

# SARS-CoV-2 and Influenza Virus Co-infection among Patients with Severe Acute Respiratory Infection During COVID-19 Pandemic in Bangladesh

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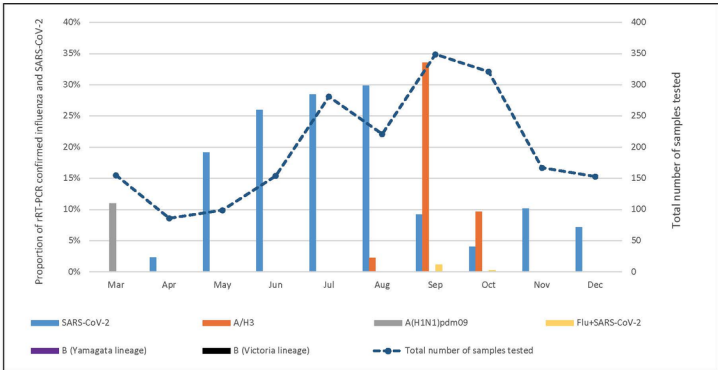
## Abstract

Background: Recent evidences reported that co-infection with SARS-CoV-2 and Influenza virus is common. We explored hospital-based influenza surveillance (HBIS) data during the COVID-19 pandemic. Methods: We analyzed data from March to December 2020 among patients admitted with severe acute respiratory infections (SARI) defined as subjective or measured fever of  $\geq 38^\circ\text{C}$  and cough with onset within the last ten days. Physicians recorded patients' demographic, clinical, and laboratory information and obtained nasopharyngeal and oropharyngeal swabs to test for influenza virus and SARS-CoV-2 by rRT-PCR. Results: We enrolled 1,986 SARI case-patients with median age of 28 years (IQR: 1.2–53 years), and 67.6% were male. Among SARI case-patients, 285 (14.3%) were infected with SARS-CoV-2 and 175 (8.8%) infected with influenza virus. Only five (0.3%) SARI patients were co-infected with SARS-CoV-2 and influenza virus. Difficulty breathing (83% vs. 77%,  $p=0.024$ ) and sore throat (26% vs. 17%,  $p<0.001$ ) were more likely to be present in SARS-CoV-2-infected SARI patients. SARI case-patients with diabetes and hypertension were more likely (14% vs. 6%,  $p<0.001$  and 27% vs. 12%,  $p<0.001$  respectively) to be infected with SARS-CoV-2 virus than those without co-morbidities. Influenza virus remained undetectable during the first 14 weeks of the 20 weeks (May to September) of peak influenza circulation period in Bangladesh. Conclusions: Our findings suggest that co-infection with SARS-CoV-2 and influenza virus was not very common together with nonappearance of the influenza virus during most of the peak influenza period in Bangladesh during COVID-19 pandemic. Future studies are warranted for further exploration.

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Figure 1: SARS-CoV-2, Influenza virus and Co-infection during March - December 2020 among SARI case patients in Bangladesh



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Table 1.docx available at <https://authorea.com/users/519165/articles/709630-sars-cov-2-and-influenza-virus-co-infection-among-patients-with-severe-acute-respiratory-infection-during-covid-19-pandemic-in-bangladesh>

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