

Assessment of the Covid19 Testing Laboratories World Health Organizationx

Shrivastava SR^{1,2} and Shrivastava PS²

¹Member of the Medical Education Unit and Institute Research Council

²Department of Community Medicine, Shri Sathya Sai Medical College & Research Institute, Sri Balaji Vidyapeeth (SBV)–Deemed to be University, Chengalpet District, Tamil Nadu – 603108, India

Corresponding Author*

Saurabh RamBihariLal Shrivastava,
Department of Community Medicine,
Shri Sathya Sai Medical College & Research Institute,
Sri Balaji Vidyapeeth (SBV)–Deemed to be University,
Chengalpet District, Tamil Nadu – 603108, India
E-mail: drshrishri2008@gmail.com
Tel: +91-9884227224

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Abstract

The availability of quality assured laboratory services and rapid diagnostic tests is one of the critical pillars of the preparedness and public health response against the ongoing Corona Virus Disease-2019 (COVID-19) pandemic. Despite of the fact that the needs of the laboratory services have increased immensely during the times of public health emergency, it is very essential that the performed laboratory tests are reliable and done in a time-bound manner. The World Health Organization has developed a tool to assess the laboratories and the entire system of the laboratories in the nation with the help of a questionnaire. The tool provides insights about the description and evaluation of all the crucial aspects of the laboratories in a systematic approach. In conclusion, in the battle against COVID-19 infection, it is extremely important to assess the functioning of the individual laboratories as well as the laboratory system of the entire nation and improve the same accordingly to enhance the quality assurance of the diagnostic tests and procedures.

Keywords: COVID-19 pandemic• Laboratory• World Health Organization

Introduction

The availability of quality assured laboratory services and rapid diagnostic tests is one of the critical pillars of the preparedness and public health response against the ongoing Corona Virus Disease-2019 (COVID-19) pandemic [1]. In-fact, the magnitude of the disease continues to rise and it has increased to 3917366 cases and 274361 deaths across the 215 nations and areas. It is vital to acknowledge that the overall case fatality rate of the novel viral infection has gradually increased to 7% which is way higher than that of the estimates of the seasonal influenza, with the European region and the American region being the most affected [2].

Role of COVID-19 testing laboratories

In general, the laboratory testing has been identified as the key component of the response against the disease. As the number of the cases continues to rise, it is very important to proportionately increase the diagnostic services worldwide and accomplish the global mission to detect each and every of the cases, so that no new chain of the transmission sets in. Despite of the fact that the needs of the laboratory services have increased immensely during the times of public health emergency, it is very essential that the performed

laboratory tests are reliable and done in a time-bound manner [3]. Any shortcomings on the part of the laboratory will result in wastage of precious time & resources and any false negative result can result in the onward transmission of the infection and even death [3,4]. Moreover, owing to the fact that the results of the laboratory become the initial point of deciding about the course of management of an individual, it is important to sustain the quality of the laboratory facilities and the performed tests [3].

Employing a tool to assess laboratories

The World Health Organization has developed a tool to assess the laboratories and the entire system of the laboratories in the nation with the help of a questionnaire [5]. The tool provides insights about the description and evaluation of all the crucial aspects of the laboratories in a systematic approach, details about the structure and organization of laboratory services and follow-up of the same in the future. From the laboratory system perspective, the tool can assess the extent of coordination and management between different ministries, procurement and supply of equipment, structure & organization of the laboratories, adherence of the laboratories to the standard regulations, quality assurance mechanism of the laboratory system, assessment of information management system, infrastructure assessment, human resources and management of biosafety risk at the national level [5].

The tool can also be used to assess the functioning of individual laboratories and understand the technical and management requirements. The tool can be used for the assessment of the financial, monitoring and general administration of the laboratory performing the diagnostic tests [3-5]. In addition, the tool can also assess the various documents (viz. the protocol, procedures for testing, forms, etc.), the process of specimen collection - handling - transport, management of data, storage-inventory-management of laboratory consumables, laboratory equipment, training status of the laboratory personnel, infrastructure, workplace safety, and adherence to biosafety the protocols. After obtaining all the findings, each and every parameter can be color-coded, ranging from red (requiring significant improvement), yellow (some improvement is essential) and green (good performance) [5].

Conclusion

In conclusion, in the battle against COVID-19 infection, it is extremely important to assess the functioning of the individual laboratories as well as the laboratory system of the entire nation and improve the same accordingly to enhance the quality assurance of the diagnostic tests and procedures.

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