# Implementation of a structured Outpatient Parenteral Antimicrobial Therapy (OPAT) service by the hospital pharmacist in a regional hospital



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## TO OPAT or TO NOPAT?

- OPAT (Outpatient Parenteral Antimicrobial Therapy) demonstrates to be safe and effective. Therefore it has widespread application outside Belgium.
- Based on international literature and local experience, a structured OPAT program was implemented at Imelda hospital in close collaboration with primary and secondary health care providers.
- Our goal was to set up a framework to establish and expand

### METHODS

- Literature analysis
- Retrospective analysis of OPAT patients of Imelda hospital including a pharmaco-economic analysis
- Surveys questioning health care providers' point of view:
  - Antimicrobial Management Teams of 94 Belgian hospitals
    (with support of BAPCOC and in collaboration with UZ Gent)
  - Physicians Imelda hospital

### RESULTS

### PAST (OPAT IMELDA HOSPITAL, 2015)

- Most frequently treated infections: urinary tract, bone and joint, and genital tract infections
- Main prescribing physicians: urology, pediatrics and geriatrics
- Most frequently prescribed antibiotics: ceftriaxone and temocilline
- Majority of OPAT patients (74%) treated in day care hospital
- Average duration of OPAT therapy: 11 days
- Number of hospitalisation bed days saved: 822 days

### PRINCIPLES OF OPAT SERVICE

- Multidisciplinary approach
- Patient selection based on defined criteria
- Antibiotics and IV fluids delivery via community pharmacy (except short term backup and hospital restricted antibiotics)
- IV administration sets and trained nurses via external home care provider

### HEALTH CARE PROVIDERS' POINT OF VIEW

- Small scale application throughout Belgian hospitals
- Acknowledgment of benefits and potential
- Need for national OPAT program or guidelines
- Drawbacks:
  - lack of information and procedures, high costs for patient, restrictive legislation regarding drug delivery
- Central role of hospital pharmacist:

informing patients and health care providers, delivery of hospital restricted antibiotics, contact person after discharge

### **OPAT SETUP FLOWCHART**

Attending physician + microbiologist + hospital pharmacist: Evaluate whether OPAT is appropriate for specific

- Validated tools and information leaflets:
  - flowchart and checklist for hospital care providers
  - patient selection criteria
  - general OPAT information brochure for patients
  - pricelist
  - informed consent form
  - form for home care provider
  - administration and monitoring instructions (per antibiotic) for home care nurses

#### patient/infection/antibiotic + selection type of catheter

#### **Attending physician + patient:**

- Provide of information using general OPAT information brochure and pricelist
- Obtain informed consent (agreement OPAT)
- Attending physician: Complete form for home care provider
  - Hospital pharmacist: Send form to home care provider

## PRESENT (OPAT IMELDA HOSPITAL 2016)

- More than twice as many patients on OPAT at home compared to 2015
- Approval and conduct by Antimicrobial Management Team
- Cooperation with external home care provider
- Tools and information leaflets available on intranet
- Participation in consortium in the scope of future reform of hospital financing
- Attending physician:
  Complete OPAT report in medical records
- Complete reimbursement forms and prescriptions for antibiotics and IV fluids
- Attending physician / hospital nurse:
  - Insert catheter

Hospital pharmacist:

 Inform patient's community pharmacist to order antibiotics and IV fluids

### FUTURE

- Raise awareness and train primary and secondary health care providers
- Conduct patient satisfaction survey
- Intensify follow-up: registration and analysis of outcomes, side effects, complications and readmissions
- Perform risk analysis and audit of OPAT service

#### **References:**

- Seaton, R.A. and D.A. Barr, Outpatient parenteral antibiotic therapy: principles and practice. Eur J Intern Med, 2013. 24(7): p. 617-23.
- Tine Ravelingien, Astrid Vantrappen, Uitbreiding van Outpatient Parenteral Antimicrobial Therapy (OPAT) in België: Wat staat er ons in de weg? Submitted for Amgen Award 2016

#### Acknowledgments:

Members Antimicrobial Management Team Imelda Hospital Bonheiden Apr Hilde Collier, Apr Pieter-Jan Cortoos, University Hospital Brussels Apr Tine Ravelingien, Apr Sabine Deryckere, Apr Franky Buyle, University Hospital Ghent  Administrate first dose of antibiotic in hospital

#### Attending physician:

- Inform patient about follow-up consultations and monitoring
- Inform **GP** by phone and complete discharge form
- Monitor patient online via home care provider platform
- Provide antibiotics and IV fluids if necessary

**Hospital pharmacist + patient:** 

- Provide patient information brochure and form with instructions for home care nurse
- Provide required reimbursement forms and prescriptions for community pharmacy

