

Guidelines Update for Renal Care

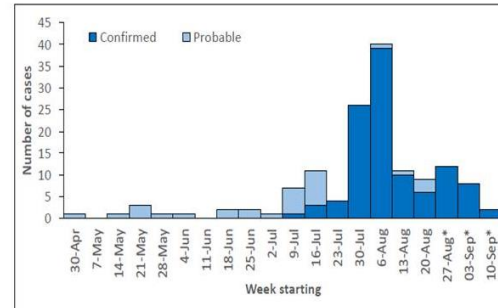
The Centre for Health Protection (CHP) has recently updated the **Infection Control Guidelines on Nephrology Services in Hong Kong**. The guidelines provide infection prevention and control information for both clinical and home dialysis settings. The new updates related to prevention of Hepatitis B transmission, post-operative infection risk, antimicrobial burden at the catheter site and the water quality for dialysis are highlighted as follows:

- In addition to patients with HBsAg, patients tested positive with HBV DNA should also be managed with the same infection control precautions. They should be isolated in a separate room or cubicle, cared by dedicated staff in the same dialysis session, if possible. Dialysis machines, equipment and medications etc. should be dedicated for their use.
- MRSA screening and decolonization therapy should be offered to haemodialysis (HD) patients before elective surgical procedures including insertion of HD catheter.
- Povidone iodine antiseptic ointment or other topical antiseptic ointments should be applied at the HD catheter exit site after catheter insertion and at the end of each dialysis session, giving that this ointment does not interact with the material of the HD catheter per manufacturer's recommendations.
- The endotoxin concentration of the reverse osmosis water and dialysate should be tested at least once a month.

Reference: CHP - Infection Control Guidelines on Nephrology Services in Hong Kong, 2018 accessible at https://www.chp.gov.hk/files/pdf/ic_gu_nephrology_services_in_hk.pdf

Latest Epidemiology: Ebola Virus Disease

Figure 1: EVD cases by week of illness onset



The current outbreak of Ebola virus disease (EVD) in in North Kivu Province of Democratic Republic of the Congo (DRC) has been ongoing for six weeks.

As of 16 September 2018, a total of 142 confirmed and probable EVD cases, including 97 deaths, have been reported. 19 health care workers have been affected: 18 confirmed cases and 1 probable case, three of whom have died.

EVD vaccination has started in early August. With new confirmed cases and deaths declining (figure 1), recent patterns suggest control measures are working but WHO warned that the trends should be interpreted with caution because case counts in recent weeks may be incomplete. Significant risks such as cases refuse treatment in healthcare facilities, poor infection control in health centers, movement of cases among different cities and reluctance to adopt prevention and risk mitigation strategies in the communities may cause further spread.

WHO considers the public health threat remain high at the national and regional levels and low globally based on the currently available information.

Reference: WHO - External situation report 07, EVD, DRC.

ICT to Note

Report from Disinfectant & Sterilant Assessment Committee (DSAC)

The DSAC assessed and approved the following two new disinfectants. The full list of antiseptic/disinfectant/sterilant is available at https://ha.home/visitor/view_content.asp?parent_id=32721&content_id=32724&lang=ENG

New disinfectants	Active ingredients	Intended use	Remark
Alcohol Isopropylique 70% IP sterile 400 ml	Propan-2-ol 70%	For disinfection on the injection port of Fresenius Medical Care dialysate bag and the sampling port of haemodialysis machine	Caution - chemical safety and fire hazard
Puristeril Plus 200 ml	Hydrogen peroxide 5-8%, acetic acid 5-10% & peracetic acid < 1%	For disinfection of AquaUNO reverse osmosis system	Replacement of Puristeril 340

Terms of reference of DSAC:

1. To assess newly introduced chemical antiseptic/ disinfectants/ sterilants submitted by hospitals
 - To review on the property, microbial efficacy
 - To define the appropriate indication for use
 - To review on occupational hazards and user precautions
 - To review compatibility issues of the compound
2. To approve new chemical antiseptic/ disinfectants/ sterilants after assessment
3. To assess and identify any potential risk of the existing disinfectants/ sterilants for reusable medical devices e.g. endoscopes during use.

NOTE: Disinfectants used solely for environmental cleaning without any application potential in patient care will not be included.

Hospital Infection Updates – Respiratory viruses activity update

While influenza activity has been stayed in relatively low level (<4% in the previous 23 weeks), around 50-60% of respiratory viruses positive results were RSV or rhinovirus/enterovirus in the last 10 weeks. Positive rate of RSV has been gradually increasing and stayed at high level (around 5-6%) for 10 weeks and positive rate of rhinovirus/enterovirus increased sharply last week from 6.4% to 9.8%. (Figure 2) Figure 3 displayed the weekly positive rate of rhinovirus/enterovirus in the recent years. The rate usually starts rising in week 36/37 and stays at high level in autumn and winter.

Figure 2: Overview – Specimens tested and positive rate of different viruses

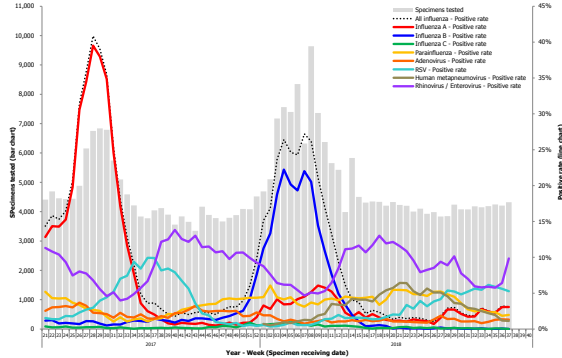


Figure 3: Weekly positive rates of rhinovirus/enterovirus in the recent years



Hand Hygiene Series - Artificial Nails: Beauty or the Beast?



The nail art and technology have become popular in many countries. In the context of hand hygiene in healthcare, there are conclusive recommendations on prohibiting artificial nails on healthcare workers (HCWs), considering the higher risk to harbor the yeast and pathogenic bacteria, in particular the Gram-negative pathogens. Artificial nails may also limit HCWs' performance in hand hygiene practices and tear gloves easily.

Studies have demonstrated strong experimental, clinical and epidemiological evidences that artificial nails can contribute to the transmission of healthcare associated infections, which include:

- A prolonged outbreak of *Pseudomonas aeruginosa* in a neonatal intensive care unit (ICU) resulted in 16 deaths, was revealed to be attributed to two HCWs (one with long natural nails and one with long artificial nails) who carried the implicated strains on their hands.
- A multiple logistic regression analysis showed the association of an outbreak of extended-spectrum beta-lactamase-producing *Klebsiella pneumoniae* in a neonatal ICU resulting from exposure to an HCW wearing artificial fingernails.
- A cluster of five cases of *Serratia marcescens* bacteraemia in haemodialysis was associated with a nurse who used an artificial fingernail to open a vial of heparin that was mixed to make a flush solution. The strains isolated from the five patients and the nurse were indistinguishable.

The Alberta Health Services examined the bacterial growth between hands with natural nails and artificial

nails after hand hygiene. Of note, artificial nails can hinder the effectiveness of hand hygiene as the increase in subungual (underneath the nail) bacteria which is exacerbated by gradual nail lifting at the edges and results in further microbial growth.

Bacterial growth after hand hygiene



Photo source from Alberta Health Services, Canada

Artificial nails are commonly refer to anything applied to natural nails. This includes, but is not limited to artificial nails, tips, wraps, appliques, acrylics, gels, shellac and other items applied to the nail surface.

In the next issue, the impact of nail polish on hand hygiene will be discussed.

References:

- WHO Guidelines on Hand Hygiene in Health Care, 2009.
- Alberta Health Services. Nails in the Healthcare Environment, 2017.
- Foca M et al. Endemic *Pseudomonas aeruginosa* infection in a neonatal intensive care unit. *New England Journal of Medicine*, 2000, 343:695-700.
- Gupta A et al. Outbreak of extended-spectrum beta-lactamase-producing *Klebsiella pneumoniae* in a neonatal intensive care unit linked to artificial nails. *Infection Control and Hospital Epidemiology*, 2004, 25:210–215.
- Gordin FM et al. A cluster of hemodialysis-related bacteremia linked to artificial fingernails. *Infection Control and Hospital Epidemiology*, 2007, 28:783-744.