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Dear Medical Superintendent,

Two Fatal Cases of Invasive Pneumococcal Disease (IPD)

We would like to alert you of two fatal cases of invasive pneumococcal disease (IPD) occurring in young children recently.

The first case was a 3-year-old boy with good past health who presented with fever and cough on 12 November 2013. He sought medical consultation from two private hospitals on 12 and 14 November 2013 respectively. He was admitted to another private hospital on 15 November 2013. As his condition deteriorated, he was transferred to Queen Mary Hospital (QMH) Paediatric Intensive Care Unit on 17 November 2013 and died on the same day. The boy's pleural fluid specimen was tested positive for serotype 3 *Streptococcus pneumoniae* by both the Public Health Laboratory Services Branch (PHLSB) of the CHP and QMH. Laboratory testing by QMH revealed that the strain was resistant to macrolides. Examples of macrolides include erythromycin, clarithromycin and azithromycin. The boy had been immunised with 7-valent Pneumococcal Conjugate Vaccine (PCV) and 10-valent PCV booster. He had no recent travel history and his family contacts are currently asymptomatic.

The second case was a 5-year-girl with good past health presented with fever and cough on 13 November 2013 and consulted three private doctors on 13 and 14 November 2013. As her condition deteriorated, the girl attended a private hospital on 16 November 2013 and was transferred to the Paediatric Intensive Care Unit of Prince of Wales Hospital (PWH) on the same day for further management but she died on 18 November 2013. Her pleural fluid specimen was tested positive for *Streptococcus pneumoniae* by PWH while a *Streptococcus pneumoniae* isolate from her tracheal aspirate specimen was determined to be serotype 3 by the PHLSB of the CHP. The strain was also found to be resistant to macrolides but sensitive to penicillin. Preliminary investigations revealed that the girl had not been immunised with Pneumococcal Conjugate Vaccine (PCV). She had no recent travel history and her family



contacts have so far remained asymptomatic.

Serotype 3 *Streptococcus pneumoniae* is one of over 90 serotypes of *Streptococcus pneumoniae* that cause IPD in Hong Kong. It is not an uncommon serotype circulating in the community.

It should be noted that no PCV formulation can confer 100% protection to IPD and IPD can occur even in vaccinated individuals.

You may wish to note that according to the recent monthly reports on “Bacterial Pathogen Isolation and Percentage of Antimicrobial Resistance - Out-patient Setting” from PHLSB, a large proportion (60-89%) of *Streptococcus pneumoniae* isolates were resistant to erythromycin, representing the macrolide class of antibiotics. Please find the details at the following link:

<http://www.chp.gov.hk/en/epidemiology/29/97/119/321.html>

We hope the above information is useful to you. For further information, please visit the CHP's website, www.chp.gov.hk.

Yours sincerely,



(Dr S K CHUANG)

for Controller, Centre for Health Protection
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