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**ePoster Session**

**Addressing outpatient antibiotic prescribing**

**Quantity metrics assessing antibiotic use in the outpatient setting: a global consensus procedure**

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**Background:** Antibiotics are the cornerstone of the treatment of infectious diseases, but antimicrobial resistance is a global threat rapidly 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 aim to present a list of consensually validated quantity metrics (QMs) of antibiotic use in the outpatient setting. DRIVE-AB is supported by IMI/EU and EFPIA.

**Methods:** A RAND-modified Delphi procedure was performed. First, quantity metrics for outpatient antibiotic use were identified in the literature (MEDLINE database) by a systematic review of the published literature (articles published until December 12, 2014). A complementary search for QMs was performed on the websites of relevant organizations and institutions active within the field of

antibiotic stewardship. Two reviewers independently screened the titles and abstracts of the records. Discrepancies between the reviewers were resolved through discussion. Second, potential QMs were presented in an internet-based survey to a multidisciplinary expert panel and experts were asked to rate their relevance for assessing the quantity of antibiotic use on a 9 point Likert scale, to add comments or to propose new metrics. Based on pre-defined criteria, QMs were selected, rejected or kept for discussion of disagreement. Next, a face to face consensus meeting with stakeholders was held to discuss the set of QMs and to identify potential QMs not included in the survey. Ultimately, a second survey was sent to the expert panel for final validation.

**Results:** A total of 597 articles were screened, 177 studies met the criteria for full text screening and 138 were finally included. 20 different QMs were identified and appraised by 23 stakeholders. During the first survey, 14 QMs were excluded. Six QMs qualified for discussion (with mean relevance score  $\geq 8$  but  $< 70\%$  of all scores in the top tertile) i.e. Defined Daily Doses, treatments/courses and prescriptions per defined population, treatments/courses and prescriptions per physician contacts and individuals treated with antibiotics per defined population. During the face-to-face meeting, 7 experts retained the first 5 QMs. Seasonal variation of total antibiotic use was added to the list of QMs. Suggestions were made considering context and combination of metrics.

**Conclusions:** A small set of consensually validated quantity metrics assessing the quantity of antibiotic use in the outpatient setting was obtained, enabling (inter)national comparisons. The QMs will help build an international conceptual framework on responsible antibiotic use.