The use and management of antibiotics: Antibiotic Management Group

Paul M. Tulkens, MD, PhD *
Prof. Françoise Van Bambeke, PharmD, PhD *
Prof. P. De Mol, MD, PhD **

* Louvain Drug Research Institute, *Université catholique de Louvain*, Brussels

** *Service de microbiologie*, *Université de Liège*, Liège

Presented at the Ministry of Health of the
Socialist Republic of Vietnam
Hanoi, Vietnam – 31 October 2013

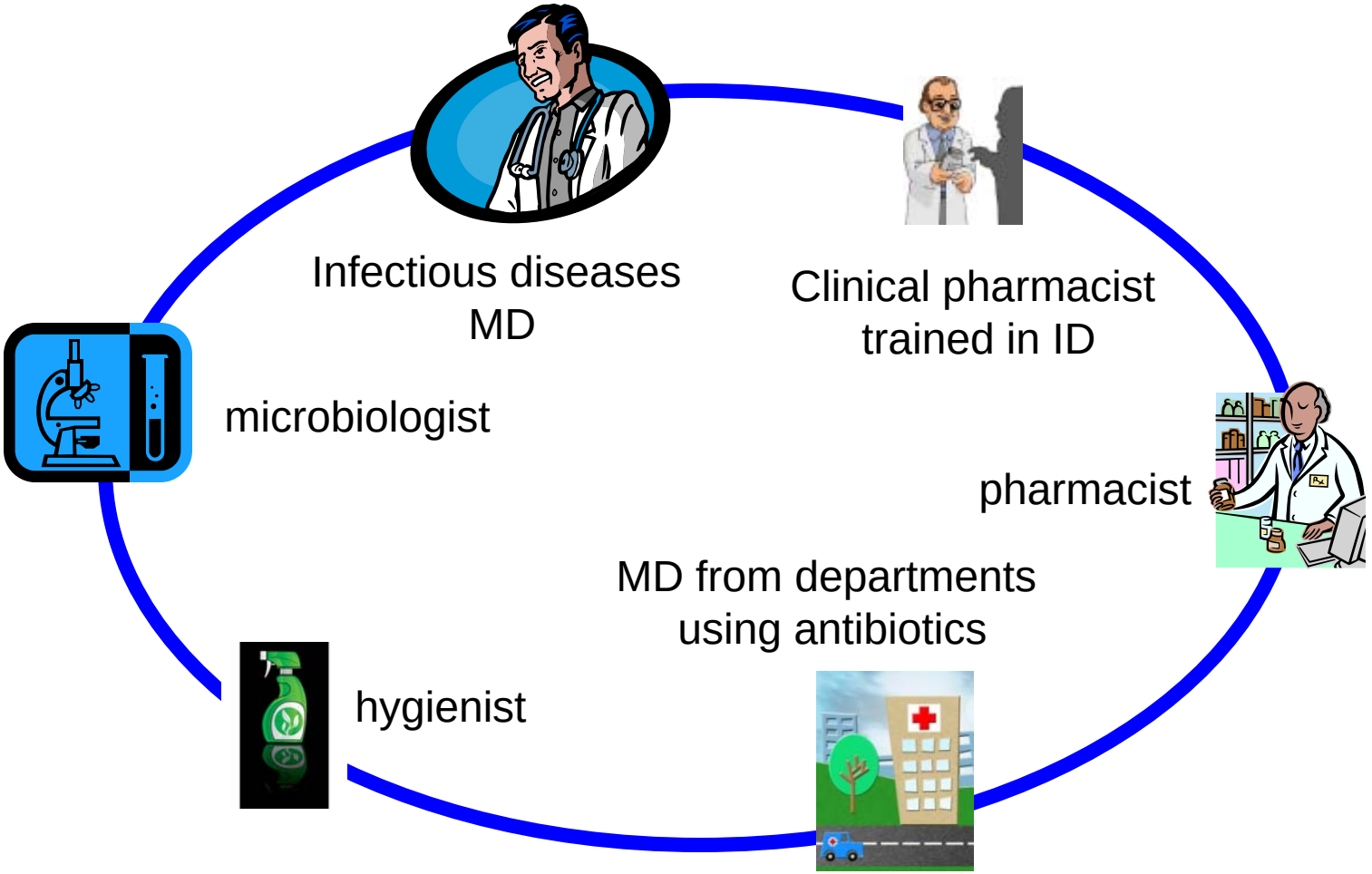
With the support of *Wallonie-Bruxelles-International*

Who is present (for Belgium)

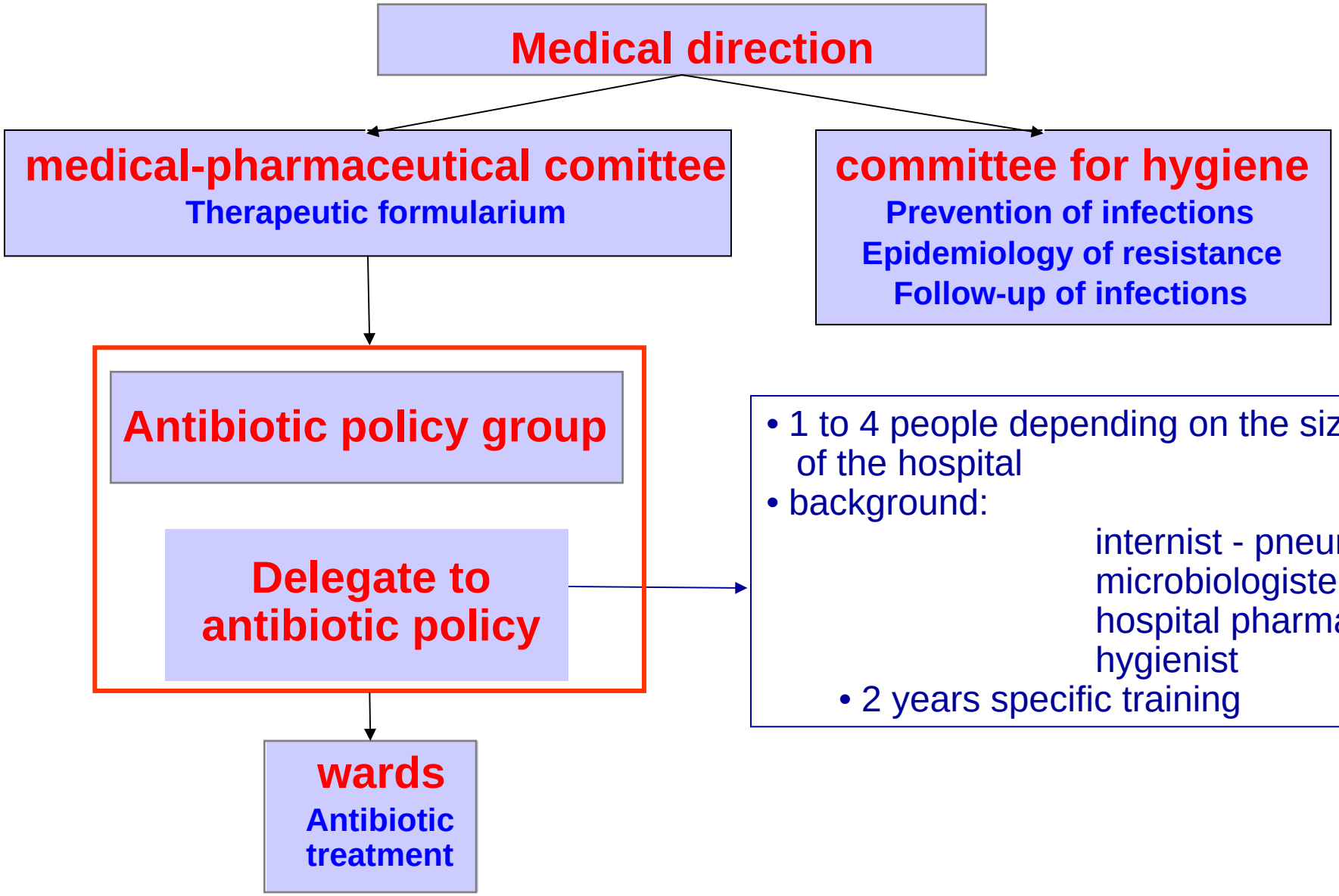
	Prof. Françoise VAN BAMBEKE, Pharm, PhD *Université catholique de Louvain* • Pharmacology & Pharmacotherapy • Antibiotic research (activity and resistance)
	Prof. Patrick DE MOL, MD, PhD *Université de Liège* • Microbiology & Infection Control • Member of the Belgian *Conseil Supérieur de la Santé*
	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 …



Position within the hospital organigram



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

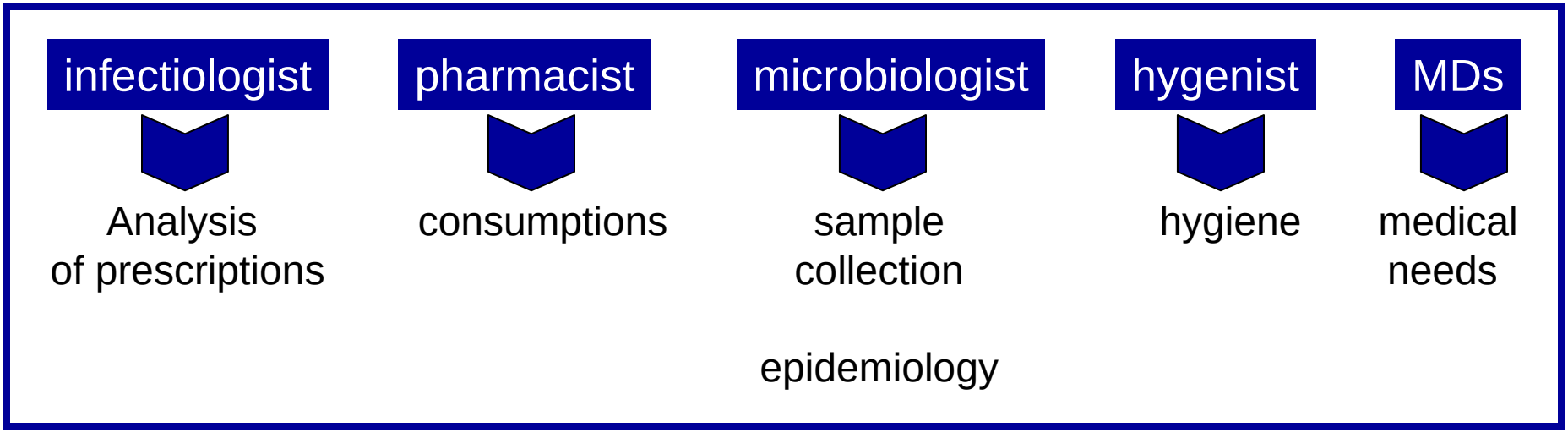
2. Convince the medical direction of the need
   - → self-supported by cost savings and improving of quality of care

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

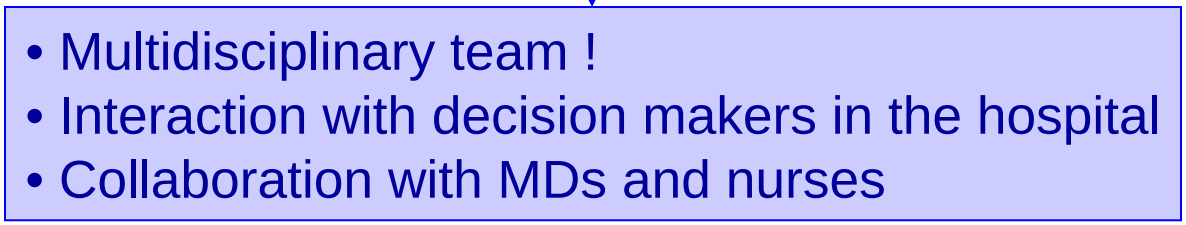


6. Establish a working plan for EACH hospital

How to structure the group ?

1. Expertises that are needed

- ✓ infectiologist and/or clinical pharmacist specialized in infectious diseases
- ✓ pharmacist
- ✓ microbiologist
- ✓ hygienist
- ✓ epidemiologist
- ✓ informatician



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 treatement) based on lab data
- Dose adaptation
- IV-Oral switch

⇨ Very efficient to reduce inappropriate usage !

How should this group act in practice ?

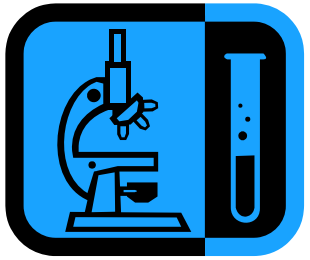
2. Formularium

- 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 feed back 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