

1) Recommendations of the German Standing Committee on Vaccination (STIKO) at the Robert Koch Institute: Vaccination against novel influenza A (H1N1)

STIKO reviewed and discussed appropriate vaccination strategies at its meetings on May 28, 2009 and on September 7, 2009, as well as during numerous teleconferences and a meeting of the Influenza Vaccination Working Group. STIKO also reviewed data on the immunogenicity and safety of the vaccines available from the licensing process.

At its meeting on September 22, 2009 and during two additional teleconferences on September 28 and October 2, 2009, STIKO made recommendations for the use of vaccines against novel influenza A (H1N1). When elaborating the recommendations, STIKO members also considered statements made by the German Commission for the Pandemic, German regional health authorities, and relevant professional medical associations.

Generally speaking, everyone can potentially benefit from vaccination against novel influenza A (H1N1). Therefore, every citizen should have the opportunity to be vaccinated against novel influenza A (H1N1) within its licensed indications.

Taking into consideration the availability of vaccines, vaccination against novel influenza A (H1N1) should be conducted in the following time order and sequence. Vaccination of target groups 1 to 3 should begin immediately:

1. Health care workers and employees in public welfare in contact with patients or infectious material;
2. All persons older than 6 months with an increased health risk due to underlying chronic medical conditions such as: chronic respiratory disease; chronic heart, liver or kidney diseases; malignant cancers; diabetes and other metabolic diseases; neurological and neuromuscular disorders; congenital or acquired immunodeficiency with partially remaining T- or B-cellular function; HIV infection;
3. Pregnant women, preferably from the second trimester onwards, and all women postpartum not vaccinated during pregnancy;
4. Household contact persons who could serve as a possible source of infection for unvaccinated persons at risk (as listed under Nos. 2 and 3, and newborns under 6 months of age);
5. All remaining persons between 6 months and 24 years of age;
6. All remaining persons between 25 and 59 years of age;
7. All remaining persons over the age of 60.

Based on the currently available data, vaccination is recommended initially for target groups 1 to 3. Should new data on the epidemiological situation and on the vaccines become available on a national or international level, STIKO will immediately review its position regarding target groups 4-7, but at the latest 4 weeks after the initiation of the vaccination campaign.

STIKO recommends that, if in doubt, an individual risk assessment should be performed before vaccination. This should be done especially before vaccinating chronically ill persons, children and pregnant women. STIKO is aware of the complex situation associated with vaccination during pregnancy, and pregnant women should, therefore, be vaccinated with nonadjuvanted split vaccines until further data are available.

STIKO's vaccination recommendations are based on medical and epidemiological considerations only. The Commission does not assess the potential benefit of immunization strategies on the assurance of public safety and order.

2) Provisional recommendations of the Paul Ehrlich Institute and the Robert Koch Institute regarding the number of vaccine doses needed to immunize against novel influenza A (H1N1) when using the pandemic influenza vaccine Pandemrix® (GSK) and its administration during pregnancy

a) Number of vaccine doses needed to immunize against novel influenza A (H1N1)

STIKO presents its recommendations in the context of the national regulatory authorization procedure according to the German Medicines Act. It has not specified the number of vaccine doses required to immunize against novel influenza A (H1N1). As recommended by the European Medicines Agency (EMA) the summary of product characteristics presents options for the immunization of different age groups and risk categories. These options are based on currently available clinical data.

For Pandemrix®, competent national authorities within the EU Member States may consider the option of recommending a single dose instead of a two-dose administration. For adults aged between 18 and 60, initial data from small-scale clinical trials indicate that an adequate immune response can be achieved with a single vaccine dose. This evidence is supported by the results of clinical trials on other pandemic H1N1 vaccines.

A decision on whether or not it is necessary to administer a second vaccine dose will be taken when additional data are available. These data are expected to be available mid-November 2009. This would be still in time for the administration of a second dose because, as indicated by the summary of product characteristics, the minimum interval between two doses should be three weeks. Clinical data show also that a second dose still produces an adequate immune response when administered after 6 months. This opinion was supported by the Secretaries of the Ministries and Senates of Health of the German States at their working meeting on October 2, 2009.

The single dose administration of a vaccine against novel influenza A (H1N1) also offers the following additional benefits:

- More persons can be vaccinated within the same timeframe;
- The persons to be vaccinated need only make one appointment to receive a single shot of the vaccine.

However, there is the possibility that there will be a relevant number of severe cases of novel influenza A (H1N1) due to insufficiently induced immunity from a single dose administration. At an individual level a two-dose administration, therefore, offers more assurance regarding protection against novel influenza A (H1N1).

In the context of these benefits and drawbacks, and considering data from pre-licensure studies for pandemic mock-up vaccines (H5N1) and the final pandemic H1N1-vaccine Pandemrix®, the Paul Ehrlich Institute (PEI) and the Robert Koch Institute (RKI) recommend the application of specific administration schemes and dosages by age group. Consequently, in some age groups only a single dose is recommended. These recommendations will be adapted accordingly in the event that ongoing studies provide data indicating the need for a second dose.

The following table summarises the preliminary recommendations of PEI and RKI for the pandemic H1N1 influenza vaccine Pandemrix® produced by GlaxoSmithKline (GSK):

Tab. 1: Recommendations by PEI and RKI on the administration of the pandemic H1N1 influenza vaccine Pandemrix® produced by GlaxoSmithKline (GSK) (Status: October 5, 2009)

Age group	Number of doses
Children aged between 6 months and 9 years	2 half adult doses (0.25 ml), with a minimum interval of 3 weeks between single doses
Persons aged between 10 and 60 years	1 adult dose (0.5 ml)
Adults over 60	2 adult doses (0.5 ml), with a minimum interval of three weeks between single doses

In the event that additional clinical data indicate the need for a two-dose administration scheme for persons aged between 10 and 60, the second dose can still be given. Clinical trials have indicated that a second dose with Pandemrix® administered within 6 months of the first dose still induces an adequate immune response.

b) Administration during pregnancy

STIKO recommends that, until further data are available, pregnant women should exclusively be vaccinated with non-adjuvanted split vaccines against novel influenza (H1N1).

Until a non-adjuvanted H1N1-vaccine is available in Germany or other EU Member States, PEI and RKI recommend that, after an adequate individual risk-benefit assessment, the administration of one adult dose of the H1N1 influenza vaccine Pandemrix® may also be appropriate for pregnant women.

An adequate risk-benefit assessment should cover the epidemiological development of novel influenza A (H1N1) over the next few weeks and the individual risk of pregnant women, especially the increased risk for the development of a severe course of novel influenza A (H1N1) resulting from underlying chronic medical conditions. Furthermore, a potentially elevated risk of infection with novel influenza A (H1N1) should be considered, for example, through other child/children in the household, exposure at work, or other sources.

If vaccination against novel influenza A (H1N1) seems necessary, the administration of Pandemrix® (H1N1) during pregnancy is covered according to its licensure taking into consideration official recommendations.

Pandemrix® can be administered to breastfeeding women.

Scientific evidence was considered sufficient by EMEA to support use of adjuvanted vaccines during pregnancy, too.