A prospective study of Community-Acquired Pneumonia in children and adults in Tropical Australia (CAPITAL)

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Background

Adults

- Aetiology and clinical outcomes across tropical Australia incompletely defined
- Atypical intracellular organisms are uncommon
- Nursing home residents comprise a significant number of admissions
- Corticosteroids and shorter antibiotic durations

Postma DF et al. NEJM. 2015 372:1312-23
Background

Children

• Admission rates for lower respiratory tract infections higher for Indigenous children

• Indigenous infants are commonly hospitalised before their first birthday
  ➢ Causative organisms not completely characterised

• No reliable tools to predict clinical outcome

Janu EK et al. MJA 2014 200:591-4
O’Grady KA et al. MJA 2010 192:586-90
Aims & hypotheses

Primary Aims:

1. Identify causative organisms and empirical antibiotics
2. Determine clinical associations and outcomes
3. Develop severity prediction scores for children and nursing home residents
4. Produce pilot data to inform future randomised trials
Primary Hypotheses:

1. *S. pneumoniae* and respiratory viruses are common
2. Atypical bacterial infections are rare
3. *A. baumannii* is unusual in FNQ and WA
4. It is possible to develop prediction scores in children and nursing home residents
Research plan

- Prospective, multi-centre, observational study of children and adults
- Cairns, Thursday Island, Weipa and Cooktown hospitals
- Royal Darwin and Broome Hospital
- X-ray confirmed pneumonia
- Inclusive study
Samples

- Blood
  - Culture, serology, haematology/biochemistry
  - Convalescent serology

- Sputum

- Urine

- Nasopharyngeal flocked swab and throat swab

- Tracheal aspirate or bronchoalveolar lavage

- PaxGene tubes
Progress

- Ethically approved
- Site visits to Thursday Island, Weipa & Cooktown
  - Local SMO & healthcare staff support
- Paediatrician engagement & support
Progress

- Legal issues between Menzies/Cairns Hospital
- Issues regarding release of grant money by JCU
- Lack of storage space for samples
  - Further grant obtained through FNQ hospital foundation, -80°C freezer purchased, awaiting arrival
- Ready to start...
Research capacity

12 – 24 months ago

- 0 FTE research staff
- Temporary positions only, funded by income generated
- No regular ethics committee chair
- Lack of research culture amongst clinicians

Health Minister Cameron Dick does not rule out job cuts in Cairns

By Felicity Caldwell
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Health Minister Cameron Dick has not explicitly ruled out job losses as a result of the fallout from the Cairns and Hinterland Hospital and Health Service budget blow-out.
Research capacity

Now

- New board; new “strategic plan”
- New CEO
- New executive director of medical services

- 6.8 FTE research staff employed by Queensland Health
- 0.25 FTE for clinical research lead and ethics chair
- New Indigenous Health ethics committee subgroup
- Planned increase of FNQ Foundation grants
- Annual research award/prizes for junior medical staff
Research capacity

- Prospective melioidosis database
- Hepatitis B database
- Supervision of Honours students
- Multiple other projects
  - *Staph. aureus*, RHD, leptospirosis, scrub typhus

- Open for business...
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