

Infection Prevention and Control

Novel Coronavirus 2019 (2019-nCoV) – Primary and Community Care

Introduction

This information sheet provides interim Infection Prevention and Control guidance for services who provide patient care in the home, outpatient clinics and community health services when novel coronavirus (nCoV) is suspected/confirmed. Health Care Workers (HCW) should also refer to the NSW Health website [Infectious Diseases Novel Coronavirus](#) and the NSW [Infection Prevention and Control Practice Handbook](#).

Additional resources can also be found on the [CEC Infection Prevention and Control web site](#).

Principles of Infection prevention and control to prevent or limit transmission of nCoV ¹

1. Triage and Risk Assess
2. Early recognition and source control
3. Protection from Respiratory Droplets – cough etiquette and respiratory hygiene
4. Application of **standard** precautions for all patients
5. Transmission base precautions based on risk
 - **Contact and Droplet** Precautions (minimum)
 - Airborne Precautions for aerosolised generating procedures
5. Hand Hygiene
6. Environmental Cleaning

Care of Patients with suspected or confirmed 2019-nCoV ^{2,3,4}

On presentation (to GP, clinic or hospital ED), the patient should be given a surgical/procedural mask and immediately directed to a single room, (whether or not respiratory symptoms are present).

Guidelines for Management

Contact and **droplet** precautions are recommended for routine care of patients in quarantine or with suspected or confirmed nCoV infection

Contact and **airborne** precautions are recommended when performing **aerosol generating procedures (AGPs)**, including intubation and bronchoscopy.

Collecting Respiratory Specimens

When collecting respiratory specimens, transmission-based precautions should be observed whether or not respiratory symptoms are present.

For most patients in a community, outpatient, clinic setting, collection of respiratory specimens is a low risk procedure and can be performed using **contact** and **droplet** precautions:

- Perform hand hygiene before donning gown, gloves and surgical mask; add eye protection as per standard precautions
- To collect throat or nasopharyngeal swab stand slightly to the side of the patient to avoid

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exposure to respiratory secretions, should the patient cough or sneeze.

- At completion of consultation, remove personal protective equipment (PPE) and perform hand hygiene, wipe any contacted/contaminated surfaces with detergent/disinfectant.

Patient with severe symptoms

If the patient has severe symptoms suggestive of pneumonia, e.g. fever and breathing difficulty, or frequent, severe or productive coughing episodes then **contact** and **airborne** precautions should be observed:

- If possible, specimens should be collected in a negative pressure room (e.g. in a hospital setting).
- If this is not possible, then collect the specimens in a room with the door closed and leave. The room should be left vacant for at least 30 minutes after specimen collection (cleaning can be performed during this time by a person wearing PPE).
- Perform hand hygiene before donning gown, gloves, eye protection (goggles or face shield) and a **P2/N95 respirator – which should be fit checked**.
- At completion of consultation, remove gown and gloves, perform hand hygiene, remove eye protection and P2/N95 respirator. Do not touch the front of any item of PPE during removal, perform hand hygiene.
- The room surfaces should be wiped clean with disinfectant wipes by a person wearing gloves, gown and surgical mask.

Information for Aerosol-generating procedures (AGPs).

AGPs are generally hospital related procedures but for the purpose of control it is important to understand the risk and identification of an AGP and particular care should be taken during such procedures.

- AGPs include tracheal intubation, non-invasive ventilation, tracheotomy, cardiopulmonary resuscitation, manual ventilation before intubation, and bronchoscopy.
- Collection of respiratory specimens **are not** generally regarded as aerosol generating, although airborne precautions should be considered for severely symptomatic patients
- P2/N95 respirators should be used only when required. Unless used correctly - i.e. with fit-checking – they are unlikely to protect against airborne pathogen spread.

NOTE: Airborne precautions should be used routinely for high-risk aerosol-generating procedures in hospital settings, such as bronchoscopy, intubation, suctioning etc.

Nebuliser use should be discouraged and alternative administration devices (eg spacers) should be used.

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Table 1: Assigning of AGP

Specimen type	Is this an AGP in someone without fever and difficulty breathing or without severe cough	Is this a potential AGP in someone with fever and difficulty breathing or severe cough
Nasopharyngeal swab	No	Yes
Oropharyngeal swab	No	Yes
Sputum (routine)	No	Yes
Nasal wash/aspirate	No	Yes
Bronchoalveolar lavage	Yes	Yes

ENVIRONMENTAL CLEANING

Environmental cleaning is important for reducing the risk of transmission of pathogenic organisms, it is particularly important in containing risk of spread throughout the containment phase during an outbreak. Recommendation for 2019-nCoV is **cleaning** and **disinfection**

KEY PRINCIPLES FOR ENVIRONMENTAL CLEANING:

1. Using a Detergent (recommended for routine cleaning)
 - A detergent is a surfactant that facilitates the removal of dirt and organic matter.
 - Most hard surfaces can be adequately cleaned with warm water and a neutral detergent as per the manufacturer's instructions. Allowing the cleaned surfaces to dry is an important aspect of cleaning
 - Routine cleaning of floors with detergent and water is recommended

2. Using a Disinfectant

- A disinfectant is a chemical agent that rapidly kills or inactivates most infectious agents.
- Disinfectants are not to be used as general cleaning agents, unless combined with a detergent as a combination cleaning agent
- Disinfection should always be undertaken following, and in addition to, detergent cleaning

WASTE MANAGEMENT

There are no additional controls required for disposing waste.

Normal waste streams for clinical waste

General waste stream for general waste generated

Waste generated in the community/home should follow routine processes for disposal. Dispose of general waste into home waste.

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CHEMICAL DISINFECTANTS

Active Compound	Properties	Activity	Other comments and considerations
Chlorine and chlorine compounds	Hypochlorites are salts of hypochlorous acid e.g. sodium hypochlorite (household bleach) sodium dichloroisocyanurate (NaDCC) and calcium hypochlorite (bleaching powder)	Biocidal effect on mycoplasma (25ppm) and vegetative bacteria (<5ppm) - in the absence of an organic load	Sodium hypochlorite is widely used in healthcare facilities for spot disinfection of floors, counter tops, patient rooms etc Do not use on its own for combined cleaning and disinfection.
Hydrogen peroxide	Binary compound of hydrogen and oxygen (H ₂ O ₂) Stable and effective disinfectant for use on inanimate surfaces and spot disinfecting fabrics	Active against a wide range of microorganisms, including bacteria, yeasts, fungi, viruses, and spores	Minimum concentration of 3% required for effectiveness against organisms such as <i>Clostridium difficile</i> Do not use on its own for combined cleaning and disinfection. Can be more expensive when systematically applied in a non-touch process, than chlorine-based disinfectant solutions Time consuming to use, with difficulties arising in appropriate implementation in an acute care setting
Quaternary ammonium compounds (QAT)	Derived from ammonium with hydrogen atoms replaced by organic groups. Each compound exhibits its own antimicrobial characteristics	Fungicidal, bactericidal, and virucidal against lipophilic (enveloped) viruses Not sporicidal and generally not tuberculocidal or virucidal against hydrophilic (nonenveloped) viruses	Widely used for general environmental cleaning/decontamination of non-critical surfaces such as floors, walls and furniture
Phenolic Disinfectants	Highly effective against vegetative organisms, many viruses and is effective at cell lysis Effective surface disinfectants for gram negative rods and mycobacteria species.	Bactericidal, fungicidal, virucidal, and tuberculocidal	

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Active Compound	Properties	Activity	Other comments and considerations
Peracetic Acid	Lacks harmful decomposition products (i.e., acetic acid, water, oxygen, hydrogen peroxide), enhances removal of organic materia ¹ , and leaves no residue	For viruses, the dosage range is wide (12–2250 ppm), with poliovirus inactivated in yeast extract in 15 minutes with 1,500–2,250 ppm.	Can corrode copper, brass, bronze, plain steel, and galvanized iron but these effects can be reduced by additives and pH modifications.

Source: CDC Guidelines for Disinfection and Sterilisation in Healthcare Facilities (2008)

Primary Care/Community Assessment

For routine and scheduled appointments including home visits a risk assessment should be undertaken to rule out any potential novel coronavirus cases

Assessment should be completed prior to scheduled face to face contact (home visit/clinic) or at time of presentation to the home or health care facility (walk-in)

Assessment screening should be documented in clinical notes

Principles of assessment should be applied to any and all healthcare settings to ensure the correct precautions can be applied.

Where can I find more information?

NSW Health

<https://www.health.nsw.gov.au/Infectious/diseases/Pages/coronavirus.aspx>

Clinical Excellence Commission

<http://www.cec.health.nsw.gov.au/patient-safety-programs/infection-prevention-and-control/novel-coronavirus-2019-ncov>

References

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http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf.

5. Natural ventilation for infection control in health-care settings. Geneva, World Health Organization, 2009.

Available at

http://www.who.int/water_sanitation_health/publications/natural_ventilation/en/index.html.

6. How to perform a particulate respirator seal check (P2/N95 mask fit check).

Geneva, World Health Organization 2008.

<https://www.who.int/csr/resources/publications/respiratorsealcheck/en/>. For the latest information, please consult the

WHO coronavirus web page at

http://www.who.int/csr/disease/coronavirus_infections/en/.

7. Hui DS. Epidemic and Emerging Coronaviruses (Severe Acute Respiratory Syndrome and Middle East Respiratory Syndrome). Clin Chest Med. 2017 Mar;38(1):71-86. doi:10.1016/j.ccm.2016.11.007

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<https://www.cdc.gov/coronavirus/2019-ncov/about/prevention-treatment.html>

10. Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected Interim guidance January 2020.

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<https://apps.who.int/iris/bitstream/handle/10665/330375/WHO-2019-nCoV-IPC-v2020.1-eng.pdf>

11. Rutala and Weber (2014) Hierarchy of Microbial resistance to Disinfectants and Sterilants

The Healthcare Associated Infections (HAI) Program provides expertise in Infection Prevention and Control and assists local health districts and specialty networks in NSW to manage and monitor the prevention and control of HAIs.