

# Adapting an integrated acute respiratory infections sentinel surveillance to the COVID-19 pandemic requirements, Egypt, 2020-2022

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## Abstract

**Introduction:** An integrated surveillance for acute respiratory infections (ARIs) was established 2016 at network of 19 governmental hospitals to identify causes of ARIs in Egypt. In response to COVID-19 pandemic, WHO requested surveillance adaptation to address the emerging challenges. This report aims at describing Egypt experience in adapting ARI surveillance to COVID-19 pandemic. **Surveillance methods:** WHO case definitions are used to identify ARI patients. NP/OP swabs collected for influenza testing by RT-PCR at central laboratories. Data collected by interviewing patients for demographic and clinical information and entered at sites. During COVID-19 pandemic, the first two outpatients daily and every fifth admitted patient were enrolled. Patients COVID-19 clinical data and testing for SARS-CoV-2 by RT-PCR were added. **Results:** Between January 2020-April 2022, 18,160 patients were enrolled including 7,923(43.6%) outpatients and 10,237(56.4%) admitted. Of them 6,453(35.5%) tested positive including 5,620(87.1%) SARS-CoV-2, 781(12.1%) influenza and 52(0.8%) SARS-CoV-2/influenza coinfection. SARS CoV-2 caused 95.3% of admitted cases and 65.4% of outpatients. Influenza subtypes included A/H3 (55.7%), Flu-B (29.1%), H1/pdm09 (14.2%). Compared to influenza, SARS-CoV-2 infections prevail in elderly, warm weather, and urban governorates. SARS-CoV-2 caused more hospitalization, longer hospital stay, more severe course and higher case fatality than influenza (16.3 vs 6.6%,  $p<0.001$ ). **Conclusion:** Egypt ARI surveillance was successfully adapted to COVID-19 pandemic and effectively describe clinical characteristics and severity of circulating viruses. Surveillance reported re-emergence of influenza viruses with severe course and high fatality. Maintaining ARI surveillance is essential to monitor respiratory viruses activity for guiding clinical management and preventive and control measures.

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