Mandatory Influenza Vaccination for Healthcare Personnel

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Topics

1. Rationale for influenza vaccination of healthcare personnel (HCP)

2. Influenza vaccine uptake of HCP

3. Attitudes and practices of HCP toward influenza vaccination

4. Influenza vaccination policies for HCP

5. Recommendations - Conclusions
Fact No 1: HCP are at increased risk for occupational exposure to influenza
(increased risk for acquisition of influenza infection compared with adults working in non-healthcare settings)
Influenza among HCP

- 18.7% in non-vaccinated HCP
- 5.4% in non-vaccinated non-HCP

*Meta-analysis of 58,245 influenza cases (diagnosed by serology, PCR or culture)*

Kuster et al. *PlosOne* 2011;6:e26239
Fact No 2: HCP provide care to patients at high risk for serious morbidity, complications, death because of:

- their age (neonates, elderly)
- underlying conditions (pregnancy, immunosuppression)
- chronic diseases (malignancy, COPD)
Transmission of influenza from HCP to patients onset of serious nosocomial epidemics with high associated morbidity, mortality and costs

Outbreak of novel influenza A (H1N1) in an adult haematology department and haematopoietic cell transplantation unit: clinical presentation and outcome.
Lalayanni C, Sirigou A, Iskas M, Smias C, Sakellari I, Anagnostopoulos A.

Influenza A/H1N1/2009 outbreak in a neonatal intensive care unit.
Tsagris V¹, Nika A, Kyriakou D, Kapetanakis I, Harahousou E, Stripeli F, Maltezou H, Tsolia M.
impact of influenza outbreaks in healthcare facilities

- extensive costs
- absenteeism among HCP
- disruption of healthcare services
Vaccination of HCP is justified in order to:

- directly protect them
- indirectly protect their patients, colleagues and families
- preserve health-care services

from nosocomial transmission of influenza
2. Vaccination coverage of HCP against influenza

- Low vaccination rates worldwide (< 40%)
- Mandatory vaccination in US hospitals: > 98%

3. Attitudes & practices of HCP about influenza

Table 2. Barriers to increase influenza vaccine uptake among health-care workers

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<tr>
<th>Barriers</th>
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<tr>
<td>Insufficient knowledge about nosocomial influenza</td>
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<td>Misconceptions that they are not at risk for contacting influenza</td>
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<tr>
<td>Misconceptions about vaccine effectiveness</td>
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<td>Misconceptions about vaccine safety</td>
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<td>Misconception that the vaccine can cause influenza</td>
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<td>Unawareness of the recommendations for annual influenza vaccination</td>
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<td>Unavailable vaccine</td>
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<td>Fear of injections</td>
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<td>Lack of leadership support</td>
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<td>Reliance on homeopathic agents</td>
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Maltezou HC, Tsakris A. Vaccination of health-care workers against influenza: our obligation to protect patients. *Influenza and Other Respiratory Viruses* 2011; 5:382-388
Table 3. Strategies associated with increased influenza vaccine uptake in health-care workers

<table>
<thead>
<tr>
<th>On-site vaccination</th>
<th>Vaccination free of charge</th>
<th>Lectures about influenza and influenza vaccine</th>
<th>Organization of campaigns</th>
<th>Mobile vaccination teams</th>
<th>Use of declination forms</th>
<th>Implementation of a mandatory vaccination policy</th>
<th>Use of reminding systems</th>
<th>Incentive programs</th>
<th>Leadership support</th>
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Maltezou HC, Tsakris A. Vaccination of health-care workers against influenza: our obligation to protect patients. *Influenza and Other Respiratory Viruses* 2011; 5:382-388
4. Influenza vaccination policies for HCP

- almost universally recommended
- different implementation frames (mandatory or voluntary)

27 countries in the European Union, Norway, Switzerland & Russia
Mandatory vaccination of HCP in Europe against:

- measles-mumps-rubella in Finland
- hepatitis A in Slovakia
- hepatitis B in France, Slovakia & Slovenia
- BCG in France, Italy and Slovakia
- poliomyelitis & tetanus-diphtheria in France

In case of refusal the HCW is moved to a low-risk department or to a post with no contact with patients.
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No mandatory vaccination policies for influenza in Europe.
Mandatory vaccination policies were adopted by several healthcare institutions and professional societies the past years

Vaccine uptake rate > 98%

Use as an index of healthcare quality

CDC. Immunization of health-care workers: recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Hospital Infection Control Practices Advisory Committee (HICPAC). MMWR 1997;46(RR-18):1–44
In case of vaccination refusal (following multiple attempts to persuade)

- termination of employment

- suspension of admitting privileges for noncompliant physicians

- mandatory surgical mask use while in patient care areas

- ineligibility for work

Honda et al. A successful strategy for increasing the influenza vaccination rate of healthcare workers without a mandatory policy outside of the United States: A multifaceted intervention in a Japanese tertiary care center. Infect Control Hosp Epidemiol 013;34:1194-1200
Vaccinations should be mandatory

- for all HCP 52%
- for HCP caring for high-risk patients 71%

Maltezou et al. *American Journal of Infection Control* 2013;41:66-70
Maltezou et al. *Journal of Infection* 2012;64:319-324
Vaccination campaigns for HCP without a mandatory policy outside of the United States

● Australia: 56% to 2013, 80% to 2014
● Japan: 63% to 2006, 97% to 2013

● sustainability and/or further increase of vaccination coverage?
● human resources utilization?
● costs?

Maltezou HC, Poland GA. Vaccination policies for healthcare workers in Europe. *Vaccine* 2014;32:4876-4880

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<th>Goal/actions to implement</th>
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<tr>
<td><strong>Delivery of vaccine</strong></td>
<td>Development of in-hospital platforms to vaccinate HCWs (be flexible, use already existing procedures and infrastructures, e.g. occupational department, vaccination clinic, mobile vaccination teams, delivery of vaccine free of charge and in all working shifts)</td>
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<td><strong>Estimate vaccine uptake</strong></td>
<td>Establishment of in-hospital records for vaccination uptake, need to review and update information on regular intervals, use standardized definitions</td>
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<td><strong>Development of reminder systems</strong></td>
<td>Approach all non-immune HCWs at regular intervals</td>
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<td><strong>Need to address concerns and mistrust about vaccines</strong></td>
<td>Education of HCWs about VPDs and vaccines, communication, collaboration with medical schools and professional societies</td>
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VPD: vaccine-preventable disease; HCW: health-care worker.
Recommendations - Conclusions

Voluntary influenza vaccination policies for HCP have not achieved and sustained high immunization rates.

Healthcare commitment is required in order to eliminate HCP misconceptions about influenza and influenza vaccine and raise vaccination rates, especially if mandatory vaccination policies are widely implemented.

Mandatory vaccination policies should be considered for diseases that can cause significant morbidity and mortality to patients, in order to induce immunity and promote safety both at the level of HCP and at the level of healthcare facility (herd immunity).
«Κάλλιον το προλαμβάνειν ἢ το θεραπεύειν»

“Prevention is better than cure”

Hippocrates, Greek physician (460-377 BC)
Thank you for your attention!