Infection Prevention & Control in neonatal and maternity - lessons learnt

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So just how serious is it.....?

- http://www.youtube.com/watch?v=S3oZrMGDMiw
Case Review One: Neonatal Unit, January 2012

Index case
31 year old maternity patient delivered baby at 36/40
- Prolonged rupture of membranes 40hrs
- Normal vaginal delivery 5/1/12 (Thursday) 09.34
- Developed cold like symptoms during prem labour

Index case - baby
- Baby admitted to NICU on 5/1/12; apgars 8,9
- CPAP in 50% oxygen initially; admitted to Level 3 NICU
Day 1-4
Day 5 (Mon)

- IP&C spoke to index for history; cough particularly at night
- Serology done (seemed unlikely due to length of time post exposure) but IgA positive
- Baby isolated in Room 2
- Mother discharged and both parents prescribed azithromycin
- D/W grandmother– anti-immunisation stance so her children were not immunised
- Sibling of index mother now complaining of symptoms as well….
Day 5
Day 6 – Team Meeting

- Incident meeting called
- CDC guidelines 2005 reviewed
- Risk assessment undertaken – risk of exposure agreed >1hr contact within 1m of index
- Precautionary approach taken due to high morbidity/mortality risk in NICU
- Action plan drawn up and initiated
Room 1

Assessed as Low risk of spread

- Informed Dunedin as transfer of contact baby
- Chemoprophylaxis offered to nurses in pod 1
- Chemoprophylaxis not offered to babies/families
Room 4

- All babies at risk
- All nurses at risk
- All visitors who stayed for >1 hour at risk
- Doctors and Allied health felt not to be at high risk due to short periods in each room
Follow up

- 9 inpatients
- 6 outpatients
- 1 outpatient readmitted to Paeds (not with pertussis)
- 16 nurses in neonatal
- 35 parents/adult visitors
- 4 sibling visitors
- 11 maternity staff (1 LMC; 3 BS; 7 maternity)
Action Plan

- Antibiotic choice for exposed contacts— azithromycin
- Advice from pharmacy
- Advice sheets for all families in NICU
- Communications team advised in case of media interest
- Public health advised and support provided
- Occupational health involved
- Staff prophylaxis in NICU and Maternity unit
- Follow up by outreach NICU team of all babies recently discharged
- Information to GPs
Review Meeting Feb 2012

- No deaths associated with this incident
- 82 individuals were treated
- No media interest
- No further cases of pertussis reported among contacts of index
- Immunisation booster programme for high risk staff in neonatal and paediatrics put in place by OHS
- Lack of screening of index (Midwives dislike taking NP swabs!)
- Issues of prescribing for staff and relatives
Immunisation of family

YOU SHOULD HAVE HAD HER VACCINATED

CERTAINLY NOT! IT MIGHT HAVE MADE HER SICK
Positive outcomes as a result of this incident

- Access to free immunisation from 30/40 pregnancy in Canterbury (subsequently available nationally from 28/40)
- Access to azithromycin in community for GP prescription
- New poster developed for paed/NICU (based on NSW version)
- Cue cards developed for ward staff to ask key questions of visitors
- Better prepared for subsequent incidents of pertussis in neonatal unit....
Case Study 2 - December 2012

Background

- Triplets born Aug 2012 - 2 discharged from neonatal unit into local community hostel with family; 1 remained on neonatal unit
- One of triplets in hostel unwell and admitted via Children’s acute unit/Paed HDU/Adult ICU
- Confirmed pertussis positive 19/12/13
- Transferred to starship with other discharged triplet and family
- Parents asymptomatic but family member has cough
Neonatal unit

- Symptomatic relative visited unit day before diagnosis of index triplet
- Sibling triplet and other contacts in room started on antibiotics
- Restricted visiting by family until 5 days treatment
Follow up - paeds/adult ICU and community hostel

- CPH follow up of hostel and issuing of information to families
- Staff follow up and immunisation and antibiotics as appropriate
- Complicated by Christmas week - a party in the hostel and access to oncall CPH
Review

- Posters at entrance to neonatal not multi-lingual
- Access to staff immunisation records an issue
- Prescribing of treatment to staff
- Poor uptake of wide immunisation programme by staff in ICU - 11 given antibiotics
- Good support from pharmacy
Case Study 3 - obstetrics May 2013

Pertussis + Obstetric SMO =
My worst nightmare!!
RMO recent return from holiday in UK

Eldest child coughing for 4 weeks; younger child for 10 days

Developed symptoms 9\textsuperscript{th} May and swab taken AFTER working on-call on weekend
Risk Assessment of Contacts by ID

Patients at risk
- Those examined or delivered
- Contact with babies of >5mins

Staff
- 60 minutes in a meeting
- Within 1m of index for >5mins
Patient follow up

Units Involved:
- Gynaecology, Maternity and neonatal

Discharged patients:
- Risk assessed by CPH by phone
- If deemed at risk, to come into weekend clinic for prophylaxis; paed contacts to paed department
- Commercial onsite pharmacy agreed to fill scripts
Staff follow up

Midwives/Nurses assessed as ‘at risk’:

- 30

Obstetrics Colleagues

- 25 (department meeting held while symptomatic)
Communication

- General letter to all GPs to advise
- Follow up letter to GPs/LMCs of all patients treated
- Media release prepared (but not released)
Review

- Difficulties establishing contacts by SMO
- Index working while unwell
- Pharmacy ran out of azithromycin on weekend
- Prescription of staff treatment
Summary

- Improving process with each incident!
- No infant deaths in any of incidents
- Improved communication sheets for patients/staff/relatives
- Access to pharmacy processes much better
Recommendations

- Use CIMS structure for these incidents/outbreaks - outbreak policies should reflect this
- Educate staff about working while sick
- Staff prescriptions an issue in each case study - being addressed
- DON’T UNDERESTIMATE PERTUSSIS
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Any Questions.....?