

Building Ageing Research Capacity Colloquium

Network Themes and BARC Strategic Areas Workshops

Afternoon Workshop 4—Population Research Strategies

Day 2–5 July
1:30 -3:00 PM

Presented by:



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Disclaimer:

This is a background document that has been produced by the ARC/NHMRC Research Network in Ageing Well and is only to be used for the purpose of informing discussion at the workshop on 5 July 2006. The materials contained herein are not available for the purposes of quotation until the workshop discussion has been incorporated. An updated version will be sent to all workshop participants and will be made available on the Network website (www.ageingwell.edu.au).

Any statements about proposed Network actions or directions are statements of possibility only. Directions will be determined at a later date after taking into consideration the discussion at the workshop.

Research Network
Convened at



Major Partners



Population Research Strategies Workshop

Background

The Population Health Strategies Theme of the Network is led by the hub at the Australian National University in collaboration with the central hub at the University of Sydney. It differs from other theme areas in that the focus is primarily on data resources and analytical expertise rather than a particular substantive area. This Theme focuses on population data that are national resources and aims to relate Australian research to international efforts in population ageing research. It collaborates closely with other Theme areas, with an emphasis on the inter-relationships across the other theme areas of healthy ageing, productivity and economic security, and independence and social participation (e.g., see the Productivity and Economic Security Theme background paper).

The Population Research Strategies Theme focuses on adding value and excellence to Australian population research efforts on ageing. There is an emphasis on longitudinal research given its value for understanding the complex, inter-related dimensions of individual and population ageing.

- Enabling better use Australian surveys by making them available for secondary and comparative analyses, thus increasing the efficiency and amount of ageing research.
- Increasing the expertise of Australian researchers in analysing longitudinal surveys.
- Leading collaborative efforts to continue existing longitudinal surveys and to initiate new proposals for national longitudinal research beyond the scope of individual researchers or small teams.

Longitudinal research has been recognised as having a prominent place in national considerations for advancing ageing research:

- The Australian Institute of Health and Welfare (Logie, Hogan, and Peut, 2004) produced a comprehensive review *Longitudinal studies of ageing; implications for future studies of ageing*. The review examined the content areas of existing Australian and international surveys as they can inform the priority research topics in the Framework for an Australian Ageing Research Agenda (2003). It also emphasised the value of longitudinal administrative records.
- The Prime Minister's Science, Engineering and Innovation Council report on Healthy Ageing (PMSEIC, 2003) recommended:
 - 'That an Australian Longitudinal Study of Older People (ALSOP) be established giving '... priority to areas that are potentially improvable and important for the health, functioning and wellbeing of older people'
 - 'That the NHMRC, ARC and relevant Government Departments develop a process for on-going funding of longitudinal studies of ageing, so that maximum value is obtained from the effort in establishing and maintaining new and existing cohorts'
 - 'Such funding would include sufficient funding for analysis of the wealth of data generated by these studies and for dissemination of findings, linking them with policy makers, practitioners and community organisations'.

The Australian Bureau of Statistics through the National Ageing Statistics Unit (NASU) has commenced an Information Development Plan project to improve the quality and availability of official statistical information on the ageing population. The ABS is undertaking a national consultation process which will lead to:

- The identification and confirmation of current significant issues related to ageing and agreement on the data implications.
- The identification of information gaps and deficiencies in the existing data sets relating to ageing.

- The development of an agreed set of priorities and a framework to improve relevant ageing statistics.

(see the link below for details on NASU and the information development plan <http://www.abs.gov.au/websitedbs/D3110129.NSF/f128006d2d1e7c10ca2566fd0081ba4b/fd391031b2922d1fca256cae007d39de!OpenDocument>).

There are growing numbers of large scale cohort studies in North America and Europe that facilitate cross-national comparisons and can inform policy choices (Kinsella and Velkoff, 2001; Burkhauser and Smeeding 2002). Thus, governments use longitudinal studies for the following purposes:

- To provide data to help in the formulation of policy;
- To provide data to model the likely future impact of proposed policy;
- To provide data to test the impact of policy.

Australia has lagged behind other western nations in its investment in national population-based longitudinal research (Watson and Wooden, 2001-2; Australian Institute of Family Studies, 2002). However, important initiatives are underway – such as the Household and Income Survey Dynamics in Australia (HILDA), the Women’s Longitudinal Survey of Ageing and the 45 and Up Study. A summary of planned, ongoing or recently completed longitudinal studies (adapted from the 45 and Up Study Protocol) has been included in Appendix 1.

The Network aims to support and extend these efforts and/or others that emerge as priorities among Participants and our collaborators. Input is particularly welcomed on the issues raised below and other possibilities for large scale, national initiatives in population research consistent with Network objectives.

Key Issues

Priority Issue 1. Making better use of existing data and support for continuing existing longitudinal surveys.

Leading research funding bodies internationally recognise that large scale population surveys are national resources that need to be available for extensive analysis by a wide range of investigators. For example, the US National Institute on Ageing (NIA) requires that survey data collected with their funding be made available immediately on a Public Use File. NIA also fund the US National Data Archive on Aging in order to make this data available and to advance related survey research methodology.

How can Australia to make best use of its population research resources and make them widely available to more researchers as well as governments and other key constituencies that do not collect data

- Our Research Network-supported Australian Data Archive on Ageing, at the ANU Australian Social Sciences Data Archive, has made an important start but should ongoing funding be provided by Australian research bodies to build and sustain it?
- Should Australia research funding bodies require that data from the survey research they fund be made available in public use samples for secondary analysis? Is the data the property of the research funding body or of the individual researcher or research team?
- Can research funding bodies recognise that re-analysis of existing data is a genuine, cost-effective, and relatively fast way of adding to knowledge? The NHMRC- ARC Ageing Well, Ageing Funding Program provided an advance in this respect because it specifically invited proposals including secondary analysis of existing data?
- Leading researchers can collaborate in proposals that pool existing data in ways that can answer new research questions that otherwise cannot be addressed.

- Can we enable researchers and post graduate research students (their supervisors) to recognise the potential of existing data for preparing high quality publications?

Our Research Network can canvass support for these initiatives, facilitate quality proposals using secondary data, and advocate them to funding bodies.

How can Australia ensure the orderly availability of resources to continue valuable longitudinal surveys beyond their initial (usually short term) periods of funding? A number of valuable efforts are now underway but their futures are uncertain (see Appendix 1). They do not fit easily into the time frame of research funding bodies (seldom more than three to five years) nor government departments having what often are even shorter time frames?

There is great potential for building mutually advantageous relations between government departments (that have data and information needs) and policy researchers (who have analytical and conceptual skills). How can these bridges be built in ways that meet the requirements of both parties?

- How can government administrative data and surveys be made available to researchers without risk of any breach of confidentiality and other requirements? Important examples include ABS Confidentialised Unit Record Files (CURFs) from national surveys, and linkage of administrative data (as per AIHW initiatives).
- In turn, can protocols and exemplars be refined and promulgated for government departments to commission researchers to analyse existing data to yield findings that are needed to inform decisions over relatively short time frames?

Issue 2: Understanding the Baby Boom Cohort

To underpin future planning, more information is needed on the ageing trajectories of the Australian post-war baby-boomer generation, that is, the cohort aged 50-59 years (in 2005) born between 1946 -1955. The first wave of baby-boomers, which turns 70 from the year 2015 onwards, will drive Australian ageing policies in relation to retirement incomes, health costs and aged care (Kendig et al., 2004). Australia is distinctive among OECD countries in experiencing a prolonged post-war baby boom, thus producing a large generation of people who grew up in prosperous times, and who differ in important ways from the inter-war generation who came before and also those who come after.

The baby-boomers are the largest age cohort in Australia's demographic history, given the high post-war birth rate and increasing adult life expectancy; further increases in longevity are possible. The challenge for the 21st century is to make these added years of life as healthy and productive as possible (PMSEIC, 2003). By mid 21st century one out of every four Australians is projected to be aged 65 years or older. Australia will be transforming its national identity, attitudes, and institutions from being a young to an ageing society.

The baby boomer generation's life trajectories and expectations will combine with population ageing in shaping Australia's future. They have a is embarking upon a *health transition* with early indicators of morbidity such as hypertension reflecting life style risks such as inactivity and obesity. They are embarking upon *social and economic transitions* in key life events, notably the transition from work to retirement, menopause among women, and new roles as grandparents. Their decisions on retirement from paid work and geographical location will further.

To fully appreciate the impact of the ageing baby boom would require an integrated analyses of the psychological, social, economic, and health dimensions of life span development and social change. It could involve a range of research strategies including cohort succession analysis using national ABS Census and survey data, attitudinal survey, and in-depth qualitative explorations. Partnerships could be formed with government departments, industry groups, and consumer groups that have a key stake in this transition. Should the Research Network facilitate the formation of a major baby boom research program or set of related research projects?

Issue 3: Does Australia Need a Health and Retirement Survey?

A major longitudinal study that follows individuals through mid and later life offers an essential perspective on the ageing process. Unlike cross-sectional surveys, a cohort design can disentangle ageing, morbidity and generational changes; differentiate between cause and effect (whether people become ill because they are depressed or become depressed because they are ill); enable predictions to be tested; and pick up transitions to and from different health and employment statuses. Although costly, European and North American countries have decided that longitudinal studies are a worthwhile investment in terms of research outcomes. Further, the growing number of such studies allow cross-national comparisons that can inform policy choices (Kinsella and Velkoff, 2001).

Australia has no omnibus longitudinal survey underway on the baby boomer generation. Surveys so far have concentrated upon two groups: younger families (family formation issues) and people aged 70 years and over (aged care and health issues). There are no major efforts jointly examining changes in different areas of life, such as health and workforce participation, that need to be considered together. Further, Australia's experiences of ageing can be better understood in an international context only through a longitudinal survey comparable to large studies overseas, notably the English Longitudinal Study on Ageing (ELSA) and the USA Health and Retirement Study (HRS). For example, how might this relatively prosperous and multicultural group of older Australians (which includes many post-war migrants) differ across the ageing process from older populations in similar countries? What are the distinctive impacts of Australian social, economic, physical, and policy environments?

One aim for a population research strategy could be to set up a major cohort study that could provide a public domain database for researchers in order to optimise research outcomes from the investment in data gathering. To answer a broad range of questions - and to make it possible to explore variation between subgroups and inter-relationships among variables – would require large a very large sample size, possibly in the order of 12,000 or more. Consideration of a cohort study of the baby-boomer generation might apply the following criteria:

- Select a national, representative sample large enough to pick up early mid life trajectories and to examine subgroups (such as urban versus rural differences);
- Examine life transitions and early morbidity indicators thought to be associated with healthy and productive ageing in later life that may be susceptible to intervention;
- Select social issues and health conditions that pose innovative and important research and policy questions, including access to employment, housing, health, and welfare benefits and services
- Tackle issues that require an interdisciplinary and dynamic (longitudinal) perspective;
- Collect substantial data in the first wave of interviews in order to establish a baseline, analyse subgroup differences and produce some quick cross-sectional results.

Should the Research Network begin to explore such a longitudinal study? As with the English Longitudinal Study of Ageing, an Australian version of the US Health and Retirement Study (HRS), might seek joint funding from a coalition of Australian funding bodies in partnership with the National Institute on Ageing (NIA). The costs involved in such an enterprise, and the limited amount of funds available, would suggest that the best strategy could be to build upon an existing study or sets of studies.

Summary of the Theme Activities to Date

Population Research Strategies

The ANU hub on Population Research Strategies has been established Dr Judith Healy (RegNet Research School of Social Sciences ANU) as convenor and Associate Professor Kaarin Anstey (Centre for Mental Health Research ANU), Dr Heather Booth (Demography ANU), and Associate Professor Marc Budge (ANU Medical School) as co-convenors. Ms Tanisha Jowsey serves as part-time project officer.

The ANU hub has set up the Ageing Well Data Archive at the Australian Social Science Data Archive (ASSDA). The archive, available at <http://ageing-well.anu.edu.au/webview/index.jsp> (or through the Network's web page), includes cross-sectional studies as well as important longitudinal surveys. The archive provides online access for Network members to 56 datasets of interest to people working in the area of ageing, including cross-sectional studies as well as important longitudinal surveys. In addition, Network members have access to the full Australian Social Sciences Data Archive (ASSDA) catalogue, comprising approximately 1,500 datasets. Access is provided via a standard web browser using the Nesstar system. New users need to register before using the system. Registration is free.

The Network, together with the Australian Government Department of Families, Community Services and Indigenous Affairs (FaCSIA), is sponsoring a workshop presented by Assoc Professor Scott Hofer and Dr Lesa Hoffman from the Pennsylvania State University. The five-day workshop for 30 participants, from Monday 10 July - Friday 14 July, will be held at the Australian National University. The workshop will provide an overview of current statistical approaches to the analysis of longitudinal data. The presenters are international experts in this area and are experienced in running workshops. Because of the high demand all places have been filled with participants coming from across the country. Discussions are currently underway to offer the course, or a derivative of it, in future years. Prior to the five-day workshop, Professor Hofer and Dr Hoffman will be presenting an abridged one-day workshop for the Network at Flinders University on 7 July.

Associate Professor Kaarin Anstey (Centre for Mental Health Research ANU) is the Chief Investigator on a proposal entitled "Learning How To Age Well From Australian Longitudinal Studies Of Ageing" for the NHMRC's "Ageing Well, Ageing Productively" Program Grants. This project draws together eight Australian Longitudinal Studies of Ageing to create substantially enhanced longitudinal data sets in order to identify factors capable of preventing disease and compressing morbidity – and thus increase years of engaged and successful ageing. The focus is upon conditions that significantly contribute to the burden of disease. Findings on modifiable disability will then be used to model the health futures of the baby boomer and older generations.

On behalf of the Australian Association of Gerontology (AAG), Associate Professor Anstey led a collaborative effort which piloted the process of drawing together multiple datasets that was outlined in the AWAP proposal. They conducted a comparative reanalysis looking at self-rated health which is a key variable of policy interest that is included in many datasets. The analysis was able to compare datasets collected for different purposes and from different areas and age groups in order to provide a broader sampling frame and a more generalisable understanding of the influence of age and education on self-reported health.

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Appendix 1. Examples of Australian cohort studies of adults (planned, ongoing or recently completed, n>1000)*

Study Name	Sampling frame	N	Data Collected		
			Years	Focus of study and variables include:	Method of Data Collection
45 and Up Study	Men and women 45 and over resident in NSW	250,000	2006+ recruiting now	Socio-economic factors, demography, habits and lifestyle, diet, reproductive history, family history, past health, disability and impairment, and psychological status	Questionnaire, biological materials, linkage, targeted sub-studies
Melbourne Collaborative Cohort Study (HEALTH 2000)	Men and women aged 40-69. 30% migrants from Italy & Greece	41,500	1990-4, 2000	Lifestyle, food habits, food frequency, physical characteristics, blood	Questionnaire
Australian Longitudinal Study on Womens Health	Australian women aged 18-23, 35-50, 70-75 years	40,000	1996 – 2016 (every 3 yrs)	General health, health service utilisation, symptoms, satisfaction, stress, smoking, alcohol, weight, exercise, diet, social support	Questionnaire
Household Income & Labour Dynamics in Australia (HILDA)	Private household panel (all members of household), census based, stratified by state and rural/urban	13,969	2001, 2003, 2005	Income, wages, pay, savings, taxes, benefits, employment, family formation, locations, job search, health	Interview
Longitudinal Prospective study of Mothers and Children	Pregnant women	8,556		Family structure, mental health, child health & development	
Path through Life	20-24, 40-44, 60-64 years Australian Capital Territory residents	7,500	1999-2019 (every 4 yrs)	Anxiety, depression, substance abuse & cognitive deficits	Administered by the Australian Bureau of Statistics
Longitudinal survey of migrants	Recently arrived migrants	7,212	1999, 2000	Attitudes and experiences relating to settlement	Interview
Australian Longitudinal Study of Ageing	Men and women 70 years and over in Adelaide community or residential care	2,087	1992, 1993, 1994, 1996, 1998, 2000	Social and economic factors, morbidity, disability, use of services, use of care, mortality, successful ageing	Interview, questionnaire, clinical studies, data linkage to care providers
Blue Mountains Eye study	Older residents of Blue mountains	2,032	1992, 2002	Eye disease, hearing loss, health & disability	Interview, examination
Australian Multiple Sclerosis (MS) Longitudinal Study	Adults with MS from state MS society member lists	2,000+	2002/3 +	Health, social & economic indicators	Self-complete survey (mail or internet) or telephone interview
Australian Diabetes, Obesity & Lifestyle Study (AusDiab)	25 years and over from selected CCDs, stratified by state and rural/urban with diabetes or impaired glucose tolerance	2,000	1999, 2000+	Blood, BMI, blood pressure, diet, physical activity, health service use	Interview, blood sample
Asset and Health dynamics among the 'old' old (AHEAD) – Dubbo cohort	Men and women 70 years and over	1,488	2001/2, 2002/3	Health, social & economic indicators	Interviews, data from HIC, DHAC, DFACS, DVA
Victorian Healthy Retirees Cohort Study	Elderly participants	15,000		Determinants/sequelae of disease in elderly	
Healthy Ageing Cohort	National sample of people 55yrs+	10,000	In planning		Interview
Hunter Cohort Study	Hunter Valley residents	10,000	2005+ recruiting now	Bio/psychosocial	Interview, physical measures, blood

Abbreviations: ABS Australian Bureau of Statistics, HIC Health Insurance Commission, FOBT Faecal Occult Blood Test, BMI Body Mass Index, DHAC Department of Health and Aged Care, CCD Census Collection District,

*This table is based on a table in the 45 and Up Study Protocol which was adapted from work by Dr Christine Paul. The table is used with the permission of Associate Professor Emily Banks, Director, 45 and Up Study.