

# EVALUATION OF AN ANTIMICROBIAL STEWARDSHIP INTERVENTION IN A GENERAL HOSPITAL

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## OBJECTIVES:

To evaluate the impact of an intervention that was designed to survey, audit and optimize the administration of **colistin (C)**, **daptomycin (D)** and **tigecycline (T)** in a tertiary general hospital, as an additional measure in the already implemented hospital Antimicrobial Stewardship Programme (ASP).



## STUDY DESIGN:




Medication review of all prescribed medication, including antimicrobials, is performed at the hospital pharmacy (HP) (Perdikouri et al., Eur J Hosp Pharm 2017;24, Suppl 1: page A244-A245).

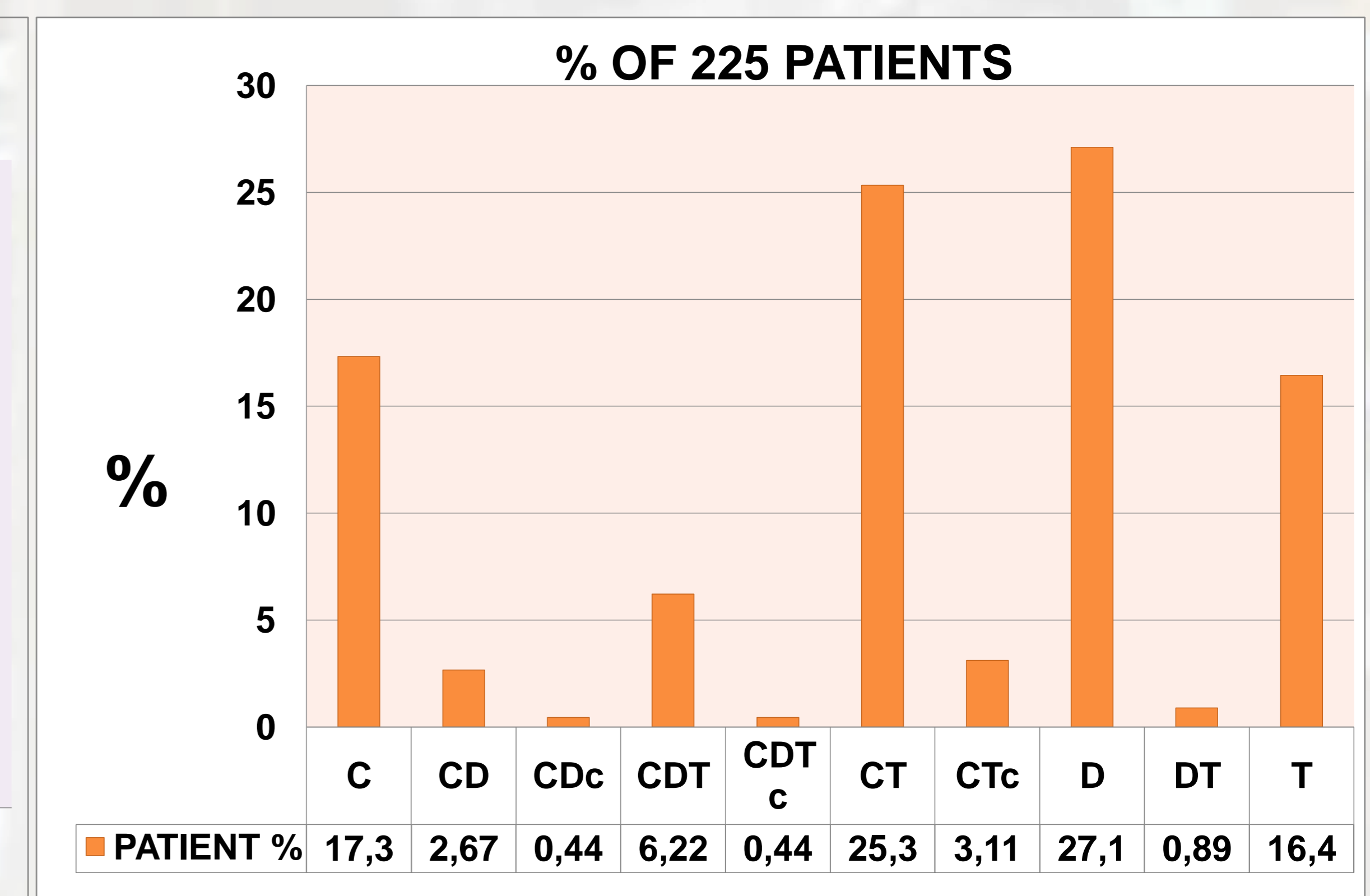
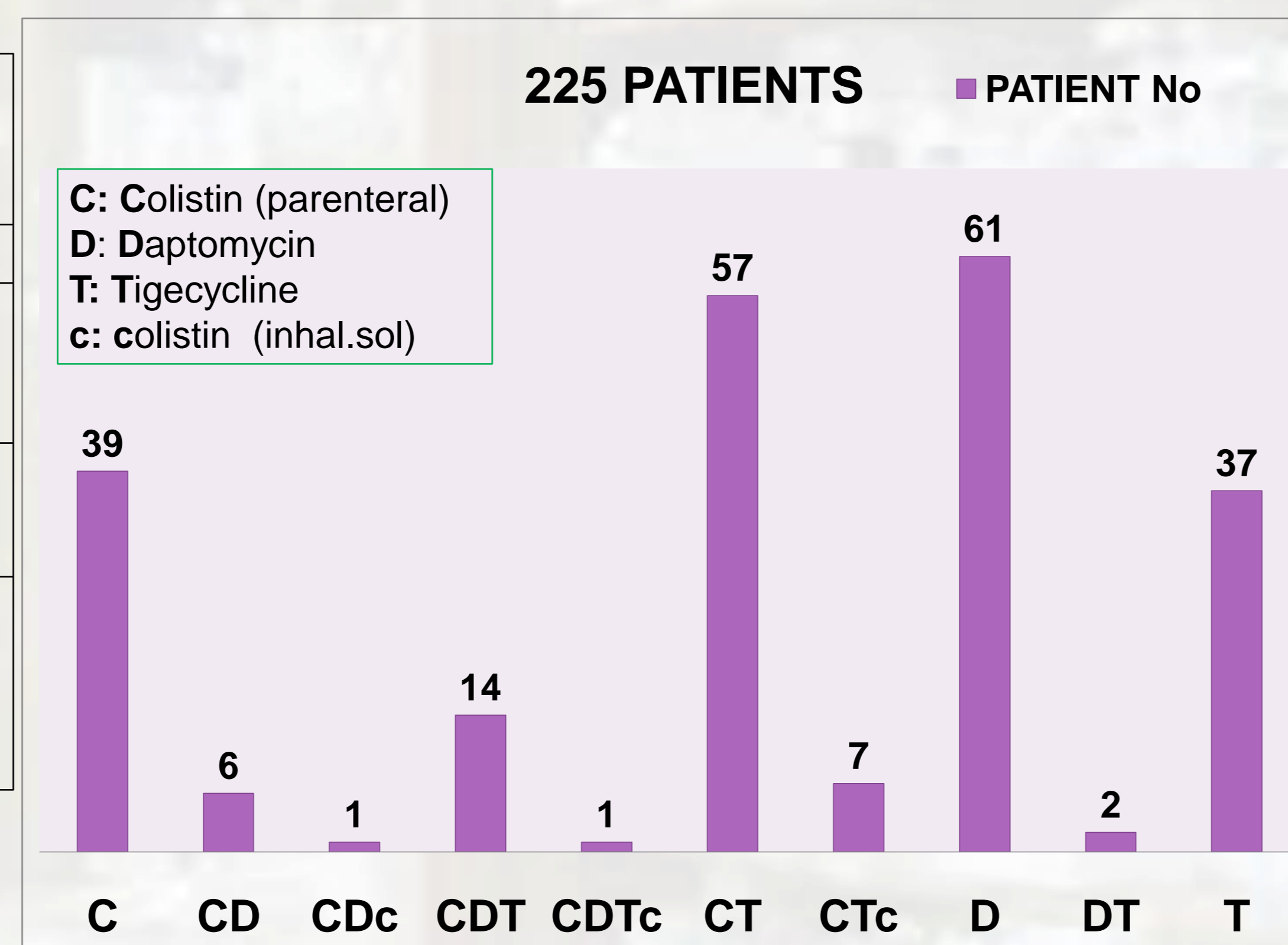
Supplementary documentation (on printed forms) regarding the administration of the three antimicrobials (C, D, T) was requested, for six months in 2017 (26 weeks, February 13<sup>th</sup> to August 14<sup>th</sup>, 2017) and if not provided to the HP, a hospital Infectious Diseases Committee (IDC) member was assigned to audit the patient case and recommend appropriate adjustments, if required.

Data were collected and analyzed by Excel® and SPSS®.



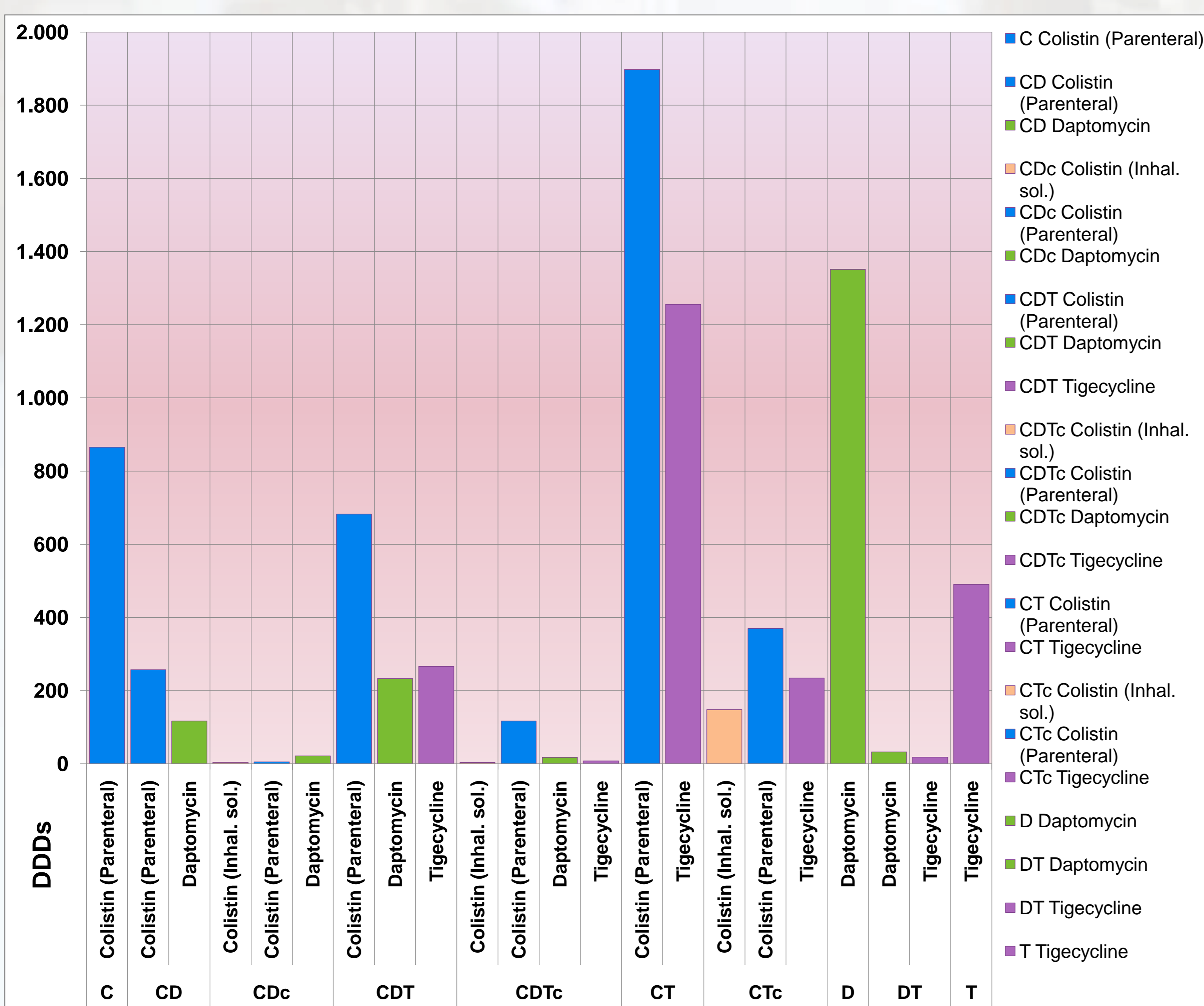
## RESULTS:

Icon	No (average)	% (average)
	750	100
Rps/w		
CDT Rps/w	72	10
CDT Rps/w Non submitted forms	63	87,5 of CDT Rps/w
CDT Rps/w audited	31	49 CDT Rps/w Non submitted forms



Rps/w : Prescriptions per week  
CDT : Colistin or/and Daptomycin or/and Tigecycline

Treatment optimization, based on consequent IDC recommendations, was observed in 8 patients (9% of the 91 audited cases, out of 225 patients), whereas for all the other, treatment was according to clinical and therapeutic guidelines and recommendations \*



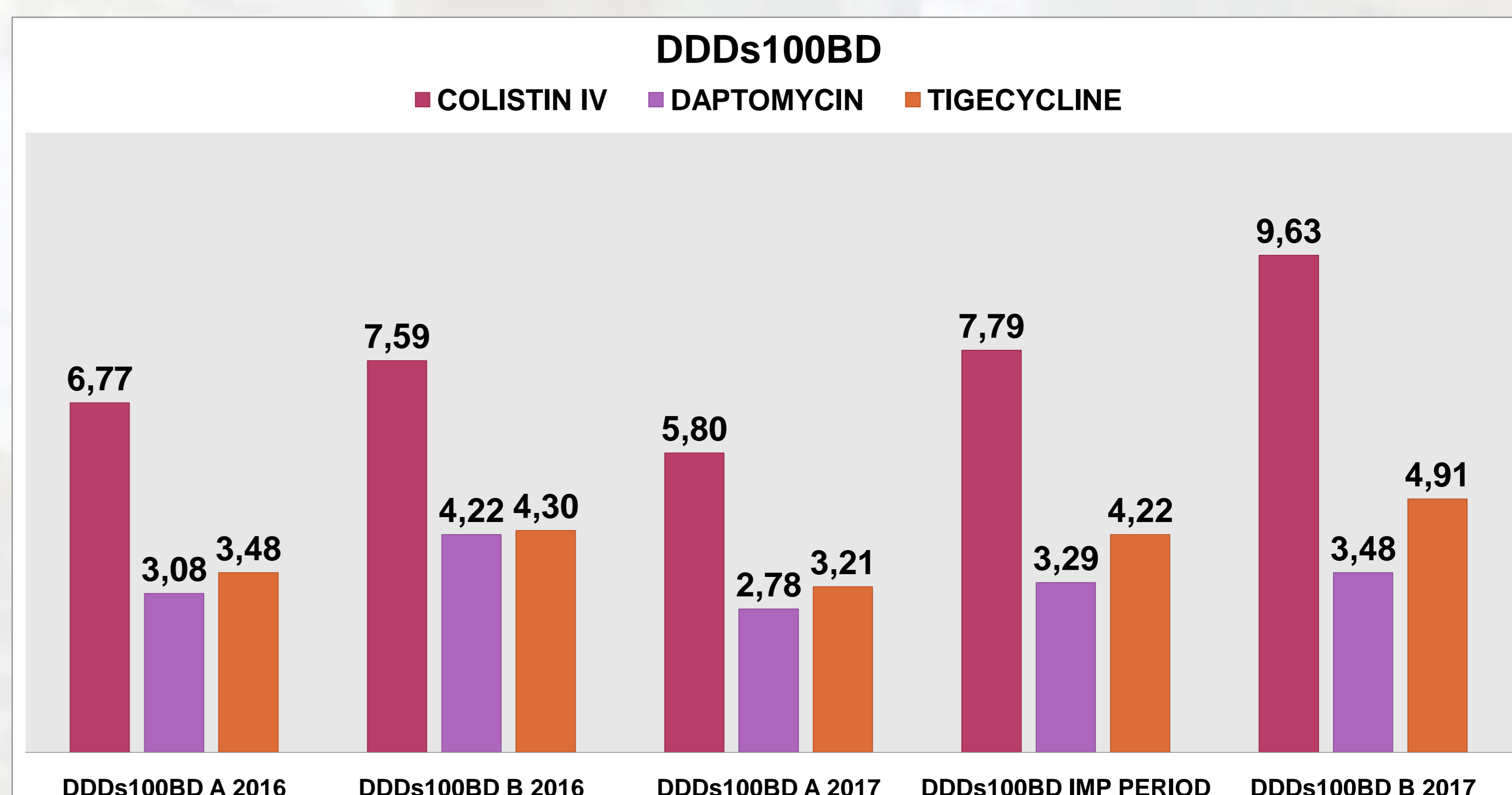
DDDs: Daily Defined Doses

Length of stay and mortality rates among audited, optimized for treatment, cases remained unaffected by the intervention, although data need further analysis.

\* Personal communication with the IDC auditor

## ACKNOWLEDGEMENTS:

We would like to thank the members of the IDC and the IT department of our hospital for a, beyond any expectations, excellent and constructive collaboration



DDDs100BD: Daily Defined Doses per 100 beddays, IMP : Intervention 13 Feb to 14 Aug 2017

DDDs of antimicrobials in combination for all 225 patients (left) and DDDs100BD in total for 2016, 2017 and the intervention semesters (right)

## DISCUSSION AND CONCLUSIONS:

National legislation often provides the guidelines for development of ASPs but their implementation relies on the perseverance and the communication skills of the hospital Infectious Diseases Committee (IDC) members rather than persuasion of clinicians to prescribe antimicrobials according to legislative and administrative guidelines and recommendations, as they usually rely on their clinical expertise, supported by clinical and therapeutic guidelines and recommendations, to make relevant decisions.

Although this ASP intervention had influenced antimicrobial consumption, it did not significantly impact patient outcomes. The intervention is further evaluated for cost-effectiveness and patient readmission events.