
# Antibiotic Policy in Belgian Hospitals

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# Introduction

- ✓Situation in westen countries:
  - 30% of all hospitalised patients receive antibiotics (AB)
  - AB = 13% to 37% of global drug budget in hospitals
  - Bad utilisation and overuse of AB is frequent
    - ⇨USA: up to 41% of prescriptions not justified
    - ⇨USA: up to 50 % of prescriptions not appropriate
- ✓Importance of antibiotic (AB) resistance:
  - Estimated additional cost in USA: 4 till 5 miljon USD per year (mostly due to multiresistant nosocomial infections)


# Antibiotic Policy in Belgium

- ✓ Objectives :
  - Ameliorate quality of care
  - Halt increase of antibiotic resistance (ABR) through a more appropriate AB use
  - Limit costs of AB therapy


# Belgian Initiatives

- ✓FPS of Social Security (RIZIV/INAMI)
  - Objective: cost containment
- ✓FPS of Health, Food Chain Security and Environment
  - Objective: containment of ABR through a multidisciplinary and integrated approach (BAPCOC)

| | |
|---|---|
| Hospital care | Ambulatory care |
| Health education | Veterinary care |


# BAPCOC

- ✓AB policy in hospital care
  - Surveillance of resistance in hospital germs
    - ⇨*S. aureus*, *E. aerogenes*
  - Elaboration of evidence based therapeutic guidelines
    - ⇨Community acquired acute pyelonephritis
  - Amendment of hospital legislation (government funding)
    - ⇨Medical microbiologist, clinical infectiologist
    - ⇨Obligatory AB policy group and AB policy specialist
    - ⇨Training in AB policy for health facilities
    - ⇨Obligatory participation in regional meetings for hospital hygienists

# Intended legislation

- ✓AB policy group (ABPG) in each hospital
  - part of medical-pharmaceutical committee (MFC)
  - members: hospital hygienist, clinical microbiologist (physician or pharmacist), clinical infectiologist and/or medical microbiologist, hospital pharmacist
  - Members and chairman proposed by medical-pharmaceutical and hospital hygiene committee and decided by the medical director after advice of medical council
  - Chairman must be a physician

# Intended legislation

- ✓ABPG takes in charge the tasks of the MFC that concern anti-infectious drugs:
  - Formulary: design and update
  - Therapeutic guidelines:
    - ⇨Design and update empiric, etiologic and prophylactic treatment guidelines for infections
    - ⇨Distribute these guidelines among physicians
    - ⇨Promote also guidelines produced by and/or approved by BAPCOC

# Intended legislation

- ✓Tasks of ABPG (cont.)
  - design, implement and evaluate initiatives to promote appropriate use of AB:
    - ⇨monitor indications, duration and stream lining of AB therapy
    - ⇨monitor AB prophylaxis in surgery
    - ⇨Oblige pharmaceutical industry to adapt its promotion strategies in accordance with the AB policy and formulary of the hospital
    - ⇨organise training for medical, paramedical and nursing staff concerning diagnosis, microbiology, epidemiology and therapeutic principals of infectious disease.

# Intended legislation

- ✓Tasks of ABPG (cont.)
  - Measuring implementation of formulary and therapeutic guidelines
  - Measure consumption profiles of anti-infectious therapy
  - Measure and monitor local resistance by means of laboratory data
  - Report to prescribers, medical director and committee of hospital hygiene

# Intended legislation

- ✓ Report yearly to BAPCOC:
  - Consumption of AB in DDD per hospital department
  - Local evolution of ABR over time and for different AB
  - Overview of control actions undertaken
  - Other items as defined by BAPCOC

# Intended legislation

- ✓Assignment within ABPG of a physician or pharmacist:
  - As AB policy responsible
  - In charge of :
    - ⇨Training
    - ⇨Implementation of guidelines and formulary (only if physician)
    - ⇨Reporting
- ✓Several hospitals can appoint together one person if formal collaboration agreement


# Intended legislation

- ✓ Required qualifications :
  - Medical microbiologist or clinical infectiologist
  - Hospital pharmacist specialised in clinical biology and with training in AB therapy policy (200 hours and apprenticeship)
  - For time being, if physican:
    - ⇨ Specialist in internal medicine, pneumology, paediatrics, intensive care or clinical biology
    - ⇨ Trained in AB therapy policy (200 hours and apprenticeship)

# Intended legislation

- ✓Transition phase (5 years)
  - Committee of peers to certify expertise in AB therapy policy based upon proven experience
    - ⇨ Members of BAPCOC
    - ⇨ Representatives of scientific societies
    - ⇨ Representatives of Ministers of health and social affairs
  - Candidates in training will be provisionally recognised as experts (5 year validity)


# Pilot project

- To bridge the time needed to publish the Royal Decree
- Selection of 36 hospitals based upon:
  - previous efforts to implement an AB policy
  - expertise of candidates
  - proposed future activities
- Funding calculated on number and type of beds (01-10-2002 till 30-09-2003)


# Proposed actions

- ✓Optimalisation of choice of AB and duration of AB treatment (38%)
  - Formularies
  - Producing or updating guidelines
  - Stop orders
  - Motivation / authorisation to prescribe outside formulary
  - Counseling (on request or automatic)
  - Uniformisation of AB policy in new hospital sites
- ✓Research: efficient if combined with other measures


# Proposed actions

- ✓Surveillance of quantity of AB used (14%)
- ✓Research: feedback can have favourable influence
- ✓Surveillance of quality of AB use (5%)
  - Timely switching to monotherapy
  - Timely switching to oral therapy
  - Streamlining
  - Audits
- ✓Research: utility demonstrated (generally in combination with limited availability of AB)

# Proposed actions

- ✓ Training of prescribers, paramedics and nursing staff (11%)
- ✓ Research: training programmes have only temporary effects if not continuous or accompanied by other measures.

Most effective are individual contacts with specialists in infectious diseases


# Proposed actions

- ✓Surveillance of AB resistance with feedback to prescribers (5%)
  - Purchase of lab equipment
  - Screening studies MRSA + multiresistant *E. aerogenes*
- ✓Research: useful to evaluate and update hospital hygiene programs (spread prevention), formularies and therapeutic guidelines

# Proposed actions

- ✓Linking AB resistance and consumption (2%)
- ✓¿ Effect on appropriate prescribing ?
- ✓Evaluation of implementation and impact of guidelines, formularies and other measures (13%)
- ✓Expert opinion:  stated to be essential
- ✓Selective reporting of AB resistance patterns (2%)
- ✓¿ Effect on appropriate prescribing ?


# Proposed actions

- ✓Others:
  - Upgrading IT technology (13)
  - Enhancing hospital hygiene (1)
  - Meetings between infectious disease specialists and microbiologists of different Hospitals (2)
  - Administrative measures:
    - ⇨control of messages communicated by representatives (1)
    - ⇨Seminars on influence of representatives (1)

# Not proposed

- ✓ Detection, prevention, and control of AB resistance declared as institutional objectives with allocation of resources
- ✓ Expert opinion: only managers can ascertain a coordinated approach


# Discussion

- ✓ Advantages of a committee:
  - Can favour bottom-up approaches and facilitate acceptation
  - Can design locally adapted and specific plans for hospital departments and institutions
  - Can adapt national guidelines to the local situation
  - Can analyse AB strategies and inform prescribers

# Discussion

- ✓ Potential problems of a committee:
  - Lack of consensus
  - Difficult to anticipate national and international resistance trends
  - Independence of pharmaceutical Industry not guaranteed