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Ageing at Home – are we Prepared? **Ms Nancy Spanbroek¹ and Dr Elizabeth Karol²**

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ABSTRACT

The design of the home is critical in allowing older people to continue to live independently. This can only occur if the home is barrier free and supports physical frailties. Most people who wish to live independently as they age in Australia will need to modify their existing homes in some way to suit their frailties. However the cost of home modifications can not always be met given the ‘asset rich, income poor’ ageing group and as one enters old age it becomes more difficult to maintain the home. Maintenance problems include affordability, not recognizing problems, not having the energy or expertise to do anything about them, a lack of knowledge about reputable builders and an inability to organize and supervise the work and check that it has been done properly.

This paper addresses the issues of independent living for the baby boomer population within a well-established suburb of Perth, Western Australia. A survey was carried out in 2004 to identify the number of baby boomers wishing to age in place, whether their existing homes were suitable for ageing in place, the modifications required to make the homes suitable, at what stage of life such modifications should be made and whether the baby boomers were prepared to make these modifications. The findings show that, in Perth, typical housing will not support ageing in place without significant investment in building modifications. More significantly it appears that the baby boomer occupants are not aware of this looming barrier to ageing in place.

KEYWORDS

Barrier free, inclusive design, awareness of built environment

Introduction

The prospect of having to move from one's home because it is unsafe and one can no longer perform daily tasks due to increasing frailties is a notion seldom considered by Australia's 'four million ageing Baby Boomers' (1). However, this may well be the path they will be forced to take if they do not prepare themselves for their next stage of life – old age. This is the largest ageing cohort Australia has ever experienced, and within this group there will be the largest number of people living alone.

Older people generally want to maintain their independence for as long as possible. Ageing in their own homes allows them to retain their independence, their connection with the community, their familiarity with the services, and their ability to participate in that community and the lifestyle that goes with it, this influences their desire to remain in place.

Simple renovations and in some cases major renovations are required to prepare the home for an ageing occupant. 'Prior research suggests that appropriate consideration of accommodation can be a critical factor in the reduction of institutionalization and in promoting integration and inclusion'. (2) Poor housing design can increase stress and contribute to confusion, frustration and challenging behavior, promote dependence and isolate people away from relationships, social experiences and community involvement. However 'good housing design can orient, calm and enable support and independence. It plays a major role in determining the number of activities that a person can complete independently, and can directly assist social inclusion'. (3)

In a recent study, Karol & Spanbroek reviewed housing editorials in the Saturday West Australian New Homes section over the year April 2005 to 2006. Their survey revealed that although occasional mention was given to accessibility into the home not one of the houses reviewed met more than two of the seven standard principles for accessible housing. (4) Universal housing design is particularly relevant to the new housing market given that one in four Australians will be aged over 65 years of age by 2051. (5) If the majority of aged persons are ageing in their own homes, then the home needs to be a safe and supportive environment.

'The Australian Network for Universal Housing Design (ANUHD) in July 2004 identified seven key features for a fully universally designed house:

1. There is a clearly discernable accessible path of travel from the front boundary or car park and throughout the entry level of the dwelling.
2. The entry level has a living and food preparation area, bathroom, WC and bedroom, all of which can be used by a person in a wheelchair.
3. All rooms, when furnished or fitted out, allow for adequate circulation space for a person using a wheelchair.
4. All doorways and corridors are wide enough to allow a person using a wheelchair to manoeuvre into and out of rooms.
5. Door furniture, switches, controls and outlets are within reach of and can be used by all.
6. There is potential for future adaptation to a dwelling with two or more levels for vertical access by a person using a wheelchair.
7. Walls and ceilings are reinforced where assistive devices may be attached. . '(6)

There are a number of concerns with an ageing population choosing to age in their home of choice. According to Karol et al., new housing stock is not being built in accordance with universal housing design requirements. Problems will emerge with existing housing in that the baby boomer cohorts who have a high percentage of home ownership prefer to age in place in housing generally that is not designed to meet the needs of an ageing occupant. Although current research suggests that ‘home ownership can bring a sense of privacy and autonomy for the owner, including the freedom to make changes to the physical structure and appearance of the home, it can also cause a large amount of stress in later stages of life. Problems occur with the upkeep of the home and affordability, not recognizing maintenance and services problems, not having the energy or expertise to do anything about them, a lack of knowledge about reputable builders and an inability to organize and supervise the work and check that it has been done properly. (7)

Existing housing will require modifications to support ageing frailties for the majority of baby boomers who choose to age in their selected home. The question is when and what type of home modifications should be made and does the baby boomer have sufficient funds available to make these modifications.

Methodology

A survey of baby boomers was undertaken at a Medical Centre in Fremantle, a suburb of Perth, in June 2004. The survey was seeking to determine the number of baby boomers who intended to age in their current homes and whether these homes could suitably cater for the onset of ageing frailties. Fremantle was selected due to its diverse cultural group and an estimated ‘residential population of 25,741 persons. ‘The City of Fremantle estimates by 2011 there will be 5073 people aged 60 years and over’ (8) living in Fremantle.

The Medical Centre is in a central location in Fremantle and services a broad demographic group of patients and visitors. The reception staff agreed to undertake the distribution of 100 questionnaires to Baby Boomer patients and visitors over a one week period. Completed questionnaires were returned to a marked sealed box which was collected at the end of the week.

The questionnaire was divided into two sections: Section one required a general overview of the respondent. The section surveyed age, gender, nationality, area of residence, marital status, number of children, their residential location, employment and financial status, physical health, and whether they aimed to age in their own homes or change their type of accommodation upon retirement.

Section two required the respondent to describe their home through a series of short questions related to the configuration and accessibility of their home in order to identify what future modifications would be required to the home to enable independent ageing at home.

Results - Section One

All respondents were born between 1945 and 1964 with 80.4% female respondents. Income figures were also high with 67.2% earning above \$40,000 per annum. Although 88.5% had a super fund, 53.3% had contributed less than 15 years. Almost half of the respondents hoped to retire before 60 years of age. [See Table 1]

Status, Age + Income	Survey Results %			
	Age	1945-1949 (61-57)	16	1950-1954 (56-52)
	1955-1959 (51-47)	26	1960-1964 (46-42)	28
<i>Gender</i>	Male	19.4	Female	80.6
<i>Marital Status</i>	married or de facto	72.5%	shared residence	5.9%
	lived alone	17.6%		
<i>Employment Status</i>	Employed full	80.8	Unemployed	19.2
<i>Annual Income</i>	Under \$40,000	32.6	\$40,000-\$60,000	39
	\$60,000-\$80,000	19.5	Over \$80,000	8.7
<i>Pensioner</i>	Yes	18.0	No	82.0
<i>Super Fund</i>	Yes	88.5	No	11.5
<i>Super Fund years of contribution</i>	15 years or less	77.7	20 years or more	22.2
<i>Age hoping to retire at</i>	55 – 60 years	45.6	60 - 70	30.5
	Never	23.9		

Table 1 Source: Spanbroek, N. Survey June 2004 [Unpublished]

The majority of respondents 82% owned their own homes with 93.9% living in houses as opposed to flats or villas and 70.9% of the homes had three or more bedrooms. However 68.1% still had mortgages left on their homes with the majority at 38.6% holding mortgages for 15 - 20years. A further 23.1% held mortgages for 25 years or more. Although 64.7% did not believe they would sell their homes and downsize to fund their retirements, one in four of the respondents believed that this is what they would need to do. [See Table 2] The majority of respondents, 94% had no intention to move to a retirement village and 64.7% chose to age at home and did not intend to sell their homes to fund their retirement. [See Table 3]

Accommodation type, Finances, Retirement + Health	Survey Results %					
	<i>Type of accommodation</i>	House	93.9	Flat	2.0	Villa
<i>Floor levels in home</i>	Single	66.0	Split level	4.0	Two storey or more	32.0
<i>Number of bedrooms</i>	Two or less	29.2				
<i>Number of bedrooms</i>	Three or more	70.9				
<i>Renting</i>	No	90.0	Yes	10.0		
<i>Home Owner</i>	No	18.0	Yes	82.0		
<i>Investment property owner</i>	No	78.7	Yes	21.3		
<i>Mortgaged</i>	No	31.9	Yes	68.1		
<i>Years left on mortgage</i>	5 – 10 yrs	37.5	15 - 20 yrs	38.6	25 years and over	23.1

<i>Intend to sell and downsize home to fund retirement</i>	No	64.7	Yes	27.5		
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Table 2 Source: Spanbroek, N. Survey June 2004 [Unpublished]

The majority of the respondents 66.7% had not investigated the cost of retirement, nor had they investigated the type of retirement villages available to them. However, 94% were adamant they would not move to a retirement village preferring instead to age in their home. [see Table 3]

<i>Accommodation type, Finances, Retirement + Health</i>		Survey Respondents %		
<i>Expect to rely on govt. aged pension when retire</i>	No	56.0	Yes	44.0
<i>Received financial advice re funds needed for retirement?</i>	No	60.0	Yes	40.0
<i>Investigated how much it will cost to live in retirement?</i>	No	66.7	Yes	33.3
<i>How much do you believe you can comfortably retire on?</i>	Under \$40,000	76.0	Over \$40,000	24.0
<i>Intend to move to retirement village?</i>	No	94.0	Yes	6.0
<i>Investigated type of retirement village?</i>	No	66.7	Yes	33.3
<i>Have a Superannuation fund</i>	No	11.5	Yes	88.5
<i>Years of contribution to fund</i>	5-15 years	77.7	20 years +	22.2
<i>Physical Disabilities</i>	Arthritis	13.2	Osteoporosis	2.6
	Bad back	31.6		
	Poor eye sight requiring glasses	89.5	Heart problems	2.6
	Increasing deafness	5.3		

Table 3 Source: Spanbroek, N. Survey June 2004 [Unpublished].

In the second half of the survey the ANUHD key features [see outline on page 2] were incorporated into the questionnaire which provided a simple check list for the home, requiring respondents to identify accessibility to the home and within the home using a shopping trolley as a common tool. From this check list, respondents were asked to identify provisions in their homes for; security, general home accessibility, bathroom and kitchen accessibility, door and corridor widths, flush floor and non-slip surfaces, storage accessibility and support aids. They were also asked to identify needs for additional heating or cooling within the home and whether the home required more natural or artificial lighting.

Results - Section Two

The following modifications were identified by the respondents.

Minor Modifications - Minor modifications involving work that can be completed by a handyman or qualified tradesmen within a few hours.

Modification	Survey results
Grab rails in bathrooms	44%
Grab rails in toilets	52%
Changes to door handles	79%
Changes to joinery handles	42%
Changes to height of light switches	44%
Changes to height of power points	86%
Modify faucets	33%

Table 4 Source: Spanbroek, N. Survey June 2004 [Unpublished].

Major Modifications - Major modifications involving work that needs to be completed by a builder or qualified tradesman and may take a few days to a few weeks to complete.

Modification	Survey results
Widening of door ways	65%
Improved access to the front entry	29%
Relocation of master bathrooms	11%
Relocation of master bedrooms	19%
Changes to bathrooms	60%
Changes to joinery	54%
Installation of heating systems	27%
Increase of natural light through sky lights	17%

Table 5 Source: Spanbroek, N. Survey June 2004 [Unpublished].

When asked to estimate the costs of these modifications 56% believed that up to \$20,000 would be required whereas 15% believed up to \$50,000's would be needed.

The average respondent believed these modifications should be made at 75 years of age. However, 57% of the respondents anticipated retiring before 75 years of age and only 23% of all the respondents had funds set aside to make these modifications.

Survey Question	Survey Result			
	Monetary value on modifications	\$0 - \$10,000	35.9%	\$20,000 - \$50,000
Funds set aside for modifications	No	71.1%	Yes	26.7%
Age need to make these modifications	50 – 60 yrs	28.2%	60 – 65 yrs	17.6 %
	70 – 80 yrs	54.4%	85 – 90 yrs	3.6%

Table 6 Source: Spanbroek, N. Survey June 2004 [Unpublished].

Discussion

The above issues of home maintenance highlight problems for the 58% of the respondents who plan to make the required home modifications at 70 years of age or older. One would be better equipped to make these modifications at an earlier stage in life whilst still active in the work force, with the energy to supervise building work in the home and with sufficient funds to have the work done properly.

This inability to plan ahead is not surprising given the boomers unwillingness to perceive themselves as old, influenced by the Youth Culture of the 1960's and major participants in a consumer society where every attempt is made to appear young it is little wonder that the ageing baby boomer is struggling with the idea of growing old. However what happens when health deteriorates enough to make living less than easy, but not bad enough to go to assisted-living or continued-care facilities? Professors' Hugo and Thomas 'predict that the baby boomer will have higher levels of chronic illness and disability than any previous generations because as life expectancy among older Australians increase and people are 'rescued from death' through therapeutic interventions, they will live longer but with chronic conditions'. (9) For the majority of the population choosing to age in place this will mean additional home care services, increased professional care within the home, and better home facilities. These additional services and demands will all impact on the design of the home and how successfully the design supports the frailties of the occupants.

The question arises how will this cohort of baby boomers fund themselves and the required home modifications when in retirement? According to the latest AMP Income and Wealth Report – *Live Long and Prosper* "it shows that most older Australians hold more than half of their wealth in their family home and, unless they are prepared to sell up, move into more modest accommodation and use the remaining proceeds to fund their retirements, then they will probably have to significantly curb their lifestyles" (10).

Within this surveyed cohort home ownership was high at 82%, compared to Australia's national average of 70% in 1999 [10] with 61.7% of this group having a mortgage of 15 years or more, however 45.6% of this cohort hoped to retire before 60 years of age. Once retired, 42% of the respondents expected to receive a government aged pension. When questioned on whether advice had been received on the cost of retirement, 60% had not yet considered how much annual income was needed to retain a similar lifestyle in retirement.

Slightly less than half of the respondents believed they would need to rely on Government pensions. Given the above figures on years left on mortgages, income levels and age of retirement it is interesting to note here that 60% of the respondents had not sought any financial advice on retirement funding and that 76% believed they could comfortably retire on less than \$40,000 per annum. In addition, the majority of respondents had contributed to a super fund for less than 15 years. Without the inclusion of employer contribution or additional employee contribution, it would be reasonable to assume; given the average respondent's age of 54 years, the average anticipated retirement age of 60 years, the average salary at \$50,000 per annum, contributions made to superannuation at 7% of gross salary x 17 years of contributions, this includes an additional 2 years given average age group of respondents. One can assume the sum available for collection at time of retirement would be less than \$100,000.

Most financial planners suggest an income equal to 65% of final full-time income is required for a comfortable retirement. (11) This equates to a retirement income of \$34,000 per year based on the average income of respondents at \$50,000 similar to the Australian average of \$52,500 (12). The retirement income amount of \$34,000 equates to \$653.00 per week before tax. This would require a gross superannuation payout of \$850,000 assuming the respondent is retiring at sixty years of age and lives for an additional twenty-five years to eighty-five years of age. Given the above scenario, our respondent falls short by \$750,000.00's [this figure does not include other investment payouts]. Therefore, if we are to assume the average respondents have no funds set aside, have contributed to superannuation for less than 15 years and will receive no additional payouts upon retirement, then their only source of income other than the sale of their property will be their superannuation payout and assuming the respondent lives to eighty-five years of age, this will be a mere \$77.00's per week this does not allow for mortgage payments.

The average respondent scenario is as follows: retires before sixty years of age, chooses to age in their home, lives with a partner, has poor eye sight, will modify the home at seventy years of age or older, have no funds set aside to make the necessary housing modifications, receives a superannuation payout of less than \$100,000 which needs to last them for approximately twenty five years and needs to continue to maintain a mortgage for fifteen years or more. It is clear this surveyed cohort is not prepared for the eventuality of old age.

Conclusion

It would seem logical to prepare oneself for the inevitability of ageing, to set aside funds for modifying the home to support the onset of ageing frailties and to do this well in advance so as to avoid the stresses of home renovation at a mature stage of life. This survey has identified a baby boomer cohort who is not prepared for old age nor fully comprehends all the dimensions of ageing at home.

This survey has identified three key factors required to assist the baby boomer to age independently in their selected home. These are accessibility, affordability and timing.

- Accessibility - the home needs to be universally designed so as to support the frailties of an ageing occupant to continue living independently and participate within a known community.
- Affordability - to be financially prepared to meet the costs of home modifications in order to make the home accessible so as to support independent living or to purchase a home that has universal design features.
- Timing - the time of life when funds are available and one has the time and energy to supervise suitable modifications to the home to ensure independent accessible living.

If the baby boomers are to avoid significant stresses in later life and if the government continues to support the policy of ageing in place, the following streams of action are required.

At the national level

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- The Building Code of Australia (BCA) is amended to determine universal housing design is carried out in Class 1 and 2 dwellings.

At the state level

- The West Australian Government needs to provide incentives such as reducing stamp duty on properties that are suitably designed for universal access to encourage home modifications.
- Incentives are introduced for developers and builders to build housing that incorporates universal design features above the minimum standard.

At the industry level

- Housing groups and private institutions such as the RAIA (Royal Australian Institute of Architects) and the DIA (Design Institute of Australia) need to be more encouraging of universal housing design, by promoting design excellence through awards.
- Architectural influences, through display homes, design journals and architectural/student competitions could champion ‘adaptable and universal housing design’; and have a large influence on reducing the stigma associated with access for people with a disability. By including these concepts into new display homes, prospective owners are educated in the long term benefits of good design.

References

1. Australian Bureau of Statistics (1999) Household and Family Projections ABS Cat. No. 3236.0.
2. Gibson, D & Griew, R (2003) “New Models and Approaches to Care”. Paper prepared for 2020 A Vision for Aged Care in Australia. The Myer Foundation.
3. Heavens, A. (2004) “Boomers Trend Toward ‘Age-In-Place’ Housing”, http://realitytimes.com/rtcpages/20011011_ageinplace.htm
4. Karol, E. & Spanbroek, N. (2006) “Housing Future for Ageing in Place” Australian Housing Researchers Conference, Adelaide, June 14-16 2006.
5. Australian Bureau of Statistics (1999) Catalogue No. 1301.0.
6. **Australian Network for Universal Housing Design (ANUHD)** Position Statement, July 2004 <http://www.anuhd.org/> [accessed 14 June 2006]
7. Bridge, C and Flynn, M. (2003) “Home maintenance and modification information needs and evidence based practice solutions in NSW”. National Housing Conference, Adelaide. Nov.
8. Policy and Strategy for Positive Ageing by the City of Fremantle. http://www.freofocus.com/council/html/key_docs.cfm [accessed 25 May 2006]
9. Hugo, G & Thomas, T. AM. (2002) “Intergenerational Issues and the Impact of Cultural Change on the Care Needs Of The Elderly”, commissioned by the Myer Foundation 2003
10. AMP.NATSEM Income and Wealth Report – “Live Long and Prosper” www.amp.com.au [accessed 25 May 2006]
11. AMP.NATSEM Income and Wealth Report – “Live Long and Prosper” www.amp.com.au [accessed 25 May 2006]
12. Australian Bureau of Statistics, “Retirement and Retirement Intentions, Australia”, Catalogue No. 6238.0, ABS, Canberra, November 1997