

Antimicrobial use and
prevalence of hospital
infections
Experience with repeated
Prevalence studies in
Latvia 2003-2005

E.Pujate MPH
Hospital epidemiologist
Stradins University Hospital
Riga, Latvia

Objectives and Methods

- Measure antibiotic consumption and prevalence of nosocomial infections
- 3 consecutive prevalence studies
- All treated patients in each ward were surveyed during one day
- Study sample – patients on antibiotics in study day
- Performed by trained infectious diseases specialist or hospital epidemiologist

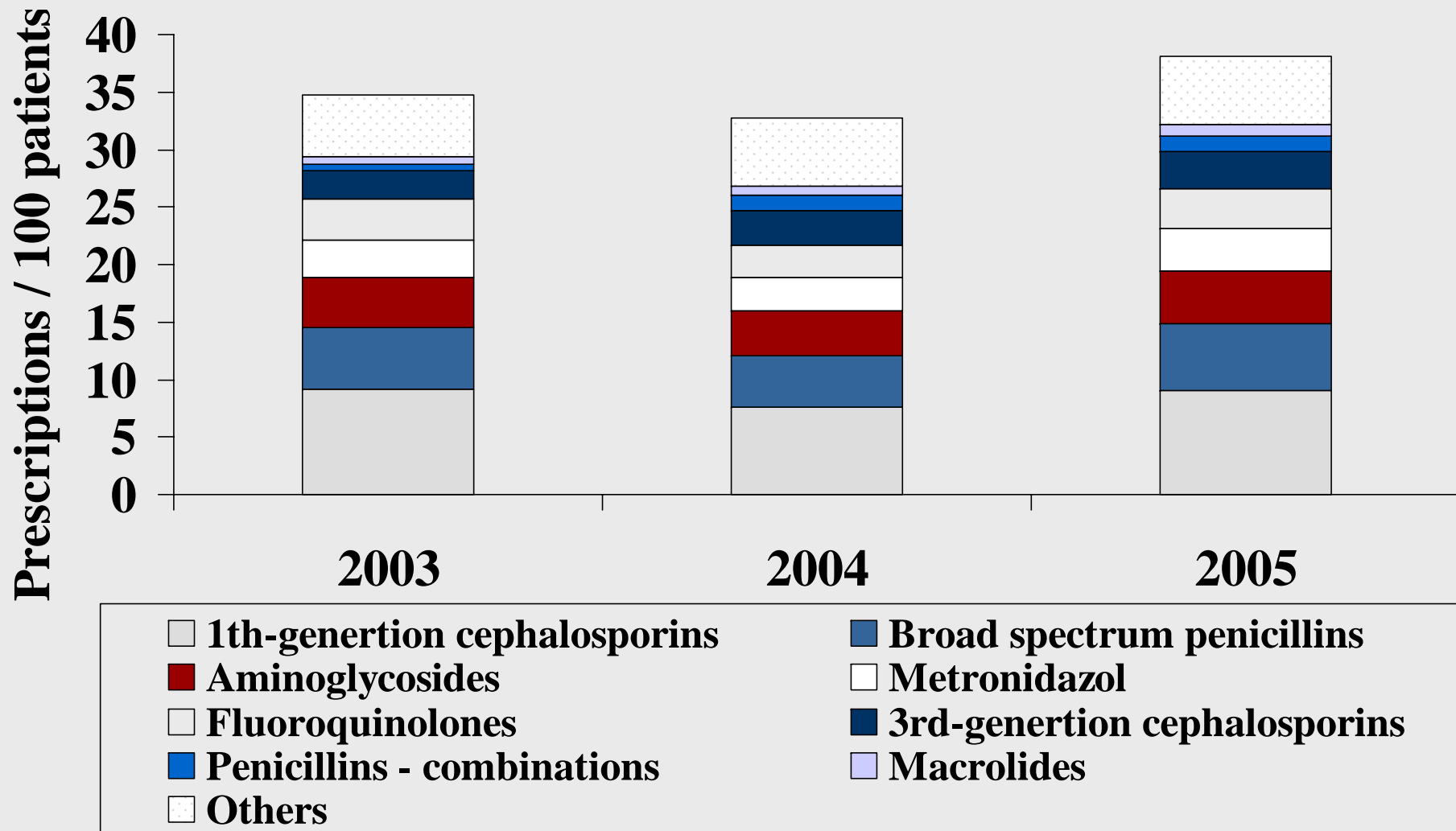
Information about

- Ward and patient
- Used antibiotics
 - Dosage, route of administration
- Indications:
 - Infection:
 - CI or NI
 - Prophylaxis
 - Surgical or therapeutically
 - No indication

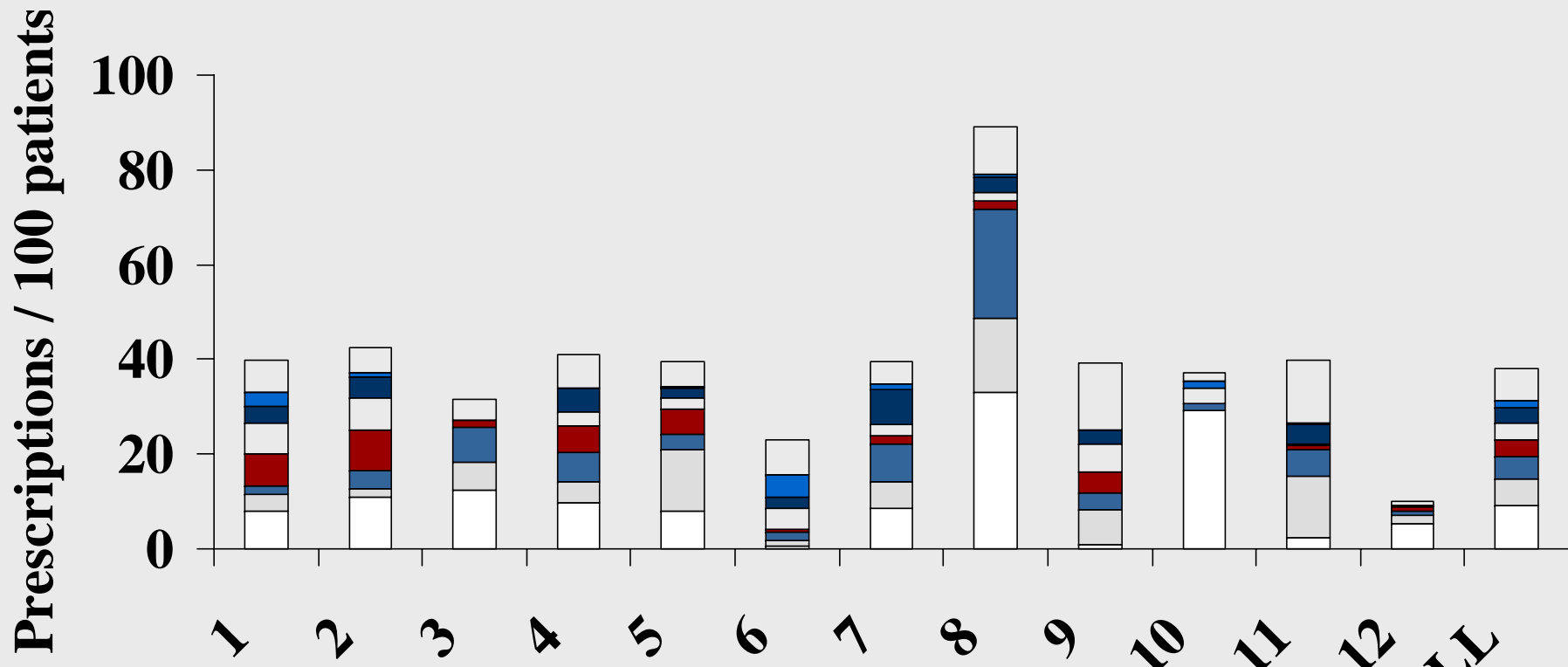
Situation

	2003	2004	2005
Hospitals	7	9	12
Patients	3150	3774	4883
Included patients (with AB)	846	989	1385
Prevalence of AB use 7 hospitals	26,9	26,2	28,6
Prevalence of infections	17,3	18,9	21,8
Nosocomial	3,9	3,9	3,1
Community acquired	13,4	15,0	18,7

Use of different antibiotic groups (2003-2005)

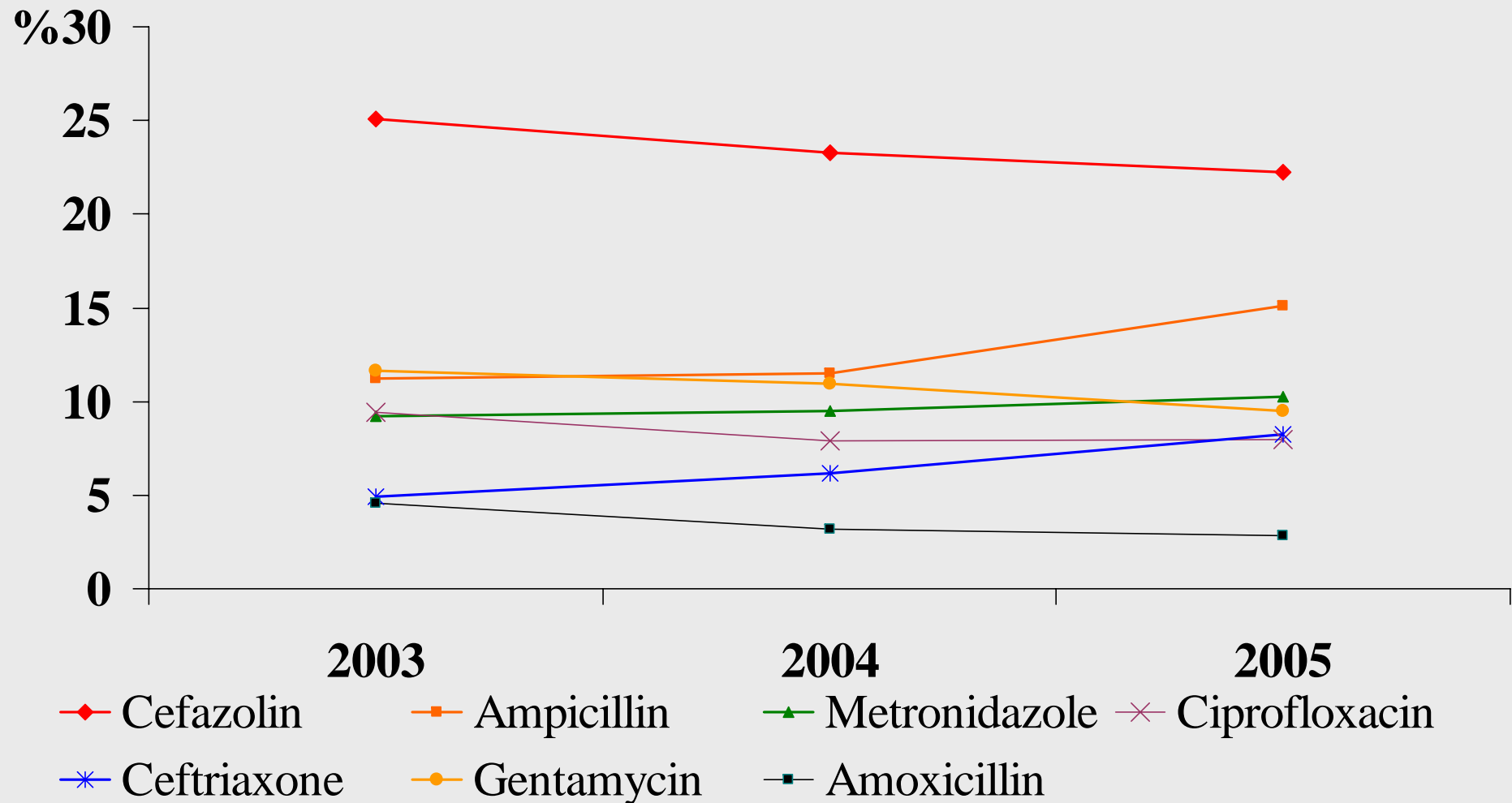


Prescribed antibiotic groups in all hospitals, 2005

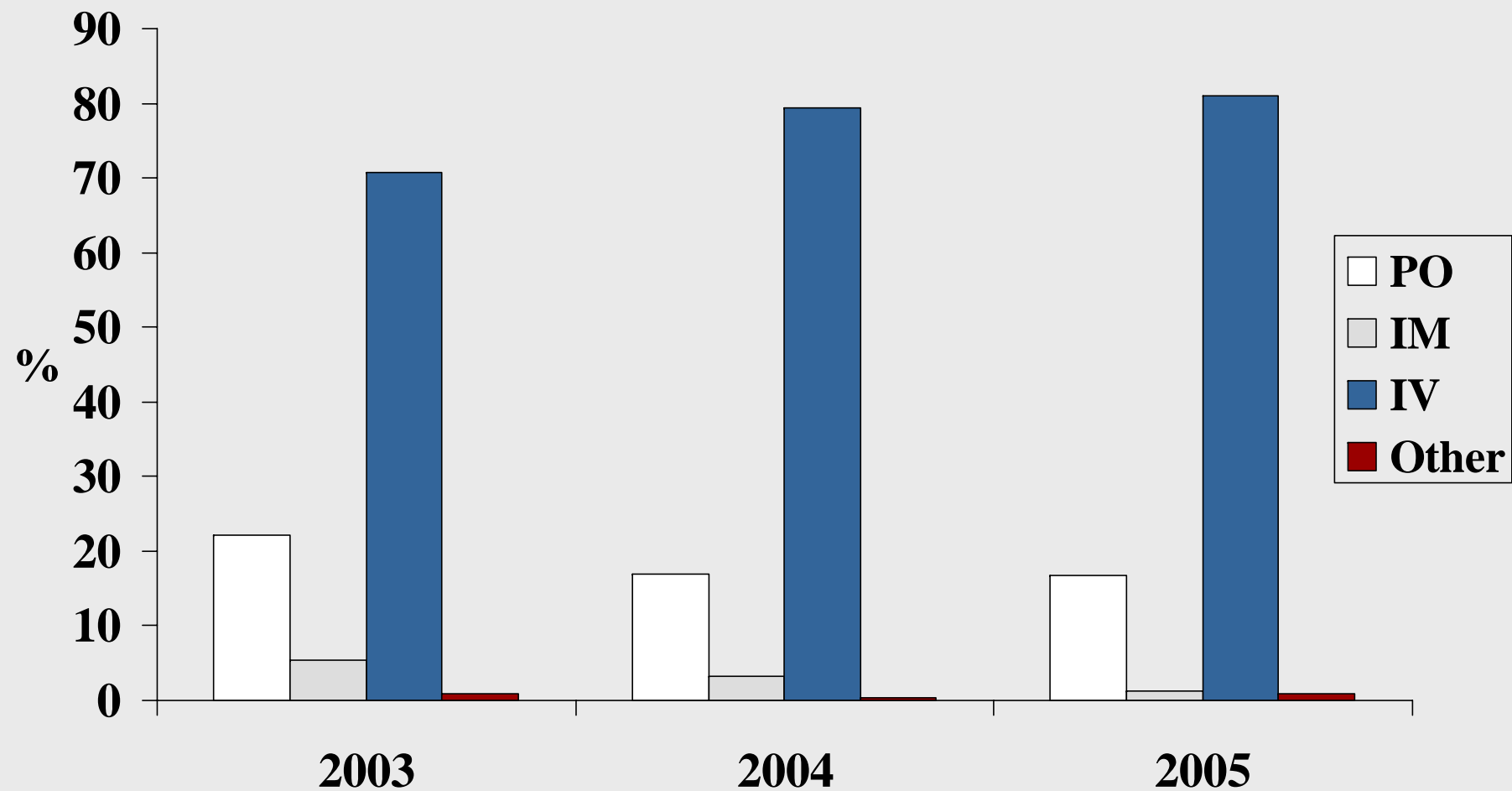


- 1th-generation cephalosporins
- Aminoglycosides
- Broad-spectrum penicillins
- Metronidazole
- Fluoroquinolones
- 3rd-generation cephalosporins
- Penicillins - combinations
- Others

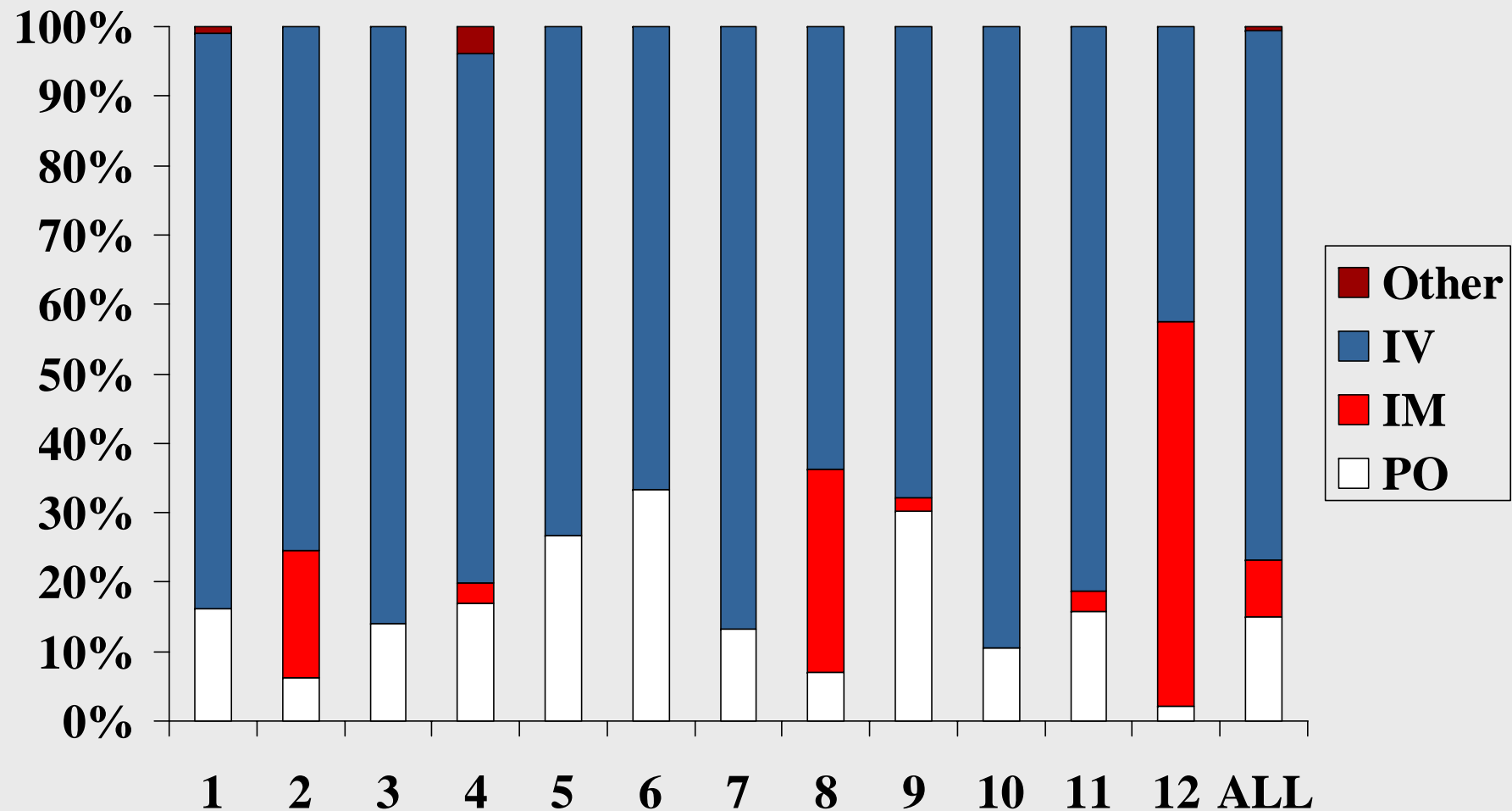
Trends of antibiotic use in 6 hospitals



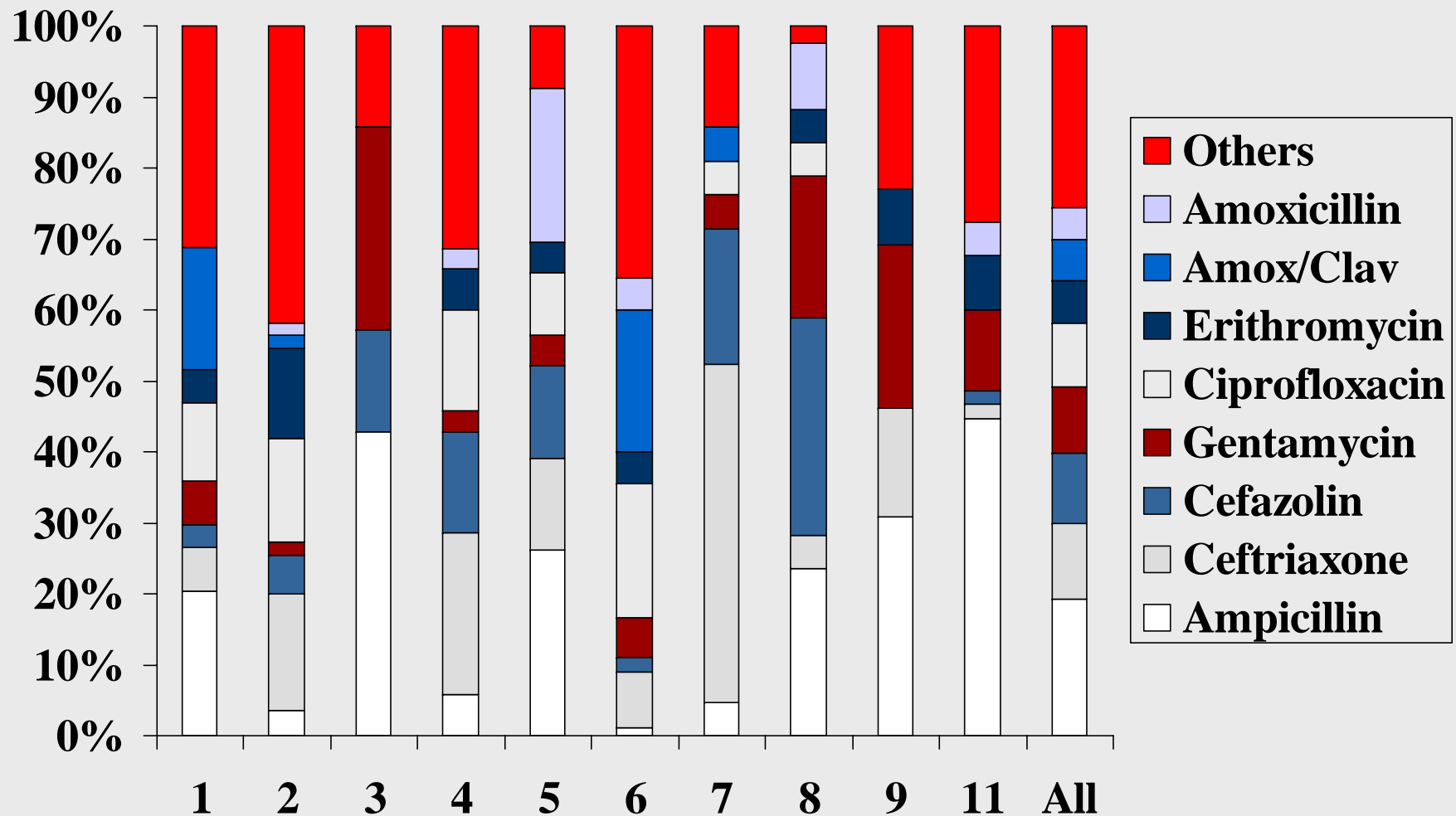
Route of administration



Route of administration in hospitals, 2005



AB used for treated of LRTI in 10 hospitals



Conclusions

- Intervences like prevalence study give us possibility to compare hospitals and it outlines variations and possible problem areas
- Concerned about infection data quality. Too low rate of NI.
- Antibiotic consumption in Latvia is uncontrolled and chaotic

Conclusions

- Practices in hospitals are different
- Proportion of hospitalised patients who receive antibiotics vary from 10-49%
- Different antibiotics for infections (LRTI, UTI)
- Variations in the route of administration

Acknowledgements

- Anna Mironovska
- Dace Pavlovska
- Dace Rudzīte
- Dace Vīgante
- Ilze Vingre
- Kristīne Mežgaile
- Linda Zeidaka
- Mārīte Kūla
- Olga Ņikitina
- Renāte Snipe
- Rita Zdūne
- Uga Dumpis

<https://www.abresistance.lv>

- Web page on antibiotic consumption and antimicrobial resistance in Latvia
- Web based data entrance for prevalence study

Thank you!