

Letter to the Editor

Varicella surveillance: simpler than you think?

In the article 'Surveillance of viral pathogens in Australia: varicella-zoster virus' published in the previous issue of *Communicable Diseases Intelligence*,¹ the authors dismiss passive surveillance as unworkable because of 'the large numbers of cases of chickenpox and the small proportion of cases who seek medical attention'. It is not clear if they believe that passive surveillance is impractical because too many or too few notifications would be made.

Effective surveillance rarely requires notification of every single case of a disease. Most often surveillance is a tool to identify change which will prompt investigation and, if necessary, public health action. The conventional notifiable diseases system, for example, depends on clinical or laboratory filtering of surveillance data to achieve an acceptable level of specificity and reduce the volume of data to a manageable quantity.

The objectives of chickenpox surveillance are to measure the impact of immunisation on the age distribution of cases and the form of the disease (primary infection or zoster). There is also some value for policy purposes of directly demonstrating a decline in the number of cases. All of these data are essential in the evaluation of a program.

If varicella immunisation is recommended for the Australian Standard Vaccination Schedule but not funded by the Commonwealth Government, it is possible that the partial immunisation of the population will result in an increase of the average age of acquisition and a parallel increase in the number of cases of severe disease.² It is also possible that the absence of regular priming of immunity to varicella-zoster by contact with chickenpox in people who have previously had chickenpox may result in increased numbers of cases of zoster.³

In South Australia varicella-zoster infection was made a notifiable disease in January 2002. General practitioners were informed by a single letter posted in April 2002. Since then 1,208 notifications have been received: 662 of chickenpox, 355 of zoster and 191 where the clinical syndrome was not stated. Varicella-zoster notifications made up 15 per cent of all notifications made in South Australia in this period.

The age distribution of the South Australian data is consistent with the expected age distribution for chickenpox (Figure 1) and zoster (Figure 2).

However, the expected temperate climate seasonal peak for chickenpox in late winter and spring⁴ is not reflected by the first year's data (Figure 3).

Figure 1. Number of notified cases of chickenpox, South Australia, 1 January 2002 to 31 January 2003, by date of onset, and age group and sex

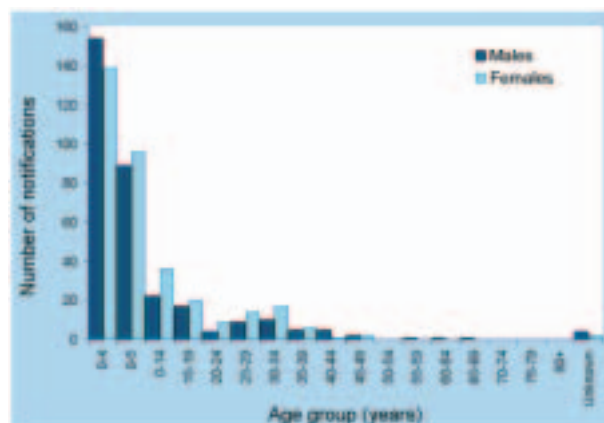


Figure 2. Number of notified cases of zoster, South Australia, 1 January 2002 to 31 January 2003, by date of onset, and age group and sex

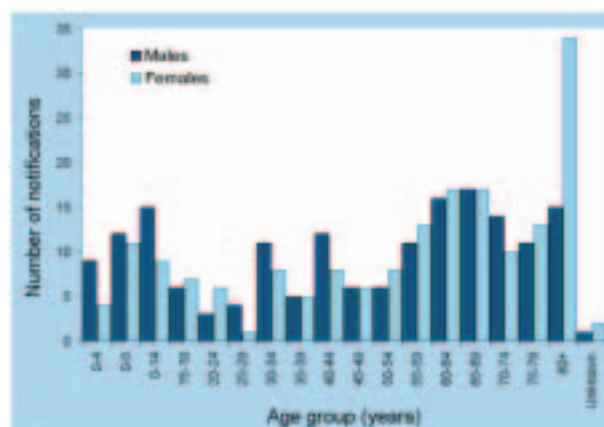
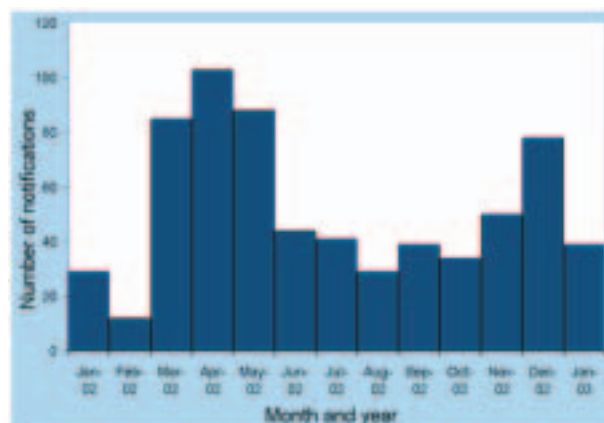


Figure 3. Number of notified cases of chickenpox, South Australia, 1 January 2002 to 31 January 2003, by month of onset



Assuming the real incidence of chickenpox is one birth cohort per year (n=17,000 for South Australia approximately) the sensitivity of this notification system for chickenpox is 4 per cent. The apparent reversal of the expected seasonal chickenpox incidence may reflect the actual situation in 2002 but, more likely, indicates that passive notification is not sensitive enough to detect seasonal trends

Given the very small effort that has been made so far in South Australia to encourage doctors to notify varicella-zoster infection, it is likely that the sensitivity of the system could be markedly improved. Even the current data may be adequate as a baseline to monitor changes in age distribution. The estimated cost to the South Australian Communicable Disease Control Branch of processing these varicella-zoster notifications was just over \$1,000 for the year.

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References

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