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Poster Session I

Antibiotic consumption data

Antimicrobial use in Kyrgyzstan: first results of the WHO/Europe-ESAC Project

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Objectives

There is no reliable data on antimicrobial use in non-European-Union (EU) south-eastern European countries (SEE) and newly independent states (NIS). We aimed to collect valid, representative, comparable total national wholesales data on systemic antimicrobial use in Kyrgyzstan, a NIS with a population of 5.392.600 (<http://hdrstats.undp.org/>).

Methods

Valid 2011 total antimicrobial use data were analysed according to the WHO Anatomical Therapeutic Chemical (ATC)/Defined Daily Doses (DDD) methodology and expressed in DDD/1000 inhabitants/day (DID). Wholesales data on antibacterials (ATC group J01), antimycotics (J02) and antifungals (D01BA) were provided by the Ministry of Health. Reimbursement data were provided for hospital care by the Health Insurance Company. Obtained data coverage was 100%.

Results

Total (outpatients and hospital care) antibacterial use was 25.1 DID. The top 5 antibacterial subgroups (ATC level 3) were: penicillins, ATC group J01C (8.8 DID, 35.1% of all antibacterials); other beta-lactam antibacterials, ATC group J01D (3.7 DID, 14.6%); quinolones, ATC group J01M (3.2 DID, 12.6%); tetracyclines, ATC group J01A (2.2 DID, 8.7%) and sulfonamides/trimethoprim, ATC group J01E (1.9 DID, 7.5%). The top 5 antibacterials (ATC level 5) were: amoxicillin (5.2 DID, 20.8%); ampicillin (2.6 DID, 10.2%); ciprofloxacin (2.4 DID, 9.5%); cefazolin (2.0 DID, 8.1%); and doxycycline (1.4 DID, 5.5%). Use of amphenicols was 0.5 DID (1.9%). Proportional parenteral antibiotic use was high representing 31.1% of total antibiotic use (7.8 DID) and included mainly ampicillin (2.2 DID), cefazolin (2.0 DID) and ceftriaxone (1.1 DID). Kyrgyzstan mainly imported antibacterials manufactured in NIS rather than from non-NIS (17.9 DID versus 9.2 DID) with Russia providing the highest volumes of antibacterials (12.9 DID) followed by India (4.1 DID) and Belarus (2.17 DID). Total antimycotic and antifungal use was low (0.38 DID). The top 3 were: fluconazole (0.29 DID, 75.5% of all antimycotics and antifungals), griseofulvin (0.09 DID, 23.8%), and itraconazole (0.002 DID, 0.4%).

Conclusions

We present for the first time a standardised and validated data set of systemic antimicrobial use in Kyrgyzstan. More in depth studies are needed to understand the remarkably high parenteral use of antibiotics which cannot be explained by hospital use only. The lack of regulatory requirement of compliance of registered medicines with requirement of good manufacturing practice for some of the imported countries is a concern because it may lead to reduction of effectiveness of antimicrobials. These data facilitate auditing of antimicrobial use and evaluation of the implementation of guidelines and public health policies to promote its judicious use.