

# A comparison of coronavirus disease 2019 and seasonal influenza surveillance in five European countries: France, Germany, Italy, Spain and the United Kingdom

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## Abstract

Background: In response to the coronavirus disease (COVID-19) outbreak that unfolded across Europe in 2020, the World Health Organisation called for repurposing existing influenza surveillance systems to monitor COVID-19. This analysis aimed to compare descriptively the extent to which influenza surveillance systems were adapted and enhanced, and how COVID-19 surveillance could ultimately benefit or disrupt routine influenza surveillance. Methods: We used a previously developed framework in France, Germany, Italy, Spain and the United Kingdom to describe COVID-19 surveillance and its impact on influenza surveillance. The framework divides surveillance systems into 7 sub-systems and 20 comparable outcomes of interest, and uses 5 evaluation criteria based on WHO guidance. Information on influenza and COVID-19 surveillance systems were collected from publicly available resources shared by European and national public health agencies. Results: Overall, non-medically attended, virological, primary care and mortality surveillance were adapted in most countries to monitor COVID-19, whilst community, outbreak, and hospital surveillance were reinforced in all countries. Data granularity improved, with more detailed demographic and medical information recorded. A shift to systematic notification for cases and deaths enhanced both

geographic and population representativeness whilst the sampling strategy benefited from the roll out of widespread molecular testing. Data communication was greatly enhanced, contributing to improved public awareness. Conclusions: Well-established influenza surveillance systems are a key component of pandemic preparedness and their upgrade allowed European countries to respond to the COVID-19 pandemic. However, uncertainties remain on how both influenza and COVID-19 surveillance can be jointly and durably implemented.

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