

EV0698

ePoster Viewing

Pharmacoepidemiology, improved prescribing and antibiotic stewardship

Appropriateness of defined daily doses (DDD) and packages as outcome measures for monitoring outpatient antibiotic consumption

Ann Versporten^{*1}, Samuel Coenen¹, Niels Adriaenssens¹, John Paget², Dominique Lescure², François Schellevis², Liset van Dijk², Herman Goossens³

¹*University of Antwerp, Laboratory of Medical Microbiology, Antwerp, Belgium*

²*Nivel, Utrecht, Netherlands*

³*University of Antwerp, Laboratory of Medical Microbiology, Wilrijk, Belgium*

Background: Many different indicators (e.g. Defined Daily Doses, prescriptions, packages) to study national outpatient antibiotic use in Europe have been reported and the outcome may depend on the antibiotic quantity metric used (Bruyndonckx et al, JAC 2014). Yet, more and more countries are setting different national targets for outpatient antibiotic prescribing. Bruyndonckx et al (JAC 2014) further showed that the number of DDD per package significantly increased for 24 EU-countries, significantly decreased for Ireland and UK; and remained unchanged over time (2002-2007) for Slovenia and Croatia. European countries have their own regulation of antibiotics and we hypothesise that these have an impact on the selection of metrics to be used to monitor national antibiotic use. We aimed to get insight in current antibiotic regulatory prescribing processes in Europe in order to better understand which indicator may be most appropriate to monitor national volumes of antibiotic consumption in the outpatient setting.

Methods: In 2015, representatives of 28 EU-countries and 3 European Free trade Association countries were invited to complete a questionnaire on the regularization of antibiotics, in collaboration with the ARNA-project (www.nivel.nl/en/arna). The questionnaire collected, amongst other, information regarding legal provisions for the prescription, reimbursement status of antibiotics and good distribution practice in the ambulatory care (n=35 questions).

Results: Representatives of 26 EU-countries, Iceland and Norway responded. Remarkably, twenty-five (89%) countries dispense antibiotics as complete packages among which 13 dispense the exact prescribed package. In a few countries, less antibiotics can be dispensed (e.g. Italy) or the nearest pack size (Malta), whereas in Denmark margins are set. In Norway, an incomplete package can be dispensed but at increased cost. In Portugal, Lithuania, Slovakia and Sweden, pharmacists may dispense by individual blister in very exceptional cases only, allowing pharmacists to open a package. Only the Netherlands, the UK and Ireland "systematically" dispense antibiotics by individual blister, reconstituted pack, by pills or items if the pack size does not exactly fit the prescription.

Conclusions: Pharmacists in all EU countries dispense complete packages of antibiotics, except in the UK, Ireland and the Netherlands, where a prescription contains the number of exact unit doses to be dispensed. In countries where complete packages are sold, and where the number of units per package and/or the amount of active substance per unit significantly increased over time, DDDs alone are not a reliable indicator to monitor outpatient antibiotic use. Therefore, in those countries, DDDs alone should not be used to monitor national targets of antibiotic prescribing, to assess the impact of awareness campaigns, or to study the link with antibiotic resistance. Our survey supports the current policy of the European Centre for Disease Prevention and Control ESAC-Net project to report outpatient antibiotic use in DDDs and packages as a numerator.