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Strengthening the global diagnostic capacity in the battle against Corona Virus

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Abstract

The Corona Virus Disease-2019 (COVID-19) pandemic has taken the world by storm and since its emergence in the Wuhan city of China, the number of confirmed cases has been ever-rising. There is an immense need for the national leaders to prioritize COVID-19 and take targeted measures to improve diagnostic, case surveillance, infection prevention & control, treatment, risk communication and community engagement activities. From the diagnostic perspective, a significant improvement needs to be done as the dynamics of the outbreak is changing with each day. It has been envisaged that each of the nations should strengthen their capacity to detect the virus and not be dependent on other nations for the same as this will unnecessarily delay the diagnosis. In conclusion, amidst the reports of a rise in the number of asymptomatic cases and in the global battle against the COVID-19 outbreak, there is an indispensable need to strengthen serological testing and simultaneously improve the diagnostic capacity of the laboratories to ensure a better response against the disease.

Keywords: COVID-19 pandemic, laboratory, diagnosis, World Health Organization

Introduction

The Corona Virus Disease-2019 (COVID-19) pandemic has taken the world by storm and since its emergence, the number of confirmed cases has been ever-rising [1,2].In-fact, as on 18 July 2020, the disease estimates suggest that a total of 13876441 cases and 593087 deaths have been reported across the world, with the American region and the European region being the most affected. [1]. The disease has been reported across 216 nations and territories, with the global case fatality rate being 4.27% [1].

Ground reality

All these estimates are an indicator that even after more than 6 months since the first case was detected, we have not been successful in effectively containing the spread of the disease in most of the nations [2, 3].

At the same time, important questions need to be raised about the level of preparedness of the nations to respond to the novel infection [2]. There is an immense need for the national leaders to prioritize COVID-19 and take targeted measures to improve diagnostic, case surveillance, infection prevention & control, treatment, risk communication and community engagement activities [2, 3].

Diagnostic facilities

From the diagnostic perspective, a significant improvement needs to be done as the dynamics of the outbreak is changing with each day [1]. Since the initial employment of genomic sequencing in establishing the diagnosis, multiple commercial and non-commercial essays have been developed to meet the needs of prompt and cost-effective diagnosis. Amidst the rising caseload, the diagnostic capacity also needs to be improved proportionately to detect the disease at the earliest and in order to aid in this regard a network of international laboratories has been established [1]. These earmarked laboratories play a two-folded role, including assisting the national-level labs to confirm the diagnosis and also aid them in their molecular assays.

Strengthening diagnostic abilities

At the same time, it has been envisaged that each of the nations should strengthen their capacity to detect the virus and not be dependent on other nations for the same as this will unnecessarily delay the diagnosis and increases the chances of spread of the infection to the susceptible contacts [2, 3]. Further, diagnostic assistance has been given to more than 150 laboratories who have

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requested for diagnostic assistance [1]. In many of the nations, in an attempt to enhance the diagnostic capacity and improve the number of samples which can be processed per day, number of laboratories from the private sector has been included and it is a definite welcome move. In addition, in order to sustain the quality of the laboratory tests, the need to implement an external quality assurance program has also been emphasized [2, 3]. Moreover, specific attention has also been given to strictly adhere to the laboratory biosafety measures to avert any lab-induced exposure [4].

Conclusion

In conclusion, amidst the reports of a rise in the number of asymptomatic cases and in the global battle against the COVID-19 pandemic, there is an indispensable need to strengthen serological testing and simultaneously improve the diagnostic capacity of the laboratories to ensure a better response against the disease.

Conflict of interests
The authors declare that they have no competing interests.

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