

# report 21

# women's health *a u s t r a l i a*



## **The Australian Longitudinal Study on Women's Health**

**20 September 2003**



*The* UNIVERSITY  
*of* NEWCASTLE  
AUSTRALIA

in association with



THE UNIVERSITY  
OF QUEENSLAND  
AUSTRALIA

## REPORT 21

### TABLE OF CONTENTS

|   |           |
|---|-----------|
| <b>EXECUTIVE SUMMARY .....</b>  | <b>5</b>  |
| <b>1. COLLABORATIVE RESEARCH ACTIVITIES .....</b>   | <b>7</b>  |
| 1.1. SCIENTIFIC MEETINGS AND TELECONFERENCES AMONG RESEARCH TEAM .....  | 7         |
| 1.2. SUMMARY OF COLLABORATIVE RESEARCH ACTIVITIES .....   | 7         |
| 1.2.1. <i>Projects completed and in progress by WHA investigators and collaborators</i> .....                         | 7         |
| 1.2.2. <i>Completed postgraduate theses (since June 2003)</i> .....   | 11        |
| 1.2.3. <i>Student projects in progress</i> .....  | 13        |
| 1.3. RESEARCH SYNTHESIS “GLOSSY” BROCHURES .....  | 14        |
| <b>2. CONDUCT OF SURVEYS .....</b>  | <b>15</b> |
| 2.1. YOUNGER SURVEY 3 (IN PROGRESS) .....   | 15        |
| 2.2. MID-AGE SURVEY 4 (PILOTING) .....  | 16        |
| <b>3. METHODOLOGICAL ISSUES: SOURCES AND DEVELOPMENT OF INSTRUMENTS, RELIABILITY AND VALIDITY OF MEASURES .....</b>   | <b>22</b> |
| 3.1. DERIVED VARIABLES .....  | 22        |
| 3.2. TRANSITION VARIABLES .....   | 22        |
| 3.3. ACCESS TO, AND SATISFACTION WITH, HEALTH SERVICES: ANALYSIS BY LANGUAGE SPOKEN AT HOME ...                       | 23        |
| 3.3.1. <i>Abstract of Report</i> .....  | 23        |
| 3.3.2. <i>Details of Analysis and Interpretation</i> .....  | 23        |
| <b>4. MAINTENANCE OF COHORTS .....</b>  | <b>34</b> |
| <b>5. DISSEMINATION OF STUDY FINDINGS .....</b>   | <b>34</b> |
| 5.1. WEB SITE .....   | 34        |
| 5.2. COMMUNICATION WITH STUDY PARTICIPANTS .....  | 34        |
| 5.3. PUBLICATIONS .....   | 34        |
| 5.3.1. <i>Papers Published</i> .....  | 34        |
| 5.3.2. <i>Papers Accepted</i> .....   | 37        |
| 5.4. CONFERENCE SYMPOSIA AND SPECIAL EVENTS .....   | 41        |
| 5.4.1. <i>NSW Department for Women Roundtable: Young Women and Pregnancy, Sydney, 25<sup>th</sup> July 2003</i> ..... | 41        |
| 5.5. CONFERENCE PRESENTATIONS .....   | 41        |
| 5.6. OTHER PRESENTATIONS .....  | 44        |
| 5.7. MEDIA .....  | 45        |
| <b>6. ARCHIVING .....</b>   | <b>46</b> |
| <b>7. FINANCIAL STATEMENT .....</b>   | <b>46</b> |
| <b>8. PROJECT STAFF JULY - SEPTEMBER 2003 .....</b>   | <b>48</b> |
| 8.1. PROJECT STAFF: RESEARCH CENTRE FOR GENDER AND HEALTH, UNIVERSITY OF NEWCASTLE .....                              | 48        |
| 8.2. PROJECT STAFF: UNIVERSITY OF QUEENSLAND .....  | 48        |
| 8.3. PROJECT INVESTIGATORS .....  | 49        |
| 8.4. ASSOCIATE INVESTIGATORS CURRENTLY WORKING WITH THE MAIN COHORTS .....  | 49        |
| <b>APPENDICES .....</b>   | <b>51</b> |
| <b>APPENDIX 1. SCIENTIFIC MEETINGS AND TELECONFERENCES AMONG RESEARCH TEAM</b>  | <b>53</b> |
| APPENDIX 1.1. STEERING COMMITTEE TELECONFERENCE MINUTES .....   | 55        |
| APPENDIX 1.2. ALSWH DATA MEETING .....  | 64        |
| <b>APPENDIX 2. RESEARCH SYNTHESIS “GLOSSY” BROCHURES .....</b>  | <b>83</b> |

|  |           |
|--|-----------|
| <b>APPENDIX 3. DERIVED CROSS-SECTIONAL AND TRANSITION VARIABLES .....</b>            | <b>85</b> |
| APPENDIX 3.1. SMOKING STATUS – YOUNGER AND MID-AGE COHORTS SURVEY 2.....             | 87        |
| APPENDIX 3.2. ALCOHOL STATUS AND ALCOHOL BINGE STATUS .....                          | 90        |
| APPENDIX 3.3. ALCOHOL INTAKE AND PATTERN OF ALCOHOL CONSUMPTION .....                | 96        |
| APPENDIX 3.4. MID-AGE SURVEY 1 REVISED EXERCISE STATUS VARIABLE.....                 | 104       |
| APPENDIX 3.5. MID-AGE CUMULATIVE EXERCISE STATUS VARIABLE.....                       | 107       |
| APPENDIX 3.6. TRANSITION IN ALCOHOL CONSUMPTION – YOUNGER COHORT, SURVEYS 1 & 2..... | 111       |

## List of Tables

|  |    |
|--|----|
| TABLE 1.1. CURRENTLY ENROLLED PHD STUDENTS .....   | 13 |
| TABLE 2.1. TIMETABLE FOR YOUNGER SURVEY 3 (AT 9 <sup>TH</sup> SEPTEMBER 2003) .....  | 15 |
| TABLE 2.2. RESPONSE RATES FOR YOUNGER SURVEY 3 (AT 9 <sup>TH</sup> SEPTEMBER 2003) .....   | 15 |
| TABLE 2.3. SUMMARY OF ITEMS IN MID-AGE PILOT SURVEY 4, DERIVATION, AND RELATIONSHIP TO MID-AGE SURVEY 3 (2001).....  | 17 |
| TABLE 3.1. PERCENTAGE OF WOMEN IN EACH COHORT WHO SPOKE A LANGUAGE OTHER THAN ENGLISH AT HOME. ....  | 24 |
| TABLE 3.2. PERCENTAGES OF WOMEN RESPONDING “EXCELLENT” OR “VERY GOOD” TO ITEMS ON HEALTH SERVICE ACCESS AND SATISFACTION. BOLD FACE INDICATES P < .005 AND MORE THAN 3 PERCENTAGE POINT DIFFERENCE.....          | 25 |
| TABLE 3.3. PERCENTAGES OF WOMEN RESPONDING “EXCELLENT”, “VERY GOOD” OR “GOOD” TO ITEMS ON HEALTH SERVICE ACCESS AND SATISFACTION. BOLD FACE INDICATES P < .005 AND MORE THAN 3 PERCENTAGE POINT DIFFERENCE. .... | 26 |
| TABLE 3.4. ACCESS AND SATISFACTION WITH HEALTH SERVICES BY WOMEN WHO SPEAK A LANGUAGE OTHER THAN ENGLISH AT HOME: CRUDE AND ADJUSTED ODDS RATIOS FOR RESPONDING “FAIR” OR “POOR”. MID-AGE COHORT.....            | 27 |
| TABLE 3.5. DISTRIBUTION OF “DON’T KNOW” AND MISSING RESPONSES BY WOMEN WHO SPEAK A LANGUAGE OTHER THAN ENGLISH AT HOME: ALL COHORTS.....   | 29 |
| TABLE 3.6. ANALYSIS OF NON-RESPONDENTS (DON’T KNOW): CRUDE AND ADJUSTED ODDS RATIOS FOR MID-AGED COHORT.....   | 30 |
| TABLE 3.7. CHARACTERISTICS (%) OF WOMEN WHO SPEAK ENGLISH OR ANOTHER LANGUAGE AT HOME: YEAR OF ARRIVAL IN AUSTRALIA, ENGLISH COMPETENCY AND LANGUAGE SPOKEN AT HOME.....   | 32 |
| TABLE 3.8. CHARACTERISTICS (%) OF WOMEN WHO SPEAK ENGLISH OR ANOTHER LANGUAGE AT HOME: RESPONSES TO GP VISIT QUESTIONS, PREVALENCE OF SELECTED SYMPTOMS AND REPORTED HOSPITAL USE.....                           | 33 |
| TABLE 7.1. FINANCIAL STATEMENT .....   | 47 |

## List of Tables: Appendices

|   |     |
|---|-----|
| TABLE A1.2.1. ACTIONS TO BE TAKEN NOW .....   | 68  |
| TABLE A1.2.2. ACTIONS TO BE TAKEN OR GOT UNDER WAY SOON .....   | 69  |
| TABLE A1.2.3. LESS DEFINITE LONGER TERM PLANS.....  | 69  |
| TABLE A1.2.4. DELIVERABLES AND TIMELINE SPECIFIED IN DRAFT CONTRACT (ANNEXURE B).....   | 70  |
| TABLE A1.2.5. DATA TIMELINE: JULY 2003 – DECEMBER 2005 .....  | 73  |
| TABLE A1.2.6. SURVEY AND DATA TIMELINE.....   | 78  |
| TABLE A1.2.7. REPORTS TIMELINE .....  | 80  |
| TABLE A3.1.1. NUMBER AND PERCENT IN AIHW SMOKING STATUS CATEGORIES AT SURVEY 2 .....  | 88  |
| TABLE A3.1.2. COMBINATIONS OF CURRENT SMOKING AND LIFETIME CONSUMPTION OF AT LEAST 100<br>CIGARETTES AND THE NUMBER ASSIGNED TO EACH CATEGORY OF AIHW SMOKING STATUS AT<br>SURVEY 2 .....                                       | 89  |
| TABLE A3.2.1. RISKS ASSOCIATED WITH ALCOHOL CONSUMPTION – NHF.....  | 92  |
| TABLE A3.2.2. RISKS ASSOCIATED WITH ALCOHOL CONSUMPTION – ALSWH .....   | 93  |
| TABLE A3.2.3. PERCENT IN EACH CATEGORY FOR ALCOHOL RELATED HEALTH RISK .....  | 93  |
| TABLE A3.2.4. CATEGORIES FOR ALCOHOL BINGE STATUS DERIVED FROM ALSWH ALCOHOL CONSUMPTION AND<br>BINGE FREQUENCY .....   | 94  |
| TABLE A3.2.5. PERCENT IN EACH CATEGORY FOR PATTERN OF ALCOHOL CONSUMPTION INCLUDING BINGE<br>DRINKING .....   | 95  |
| TABLE A3.3.1. RISK OF HARM IN THE LONGER TERM ASSOCIATED WITH ALCOHOL CONSUMPTION – USING<br>NRMRC GUIDELINES.....  | 99  |
| LESS THAN ONCE A WEEK .....   | 99  |
| TABLE A3.3.2. PERCENT IN EACH CATEGORY FOR ALCOHOL RELATED HEALTH RISK .....  | 100 |
| TABLE A3.3.3. PERCENT IN EACH CATEGORY FOR PATTERN OF ALCOHOL CONSUMPTION .....   | 102 |
| TABLE A3.3.4. SURVEY ITEMS FOR QUANTITY AND FREQUENCY OF ALCOHOL CONSUMPTION, ESTIMATED NUMBER<br>OF DRINKS PER WEEK AND CATEGORIES FOR RISK, ALSWH AND NRMRC.....  | 103 |
| TABLE A3.4.1. DEFINITIONS AND CATEGORIES FOR REVISED EXERCISE STATUS MID 1.....   | 105 |
| TABLE A3.4.2. NUMBER AND PERCENT IN REVISED SURVEY 1 MEASURE, COMPARED WITH ORIGINAL PA MEASURE<br>AND PERCENTAGES AT SURVEY 1 .....  | 106 |
| TABLE A3.4.3. PERCENT IN EACH PHYSICAL ACTIVITY CATEGORY AND SURVEY 1, 2 AND 3 .....  | 106 |
| TABLE A3.5.1. CUT POINTS FOR PHYSICAL ACTIVITY SCORES FOR SURVEY 1,2 AND 3 AND FOR CUMULATIVE<br>PHYSICAL ACTIVITY SCORES.....  | 108 |
| TABLE A3.5.2. NUMBER AND PERCENT IN EACH PHYSICAL ACTIVITY CATEGORY FOR CUMULATIVE SCORE,<br>SURVEYS 1 AND 2. (INCLUDES THOSE WOMEN WHO RESPONDED TO SURVEY 1 AND THE FULL VERSION<br>OF SURVEY 2).....                         | 108 |
| TABLE A3.5.3. NUMBER AND PERCENT IN EACH PHYSICAL ACTIVITY CATEGORY FOR CUMULATIVE SCORE,<br>SURVEYS 1, 2 AND 3. (INCLUDES THOSE WOMEN WHO RESPONDED TO SURVEY 1 AND THE FULL<br>VERSIONS OF SURVEYS 2 AND 3) .....             | 108 |
| TABLE A3.5.4. REASONING FOR SURVEY 1 PHYSICAL ACTIVITY CUT POINTS .....   | 109 |
| TABLE A3.5.5. REASONING FOR SURVEY 2 AND SURVEY 3 PHYSICAL ACTIVITY CUT POINTS.....   | 109 |
| TABLE A3.5.6. CUT POINTS FOR PHYSICAL ACTIVITY SCORES FOR SURVEYS 1, 2 AND 3 AND FOR CUMULATIVE<br>PHYSICAL ACTIVITY SCORES.....  | 109 |
| TABLE A3.5.7. NUMBER AND PERCENT IN EACH OF THE FIVE PHYSICAL ACTIVITY CATEGORIES FOR CUMULATIVE<br>SCORE, SURVEYS 1 AND 2. (INCLUDES THOSE WOMEN WHO RESPONDED TO SURVEY 1 AND THE FULL<br>VERSION OF SURVEY 2).....           | 110 |
| TABLE A3.5.8. NUMBER AND PERCENT IN EACH OF THE FIVE PHYSICAL ACTIVITY CATEGORIES FOR CUMULATIVE<br>SCORE, SURVEYS 1, 2 AND 3 (INCLUDES THOSE WOMEN WHO RESPONDED TO SURVEY 1 AND THE FULL<br>VERSIONS OF SURVEYS 2 AND 3)..... | 110 |
| TABLE A3.6.1. CROSS-TABULATION OF ALCOHOL CONSUMPTION AT SURVEYS 1 AND 2.....   | 112 |
| TABLE A3.6.2. TRANSITION IN ALCOHOL CONSUMPTION BETWEEN SURVEYS 1 AND 2.....  | 113 |

## EXECUTIVE SUMMARY

1. This Report, unlike previous six-monthly Reports, covers a three-month period. Major activities have been the production of brochures outlining research synthesis work, continuation of Survey 3 of the Younger cohort, development of Survey 4 of the Mid-age cohort, preparation of a newsletter to distributed to all participants in October, negotiation over continued funding of the project, student supervision, conduct of substudies and analyses, statistical and data management, and conference presentations.
2. The “glossy” reports that summarise Research Syntheses conducted in the first half of 2003 have been completed and provided to the Department of Health and Ageing. Additional copies have been distributed widely to other Commonwealth and State Departments, and to other relevant government and non-government organizations.
3. The work program of annual surveys continues to progress smoothly. Survey 3 of the Younger cohort was mailed in March. During the reporting period, intensive efforts have been made to track and telephone non-respondents, and the response rate for this survey is now 60%, at 9<sup>th</sup> September 2003. Planning for Mid-Age Survey 4, which will be conducted in 2004, is continuing. The survey has been finalised and pilot work is currently under way. The data from Older Survey 3, collected in 2002, have been cleaned and distributed within the research team.
4. Graduate research students provide an important dimension to the project. In the reporting period, it is pleasing to note that two PhD students have submitted their theses in this three-month period and several others are working towards completion later in the year. Research students are an investment in the future of health research and evaluation in this country. Most are supported by scholarships and grants from other sources, meaning that they add to the project and its outcome without significant cost to core funds.
5. Other research activity has continued during the reporting period. A number of substudies and additional analyses are underway. These include substudies on and health services for older women with cardiovascular disease; the health service experiences of family caregivers; processes of negotiating time use within couples; and mid-age women’s history of contraceptive use.
6. Work on methods and measurement has also continued during the reporting period. In particular, work is being carried out on variables defining risky behaviours such as unsafe alcohol consumption, cigarette smoking, and the use of illicit drugs.
7. Dissemination of findings to the scientific community has included the publication of five papers in peer-reviewed academic journals, the acceptance of seven other for future publication, and six conference presentations at national meetings, as well as a range of other symposia and public addresses.
8. The research team has expended considerable time and effort in organizational activity. This has mainly centred on re-funding of the project. At the time of printing, we are awaiting the outcome of negotiations over continued funding. We hope for a

satisfactory resolution that will enable us to concentrate on the project rather than on financial negotiation. At the same time, there has been some structural reorganization. Professor Christina Lee, who has been Project Manager in Newcastle since January 2000, has relocated to the University of Queensland and is now the Project Coordinator (65% full time). Dr Penny Warner-Smith has taken over as Interim Project Manager in Newcastle, while Professor Lois Bryon has taken on the part-time position of Director of the Research Centre for Gender and Health. With the new arrangements in place, the research team is confident of our ability to maintain continuity.

## 1. COLLABORATIVE RESEARCH ACTIVITIES

### 1.1. SCIENTIFIC MEETINGS AND TELECONFERENCES AMONG RESEARCH TEAM

The strategy of electing a Steering Committee who participate in teleconferences and other planning activities, and report to the broader group of Investigators, has continued. The Steering Committee consists of a core group of Investigators who are able, at the time, to commit considerable effort to the project. Membership is flexible and decided on an annual basis, so that a group of about six people are involved at this level at any one time. Current Steering Committee members are: Annette Dobson (Chair); Wendy Brown; Lois Bryson; Julie Byles; Christina Lee; Penny Warner Smith; and Anne Young.

Appendix 1.1 includes meeting notes and minutes for Steering Committee teleconferences held on 7<sup>th</sup> July 2003; 7<sup>th</sup> August 2003; and 4<sup>th</sup> September 2003.

A face-to-face meeting of researchers and staff from the Universities of Newcastle and Queensland who work with the data was held on Friday 11<sup>th</sup> July 2003. This resulted in the production of two detailed work plans covering the period from July 2003 until December 2005, one covering surveys, data preparation and analyses, and the other listing the reporting process. These work plans, together with notes from the meeting, appear in Appendix 1.2. It should be noted that the work plans and timetables are provisional and will be modified as necessary when a further contract is finalized.

### 1.2. SUMMARY OF COLLABORATIVE RESEARCH ACTIVITIES

#### 1.2.1. Projects completed and in progress by WHA investigators and collaborators

|                                     |  |
|-------------------------------------|--|
| <b>Project:</b>                     | Violence against young women and reproductive health   |
| <b>WHA Investigator:</b>            | Professor Christina Lee  |
| <b>Collaborative Investigators:</b> | Dr Angela Taft (Centre for Mothers' and Children's Health, La Trobe University) & Dr Lyn Watson (Centre for Mothers' and Children's Health, La Trobe University) |
| <b>Funding Source:</b>              | Office for the Status of Women   |

This analysis of existing data has been commissioned by the Office for the Status of Women, Department of the Prime Minister and Cabinet, and has been under way since mid 2002. The project is in three parts:

- A cross-sectional analysis of the correlates of violence against young Australian women at each of Surveys 1 and 2, completed in March 2003
- A report on these analyses to the Office for the Status of Women's annual conference, held in March 2003
- A longitudinal analysis of patterns of consistency and change in experiences of abuse, and of the longer-term effects of abuse on reproductive health across Surveys 1 and 2, completed in mid September 2003.

The final report describes the associations of violence against young Australian women, with an emphasis on reproductive health. While there is already some clinical evidence from



Australia, and community-based surveys from overseas, the Australian Longitudinal Study on Women's Health provides the first Australian evidence at a population level on this topic.

Data from Survey 1 (1996) and Survey 2 (2000) of the Young cohort of ALSWH provide the raw material for this analysis. Cross-sectional analyses of the two surveys and the transitional analysis have been completed and reported. At each survey, women were categorised into four mutually exclusive groups:

- **1. No violence: women in category 1 report not having experienced violence or abuse**  
75% at Survey 1; 82% at Survey 2
- **2. Recent non-partner violence (physical or sexual violence from people other than intimate partners)**  
13% at Survey 1; 5% at Survey 2
- **3. Previous partner violence**  
6% at Survey 1; 7% at Survey 2
- **4. Partner violence together with current or recent physical or sexual violence**  
5% at Survey 1; 3% at Survey 2

Overall, 24% of young women reported violence in Survey 1 and 15% in Survey 2. Experience of violence, particularly violence by partners, was associated with significantly poor reproductive and pregnancy outcomes and reproductive risks, as well as with a range of demographic factors, poor mental and physical health, unhealthy behaviours such as drinking and smoking, and low social support. Nevertheless, the survey also provides evidence of the beneficial effect of social support in enhancing victimised women's physical and mental wellbeing and the protective effect of education. As women separate and are more removed from the violence, their mental health improves.

The data demonstrate that partner violence in particular is associated with a worrying level of health problems, many of which have far-reaching implications for these women's health and the health of their children. While some health problems improve when women separate, others such as STDs persist and still place women at risk, indicated by high abnormal pap smears rates, even in this young age group. They also provide evidence of women's active help-seeking from health services, which increases as women's experience of violence intensifies. They indicate a need for concerted efforts to prevent violence against women, to educate health service providers in the identification of violence, the many serious risks associated with it and to provide appropriate and effective early interventions, especially in partner violence.

This report includes a linked analysis of women's Survey 1 and Survey 2 data, allowing an exploration of the effects of changes in women's life circumstances on their experiences of violence and on their reproductive health and on their wider health and wellbeing.

|                                     |   |
|-------------------------------------|---|
| <b>Project:</b>                     | How well do health and community services help older people with neurodegenerative disorders and their family caregivers? |
| <b>WHA Investigators:</b>           | Professor Annette Dobson, Professor Christina Lee   |
| <b>Collaborative Investigators:</b> | Dr Leigh Tooth, Professor Andrew Wilson, Assoc Professor Gerard Byrne   |
| <b>Funding Source:</b>              | NHMRC Project Grant   |

This is a comparative study of family carers for older people living with neurodegenerative

disorders which are likely to require different types of support and services. Disorders may have effects which are largely cognitive (eg Alzheimer's disease), largely physical (eg Parkinson's disease), or both. Information will be obtained from carers of their experiences of health care and other services, and the impact of caring on their own health.

Draft surveys were assessed by focus groups of women caring for family members with a range of disabilities. These showed that considerable revision of the content and layout was required, in order to be responsive to the needs and concerns of caregivers. Surveys have been revised and a further round of focus groups, targeting carers of family members with neurodegenerative disorders only, is being arranged. Following these focus groups, and any further adjustments to the survey instruments, a survey of Older caregivers is planned for 2004.

**Project:** Are cardiac conditions in older women managed appropriately?  
**WHA Investigator:** Professor Annette Dobson  
**Collaborative Investigators:** Professor Andrew Wilson & Ms Lindy Humphreys-Reid (Queensland University)  
**Funding Source:** NHMRC Project Grant & NHMRC scholarship for Ms Humphreys-Reid

Cardiac conditions, including heart attack, heart failure, angina and hypertension, are very common among older Australians. They account for a large proportion of mortality, morbidity and health care costs. For most of the conditions there are highly effective treatments, however there is evidence that these are not as well used as they might be. Also, for women, diagnosis may be delayed because of perceptions that heart disease is a problem mainly of men. This substudy is based on the Older cohort of ALSWH. Women with cardiac conditions will be surveyed concerning their medical care. This targeted information, together with data from the main Surveys 1, 2 and 3, and Medicare unit records where they are available, will be compared with best practice guidelines established by NHMRC and the National Heart Foundation of Australia. The first stage of this project involves the development and validation of the targeted survey. This will be done with groups of cardiac patients with known diagnoses, drawn from hospital and general practice populations.

**Project:** Weight maintenance in young women  
**WHA Investigator:** Dr Kylie Ball  
**Collaborative Investigators:** Associate Professor David Crawford (School of Health Sciences, Deakin University)  
**Funding Source:** NHMRC Fellowship; Internal Deakin University Funds

This substudy follows-up a selected sample of women from the Younger cohort who have gained weight between surveys 1 and 2 and women who have maintained their weight during this period, and to investigate potential psychosocial and environmental predictors of weight gain/maintenance in this cohort. Surveys were mailed to 1200 young women early in 2002, and completed surveys were received from a total of 939 women. Data coding, entry and cleaning has been completed and preliminary analyses are continuing.

**Project:** Dietary Analyses: Mid-age Women  
**WHA Investigator:** Dr Kylie Ball, Professor Wendy Brown, Professor Annette Dobson, Professor Christina Lee, Dr Gita Mishra, Dr Amanda Patterson  
**Collaborative Investigators:** Allison Hodge (Cancer Council Victoria)  
**Funding Source:** NHMRC Travel award (Dr Kylie Ball); MRC-NHR

This series of analyses aims to describe the diets of Australian women and how they vary by sociodemographic and health characteristics. Analysis of Food Frequency Questionnaire data from the Mid-age cohort was conducted during a visit by Investigator Kylie Ball to Cambridge University where she worked with Investigator Gita Mishra. Two papers – one focusing on describing the dietary intakes of women in the Mid-age cohorts, and one on assessing the extent to which they meet dietary guidelines – have been submitted for publication.

**Project:** Work-life tensions: time pressure, leisure and well-being among dual-earner parents in Australia  
**WHA investigator:** Professor Peter Brown, Professor Lois Bryson & Dr Penny Warner-Smith  
**Collaborative investigators:** Associate Professor Duncan Ironmonger (Melbourne University)  
**Funding Source:** ARC Discovery Grant (2003-2005)

**Project summary:** Empirical studies of work-life tensions, especially for women, have rarely considered how individuals actually experience time pressures. The main aim of this project is to examine the hypothesis that well-being is positively related to reduced time pressure, more leisure and greater control over time schedules. The project will use an innovative time-use sampling method to examine this hypothesis for parents in dual-earner households. The project will also investigate relationships between women's time use, life course experience and measures of physical and mental well-being by using data already available from the Mid-age and Younger cohorts.

**Project progress:** Ethics applications were submitted to Griffith and Newcastle Universities in January and both have been approved. Focus groups are currently being conducted in Newcastle and Brisbane, with participants recruited from outside the ALSWH study. Subsequent phases of the study – using random time-sampling and follow-up interviews – will involve a sample of 50 mid-age and 50 younger women selected from the ALSWH study, and their partners.

**Project:** Comparison of non-heterosexual and heterosexual women in Young Survey 2  
**WHA investigator:** Professor Christina Lee  
**Collaborative investigators:** Dr Ruth McNair & Ms Liz Stewart (Melbourne University). Professor Marian Pitts, Dr Lynn Hillier, Dr Anne Kavanagh, Ms Philomena Horsley & Ms Anne Mitchell (Australian Research Centre in Sex, Health and Society, La Trobe University)  
**Funding Source:** Royal Women's Hospital, Victoria - donation \$5 000  
 Further funding is being sought

The research team has recently re-convened due to new funding and are planning analysis from two different ALSWH surveys.

### **Younger Survey 2**

Comparison between the non-heterosexual and heterosexual women initially focused on mental health and drug use. The analysis planned next includes:

health service usage

sexual health, cervical health

reproductive (pregnancy, abortion, contraceptive)

exercise, body image, BMI, diet

Subgroups of the research team will look at each of these areas with a view to preparing papers for publication.

### **Mid-age Survey 3**

The analysis will begin during September to October 2003.

It is expected that areas will be analysed that allow comparison between the young and middle-aged cohorts.

#### **1.2.2. Completed postgraduate theses (since June 2003)**

|                            |   |
|----------------------------|---|
| <b>Project:</b>            | Stress, health behaviours and the transition to adulthood among young women           |
| <b>Degree:</b>             | PhD Thesis  |
| <b>Candidate:</b>          | Mrs Sandra Bell (University of Newcastle)   |
| <b>Supervisor:</b>         | Professor Christina Lee   |
| <b>Funding Source</b>      | University of Newcastle Science Faculty Postgraduate Award and Research Quantum Funds |
| <b>Date of Submission:</b> | 4 July 2003   |

Stress, smoking and physical activity are areas of particular concern for young women, as they report higher levels of stress, are taking up smoking at a higher rate, and are less likely to undertake vigorous leisure time physical activity, than young men. In this thesis the health psychology concepts of stress, smoking and physical activity were examined in a life-span perspective. The focus was on the transition to young adulthood, which is a time of many changes for most individuals and represents the move from a dependent adolescent to an independent adult. The transition to young adulthood was defined objectively by using positions in four life domains: residential independence, employment, relationships and parenthood. Young women participating in the ALSWH project, who were aged 18 to 23 at Survey 1 in 1996 and 22 to 27 at Survey 2 in 2000, provided the data used in this thesis. The majority of these women could be classed as being in the transition to young adulthood at the time of both surveys. The stages of transition to young adulthood were used to examine, both cross-sectionally and longitudinally, the relationships with stress, smoking and physical activity. Overall, the strongest relationships were found with stress and smoking. Physical activity was most strongly related to relationship and motherhood, but not to other stages or transitions. A consistent finding was that participants who were in the most adult stage by Survey 1 showed the most negative outcomes for longitudinal changes in stress, smoking and physical activity. The exact age at which life changes were made could not be ascertained from the main surveys. This led to a survey, which asked about the timing of six major life changes, being sent to a subsample of the young women. Early timing of the life changes

was found to be most related to negative outcomes for smoking behaviour. The implications for health and developmental psychology theories and prevention/intervention strategies are discussed. Future research could incorporate more subjective measures of the transition to young adulthood, whilst future work will entail the examination of a more complex assessment of longitudinal transitions and the impact of the timing of transitions.

**Project:** Abused Mid-aged Women in Australia: Experiences, Well-being, and Ways of Coping  
**Degree:** PhD Thesis  
**Candidate:** Ms Glennys Parker (University of Newcastle)  
**Supervisor:** Professor Christina Lee  
**Funding Source:** University of Newcastle  
**Date of Submission:** 9<sup>th</sup> September 2003

This thesis examines the relationship between characteristics of abuse, coping, and emotional well-being among women from the Australian population. Using data from the mid-aged cohort ( $N = 12339$ ) of the Australian Longitudinal Study of Women's Health, abused women ( $n = 4268$ ) were identified as an at-risk group for a number of adverse health, behavioural, and social problems. One hundred and forty-three women, who had earlier participated in a targeted survey on their experiences of abuse, completed a second questionnaire that drew on both quantitative and qualitative methods to investigate the strategies used to cope with abuse in adult relationships. This survey included the Revised Ways of Coping Checklist and the Antonovsky Sense of Coherence scale. Multivariate analysis of variance showed that problem-focused coping at the time of the abuse was not related to current emotional health, while emotion-focused coping was related to poor emotional health, and a high sense of coherence was related to better emotional health. Using data from this and the earlier abuse surveys, analysis of covariance indicated that the effect of emotion-focused coping on emotional health was indirect, through its inverse relationship with sense of coherence. In the final summary path model, sense of coherence emerged as the only coping measure to have significant direct effects on current emotional health. Greater use of emotion-focused coping was associated with frequent abuse, with the number of abusers, with talking about the abuse to a medical practitioner, with emotional abuse, with returning to an abusive partner, with feeling a bond with other abused women, with feeling vulnerable to further abuse, and with viewing oneself as a victim, and not with talking about the abuse to family or friends. After controlling for emotion-focused coping, a high sense of coherence was positively related to disclosure of the abuse to family and friends, but inversely associated with abuse from strangers, with frequent abuse, with recent abuse, with talking about the abuse to a psychiatrist, with talking about the abuse to a social worker, with talking about the abuse to a financial advisor, with feeling vulnerable to further abuse, and with viewing oneself as a victim. However, characteristics of abuse experience explained less than 29 per cent of the variance on coping measures. Qualitative analysis of women's own descriptions of useful ways of coping generally identified self-determination and self-affirmation, distancing and distraction tactics, and open disclosure of the abuse. The thesis concludes that coping is more usefully viewed as a personal resource than as a strategy, and its efficacy in situations of abuse will be determined by each woman's perception of the situation, by the degree of challenge to comprehensibility, manageability, and meaningfulness, and by the extent of individual resolve for change.

### 1.2.3. Student projects in progress

Table 1.1 lists students who are currently enrolled in PhD projects. All provided progress reports in June 2003 (Report 20) and will provide further reports in December 2003 (Report 22).

**Table 1.1. Currently enrolled PhD students**

| Name                 | Institution              | Supervisors                                 | Thesis topic  | Expected Submission Date |
|----------------------|--------------------------|---|---|--------------------------|
| Melissa Graham       | La Trobe (Bendigo)       | Erica James<br>Helen Keleher<br>Julie Byles | Treatments for Menstrual Symptoms: An Epidemiological Investigation                                       | Oct 2003                 |
| Esben Strodl         | University of Queensland | Justin Kenardy                              | Psychological factors in coronary heart disease   | Oct 2003                 |
| Heather McKay        | University of Melbourne  | Jane Fisher                                 | Childlessness and the Role of Choice in Childless Women's Reproductive Outcome                            | Maternity leave          |
| Lauren Miller-Lewis  | Flinders University      | Tracey Wade<br>Christina Lee                | Psychosocial Risk Factors for Pregnancy, Childbirth, and Pregnancy Risk-Taking in Late-Adolescent Females | May 2004                 |
| Nadine Smith         | University of Queensland | Annette Dobson<br>Nancy Pachana             | Depressed mood: Psychometric and Health-Related Issues  | Jan 2005                 |
| Cate France          | University of Newcastle  | Christina Lee<br>Sue Outram                 | An exploration of how young Australian women cope with depressive symptoms                                | Sept 2005                |
| Liane McDermott      | University of Queensland | Annette Dobson<br>Neville Owen              | Reducing cigarette smoking among young women  | March 2006               |
| Lindy Humphreys-Reid | University of Queensland | Annette Dobson<br>Andrew Wilson             | Management of cardiac conditions in Older women   | Nov 2006                 |
| Sheree Gregory       | University of Melbourne  | Jill Astbury<br>Penny Warner-Smith          | Understanding Young Women's Decision-making Regarding Employment whilst Pregnant                          | Feb 2009                 |

### **1.3. RESEARCH SYNTHESIS “GLOSSY” BROCHURES**

A major activity in the previous reporting period was the preparation of five research syntheses - overviews focusing on current policy issues for the Commonwealth Department of Health and Ageing – in the areas of Chronic Disease and Health Service Use, Healthy Ageing, Mental Health, Physical Activity and Obesity, and Rural Health.

In order to increase the profile of the Study across the Department of Health and Ageing, and to introduce it to staff who may not have been aware of potential relevance in their area of responsibility, five eight-page “glossy” brochures were designed. These aimed to present the most important and policy-relevant aspects of the Research Syntheses in an attractive and readily accessible format, and included references for obtaining further information. The material was prepared by the research team, and layout was done by Tim Neve. Brochures have been produced, and as well as distribution within the Department of Health and Ageing they have been distributed widely among State Departments of Health, other Commonwealth Departments, relevant NGOs, politicians, public servants and academics.

Copies of the five brochures appear in Appendix 2.

## 2. CONDUCT OF SURVEYS

### 2.1. YOUNGER SURVEY 3 (IN PROGRESS)

Survey 3 for the Younger cohort was mailed initially in March 2003. Copies of survey materials were included in Report 20 (June 2003). Table 2.1 summarizes the timetable for Survey 3 of the Younger Cohort, and Table 2.2 the response rates at the 9<sup>th</sup> of September 2003.

**Table 2.1. Timetable for Younger Survey 3 (at 9<sup>th</sup> September 2003)**

| Date                | Mailout        | Items  | Number               |
|---------------------|----------------|--|----------------------|
| 11 March 2003       | Mailout 1      | Package mailed including survey, reply-paid envelope, letter of invitation and change of details card  | 12,796 mailed        |
| 7 April 2003        | Mailout 2      | Thank you/reminder leaflet mailed to all in Mailout 1, except recent withdrawals   | 12, 285 mailed       |
| 12 May 2002         | Mailout 3      | Reminder leaflet to all non-responders   | 6,008 mailed         |
| June and July 2003  | Extra mailouts | Packages mailed (as Mailout 1) to: <ul style="list-style-type: none"> <li>• those previously not sent surveys because of no current contact details, who have since given new contact details;</li> <li>• those who elected to have telephone interviews;</li> <li>• those who rang to say they received a reminder but did not receive the first survey;</li> <li>• those who have been tracked following return-to-sender</li> </ul> | 2,270 mailed to date |
| June – October 2003 | Phone reminder | Reminder phone calls to all non-respondents will be carried out  | Approx 5,000         |

**Table 2.2. Response Rates for Younger Survey 3 (at 9<sup>th</sup> September 2003)**

|                                | N             | %             |
|--------------------------------|---------------|---------------|
| Completed Surveys              | 7971          | 61.0%         |
| Deceased                       | 3             | 0.0%          |
| Withdrawn                      | 211           | 1.6%          |
| Overseas – will not do         | 62            | 0.5%          |
| Not this time                  | 96            | 0.7%          |
| Other have not returned survey | 4723          | 36.1%         |
| <b>TOTAL</b>                   | <b>13,066</b> | <b>100.0%</b> |



Survey 3 of the Younger Cohort is progressing smoothly. While Younger women have been difficult to track in previous years, they are now slightly older (age in 2003 is between 25 and 30) and many appear to be leading somewhat more stable lives. The number who are changing their surnames is still considerably higher than in the Mid-age and Older cohorts, but these women are now much more likely to be listed in Electronic White Pages and Electoral Rolls. Further, many of those who have been travelling overseas have now returned to Australia. There is still a substantial number working and travelling overseas, and once again we have been able to provide a British maildrop for the high proportion of overseas women who have permanent or semi-permanent British addresses. These women are invited to return their surveys to Dr Janice Muir at the University of Cardiff in Wales, who then returns the surveys to the Women's Health Australia office.

## **2.2. MID-AGE SURVEY 4 (PILOTING)**

Preparation for the fourth survey of the Mid-age cohort, which is scheduled to take place from March 2004, began in March 2003. The Mid-age women will be aged between 53 and 58. A meeting of the research team was held on 12<sup>th</sup> June 2003 to make decisions about possible changes for Survey 4 of the Mid-age cohort. Restrictions on modification include the necessity of maintaining consistency for longitudinal analysis; a perception that a longer survey might be unacceptable to many respondents; additional costs for printing and postage of a longer survey; and the need to pay copyright holders for some materials.

Table 2.3 outlines the changes made between Mid-Age Survey 3 and the pilot version of Mid-age Survey 4, together with sources of items and explanations of changes.

Approval for pilot testing of Survey 4 has been obtained from the University of Newcastle Human Research Ethics Committee. The pilot survey will be mailed to 369 women, originally from the Bathurst and Illawarra areas, who have also served as pilot test participants for Mid-age Surveys 1, 2 and 3. This part of the surveying procedure is scheduled to take place on the 12th of September 2003.

**Table 2.3. Summary of items in Mid-Age Pilot Survey 4, derivation, and relationship to Mid-Age Survey 3 (2001).**

| Mid 4 Pilot item number | Question description   | Source   | Notes  | Identical or similar item in Mid 3 survey |
|-------------------------|--|--|--|---|
| 1-11                    | SF-36  | Ware JE & Sherbourne CD. The MOS 36-Item Short-Form Health Survey  | No change  | M3Q1-M3Q11                                |
| 12 a-c                  | No. of times consulted a family doctor or a GP, hospital doctor, specialist doctor | WHA  | No change  | M3Q12a-c                                  |
| 13 a-n                  | Whether consulted health care professionals  | Modified from ABS. 1989-1990 National Health Survey. Summary of results, Australia. Canberra: ABS, 1991; Catalogue No. 4364.0. consultations | Chiropractor and osteopath combined into one item<br><br>Massage therapist added<br><br>"Other allied or alternative health practitioner" changed to "Other alternative health practitioner" |   |
| 14 a-b                  | Consistency of GP visit  | WHA "Availability and Use of Health Services Substudy"   | No change  | M3Q14a-b                                  |
| 15                      | Cost of last GP visit  | WHA  | No change  | M3Q15                                     |
| 16                      | GP lifestyle advice  | WHA  | New - responding to DoHA interest in promoting the role of GPs in lifestyle change   |   |
| 17                      | Date of birth  | WHA  | No change  | M3Q32                                     |
| 18                      | Health care card   | WHA  | No change  | M3Q17                                     |
|                         | DVA coverage   | WHA  | DELETED, now covered by M4Q19  | M3Q18                                     |
| 19                      | Health insurance for hospital cover/ancillary services                             | WHA  | Changed back to M2Q18 and M2Q19, including reasons for not having cover (one option from M2Q19 was deleted for consistency and because of very low endorsement at M2)                        | M3Q19                                     |
| 20 a-r                  | Access to health care  |  | Item k small grammatical change<br>Item r "advice from health professionals about lifestyle changes" added to reflect DoHA concerns  | M3Q20a-q                                  |

| Mid 4 Pilot item number | Question description       | Source   | Notes   | Identical or similar item in Mid 3 survey |
|-------------------------|----------------------------|--|---|---|
| 21 a-b                  | last had a pap/mammogram   | WHA  | No change   | M3Q23a-b                                  |
| 22 a-b                  | abnormal pap/mammogram     |  |   | M3Q24a-b                                  |
| 23 a-e                  | screening                  |  |   | M3Q25a-e                                  |
| 24 a-b                  | OCP/HRT                    |  |   | M3Q26a-b                                  |
| 25 a-c                  | menstrual history          |  |   | M3Q27a-c                                  |
| 26                      | menstrual changes          |  |   | M3Q28                                     |
| 27                      | age periods stopped        |  |   | M3Q29                                     |
| 28                      | Dates of children's births | WHA  | NEW. Identical to Y3Q36   |   |
| 29 a-s                  | Medications                | WHA  | Expanded to provide more detail: "pain" changed to "headache" "backache" "other pain" Added "high blood pressure", "high cholesterol", "heart problems", "diabetes" "asthma"                      | M3Q33                                     |
| 30                      | Supplements                | WHA  | No change   | M3Q34                                     |
| 31a-g                   | Falls                      | DVA trial  | NEW. Identical to O3Q15a-g  |   |
| 32 a-w                  | Medical History            | Modified from ABS 1989-1990 NHS  | Added skin cancer (so that they will not endorse "other cancer"). Removed HIV/AIDS, hepatitis. Combined types of diabetes.  | M3Q35a-y                                  |
| 33a-f                   | Sleeping problems          | Nottingham Health Profile  | NEW. Identical to O3Q14a-f  |   |
| 34                      | Trouble staying awake      | WHA  | NEW.  |   |
| 35a-p                   | Surgery/procedures         | WHA  | Expanded. Added "joint replacement", "removal of skin cancer", "other cancer surgery", "chemotherapy", "other surgery". Deleted "cosmetic surgery"  | M3Q36a-l                                  |
| 36                      | Caesarean birth            | WHA  | NEW   |   |
| 37a-f                   | Memory changes             | Crook T et al. Assessment of memory complaints in age-associated memory impairment: The MAC-Q. International Psychogeriatrics, 1992; 4:165-75. | NEW. Identical to O3Q33a-f  |   |
| 38 A/B/C a-u            | Symptoms and help seeking  | WHA (Survey 1) with revisions  | "leaking urine" and "passing urine 2x night" deleted - replaced by M4Q39. Four items about menstruation replaced with "menstrual problems". "difficulty sleeping" deleted - replaced by M4Q32-33. | M3Q37a-aa                                 |

| Mid 4 Pilot item number | Question description                 | Source   | Notes   | Identical or similar item in Mid 3 survey |
|-------------------------|--------------------------------------|--|---|---|
| 39                      | Life isn't worth living              | Modified from Beck A, Schuyler D & Herman I. Development of the Suicide Intent Scale. In Beck AT, Resnick HLP & Lettieri D. The prediction of suicide. Bowie PA: Charles Press, 1974.                            | No change   | M3Q21                                     |
| 40                      | Self-harm                            | Modified from Beck A, Schuyler D & Herman I. Development of the Suicide Intent Scale. In Beck AT, Resnick HLP & Lettieri D. The prediction of suicide. Bowie PA: Charles Press, 1974.                            | No change   | M3Q22                                     |
| 41                      | Urine leakage                        | Gunthorpe PhD  | NEW   |   |
| 42                      | Need help                            | WHA  | No change   | M3Q75                                     |
| 43a-b                   | Residential and postal postcode      | WHA  | No change   | M3Q48a-b                                  |
| 44                      | Serious illness/condition/disability | WHA  | No change   | M3Q16                                     |
| 45a-j                   | Sources of stress                    | WHA  | No change   | M3Q39a-j                                  |
| 46a-f                   | Life Control Scale                   | Bobak M, Pikhart H, Hertzman C, Rose R & Marmot M. Socioeconomic factors, perceived control and self-reported health in Russia. A cross-sectional survey. <i>Social Science Medicine</i> , 1998; 47(2): 269-279. | No change.  | M3Q83a-f                                  |
| 47-51                   | Smoking questions                    | Australian Institute of Health & Welfare. Standard questions on the use of tobacco among adults. (1998)  | Only change is that age at starting smoking has been added  | M3Q41-43                                  |
| 52 a-k                  | Depression - CES-D                   | Andresen EM, Carter WB, Malmgren JA & Patrick DL. Screening for depression in well older adults: evaluation of a short form of the CES-D. <i>American Journal of Preventive Medicine</i> , 1994; 10: 77-84.      | No change. Note that item k is not part of the scale.   | M3Q44a-k                                  |
| 53 a - hh               | Life events                          | Modified from Norbeck JS. Modification of life event questionnaire for use with female respondents. <i>Researching in Nursing &amp; Health</i> , 1984; 7: 61-71  | Changes from M3: Split death of child and death of other family member into separate categories; split you or spouse/partner being made redundant; add birth of grandchild; add you or family member involved in problem gambling; add major personal | M3Q45a-ee                                 |

| Mid 4 Pilot item number | Question description           | Source  | Notes  | Identical or similar item in Mid 3 survey |
|-------------------------|--------------------------------|---|--|---|
|                         |                                |   | achievement  |   |
| 54 a-f                  | Optimism - approach to life    | Modified from Scheier MF, Carver CS, Bridges MW. Distinguishing optimism from neuroticism (and trait anxiety, self-mastery and self-esteem): a reevaluation of the Life Orientation Test. <i>Journal of Personality &amp; Social Psychology</i> , 1994; 67(6): 1063-1078. | No change  | M3Q84a-f                                  |
| 55a-i                   | Anxiety                        | Anxiety items from Goldberg Anxiety & Depression Scale (Goldberg D et al., Detecting anxiety and depression in general medical settings. <i>BMJ</i> , 1988, 297: 897-9.)  | NEW - identical to Y3Q83a-i  |   |
| 56a-b                   | Parents still living           | WHA   | No change  | M3Q37a-b                                  |
| 57 a -b                 | Height and weight              | WHA   | No change  | M345a-b                                   |
| 58a-c                   | Weight changes                 | WHA   | No change  | M3Q47a-c                                  |
| 59-61                   | Alcohol intake                 | AIHW  | Not in M3 as included in FFQ, identical to M2Q39-41                                    |   |
| 62                      | Serves of vegetables           |   | NEW  |   |
| 63                      | Serves of fruit                |   | NEW  |   |
| 64                      | Fluid intake                   |   | NEW  |   |
| 65a-e                   | Hours spent sitting            | Wendy Brown   | More detail than in Mid 3  | M370a-b                                   |
| 66-67                   | Exercise questions             | Wendy Brown   | No change  | M3Q68-69                                  |
| 68a-h                   | Time use in past week          | WHA but items modified from ABS (1992) Time use survey.   | Three paid-work categories combined into one; socializing and using a computer deleted | M3Q71a-l                                  |
| 69 a-b                  | Rushed/pressured time on hands | Modified from Statistics Canada (1985)  | No change  | M3Q73a-b                                  |
| 70                      | Provide care to children       | WHA   | No change  | M3Q74                                     |
| 71-74                   | Provide care                   | WHA   | No change  | M376-79                                   |
| 75                      | Happy with share of tasks      | WHA   | Same as Y3Q92  |   |
| 76a-i                   | Neighbourhood Satisfaction     |   | No change  | M3Q82                                     |
| 77a-h                   | Types of paid work             | WHA   | Same as Y3Q88 - includes causal work and having more than one job                      | M3Q72a-f                                  |
| 78                      | Occupation self & partner      | ABS. Australian Standard Classification of Occupations Second Edition. 1997. Catalogue No. 1220.0. From the Web page.   | No change  | M3Q80                                     |
| 79                      | Retirement status              | HILDA study   | NEW  |   |
| 80                      | Age at retirement              | HILDA study   | NEW  |   |

| Mid 4 Pilot item number | Question description            | Source   | Notes   | Identical or similar item in Mid 3 survey |
|-------------------------|---------------------------------|--|---|---|
| 81                      | Age expect to retire            | HILDA study  | NEW   |   |
| 82                      | Age want to retire              | HILDA study  | NEW   |   |
| 83                      | Retirement decision-making      | HILDA study  | NEW   |   |
| 84                      | Sources of retirement income    | HILDA study  | NEW   |   |
| 85a-i                   | Abuse                           | Modified from Neale AV, Hwalek MA, Scott RO & Stahl C. Validation of the Hwalek-Sengstock elder abuse screening test <i>Journal of Applied Gerontology</i> , 1991; 10(4): 406-418. | Not in Mid 3. Same as Y3Q86a-i                                  |   |
| 86                      | Manage on income                | WHA  | No change   | M3Q89                                     |
| 87                      | Living arrangements             | ABS Census dictionary. 1996 Catalogue No. 2901.0   | No change   | M3Q90                                     |
| 88                      | Others dependent on income      | WHA  | No change   | M3Q91                                     |
| 89                      | Social Support                  | Sherbourne CD & Stewart AL. The MOS Social Support Survey. <i>Social Science &amp; Medicine</i> , 1991; 32(6): 705-714.  | 19-item full version (as M2Q82) replaces 6-item version from M3 | M3Q81                                     |
| 90                      | Marital status                  | WHA  | No change   | M3Q85-86                                  |
| 91 a-g                  | Satisfaction with life          | WHA  | No change   | M3Q92a-g                                  |
|                         |                                 |  |   |   |
|                         | infertility                     | WHA  | DELETED as unlikely to change                                   | M3Q30                                     |
|                         | sexual orientation              | WHA  | DELETED as unlikely to change                                   | M3Q31                                     |
|                         | Stress reduction                | WHA  | DELETED   | M3Q40                                     |
|                         | Food frequencies                | Anti Cancer Council of Victoria Food Frequency Questionnaire. Includes alcohol and replaces previous alcohol items.  | DELETED   | M3Q49-66                                  |
|                         | Income                          | WHA  | DELETED   | M3Q87a-b                                  |
|                         | Number dependent on this income | WHA  | DELETED   | M3Q88                                     |

### **3. METHODOLOGICAL ISSUES: SOURCES AND DEVELOPMENT OF INSTRUMENTS, RELIABILITY AND VALIDITY OF MEASURES**

#### **3.1. DERIVED VARIABLES**

Many of the variables used in analyses are derived by combining the responses to several items within the surveys. Where possible, standardized methods for their calculation are derived and documented. Appendix 3 lists definitions of the following variables for use in analyses and reporting:

Appendix 3.1 Smoking Status - Younger and Mid-Age Cohorts, Surveys 1 & 2

Appendix 3.2 Alcohol Consumption and Binge Status – Younger, Mid-Age and Older Cohorts, Surveys 1 & 2

Appendix 3.3 Alcohol patterns - Younger, Mid-Age and Older Cohorts, Surveys 1 & 2

Appendix 3.4. Physical Activity (Revised index) – Mid-Age Cohort, Survey 1

Appendix 3.5 Physical Activity (Cumulative score) – Mid-age Cohort, Surveys 1, 2 & 3

Appendices 3.2 and 3.3 reflect different methods of categorizing alcohol intake – Appendix 3.2 is based on definitions used by the National Heart Foundation and AIHW prior to 2002, while Appendix 3.3 is based on the NHMRC’s 2003 guidelines.

#### **3.2. TRANSITION VARIABLES**

Methodological and analytical work continues to concentrate on the measurement of change. For categorical and ordinal variables, such as smoking status, marital status, and alcohol consumption, it is necessary to define and develop transition variables. In many cases, the questions used to assess these variables have changed between surveys in order to reflect current best practice. This is one of several reasons why the definition of transition variables is complex. Appendix 3 also includes definitions of the following transition variable between Surveys 1 and 2:

Appendix 3.6: Transition in Alcohol Patterns - Younger Cohort, Surveys 1 & 2

### **3.3. ACCESS TO, AND SATISFACTION WITH, HEALTH SERVICES: ANALYSIS BY LANGUAGE SPOKEN AT HOME**

This report, prepared by Natalie Grove, assesses the methodological questions that arise when comparing responses from women who do and do not speak English at home.

#### **3.3.1. Abstract of Report**

**Objective:** to determine whether women who speak a language other than English at home differ from English speaking women in their perceived access to and satisfaction with health services.

**Results:** Both English-speaking and women who spoke other languages showed high levels of satisfaction with and access to health services, with older women the most satisfied and younger women the least. On most items, more than 75% of women, both ‘English’ and ‘Other’, rated their access or satisfaction as good, very good or excellent. The lowest ratings were commonly given to items concerning time (time spent in waiting room, access to after hours care, hours GP is available) as well as ease of seeing GP of choice. This pattern of satisfaction was similar for the two language groups, suggesting that the experience and expectations of the health services were similar. After controlling for possible confounding of education, occupation, area of residence and mental health, there appeared to be a small, consistent difference in the levels of access to and satisfaction with some health services; women who spoke English at home more likely to rate these services higher than women who spoke other languages. However the differences were small, less than 10% difference in satisfaction or access for most items. Finally and importantly, a differential use of the “don’t know” category was noted, with non-English speaking women as much as three times more likely to choose this response for some items.

**Conclusions:** This analysis indicated a tendency for English speaking women to rate their access and satisfaction slightly higher than women who spoke other languages. However, we are unable to determine whether these differences reflect a different use of the response scale and/ or difficulty interpreting the questions, or in fact reveal different levels of access and satisfaction. Furthermore, the differences are statistically significant but may be inconsequential at a service delivery level, as the overall ratings were mostly high and the differences often less than 10% between language groups. Satisfaction and access differ more substantially between urban and rural areas and between age cohorts than by language spoken at home.

#### **3.3.2. Details of Analysis and Interpretation**

**Satisfaction with health services** was based on items from Survey 1, asking women to rate their satisfaction with various aspects of their most recent visit to the GP, including time spent in the waiting room, personal manner of the GP etc: Q13a-i (Y1), Q13a-i (M1), Q14a-I (O1).

**Access** to health services was based on items from Survey 2 which asked women to think about their own health and to rate their access to health services including medical



specialists, hospitals, GPs who bulk billed etc: Q8a-k (Y2), Q17a-b, d-i, l, o-p (M2), Q5a-g (O2).

**Language group** was determined by Survey 1 response to the question, “Do you usually speak a language other than English at home?” with responses categorized as English or Other. All analysis was conducted on data from women who completed Survey 1 and the long version of Survey 2 (N=9600 for Younger Cohort, N=11648 for Mid-age Cohort and N=9501 for Older Cohort). Table 3.1 shows the distribution of women in the three cohorts.

**Table 3.1. Percentage of women in each cohort who spoke a language other than English at home.**

|         | Younger |       | Mid-Age |     | Older |       |
|---------|---------|-------|---------|-----|-------|-------|
|         | N       | %     | N       | %   | N     | %     |
| Other   | 659     | 7.2%  | 564     | 5%  | 502   | 5.9%  |
| English | 8,481   | 92.8% | 10,753  | 95% | 7,997 | 94.1% |

### Initial Analyses

Chi-square analyses conducted for the research syntheses demonstrated strong associations between language spoken at home and satisfaction and access in the mid-aged and older cohorts, and for access in the younger cohort (see Table 3.2). Analysis for the research synthesis was concerned with high levels of satisfaction and dichotomized responses in the following way:

Satisfied: excellent/ very good

Unsatisfied: good/ fair/ poor

Women who missed the item or responded “don’t know” (available for access items only) were excluded from these analyses.

**Table 3.2. Percentages of women responding “excellent” or “very good” to items on health service access and satisfaction. Bold face indicates  $p < .005$  and more than 3 percentage point difference.**

| Access                           | Younger |           |           | Mid-age |           |           | Older     |           |           |
|----------------------------------|---------|-----------|-----------|---------|-----------|-----------|-----------|-----------|-----------|
|                                  | All     | Other     | English   | All     | Other     | English   | All       | Other     | English   |
| Medical specialists              | 44      | 41        | 44        | 58      | <b>47</b> | <b>58</b> | 60        | <b>47</b> | <b>61</b> |
| Hospital if needed               | 54      | 48        | 55        | 65      | <b>50</b> | <b>65</b> | 63        | <b>49</b> | <b>63</b> |
| After hours care                 | 32      | <b>25</b> | <b>33</b> | 43      | <b>35</b> | <b>43</b> | 44        | <b>31</b> | <b>44</b> |
| GP Bulk bills                    | 48      | <b>54</b> | <b>47</b> | 49      | 53        | 49        | 70        | <b>63</b> | <b>70</b> |
| Female GP                        | 44      | 42        | 44        | 48      | 43        | 48        | -         | -         | -         |
| Hours GP                         | 33      | <b>28</b> | <b>33</b> | 43      | 39        | 43        | 52        | <b>45</b> | <b>52</b> |
| No. GPs to choose from           | 43      | <b>37</b> | <b>43</b> | 50      | 45        | 51        | 54        | <b>44</b> | <b>55</b> |
| Ease seeing GP choice            | 36      | 35        | 36        | 48      | 46        | 49        | 63        | <b>52</b> | <b>63</b> |
| Ease Pap test                    | 63      | <b>55</b> | <b>64</b> | 75      | <b>68</b> | <b>75</b> | -         | -         | -         |
| Access counselling               | 38      | 32        | 39        | 45      | 40        | 45        | -         | -         | -         |
| <b>Satisfaction</b>              |         |           |           |         |           |           |           |           |           |
| Convenience of surgery location  | 73      | 69        | 73        | 72      | <b>61</b> | <b>73</b> | 72        | <b>61</b> | <b>74</b> |
| Length of waiting time           | 34      | 34        | 34        | 40      | <b>30</b> | <b>40</b> | 50        | <b>37</b> | <b>51</b> |
| Personal manner of doctor        | 69      | 66        | 69        | 79      | <b>68</b> | <b>79</b> | 88        | <b>79</b> | <b>89</b> |
| Doctor’s explanation             | 60      | 56        | 61        | 72      | <b>64</b> | <b>72</b> | 81        | <b>70</b> | <b>81</b> |
| Interest of doctor in feelings   | 55      | 53        | 55        | 68      | <b>60</b> | <b>68</b> | 80        | <b>67</b> | <b>80</b> |
| Opportunity to ask questions     | 63      | 58        | 63        | 72      | <b>65</b> | <b>73</b> | <b>81</b> | <b>69</b> | <b>82</b> |
| Amount of time spent with doctor | 51      | 49        | 52        | 65      | <b>56</b> | <b>66</b> | <b>73</b> | <b>58</b> | <b>74</b> |
| Cost of visit                    | 49      | 46        | 49        | 45      | 43        | 45        | 73        | <b>62</b> | <b>74</b> |
| Visit overall                    | 57      | 55        | 58        | 66      | <b>55</b> | <b>67</b> | <b>79</b> | <b>65</b> | <b>80</b> |

### Recategorization and reanalysis

A decision was made to redefine ‘satisfied’ for this analysis, using a broader category of satisfied that included excellent, very good and good. This enabled comparison of those who were definitely unsatisfied with all other women, and allowed us to investigate whether the two language groups were using the response scale differently. These categories were used throughout the remaining analysis:

Satisfied = Excellent/ very good *and* good

Unsatisfied = Fair/ poor

Women who missed the item or responded “don’t know” (available for access items only) were excluded from these analyses.

This recategorization resulted in fewer significant associations between language and access and especially between language and satisfaction (see Table 3.3). This suggests there may have been a different use of the response scale in the two language groups (i.e. non-English speaking women were more likely to rate the item ‘good’, than to use the end of the scale ‘very good’ or ‘excellent’).

**Table 3.3. Percentages of women responding “excellent”, “very good” or “good” to items on health service access and satisfaction. Bold face indicates  $p < .005$  and more than 3 percentage point difference.**

| Access                           | Younger |           |           | Mid-age |           |           | Older |           |           |
|----------------------------------|---------|-----------|-----------|---------|-----------|-----------|-------|-----------|-----------|
|                                  | All     | Other     | English   | All     | Other     | English   | All   | Other     | English   |
| Medical specialists              | 78      | 81        | 78        | 82      | 81        | 82        | 89    | 86        | 89        |
| Hospital if needed               | 86      | <b>80</b> | <b>87</b> | 89      | <b>82</b> | <b>90</b> | 90    | <b>83</b> | <b>91</b> |
| After hours care                 | 64      | <b>58</b> | <b>64</b> | 69      | 67        | 69        | 75    | <b>67</b> | <b>75</b> |
| GP Bulk bills                    | 70      | <b>81</b> | <b>68</b> | 66      | <b>79</b> | <b>65</b> | 88    | 88        | 88        |
| Female GP                        | 72      | 71        | 72        | 74      | 79        | 73        | -     | -         | -         |
| Hours GP                         | 72      | 68        | 72        | 77      | 77        | 77        | 87    | 86        | 87        |
| No. GPs to choose from           | 77      | 74        | 78        | 80      | 81        | 80        | 86    | 83        | 86        |
| Ease seeing GP choice            | 68      | 68        | 68        | 77      | 77        | 77        | 90    | 87        | 90        |
| Ease Pap test                    | 91      | <b>86</b> | <b>91</b> | 96      | 94        | 96        | -     | -         | -         |
| Access counselling               | 75      | 70        | 76        | 76      | 77        | 75        | -     | -         | -         |
| <b>Satisfaction</b>              |         |           |           |         |           |           |       |           |           |
| Convenience of surgery location  | 93      | 92        | 93        | 92      | 90        | 92        | 92    | <b>86</b> | <b>92</b> |
| Length of waiting time           | 60      | 59        | 60        | 69      | <b>62</b> | <b>69</b> | 79    | <b>69</b> | <b>80</b> |
| Personal manner of doctor        | 88      | 89        | 88        | 94      | 92        | 94        | 98    | 97        | 98        |
| Doctor’s explanation             | 82      | 81        | 82        | 90      | 88        | 90        | 95    | 93        | 95        |
| Interest of doctor in feelings   | 79      | 79        | 78        | 88      | 86        | 88        | 95    | 94        | 95        |
| Opportunity to ask questions     | 83      | 83        | 83        | 90      | 88        | 90        | 95    | <b>92</b> | <b>95</b> |
| Amount of time spent with doctor | 79      | 77        | 80        | 88      | <b>83</b> | <b>89</b> | 94    | <b>86</b> | <b>94</b> |
| Cost of visit                    | 74      | 72        | 74        | 71      | <b>68</b> | <b>72</b> | 90    | <b>84</b> | <b>91</b> |
| Visit overall                    | 85      | 84        | 86        | 90      | 88        | 91        | 96    | <b>92</b> | <b>96</b> |

### Adjustment for Confounding

As the patterns were similar within each cohort, the mid-age cohort was selected for assessment of the possible effect of confounders. Logistic regression analyses predicting lack of satisfaction (ratings of fair or poor) were performed. Table 3.4 shows odds ratios, both crude and adjusted for area of residence, occupation, education, and mental health.

**Table 3.4. Access and Satisfaction with Health Services by Women who Speak a Language Other than English at Home: Crude and adjusted odds ratios for responding “fair” or “poor”. Mid-age Cohort.**

|  | Percent rating “fair” or “poor” |       |         | Crude OR   | P value           | Adjusted        |                   |
|--|---------------------------------|-------|---------|------------|-------------------|-----------------|-------------------|
|  | All                             | Other | English |            |                   | OR <sup>a</sup> | P value           |
| <b>Access (Mid-age Survey 2)</b>       |                                 |       |         |            |                   |                 |                   |
| Medical specialists                    | 18                              | 19.5  | 17.9    | 1.1        | ns                | <b>1.6</b>      | <b>0.0002</b>     |
| Hospital if needed                     | 10.7                            | 18.4  | 10.4    | <b>1.9</b> | <b>&lt;0.0001</b> | <b>2.1</b>      | <b>&lt;0.0001</b> |
| After hours care                       | 30.8                            | 32.9  | 30.7    | 1.1        | ns                | 1.2             | ns                |
| GP Bulk bills                          | 34.2                            | 20.7  | 34.9    | <b>0.5</b> | <b>&lt;0.0001</b> | 0.8             | ns                |
| Female GP                              | 26.5                            | 20.9  | 26.5    | 0.7        | 0.0087            | 1.0             | ns                |
| Hours GP                               | 23.2                            | 23    | 23      | 1.0        | ns                | 1.1             | ns                |
| No. GPs to choose from                 | 19.8                            | 19.5  | 19.7    | 1.0        | ns                | 1.4             | 0.0162            |
| Ease seeing GP choice                  | 23                              | 23.3  | 23      | 1.0        | ns                | 1.2             | ns                |
| Ease Pap test                          | 4.4                             | 5.9   | 4.3     | 1.4        | ns                | 1.4             | ns                |
| Access counselling                     | 24.5                            | 23.4  | 24.5    | 0.9        | ns                | 1.1             | ns                |
| <b>Satisfaction (Mid-age Survey 1)</b> |                                 |       |         |            |                   |                 |                   |
| Convenience of surgery location        | 8.4                             | 10.5  | 8.3     | 1.3        | ns                | 1.2             | ns                |
| Length of waiting time                 | 31.2                            | 38.1  | 30.8    | <b>1.4</b> | <b>0.0003</b>     | <b>1.4</b>      | <b>0.0012</b>     |
| Personal manner of doctor              | 5.7                             | 7.6   | 5.5     | 1.4        | 0.0354            | 1.3             | ns                |
| Doctor’s explanation                   | 10.2                            | 11.5  | 10.1    | 1.2        | ns                | 1.1             | ns                |
| Interest of doctor in feelings         | 12.5                            | 14.3  | 12.4    | 1.2        | ns                | 1.1             | ns                |
| Opportunity to ask questions           | 9.8                             | 11.6  | 9.7     | 1.2        | ns                | 1.2             | ns                |
| Amount of time spent with doctor       | 11.7                            | 17    | 11.3    | <b>1.6</b> | <b>&lt;0.0001</b> | <b>1.5</b>      | <b>0.0008</b>     |
| Cost of visit                          | 28.7                            | 32.2  | 28.5    | 1.2        | ns                | <b>1.4</b>      | <b>0.0015</b>     |
| Visit overall                          | 9.5                             | 12.4  | 9.4     | 1.4        | 0.0164            | 1.4             | 0.0251            |

adjusted for area of residence, education, occupation, mental health

After adjustment, women of non-English speaking background were found to be more dissatisfied with access to medical specialists and hospitals, length of time in the GPs waiting room, amount of time with the doctor and the cost of the visit than women of English speaking background. Dissatisfaction tended to increase with distance from urban centres and with reduced mental health. Education was significantly associated with lack of satisfaction with access to medical specialists, a GP who bulk bills, hours the GP is available, and counselling, although there was no consistent pattern with levels of education. Women in lower status occupations were less likely to be dissatisfied with access to a GP who bulk bills.

### **Investigation of “Don’t Know” and missing responses**

Finally, an investigation of non-respondents, both those who did not answer and those who responded “don’t know” to access questions, was conducted. Women who spoke a language other than English were more likely to have missing data for each of the access and satisfaction questions, although the percentages were small (1.9% - 4.8% missing). The access items contained a response option of “don’t know” and the use of this option differed substantially between the language groups, even after adjusting for area of residence, education, occupation and mental health; women who spoke a language other than English were up to three times more likely to select “don’t know” than English speaking women (see Tables 3.5 and 3.6). This differential use of “don’t know” by language spoken suggests difficulty with interpreting/ answering the access items and calls into question the interpretability of results for women who do not speak English at home.

**Table 3.5. Distribution of “Don’t Know” and Missing Responses by Women who Speak a Language Other than English at Home: All Cohorts.**

| Item                             | % Missing |     |      |       |     |      |         |     |      | % Don’t know among the ‘non-missing’ |      |      |       |      |      |         |      |      |
|----------------------------------|-----------|-----|------|-------|-----|------|---------|-----|------|--------------------------------------|------|------|-------|------|------|---------|------|------|
|                                  | All       |     |      | Other |     |      | English |     |      | All                                  |      |      | Other |      |      | English |      |      |
|                                  | Y         | M   | O    | Y     | M   | O    | Y       | M   | O    | Y                                    | M    | O    | Y     | M    | O    | Y       | M    | O    |
| Medical specialists              | 0.5       | 0.7 | 3.7  | 0.7   | 1.9 | 6.8  | 0.5     | 0.7 | 3.5  | 9.5                                  | 5.0  | 4.6  | 10.3  | 7.1  | 7.5  | 9.4     | 4.9  | 4.4  |
| Hospital if needed               | 0.4       | 0.7 | 4.3  | 0.6   | 2.3 | 10.4 | 0.4     | 0.6 | 4.0  | 6.9                                  | 4.1  | 6.5  | 9.4   | 10.6 | 8.9  | 6.8     | 3.7  | 6.3  |
| After hours care                 | 0.5       | 1.1 | 10.1 | 0.7   | 2.6 | 17.8 | 0.5     | 0.9 | 9.6  | 10.0                                 | 12.4 | 17.8 | 11.0  | 20.6 | 19.9 | 10.0    | 11.9 | 17.7 |
| GP Bulk bills                    | 0.8       | 1.6 | 8.1  | 1.2   | 3.3 | 10.3 | 0.7     | 1.5 | 8.0  | 8.3                                  | 20.1 | 9.7  | 9.3   | 17.2 | 7.7  | 8.3     | 20.3 | 9.9  |
| Female GP                        | 0.6       | 1.3 | -    | 0.9   | 2.9 | -    | 0.6     | 1.1 | -    | 7.4                                  | 15.1 | -    | 9.4   | 20.7 | -    | 7.3     | 14.8 | -    |
| Hours GP                         | 0.7       | 1.8 | 5.9  | 0.9   | 3.8 | 11.8 | 0.7     | 1.7 | 5.5  | 3.2                                  | 4.1  | 4.0  | 4.6   | 6.8  | 5.0  | 3.1     | 3.9  | 4.0  |
| No. GPs choose from              | 0.7       | 1.3 | 7.9  | 1.0   | 3.8 | 13.7 | 0.6     | 1.1 | 7.5  | 3.1                                  | 4.3  | 7.1  | 4.8   | 11.3 | 10.8 | 3.0     | 3.9  | 6.8  |
| Ease seeing GP choice            | 0.7       | 1.3 | 9.3  | 1.5   | 3.6 | 8.1  | 0.6     | 1.1 | 2.6  | 3.1                                  | 2.1  | 1.1  | 4.2   | 5.2  | 3.3  | 3.1     | 1.9  | 1.0  |
| Ease Pap test                    | 0.8       | 1.2 | -    | 1.3   | 2.6 | -    | 0.8     | 1.1 | -    | 12.4                                 | 5.6  | -    | 29.3  | 9.4  | -    | 11.1    | 5.4  | -    |
| Access counselling               | 1.0       | 0.9 | -    | 1.2   | 3.8 | -    | 0.9     | 0.8 | -    | 40.0                                 | 48.0 | -    | 45.6  | 50.7 | -    | 39.6    | 48.0 | -    |
| <b>Satisfaction</b>              |           |     |      |       |     |      |         |     |      |                                      |      |      |       |      |      |         |      |      |
| Convenience of surgery location  | 0.8       | 1   | 1.6  | 1.5   | 2.8 | 3.7  | 0.8     | 0.8 | 1.5  |                                      |      |      |       |      |      |         |      |      |
| Length of waiting time           | 0.8       | 0.9 | 1.8  | 1.6   | 2.8 | 3.7  | 0.8     | 0.8 | 1.7  |                                      |      |      |       |      |      |         |      |      |
| Personal manner of doctor        | 0.7       | 0.8 | 1.1  | 1.6   | 2.6 | 1.9  | 0.6     | 0.6 | 1.0  |                                      |      |      |       |      |      |         |      |      |
| Doctor’s explanation             | 0.8       | 1   | 1.4  | 1.3   | 2.4 | 1.7  | 0.7     | 0.8 | 1.4  |                                      |      |      |       |      |      |         |      |      |
| Interest of doctor in feelings   | 0.8       | 1.4 | 2.2  | 1.5   | 3.1 | 3.1  | 0.8     | 1.3 | 2.1  |                                      |      |      |       |      |      |         |      |      |
| Opportunity to ask Q’s           | 0.9       | 1   | 1.3  | 1.6   | 2.8 | 1.9  | 0.8     | 0.8 | 1.2  |                                      |      |      |       |      |      |         |      |      |
| Amount of time spent with doctor | 0.9       | 1.1 | 2.3  | 1.6   | 3.3 | 3.7  | 0.8     | 0.9 | 2.2  |                                      |      |      |       |      |      |         |      |      |
| Cost of visit                    | 1.4       | 1.8 | 12.2 | 2.4   | 4.8 | 15.9 | 1.3     | 1.5 | 12.0 |                                      |      |      |       |      |      |         |      |      |
| Visit overall                    | 0.8       | 1.1 | 3.0  | 1.8   | 4   | 6.4  | 0.6     | 0.9 | 2.8  |                                      |      |      |       |      |      |         |      |      |

a. adjusted for area of residence, education, occupation, mental health

**Table 3.6. Analysis of non-respondents (don't know): crude and adjusted odds ratios for mid-aged cohort.**

| Item                             | % Don't know among the<br>'non-missing' |       |         | Crude OR   |                   | Adjusted <sup>a</sup> OR |                   |
|----------------------------------|---|-------|---------|------------|-------------------|--------------------------|-------------------|
|                                  | All                                     | Other | English | OR         | P value           | OR                       | P value           |
| Medical specialists              | 5.0                                     | 7.1   | 4.9     | 1.5        | 0.0228            | 1.3                      | ns                |
| Hospital if needed               | 4.1                                     | 10.6  | 3.7     | <b>3.1</b> | <b>&lt;0.0001</b> | <b>2.2</b>               | <b>&lt;0.0001</b> |
| After hours care                 | 12.4                                    | 20.6  | 11.9    | <b>1.9</b> | <b>&lt;0.0001</b> | <b>1.6</b>               | <b>&lt;0.0001</b> |
| GP Bulk bills                    | 20.1                                    | 17.2  | 20.3    | 0.8        | ns                | 1.0                      | ns                |
| Female GP                        | 15.1                                    | 20.7  | 14.8    | <b>1.5</b> | <b>0.0002</b>     | <b>1.4</b>               | <b>0.0049</b>     |
| Hours GP                         | 4.1                                     | 6.8   | 3.9     | <b>1.8</b> | <b>0.0006</b>     | <b>1.9</b>               | <b>0.0006</b>     |
| No. GPs to choose from           | 4.3                                     | 11.3  | 3.9     | <b>3.1</b> | <b>&lt;0.0001</b> | <b>2.7</b>               | <b>&lt;0.0001</b> |
| Ease seeing GP choice            | 2.1                                     | 5.2   | 1.9     | <b>2.8</b> | <b>&lt;0.0001</b> | <b>2.3</b>               | <b>0.0002</b>     |
| Ease Pap test                    | 5.6                                     | 9.4   | 5.4     | <b>1.8</b> | <b>&lt;0.0001</b> | <b>1.7</b>               | <b>0.0016</b>     |
| Access counselling               | 48.0                                    | 50.7  | 48.0    | 1.1        | ns                | 1.0                      | ns                |
| <b>Satisfaction</b>              |   |       |         |            |                   |                          |                   |
| Convenience of surgery location  |   |       |         |            |                   |                          |                   |
| Length of waiting time           |   |       |         |            |                   |                          |                   |
| Personal manner of doctor        |   |       |         |            |                   |                          |                   |
| Doctor's explanation             |   |       |         |            |                   |                          |                   |
| Interest of doctor in feelings   |   |       |         |            |                   |                          |                   |
| Opportunity to ask questions     |   |       |         |            |                   |                          |                   |
| Amount of time spent with doctor |   |       |         |            |                   |                          |                   |
| Cost of visit                    |   |       |         |            |                   |                          |                   |
| Visit overall                    |   |       |         |            |                   |                          |                   |

b. adjusted for area of residence, education, occupation, mental health

### Other Factors Associated With "Don't Know" Response

Selection of the "don't know" response was consistently associated with area of residence, with the exception of access to specialists and ease of obtaining a Pap smear. Women living in non-urban areas reported "don't know" less often than urban women for access to hospital, after hours care, access to a female GP, number of GPs (small/other rural only), ease of seeing a GP (higher for remote), access to counselling. However, women living in non-urban areas reported "don't know" more often than urban women for access to GP who bulk bills and hours the GP is available (remote only).

Higher levels of mental health were associated with a "don't know" response for access to GP who bulk bills, access to a female GP and access to counselling. Lower levels of mental health were associated with a "don't know" response for ease of Pap smear.

All other education groups were compared with women with Year 12 education. Women with no formal education more often gave a “don’t know” response for access to after hours care, access to a female GP, for number of GPs to choose from and ease of obtaining a Pap smear. Women with trade or certificate level education more often gave a “don’t know” response for number of GPs to choose from. Women with university education less often gave a “don’t know” response for access to a female GP and ease of obtaining a Pap smear and more often gave a “don’t know” response for number of GPs to choose from.

All other occupation groups were compared with administrative assistants and sales. No paid work and occupation missing more often reported “don’t know” for number of GPs, and ease of obtaining a Pap smear. Machine operators and manual workers more often reported “don’t know” for access to medical specialists, access to a female GP and number of GPs. Trades and para-professionals less often reported “don’t know” for access to counselling. Managers and professionals more often reported “don’t know” for number of GPs.

### **Other Findings Concerning Women Who Speak A Language Other Than English At Home**

In the course of understanding the associations between language spoken at home and health services, various exploratory analyses were conducted. We report the main findings here to prevent duplication of this effort. Table 3.7 provides descriptive language and migration information on women who speak a language other than English at home, while Table 3.8 describes health service use and common symptoms.



**Table 3.7. Characteristics (%) of women who speak English or another language at home: year of arrival in Australia, English competency and language spoken at home.**

|                           | Young<br>Urban<br>English | Urban<br>NESB | Rural<br>English | Rural<br>NESB | MID<br>Urban<br>English | Urban<br>NESB | Rural<br>English | Rural<br>NESB | OLD<br>Urban<br>English | Urban<br>NESB | Rural<br>English | Rural<br>NESB |
|---------------------------|---------------------------|---------------|------------------|---------------|-------------------------|---------------|------------------|---------------|-------------------------|---------------|------------------|---------------|
| <b>Years in Australia</b> |                           |               |                  |               |                         |               |                  |               |                         |               |                  |               |
| 1986 or later             | 2                         | 22            | 1                | 8             | 2                       | 19            | 1                | 10            | -                       | -             | -                | -             |
| 1985- 1966                | 5                         | 16            | 2                | 9             | 13                      | 47            | 7                | 43            | 6                       | 18            | 3                | 13            |
| 1965-1956                 | -                         | -             | -                | -             | 5                       | 16            | 3                | 16            | 5                       | 28            | 4                | 24            |
| 1955 or earlier (mid)     | -                         | -             | -                | -             | 6                       | 11            | 4                | 14            | -                       | -             | -                | -             |
| 1955-46                   | -                         | -             | -                | -             | -                       | -             | -                | -             | 6                       | 48            | 6                | 47            |
| 1945 earlier (old)        | -                         | -             | -                | -             | -                       | -             | -                | -             | 3                       | 4             | 2                | 8             |
| Australian born           | 93                        | 62            | 97               | 83            | 74                      | 8             | 84               | 17            | 80                      | 2             | 86               | 9             |
| <b>Speak English</b>      |                           |               |                  |               |                         |               |                  |               |                         |               |                  |               |
| Not very well             | -                         | 17            | -                | 15            | -                       | 48            | -                | 36            | -                       | 24            | -                | 12            |
| Well                      | -                         | -             | -                | -             | -                       | -             | -                | -             | -                       | 46            | -                | 49            |
| Very well                 | -                         | 83            | -                | 85            | -                       | 52            | -                | 64            | -                       | 30            | -                | 39            |
| Native                    | 100                       | -             | 100              | -             | 100                     | -             | 100              | -             | 100                     | -             | 100              | -             |
| <b>Language at home</b>   |                           |               |                  |               |                         |               |                  |               |                         |               |                  |               |
| English                   | 100                       | 0             | 100              | 0             | 100                     | 0             | 100              | 0             | 100                     | 0             | 100              | 0             |
| Southern Europe           | -                         | 40            | -                | 45            | -                       | 36            | -                | 29            | -                       | 27            | -                | 20            |
| Northern Europe           | -                         | 10            | -                | 18            | -                       | 19            | -                | 34            | -                       | 41            | -                | 65            |
| Eastern Europe            | -                         | 3             | -                | 6             | -                       | 7             | -                | 7             | -                       | 16            | -                | 7             |
| SE Asia                   | -                         | 7             | -                | 3             | -                       | 6             | -                | 2             | -                       | 3             | -                | 0             |
| North Asia                | -                         | 17            | -                | 6             | -                       | 17            | -                | 6             | -                       | 6             | -                | 3             |
| Middle East               | -                         | 9             | -                | 5             | -                       | 3             | -                | 3             | -                       | 4             | -                | 1             |
| Africa                    | -                         | 1             | -                | 0             | -                       | 0             | -                | 1             | -                       | 0             | -                | 1             |
| Pacific Islands           | -                         | 1             | -                | 4             | -                       | 1             | -                | 2             | -                       | -             | -                | -             |
| Filipino                  |                           |               |                  |               |                         |               |                  |               | -                       | 1             | -                | 1             |

**Table 3.8. Characteristics (%) of women who speak English or another language at home: Responses to GP visit questions, prevalence of selected symptoms and reported hospital use.**

|                           | <b>Young</b><br>Urban<br>English | Urban<br>NESB | Rural<br>English | Rural<br>NESB | <b>MID</b><br>Urban<br>English | Urban<br>NESB | Rural<br>English | Rural<br>NESB | <b>OLD</b><br>Urban<br>English | Urban<br>NESB | Rural<br>English | Rural<br>NESB |
|---------------------------|----------------------------------|---------------|------------------|---------------|--------------------------------|---------------|------------------|---------------|--------------------------------|---------------|------------------|---------------|
| <b>GP visit</b>           |                                  |               |                  |               |                                |               |                  |               |                                |               |                  |               |
| Always prefer female GP   | 19                               | 18            | 17               | 17            | <b>18</b>                      | <b>15</b>     | <b>13</b>        | <b>22</b>     | <b>12</b>                      | <b>15</b>     | <b>9</b>         | <b>14</b>     |
| Prefer female GP          | 65                               | 71            | 53               | 68            | <b>45</b>                      | <b>58</b>     | <b>39</b>        | <b>50</b>     | <b>33</b>                      | <b>48</b>     | <b>30</b>        | <b>41</b>     |
| GP/ go to same place      | <b>40</b>                        | <b>42</b>     | <b>59</b>        | <b>57</b>     | <b>69</b>                      | <b>62</b>     | <b>76</b>        | <b>80</b>     | -                              | -             | -                | -             |
| GP/ See same GP           | <b>25</b>                        | <b>33</b>     | <b>34</b>        | <b>24</b>     | <b>46</b>                      | <b>56</b>     | <b>48</b>        | <b>59</b>     | -                              | -             | -                | -             |
| Incurred cost at GP visit | <b>47</b>                        | <b>36</b>     | <b>74</b>        | <b>74</b>     | <b>53</b>                      | <b>43</b>     | <b>73</b>        | <b>69</b>     | 21                             | 20            | 38               | 38            |
| Satisfied with cost       | <b>27</b>                        | <b>28</b>     | <b>23</b>        | <b>17</b>     | <b>36</b>                      | <b>46</b>     | <b>35</b>        | <b>26</b>     | 33                             | 32            | 30               | 16            |
| High use GP               | 32                               | 30            | 32               | 35            | 46                             | 52            | 44               | 44            | <b>33</b>                      | <b>40</b>     | <b>25</b>        | <b>28</b>     |
|                           |                                  |               |                  |               |                                |               |                  |               |                                |               |                  |               |
| <b>Symptoms</b>           |                                  |               |                  |               |                                |               |                  |               |                                |               |                  |               |
| Hypertension              | 9                                | 6             | 13               | 14            | 23                             | 22            | 26               | 28            | 51                             | 56            | 54               | 54            |
| Bronchitis/ Emphysema     | -                                | -             | -                | -             | <b>24</b>                      | <b>16</b>     | <b>20</b>        | <b>13</b>     | 21                             | 20            | 18               | 14            |
| Osteoporosis              | -                                | -             | -                | -             | <b>6</b>                       | <b>8</b>      | <b>5</b>         | <b>5</b>      | <b>27</b>                      | <b>31</b>     | <b>23</b>        | <b>31</b>     |
| Arthritis                 | -                                | -             | -                | -             | -                              | -             | -                | -             | <b>43</b>                      | <b>53</b>     | <b>43</b>        | <b>46</b>     |
|                           |                                  |               |                  |               |                                |               |                  |               |                                |               |                  |               |
| <b>Service Use</b>        |                                  |               |                  |               |                                |               |                  |               |                                |               |                  |               |
| Seen Hospital Dr          | 20                               | 19            | 29               | 29            | <b>13</b>                      | <b>21</b>     | <b>15</b>        | <b>22</b>     | 18                             | 22            | 17               | 22            |
| Admitted to hospital      | 16                               | 16            | 24               | 15            | 15                             | 15            | 17               | 19            | 28                             | 26            | 28               | 27            |

**Figures in bold indicate statistically significant difference at  $p < .005$**

#### 4. MAINTENANCE OF COHORTS

Cohort maintenance and tracking of “return-to-sender” mail continues according to the strategies outlined in previous reports. The office team continues to track all women who responded to Survey 1 in 1996, even those who have not responded to Survey 2 or Survey 3. Participants for whom we have no current contact details remain in the tracking system unless they are positively identified as deceased, withdrawn, permanently emigrated, or otherwise ineligible or unwilling to participate. Secondary contacts, electoral rolls, and electronic white pages continue to be the main sources of information. Increasingly we are finding email addresses to be useful, especially among the younger women. While in previous years, email addresses seemed to be fairly short-lived and unstable, it now appears that individuals are likely to keep the same email address for some years.

#### 5. DISSEMINATION OF STUDY FINDINGS

##### 5.1. WEB SITE

The Study web site is maintained at the University of Newcastle. In the first half of 2003 we appointed Ms Rachael Gill to develop and update the web site. Rachael revised the site extensively, including the updating and re-formatting of all files and directories, before finding permanent work elsewhere. Mr Tim Neve has continue the work on the new website, which can be viewed at <http://www.newcastle.edu.au/centre/wha>

We plan to install a password-protected section for work in progress, internal reports, minutes, agendas, and other internal information.

##### 5.2. COMMUNICATION WITH STUDY PARTICIPANTS

A newsletter is in preparation and will be mailed to all participants in October 2003. A copy of the newsletter will be included in the next Report.

##### 5.3. PUBLICATIONS

###### 5.3.1. Papers Published

**Lee C & Russell A. Effects of physical activity on emotional well-being among older Australian women: cross-sectional and longitudinal analyses. *Journal of Psychosomatic Research*, 2003; 54: 155-160.**

**Objective:** To explore relationships between physical activity and mental health, cross-sectionally and longitudinally, in a large cohort of older Australian women.

**Method:** Women in their 70s participating in the Australian Longitudinal Study on Women’s Health responded in 1996 (aged 70-75) and in 1999 (aged 73-78). Cross-sectional data were analysed for 10,063 women and longitudinal data for 6,472. Self-reports were used to categorize women into four categories of physical activity at each time point, as well as to

define four physical activity transition categories across the three-year period. Outcome variables for the cross-sectional analyses were the mental health component score, and mental health subscales, of the SF-36. The longitudinal analyses focused on changes in these variables. Confounders included the physical health component scale of the SF-36, marital status, body mass index, and life events. Adjustment for baseline scores was included for the longitudinal analyses.

**Results:** Cross-sectionally, higher levels of physical activity were associated with higher scores on all dependent variables, both with and without adjustment for confounders. Longitudinally, the effects were weaker but women who had made a transition from some physical activity to none generally showed more negative changes in emotional well-being than those who had always been sedentary, while those who maintained or adopted physical activity had better outcomes.

**Conclusion:** Physical activity is associated with emotional well-being among a population cohort of older women both cross-sectionally and longitudinally, supporting the need for the promotion of appropriate physical activity in this age group.

**Mishra GD, Brown WJ & Dobson AJ. Physical and mental health: Changes during menopause transition. *Quality of Life Research*, 2003; 12(4): 405-412.**

**Objective:** To measure changes in physical and mental health in six groups of women defined by menopausal status or use of hormone replacement therapy (HRT).

**Design:** Longitudinal study with 2 years follow-up.

**Participants:** Eight thousand six hundred and twenty three women participating in the Australian Longitudinal Study on Women's Health, aged 45-50 years in 1996.

**Main outcome measures:** Changes in the eight dimensions of the Short Form General Health Survey (SF-36) adjusted for baseline scores, lifestyle, behavioural and demographic factors.

**Results:** At baseline, mean scores for five of the eight dimensions of the SF-36 were highest (indicating better state of health or well-being) in pre-menopausal women. There were declines (that is, worsening health) in the SF-36 dimensions in most groups of women. Declines were largest in physical functioning (adjusted mean change of -4.9, standard error (SE) 0.7) and physical role limitation (-5.7, SE: 1.3) in women who remained peri-menopausal throughout the study period and in women taking HRT at the time of either survey (physical functioning: -5.3 (0.7), role physical limitation: -7.5 (1.2)). They were smallest in women who remained pre-menopausal (physical functioning: -3.2 (0.7); role physical limitation: -2.1 (1.1)).

**Conclusions:** Physical aspects of general health and well-being decline during the menopausal transition. Sensitive measures and careful analysis are needed to understand why these changes are worse for peri-menopausal women and those taking HRT.

**Powers JR & Young AF. Beware mixing mail and telephone administration of surveys. *Australian Epidemiologist*, 2003; 10(2): 41-44.**

Non-refereed letter.

No Abstract Available.

**Sibbritt D, Adams J, Easthope G & Young A. Complementary and alternative medicine (CAM) use among elderly Australian women who have cancer. *Supportive Care in Cancer*, 2003; 11: 548-550.**

The use of complementary and alternative medicine (CAM) in the general population has grown considerably in recent years. However, little is known about the prevalence of CAM use amongst women with cancer. Our research provides the first step in addressing this gap in knowledge by reporting on a survey of 9,375 Australian women aged 73-78. We found that, for all cancers combined, 14.5% of women with cancer consulted an alternative practitioner. This percentage varied depending on the type of cancer: skin (15.0%), breast (11.5), bowel (8.8%), and other (16.5%). Our findings suggest that CAM is now a significant practice issue for those delivering cancer-patient care and management.

**Adams J, Sibbritt D, Easthope G & Young A. The profile of women who use complementary and alternative medicine (CAM) in Australia. *Medical Journal of Australia*, 2003; 179(6): 297-300.**

**Objectives:** To compare the characteristics of complementary and alternative medicine (CAM) users and non-users among Australian women.

**Design:** Cross-sectional postal questionnaire conducted during 1996, forming the baseline survey of the Australian Longitudinal Study on Women's Health.

**Participants:** Women aged 18-23 (n=14,779), 45-50 (n=14,099) and 70-75 (n=12,939) years, randomly selected from the Health Insurance Commission (Medicare) data base, with over-sampling of women from rural and remote areas of Australia.

**Main outcome measures:** Consultation with an alternative health practitioner in the twelve months prior to the survey.

**Results:** Women in the mid age cohort were more likely to have consulted an alternative health practitioner in the previous year (28%) than women in the younger cohort (19%) or older cohort (15%). In all age groups, CAM users were more likely to reside in non-urban areas, to report poorer health, have more symptoms and illness and be higher users of conventional health services than CAM non-users.

**Conclusions:** There is clear evidence of use of CAM in parallel with conventional health services by women in Australia. These findings highlight a need for further research exploring the determinants of women's use of CAM.

**Byles JE, Mishra GD, Harris MA & Nair K. The problems of sleep for older women: Changes in health outcomes. *Age and Aging*, 2003; 32(2): 154-163.**

**Objective:** To identify the persistence of sleeping difficulty and medication use in a cohort of older Australian women from baseline to 3-year follow-up and to explore the relationship between these factors and health-related quality of life scores, falls and other health care use.

**Method:** A three-year longitudinal survey of Australian 10,430 women aged 70-75 years at baseline. These women were participants in the Australian Longitudinal Study on Women's Health (ALSWH) randomly selected from the Australian Medicare database.

**Results:** A majority of women (63%) endorsed one or more items related to sleeping difficulty at 3-year follow-up: 33% reported one item only, 16% reported two or three items, and 14% reported more than 3 items; 4,194 (42.4%) reporting "waking in the early hours",

2,592 (26.0%) “taking a long time to get to sleep”, 2,078 (21.0%) “sleeping badly at night”, 1,072 (10.84) “lying awake most of the night” and 1,087 (11.0%) “worry keeping you awake”. Total scores on the Nottingham Health Profile sleep sub-scale ranged from 0-100 and were skewed to the right. The median score was 12.57. There was a strong statistical association between reporting sleeping difficulty at baseline and at follow-up. A total of 1,532 (15%) women reported use of sleeping medication at follow-up and women were 6.5 times more likely to report use if they also reported any item of sleep difficulty. There was a moderate level of agreement (88%, Kappa = 0.56 ) between taking sleeping medication within 4 weeks before the baseline survey and within 4 weeks before follow-up. On multivariate analysis, sleeping difficulty at baseline was negatively associated with general health perceptions, emotional role limitations and general mental health sub-scales of the Short-Form-36 Health Survey at follow-up; the use of sleep medication at baseline was negatively associated with physical functioning, bodily pain, vitality, social functioning and general mental health Short-Form-36 sub-scale scores. The use of sleep medication was also significantly associated with falls, accidents, and health care utilisation.

**Conclusion:** Sleeping difficulty is a common and persistent complaint among older women and is strongly associated with use of sleeping medications. Both behaviours are negatively associated with health status.

### 5.3.2. Papers Accepted

**Hillier L, DeVisser R, Kavanagh A & McNair R. The association between drug use and sexuality in young women. Refereed Letter. *Medical Journal of Australia.***

Studies of non-representative samples reveal that recreational drug use is more prevalent among non-heterosexual women than heterosexual women. The Australian Longitudinal Study of Women’s Health allowed an examination of the links between sexuality and recreational drug use in a representative sample of 9,260 women aged 22-27 in 2000.

Respondents reported their history of smoking tobacco. Reported frequency and volume of alcohol consumption were recoded according to NHMRC guidelines. Use of illicit drugs in the last year was dichotomised between marijuana and other illicit drugs - amphetamines, LSD, ecstasy/designer drugs, tranquilisers, natural hallucinogens, cocaine, inhalants, heroin, or barbiturates. Respondents also indicated whether they had ever injected illicit drugs.

The analyses compare exclusively heterosexual women to all other women. Data were weighted to correct for over-sampling in non-metropolitan areas. Odds ratios were adjusted for three confounding variables: age, region of residence, and father’s occupation. Younger women were significantly more likely to report risky drinking, and illicit drug use. Women from urban areas were significant more likely to be non-heterosexual and to use illicit drugs, but less likely to report risky drinking. Women with professional/manager fathers were significantly more likely to be non-heterosexual and more likely to use illicit drugs, but less likely to smoke or report risky drinking. Details are available from the authors.

Non-heterosexual women were significantly more likely than heterosexual women to have ever smoked, to be current smokers, and to report risky levels of alcohol consumption, to

have used marijuana and other illicit drugs in the last year, and to have ever injected drugs. Although these relative differences are important, so too are the absolute values - 45.6% of non-heterosexual women were smokers, and 45.6% reported risky alcohol consumption. In the last year 54.6% had used marijuana, and 40.7% used other illicit drugs. One in ten had injected illicit drugs.

Although women in general are less likely than men to use drugs, and may not be a high-priority target for drug education, non-heterosexual young women's rates of illicit drug use are at least as high as those of young men. Greater drug use among non-heterosexual young women may be the result of individual experiences of homophobic discrimination, where drugs are used as an (albeit, short lived) panacea.<sup>1</sup> Greater drug use may also be the result of normalisation of recreational drug use within lesbian communities. There is a need for specific interventions among young lesbians and bisexual women, and for further research to determine the reasons for their high levels of recreational drug use.

**Turner C, Russell A & Brown W. Prevalence of illicit drug use in young Australian women, patterns of use and associated risk factors. *Addiction*.**

**Objectives:** To estimate the prevalence of illicit drug use in young Australian women, determine their patterns of drug use and identify associated risk factors.

**Methods:** Data were collected in 2000 as part of the second survey of the youngest cohort in the Australian Longitudinal Study on Women's Health (n=9512).

**Results:** Among women aged 22-27 years, 58% reported having used an illicit drug at some time with most (57%) having used cannabis. Amphetamines (16%), ecstasy/designer drugs (15%) and LSD (14%) were the next three most commonly used drugs. Four different patterns of drug use were identified: past users of cannabis only (39%); current users of cannabis only (17%); past multiple drug users (13%) and current multiple drug users (31%). Living in a de-facto relationship or never being married, living with non-family members, a history of physical abuse, sexual intercourse, smoking and binge drinking were significantly associated with exclusive use of cannabis and with use of multiple drugs compared to never using illicit drugs. Living with a partner, experience of sexual or emotional abuse, pregnancy, diagnosis of depression and taking sleeping medication were significantly associated with being a multiple drug user but not for exclusive cannabis use. Multiple drug users had, on average, used cannabis 2-3 years before using any other drug.

**Conclusions:** Given the strong association found between smoking, heavy drinking and drug use of varied patterns, public health initiatives targeted at preventing young women from smoking and drinking should additionally target illicit drug use.

**Schofield MJ & Mishra GD. Three year health outcomes among older women at risk of elder abuse: Women's Health Australia. *Quality of Life Research*.**

**Background:** Elder abuse is increasingly being recognized as a serious form of familial violence, yet detection is poor and very little is known of the long term health effects of this psychosocial problem. The effectiveness of the brief, self-report Vulnerability to Abuse Screening Scale in predicting three year health outcomes was investigated among women enrolled in the Australian Longitudinal Study on Women's Health.

**Methods:** The sample comprised a cohort of 10,421 women aged 73-78 who completed the 1996 and 1999 postal surveys (attrition rate 19.5%). The Time 2 sample had a small bias towards lower risk for elder abuse at Time 1 and better health on SF-36 and self-rated health.

**Results:** This study provides the first clear evidence of a long term impact of psychological abuse on health outcomes among older women, even when controlling for a large number of confounders. The dejection factor of the VASS, which measures emotional and psychological abuse, was strongly and consistently related to all subscales of the SF-36 quality of life measure and the physical (PCS) and mental health (MCS) factors of the SF-36. The vulnerability factor, involving physical and psychological abuse, predicted three year mental health.

**Conclusions:** These findings have important implications for health service providers who need to enhance their recognition of psychological abuse through easily administered brief questions such as provided in the VASS, and develop effective ways of intervening to reduce the likelihood of abuse and improve quality of life, and particularly mental health, among older people.

**Smith N, Young A & Lee C. Optimism, health-related hardiness and well-being among older Australian women. *Journal of Health Psychology.***

Understanding the role of psychological characteristics in predicting or maintaining positive well-being in older age may help provide directions for preventive intervention. This paper addresses the question of whether optimism and health-related hardiness contribute to health and well-being among older women. Positive psychological characteristics, including optimism and health-related hardiness, are known to be associated with good self-rated health, but the nature of the relationship is open to question, since these variables are all affected by socioeconomic status, social support, major physical illness, and access to health services. The paper uses data from 9,501 women aged 73 to 78, participating in the population-based Australian Longitudinal Study on Women's Health. Hierarchical multiple regression established that optimism and health-related hardiness explained a significant proportion of the variance in all subscales of the SF-36, and in a measure of stress, even after these potential confounders were taken into account. The data, although cross-sectional, suggest that positive personal characteristics such as these may make a unique contribution to well-being, at least among older women.

**Warner-Smith P & Byles J. The big picture: The health and Wellbeing of three generations of women in rural and remote areas. *Annual Review of Health Sciences.***

Given the social and economic changes occurring in many areas of rural Australia (Beilin, 1995; Lawrence, 1996), and claims of an increasing 'gap' between urban and rural areas where there is 'higher unemployment, higher suicide rates, lower standards of health care, education and telecommunication services, and lower life expectancy' (Kilpatrick and Bell, 2000: 4) and given also that 'women bear the brunt when social services in rural communities are reduced' (Haslam McKenzie 2000:86), it is timely to consider the health of country women compared to women in the cities, to help fill in the big picture.



This paper draws on findings from the Australian Longitudinal Study on Women's Health (ALSWH), a 20 year study of the health of 40,000 Australian women in three age cohorts, to present an overview of rural women's health. The age groups were selected in order to follow women through life stages which are likely to be critical to their health and well-being. Here we discuss aspects of the lives of three generations of rural women: Younger women who were aged 18-23 at the time of the first ALSWH survey in 1996; Mid-age women who were 45-50; and Older women who were 70-75.

**Grove N, Brough M, Canuto C & Dobson A. Aboriginal and Torres Strait Islander health research and the conduct of longitudinal studies; issues for debate. *Australian and New Zealand Journal of Public Health*.**

The National Health and Medical Research Council, Research Agenda Working Group (RAWG) and the literature on Indigenous health have identified the need to fill gaps in descriptive data on Aboriginal and Torres Strait Islander health and noted both the lack of research with urban populations and the need for longitudinal studies. This paper presents some of the broad ethical and methodological challenges associated with longitudinal research in Indigenous health and focuses particularly on national studies and studies in urban areas. Our goal is to advance debate in the public health arena about the application of ethical guidelines and the conduct of longitudinal studies in Aboriginal and Torres Strait Islander communities. We encourage others to offer their experiences in this field.

**Powers JR, Goodger B & Byles JE. Assessment of the abbreviated Duke Social Support Index in a cohort of older Australian women. *Australasian Journal on Ageing*.**

**Objectives:** To assess the acceptability, reliability and validity of the 11-item Duke Social Support Index (DSSI) in community-dwelling older Australian women and to describe its relationship with the women's socio-demographic and health characteristics.

**Method:** Women aged 70-75 years were randomly selected from the national Medicare database, with over-sampling of rural and remote areas. The mailed survey included items about social support, Medical Outcomes Study Short Form Health Survey (SF-36), health service use, recent life events and socio-demographics.

**Results:** All DSSI items were completed by 94% of the 12,939 participants. Internal reliability was reasonable for ten of the 11 DSSI items and its factors, social interaction (4 items) and satisfaction with social support (6 items; Cronbach's alpha of 0.8, 0.6, 0.8). The factor structure was consistent for subgroups of women: urban/non-urban; English speaking/non-English speaking background; married/widowed. Summed scores were highly correlated with factor scores and showed good construct validity. Higher social support was associated with better physical and mental health, being Australian born, more educated and better able to manage on income.

**Conclusion:** Ten of the 11 DSSI items provided an acceptable, brief and valid measure of social support for use in mailed surveys to community-dwelling older women.

## 5.4. CONFERENCE SYMPOSIA AND SPECIAL EVENTS

### 5.4.1. NSW Department for Women Roundtable: Young Women and Pregnancy, Sydney, 25<sup>th</sup> July 2003.

#### Warner-Smith, P. 'Teenage pregnancy and parenting'.

ALSWH is a longitudinal survey of a representative national sample of 40,000 Australian women, spread across three age groups -young, mid-age and older - with the young cohort aged 18-23 in 1996 . The longitudinal nature of the ALSWH project is increasingly providing the potential to examine women's lives as they move through critical life stages. ALSWH data are presented here which describe and compare three groups of young women: those who had their first baby in their teens, those who became mothers after the age of 20, and those who did not have children. The data show that the mental and physical health of those women who had a baby in their teens was poorer than either of the other two groups, and a range of risk factors for teenage pregnancy are discussed.

## 5.5. CONFERENCE PRESENTATIONS

### Taft A\*, Small R, Hegarty K, Lumley J, Watson L with Women's Health West. **Evaluating interventions for women experiencing intimate partner abuse: challenges in the development of a randomised community intervention trial. The story of the mosaic (mothers advocates in the community project).** *National Nursing Network Against Violence*, 21<sup>st</sup> International Conference, Adelaide 20<sup>th</sup>-22<sup>nd</sup> June 2003.

With a growing emphasis on interventions to prevent or reduce domestic violence, how do we know these are helping women? Governments and NGOs are increasingly concerned with the effectiveness and cost-effectiveness of interventions in health and other systems that attempt to reduce and prevent intimate partner abuse. This paper will review the issues in methods that have been developed to date to evaluate VAW interventions and discuss their strengths and limitations. It will then illustrate the challenges of developing a rigorous, generalisable, collaborative and women-centred evaluation strategy, using the story of the MOSAIC project development. MOSAIC is a proposed randomised controlled community intervention trial in the culturally and linguistically diverse north-western area of Melbourne.

The study's primary aims are:

- \* to reduce partner abuse among women pregnant or with children under 5 GPs identify as at risk

- \* to reduce depression in women pregnant or with children under 5 whom GPs identify as at risk

Its broad objectives are:

- \* to determine the effectiveness of providing mentor mothers' support to women at risk in a CALD community through a randomised trial design, including process, impact and outcome evaluation

- \* to strengthen the attachment of at-risk women to their children

- \* to enhance GP case management of family members living with partner abuse

\* to enhance effective inter-sectoral collaboration between general practice and community-based family violence networks

The paper will describe the outcomes of the development phase of this project, the evaluation challenges the research team faced and how these were resolved.

**Taft A. Abuse and young Australian women's reproductive health outcomes – emerging data from the Australian Women's Longitudinal Health Study: what are the implications? *Emerging issues in pregnancy care: tackling violence and depression: Evidence, dilemmas and solutions.* Seminar: La Trobe University, Melbourne, 25<sup>th</sup> June 2003.**

No abstract available.

**Kelagher, M. Unemployment, contraceptive behaviour and reproductive outcomes among young Australian women. 20<sup>th</sup> Annual Research Conference: Academy of Health Services Research and Health Policy. Nashville, Tennessee, United States of America, 27<sup>th</sup>-29<sup>th</sup> June 2003.**

**Research objective:** To test the hypothesis that welfare reliance provides incentives for single/early motherhood. If this hypothesis is true it would be expected that:

- 1) Unemployed young women might be less likely to aspire to marry, more likely to aspire to having children and less likely to aspire to being unemployed than employed young women
- 2) Unemployed young women would be more likely to fall pregnant
- 3) Unemployed young women may be more likely to give birth

It would be further expected that such differences could not be explained by differences in contraceptive practices.

**Study Design:** The Australian Longitudinal Study of Women's health conducted mailout surveys of young Australian women (18-22 years) in 1996 and 2000. The current analysis used the following variables.

**Unemployment:** At time 1 women were considered unemployed if they indicated that they were unemployed and looking for work. All other women including those in full time study were considered not unemployed.

**Aspirations at 35 years of age:** The women were asked about whether they aspired to have children, be married and be working at age 35 years.

**Pregnancy, births and terminations:** These were coded as dichotomous variables. The analyses only included outcomes that had occurred since time 1, this resulted in the exclusion of 234 women but the percentage of unemployed was still 6.9%.

**Contraception:** Perceived need for contraception, use of oral contraceptives and condoms at time 1 were also examined.

Age, socioeconomic status of parents and area and partnership status were taken into account in all analyses.

**Population studied:** There were 14779 women in the young group at time 1 and 9683 women at time 2. Most of the women had valid data (98.3%) had valid data on unemployment, with 6.9% of the sample reporting that they were unemployed and looking for work.

**Principal Findings:** Rates of pregnancy among young unemployed women were higher than rates among unemployed women. However these differences do not reflect a response to the incentives provided by welfare. Unemployed women were less likely than employed women to aspire to be married by 35 years but were also less likely to aspire to have children and more likely to aspire to work at 35 years. There was also no evidence that unemployed women were less likely to see a need for or to use contraception. However there was evidence that higher rates of pregnancy among unemployed women were the result of lower use of the contraceptive pill in this population.

**Conclusions:** Barriers to contraceptive use rather than incentives provided by the welfare system may be responsible for differences in higher rates of pregnancy among young unemployed Australian women.

**Miller-Lewis L. Psychosocial risk factors for late-adolescent pregnancy and birth: a Women's Health Australia Study. 8<sup>th</sup> European Congress of Psychology. Vienna, Austria, 6<sup>th</sup>-11<sup>th</sup> July 2003**

This study investigated psychosocial predictors of late-adolescent pregnancy and childbirth in young Australian women. Two mail-out surveys assessing reproductive behaviour and socio-demographic, unemployment/competence, psychosocial well-being, and aspiration factors, were completed four years apart by 1647 late-adolescent females selected from the young cohort of the Australian Longitudinal Study of Women's Health. Cross-sectional findings indicated that lower psychosocial maturity correlated with both late-adolescent pregnancy and birth, and problem behaviour correlated with late-adolescent pregnancy. Low educational involvement combined with low status employment also correlated with late-adolescent childbirth. Longitudinally, poorer psychosocial well-being and high family aspirations combined with low job aspirations were risk factors for both late-adolescent pregnancy and childbirth. Stress and alcohol use was an additional risk factor for pregnancy, and unemployment with lower income another risk factor for childbirth. These findings provide some support for the Eriksonian developmental model of adolescent pregnancy and childbirth, in that psychosocial well-being partially mediated the relationship between unemployment/income and subsequent late-adolescent childbirth. It is concluded that psychosocial factors play an important role in the understanding of late-adolescent pregnancy and childbirth, and the implications of this for prevention are discussed.

**McNair RP. The health of young lesbians in Australia. Australian Lesbian Medical Association annual conference 2003, Noosa, 15<sup>th</sup>-17<sup>th</sup> August 2003.**

No abstract available.

**Brown WJ. Reducing risks and big fat lies: global and local perspectives on weighty issues. Invited keynote presentation to the inaugural Queensland conference of the Australian Health Promotion Association. Mackay, August 2003.**

No abstract available.

## 5.6. OTHER PRESENTATIONS

**Powers J.** Women's Health Australia: Selected results. Older Women's Network, Newcastle, Australia, 5<sup>th</sup> June 2003.

**Lee C.** Mental health in the Women's Health Australia cohort. *Research Centre for Gender and Health's monthly seminar series: 'RCGH does lunch'*, the University of Newcastle, Newcastle, Australia, 10<sup>th</sup> June 2003.

**Powers J.** Lost and found: Tracking, retention and types of attrition. *Research Centre for Gender and Health's monthly seminar series: 'RCGH does lunch'*, the University of Newcastle, Newcastle, Australia, 8<sup>th</sup> July 2003.

**Watson L & Taft A.** Taking control of a large cohort dataset grappling with the Australian Longitudinal Study of Women's Health. *Methods Seminar, Clinical Epidemiology and Biostatistics Unit and the Centre for the Study of Mothers and Children's Health, Royal Women's Hospital, Melbourne, Australia, 30<sup>th</sup> July 2003.*

**Hillier L & Kavanagh A.** Substance use and mental health and health service usage among non-heterosexual young women in Women's Health Australia. *Lesbian Health Research Seminar, Australian Research Centre for Sex, Health and Society, La Trobe University, Melbourne, 4<sup>th</sup> August 2003.*

**Warner-Smith P.** Virgin births and other information about teenage pregnancies: data from the Australian Longitudinal Study on Women's Health. *Research Centre for Gender and Health's monthly seminar series: 'RCGH does lunch'*, the University of Newcastle, Newcastle, Australia, 12<sup>th</sup> August 2003.

**Young A.** Postmenopausal hormone replacement therapy: Is it worth the risks? *Research Centre for Gender and Health's monthly seminar series: 'RCGH does lunch'*, the University of Newcastle, Newcastle, Australia, 9<sup>th</sup> September 2003.

**Byles J.** Australian Longitudinal Study on Women's Health. *Hunter Chapter of the Australian Association of Gerontology: Dick Gibson Oration, Willows Convention Centre, Warners Bay, New South Wales, 18<sup>th</sup> September 2003.*

## 5.7. MEDIA

| <b>Date</b> | <b>Media</b>   | <b>Title</b>   | <b>WHA Collaborator</b>                  |
|-------------|--|--|--|
| 10/06/03    | Article – The Age (Farah Farouque)   | “1 in 4 young women hit by violence”   | Dr Angela Taft                           |
| 16/06/03    | Article - The Medical Journal of Australia (Michael R C Carr-Gregg, Kate C Enderby & Sonia R Grover) | “Risk-taking behaviour of young women in Australia: screening for health-risk behaviour” | ALSWH Research team                      |
| 16/06/03    | Article – The Sunday Herald Sun (Mary Papadakis)   | “Teenage girls are drinking more”  | ALSWH Research team                      |
| 20/06/03    | Article – The Age (Deborah Cameron)  | “It’s the stress of success”   | Professor Annette Dobson & Dr Kylie Ball |
| 21/06/03    | Article – The Age (Deborah Cameron)  | “Money, work and family send stress levels soaring”                                      | Professor Annette Dobson & Dr Kylie Ball |
| 21-22/06/03 | Article - The Sydney Morning Herald (Deborah Cameron)  | “The young and the restless”   | Professor Annette Dobson & Dr Kylie Ball |
| 28/07/03    | Article - The Courier-Mail (Jane Fynes-Clinton)  | “Risky Business”   | ALSWH Research team                      |
| 21/08/03    | Interview for Yen magazine (Michelle Graham)   | NA   | Professor Annette Dobson                 |
| 08/03       | Article – Uninews The University of Newcastle  | “Virgin births and teenage pregnancy”  | Dr Penny Warner-Smith                    |
| 09/09/03    | Newcastle University Radio   | “Risks and benefits of Postmenopausal Hormone Therapy”                                   | Dr Anne Young                            |
| 08/09/03    | Local ABC Radio (Newcastle)  | “Older women and alcohol use”  | Professor Julie Byles                    |
| 08/09/03    | Newcastle University Radio   | “Older women and alcohol use”  | Professor Julie Byles                    |
| 27/09/03    | ABC Radio National   | “Profile of CAM users in Australia”  | Dr Jon Adams                             |

## **6. ARCHIVING**

Data from main surveys are archived with the Social Sciences Data Archive, once they have been cleaned and checked, and preliminary calculation of variables has been performed. Data dictionaries and a copy of the survey are also archived. Archiving is current to Survey 3 of the Mid-age cohort (collected in 2001). There has been no archiving activity in the current reporting period. We expect that data from Old Survey 3 (2002) will be ready for archiving by December 2003.

## **7. FINANCIAL STATEMENT**

Expenditure July- September 2003

Based on University of Newcastle Financial Reporting System 12/9/03

Account 593-1029

The following table outlines income received from the Commonwealth, including the September contractual payment which has not yet been received, and expenditure associated with the conduct of the project. This includes forward estimates for the period October-December 2003.

Table 7.1. Financial Statement

| INCOME         |   |                  | EXPENDITURE                           |                                       |   |                                      |
|----------------|---|------------------|---------------------------------------|---------------------------------------|---|--------------------------------------|
| Source         | Details   | Income           | Items                                 | Actual Expenditure<br>1/7/03– 12/9/03 | Forward Estimate<br>13/9/03-<br>30/9/03 | Forward estimate<br>1/10/03-31/12/03 |
| DoHA           | <i>Contract</i>   | 382,040<br>(UN)  | Surveys & data entry                  |                                       |   | 31,306                               |
|                | <i>September contractual payment (not yet received)</i> | 37,000<br>(UQ)   | Newsletter printing                   |                                       | 11,583                                  |                                      |
|                |   | 190,000<br>(UN)  | Data linkage (AEC, HIC, CCV, NDI)     | 2,620                                 |   | 440                                  |
|                |   | 60,000<br>(UQ)   | Computer hardware, software           | 124                                   |   |                                      |
|                |   |                  | Equipment & maintenance               | 24                                    |   | 800                                  |
|                |   |                  | Postage & freight                     | 1,801                                 | 500                                     | 22,750                               |
|                |   |                  | Telephone                             | 2,740                                 | 498                                     | 1,100                                |
|                |   |                  | Printing, stationery, office supplies | 15,297                                | 880                                     | 550                                  |
|                |   |                  | General consumables/ Repairs          | 1,876                                 | 340                                     | 550                                  |
|                |   |                  | Travel/ Hospitality                   | 9,393                                 |   | 8,800                                |
|                |   |                  | Salaries UN                           | 133,315                               | 24,239                                  | 157,554                              |
|                |   |                  | On-costs                              | 30,516                                | 5,548                                   | 36,064                               |
|                |   |                  | Salaries UQ                           | 42,195                                | 7,672                                   | 49,867                               |
|                |   |                  | On-costs                              | 8,439                                 | 1,534                                   | 9,973                                |
|                |   |                  | Annual Report                         |                                       |   | 4,400                                |
|                |   |                  | University O'head charge              | 57,306                                |   | 37,500                               |
|                |   |                  | Postgraduate scholarships/ fees       | 7,155                                 | 1,301                                   | 5,500                                |
|                |   |                  | Student research costs                |                                       |   |                                      |
| <b>TOTAL S</b> |   |                  |                                       | <b>312,801</b>                        | <b>54,095</b>                           | <b>367,154</b>                       |
|                |   | <b>\$669,040</b> |                                       |                                       | <b>\$734,050</b>                        | <b>(\$65,010)</b>                    |



## **8. PROJECT STAFF JULY - SEPTEMBER 2003**

### **8.1. PROJECT STAFF: RESEARCH CENTRE FOR GENDER AND HEALTH, UNIVERSITY OF NEWCASTLE**

|                               |  |
|-------------------------------|--|
| Research Centre Director:     | Professor Lois Bryson (part-time position) |
| Project Manager:              | Dr Penny Warner-Smith                      |
| Data Manager:                 | Mrs Jean Ball                              |
| Statistician:                 | Dr Anne Young                              |
| Statistician:                 | Ms Jenny Powers                            |
| Research Assistants:          | Mrs Lyn Adamson                            |
|                               | Ms Rosie Brotherston                       |
|                               | Ms Jennifer Helman (part-time)             |
|                               | Mrs Joy Goldsworthy (maternity leave)      |
| Data Assistant:               | Ms Eliza Fraser                            |
| Secretary (shared position):  | Mrs Penny Knight, Ms Sue James             |
| Part-time Project Assistants: | Ms Kath Bell                               |
|                               | Mrs Catherine Chojenta                     |
|                               | Ms Ashlea Dwyer                            |
|                               | Ms Katie Lawrence                          |
|                               | Mr Tim Neve                                |
|                               | Ms Ingrid O'Neill                          |
|                               | Ms Paula Setz                              |
|                               | Ms Suzanne Stevens                         |
|                               | Ms Zoe Turner                              |
|                               | Ms Jacqui Warner-Smith                     |

### **8.2. PROJECT STAFF: UNIVERSITY OF QUEENSLAND**

|                                |  |
|--------------------------------|--|
| Project Coordinator:           | Professor Christina Lee (part-time position) |
| Senior Project Officer:        | Ms Anne Russell                              |
| Part-time Research Assistants: | Ms Jess Ford                                 |
|                                | Ms Natalie Grove                             |
|                                | Ms Nadine Smith                              |
|                                | Ms Helen Gramotnev                           |

### **8.3. PROJECT INVESTIGATORS**

Professor Annette Dobson, School of Population Health, University of Queensland, Study Director

Dr Kylie Ball, School of Health, Deakin University

Professor Wendy Brown, School of Human Movement Studies, University of Queensland

Emeritus Professor Lois Bryson, Director, Research Centre for Gender and Health, University of Newcastle, and RMIT University

Professor Julie Byles, Centre for Research and Education in Ageing, University of Newcastle

Professor Christina Lee, Schools of Psychology and Population Health, University of Queensland

Dr Gita Mishra, Medical Research Council Human Nutrition Research Unit, Cambridge, UK

Dr Nancy Pachana, School of Psychology, University of Queensland

Associate Professor Margot Schofield, School of Health, University of New England

Dr Penny Warner-Smith, Research Centre for Gender and Health, University of Newcastle

Dr Anne Young, Research Centre for Gender and Health, University of Newcastle

### **8.4. ASSOCIATE INVESTIGATORS CURRENTLY WORKING WITH THE MAIN COHORTS**

Dr Jon Adams, Centre for Clinical Epidemiology and Biostatistics, University of Newcastle

Mr Michael Bittman, School of Sociology, University of New South Wales

Professor Peter Brown, School of Leisure Studies, Griffith University

Dr Rafat Hussain, School of Health, University of New England

Associate Professor Justin Kenardy, School of Psychology, University of Queensland

Dr Ruth McNair, School of General Practice, University of Melbourne

Dr Amanda Patterson, King's College, London

Dr Charmaine Power, School of Nursing and Midwifery, Flinders University

Dr David Sibbritt, Centre for Clinical Epidemiology and Biostatistics, University of Newcastle

Dr Angela Taft, Centre for Mothers' and Children's Health, La Trobe University

Dr Stewart Trost, School of Human Movement Studies, University of Queensland

Dr Cathy Turner, School of Population Health, University of Queensland

Dr Tracey Wade, School of Psychology, Flinders University

Dr Edith Weisberg, FPA Health



## **APPENDICES**



**APPENDIX 1. SCIENTIFIC MEETINGS AND TELECONFERENCES AMONG  
RESEARCH TEAM**



## APPENDIX 1.1. STEERING COMMITTEE TELECONFERENCE MINUTES

### Steering Committee Teleconference Tuesday 10<sup>th</sup> June 2003

**Present:** Annette Dobson, Penny Warner-Smith, Christina Lee, Anne Young, Lois Bryson, Wendy Brown, Julie Byles

**Apologies:** None

**Minutes:** Penny Knight

| Item No | Item   | Action | By whom<br>Due date |
|---------|--|--------|---------------------|
| 1       | <b>Welcome and apologies:</b> Annette welcomed everyone.   |        |                     |
| 2       | <b>Minutes and matters arising</b><br>All on agenda – no problems with previous minutes.   |        |                     |
| 3       | <p><b>Strategic issues</b></p> <p><u>Refunding</u><br/>Annette spoke to Brendan Gibson last week. He advised to escalate contact. Annette emailed Rob Wooding with a copy to Joy Eshpeter – no reply from either of them to date. Annette to contact Rob Wooding later today.<br/>The present contract expires at the end of June, and any extension thereof has to have the University of Queensland as a signatory.<br/>Staff at WHA to be advised that the contract will be renewed for three months, and that there are sufficient funds to continue until the end of 2003. Decisions will have to be made at that time as to the future of the study and its three cohorts if we do not receive the funding we have requested.</p> <p><u>Management issues</u><br/>Chris in Queensland from July 1. Penny to take over her duties in Newcastle. Lois becomes the director of the Research Centre.<br/>Lois, Penny and Chris to see Ron McDonald in Newcastle at 8:30 am on Friday 13<sup>th</sup> June to discuss financial matters.<br/>Data meeting on 11 July in Queensland.<br/>Ronis Chapman will represent the Department of Health and Ageing at the Mid 4 meeting on Thursday. Several investigators will attend as well.<br/>It is proposed at the meeting on Thursday to spend time working out a research agenda for the</p> |        |                     |



| Item No | Item   | Action   | By whom<br>Due date       |
|---------|--|--|---------------------------|
|         | <p>Old cohort. Time limit on research proposals needs to be set. There is a potential for collaboration on research proposals. Priorities have to be set both from the perspective of the Stats group, and also the PI's with regard to the data sets.</p> <p><u>Research syntheses</u><br/>Wendy has completed first draft of the PA glossy and will circulate for comment later today. Four syntheses have been sent to Print National for printing and binding. Tim has nearly final drafts of three glossies – Chris to circulate these to PI's.</p> <p><u>Reports from UN and UQ</u><br/>UN report on the table.<br/>UQ – huge backlog with ethics approval at the hospital.</p> <p><u>AOB</u><br/>National Symposium on Ageing Research – documentation has been circulated. Important that people from our Study be there for all of the events, including those with Dept of Ageing. Julie to follow up with Hal Kendig.<br/>Chris to draw up schedule for meetings for the second half of the year.</p> | <p>Chris to circulate glossies</p> <p>Chris to draw up schedule for meetings</p> | <p>Chris</p> <p>Chris</p> |

Next meeting: Monday 7<sup>th</sup> July 2003 at 9 am

**Steering Committee Teleconference  
Monday 7<sup>th</sup> July 2003**

**Present:** Annette Dobson, Penny Warner-Smith, Christina Lee, Anne Young, Lois Bryson, Wendy Brown

**Apologies:** Julie Byles

**Minutes:** Penny Knight

| Item No | Item  | Action | By whom<br>Due date |
|---------|---|--------|---------------------|
| 1       | <b>Welcome and apologies:</b> Annette welcomed everyone.  |        |                     |
| 2       | <b>Minutes and matters arising</b><br>All on agenda – no problems with previous minutes.  |        |                     |
| 3       | <p><b>Strategic issues</b></p> <p><u>Report on Research Syntheses</u><br/>Hard copies of research syntheses and one CD have been sent to Canberra. Glossies are deliverables for the extension of the contract and must be in Canberra by September. Three are nearly complete, and two are still being worked on. It was agreed that they should be sent to the Department as soon as they are ready, possibly even by the end of July. Once they are with the Department, we will work out a distribution strategy for them.</p> <p><u>Report on Re-funding progress</u><br/>Long term re-funding details are unclear at this time. A three month extension to the current contract, till the end of September, has been signed.</p> <p><u>Management issues for 2003</u><br/>The data management workshop on Friday 11<sup>th</sup> July will be used to help formulate a work plan for the next couple of years.</p> <p><u>Reports from UN and UQ</u><br/><b>UN</b> – surveys still coming in (55%). Overseas surveys received from Janice Muir. Telephone reminders going well. Another three part-timers have been employed. Congratulations to all concerned with the huge task of tracking 5000 young women by phone.<br/>Working on the website.<br/>OSW contract signed and Deb Loxton has started work on this. Proposal from NSW Department for Women to put in a linkage grant application to look at teenage pregnancy.</p> |        |                     |

| Item No | Item  | Action | By whom<br>Due date |
|---------|---|--------|---------------------|
|         | <p>Penny will be going down to the round table for this proposal at the end of this month.</p> <p><b>UQ</b> – Chris has taken up her post at UQ.</p> <p>Major holdups with ethics so therefore the two grants cannot progress further at this stage.</p> <p>It is possible we will lose the Cardio-vascular NHMRC grant due to the delay in obtaining ethics approval.</p> <p>ARC Research Networks: Hal Kendig for Ageing. Mark Wooden for Panel studies. Trevor Breusch and Mark Western for Social Science data archives.</p> <p><u>AOB</u><br/>None</p> |        |                     |

Next meeting: Thursday 7<sup>th</sup> August 2003 at 9 am

**Steering Committee Teleconference  
Thursday 7<sup>th</sup> August 2003**

**Present:** Annette Dobson, Penny Warner-Smith, Christina Lee, Julie Byles, Anne Young, Lois Bryson, Wendy Brown

**Apologies:** None

**Minutes:** Penny Knight

| Item No | Item   | Action                        | By whom<br>Due date |
|---------|--|-------------------------------|---------------------|
| 1       | <b>Welcome and apologies:</b> Annette welcomed everyone.   |                               |                     |
| 2       | <b>Minutes and matters arising</b><br>All on agenda – no problems with previous minutes.   |                               |                     |
| 3       | <p><b>Strategic issues</b></p> <p><u>Report on Research Syntheses</u><br/>Glossies are with the printers, and we should receive the first copies for proofreading by tomorrow.<br/>There has been no response from the Minister yet with regard to our request for the Research Syntheses launch. Wendy will be speaking to Andrew Laming again about this issue.</p> <p><u>Report on Re-funding progress</u><br/>Annette to follow up details of proposed funding from OSW, with Joy Eshpeter and Tanya. Enabling Grant has to be in to UQ by the end of next week. Not possible to have all 11 Investigators on the form, but 7 is a reasonable compromise. Everyone to send a one page cv with comments and suggestions to Chris, and these will be collated and circulated over the weekend.<br/>Need a firm strategy to keep the study together, but funded in a more realistic way, from several sources.</p> <p><u>Reports from UN and UQ</u><br/><b>UN</b> – Mid 4 pilot close to being finalised. Complete Elder Abuse scale is to go into the pilot, and the Mid cohort will be asked to comment. Evaluation form will be sent out with the pilot surveys. Rosie has ‘mapped’ the Young cohort and Penny will circulate this document. Young 3 response up to 56%. Phoning going really well. Jean expecting a final response rate of between 60% and 65%.<br/><b>UQ</b> – Work on which aspects of SES (eg education, income, occupation, parents’ SES) as they apply to young women and how they relate to health is now coming together and Natalie Grove</p> | All to send cv’s and comments | All                 |

| Item No | Item   | Action | By whom<br>Due date |
|---------|--|--------|---------------------|
|         | <p>has a well advanced draft paper. Jess and Wendy are working on physical activity. Nadine, Nancy and Chris are working on papers on DSSI and MH. The Indigenous paper (why a national longitudinal study is inappropriate) has been accepted for ANZJ Pub Health. Ethics committee issues continue to plague the 2 NHMRC grants – approval has not yet been received in writing from RBH for focus groups for carers of people with neurodegenerative conditions (which does have UQ Ethics approval), and the heart disease project still needs a full set of documentation before it can go to UQ Ethics. Anne R is mainly working on non-ALSWH projects at present (with funding from Neville Owen). Liane is making steady progress analysing the transcripts for the interviews with young women on smoking.</p> <p><u>Substudies</u><br/>Mids will have to be excluded from the CVD substudy because of timeline problems. Substudies for next year will have to be carefully planned, because there is the Mid 4 main survey, and also the pilot survey for Old 4. More attention should be given to substudies which entail personal contact, especially with the Old cohort.</p> <p><u>AOB</u><br/>Teleconference costs were investigated. It was decided to stay with Telstra for now.</p> |        |                     |

Next meeting: Thursday 4<sup>th</sup> September 2003 at 9 am

**Steering Committee Teleconference  
Thursday 4<sup>th</sup> September 2003**

**Present:** Annette Dobson, Penny Warner-Smith, Christina Lee, Julie Byles, Anne Young, Lois Bryson, Wendy Brown

**Apologies:** None

**Minutes:** Penny Knight

| Item No | Item   | Action | By whom<br>Due date |
|---------|--|--------|---------------------|
| 1       | <b>Welcome and apologies:</b> Annette welcomed everyone.   |        |                     |
| 2       | <b>Minutes and matters arising</b><br>All on agenda – no problems with previous minutes.   |        |                     |
| 3       | <p><b>Strategic issues</b></p> <p><u>Report on Re-funding progress</u><br/>Nothing finalised. Annette, Wendy and Christina, together with the Deputy Vice Chancellor from UQ are meeting with Tanya Utkin tomorrow, Friday 5<sup>th</sup> September – the agenda for this meeting is unclear. A three-way teleconference will be set up after the meeting to advise the PIs of the outcome. Lois spoke to Jeff Whalan in the Prime Minister’s office yesterday. The Department appears committed to the cause, but there is a shortage of funds. Lois to contact Perrin now that Jeff Whalan has left.</p> <p>Christina revised the budget and a copy was sent to David Siddle and to Ron McDonald. It is important that the UQ DVC understands thoroughly what the situation is with regard to both Universities. Ron and David have undertaken to put in \$50 000 per year should the application for the Enabling Grant be successful.</p> <p><u>Report from UN</u><br/><i>Young Survey 3</i><br/>Now up to 60% and hopeful that this could rise.</p> <p><i>Newsletter</i><br/>Unclear when this will be mailed as Tim has other priorities, such as posters for the Conference at the end of the month, which are taking much of his time. Still expecting to get it out early October. Lyn has written permission from all the women whose stories we are going to use.</p> |        |                     |

| Item No | Item  | Action | By whom<br>Due date |
|---------|---|--------|---------------------|
|         | <p><i>Mid 4</i><br/>Ethics received from Newcastle. We have had a quote from Lane and the distribution list is to be sent to them today.</p> <p><u>List of Registered Users</u><br/>Lois met David Hazlehurst in Canberra from FACS who spoke about a list of registered users. Rosie and Jean are compiling a list of people who have a Privacy Agreement and an MOU. This list could be used if we were called upon to produce a list of registered users. Data Management group have decided to ask people to sign a confidentiality statement annually.</p> <p><u>AMA newsletter</u><br/>Two documents prepared and sent to Margaret McDonald. Must ensure we do not trivialise our findings.</p> <p><u>ARC Research Networks</u><br/>Julie advised that she and Annette have been invited on to the Hal Kendig network and also the John McCallum network. Julie has sent details for the Hal Kendig network, and Annette to do the same. John McCallum – not quite as developed at this point. Julie is asking for clarification on its progress.<br/>Mark Wooden (HILDA) one – panel studies. Minimalist information on this.<br/>Christina on Research network on Women and Reproductive Health, being put together by Jane Usher, psychologist in Sydney.<br/>PIs should endeavour to get on as many of these networks as possible.</p> <p><u>AOB</u><br/><i>Grants</i><br/>Julie advised the meeting that they have received a \$10 000 grant from HMRI to assist with the analysis of the data for the older women and alcohol use. Still awaiting a response from Brewers in this regard.<br/>Julie and Annette to circulate a short proposal for money from the Pharmaceutical Alliance looking into muscular skeletal conditions and treatment. (Sean Lybrand and Mark Schultz – Julie's contacts).</p> |        |                     |

| Item No | Item  | Action | By whom<br>Due date |
|---------|---|--------|---------------------|
|         | <p><i>Conferences</i></p> <p>Julie has been invited to run a workshop at the International Congress on Longevity in Sydney next year, and would like to do the workshop on this Study. All in agreement this would be good for the Study.</p> <p>Christina has been asked to be the Keynote speaker at next year's Australian Psychological Society Conference, and will be speaking about WHA.</p> <p>There is an international Health Network Conference in Newcastle next month. We have been asked to put in a poster for that and Penny is hoping to use the Canberra conference poster.</p> |        |                     |

Next meeting: Thursday 2<sup>nd</sup> October 2003 at 9 am



## APPENDIX 1.2. ALSWH DATA MEETING

### Notes on ALSWH Data Meeting University of Queensland 11<sup>th</sup> July 2003

**Date of this document: 15<sup>th</sup> July 2003**

Present:

UQ: Annette Dobson, Christina Lee, Jess Ford, Anne Russell, Nadine Smith, Natalie Grove  
UN: Penny Warner-Smith, Anne Young, Jean Ball, Eliza Fraser, Jenny Powers

Conversation was frequently discursive so I have tried to summarize decisions and action plans in logical order rather than in the order they happened. At the end I have a list of actions which summarizes who is to do what.

#### **1. Month-by-month work plan**

A draft had been drawn up by CL and circulated. We went through this adding names to tasks and modifying as appropriate.

##### National Death Index

Annette's preference is to do this annually rather than triennially. To review when exact budget is known (leave in work plan as annual for the moment)

##### Data on Deaths

What quality of data do we have on deaths? For how many do we know actual date of death, cause of death? Jenny P to prepare a table and circulate.

##### Glossies

Penny WS to get these printed as soon as possible.

Distribution list – PWS and CL to work with LA on mailing list. To include those who receive Annual Report (Lyn to update contact details), plus members of NHMRC committees, advisors in PMC, Margaret McDonald, Jon Kruger, State and Federal presidents, & others at AMA, journalists

##### Data linkage Report

Anne Russell and Jess Ford to look at finalizing what is currently in draft form and include in December 2003 Report, then consider what might go into subsequent reports in early 2004 (when some of the current uncertainties about funding and about HIC may or may not be resolved)

##### Web

Explore methods for getting all surveys and all databooks put on web as pdf files for simpler downloading

Replace the current survey-with-percentages (previously prepared by Joy) with copy of survey and copy of databook

#### **2. Derived Variables**

Anne Russell presented a list of variables completed or being worked on (data dictionary supplement)

Comments on Anne's TO DO column (and other variables which arose).

SES Young – Jess Ford is working on this. Mid and Old.

Work/study status – only needs writing up in standard format

Menopause – there has been work done by various people, not sure how much has been shared.

AY and JP to collect materials on menopause and menopause transition (including anything prepared by Lauren Williams) and circulate to data meeting

Menopause transitions (1-2 and 2-3) to be added to data meeting agenda

CL to remind Gita about proposed paper on HRT and hysterectomy

Stress – CL to write up new materials

Physical activity, including transitions and cross-sections – Jess Ford has this nearly finished for Mids. Will do Young and Old once Mids is completed and approved.

CL to extract from Sandra Bell's thesis the section on PA transitions among Young, and circulate to AR, JF and WB.

BMI – cross-sectional data have been sorted and cleaned. Longitudinal – waiting on T3 data to decide on inconsistencies in heights and weights. AY to work on longitudinal inconsistencies.

FFQ – documentation of energy adjustment – AD will ask Gita to provide information

Medical history – JP will send information on diagnoses and symptoms to AR.

We need a standard method for calculating number of symptoms, to replace present system of adding up all or some and of including “rarely” in some analyses and not others.

Psych variables – CESD, satisfaction, DSSI, opt/hard – documentation done, formatting only needed. NS to send code for opt/hard to JB.

- GADS. NS will look at this variable. Add to data meeting agenda.
- Perceived control – JF and CL to work on

### **3. HIC issues**

Anne Young led this discussion. Progress with HIC depends on funding and on the acceptability of the protocol for 100% linkage. Decided we should consider pursuing other types of linkage. Anne Y, Annette D and Michael Hobbs (WA) to look at possibility of NHMRC grant involving linkage with WA data, need to have a specific research question (maybe CVD?). Applications due in December.

Should we proceed with obtaining PBS data? The quality of the data is widely considered to be poor and we probably do not have the capacity to work with the data at the moment.

The question of whether our current data and/or data obtainable under a new protocol would include DVA data has not yet been answered.

#### **4. Substudies**

Discussion of possible substudies for 2003 and 2004. These include:

FPA contraception substudy – pilot completed, main survey to start soon

Younger women and depression – Kate France – working on survey and ethics for 2004

CVD study – Annette et al. – progress on this depends on ethics committees and the NHMRC accepting the problems of cross-institutional research management

Carers – we hope to have this completed in 2003

Elder abuse substudy – Margot Schofield – no response to CL's request for information, now too late for it to go ahead in 2003, need to explore with Margot whether best to abandon it or conduct in 2004

Work/life balance – Penny et al. – focus groups proceeding, project will continue into 2004

Wendy B and colleague on PA – CL to circulate information to PSA

#### **5. Longitudinal Studies Capacity Grant**

Gail Williams joined the meeting together with four of the LSU postdoc – Rob Ware, Jolieke van der Pol, Leigh Tooth, and Adrian Barnett. They explained the purpose of the Longitudinal Studies Unit, with an initial focus on (a) measurement of change and (b) generalizability, with initial emphasis attrition. General discussion of how best to collaborate with ALSWH, and a presentation of work in progress. AB is working on dealing with highly skewed data/floor & ceiling effects and LT is working on strategies for understanding predictors of attrition. All have signed confidentiality agreements and can now use ALSWH data as well as other datasets to explore methods.

#### **6. Discussion of Research Theme – Measurement and Analysis of Health Outcomes**

Annette prepared an outline of major topics under this theme, derived largely from the 2002 Report to Reviewers. Discussion of the main points:

##### Attrition

Respondents vs non-respondents

Attrition S1-S2-S3 for Mid and Old – JP and AY working on descriptive report – characteristics of who is lost

Respondents vs 2001 census

Jenny P waiting on data

Deaths and survivors

Death data to be reviewed and tidied (as discussed earlier). Discussion of paper on compression vs prolongation of morbidity – differences in SF36 etc at previous survey for Deaths vs Survivors, taking SES and region into account. Survival analysis if data quality is adequate. Annette, Julie Byles, Natalie, Jenny P, Anne Young, others?

### Health Service Use

Who are high users among the Young? Data need to be examined to look at the 2 items about GP visits (routine pregnancy and contraception relates vs all other reasons) Do they distinguish and if not how best to use these data.

Nancy Pachana has a new PhD student (Emma Harley) with an interest in high service use and somatisation of anxiety-related complaints – vague at the moment – probably with the Older cohort. NP will keep us informed.

### Cognitive decline/memory changes

Nancy plans to work on this.

### Depression

effects on response bias – Nadine is looking at this as part of the PhD  
effects on retention – Jenny P has done a report in this already.

### Missing data/multiple imputation

Not a burning issue for this group, Gita Mishra continues to work on this and will keep us informed.

### Validity of measurements

#### Prospective/predictive validity

ANSI – Jenny P about to finish work on this, will need input from AY and Amanda Patterson

#### Validation of self-reported diagnoses

substudies needed for validity. Jenny P looking at inconsistencies in self-report of diagnoses

#### Generic vs specific measures of functional limitation and comorbidity

Substudies needed

Cate D'Este and Julie Byles are doing something with DVA data – check what they are doing

### Measuring change

LSU staff working on latent variables underlying ordinal categories and on adjustment for baseline/regression to the mean, and responsiveness of measures – if there are example in the ALSWH data they could address, please discuss with Annette.

### Statistical analysis

Annette is working on these topics with LSU staff

### Record Linkage

Dependent on funding and progress with protocol, as discussed earlier

### Geocoding & spatial analysis

Anne Y – looks at FACS classification of categories of SLA – to cross-classify against ARIA/RRMA/other measures – main value may be in identifying outer urban regions

Deb Loxton using for OSW project which looks at unpartnered mothers esp in outer urban areas

Ann Larson (now at UQ in Geography) continuing to be interested in internal migration

## 7. Other issues

CL reported on plans for analyses in the “roles and relationships” theme, with a focus on identifying characteristics of young women who cope successfully with life transitions.

Julie Byles’ table of analyses for Older cohort – CL to look at status of each box in terms of existing projects, expressions of interest, completed papers etc. Rosie to prepare a parallel table for Younger cohort.

Brief discussion (for later development) of measures of responsiveness of health system (vs subjective satisfaction of individual) and of measures of quality of life which are broader than health-related QoL (current psych literature in this area sees QoL as multidimensional and shows that the relative importance of the dimensions alters depending on an individual’s personal and medical situation)

## 8. Actions Arising

**Table A1.2.1. Actions to be taken now**

| What  | Who             |
|---|-----------------|
| Comment to CL on revised Monthly Plan (attached) by end of July                             | Everybody       |
| Glossies to printer and circulated asap   | Penny WS        |
| Updated mailing list for glossies (revision of Glossy list)                                 | PWS, CL, LA     |
| Look at getting all surveys and databooks on Web in pdf format                              | Penny WS, Tim N |
| Remind Gita about HRT/Hx paper and put in proposal  | Christina L     |
| Get FFQ energy adjustment algorithm from Gita   | Annette D       |
| Send code for opt/hard to Jean Ball   | Nadine S        |
| Circulate substudy plan from Wendy B to PSA   | Christina L     |
| Find out what Jule B and Cate d’E are doing on comorbidities with DVA data, report to group | Jenny P?        |
| Ensure that all items in the next table appear on the data meeting agenda                   | Lyn A           |

**Table A1.2.2. Actions to be taken or got under way soon**

| What  | Who  |
|---|--|
| Tabulate existing data on deaths – for how many do we have exact date?<br>Cause?  | Jenny P  |
| Finalise existing materials for HIC databook /data linkage report by December 2003  | Anne R, Jess F   |
| Derived variables:<br>SES - continue working on SES for all age groups<br>Work/study status - write up in standard format<br>Menopause and menopause change status – collect all existing documentation and circulate to data group to decide what to do next<br>Stress – Y –revise report on basis of Sandra’s more recent work<br>PA – complete Mid work then do Young and Older<br>- circulate Sandra’s work on Y PA transitions<br>Symptoms - make some decisions about a standard method for calculating a derived symptoms variable<br>Psych variables – finish formatting of documentation<br>GADS – begin looking at this variable<br>Perceived control - ditto | Jess F<br>Anne R<br>Anne Y & Jenny P<br><br>Christina L<br>Jess F<br>Christina L<br>?????<br><br>Anne R<br>Nadine S<br>Jess F, Christina L |
| Attrition:<br>descriptive paper on attrition S1-S2-S3<br>comparison with 2001 census (when available)<br>deaths vs survivors – paper on morbidity as a predictor  | Jenny P, Anne Y<br>Jenny P<br>Annette D, Julie B, NG, JP, AY<br>+++  |
| Health service use<br>How are the 2 GP use items among the Youngs distinguished?  | ?????  |
| Depression and response bias  | Nadine S   |
| Validity of measures:<br>ANSI – JP to finish work on this, input from AY and AP<br>Inconsistencies in reported diagnoses – I’m not sure what stage this is at   | Jenny P, AY, AP<br>Jenny P   |
| Geocoding<br>Crosstabulating FACS classification against ARIA etc   | Anne Y   |

**Table A1.2.3. Less definite longer term plans**

| What   | Who                    |
|--|------------------------|
| Decide what might go into subsequent data linkage reports                                      | Anne Y, Anne R, Jess F |
| Work on BMI, height and weight inconsistencies when T3 data are available                      | Anne Y                 |
| Look at NHMRC grant to explore linkage with WA dataset   | Anne Y,<br>Annette D   |
| Continue process of working with HIC<br>Find out about DVA data and whether routinely included | Anne Y                 |
| Look at ways of working on collaborative activities with LSU people                            | ?????                  |

**Table A1.2.4. Deliverables and Timeline Specified in Draft Contract (Annexure B)**

Revised 15/7/03

|         | Survey | Prep & Pilot | Study report  | Annual Report | Survey Report | Changes Report | Data Linkage Report | Newsletter | Policy Report | Archive |
|---------|--------|--------------|---|---------------|---------------|----------------|---------------------|------------|---------------|---------|
| Dec 03  | Y3     | M4           | CL  | CL            | O3            |                |                     | ☺          | ☺             |         |
| June 04 | M4     | O4           |   |               |               | ☺              |                     |            |               | ☺       |
| Dec 04  |        |              | CL  | CL            | Y3            |                |                     | ☺          | ☺             |         |
| June 05 | O4     | Y4           |   |               |               |                | ☺                   |            |               | ☺       |
| Dec 05  |        |              | CL  | CL            | M4            |                |                     | ☺          | ☺             |         |
| June 06 | Y4     | M5           |   |               |               | ☺              |                     |            |               | ☺       |
| Dec 06  |        |              | CL  | CL            | O4            |                |                     | ☺          | ☺             |         |
| June 07 | M5     | O5           |   |               |               |                | ☺                   |            |               | ☺       |
| Dec 07  |        |              | CL  | CL            | Y4            |                |                     | ☺          | ☺             |         |
| June 08 | O5     | Y5           | FINAL REPORT, END OF CONTRACT PERIOD. PROCEED SMOOTHLY TO NEW CONTRACT WITH INCREASED ANNUAL BUDGET |               |               |                |                     |            |               |         |
| Dec 08  |        |              | CL  | CL            | M5            |                |                     | ☺          |               |         |

## NOTES:

**Study Report** is the old 6-monthly report, now annual

**Annual Report** is the Glossy

**Survey Report** is to consist of

1. Methodological issues - response rates – cut and paste from previous year's Study Report
  - sources of items – cut and paste from pilot year's Study Report
2. Survey forms – copy from previous year's Study Report
3. Tabulation of results = data book. NEW, to be done that year

**Changes Report** consists of

1. Definitions of measures of change
  2. Tables showing changes in major variables (ie change databook)
- We need to produce two of these – first need to tabulate what change variables have already been defined, then decide which ones to do next and which to present in which change report. NB as we have not yet done a change databook, we can use all the work which has already been done as deliverables under this new contract.

**Data Linkage Report** consists of

1. methods used
  2. tabulations of the main results (ie HIC databook)
- We need to produce two of these too – again work already done can count towards these deliverables as the HIC data book has not been completed yet.

**Policy Report** equates to a research synthesis.



Timelines in order to achieve all deliverables (endlessly repeating 2-year cycle)

In each year we:

Run this year's survey  
Prepare data dictionary for this year's survey  
Pilot next year's survey  
Clean last year's data and prepare data books  
Archive the year before last's survey  
Write and distribute at least one newsletter (two if funding permits)

As well as this, in each year we write:

Study Report  
Annual Report  
Survey Report  
Policy Report

And in every second year we write:

Changes Report  
Linkage Report

And we also do substudies every year.

**Table A1.2.5. Data Timeline: July 2003 – December 2005**

This is a draft designed to present a two-yearly cycle, starting at Jan 04, but the last 6 months of this year are included to remind us of what we need to do before we start the next cycle. NB it is not meant to include all tasks involved in running the project, only those for which the data meeting has a role in planning or carrying out.

|         | <b>Survey (annual)</b>   | <b>Prep &amp; Pilot (annual)</b>  | <b>Study report (annual)</b>                                    | <b>Annual Report (annual)</b>   | <b>Survey Report (annual)</b>  | <b>Changes Report (biennial)</b>   | <b>Data Linkage Report (biennial)</b>                       | <b>Newsletter (annual at this stage)</b>                 | <b>Policy Report (annual)</b>                                 | <b>Data dictionary and Archive (annual)</b>                      |   |  |
|---------|--|---|---|---|--|--|---|--|---|--|---|--|
| July 03 | <i>Complete data collection and send surveys for scanning Y3<br/><b>JB/EF/LA/Part-timers</b></i> | <i>Finalise survey, ethics<br/><b>PWS/CL</b></i>  | <i>Start Sept report<br/><b>CL</b></i>                          |   | <i>Finish cleaning O3 data, calculating variables, and producing data book<br/><b>JB/EF/PK</b></i> | <i>List change variables already defined. Decide which variables to define next.</i>                                   | <b>Report on what is currently in preparation<br/>AY/JF</b> | <i>Write text, circulate and finalize CL</i>             | <i>Complete glossies and submit to DoHA<br/><b>PWS/TN</b></i> | <i>Ensure that Y3 data dictionary is complete.<br/><b>EF</b></i> |   |  |
| Aug 03  |  | <i>Pilot mailout M4<br/><b>EF/LA/RB</b></i>   | <i>Finalise, layout, production<br/><b>CL/RB</b></i>            |   |  | <i>Decide on formats for change databook</i>   |   | <i>Layouts and quotes<br/><b>TN/LA/CL/PWS</b></i>        |   |  |   |  |
| Sept 03 |  | <i>Pilot reminders<br/><b>EF</b></i>  | <i>Submit Sept Report<br/><b>CL</b></i>                         |   |  | <i>Decide which change variables to put in June 04 change databook and start producing definitions and data tables</i> |   | <i>Newsletter address list and mailout<br/><b>JB</b></i> |   |  | <i>Distribute glossies<br/><b>PWS/CL/LA</b></i> |  |
| Oct 03  |  | <i>Pilot track and data entry<br/><b>EF/CC/LA</b></i>   | <i>Start Dec report<br/><b>CL</b></i>                           | <i>Choose theme, write text<br/><b>CL</b></i>   |  |  |   |  |   |  |   |  |
| Nov 03  |  | <i>Pilot descriptives, missing data, revise M4, to data mtg, ethics<br/><b>EF/PWS/CL/AD</b></i> | <i>Finalise Dec report, layout, production<br/><b>CL/RB</b></i> | <i>Layout and design, finalise text, production, mailing list<br/><b>CL/TN/LA</b></i> |  |  |   |  |   |  |   |  |
| Dec 03  |  | <i>Call for tenders M4<br/><b>JB</b></i>  | <i>Finalise survey, ethics<br/><b>PWS/CL</b></i>                | <i>Submit Dec Report<br/><b>CL</b></i>  |  | <i>Submit report<br/><b>CL/LA</b></i>  |   |  |   |  |   |  |

|         | <b>Survey (annual)</b>                                       | <b>Prep &amp; Pilot (annual)</b>     | <b>Study report (annual)</b> | <b>Annual Report (annual)</b> | <b>Survey Report (annual)</b>                                 | <b>Changes Report (biennial)</b>  | <b>Data Linkage Report (biennial)</b>                        | <b>Newsletter (annual at this stage)</b>  | <b>Policy Report (annual)</b>  | <b>Data dictionary and Archive (annual)</b>    |                            |
|---------|--|--------------------------------------|------------------------------|-------------------------------|---|---|--|---|--|--|----------------------------|
| Jan 04  | Finalise tender for this year's survey M4<br><b>JB/PWS</b>   |                                      |                              |                               |   | Continue to work on changes variables selected for this Changes Report – definitions and data tables. |  |   | This is to be scheduled in collaboration with DoHA staff<br><b>AD/CL/PWS</b> | Prepare data dictionary for M4<br><b>AR/JF</b> |                            |
| Feb 04  | Mailing lists, track & NDI<br><b>JB/JP/EF/LA/Part-timers</b> |                                      |                              |                               | Y3 Data back from scanner                                     |   |  |   |  |  |                            |
| Mar 04  | Mailout<br><b>JB/LA/Part</b>                                 |                                      |                              |                               | Clean Y3 data and calculate derived variables<br><b>JB/EF</b> |   | Decide on formats and vars to go in June 05.<br><b>AY/JF</b> |   |  |  |                            |
| Apr 04  | Reminders<br><b>JB/LA/Part</b>                               | Concepts and changes O4<br><b>CL</b> |                              |                               |   |   | Start work on data linkage material –                        |   |  |  | Archive O3<br><b>AR/JF</b> |
| May 04  | Reminders<br><b>JB/LA/Part</b>                               | Draft O4 <b>CL</b>                   |                              |                               |   |   | Layout, design, ext, production                              | data dictionary, data books, descriptive materials.   |  |  |                            |
| June 04 | Phone, track, further mailouts<br><b>JB/LA/Part</b>          | Planning mtg<br><b>CL</b>            |                              |                               |   |   | Submit Changes Report 1                                      | Also develop timetable for actual linkage process. Review progress in March, June, Sept and Dec of each year.<br><b>AY/JF</b> |  |  |                            |

|         | <b>Survey (annual)</b>                             | <b>Prep &amp; Pilot (annual)</b>   | <b>Study report (annual)</b>  | <b>Annual Report (annual)</b>   | <b>Survey Report (annual)</b>   | <b>Changes Report (biennial)</b>   | <b>Data Linkage Report (biennial)</b>            | <b>Newsletter (annual at this stage)</b>     | <b>Policy Report (annual)</b>   | <b>Data dictionary and Archive (annual)</b> |
|---------|--|--|---|---|---|--|--|--|---|---|
| Jul 04  |  | Finalise survey, ethics<br><b>PWS/CL</b>   |   |   | Calculate weightings and produce data book<br><b>AR/JF</b>  | Decide which change variables to focus on over the biennial reporting cycle.   |  | Write text, circulate and finalize <b>CL</b> | Keep making helpful suggestions – develop timeline when report has been defined – to be delivered some time this year<br><b>AD/PWS/CL</b> |   |
| Aug 04  |  | Pilot mailout M4<br><b>EF/LA/RB</b>  | Collate info from existing records, other reports, Investigator reports etc<br><b>CL/RB</b> |   | Work steadily away on definitions and data tables for chosen change variables. Review progress in Sept, Dec, March and June of each year. | Keep working on data linkage material – data dictionary, data books, descriptive materials. Review progress in March, June, Sept and Dec of each year.<br><b>AY/JF</b> | Layouts and quotes<br><b>TN/LA/CL/PWS</b>        |  |   |   |
| Sept 04 |  | Pilot reminders<br><b>EF</b>   |   |   |   |  | Newsletter address list and mailout<br><b>JB</b> |  |   |   |
| Oct 04  | Phone surveys, final tracking<br><b>JB/LA/Part</b> | Pilot track and data entry<br><b>EF/CC/LA</b>  | Draft report, write summaries<br><b>CL</b>  | Choose theme, write text<br><b>CL</b>   |   |  |  |  |   |   |
| Nov 04  |  | Pilot descriptives, missing data, revise M4, to data mtg, ethics EF/<br><b>PWS/CL/AD</b> | Do budgets, Produce Report<br><b>CL/PWS/RB</b>  | Layout and design, finalise text, production, mailing list<br><b>CL/TN/LA</b> | Prepare report, finalise text, update cut-and-paste material, layout, production<br><b>AR/JF/CL</b>                                       |  |  |  |   |   |
| Dec 04  | Call for tenders O4<br><b>JB</b>                   | Finalise survey, ethics<br><b>PWS/CL</b>   | Submit report<br><b>CL</b>  | Submit report<br><b>CL/LA</b>   | Submit report<br><b>CL</b>  |  |  |  |   |   |

|         | <b>Survey (annual)</b>  | <b>Prep &amp; Pilot (annual)</b>            | <b>Study report (annual)</b>  | <b>Annual Report (annual)</b>                                 | <b>Survey Report (annual)</b>   | <b>Changes Report (biennial)</b>  | <b>Data Linkage Report (biennial)</b>           | <b>Newsletter (annual at this stage)</b> | <b>Policy Report (annual)</b>   | <b>Data dictionary and Archive (annual)</b>    |
|---------|---|---|---|---|---|---|---|--|---|--|
| Jan 05  | Finalise tender for O4<br><b>JB/PWS</b>                           |   |   |   |   | Keep working on definitions and data tables for chosen change variables. Review progress in Sept, Dec, March and June of each year. |   |  | Keep making helpful suggestions – develop timeline when report has been defined – to be delivered some time this year<br><br><b>AD/PWS/CL</b> | Prepare data dictionary for O4<br><b>AR/JF</b> |
| Feb 05  | Finalise mailing lists<br>Track<br>NDI<br><b>JB/JP/EF/LA/Part</b> |   |   | M4 Data back from scanner                                     | Keep working on data linkage material – data dictionary, data books, descriptive materials.<br><b>AY/JF</b> |   |   |  |   |  |
| Mar 05  | Mailout<br><b>JB/LA/Part</b>                                      |   |   | Clean M4 data and calculate derived variables<br><b>JB/EF</b> | Layout and design, finalise text, production<br><b>AY/JF/CL</b>   |   |   |  |   |  |
| Apr 05  | Reminders<br><b>JB/LA/Part</b>                                    | Concepts and changes Y4<br><b>CL</b>        |   |   | Submit Data Linkage Report 1<br><b>CL</b>   |   |   |  |   | Archive Y3<br><b>AR/JF</b>                     |
| May 05  | Reminders<br><b>JB/LA/Part</b>                                    | Draft Y4<br><b>CL</b>                       |   |   | Decide what is to go into next biennial data linkage report<br><b>AD/AY/JF</b>                              |   | Write text, circulate and finalize<br><b>CL</b> |  |   |  |
| June 05 | Phone, track, further mailouts<br><b>JB/LA/Part</b>               | Planning mtg<br><b>CL</b>                   |   |   | Calculate weightings and produce data book<br><b>AR/JF</b>  |   | Layouts and quotes<br><b>TN/LA/CL/PWS</b>       |  |   |  |
| Jul 05  |   | Finalise Y4 survey, ethics<br><b>PWS/CL</b> |   |   |   |   | Begin working on                                | Newsletter address list                  |   |  |
| Aug 05  |   | Pilot mailout Y4<br><b>EF/LA/RB</b>         | Collate info from existing records, other reports, Investigator reports etc |   |   |   |   |  |   |  |
| Sept 05 |   | Pilot reminders                             |   |   |   |   |   |  |   |  |

|        | <b>Survey (annual)</b>                             | <b>Prep &amp; Pilot (annual)</b>  | <b>Study report (annual)</b>                   | <b>Annual Report (annual)</b>                                   | <b>Survey Report (annual)</b>  | <b>Changes Report (biennial)</b> | <b>Data Linkage Report (biennial)</b> | <b>Newsletter (annual at this stage)</b> | <b>Policy Report (annual)</b> | <b>Data dictionary and Archive (annual)</b> |
|--------|--|---|--|---|--|----------------------------------|---------------------------------------|--|-------------------------------|---|
|        |  | <b>EF</b>   | <b>CL/RB</b>                                   |   |  |                                  | data linkage material<br><b>AY/JF</b> | and mailout<br><b>JB</b>                 |                               |   |
| Oct 05 | Phone surveys, final tracking<br><b>JB/LA/Part</b> | Pilot track and data entry<br><b>EF/Part/LA</b>   | Draft report, write summaries<br><b>CL</b>     | Choose theme, write text<br><b>CL</b>                           |  |                                  |                                       |  |                               |   |
| Nov 05 |  | Pilot descriptives, missing data, revise Y4, to data mtg, ethics<br><b>EF/PWS/CL/AD</b> | Do budgets, Produce Report<br><b>CL/PWS/RB</b> | Layout and design, finalise text, production<br><b>CL/TN/LA</b> | Prepare report, finalise text, layout, production<br><b>AR/JF/CL</b> |                                  |                                       |  |                               |   |
| Dec 05 | Call for tenders Y4<br><b>JB</b>                   | Finalise survey, ethics<br><b>PWS/CL</b>  | Submit report<br><b>CL</b>                     | Submit report<br><b>CL/LA</b>                                   | Submit report<br><b>CL</b>   |                                  |                                       |  |                               |   |

Table A1.2.6. Survey and Data Timeline

|         | Survey  | Prep & Pilot  | Data Management  |
|---------|---|---|--|
| July 03 | Complete data collection and send surveys for scanning Y3<br><b>JB/EF/LA/ Part-timers</b> | Finalise survey, ethics<br><b>PWS/CL</b>  | Ensure that Y3 data dictionary is complete.<br><b>EF</b><br>Finish cleaning O3 data, calculating variables, and producing data book<br><b>JB/EF/PK</b> |
| Aug 03  |   | Pilot mailout M4<br><b>EF/LA/RB</b>   |  |
| Sept 03 |   | Pilot reminders<br><b>EF</b>  |  |
| Oct 03  |   | Pilot track and data entry<br><b>EF/CC/LA</b>   |  |
| Nov 03  |   | Pilot descriptives, missing data, revise M4, to data mtg, ethics<br><b>EF/PWS/CL/AD</b> |  |
| Dec 03  | Call for tenders M4<br><b>JB</b>  | Finalise survey, ethics<br><b>PWS/CL</b>  |  |
| Jan 04  | Finalise tender for this year's survey M4<br><b>JB/PWS</b>                                |   | Prepare data dictionary for M4<br><b>AR/JF</b>   |
| Feb 04  | Mailing lists, track & NDI<br><b>JB/JP/EF/ LA/Part-timers</b>                             |   | Y3 Data back from scanner  |
| Mar 04  | Mailout<br><b>JB/LA/Part</b>  |   | Clean Y3 data and calculate derived variables<br><b>JB/EF</b>  |
| Apr 04  | Reminders<br><b>JB/LA/Part</b>  | Concepts and changes O4<br><b>CL</b>  | Archive O3<br><b>AR/JF</b>   |
| May 04  | Reminders<br><b>JB/LA/Part</b>  | Draft O4<br><b>CL</b>   |  |
| June 04 | Phone, track, further mailouts<br><b>JB/LA/Part</b>                                       | Planning mtg<br><b>CL</b>   |  |
| Jul 04  |   | Finalise survey, ethics<br><b>PWS/CL</b>  | Calculate weightings and produce data book<br><b>AR/JF</b>   |
| Aug 04  |   | Pilot mailout M4<br><b>EF/LA/RB</b>   |  |
| Sept 04 |   | Pilot reminders<br><b>EF</b>  |  |

|         | <b>Survey</b>  | <b>Prep &amp; Pilot</b>  | <b>Data Management</b>  |
|---------|--|--|---|
| Oct 04  | Phone surveys, final tracking<br><b>JB/LA/Part</b>             | Pilot track and data entry<br><b>EF/CC/LA</b>  |   |
| Nov 04  |  | Pilot descriptives, missing data, revise M4, to data mtg, ethics<br><b>EF/ PWS/CL/AD</b> |   |
| Dec 04  | Call for tenders O4<br><b>JB</b>                               | Finalise survey, ethics <b>PWS/CL</b>  |   |
| Jan 05  | Finalise tender for O4<br><b>JB/PWS</b>                        |  | Prepare data dictionary for O4<br><b>AR/JF</b>                |
| Feb 05  | Finalise mailing lists, Track, NDI<br><b>JB/JP/EF/ LA/Part</b> |  | M4 Data back from scanner                                     |
| Mar 05  | Mailout<br><b>JB/LA/Part</b>                                   |  | Clean M4 data and calculate derived variables<br><b>JB/EF</b> |
| Apr 05  | Reminders <b>JB/LA/Part</b>                                    | Concepts and changes Y4<br><b>CL</b>   | Archive Y3<br><b>AR/JF</b>                                    |
| May 05  | Reminders <b>JB/LA/Part</b>                                    | Draft Y4 <b>CL</b>   |   |
| June 05 | Phone, track, further mailouts<br><b>JB/LA/Part</b>            | Planning mtg<br><b>CL</b>  |   |
| Jul 05  |  | Finalise Y4 survey, ethics <b>PWS/CL</b>   | Calculate weightings and produce data book<br><b>AR/JF</b>    |
| Aug 05  |  | Pilot mailout Y4<br><b>EF/LA/RB</b>  |   |
| Sept 05 |  | Pilot reminders<br><b>EF</b>   |   |
| Oct 05  | Phone surveys, final tracking<br><b>JB/LA/Part</b>             | Pilot track and data entry<br><b>EF/Part/LA</b>  |   |
| Nov 05  |  | Pilot descriptives, missing data, revise Y4, to data mtg, ethics <b>EF/PWS/CL/AD</b>     |   |
| Dec 05  | Call for tenders Y4 <b>JB</b>                                  | Finalise survey, ethics <b>PWS/CL</b>  |   |



Table A1.2.7. Reports Timeline

|         | Study report (annual)                                   | Survey Report (annual) | Annual Report (annual)  | Changes Report (biennial)   | Data Linkage Report (biennial)                              | Newsletter (annual at this stage)   | Policy Report (annual)                             |
|---------|---|------------------------|---|---|---|---|--|
| July 03 | Start Sept report<br><b>CL</b>                          |                        |   | List change variables already defined. Decide which variables to define next.                                   | <b>Report on what is currently in preparation<br/>AY/JF</b> | Write text, circulate and finalize<br><b>CL</b>                               | Complete glossies and submit to DoHA <b>PWS/TN</b> |
| Aug 03  | Finalise, layout, production<br><b>CL/RB</b>            |                        |   | Decide on formats for change databook   |   | Layouts & quotes<br><b>TN/LA/CL/PWS</b>                                       |  |
| Sept 03 | Submit Sept Report <b>CL</b>                            |                        |   | Decide which change variables to put in June 04 change databook and start producing definitions and data tables |   | Newsletter address list and mailout <b>JB</b>                                 | Distribute glossies<br><b>PWS/CL/LA</b>            |
| Oct 03  | Start Dec report <b>CL</b>                              |                        | Choose theme, write text <b>CL</b>  |   |   |   |  |
| Nov 03  | Finalise Dec report, layout, production<br><b>CL/RB</b> |                        | Layout and design, finalise text, production, mailing list<br><b>CL/TN/LA</b> |   |   |   |  |
| Dec 03  | Submit Dec Report <b>CL</b>                             |                        | Submit report <b>CL/LA</b>  |   |   |   |  |
| Jan 04  |   |                        |   | Continue to work on changes variables selected for this Changes Report – definitions and data tables.           |   | This is to be scheduled in collaboration with DoHA staff.<br><b>AD/CL/PWS</b> |  |
| Feb 04  |   |                        |   |   |   |   |  |
| Mar 04  |   |                        |   |   | Decide on formats and vars to go in June 05. <b>AY/JF</b>   |   |  |
| Apr 04  |   |                        |   |   | Start work on data linkage material – data dictionary,      |   |  |
| May 04  |   |                        |   |   | Layout, design, ext, production                             |   |  |

|         | <b>Study report<br/>(annual)</b>  | <b>Survey Report<br/>(annual)</b>   | <b>Annual Report<br/>(annual)</b>   | <b>Changes Report<br/>(biennial)</b>  | <b>Data Linkage<br/>Report<br/>(biennial)</b>  | <b>Newsletter<br/>(annual at this<br/>stage)</b> | <b>Policy Report<br/>(annual)</b>   |
|---------|---|---|---|---|--|--|---|
| June 04 |   |   |   | Submit Changes Report 1   | data books, descriptive materials. Also develop timetable for actual linkage process. Review progress in March, June, Sept and Dec of each year.<br><b>AY/JF</b>       |  |   |
| Jul 04  |   |   |   | Decide which change variables to focus on over the biennial reporting cycle.  |  | Write text, circulate and finalize<br><b>CL</b>  | Keep making helpful suggestions – develop timeline when report has been defined – to be delivered some time this year<br><b>AD/PWS/CL</b> |
| Aug 04  | Collate info from existing records, other reports, Investigator reports etc<br><b>CL/RB</b> |   |   | Work steadily away on definitions and data tables for chosen change variables. Review progress in Sept, Dec, March and June of each year. | Keep working on data linkage material – data dictionary, data books, descriptive materials. Review progress in March, June, Sept and Dec of each year.<br><b>AY/JF</b> | Layouts and quotes<br><b>TN/LA/CL/PWS</b>        |   |
| Sept 04 |   |   |   |   |  | Newsletter address list and mailout<br><b>JB</b> |   |
| Oct 04  | Draft report, write summaries<br><b>CL</b>  |   | Choose theme, write text<br><b>CL</b>   |   |  |  |   |
| Nov 04  | Do budgets, Produce Report<br><b>CL/PWS/RB</b>  | Prepare report, finalise text, update cut-and-paste material, layout, production<br><b>AR/JF/CL</b> | Layout and design, finalise text, production, mailing list<br><b>CL/TN/LA</b> |   |  |  |   |
| Dec 04  | Submit report<br><b>CL</b>  | Submit report<br><b>CL</b>  | Submit report <b>CL/LA</b>  |   |  |  |   |
| Jan 05  |   |   |   | Keep working on definitions and data  |  |  | Keep making helpful suggestions   |
| Feb 05  |   |   |   |   | Keep working on  |  |   |

|         | <b>Study report<br/>(annual)</b>   | <b>Survey Report<br/>(annual)</b>                                    | <b>Annual Report<br/>(annual)</b>                               | <b>Changes Report<br/>(biennial)</b>   | <b>Data Linkage<br/>Report<br/>(biennial)</b>   | <b>Newsletter<br/>(annual at this<br/>stage)</b>                | <b>Policy Report<br/>(annual)</b>   |
|---------|--|--|---|--|---|---|---|
| Mar 05  |  |  |   | tables for chosen change variables. Review progress in Sept, Dec, March and June of each year. | data linkage material – data dictionary, data books, descriptive materials.<br><b>AY/JF</b> |   | – develop timeline when report has been defined – to be delivered some time this year<br><b>AD/PWS/CL</b> |
| Apr 05  |  |  |   |  |   |   |   |
| May 05  |  |  |   |  |   | Layout and design, finalise text, production<br><b>AY/JF/CL</b> |   |
| June 05 |  |  |   |  |   | Submit Data Linkage Report 1<br><b>CL</b>                       |   |
| Jul 05  |  |  |   | Decide what is to go into next biennial data linkage report<br><b>AD/AY/JF</b>                 | Write text, circulate and finalize <b>CL</b><br>Layouts and quotes<br><b>TN/LA/CL/PWS</b>   |   |   |
| Aug 05  | Collate info from existing records, other reports, Investigator reports etc <b>CL/RB</b> |  |   |  |   |   |   |
| Sept 05 |  |  |   |  |   |   |   |
| Oct 05  | Draft report, write summaries <b>CL</b>  |  | Choose theme, write text<br><b>CL</b>                           |  |   |   |   |
| Nov 05  | Do budgets, Produce Report<br><b>CL/PWS/RB</b>   | Prepare report, finalise text, layout, production<br><b>AR/JF/CL</b> | Layout and design, finalise text, production<br><b>CL/TN/LA</b> |  |   |   |   |
| Dec 05  | Submit report <b>CL</b>  | Submit report <b>CL</b>  | Submit report <b>CL/LA</b>                                      |  |   |   |   |

**APPENDIX 2. RESEARCH SYNTHESIS “GLOSSY” BROCHURES**

For copies of the research synthesis brochures please visit:  
[http://www.newcastle.edu.au/centre/wha/Reports/syntheses\\_reports.html](http://www.newcastle.edu.au/centre/wha/Reports/syntheses_reports.html)

**APPENDIX 3. DERIVED CROSS-SECTIONAL AND TRANSITION VARIABLES**



## APPENDIX 3.1. SMOKING STATUS – YOUNGER AND MID-AGE COHORTS SURVEY 2

|  |   |
|--|---|
| <b>Derived Variable</b>                  | Y2AIHWSmk<br>M2AIHWSmk                      |
| <b>Definition</b>                        | Tobacco smoking status                      |
| <b>Source Items</b>                      | Y2q53, Y2q55<br>M2q, M2q                    |
| <b>Data Dictionary Index Number</b>      | [SMOK -To be allocated by the Data Manager] |
| <b>Endorsed by Data Management Group</b> |   |

### Source Items- Survey 2 (Younger and Mid-age cohorts)

**How often do you currently smoke cigarettes or any tobacco products?**  
(Mark one only)

| Code | Response                        |
|------|---------------------------------|
| 1    | Daily                           |
| 2    | At least weekly (but not daily) |
| 3    | Less often than weekly          |
| 4    | Not at all                      |

**In your lifetime, would you have smoked at least 100 cigarettes (or equivalent)?** (Mark one only)

| Code | Response |
|------|----------|
| 1    | Yes      |
| 2    | No       |

### Derived Variable

At the second ALSWH surveys of young and mid-age women, survey items concerning tobacco smoking (above) were revised in line with contemporary recommendations by the Australian Institute of Health and Welfare (AIHW)<sup>1</sup>. These items were used to define categories for smoking status that were detailed in the National Health Data Dictionary<sup>2</sup> (see over).

AIHWSmk is derived for women completing the full and short versions of survey 2 in the younger cohort and women completing the full version only of survey 2 in the mid-age cohort.



**Code      AIHW Category**

- 1      Never smoker  
*A person who does not smoke now and has smoked fewer than 100 cigarettes or similar amount of other tobacco products in his/her lifetime*
- 2      Ex-smoker  
*A person who does not smoke at all now, but has smoked at least 100 cigarettes or a similar amount of other tobacco products in his/her lifetime.*
- 3      Irregular smoker  
*A person who smokes less than weekly*
- 4      Weekly smoker  
*A person who smokes at least weekly but not daily*
- 5      Daily smoker:  
*A person who smokes daily*

Note that AIHWSmk is similar to SmokSt with categories

**Code      Category**

- 1      Never smoker
- 2      Ex-smoker
- 3      Current smoker – smokes less than 10 cigarettes per day
- 4      Current smoker – smokes 10-19 cigarettes per day
- 5      Current smoker – smokes 20 or more cigarettes per day

The distribution of AIHWSmk in the second survey of young and mid-age women is shown in Table A3.1.1.

**Table A3.1.1. Number and percent in AIHW smoking status categories at survey 2**

| Code | Smoking status - AIHW    | Younger      |              | Mid-age       |              |
|------|--------------------------|--------------|--------------|---------------|--------------|
|      |                          | Number       | Percent      | Number        | Percent      |
| 1    | Never smoker             | 5 509        | 57.2         | 6 509         | 56.4         |
| 2    | Ex-smoker                | 1 390        | 14.4         | 3 054         | 26.4         |
| 3    | Irregular smoker         | 569          | 5.9          | 158           | 1.4          |
| 4    | Weekly smoker            | 299          | 3.1          | 112           | 1.0          |
| 5    | Daily smoker             | 1 873        | 19.4         | 1 712         | 14.8         |
|      | <b>Total non-missing</b> | <b>9 640</b> | <b>100.0</b> | <b>11 545</b> | <b>100.0</b> |
| 9    | <i>Missing</i>           | 45           | 0.5          | 103           | 0.9          |
|      | <b>Total</b>             | <b>9 685</b> |              | <b>11 648</b> |              |

Table A3.1.2 shows how combinations of responses to the relevant survey items were allocated to each category for smoking status.

**Table A3.1.2. Combinations of current smoking and lifetime consumption of at least 100 cigarettes and the number assigned to each category of AIHW smoking status at survey 2**

| Smoking status   | Current smoking                 | Ever smoked 100 cigarettes | Younger | Mid-age |
|------------------|---------------------------------|----------------------------|---------|---------|
| Never smoker     | Not at all                      | No                         | 5 509   | 6 509   |
| Ex-smoker        | Not at all                      | Yes                        | 1 390   | 3 054   |
| Irregular smoker | Less often than Weekly          | Yes                        | 412     | 142     |
|                  |                                 | No                         | 151     | 14      |
|                  |                                 | Missing                    | 6       | 2       |
| Weekly smoker    | At least weekly (but not daily) | Yes                        | 274     | 104     |
|                  |                                 | No                         | 21      | 3       |
|                  |                                 | Missing                    | 4       | 5       |
| Daily smoker     | Daily                           | Not applicable             | 1 797   | 1 119   |
|                  |                                 | Missing                    | 76      |         |
|                  |                                 | Yes                        |         | 589     |
|                  |                                 | No                         |         | 4       |
| Missing          | Missing                         | Missing                    | 25      | 82      |
|                  |                                 | Yes                        | 4       | 4       |
|                  |                                 | Not at all                 | 16      | 17      |

### References

1. Standard Questions on the Use of Tobacco Among Adults (self- and interviewer administered versions) (1998) National Centres for Monitoring Cardiovascular Disease and Diabetes at Australian Institute of Health and Welfare
2. Australian Institute of Health and Welfare 2000. National Health Data Dictionary. Version 9. AIHW Catalogue no. HWI 24. Australian Institute of Health and Welfare

*Anne Russell and Jean Ball prepared this document.*

### APPENDIX 3.2. ALCOHOL STATUS AND ALCOHOL BINGE STATUS

|  |  |                  |
|--|--|------------------|
| <b>Derived Variables</b>                 | y1AlcSt  | y1AlcBng         |
|  | y2AlcSt  | y2AlcBng         |
|  | m1AlcSt  | m1AlcBng         |
|  | m2AlcSt  | m2AlcBng         |
|  | o1AlcSt  | o1AlcBng         |
|  | o2AlcSt  |                  |
| <b>Definition</b>                        | AlcSt: Alcohol consumption, combining frequency and quantity of alcohol consumed |                  |
|  | AlcBng: Combines alcohol consumption and binge frequency                         |                  |
| <b>Source Items</b>                      | Younger Survey 1:  | q35, q36 and q37 |
|  | Younger Survey 2:  | q59, q60 and q61 |
|  | Mid-age, Survey 1:   | q43, q44 and q45 |
|  | Mid-age, Survey 2:   | q39, q40 and q41 |
|  | Older Survey 1:  | q31, q32 and 33  |
|  | Older Survey 2:  | q26 and q27      |
| <b>Data Dictionary index Number</b>      | AlcSt:   | ALCS-007         |
|  | AlcBng:  | ALCS-008         |
| <b>Endorsed by Data Management Group</b> | 28 May 2003  |                  |

**NOTE:** AlcSt and AlcBng were included in SAS datasets for surveys 1 and 2 distributed before May 2003. In datasets distributed subsequently, these variables were replaced by AlcNHMRC (Index number ALCS-021) and AlcPatt (Index number ALCS-022) respectively. See Appendix 3.3.

**Source Items****Frequency of alcohol consumption**

How often do you usually drink alcohol?

| <b>Cohort:</b>          | Younger |    | Mid-age      |    | Older |    |
|-------------------------|---------|----|--------------|----|-------|----|
| <b>Survey:</b>          | 1       | 2  | 1            | 2  | 1     | 2  |
| <b>Question number:</b> | 35      | 59 | 43           | 39 | 31    | 26 |
| <i>Response</i>         |         |    | <i>Codes</i> |    |       |    |
| I never drink alcohol   | 1       | 1  | 1            | 1  | 1     | 1  |
| I drink rarely          | 2       |    | 2            | 2  | 2     | 2  |
| Less than once a month  |         | 2  |              |    |       |    |
| Less than once a week   | 3       | 3  | 3            | 3  | 3     | 3  |
| On 1 or 2 days a week   | 4       | 4  | 4            | 4  | 4     | 4  |
| On 3 or 4 days a week   | 5       | 5  | 5            | 5  | 5     | 5  |
| On 5 or 6 days a week   | 6       | 6  | 6            | 6  | 6     | 6  |
| Every day               | 7       | 7  | 7            | 7  | 7     | 7  |

**Quantity of alcohol consumed**

On a day when you drink alcohol, how many standard drinks do you usually have?

| <b>Cohort:</b>           | Younger |    | Mid-age      |    | Older |    |
|--------------------------|---------|----|--------------|----|-------|----|
| <b>Survey:</b>           | 1       | 2  | 1            | 2  | 1     | 2  |
| <b>Question number:</b>  | 36      | 60 | 44           | 40 | 32    | 27 |
| <i>Response</i>          |         |    | <i>Codes</i> |    |       |    |
| I don't drink alcohol    |         |    |              |    |       | 0  |
| Non-drinker              | 5       | 0  | 5            | 0  | 5     |    |
| 1 or 2 drinks per day    | 1       | 1  | 1            | 1  | 1     | 1  |
| 3 or 4 drinks per day    | 2       | 2  | 2            | 2  | 2     | 2  |
| 5 to 8 drinks per day    | 3       | 3  | 3            | 3  | 3     | 3  |
| 9 or more drinks per day | 4       | 4  | 4            | 4  | 4     |    |

**Binge frequency**

How often do you have five or more standard drinks of alcohol on one occasion?

| Cohort                 | Younger          |    | Mid-age      |    | Older |    |
|------------------------|------------------|----|--------------|----|-------|----|
|                        | Survey:          |    | 1            | 2  | 1     |    |
|                        | Question number: | 37 | 61           | 45 | 41    | 33 |
| <i>Response</i>        |                  |    | <i>Codes</i> |    |       |    |
| Never                  |                  | 1  | 1            | 1  | 1     | 1  |
| Less than once a month |                  | 2  | 2            | 2  | 2     | 2  |
| About once a month     |                  | 3  | 3            | 3  | 3     | 3  |
| About once a week      |                  | 4  | 4            | 4  | 4     | 4  |
| More than once a week  |                  | 5  | 5            | 5  | 5     | 5  |
| Non-drinker            |                  | 6  | 0            | 6  | 0     | 6  |

**Derived Variables****Alcohol status**

Categories for alcohol consumption status were based on recommendations from the 1980 National Heart Foundation (NHF) Risk Factor Prevalence Study<sup>1</sup> (Table A3.2.1). A variable for alcohol consumption status (AlcSt) was derived from the frequency and quantity items. Table A3.2.2 shows how the NHF recommendations were implemented in the ALSWH data.

**Table A3.2.1. Risks associated with alcohol consumption – NHF**

| Frequency of drinking alcohol | Quantity of alcohol consumed |               |               |               |                |                 |                     |
|-------------------------------|------------------------------|---------------|---------------|---------------|----------------|-----------------|---------------------|
|                               | I don't drink alcohol        | 1 or 2 drinks | 3 or 4 drinks | 5 to 8 drinks | 9 to 12 drinks | 13 to 20 drinks | More than 20 drinks |
| I don't drink alcohol         | A                            |               |               |               |                |                 |                     |
| Less than once a week         |                              | B             | B             | B             | C              | D               | E                   |
| 1 or 2 days                   |                              | B             | B             | B             | C              | D               | E                   |
| 3 or 4 days                   |                              | B             | B             | C             | D              | E               | F                   |
| 5 or 6 days                   |                              | B             | C             | D             | E              | F               | F                   |
| Every day                     |                              | B             | C             | D             | E              | F               | F                   |

**Legend****Risk category - Females Average number of drinks**

- A** Non-drinker
- B** Low risk drinker      Average daily intake less than 3 drinks
- C** Intermediate risk drinker      Average daily intake of 4 or 9-12 drinks in any day
- D** High risk drinker      Average daily intake of 5 to 8 drinks or occasional excess
- E** Very high risk drinker      Average daily intake of 9 to 12 drinks or frequent or great occasional excess
- F** Very high risk drinker      Average daily intake over 12 drinks

Table A3.2.2. Risks associated with alcohol consumption – ALSWH

| Frequency of drinking alcohol | Quantity of alcohol consumed |               |               |               |                  |         |
|-------------------------------|------------------------------|---------------|---------------|---------------|------------------|---------|
|                               | I don't drink alcohol        | 1 or 2 drinks | 3 or 4 drinks | 5 to 8 drinks | 9 or more drinks | Missing |
| I don't drink alcohol         | 1                            |               |               |               |                  | 1       |
| I rarely drink                |                              | 2             | 2             | 2             | 2                | 2       |
| Less than once a week         |                              | 3             | 3             | 4             | 5                |         |
| 1 or 2 days                   |                              | 3             | 3             | 4             | 5                |         |
| 3 or 4 days                   |                              | 3             | 3             | 4             | 5                |         |
| 5 or 6 days                   |                              | 3             | 4             | 5             | 6                |         |
| Every day                     |                              | 3             | 4             | 5             | 6                |         |
| Missing                       | 1                            | 3             |               |               |                  |         |

## Legend

- |                   |                             |
|-------------------|-----------------------------|
| 1 Non-drinker     | 4 Low risk drinker          |
| 2 Rarely drinks   | 5 Intermediate risk drinker |
| 3 No risk drinker | 6 High risk drinker         |

Percentages of women from the three age cohorts in each category of AlcSt at Surveys 1 and 2 are shown in Table A3.2.3.

Table A3.2.3. Percent in each category for alcohol related health risk

| Cohort:                    | Younger      |              | Mid-age      |                | Older        |                |
|----------------------------|--------------|--------------|--------------|----------------|--------------|----------------|
|                            | Survey: 1    | 2            | 1            | 2 <sup>a</sup> | 1            | 2 <sup>a</sup> |
| Number surveyed            | 14 779       | 9 685        | 14 099       | 11 648         | 12 940       | 9 501          |
| Number missing             | 165          | 65           | 142          | 101            | 518          | 266            |
| Percent missing            | 1.1          | 0.7          | 1.0          | 0.9            | 4.0          | 2.8            |
| Number classified          | 14 614       | 9 620        | 13 957       | 11 547         | 12 422       | 9 235          |
| Non-drinkers               | 9.0          | 9.1          | 15.3         | 13.4           | 35.1         | 34.6           |
| Rarely drink               | 34.5         | 29.0         | 31.4         | 28.7           | 29.1         | 27.0           |
| No risk drinkers           | 31.3         | 46.5         | 46.7         | 51.2           | 32.2         | 34.5           |
| Low risk drinkers          | 18.3         | 12.4         | 5.4          | 5.9            | 3.2          | 3.6            |
| Intermediate risk drinkers | 6.9          | 3.1          | 1.0          | 0.9            | 0.4          | 0.3            |
| High risk drinkers         | 0.1          | 0.02         | 0.1          | 0.1            | 0.03         | 0.0            |
|                            | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b>   | <b>100.0</b> | <b>100.0</b>   |

<sup>a</sup> Full survey only

**Alcohol binge status**

A summary variable (AlcBng) was derived as a composite of AlcSt and binge frequency (Table A3.2.4).

**Table A3.2.4. Categories for alcohol binge status derived from ALSWH alcohol consumption and binge frequency**

| Alcohol status               | Binge frequency |                        |              |             |                       | Missing |
|------------------------------|-----------------|------------------------|--------------|-------------|-----------------------|---------|
|                              | Never           | Less than once a month |              | Once a week | More than once a week |         |
|                              |                 | Once a month           | Once a month |             |                       |         |
| Non-drinkers                 |                 |                        |              |             |                       | 1       |
| Rarely drinks                | 1               | 1                      | 1            | 1           | 5                     | 1       |
| No risk drinker              | 2               | 2                      | 3            | 3           | 5                     |         |
| Low intake                   | 2               | 2                      | 3            | 3           | 5                     |         |
| Intermediate risk drinkers   | 4               | 4                      | 4            | 4           | 5                     |         |
| High/very high risk drinkers | 4               | 4                      | 4            | 4           | 5                     |         |
| Missing                      |                 |                        |              |             | 5                     |         |

**Legend**

- |                                   |                          |
|-----------------------------------|--------------------------|
| 1 Non/rare drinker                | 4 Intermediate/high risk |
| 2 Low risk drinker, without binge | 5 Very high risk binge   |
| 3 Low risk drinker, with binge    |                          |

Women from the older age cohort were not asked about binge drinking at survey 2. Values for AlcBng were derived for the mid-age and younger cohorts at surveys 1 and 2 and older women at survey 1 (Table A3.2.5).

**Table A3.2.5. Percent in each category for pattern of alcohol consumption including binge drinking**

| Cohort:                | Younger |              | Mid-age      |              | Older          |              |
|------------------------|---------|--------------|--------------|--------------|----------------|--------------|
|                        | Survey: | 1            | 2            | 1            | 2 <sup>a</sup> | 1            |
| Number surveyed        |         | 14 779       | 9 685        | 14 099       | 11 648         | 12 940       |
| <i>Number missing</i>  |         | 182          | 74           | 162          | 138            | 543          |
| <i>Percent missing</i> |         | 1.2          | 0.9          | 1.2          | 1.2            | 4.2          |
| Number classified      |         | 14 597       | 9 611        | 13 937       | 11 510         | 12 422       |
| Non/rare drinker       |         | 43.5         | 38.1         | 46.8         | 42.1           | 64.3         |
| Low risk without binge |         | 20.5         | 29.7         | 39.5         | 43.2           | 32.0         |
| Low risk with binge    |         | 27.8         | 27.8         | 11.7         | 13.0           | 3.0          |
| Intermediate/high risk |         | 5.7          | 2.6          | 0.3          | 0.3            | 0.2          |
| Very high risk binge   |         | 2.6          | 1.8          | 1.7          | 1.5            | 0.6          |
|                        |         | <b>100.0</b> | <b>100.0</b> | <b>100.1</b> | <b>100.0</b>   | <b>100.1</b> |

<sup>a</sup> Full survey only

## Reference

1. National Heart Foundation Risk Factor Prevalence Study: Report No. 1-1980

*Anne Russell and Jean Ball prepared this document.*



### APPENDIX 3.3. ALCOHOL INTAKE AND PATTERN OF ALCOHOL CONSUMPTION

|  |   |   |
|--|---|---|
| <b>Derived Variables</b>                 | y1AlcNHMRC<br>y2AlcNHMRC<br>m1AlcNHMRC<br>m2AlcNHMRC<br>o1AlcNHMRC<br>o2AlcNHMRC  | y1AlcPatt<br>y2AlcPatt<br>m1AlcPatt<br>m2AlcPatt<br>o1AlcPatt |
| <b>Definition</b>                        | AlcNHMRC: Alcohol consumption, combining frequency and quantity of alcohol consumed<br><br>AlcPatt: Combines alcohol consumption and binge frequency  |   |
| <b>Source Items</b>                      | Younger Survey 1: q35, q36 and q37<br>Younger Survey 2: q59, q60 and q61<br>Mid-age, Survey 1: q43, q44 and q45<br>Mid-age, Survey 2: q39, q40 and q41<br>Older Survey 1: q31, q32 and q33<br>Older Survey 2: q26 and q27 |   |
| <b>Data Dictionary index Number</b>      | AlcNHMRC: ALCS-021<br>AlcPatt: ALCS-022   |   |
| <b>Endorsed by Data Management Group</b> | 28 May 2003   |   |

**NOTE:** AlcSt (Index number ALCS-007) and AlcBng (Index number ALCS-008) were the measures of alcohol consumption included in SAS datasets for surveys 1 and 2 that were distributed before May 2003. AlcNHMRC and AlcPatt have replaced these two variables respectively.

## Source Items

### ***Frequency of alcohol consumption***

How often do you usually drink alcohol?

| <b>Cohort:</b>          | Younger |    | Mid-age      |    | Older |    |
|-------------------------|---------|----|--------------|----|-------|----|
| <b>Survey:</b>          | 1       | 2  | 1            | 2  | 1     | 2  |
| <b>Question number:</b> | 35      | 59 | 43           | 39 | 31    | 26 |
| <i>Response</i>         |         |    | <i>Codes</i> |    |       |    |
| I never drink alcohol   | 1       | 1  | 1            | 1  | 1     | 1  |
| I drink rarely          | 2       |    | 2            | 2  | 2     | 2  |
| Less than once a month  |         | 2  |              |    |       |    |
| Less than once a week   | 3       | 3  | 3            | 3  | 3     | 3  |
| On 1 or 2 days a week   | 4       | 4  | 4            | 4  | 4     | 4  |
| On 3 or 4 days a week   | 5       | 5  | 5            | 5  | 5     | 5  |
| On 5 or 6 days a week   | 6       | 6  | 6            | 6  | 6     | 6  |
| Every day               | 7       | 7  | 7            | 7  | 7     | 7  |

### ***Quantity of alcohol consumed***

On a day when you drink alcohol, how many standard drinks do you usually have?

| <b>Cohort:</b>           | Younger |    | Mid-age      |    | Older |    |
|--------------------------|---------|----|--------------|----|-------|----|
| <b>Survey:</b>           | 1       | 2  | 1            | 2  | 1     | 2  |
| <b>Question number:</b>  | 36      | 60 | 44           | 40 | 32    | 27 |
| <i>Response</i>          |         |    | <i>Codes</i> |    |       |    |
| I don't drink alcohol    |         |    |              |    |       | 0  |
| Non-drinker              | 5       | 0  | 5            | 0  | 5     |    |
| 1 or 2 drinks per day    | 1       | 1  | 1            | 1  | 1     | 1  |
| 3 or 4 drinks per day    | 2       | 2  | 2            | 2  | 2     | 2  |
| 5 to 8 drinks per day    | 3       | 3  | 3            | 3  | 3     | 3  |
| 9 or more drinks per day | 4       | 4  | 4            | 4  | 4     |    |

**Binge frequency**

How often do you have five or more standard drinks of alcohol on one occasion?

| <b>Cohort:</b>          | Younger |    | Mid-age      |    | Older |
|-------------------------|---------|----|--------------|----|-------|
| <b>Survey:</b>          | 1       | 2  | 1            | 2  | 1     |
| <b>Question number:</b> | 37      | 61 | 45           | 41 | 33    |
| <i>Response</i>         |         |    | <i>Codes</i> |    |       |
| Never                   | 1       | 1  | 1            | 1  | 1     |
| Less than once a month  | 2       | 2  | 2            | 2  | 2     |
| About once a month      | 3       | 3  | 3            | 3  | 3     |
| About once a week       | 4       | 4  | 4            | 4  | 4     |
| More than once a week   | 5       | 5  | 5            | 5  | 5     |
| Non-drinker             | 6       | 0  | 6            | 0  | 6     |

## Derived Variables

### Alcohol Intake

The ALSWH originally based its definition of risk associated with alcohol intake on National Heart Foundation criteria<sup>1</sup>. Subsequently, the definition has been revised in light of National Health and Medical Research Council (NHMRC) guidelines<sup>2</sup>. The 3 categories of risk endorsed currently are: 'Low risk' (Up to 14 drinks per week), 'Risky' (15 to 28 drinks per week) and 'High risk' (More than 28 drinks per week).

Based on NHMRC guidelines, a variable for alcohol consumption status (AlcNHMRC) was derived from the frequency and quantity items. The ALSWH has defined 4 categories of risk. The NHMRC definitions for 'Risky' and 'High risk' drinking are adopted in full. For women defined as 'Low risk' by NHRMC, the ALSWH have separately defined as 'Rarely drinks' those who drink only rarely, leaving the remainder of this group to be classified as 'Low risk'. A fifth category for 'non-drinkers' was added. Table A3.3.1 shows how the NHMRC guidelines were implemented in the ALSWH data.

**Table A3.3.1. Risk of harm in the longer term associated with alcohol consumption – using NRMRC guidelines**

| Frequency of drinking alcohol | Quantity of alcohol consumed |               |               |               |                  | Missing |
|-------------------------------|------------------------------|---------------|---------------|---------------|------------------|---------|
|                               | I don't drink alcohol        | 1 or 2 drinks | 3 or 4 drinks | 5 to 8 drinks | 9 or more drinks |         |
| I don't drink alcohol         | 2                            |               |               |               |                  | 2       |
| I rarely drink                |                              | 3             | 3             | 3             | 3                | 3       |
| Less than once a week         |                              | 1             | 1             | 1             | 1                |         |
| 1 or 2 days                   |                              | 1             | 1             | 1             | 4                |         |
| 3 or 4 days                   |                              | 1             | 1             | 4             | 5                |         |
| 5 or 6 days                   |                              | 1             | 4             | 5             | 5                |         |
| Every day                     |                              | 1             | 4             | 5             | 5                |         |
| Missing                       | 2                            | 1             |               |               |                  |         |

| <i>Risk category</i> | <i>Average number of drinks per week (per day)</i>      |
|----------------------|---|
| 1 Low Risk           | Up to 14 drinks per week (Up to 2 drinks per day)       |
| 2 Non-drinker        |   |
| 3 Rarely drinks      | Up to 14 drinks per week (Up to 2 drinks per day)       |
| 4 Risky              | 15 to 28 drinks per week (3 to 4 drinks per day)        |
| 5 High risk          | More than 28 drinks per week (5 or more drinks per day) |

Note that published research from the ALSWH<sup>3</sup> used a similar variable, based on earlier NHMRC recommendations<sup>4</sup>. The categories for risk used were: 'Rarely drinks', 'Low intake', 'Hazardous intake' and 'Harmful intake' and these correspond to 'Rarely drinks', 'Low risk', 'Risky' and 'High risk' respectively.

Percentages of women from the three age cohorts in each category of AlcNHMRC at Surveys 1 and 2 are shown in Table A3.3.2.

**Table A3.3.2. Percent in each category for alcohol related health risk**

| Cohort:                | Younger |              | Mid-age      |              | Older          |              |                |
|------------------------|---------|--------------|--------------|--------------|----------------|--------------|----------------|
|                        | Survey: | 1            | 2            | 1            | 2 <sup>a</sup> | 1            | 2 <sup>a</sup> |
| Number surveyed        |         | 14 779       | 9 685        | 14 099       | 11 648         | 12 940       | 9 501          |
| <i>Number missing</i>  |         | 165          | 65           | 142          | 101            | 518          | 266            |
| <i>Percent missing</i> |         | 1.1          | 0.7          | 1.0          | 0.9            | 4.0          | 2.8            |
| Number classified      |         | 14 614       | 9 620        | 13 957       | 11 547         | 12 422       | 9 235          |
| Low risk               |         | 50.9         | 58.2         | 47.9         | 52.4           | 32.4         | 34.5           |
| Non-drinkers           |         | 9.0          | 9.1          | 15.3         | 13.4           | 35.1         | 34.6           |
| Rarely drinks          |         | 34.5         | 29.0         | 31.4         | 28.7           | 29.1         | 27.0           |
| Risky                  |         | 4.9          | 3.5          | 4.4          | 4.8            | 3.1          | 3.6            |
| High risk              |         | 0.7          | 0.3          | 0.9          | 0.8            | 0.4          | 0.3            |
|                        |         | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b>   | <b>100.0</b> | <b>100.0</b>   |

<sup>a</sup> Full survey only

### ***Pattern of Alcohol Consumption***

A composite variable was derived which describes the pattern of alcohol consumption (AlcPatt). The purpose of the variable AlcPatt is to reflect NHMRC risk categories and to separately identify among low risk drinkers and those who rarely drink a pattern of regular binge drinking (defined as having 5 or more drinks about once per week or more) or not. The following categories were defined

| <b>Code</b> | <b>Category</b>                           | <b>Definition</b>  |
|-------------|---|--|
| 1           | Low risk drinker, binges less than weekly | Usually drinks rarely or at low risk levels with no bingeing or binge drinking monthly or less |
| 2           | Non-drinker                               | Non-drinker  |
| 3           | Low risk drinker, binge drinks weekly     | Usually drinks rarely or at low risk levels and binge drinks weekly or more                    |
| 4           | Risky or high risk drinking               | Hazardous/harmful level of drinking, regardless of bingeing behaviour                          |

### ***Inconsistencies in data on binge frequency***

Inconsistencies were found between responses to the binge frequency item and an estimate of *usual* binge frequency, based on alcohol frequency and quantity items. Information from both these sources was used to identify regular binge drinking.

Usual binge drinking was defined as 'weekly or more' if usual consumption frequency is one or more days each week and usual quantity consumed of 5 or more drinks. Reported binge frequencies of 'about once a week' and 'more than once a week' were categorised as 'weekly or more'.

Women who 'drink rarely' or are defined as 'low risk' based on NHMRC recommendations were assigned to categories in relation to binge drinking using the following criteria:

Low risk drinker, binges less than weekly

- Usually drinks rarely or at low risk levels AND
- reported binge frequency is *not* weekly or more AND
- usual binge frequency is *not* weekly or more

**OR**

- Usually drinks rarely AND
- does not report the quantity of alcohol usually consumed AND
- reported binge frequency is *not* weekly or more

Low risk drinker, binge drinks weekly

- Usually drinks rarely or at low risk levels AND
- usual binge frequency is weekly or more

**OR**

- Usually drinks rarely or at low risk levels AND
- reported binge frequency is weekly or more

Women from the older age cohort were not asked about binge drinking at Survey 2. Values for AlcBng and AlcPatt were derived for the mid-age and younger cohorts at Surveys 1 and 2 and older women at Survey 1 (Table A3.3.3). Table A3.3.4 compares ALSWH and NHMRC categories of risk.

**Table A3.3.3. Percent in each category for pattern of alcohol consumption**

| Cohort:                                   | Younger |              | Mid-age      |              | Older          |              |
|---|---------|--------------|--------------|--------------|----------------|--------------|
|   | Survey: | 1            | 2            | 1            | 2 <sup>a</sup> | 1            |
| Number surveyed                           |         | 14 779       | 9 685        | 14 099       | 11 648         | 12 940       |
| <i>Number missing</i>                     |         | 281          | 148          | 248          | 137            | 847          |
| <i>Percent missing</i>                    |         | 1.9          | 1.5          | 1.8          | 1.2            | 6.6          |
| Number classified                         |         | 14 498       | 9 537        | 13 851       | 11 511         | 12 093       |
| Low risk drinker, binges less than weekly |         | 70.9         | 75.2         | 75.9         | 77.8           | 59.6         |
| Non drinker                               |         | 9.1          | 9.1          | 15.5         | 13.4           | 36.0         |
| Low risk drinker, binge drink weekly      |         | 14.4         | 11.9         | 3.4          | 3.2            | 0.9          |
| Risky/high risk drinker                   |         | 5.6          | 3.8          | 5.3          | 5.6            | 3.6          |
|   |         | <b>100.0</b> | <b>100.0</b> | <b>100.1</b> | <b>100.0</b>   | <b>100.1</b> |

<sup>a</sup> Full survey only

**Table A3.3.4. Survey items for quantity and frequency of alcohol consumption, estimated number of drinks per week and categories for risk, ALSWH and NRMRC**

| Quantity Item | Frequency Item      | Drinks per week:                |   |   |
|---------------|---------------------|---------------------------------|---|---|
|               |                     | Minimum to Maximum <sup>a</sup> | Categories for risk: ALSWH <sup>b</sup> | Categories for risk: NHMRC <sup>3</sup> |
|               | Non-drinker         |                                 | Non-drinker                             | Non-drinker                             |
| Any           | Rarely drinks       |                                 | Rarely drinks                           | Rarely drinks                           |
| 1-2 drinks    | Any                 | 1 to 14                         | No risk                                 | Low risk                                |
| 3-4 drinks    | Less than once week | 3 to 4                          | No risk                                 | Low risk                                |
|               | 1-2 days            | 3 to 8                          |   |   |
|               | 3-4 days            | 9 to 16                         |   |   |
| 3-4 drinks    | 5-6 days            | 15 to 24                        | Low risk                                | Risky                                   |
|               | Every day           | 21 to 28                        |   |   |
| 5-8 drinks    | Less than once week | 5 to 8                          | Low risk                                | Low risk                                |
|               | 1-2 days            | 5 to 16                         |   |   |
| 5-8 drinks    | 3-4 days            | 15 to 32                        | Low risk                                | Risky                                   |
| 5-8 drinks    | 5-6 days            | 25 to 48                        | Intermediate risk                       | High risk                               |
|               | Every day           | 35 to 56                        |   |   |
| 9+ drinks     | Less than once week | About 10                        | Intermediate risk                       | Low risk                                |
| 9+ drinks     | 1-2 days            | 10 to 20                        | Intermediate risk                       | Risky                                   |
| 9+ drinks     | 3-4 days            | 30 to 40                        | Intermediate risk                       | High risk                               |
| 9+ drinks     | 5-6 days            | 50 to 70                        | High risk                               | High risk                               |
|               | Every day           | 70 or more                      |   |   |

<sup>a</sup> Minimum=Minimum frequency \* Minimum quantity; Maximum=Maximum frequency \* Maximum quantity

<sup>b</sup> Only included in datasets for Surveys 1 and 2 distributed prior to April 2003.

## References

1. National Heart Foundation Risk Factor Prevalence Study: Report No. 1-1980
2. Australian Alcohol Guidelines: Health Risks and Benefits. Endorsed October 2002. National Health and Medical Research Council.
3. Jonas HA, Dobson AJ & Brown WJ. Patterns of alcohol consumption in young Australian women: associations with socio-demographic factors, lifestyle, health practices and physical health. *Australian and New Zealand Journal of Public Health*, 2000; 24(2): 185-191.
4. Pols RG, Hawks DV. Is there a safe level of daily consumption of alcohol for men and women? Canberra. Australian Government Publishing Service, 1992.

*Anne Russell and Jean Ball prepared this document.*



### APPENDIX 3.4. MID-AGE SURVEY 1 REVISED EXERCISE STATUS VARIABLE

|  |   |
|--|---|
| <b>Derived Variable</b>                      | m1revexstat m1revpagp   |
| <b>Definition</b>                            | mid 1 revised exercises status<br>mid 1 revised physical activity |
| <b>Source Items</b>                          | m1q63 m1q64   |
| <b>Data Dictionary<br/>INDEX NUMBER</b>      | <i>To be allocated by data manager</i>                            |
| <b>Endorsed by Data<br/>Management Group</b> |   |

#### Source Items - Survey 1

**63 In a NORMAL week, how many times do you engage in VIGOROUS exercise lasting for 20 minutes or more?** (Exercise which makes you breath harder or puff and pant such as netball, squash, jogging, aerobics, vigorous swimming, etc.) *(Circle one number only)*

| CODE | RESPONSE                       |
|------|--------------------------------|
| 1    | Never                          |
| 2    | Once a Week                    |
| 3    | Two or three times a week      |
| 4    | Four, five or six times a week |
| 5    | Once every day                 |
| 6    | More than once every day       |

**64 In a NORMAL week, how many times do you engage in LESS VIGOROUS exercise which lasts for 20 minutes or more?** (Exercise which does not make you breathe harder or puff and pant, like walking, gardening, swimming and lawn bowls) *(Circle one number only)*

| CODE | RESPONSE                       |
|------|--------------------------------|
| 1    | Never                          |
| 2    | Once a Week                    |
| 3    | Two or three times a week      |
| 4    | Four, five or six times a week |
| 5    | Once every day                 |
| 6    | More than once every day       |

#### Derived Variable

In order to obtain a combined score of Physical Activity (PA), to best represent long-term PA levels of individual women as accurately as possible, the PA measure at Survey 1 needs to be more comparable with those used in Survey 2 and Survey 3. This is difficult, because we do not have a measure of duration for the Survey 1 PA measure. This is nonetheless an

attempt to revise the Survey 1 PA measure to try to make it more comparable with the Survey 2 and Survey 3 PA measures.

### Original physical activity score - Survey 1 (*m1exstat*)

In survey one PA was measured using questions from the 1980-89 NHF risk factor prevalence studies (2). Responses to these two questions were used to derive *m1exstat*. Response codes 1 to 6 in question 63 and 64 were weighted 0, 1, 2.5, 5, 7, and 10 respectively. Weighted responses for vigorous exercise were multiplied by 5 and for less vigorous exercise by 3; *m1exstat* was derived as the sum of those two products.

The resulting PA scores were categorised as none (<5), low (5-<15), moderate (15-<25), or high ( $\geq 25$ ), where a score of 15 is equivalent to the US national PA guidelines in 1996 (1) of 5 bouts of moderate activity per week, or 3 bouts of vigorous activity, or any combination of the two (3).

### Revised physical activity score – Survey 1 (*m1revexstat*)

Responses to questions 63 and 64 were used to derive *m1revexstat*, a revised exercise score for survey one. Coded responses 1 to 6 in question 63 and 64 were weighted 0, 1, 2.5, 5, 7, and 10 respectively. These weighted values were assigned, based on the midpoint of the frequency of exercise per week. All weighted responses were multiplied by 20 minutes, as this was the minimum time needed to correctly record a response. Responses for vigorous exercise were then multiplied by 7.5 and by 4 for less vigorous activity; *m1revexstat* was derived as the sum of these two products.

The resulting physical activity scores were categorized as none (<80), low (80 to <400), moderate (400 to <560) and high ( $\geq 560$ ), where a score of 400 is equivalent to the current national PA guidelines of 5 bouts of less vigorous (moderate) activity per week.

It is important to note that, while this measure can be regarded as a METS.mins measure (similar to those used in Survey 2 and Survey 3), the cut points for the categories are different from those used in Survey 2 and Survey 3 because we have assumed each reported activity session is only 20 minutes in duration. In reality, it is likely that mean session duration is at least 30 minutes, as many women walk or play sport in blocks of 30 minutes or one hour. Since we do not have information on duration at Survey 1, we have chosen to use the 20 minute value for duration in working out the METSmins cut points.

**Table A3.4.1. Definitions and categories for revised exercise status mid 1**

| Category | Definition                  |   |
|----------|-----------------------------|---|
| None     | Exercise status <80         | A score of 80 is equivalent to 1 * 20 minute session (20 minutes) of exercise per week, at a less vigorous intensity (4 MET). |
| Low      | 80 <= exercise status <400  | A score of 400 is equivalent to 5 * 20 minute sessions (100 minutes) of less vigorous intensity (4 MET).                      |
| Moderate | 400 <= exercise status <560 | A score of 560 is equivalent to 7 * 20 minute sessions (140 minutes) of exercise at a less vigorous intensity (4 MET).        |
| High     | Exercise status $\geq 560$  |   |

Because a duration of 20 minutes is assumed for Survey 1, this score of 400 METmins at Survey 1 (based on 5 sessions) is considered equivalent to a score of 600 METmins at Surveys 2 and 3 (i.e. 5\*30 minutes = 150mins\*4 METs = 600 METmins). In both cases this is equivalent to the 'five' sessions recommended in the US Surgeon General's report (1).

The number and percent of women in each of the new Survey 1 PA categories are shown in Table A3.5.2, with comparison against the percentage of women in each PA category in the original Survey 1 measure. Table A3.5.3 shows the percentage in each category (using the new Survey 1 PA categories) at each survey.

**Table A3.4.2. Number and percent in revised survey 1 measure, compared with original PA measure and percentages at Survey 1.**

| Code | Revised physical activity status survey one | Number       | Percent      | Percent in original pa category |
|------|---|--------------|--------------|---------------------------------|
| 1    | None  | 1777         | 12.7         | 27.7                            |
| 2    | Low   | 6370         | 45.6         | 30.6                            |
| 3    | Moderate                                    | 1880         | 13.5         | 25.4                            |
| 4    | High  | 3955         | 28.3         | 16.4                            |
|      | <b>Total Classified</b>                     | <b>13982</b> | <b>100.0</b> | <b>100.0</b>                    |
|      | <b>Missing</b>                              | <b>117</b>   | <b>0.8</b>   | <b>0.8</b>                      |
|      | <b>Total</b>                                | <b>14099</b> |              |                                 |

**Table A3.4.3. Percent in each physical activity category and survey 1, 2 and 3**

| Code | PA categories survey 1, 2 & 3 | Survey 1     | Survey 2     | Survey 3     |
|------|-------------------------------|--------------|--------------|--------------|
| 1    | None                          | 12.7         | 18.2         | 18.7         |
| 2    | Low                           | 45.6         | 30.7         | 36.5         |
| 3    | Moderate                      | 13.5         | 22.1         | 20.3         |
| 4    | High                          | 28.3         | 28.9         | 24.5         |
|      | <b>Total Classified</b>       | <b>100.0</b> | <b>99.9</b>  | <b>100.0</b> |
|      | <b>Missing</b>                | <b>0.8</b>   | <b>3.8</b>   | <b>4.9</b>   |
|      | <i>Total Number of Women</i>  | <b>14099</b> | <b>11648</b> | <b>11196</b> |

#### REFERENCES:

1. U.S. Department of Health and Human Services. (1996). *Physical activity and health: A report of the Surgeon General*. Washington, DC.
2. Risk Factor Prevalence Study Management Committee. (1990). *Risk factor prevalence study 3, 1989*. Canberra, Australia: National Health Foundation of Australia and Australian Institute of Health.
3. Brown WJ, Mishra G, Lee C, Bauman A. (2000). Leisure Time Physical Activity in Australian Women: Relationship With Well Being and Symptoms. *Research Quarterly for Exercise and Sport*. 71 (3): 206-216.

*This report prepared by Jess Ford*

### APPENDIX 3.5. MID-AGE CUMULATIVE EXERCISE STATUS VARIABLE

|  |  |
|--|--|
| <b>Derived Variable</b>                  | mid12exstat mid123exstat mid12pagp mid123pagp<br>mid12pagp5 mid123pagp5  |
| <b>Definition</b>                        | Cumulative exercise status from mid survey 1 & 2<br>Cumulative exercise status from mid survey 1, 2 & 3<br><br>Cumulative physical activity from mid survey 1 & 2<br>Cumulative physical activity from mid survey 1, 2 & 3<br><br>Cumulative physical activity from mid survey 1 & 2 in five categories<br>Cumulative physical activity from mid survey 1,2 & 3 in five categories |
| <b>Source Items</b>                      | m1revexstat m2exstat m3exstat  |
| <b>Data Dictionary INDEX NUMBER</b>      | <i>To be allocated by data manager</i>   |
| <b>Endorsed by Data Management Group</b> |  |

#### Source Items - Surveys 1, 2 & 3

##### Source Items

**Survey 1** - M1revexstat

**Survey 2** - M2exstat

**Survey 3** - M3exstat

##### Derived Variable

A combined score of physical activity was calculated to represent long-term physical activity (PA) levels of individual women as accurately as possible.

The scores were calculated as a sum of the exercise status scores from the relevant surveys. Mid12exstat is the sum of m1revexstat and m2exstat; mid123exstat is the sum of m1revexstat, m2exstat, and m3exstat.

Only those who completed the full survey version of Survey 2 and Survey 3 could be included in the cumulative variables.

This method is based on published studies (1,2,3,4,5) using unweighted totals to estimate the cumulative average of MET scores to best represent long-term PA levels. (A MET, metabolic equivalent, is defined as the rate of energy expenditure from a given PA. 1MET is equivalent to resting metabolic rate or sitting quietly; 4 METs is used as the generic MET value for moderate activity and 7.5 METs is used as the generic MET value for vigorous activity.

The cumulative exercise scores were then categorized into the four PA groups (none, low, moderate and high) based on the sum of the cut points used for the PA groups for surveys 1,2 and 3 (Table A3.6.1).

**Table A3.5.1. Cut points for physical activity scores for survey 1,2 and 3 and for cumulative physical activity scores**

| PA   | INDIVIDUAL SCORES |          |          | CUMULATIVE SCORES |              |
|------|-------------------|----------|----------|-------------------|--------------|
|      | Survey 1          | Survey 2 | Survey 3 | Survey 1,2        | Survey 1,2,3 |
| None | <80               | <50      | <50      | <130              | <180         |
| Low  | <400              | <600     | <600     | <1000             | <1600        |
| Mod  | <560              | <1200    | <1200    | <1760             | <2960        |
| High | >=560             | >=1200   | >=1200   | >=1760            | >=2960       |

Tables A3.6.2 and A3.6.3 show the number and percent of women in each category.

**Table A3.5.2. Number and percent in each physical activity category for cumulative score, Surveys 1 and 2. (Includes those women who responded to Survey 1 and the full version of Survey 2)**

| Code | Cumulative physical activity status survey 1 & 2 | Number         | Percent     |
|------|--|----------------|-------------|
| 1    | None   | 1096           | 9.8         |
| 2    | Low  | 4486           | 40.2        |
| 3    | Moderate   | 2535           | 22.7        |
| 4    | High   | 3034           | 27.2        |
|      | <b>Total Classified</b>                          | <b>11151</b>   | <b>99.9</b> |
|      |  | <b>Missing</b> | <b>497</b>  |
|      | <b>Total</b>                                     | <b>11648</b>   |             |

**Table A3.5.3. Number and percent in each physical activity category for cumulative score, Surveys 1, 2 and 3. (Includes those women who responded to Survey 1 and the full versions of Surveys 2 and 3)**

| Code | Cumulative physical activity status survey 1,2 & 3 | Number         | Percent      |
|------|--|----------------|--------------|
| 1    | None   | 560            | 5.8          |
| 2    | Low  | 3934           | 41.1         |
| 3    | Moderate   | 2518           | 26.3         |
| 4    | High   | 2563           | 26.8         |
|      | <b>Total Classified</b>                            | <b>9575</b>    | <b>100.0</b> |
|      |  | <b>Missing</b> | <b>825</b>   |
|      | <b>Total</b>                                       | <b>10400</b>   |              |

Having categorized the cumulative scores into four groups, it was apparent that a large proportion of the women was included in the Low PA category (~40%). To overcome this, it was decided to further divide this group. The Low group included all responses for physical activity from ~10minutes to 2 ½ hours. This category was divided into those who exercised for ~10minutes to 1 hour, and those who reported 1-2 ½ hours of moderate intensity activity.

The cut points from Surveys 1, 2 and 3 were calculated and then the cumulative scores were derived as the sum of the relevant cut points.

**Table A3.5.4. Reasoning for Survey 1 physical activity cut points**

| Frequency of activity | Score | Assumed minutes S1 | METmins (x4) | Categories | Ranges   |
|-----------------------|-------|--------------------|--------------|------------|----------|
| Never                 | 0     | 0                  | 0            | None       | <80      |
| Once                  | 1     | 20                 | 80           | Very Low   | 80-<200  |
| 2-3                   | 2.5   | 50                 | 200          | Low        | 200-<400 |
| 4-5-6                 | 5     | 100                | 400          | Mod        | 400-<560 |
| 7                     | 7     | 140                | 560          | High       | ≥560     |
| >7                    | 10    | 200                | 800          |            |          |

**Table A3.5.5. Reasoning for Survey 2 and Survey 3 physical activity cut points**

| Frequency of activity | Duration                               | Approx METmins | Categories | Ranges    |
|-----------------------|--|----------------|------------|-----------|
| Never                 | 12 Minutes or less                     | <50            | None       | <50       |
| Once                  | One hour                               | 240            | Very Low   | 50-<240   |
| 2-3-4                 | 150 minutes                            | 600            | Low        | 240-<600  |
| 5-10                  | 300 minutes or one hour a day (6 days) | 1200           | Mod        | 600-<1200 |
| >10                   | More than one hour a day               | >1200          | High       | ≥1200     |

**Table A3.5.6. Cut points for physical activity scores for Surveys 1, 2 and 3 and for cumulative physical activity scores**

| PA       | INDIVIDUAL SCORES |                |                | CUMULATIVE SCORES |                |
|----------|-------------------|----------------|----------------|-------------------|----------------|
|          | Survey 1          | Survey 2       | Survey 3       | Survey 1,2        | Survey 1,2, 3  |
| None     | <80               | <50            | <50            | <130              | <180           |
| Very Low | <b>&lt;200</b>    | <b>&lt;240</b> | <b>&lt;240</b> | <b>&lt;440</b>    | <b>&lt;680</b> |
| Low      | <400              | <600           | <600           | <1000             | <1600          |
| Mod      | <560              | <1200          | <1200          | <1760             | <2960          |
| High     | ≥560              | ≥1200          | ≥1200          | ≥1760             | ≥2960          |

**Table A3.5.7. Number and percent in each of the five physical activity categories for cumulative score, Surveys 1 and 2. (Includes those women who responded to Survey 1 and the full version of Survey 2)**

| Code                    | Cumulative physical activity status survey 1& 2 | Number         | Percent      |
|-------------------------|---|----------------|--------------|
| 1                       | None  | 1096           | 9.8          |
| 2                       | Very Low  | 1557           | 14.0         |
| 3                       | Low   | 2929           | 26.3         |
| 4                       | Moderate  | 2535           | 22.7         |
| 5                       | High  | 3034           | 27.2         |
| <b>Total Classified</b> |   | <b>11151</b>   | <b>100.0</b> |
|                         |   | <b>Missing</b> | <b>497</b>   |
| <b>Total</b>            |   | <b>11648</b>   |              |

**Table A3.5.8. Number and percent in each of the five physical activity categories for cumulative score, Surveys 1, 2 and 3 (Includes those women who responded to Survey 1 and the full versions of Surveys 2 and 3)**

| Code                    | Cumulative physical activity status survey 1,2 & 3 | Number         | Percent      |
|-------------------------|--|----------------|--------------|
| 1                       | None   | 560            | 5.8          |
| 2                       | Very Low   | 1388           | 14.5         |
| 3                       | Low  | 2546           | 26.6         |
| 4                       | Moderate   | 2518           | 26.3         |
| 5                       | High   | 2563           | 26.8         |
| <b>Total Classified</b> |  | <b>9575</b>    | <b>100.0</b> |
|                         |  | <b>Missing</b> | <b>825</b>   |
| <b>Total</b>            |  | <b>10400</b>   |              |

#### REFERENCES:

1. Feskanich D, Willett W, Colditz G. Walking and leisure-time activity and risk of hip fracture in postmenopausal women. The journal of the American Medical Association. 2002 Nov 13; 288(18): 2300-6
2. Hu FB, Sigal RJ, Rich-Edwards JW, colditz GA, Solomon CG, Willett WC. Walking compared with vigorous physical activity and risk of type 2 diabetes in women: A prospective study. The journal of the American Medical Association. 1999 October 20; 282(15): 1433-9
3. Hu FB, Stampfer MJ, Colditz GA, AScherio A, Rexrode KM, Willett WC. Physical activity and risk of stroke in women. 2000 June 14; 283(22): 2961-7
4. Rockhill B, Willett WC, Manson JE, Leitzmann MF, Stampfer MJ et al. Physical activity and mortality: a prospective study among women. American Journal of Public Health. 2001 April; 91(4): 578-83
5. Rockhill B, Willett WC, Hunter DJ, Manson JE, Hankinson SE, Colditz GA. A prospective study of recreational physical activity and breast cancer risk. Archives of internal medicine. 1999 October 25; 159(19): 2290-6

*This report prepared by Jess Ford*

### APPENDIX 3.6. TRANSITION IN ALCOHOL CONSUMPTION – YOUNGER COHORT, SURVEYS 1 & 2

|  |   |
|--|---|
| <b>Derived Variable</b>                  | YT12AlcNMHRC  |
| <b>Definition</b>                        | Transition in alcohol consumption between surveys 1 & 2 |
| <b>Source Items</b>                      | Derived variables y1AlcNMHRC & y2AlcNMHRC               |
| <b>Data Dictionary Index Number</b>      | ALCS <i>To be allocated by the Data Manager</i>         |
| <b>Endorsed by Data Management Group</b> | 28 May 2003   |

#### Source Items

Alcohol consumption was defined in the same way at Surveys 1 and 2 and was based on categories of estimated risk (1).

#### Code Risk category

- 1 Non-drinker
- 2 Rarely drinks
- 3 Low risk drinker (Up to 14 drinks per week; up to 2 drinks per day)
- 4 Risky drinker (15 to 28 drinks per week; 3 to 4 drinks per day)
- 5 High risk drinker (More than 28 drinks per week; 5 or more drinks per day)

Categories of 'risky' and 'high risk' drinking were aggregated for the purposes of transition.

#### Derived Variable

Transition in alcohol consumption was derived for women from the younger cohort completing Survey 1 and either the full or the abbreviated version of Survey 2 and for women from the mid-age and older cohorts completing Survey 1 and the full version of Survey 2. Categories for transition were based on a cross-tabulation of alcohol consumption at both surveys (Table A3.7.1) and are shown in Table A3.7.2.

#### Reference:

1. Australian Alcohol Guidelines: Health Risks and Benefits. Endorsed October 2002. National Health and Medical Research Council.

*Anne Russell prepared this document*



Table A3.6.1. Cross-tabulation of alcohol consumption at Surveys 1 and 2

| Survey 1              | Survey 2     |               |                  |               |                   |            | Total         |
|-----------------------|--------------|---------------|------------------|---------------|-------------------|------------|---------------|
|                       | Non-drinker  | Rarely drinks | Low risk drinker | Risky drinker | High risk drinker | Missing    |               |
| <b>Younger Cohort</b> |              |               |                  |               |                   |            |               |
| Non-drinker           | 432          | 249           | 108              | 5             | 0                 | 3          | <b>797</b>    |
| Rarely drinks         | 309          | 1 507         | 1 406            | 36            | 4                 | 19         | <b>3 281</b>  |
| Low risk drinker      | 97           | 919           | 3 727            | 203           | 12                | 33         | <b>4 991</b>  |
| Risky drinker         | 13           | 83            | 276              | 72            | 6                 | 7          | <b>457</b>    |
| High risk drinker     | 5            | 8             | 27               | 17            | 3                 | 1          | <b>61</b>     |
| Missing               | 15           | 22            | 54               | 5             | 0                 | 2          | <b>98</b>     |
| <b>Total</b>          | <b>871</b>   | <b>2 788</b>  | <b>5 598</b>     | <b>338</b>    | <b>25</b>         | <b>65</b>  | <b>9 685</b>  |
| <b>Mid-age Cohort</b> |              |               |                  |               |                   |            |               |
| Non-drinker           | 1 233        | 400           | 42               | 1             | 1                 | 19         | <b>1 696</b>  |
| Rarely drinks         | 231          | 2 389         | 933              | 3             | 1                 | 29         | <b>3 586</b>  |
| Low risk drinker      | 29           | 491           | 4 885            | 215           | 15                | 41         | <b>5 676</b>  |
| Risky drinker         | 3            | 4             | 158              | 305           | 33                | 1          | <b>504</b>    |
| High risk drinker     | 2            | 1             | 16               | 25            | 45                | 2          | <b>91</b>     |
| Missing               | 44           | 23            | 18               | 1             | 0                 | 9          | <b>95</b>     |
| <b>Total</b>          | <b>1 542</b> | <b>3 308</b>  | <b>6 052</b>     | <b>550</b>    | <b>95</b>         | <b>101</b> | <b>11 648</b> |
| <b>Older Cohort</b>   |              |               |                  |               |                   |            |               |
| Non-drinker           | 2 529        | 361           | 70               | 1             | 0                 | 77         | <b>3 038</b>  |
| Rarely drinks         | 402          | 1 554         | 598              | 6             | 0                 | 112        | <b>2 672</b>  |
| Low risk drinker      | 62           | 504           | 2 406            | 124           | 6                 | 65         | <b>3 167</b>  |
| Risky drinker         | 4            | 7             | 80               | 178           | 8                 | 2          | <b>279</b>    |
| High risk drinker     | 1            | 0             | 2                | 17            | 10                | 1          | <b>31</b>     |
| Missing               | 200          | 69            | 34               | 2             | 0                 | 9          | <b>314</b>    |
| <b>Total</b>          | <b>3 198</b> | <b>2 495</b>  | <b>3 190</b>     | <b>328</b>    | <b>24</b>         | <b>266</b> | <b>9501</b>   |

Table A3.6.2. Transition in Alcohol Consumption between Surveys 1 and 2

| <i>Transition in Alcohol Consumption</i> |   | <b>Younger</b> |                | <b>Mid-age</b> |                | <b>Older</b>  |                |
|--|---|----------------|----------------|----------------|----------------|---------------|----------------|
| <b>Code</b>                              | <b>Consumption</b>  | <b>Number</b>  | <b>Percent</b> | <b>Number</b>  | <b>Percent</b> | <b>Number</b> | <b>Percent</b> |
| <b><i>No Change</i></b>                  |   |                |                |                |                |               |                |
| 1  | Low risk drinker  | 3 727          | 39.1           | 4 885          | 42.6           | 2 406         | 26.9           |
| 2  | Non-drinker   | 432            | 4.5            | 1 233          | 10.8           | 2 529         | 28.3           |
| 3  | Rarely drinks   | 1 507          | 15.8           | 2 389          | 20.8           | 1 554         | 17.4           |
| 4  | Risky or high risk drinker  | 98             | 1.0            | 408            | 3.6            | 213           | 2.4            |
| <b><i>Decreased Consumption</i></b>      |   |                |                |                |                |               |                |
| 5  | Rarely drinks to Non-drinker  | 309            | 3.2            | 231            | 2.0            | 402           | 4.5            |
| 6  | Low risk drinker to Non-drinker/Rarely drinks                             | 1 016          | 10.7           | 520            | 4.5            | 566           | 6.3            |
| 7  | Risky or high risk drinker to Non-drinker/rarely drinks                   | 109            | 1.1            | 10             | 0.1            | 12            | 0.1            |
| 8  | Risky or high risk drinker to Low risk drinker                            | 303            | 3.2            | 174            | 1.5            | 82            | 0.9            |
| <b><i>Increased Consumption</i></b>      |   |                |                |                |                |               |                |
| 9  | Non-drinker to Rarely drinks/Low risk drinker                             | 357            | 3.8            | 442            | 3.9            | 431           | 4.8            |
| 10                                       | Rarely drinks to Low risk drinker   | 1 406          | 14.8           | 933            | 8.1            | 598           | 6.7            |
| 11                                       | Non-drinker/Rarely drinks/ Low risk drinker to Risky or high risk drinker | 260            | 2.7            | 236            | 2.1            | 137           | 1.5            |
| <b>Total non-missing</b>                 |   | <b>9 524</b>   | <b>99.9</b>    | <b>11 461</b>  | <b>99.9</b>    | <b>8 930</b>  | <b>99.8</b>    |
| 99                                       | <i>Missing</i>  | 161            | 1.7            | 187            | 1.6            | 571           | 6.0            |
| <b>Total surveyed</b>                    |   | <b>9 685</b>   |                | <b>11 648</b>  |                | <b>9 501</b>  |                |

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