



The role of primary care professionals in influenza epidemics and pandemics

A joint ESWI/EUROPREV/IPCRG statement

Background

The European Scientific Working group on Influenza (ESWI), the European Network for Prevention and Health Promotion in Family Medicine and General Practice (EUROPREV) and the International Primary Care Respiratory Group (IPCRG) held a joint satellite symposium called “GPs: in the forefront of the fight against influenza” on 29 June 2017, during the 22nd WONCA Europe Conference in Prague, Czech Republic.

The satellite event provided a state-of-the-art of influenza vaccine uptake in Europe and examined pathways to improve this uptake. Symposium attendees jointly discussed the crucial role of care physicians in influenza prevention and decided that a position statement should be issued to provide the scientific base to improve flu vaccine uptake in at-risk groups and in healthcare providers. The statement at hand meets that urgent call. It systematically summarizes the main conclusions and takehome messages of the symposium.

1. The need for an increased influenza vaccine uptake in Europe

Annually occurring influenza is an important public health problem in Europe. It is associated with increased general practice consultation rates, hospital admissions, and excess deaths. It also leads to economic and social losses due to absence from work and school, decreased productivity, and extra pressure on health care services during the winter season.

Next to epidemic influenza, the threat of an influenza pandemic is clearly still

present. The first influenza pandemic of the 21st century was caused by a H1N1 swine flu virus in 2009. Today, H5N1 avian influenza viruses are still circulating, claiming lives mainly in Southeast Asia. Avian H7N9 influenza viruses, that equally claim numerous lives, have recently emerged in China. As all these and other avian influenza viruses have the potential to develop into pandemic viruses, there is no time for complacency when it comes to public health preparedness.

Vaccination is a cornerstone of the fight against both epidemic and pandemic influenza. It is the primary means of preventing and reducing transmission of influenza, and therefore seasonal influenza vaccination is highly recommended for people in priority groups. According to the World Health Organization⁴, priority groups include older adults, healthcare professionals, people with chronic medical conditions such as diabetes, heart, lung, or kidney disease. Since 2012, WHO added pregnant women and children aged <5 years of age to the at-risk groups.

These priority groups represent about 30% of the EU population. Since risk groups are at risk of severe complications when they get influenza, the European Union has endorsed the WHO's objectives of increasing vaccine coverage in high-risk groups to more than 75%.

It is also good to note that influenza vaccines are not only safe, they are also effective. For at risk patients under 65 years of age, there is no discussion about effectiveness. For older adults, there is not enough evidence from RTCs, since only one RTC is available.

The Cochrane report by Jefferson et al concluded that in order 'to resolve the uncertainty, an adequately powered publicly-funded randomised, placebo-controlled trial run over several seasons should be undertaken'.

Since evidence about the effectiveness in older adults is overwhelming in observational studies, most scientists disagree for ethical reasons.

Moreover, a more recent review of effectiveness studies in older adults indeed provides ample evidence of the ability of influenza vaccines to reduce the risk of influenza infection and death, but also the risk of frailty.

2. The role of primary care in influenza vaccination

The level of vaccination coverage is the result of the interplay of many factors: policy decisions at the level of the healthcare system and awareness of patients, as well as the commitment, motivation and organization of healthcare workers. It has been demonstrated that when a doctor or nurse recommended vaccination to positively predisposed patients, 87% of patients got vaccinated. Moreover, even when patients had a negative attitude towards vaccination, 70% of them still got vaccinated if their healthcare provider recommended it. In contrast, when patients had a positive attitude but their physician did not recommend vaccination, only 8% got vaccinated. A proactive healthcare worker, therefore, has a huge impact on the likelihood of a patient to become vaccinated.

Specific attention should go to the protection of pregnant women. After all, pregnant women are usually not aware they belong to an at-risk group for influenza infection. Healthcare workers therefore need to actively inform pregnant women and elaborate on the importance of influenza prevention for them and their unborn babies.

3. Influenza vaccination of healthcare workers

Most EU countries recommend healthcare providers to get immunised against influenza, especially when they have regular contacts with patients and high-risk patients. The reasons are three-fold:

- It is important to protect those who protect others against health hazards.
- Healthcare workers should be able to provide care for their patients when they need it, particularly during the influenza season. Immunisation provides the opportunity to keep taking care of patients when they need it the most.
- Healthcare workers should not pose a risk to their own patients. Influenza is a highly transmissible infection and healthcare workers may transmit the illness to patients even if they are mildly or sub-clinically infected. It is advised that healthy adults who take care of patients at risk of developing complications when they get influenza have their annual flu shot.

Although many countries recognize the need for their healthcare workers to be vaccinated, the implementation of this principle remains low. In Europe vaccination rates among healthcare workers are generally less than 25%.

4. Conclusion

Concerted action is urgently needed to improve seasonal influenza vaccine uptake in at-risk groups and in healthcare providers by raising awareness in all target groups. Enhancing protection against influenza infection and disease is a joint commitment of WONCA Europe and other stakeholders, including ESWI, EUROPREV and IPCRG.

About the initiators

ESWI

The European Scientific Working group on Influenza is a network of independent influenza experts and organizations of public health officials, healthcare professionals, at-risk patients and the elderly. Together, we aim to reduce the burden of influenza in Europe.

www.eswi.org

EUROPREV

The European Network for Prevention and Health Promotion in Family Medicine and General Practice (EUROPREV) is a WONCA Europe network that aims to promote evidence-based disease prevention and health promotion in general practice/family medicine in Europe.

<http://europrevdev.woncaeurope.org>

IPCRG

The International Primary Care Respiratory Group is a clinically-led charitable organization with the prime mission of carrying out and promoting research into the care, treatment and prevention of respiratory diseases and tobacco dependence in the community. In addition, through its network of over 130,000 primary care professionals, it makes available the results of research for patient benefit.

www.theipcr.org

References

1. http://www.ecdc.europa.eu/en/healthtopics/seasonal_influenza/basic_facts/Pages/fact_sheet_professionals_seasonal_influenza.aspx
2. Imai M, Herfst S, Sorrell EM, Schrauwen EJ, Linster M, De Graaf M, Fouchier RA, Kawaoka Y. Transmission of influenza A/H5N1 viruses in mammals. *Virus Res.* 2013; 178:15-20.
3. Jonges M, Welkers MR, Jeeninga RE, Meijer A, Schneeberger P, Fouchier RA, de Jong MD, Koopmans M. Emergence of the Virulence-Associated PB2 E627K Substitution in a Fatal Human Case of Highly Pathogenic Avian Influenza Virus A(H7N7) Infection as Determined by Illumina Ultra-Deep Sequencing. *J Virol.* 2014; 88:1694-702.
4. WHO Regional Office for Europe recommendations on influenza vaccination during the 2016/2017 winter season.
5. Benefits of flu vaccination for persons with diabetes mellitus: A review. M.Goeijenbier T.T.van Sloten L.Slobbe C.Mathieu P.van Genderen Walter E.P.Beyer Albert D.M.E.Osterhaus <https://doi.org/10.1016/j.vaccine.2017.07.095>
6. Loerbroks A, Stock C, Bosch JA, Litaker DG, Apfelbacher CJ. Influenza vaccination coverage among high-risk groups in 11 European countries. *Eur J Public Health.* 2012;22:562-8.
7. http://www.ecdc.europa.eu/en/healthtopics/seasonal_influenza/vaccines/pages/influenza_vaccination.aspx
8. Michiels B et al. A systematic review of the evidence on the effectiveness and risks of inactivated influenza vaccines in different target groups. *Vaccine*, 2011, 29:9159–9170.
9. Jefferson TO, Rivetti D, Di Pietrantonj C, Rivetti A, Demicheli V. Vaccines for preventing influenza in healthy adults. *Cochrane Database Syst Rev.* 2007;(2):CD001269.
10. Osterholm MT, Kelley NS, Sommer A, Belongia EA. Efficacy and effectiveness of influenza vaccines: a systematic review and meta-analysis. *Lancet Infect Dis.* 2012;12:36-44.
11. Govaert TM, Thijs CT, Masurel N, Sprenger MJ, Dinant GJ, Knottnerus JA. The efficacy of influenza vaccination in elderly individuals. A randomized double-blind placebo-controlled trial. *JAMA* 1994;272:1661-5.

12. Jefferson T, Di Pietrantonj C, Al-Ansary LA, Ferroni E, Thorning S, Thomas RE. Vaccines for preventing influenza in the elderly. *Cochrane Database Syst Rev.* 2010;(2):CD004876.
13. Nichol KL, Nordin JD, Nelson DB, Mullooly JP, Hak E. Effectiveness of influenza vaccine in the community-dwelling elderly. *N Engl J Med.* 2007;357(14):1373-81.
14. Beyer W., McElhaney J., Smith D., Osterhaus A., Nguyen Van-Tam J., Monto A. Cochrane re-arranged: Support for policies to vaccinate elderly people against influenza; *Vaccine.* 2013;50:6030–6033
15. Blank P, Schwenkglens M, Szucs TD. The impact of European vaccination policies on seasonal influenza vaccination coverage rates in the elderly. *Hum Vaccin Immunother.* 2012;8:328-35.
16. <https://ecdc.europa.eu/en/publications-data/seasonal-influenza-vaccination-europe-vaccinationrecommendations-and-coverage-1> 20 July 2017
17. van Delden JJ, Ashcroft R, Dawson A, Marckmann G, Upshur R, Verweij MF. The ethics of mandatory vaccination against influenza for health care workers. *Vaccine.* 2008; 26:5562-6.
18. Wicker S, Marckmann G. Vaccination of health care workers against influenza: Is it time to think about a mandatory policy in Europe? *Vaccine.* 2013;10i: S0264-410X(13)01338-8.