Guidance Objective

To ensure all relevant clinical staff are aware of the risks associated with Respiratory Tract Infections

This guidance applies to all staff employed by NHS Greater Glasgow & Clyde and locum staff on fixed term contracts.

KEY CHANGES FROM THE PREVIOUS VERSION OF THIS GUIDANCE

Important Note: The version of this policy found on the Infection Prevention & Control (eIPC Manual) on the intranet page is the only version that is controlled. Any other versions either printed or embedded into other documents or web pages should be viewed as uncontrolled and as such may not necessarily contain the latest updates, amendments, or linkages to other documents.

Document Control Summary

Approved by and date	Board Infection Control Committee 23rd June 2022
Date of Publication	27th June 2022
Developed by	Infection Prevention Control Policy Sub-Group
Related Documents	National Infection Prevention and Control Manual NHSGGC Hand Hygiene Guidance NHSGGC SOP Cleaning of Near Patient Equipment NHSGGC SOP Twice Daily Clean of Isolation Rooms NHSGGC SOP Terminal Clean of Ward/Isolation Rooms
Distribution / Availability	NHSGGC Infection Prevention and Control web page www.nhsggc.scot/hospitals-services/services-a-to-z/infection-prevention-and-control
Lead Manager	Director Infection Prevention and Control
Responsible Director	Executive Director of Nursing

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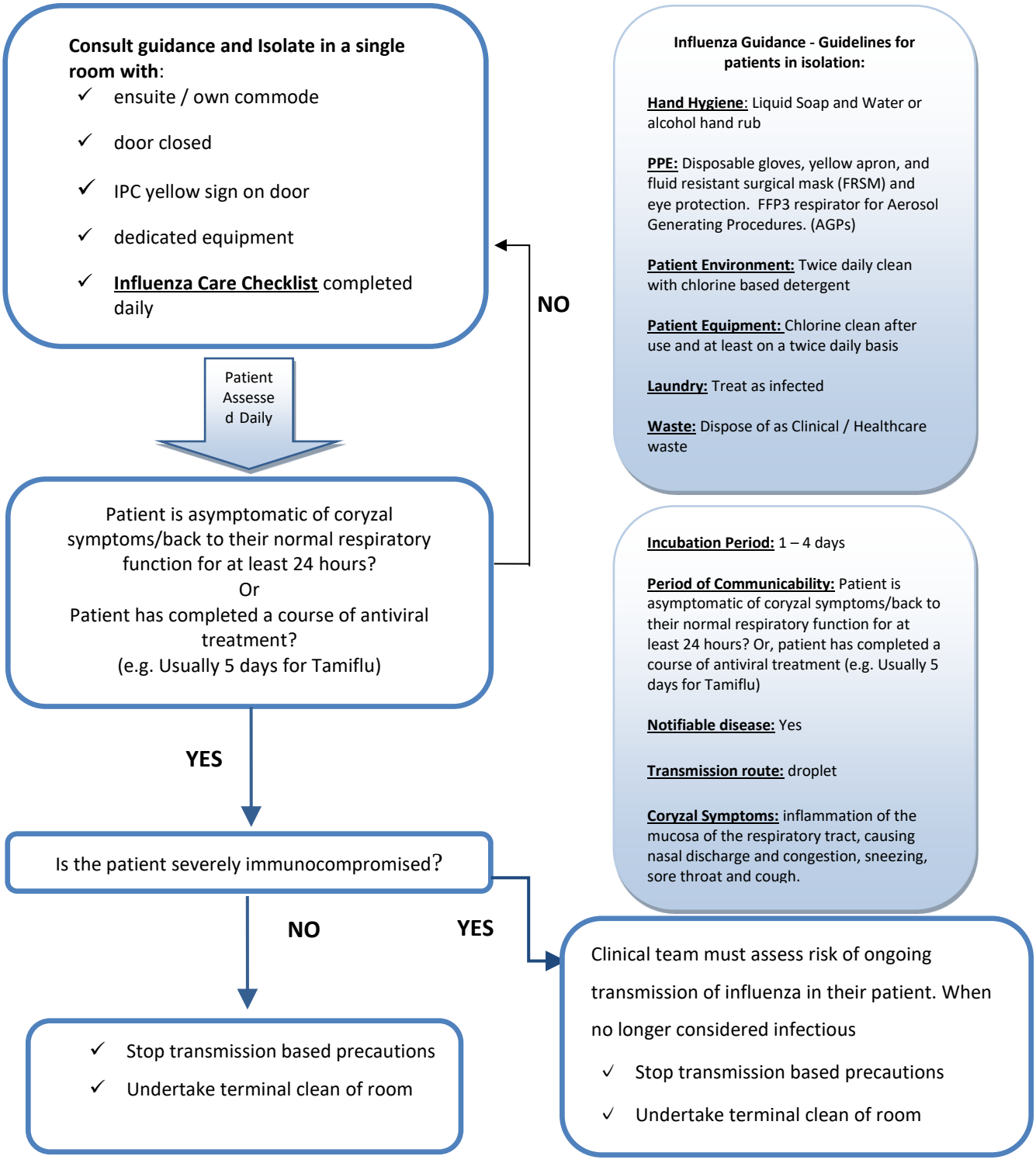
Influenza Aide Memoire

Follow this algorithm if you have a patient with suspected or confirmed **Influenza**



1. Responsibilities

Healthcare Workers (HCWs) must:

- Follow this guidance.
- Inform a member of the Infection Prevention and Control Team (IPCT) if this guidance cannot be followed.
- Must ensure care checklists are implemented and up to date.

Senior Charge Nurses (SCNs) / Managers must:

- Support HCWs in following this guidance.
- Cascade new policies/SOPs/guidance to clinical staff after approval by the Board Infection Control Committee (BICC).
- Ensure HCW are aware how to use respiratory protection and have access to appropriate PPE including fit testing for FFP3 masks.
- Provide staff the opportunity to receive the staff flu vaccination each year

Infection Prevention and Control Teams (IPCTs) must:

- Keep this guidance up-to-date.
- Support the clinical team to undertake a risk assessment where this guidance cannot be followed.
- Provide education opportunities on this guidance.

Occupational Health Service (OHS) must:

- Public Health and OHS will plan and promote the uptake of staff seasonal flu vaccination
- OHS will provide opportunity for staff to receive their flu vaccination during working hours

Influenza

Infections with a particular strain of influenza (type A or B) occur every year and are referred to as seasonal influenza. Pandemic influenza occurs when a new influenza sub-type appears that is different to previous sub-types and can:

- infect humans
- spread effectively from human to human
- causes significant clinical illness in a high proportion of those who acquire the virus

Primary strategies for preventing influenza are:

- **VACCINATION - the most effective way of preventing the spread of influenza**
- early detection and treatment
- standard infection control precautions and transmission based precautions must be followed, to prevent transmission during patient care

2. Symptoms of Influenza

Influenza is a respiratory illness characterised by coryzal symptoms including fever, cough, headache, sore throat and aching muscles and joints. There is a wide spectrum of illness ranging from minor symptoms through to pneumonia and death. The most common complications of influenza are bronchitis and secondary bacterial pneumonia.

The typical incubation period for non-pandemic influenza is one to four days, with an average of two to three days. Adults can be infectious from the day before symptoms begin to approximately five days after illness onset. Children can be infectious for seven or more days, and young children can shed virus for several days before their illness onset. Severely immunocompromised persons can shed virus for weeks or months.

Routes of Transmission

There are three main routes of transmissions:

i. Droplet Transmission

Large droplets (greater than 5 microns in size) may be generated from a person with clinical disease during coughing or sneezing and may land directly on the conjunctiva, or mucous membranes of the nose and mouth of a susceptible person. Large droplets are heavy and do not remain suspended in the air for long periods of time and only travel for up to 1 metre, so close contact is required for transmission.

ii. Direct / Indirect Contact Transmission

Direct contact transmission is when the virus is spread person to person either by contact with the infectious person skin or droplet transmission, e.g. symptomatic patient to a HCW, from a sneeze or cough directly onto the nose or mouth.

Indirect contact transmission is the transfer of an infectious agent through a contaminated intermediate object or person, e.g. from a contaminated surface, bed table, to the hands of another person who then transfers the virus to their nose, mouth or eyes. Influenza virus is known to survive well in the environment; up to 24 hours.

iii. By the Airborne Route during and after Aerosol Generating Procedures (AGPs)

Transmission may occur at short distances through inhalation of small particle aerosols which are produced during Aerosol Generating Procedures (AGPs).
(See section 5 below)

Smaller droplets or aerosol produced during these types of procedures can be inhaled and cause infection. They may also remain in the air for a prolonged period and travel over distances.

3. Aerosol Generating Procedures (AGPs)

Healthcare staff that perform AGPs on patients with confirmed or suspected influenza should don additional protective clothing (see **Section 5E** Personal Protective Equipment).

Where possible, AGPs should be avoided or alternative methods considered. Only essential staff should be present.

Aerosol Generating Procedures (AGPs) are defined as:

Tracheal intubation and extubation
- Manual ventilation
- Tracheotomy or tracheostomy procedures (insertion or removal)
- Bronchoscopy
- Dental procedures (using high-speed devices, for example, ultrasonic scalers/high-speed drills)

• Non-invasive ventilation (NIV): Bi-level Positive Airway Pressure Ventilation (BiPAP) and Continuous Positive Airway Pressure Ventilation (CPAP)
• High flow nasal oxygen (HFNO)
• High frequency oscillatory ventilation (HFOV)
• Induction of sputum using nebulised saline
• Respiratory tract suctioning
• Upper ENT airway procedures that involve respiratory suctioning
• Upper gastrointestinal endoscopy where open suction beyond the oro-pharynx occurs
• High speed cutting in surgery/post-mortem procedures

4. Testing for Influenza

- Patients who present to hospital with flu-like illness should be tested **if** clinically relevant.
- Repeat testing to confirm clearance of influenza is **not** required.

Anti-viral Prescribing for patients with flu-like illness

Treatment and prophylaxis
Please contact infectious disease consultant or virologist to obtain advice regarding treatment of suspected or known cases of influenza and / or prophylaxis of specific vulnerable groups. The most up-to-date information on treatment issued by the Scottish Government Health Directorates (SGHD) can be viewed at https://www.hps.scot.nhs.uk/a-to-z-of-topics/influenza/

5. Limiting the Spread of Influenza

A. Patient Placement

- All patients with confirmed or suspected influenza should be nursed in a single room with en suite facilities. If a single room is not available staff must contact a member of the local IPCT for further advice.
- A yellow IPC isolation sign should be clearly visible on the door.
- Patients should be considered infectious until patient is asymptomatic / back to their normal respiratory function for at least 24 hours OR patient has completed a course of antiviral treatment.
- Patients who are diagnosed as having influenza but are asymptomatic are unlikely to spread the virus and can be regarded as non-infectious.
- Patients who are immunocompromised or with prolonged illness or complications should be assessed by clinical staff and the IPCT, and isolation

precautions discontinued if deemed appropriate. Patients who fall into this category must be assessed individually.

- PCR tests can remain positive for considerable periods and should not be used to determine infectivity.
- Patients with underlying medical conditions or patients who have gone on to develop a secondary complication as a result of infection should be considered infectious until they return to their previous health state.
- If patient is in ICU please discuss with IPCT.
- Patients who are immunocompromised or with prolonged illness or complications should be assessed by clinical staff and the IPCT, and isolation precautions discontinued if deemed appropriate. Patients who fall into this category must be assessed individually.
- In the event of increase in the number of patients with influenza requiring admittance to hospital, in conjunction with the IPCT, an influenza cohort bay or ward can be considered. Please see **Appendix 2** for IPC guidance.

B. Patient Movement / Inter-Hospital Transfers

Influenza patients who are still infectious must not leave the area unless there is an urgent clinical need. If patient has to leave the single room while symptomatic, they should wear a fluid-resistant surgical mask (FRSM) if possible to minimise the dispersal of respiratory secretions and prevent environmental contamination. The FRSM should be worn until the patient is returned to the single room / cohort area. On removal of the FRSM, the patient should be offered the opportunity to undertake hand hygiene.

If a patient requires transfer to another department the following procedures must be followed:

- The department must be informed in advance.
- HCWs transporting the patient **do not need** to wear PPE if the patient is wearing an FRSM but must undertake hand hygiene.
- If the patient cannot wear/tolerate a FRSM then any HCW transporting the patient must wear a FRSM
- The patient must be taken straight to and returned from the department and must not wait in a communal area.
- If possible patients should be placed at the end of a list, to allow appropriate decontamination after any procedure.
- If the patient requires oxygen via a mask, then the patient need not wear the FRSM however, if nasal prongs are used to deliver oxygen then the patient should also wear an FRSM over the prongs.

Hospital Transfers and Discharges

Patients must not be transferred from one hospital to another for routine care however some patients may require specialist care, e.g. renal dialysis. If a patient has to be transferred this **MUST** be discussed with the local IPCT who will alert the IPCT at the receiving hospital. It will be the responsibility of the clinical area that the patient is being discharged from to alert the Scottish Ambulance Service.

Discharge to residential care:
If a patient remains symptomatic or has not completed 5 days of appropriate antiviral treatment, this must be communicated to those receiving the patient, and appropriate IPC measures put in place prior to the transfer of the patient.

C. Visitor Restrictions

- Visiting in hospital should be restricted to 1-2 visitors only in order to reduce the risk of influenza transmission to visitors.
- All visitors must be free of flu-like symptoms, however in exceptional circumstances, e.g. when a patient is critically ill, then advice should be sought from the IPCT and a risk assessment will be undertaken.
- Visitors must speak to a member of staff and be instructed on hand hygiene practice and the wearing of protective clothing as appropriate prior to visiting the patient, such as a surgical mask, apron and gloves.
- Visitors to patients ventilated with NIV or HFOV may be exposed to potentially infectious aerosols. The number of such visitors should be limited to two unless there are exceptional circumstances. Visitors should be made aware of the risks and be offered PPE as recommended for staff.
- There may be further visiting restrictions if a ward is closed due to influenza.

D. Hand Hygiene

Hand hygiene remains the single most important measure to take against the spread of influenza. Effective hand hygiene with plain liquid soap and running water or alcohol based hand rub on visibly clean hands is effective, for a minimum of 20 seconds.

E. Personal Protective Equipment (PPE)

PPE is worn to protect staff from body fluids to reduce the risk of transmission of influenza between patients and staff and from one patient to another. The level of PPE used will vary based on the procedures being carried out and not all items of PPE

will always be required. Appropriate PPE for care of patients who are suspected or confirmed to have influenza is summarised **below**.

PPE to be worn when providing direct care for service users on the respiratory pathway.

Fluid resistant surgical mask (FRSM)

Fluid resistant surgical masks (FRSM) should be worn by HCWs for contact with patients suspected or known to have influenza. The mask provides a physical barrier which becomes ineffective once wet. As masks themselves may become a reservoir for the virus great care should be taken during their removal and disposal.

When to remove the FRSM

When visiting a number of patients within an influenza cohort or A&E department, it is acceptable to wear the same mask and change it at the end of the session and if it gets wet. Great care must be taken not to contaminate the hands during this time by touching the mask. HCW/ Visitors must removal all PPE before leaving a patient care area (single room/ cohort area), FRSM or FFP3 respirators should be removed last. **Hand hygiene must be performed after removal of all PPE.**

When to wear an FFP3 respirator

FFP3 respirators should be worn only by those staff carrying out AGPs. To be effective, individual users must be trained to fit the respirator properly to their face.

When to remove the FFP3

The FFP3 mask must be worn for up to 2 hours following an AGP, until fallow times have been completed during which time the aerosols will have either been removed through the ventilation system or allowed to settle. If staff wish to leave the patient room within the fallow time, gloves and aprons should be removed in the room and hand hygiene performed. The FFP3 mask should be removed on leaving the room, placed in the nearest clinical waste receptacle and hand hygiene performed.
National Infection Prevention and Control Manual: Appendix 17 - Aerosol Generating Procedures (AGPs) and post AGP Fallow time (PAGPFT) (scot.nhs.uk)
Domestic staff where possible should wait for the fallow time to be over before entering the room.

F. Decontamination of Patient Equipment
Where practicable, the patient should be designated their own equipment.
See NHSGGC Cleaning of Near Patient Equipment SOP

G. Decontamination of the Environment

Domestic staff must follow the SOP for Twice Daily Clean of Isolation Rooms. Cleans should be undertaken at least four hours apart.
See NHSGGC Twice Daily Clean of Isolation Rooms SOP

All frequently touched surfaces should be decontaminated after any AGP using chlorine based detergent. Limit the amount of equipment in the room as far as possible.

H. Clinical/ Healthcare Waste

Waste should be designated as clinical / healthcare waste and placed in an orange bag. Please refer to the NHSGGC Waste Management Policy

I. Laundry

Discard linen as soiled/ infected, i.e. in a water soluble bag then a clear plastic bag, tied and then placed into a laundry bag.

Please refer to National guidance of the safe management of linen

Sending Laundry Home

If relatives or carers wish to take personal clothing home, staff must place clothing into a domestic water soluble bag then into a patient clothing bag and ensure that a Washing Clothes at Home Information Leaflet is issued.

NB Nursing staff in the ward should record in the nursing notes that both the advice and information leaflet has been issued.

J. Respiratory Hygiene / Cough Etiquette (Catch it, Bin it, Kill it)

Patients, staff and visitors should be encouraged to minimise potential influenza transmission by:

- Covering the nose and mouth with disposable single-use tissues when sneezing, coughing, wiping and blowing noses.
- Disposing of used tissues in nearest clinical/ healthcare waste bin, washing hands after coughing, and sneezing using tissues.
- Avoid touching eyes, mouth and nose.

Some patients may need assistance with containment of respiratory secretions, e.g. older people and children. Those who are immobile may need a personal waste bag

readily at hand for immediate disposal of tissues. They should also have a supply of hand wipes and tissues.

6. Evidence Base

Health Protection Scotland. Guidance on use of antiviral agents for the treatment and prophylaxis of influenza
HPS Website - Influenza

Health Protection Scotland Infection Prevention and Control Guidance;
National Infection Prevention and Control Manual: A-Z Pathogens

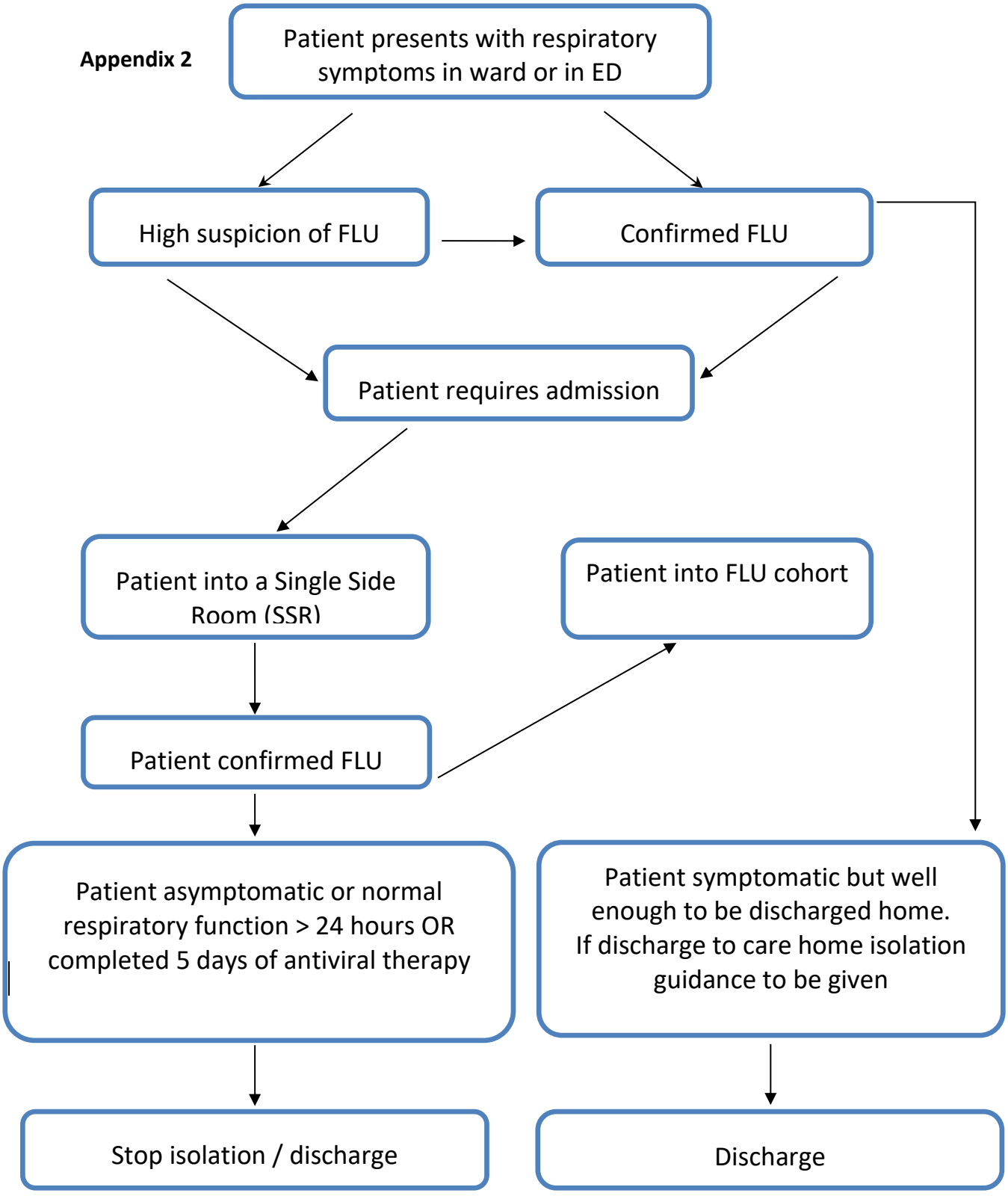
Winter (21/22), Respiratory Infections in Health and Care Settings Infection Prevention and Control (IPC) Addendum

Appendix 1: Influenza Cohort Nursing Aide Memoire

Planning and communications	On each hospital site, wards and wards with suitable bed bays will be identified and a respiratory pathway agreed from ED to discharge. This will be communicated to the appropriate staff at huddles/briefs to support patient/bed management. Daily updates on bed spaces on cohort wards/bays should be available to support patient transfers from ED and acute receiving. Wards with cohort bays will not be closed to other admissions.
Definition of a cohort ward or bay	A cohort area is a bay/ward in which a group of patients (cohort) with the same infection are placed together. Patient cohorting may be appropriate when single rooms are not available and there is more than one patient with the same confirmed infection.
Decision to create a Flu cohort	If a ward has bed bays and a number of confirmed FLU patients, those patients should be nursed in a single bay as a cohort. If there are empty beds in that cohort, they can be used for FLU patients from other areas. The decision to set up a cohort should be discussed with local IPCT/on call Microbiologist prior to being implemented.
Setting up the cohort	The cohort bay should have dedicated equipment as far as possible such as blood pressure, oxygen saturation and temperature recording devices within the cohort bay.
Staffing (cohort nursing)	Cohort nursing (dedicated teams) should be implemented to minimise the risk of contamination between groups of symptomatic and non-symptomatic patients if staff resource allows. If not, contact the local IPCT who will help to undertake a risk assessment
Bed spacing	Patients should be separated by at least 2.7 metres from each other in a cohort area, and bed curtains can be drawn as an additional physical barrier if required.
Cohort patients	Patients who have confirmed Influenza can be nursed in an influenza cohort until they have been asymptomatic / returned to normal respiratory function for at least 24 hours OR received 5 days of antiviral therapy. However, It should be noted that patients being nursed together in a cohort should all have the same type of FLU. e.g. Influenza A. Patients who remain symptomatic but are well enough to be discharged can be sent home. Patients who have FLU and another infection e.g. diarrhoea or MRSA, should be nursed in a single room.
Testing for influenza	Either laboratory or POCT testing is sufficient to identify patients with influenza. It is not necessary to test prior to discharge. Patients who are asymptomatic should not be tested.
PPE	For entering the cohort ward / bay, it is not necessary to wear PPE unless about to undertake patient care. For all direct care or contact with the patients environment staff should don a disposable plastic yellow apron, disposable gloves, a fluid resistant face mask and eye protection. For AGP, an FFP3 mask should be worn. If patients require routine AGPs, consider placing this patient in a single room.
Equipment	As far as possible, dedicated equipment should remain in the cohort bay for use on cohort patients only. For equipment that cannot be dedicated, items should be cleaned with a chlorine based solution containing 1,000 ppm active chlorine.
Ward rounds	Ward rounds within a cohort will consist of 1 member of medical team entering the cohort in appropriate PPE to examine the patient only. Once exam completed, removal of PPE and hand hygiene should be performed. Any equipment used will either stay in the cohort or be decontaminated before removal
Linen	Bed linen should be managed as infected linen
Waste	Waste should be managed as healthcare waste

Cleaning of Environment	Domestic services should clean the cohort bed bay/ ward a minimum of daily with a solution containing 1,000 ppm active chlorine. (Consideration should be given to a dedicated cleaning team on each site). If an AGP has been carried out the domestic staff should wait until the fallow time is complete before entering the room to clean.
Visitors	Visitors are allowed but no more than two per bed space. It may be necessary to stop visiting temporarily if the situation warrants this.

Appendix 2


Patient presents with respiratory symptoms in ward or in ED
High suspicion of FLU
Confirmed FLU
Patient requires admission
Patient into a Single Side Room (SSR)
Patient into FLU cohort
Patient confirmed FLU
Patient asymptomatic or normal respiratory function > 24 hours OR completed 5 days of antiviral therapy
Patient symptomatic but well enough to be discharged home. If discharge to care home isolation guidance to be given
Stop isolation / discharge
Discharge