

PLEURAL EMPYEMA IN CHILDREN AGED <15 YEARS

NZPSU STUDY - COMMENCED JUNE 2014

Background:

Empyema, pus within the pleural space, is an uncommon complication of childhood bacterial pneumonia. Worldwide empyema is reported in children at a rate of 1-4 per 100,000 and complicates 1% of children aged <5 years hospitalized with all-cause pneumonia. Empyema often requires invasive intervention, and results in prolonged hospitalisation and antibiotic therapy. The management can be complex needing multidisciplinary team efforts.

New Zealand has a significant burden of staphylococcal, pneumococcal and group A streptococcal disease, and clinicians have observed a large burden of empyema from these infections. With this information and in view of international trends showing increasing empyema in children, the New Zealand experience is important to document to inform management and prevention.

The NZPSU is well suited to be used for a national surveillance project as most children will be admitted and have care from a specialist paediatrician. This study will be enhanced by an analysis of trends using hospital discharge data.

Case Definition

Child (<15yrs) hospitalised with empyema defined as:

- Pneumonia and pleural effusion lasting ≥ 7 days
- **OR**
- **Any** pneumonia and pleural effusion with radiologic features of empyema such as echogenic material or loculated pleural fluid
- **OR**
- **Any** pneumonia and pleural effusion necessitating drainage

Reporting Instructions:

- Please report any infant or child empyema aged less than or up to 15 years on NZPSU card
- Please request culture negative pleural specimens collected are referred for further molecular diagnosis to Dr Deborah Williamson at ESR.

Principal Investigator (on behalf of multicentre team)

Dr Emma Best

Paediatric Infectious Diseases Unit
Level 5, Starship Children's Hospital
Park Road, Grafton, Auckland
Phone: 09 307 4949 x 22559

Email: EBest@adhb.govt.nz