

European Union “Yellow pages” for Microbiology Laboratory Services to support outbreak response and control – A needs analysis



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Background

Timely and reliable surveillance of infectious agents which may threaten public health is an essential component of effective disease prevention and control. Studies of the EU public health microbiology systems and structures have revealed some gaps in provision of, or access to, microbiology tests needed for surveillance and epidemic preparedness. Particularly for rare and emerging pathogens and those requiring specialised facilities (e.g. biosafety level 4 containment laboratories). The European Centre for Disease Prevention and Control (ECDC) has a mandate to foster collaborations between experts and expert reference laboratories^[1].

In 2012, ECDC set-up a needs analysis study to answer the question of whether EU Member States partners can adequately access information about available microbiology laboratory tests and how this could be improved. The goal of the so called “Directory” is to create a simple, easy to maintain, searchable “database” of expert laboratories that provide specialised testing services available for the EU Member States in case of need at national level.

Methods and Materials

Two steps were taken to conduct the needs analysis: a telephone interview to 22 persons from 15 countries, to collect standardized information and let people largely express their feelings, which was made of open questions and tailored to three different stakeholder’s categories (laboratory providers and epidemiologists, ECDC network coordinators, and ECDC staff); and drawn from the interviews’ results, a simple, short, targeted and precise online questionnaire that was distributed to 140 persons from 31 countries.

Both steps inquired about the following areas: the pathogens to be included in the Directory, searching keys (Figure 2), search display (Figure 3), access level (Figure 5), other information that should be included in the interface (e.g. packaging and transportation SOPs, provision of country’s regulation about a specimen), general feeling about price and interesting ideas to develop (e.g. list of rapid courier, inclusion of online training course).

Analysis of the online survey was based on three groups of respondents: “Service provider” (labs), “Service customer” or “Both” from the EU/EEA National Microbiology Focal Points and other relevant experts leading EU disease specific laboratory networks.

Results

The main results from interviews indicate that the Directory would be a useful tool and would formalise what is happening (mostly ad hoc) through professional connections. It should also be simple and easy to search.

Regarding the online survey, the following were the key results:

- Roughly, 1/3 of the respondent are performing all analyses in their country, when 2/3 are performing some or lot of analysis abroad
- The principal type of services that should be available are diagnosis, confirmation and information (Figure 1)
- Most critical important search criteria were: by group of pathogens, by syndrome, labs following EQA, by national reference lab, by WHO CC and the by being able to provide advice (Figure 2)
- Most relevant display after search information with >70% respondents considering critical or important was: focal point contact, reference lab and WHO CC, Lab director contacts (Figure 3)
- Major gap areas to find information were biosafety laboratory level 4 (BSL4), prions, toxins and emerging variants (Figure 4)
- Access should be “semi-public” (~47%): basic-level information (e.g. pathogen and name of institution offering service) should be open to the public, whereas more detailed information including contact details and diagnostic methods used would require a registration process as well as some information being restricted to the responsible Member State public health authorities (Figure 5).

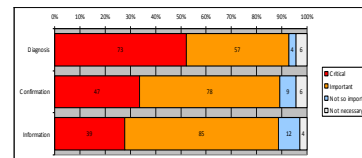


Figure 1: Type of services which should be available on the interface

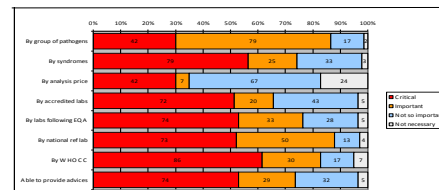


Figure 2: Search criteria relevancy

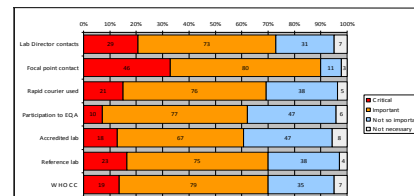


Figure 3: Display after search

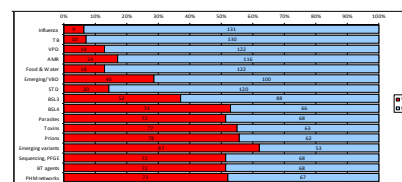


Figure 4: Are there major gaps to find information about selected pathogens?

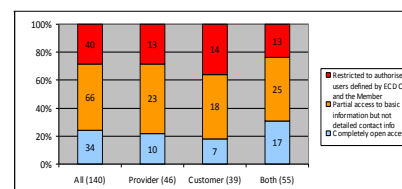


Figure 5: User interface access level

Conclusions

Considering the current economic crisis and the need to strengthen laboratory capabilities in the EU, this study supports that ECDC goes forward in its “information broker” role and develop, jointly with the MS stakeholders, an EU directory of relevant microbiology laboratory tests. Next steps in 2013 will involve further development and discussion of this first step needs analysis into models for implementation to best meet these needs and with the appropriate resources.

Acknowledgements

All expert respondents to the telephone interviews and online survey. All staff at ECDC who contributed to the preparation of the needs analysis and technical contributions therein.

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