addressed by intensified cooperation between us”.
TATFAR Initiatives

TATFAR report was made public on 22 Sept 2011

TATFAR has identified a set of 17 recommendations in key areas where future cooperation would prove fruitful:
- Common indicators of surveillance of antimicrobial use
Conclusions

• Most significant attention *ever* from senior global political leadership

• Access, conservation and innovation, in the context of One Health

• Innovation – growing consensus on need for strong pull incentive, including delinked post-approval payments

• National variations possible within a global framework
National Targets in China

Changes in Chinese Policies to Promote the Rational Use of Antibiotics

Yonghong Xiao*, Jing Zhang, Beiwen Zheng, Lina Zhao, Sujuan Li, Lanjuan Li*
Collaborative Innovation Center for Diagnosis and Treatment of Infectious Diseases, State Key Laboratory for Diagnosis and Treatment of Infectious Diseases, The First Affiliated Hospital, College of Medicine, Zhejiang University, Hangzhou, China

Target for general hospitals: “antibiotic utilization in inpatients should be less than 40 DDD/ per 100 patient days.”

Government policy, Initiation in May 2011 by vice-minster of China
National targets in Sweden - 2011 - 2014

Antibiotic prescribing indicator: increased adherence to treatment guidelines for infections in outpatient care, and thereby a decrease in antibiotic prescribing.

Long term target for 2014: 250 prescriptions/1000 inhabitants and year

Target for 2011: decrease by 10% of the difference between current level and long term target

The indicator was based on calculations from a diagnosis-prescribing study about respiratory tract infections in primary care.
National targets in Norway - 2015-2020

Antibiotic use will be reduced by 30 percent measured in DDD/1000 inhabitants/days, compared with 2012.

Norway will be one of the three European countries that uses the least antibiotics in humans, measured in DDD/1000 inhabitants/day.

Prescription of antibiotics will be reduced from an average today of 450 prescriptions per 1000 inhabitants per year to 250 prescriptions per 1000 inhabitants per year.

Prescription of antibiotics for respiratory infections will be reduced by 20 percent measured in DDD/1000 inhabitants/day compared to 2012.
National targets in the UK 2015 - 2019

Primary care

Measures to reduce total antibiotic prescribing:

- Total antibiotic prescribing to be reduced to 2010 levels at CCG level as measured by number of antibiotic prescriptions (“items”) per 100 patients per year.

Measures to encourage narrow spectrum antibiotic prescribing

- Proportion of antibiotics from cephalosporin, quinolone or co-amoxiclav classes to be reduced to less than the current median for English CCGs as measured by the number of prescriptions (“items”) from target classes in comparison with the total number of antibiotic prescriptions per year.

Hospital care

Measures to reduce total antibiotic prescribing

- Total antibiotic consumption to be reduced by 1% per year 2015-2019 as measured by DDD per 1000 admissions per year.

Measures to encourage narrow spectrum antibiotic prescribing

- Total carbapenem consumption to be reduced to 2010 consumption levels as measured by DDD per 1000 admissions per year.
One Health
ESBLs is a One-Health problem

Dominated in humans by human to human transmission of successful “human-adapted-ESBL producing strains”

Attribution from animals by transfer of ESBL-genes on plasmids

ESBL-Producing Gram-Negatives in food

- 84 – 100% of poultry meat positive for ESBLs
- Pork/beef incidentally positive
Association with humans

Dutch patients, retail chicken meat and poultry share the same ESBL genes, plasmids and strains

M.A. Leverstein-van Hall1,2, C.M. Dieriks3, J. Cohen Stuart1, G.M. Voets1, M.P. van den Munkhof1, A.van Essen-Zandbergen1, T. Postma1, J.C. Fikkers1, W. de Sande-Bruinisma1, J.J. Scharringa1, M.J.M. Bonte1,3 and D.J. Merks1,3 on behalf of the national ESBL surveillance group** 1) Department of Medical Microbiology, University Medical Centre Utrecht, Utrecht; 2) Centre for Infectious Disease Control, National Institute for Public Health and the Environment (RIVM), Bilthoven; 3) Department of Bacteriology and TSE, Central Veterinary Institute of Wageningen UR, Lelystad; 4) SALTO, Primary Health Care Laboratory, Utrecht; 5) Julius Centre for Health Sciences and Primary Care, University Medical Centre, Utrecht; and 6) Department of Infectious Diseases & Immunology, Faculty of Veterinary Medicine, Utrecht University, Utrecht, the Netherlands

% of human isolates with poultry associated genetic element

<table>
<thead>
<tr>
<th>Level of genetic typing</th>
<th>% of human isolates with poultry associated genetic element</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESBL genes (blaCTX-M-1, blaTEM-52, blaSHV-12, blaSHV-2 and blaCTX-M-2)</td>
<td>35% (see Table 1)</td>
</tr>
<tr>
<td>blaCTX-M-1 and blaTEM-52 genes</td>
<td>30% (23.7% blaCTX-M-1; 6.2% blaTEM-52)</td>
</tr>
<tr>
<td>blaCTX-M-1 and blaTEM-52 genes on IncI plasmid</td>
<td>20% (14.2% blaCTX-M-1; 6.2% blaTEM-52)</td>
</tr>
<tr>
<td>blaCTX-M-1 and blaTEM-52 genes on IncI plasmid belonging to complex CC7 or CC3 and CC5 resp.</td>
<td>19% (12.6% blaCTX-M-1; 6.2% blaTEM-52)</td>
</tr>
<tr>
<td>blaCTX-M-1 and blaTEM-52 genes on IncI plasmid belonging to complex CC7 or CC3 and CC5 resp. in a poultry-associated MLST strain (ST10, ST58 or ST117)</td>
<td>11% (9.5% blaCTX-M-1; 2.0% blaTEM-52)</td>
</tr>
</tbody>
</table>

Extended-Spectrum β-Lactamase Genes of *Escherichia coli* in Chicken Meat and Humans, the Netherlands

Ise Overdevest, Ina Willemsen, Martine Rijnsburger, Andrew Eustace, Li Xu, Peter Hawkey, Max Heck, Paul Saveskou, Christina Vandenbroucke-Grauls, Kim van der Zwaluw, Xander Huijsdens, and Jan Kluyster mans

Figure 1. Distribution of extended-spectrum β-lactamase genes in chicken meat (A), human rectal swabs (B), and human blood cultures (C), the Netherlands. Values in parentheses are no. positive.
Antibiotic use in animals in the Netherlands

Figure ABuse 01. Antimicrobial veterinary medicinal product sales 1999-2013 in kg (thousands)
Fig 3. Proportion of CTX-M-1 like ESBL genes over time. The vertical bars represent the percentage of CTX-M-1 like ESBL genes divided by the total number of ESBL genes. The line represents the logarithmic trendline.
Belgium
(Partially) Successful Initiatives
Belgian National Public Campaigns

When: since November 2000, annually during winter season
Organised by: BAPCOC (Belgian Antibiotic Policy Coordination Committee)

Budget:
400,000 EUR/annual campaign

Interventions targeting the public:
Ads on TV, radio and newspaper
Information booklets
Folders
Posters
Internet campaigns: www.antibiotics-info.be
Outpatient antibiotic use in Belgium in PID
Resistance of *S. pneumoniae* in Belgium

![Graph showing resistance of *S. pneumoniae* to various antibiotics from 1986 to 2014.]

**Courtesy:** Jan Verhaegen, Nationaal Referentiecentrum *Streptococcus pneumoniae*
Cost Savings

Total cost for reimbursement of antibiotics decreased with 21 million Euro (-16.7%) from 125.555.454 Euro in 2002-03 to 104.529.213 Euro in 2008-09.

Cumulative savings between 2002 and 2009: 90.154.345 Euro (two thirds were due to reduced prescribing; one third was due to reduction in price of antibiotics).

For every EUR invested in the campaign, 25 EUR were saved.
Hand hygiene compliance before vs after campaign

<table>
<thead>
<tr>
<th>Campaign</th>
<th>Compliance Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st camp. (2005)</td>
<td>+19%</td>
</tr>
<tr>
<td>2nd camp. (2006)</td>
<td>+16.3%</td>
</tr>
<tr>
<td>3rd camp. (2008)</td>
<td>+11.1%</td>
</tr>
<tr>
<td>4th camp. (2010)</td>
<td>+10.6%</td>
</tr>
<tr>
<td>5th camp. (2013)</td>
<td>+11.7%</td>
</tr>
<tr>
<td>6th camp. (2015)</td>
<td>+8.6%</td>
</tr>
</tbody>
</table>

Compliance percentages:

- Compliantie voor campagne
- Compliantie Na campagne
Infections MRSA

Mean incidence of nosocomial MRSA: 1994-2014

Source: Epidemiological surveillance of MRSA: WIV-ISP (B. Jans) and National Reference Lab, Erasmus Hospital (O. Denis)
Conclusions

• National public campaigns since 1999-2000 to reduce antibiotic use and resistance in the community have been very successful, with huge cost savings
  • However, plateau in 2006-2007 and significant increase of moxifloxacin use
• National multimodal campaigns since 2005 to promote hand hygiene in Belgian hospitals were very successful, which most likely resulted on a reduction of MRSA infections in hospitals
  • However, HH compliance can still be improved
Challenges
Outpatient quinolone use in Europe in 2011

- First-generation quinolones
- Second-generation quinolones
- Third-generation quinolones
Antibiotic consumption in Belgium and the Netherlands in 2013

<table>
<thead>
<tr>
<th></th>
<th>Total population</th>
<th>Total pills consumed</th>
<th>Total costs</th>
<th>Pills/Person</th>
<th>Cost/Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>11,140,000</td>
<td>141,000,070</td>
<td>€134,524,191</td>
<td>12.66</td>
<td>€12.08</td>
</tr>
<tr>
<td>Netherlands</td>
<td>16,770,000</td>
<td>99,476,775</td>
<td>€43,046,397</td>
<td>5.93</td>
<td>€2.57</td>
</tr>
</tbody>
</table>

Source: IMS Health MIDAS; IMS Health Belgian National Retail Data

With a 30% smaller population in Belgium than in The Netherlands, antibiotic spending in Belgium is two times higher and related cost is 5 times higher.

Caekelbergh et al, ISPOR Congress 7-11 November 2015
Conclusions

“By comparing Belgium’s prescription patterns to the Netherlands, we estimated important potential savings due to antibiotics mis-use/over-use (€71 Million). The additional health and cost implications of antibiotics resistance were not taken into account. These savings could then be reinvested in covering innovative drugs.”

Incidence of ESBL-production and meropenem-resistance (I/R) among *K. pneumoniae*, *E. coli* and *E. cloacae*

Source: Epidemiological surveillance of resistant enterobacteriaceae: WIV-ISP (B. Jans) and National Reference Lab, UCL, Mont-Godinne (Y. Glupczynski)
Regional distribution of CPE
1/1/2012 - 30/06/2014
n=1,127 cases

- 22/103 hospitals with clusters/outbreaks
- Local/inter-regional spread in 5 provinces
- 11% associated to international travel

Courtesy from B. Jans, SIPH NSIH report year 2013-2014 (D/2014/2505/68)
Enterococcal strains received at the NRC (01/01/2009-30/09/2015)

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Nr of strains received</td>
<td>32</td>
<td>27</td>
<td>81</td>
<td>131</td>
<td>178</td>
<td>300</td>
<td>462</td>
</tr>
<tr>
<td>UNK</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>E. faecium</td>
<td>18</td>
<td>19</td>
<td>47</td>
<td>104</td>
<td>95</td>
<td>215</td>
<td>386</td>
</tr>
<tr>
<td>E. faecalis</td>
<td>12</td>
<td>3</td>
<td>18</td>
<td>15</td>
<td>67</td>
<td>68</td>
<td>60</td>
</tr>
<tr>
<td>E. cass/gall</td>
<td>2</td>
<td>1</td>
<td>13</td>
<td>9</td>
<td>12</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Other Ent. spp</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Nr of VRE (%)</td>
<td>18 (56.3)</td>
<td>21 (77.8)</td>
<td>61 (75.3)</td>
<td>103 (77.4)</td>
<td>85 (47.8)</td>
<td>198 (65.8)</td>
<td>381 (82.5)</td>
</tr>
<tr>
<td>vanA (%)</td>
<td>5 (27.8)</td>
<td>8 (38.1)</td>
<td>24 (39.3)</td>
<td>84 (81.6)</td>
<td>61 (71.8)</td>
<td>163 (82.3)</td>
<td>349 (91.6)</td>
</tr>
<tr>
<td>vanB (%)</td>
<td>11 (61.1)</td>
<td>12 (57.1)</td>
<td>24 (39.3)</td>
<td>11 (10.7)</td>
<td>12 (14.1)</td>
<td>20 (10.1)</td>
<td>18 (4.7)</td>
</tr>
<tr>
<td>vanC (%)</td>
<td>2 (11.1)</td>
<td>1 (4.8)</td>
<td>13 (21.3)</td>
<td>8 (7.7)</td>
<td>12 (14.1)</td>
<td>11 (5.6)</td>
<td>11 (2.9)</td>
</tr>
<tr>
<td>Other (%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3 (1.5)</td>
<td>3 (0.8)</td>
</tr>
<tr>
<td>Nr of outbreaks</td>
<td>1 (n=6)</td>
<td>1 (n=3)</td>
<td>3 (n=4, 12, 16)</td>
<td>4 (n=3, 4, 6, 39)</td>
<td>1 (n=36)</td>
<td>10 (n=2, 3, 3, 3, 6, 6, 8, 14, 35, 46)</td>
<td>9 (n=3, 5, 8, 9, 12, 24, 36, 67, 112)</td>
</tr>
</tbody>
</table>
Geographical distribution of Enterococci (2014)
Antimicrobial use in animals in Europe

ESVAC report 2007
35 – 40% *E. coli* resistant for ceftiofur
60% of broilers carrier of ESBL

Persoons et al., 2010
BelVet-Sac

Antibiotic use in animals in Belgium

- **2011-2012**: - 6.9%
- **2012-2013**: - 6.3%
- **2013-2014**: + 1.1%

www.belvetsac.ugent.be
New BAPCOC National Action Plan
2014-2019

One health approach: integrated programmes and datasets on antimicrobial utilisation and resistance

Targets for outpatients and inpatient antibiotic use

Quality measures/Audits

Education and Training

Better integration and coordination (MDRO Working group; National Reference Centres; INAMI/RIZIV; WIV/ISP)

Engage with stakeholders

Develop methods to monitor effects of antimicrobial stewardship strategies, policy and guidance interventions across the healthcare economy
Budget 2015 (15 November 2015)

- Sensibilisatiecampagne ter promotie van het verantwoord antibioticagebruik - winter 2015-2016 [RIZIV : 400.000€]
- Financiering antibiotherapiebeleidsgroepen [BFM ziekenhuizen B5: 4.261.873 €]
- Financiering ziekenhuishygiëne [BFM B4]:
  - verpleegkundigen: 9.696.521 €
  - artsen: 6.897.554 €
- Financiering regionale platformen [BFM B4: 22.310 €]
- Financiering Noso-info [BFM B4: 35.000 €]
- Verspreiding van bedrijfsgesundheitsgidsen voor verantwoord gebruik van diergeneeskundige antibacteriële middelen die werden ontwikkeld door AMCRA [RIZIV art 56: 15.000€]
- CPE prevalentiestudie in de populatie [RIZIV art 56: 25.000€]
- Updaten van de guidelines profylactisch en therapeutisch gebruik van antibiotica in ziekenhuizen door het BVIKM [RIZIV art 56: 50.000€]
- Organisatie van de studiedag “One health strategie” op 18/11/2015 [RIZIV art 56: 6.000€]
FOD VOLKSGEZONDHEID, VEILIGHEID VAN DE VOEDSELKETEN EN LEEFMILIEU

ORGANIGRAMME

Bureau BAPCOC
Support team
Sibyl ANTHIERENS
Anali CONESA BOTELLA
Ann VERSPORREN

Plateforme fédérale
HYGIÈNE HOSPITALIÈRE

Groupe de travail
SENSIBILISATION

Groupe de travail
MÉDECINE HOSPITALIÈRE

Groupe de travail
PRATIQUE AMBULATOIRE

Groupe de travail
MÉDECINE VÉTÉRINAIRE

AMCRA

HYGIÈNE DES MAINS

INDICATEURS QUALITÉ
Lancering BAPCOC Strategisch Plan
2015 - 2019:
Persconferentie 18/11/2014
Changing behavior and culture requires perseverance