



WETENSCHAPPELIJK INSTITUUT  
VOLKSGEZONDHEID  
INSTITUT SCIENTIFIQUE  
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# SYSTEMIC ANTIMICROBIAL USE IN BELGIAN HOSPITALS 2006 – 2008 preliminary results

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Healthcare Associated Infections (NSIH)  
Public Health and Surveillance

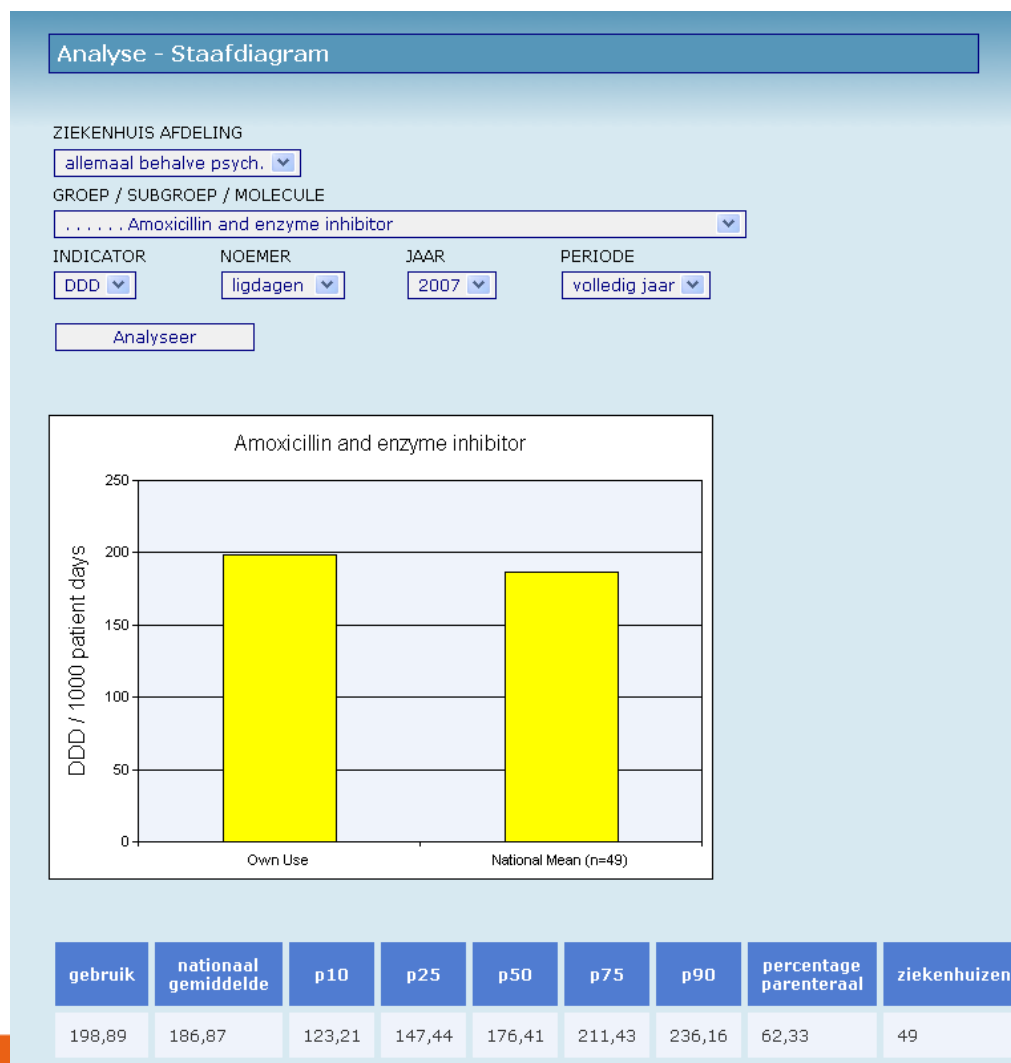
# Content

Participation

Results

- stratification by
  - Year, month & ward type
  - hospital type, size

Concluding remarks



# PARTICIPATION

	2006	2007	2008
Monthly	6	17	27
Annual	26	48	89
<b>Total</b>	<b>32</b>	<b>65</b>	<b><u>116</u></b>

Principal site versus additional sites

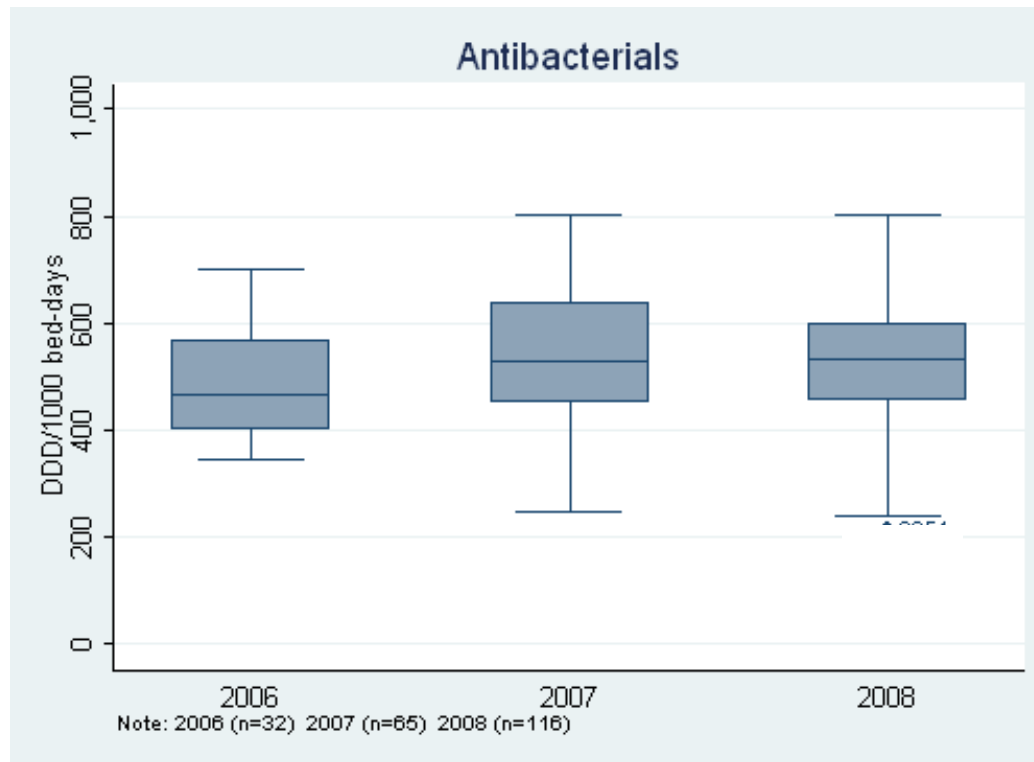
# PARTICIPATION

## by hospital unit

	2006	2007	2008
Total (TOT)	32	65	116
Pediatric (PED)	31	54	92
Non pediatric (NPD)	32	65	115
Intensive care (ICU)	21	51	<u>77</u>
Haem/oncol. (HAE)	9	21	22

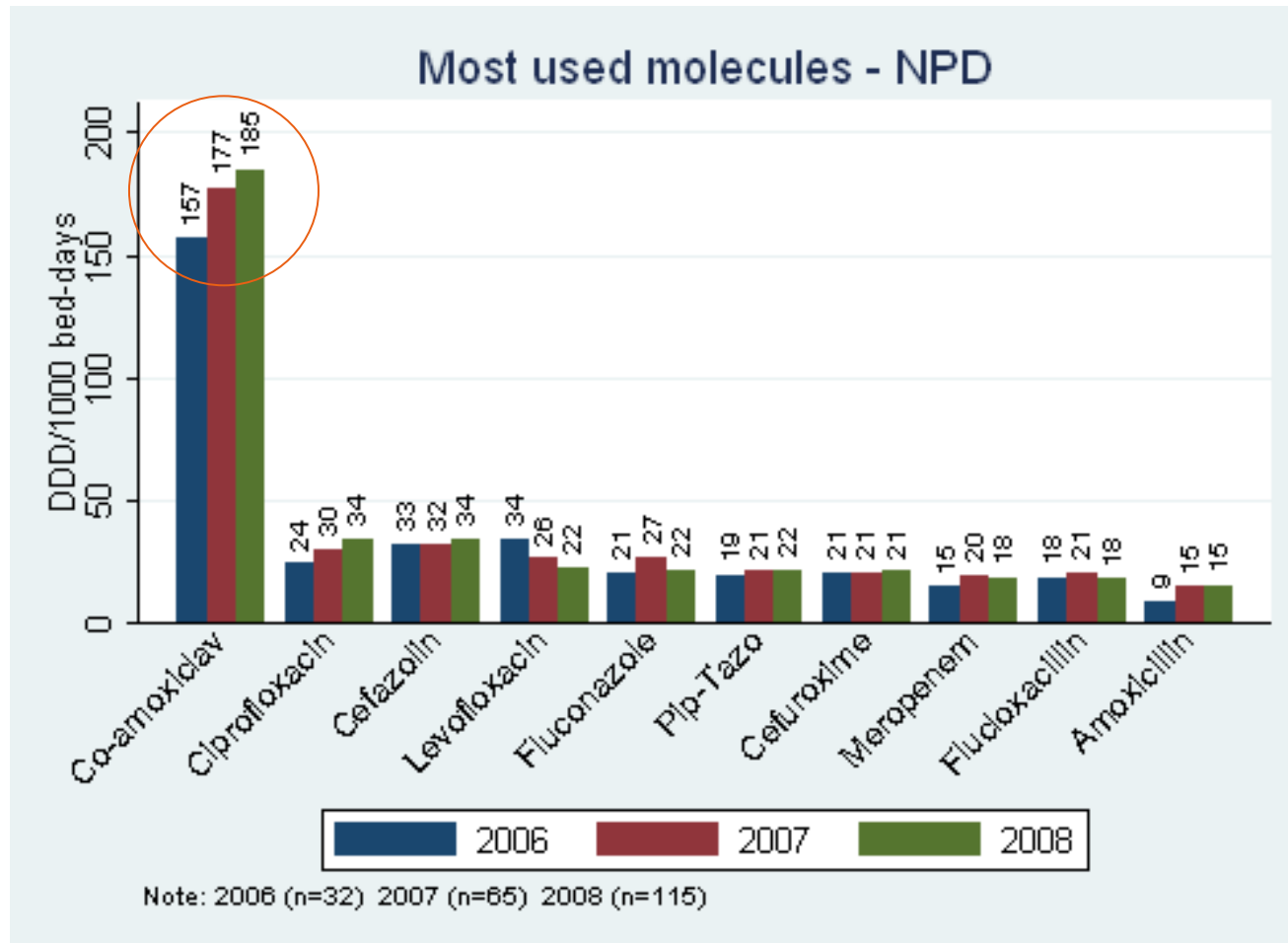
J01

## OVERALL Defined Daily Dose/1000 bed-days

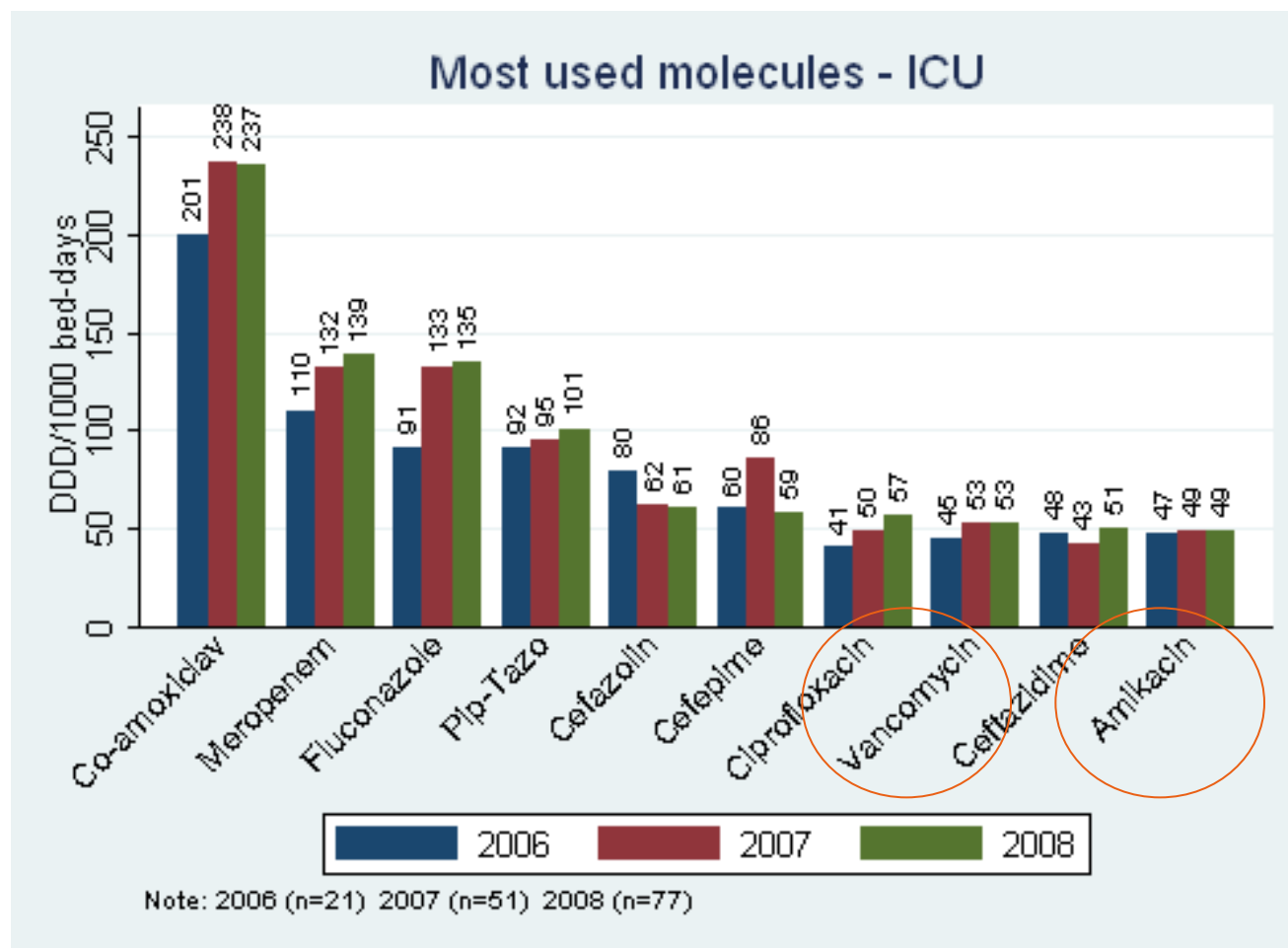


	<b>2006</b>	<b>2007</b>	<b>2008</b>
<b>P25</b>	399	452	455
<b>P50</b>	<b>467</b>	<b>529</b>	<b>531</b>
<b>P75</b>	567	638	600

# Non Pediatric Wards



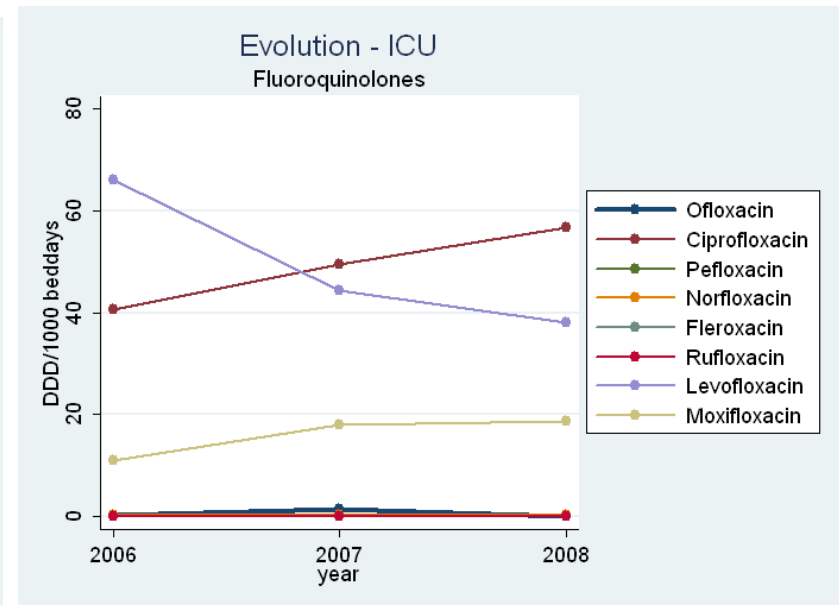
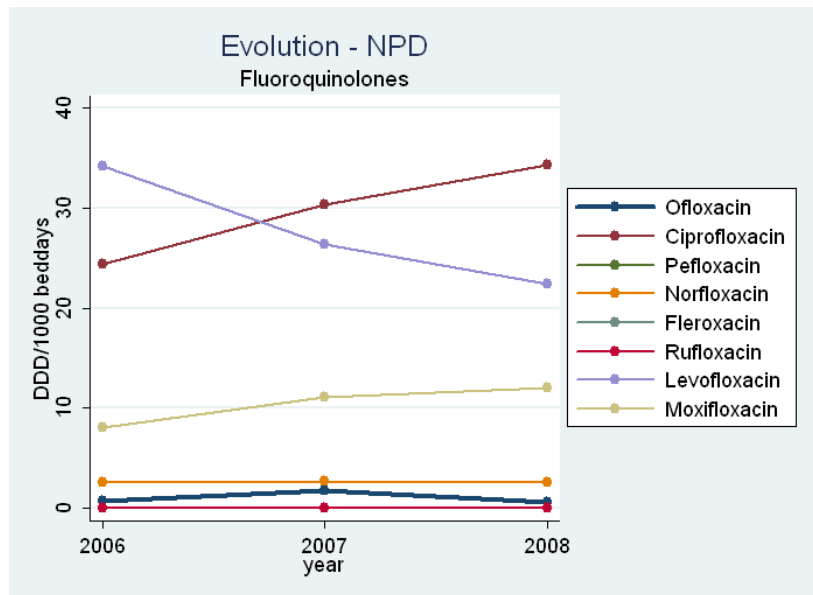
# Intensive Care Unit



# Yearly evolutions NPD & ICU



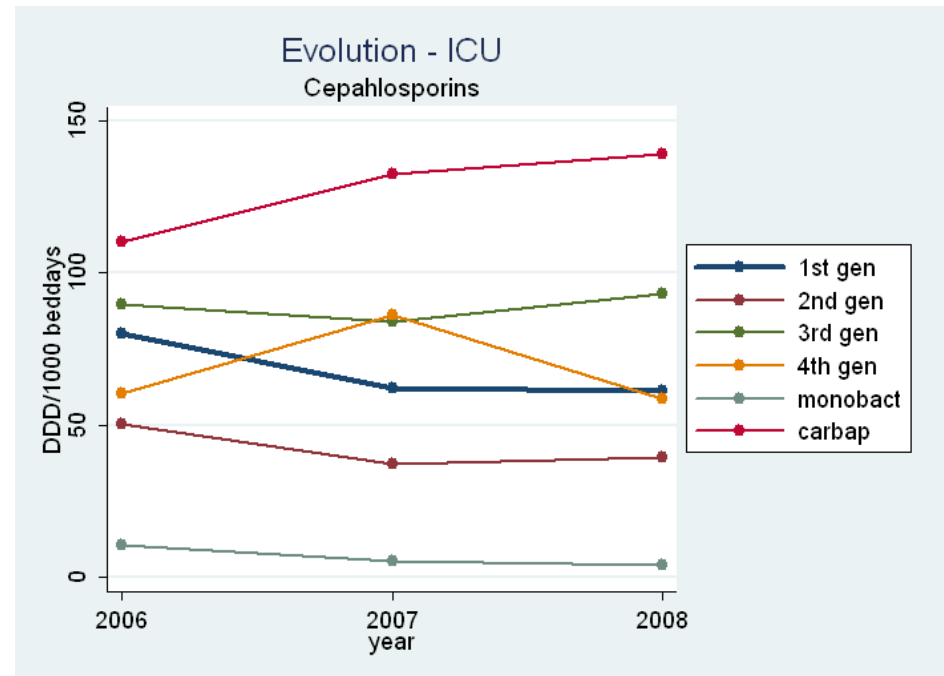
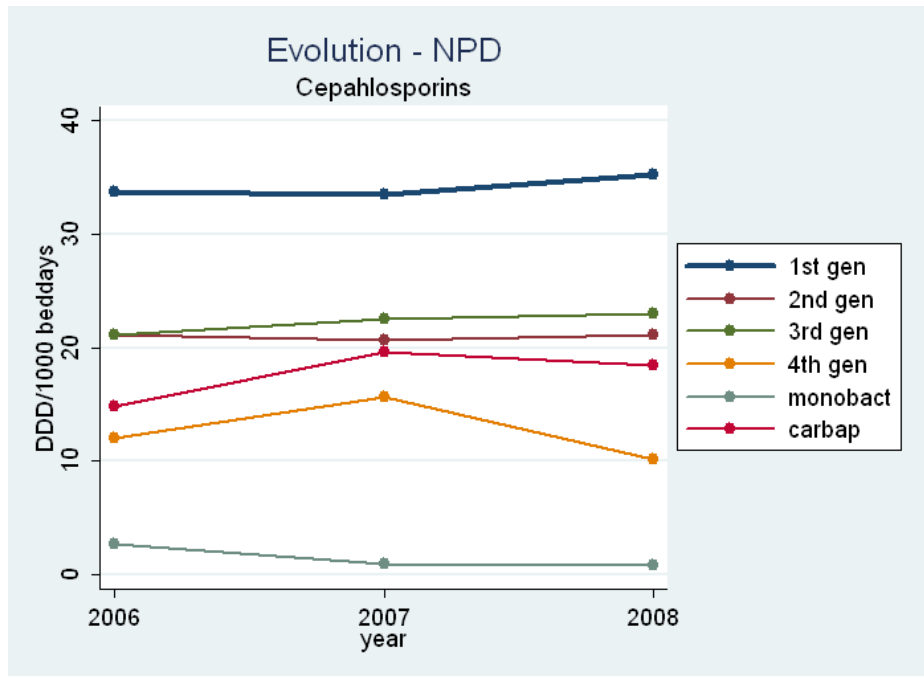
## Fluoroquinolones: cipro vs levo



MRSA ~ shift in FQ formulary (Bosso & Mauldin, 2006, AAC)

# Yearly evolutions NPD vs ICU

Cephalosporins & related: Carbapenems!

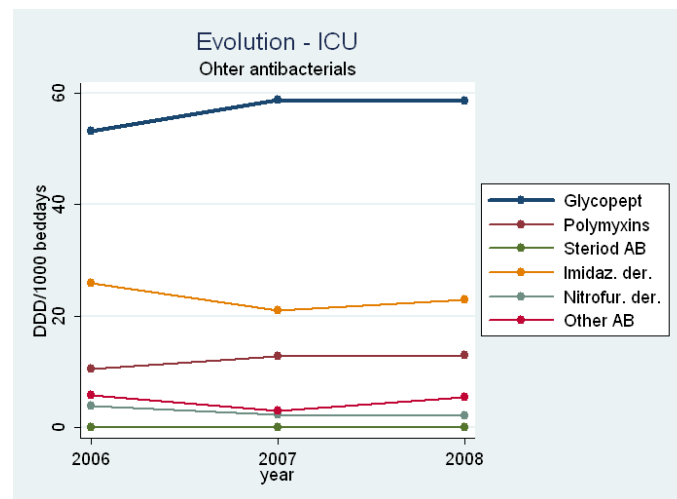
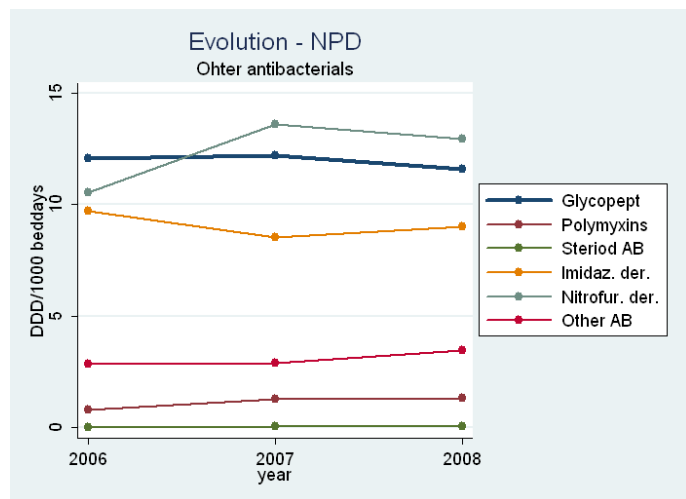
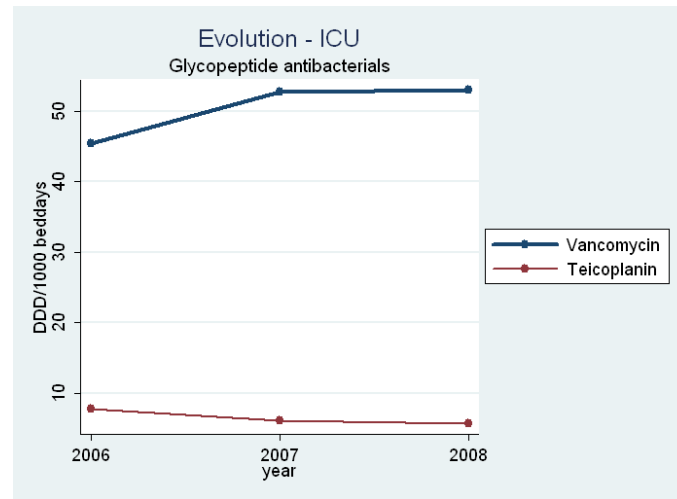
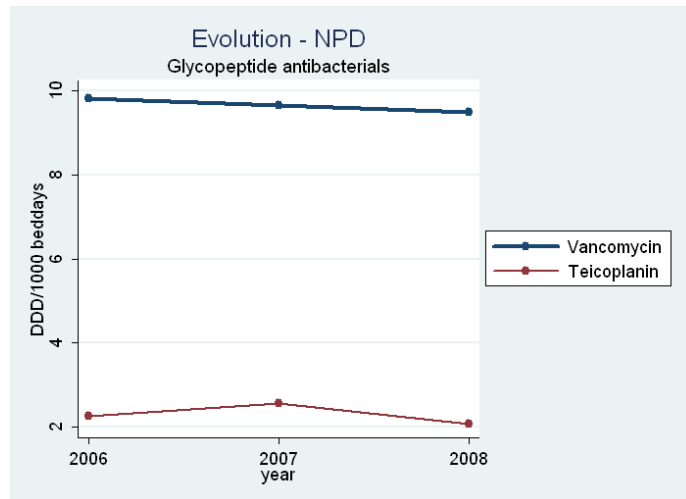


# Yearly evolutions

# NPD & ICU



## Glycopeptides

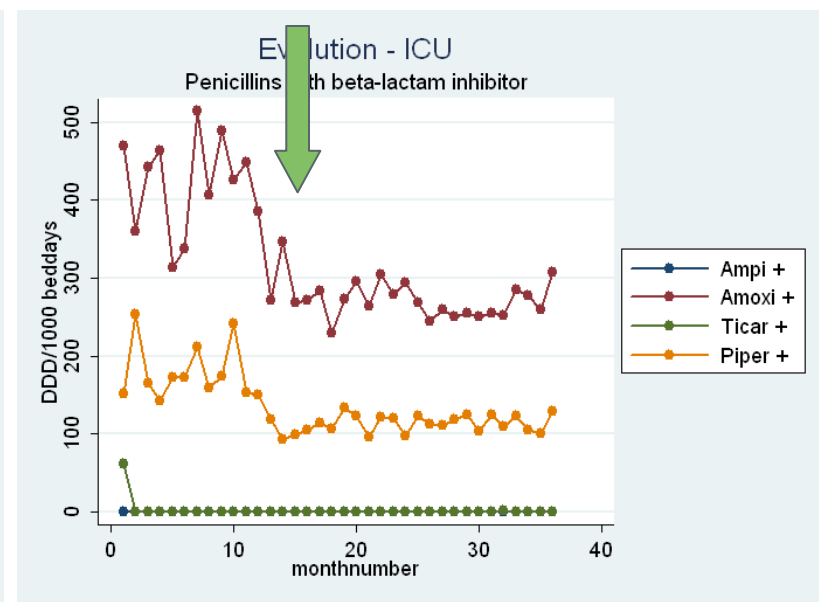
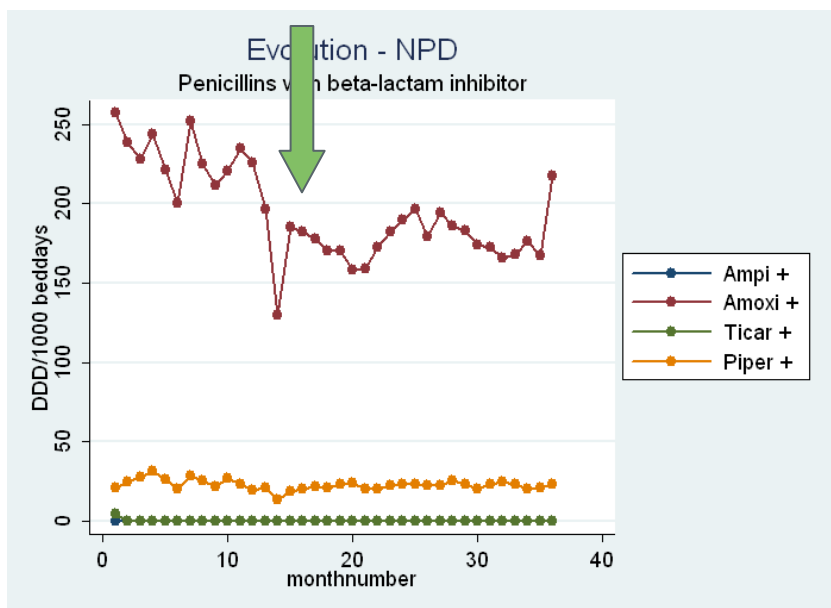


## Monthly evolution

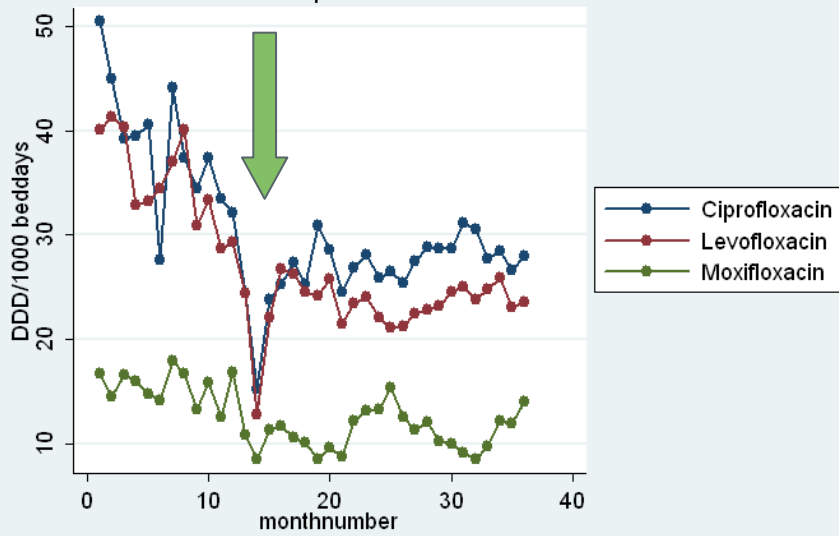
- Selection of hospitals (information bias)
- Initially limited number of hospitals

	<b>2006</b>	<b>2007</b>	<b>2008</b>
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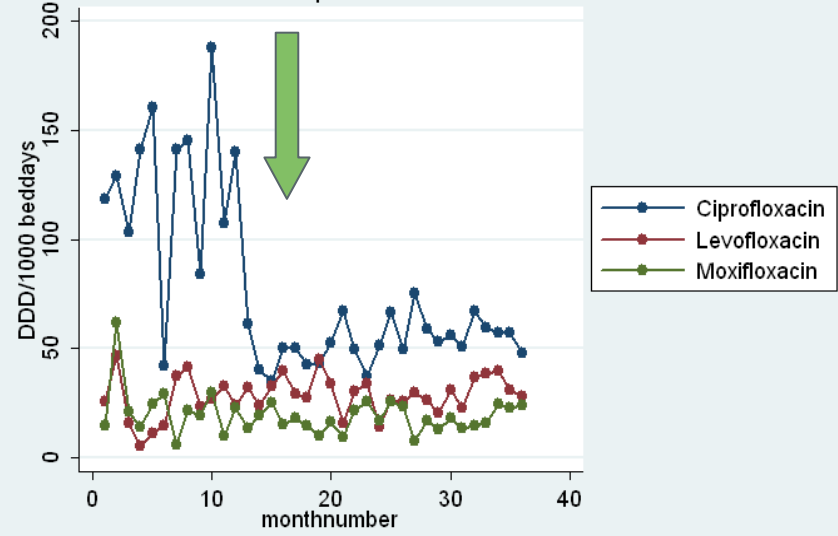
# Amoxicillin – clavulanic acid MONTHLY



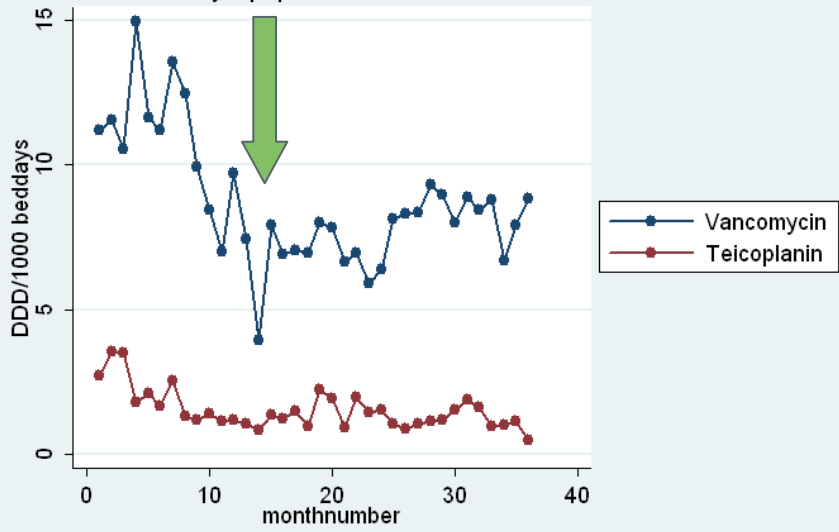
Evolution - NPD  
Fluoroquinolones



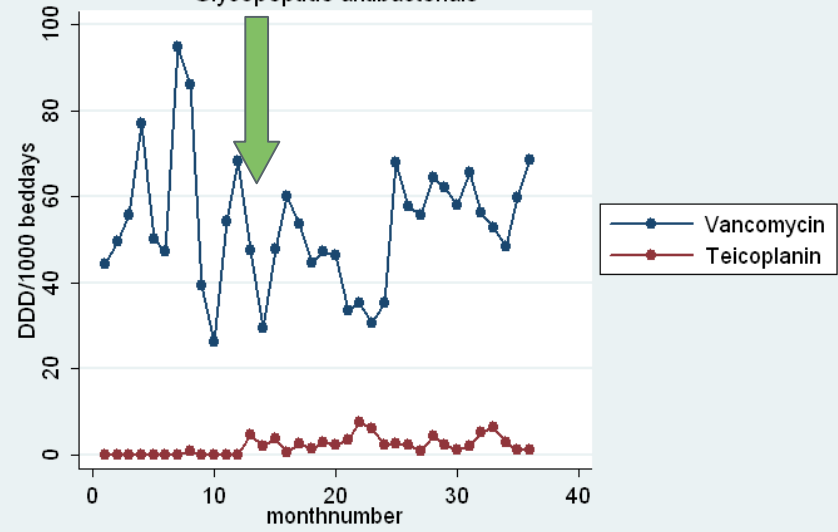
Evolution - ICU  
Fluoroquinolones



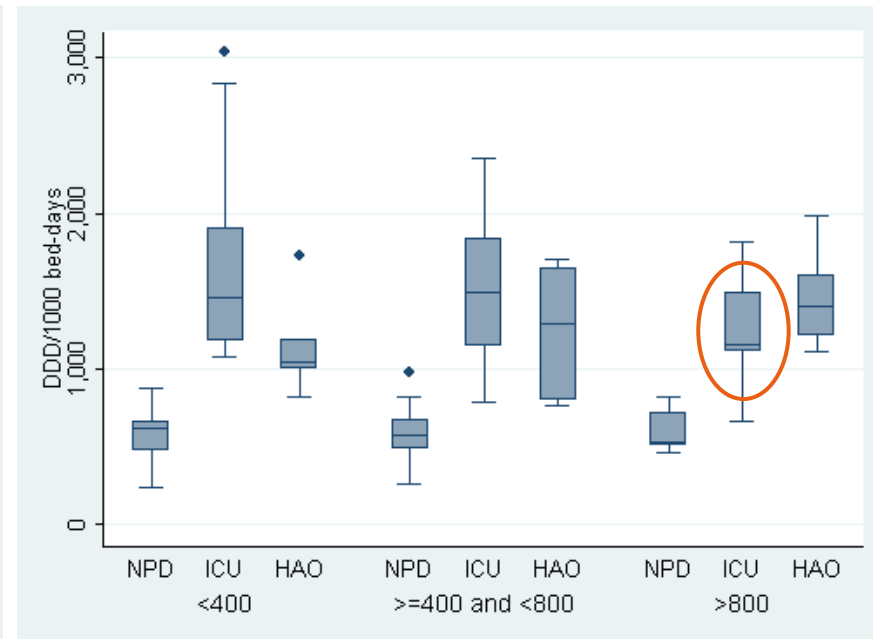
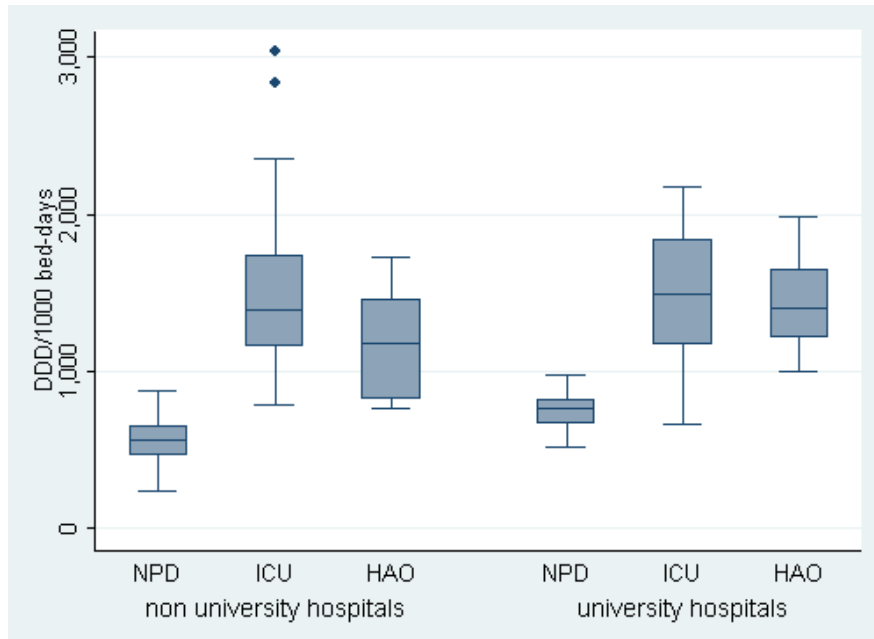
Evolution - NPD  
Glycopeptide antibacterials



Evolution - ICU  
Glycopeptide antibacterials



# stratified by type vs size



## Concluding remarks

- Output:
  - Denominator : bed-days vs. admissions
    - Evolution MRSA, MRE, Cdiff, ... might assist here
    - (Retrospective) monthly recording required
      - Different hospitals already did!
  - DDD vs DDA
  - Stratification by ward & hospital type, size, region?
- Within hospital evolution >> bench marking
  - Caution because of selection bias (evolution 4FQ)
- Feedback : questionnaire

# Acknowledgements



Vet. Sofie Vaerenberg: Project responsible  
Dr. Erik Hendrickx

Help from Dr. Mat Goossens



Thank you for your participation and attention!

[www.nsih.be](http://www.nsih.be) (NL geneesmiddelen/download – FR  
médicaments/download)



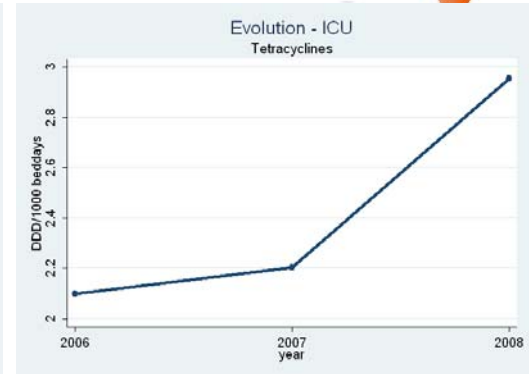
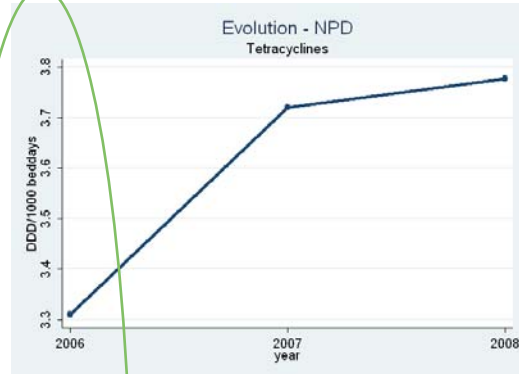
# Quinolones NPD

		<b>2006</b> (n=32)	<b>2007</b> (n=65 )	<b>2008</b> (n=116)
<b>Compound</b>	<b>ATC</b>	<b>Mean</b> <b>(range)</b>	<b>Mean</b> <b>(range)</b>	<b>Mean</b> <b>(range)</b>
Ciprofloxacin	J01MA 02	<b>23</b> (0 - 82)	<b>30</b> (0 - 89)	<b>34</b> (0 - 95)
Levofloxacin	J01MA 12	<b>33</b> (0 - 91)	<b>25</b> (0 - 103)	<b>21</b> (0 - 102)
Moxifloxacin	J01MA 14	8 (0 - 35)	11 (0 - 52)	12 (0 - 56)
Norfloxacin	J01MA 06	2 (0 - 17)	3 (0 - 22)	2 (0 - 21)
Ofloxacin	J01MA 01	1 (0 - 32)	2 (0 - 26)	1 (0 - 13)
Oxolinic acid	J01MB0 5	0 (0 - 0)	0 (0 - 0)	0 (0 - 0)
<b>Total</b>		<b>67</b> <b>(8 - 157)</b>	<b>70</b> <b>(7 - 186)</b>	<b>69</b> <b>(2 - 174)</b>

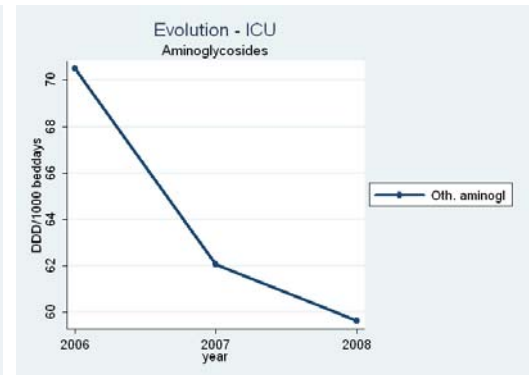
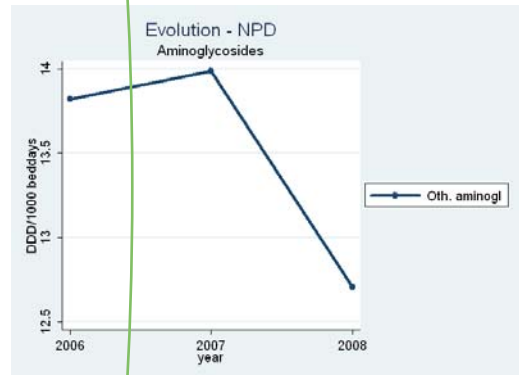


# Yearly evolutions NPD & ICU

Tetracyclines



Aminoglycosides



MLS

