

Tracking Respondents within a Longitudinal Survey

A longitudinal survey collects information from a cohort or panel of subjects on a number of occasions over a period of time. A longitudinal survey design is appropriate when there is research interest in measuring and characterising changes within subject. This type of survey may be time-consuming and costly and benefits must clearly outweigh costs before such a survey is undertaken.

One of the factors contributing to the high costs of longitudinal surveys and one that threatens the statistical power of such studies, is loss to follow-up, or attrition. Typically, to reduce respondent burden and/or because the changes that the study hopes to measure occur on a longer timescale, information is not gathered from subjects continuously, but rather at specific periods of time. Usually, there is little or no contact between subject and researcher in the times between. Consequently, if a subject's contact details change following their most recent contact with the researcher, it may be very difficult to locate them at subsequent scheduled contact times, unless mechanisms to trace their movements are in place.

Loss to follow up can have serious consequences for the validity of a longitudinal study. Loss of subjects reduces the statistical power of the study. This affects precision but not validity if subjects exit the study 'at random', that is, for reasons independent of the subject of the study. However, validity is also affected if, as may be more likely, many subjects refuse to continue or cannot be located for reasons directly or indirectly related to their participation in the study.

Power can be maximised and bias minimised by successful strategies to discourage drop-outs (refusal to continue) and loss of contact.

This document discusses tracking procedures that aim to minimise attrition due change of address by keeping respondent address and telephone information as current as possible. According to the latest census data (2001), 22.6% of people living in Queensland moved within the last year and 50.5% changed address within the last five years. From these figures it is easy to see that a good proportion of respondents may change address throughout the life of a longitudinal survey of only a few years duration. Therefore it is imperative to have good systems in place for tracking those that change their address.

Some possible tracking methods are:

- Asking subjects to inform you when they move and keeping in contact with them between interviews;
- Asking subjects for the contact details of a close relative or friend so that if they do move and cannot be found, hopefully the relative or friend will know where they have gone;
- Using the State Electoral Role to obtain current addresses;
- Register names and addresses of subjects with Australia Post. A subject can then be tracked if they notify the post office of their new (charges apply).

One of the simplest strategies to avoid loss to follow-up due to change of address is to ask subjects to notify researchers whenever they move. However practical experience has shown over many studies that few subjects are sufficiently motivated to do so. There are a number of ways to increase their motivation to inform researchers. These include keeping subjects up to date with the survey processes in the form of, say, a quarterly or six monthly newsletter, or by providing them with reminders such as a fridge magnet that contains the researchers phone number. Both methods are relatively inexpensive and have been demonstrated to reduce losses. Depending on budgets, another effective method is to offer a reward (monetary or otherwise) for completing an interview or questionnaire. While this technique is used principally to increase response rates, the lure of future 'rewards' may encourage subjects to volunteer changes of address.

Another method which can be used as a back-up in case respondents fail to report their change of address is to ask them at recruitment for the contact details of a close relative or friend. Then when a subject cannot be found, their close relative or friend may be contacted and asked for the subject's latest contact information.

A third option is the State Electoral Role for Queensland. This is publicly available at various outlets in Queensland, or can be purchased at a relatively moderate cost. While the role is updated every 3-6 months, it has been found that people generally only record their change of address with the State Electoral Commission around election times. Also, analogous to silent telephone numbers, people can request that their name be suppressed on the publicly available version of the Role. Fortunately, proportions of entries suppressed in this way are much smaller than the proportion of silent telephone numbers.

Subjects lost to follow-up may also be found by searching the White Pages telephone directory or through the Australia Post change of address database, called the National Change of Address file. Many people use the Australia Post mail redirection facility so it can be a fruitful search and location tool. For a fee, Australia Post will attempt to match a supplied list of name and address information with entries on their database. The result is a file of the latest address details for all those who are found to match. It costs a minimum of \$162 plus \$43.20 per thousand records (prices as of March 2003).

With advancements in technology and the Internet, the White Pages have also given people the option of changing their address details online as well as by more traditional methods. Similar to the Australian Post database, a search for lost respondents can be made through the latest edition of electronic White Pages or simply over the Internet at www.whitepages.com.au. Over the Internet, search is free of charge; however, for a more refined search, a copy of the electronic White Pages is required (cost around \$300). However, a drawback of this method is that it only covers those people with listed (i.e. non-silent) phone numbers.

While the implementation of these various methods cannot ensure that loss to follow-up due to change of address does not occur, they provide a variety of strategies for minimising any such losses and in certain populations may be highly effective.