York Teaching Hospital NHS
NHS Foundation Trust

Management of Respiratory Viruses

Author:	Linda Horton-Fawkes Senior Infection Prevention Nurse
Owner:	Vicki Parkin Deputy Director of Infection Prevention and Control
Publisher:	Compliance unit
Date of first issue:	September 2011
Version:	1
Date of version issue:	September 2011
Approved by:	HIPPC
Date approved:	September 2011
Review date:	September 2013
Target audience:	All Clinical Staff
Relevant Regulations and Standards	

Executive Summary

This policy provides concise guidance for all staff to minimize the potential risks of infection and to ensure prompt recognition of those patients who are at risk of infection.

Version History Log

Version	Date Approved	Version Author	Status & location	Details of significant changes
1		Linda Horton Fawkes (Senior Infection Prevention Nurse)		New Policy

Contents

Process flowchart

Assessment Criteria

Fever >38°C (or a history of fever) *and* two or more of the following:

- cough
- headache
- muscle or joint pains
- vomiting or diarrhoea

Or severe illness of sudden onset suggestive of an infectious process without another obvious or proven cause

Isolate patient in side room

Inform Infection Prevention Team

Obtain nose & throat swab **&** nasal pharyngeal swab-send to lab via air tube (inform lab prior to sending sample)

Commence respiratory precautions; staff to wear surgical masks for basic care; FFP3 masks during aerosolizing procedures e.g. cough inducing procedures. Aprons for direct patient contact; gloves for contact with secretions/bodily fluids

Negative swab result for all respiratory viruses

Isolation not required

Positive result for influenza

Continue isolation and respiratory precautions

Consider cohort during outbreaks (discuss with Microbiologist/IPT

N.B. Dispose of gloves and aprons as clinical waste inside the patients room. Remove mask on vacating the patient's room place in a designated clinical waste bin with lid. Keep the door closed and always display a 'Respiratory' poster.
For advice regarding medical treatment please refer to consultant microbiologist/Respiratory Viruses Policy 2011.
For immunosuppressed patients consider antiviral therapy.

1 Introduction & Scope

Respiratory infections are common, most are fairly mild self limiting and confined to the upper respiratory tract. However these can progress to become significant infections with serious sequelae.

Outbreaks of respiratory virus infections are often associated with increased hospitalizations and mortality. Patients most at risk are those with compromised immune cardiac or pulmonary systems.

Influenza occurs during the winter months and can affect all age groups, particularly the elderly and the immunocompromised. Often requiring hospitalization is due to complications such as pneumonia.

Emerging diseases such as avian influenza and Swine (H1N1) influenza have the potential to cause severe human illness.

This policy provides concise guidance for all staff to minimize the potential risks of infection and to ensure prompt recognition of those patients who are at risk of infection.

2 Definitions

Aerosol - a suspension of fine solid particles or liquid droplets in a gas.

Aerosol Generating Procedures (AGP) - are procedures that stimulate coughing and promote the generation of aerosols

Geographical exposure– travel within last 2 weeks to any area of the world known to have cases of severe unexplained respiratory illness.

FFP3 respirators - respirators that are entirely or substantially constructed of filtering material (filters at least 99% of airborne particles).

PPE –Personal Protective Equipment

URTI – Upper Respiratory Tract Infection

3 Policy Statement

Infection can be acquired by direct and indirect contact and the airborne route.

Transmission occurs from person to person by close contact, predominantly by large droplet/airborne respiratory secretions and /or contamination of hands. Standard and respiratory precautions must be maintained at all times.

Patients with a suspected URTI, a history of travel and suspected exposure to infection with a new emerging or re-emerging infection and meet the clinical criteria below, must be nursed in a single room and the Infection Prevention Team informed.

Fever >38°C (or a history of fever) *and* two or more of the following:

- cough
- headache
- muscle or joint pains
- vomiting or diarrhoea

Or severe illness of sudden onset suggestive of an infectious process without another obvious or proven cause

- On presentation to hospital, if the patient meets the above criteria, they must be isolated immediately (for step by step guidance see **Appendix A).**
- Clinical staff should wear surgical face masks when within 3 feet of the patient. Correctly fit tested respirators (FFP3) **must** be worn during aerosolizing procedures. (See **Appendix B).**
- Staff must contact Occupational health for correct fitting of respirators.
- All masks are to be removed outside the patient's room and be disposed of in a designated **closable** clinical waste bin.
- FFP3 masks are available via the Bed Managers

http://www.hse.gov.uk/news/2009/facemasks.htm

Visitors with symptoms of respiratory infection must be discouraged from visiting.

4 Equality Impact Assessment

The Trust' statement on Equality is available in the Policy for Development and Management of Policies at Section 3.3.4.

A copy of the Equality Impact Assessment for this policy is at appendix A

5 Accountability

Corporate accountabilities are detailed in the **Policy for Development and Management of Policies** at section 5.

All healthcare professionals are responsible and accountable to the Chief Executive for the correct implementation of this policy. Medical staff are professionally accountable through the General Medical Council; nurses are professionally accountable to the Nursing and Midwifery Council and Allied Health Care Professionals are accountable to their individual governing body.

The Trust expects all health care professionals involved in the performance of isolation practice and techniques to be familiar with current policies and legislation, and to ensure they attend the relevant training courses, and be able to demonstrate a satisfactory level of competence measured by formal assessment.

6 Consultation, Assurance and Approval Process

Consultation, assurance and approval process is detailed in section 6 of the **Policy for the Development and Management of Policies.**

A list of consulted stakeholders are:

Respiratory Physicians

Hospital Infection Prevention Committee

7 Review and Revision Arrangements

The date of review is given on the front coversheet.

The Compliance Unit will notify the author of the policy of the need for its review six months before the date of expiry.

On reviewing this policy, all stakeholders identified in section 6 will be consulted as per the Trust's Stakeholder policy. Subsequent changes to this policy will be detailed on the version control sheet at the front of the policy and a new version number will be applied.

Subsequent reviews of this policy will continue to require the approval of the appropriate committee as determined by the **Policy for Development and Management of Policies.**

8 Dissemination and Implementation

8.1 Dissemination

Once approved, this policy will be brought to the attention of relevant staff as per the **Policy for Development and Management of Policies**, section 8 and Appendix C Plan for Dissemination.

This policy is available in alternative formats, such as Braille or large font, on request to the author of the policy.

8.2 Implementation of Policies

The Policy will be disseminated through the Consultants; Clinical Directors; Directorate Manager; Matrons; and Ward Managers via emails and meetings.

9 Document Control including Archiving

The register and archiving arrangements for policies will be managed by the Compliance Unit. To retrieve a former version of this policy the Compliance Unit should be contacted.

10 Monitoring Compliance and Effectiveness

This policy will be monitored for compliance with the minimum requirements outlined below.

10.1 Process for Monitoring Compliance and Effectiveness

Evidence	Monitoring /Who by	Frequency
a. Standard and respiratory precautions maintained at all times	By IPT and dedicated responsible health care worker	For the duration of symptoms
b. Patient to be nursed in single room /cohort bay	IPT documentation records. CPD whiteboard records.	Duration of isolation
c. Effective hand hygiene	Hand hygiene audits completed by ward/ department staff	Monthly
d. Environmental cleanliness	Monit audits completed by domestic teams PEAT inspections completed by PEAT teams	According to risk category for each ward/ department
e. Clinical equipment cleaning	Saving Lives High Impact Intervention 8 – cleaning clinical equipment completed by ward/ department staff Matron Environment Audits completed by matrons	Monthly

10.2 Standards/Key Performance Indicators

11 Training

See section 11 of the **Policy for Development and Management of Policies** for details of the statutory and mandatory training arrangements.

12 Trust Associated Documentation

YHFT Policy for the Development and Management of Policies CORP.RL.10
YHFT [version 2] Infection Prevention Isolation Policy CLIN.IC.8
YHFT [version 8] Infection Prevention Hand Hygiene Policy CLIN.IC.12
YHFT [version 4] Infection Prevention Standard Precautions Policy CLIN.IC.6

13 External References

The Health and Social Care Act (2008) www.dh.gov.uk

Critical care management of adults with influenza with particular reference to H1N1 (2009)
http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1287148502205

Respiratory Syncytial Virus (RSV)
http://www.hpa.org.uk/webw/HPAweb&Page&HPAwebAutoListName/Page/1191942172184?p=1191942172184

Clinical management of patients with an influenza-like illness during an influenza pandemic (DH 2006)
http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4135811.pdf

The Use Of Face Masks During An Influenza Pandemic: Scientific Evidence Base (DH)
http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_077781.pdf

Infection prevention and control in health care for confirmed or suspected cases of pandemic (H1N1) 2009 and influenza-like illnesses (WHO 2009)
http://www.who.int/csr/resources/publications/swineflu/swineinfinfcont/en/index.html

Aerosol Generating Procedures (HSE 2010)http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/Infectioncontroladvice/File,3625,en.pdf

Appendices

Appendix A Nursing Management of patients with a suspected respiratory infection

- Respiratory isolation –the patient must be nursed in a single room or cohort bay with the doors closed. Continue isolation for 7 days after the onset of clinical symptoms or until the patient is asymptomatic, if symptoms persist longer than 7 days isolation must be continued until these resolve. N.b. immunocompromised patients' may excrete viruses for a longer period; discuss management with physician in charge of patient care and with microbiologists.
- Staff contact should be kept to a reasonable minimum without compromising patient care.
- Effective hand hygiene before and after patient contact or contact with the patients' immediate environment. Please refer to the Trust Hand Hygiene policy available on Horizon.
- Respiratory hygiene/cough etiquette - actively encourage patients to cover their nose and mouth with disposable tissues when coughing , sneezing , wiping or blowing their nose and dispose of the tissue in a disposal bag on the bedside prior to be disposed of as clinical waste.
- Encourage/assist the patient to clean their hands after coughing, sneezing, wiping or blowing their nose.
- Restrict patient movement unless clinically indicated, if they need to travel to other areas within the hospital they should wear a surgical mask (if tolerated) at all times.
- Health care workers delivering direct patient care must wear personal protective equipment (PPE):
  - Eye protection must be used when there is a risk of contamination of the eyes by splashes aerosols and droplets,
  - Disposable apron must be worn whenever there is a risk of contamination by a patient's blood or bodily fluids and during activities that involve close patient contact.
  - Long sleeved fluid repellent gowns must be worn if there is risk of excessive soiling.
  - Disposable gloves must be worn when in direct contact with blood and body fluids including mucus.

Disposable respirators (FFP3) for suspected influenza must be worn where there is a risk of aerosolization of respiratory secretions. The following are classified as AGP by the World Health Organization (reviewed 2009):

- Intubation and related procedures, e.g. manual ventilation
- Respiratory and airway suctioning (including tracheostomy care and open suctioning with invasive ventilation)
- Cardiopulmonary resuscitation
- Bronchoscopy
- Collection of lower respiratory tract specimens (e.g. bronchial and tracheal aspirates)
- Post mortem procedures

The following procedures are **not** classified as AGP:

- Mechanical ventilation or respiratory therapy treatment unless an AGP is being performed on an open system
- Closed suctioning with invasive ventilation
- Non-invasive positive pressure ventilation (BiPAP)
- Bi-level positive airway pressure (BPAP)
- Nasopharyngeal aspiration
- Nebulisation (but only if this procedure can be performed in an area physically separate from other patients)

Chest physiotherapy is not considered an AGP but a surgical mask should be worn by the patient if tolerated and Health Care Workers should wear PPE as recommended for routine care (surgical mask) during the procedure.

- All PPE must be disposed of as clinical waste in the patient's room, except the respirator/surgical mask worn by staff which must be removed **outside** the room and disposed of in a closable clinical waste bin.
- Linen must be treated as infected by placing it in a hot water soluble bag inside a red plastic bag tied and sealed at the point of use.
- Environmental cleaning – all floors and flat surfaces must be cleaned daily with the micro fibre system, disposable bags at the patients bed side to be disposed of a clinical waste when ¾ full.
- Communal clinical equipment must be cleaned after each use.
- A respiratory precautions door notice must be displayed at all times.
- The door to the isolation room **must** remain closed at all times.

Appendix B What is the difference between a mask and a respirator?

Masks - The main purpose of a mask is to help prevent particles (droplets) being expelled into the environment by the wearer and are also resistant to fluids. They help protect the wearer from splashes of blood or other potentially infectious substances. They are not necessarily designed for filtration efficiency, or to seal tightly to the face.
Respirators - are intended to help reduce the wearer's exposure to airborne particles. They are made to defined national standards, such as the United States NIOSH-approved N99 respirator, or the similar (but not identical) European standard EN149:2001 FFP3 respirator. The standards define the performance required of the respirator, including filtration efficiency. When worn correctly, they seal firmly to the face, thus reducing the risk of leakage. (Source – HPA Guidance Information on Face Masks & Respirators)

http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733839643

European Standard EN 149 defines the following classes of “filtering half masks” (also called “filtering face pieces”) that is, respirators that are entirely or substantially constructed of filtering material:

Class	Filter penetration limit (at 95 L/min air flow)	Inward leakage
FFP1	Filters at least 80% of airborne particles	<22%
FFP2	Filters at least 94% of airborne particles	<8%
FFP3	Filters at least 99% of airborne particles	<2%

Appendix C Equality Impact Assessment Tool

To be completed when submitted to the appropriate committee for consideration and approval.

Name of Policy:	

1.	**What are the intended outcomes of this work?** *Include outline of objectives and function aims*	
2	**Who will be affected?** *e.g. staff, patients, service users etc*	
3	**What evidence have you considered?** *List any examples of good practice you have used in putting this policy together, ensuring consideration to the ability to implement the policy by he following groups has been given*	
a	**Disability**	
b	**Sex**	
c	**Race**	
d	**Age**	
e	**Gender Reassignment**	
f	**Sexual Orientation**	
g	**Religion or Belief**	

h	**Pregnancy and Maternity**.	
i	**Carers**	
j	**Other Identified Groups**	
4.	**Engagement and Involvement**	
a.	Was this work subject to consultation?	
b.	How have you engaged stakeholders in constructing the policy	
c.	If so, how have you engaged stakeholders in constructing the policy	
d.	For each engagement activity, please state who was involved, how they were engaged and key outputs	
5.	**Consultation Outcome** *Now consider and detail below how the proposals impact on elimination of discrimination, harassment and victimisation, advance the equality of opportunity and promote good relations between groups*	
a	Eliminate discrimination, harassment and victimisation	
b	Advance Equality of Opportunity	
c	Promote Good Relations Between Groups	
d	What is the overall impact?	

	Name of the Person who carried out this assessment:
	Date Assessment Completed
	Name of responsible Director

If you have identified a potential discriminatory impact of this procedural document, please refer it to the Equality and Diversity Committee, together with any suggestions as to the action required to avoid/reduce this impact.

Appendix D Checklist for the Review and Approval

To be completed and attached to any document which guides practice when submitted to the appropriate committee for consideration and approval.

	Title of document being reviewed:	Yes/No/ Unsure	Comments
1	**Development and Management of Policies**		
	Is the title clear and unambiguous?		
	Is it clear whether the document is a guideline, policy, protocol or procedures?		
2	**Rationale**		
	Are reasons for development of the document stated?		
3	**Development Process**		
	Is the method described in brief?		
	Are individuals involved in the development identified?		
	Do you feel a reasonable attempt has been made to ensure relevant expertise has been used?		
	Is there evidence of consultation with stakeholders and users?		
	Has an operational, manpower and financial resource assessment been undertaken?		
4	**Content**		
	Is the document linked to a strategy?		
	Is the objective of the document clear?		
	Is the target population clear and unambiguous?		
	Are the intended outcomes described?		

	Title of document being reviewed:	Yes/No/ Unsure	Comments
	Are the statements clear and unambiguous?		
5	**Evidence Base**		
	Is the type of evidence to support the document identified explicitly?		
	Are key references cited?		
	Are the references cited in full?		
	Are local/organisational supporting documents referenced?		
5a	**Quality Assurance**		
	Has the standard the policy been written to address the issues identified?		
	Has QA been completed and approved?		
6	**Approval**		
	Does the document identify which committee/group will approve it?		
	If appropriate, have the staff side committee (or equivalent) approved the document?		
7	**Dissemination and Implementation**		
	Is there an outline/plan to identify how this will be done?		
	Does the plan include the necessary training/support to ensure compliance?		
8	**Document Control**		
	Does the document identify where it will be held?		
	Have archiving arrangements for superseded documents been addressed?		

	Title of document being reviewed:	Yes/No/ Unsure	Comments
9	**Process for Monitoring Compliance**		
	Are there measurable standards or KPIs to support monitoring compliance of the document?		
	Is there a plan to review or audit compliance with the document?		
10	**Review Date**		
	Is the review date identified?		
	Is the frequency of review identified? If so, is it acceptable?		
11	**Overall Responsibility for the Document**		
	Is it clear who will be responsible for coordinating the dissemination, implementation and review of the documentation?		

Individual Approval			
If you are happy to approve this document, please sign and date it and forward to the chair of the committee/group where it will receive final approval.			
Name		Date	
Signature			
Committee Approval			
If the committee is happy to approve this document, please sign and date it and forward copies to the person with responsibility for disseminating and implementing the document and the person who is responsible for maintaining the organisation's database of approved documents.			
Name		Date	
Signature			

Appendix E Plan for dissemination of policy

To be completed and attached to any document which guides practice when submitted to the appropriate committee for consideration and approval.

Title of document:	
Date finalised:	
Previous document in use?	
Dissemination lead	
Which Strategy does it relate to?	
If yes, in what format and where?	
Proposed action to retrieve out of date copies of the document:	**Compliance Unit will hold archive**

Dissemination Grid

To be disseminated to:	**1)**	**2)**
Method of dissemination		
Who will do it?		
And when?		
Format (i.e. paper or electronic)	**Electronic**	

Dissemination Record

Date put on register / library	
Review date	
Disseminated to	
Format (i.e. paper or electronic)	
Date Disseminated	
No. of Copies Sent	
Contact Details / Comments	