



MINISTRY OF HEALTH
SINGAPORE

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18 Sep 2009

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MOH CIRCULAR 100/2009
UPDATE ON THE INTERIM BIOSAFETY GUIDELINES FOR LABORATORY
WORKERS WORKING WITH THE NOVEL H1N1 INFLUENZA A¹ VIRUS

With more information available on the novel H1N1 influenza virus, the MOH Biosafety Legislation Branch has revised the Biosafety Guidelines for laboratory workers working with the virus.

2 Please see attached updated Biosafety Guidelines

3 This updated Guideline supersedes the previous publication entitled "MOH Circular 57/2009: Interim Biosafety Guidelines for Laboratory Workers Diagnosing Influenza H1N1-2009 and Emerging Viral Infections with Unknown Risks" (dated 27 May 09).

4 Please note that the recommendations made in this updated Guidelines (dated 18 Sept 09) may be revised from time to time when new information about the novel H1N1 virus is available.

5 For clarification, please contact the officer from the MOH Biosafety Legislation Branch (63259205, 63251320 or 63258459).

PROF K SATKU
DIRECTOR OF MEDICAL SERVICES
MINISTRY OF HEALTH

cc. A/Prof Raymond Lin, Head, National Public Health Laboratory

¹The virus is previously known as Influenza H1N1-2009 (as in the MOH Circular 57/2009)



Updated Interim Biosafety Guidelines for Laboratory Workers Working with the Novel H1N1 Influenza A virus²

18 Sep 2009

This guidance is for laboratory workers who may be transporting, processing, performing diagnostic testing or research work on specimens from suspected or confirmed novel H1N1 Influenza A virus.

Please note that this updated guideline supersedes previous versions and will serve as interim recommendations until more information becomes available.

Packaging and Transporting

1. Transport within Singapore
 - Clinical specimens or virus isolates for diagnosis or research work shall be triple packaged. The primary and/or the secondary vesicle containing the specimens must be unbreakable and leak proof. The external packaging must be labelled with the biohazard logo. Public transport is strictly prohibited.
 - Important
Inclusion of hazardous materials (such as dry ice or liquid nitrogen) must be considered separately when packaging. Shipper must be trained and are liable to ensure all items are properly and safely packaged.
2. International air shipment – Follow IATA Regulation
 - Clinical specimens – Send as UN3373 biological substances
 - Viral cultures – Send as UN2814 infectious substances affecting humans

Laboratory Procedure and Biosafety Level

Procedure / Assay	Biosafety Level
Immunofluorescence Assay (IFA)	<ul style="list-style-type: none">• BSL-2 Lab• Procedures involving potentially infectious materials are to be manipulated in certified BSC³
Molecular Testing (e.g. PCR)	<ul style="list-style-type: none">• BSL-2 Lab• Procedures involving potentially infectious materials are to be manipulated in certified BSC

² The virus is previously known as Influenza H1N1-2009 (as in the MOH Circular 57/2009)

³ The BSC has been subjected to annual maintenance/certification process and is verified to be performing as according to specifications

Rapid Test (Immunoassay)	<p>Laboratory Setting</p> <ul style="list-style-type: none"> • BSL-2 Lab • Procedures involving potentially infectious materials are to be manipulated in certified BSC.
	<p>Non-Laboratory Setting (e.g. point-of-care testing)</p> <ul style="list-style-type: none"> • Minimize aerosol and splash generation. • Standard PPE (appropriate protective clothing, gloves) plus PPE for eye and respiratory protection (goggle, surgical or N95 mask). A splash shield that protects the entire face may be used in place of separate eye protection and facemask.
Virus Isolation and Culture	<ul style="list-style-type: none"> • Minimum BSL-2 lab, performed in certified BSC. • BSL-3 lab and/or BSL-3 practices (including eye protection and N95 respirator) to be adopted by individual laboratories if indicated by risk assessment.
Other Laboratory Procedures	<ul style="list-style-type: none"> • Perform risk assessment and adopt the appropriate biosafety practices as according to the risk level.

Appropriate Disinfectants

- 70% Ethanol
- 5% Lysol
- 10% Bleach
- Any other disinfectant that is proven to be effective for the specific pathogen

All disinfectants should be used at the correct concentration with an appropriate contact time. Work surfaces to be decontaminated immediately after work.

Waste Management

Follow procedure outlined in the laboratory.

Occupational Health

All laboratory personnel should practice self monitoring for fever or any other symptoms. Personnel who present with influenza-like illness should report immediately to their supervisor or the medical authorities so that they can be given appropriate medical advice, prophylaxis and/or treatment.

Any adverse incidents or accidents involving potential or actual exposure to the virus should be reported immediately to the supervisor for evaluation and advice. The Biosafety Legislative Branch of MOH should also be notified.

References

1. WHO Information for Laboratory Diagnosis of New Influenza A (H1N1) Virus in Humans (21-May-09), WHO.
2. Instructions for Shipments of Pandemic (H1N1) 2009 Specimens and Virus Isolates to WHO Collaborating Centres for Influenza (16-Jul-09), WHO.
3. Instructions for Transport of Virus Cultures (i.e. Virus Isolates) of Candidate Reassortant Vaccine Viruses of Pandemic (H1N1) 2009 Virus (27-Jul-09), WHO.
4. Interim Biosafety Guidance for All Individuals handling Clinical Specimens or Isolates containing 2009-H1N1 Influenza A Virus (Novel H1N1), including Vaccine Strains (15-Aug-09).
5. Novel H1N1 Flu (Swine Flu) and You (5-Aug-09), CDC (USA).
6. Interim Recommendations for Facemask and Respirator Use to Reduce Novel Influenza A (H1N1) Virus Transmission (5-Aug-09), CDC (USA).
7. Interim Guidelines on Specimen Collection, Processing, and Testing for Patients with Suspected Novel Influenza A (H1N1) Virus Infection (13-May-09), CDC (USA).
8. H1N1 Flu Virus Interim Guidelines (15-Jun-09), PHAC (Canada).