

*...scientists fighting influenza*

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## European Scientists Fighting Influenza 2013

European  
Scientific  
Working group on  
Influenza

## A multidisciplinary scientifically independent network of

- **Members:** Independent influenza experts
- **Associated members:** experts with additional advisory roles
- **Partners:** patient organizations, organizations of the elderly, medical occupational associations, public health organizations

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## Our partners



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## Members

- Dr. T. Heikkinen, Finland (*paediatrician*)
- Dr. P. Openshaw, UK (*immunologist; Vice-President*)
- Dr. A.D.M.E. Osterhaus, The Netherlands (*virologist, President*)
- Dr. R. Prymula, Czech Republic (*epidemiologist*)
- Dr. T.D. Szucs, Switzerland (*pharmacoeconomist*)
- Dr. S. van der Werf, France (*virologist*)
- Dr. A. Monto, USA (*epidemiologist*)
- Dr. G.A. van Essen, The Netherlands (*GP*)
- Dr. G. Gabriel, Germany (*virologist*)
- Dr. B. Lina, France (*virologist*)
- Dr. M. Ciblak, Turkey (*microbiologist*)
- Dr. V. Munster, USA (*virologist*)

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## ESWI's driving motives:

- **Fact 1:** European health care systems are among the best in the world
- **Fact 2:** In Europe, influenza claims more lives than traffic accidents
- **Fact 3:** Influenza is partly preventable by vaccination and other measures
- **Fact 4:** We can identify those at special risk
- **Fact 5:** We need to improve our understanding of influenza viruses

**Our goal:** To reduce the burden of influenza in Europe

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## Partnership of influenza stakeholders

### **Shared common aims:**

To advance our understanding of influenza as a disease; to apply this knowledge to improve the health of Europeans

### **Shared partnership:**

Partners address obstacles together, making progress that neither could make alone

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## Revenue

- Public funding (EU grants)
- Unrestricted grants by flu vaccine and antivirals companies
- Organization of European Influenza Conferences
- Separate project support
- ESWI has legally formalized independence: articles of incorporation and rules of practice approved and respected by all parties

*ESWI's members gain no personal financial benefit from ESWI*

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## Benefits for sponsoring partners

- Access to the ESWI network
- Opportunity to discuss influenza issues with ESWI Board members (twice a year)
- Visibility and access to ESWI conferences/summit/workshops
- Visibility and access to ESWI communication tools (FluCommunity/FluCentre...)
- Informal platform to discuss new ideas/hurdles/actions...

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## ESWI activities



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## European Influenza Conferences



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## European Influenza Conferences



THE FIFTH ESWI  
**INFLUENZA**  
CONFERENCE

14-17 SEPTEMBER 2014 | RIGA

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## Science Policy Interface



- delineated programme track for public health officials
- ‘translates’ the newest scientific data and presents good practices about influenza policy measures and recommendations
- seven sessions, chaired by scientific experts and co-chaired by experienced facilitators
- ample room for Q&A and discussion
- session reports published as part of conference proceedings

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## ESWI Flu Summits



- Platform for influenza stakeholder organizations
  - to exchange good practices
  - to initiate concrete actions
  - to learn about the latest scientific insights in influenza issues
- Third edition held on 2 May 2013 in the Institute for European Studies in Brussels
  - 100 attendees – 10 lectures
  - Co-operation with WHO/Europe
  - H7N9 update; new evolutions in influenza vaccines and antivirals; vaccine safety and effectiveness; the prospect of a universal vaccine; the H5N1 threat
- [www.flusummit.org](http://www.flusummit.org)

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## *Cochrane re-arranged:* Influenza vaccination and the elderly

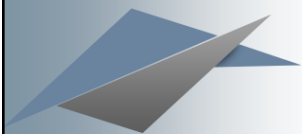
Janet E. McElhaney, MD

HSN Volunteer Association Chair in Geriatrics Research

Health Sciences North and

Advanced Medical Research Institute of Canada

Sudbury, Canada



ADVANCED MEDICAL RESEARCH  
INSTITUTE OF CANADA

## Overview:

- 1) Increasing rates of hospitalization due to influenza are occurring with aging of the population. *Does influenza illness impact the independence and care needs of the elderly?*
- 2) Recent reports have questioned the benefit of influenza vaccination in the elderly. *Should we be prepared to make policy decisions based on these data?*



## Key Messages

- The differences explained: **a matter of methodology**

### **Cochrane statisticians**

- 75 articles out of a database of 4,000 publications, using mainly observational studies
- Overstratification: one hundred single metaanalyses, according to various vaccine types, study designs, populations, and outcome case definitions – a formal statistical vs. biologic point-of-view.

### **Influenza experts**

- Patient-centred knowledge about the infection processes, the rationale of vaccination and the measures for vaccine quality in order to determine relevant concepts and categories.

- In addition, Cochrane's analysis is **statistically flawed**

### **Cochrane does not distinguish** between

- seasons with high vs. mild or no circulation of influenza virus
- vaccines with good vs. poor match vaccines to circulating strains

## The Controversy

- Conclusion of the **Cochrane Review**<sup>^</sup>
  - “Data presented in this review are so biased as to be virtually uninterpretable”
    - translates in the media to “there is no benefit of influenza vaccination in community-dwelling elderly”.
- Conclusion of the **Cochrane Re-arranged**\* study
  - The findings of the *Cochrane Re-arranged study* provides evidence for the ability of influenza vaccines to reduce the risk of influenza infection and influenza-related disease and death in the elderly.

<sup>^</sup>Jefferson T et al. Vaccines for preventing influenza in the elderly. Cochrane Database of Systematic Reviews 2010, Issue 2. DOI: 10.1002/14651858.CD004876.pub3.

\*Beyer WEP et al. Cochrane re-arranged: Influenza vaccination and the elderly. Interpreting the uninterpretable. Fourth ESWI Influenza Conference, Malta, Sept 11-14, 2011. Abstract AS21P.

## ESWI Influenza Survey *FluQuest*



- Comparative analysis of pre- and post-pandemic plans in nine European countries: Austria, Belgium, the Czech Republic, Finland, France, Germany, the Netherlands, the UK and Turkey.
- Comparative analysis of pre- and post-pandemic seasonal Influenza surveillance, vaccination and communication
- Survey data from Japan and the US used as international references.
- Multiple data collection methods: document review, electronic survey and key participant interviews.
- Purpose:
  - Learn about Europe’s level of pandemic preparedness
  - Learn about rationales for changes in pandemic response policies
  - Enhance European preparedness for the next influenza pandemic
  - NOT to facilitate the establishment of new PPPs

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## ESWI Influenza Survey FluQuest Workshop 3 May 2013



- Main survey conclusions presented at FluQuest Workshop in Brussels
- Audience of 45 European Public Health Officials; reflections on main conclusions by WHO/Europe
- [www.eswiworkshop.org](http://www.eswiworkshop.org)
- Main conclusions:
  - European policy makers are complacent to develop decisive pandemic response plans, based on lessons learnt during the 2009 pandemic.
  - Revised pandemic preparedness plans are often extremely flexible.
  - EU countries await actions by WHO (revision pandemic phases), ECDC and DG Sanco (vaccine procurement initiative)
  - Challenges lie ahead in terms of antiviral stockpiles, vaccine procurement (no agreements in place) and healthcare capacity (lack of emergency response plans)
  - Evaluation of pandemic communication urgently needed in terms of target groups (inclusion of at-risk groups) and tools (intermediaries, social media...)

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## Country Influenza Stakeholder Networks (CISN)



- 2003: Poland, Germany, Sweden
- 2008: Finland, Czech Republic
- 2010: Turkey, Austria
- 2013: Israel



### CISN

- Identifies local barriers in influenza management
- Develops an action plan to overcome barriers

*ESWI promotes communication between stakeholders*

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## ESWI documentaries

- Flu documentary “Influenza: aiming at a moving target” (38 min). English spoken, subtitles in French and Russian
- CISN documentary “A concept to tackle flu nationwide” (21min)
  - available online at [www.flucentre.org/media-library/](http://www.flucentre.org/media-library/)
  - DVD copies available



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## Online influenza community

- Online since 2012
- Discussion platform for influenza stakeholders
- Hub of ESWI's online communication through integrated dbase of 2,800 flu stakeholders: scientists, public health officials, members of the partner organisations, policy makers and influencers.
- [www.flucommunity.org](http://www.flucommunity.org)



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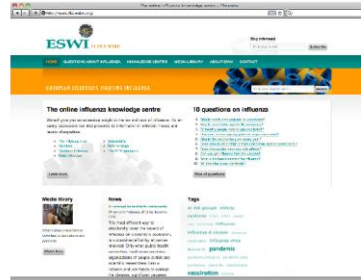
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## Online influenza knowledge centre for healthcare professionals



- Online since 2008
- Regular content updates
- Well-established media library
- Daily unique hit rate ranging from 250 to 600
- [www.flucentre.org](http://www.flucentre.org)



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## Young Scientists Best Body of Work Award



- to advance research in the influenza field
- competition open to all young scientists throughout the world
- judged by an international committee spanning all of influenza
- Prize worth €10,000
- 2009 winner: Gülsah Gabriel
- 2011 winner: Vincent Munster
- Next edition: 2014

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## ESWI Communication tools: summary

- [eswi.org](http://eswi.org): corporate website
- [flucommunity.org](http://flucommunity.org): open to all stakeholder groups
- [flucentre.org](http://flucentre.org): online influenza knowledge centre
- Flu documentary: “Influenza: aiming at a moving target”
- CISN documentary: “A concept to tackle flu nationwide”
- Flu Summit reports (to partner organizations)

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## ESWI activities: summary

- ESWI Flu Summit
- FluQuest Survey
- Young scientists awards and lab training courses
- Country Influenza Stakeholders Networks
- ESWI Influenza Conferences & Science Policy Interface
- Science Inspired Tales
- ad hoc scientific publications/press releases/position papers
- ad hoc contacts with Members of European Parliament

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## Flu-Quest workshop

- Comparative analysis of pre- and post-pandemic plans in nine European countries: *Austria, Belgium, the Czech Republic, Finland, France, Germany, the Netherlands, the UK and Turkey.*
- Comparative analysis of pre- and post-pandemic seasonal Influenza surveillance, vaccination and communication
- Survey data from *Japan and the US* used as international references.
- Selection criteria mainly of *geographical* nature. Regional clustering allowed identification of differences in countries that otherwise have fairly similar healthcare systems.
- Multiple data collection methods: *document review, electronic survey and key participant interviews.*

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## Seasonal Influenza Vaccination

### Impact of 2009 pandemic on seasonal influenza vaccination

- New post-pandemic vaccination target groups often include pregnant women, children or household contacts, leading to increased uptake in those groups.
- Several countries see an overall decrease in seasonal vaccine uptake because of loss of credibility and trust

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## Seasonal Influenza Communication

### Observation:

#### Impact of ESWI's Country Influenza Stakeholder Networks (CISN)

- The Finnish CISN has proven instrumental in the establishment of communication lines between the government and the risk-groups.
- In Turkey, the GRIP PLATFORMU brings together healthcare organizations and scientific societies and uses these groups as an intermediary to inform patients.
- Currently, ESWI is involved in setting up similar initiatives in Austria and Israel.

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## Pandemic Influenza Monitoring

### Observation:

**European countries are very well equipped to monitor newly emerging strains of influenza virus:**

- In all countries, laboratories are capable of typing and subtyping all influenza strains.
- All countries were capable of monitoring antiviral resistance and of distinguishing H1 swine origin early.
- A national system for influenza surveillance in animals is operational in all countries surveyed, and all countries have access to one or more veterinary laboratories able to offer routine influenza diagnosis, typing and subtyping.

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## Pandemic planning and coordination

### Observation: preparedness plan updates are often postponed

- A minority of countries has updated its pre-pandemic preparedness plan: Finland, France, UK, Czech Republic and Japan
- Most other countries lack the urgency to revise their plans, for a variety of reasons:
  - Lack of political interest
  - Lack of scientific consensus over pandemic evaluation
  - Waiting for coordinated response by international community (WHO/ECDC)

## Pandemic planning and coordination

### Pandemic planning committee

- Most countries had an interministerial pandemic planning committee installed to coordinate pandemic response on a national and regional level
- All pandemic planning committees include
  - Policy makers
  - Scientific opinion leaders (except France)
- None include representation of
  - Organizations of the elderly
  - Nurses organizations
  - Organizations of at-risk patients

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## Antiviral medicines: stockpiles and distribution

### Observations:

- All surveyed countries have oseltamivir and zanamivir stockpiles
  - peramivir licensed for use during pandemic in US and Japan
  - laninamivir licensed for use during pandemic in Japan
- Antiviral stockpile remained untouched since market supply sufficed to meet the demand in e.g. Finland and The Netherlands. Stockpile “activated” but not used in Austria and Japan.
- Emergency distribution lines for antiviral medicines are differently organized in all surveyed countries. Pharmacists and primary healthcare workers play a central role in most countries except in the Czech Republic, France and Germany.

## Antiviral medicines: stockpiles and distribution.

### Impact of the 2009 pandemic on antiviral stockpile

- None of the surveyed countries has or will replenish its antiviral stockpile
  - Exception Finland (rolling stockpile)
  - Exception UK
    - 50% of the population was covered by the national antivirals stockpile. 1,1 million courses have actually been distributed for prophylactic use and for treatment. This stockpile level is being maintained to ensure continued preparedness.
- Stockpile expiration dates are extended
  - Stockpile retested for stability and efficacy, and shelf-life extended in Belgium, Czech Republic, France and Japan.

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## Antiviral medicines: The UK Approach

- One of the few surveyed countries that have used antiviral drugs prophylactically
- Only country that practically made antivirals available OTC
- One of two countries to install an online or telephone flu algorithm to relieve the burden on frontline health workers
- Pharmacists acted as antiviral collection points in the National Pandemic Flu Service (= self assessment scheme: online or phone).

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## Antiviral medicines: Priority groups

### Observations:

- Few countries have defined priority groups for **AVs**  
In pre-pandemic response plans, all patients with ILI symptoms are entitled to receive antivirals in Belgium, Czech Republic, UK, France, The Netherlands and Turkey
- Data on actual coverage of population groups hardly available in any of the surveyed countries due to lack of monitoring

## Pre-pandemic (H5N1) vaccine

### Observation:

- France, Finland and the UK were the only EU countries to have acquired a H5N1 pre-pandemic vaccine stockpile

### Impact of the 2009 pandemic on pre-pandemic stockpile:

- Finnish stockpile will not be replenished, due to the impossibility to predict the next pandemic influenza strain.
- France: discussions are ongoing whether the stockpile should be used or not, and whether a new stockpile should be acquired.

### Comparison Japan

30 million H5N1 vaccine doses stockpiled. In 2012, two mln healthcare workers and 8 mln service workers have actually been vaccinated in a two-dose regimen.

## Pandemic Influenza Vaccine Procurement

### Observations:

- Czech Republic, Belgium, UK, France and Austria were able to partially cancel purchase order
- Pandemic vaccine procurement varied greatly in EU countries:
  - Low quantities acquired
    - Czech Republic: 10% of population covered
    - Turkey: 8,1% of population covered
  - High quantities acquired
    - The Netherlands: 100% of the country's population covered in a two-shot regimen
    - UK: actually purchased enough doses of vaccine to cover 72,6% of the country's population in a one-shot regime
- Belgium: adjuvants bought separately because of longer shelf-life

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## Pandemic Influenza Vaccine Procurement

### Impact of the 2009 pandemic on pandemic vaccine policies:

- Countries that used to have pandemic vaccine contracts in place, chose not to conclude new agreements at present: Belgium, Austria, France, The Netherlands.
- Two countries to wish rely on the EU joint procurement programme: Czech Republic and Finland

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## Pandemic Influenza Vaccine Use

### Pandemic vaccine uptake varied greatly in EU countries: low uptake countries

#### Czech Republic

None of the 'standard' priority groups has been covered for over 10% with pandemic vaccines, with one exception: dialysis patients were covered > 90%

#### Germany

- those > 60 years of age: 10,4%
- those with chronic medical conditions: 12,3%
- pregnant women: 8,8%
- healthcare workers: estimated 15,9%
- all ages: 8%

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## Pandemic Influenza Vaccine Use

### Pandemic vaccine uptake varied greatly in EU countries: high uptake countries

#### The Netherlands

- +60 age group: 60-70%
- those with chronic medical conditions: 60-70%
- children (6m – 4years): 50-60%
- healthcare workers: 40-50%

#### Finland

- +65 age group: 55,5%
- 0-4 yrs: 74.2%
- 5-9 yrs: 80.6%
- 10-14 yrs: 81.9%
- 15-19 yrs: 56.6%

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## Pandemic Influenza Vaccine Use

**Pandemic vaccine uptake varied greatly in EU countries: high uptake countries**

### **The Netherlands**

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### **Finland**

- +65 age group: 55,5%
- 0-4 yrs: 74.2%
- 5-9 yrs: 80.6%
- 10-14 yrs: 81.9%
- 15-19 yrs: 56.6%

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## Pandemic Influenza Vaccine Distribution

**Impact of the 2009 pandemic on pandemic vaccine distribution lines:**

Many countries have adapted vaccine distribution lines based on 2009 experience:

- **Czech Republic:** emergency distribution lines for pandemic vaccines now specified in revised pandemic response plan
- **France:** emergency distribution lines for pandemic vaccines had not been specified. During the pandemic, mass vaccination happened at specific locations (clinics/hospitals), there was hence no direct involvement of individual GPs.
- **UK:** emergency distribution no longer specified.

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## Other medical measures

### General observations:

- Available stocks of antibiotics are not monitored nor replenished (exceptions: Finland, UK and US), while all countries (except Belgium and Japan) have guidelines in place for the treatment of secondary infections with antibiotics
- Surgical facemasks are recommended for healthcare workers in all surveyed countries, while recommendations also exist for symptomatic patients in Belgium, France and Japan.
- None of the surveyed countries had a pneumococcal vaccine stockpile available, except France.

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## Social Distancing

- Isolation and quarantine measures have been implemented in all countries except Finland and the US
- Schools and childcare centers have actually been closed (at least in part) in all countries except in Belgium, Germany, Austria and Finland
- Restrictions on social gatherings have been imposed in Japan and Germany
- Restrictions on use of public places have been imposed in Japan, Germany, France and Turkey

### Little impact of the 2009 pandemic on social distancing measures:

Most countries maintain a flexible attitude towards social distancing measures, stating that 'they may be imposed whenever the epidemiological situation requests it.'

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## Conclusions

- European policy makers are, in general, too complacent to develop decisive pandemic response plans, based on lessons learnt during the 2009 pandemic
- Revised pandemic preparedness plans are often extremely flexible: *"The most appropriate course of action would depend on the particular circumstances."*
- EU countries await actions by WHO (revision pandemic phases), ECDC and DG Sanco (vaccine procurement initiative)
- Challenges lie ahead in terms of antiviral stockpiles, vaccine procurement (no agreements in place) and healthcare capacity (lack of emergency response plans)
- Evaluation of pandemic communication urgently needed in terms of target groups (inclusion of at-risk groups) and tools (intermediaries, social media...)

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