CORRESPONDENCE

Accelerated primary immunisation schedule

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Since Burgess and Forrest, and Sloan quote the same reference to draw opposite conclusions about the incidence of pertussis in the United Kingdom, perhaps you could have some editorial comment in the next edition, or perhaps publish the paper by Miller, Vurdien and White if that is possible and permissible.

Reply from the author

Dr David Sloan, Central Queensland Public Health Unit, PO Box 946, Rockhampton Qld 4700

Thank you for your query about my recent letter in *Communicable Diseases Intelligence*[1].

A reader suggests that I draw opposite conclusions from a reference article to those drawn by M Burgess and J Forrest in an article in the same issue[2].

In my letter I used the reference article to support my comment that in the United Kingdom following the introduction of the accelerated schedule in 1990 'the incidence of pertussis fell[3]. Burgess and Forrest use the same reference in stating that the adoption of the accelerated schedule in the United Kingdom 'has not yet reduced the number of cases in children under the age of one year'. These are different types of conclusions and are not necessarily mutually exclusive.

My comment is supported on page R153 paragraph one and Figure 1 of the reference article.

The comment by Burgess and Forrest appears to be based on page 153, paragraph 4, 'the proportion of cases in children in cases aged 3 - 11 months has not declined (Figure 2)'.

The stability of the number and of the proportion of cases is not necessarily the same. In this situation, total number of pertussis cases are declining, and so while the proportion has not declined, the number of 3 - 11 month old cases is likely to have fallen.

To complicate matters, the proportion of cases in younger infants (under three months) has actually risen since 1990 (Figure 2 of the reference article). However, as the total uptake of immunisation increases and total cases fall, the proportion of cases from this group, who are too young for any or complete protection, is quite likely to rise.

Rather than dwell too much on the interpretations of this article, it may be more beneficial to recognise that it was written some while ago and note that an editorial in *CDI* has recently suggested that Australia should consider an accelerated schedule[4] (remembering as well the other benefits of higher uptake and lower rates of side effects). Perhaps the editor might consider inviting Dr Elizabeth Miller (et al.) to comment on the latest situation in the United Kingdom vis-a-vis pertussis.

References

1. Sloan D. Accelerated primary immunisation schedule [letter]. *Comm Dis Intell* 1996: 20;199.
2. Burgess M, Forrest J. Pertussis and the acellular vaccines. *Comm Dis Intell* 1996: 20; 192-196.
3. Miller E, Vurdien TE, White TM. The epidemiology of pertussis in England and Wales. *Comm Dis Rep* 1992: R152-164.
4. Hall R. Editorial: measuring immunisation coverage. *Comm Dis Intell* 1996: 20; 219.

Editorial comment

An update on the effect of the accelerated immunisation schedule on pertussis in England and Wales has since been published in *Communicable Disease Report* on 24 May 1996[1]. Dr Miller is a co-author.

In May 1990, an accelerated schedule was introduced in the United Kingdom with primary immunisation at two, three and four months of age rather than three, five and ten months of age as had previously been the case. There has been concern that the accelerated schedule might lead to inadequate immunity against pertussis in the preschool years and as a consequence could cause more disease in siblings under six months of age and, in particular, those under three months.

The report highlights a marked reduction in the incidence of pertussis in all age groups and a change in the age distribution of cases. The epidemic year of 1994 had the smallest number of cases so far recorded: only 3,964 were notified compared to 65,810 in the epidemic year of 1984. Improved vaccine coverage in preschool children led to a fall in the number of cases aged between six months and five years. Rates of infection for both this age group and those under six months remained extremely low. The rates in children aged two months and under, who are too young to be vaccinated, fell from 161 per 100,000 during the period 1985 to 1989 to 115 per 100,000 during 1990 to 1994.

Vaccine efficacy estimates of 96% were calculated for infants between six and 11 months of age and 93% for children aged one to four years. There was no significant decline in vaccine efficacy with age. The authors point to a number of factors that may have led to an over-estimation of vaccine efficacy and highlight the need for continued surveillance of immunity beyond five years of age.

The authors note a continuing decline in disease rates in all age groups, including those under six months of age and that the data suggests children no more than five years of age who were vaccinated under the accelerated schedule are not getting mild pertussis that could in turn be transmitted to young infants.

Reference

1. White JM, Fairley CK, Owen D *et al*. The effect of an accelerated immunisation schedule on pertussis in England and Wales. *Comm Dis Rep* 1996; 6:R86-90.