



Interim report – prospective evaluation of pertussis serology update...

The prospective evaluation of pertussis serology began earlier this year and continues in the middle of a significant outbreak of pertussis across the community

Recruitment

To date 250 prospective patients have been referred to the study, of whom 110 have met the WHO criteria for a clinical case of pertussis (Table 1). Of these, 57 have submitted a follow-up serum sample and 30 have submitted two subsequent samples.

PCR & Duration of Cough

Of the 110 who have met the WHO clinical criteria, 46 have been PCR positive. These patients have had cough symptoms for a median time of 17 days at presentation (range 7-56 days), with the majority of PCR positive patients having cough symptoms for 3 weeks or less (32/46). See Figure 1

In those individuals with a cough for <2 weeks who were PCR negative, follow-up testing was very unlikely to result in subsequent positive results (either PCR or serology). Of the 106 patients who had a cough for <2 weeks at presentation, 28% had a positive laboratory test for pertussis, as opposed to 93% of those with 2-3 weeks of cough and 82% of those with 3-8 weeks of cough (Figure 2). This suggests laboratory testing for pertussis is less likely to be helpful in those individuals with <2 weeks of symptoms, probably due to the broader differential diagnosis of acute cough.

Clinical Features

In terms of cough features, the most commonly reported symptom in the case definition was paroxysmal cough. No particular combination of cough features (paroxysm, presence of whoop, post-tussive vomiting) appeared to have any particular predictive value with respect to identifying laboratory-confirmed cases.

Immunisation status and impact of recent vaccine on serology

The majority (75%) of adults enrolled identified themselves as having received childhood immunisations. Only one child enrolled aged < six years was reported as unvaccinated. This most likely reflects a selection bias generated by those individuals and parents who volunteer to participate in a study such as this. Of the 14 patients (adults and children) identified as having had a recent pertussis immunisation (i.e. within the last 6 months – dTPa or Boostrix), none have had a positive IgG or IgA attributable to vaccination.

Serology

In the laboratory-confirmed cases, development of a PT (pertussis toxin) IgG response appears to be more prompt than PT IgA, while the IgA is quicker to decline (Figure 3). Due to the inaccuracy of the clinical case definition of pertussis, the sensitivity of the serological assay remains difficult to ascertain, but current results support our belief of excellent specificity. Importantly, of the 122 patients referred who did not fulfil the WHO clinical definition of pertussis, only three patients (2.5%) had a (low) positive PT IgA or IgG result. We expect to be able to confirm these findings as enrolments increase.

WHO criteria for a clinical case of pertussis

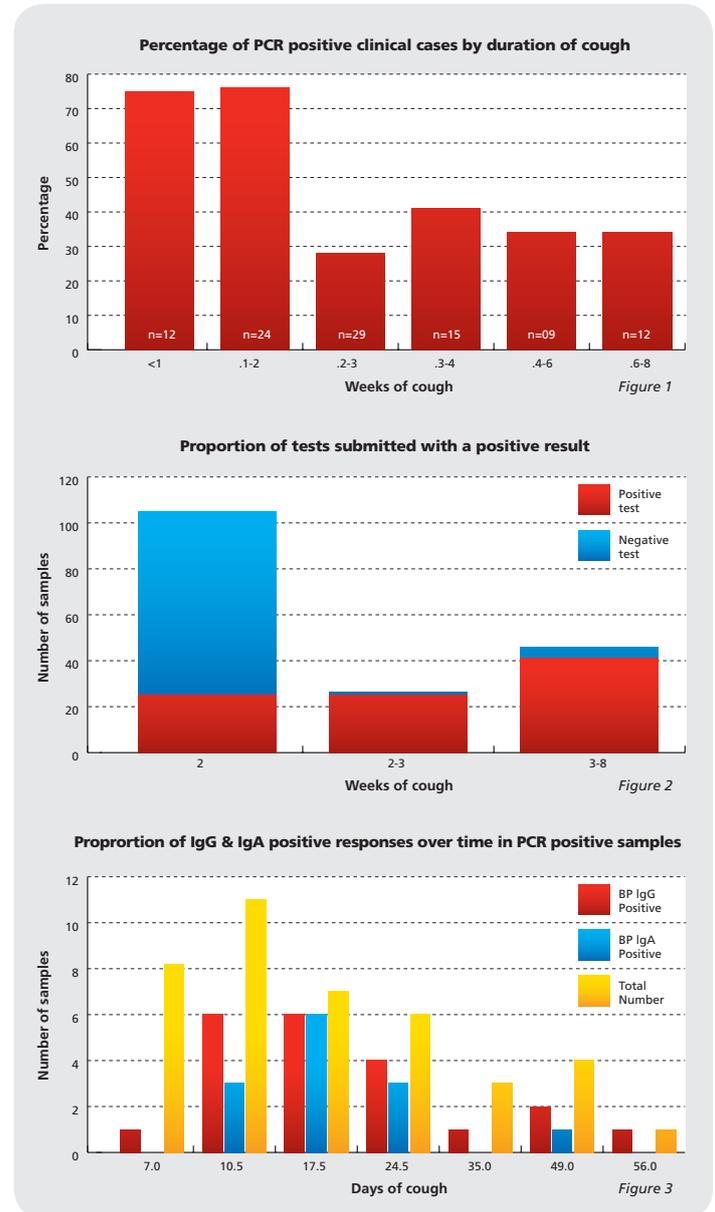
Table 1

Cough for >2 weeks AND one or more of the following:

- paroxysms of coughing
- inspiratory whoop
- post-tussive vomiting

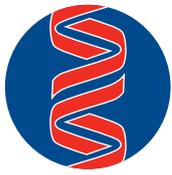
Key points:

- PCR positivity is less likely after 2-3 weeks of cough
- The current PT IgG and IgA appear to have excellent specificity, for acute pertussis infection
- PT IgG appears to be more sensitive in detection of early pertussis than IgA



Points for practice:

- A single equivocal serological result (i.e. either IgG or IgA) is best confirmed by a subsequent specimen.
- Testing for pertussis between 2 weeks and 2 months has the highest positive predictive value for laboratory confirmation of cases.
- Unless very recent (e.g. within 3 months), pertussis immunisation appears unlikely to affect our serological results.



Medicare changes to free PSA testing

From 1 May 2009, new conditions apply in the Medicare Benefits Schedule to the measurement of free PSA.

- Item 66659 (amendment) now allows a measurement of free PSA to be performed as a rebateable test if the total PSA value is above the age-related median and below, or equal to, the age-related upper reference limit – 1 episode in a 12-month period.
- Item 66660 (new item) allows up to 4 episodes of testing for free PSA in a 12-month period if the total PSA is above the age-related upper reference limit, but below 10 ug/L.

HOW TO REQUEST FREE PSA

Free PSA – The specimen needs to be analysed within 24 hours. For measurement of free PSA on eligible patients to be performed on the same episode as total PSA, it is advisable to specify 'Total PSA' together with 'Free PSA if indicated' on the request form, to avoid any delay in measuring the free PSA and obtaining a report of the patient's free/total PSA ratio.

AGE-RELATED REFERENCE LIMITS & MEDIAN VALUES FOR TOTAL PSA

The age-related reference limits and median values that apply to total PSA testing of Australian men using the Abbott Architect® method are as follows:

AGE (YEARS)	REFERENCE (ug/L)	MEDIAN (ug/L)
20 - 29	0.20 - 2.0	0.70
30 - 39	0.20 - 2.1	0.75
40 - 44	0.25 - 2.2	0.80
45 - 49	0.25 - 2.5	0.85
50 - 54	0.25 - 3.0	0.95
55 - 59	0.30 - 3.5	1.1
60 - 64	0.30 - 4.5	1.2
65 - 69	0.30 - 5.5	1.3
70 - 74	0.30 - 6.5	1.4
75 - 79	0.30 - 7.5	1.5
80+	0.25 - 9.0	1.6

Table supplied courtesy of Dr Grahame Caldwell, BSc (Med), MB, BS, FRCPA
Douglass Hanly Moir Pathology

The SNP Club – for non-concession patients

At SNP, a recent review showed that patients who have 5 pathology episodes in any one year are more than likely to have many more. For this reason SNP are introducing an annual 'safety net' - **The SNP Club** - to help our non-concession patients when they need it the most.

Each calendar year when a patient has paid 4[#] non-concession outpatient accounts with a patient contribution they will automatically qualify for the SNP Club.

SNP Club members will be offered bulk billing for any further Medicare eligible* outpatient pathology services for the rest of the year. Patients will automatically receive their SNP Club card and letter informing them of the process.

At the collection centre they simply present their card to the collector

who will complete the steps needed to meet bulk billing requirements.

However, if their specimens are collected at your surgery, please note 'SNP Club member' on their request form and include their Medicare number and ask them to sign the Medicare assignment to fulfil Medicare requirements.

Our desire is to maintain our service to you and to our patients whilst remaining financially viable. At the same time we wish to continue to support those who can least afford it: pensioners, Health Care Card holders and those having repeat testing.

Should patients have any concerns about their accounts please direct them to our Patient Services Support Centre on 1300 732 032.

For calendar year 2009 patients qualify when they have paid 4 or more non-concession outpatient accounts with a patient contribution – bulk billing will apply from 01/09/09 – 31/12/09.

*Applicable to out-patient services only. Bulk billing only applies to people who are personally eligible for Medicare and for pathology services listed in the Medicare Benefits Schedule (MBS). Patients will be sent an account for any services performed that are not eligible for a Medicare rebate.

Collection Centre updates

Brisbane

Toowong – relocation
Shop G06 , Toowong Shopping Village,
9 Sherwood Rd Toowong
Mon – Fri 7 am - 3 pm
Phone (07) 3217 7968

Regional

Southport – now open
Premion Place, cnr High & Queen Streets
Mon – Fri 8 am - 4 pm
Phone (07) 5573 8883

Calliope – now open
Shop 10, Calliope Central Shopping
Centre, Dawson Highway
Mon – Fri 8 am - 12 noon
Phone (07) 4975 7114

Toowoomba – now open
Drayton Rd Collection Centre
146 Drayton Road Shopping
Mon – Fri 7.30 am - 4 pm
Phone (07) 4613 6458



Syzygy – now on 100% recycled paper

Environmental savings per issue of *Syzygy* compared to using non-recycled paper:

- 3.7 trees saved
- 720 kg carbon dioxide emissions reduced
- 55% less water used
- 60% less energy used.