

P1328

Paper Poster Session

News on outpatient antibiotic prescribing quality

Quality indicators assessing antibiotic use in the outpatient setting: a systematic literature review followed by a consensus procedure

Marion Le Marechal¹, Annelie Monnier², Inge C. Gyssens², Niels Adriaenssens³, Benedikt Huttner⁴, Romina Milanič⁵, Mirjana Stanic⁶, Gianpiero Tebano^{*7}, Ann Versporten³, Vera Vlahović - Palčevski⁵, Veronica Zanichelli⁸, Jeroen Schouten², Marlies Hulscher⁹, Céline Pulcini¹⁰

¹*Université de Lorraine, Faculté de Médecine, Ea4360-Apemac, Nancy, France*

²*Radboud University Medical Center, Nijmegen, Netherlands*

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

⁴*Geneva University Hospitals and Medical School, Infection Control Program, Geneva, Switzerland*

⁵*University Hospital Rijeka, Rijeka, Croatia*

⁶*University Hospital Rijeka, Unit for Clinical Pharmacology, Rijeka, Croatia*

⁷*Université de Lorraine, Vandœuvre-Lès-Nancy, France*

⁸*University of Geneva, Geneva, Switzerland*

⁹*Radboud University Medical Center, Scientific Institute for Quality of Healthcare, Department of Primary and Community Care, Nijmegen, Netherlands*

¹⁰*Université de Lorraine, Faculté de Médecine de Nancy, Ea4360-Apemac, Vandoeuvre-Lès-Nancy, France*

Background: Antibiotics are the cornerstone of the treatment of infectious diseases, but antimicrobial resistance is a global threat increasing worldwide. The IMI international project DRIVE-AB (Driving re-investment in Research & Development and responsible antibiotic use) aims at developing a consensus concept of “responsible” antibiotic use. We present here a list of consensually validated quality indicators (QIs) of antibiotic use in the outpatient setting.

Material/methods: A systematic literature review was first conducted to make an inventory of existing QIs, by searching PubMed articles published until December 12, 2014. In addition, relevant websites were searched, from large international organizations (e.g. ECDC) and societies (e.g. ESCMID). Two reviewers independently screened the titles and abstracts of the records. Discrepancies between the reviewers were resolved through discussion. QIs were then submitted to an international multidisciplinary panel of stakeholders (clinical medicine, public health, R&D, payers, policy makers, regulators), who were asked to appraise the relevance of the QIs for assessing the quality of antibiotic use in the outpatient setting (9-point Likert scale). This consensus procedure based on a RAND-modified Delphi method used a stepped approach: two rounds of Internet-based surveys with a face-

to-face meeting in between.

Results: The search strategy is presented in the Figure. Most (37/61, 61%) included studies were from high-income countries, and almost all (16/17) studies from low/middle income countries addressed QIs developed by the World Health Organization (WHO). Overall we extracted 335 QIs from the literature search, and 21 from the website search. We removed overlap and combined similar indicators into 43 unique generic QIs that were included in a questionnaire sent to a panel of 23 stakeholders from 11 countries. Most (14/18) of the process QIs targeted specific clinical situations (ex: “Antibiotics should be prescribed for (most) bacterial infections (e.g. acute pneumonia, urinary tract infections)”), whereas half (12/24) of structure QIs were the WHO indicators, mostly focusing on general pharmaceutical issues (“Antibiotics in stock should not be beyond the expiry date”). Only one outcome QI was identified (“Outpatients should be satisfied with the care they received when prescribed antibiotics”), and 14 QIs (2/18 process QIs and 12/24 structure QIs) specifically dealt with outpatient parenteral antimicrobial therapy (OPAT). The first survey and the face-to-face meeting have selected 27 indicators, excluded 10 QIs and 8 QIs are under discussion (including 2 newly suggested indicators). An ultimate set of QIs will be sent to the expert panel for final validation by the end of 2015.

Conclusions: This set of consensually validated quality indicators assessing the quality of antibiotic use in the outpatient setting will be useful for benchmarking and will help build an international conceptual framework on antibiotic stewardship.

DRIVE-AB is supported by IMI/EU and EFPIA.

Figure: Flow chart of the studies' inclusion process

