INTRODUCTION AND PURPOSE

UMCL was the only hospital in Slovenia which participated in the Global-PPS. UMCL is the biggest state hospital which represents approximately one third of hospital beds in the country. UMCL has more than 100,000 admissions per year. With multifacetted antimicrobial stewardship programme and infectious diseases specialist consultations antimicrobial resistance and consumption in UMCL is relatively stable. The purpose of PPS in UMCL was to use a uniform and standardized method to assess antimicrobial (AM) use in the hospital and to compare it with other hospitals in Europe and worldwide.

METHODS

The Global-PPS in UMCL was conducted in March and April 2015. The survey included all inpatients receiving an AM on the day of PPS. Data collected included age, gender, weight, antimicrobial agents, doses, reasons and indications for treatment, microbiological data, compliance to guidelines, documentation of reasons and stop/review date of prescription. Denominators included the total number of inpatients per ward. A web-based application was used for data-entry, validation and reporting as designed by the University of Antwerp.

RESULTS

On the day of PPS a total of 1763 patients were hospitalized at UMCL and a total of 60 wards were surveyed. The hospital does not have a dedicated transplant unit which precluded the assessment of AM use in transplant wards. The AM prevalence was the highest in hematology and intensive care wards for adults. A similar pattern can be seen for pediatric and neonatal wards with AM prevalence in haemotology-oncology ward being 100% (Table 1).

In UMCL antibiotics were used slightly more often for healthcare associated infections (HAI) than community acquired infections (CAI) (Figure 3).

In UMCL the quality of prescribing was better in documenting reason for AM use, notes and guidelines compliance, and worse in documenting the stop/review date. Guidelines were available for almost every patient (Figure 5).

Top 3 most common diagnoses treated with AM were pneumonia/lower respiratory tract infection, intra-abdominal sepsis and upper urinary tract infection (Table 2).

The most frequently prescribed AM were penicillins, together with other β-lactams they summed up for more than 70% of AM. Fluoroquinolones were third most prescribed antibiotics (Figure 1). Among other β-lactams we use predominately first generation cephalosporins (surgical prophylaxis) and carbapenems (Figure 2).

CONCLUSION

Global-PPS provided an insight into antimicrobial prescribing at UMCL Ljubljana. According to the results we came to the following conclusions:

1. AM use in hematology and intensive care units should be further analyzed and improved.
2. Improvements should be done to lower the use of fluoroquinolones.
3. Better infection control and antimicrobial stewardship are needed to lower the prevalence of HAI.
4. Stop/review date of prescribed AM should be documented more frequently.
5. We should decrease the duration of surgical prophylaxis.