

Assessing laboratory capacity to support the control of Neglected Tropical Diseases

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Introduction

Regional Reference Laboratories are essential hubs for neglected tropical disease (NTD) diagnoses, epidemiology, monitoring and surveillance.

Information about the distribution and expertise of NTD regional reference laboratories is not readily available and not coordinated between WHO regions.

It is essential to establish an effective global network of strategically located NTD reference laboratories to facilitate quality assurance and sharing of expertise.

We conducted a mapping study of potential international-standard NTD regional reference laboratories across five WHO regions as a first step in creating a global network of NTD reference laboratories

Materials and Methods

We identified potential laboratories through systematic searches and snowball sampling from key informants.

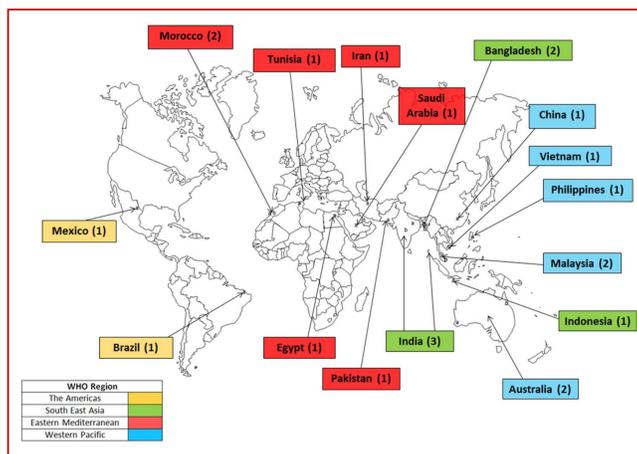
Between October 2013 and January 2014 we surveyed the laboratories to elicit information about their NTD specialities, methodologies, staffing quality assurance processes and networks

We compared their capacity against pre-determined criteria for an NTD reference laboratory and identified their strengths and capacity gaps.

Results

19% (n=32) of the 167 laboratories contacted responded to the survey and were based in the following WHO regions: Eastern Mediterranean, South East-Asia, Americas, Western Pacific and Europe (see figure) (Africa WHO region conducted their own laboratory survey).

Figure. Location of potential NTD reference laboratories surveyed



Key findings were:

- the majority (69%) of the laboratories were based within academic institutions and their greatest strengths lay in research.
- most of laboratories (53%, n=17) provided a national-level service.
- only 4 laboratories stated they adhered to international standards and had relatively strong quality management systems.
- despite the majority (91%) of laboratories believing they have the capacity to carry out a role of a reference laboratory, only 14% (n=3) fulfilled the pre-determined criteria for a reference laboratory.



Conclusions

Very few NTD laboratories surveyed in five WHO regions fulfilled the criteria for a research laboratory

Laboratory quality management was identified as the weakest aspect of laboratories supporting NTD control.

This study has laid the groundwork for the next steps, which include strategically selecting and supporting a small number of laboratories in each WHO region to achieve accreditation and integrating them into regional NTD laboratory networks.

This will create a global network of laboratories with NTD expertise and clarify which laboratories meet international standards to provide specialist, high quality services to support the various and diverse needs of national and international NTD programmes.



Further Information

Please go to:

<http://www.lstmed.ac.uk/research/centres-and-units/capacity-research-unit>