ACUTE VIRAL RESPIRATORY INFECTIONS AND ISOLATION

PRACTICE GUIDELINE©

DOCUMENT SUMMARY/KEY POINTS

- The aim of this policy is to reduce the risk of hospital acquired transmission of viruses causing acute respiratory infections (ARI) in children who are inpatients.
- Children with ARIs should be in isolation wherever possible. All children with symptoms of a respiratory infection will be nursed using Standard and Droplet Precautions, in a single room if available.
- Children with a diagnosed ARI may be cohort managed with other children with an ARI if there are no single rooms available, except on Edgar Stephen, Clancy or Camperdown wards at CHW and C1 South and C2 West at SCH.
- A "surge plan" for prioritisation of respiratory isolation rooms is provided for use ONLY if there are no sufficient rooms available to follow the above guideline.
- Children with symptoms of an ARI must be given priority for transfer out of the Emergency Department and into another area within the hospital, and Standard and Droplet Precautions must be maintained.
- The principle guiding patient placement is that patients should be nursed in an area most appropriate for their clinical condition. If specialised clinical care is required, then they should be admitted to the ward where that is best provided, and Standard and Droplet Precautions and isolation instituted.
- A child who develops an ARI whilst on Edgar Stephen, Clancy or Camperdown wards at CHW or C1 South and C2 West at SCH must be transferred to a single room on their current ward or cohort room on another ward, as soo n as possible.
- Children presenting to the Emergency Department with symptoms of an ARI should not be admitted to Edgar Stephen, Clancy or Camperdown wards at CHW or C1 South and C2 West at SCH.

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

Approved by:	SCHN Policy, Procedure and Guideline Committee	
Date Effective:	1st October, 2018	**Review Period**: 3 years
Team Leader:	CNC, Infection Prevention and Control	**Area/Dept**: Infection Prevention & Control

- Children at risk of severe respiratory infection must be nursed in a single room and not cohorted with other children with a suspected or confirmed ARI.
- **Non-immunocompromised** inpatients diagnosed with an ARI at admission who no longer have respiratory symptoms during their hospitalisation can be de-isolated. Repeat testing for a respiratory pathogen is not necessary.
- **Immunocompromised** patients diagnosed with an ARI should have a nasopharyngeal aspirate (NPA) or nose and throat swabs performed for diagnostic purposes. They may be de-isolated only if they become symptom free and a respiratory pathogen is not detected.
- Staff caring for high risk patients should show evidence of seasonal influenza vaccination.
- Staff with symptoms of an ARI (fever and/or rhinorrhoea) should not present for work.
- Significant clusters of ARIs in staff should be notified to the Chief Resident Medical Officer (CRMO)/After Hours Nurse Manager (AHNM) and Infection Prevention and Control Team/ Staff Health (in business hours). If possible the causative agent should be identified.

CHANGE SUMMARY

- Conversion to a SCHN practice guideline.
- Replaces SCH Infection Control Policy: “Acute Respiratory Infections – SCH”.
- Replaces CHW Infection Control Policy: “Respiratory Viral Infection Isolation – CHW”.

READ ACKNOWLEDGEMENT

- All staff must read and notify their local manager that they understand the content of the document.
- Local managers will maintain records of read receipts for subsequent compliance and other audits.

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1 Purpose and Scope

The aim of this policy is to reduce the risk of hospital acquired transmission of viruses causing acute respiratory infections (ARI) in children who are inpatients.

2 Introduction

This document is designed to assist in placing children with a viral ARI in ward beds, thus potentially improving patient flow and minimising cross infection to children likely to suffer severe effects of hospital-associated infection with viral respiratory infections.

The most relevant viral respiratory infections in this regard are:

- Influenza A & B
- Respiratory Syncytial Virus (RSV) A & B
- Adenovirus
- Human metapneumovirus.
- Parainfluenza 1, 2, 3 & 4
- Other viruses which may be detected and can be cohorted together include
    - Bocavirus
    - Rhinovirus
    - Enterovirus
    - Coronavirus OC43, NL63, 229E

Children in whom a viral respiratory pathogen has been detected that is not covered by this policy (e.g. MERS coronavirus, SARS coronavirus) should be discussed with the IPC Team and Infectious Diseases / Microbiology.

3 Responsibilities

- Clinical line managers
- Operational Managers
- Admitting Medical Officers (AMO)
- After Hours Nurse Managers (AHNM)
- Clinical Staff – Medical, Nursing, Allied Health
- Infection Prevention and Control (IPC) Team
- Chief Resident Medical Officer (CRMO)

Responsibility for implementation of this policy is the direct responsibility of appropriate clinical line managers caring for affected patients.

- The clinical line managers will consult with the IPC Team regarding appropriate patient placement and infection control procedures.
- Decisions related to isolation and Transmission Based Precautions for emerging infections are difficult when there is a lack of evidence. Decision making is often pragmatic and may require liaison between clinical line managers, IPC Team and Infectious Diseases/Microbiology.
- If there is no policy on a particular issue or the policy needs updating then there needs to be further discussion between clinical line managers, IPC Team, Infectious Diseases/Microbiology and the Director of Clinical Operations to develop a consensus agreement based on best evidence. If a dispute arises about policy it is to be referred to the Chief Executive (CE) for resolution.
- The Infectious Diseases Physician, Microbiologist, or IPC Clinical Nurse Consultant (CNC) will notify the Director of Clinical Operations of identification of any known clusters. The Director of Clinical Operations will in turn notify the CE.
- Any ongoing outbreak not responding to appropriate infection control measures will be discussed with members of the Clinical Executive Unit in collaboration with the appropriate clinical teams to discuss what further actions are required.

4 Standard

- Children with ARIs should be admitted to a ward with an appropriate isolation facility (SCH – C3 West; CHW – Variety and Hunter Baillie wards) whenever possible. If clinical considerations do not favour admission to these wards, the ward to which the child is to be admitted and the isolation requirements should be discussed with the Bed Manager, AMO, IPC Team, Infectious Diseases/Microbiology, and/or the AHNM before bed allocation occurs.

- Staff caring for patients with ARIs should adhere to Standard and Droplet Precautions, especially while performing aerosol generating procedures such as suctioning, collection of oropharyngeal or nasopharyngeal specimens, or intubation.
- Staff caring for patients at risk of developing severe lower respiratory tract infections should meet the requirements set forth by NSW Health (http://www.health.nsw.gov.au/Infectious/factsheets/Pages/influenza-vaccination-for-hcw.aspx).
- Staff with symptoms of an ARI (fever and/or rhinorrhoea) should not present for work.
- Significant clusters of ARIs in staff should be notified to the CRMO at SCH or the Assistant Director of Nursing (ADON) at CHW if after hours, otherwise the IPC Team should be notified during in business hours. The IPC Team should review and consider Staff Health involvement for investigations to identify a pathogen.
- **Non-immunocompromised** inpatients diagnosed with an ARI at admission who no longer have respiratory symptoms during their hospitalisation can be de-isolated. No further testing is required.
- **Immunocompromised** patients diagnosed with an ARI at admission should have a nasopharyngeal aspirate (NPA) or nose and throat swabs performed for diagnostic purposes. They may be de-isolated only if they become symptom free and a respiratory pathogen is not detected.
- A Surge Plan is to be used when standard isolation precautions are not possible due to insufficient bed spaces. Activation of the Surge Plan and de-escalation is the responsibility of the Patient Flow team.

5 Transmission

Respiratory infections are spread via direct or indirect contact with respiratory droplets that are either aerosolised or on contaminated surfaces. Standard and Droplet Precautions should be observed.

6 Investigations

- Routine NPAs or nose and throat swabs in otherwise healthy patients with an uncomplicated ARI are not indicated. There is a role for NPAs or nose and throat swabs to be performed in children with significant co-morbidities (see “high risk” patient groups) who have respiratory symptoms as this will influence management and placement of these patients.
- An NPA should be performed as per the Nasopharyngeal Aspirate procedure:
- At CHW: the MP Nasopharyngeal Aspirate Respiratory Virus PCR (NPA PCR) will be replaced by Upper Respiratory Pathogen PCR. In addition to the 15 viral targets in the existing NPA PCR, 3 Influenza A subtypes and 7 bacteria are tested in this assay, including: Influenza A-H1, Influenza A-H1 (pandemic), Influenza A-H3, *Mycoplasma pneumoniae*, *Chlamydophila (or Chlamydia) pneumoniae*, *Legionella pneumophila*,

Bordetella pertussis and *Bordetella parapertussis*. Clinicians are recommended to order "MP Upper Respiratory Pathogens PCR".

7 Admission Procedures

- At SCH, children with a suspected or proven ARI should **NOT** be admitted to C1 South or C2 West unless effective isolation of these patients is possible in these wards. At CHW, these wards include Camperdown, Clancy and Edgar Stephen.
- At SCH, C3 West has the most suitable patient mix for isolating children with ARIs. At CHW these wards include Variety and Hunter Baillie.
- Children admitted electively but who have an ARI should be placed in a ward with due regard to the susceptibility of other patients. Their admission ideally should be postponed until they recover from their ARI.
- The IPC Team can advise on cohorting if unsure.

8 Management Of High Risk Groups

The following patients are considered "high risk" and must be nursed in a single room when admitted with a suspected of confirmed ARI. They must not be cohorted with other children with an ARI:

- Children with cardiac disease
- Children who have had solid organ (e.g. kidney or liver) transplantation and are currently immunosuppressed
- Any oncology patient with immunosuppression
- Any other child with immunosuppression
- Children with neuromuscular disease
- Children with respiratory/airway conditions, such as Cystic Fibrosis, chronic lung disease, prematurity, broncho-pulmonary dysplasia, cleft palate, tonsillectomy, severe asthma, tracheostomy
- Young infants, particularly less than 12 weeks of age, where possible.

9 Management and Prevention Of Transmission

- ***Standard and Droplet Precautions*** should be observed for patients admitted with symptoms of an ARI.
- For children at risk of severe respiratory illness, refer to Management of High Risk Groups.
- A child with other infections or a multi-resistant organism should be isolated as per the relevant policy.
- At SCH:

- Children with symptoms of an ARI maybe admitted to the same room as another child with a suspected or confirmed ARI, provided they are not at risk of severe respiratory illness (see Management of High Risk Groups) or have other infection control requirements such as other infections (e.g. pertussis) or multi-resistant organisms (MROs).

- At CHW:
  - Children with symptoms of an ARI in whom an **NPA or nose and throat swabs are unknown** should be nursed in a single room. When a single room is not feasible, the child may be admitted to the same room as another child with an unknown respiratory pathogen provided they are not at risk of severe respiratory illness (see Management of High Risk Groups) or have other infection control requirements such as other infections (e.g. pertussis) or MROs.
  - Children with symptoms of an ARI in whom an **NPA or nose and throat swabs are positive for a respiratory virus** should be nursed in a single room or cohort with children with the same respiratory pathogen on a ward other than Edgar Stephen, Clancy, or Camperdown wards.
  - Children with symptoms of an ARI in whom an N**PA or nose and throat swabs are negative for a respiratory virus** can be cohorted with other children who have symptoms of an ARI who have a negative NPA or nose and throat swabs on a ward other than Edgar Stephen, Clancy, or Camperdown wards.
- In cohort rooms, children must remain in their bed spaces, beds must be separated by at least 1 metre, and curtains must be drawn for any aerosol-generating procedures.

10 De-Isolation Of Patients (Clearance)

- Excretion of respiratory viruses may be prolonged and can persist after resolution of symptoms. However, infectivity would be anticipated to be minimal if the reasons for droplets being generated and spread (i.e. rhinorrhoea or cough) are absent.

Non-immunocompromised children

- Non-immunocompromised inpatients diagnosed with an ARI at admission who no longer have respiratory symptoms during their hospitalisation can be de-isolated.

Immunocompromised children

- If an immunocompromised child remains an inpatient for seven days after a positive NPA or nose and throat swabs and their respiratory symptoms have resolved, de-isolation may be considered provided testing is negative, and an NPA or nose and throat swabs should be repeated.
  - If the NPA or nose and throat swabs are negative, the child no longer requires Droplet Precautions and isolation.
  - If the NPA or nose and throat swabs are positive, the child must remain in isolation and Standard and Droplet Precautions observed. Testing should be repeated after a further 7 days following a positive repeat NPA or nose and

throat swabs. The child may be de-isolated if the repeat NPA or nose and throat swabs are negative and the child remains free of symptoms.

- Any proposed departure from these guidelines is to be discussed with the AMO, IPC Team or AHNM.

11 Factsheets for Parents

Bronchiolitis

hhttp://www.schn.health.nsw.gov.au/files/factsheets/bronchiolitis-en.pdf

Whooping cough (Pertussis)

http://www.schn.health.nsw.gov.au/files/factsheets/whooping_cough-en.pdf

References and Bibliography

1. American Academy of Paediatrics, Kimberlin D.W., Brady M.T., Jackson M.A., Long S.S. (Editors). Red Book –2015 Report of the Committee on Infectious Diseases, 30th Edition, Elk Grove Village, Illinois.
2. NHMRC (2012) Australian Government Department of Health & Aging. (2004). Australian Guidelines for the Prevention and Control of Infection in Healthcare. Commonwealth Australia. Available at: https://www.nhmrc.gov.au/_files_nhmrc%20/publications/attachments/cd33_infection_control_healthcare.pdf. Accessed 3 May 2018.

Appendix 1: Bed Allocation Algorithm