



This edition of ESWI's Influenza Newsletter to Policy Makers introduces four of the most challenging influenza issues for governments and health authorities. At ESWI's Third European Influenza Conference in Vilamoura, Portugal, each of these topics is extensively discussed in separate sessions.

TO VACCINATE OR NOT TO VACCINATE – IS THERE ANY QUESTION?

Despite the human devastation caused by influenza, figures show that vaccination coverage rates in some countries continue to fall short of their goals. Yet there are cases where the reverse has happened, proof that boosting coverage rates and protecting populations are achievable goals when appropriate strategies are deployed.

HITTING THE TARGET

The key to achieving coverage targets, and even going beyond them, lies in a combination of removing barriers that stop people from getting vaccinated, and using incentives or driving forces that encourage vaccination.

GENERATE DRIVING FORCES, REMOVE BARRIERS

To bring down these barriers and reach the target coverage rates, driving forces must feature in the strategies used. Such driving forces include effective education about the disease and the vaccines, recommendations from providers, feedback to providers, and reminders to patients. The incentive of reimbursing vaccination costs is also an option, as studies have shown that vaccine use increases markedly when a public reimbursement system is put in place. Another key strategy is to encourage healthcare workers to get vaccinated, in view of their close contact with patients and the opportunity this presents for encouraging patients to do the same.

THINK GLOBALLY

When looked at from a global perspective, there still remain disparities between the “haves and the have-nots”. This is reflected in the disproportionately higher use of vaccines in vaccine-producing countries than in other more populated, poorer countries. Therefore, efforts must also focus on the global aspect and ensure an equitable distribution of vaccines, notably to developing countries.

Session dedicated to this topic:
Monday 15 September 2008
10h30-12h
**Increasing the overall epidemic
vaccination coverage**

The European Scientific Working group on Influenza (ESWI) is a multidisciplinary group of key opinion leaders in the field combating the impact of epidemic and pandemic influenza in Europe.

MAIN BARRIERS TO INCREASED VACCINATION UPTAKE

- misperceptions about the risk of catching influenza
- related complications and side-effects
- unfounded concerns about vaccine safety and efficacy
- lack of organised programmes offering easy access to vaccines
- forgetting to get vaccinated
- belief there is only an outside chance of catching the disease



15 years fighting influenza



ESWI

BEST-CASE SCENARIOS AMIDST A CLOUD OF UNCERTAINTY

When it comes to antivirals and their effectiveness in future pandemics and epidemics, there is little in the way of concrete evidence, hard facts or clear answers. For this reason, those striving to protect populations from influenza viruses, namely, policy makers, researchers, strategists, practitioners and health service planners, need to work together and produce best-case scenarios for their use.

GENERATE DRIVING FORCES, REMOVE BARRIERS

While governments currently have access to human H5N1 vaccines, these offer no guarantee of controlling a spread. The reality is that the origin and subtypes of any future influenza pandemic are simply unknown. Despite this, antiviral drugs remain a vital component of pandemic preparedness and strategies. Key actors have a role to play in this work:

- **policy makers** and **strategists** need to understand how effective antivirals are;
- **researchers** need to continue producing vital data for monitoring and modelling;
- **medical workers** need to be confident in prescribing antivirals;
- **health service planners** need to provide rapid access to antivirals.

TREATMENT OPTIONS

The global population faces the problem of mutations, variants and resistance to antivirals, as seen in Europe in 2007/08 with the H1N1 strain when many variants were in circulation. Yet there is a glimmer of hope at the end of what seems a dark tunnel, in the form of inhibitors, though again offering no guarantee and calling for prudent use. Some inhibitors may contain or delay the emergence of a pandemic, however this is likely only under certain conditions. Others are still untested in certain human infections. Some treatments appear to reduce likely mortality, yet questions remain as to their impact on contagiousness. What is clear, however, is that rapid distribution and sufficient quantities of antivirals are critical when it comes to planning for a possible pandemic.

RESEARCH – PAVING THE WAY TOWARDS BETTER ANTIVIRALS

Given the uncertainties presented and the potential human suffering, it is vital that support be provided for ongoing research and monitoring of antiviral effectiveness, so that the range of options available to populations can be improved, expanded and made safer, ultimately offering best-case scenarios in the event of a pandemic or epidemic situation.



Session dedicated to this topic:
Monday 15 September 2008
15h30-17h
**Epidemic and pandemic use
of antivirals**



MOVING VIRAL TARGETS: A TOUGH CHALLENGE IN PANDEMIC PREPAREDNESS

The threat of a pandemic remains, notably due to the highly pathogenic avian influenza A (H5N1) virus. This or any other similar virus could soon evolve and spread among humans at an alarming rate. The response to such a threat therefore requires medical intervention strategies and vaccination plans that contain or slow down the spread, in doing so, saving lives around the planet.

TWO-STEP STRATEGY

The first step in the event of evolving viruses is to nip the new strain in the bud, at source. However history has proven this a difficult task. If the new strain evades this initial attempt at containment, then the second step is to slow the spread down until a suitable vaccine is developed and distributed among the population. Studies and trials have revealed suitable methods for assessing the efficacy of both general and influenza vaccines. Models have also been developed to track the spread of pandemic strains of influenza viruses and to measure the impact of antiviral agents, vaccines and human mobility (e.g. school closures, travel restrictions) on the timing of such a spread and how far it may go.

TIME CONSTRAINTS AND TREATMENT PRIORITIES - PUBLIC INPUT COUNTS

Time is also critical when it comes to producing a vaccine. Added to the timing factor, there may be limitations in the production capacity, depending on the extent of the initial pandemic wave. As a result, it is unlikely that the entire population will be protected immediately. In an effort to address these constraints and to prioritise vaccinations, a US government interagency workgroup organised a series of meetings involving different stakeholders and members of the public from diverse backgrounds. The aim was to gauge opinions as to which groups should be first in line for available vaccines, and based on this, provide updated recommendations and guidelines. From a list of 10



groups, the following 4 ranked highest:

1. Persons critical to the pandemic response and who provide care for those with pandemic illness;
2. Persons who provide essential community services;
3. Persons who are at high risk of infection because of their occupation;
4. Children.

The proposed strategy has since been incorporated into public policy and demonstrates that the general public, alongside other key stakeholders, has a role to play in contributing to strategies and planning for prioritised use of a limited resource, in this case a pandemic vaccine.

Session dedicated to this topic:
Tuesday 16 September 2008
10h30-12h
**Prepandemic and pandemic
vaccination**



DELAY TACTICS USED TO BUY TIME AND SAVE LIVES

The potentially enormous scale of a pandemic is such that all options need to be considered. While pharmaceutical interventions such as vaccines and antivirals play an important role, there are also other non-pharmaceutical interventions (NPIs), e.g. dismissing children from school, quarantines etc., which have been proven to significantly hinder the spread of a virus, especially when deployed early and effectively.

WHO AND GOVERNMENTS SUPPORT NPIs

The World Health Organization and national governments have voiced their support for the use of NPIs as complementary measures in the event of a pandemic. The aims of NPIs include postponing the pandemic peak, reducing the overall rate of attack and reducing the number of deaths. The valuable time gained can be constructively used to develop vaccines and antivirals, at the same time alleviating the burden on healthcare systems. A study into the 1918-19 influenza pandemic in the US has revealed that US cities where NPIs were used earlier saw the following benefits:

- greater delays in reaching peak mortality;
- lower peak mortality rates;
- lower total mortality.

There was also a clear link between increased NPI duration and reduced total mortality. Other studies as well as simulations carried out have reported similar findings in support of NPI use.



Session dedicated to this topic:
 Tuesday 16 September 2008
 13h30-15h
Social distancing during a pandemic

THE DOWNSIDE

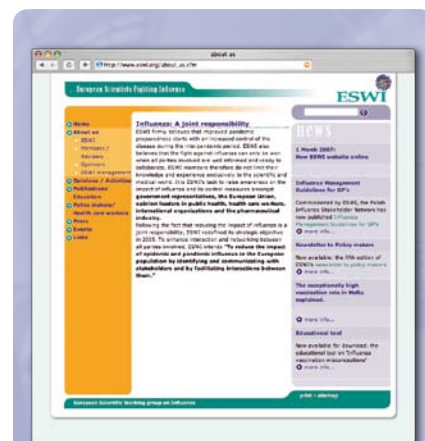
However, like many counter-pandemic measures, NPIs also have their own 'side-effects'. For example, dismissing children from school increases absenteeism, and may increase financial burdens (children who normally receive free or low-cost meals at school) and affect a child's development, particularly those in special programmes. Isolation and quarantines could also be detrimental to the health of the elderly, the chronically ill, people who live alone, or people without caregivers or who need extra medical attention. A US survey investigating NPIs revealed that while there is much support for NPI use, caution is required.

IMPLEMENTING A TAILOR-MADE, ETHICAL STRATEGY

In view of public concerns, effective strategic planning is required in order to get an optimal ratio between benefit and harm. Plans need to be tailored to the scale of the pandemic and implemented under an ethical framework. In developing countries, the uncertainty surrounding the availability of vaccines and antivirals means that NPI solutions could be particularly effective, provided they take into account the specific needs and concerns of different countries.

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