

Infection Control Precautions for Carriers of MDROs or Individuals with Respiratory Symptoms for Dialysis



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Infection control precautions for dialysis patients with

1. Multi-drug resistant organisms (MDROs)

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2. BACTERIAL AND FUNGAL HAZARDS

2.1 Prevention and Control of Multi-Drug Resistant Organisms

Multi-drug resistant organisms (MDROs) have emerged as important pathogens of nosocomial infections among hospitalised patients, including those with chronic renal failure. The impact of MDROs on renal patients was evident in increasingly common reports of methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant *enterococci* (VRE) in this group of patients, as well as ongoing outbreaks of MDROs in haemodialysis centres. [44] The morbidity and mortality of renal patient with invasive MDRO infections are significantly higher than the other patient groups. [21, 44, 45] Risk factors for the selection or acquisition of MDROs in renal patients include the use of vancomycin or other broad-spectrum antibiotics, frequent visits to healthcare settings, indwelling catheters and weakened immune status. [31, 45, 46] Furthermore, the prolonged survival of MDROs in the environment facilitates nosocomial transmission by direct patient-to-patient contact or indirectly from healthcare workers to patients via contaminated environmental surfaces and patient care equipment. [15, 31]

2.1.1 Prudent use of antibiotics is of paramount importance in the prevention of MDROs. Please refer to the IMPACT guidelines on antibiotic use, which can be accessed at the following link:

http://www.chp.gov.hk/files/pdf/reducing_bacterial_resistance_with_impact.pdf

2.1.2 Contact precautions, in addition to the Infection Control Practices in Renal Units (please refer to section 7), should be applied in order to prevent and control the transmission of MDROs in dialysis units as follows:

2. Respiratory symptoms

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1.3 Prevention of Respiratory Virus Transmission in Dialysis Units

When patient presents with respiratory symptoms, the following guidelines should be strictly observed in addition to those stipulated in section 7 of this document.

- 1.3.1 Apply standard and transmission-based precautions for the patient.
- 1.3.2 Place infected patient(s) in well-ventilated designated room / cubicle / area separated from others (e.g. with partition).
- 1.3.3 Wear well-fitted surgical mask for staff and patients.
- 1.3.4 Cover mouth and nose when coughing or sneezing and perform hand hygiene afterwards. [43]
- 1.3.5 Use tissue papers to contain respiratory secretions and dispose them in a rubbish bin with lid. [43]
- 1.3.6 Take annual seasonal influenza vaccination to minimise the potential risk of patient exposure. [43]

1. Prevention of MDROs transmission in dialysis units



<https://www3.ha.org.hk/kwh/main/en/service-renal.asp>

Prevention and Control of MDROs for dialysis patients

- The morbidity and mortality of renal patient with invasive MDRO infections are significantly higher than the other patient groups.
- Risk factors for the selection or acquisition of MDROs in renal patients include
 - use of vancomycin or other broad-spectrum antibiotics
 - frequent visits to healthcare settings
 - indwelling catheters
 - weakened immune status



Prevention and Control of MDROs for dialysis patients

- MDROs

- Vancomycin-resistant *enterococci* (VRE)
- Carbapenemase-Producing *Enterobacteriaceae* (CPE)
- Carbapenem-Resistant *Acinetobacter* (CRA) / Multi-Drug Resistant *Acinetobacter* (MDRA)
- Multi-Drug Resistant *Pseudomonas aeruginosa* (MRPA)
- Methicillin-resistant *Staphylococcus aureus* (MRSA) / vancomycin-intermediate *Staphylococcus aureus* (VISA) / vancomycin-resistant *Staphylococcus aureus* (VRSA)
- *Candida auris*

- Transmission by

- direct patient-to-patient contact; or
- indirectly from healthcare workers to patients via contaminated environmental surfaces and patient care equipment

(Press Release)

Monday, 4 October 2021

Attention News Editors:

Regarding a recent announcement on a cluster of patients confirmed to have Carbapenemase-Producing Enterobacteriaceae (CPE) in the renal dialysis unit, the spokesperson for the Alice Ho Miu Ling Nethersole Hospital (AHNH) made the following update today (October 4):

The hospital has stepped up the screening procedures and confirmed two more female patients (aged 66 and 80) as CPE carriers. One patient has been transferred to the Tai Po Hospital for further treatment and is in stable condition. The remaining patient was discharged today.

The unit concerned will continue to adopt the following enhanced infection control measures:

1. Enhanced patient and environmental screening procedures;
2. Continue to apply stringent contact precautions and enhance hand hygiene of staff and patients;
3. Enhanced cleansing and disinfection of the environment and facilities of the unit; and
4. Arrange CPE carriers to receive dialysis treatment in isolation cubicle.

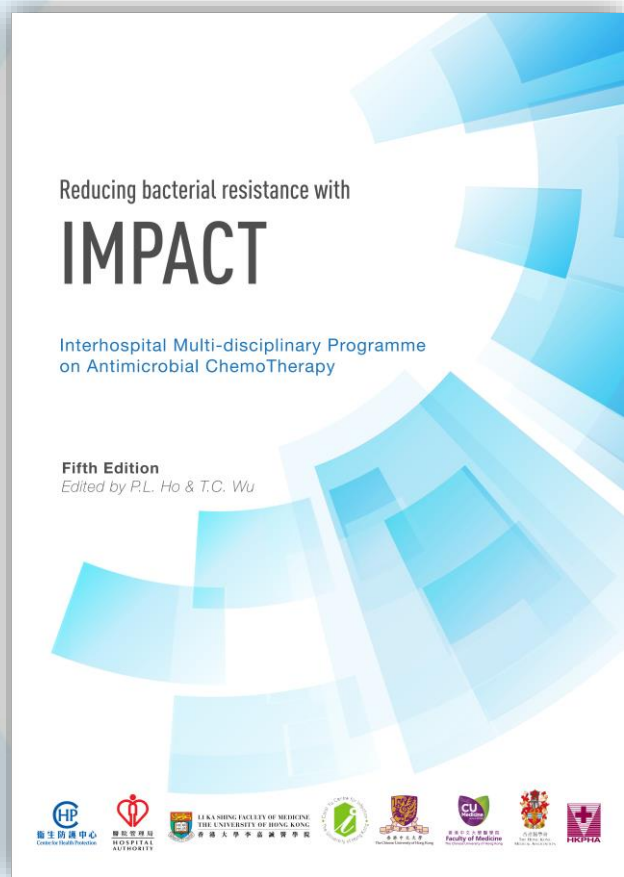
The hospital will continue to closely monitor the situation in the unit concerned. The cases have been reported to the Hospital Authority Head Office and the Centre for Health Protection for necessary follow-up.

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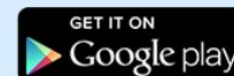
Media enquiries: 2689 2000 (Duty Media Relations Officer)



Prudent use of antibiotics



IMPACT



https://www.chp.gov.hk/files/pdf/reducing_bacterial_resistance_with_impact.pdf

Implement Contact Precautions

- Physical isolation
 - Preferably be isolated in a single room
 - If the above is not feasible, cohort patients with the same MDRO in the same room or cubicle
 - A corner bed is the third choice
- Use of PPE
 - Wear gown and gloves when direct contact with patients or their immediate environment / equipment
- Perform hand hygiene as indicated



Implement Contact Precautions

- Equipment and instruments
 - Equipment in the room / area should be kept to an absolute **minimum**
 - **Dedicate patient-care items**, such as stethoscopes, blood pressure cuffs, bedpans and thermometers to the patients in isolation
 - Ensure that medical equipment (including HD machines) is subjected to **appropriate cleaning and disinfection / sterilisation** procedures before they are being placed in the clean store or used for other patients
 - Patient charts and records should be kept away from the area to avoid contamination
 - **Bedpans, commodes, urinals and washbowls** should be **cleaned and disinfected immediately after use**



Implement Contact Precautions

- Wound management
 - All wounds should be covered with dressings at all times
- Avoid transferring colonised / infected patients within or between facilities as far as practical
 - If transfer is necessary, inform the receiving unit in advance
- Terminal disinfection
 - Ensure adequate cleaning and terminal disinfection of the isolation room after the patient's discharge
 - Environmental disinfection with 1 in 49 diluted household bleach
 - Discard all dedicated single-use items
- Alert system
 - Post signage of contact precautions at the entrance of the isolation room, the patient's dialysis station and kardex
 - Electronic tagging



Active surveillance culture / screening culture to identify asymptomatic colonizers in renal units

- Conduct MRSA screening before elective surgical procedures for HD patients, including the insertion of HD catheters per se
 - Decolonise MRSA carriers with mupirocin to reduce postoperative infection risk
- Routine surveillance for common MDROs (e.g. MRSA) is encouraged
- Consider decolonisation therapy for epidemiologically linked cases during outbreaks



Prevention of respiratory virus transmission in dialysis units



<https://www3.ha.org.hk/kwh/main/en/service-renal.asp>

Infection control precautions for dialysis patients with respiratory symptoms

- Place infected patient(s) in well-ventilated designated room / cubicle / area separated from others (e.g. with partition)



Appropriate Isolation Precautions

- Apply standard and appropriate transmission-based precautions

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
切勿套回已使用的針咀		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 應立即洗手		Perform Hand Hygiene Immediately after taking off gloves or handling blood, body fluids, secretions, excretions, mucous membrane or non-intact skin



Respiratory Hygiene and Cough Manners

- Cover mouth and nose when coughing or sneezing and perform hand hygiene afterwards
- Wear well-fitted surgical mask
- Use tissue papers to contain respiratory secretions and dispose them in a rubbish bin with lid



Vaccination

- Take annual seasonal influenza vaccination to minimise the potential risk of patient exposure
- COVID-19 vaccination: keep track of the latest local vaccination strategies issued by the SCVPD

https://www.chp.gov.hk/files/pdf/consensus_interim_recommendations_on_the_use_of_covid19_vaccines_in_hong_kong_20feb.pdf

- Pneumococcal Vaccination [section 5.3]



Thank You

