

## Draft reports

### ***A Study of Presentations of Householder Concerns to the Asian Gypsy Moth (AGM) Health Service and A Study of Presentations of Householder Concerns to the Painted Apple Moth (PAM) Health Service & Auckland Summer Symptom Survey. Auckland: Aeraqua Medical Services Ltd.***

The independent Health Risk Assessment (HRA) (Auckland District Health Board, 2002) for Foray 48B concluded that “some people may complain of minor skin, eye and upper respiratory tract irritation, or aggravation of existing asthma or allergies” if directly exposed to the spray.

The draft reports describe the basic demographic characteristics (age and gender) of the householders presenting to the Health Service and the frequency and nature of the reported symptoms for the AGM and PAM spraying programmes. Information is also given about householders who had Practical Support Plans.

Use of the Health Service does not indicate widespread effects. About 3.6% of the residentially exposed householders used the Health service in the AGM programme compared to 1.6% in the PAM programme. The highest rate of presentation in both programmes was for the under five years age group.

Based on census data females and children under five years were overrepresented in those who presented.

Although the spraying programmes were of markedly different duration (AGM two months and PAM two years) reported symptoms were similar. The three most common implicated organ systems were, in order of decreasing frequency: respiratory, general and skin. The commonest symptoms were asthma, allergic reactions, atopic dermatitis and allergic rhinitis among the AGM exposed householders and asthma, allergic reactions, throat symptoms and headache for the PAM exposed householders.

The Health Service GPs also grouped common symptoms into five clinical syndromes. The highest presentation rate was for upper respiratory followed by eye, lower respiratory, skin and headache for the AGM exposed householders and upper respiratory followed by eye, skin, lower respiratory and headache for the PAM exposed householders.

In general the distribution of reported symptoms was the same across age, gender, whether the person was residentially exposed or not, and whether the person had a medical diagnosis or not. For most organ systems the frequency was slightly higher for those who were residentially exposed compared to those who were not (but may have been exposed through travel, work, school etc).

The subpopulation for whom there was a medical diagnosis (as opposed to self-reporting alone) were at least twice as likely than those without a medical diagnosis to report a symptom.

In early 2004 a self-administered symptom questionnaire of perceived health status over the preceding three months was sent to households in three PAM zones with different exposure durations and two control zones to determine if there were differences in symptoms between the exposed and control groups, and any relationship between symptom frequency and exposure duration. Symptom frequency was not associated with duration and was increased in the exposed compared to the control zones although this finding also applied to symptoms unrelated to irritancy or atopy. However response rates were very low meaning definitive conclusions cannot be drawn. In summary, the results suggest selection and recall bias.

Symptom frequency decreased significantly as the AGM programme progressed indicating there was no change in health risk with duration. Data over time was not reported for the PAM programme.

## **Conclusions**

- 1) The draft reports are based on those people who lived in the spray area who either telephoned on their own or another household member's behalf or attended the Health Service. In the absence of a random survey (e.g. telephone) of residents carried out during the spray programme it is not known how representative of the health status of the total population they were although it is reasonable to assume that those with more severe and more frequent symptoms would have reported them.
- 2) The predominant symptoms were nonspecific. In the absence of background prevalence data for these symptoms it is not possible to determine to what extent, if any, they were associated with the spray and to what extent they were the result of increased health awareness as a result of publicity about the spray programme.
- 3) Whilst the commonest reported symptoms (respiratory, skin) were those that may be associated with an environmental irritant, and expected from the HRA of Foray 48B, there was no evidence of a dose-response relationship suggesting that increased health awareness may be the more likely explanation.
- 4) There is no evidence of widespread adverse health effects associated with the spray.
- 5) The findings are consistent with current knowledge about the human health impact of aerial spraying of *Btk*, including Foray 48B.

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