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European Scientists Fighting Influenza 2014

European
Scientific
Working group on
Influenza

A multidisciplinary scientifically
independent network of

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

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ESWI works with



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Members

- Dr. G.A. van Essen, The Netherlands (*GP*)
- 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. Gabriel, Germany (*virologist*)
- Dr. B. Lina, France (*virologist*)
- Dr. M. Ciblak, Turkey (*microbiologist*)
- Dr. V. Munster, USA (*virologist*)

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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

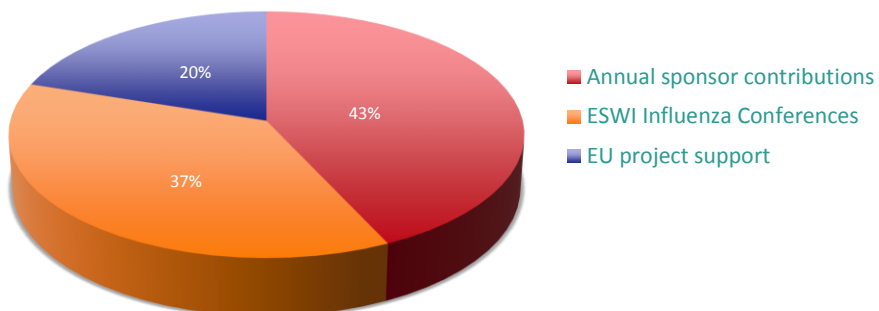
*Strategic objective: "To translate expertise and enhance awareness
among all European stakeholders that influenza is a public health
priority."*

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ESWI revenue



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Cochrane re-arranged: paper published October 2013 (ScienceDirect)

*Authors: Walter E.P. Beyer, Janet McElhaney, Derek Smith,
Arnold Monto, Jonathan S Nguyen-Van-Tam, Ab Osterhaus.*

Main conclusion

There is substantial evidence that influenza vaccination reduces the risk of influenza infection and influenza-related disease and death in the elderly (efficacy at least 50%, likely > 60%)

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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, ample room for Q&A and discussion
- session reports published as part of conference proceedings

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The slide has a teal header with the title "Science Policy Interface". To the right of the title is a logo for "ESWI SCIENCE POLICY INTERFACE" which includes a stylized sun icon. Below the title is a bulleted list of four points. At the bottom left is the text "European Scientific Working group on Influenza" and at the bottom right is the text "...scientists fighting influenza" followed by the "ESWI" logo.

Flu-Quest survey and 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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Concept



Survey results organized according to six areas of focus:

- Seasonal Influenza Surveillance, vaccination and communication
- Pandemic Influenza Planning and Coordination
- Pandemic Influenza Situation Monitoring
- Pandemic Influenza Prevention, Mitigation and Treatment
- Pandemic Influenza Healthcare Capacity
- Pandemic Influenza Communication

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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
- NOT to facilitate the revision with clear guidelines
- NOT to duplicate important evaluation efforts by WHO and ECDC

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Seasonal Influenza Vaccination

- **Observation**
- All EU countries recommend routine vaccination against seasonal influenza for
 - the elderly
 - healthcare providers
 - patients with underlying conditions under 65y (except Germany)
- Yet reimbursement policies do not always correspond with recommendations:
 - Austria has no reimbursement policy in place
 - Few countries reimburse healthcare providers

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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.
- Many countries see an overall decrease in seasonal vaccine uptake because of loss of credibility and trust

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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
 - Organizations of the elderly
 - Nurses organizations
 - Organizations of at-risk patients

Pandemic planning and coordination

- **Impact of the 2009 pandemic on pandemic planning and coordination**
 - Flexibility built in, in cooperation between pandemic planning committee and scientific stakeholders (examples France and UK)
 - WHO pandemic phasing largely abandoned
 - Whereas many pre-pandemic preparedness plans chose to strictly abide to WHO's pandemic preparedness phases, most countries which have already revised their ppp, have built in some flexibility or even developed their own set of phases.

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Antiviral medicines: stockpiles and distribution

- **Observations:**
 - All surveyed countries have oseltamivir and zanamivir stockpiles
 - peramivir authorized 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 Finland and The Netherlands. Stockpile “activated” but not used in Austria and Japan.

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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.

Antiviral medicines: The UK Approach

- One of the few surveyed countries that have used antiviral drugs prophylactically
- Only country that made antivirals available over the counter
- 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 telephone).

Antiviral medicines: Priority groups

- **Observations:**

- Few countries have defined priority groups for AV
- 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 either 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 doses stockpiled. In 2012, two mln healthcare workers and 8 mln service workers have actually been vaccinated with H5N1 vaccine in a two-dose regime.

Pandemic Influenza Vaccine Procurement

- **Observations:**
- Czech Republic, Belgium, UK, France and Austria 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 regime
 - 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

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: Belgium, Austria, France, The Netherlands.
- Two countries rely on the EU joint procurement programme: The Czech Republic and Finland

Pandemic Influenza Vaccine Use

- Pandemic vaccine uptake varied greatly in EU countries: **low uptake**
- 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**
- 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

- **Impact of the 2009 pandemic on pandemic vaccine prioritization**
- Many countries have adapted their pandemic priority list based on pandemic experience or do not specify any priority groups:
 - The Netherlands have added children (6m – 4 years) as a pandemic vaccine priority group (since 9/11/2009)
 - No priority groups specified: Finland, Austria, France.

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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.

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None of the surveyed countries had a pneumococcal vaccine stockpile available, except France.

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Social Distancing

- The isolation and quarantine measure has been implemented in all countries except in Finland and the US
- Schools and childcare centers have actually been closed in all countries except in Belgium, Germany, Austria and Finland
- 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 can be imposed whenever the epidemiological situation requests it.'

Other non-medical measures

- Several of the surveyed countries has screened travellers: the Czech Republic, the UK, Germany, Turkey and Japan, while travel restrictions have only be imposed in Japan.
- None of the surveyed countries has closed borders or airports.
- All countries have developed a strategy to deal with extra training of health staff (except the UK and Japan), while few countries feel the need to also develop a strategy to attract extra health staff.

Health Care Capacity

■ Observations:

- Percentages of population to require primary care during an influenza pandemic vary greatly, whereas percentages of population to require hospital care during an influenza pandemic are consistent across Europe
- Although primary care and hospital care systems were able to cope with all patients in all surveyed countries, it is estimated that many countries were close to 100% occupation of hospital capacities.
- Consequently, hospital capacity would have been overstretched if pandemic would have been worse (e.g. UK, Belgium, Finland, The Netherlands, Austria, Turkey).
- Lack of hospital capacity in case of severe pandemic is not calculated in pandemic preparedness plans, e.g. the UK's pre-pandemic preparedness plan expected hospital services to be ready to assist no more than 20-25% of patients.

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Pandemic Influenza Communication

- Healthcare professionals well informed by national governments
- Public at large important target group for national governments
- At-risk groups not often targeted by national governments
- Trial and error communication during pandemic
- Flexibility built in in communication strategies
- Several European countries chose not to install a single flu spokesperson to inform the public at large. In spite of the uncoordinated communication, no lesson learnt in many countries.
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Main conclusions



- Overall decrease in seasonal vaccine uptake is worrisome
- European countries are well equipped to monitor newly emerging strains of influenza virus
- Preparedness plan updates are often postponed
- WHO pandemic phasing largely abandoned

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Main conclusions



- Very few countries have or will replenish their antiviral stockpile
- The UK applied an exceptional yet successful pandemic strategy
- Widespread hesitance to have pandemic vaccine purchase contracts in place
- Remarkable variation in pandemic vaccine use in the EU
- Healthcare capacity had been pushed to the limit during the 'mild' H1N1 pandemic

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Publication



- **Article under review at Journal of Public Health, submitted by Ian Shaw, Prof. of Public Health at Nottingham University, UK. Co-authored by all survey collaborators.**

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