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Dear Doctors,

A cluster of three cases of Legionnaires' Disease with the same sequence type

We write to inform you that the Centre for Health Protection (CHP) of the Department of Health has detected a cluster of three community-acquired cases of Legionnaires' Disease (LD) with the same sequence type. We would like to solicit your support to remain vigilant against LD.

The first case was an 84 years old man who had history of ischemic heart disease, hypertension and diabetes mellitus (DM). He had onset of fever and respiratory symptoms on January 3, 2017. His urine specimen collected on January 6 was tested positive for *Legionella pneumophila* serogroup 1 (Lp1) antigen by Queen Elizabeth Hospital. The clinical diagnosis was pneumonia with respiratory failure. He remained in stable condition. The second case was a 66 years old man with good past health. He had onset of fever and respiratory symptoms on January 22. His urine specimen collected on January 26 was tested positive for Lp1 antigen by Pamela Youde Nethersole Eastern Hospital. He had pneumonia and recovered after treatment. The third case was a 70 years old man who had history of B-cell lymphocytic leukemia and gastrointestinal stromal tumor with partial gastrectomy done. He had onset of fever and respiratory symptoms on March 22. His urine specimen collected April 5 was tested positive for Lp1 antigen by Tseung Kwan O Hospital. He was complicated with respiratory failure and septic shock requiring admission to intensive care unit. His current condition is critical.

The CHP has performed genetic analysis (*Legionella* sequence-based typing) for the Lp1 isolates from the respiratory specimens of the three cases and revealed that all belonged to the same sequence-based type. Epidemiological investigations revealed that all the three patients had travelled to Macau during the incubation period. They resided in different districts in Hong Kong and no common local movements have been identified so far. All their household contacts remained asymptomatic. The



CHP's investigation is on-going to identify any possible common sources. We have informed the health authority of Macau of this cluster and will maintain close liaison to monitor the latest developments.

Legionella bacteria are ubiquitous in aquatic environments. Man-made water systems such as fresh water cooling tower, hot water system, whirlpool or spa are known to be possible environmental sources for the spread of Legionella bacteria. People may get infected when they inhale contaminated droplets, aerosols and mist generated by water systems. People may also get the infection when handling garden soils, compost and potting mixes. The incubation period ranges from 2 to 10 days. The elderly, males, smokers, alcoholics, and persons with DM, chronic lung disease, renal disease, malignancy or immunosuppression are at higher risk of acquiring LD.

We would like to solicit your assistance to advise immunocompromised patients to use sterile water or boiled water for drinking, tooth brushing and mouth rinsing. They should also avoid using humidifiers, or other mist- or aerosol-generating devices. Shower may also generate small aerosols.

Please be reminded that LD is a notifiable disease. If you encounter any LD case, please report to our Central Notification Office via fax (24772770), phone (24772772) or CENO On-line (https://cdis.chp.gov.hk/CDIS_CENO_ONLINE/ceno.html).

Further information on LD is available from the designated webpage of the CHP (http://www.chp.gov.hk/en/view_content/24307.html). Please draw the attention of the healthcare professionals and supporting staff in your institution/ working with you to the above. Thank you for your ongoing support in combating communicable diseases.

Yours faithfully,



(Dr. Yonnie LAM)

for Controller, Centre for Health Protection
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