

# Surveillance des entérobactéries multirésistants en Belgique

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Journée des CLIN PN 6/3/2003*



## Introduction

- Données provenant de 3 composantes de la surveillance nationale en Belgique:
  - surveillance des septicémies nosocomiales, 1992...
  - surveillance des infections nosocomiales aux soins intensifs: 1996...
  - surveillance nationale des MREA (multiresistant *E. aerogenes*), coll. GDEPIH: 2000...
- + investigation d'épidémie/enquête nationale GDEPIH

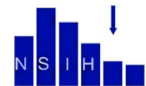


## Surveillance des bactériémies (hospital-wide)

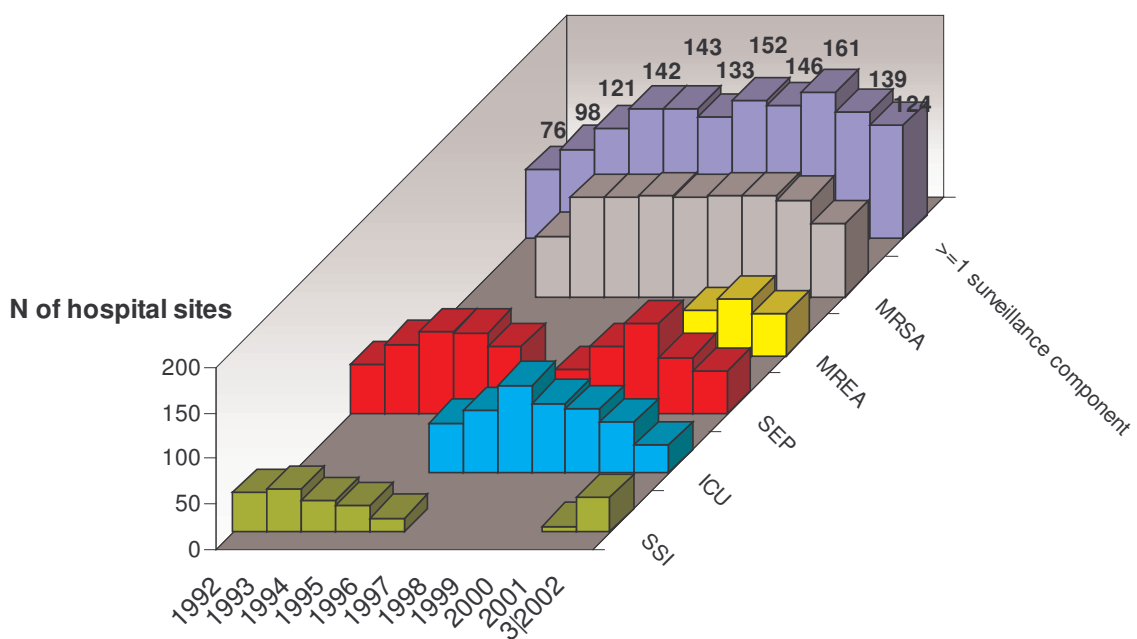
- 1 dossier par BAC > 48h confirmé par labo
- dénom de sources administratives (admissions + j. d'hospitalisation)
- Participation min. 3 mois (stop 7/96-10/98)
- Analyse de tendance:  $\geq 3$  participations à 5 périodes (linear regression for repeated measures), ajusté pour n HC/1000 jrs d'hosp.
  - +  $\geq 1$  période avant juillet 96
  - +  $\geq 1$  période à partir d'oct 98



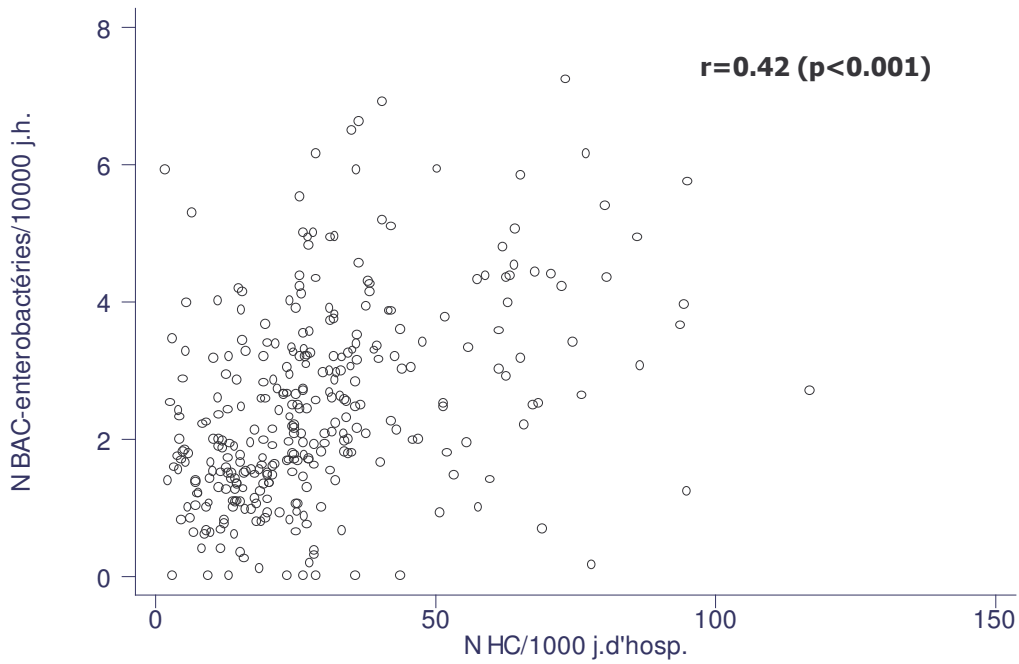
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Participation to the national surveillance of hospital infections and antibiotic resistance, IPH-NSIH, 10/1992-9/2002 (data until 31/1/2003)



# Incidence des bactériémies + entérobactéries en fonction de la fréquence des hémocultures



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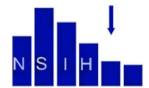
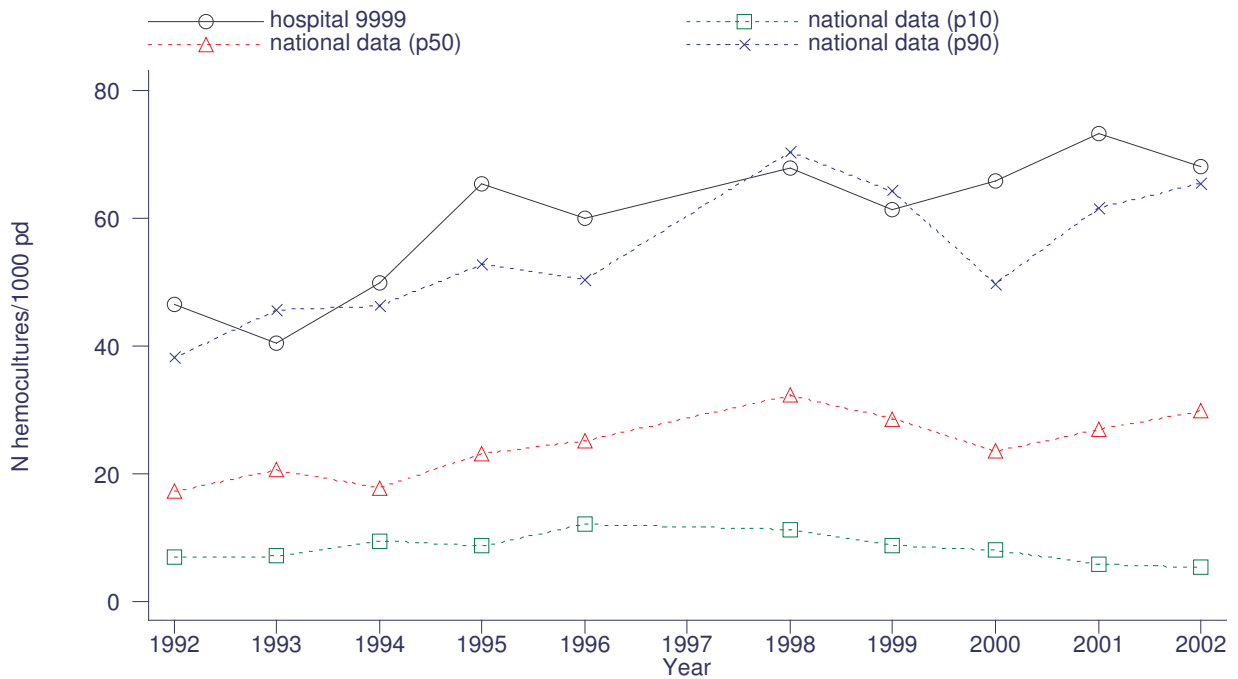


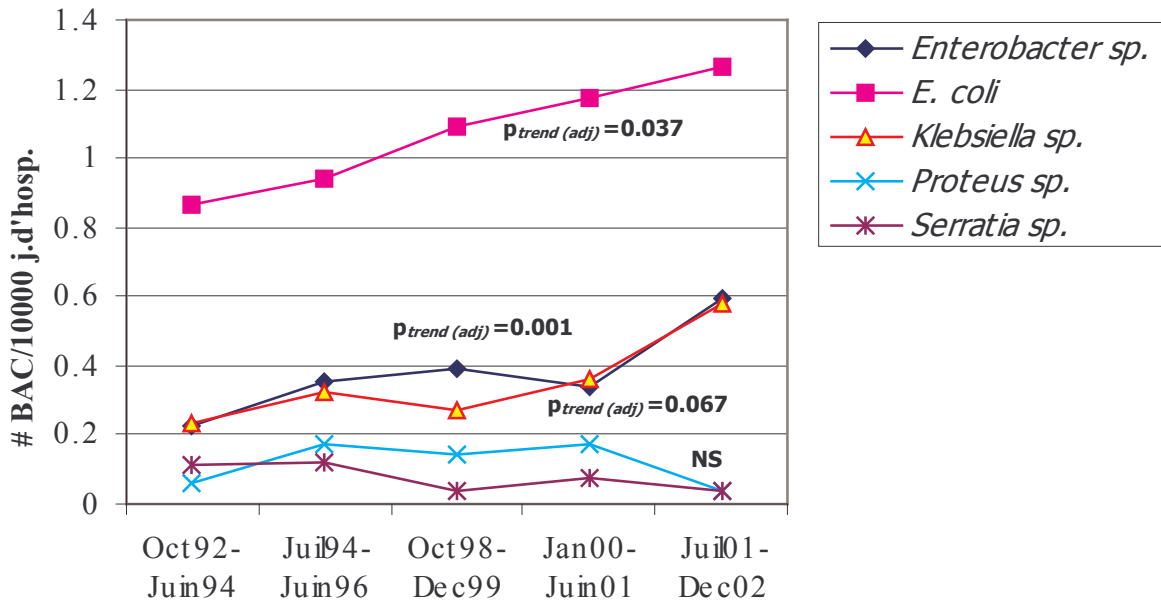
Figure 33. Number of hemocultures per 1000 patient-days



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## Incidence des entérobactéries par 10000 jrs d'hospitalisation, Belgique, 1992-2002, n=81 H

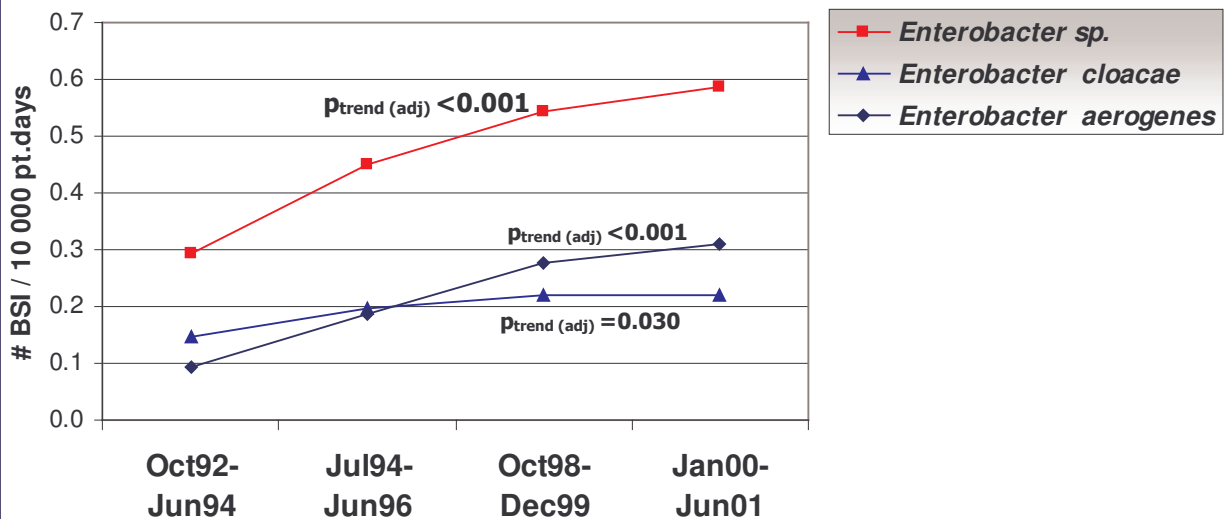


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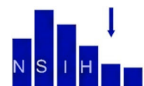


## Evolution of pathogen-specific BSI rates, October 1992 – June 2001, 73 Belgian hospitals

### Enterobacter species

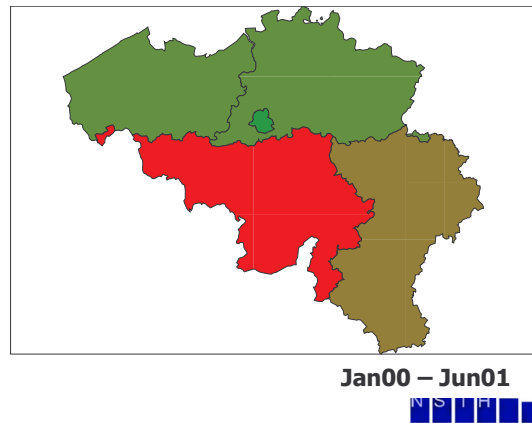
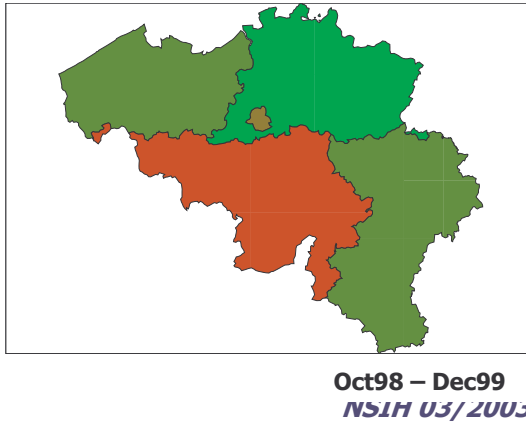
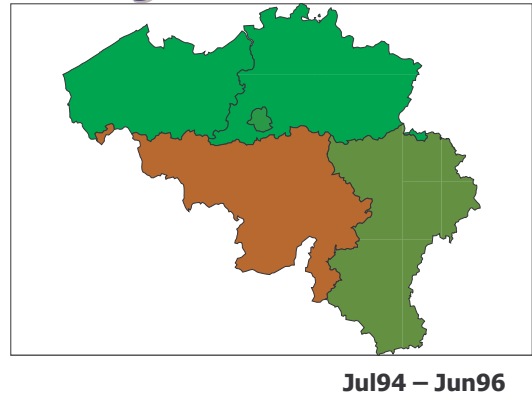
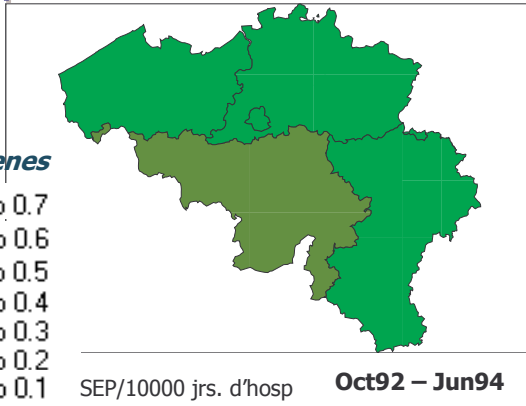
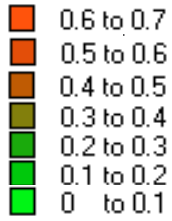


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# Surveillance des septicémies nosocomiales: L'épidémie nationale de *E. aerogenes*

## *E. aerogenes*



## Un hôpital du Sud-ouest...

Figure . Incidence SEP with Enterobacter spp.

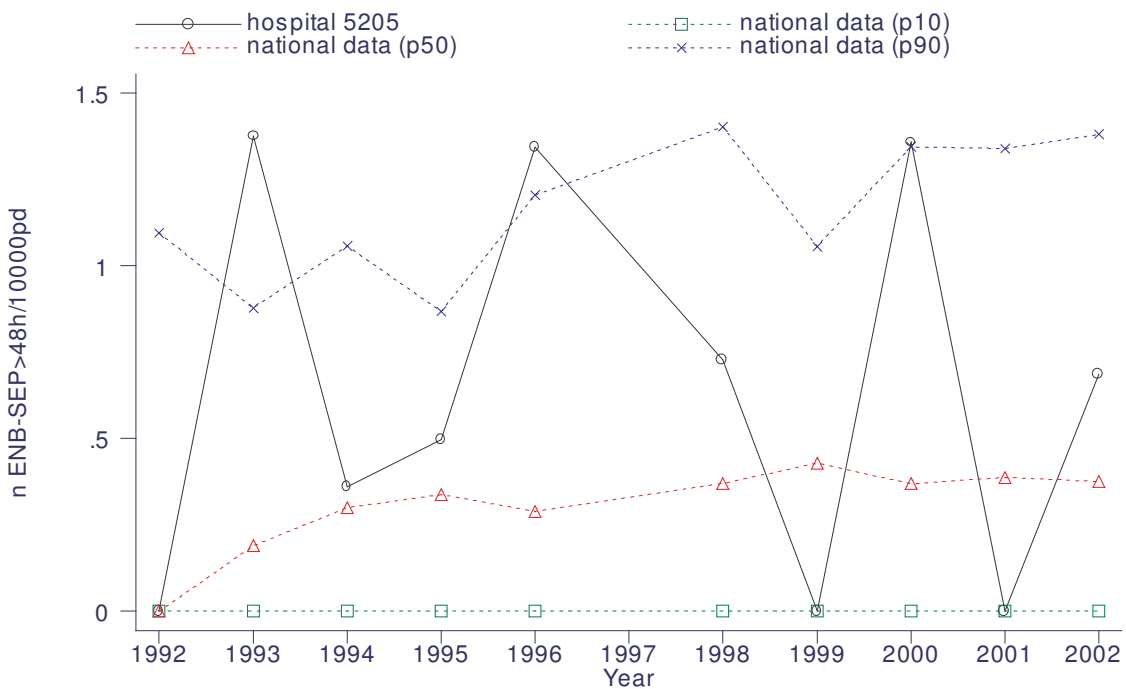
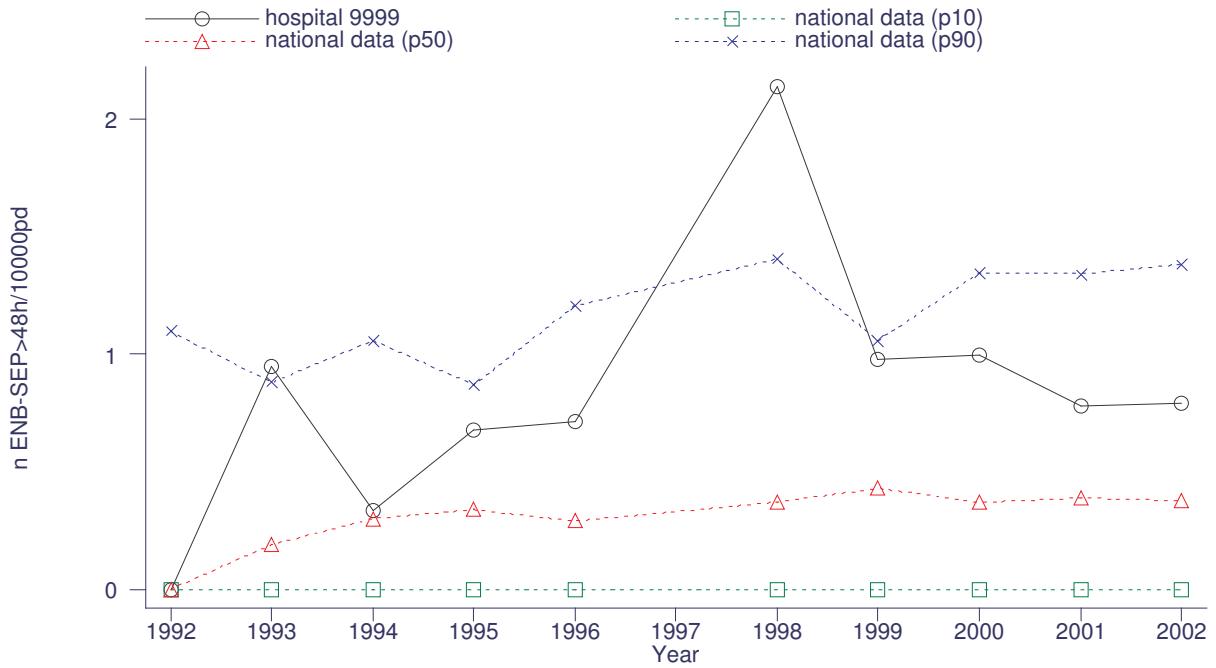


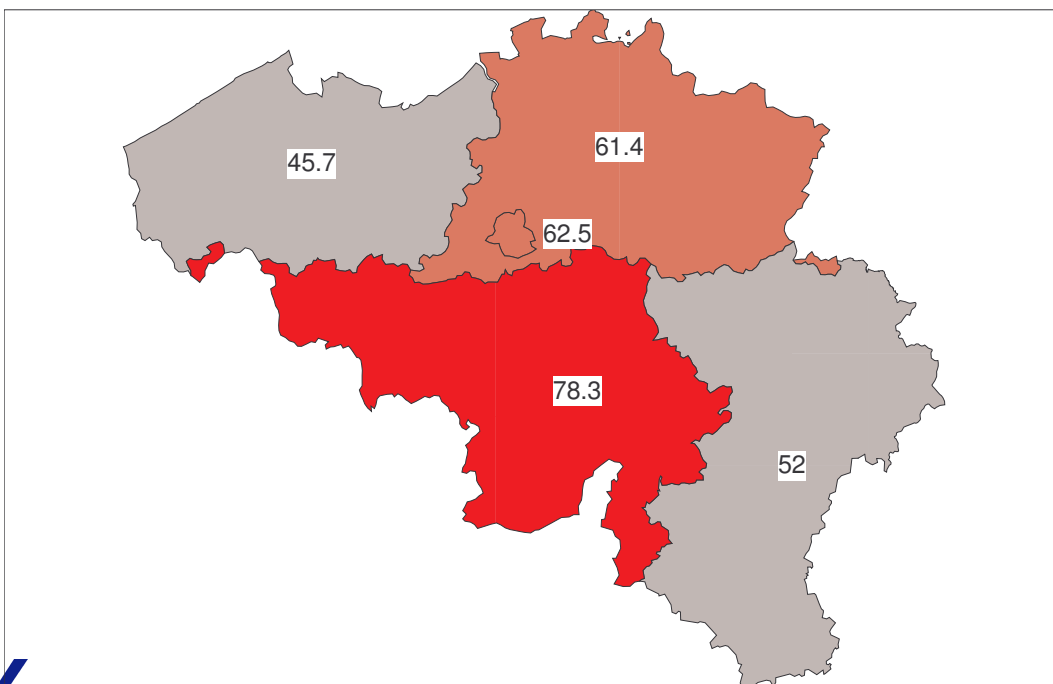
Figure 43. Incidence SEP with Enterobacter spp.



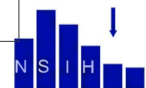
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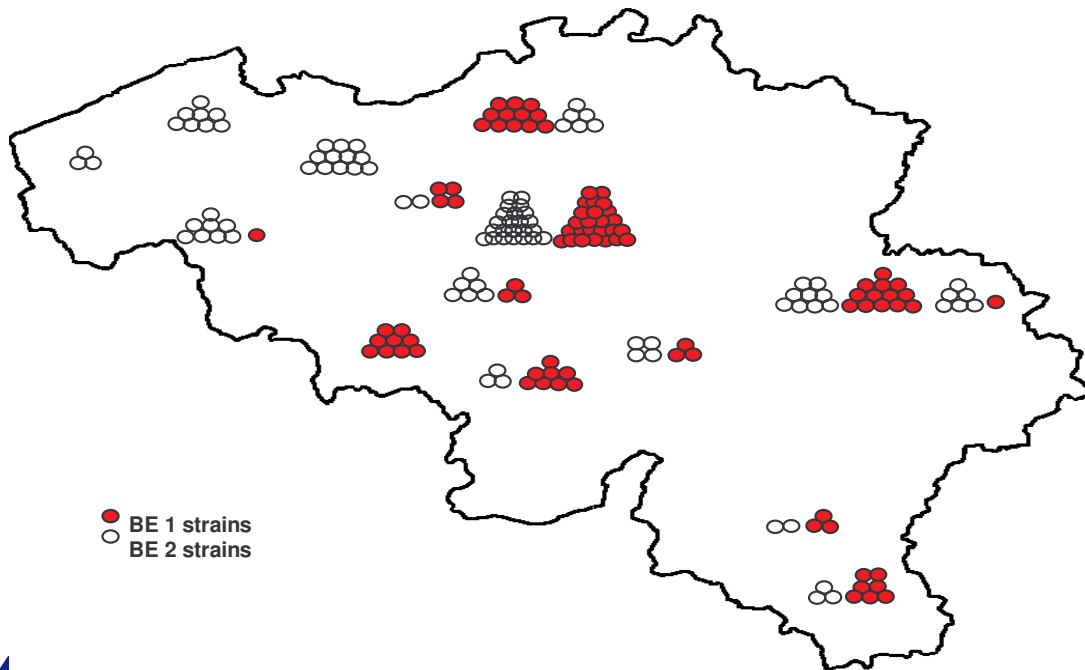
## Regional differences in antibiotic resistance in the ICU, 1997-2002 : *E. aerogenes* C3-R%



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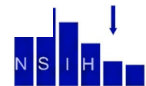


## Enquêtes GDEPIH 1996-1998: 75% des souches d'*E.aerogenes* = 2 types épidémiques

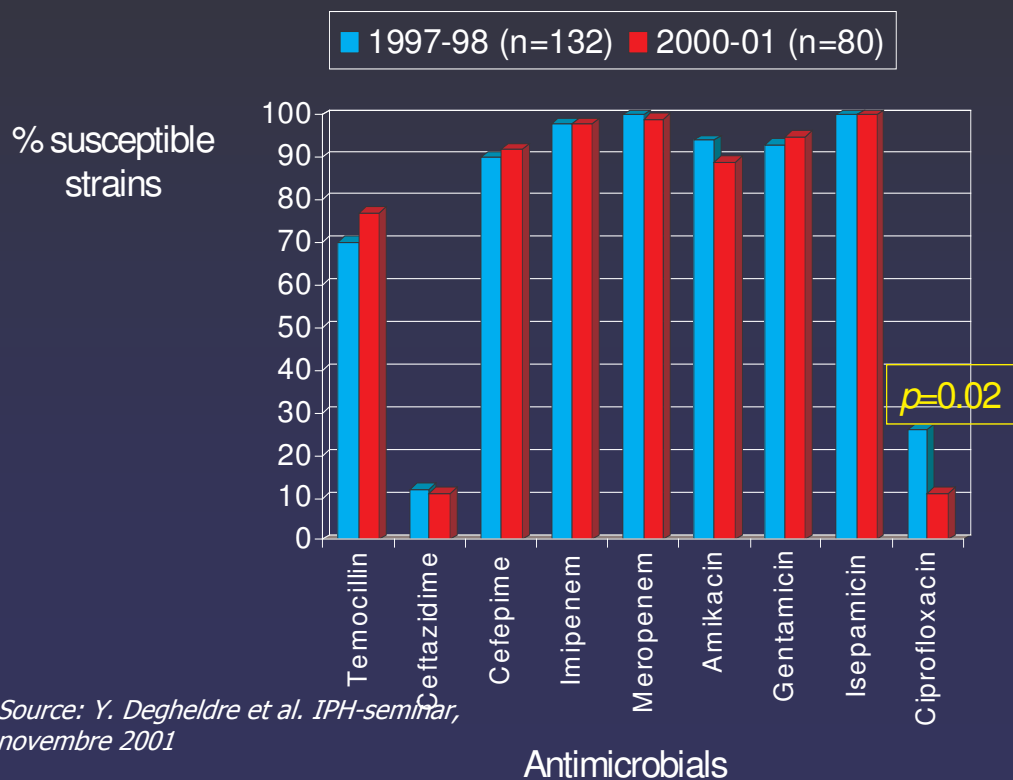


Source: Y. Degheldre et al., *J.Clin.Microbiol.*, Mar.2001

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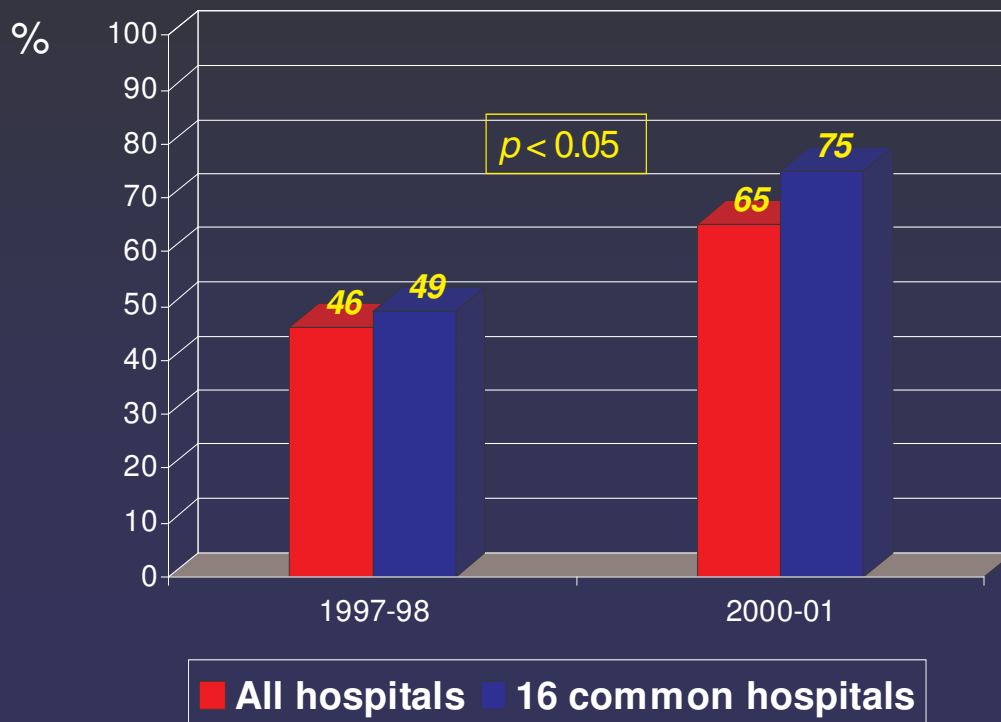


## Antimicrobial susceptibility of MREA strains, 1997-98 compared to 2000-01 (n = 16 hospitals)



Source: Y. Degheldre et al. IPH-seminar, novembre 2001

## ESBL production by MREA strains, 1997-98 compared to 2000-01



Source: Y. Degheldre et al. IPH-seminar,  
novembre 2001

### Depuis 2000: surveillance nationale des MREA

Multiresistant E.a. (MREA): resistant at least to  
one 3th generation cephalosporine:

*ceftazidime, cefotaxime, ceftriaxone, aztreonam*

and

one fluoroquinolone:

*ofloxacin, levofloxacin, ciprofloxacin*

Nosocomial MREA (n-MREA)

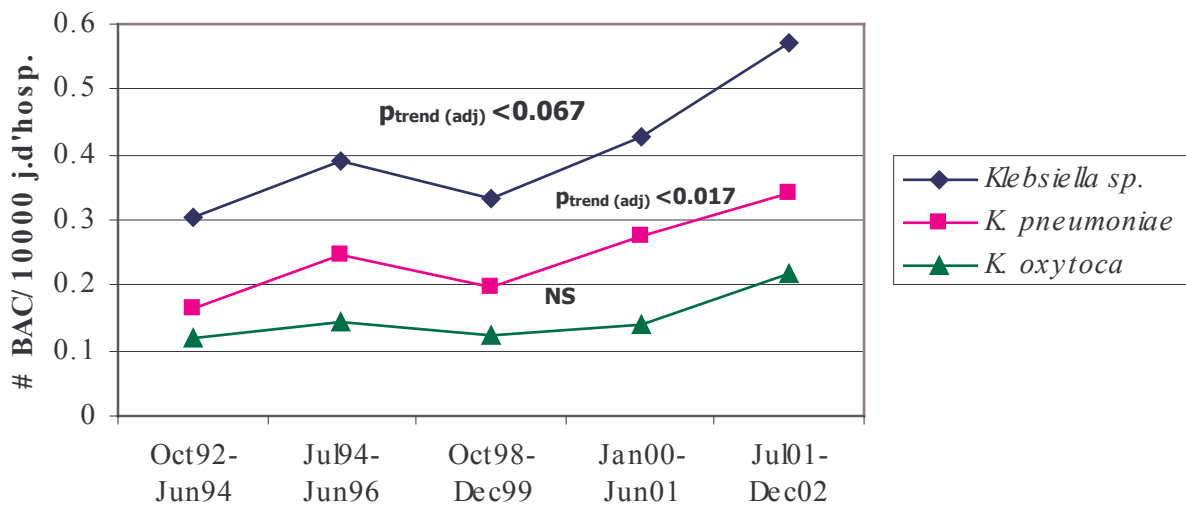
infection or carriage of MREA, hospital acquired and not present  
at admission (first positive culture > 48h. after admission)





Une histoire semblable, à suivre...

### Klebsiella species



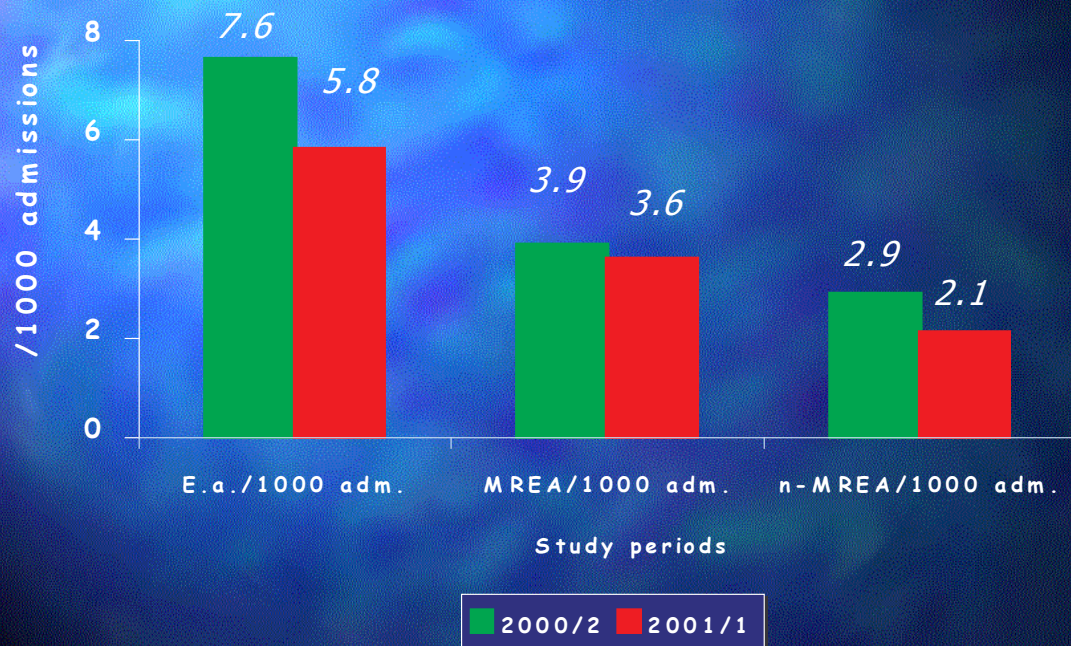
Hôpitaux réguliers, n=81



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### Incidence of E.a., MREA, n-MREA (all hospitals, n=42)



Woluwe, October 2002

# Discussion

- Augmentation de l'incidence des bactériémies à *E. aerogenes* (+ *Klebsiella pneumoniae*, *E. coli*) lié à une augmentation de l'antibiorésistance
- Augmentation AR en *E. aerogenes* lié à augmentation du % BSLE
- Clone BE 1, plus prévalent en Wallonie,
  - +TEM-24 beta-lactamase,
  - ≅ souche épidémique France
  - « sequence of spread is not clear »  
(Y. Degeldhre et al.)



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