HOSPITAL AUTHORITY

CICO's Biweekly Update

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ICT To Note

Revision of Reporting Criteria for MERS

On 18 Feb 2019, the Centre for Health Protection (CHP) revised the reporting criteria for Middle East Respiratory Syndrome (MERS). The major changes were highlighted in red in the below table.

Clinical Criteria		Epidemiological Criteria
- A person with fever **AND symptoms of respiratory illness** not explained by any other aetiology; **OR** - A person with clinical feature(s) of lower respiratory tract infection not explained by any other aetiology; **OR** - An immunocompromised patient with diarrhoea not explained by any other aetiology	**AND**	One of the following within 2-14 days before onset of illness: - close contact***** with a confirmed or probable case of MERS while the case was ill; **OR** - residence in or **history of travel#** to the Arabian Peninsula or neighbouring countries (i.e., Bahrain, Iran, Iraq, Israel, Jordan, Kingdom of Saudi Arabia, Kuwait, Lebanon, Oman, Qatar, State of Palestine, Syria, United Arab Emirates, and Yemen)

* Close contact is defined as:
- Anyone who provided care for the patient, including a health care worker or family member, or who had other similarly close physical contact; **OR**
- Anyone who stayed at the same place (e.g. lived with, visited) as a probable or confirmed case while the case was ill.

Transiting through an international airport (<24 hours stay, remaining within the airport) in the Arabian Peninsula or neighbouring countries only is not regarded as a history of travel.

Latest Update on MERS

The World Health Organization (WHO) has recently updated an interim guidance on "clinical management of severe acute respiratory infection when Middle East respiratory syndrome coronavirus (MERS-CoV) infection is suspected".

The guidance aims to provide recommendations to clinicians taking care with critically ill patients (both adult and children) with severe acute respiratory infection (SARI).

The topics include:

1. Early recognition of patients with SARI;
2. Immediate implementation of appropriate infection prevention and control measures;
3. Early supportive therapy and monitoring;
4. Collection of specimens for laboratory diagnosis;
5. Management of hypoxemic respiratory failure and acute respiratory distress syndrome;
6. Management of septic shock;
7. Prevention of complications;
8. Specific anti-MERS-CoV treatments; and
9. Special considerations for pregnant patients.

For details of each topic, please access the full document at:
https://www.who.int/csr/disease/coronavirus_infections/case-management-ipc/en/

Respiratory virus activity update

After the peak of this winter influenza season, the influenza positive rates have been gradually decreasing from 30.1% in week 3 to 15.7% in week 7 but remained above the baseline threshold. In February, the daily influenza positive rates ranged from 12-17% and the daily number of new influenza cases identified in HA was around 100 - 170 cases (average 139) (Figure 1). The influenza positive rates in different age groups were quite stable or slightly dropped in the past three weeks. Besides, the predominating virus remained influenza A(H1). Due to the drop of influenza A (H1) cases, the proportion of influenza A (H3) positive patients increased.

On the other hand, the activity of human metapneumovirus (hMPV) is on increasing trend (Figure 2).

Figure 1: Daily number of new influenza cases identified in HA since 30/12/2018

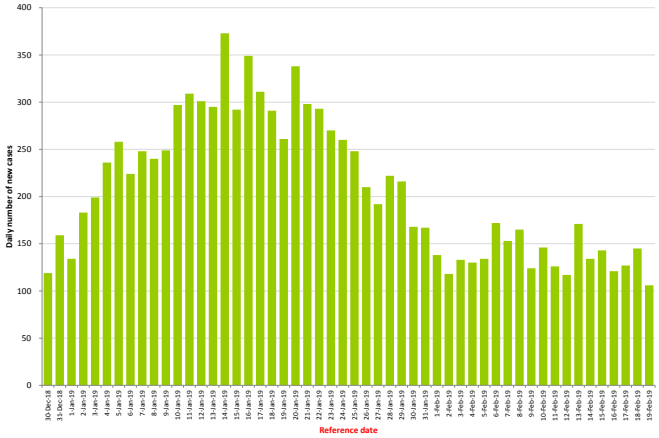
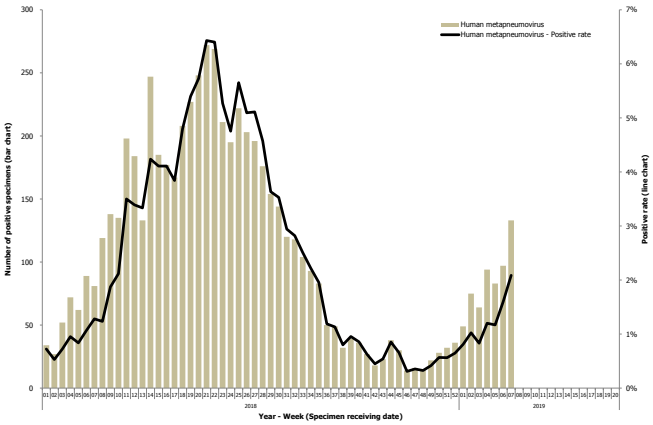


Figure 2: Number of positive results and positive rate – Human metapneumovirus (hMPV)



Innovation in Infection Control – UVC Disinfection Robot

The use of ultraviolet C (UVC) radiation has become one of the disinfection technologies in health care settings. It is employed in addition to the manual cleaning to disinfect environmental surfaces particularly in terminal disinfection and outbreaks of multi-drug resistant organisms.

UVC disinfection can only take place when UVC light is absorbed by the DNA and RNA of microorganisms, which causes changes in the DNA and RNA structure, rendering the microorganisms incapable of replicating. Thus, shadow areas of the contaminated surfaces that are not directly exposed to the light do not receive adequate disinfection to kill the pathogens.

Photo 1 demonstrated a new model of UVC disinfection machine in a simulated patient room.

The machine incorporated the robot technology so as to simplify the disinfection process and shorten the disinfection time. After mapping the layout of the room, the robot was able to drive autonomously around in the room and position itself optimally in relation to each pre-defined spot for disinfection. It aimed to relieve workload of the operator for repositioning of the machine, and ensure thorough disinfection.

Dosimeter (photo 2) was used as an indicator to provide a simple visual monitoring of the available UVC dosage. The indicator exhibited gradually color change from yellow to pink (pass color) correlating the amount of UVC exposure (photo 3). The disinfection cycle was about 5 to 10 minutes depending on the type of pathogen, the number of equipment and the size of the room.

Photo 1: UVC disinfection robot

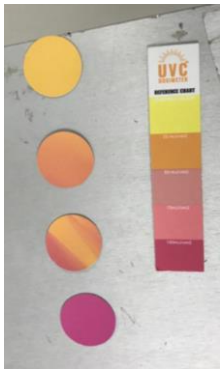


Photo 2: UVC dosimeters

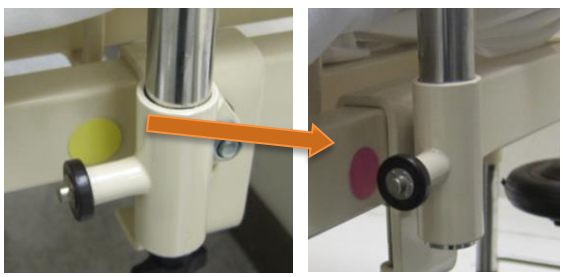


Photo 3: Indicator was changed from yellow to pink after UVC disinfection cycle