



GOT18-0628

# Antibiotic use



## in a tertiary care hospital

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### Objectives

- Monitor antibiotic consumptions
- Describe the most prescribed classes
- Describe the most common indications

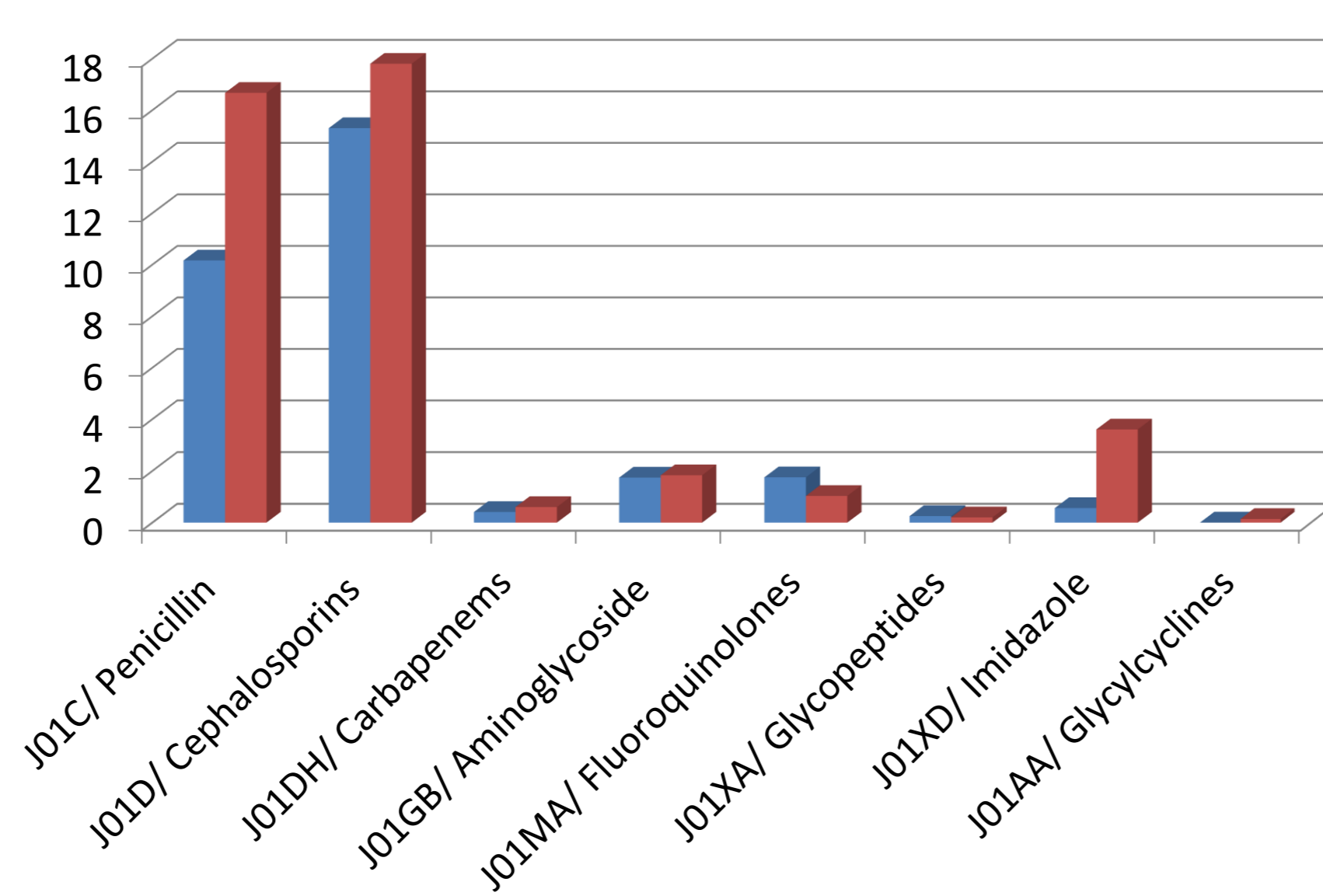
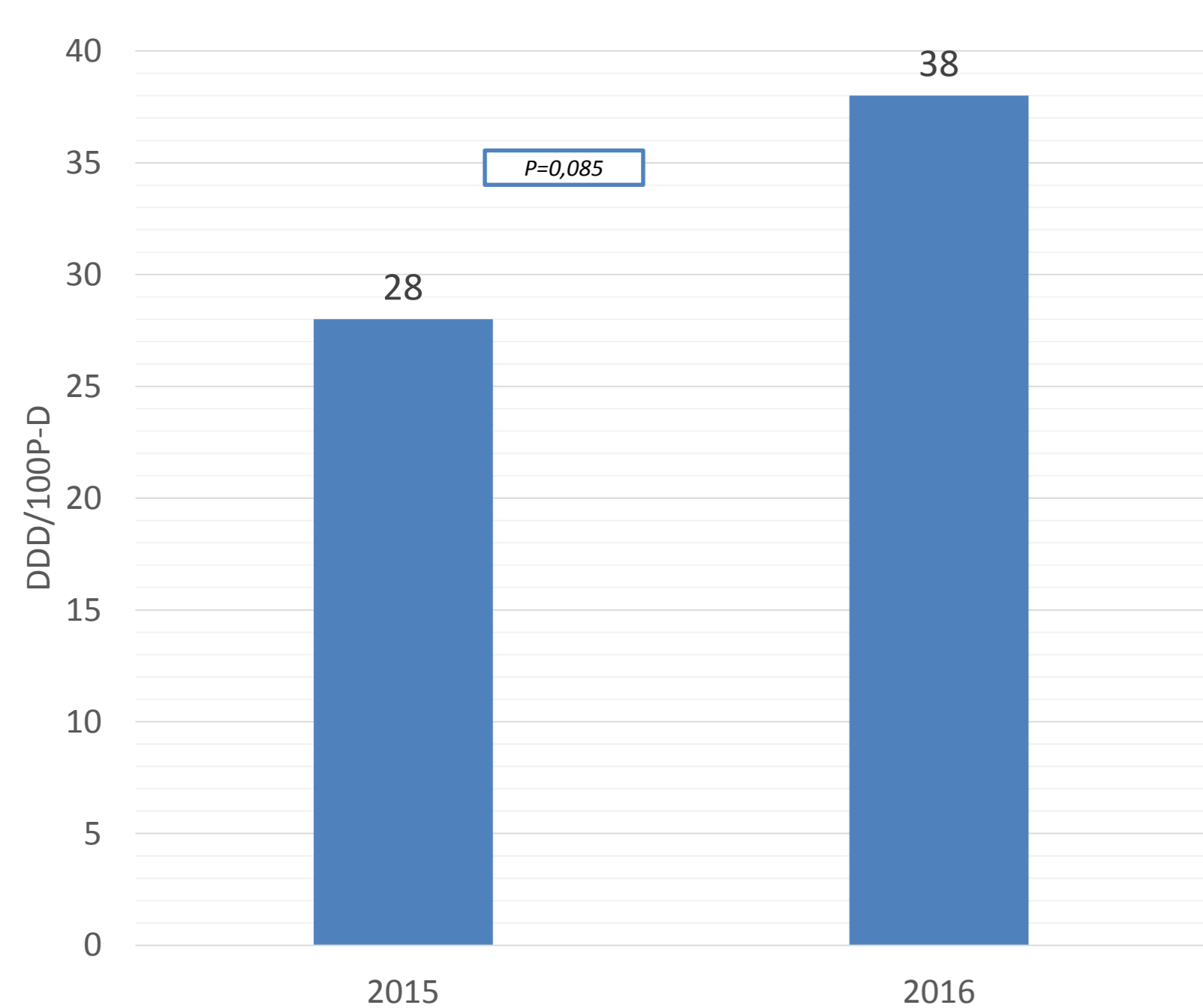
Bacterial resistance is a Major concern in Healthcare

### Methods

- A descriptive and analytical, two-year (2015-2016) study of antibiotic consumption and prescribing in Mohammed VI University hospital, Oujda, Morocco.
- Systemic antibiotics (J01 of ATC classification) were included in the study.
- The consumption data were measured according to WHO ATC-DDD recommendations 2017.
- Patient data and antibiotic prescriptions were collected from registered prescriptions at the central Pharmacy Department.
- The statistical analysis was carried out by SPSS version 21.0.

### Results

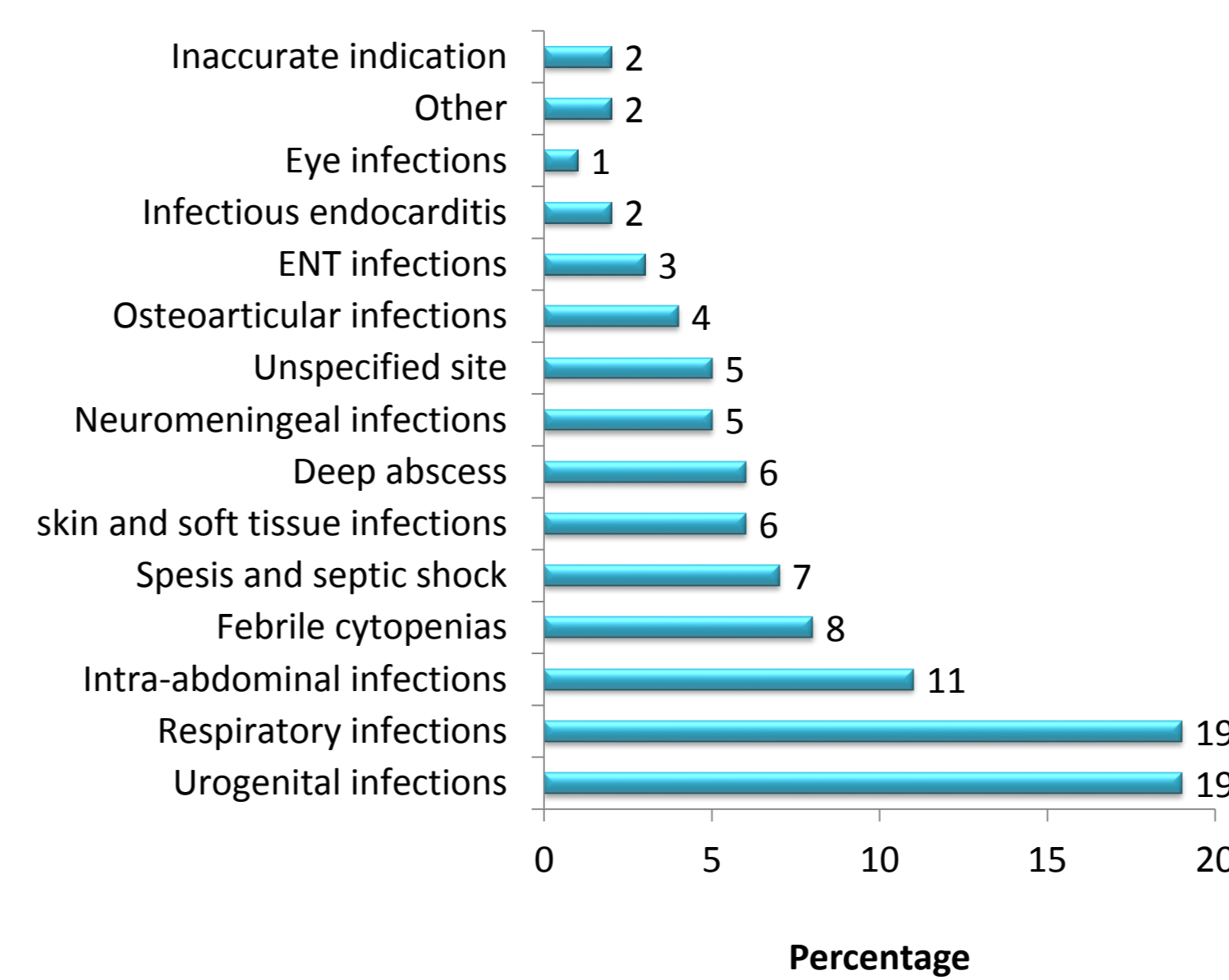
#### Antibiotic consumption



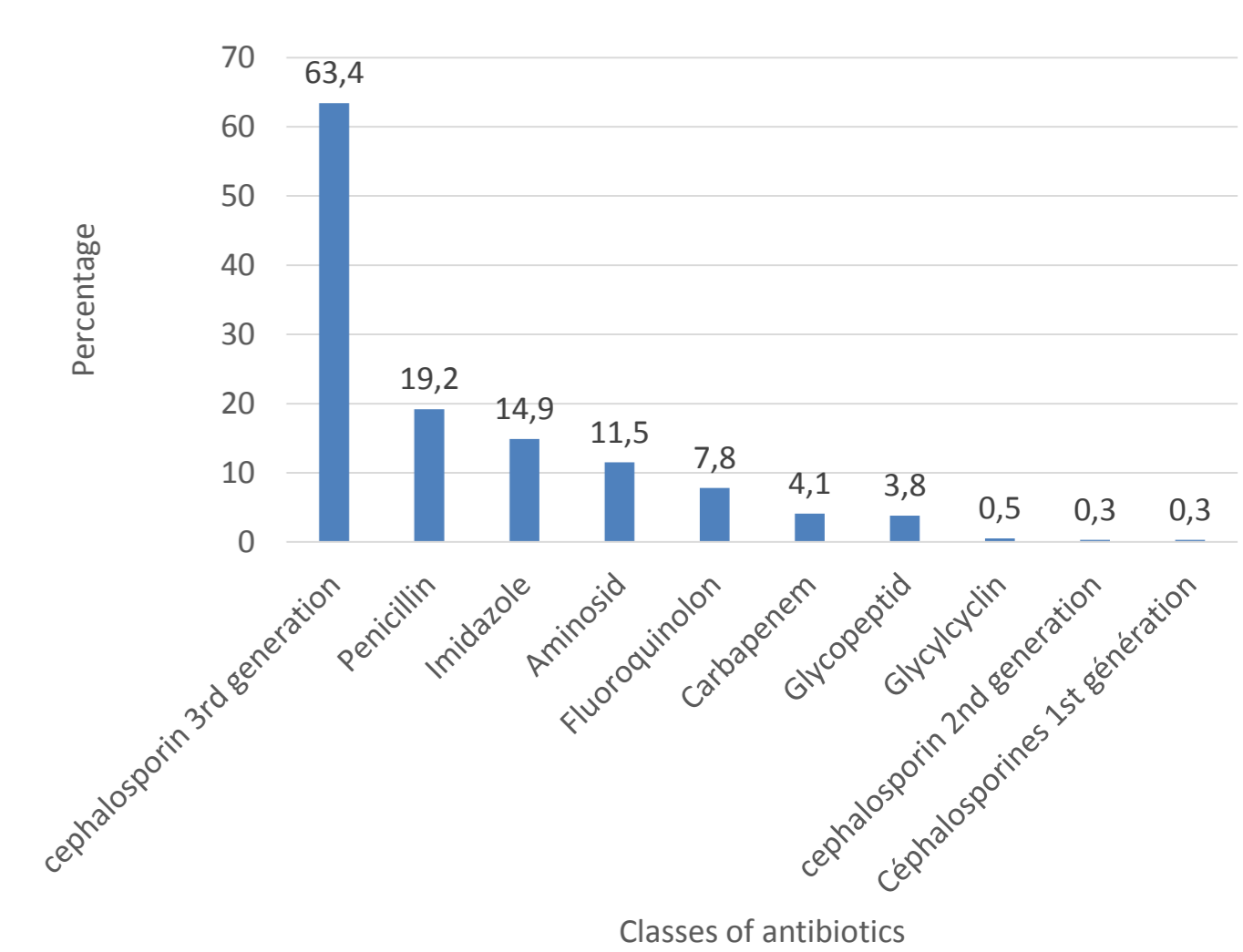
Antibiotic consumption by therapeutic classes

#### Antibiotic prescribing

2141 prescriptions of antibiotics

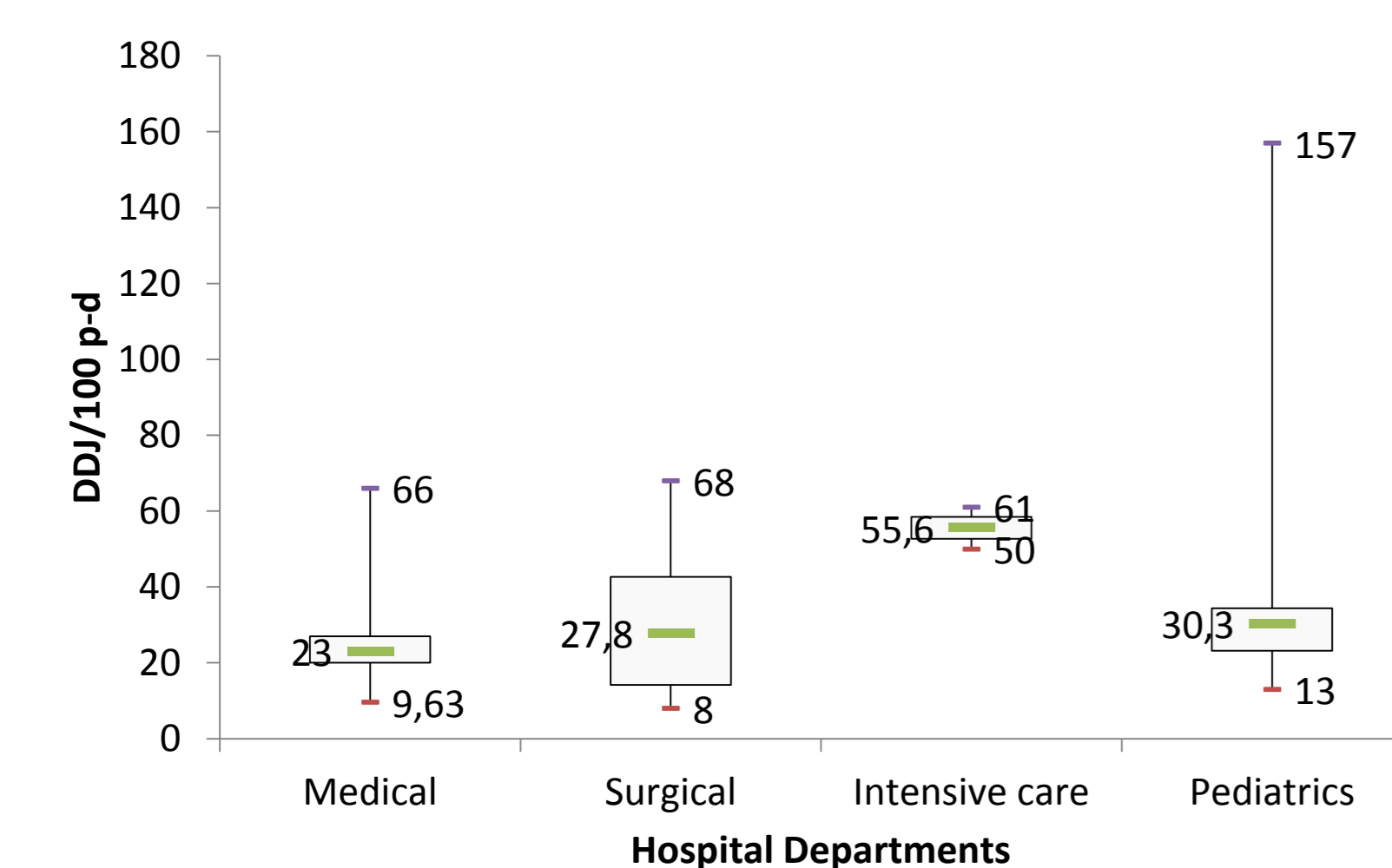


Indications for antibiotic therapy

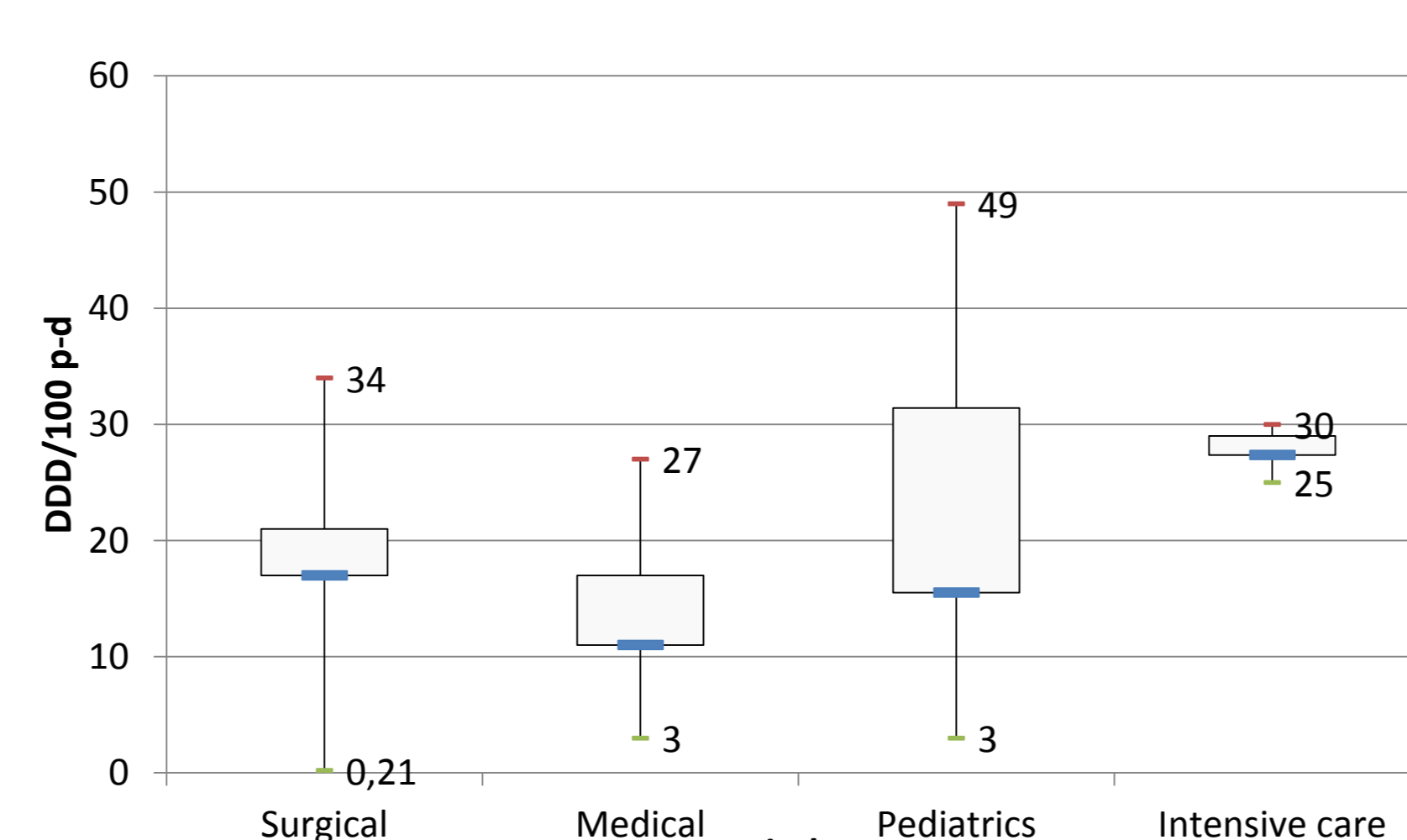


classification of prescribed classes of antibiotics

#### Evolution of Antibiotic consumption



Overall Antibiotic Consumption by Sector



Ceftriaxone use in hospital Sectors

#### Antibiotic Prescription analysis in different hospital Sectors

Therapeutic class	Medical	Surgical	Pediatrics	Intensive care	Emergencies	P
Penicillin	156 (17,8%)	86 (14,4%)	148 (31,4%)	22 (12,6%)	0	<0.001
cephalosporin 3rd generation	526 (60,2%)	409 (68,5)	294 (62,4%)	106 (60,9%)	23 (92%)	<0.001
cephalosporin 2nd generation	0	0	6 (1,3%)	0	0	<0.001
Céphalosporines 1st génération	1 (0,1%)	2 (0,3%)	3 (0,6%)	0	0	0.45
Aminosid	36 (4,1%)	53 (8,9%)	133 (28,2%)	22 (12,6%)	2 (8%)	<0.001
Fluoroquinolon	83 (9,5%)	51 (8,5%)	0	31 (17,8%)	1 (4%)	<0.001
Imidazole	116 (13,3%)	143 (24%)	32 (6,8%)	27 (15,5%)	0	<0.001
Glycopeptid	44 (5%)	11 (1,8%)	14 (3%)	12 (6,9%)	0	0.003
Glycylcyclin	2 (0,2%)	5 (0,8%)	0	3 (1,7%)	0	0.026
Carbapenem	46 (5,3%)	15 (2,5%)	12 (2,5%)	15 (8,6%)	0	0.001

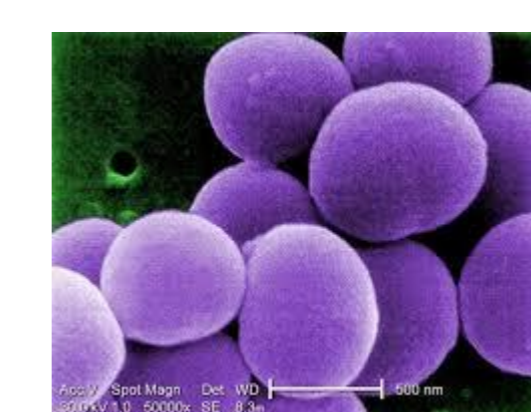
### Discussion

Our study showed that antibiotic consumption is higher in Intensive care, this finding is observed in other similar studies. the study has set up an important prescription of cephalosporins of 3rd generation in emergency department. According to other studies, the majority of cephalosporin of 3rd generation prescriptions in emergencies may be preventable.

High consumption of 3cephalosporin rd generation and carbapenems

Carbapenemases + BLSE

High Bacterial Resistance



### Conclusion

The spread of antibiotic resistance is governed by human behavior. Hence, the need for a stewardship to reduce the consumption of broad-spectrum antibiotics and also resistance by strengthening the nominative validation of prescription of antibiotic therapy and its reassessment 24 to 48 hours later

