

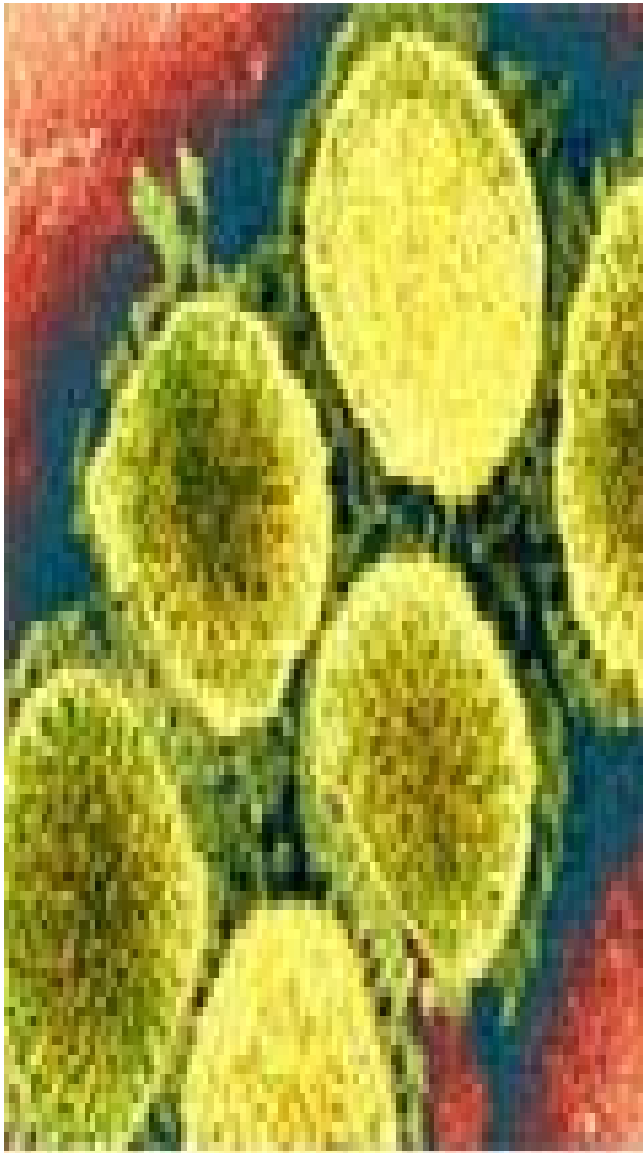


West Midlands



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Influenza A (H1N1) Swine Flu Guidance



***Questions and
Answers for
Healthcare
Professionals on
Swine Flu
Vaccinations***

Produced by the West Midlands Health Advice Cell to support the
Emergency Response Management Arrangements (ERMA 3)

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The information contained in this document utilises guidance consistent with current knowledge and practice at the time of publication. However, medical knowledge and practices constantly evolve and individual cases may require specific advice that cannot be addressed through this guidance.

We cannot guarantee that information provided by us through this guidance will meet your health and medical requirements. If you have any queries that are not answered by this guidance please contact the NHS West Midlands pandemic flu team on Flu@westmidlands.nhs.uk

General Vaccine Information

- 1. What is H1N1 “Swine flu” vaccine ?** A new vaccine against the novel strain of Influenza A virus subtype H1N1 that emerged in Mexico in April of 2009. The H1N1 strain is different to the normal “seasonal” flu because it is new and most people have no protection against it. Therefore it can spread rapidly from person to person. The outbreak was declared a pandemic by the World Health Organisation in June 2009.
- 2. What is the purpose of a flu vaccine ?** To prime the body’s immune system so that it is able to respond rapidly if it is later exposed to the flu virus. The vaccine contains either a safe version of the virus , or copies of the viral proteins. The purpose of the national pandemic vaccination programme is to stop or slow the spread of the virus, and thus reduce its impact on health services, workplaces, schools and the economy.
- 3. Who makes the vaccine ?** The Department of Health has ordered approximately 130million doses of H1N1 vaccine from two different manufacturers. The antigen used in both vaccines is the. *Pandemrix*® is manufactured by GlaxoSmithKline and *Celvapan*® is manufactured by Baxter. The Department deliberately chose two companies that produce vaccines in very different ways to make it less likely that both would be affected by any problems with production.
- 4. How do the vaccines differ ?** *Pandemrix*® is known as a split cell or split virion vaccine and is produced using a traditional method of growing viruses in fertilised hen’s eggs. The viruses are harvested and then split into their constituent proteins, some of which are included in the vaccine. The antigen used is the A/California/07/2009 H1N1 strain developed using reverse genetics technology. This vaccine also contains an adjuvant to help boost the immune response to vaccination. The adjuvant will need to be mixed with the vaccine before administration.

In contrast, *Celvapan*® is known as a whole cell or whole virion vaccine and is produced by growing the virus in cultured mammalian cells (vero cell culture). The whole virus is then killed using formaldehyde and ultraviolet light and harvested to prepare the vaccine. The antigen used is the wild-type A/California/07/2009 H1N1 strain.

Candidate vaccine viruses were developed by a number of different laboratories.

Further information is available from the World Health Organisation website http://www.who.int/csr/resources/publications/swineflu/vaccine_virus_development/en/index.html

- 5. Are the H1N1 vaccines live vaccines ?** No, these are inactivated influenza vaccines and therefore cannot cause the disease against which they protect. There is no live virus in either vaccine.

Vaccine Production and Regulatory Issues

- 6. When will the vaccine be available?** Before it can be used in the UK, the vaccines and the processes and premises of their manufacture need to be approved by the European Medicines Agency (EMA). Both vaccines have been submitted to the EMA for approval.

A letter from the Chief Medical Officer published on 13th August 2009 announced that subject to satisfactory review of the data, the manufacturers anticipate that licences for their vaccines may be granted in late September or October 2009. The vaccination programme will only commence once vaccines are licensed and stock has been distributed around the country. Based on these assumptions, the earliest a vaccination programme could begin is mid-October.

- 7. Which version of the vaccine will be available first ?** The majority of the initial supplies of vaccine delivered are expected to be the GSK split cell adjuvanted vaccine *Pandemrix*®.
- 8. Will the production of seasonal influenza vaccine be delayed due to swine flu vaccine production ?** No, the production of H1N1 swine flu vaccine is being undertaken by manufacturers with dedicated production capacity separate from that earmarked for seasonal flu vaccine production.
- 9. Can the seasonal flu vaccination programme be brought forward?** No, suppliers of seasonal flu vaccine will follow the usual delivery schedule and timescales.
- 10. Will the vaccines be changed over time to accommodate genetic shifts (mutations) in the H1N1 virus that is circulating?** As with seasonal influenza, the genetic makeup of the H1N1 swine flu virus is continuously monitored by a number

of “sentinel” laboratories across the world. Any significant change in the virus can therefore be detected and this information can be used to assess the need to change the composition of the vaccine over time. However, experiences with H5N1 bird flu vaccine suggest that an H1N1 vaccine is likely to provide a high level of immunity against closely related strains.

11. What is the legal status of vaccines ? All injectable medicinal products including vaccines are legally classified as prescription only medicines. This classification controls who can prescribe, supply and administer the vaccine.

12. So who can give the vaccine? The vaccine can only be administered against a patient specific direction (prescription) made by a qualified medical practitioner or other qualified prescriber. However, Patient Group Directions (PGDs) are documents which make it legal for medicinal products to be given to groups of patients - for example as part of a vaccination programme - without individual prescriptions having to be written for each patient. They can also be used to empower healthcare workers other than doctors to legally give the medicine in question.

The qualified health professionals who may supply or administer medicines under a patient group direction are nurses; midwives; health visitors; optometrists; pharmacists; chiropodists; radiographers; orthoptists; physiotherapists; ambulance paramedics; dieticians; occupational therapists; speech and language therapists; prosthetists and orthotists.

The Department of Health is considering the possibility of extending this list to include appropriately trained healthcare assistants but has yet to issue any additional guidance.

13. What training is needed to administer the vaccine? Those people administering the vaccine must be competent to do so and have had appropriate training. The National Minimum Standards for Immunisation Training (http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1196942164323) offers information about both training and competencies. All staff involved in administering vaccines should have received training on cardiopulmonary resuscitation and the management of anaphylaxis.

14. Will patient group direction templates for administration of vaccine be provided? The Department of Health is preparing a wide range of additional resources to support the pandemic immunisation programme. This will include PGD

templates for vaccines, patient leaflets and communication materials.

Specific Vaccine and Dosage Information

- 15. How effective is H1N1 swine flu vaccine ?** Prior to approval, clinical trials are undertaken to establish efficacy. It is expected that the H1N1 swine flu vaccines will have a similar efficacy to seasonal flu vaccines if a full immunisation course of two doses is given.
- 16. Will one dose of vaccine provide sufficient immunity?** No. Based on current guidance from DH it is anticipated that in order to achieve an adequate immune response, two doses of the vaccine will need to be given at least 3 weeks apart.
- 17. Do recipients need to be given the same brand of vaccine on each occasion?** Yes, the two brands are not interchangeable and two doses of the same brand are needed to provide a full immunisation course. Accurate recording of the first dose given to individuals is therefore essential.
- 18. Will the dose be the same for adults and children?** The dosage to be used in children will be determined during clinical trials and specified as part of the approval process. Further guidance will be issued in due course.
- 19. Can swine flu vaccine be given at the same time as other vaccines?** Yes, the swine flu vaccines are inactivated vaccines and can be given at the same time as other vaccines, including seasonal flu vaccine, pneumococcal, HPV and other childhood vaccines. Vaccines given at the same time should be given at different injection sites and accurately recorded.
- 20. Will H1N1 vaccination prevent individuals from getting seasonal flu?** No. Studies evaluating this question have found no evidence that H1N1 swine flu vaccine will protect individuals from getting normal flu. Similarly, seasonal flu vaccination will not protect individuals against H1N1 swine flu.
- 21. Do people who have had swine flu still need to be vaccinated?** Yes, unless there has been laboratory confirmation of previous infection with swine flu virus.

Vaccine Safety Issues

22. How are the vaccines tested for safety and efficacy? H1N1 swine flu vaccines will comply with the same quality and safety requirements as for seasonal flu vaccines. Approval of the vaccine by the European Medicines Agency is specific both to the product and the production method. To gain approval, the manufacturer must provide detailed information about the safety of the vaccine and consistency of the manufacturing process.

Clinical trials of the vaccines in adults and children have already started and initial results are expected from September 2009 onwards. In addition, further data on safety and efficacy must be provided by the manufacturer as it emerges as it is only with widespread use that all side effects can be detected. However, experience with seasonal flu vaccines (produced by the same processes used for the swine flu vaccines) suggests that changing the strain of virus does not have an impact on the safety and efficacy of seasonal flu vaccine.

23. What side effects are likely ? Inactivated vaccines, such as the new swine flu vaccines or seasonal flu vaccines, are regarded as very safe. As with many vaccines, the most common side effects are local reactions, or transient systemic reactions (a mild fever, general aches and pains, a rash and feeling tired). These usually go away within a day or two. Symptoms can usually be managed with simple analgesics such as paracetamol, if necessary .

24. What is the likelihood of Guillain-Barre Syndrome? Influenza-like illness has shown to be associated with an increased risk of Guillain-Barre Syndrome. A recent study (Stowe et al 2009) suggested that the risk of Guillain-Barre Syndrome was about seventeen times higher in the period following infection with a flu-like illness compared to the normal risk of Guillain-Barre Syndrome. There is no clear cause and effect relationship between inactivated influenza vaccine and Guillain-Barre Syndrome. The background incidence of Guillain-Barre Syndrome is about 20 cases per million seasonal flu vaccines recipients. The epidemiological study of seasonal flu vaccines recently used in the UK found no elevated risk of Guillain-Barre syndrome (Stowe et al 2009). H1N1 swine flu vaccines are not expected to show any different findings as their composition is not substantially different from seasonal flu vaccines.

Stowe J et al. Investigation of the temporal association of Guillain-Barre Syndrome

with influenza vaccine and influenza-like illness using the United Kingdom General Practice Research Database. Am J Epidemiol (2009); 169(3): 382-8

25. Is the Vaccine safe for pregnant women? Yes. There is no evidence of risk from vaccinating pregnant women with inactivated vaccines, such as the H1N1 swine flu vaccine. The Department of Health's swine flu vaccination programme is underpinned by independent expert advice from the Joint Committee on Vaccination and Immunisation and Scientific Advisory Group for Emergencies, and their advice is being sought regarding the vaccination of pregnant women against H1N1 swine flu. The European Medicines Agency, as part of the vaccine licensing process, will indicate whether the vaccine can be given to all pregnant women or whether it should only be offered at certain stages of pregnancy.

Contraindications and related Issues

26. Are there any contraindications to the H1N1 swine flu vaccines? There are very few individuals over the age of six months who cannot receive the H1N1 swine flu vaccines. The contraindications are a confirmed anaphylactic reaction to

- a. a previous dose of the same vaccine;
- b. any component of the vaccine; or
- c. egg products in the case of split cell vaccine (see Q27 below)

Caution is needed when administering the vaccine to persons with a known hypersensitivity (other than an anaphylactic reaction) to the active substance(s), to any of the other components (excipients) and to trace residues (see Q29 below).

27. Can H1N1 swine flu vaccines be given to people who are allergic to eggs? The Baxter *Celvapan*® vaccine is an inactivated whole cell vaccine produced in mammalian cell cultures and the manufacturing process does not involve eggs. However, the GlaxoSmithKline *Pandemrix*® split cell vaccine is produced using embryonated hens' eggs and should therefore not be given to those who have had a confirmed anaphylactic hypersensitivity reaction to egg products. The Joint Committee on Vaccination and Immunisation (JCVI) have advised that a confirmed anaphylactic reaction to egg, which is a very rare condition, is the only reason an individual should not be offered *Pandemrix*®. Egg-based vaccines are not contraindicated in individuals who have had non-anaphylactic allergic reactions.

28. Does the H1N1 swine flu vaccine contain any porcine (pork) products? Trypsin prepared from porcine pancreas glands and porcine gelatine are used in the manufacturing process for the Baxter *Celvapan*® vaccine. However, there are no detectable traces of these in the final vaccine product.

29. Does the vaccine contain additives or preservatives ? The GlaxoSmithKline *Pandemrix*® split cell vaccine contains oil-in-water adjuvant (AS03) This is a licensed product that improves the immunogenicity of the vaccine and therefore reduces the amount of antigen (active ingredient) required.

30. *Pandemrix*® contains the following excipients :

- Thiomersal, polysorbate 80, oxtoxynol 10, sodium chloride, disodium hydrogen phosphate, potassium dihydrogen phosphate, potassium chloride, magnesium chloride, water for injections, squalene, DL- α -tocopherol

Pandemrix® may contain the following residues:

- Egg and chicken protein, ovalbumin, formaldehyde, gentamicin sulphate, sodium deoxycholate

Celvapan® contains the following excipients :

- Trometamol, sodium chloride, water for injections, polysorbate 80

Celvapan® may contain the following residues:

- Formaldehyde, benzonase, sucrose

31. Given previous concerns about thiomersal, will *Celvapan*® (thiomersal-free) be recommended for pregnant women and children ? Advice from JCVI is being sought. This is usually the case if there is an equivalent thiomersal-free alternative available. JCVI may wish to consider the data available on use of the vaccine in children.

A factsheet on thiomersal is available at

http://www.immunisation.nhs.uk/Publications/thiomersalsfsh_acc.pdf .

32. Is there any process to align vaccine safety policies across different countries ? The vaccines will be licensed by the European Medicines Evaluation Agency

(EMA). If a vaccine is contraindicated in particular groups, then this will be reflected in the appropriate summary of product characteristics and will apply across Europe.

Priority Groups

33. Who are the priority groups for vaccination ? The initial priority groups for vaccination are described in the letter from the Chief Medical Officer (published 13th August 2009). They are:

- a. Individuals aged six months and up to 65 years in the current seasonal flu vaccine at-risk groups
- b. All pregnant women, subject to licensing conditions on trimesters
- c. Household contacts of individuals with reduced immune systems
- d. People aged 65 years and over in the current seasonal flu at-risk groups - this does not include otherwise healthy over 65s as they appear to have some natural immunity to the virus
- e. Frontline health and social care workers

34. What are the seasonal flu vaccine at-risk groups? These are people with:

- a. **chronic respiratory disease**, such as chronic obstructive pulmonary disease (COPD)
- b. **chronic heart disease**, such as heart failure
- c. **chronic kidney disease**, such as kidney failure
- d. **chronic liver disease**, such as chronic hepatitis
- e. **chronic neurological disease**, such as Parkinson's disease
- f. **diabetes requiring insulin or oral antidiabetic drugs**, and
- g. **a suppressed immune system**, due to disease or treatment

35. I am a front line health professional, how will the vaccine be provided to me?

Your employer has responsibility for arranging vaccination of front line staff who meet the definition as detailed in the CMO's letter of 13th August 2009. This will usually involve your occupational health service or other local arrangements.

36. I am a volunteer for health services; will I be prioritised for the pandemic flu vaccine in a similar way to NHS employed front line staff? All staff who are involved in direct patient care are included in the priority group. This includes volunteers who are working with patients as defined in the Annex to the CMO's letter

dated 13th August 2009.

- 37. I am a community pharmacist, will I get the vaccine?** You will be offered the vaccine if your work involves direct patient care as defined in the Annex to the CMO's letter dated 13th August 2009.
- 38. Will vaccination against swine flu be mandatory for priority groups?** No, the H1N1 swine flu vaccination is voluntary. However, everyone in an at-risk group should be strongly encouraged to have it.
- 39. Social workers within our mental health, learning disabilities and children's services (especially in respect of special schools) have very close contact with the clients / patients. Would social workers under these circumstances be included in the priority group for vaccination?** Social workers as a rule do not provide 'personal care' as outlined in the CMO letter of 13th August 2009 (Annex B). In instances where social workers provide personal care (as defined) they are eligible for vaccination. These situations should be reviewed on a case-by-case basis by the employing organization.
- 40. Should members of the public and patients be vaccinated before going abroad or travelling?** Travel per se is not an indication for H1N1 swine flu vaccination. Persons in the priority groups should receive the vaccine irrespective of travel arrangements.
- 41. Is there any clear guidance on what a 'household contact' is?** A household contact is someone who lives with someone whose immune system is compromised (e.g. having cancer or HIV/AIDS). Household contact implies prolonged and close contact in a household-type setting. Examples of household contacts would be those living and/or sleeping in the same household (including extended household), pupils in the same dormitory, boy/girlfriends, or university students sharing a kitchen in a hall of residence. It is important these household contacts have the vaccine to help protect the at-risk person they live with.
- 42. When will everyone who isn't in a priority group receive the vaccine?** The Joint Committee on Vaccination and Immunisation (JCVI) has advised that the use of the vaccine in the wider healthy population should depend on how the pandemic evolves and on emerging clinical data on the use of the vaccine. This situation will be kept under review.

Vaccine handling, storage and the “Cold chain”

43. How will the vaccines be presented?

Celvapan® (Baxter)

- packs of 20 multidose vials of 5ml suspension per pack.
- Each 5ml vial should provide 10 doses.
- Each pack should provide 200 doses.
- The pack size is 206mm x 166mm x 55mm.

Pandemrix® (GlaxoSmithkline)

- box of 50 multidose vials of 2.5ml suspension and two boxes containing 25 2.5ml vials of adjuvant
- each 5.0 ml of reconstituted vaccine should provide 10 doses.
- Each pack should provide 500 doses.
- The pack size is 260mm x 113mm x 97mm.

44. What about needles, syringes and gloves? The Department of Health has ordered needles and syringes to be used as part of the pandemic vaccination programme. These will be delivered to Primary Care Trusts in advance of the vaccine. Gloves have not been ordered as their use is not recommended in vaccination.

45. How long can the multi-dose vial be used? Current information suggests that *Pandemrix®* (GlaxoSmithkline) must be stored below 25°C and used within 24 hours after mixing the vaccine and adjuvant. *Celvapan®* (Baxter) must be used within three hours of first opening the multi-dose vial.

46. Where can I find details of H1N1 vaccine stability, storage requirements etc?

These details will be published in full when the vaccines are licensed. The H1N1 swine flu vaccine will have the same cold chain and storage requirements as the inactivated seasonal influenza vaccines. Typically these vaccines need to be transported and stored, prior to use, in their original packaging at +2°C to +8°C and protected from light. Further details will be made available before the vaccines are distributed. Please contact your PCT Medicines Management team for details of local vaccine handling and storage policies.

47. The vaccine has been out of the fridge for 2 hours – can it still be used? See above (Q 42 and Q43). Effectiveness can only be guaranteed for the vaccines if they are stored at the correct fridge temperatures (+2⁰C to +8⁰C). Vaccine stored outside the required temperature range are unfit for use and must be marked 'expired' and disposed of using set procedures. Heat reduces the potency of the vaccine. Freezing may increase reactogenicity and also reduce potency. As above please contact your PCT Medicines Management Lead for the latest information.

Vaccination Programme evaluation

48. What is the system for recording/monitoring vaccine side effects across the population? As for all medicinal products, each of the vaccine manufacturers are required to monitor adverse events in vaccine recipients via specific 'pharmacovigilance' systems. The European Medicines Agency has drafted and is consulting on a new adverse event reporting form for the vaccines.

In addition, as with any other licensed medicinal product, clinicians should report suspected adverse effects using the "Yellow Card" system coordinated by the Medicines and Healthcare products Regulatory Agency (MHRA). Because this is new vaccine it will be designated a Black Triangle vaccine and all side effects to the vaccine administration will be reported (this includes minor effects such as painful injection site). This is a sensitive way of detecting possible side effects at an early stage. <http://www.mhra.gov.uk/Safetyinformation/Swinefluinformation/index.htm>

49. How will the efficacy of the vaccine be monitored? The ability of the vaccine to prevent the occurrence of swine flu in individuals and groups will be evaluated by comparing disease incidence in persons who have been vaccinated vs. those who have not. The specific protocols for undertaking this work are finalised and more details will be made available in the near future.

50. Who will be responsible for monitoring vaccine uptake? Primary Care Trusts have responsibility for monitoring the uptake of vaccine across the specific target population groups. The Department of Health will publish additional guidance on monitoring in due course but it is likely that the Immform system currently in place will be used. Records will need to be kept of individual immunisations in order to ensure that vaccine programme uptake can be monitored on a continuous basis.