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## DEVELOPMENT OF CARDIOVASCULAR DISEASES POST COVID-19 VIRUS; COMPARISON BETWEEN DIFFERENT COUNTRIES

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**Relevance.** The COVID-19 pandemic has raised concerns about its long-term health effects, particularly regarding cardiovascular diseases (CVDs) in survivors. This research explores the development of long-term CVDs following COVID-19 infection, focusing on the main types of diseases prevalent among affected populations.

**Aim:** to investigate the development of long-term cardiovascular diseases (CVDs) following COVID-19 infection and to compare these outcomes across USA, Belarus and Sri Lanka. Ultimately, to enhance awareness and inform healthcare strategies for managing post-COVID health outcomes.

Materials and methods. Quantitative data were sourced from systematic reviews and peer-reviewed articles, including a pivotal study published in *The Lancet* in 2021, which examined the cardiovascular outcomes in COVID-19 survivors. Additional insights were drawn from research published in *Circulation* (2022) and the *Journal of the American College of Cardiology* (2021), focusing on the prevalence of CVDs in post-COVID populations. We also reviewed health reports from the World Health Organization (WHO, 2022) and the Centers for Disease Control and Prevention (CDC, 2021) for epidemiological data.

Results and their discussion. In a comparative analysis of COVID-19 survivors across the USA, Sri Lanka, and Belarus, notable differences emerge in total patient counts and demographic distributions. The USA reports approximately 1,000,000 survivors, with a gender distribution of 55% male and 45% female. In Sri Lanka, 150,000 survivors show a slightly higher male proportion at 57% and 43% female. Belarus has about 200,000 survivors, with 60% male and 40% female. Age distribution reveals that in the USA, 15% are aged 18-39, 40% are aged 40-64, and 45% are aged 65 and older. Sri Lanka 22% are aged 18-39, 36% of 40-64 age and older survivors of age 65 and older are 42%, while Belarus mirrors the USA with 20% aged 18-39 and 45% aged 65 and older. Regarding cardiovascular diseases, myocardial infarction rates are 10% in the USA, 9% in Sri Lanka, and 12% in Belarus; heart failure affects 8% of USA survivors, 7% in Sri Lanka, and 9% in Belarus. Arrhythmias are reported at 12% in the USA, 11% in Sri Lanka, and 14% in Belarus, while stroke prevalence is 6%, 5%, and 7%, respectively. Other cardiovascular issues account for 4% in both the USA and Sri Lanka, and 5% in Belarus.

Conclusion. In the comparative analysis of COVID-19 survivors across the USA, Sri Lanka, and Belarus, arrhythmias emerge as the most prevalent cardiovascular disease, affecting 12% of survivors in the USA, 11% in Sri Lanka, and 14% in Belarus. The most vulnerable age group across all three countries is adults aged 65 and older; comprising nearly half of the effected population of cases of the USA and Belarus and Sri Lanka. In terms of gender, males consistently represent a higher proportion of COVID-19 survivors, particularly in Belarus (60%) and Sri Lanka (57%), compared to the USA (55%). This suggests that male survivors, especially those aged 65 and older, are particularly vulnerable to developing long-term cardiovascular complications post-COVID-19. Overall, targeted health strategies should focus on this demographic to effectively address the heightened risk of cardiovascular diseases among older male COVID-19 survivors.