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<b>Prepared by</b>	M. Clark
<b>Developed by</b>	Public Health
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## Contents

INTRODUCTION .....	3
OBJECTIVES .....	3
STAFF RESPONSIBILITY .....	3
VACCINE INFORMATION .....	3
1) LIVE INTRANASAL INFLUENZA VACCINE .....	3
2) INACTIVATED INFLUENZA VACCINE BY INJECTION .....	4
<b>CONTAMINATION AND TRANSMISSION RISK OF LIVE VACCINE .....</b>	<b>4</b>
CONTAMINATION BY VACCINE .....	4
TRANSMISSION RISK OF VACCINE .....	4
SHOULD FLUENZ VACCINATION BE ADMINISTERED TO CHILDREN WHO ARE IMMUNOCOMPROMISED .....	5
TRANSMISSION RISK TO STAFF WHO ARE IMMUNOSUPPRESSED OR PREGNANT .....	5
<i>What does the term "reasonable precautions" mean in managing exposure of healthcare professionals to live attenuated influenza vaccine viruses?.....</i>	<i>6</i>
ENVIRONMENTAL RISK .....	6
<b>ENVIRONMENT .....</b>	<b>6</b>
RISK ASSESSMENT .....	6
PUPILS/CLASSROOMS .....	7
<b>WASTE MANAGEMENT .....</b>	<b>7</b>
INFLUENZA VACCINE .....	7
<i>Packaging.....</i>	<i>7</i>
<i>Needle free syringe.....</i>	<i>7</i>
PPE/HAND HYGIENE .....	7
SHARPS.....	8
WASTE TRANSPORTATION .....	8
<i>Domestic (black bag) waste .....</i>	<i>8</i>
<i>Clinical (yellow bag) waste .....</i>	<i>8</i>
<i>Sharps bins.....</i>	<i>8</i>

## Introduction

This is the NHS Borders Infection Control Policy for primary schools Influenza vaccine programme. It deals with infection control aspects of the vaccination programme only. Clinicians must familiarise themselves with other policies and procedures in relation to the vaccination programme.

## Statement of Intent

The aim of this Policy is to provide guidance to support:

- safe and effective infection control working practices
- reduce infection control risks to staff, children and the public
- the appropriate management of waste.

## Objectives

- to standardise practice across NHS Borders
- to provide staff with clear infection control information
- to ensure that infection control responsibilities are clearly defined

## Staff Responsibility

All staff involved in the delivery and organisation of the primary school influenza vaccine programme must follow and familiarise themselves with this policy. Further standard infection control and prevention information can be found on the [NHS Borders microsite](#).

## Vaccine information

### 1) Live intranasal influenza vaccine

*Fluenz*<sup>®</sup> is a vaccine. Vaccines work by 'teaching' the immune system how to defend itself against a disease. FLUENZ contains strains of flu virus that have first been weakened (attenuated) so that they do not cause influenza to develop.

*Fluenz*<sup>®</sup> is the vaccine offered as part of the UK national childhood immunisation programme. It is a **live attenuated intranasal vaccine**, adapted to cold so that it cannot replicate at body temperature.

As for any live attenuated vaccine, standard infection control precautions apply. No additional precautions are required for administering *Fluenz*<sup>®</sup>.

It is contraindicated in children and adolescents who are clinically severely immunodeficient due to conditions or immunosuppressive therapy such as: acute and chronic leukaemias; lymphoma; symptomatic HIV infection; cellular immune deficiencies; and high-dose corticosteroids. FLUENZ is not contraindicated for use in individuals with asymptomatic HIV infection.

## 2) Inactivated influenza vaccine by injection

This vaccine may be offered to a small number of children contraindicated for Fluenz®. It is inactivated and cannot cause influenza. There's a small chance the child may experience symptoms such as a sore arm or a few aches and pains immediately after being vaccinated, but any side effects are usually very mild and pass within 48 hours. This can be a sign the immune system is responding to the vaccine and is working – but it's not influenza.

Used sharps pose the most significant Infection control risk. As the vaccine is inactivated the general infection control risks are negligible.

[NHS Borders Occupational Health Sharps Guidance](#) must be followed when dealing with sharps. All sharps must be disposed of via an orange lidded sharps bin. These being incinerated at the Borders General Hospital.

## Contamination and Transmission risk of live vaccine

### Contamination by vaccine

In the unlikely event of contamination of the administrator or child:

- If face, eyes or mouth is contaminated then rinse immediately with copious amounts of running water;
- If skin is contaminated then wash area with soap and running water;
- If clothing is contaminated then rinse well with soap and running water

For further information see Standard Infection Control Precautions: [Appendix 13- Management of occupational exposure incidents](#)

### Transmission risk of vaccine

The risk of transmission is real but clinically insignificant because the viruses are weakened; infection is unlikely to result in influenza illness symptoms since the vaccine viruses have not been shown to mutate into typical or naturally occurring influenza viruses.

No report has been identified in the medical literature about secondary transmission from a person who received the Live Attenuated Influenza Vaccine (LAIV) that resulted in clinically important illness. Vaccine recipients (or parents/guardians) however should be appropriately informed that FLUENZ is an attenuated live virus vaccine and has the potential for transmission to immunocompromised contacts. Vaccine recipients should attempt to avoid, whenever possible, close association with severely immunocompromised individuals (e.g. bone marrow transplant recipients requiring isolation) for 1-2 weeks following vaccination. In circumstances where contact with severely immunocompromised individuals is unavoidable, the potential risk of transmission of the influenza vaccine virus should be weighed against the risk of acquiring and transmitting wild-type influenza virus.

Administration may trigger coughing/sneezing in the child. Whilst transmission in this manner is highly unlikely, a pragmatic approach is advised:

- Have paper tissues readily available.
- Advise children pre-administration to use a tissue to cover their mouth and nose if they need to cough / sneeze.
- Cough etiquette / respiratory hygiene is part of [Standard Infection Control Precautions](#).
- If possible, ensure the area of administration is well ventilated e.g. large-ish room with windows open.

**Should Fluenz vaccination be administered to children who are immunocompromised** (e.g. bone marrow transplant recipients), household contacts of these bone marrow transplant recipients and should they be excluded from school?

Immunocompromised children - Advice on the above will obviously depend on the severity of their illness.

Severe immunocompromise requiring isolation - For children who are severely immunocompromised (e.g. in isolation after bone marrow transplantation) it is clear that they should not receive Fluenz and should receive the inactivated vaccine. Until these individuals are deemed well enough to attend school they and their parents should be advised that household contacts should not receive Fluenz and should instead be vaccinated as early in the season as possible with an inactivated flu vaccine by their GP. (As per Green Book guidance)

Less severe immunocompromise not requiring isolation - These individuals should be advised (along with their household contacts) to seek vaccination by their GP with an inactivated flu vaccine as early as possible at the start of the season. If the patient is vaccinated 2 weeks in advance of their school class contacts receiving Fluenz, the risk is very low that they will become ill with a vaccine strain of virus and so they should be advised to attend school as normal. However, if for some reason the patient is not vaccinated with an inactivated vaccine 2 weeks in advance of their household child and/or school contacts being offered Fluenz vaccination. The parents should be advised that the household child contacts should only be offered inactivated vaccine through the GP and/or school programme and they should draw this to the attention of their GP/school nursing service. Evidence suggests the risk of transmission of vaccine virus and subsequent significant illness seems to be very low indeed (more theoretical than real) and the child should not be excluded from school.

#### ***Transmission risk to staff who are immunosuppressed or pregnant***

- As a precaution, very severely immunosuppressed individuals should not administer the vaccine.
- Other staff who are immunosuppressed or pregnant, should take reasonable precautions to avoid inhaling the vaccine and ensure that they are appropriately vaccinated. Staff who fall into these categories should discuss the relative risk and controls with their line manager, seeking advice from infection control if required.

- The relative risk of developing infection is deemed to be very low and should infection occur it is likely to be clinically insignificant

***What does the term "reasonable precautions" mean in managing exposure of healthcare professionals to live attenuated influenza vaccine viruses?***

Public Health Practitioners have asked for clarification of the statement in the section of the flu GB chapter 'regarding pregnant women and those who are immunosuppressed taking "reasonable precautions" to avoid inhaling the vaccine'. The answer is that a common sense approach should apply in this situation and that there is no need to wear a mask as the risk of colonisation is thought to be minimal. (Some practical suggestions may include don't give vaccine too close-up, don't inhale whilst vaccinating, arms length administration of the vaccine, well ventilated room if possible etc.)

### **Environmental risk**

FLUENZ does not replicate freely in the environment. It does not carry a toxic transgene, is specific to humans, does not integrate and therefore it is very unlikely to transfer genes to any other species, and is well tolerated in vaccinated individuals at recommended administration doses.

## **Environment**

### **Risk assessment**

An infection control risk assessment in each school must be undertaken by the School Nurse prior to commencing the vaccination clinic. This must include:

- Identification of hand washing facilities for clinic staff, with adequate supplies of liquid soap and paper towels and waste bin (these must be as near as possible to the clinic room)
- Identification of most appropriate hand decontamination practice (see hand decontamination section)
- Identification of domestic waste storage area (additional to usual volume)
- Review of respiratory hygiene facilities in each classroom - including ventilation and size of room (small unventilated spaces must be avoided)
- Identification of cleaning schedule for clinic room: the clinic room must be fully cleaned prior to and immediately following clinic activity. Cleaning should be undertaken with routine cleaning products.

## Pupils/Classrooms

Respiratory etiquette should be discussed with teaching staff prior to the vaccination clinic. Teaching staff should discuss respiratory hygiene with pupils before and following vaccination and all classrooms should be provided with adequate waste bins and tissues. Respiratory hygiene waste should be managed as domestic (black bag) waste, and in accordance with local policy. Teaching staff should have in place controls to empty this waste stream at regular intervals, according to usage and volume.

Pupils should be encouraged to wash their hands after blowing or wiping their nose. Each classroom should have in place a system to ensure effective pupil hand washing.

## Waste Management

### Influenza vaccine

#### Packaging

All product packaging should be disposed of via the domestic (black bag) waste stream or recycling, unless it has been contaminated by the product or by body fluids. This contaminated waste should then be disposed of via the clinical (yellow bag) waste stream. Product packaging includes the outer box and inner plastic tray and lid.

#### Needle free syringe

The needle free syringe must be disposed of via orange lidded sharps bins to avoid spillages or leaks associated with the risk of the vaccine applicators bursting yellow bags.

### PPE/Hand Hygiene

The routine use of PPE (gloves, aprons and masks) is not required to administer the Fluenz® vaccine. The clinician should determine the best method for hand hygiene based on the available resources and pre-clinic check. Where gloves are not used, hand decontamination using soap and water, or alcohol gel must be used between each child. A mixture of these options may be made at the discretion of the clinician:

1. Gloves
2. Hand washing
3. Alcohol gel

Soap and water hand washing is considered the preferable method for hand decontamination.

Soap and water hand washing must take place following visible contamination or sneezing by the child.

Gloves and aprons should be disposed of via the clinical (yellow bag) waste stream if used.

Due to the large numbers of children being seen, skin integrity must be maintained, this should be achieved using the above decontamination methods and through the use of approved hand cream on a regular basis.

Please follow advice in [Standard Infection Control Precautions](#) (SICPs) for comprehensive infection control advice.

### **Sharps**

All sharps must be disposed of according to [Standard Infection Control Precautions](#).

### **Waste transportation**

#### **Domestic (black bag) waste**

All domestic waste (black bag) should be disposed of via normal school waste streams according to local policy.

#### **Clinical (yellow bag) waste**

All Clinical yellow waste bags must be tied, be no more than  $\frac{3}{4}$  full, labelled and double bagged. The clinic nurse is responsible for taking these, immediately following the end of the clinic, to the nearest health centre for correct disposal.

#### **Sharps bins**

Sharps bins must be no more than  $\frac{3}{4}$  full, secured, and labelled. The clinic nurse is responsible for taking these, immediately following the end of the clinic, to the nearest health centre for correct disposal.