Public Health England

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Knowledge and Library Services (KLS)

Impact stories

Title:
KLS provided essential support to the National Mycobacterium reference service South (NMRS-S) for a systematic review

User testimonial:
"*KLS and Anh in particular has been extremely helpful and overall level of service/support provided was exceptional. Anh provided training on use of software and guided us through various steps of literature search, documents screening, and data extraction helping to resolve issues and achieve the result. We are grateful for her help and hope to be able to use it again in future*" **Dr Vlad Nikolayevskyy, NMRS South**

Challenge:
NMRS-S, as a part of our coordinator's role within the European Network of TB reference laboratories (ERLTB-Net) project, has been asked to conduct a systematic review and meta-analysis on the performance of non-commercial phenotypic assays for M.tuberculosis drug susceptibility testing. Evidence found needed to be summarised, analysed, presented in a document and communicated to the network members and wider laboratory community through a peer-reviewed publication. Key challenges were a large number of publications that needed to be revised, tight deadlines as well as lack of standardisation in drug concentrations and breakpoints which made a screening, full text analysis and data extraction technically challenging.

Solution:
Jointly with KLS, a search strategy (including search terms, databases etc) were developed and agreed and deadlines set; strict adherence to the deadline and original strategy proved to be one of the key success factors. Use of cloud-based software proved to be extremely efficient as it allowed three operators located in three different countries to work and communicate effectively. Study selection included extensive title and abstract screening, followed by a full text analysis by two operators, leaving us with a reasonable number of studies to be considered for a data extraction. Simultaneously, the quality of individual studies was assessed, data extracted, summarised and presented where possible using forest plots.

9th May 2018

Impact:
A total of 43 studies were included in the systematic review. A document summarising findings and evidence was developed, submitted and accepted by the funding body (European Centre for Disease Control). Results confirmed high sensitivity and specificity of specific assays for direct and indirect detection of resistance to rifampicin (RIF) and isoniazid (INH). Their utility for a rapid and accurate detection of multi-drug-resistant TB in settings where commercial WHO-endorsed culture-based assays are used could be limited, due to a variety of reasons including lack of trained personnel and laboratory facilities.

Success factors/lessons:
Careful advance planning, getting KLS involved at early stages, setting up realistic deadlines and strict adherence to agreed procedures.

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