

Title The Australian Deployment Health Surveillance Program: an evaluation of recruitment and data collection strategies

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#### Background / objective

A series of cross-sectional studies exploring health outcomes in Australian Defence Force (ADF) personnel who deployed to the Solomon Islands, Bougainville and East Timor was recently conducted. We aimed to evaluate the effectiveness of mail and email approaches in the collection of questionnaires, the success of call strategies in telephone follow-up, and the characteristics of online and mail participants in questionnaires surveys.

#### Methods

For the Solomon Islands study conducted in 2007 (N=994) all invitations were sent by mail. For the larger Bougainville and East Timor cohorts approached in 2008 (N=12,742), two-thirds of invitations were emailed, with the remainder being mailed. Recipients could complete the questionnaire online or request a paper copy. Those who did not reply were followed up by telephone and, where requested, invitations and/or questionnaires were re-sent.

#### Results

Emailing the invitations was twice as effective as mailing in the Bougainville and East Timor studies, with 24% of the sample participating after an emailed invitation, versus 12% for a mailed invitation ( $p<0.001$ ). During telephone follow-up for non-responders, the potential participant was actually reached on 65% of the mobile numbers, compared with 42% of landlines ( $p<0.001$ ). These studies received a 43% response rate, with 86% participants (N=4689) submitting data online.

#### Conclusions

There are significant advantages to using electronic recruitment and data collection methods, especially among young, mobile populations. Email is a cost-effective way to deliver study invitations, and mobile telephone numbers facilitate contact with potential study participants. Coupled with an online questionnaire, which is popular, efficient and cost-effective, electronic methods enable rapid collection of data.