

Respiratory Viruses

Infection Prevention Guidelines

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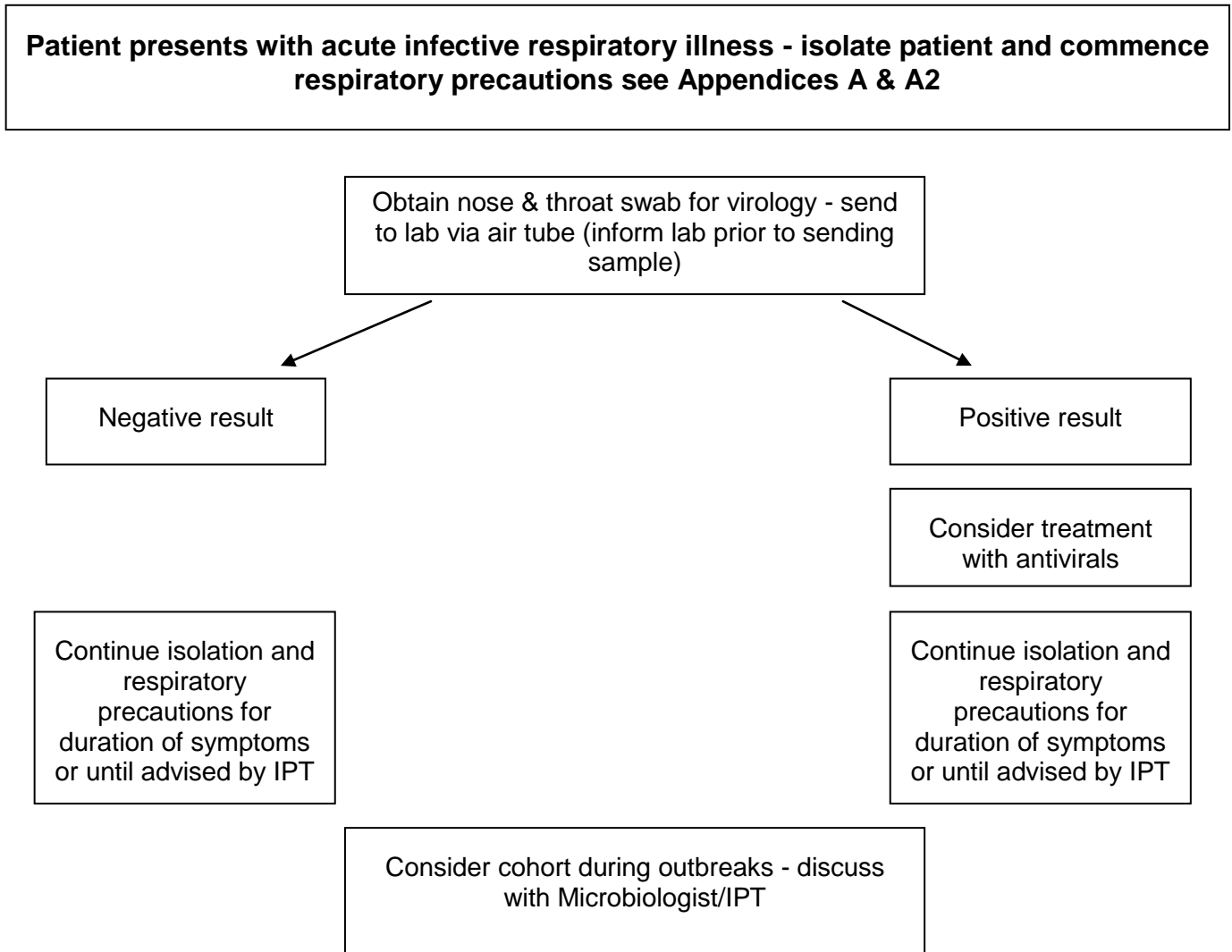
Summary

These guidelines provide 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.

Contents

Number	Heading	Page
0	Process flowchart	3
1	Introduction & Scope	4
2	Definitions	4
3	Overview	5
4	Trust Associated Documentation	6
5	External References	6
6	Appendices	7

Process flowchart



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

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 hospitalisations 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 hospitalisation due to complications such as pneumonia.

Emerging diseases such as avian influenza, Swine influenza and MERS – Coronavirus have the potential to cause severe human illness.

These guidelines provide 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

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 Overview

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

Suspect Influenza if patient has fever > 38°, coryza, headache, malaise, myalgia, arthralgia and sometimes GI symptoms, with or without the following;

- Lower respiratory tract infection (hypoxaemia, dyspnoea, lung infiltrate)
- Central nervous system involvement
- And/or a significant exacerbation of an underlying medical condition.

(DH 2012)

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 including PPE 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 aerosolising procedures (AGP). (See [Appendix B](#)).
- **If the patient fits the criteria for new and emerging respiratory virus syndrome i.e. travel outside Europe, pending discussion with microbiologist; properly fitted FFP3 respirators must be worn for all patient contact. A register of all contacts with the patient must be accurately maintained for the duration of precautions. See [Appendix A2](#)**
- Designated trainers will be responsible for 'fit testing' of staff in emergency admission areas.
- All masks are to be removed outside the patient's room and be disposed of in a designated **closable** infected waste bin.

- FFP3 masks and kit are available via the Bed Managers out of hours. Keys for the stock room are also kept in ED and Medical Assessment Units on Scarborough and York sites.

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

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

4 Trust Associated Documentation

YHFT Policy for the Development and Management of Policies
CORP.RL.10

YHFT [version 4] Infection Prevention Isolation Policy CLIN.IC.8

YHFT [version 10] Infection Prevention Hand Hygiene Guidelines
CLIN.IC.12

YHFT [version 6] Infection Prevention Standard Precautions
Guidelines CLIN.IC.6

5 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

Seasonal influenza: guidance, data and analysis (PHE) 2014

<https://www.gov.uk/government/collections/seasonal-influenza-guidance-data-and-analysis>

Infection control precautions to minimise transmission of acute
respiratory tract infections in healthcare settings (PHE) 2014

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/452928/RTI_infection_control_guidance_PHE_v3_FPF_CT_contents2.pdf

Respiratory syncytial virus (RSV): guidance, data and analysis
(Gov.UK) 2015

<https://www.gov.uk/government/collections/respiratory-syncytial-virus-rsv-guidance-data-and-analysis>

6 Appendices

[Appendix A Management of patients with a suspected respiratory viral infection.](#)

[Appendix A2 Management of patients with suspected new and emerging respiratory virus syndrome](#)

[Appendix B What is the difference between a mask and a respirator?](#)

Appendix A

Isolation and PPE for patients with a suspected influenza

- 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 infected 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):
 - Clinical staff should wear surgical face masks when within 3 to 6 feet of the patient. Correctly fit tested respirators (FFP3) **must** be worn during aerosolising procedures. (Employers are under legal obligation under the Control of Substances Hazardous to Health (COSHH) health regulations to adequately control the risk of exposure to the virus where it cannot be prevented. Employees have an obligation to make full and proper use of any control measures, including PPE, provided by their employer. Vaccination cannot be used as a substitution for such controls as it is not always fully effective in all cases).

- Eye protection must be used when there is a risk of contamination of the eyes by splashes aerosols and droplets (which in reality is most of the time)
- 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.
- Full length, 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 aerosolisation of respiratory secretions. The following are classified as AGP PHE 2014

- intubation, extubation and related procedures; for example manual ventilation and open suctioning
- cardiopulmonary resuscitation
- bronchoscopy (unless carried out through a closed circuit ventilation system)
- 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)
- continuous positive airway pressure ventilation (CPAP)
- high frequency oscillatory ventilation (HFOV)
- induction of sputum

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

- Mechanical ventilation or respiratory therapy treatment when AGP is being performed via a closed system
- Closed suctioning with invasive ventilation
- Nasopharyngeal aspiration
- Nebulisation

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 infected 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 infected waste bin.
- Linen must be treated as infected by placing it in a hot water soluble bag inside a white plastic bag tied and sealed at the point of use labelled with tape denoting it as infected.
- Environmental cleaning – all floors and flat surfaces must be cleaned daily with detergent using the micro fibre system, disposable bags at the patients bed side to be disposed of as infected waste when $\frac{3}{4}$ full.
- Communal clinical equipment must be cleaned after each use using detergent wipes.
- A respiratory precautions door notice must be displayed at all times.

<http://staffroom.ydh.yha.com/isolationpracticejune2015.pdf>

Appendix A2

Management of patients with suspected new and emerging respiratory virus syndromes

- The door to the isolation room **must** remain closed at all times. 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 continue 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. A register of all contacts must be maintained until isolation is no longer required.
- 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 infected 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 for all patient contact
 - Long sleeved fluid repellent gowns must be worn for all patient contact.
 - Disposable gloves must be worn when in direct contact with blood and body fluids including mucus.
 - Gowns and gloves must be disposed of inside the room into an infected waste bag.
 - FFP3 respirators and visors/goggles must be removed outside the room.
 - Disposable equipment must be disposed in a lidded infected waste bin
 - Reusable equipment must be cleaned immediately using detergent wipes

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 – PHE Guidance Information on Face Masks & Respirators)