Purpose: Scarce data is available regarding topical antibiotics prescribing patterns in Ophthalmology. We aimed to describe and analyze the nationwide prescription of these antimicrobials during the year of 2016.

Methods: Cross-sectional study. A common electronic drug prescription system is used by all public or private hospitals and clinics in Portugal. We used this national database and included all the 2016 prescriptions of topical antibiotics used prophylactically or therapeutically in ophthalmology. Patients’ demographic data and medications prescribed were provided in an encrypted form and anonymously extracted. Results were stratified by region, physician specialty and public/private sector. Statistical analysis was performed using STATA 14.1.

Results: During 2016 in Portugal, a total of 458,638 topical antibiotic medications were prescribed to 324,683 different patients (47% male), corresponding to approximately 3.2% of the country population. Mean age was 46.4 ± 29.9 years, with 82,842 (25%) patients < 18 years old. Of all prescriptions, 46.6% were from ophthalmologists, 31.9% from general practitioners and 11.3% from pediatricians. The most prescribed drugs were chloramphenicol (24.2%), ofloxacin (14.0%) and fusidic acid (9.0%). A similar rank was found in the public sector, but in private practice moxifloxacin was the third most prescribed. The prescription pattern had significant fluctuations throughout the different national geographic areas. Lastly, a seasonal effect is suggested, since more than 35% of the prescriptions were made from October to December.

Conclusions: This nationwide study revealed prescription’s trends of topical antibiotic drugs in Portugal. These results might contribute for the development of a wiser use of antimicrobial drugs, thus promoting the best patient care and the whole system sustainability.