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1 SEASONAL DISEASES

Influenza

Data from two influenza surveillance programmes, influenza-like illness (ILI) at primary healthcare clinics and Viral Watch sites, and severe respiratory illness (SARI), which monitors severe disease in hospitalised patients, show that during 2014 the predominant circulating influenza subtype was influenza A(H3N2). The 2014 influenza season started in epidemiological week 21 (week ending 25 May), when the influenza detection rate rose above 10%, and peaked in epidemiological week 27 (week ending 06 July) with a detection rate of 80.4%. The season ended in epidemiological week 37 (week ending 14 September).

In the first nine weeks of 2015, 28 specimens were received from Viral Watch sites. Influenza A(H3N2) was detected in three patients who had recently returned from Europe. In addition, 14 specimens were collected at the time of entry into South Africa from abroad; influenza A(H1N1)pdm09 was detected in one, A(H3N2) in five, and influenza B in two of these travellers.

During the same period 126 patients with ILI were tested at two sentinel sites, but influenza was not detected. Other respiratory viruses were detected in patients with ILI, the majority being rhinovirus (41/78, 53%) followed by respiratory syncytial virus (15/78, 9%).

Between 01 January and 11 February 2015, 380 patients with SARI were tested at the four SARI sentinel hospital sites. Influenza B was detected in two patients admitted at Klerksdorp-Tshepong Hospital Complex, neither reporting recent travel. Other respiratory viruses were detected in 143 patients, the majority being rhinovirus (96/152, 63%) followed by parainfluenza (13/152, 9%) and RSV (10/152, 7%).

For the 2014 influenza season, influenza A(H3N2) was the dominant strain. Estimates of overall vaccine effectiveness (from the viral watch surveillance programme) adjusted for age and underlying conditions, found that the vaccine

effectiveness was 43.1% (95% CI: -26.8% to 74.5%). The circulating strain of influenza A(H3N2) was substantially drifted from the vaccine strain. Similarly, influenza viral characterisation data from the United States of America 2014/2015 season indicated that 52% of the influenza A(H3N2) viruses were antigenically different (drifted) from the A(H3N2) vaccine virus component.[1] Influenza A(H3N2) viruses were associated with outbreaks in several countries (especially in the northern hemisphere) and the majority of A(H3N2) viruses were antigenically related to A/Switzerland/9715293/2013[2]. As a result of the drift, the influenza vaccine recommendations for both the southern and northern hemisphere have changed for the 2015/2016 seasons.

Influenza vaccination

Recommended composition of influenza virus vaccine for use in the 2015 southern hemisphere influenza season

The following strains have been recommended by the World Health Organization (WHO) for the 2015 southern hemisphere influenza season:

- an A/California/7/2009 (H1N1)pdm09-like virus
- an A/Switzerland/9715293/2013(H3N2)-like virus[a]
- a B/Phuket/3073/2013-like virus

[a] A/South Australia/55/2014, A/Norway/466/2014 and A/Stockholm/6/2014 are A/Switzerland/9715293/2013-like viruses

Timing of influenza vaccination

Since it takes about two weeks after vaccination for protective antibodies to develop, it is recommended that people be vaccinated as soon as vaccine becomes available, to ensure that they are protected before the influenza season starts. Healthcare workers are encouraged to discuss influenza vaccination with their patients, in particular those who are at increased risk for severe influenza-associated complications.

Detailed recommendations on target groups, dosages and contraindications for the 2015 influenza vaccine can be accessed in the February issue of the South African Medical Journal, available at: http://www.samj.org.za/index.php/samj/article/viewFile/9367/6535.

Owing to the antigenic drift in influenza A(H3N2) and influenza B viruses noted in the 2014 northern hemisphere influenza season, new influenza strains had to be incorporated in the 2015 southern hemisphere influenza vaccine. There has subsequently been a delay in influenza vaccine production and the 2015 influenza vaccine will only be available towards the end of April 2015.

References

1. CDC. HAN 374: CDC Health Advisory Regarding the Potential for Circulation of Drifted Influenza A(H3N2) Viruses. 2014
2. http://www.who.int/influenza/vaccines/virus/recommendations/201502_recommendation.pdf

Source: Centre for Respiratory Diseases and Meningitis, NICD-NHLS