Antibiotic Policy in Belgian Hospitals

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Introduction

✓ Situation in western 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 million 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
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
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
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 physician:
    ⇒ 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)
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)
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