The use and management of antibiotics:
Antibiotic Management Group

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### Who is present (for Belgium)

<table>
<thead>
<tr>
<th>Image</th>
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| ![Image](image1.png) | Prof. Françoise VAN BAMBEKE, Pharm, PhD | Université catholique de Louvain                 | • Pharmacology & Pharmacotherapy  
• Antibiotic research (activity and resistance) |
| ![Image](image2.png) | Prof. Patrick DE MOL, MD, PhD     | Université de Liège                              | • Microbiology & Infection Control  
• Member of the Belgian Conseil Supérieur de la Santé |
| ![Image](image3.png) | Prof. Paul M. TULKENS, MD, PhD    | Université catholique de Louvain                 | • Pharmacology & Clinical Pharmacy  
• Member of the Belgian Antibiotic Policy Coordination Committee |
Antibiotic policy control group in Belgium

Multidisciplinary team ...

- Infectious diseases MD
- Clinical pharmacist trained in ID
- MD from departments using antibiotics
- Microbiologist
- Pharmacist
- Hygienist
Position within the hospital organigram

Medical direction

medical-pharmaceutical comittee
Therapeutic formularium

Antibiotic policy group
Delegate to antibiotic policy

committee for hygiene
Prevention of infections
Epidemiology of resistance
Follow-up of infections

• 1 to 4 people depending on the size of the hospital
• background:
  internist - pneumologis
  microbiologiste
  hospital pharmacist
  hygienist

• 2 years specific training

wards
Antibiotic treatment
Priority tasks

- **Mandatory interventions**
  - Hospital formularium

- **Required interventions**
  - Guidelines
  - Local epidemiology

- **Priority interventions**
  - Evaluation of consumption
  - Link between consumption and epidemiology
  - Providing advice about antibiotic use
  - Limitation and control of antibiotic usage
  - Staff education
  - Annual report for the commission coordinating antibiotic policy
How to set up an antibiotic policy control group?

1. Clearly establish the main goals of the working group.
   → improve antibiotic usage (efficacy AND security)
   → reduce the cost without altering quality of care

2. Convince the medical direction of the need
   → self-supported by cost savings
      and improving of quality of care

3. Examine the local situation
   → number and type of beds
   → number and type of hospital stays
   → type of activities (surgery, ICU, oncology, …)
How to set up an antibiotic policy control group?

4. Determine human resources that are needed … and available

5. Describe the current situation

6. Establish a working plan for EACH hospital
How to structure the group?

1. Expertises that are needed

- Infectiologist and/or clinical pharmacist specialized in infectious diseases
- Pharmacist
- Microbiologist
- Hygienist
- Epidemiologist
- Informatician

- Multidisciplinary team!
- Interaction with decision makers in the hospital
- Collaboration with MDs and nurses
How should this group act in practice?

1. « Face to Face » interventions

- Prospective and direct interaction between the prescriptor and the infectiologist/clinical pharmacist and feed-back
- Des-escalation (if empirical treatment) based on lab data
- Dose adaptation
- IV-Oral switch

⇒ Very efficient to reduce inappropriate usage!
How should this group act in practice?

2. Formularium

- list of antibiotics that are available in the hospital
- list of « reserved » antibiotics (broad spectrum) with specific modalities of use

→ Very efficient to reduce consumption!
How should this group act in practice?

3. At the level of the laboratorium

- **modalities of sample collection**
  - why, when, how?

- **data interpretation**
  - criteria used
  - colonisation vs infection
  - sample quality

- **testings**
  - antibiograms vs MIC
  - which antibiotics to test?

- **epidemiology**
  - how often?
  - which type of sample?
How should this group act in practice?

4. At the level of the pharmacy

- consumption data (per ward)

- detailed evaluation of specific antibiotics
  carbapenems
  fluoroquinolones
  glycopeptides

- tables to improve antibiotic use
  dose
  compatibilities and storage
  interactions, …
How should this group act in practice?

5. Education

- guidelines
- analysis and feedback of data (resistance and consumption)

Should be accompanied by active interventions to be efficient
How should this group act in practice?

6. Evaluation

• compliance to guidelines

• reasons for non-observance

Propose new measures to improve at the next round!
One example of intervention of the antibiotic policy group in Belgium

St Luc hospital, Université catholique de Louvain

University hospital, ~ 950 beds

22 pharmacists
Among them, 6 full-time in clinical pharmacy