Background & Objective
Antibiotic prophylaxis in surgery is one of the most important actions to prevent postoperative surgical site infections (SSI). When administered correctly, infection rates can be reduced by 40-60%. Because correct use of antibiotic prophylaxis is so important, guidelines were introduced in the University Hospital Ghent in January 2014. The aim of this study was to review and evaluate the compliance of the prescribers to this guideline.

Main Outcome Measures
Evaluation was done using six quality indicators:

INDICATOR 1: antibiotic administration necessary and administered *100 total surgeries in need of prophylaxis

INDICATOR 2: registration of prophylaxis 60-0 min before incision *100 total surgeries in need of prophylaxis and administered

INDICATOR 3: prophylaxis ended within 24h after first administration *100 total surgeries in need of prophylaxis and administered

Setting & Method
Prophylactic use of antibiotics was retrospectively (03/12/2014 – 17/12/2014) evaluated using six quality indicators. Data were collected from the electronic medical record and pharmacy files. Results were compared to data from a previous evaluation and statistical analysis was done using IBM SPSS Statistics 21.0 (New York, USA).

Results
A total of 1025 consecutive surgical interventions were evaluated. Prophylaxis was necessary in 682 surgical interventions, only 510 patients (75%) received antibiotic prophylaxis and had it documented in their electronic medical record. 336 surgical interventions did not require antibiotic prophylaxis, but 62 (18%) received unnecessary antibiotic prophylaxis. Only 267 patients (52%) received antibiotic prophylaxis within the correct administration window (60-0 min before incision). Antibiotic prophylaxis was terminated within 24h after the first administration in 387 patients (90%), after exclusion of patients receiving therapeutic antibiotic treatment. Only 221 patients (49%) received correct antibiotic prophylaxis according to the implemented guidelines. 81 surgical interventions required an extra dose during surgery, only 8 patients (10%) received the extra dose.

Conclusion
Compared to previous results, five out of six indicators scored worse in this evaluation. Evaluation of the use of antibiotic prophylaxis in surgical interventions is based on registration in the electronic medical record. If this registration is incomplete or documented later than effectively administered, data are influenced. Extra lessons and new implementation strategies seem necessary to improve the compliance to the guideline.