

Hand Foot & Mouth Disease & Enterovirus infections

Infection Control Measures Practical Aspects

Friday, 10 June 2010



Transmission

- Faecal - oral / oral to oral route
- Direct contact with objects contaminated by faeces or respiratory secretion, vesicular fluids from infected persons.



IC precaution

遇到下列情況，必須遵守

標準防護措施

Standard Precautions
must be taken in the following situations

接觸血液、體液、分泌物、排泄物、黏膜或傷口
必須戴上手套

Wear Gloves
when handling blood, body fluids, secretions, excretions, mucous membrane or non-intact skin

若有可能接觸濺出血液或體液
必須戴上口罩、眼罩及穿上保護衣

Wear a Mask, Protective Eyewear and a Gown
to protect yourself from splashed blood or body fluids

切勿塞回已使用的針咀

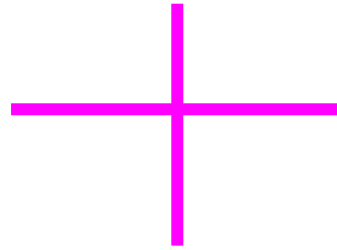
No Recapping

小心處理針咀及利器

Handle Sharps Carefully

接觸血液、體液、分泌物、排泄物、黏膜、傷口，或除下手套後
應立即潔手

Perform Hand Hygiene Immediately
after taking off gloves or handling blood, body fluids, secretions, excretions, mucous membrane or non-intact skin



接觸傳播防護措施

CONTACT Precautions

除標準措施（標準防護措施）外，還應採取以下措施

In addition to STANDARD PRECAUTIONS

訪客進入病区前，請先通知當值護士

Visitors should Report to nurse station before Entering Area

手套 GLOVES

洗手 HAND HYGIENE

保護袍 GOWN

醫院管理局 HPA HEALTH PROFESSIONALS AUTHORITY

衛生防護中心 HPH Health Protection Centre



Patient Placement

- Place / cohort the patient in an isolation room as far as possible; No negative pressure needed for isolation room.
- Restrict the direct contact of patients suffering from HFMD/ EV infection with other patients
- Confirmed cases should not be nursed in same cubicle with suspected cases.

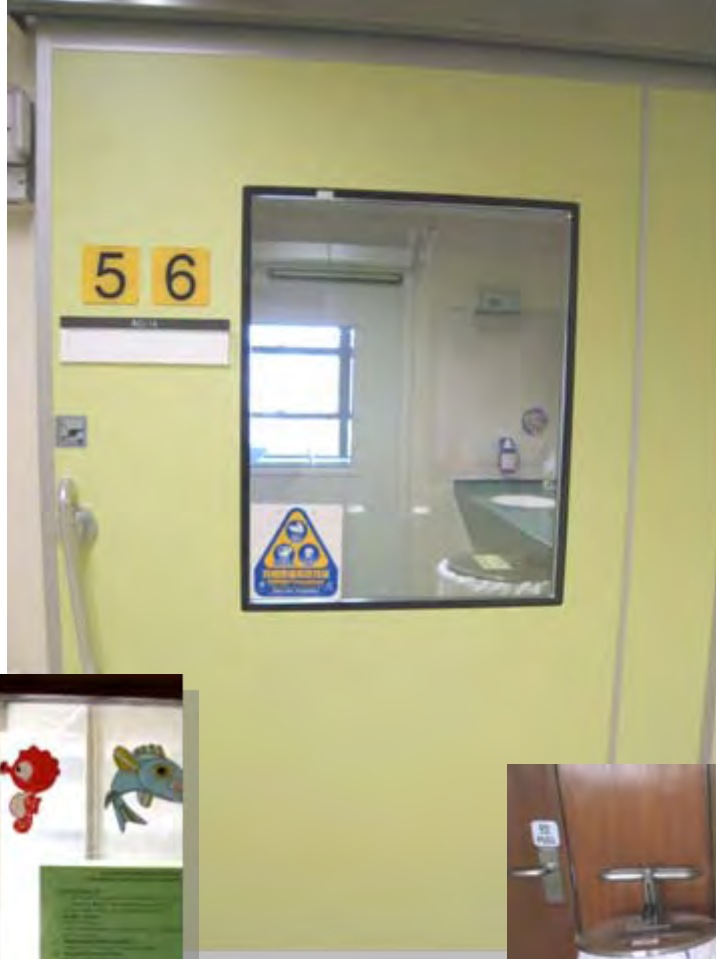




Patient Placement

- Hand hygiene / degowning facilities - available in isolation rooms
- Posting contact precaution signage at the room entrance
- Medical record - away from isolation room







Concern from O&G and Paed. Colleagues...



Q: Should the newborn be isolated when the mother is suspected / confirmed HFMD /EV infection during delivery?

A: **Yes**

Mothers infected shortly before delivery may pass the virus to the newborn. Babies born to mothers who have symptoms of enteroviral illness around the time of delivery are more likely to be infected.

Reference: CDC. Fast Facts and Questions and Answers for Hand, Foot, & Mouth Disease (HFMD).



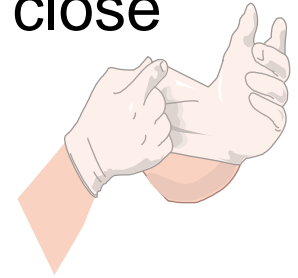


Use of PPE



Gloves and gowns


- During patient-care activities that are likely to involve contact with patient secretions or excretions / close contact



Mask / faceshield

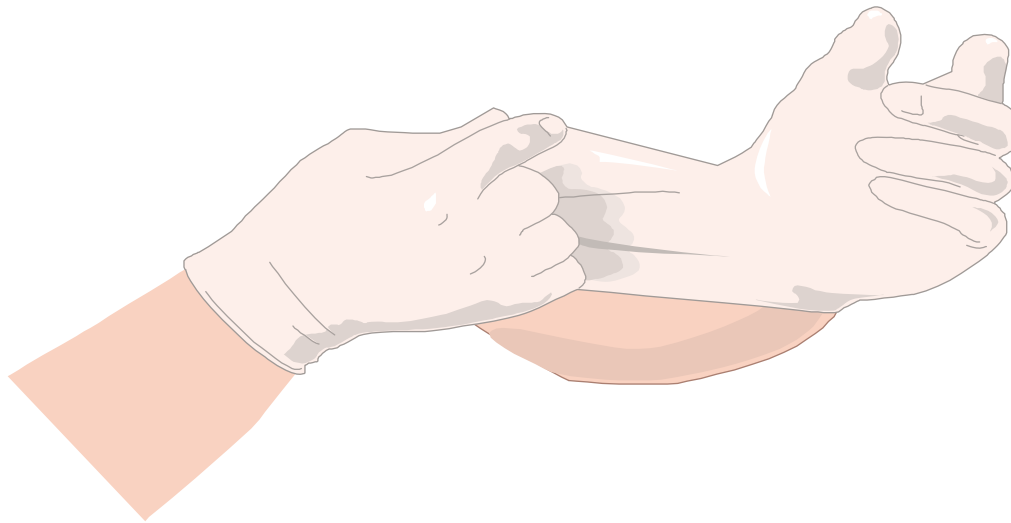
- Carrying out procedure that is likely to generate splashes to mucous membranes





Proper use of gloves – oblivious action

- Change in-between patient
- Remove immediately after procedure
- Hand hygiene after removing gloves





PPE use during changing diapers

- Hand hygiene
- Wear gloves and gowns
- After procedure, dispose diapers **directly** in waste bag
- Remove gloves and gowns and perform hand hygiene **BEFORE** documentation



Easily miss



Hand Hygiene

5 moments for hand hygiene

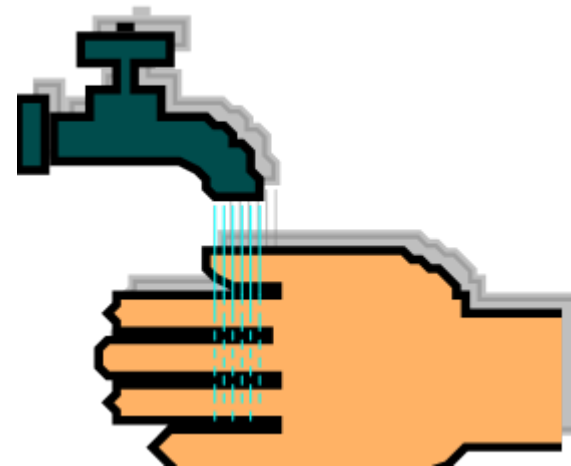
五個必須潔手的時刻





Enterovirus

Handrubbing OR Handwashing



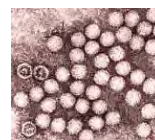


Dashboard on infection

(Vol. 3, 39th Issue: 11th June, 2010) ↵

Data Scanning : Data reviewed on 10th June. ↵

- There is a new statement release by the WHO regarding the fact that we have passed the peak of the pandemic. Indeed in Hong Kong Influenza A continue to be low. The rapid viral scan is just 0.54% positive. A clarification to explain the WHO statement is provided below under other issues. ↵
- **Influenza B also continues to decline** and the rapid viral scan is only 1.33% positive (as compared to 2.01% last week). The PHLC cultures also fell to 46 cases (73 last week). ↵
- The main upsurge is HFMD. The institutional outbreaks continue to be on the increase to 88 (last week 55) but the number of confirmed cases of EV71 has fallen to 7 (10 last week). Another positive note is that the GP consults for HFMD has a slight decrease. So not all data are on the rising but we will keep monitoring. There is some concern regarding the efficacy of the alcohol hand rub on Enterovirus. **Let me assure you that in pp32 of the WHO guideline (http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf), it stated that “enteroviruses (e.g. poliovirus)70–80% alcohol [may] be reliably inactivated.” We have communicated with Sattar, a world expert from Canada and he has assured that this is so. The dashboard will deal with this fully under other issues next week. ↵**



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<http://www.med.uottawa.ca/crem/eng/>

He wrote on 7th June 2010

“Our studies show that handrubs with a minimum of 60% ethanol (volume/volume) have good activity against vegetative bacteria, fungi and most non-enveloped viruses. The two exceptions here are parvoviruses and hepatitis A virus. Therefore, **I believe that such formulations should be suitable in situations where an enterovirus is encountered as long as handrubbing is carried out for a minimum of 20 seconds on clean or lightly soiled hands.**”





WHO Formulation 1

Ethanol 80% (V/V), *glycerol 1.45%, hydrogen peroxide 0.125 %*

WHO Formulation 1

Isopropyl 75% (V/V), *glycerol 1.45%, hydrogen peroxide 0.125 %*





Hand Hygiene - Points to note

- Wear gloves when handling secretion excretion, and vesicles
- Hand washing if there is visibly soiled
- Rub with adequate contact time ~ 20-30 seconds and proper hand hygiene technique





Patient items

- Disinfect the patient items with use of 5.25% hypochlorite solution added into 49 parts of water.

- Handling of
 - Toys
 - Feeding utensils
 - Linen and waste





Advice on Visitors

- Hand hygiene before entering and leaving patient room
- Wear gown before contact patient
- Advise not to visit if visitor presents fever or other clinical symptoms





Difficulties...

- ☹ frequent change of visitors
- ☹ Instruct to wear gowns properly and remove gown before leaving the room
- ☹ Remind not to contact with other patient / their relatives





Summary on enhanced control measures on Hand-Foot-and-Mouth Disease (HFMD) and Enterovirus (EV)

28 May 2010

- Health-care staff that has developed any symptom of Enterovirus infection (e.g. fever, rash, vesicular lesions, etc) AND with known contact history should seek medical advice and must be off from work for the duration of illness.
- He or she can only resume duty after all symptoms have subsided, e.g. fever has been down and all vesicular lesions have dried up.
- Supervisor of the concerned staff should notify hospital ICT on the incident.





Inform hospital infection control team when:

- ✚ Hospital-acquired HFMD / EV infection

- ✚ suspected or confirmed case of Enterovirus infection associated with severe complications
 - Aseptic meningitis
 - Encephalitis (esp. brainstem, rhomboencephalitis)
 - Encephlomyelitis
 - Acute flaccid paralysis
 - Neurogenic pulmonary oedema +/- pulmonary haemorrhage





Early recognition for appropriate IC measures

➤ Clinical signs of HFMD / EV

- Fever
- papulovesicular rash involving the distal extremities, buttocks and extensor surfaces of the knees
- Oropharyngeal ulcers

➤ Contact History

- Household / classmates confirmed to have HFMD





But sometimes we cannot identify at the beginning...

- No definite clinical signs in some of pediatric patients
- Unclear contact history



So we should apply.....

第一層

標準防護措施
Standard precautions



+

第二層

視乎傳播途徑防護措施
Transmission Based precautions





Reference

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