A new decade, a new seasonal influenza: the Council of the European Union Recommendation on seasonal influenza vaccination

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Europe is coming to the end of its autumn-winter wave of the 2009 influenza A(H1N1) pandemic. Transmission has been continuing in the east and south-east of Europe, but the signs from other parts of Europe before Christmas indicated that the circulation of the pandemic influenza A(H1N1) virus was declining. Though as is to be expected the associated burden on hospitals and especially on intensive care, and the number of deaths are declining less quickly and with some delay [1,2]. Worldwide in almost all countries with virological surveillance pandemic viruses are pre-dominating apart from co-circulating influenza B viruses [3]. In Europe, there have hardly been any influenza (AH3) viruses in this season so far, and even fewer of the previous seasonal influenza A(H1) viruses [1].

So what happens next and what needs to be done? The historical pattern of human influenzas is that after pandemics, the world experiences a new mix of viruses referred to as *inter-pandemic influenza* or as *seasonal influenza* in temperate countries. In the three 20th-century pandemics, the new pandemic virus displaced the previous influenza A seasonal viruses, with a variation for the last three decades due to the re-emergence of an A(H1N1) virus (Figure) [4]. Hence, what now has to be done is to determine the characteristics of the coming, new seasonal influenza based first on the growing knowledge of the 2009 pandemic influenza, then on the experiences from the coming influenza season first in the southern hemisphere and then in Europe. These characteristics should then be compared to those of the previous seasonal influenza to be able to determine a rational approach to mitigation, treatment and vaccination [5].

The 2009 pandemic influenza has some similarities with the previous seasonal influenza but there are also a number of important differences. The incidence of severe disease in children and pregnant women from 2009 pandemic influenza seems to be higher than from the previous seasonal influenza. Furthermore, there is residual immunity in many older people, though older people who were not immune had the highest mortality rate of any age group in this pandemic. Another uncommon but striking feature was the prominence of sudden acute illness and deaths due to acute respiratory disease syndrome (ARDS) [5,6]. ARDS had been seen before in association with seasonal influenza, but was even more uncommon. If the features described persist with the new seasonal influenza, this may have an impact on the details of recommendations for seasonal influenza immunisation. To gather the scientific evidence, Europe will need to additionally focus its surveillance on severe cases, so called severe acute respiratory infections (SARI), and especially deaths [7]. Such surveillance has started in the pandemic under a strategy agreed with the European Union Member States, but it now needs to be extended to more countries and to capture more data on deaths [1, 7-9].

Influenza A never stands still. What is true at the moment for the 2009 influenza A(H1N1) will probably not remain so. The virus responsible for the last pandemic in 1968-70 became more transmissible between its first and second winter so that there were more cases and deaths in 1969-70 in at least two European countries [10,11]. The 1957-8 pandemic, declined before Christmas, but then saw a rise in the new year in influenza-related deaths, though not in cases [12,13]. Serological data such as that already gathered by France and the United Kingdom and close epidemiological and virological surveillance throughout the year are essential to determine how likely these scenarios will be in 2010-11 [14,15]. In 2007-8, the seasonal influenza A(H1N1) virus suddenly became resistant to the main oral antiviral oseltamivir, a change that seemingly was not related to the use of antivirals [16,17]. The rule with influenza, pandemic and inter-pandemic, is to maintain vigilance and expect the unexpected.

The most potent countermeasure for any human influenza is vaccination. With prescience the Member States of the European Union (EU) collectively as the Council of the European Union have just adopted under the Swedish Presidency a formal recommendation promoting seasonal influenza vaccination [18].

This has a number of important features (Box), puts responsibilities to Member States to enact vaccination programmes and to monitor coverage. The European Centre for Disease Prevention and Control (ECDC) is to provide technical support from its Seasonal Influenza Immunisation Programme including its work with the Vaccine European New Integrated Collaboration Effort (VENICE) project to monitor policies, practices and coverage. Much is to be done, as uptake in the older age groups varies forty-fold between Member States, some countries cannot provide data at all, and most find it difficult to monitor coverage in the clinical risk groups [19]. A group especially singled out for attention and immunisation by the European Council are healthcare workers (HCW). An article in this week's issue by M. Chironna *et al*. illustrates the necessity for HCW to get vaccinated against influenza [20]. Highly vulnerable patients, hospitalised children with cancer, were probably infected by unimmunised healthcare staff. A number of HCW in Europe choose not to be vaccinated. While the reasons for this may be manifold, what needs to be emphasised with them is that this is not just for their own protection. The most important reason for them to get immunised is to protect their vulnerable patients who often belong to risk groups for influenza.

The question of whether there are also other groups who would benefit from seasonal influenza vaccination, such as young children who have not been exposed to the 2009 pandemic influenza and pregnant women, can only be answered by close European and global epidemiological and virological surveillance in the months to come [7,8]. Results from such common efforts will provide guidance for EU Member States in their decisions for whom to recommend the seasonal influenza vaccine in the autumn of 2010.

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