Influenza redefined – clinical and epidemiological insight

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With this year's influenza season officially over, it's time to pause and reflect on lessons learned. Despite the availability of influenza vaccination, this infection continues to pose a significant burden and an important strain on the healthcare system each year.

Identifying patients with influenza based on their signs and symptoms is quite straightforward in the clinic during the cold season, and with access to rapid molecular diagnostics, laboratory confirmation can be obtained within a few hours following the initial patient consult.

However, when it comes to epidemiological surveillance, a systematic approach needs to be consistently applied and it is here that case definitions have been a matter of debate. Definitions for influenza-like illness (ILI) and severe acute respiratory infection (SARI) combine clinical signs and symptoms that occur suddenly within a specified time-frame, being suggestive for acute respiratory illness.

Recent studies have discussed whether all the "classical" ILI criteria are indeed needed. While the European Centre for Disease Prevention and Control defines clinical influenza criteria as "at least one systemic symptom (among fever/ feverishness, malaise, headache, myalgia) and at least one respiratory symptom (among cough, sore throat, shortness of breath)",[1] the World Health Organization (WHO) has simplified the case definitions in 2011 and 2014, to include only "fever ≥38°C (or history of fever) plus cough,"[2] since these two criteria appear to yield the best balance of sensitivity and specificity, and can be assessed in all age groups. The definition of fever has also been subject to discussion, particularly for elderly patients, where the threshold could be set as low as 37.3°C to increase the case definition performance.[3]

The time-frame for assessing ILI or SARI criteria, generally regarded as 7 days, was revised by WHO to 10 days,[2] although not all epidemiological studies, including those performed at our facility, have yet incorporated this revision.

In conclusion, since any given definition comes with advantages and disadvantages, when it comes to epidemiological surveillance, consistency is key. Regardless of the definition used, it is essential to be consistent from season to season, in order to generate an accurate picture, based on information that can be compared from year to year, allowing trend analysis.

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