Background & Aim: Antibiotic resistance is important public health problem throughout the world, and is proven to be connected with the excessive use. The aim of this study was to investigate ten-year trends of antibiotic utilisation in Croatia.

Methods: The study is observational, based on routinely collected data from the Annual reports on drugs utilisation, Croatian Agency for Medicinal Products and Medical Devices, 2005 - 2014; anatomical therapeutic chemical classification (ATC) is used; pharmaceutical utilization is expressed in Defined Daily Doses per 1000 inhabitants per day (DDD/TID) and financial spending in Croatian kunas. According to ATC, antibiotics belong to the group J01 and subgroups J01A to J01X.

Results: Since 2005, a stable upward trend of antibiotic's utilisation (17.5 DDD/TID in 2005 and 23.5 DDD/TID in 2014) is recorded in Croatia. Penicillin’s are the most widely used (48-55% of total antibiotic’s utilisation), with increasing trend, from 9.2 in 2005 to 13.0 DDD/TID in 2014. Cephalosporin’s are on the second place (13-16% of total utilisation), firstly with upward and than downward trend (2.9 DDD/TID in 2005, 4.2 in 2010, 3.0 in 2014). Macrolid’s, on the third place, shows a trend similar to cephalosporin’s, firstly slightly increased (2.0 in 2005 to 3.3 DDD/TID in 2010) and then decreased (2.95 DDD/TID in 2014). Tetracyclin’s and quinolon’s share the fifth and sixth places, with stable trends (around 1.5 DDD/TID per years). Utilisation of other antibiotic's, including aminoglycosid’s are less present (less than 1.0 DDD/TID per years).

Conclusions: in comparison to international studies, antibiotic's utilisation in Croatia is rather high and with increasing trends. Our next step is to investigate the utilisation of individual antibiotics and to compare with the international data in order to rise up the awareness of the necessities for changing public and professional utilisation habits.