

UTILIZATION OF LABORATORY CAPACITIES IN SERBIAN HEALTH INSTITUTIONS AND PUBLIC HEALTH INSTITUTES DURING THE COVID-19 PANDEMIC, 2020-2022

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Background: In 2020, the COVID-19 pandemic emerged as a public health emergency of international concern. Health system preparedness and response capacities have been diverted for surveillance and epidemic suppression in Serbia. This study evaluates the public health institutes (PHIs) network's contribution to performing SARS-CoV-2-related laboratory services (LSs).

Methods: We collected and analyzed nationwide data on SARS-CoV-2-related LSs performed in all health care (HC) levels and PHIs in Serbia for the 2020-2022 period. The PHI-LSs contribution was calculated as a proportion of the total number of LSs performed in all HC facilities and PHIs and the ratio between PHIs and primary HC facilities LSs (Rls).

Results: The highest contribution and Rls in SARS-CoV-2-related LSs were during 2020 (12.3%; 0.2) and the lowest in 2022 (2.2%; 0.03), with decreasing trend on the annual level. The highest district-level PHI's contribution in SARS-CoV-2-related LSs in the 2020-2022 period was as follows: 2020: Nišava district (39.5%), 2021: West Bačka district (27.5%) and 2022: Pčinja district (11.3%). On the other hand, the primary HC facilities enlarged their contribution over time (2020, 2021, 2022: 62.5%, 76.3%, 75.0%). During the observed period, secondary and tertiary HC facilities had the following annual SARS-CoV-2-related LSs contributions: 2020, 2021, 2022: 25.1%, 17.4%, 22.7%.

Conclusions: At the beginning of the pandemic, PHIs had a greater LSs contribution, after which the focus of SARS-CoV-2-related LSs provision shifted toward the primary HC level. LSs in hospitals were performed based on relevant clinical guidelines and indications.

Keywords: COVID-19, laboratories, public health service, primary health care