

Belgian Antibiotic Policy Coordination Committee
Policy paper for the 2014-2019 term

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Executive Summary

Antimicrobial resistance represents a big threat to public health. The Centers for Disease Control and Prevention (CDC) estimate that every year two million Americans are infected with a (multi-)drug resistant bacterium, resulting in 23,000 deaths. The WHO has repeatedly drawn attention to this major health issue. In the worst-case scenario, we will shortly run out of effective antibiotics. Surgery and cancer therapy will then become very dangerous due to the risk of infection associated with such treatments. (Organ) transplantation will become close to impossible as the immunosuppression necessary for transplant patients makes them highly vulnerable to infections. Some infections we can easily treat today could turn deadly. It is therefore conceivable that infectious diseases once again become the leading cause of death as in early 20th century.

Healthcare-associated infections (HAI), too, can have a heavy toll on human health. Research at the Belgian Health Care Knowledge Centre (KCE) shows that 103,000 patients in acute care hospitals in Belgium suffer from hospital-acquired infections every year, accounting for 720,757 additional hospital days, €384,3 million in additional healthcare expenses and 2,625 extra deaths.

Antibiotic policy and infection control are essential to quality of care and contribute to patient safety. In many countries, quality management and patient safety are stimulated through health care financing (the so-called Pay for Quality). In Belgium too, there is an urgent need to review the health care funding system in order to promote quality management and patient safety initiatives.

With regard to antimicrobial resistance, human and veterinary medicine are inextricably linked to each other. **A strong approach to antimicrobial resistance therefore requires a full approach to both ecosystems based on the “One Health” concept.** The “One Health” concept also implies that in the field of human medicine attention should be paid to both outpatient and inpatient settings, and specifically to hospitals and residential care facilities.

Epidemiological data

In Belgium, **outpatient antibiotic consumption**, expressed in number of packages, has declined more than 36% compared to the period 1999-2000 but still remains high in comparison with other European countries. Consumption figures are stable since 2006-2007 and Belgium is mainly characterized by high consumption levels of quinolones.

Between 2007 and 2013, **antibiotic consumption in hospitals** rose 5.6%. The figures for 2012 show that the **use of antibiotics in veterinary medicine** is higher in Belgium than in the neighbouring countries. Over the period 2007-2013, the use of antimicrobial pharmaceuticals however fell 33% and the use of antimicrobial feed premixes increased 73%.

As far as pneumococci and MRSA **resistance** is concerned, we have seen a positive evolution over the past decade, but there has also been a significant increase in multiresistant Gram-negative bacteria.

In Belgium, **resistance** in porcine, avian and bovine commensal *E.coli* is higher than the average in the other EU member states.

A recent study has shown that 7.2 % of patients in acute care hospitals and 3.1% in residential care facilities had a **healthcare-associated infection** on the day of survey.

National MDRO strategic plan

The memorandum of understanding (MoU) provides for: **1) the creation of a MDRO Surveillance Technical Committee** (TC-MDRO) to assess the risks associated with MDRO (risk assessment) and to optimize (coordination of) MDRO surveillance; **2) the creation of a National MDRO Control Commission** (CNL-MDRO) to optimize MDRO control coordination (risk management); and **3) the creation of an Outbreak Support Team** (OST) to help fight outbreaks of healthcare-associated infections (caused by MDROs) in hospitals and residential care facilities. The MoU also stipulates that residential care facilities are required to implement a clear policy to control HAIs. Finally, the MoU stresses the importance of continuing and even repeating some initiatives launched by BAPCOC.

Indicators and target values

Hospitals	
Indicators	Choice of therapeutic antibiotics Indication statement of antibiotic therapy in the medical record Choice of antibiotic as prophylaxis for surgical infections Duration of surgical antibiotic prophylaxis following local instructions
Data sources	Point prevalence studies (baseline) and internal audits (sampling of medical records) conducted by antibiotic policy groups (GGA or “ <i>groupes de gestion de l’antibiothérapie</i> ”) on a regular basis
Actions	Actions by antibiotic policy groups and coordination by the BAPCOC Hospital Medicine Working Group (regarding, inter alia, national topics)
Outpatient care	
Indicators	Total antibiotic consumption Use of quinolones Ratio amoxicillin versus amoxicillin + clavulanic acid
Data sources	Outpatient antibiotic consumption (IMA-AIM ¹ and RIZIV-INAMI ² data)
Actions	Campaigns promoting rational antibiotic use; elaboration of outpatient anti-infective therapy guidelines for Belgian healthcare professionals (“ <i>Guide belge des traitements anti-infectieux en pratique ambulatoire</i> ”); local delegates in charge of antibiotic use management in medical peer review groups (GLEM or “ <i>Groupes locaux d’évaluation médicale</i> ”); strengthening of controls required by law (e.g. establishment of prescription requirements for some antibiotics or antibiotic classes, a posteriori outliers detection)
Veterinary medicine	
Indicators	Total antibiotic consumption Use of main critical antibiotics Use of medicated premixes containing antibiotics
Data	Veterinary antibiotic use (BelVet-SAC ³ and Sanitel-Med ⁴ data)

¹ Belgian Intermutualistic Agency, whose task is to integrate mutual health funds data, to analyse them and to put them at the disposal of researchers

² The “Institut National d’Assurance Maladie-Invalidité” (National Institute for Health and Disability Insurance) is a public social security institution that manages and supervises the compulsory health care and benefits insurance in Belgium

sources	
Actions	See AMCRA ⁵ 2020 Strategy Plan

As regards hospitals (by 2019):

- **Choice of therapeutic antibiotics following local instructions** in at least 90% of cases;
- **Indication statement of antibiotic therapy in the medical record** in at least 90% of cases;
- **Choice of surgical antibiotic prophylaxis following local instructions** in at least 90% of cases; and
- **Duration of surgical antibiotic prophylaxis following local instructions** in at least 90% of cases.

As regards outpatient care:

- **A decrease in total antibiotic consumption**, from more than 800 prescriptions per 1,000 inhabitants per year today to 600 prescriptions by 2020 and 400 prescriptions by 2025;
- **A decrease in quinolones consumption**, from about 10% of the total antibiotic use today to 5% by 2018; and
- **An increase in ratio amoxicillin versus amoxicillin + clavulanic acid**, from about 50/50 today to 80/20 by 2018.

As regards veterinary medicine (The AMCRA 2020 Strategy Plan has been approved by the BAPCOC Veterinary Medicine Working Group):

- **Halving the use of antibiotics by 2020**;
- **Reducing by 75% the use of most critical antibiotics by 2020**; and
- **Halving the use of medicated premixes containing antibiotics by 2017**.

Planned activities of the BAPCOC Working Groups

The **Hospital Medicine WG** would like to replicate a Scottish initiative ensuring a continuous monitoring of four quality indicators (see Indicators and target values for hospitals) by means of a point prevalence study and internal audits. Antibiotic policy groups (GGA) will have to work on major national topics in accordance with the PDCA cycle and will be monitored through a brief activity report on a yearly basis. The interuniversity training for “delegates in charge of antibiotic use management” and national study days will continue to be held. The antibiotic surveillance carried out by WIV-ISP⁶ needs to be extended so as to allow meaningful comparisons to be made between hospitals (benchmarking). These data should be linked to other data sources such as the Minimal Clinical Dataset, in order to gain a more accurate picture of the antibiotic use per APR-DRG code. It is necessary to develop an electronic antibiotic guide for hospitals, in co-operation with BVIKM-SBIMC⁷. With regard to specific antibiotic policy issues, national guidelines should be set or opinions should be delivered.

The **Federal Infection Control Platform** wishes to particularly emphasize the national topics. As part of a PDCA cycle, all hospitals (and residential care facilities)

³ Belgian Veterinary Surveillance of Antibiotic Consumption

⁴ Belgium’s national data collection system

⁵ Centre of Expertise on Antimicrobial Consumption and Resistance in Animals

⁶ Belgian Scientific Institute of Public Health

⁷ Belgian Society of Infectiology and Clinical Microbiology

will be encouraged to implement concrete improvement actions and to assess the impact thereof. All bodies involved in infection control will have a role to play in developing/organizing/implementing guidelines; symposia, workshops and training sessions; surveillance, point prevalence studies and internal audits; national improvement projects (e.g. care bundles, campaigns); and research. The Federal Platform wants to define a new vision for the future of infection control in acute care hospitals and to promote infection control practices outside acute care hospitals. National hand hygiene campaigns in Belgian hospitals will take place every two years.

The **Outpatient Care WG** will develop an electronic version of the outpatient anti-infective therapy guidelines for Belgian healthcare professionals and would like to integrate it in electronic medical records. Available data regarding antibiotic use in outpatient settings should ideally be linked to indications. Identifying germs responsible for infections outside the hospital setting and defining their resistance profiles require studies in which general practitioners should take samples in every patient for culture purposes. In this kind of study, we can also consider taking samples to determine the community prevalence of MDRO carriers. The feedback of antibiotic use and outpatient antibiotic resistance data to GPs should also be improved. Furthermore, the WG wishes to aim at new groups of professionals (dentists, emergency doctors, home care nurses) and to begin consultation with the pharmaceutical industry. If the above mentioned actions are not working, controlling and regulating will then be options to be considered. Possibilities are, among others, subjecting prescription of some antibiotics (or antibiotic classes) to conditions, and a posteriori detection of “outliers” prescribing far more antibiotics than their colleagues do.

The **Hospital Medicine WG** and the **Outpatient Care WG** request that more attention be paid to antibiotics in the medical basic training curriculum, in specialized medical training (and even more specifically for the special professional qualification in infectiology and clinical microbiology) and continuing training courses (local delegates in charge of antibiotic use management in medical peer review groups). Both WGs wish to collect available data regarding resistance profiles at national level.

The **Awareness WG** will keep on promoting rational use of antibiotics through annual campaigns, based on a new concept. With a view to supporting GPs in improving their prescribing behaviour, the WG plans to develop actions under the GRACE EU research project (online communication training and interactive information brochure for patients). A special edition of “Spike and Suzy”, the famous Belgian comics series, will talk about correct use of antibiotics.

The **Veterinary Medicine WG** aims to co-operate in a constructive way with AMCRA and all public bodies involved under the Veterinary Antibiotic Policy Strategy Working Group (SVAB-SVPA). The WG also wishes to deliver own opinions and take own initiatives.

Finally, all Working Groups stress the need for more research on antibiotic use and antimicrobial resistance.