

P0880 **Review of factors influencing antibiotic prescribing, 2012-2017**

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Background: As antibiotic misuse is a major driver of antimicrobial resistance, the WHO called for studies to understand determinants of inappropriate use of antibiotics. Indeed, root causes of antibiotic misuse are still unexplored although their study could allow for better identification of barriers and of factors facilitating the proper use of antibiotics. We performed a literature review to identify human (prescriber), organisational and patient factors influencing prescription of antibiotics in order to use them for developing a tool for root cause analysis (RCA) of antibiotic misuse.

Materials/methods: The literature review complied with the PRISMA guidelines. It included analytical and evaluative studies in French or English indexed in Pubmed from 01/01/2012 to 30/04/2017, measuring the outcome as a volume of prescriptions or of use or as the rate of compliance of antibiotic prescriptions with guidelines. Study participants should be prescribers or patients susceptible to receive antibiotics, in a country with a healthcare system comparable to the French one. ICROMS tool was used to assess risk of bias of included studies.

Results: Among 384 publications retrieved by the literature search, 49 studies were included (comprising 25 interventional studies) of which 19 presented a low risk of bias. Studies were conducted in North-America (26), Europe (20) and other countries (3). The measured outcome was a volume of prescription in 26 studies and rate of compliance of antibiotic prescriptions with guidelines in 23. Identified factors influencing antibiotic prescription were: seven human factors including medical specialty; commitment; level of training and experience of the prescriber; 29 organisational factors including availability of a decision-making tool; continuous training; communication within the team; human resources; 39 patient factors including age, sex, various symptoms and comorbidities.

Conclusions: Despite difficulties encountered to identify and class factors and to assess the risk of bias of included studies, this literature review identified many human, organisational and patient factors, associated with antibiotics prescription to be integrated into a RCA tool of the misuse of antibiotics. The next step will be to develop and validate this tool in different healthcare settings in order to identify local barriers and facilitators to antibiotic prudent use.