A New Look at the Living Arrangements of Older Americans using Multistate Life Tables

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Introduction

Research on living arrangements at older ages has a long history in demography. This work has paid particular attention to documenting levels and correlates of intergenerational coresidence, reflecting the importance of family-provided support via coresidence for economic, emotional, and physical well-being at older ages. Much of this research has examined living arrangements in countries where reliance on private support at older ages is relatively strong and has interpreted trends toward less intergenerational coresidence as a reflection of broader patterns of social and economic change. Research on the U.S. and other developed countries has tended to focus on relationships between health and living arrangements (Liang et al. 2005), family structure and living arrangements (Wilmoth 2000), and racial and ethnic differences in coresidence (Kamo and Zhou 1994). Continued efforts to document and understand patterns of living arrangements at older ages are important in light of changes in marriage, fertility, and women’s employment in the context of globalization, urbanization, and population aging, which have altered the family structures and norms surrounding intergenerational expectations and obligations. Indeed, the United Nations has identified living arrangements of older persons and possible government responses as the most pressing issue of population aging (United Nations 2001).

While the body of research on living arrangements at older ages is large, it is limited in several important ways. First, the conventional conceptualization of living arrangements has emphasized the distinction between intergenerational coresidence with children and other arrangements, typically overlooking proximate residence from children. This is problematic in that geographic proximity to adult children is a key feature of contemporary family living arrangements that may provide many of the posited benefits of coresidence without some of its
posed disadvantages (e.g., lack of privacy) (Zhang, Engelman, and Agree 2013). Second, few studies have examined trajectories of living arrangements over an extended period of time. Much of the past work has focused on correlates of living arrangements in the cross-section or has examined change over very short periods of time. We thus know little or nothing about how the duration of exposure to different types of living arrangements across older ages is related to key sociodemographic characteristics (e.g., race/ethnicity, socioeconomic status) or important dimensions of well-being (e.g., economic need, physical health, emotional health). A third limitation is lack of attention to the living arrangements of childless older men and women. This is an important shortcoming in view of the profound implications of childlessness for old age support and that fact that 15% of Americans currently aged 65 and over are childless and 30% of those aged 70 to 85 are projected to be childless in 2030 (OECD 2011).

We address these limitations by using data from the Health and Retirement Study (HRS) over a period of 12 years to construct multistate life tables of living arrangements beyond age 65. These analyses allow us to describe the lives of older Americans in terms of the number of expected years of life in different living arrangements – reflecting both mortality and transitions in living arrangements across later life. By conducting analyses separately by sex, race/ethnicity, and educational attainment, we provide one of the first descriptive portraits of sociodemographic differences in living arrangements across older ages in the U.S. The only other life table analysis of living arrangements of which we are aware (Wilmoth 1998) is based on older data, used a smaller sample of older individuals, was based on a shorter period of time, did not focus on proximate residence, and did not consider differences across racial groups, socioeconomic status, or the presence or absence of children.
**Data**

We use data from the waves 4-10 of the HRS (1998-2012) provided by RAND. Wave 4 (1998) is the first wave of the HRS to include a representative sample of Americans age 65 and over. Living arrangements can be categorized in several ways including household headship, relationship to the head of the household, and whether the elderly live with children or others, cross-classified by marital status. In this paper, we define respondents’ living arrangement at the time of each interview using the following categories: (a) co-residence with children (regardless of whether there were other co-residents), (b) proximate residence (living independently, including both living alone and with spouse only, but within close proximity (10 miles) to at least one living child), (c) distant residence (living independently, including both living alone and with spouse only, and far from any living child), and (d) institutional living (i.e., nursing home). Transitions to death prior to the subsequent wave are treated as an additional, absorbing state. Recognizing that the different categories of living arrangements are not mutually exclusive, we apply the hierarchy of categories just listed when defining a person’s living arrangement category. For example, an HRS respondent will be coded as co-residing if s/he was living with a child, regardless of whether s/he lived within 10 miles of another living child. Sex, race/ethnicity, and educational attainment are measured using conventional categories (although there are not enough Asian-Americans in the HRS to conduct analyses for that group).

**Methods**

We use multistate life tables to summarize information on transitions between different living arrangements from age 65 through age 100. Multistate life tables allow us to characterize old age in terms of the number of years a 65-year-old (or an x-year-old more generally) would expect to live in different living arrangements (alone, coresiding with children, living proximate to
children, in institutional care) if prevailing patterns of living arrangements were to continue indefinitely. They also allow for comparison of time spent in different living arrangements across groups of interest, e.g., men vs. women, those married at age 65 vs. those not married at age 65, racial and ethnic groups, different levels of educational attainment. We estimate models using the SPACE program (Cai et al. 2010). In the preliminary results presented below, we pool data across all waves and cohorts in the HRS. This hybrid period-cohort life table allows us to more precisely estimate transitions across multiple living arrangements (and death) for men and women age 65 and older.

Results

Figure 1 presents the average number of years that 65-year-old men and women are expected to live in each of the four living arrangement states. These preliminary results are based on older adults with at least one living child and are pooled across racial and ethnic groups, levels of educational attainment, and marital status. Subsequent analyses will produce similar figures for these subgroups. These figures are also pooled across living arrangements at age 65, thus providing an overall average number of years of life in each state. From this figure, we can see that women live longer than men (23 years vs. 20 years) and that older Americans spend very little time, on average, in institutional living arrangements. Both men and women spend slightly over 40% of life beyond age 65 living within 10 miles of an adult child. Roughly one-third of remaining life is spent living alone (or with spouse) and distant from adult children and one-quarter is spent coresiding with an adult child.

Because the life expectancies in Figure 1 reflect averages of different trajectories of living arrangements, it is also informative to examine living-arrangement-specific life expectancy conditional on living arrangements at age 65. These estimates are presented in Figure
2. Not surprisingly, those who were in nursing homes at age 65 spend a large part of their remaining (much shorter) lives in nursing homes. Years of remaining life do not differ much across the other initial living arrangement categories (about 20 years for men and about 22-23 years for women), but it is clear that there is significant movement across living arrangements. In all cases, two-thirds to three-quarters of remaining years of life are spent in the initial state, but the remaining 25-35% is spent in different states. For example, men who were coresiding with a child at age 65 spend 24% of remaining life living proximate to a child(ren) and 14% living far from their nearest child. Similarly, women who were living far from children at age 65 spend 30% of their remaining life living either coresiding (10%) with a child or living close to a child(ren) (20%). Clearly, there is a good deal of movement across living arrangements beyond age 65. Subsequent analyses will examine the extent to which these patterns differ across racial/ethnic groups, educational attainment, and marital status at age 65. We will also conduct parallel analyses for childless adults.
References


Figure 1: Living-arrangement-specific life expectancy beyond age 65, by sex

![Diagram showing years of expected life at age 65 for men and women, broken down by living arrangements at age 65.]

- Men: 0.58 (coresiding) + 6.94 (proximate) + 8.91 (distant) + 3.96 (institutional) = 20.49 years
- Women: 1.47 (coresiding) + 6.41 (proximate) + 9.85 (distant) + 5.67 (institutional) = 23.40 years

Figure 2: Living-arrangement-specific life expectancy beyond age 65, by sex and living arrangements at age 65

![Diagram showing years of expected life at age 65 for men and women, broken down by living arrangements at age 65.]

- Men: Coresiding, Proximate, Distant, Institutional (years)
- Women: Coresiding, Proximate, Distant, Institutional (years)