

09. SPECIFIC TERMS OF REFERENCE FOR THE NRC FOR CLOSTRIDIUM DIFFICILE

AIMS

- Each National Reference Centre (NRC) must meet both the general and the specific terms of reference.
- In the specific terms of reference, the NRC tasks dedicated to each selected pathogen or group of pathogens are described.
- These aim to guarantee the knowledge, the know-how and the epidemiological surveillance expertise of each NRC.
- The task list is not exhaustive and can be modified in function of the requirements and the evolution of knowledge and techniques.
- In the event a NRC is unable to perform a specific task, this can be subcontracted to preserve the knowledge in the NRC. If this is the case, quality of the subcontracted task has to be proven and assured.
- Each list of specific terms of reference is divided into three parts: 1) a reminder of the specific missions, 2) a description of the tasks that the NRC must be able to do including the competencies and 3) a list of the tasks that will be asked in a particular context.
- The type of analysis indicated for each specific pathogen in each particular situation (diagnosis or confirmation, typing, sensitivity to antimicrobial substances, virulence...) is defined.
- The collaboration with national and international surveillance systems (e.g. ECDC) and when relevant with other reference centres (European Medicines Agency, food safety reference centres, veterinary reference centres, ...) is also a priority.

09. SPECIFIC TERMS OF REFERENCE FOR THE NRC FOR CLOSTRIDIUM DIFFICILE

SPECIFIC MISSIONS

1. To confirm the identification by non-classical techniques (other than culture + biochemical identification or MaldiTof) if clinically relevant.
2. To perform epidemiological typing of the isolates.
3. To monitor the antibiotic susceptibility of circulating strains.
4. To collaborate with existing networks at European level (ECDC, ESGCD).
5. To participate in national surveillance, transfer microbiological data (through e-health reporting) and contribute to the presentation and interpretation of the results in a public health approach.
6. To interact with epidemiologists and other NRC's with the aim to sustain/adapt the use of the various outputs (with regards to quality of care, recommendations for control/prevention, ...).

THE NRC MUST BE ABLE TO (LEVEL OF COMPETENCES)

1. Perform the culture and identification of *C. difficile*.
2. Confirm the diagnosis and in particular the toxinogenic character of the strain by a cell culture cytotoxicity test or by an immunoenzymatic method (A and B).
3. Perform the toxinotyping by PCR-RFLP.
4. Perform the genotyping by internationally standardized methods (e.g. ribotyping, mutation detection in the toxin genes and MLVA).
5. Determine the antibiotic susceptibility and to characterize the resistance mechanisms.
6. Perform the binary toxin gene detection on isolates by PCR.
7. Have access to whole genome sequencing and expertise in species specific bioinformatic analysis.

TASKS THAT WILL BE ASKED IN A PARTICULAR CONTEXT

1. To confirm and to type the strains isolated from clusters (outbreak investigation).
2. To perform periodical microbiological analysis on informative strains sampled by hospital and other health care facilities and to determine the genotype distribution among cases of *C. difficile* associated disease in Belgian hospitals.
3. To improve the linkage between epidemiological (patient-based) as collected by Sciensano and laboratory data, to improve the usefulness (e.g.: representativeness) and opportunities for scientific exploitation of data.
4. To collaborate with Sciensano in the regular update of the *C. difficile* surveillance protocol.
5. To assist Sciensano in research projects involving epidemiology of *C. difficile*.