Update on H1N1 Virus

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Epidemiological update worldwide

The total number of deaths up to 7 November in the 27 EU and 4 EFTA countries is 1079 and in the rest of the world it is 9971.

In Europe, 17 EU countries reported widespread activity in the past week, most experiencing medium to very high influenza intensity. Increasing activity is still being reported in Eastern and Southern European countries while a decline in activity is starting to be seen in Northern, Western and Central European Countries (Belgium, Bulgaria, Belarus, Ireland, Luxemburg, Norway, Serbia, Ukraine and Iceland).

Over 99% of subtyped influenza A viruses in Europe were pandemic H1N1 (2009).

In the United States and Canada, influenza transmission is still present but there are signs that influenza activity has peaked. In East Asia, influenza transmission remains active while most countries in Central and South America are reporting declining influenza activity. In the southern hemisphere, little pandemic influenza activity has been reported.

Epidemiological update – The Local Scenario

Malta, like the rest of the world started its second wave in October with the start of schools. Over the past 10 weeks we have seen a steady increase in the rate of influenza-like illness through our sentinel surveillance with a slight drop during the first two weeks in November but it is now increasing again.

Since 4 October we have had 162 confirmed cases (high risk cases and sentinel cases). Since the 1of July we have confirmed 615 cases of Influenza A H1N1 and 146 Influenza A cases.

Over the past two weeks we have seen a number of increased absenteeism in particular classes in different schools all over the country. Risk assessments done by the Infectious Disease Prevention and Control Unit on particular schools confirmed that the majority of children away from school were suffering from influenza-like illness. Primary school children have been mostly affected.

We expect to continue seeing a rise in school absenteeism until school closure for the Christmas recess.

For the last 10 weeks since we started our second wave we have not had any deaths and have had 27 hospitalizations of confirmed cases.

The Pandemic Vaccine for Malta

The pandemic vaccine that will be shortly available in Malta is Pandemrix™, manufactured by GlaxoSmithKline. It will be provided to all those who are at high risk of developing complications from influenza.

It is a split virion, inactivated, adjuvanted vaccine. It is a monovalent vaccine containing 3.75 micrograms of antigen. The antigen used is A/California/07/2009 (H1N1)v-like strain (X-179A), propagated in fertilised hens' eggs. The vaccine contains an adjuvant (AS03) to help boost the immune response. AS03 adjuvant is composed of squalene, DL-α-tocopherol and polysorbate 80.

Pandemrix™ contains five micrograms of thiomersal as a preservative. This is added to prevent bacterial contamination occurring during the preparation and subsequent storage and use of the vaccine. There is no evidence of risk from thiomersal-containing vaccines, including for children, pregnant women and their offspring.

In 2004, the European Agency for the Evaluation of Medicinal Products (EMEA) concluded that studies show no association between vaccination with thiomersal-containing vaccines and specific neurodevelopmental disorders. A more recent study has also shown no association between neuropsychological functioning at the age of seven to ten years and exposure to mercury during the prenatal period, the neonatal period and the first seven months of life[1]

Doses for Pandemrix™

Children aged 6 months to under 10 years - Two doses of 0.25ml (i.e. half the normal dose) given at least three weeks apart.
Adults and children aged 10 years and above - A single injection of 0.5ml
Immunocompromised individuals aged 10 years and above -Two doses of 0.5ml given at least three weeks apart.
Pregnant Women A single injection of 0.5ml

The influenza A(H1N1) vaccine can be given at the same time as other vaccines including seasonal influenza vaccine and other childhood vaccines. Vaccines should be given at separate sites, preferably in different limbs.

Adverse Reactions

The main adverse reactions include headache, fever, fatigue, arthralgia, myalgia, induration, swelling, pain and redness at injection site. Other common reactions include lymphadenopathy, increased sweating, shivering, influenza-like illness, and injection-site reactions such as ecchymosis, warmth and pruritus.

Association with Guillain-Barre Syndrome

A recent study in the UK found that there is no association between Guillain-Barré syndrome (GBS) and seasonal flu vaccines although there is a strong association between GBS and influenza-like illness. GBS has been reported very rarely after immunisation with influenza vaccine (one case per million people vaccinated in one US study.[2] Information regarding the association of GB with the pandemic vaccine is presently underway since no official data has been released so far. So we can only compare the association with the seasonal influenza.

Fever in children after second dose

The European Medicines Agency is warning that young children (below 6 years of age) may experience fever (above 38°C) after their second dose of the pandemic influenza vaccine Pandemrix™. It is important to tell parents to monitor the temperature of the vaccinated child and, if necessary, take measures to lower the fever. Ongoing clinical trials have shown that there was more soreness at the site of injection and more general symptoms such as drowsiness, irritability and loss of appetite after the second dose.

The study also showed that a single dose of vaccine triggered a good immune response in young children, but that the second dose further increased the immune response.

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References

1. Thompson W, Price C, Goodson B et al. Early Thimerosal Exposure and Neuropsychological Outcomes at 7 to 10 Years. *NEJM* 2007; 357:1281-92.
2. Lasky T, Terracciano GJ, Magder L et al. The Guillain-Barré syndrome and the 1992-93 and 1993-94 influenza vaccines. *NEJM* 1998;339:1797-1802.