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Editorial

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Amelioration of the Influenza Epidemic Alert

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▸ See the article "Application of the Time Derivative (TD) Method for Early Alert of Influenza Epidemics" in volume 39, e40.

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1. Learning From Predictable Epidemics

Seasonal influenza demands public health attention in both hemispheres due to its severity and pandemic potential.[1,2] Despite the unpredictability of the pandemic, we learn from the past experiences how to enhance protection for high risk populations, whom to vaccinate and how to treat.[3,4] Interpandemic Influenza planning consists of vaccination strategy, social distancing policy, diagnostic testing indications, treatment guidelines, including reimbursement and the stockpiling of antiviral drugs.

2. Epidemic Alerts Matter in All Healthcare Scenarios!

Predicting the temporal and regional activity of this annual endemic has been the cornerstone of influenza response in many countries. Depending on the size of the territory or population and the age structure, the priority for influenza activity surveillance could be specific regions, age groups or particular subpopulations. Better prediction of the season the surveillance system is more important in a country with strong public healthcare system where an "influenza epidemic alert" during the influenza season is particularly crucial.[5] This matters not only for primary physicians when testing for influenza but also when prescribing antiviral drugs. The seasonal influenza epidemic alert also facilitates clinical diagnosis of the influenza in outpatient clinics or emergency hospitals. The institutional preparedness for respiratory isolation including preservation of negative pressure isolation rooms, is linked to the healthcare authorities' alert system. Infectious diseases specialists during COVID-19 pandemic periods in Korea have encountered difficulty communicating with local government regarding the sharing of resources from their private hospitals for public purpose.

3. Do We Have Better Strategies to Detect Influenza Activity Earlier?

The Korea Disease Control and Prevention Agency (KDCA) long relied on the influenza epidemic alert system which is based on the criteria of influenza-like illness (ILI) activity from the United States of America's (USA) Outpatient Influenza-Like Illness Surveillance Network (ILINet).[6] However this formula just identifies statistical outliers based on data from three

previous seasons. The study by Kang et al.,[7] published in this issue, suggests an alternative approach to improve sensitivity of the influenza activity using the time derivative (TD) which does not require data from previous non-epidemics periods. Whether this novel strategy will better forecast the beginning of the season remains to be evaluated. Other than statistical or time derivative based approaches, internet based prediction services for influenza activity like Google Flu Trends (GFT) were introduced.

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