OPTIMISATION OF ANTIBIOTIC USE IN A COUNTY HOSPITAL

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Background

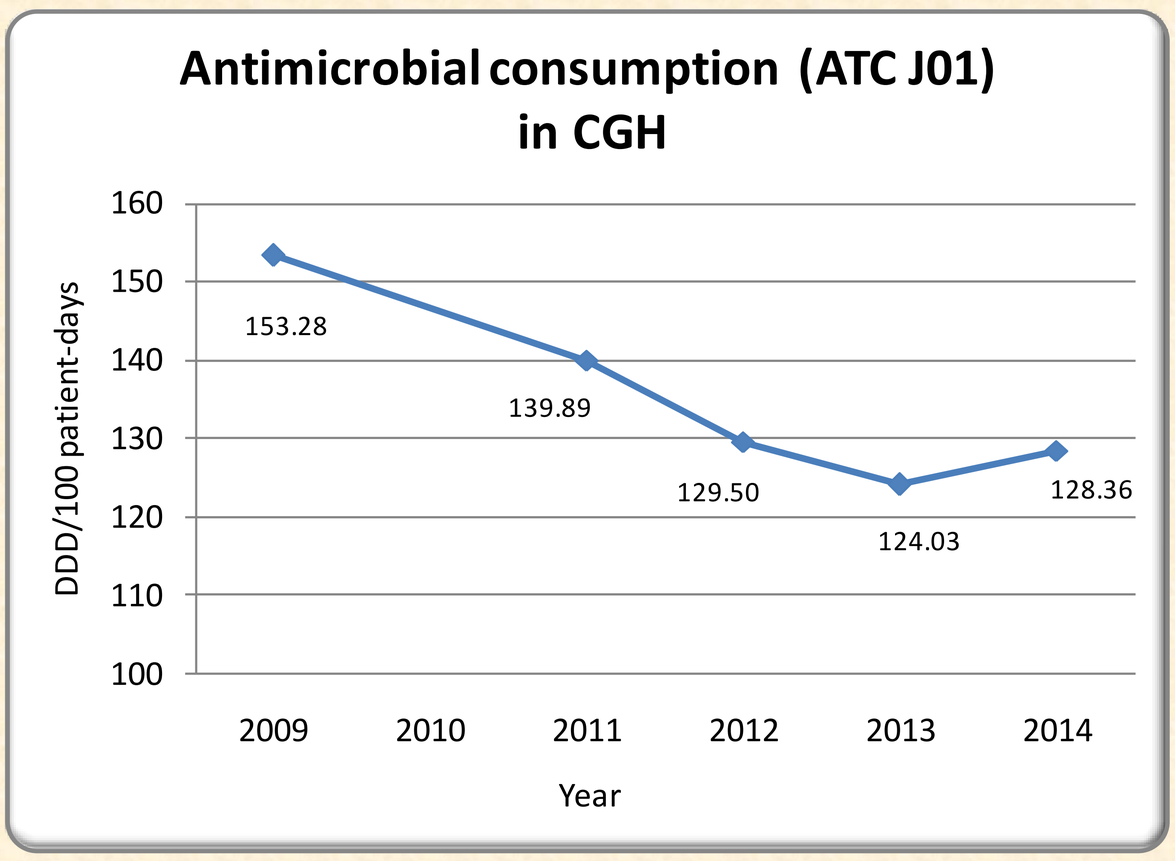
Chania General Hospital "Agios Georgios" (CGH), is a 460-bed public hospital that supports 150000 inhabitants. Since 2010 a number of interventions have been made, concerning antibiotics' distribution from pharmacy department (with unit-dose individual prescription and consequently a tighter control of their use) and initiatives of the Infections Committee (extensive use of antiseptics, staff training etc).

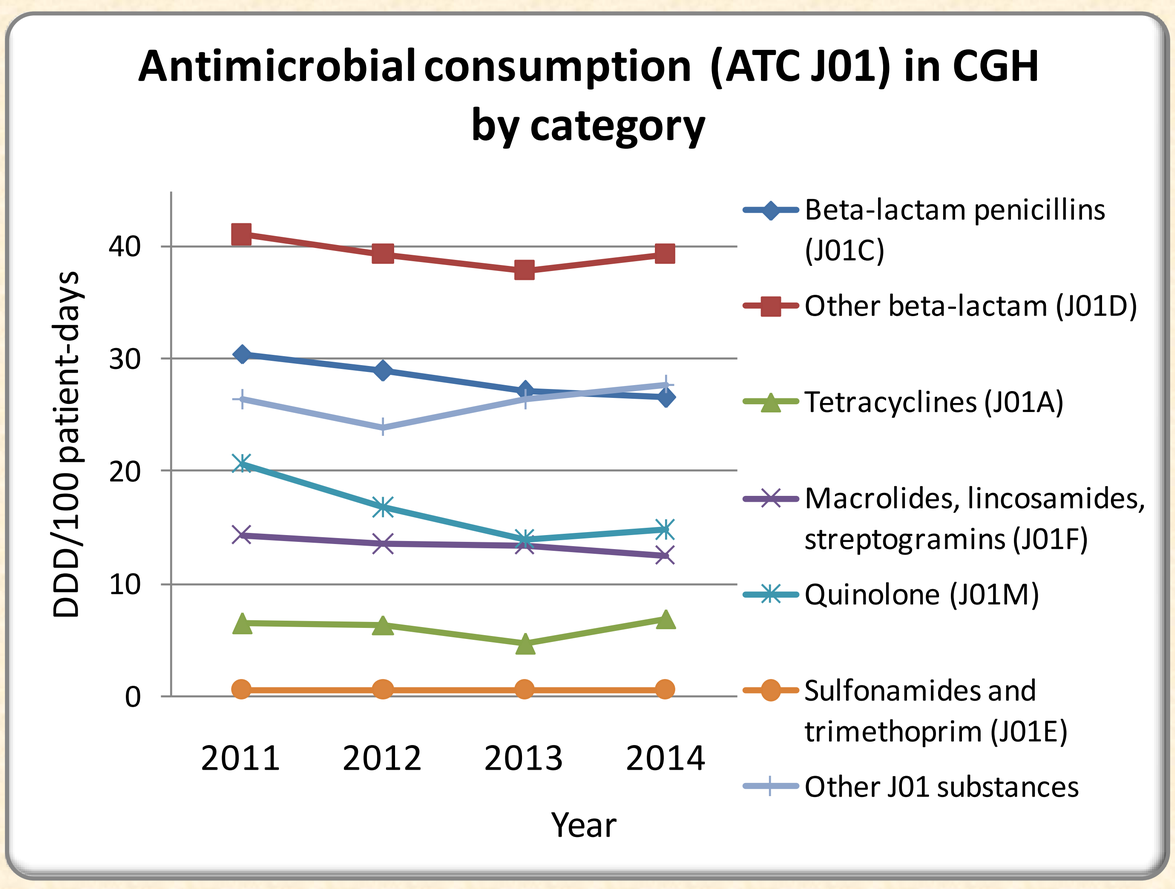
Purpose

The aim of this study was to evaluate the antibiotic consumption in CGH over time as well as correlate it to the aggregated data of **the Public Hospitals of Greece (PHG)**, hoping to improve the provided hospital medication workflow.

Material and methods

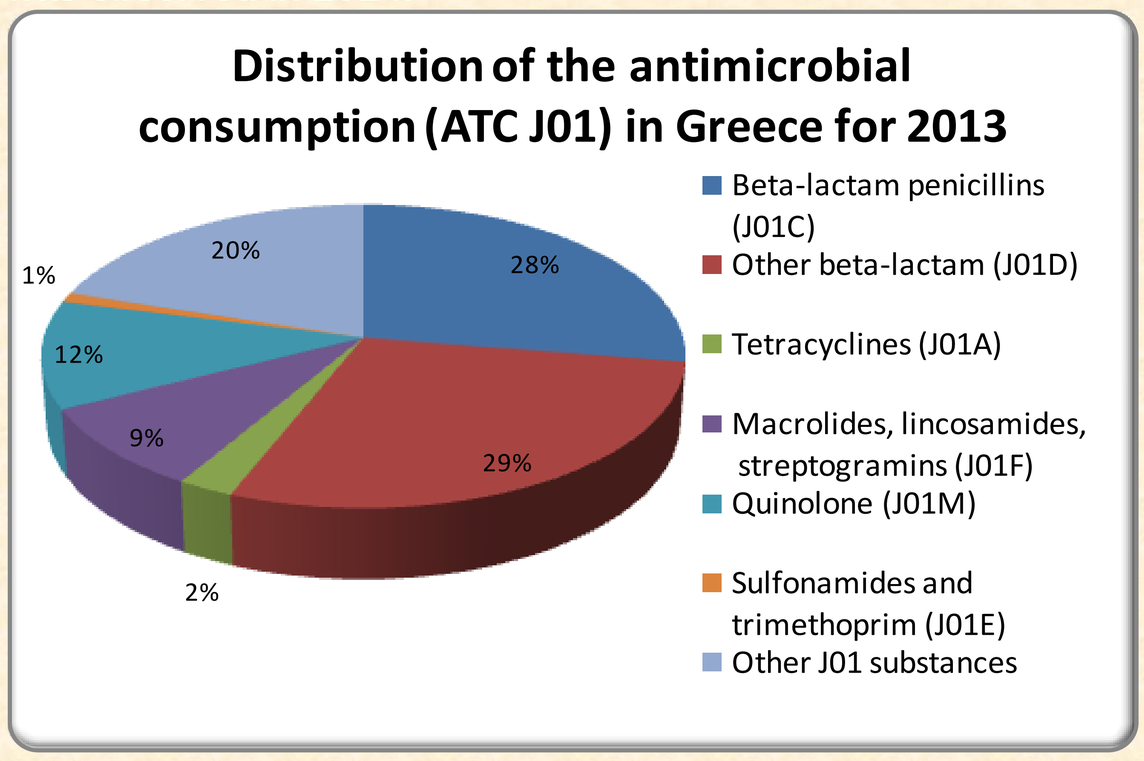
We studied the quantity of prescribed antibiotic substances, expressed in DDDs/100 patient-days, from 2009 to 2014 in CGH, in comparison with the data of the PHG. Antibiotics were classified according to ATC system (category J01).

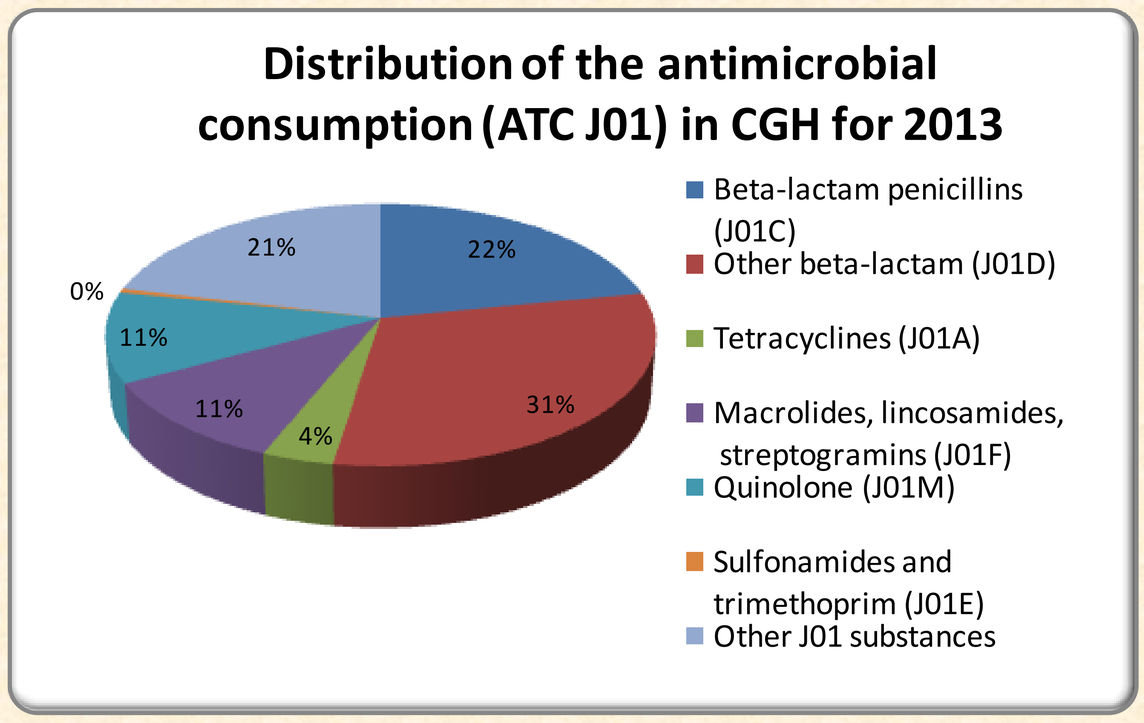


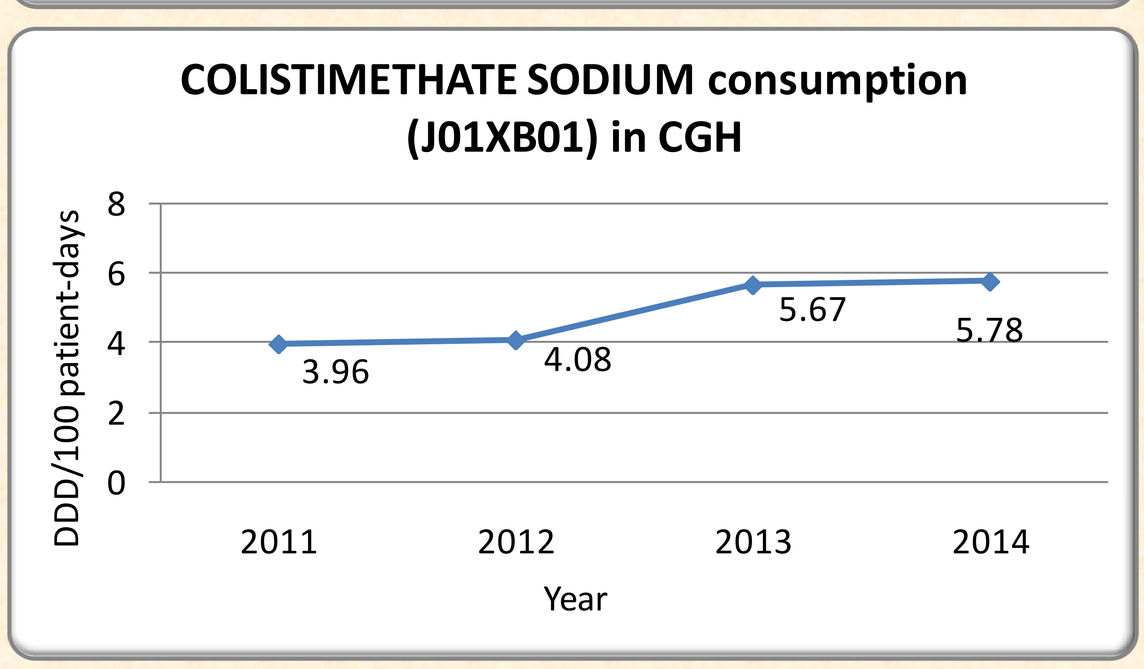


Results

In total, 53.28 DDDs/100patient-days were used in 2009 while 124.03 DDDs/100patient-days in 2013. In 2014 there was a slight increase with 128.36 DDDs/100patient-days.
From 2011 to 2014, the overall use of Tetracycline (J01A) and Other J01 Antibiotics was increased.
During these five years, no significant differences were observed in the distribution of the antimicrobial consumption.
When comparing these findings with the corresponding distribution in PHG for the years 2011 and 2013, a remarkable increase of Tetracyclines' use (J01A) in CGH (4% and 5% respectively) was found (use in PHG (2%)).
Reduced rate of Beta-lactam antibiotics' use (J01C) was conversely observed in CGH (22%), with PHG percentage being 28%.
Significant increase in the use of Colistin (J01XB01) from 3.96 DDDs/100patient-days in 2011 to 5.78 DDDs/100patient-days was observed in 2014.







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Conclusions

The interventions that have been made in CGH led to a gradual decrease in antibiotics' use, between 2009 and 2013, with a slight increase in 2014.
The high rate of Tetracyclines' use (25% of which relates to Tigecycline) and increased use of Colistin, could be justified by the increased number of multiresistant strains of Klebsiella pneumonia and Acinetobacter baumanni, reported in CGH since the 2nd half of 2011.
The reduced use of Beta-lactam antibiotics is possibly related to resistance problems, too.
In collaboration with the Hospital Microbiology department, this study is still in progress aiming to optimize antimicrobial policy making in CGH.