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LETTERS TO THE EDITOR

A survey of age at first immunization in the Aiyura Valley

At the Papua New Guinea (PNG) Medical Society meeting in Sep 2000 Dr Frank Shann discussed a study conducted in Guinea-Bissau by Dr Peter Aaby (1) suggesting that early immunization of children with measles and BCG reduced mortality from all causes. 'Early immunization' in this study was between 4 and 8 months. If this finding is confirmed in other studies, early immunization could be a valuable strategy for reducing child mortality in PNG. We have done a small survey to document at what age children present for their first immunization in our area of the Eastern Highlands Province.

The Summer Institute of Linguistics (SIL) clinic is located in a semirural area in the Aiyura Valley, with approximately 18,000 patient contacts per year, 30% of which are with children under the age of 5 years. We inspected the immunization books of all children under 5 years seen at the base clinic between 18 Sep and 24 Nov 2000, and recorded the date of birth and date of first immunization. Of the 766 children presenting during the survey period, data were recorded for 626. Data for 140 patients were unavailable due to missing record books, repeat visits during the period of the study or oversight. During data analysis, a further 34 patients were found to be duplicate visits and data were illegible for 16. Analysis is based on the remaining 576 patient visits.

Our survey showed that most children (78%) have their first immunization before 3 months of age. Approximately 22% of children present for their first immunization after 90 days of age and only 4% after one year (Figure 1). We did not attempt to analyze the age at completed immunization.

Families living in the SIL clinic catchment area have good access to immunization clinics, at base clinic or at 12 travelling clinics in surrounding areas. The clinic is always staffed and reliably supplied with vaccine. Clan fighting had been minimal in the 2 years before the study. The rate of first immunization in our area with optimum conditions is 78% at 3 months but may be much less in areas where clinics are widely spread, inadequately supplied or staffed, or where clan fighting prohibits travel.

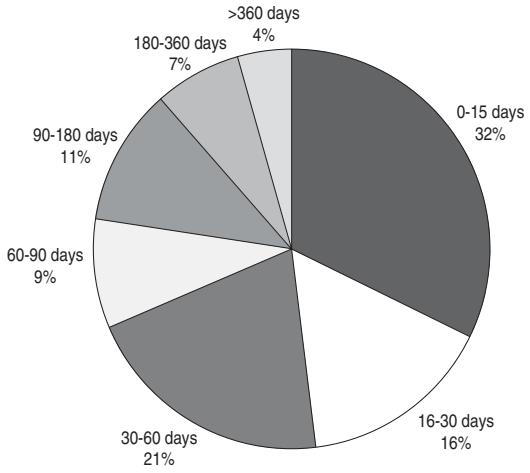

Figure 1. Age at first immunization in children presenting to the Summer Institute of Linguistics (SIL) base clinic at Ukarumpa, Eastern Highlands Province.

This study only included children who at some point are brought to the SIL base clinic. There are undoubtedly many children who never present to the central clinic or present only infrequently. Further work is being undertaken in the outlying villages to study the effect of regular travelling immunization clinics on first immunization intervals as well as immunization completion rates.

At present with close to ideal conditions, many children in this area benefit from early immunization. If measles and BCG vaccination before 8 months of age reduces overall mortality, 90% of our clinic attenders should benefit. We need to establish why 22% of the children we surveyed presented after 3 months of age for their first immunization. We also need to find children who may never present to clinic and establish the ages at which children complete primary immunizations.