

3.1 The Care of Patient with Suspected or confirmed Influenza

Questions and Answers

Contents

1. [What is Influenza?](#)
2. [What is seasonal and pandemic Influenza?](#)
3. [How do you catch influenza?](#)
4. [What is the incubation period?](#)
5. [What is the period of infectivity?](#)
6. [How is influenza diagnosed?](#)
7. [Do I need to isolate a patient with known or suspected influenza?](#)
8. [Which patients are more at risk of developing complicated influenza?](#)
9. [Precautions should to be taken during a patient transfer?](#)
10. [What actions do I need to take for patients who are confirmed with influenza but have not been isolated?](#)
11. [What personal protective equipment do I need to wear when caring for a patient with confirmed or suspected influenza?](#)
12. [What other measures must we take to reduce the risk of influenza transmission?](#)
13. [Can influenza be treated and when is antiviral medication given?](#)
14. [In who is influenza vaccination recommended?](#)
15. [What are the contraindications to the influenza vaccination?](#)
16. [When can Isolation precautions be discontinued?](#)
17. [What actions do I take if there is an outbreak of influenza on the ward?](#)
18. [Appendix 1: What are aerosol generating procedures?](#)
19. [Appendix 2 How do I take specimens for virological investigations from patients with Suspected influenza](#)
20. [Appendix 3 what is the escalation plan for influenza cases?](#)

[Back to main contents page](#)

1. What is Influenza or “flu”? It is a viral infection that occurs mainly in the winter months and affects all age groups. There is a wide spectrum of severity of illness ranging from minor symptoms (fever, chills, headache, and myalgia) through to pneumonia and death. There are three types of influenza affecting people:

Influenza A
Influenza B
Influenza C

Influenza A usually causes a more severe illness than influenza B

The influenza virus is unstable and new strains and variants are constantly emerging which is one of the reason why the flu vaccine should be given each year.

2. What is seasonal and pandemic Influenza? **Seasonal flu** occurs every year typically in winter. For most healthy people, flu is an unpleasant but usually self-limiting disease with recovery generally within a week. However a number of people with risk factors are at particular risk of severe illness if they catch flu (detailed in question 8). Usually some immunity built up from previous exposure. A Vaccine is available for annual flu season.

Influenza pandemic occurs when a new influenza virus such as swine flu (H1N1) 2009, emerges to which there is little immunity in the population and which is capable of spreading effectively from person to person, spreads among human being and occurring over a very wide area, usually affecting a large portion of the population and can occur any time of the year. Pandemic influenza can emerge and cause an epidemic at any time of the year. Healthy people may be at increased risk for serious complications. Vaccine probably would not be available in the early stages of a pandemic.

3. How do you catch influenza? There are four main routes of transmission

Droplet route:

Transmission occurs mainly though the spread of respiratory droplets by coughing, sneezing and contact with contaminated surfaces.

If droplets from an infected person come into contact with the mucous membranes (mouth or nose) or surface of the eye of a recipient, they can cause infection. These droplets remain in the air for a short period and travel about one metre, so closeness is required for transmission.



Airborne route:

The airborne route during and after Aerosol Generating Procedures (AGPs): AGPs can produce droplets <5 microns in size. These small droplets can remain in the air, travel more than one metre from the source and still be infectious, either by mucous membrane contact or inhalation.

Certain aerosol-generating procedures are thought to be associated with an increased risk of transmission of some respiratory pathogens (see appendix 1)

Direct contact transmission:

Infectious agents are passed directly from an infected person (for example after coughing into their hands) to a recipient who then transfers the organism into their mouth, nose or eyes.

Indirect contact transmission:

This takes place when a recipient has contact with a contaminated object, such as bedding, furniture or equipment which is usually in the environment of an infected person. Again, the recipient transfers the organisms from the object to their mouth, nose or eyes

Influenza viruses can survive on commonly touched surfaces for periods ranging from a few hours to several days, depending on environment condition, but certainly long enough to facilitate person-to-person transmission. In general, viruses survive longer on hard nonporous surfaces, such as door handles, than on soft porous surfaces, such as tissues.

Evidence of influenza transmission other than via respiratory droplets is limited. All secretions (except perspiration) and excretions, including diarrhoeal stool, should be regarded as potentially infectious.

4. What is the incubation period? The incubation period from influenza (the time between catching influenza and showing symptoms) can be up to seven days but is most likely to be between two to three days.

Patients with a clinical diagnosis of influenza or laboratory confirmed influenza must be isolated immediately and a throat swabs taken for laboratory testing as a matter of priority.

5. What is the period of infectivity? Individuals are usually considered infectious while they have symptoms, especially fever. Children, immunocompromised individuals and severely ill people, shed virus for longer periods and are likely to be infectious for longer periods than other individuals.

6. How is influenza diagnosed?

Influenza should be considered if a patient has:

- Fever $\geq 38^{\circ}\text{C}$ **OR** a history of fever

AND

- Flu-like illness (two or more of the following symptoms: cough, sore throat, rhinorrhoea or joint pain; headache, vomiting or diarrhoea)

OR

- Severe/life-threatening illness suggestive of an infectious process.

NASAL/THROAT SWABS

Nose and throat swabs should be taken and put into viral media and sent IMMEDIATELY to the microbiology lab. The laboratory will accept red topped swabs or green topped virology swabs.



During a Flu season there is one run per day by the virology Laboratory every morning. Samples must be in the laboratory by 09:45hrs to be included in the run. Samples from intensive care unit, paediatric intensive care unit and high dependency unit, immunocompromised, pregnant women will be prioritised by the laboratory. Results will be available at approximately 4pm the same day and available ICE system.

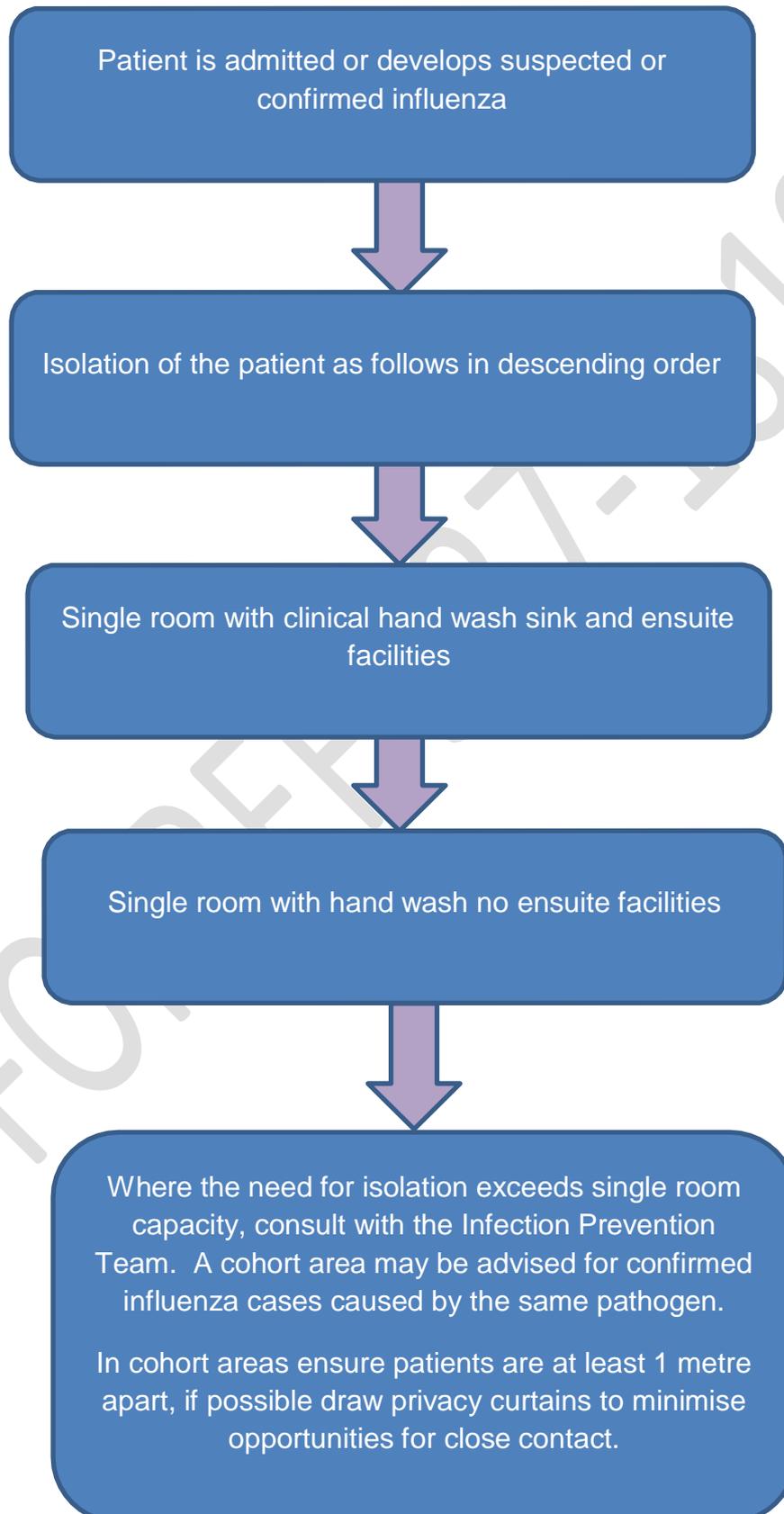
For the County Hospital site specimens need to be taken to the pathology specimen reception as soon as possible after being taken such that they can be transported to The Royal Hospital.

These swabs need to be refrigerated if not being transported immediately, at the pathology specimen reception there is a 24 hour facility for storing swabs.

Re-testing of a patient with confirmed influenza, e.g. with the aim to determine infectiousness or to decide if the patient can be taken out of isolation, is **not** recommended.

7. Do I need to isolate a patient with known or suspected influenza? Yes, follow the patient flow chart detailed below:

Patient placement flowchart for known/suspected influenza



In the case of children admitted with influenza like symptoms it must be noted that a parent or accompanying adult or sibling may also be infected. These adults or siblings should, preferably not visit, and must not circulate in patient areas (i.e. play rooms) or share toys with other inpatients.

8. Which patients are more at risk of developing complicated influenza? People with the following risk factors are more at risk of developing complicated influenza

- Neurological, hepatic, renal, pulmonary and chronic cardiac disease
- Diabetes mellitus
- Age over 65 years
- Pregnancy (including up to two weeks post-partum)
- Children under 6 months of age
- Morbid obesity (BMI ≥ 40).
- Immuno suppression caused by disease or treatment

9. What precautions should be taken during a patient transfer?

The patient should wear a surgical mask where possible to contain the virus.

Escorting staff do not need to wear a surgical mask if the patient is wearing a mask.

Escorting staff do not need to wear apron and gloves unless there is a risk of contact with blood or body fluids.

Escorting staff should deposit any linen on the admitting ward as infected linen and
Clean the trolley with a disinfectant approved for the ward/area.

Escorting staff should then decontaminate their hands with either soap and water or wash or alcohol hand rub.

It is essential that particular attention is paid to avoid contaminating surfaces touched by escorting staff e.g. doors, lift buttons etc. during the transfer (alcohol hand rub should be available on the transfer trolley to facilitate this).

10. What actions do I need to take for patients who are confirmed with influenza but have not been isolated? It is the responsibility of the Clinician in charge of the ward to note patients who have been exposed, their risk factors and immunisation history.

- Advice should be obtained from the Consultant in Infectious Diseases or the Duty Microbiologist regarding Flu prophylaxis.
- Asymptomatic close contacts of **proven** Influenza A/B (same bay >1h) do not need to be isolated as long as asymptomatic for flu like illness; however they may be offered Flu prophylaxis irrespective of vaccine status following discussion with the Duty Microbiologist or Consultant in Infectious Diseases.

11. What personal protective equipment do I need to wear when caring for a patient with confirmed or suspected influenza?

Personal protective equipment	Entry into isolation area but no patient contact	Close patient contact (less than 1 metre)	Aerosol generating procedure (AGP)*
Hand hygiene	Yes	Yes	Yes
Disposable gloves	Yes, if decontaminating equipment or environment	Yes	Yes
Disposable plastic apron	Yes if decontaminating equipment or environment	Yes	Yes
Fluid repellent long sleeve gown	No	Yes, if extensive contamination of clothing anticipated	Yes, if extensive contamination of clothing is anticipated
Surgical mask	Yes	Yes	No - FFP3 masks must be worn
FFP3 mask/respirator	No	No, unless in the same room as aerosol generating procedure taking place.	Yes
Eye protection	No	Risk assess for splashing to face	Yes

There may be situations i.e. during pandemic influenza when the recommendation for the level of personal protective equipment changes, this will be advised by the Infection Prevention Team.

FFP3 masks: Staff using them must have been instructed on the correct fitting, have undergone a fit test, in line with the HSE circular 282/28, and ensure they perform a fit check for each use.

It is important that personal protective equipment is put on (donning) and removed (doffing) in the correct order; see [Personal Protective Equipment, Questions and Answers Chapter 1](#)

Decontaminate hands after removal of PPE

12. What other measures must we take to reduce the risk of influenza transmission?

- **Respiratory Hygiene –‘Catch it, bin it, kill it’**

Patients, staff and visitors should be encourage to minimise potential influenza transmission through good respiratory measures

- Hands should be kept away from the eyes, mouth and nose
- Disposable single use tissues should be used to cover the nose and mouth when coughing, sneezing, wiping or blowing noses. Used tissues should be disposed of promptly in the nearest waste bins.

Hands should be cleaned after coughing, sneezing, using tissues or after contact with respiratory secretions and contaminated objects

	Patient Care. Standard Precautions at all time, plus the use of droplet and contact precautions at all times. The addition of airborne precautions whilst undertaking an AGP
Code:	ISOLATION Door Sign.
Isolation facilities:	Patients with suspected or confirmed influenza should be immediately isolated in a single room.
Hand decontamination	All healthcare workers should decontaminate their hand following the WHO :five moments for hand hygiene” Alcohol hand rub may be used as an alternative to soap and water if hands are visibly clean. All staff, patients and visitors should clean their hands when entering and leaving areas.
Environmental and Equipment Decontamination	Liaise with housekeeping services to arrange a barrier clean (The County Hospital) or the Infection Prevention Team at The Royal Hospital. A terminal clean following patient vacating the room/bed space is required. Single patient use equipment where possible. If not single patient use then decontaminate after each use with the approved disinfectant for the area/ward.
Patient Transfer for Investigations	Transfer and movement of patients should be reduced to an operationally effective minimum. Where patients need to attend departments for essential investigations, they should be “last on the list” unless earlier investigation is clinically indicated. The receiving area should be notified of the patient’s infection status. Arrangements should be put in place to

	<p>minimise the patient's waiting time and hence contact with other patients.</p> <p>E.g. the patient should be called for when the department is ready for them and their transfer planned so that they are not held in communal waiting areas.</p> <p>Staff, including ambulance personnel, should adopt appropriate infection control precautions when in contact with the patient.</p> <p>Consider offering the patient a surgical mask to be worn during transport until the patient returns to the segregated area to minimise the dispersal of respiratory droplets, if a surgical mask cannot be tolerated by the patient then good respiratory hygiene should be encouraged.</p> <p>Hand hygiene is important for staff involved in transfer and hand hygiene facilities should be offered to the patient when feasible.</p>
Linen	All linen should be placed in a red soluble bag, and then placed in a white outer plastic bag.
Waste Disposal	Discard all contaminated waste into the ORANGE clinical waste system.
Crockery/cutlery/water jug/beakers	Must decontaminated in an automated dishwasher.
Staff movement	Staff movement between clinical areas should be kept to a minimum.
Visitors	Due to the highly infectious nature of Flu, relatives and visitors should be contacted and advised of the risks of visiting the clinical area. All visitors entering an isolation room or cohort area must be instructed on hand hygiene practices and the use of personal protective equipment.
Bed management	The bed management team will be updated and liaised with to ensure effective bed management in the event of an outbreak or when single rooms are no longer available.
Patient	Please ask the patient to use a tissue when sneezing and coughing. Dispose of as clinical waste then clean hands.
Deceased Patients	Body bags are not necessary for cadavers where influenza has been implicated in the death, unless it is thought likely that there would be leakage of body fluids in transit.

Avoid the use of fans as these recirculate the air.

13. Can influenza be treated and when is antiviral medication given? Antiviral medication is available that inhibit viral replication and lessen the symptoms if started within 48 hours of onset of symptoms.

Influenza management is a complex and evolving area. Early specialist advice is recommended for the management of patients with complicated influenza from the Consultant Microbiologist or the Consultant in Infectious Diseases.

Public Health England guidance of the use of antiviral agent for the treatment and prophylaxis of influenza

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/400392/PHE_guidance_antivirals_influenza_2014-15_5_1.pdf.

If above link is no longer active, visit <https://www.gov.uk/> and type “influenza antiviral treatment prophylaxis” in search field

14. In who is influenza vaccination recommended? Routine vaccination offers the best protection and people who are at risk of complicated infection should be vaccinated.

For up-to-date guidance visit <https://www.gov.uk/> and type “influenza vaccination” in search field.

Immunisation is also offered to all health care workers involved in the delivery of care and/or support to patients. The vaccine takes 2-3 weeks to take full effect. Staff should contact the Infection prevention team for influenza vaccination.

Regardless of whether staff have had, and recovered from a specific respiratory pathogen or have received vaccine for that organism, they should continue to follow the infection control precautions including PPE.

15. What are the contraindications to the influenza vaccination? The contraindications to the influenza vaccine include some of the following:

- Allergy to eggs, chicken protein or gentamicin
- Patients who have previously had an allergic reaction to the vaccine
- History of allergy to any component of the vaccine

Each person should be assessed, further guidance click on the link below- The Green Book, chapter 19

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/385226/Green_Book_Chapter_19_v8_2.pdf

16. When can Isolation precautions be discontinued? A patient with uncomplicated influenza can be moved out of a side room and staff discontinue wearing masks when they are asymptomatic.

Discontinuation of isolation precautions for patients with complicated influenza including those nursed on critical care or immunocompromised patients will require discussion with the Consultant Microbiologist or the Consultant in Infectious Diseases as they may remain infectious to others for longer.

17. What actions do I take if there is an outbreak of influenza on the ward? If more than one case of influenza is identified on a ward then the Infection Prevention Team must be informed.

Actions to take:

Isolate affected patients in single rooms if possible.

It is the responsibility of the Clinician in charge of the ward to note patients who have been exposed to the symptomatic case. Check appropriate immunisation history and risk factors of other non-affected patient in the same bay (>1 hour) that have been in contact with influenza patient.

Previous influenza immunisation does not exclude influenza. Discuss with Consultant microbiologist regarding prophylaxis treatment.

All visitors to the affected inpatient areas must be informed that there is influenza of the ward prior to entering.

The Infection Prevention Team will assess each situation on an individual basis.

Following discussion with the Director of Infection Prevention and Control ward closures or bay closures will be enforced if there is evidence of spread of influenza to patients and staff (appendix 3).

Where the need for isolation exceeds single room capacity, consult with the Infection Prevention Team. A cohort area may be advised for confirmed influenza cases caused by the same pathogen.

There may be occasions where individuals would have been vaccinated with a vaccine that is not well matched (according to information from the Public Health England) to the circulating strain of influenza virus.

There is a separate Trust pandemic influenza plan which is led by emergency services.

18. Appendix 1

What are aerosol generating procedures?

The following procedures are considered likely to generate aerosol capable of transmitting influenza when undertaken on patients with influenza

Intubation, extubation and related procedures, manual ventilation and open suctions
Cardiopulmonary resuscitation
Bronchoscopy
surgery and post-mortem procedures in which high-speed devices are used
Dental procedures
Non-invasive ventilation (NIV), e.g. Bi-level Positive Airway Pressure Ventilation (BiPAP) and continuous Positive Airway Pressure Ventilation (CPAP)
High – frequency oscillating ventilation(HFOV)
induction of sputum

Certain other procedures/equipment may generate an aerosol from material other than the patient secretions but are not considered to represent a significant infectious risk. Procedures in this category include:

Administration of pressurised humidified oxygen
Administration of medication via nebulisation

19. Appendix 2

How do I take specimens for virological investigations from patients with suspected influenza?

Collect a throat and nasal swab.

- Perform hand hygiene by washing hands with soap and water or using alcohol hand rub.
- Put on gloves, apron and surgical mask (and eye protection if required or if splashing is anticipated).
- Use one swab for taking the throat swab and one swab for taking the nasal swab (swab for respiratory virus PCR; green top).
- Use one of the **swabs** in the kit, vigorously swab the back of the throat around the tonsillar area (see diagram1)
- Use the other **swab** in the kit, Insert the swab into the nostril and guide it gently and horizontally to the back of the nose (see diagram2)

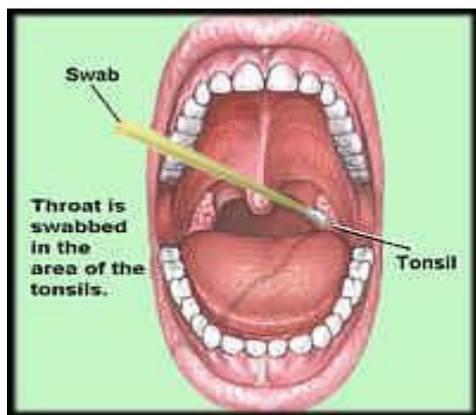


Diagram 1

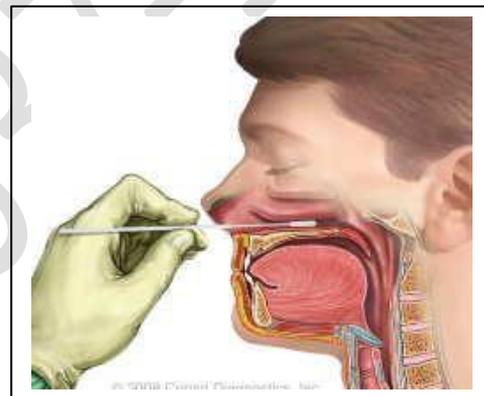


Diagram 2

- Place both swabs into the same transport medium, and break off the shaft so that it does not protrude above the rim of the container. Failure to do so will result in the transport medium leaking and the **sample being discarded**
- **Ensure that the lid of the container is screwed on tight.**
- Remove and discard gloves. Perform hand hygiene by washing hands with soap and water or using alcohol hand rub.
- Remove and discard face mask, and repeat hand hygiene.
- Follow the labelling and transport instructions given in the collection kit insert.
- Complete the request form with all the patient details including NHS number and contact numbers for results reporting.

FOI REF 537-1819