GLOSSARY

CARER EDUCATION

The level of educational attainment achieved by carers was determined from two survey questions: "What was the highest grade you finished at school?", and "What qualifications have you received since leaving school". Qualifications were classified as:

- Trade/apprenticeship
- Certificate from college
- Diploma (beyond year 12)
- Bachelor Degree
- Post Graduate Diploma/higher degree
- Other

Carers who had completed a diploma, bachelor degree, post graduate diploma or higher degree were classified as having 13+ years education. Otherwise educational attainment was classified by highest grade finished at school. The following categories have been used in this publication:

- Did not attend school
- 1–9 years education
- 10 years education
- 11–12 years education
- 13+ years education

Note that educational attainment refers to highest level achieved, not the number of years taken to achieve the qualification.

DWELLINGS

In household surveys a distinction is often made between dwellings, households and families as per the Census of Population and Housing, with allowance made for the possibility of more than one household living in a single dwelling, and for a household to comprise more than one family. In the census, adwelling is a habitable structure, a household is a group of related or unrelated people who make common provision for food, while a family is a group of people related by blood, marriage, adoption, step or fostering who usually reside within a single family. Note that in a block of flats, for example, each flat is considered to be a separate dwelling.[1]

In practice, the distinction between dwellings, households and families was found to have little importance in the WAACHS. Aboriginal families living together often contain extended family relationships. However, there were hardly any cases were two or more unrelated families were found to be living in the same household, and no cases were found were multiple households were residing in the same dwelling. In this volume, the terms household and family are used interchangeably, while the term dwelling is used to describe the physical structure in which a household or family is living.

INDEX OF RELATIVE SOCIO-ECONOMIC DISADVANTAGE

The index of relative socio-economic disadvantage is one of five measures of socio-economic status calculated by the ABS in their SEIFA product.[3] The index is a summary measure calculated from census data which ranks the relative level of disadvantage of each census collection district (CD). As one of the factors included in the standard SEIFA product is proportion of Aboriginal and Torres Strait Islander people in each CD, the ABS produced a special version of the index for use in this survey that excluded this variable as a factor. The index is scaled to have a mean of 1,000 and a standard deviation of 100. Lower values indicate greater levels of disadvantage.

INDIGENOUS STATUS

To be included in the survey, carers had to identify one or more of their children in their household as being of Aboriginal or Torres Strait Islander origin. Only Aboriginal or Torres Strait Islander children (under the age of 18 years) were included in the survey, even in those cases where there were both Aboriginal and non-Aboriginal children living in the same household. Note that the carers did not have to be Aboriginal for the family to be included in the survey.

Carers were also asked whether they were of Aboriginal or Torres Strait Islander descent. Approximately 17 per cent of primary carers and 21 per cent of secondary carers of Aboriginal and Torres Strait Islander children and young people were not of Aboriginal or Torres Strait Islander descent.

LEVEL OF RELATIVE ISOLATION (LORI)

A new classification of remoteness and isolation has been designed for this survey — the Level of Relative Isolation (LORI). The LORI is based on a product from the National Key Centre for Social Application of Geographic Information Systems at Adelaide University (GISCA) called ARIA++. The ARIA++ is an extension of ARIA (the Accessibility/Remoteness Index of Australia), which was first published in 1997 and has been widely adopted as the standard classification of remoteness in Australia. Because ARIA is based on describing the entire population of Australia, it has not been specifically designed to describe the circumstances of Aboriginal people living in remote areas. The ARIA++ gives much greater discrimination among more remote areas by including more service centres, of smaller sizes, in calculating its remoteness scores.

Based on the ARIA++ scores, five categories of isolation have been defined specifically for the survey that reflect differences in access to services for Aboriginal children. To avoid confusion with the original ARIA, the five categories are referred to as Levels Of Relative Isolation (LORI) and range from None (the Perth Metropolitan area) to Low (e.g. Albany), Moderate (e.g. Broome), High (e.g. Kalumburu) and Extreme (e.g. Yiyili).

See *Level of Relative Isolation* in Chapter 1, and *Appendix C — Determination of Levels of Relative Isolation from ARIA++* of Volume One[3] for more details.

LOGISTIC REGRESSION

See **MULTIVARIATE LOGISTIC REGRESSION MODELLING**

MULTIVARIATE LOGISTIC REGRESSION MODELLING

Logistic regression is a modelling technique that is used to investigate the relationship between the probability of a certain outcome (for example, a child having a particular health condition) and a set of explanatory variables. Logistic regression is discussed in several statistical publications – see, for example, Hosmer and Lemeshow (2000).[4] In this publication, logistic regression models have been fitted using a weighted version of multi-level modelling which allows for community level, family level and individual level factors to be included as explanatory variables in the models (see Pfeffermann *et al*, 1997).[5] This technique takes into account the survey weights and the hierarchical structure of the data with selection of children within families and communities.

Logistic regression modelling has been used in situations where multiple factors may all have an impact on an outcome of interest. If the factors themselves are inter-related, bivariate tables may not tell the full story. For each variable included in a logistic regression model, the model determines its effect on the outcome independent of the effect of all other variables included in the model.

ODDS RATIO

The odds of a given event is the ratio of the probability of its occurrence to the probability of its non-occurrence. For instance the odds of obtaining heads in a coin toss are one to one, the odds of any given face in the roll of a die are one to five. The odds ratios used in this publication are a measure of relative risk, derived from a formula which examines the association between, in most of the survey cases, a risk factor (exposure), and an adverse health outcome. In this publication odds ratios have been estimated using logistic regression, which estimates the effect of each risk factor included in a model after adjusting for the independent effects of all other factors included in the model.

The statistical significance of an odds ratio can be judged by whether the confidence interval includes the reference value of one.

OUTSTATIONS

Generally speaking outstations are small Aboriginal communities where families live in close connection with the natural environment. These outstation communities are often linked to a larger parent Aboriginal community for the provision and maintenance of services.

PRIMARY CARER

For each child in the survey, the family was asked to identify the primary carer of that child. This was the person who was considered to spend the most time with the child or who had primary responsibility for the upbringing of the child. In many cases, the primary carer was the child's mother. The primary carer was then asked to provide information about each of the children in their for the survey.

RECORD LINKAGE

Carers were asked for consent to access their hospital and medical records, as well as the birth, hospital and medical records of their children. Carers who consented were given the opportunity to opt out at any stage should they change their mind. The vast majority of carers consented to these records being accessed. Of primary carers, 96.7 per cent consented to allow access to their hospital records, while 92.8 per cent of secondary carers gave similar consent. Overall, 96.3 per cent of carers gave consent for their children's birth, hospital and medical records to be accessed.

The WA Record Linkage System is unique in Australia, and one of only a handful of similar data collections in the world. It links together birth and death registrations with administrative hospital data from several sources to give a comprehensive record of health services contacts for the population of Western Australia. As there are no unique identifying numbers, probabilistic record linkage has been used to link the files together. This operates on matching names, dates of birth, hospital names and addresses. The procedure allows for possible changes in the matching fields by calculating the probabilities of records being correct matches. Records that are potential links are clerically reviewed, and the overall error rate has been estimated to be less than one per cent.

Key components of the record linkage system used in the survey are the birth records, the Hospital Morbidity Data System and the Mental Health Information System.

SECONDARY CARER

Each family was asked to identify the primary and secondary carer of each child. Often the secondary carer was the father of the child, but may also have been a grandparent or other relative of the child, or other person involved in the upbringing of the child.

ENDNOTES

1. Australian Bureau of Statistics. *2001 Census dictionary.* Canberra: Australian Bureau of Statistics (Catalogue 2901.0); 2001.
2. Australian Bureau of Statistics. *Information paper 1996 Census of Population and Housing Socio-economic Indexes for Areas.* Canberra: Australian Bureau of Statistics (Catalogue 2039.0); 1998.
3. Zubrick SR, Lawrence DM, Silburn SR, Blair E, Milroy H, Wilkes E, Eades S, D'Antoine H, Read A, Ishiguchi P, Doyle S. *The Western Australian Aboriginal Child Health Survey: The health of Aboriginal children and young people.* Perth: Telethon Institute for Child Health Research; 2004.
4. Hosmer D, Lemeshow S. *Applied logistic regression 2nd edition.* New York: Wiley; 2000.
5. Pfeffermann D, Skinner CJ, Holmes DJ, Goldstein H, Rasbash J. Weighting for unequal selection probabilities in multi-level models. *Journal of the Royal Statistical Society, Series B* 1998;60:23–40.