

AMERICAN INDIANS AND ALASKA NATIVES IN NURSING HOMES: INITIAL RESULTS FROM THE 2008 MINIMUM DATA SET

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ABSTRACT

This study questions the assumption that American Indian and Alaska Natives (AIANs) provide care for their frail older adults within the community. Using the Minimum Data Set (MDS) this study examined the status of Native elders in nursing homes compared to the white residents. The initial results indicate that AIANs enter the nursing homes at earlier stages of need and are more likely to be independent than white patients. In addition, AIANs were more likely to have lived alone or in another nursing home or residential facility prior to their present nursing home. This study is a wakeup call to examine the continuum of care for American Indian and Alaska Native elders. With the migration of young people out of Native communities, and with a lack of social services infrastructure, Native elders are being placed in nursing homes much earlier than necessary and earlier than whites.

Keywords: Aging, Indigenous, American Indian, Alaska Native, nursing home, continuum of care, ADL, IADL, MDS, Minimum Data Set, independence, family, socializing, missing cohort, dementia, cognitive impairment, demographic

INTRODUCTION

An assumption persists that American Indian and Alaska Natives (AIANs) — similar to other minority populations — provide care for their frail older adults within the community. However, earlier studies show that a subtle but radical demographic transition, currently underway in some Native communities, may prevent them from doing so. In some communities, potential caregivers do not exist because they have migrated out of the reservation/trust land/Native lands to meet work, education, or family obligations (Garrett et al., 2008; Garrett and McGuire, 2008; Garrett et al., 2010). In these studies, using 2000 US Census data, the demographic make-up of 345 Native communities was examined to identify those communities with a deficit of potential caregivers. Earlier results showed that the communities with the lowest percentages of potential caregivers — reflecting higher outmigration — also have higher unemployment (Garrett et al., 2010).

Demographically, some Native communities are losing their capacity to care for frail older adults. Lacking services in general, and specifically lacking supportive home-based services — these communities have few options when dealing with isolated frail and impaired older adults. When family members have either migrated out of the reservation or exceeded their caretaking limits, external support is necessary. This external support can be a combination of informal (neighbours, friends, extended family) or formal (home help agencies, county and state services). When such external support cannot be accessed because it either does not exist or is

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unaffordable, the family is left with nursing home (NH) placement as the only viable option. This perspective argues that NH placement doesn't necessarily mean that families have abandoned older adults, but that the elder requires care beyond that which the proximal family and community can provide.

The literature identifies two factors that predict NH placement — deterioration of the elder's physical and mental state and/or the deterioration of the caregivers' capacity to provide care. Previous studies have shown that because of migration there is an increased likelihood that vulnerable older adults have lost their familial support network. Currently, there are no studies evident that have looked at the deterioration of the AIAN elder's physical and mental state prior to NH placement.

ADLs

Deterioration of the elder's physical and mental state is usually measured by the level of help required for activities of daily living (ADL). Although assessment of ADL is crude, it remains a significant predictor of admission to a nursing home (Branch and Jette, 1982) as well as utilization of other services including: use of paid home care (Garber, 1989; Soldo and Manton, 1985); use of hospital services (Branch et al., 1981; Wan and Odell, 1981); living arrangements (Bishop, 1986); use of physician services (Wan and Odell, 1981); insurance coverage (Dunlop et al., 1989); and mortality (Manton, 1988). In this case the ability to perform ADLs has become a standard variable to include in analyses (Fillenbaum, 1987). Cognitive impairment and ADL status are separate, but correlated, dimensions of functioning (Fillenbaum et al., 1978). However, not all persons with substantial cognitive impairment have ADL needs and vice versa.

Although NH placement is usually set into motion by an elder or caregiver's deteriorating physical or mental status, rather than a weakening of familial ties (Bowers, 1988), with AIAN communities — due to the migration of younger adults — this decision may occur earlier than in other ethnic groups. With fewer available caregivers, the level of burden on the remaining few caregivers may be exacerbated.

Caregivers' burden has long been a topic of interest to researchers. Earlier studies have identified

caregivers' burden as arising from anxiety about managing in-home medical care to problems in dealing with psychosocial aspects of care, strains on family relations, and negative effects on personal health and well-being (Hennessy and John, 1996; John et al., 2011). As with the rest of the aging population, the older AIAN elders the more likely they are to develop disability and functional impairment, which cause significant burden to family caregivers who are less likely to have the appropriate home-based resources to assist them (Indian Health Service, 2001).

Without home-based supportive services, the tipping point for sending frail older adults to NHs may be far earlier than it would be for older adults residing in communities with home-based supportive services. In a review of the effectiveness of community-based assessments of geriatric patients (Smith et al., 1993) it was reported that some clients who met criteria for NH admission can still be cared for in the community without NH placement. Furthermore, the provision of home and community services may prevent or delay nursing home placement (Gunner-Svensson et al., 1984; Montgomery and Borgatta, 1989; Stuck et al., 1995). While tribes recognize the need for long-term care, only a few have the resources to develop tribal nursing homes (Administration on Aging, 2002). Consequently, most AIAN elders are either cared for at home or reside in non-native NHs, sometimes far from reservation or home. This suggests that AIANs enter NHs at earlier stages of need and therefore are more functional than other residents.

FAMILY

In the general population, families and friends often stay in contact with older adults following institutionalization. Families and friends continue to be involved with residents after placement by remaining emotionally close, continuing to provide basic care and/or support to residents, and participating in decision-making (Bitzan and Kruzich, 1990; Naleppa, 1996; Rowles and High, 2003; Schwartz and Vogel, 1990; Stull et al., 1997). This is, however, dependent on the proximity of the NH. If the NH is too far from the community, maintaining contact with the residents may be eroded. Proximity to the NH

has been linked to an increase in family visits (Bitzan and Kruzich, 1990; Gaugler et al., 2003; Greene and Monahan, 1982; Port et al., 2001; Yamamoto-Mitani et al., 2002).

There is no literature that examines the level of contact by family and friends with AIAN NH residents. If proximity to a NH is a determining factor for contact, then it is important to locate NHs in close proximity to Native communities. However, one recent survey reported that only 15% of tribes had nursing home services and 16% had assisted living services available for elders (Goins, 2010). Fewer than 16 tribally managed NHs exist among 568 tribes (IHS, 2010; Benson, 2002; Finke, 2002; Smith, 1993). Those that do exist often have limited services, lack certified doctors and staff, and are relatively small with an average bed capacity of about 50 (Finke, 2002). In addition, there are no known urban tribal nursing homes (Forquera, 2002). While only a few tribes have NHs on reservation or in close proximity to reservations, most NHs are located far away from tribal communities (Jervis et al., 2002; Manson and Callaway, 1988). If NHs are likely to be located away from the reservation/trust lands, this may have a detrimental effect on family and friends' interaction with the AIAN NH resident.

SOCIALIZING

Elders in nursing homes far from their families often feel isolated and abandoned because families cannot visit on a regular basis. In addition, the lack of AIAN-managed and staffed NHs may translate to cultural needs being met inadequately or not at all. Most elders want to remain close to family members. Those that had a close family life before entering NH are more likely to continue to have close contact with their family once institutionalized (Friedemann et al., 1999; Bowers, 1988, Gaugler et al., 2003, Naleppa, 1996, Port et al., 2001, Yamamoto-Mitani et al., 2002). If family involvement is possible (or desirable) residents still report that they want to retain some of their normal behaviours such as eating familiar foods and practicing traditional rituals that bring them comfort (Jervis et al., 2002).

AIANs tend to be more group-oriented rather than individualistic (Joe and Malach, 1992; Brucker and Perry, 1998) and can be seen as being more con-

cerned with other community residents than themselves. Whether this is retained in NHs is not known. Sharing has been documented to represent an expression of AIAN's honour and respect (Brucker and Perry, 1998; Garrett and Garrett, 1994). Whether this remains true in NHs might be challenged.

DESIGN AND METHODS

The Minimum Data Set (MDS) is a standardized, uniform, comprehensive assessment of all residents in Medicare or Medicaid certified facilities mandated by federal law (P.L.100-203). The MDS is completed by each NH and electronically transmitted to state authorities, identifying potential resident problems, strengths, and preferences. Some 483 variables are collected by nurses on each patient that enters a NH (see Appendix 1 for list of variables).

The role of the MDS has expanded beyond its primary purpose of an assessment tool for individualized care plans. Data collected from MDS assessments are used for the Medicare reimbursement system, many state Medicaid reimbursement systems, and to monitor the quality of care provided to NH residents. The MDS, containing items that reflect the acuity level of the resident including diagnoses and treatments, and an evaluation of the resident's functional status, is used to monitor the quality of care in the nation's NHs.

Access to the MDS database is provided by The Research Data Assistance Center (ResDAC) at the University of Minnesota which contracts with the federal Centers for Medicare and Medicaid Services (CMS). A request for the data was submitted through ResDAC with payment of \$5,000. Because the ethnic code is incorrect in the data file, the file was merged with a corrected ethnicity code from a private company, Buccaneer Incorporated. The resultant data file combines corrected ethnic codes and data from the beneficiary files.

For ethnicity, the MDS form uses six mutually exclusive categories: White not of Hispanic origin (hereafter referred to as white), Black or African American, Other, Asian or Pacific Islander, Hispanic (regardless of race, hereafter referred to as Latinos/Hispanic), and American Indian and Alaska Native (hereafter referred to as AIAN)

STUDY MEASURES

To measure the racial and ethnic composition of the nursing home population, we used both the absolute number and the percentage share of residents in each racial and ethnic group, all at the national level. The analyses include cross tabulation of ethnic categories by all variables in the MDS.

LIMITATIONS

Our analysis was based on annual snapshots of the nursing home population, including everyone residing in a facility at a given period in time. We eliminated those that died during that year, in order to minimize the effect of increasing medical complications associated with moribund patients.

RESULTS

There were 2,308,759 total cases in the MDS database for 2008, which translates to 2,308,759 residents in NHs. The category “Other” was cross-tabu-

Table 1: Frequency and Percentage of Nursing Home Population in the Minimum Data Set for 2008 after Filtering for Those who Died in 2008 and had Duplicate Records as Compared with Two Other Studies, Buchanan et al. (2008) and Feng et al. (2011) That Report Data for the MDS for 2008.

<i>Ethnicity</i>	<i>Raw Frequencies</i>	<i>Raw %</i>	<i>Filtered</i>	<i>Final Frequencies</i>	<i>Final %</i>	<i>Buchanan**%</i>	<i>Feng***%</i>
White	1,963,092	85.0	76.9	1,314,341	86.0	79.0	86.7
Black	221,324	9.6	78.6	15,0331	9.8	12.9	9.6
Other	17,822	0.8	—	—	—	—	—
Asian/ Pacific Islander	24,246	1.1	79.0	13,087	0.9	1.9	1.0
Latino/ Hispanic	37,491	1.6	77.5	44,615	2.9	5.3	2.3
American Indian/ Alaska Native	8,260	0.4	79.5	5,444	0.4	0.7	—

* Buchanan et al., 2008; ** Feng et al., 2011

lated with state data. Most of these cases came from California (28.1%), Hawaii (9.7%), and Texas (4.4%). For parsimony, and to match other studies, the “Other” category was combined with “Latino/Hispanic.” We do not use this combined category in this study. Comparative analysis is conducted between AIAN and white. To minimize biases from moribund patients — those that are approaching death — NH residents who died that year were eliminated from the analyses. This reduced the data by 518,938 or 22.5% to 1,789,821. Duplicate entries on the basis of the beneficiary ID and state were culled and the latest entry retained. This dual filtering — residents who died that year and duplicate cases — is illustrated in Table 1.

Using these categories, cross-tabulations were run against all of the outcome variables. The initial results (Table 2) indicated significant differences between ethnic groups, with AIANs showing the highest or lowest rates in some variables. Table 2 shows a list (below) identifying all variables where AIAN showed significant differences when compared against all the other ethnic groups:

Identifying significant differences between ethnic groups across specific variables is interesting, but does not necessarily point to a trend. Therefore, the analysis categorized individual variables into groups related to ADLs, family, and socializing.

ADLS

Activities of Daily Living (ADL) was not administered as part of the Minimum Data Set. Instead a much more detailed review of the patient’s level of independence was conducted. This included the following variables:

- Bed mobility self performance
- Bed mobility support provided
- Transfer self performance
- Transfer support provided
- Walk in room self performance
- Walk in room support provided
- Walk in corridor self performance
- Walk in corridor support provided
- Locomotion on unit self performance
- Locomotion on unit support provided

Table 2: Variables from the Minimum Data Set for 2008 Found to be Significantly Different for American Indian and Alaska Native When Compared with other Ethnic Groups (Parenthesis Includes Original MDS Variable Name)

(AB5A) Prior stay in this nursing home	(E4DB) Socially inappropriate behavior alterability (no)	(I2L) Wound infection
(AB5B) Stay in other nursing home	(E5) Change in behavioral symptoms (deteriorated)	(J1A) Weight gain/loss of 3+ pounds
(AB5D) MH/Psychiatric setting	(F1A) At ease interacting with others	(J1D) Insufficient fluid
(AB5E) MR/DD setting	(F1E) Pursues involvement in life of facility	(J1E) Delusions
(AB7) Education (no schooling)	(F1F) Accepts invitations into most group activities	(J1O) Vomiting
(AB9) Mental health history	(F2E) Absence of personal contact with family/friends	(J2B) Pain intensity
(AB10A) No MR/DD	(F2G) Does not adjust well easily to change in routine	(J3B) Bone pain
(AC1B) Naps regularly during day	(F2H) None of above unsettled relationships	(J3D) Headache
(AC1E) Spends most of time alone/watching TV	(F3A) Strong identifications with past roles	(J3F) Incisional pain
(AC1J) Eats between meals	(F3B) Expresses sadness/anger over lost roles	(J3G) Joint pain
(AC1K) Use of alcoholic beverages at least weekly	(F3C) Perceived daily routine is very different from prior pattern in community	(J3H) Soft tissue pain
(AC1M) In bedclothes much of day (with blacks)	(G1AA) Bed mobility self performance (with bed rails)	(J4B) Fell in past 31-180 days
(AC1N) Wakens to toilet most nights	(G1BA) Transfer self performance	(J5A) Conditions/disease make resident's mood/behavior unstable
(AC1O) Has irregular bowel movement pattern	(G1CA) Walk in room self performance	(J5B) Resident experiencing episode of recurrent/chronic problem
(AC1P) Showers for bathing	(G1DA) Walk in corridor self performance	(K4A) Complains about the taste of many foods
(AC1V) Daily animal companion/presence	(G1EA) Locomotion on unit self performance	(L1F) Daily cleaning of teeth/dentures
(AC1W) Involved in group activities	(G1GA) Dressing self performance	(M4E) Skin desensitized to pain/pressure
(B2A) Short term memory (OK)	(G1HA) Eating self performance (with Whites, but with less help)	(M5B) Pressure relieving devices for bed (no)
(B5A) Easily distracted (with white present long term)	(G1IA) Toilet use self performance	(M5C) Turning/repositioning program (no)
(B5B) Altered perception (not present with whites)	(G1JA) Personal hygiene self performance	(M6B) Infection of foot
(B5C) Disorganized speech (not present)	(G2A) Bathing self performance	(M6C) Open lesions on foot
(B5E) Lethargy (not present)	(G3A) Balance while standing	(M6D) Nails/calluses trimmed on foot
(C3A) Speech (to communicate)	(G3B) Balance while sitting	(N2) Time involved in activities (more than 2/3 of time)
(C6) Ability to understand others	(G4AA) Neck range of motion	(N3A) Prefers own room
(E1E) Self depreciation (no)	(G4AB) Neck voluntary movement	(N3B) Prefers day/activity room
(E1J) Unpleasant mood (no)	(G8A) Resident believes he/she capable of increased independence (do not)	(N3C) Prefers inside NH/off unit
(E1L) Sad facial expressions (no)	(H1B) Bladder continence	(N3D) Prefers outside activity
(E2) Mood persistence (no)	(H3D) Indwelling catheter (11.5%)	(N3E) None of above preferred activity settings
(E3) Change in mood (improved)	(H3G) Pads/briefs used (do not)	(N4A) Cards/other games
(E4AA) Wandering frequency (not exhibited this week)	(H4) Change in urinary continence (improved)	(N4B) Crafts/arts
(E4AB) Wandering alterability (not present)	(I1Q) Alzheimer's disease (do not)	(N4C) Exercises/sports
(E4BA) Verbally abusive frequency (no)	(I1U) Dementia other than Alzheimer's disease (do not)	(N4G) Trips/shopping
(E4BB) Verbally abusive alterability (no)	(I1W) Multiple Sclerosis (do not)	(N4H) Walking/wheeling outdoors
(E4CA) Physically abusive frequency (no)	(I1X) Paraplegia (do not)	(N4K) Talking or conversing
(E4CB) Physically abusive alterability (no)	(I1Z) Quadriplegia (do not)	(N4L) Helping others
(E4DA) Socially inappropriate behavior frequency (no)	(I2A) Antibiotic resistant infection	

- Locomotion off unit self performance
- Locomotion off unit support provided
- Dressing self performance
- Dressing support provided
- Eating self performance
- Eating support provided
- Toilet use self performance
- Toilet use support provided
- Personal hygiene self performance
- Personal hygiene support provided
- Bathing self performance
- Bathing support

For each of these variables the code 0 was designated for those patients that needed “no setup or physical help from staff.” If a patient recorded that they did not need any setup of physical help from staff, for all 22 variables listed above, they were identified as completely independent. There were 3,557 White and 31 AIAN NH patients who reported that they did not need any help with any of these activities.

The χ^2 was significant ($\chi^2 = 756.945$, $df = 1$, two-tailed test $p < 0.001$). The odds ratio (OR) shows that most patients in NHs are likely to be dependent (2.1 times more likely to be dependent; with a Confidence Interval (95% CI) of 1.48–3.0). AIANs are half as likely to be dependent as White patients in NHs (OR = 0.476; 95% CI = 0.335 - 0.676).

Table 3: Crosstabulating White and AIAN against Being Completely Independent in Nursing Homes

		Race			
		WHITE	AIAN	Total	
Independent	Not Independent	Count	1310784	5413	1316197
		% Within Independent	99.6	.4	100.0
		% Within Race	99.7	99.4	99.7
	Independent	Count	3557	31	3588
		% Within Independent	99.1	.9	100.0
		% Within Race	.3	.6	.3
Total	Count	1314341	5444	1319785	
	% Within Independent	99.6	.4	100.0	
	% Within Race	100	100	100	

Another indicator of independence was behaviour. The following ten variables were selected to identify problematic behaviours:

- Wandering frequency
- Wandering alterability
- Verbally abusive frequency
- Verbally abusive alterability
- Physically abusive frequency
- Physically abusive alterability
- Socially inappropriate behavior frequency
- Socially inappropriate behavior alterability
- Resists care frequency
- Resists care alterability

For these variables a score of “0” indicated that the “Behavior not exhibited this week” or “Behavior not present.” A variable was computed that aggregates all the variables where the resident was reported not to have any of these ten problematic behaviours. Those that scored “0” in all variables were placed in the category of non-problematic behaviours. The results show that there were 1,065,234 White and 4,359 AIAN who did not exhibit any problematic behaviours.

The χ^2 was not significant. The odds ratio (OR) shows that most patients in NH are just as likely to have problematic behaviours as are not likely (OR=0.940; 95%CI=0.879-1004). AIANs are just as likely as White to not exhibit problematic behaviours.

Table 4: Crosstabulating White and AIAN against Non-problematic Behaviour in Nursing Homes

		Race			
		White	AIAN	Total	
Behaviour	Problematic Behaviour	Count	249107	1085	250192
		% Within Behaviour	99.6	.4	100.0
		% Within Race	19.0	19.9	19.0
	Non-problematic Behaviour	Count	1065234	4359	1069593
		% Within Behaviour	99.6	.4	100.0
		% Within Race	81.0	80.1	81.0
Total	Count	1314341	5444	1319785	
	% Within Behaviour	99.6	.4	100.0	
	% Within Race	100.0	100.0	100.0	

FAMILY

Four variables were used to assess family involvement prior to NH placement and during NH residence.

- Live alone prior to entry
- Prior stay in this nursing home
- Stay in other nursing home
- Other residential facility
- Openly express conflict With family/friends
- Absence of personal contact with family/friends

A recorded value of “0” in each of these variables denoted that the patient did not live alone or had any prior stay in this or any other NH or residential facility. Three other variables can be used as a proxy for family/friends involvement with the NH resident:

- Resident supported by someone
- Family participation in assessment
- Significant other participation in assessment

For these variables a “1” signified that there was someone to support the resident in NH. These nine variables were combined to create an additional variable that approximates prior ties with family and friends and current ties with family and friends, while in NH placement. The final variable was applied as an indication of the availability and proximity of family or friends to the NH resident. There were 36,283 White and 118 AIAN NH residents who did not live alone or in NH/residential facility prior to the present NH placement, and who had someone supporting them during the participation of the MDS assessment process.

The χ^2 analysis was significant (χ^2 7.1089, $df = 1$, $p < 0.007$). The odds ratio shows that most NH residents were 78% less likely to not have lived alone or in NH/residential facility prior to the present NH placement, and less likely to have someone supporting them during the participation of the MDS assessment process (OR = 0.78; 95% CI = 0.65 - 0.937). AIANs were 28% more likely (OR = 1.28; 95% CI = 0.67 - 1.536) to have lived alone or in NH/residential facility prior to the present NH placement, and less likely to have someone supporting them during the participation of the MDS assessment process.

Table 5: Cross-tabulating White and AIAN against Having Strong Family Ties Prior and during Nursing Home Placement

		Race		Total	
		White	AIAN		
Family	.00	Count	1278058	5326	1283384
		% Within Family	99.6	.4	100.0
		% Within Race	97.2	97.8	97.2
	1.00	Count	36283	118	36401
		% Within Family	99.7	.3	100.0
		% Within Race	2.8	2.2	2.8
Total	Count	1314341	5444	1319785	
	% Within Family	99.6	.4	100.0	
	% Within Race	100.0	100.0	100.0	

SOCIALIZING

There were no formal standardized tests of socializing activity. However the MDS does have a detailed review of the patient’s level of preference for activities that included the following variables:

- Prefers day/activity room
- Prefers inside NH/off unit
- Prefers outside activity
- None of above preferred activity settings
- Cards/other games
- Crafts/arts
- Exercises/sports
- Music
- Reading/writing
- Spiritual/religious activities
- Trips/shopping
- Walking/wheeling outdoors
- Watching TV
- Gardening or plants
- Talking or conversing
- Helping others

If a patient recorded that they undertook any of these activities a “1” was recorded for that variable. Combining all variables, a new variable was created-identified as “social,” the higher the number the more activities within this list that the patient performed. There were 131,328 White and 538 AIAN NH patients who reported that they performed all of these activities, and these were designated as social in the analysis.

The χ^2 analysis was not significant. The odds ratio (OR) shows that most patients in NH are just as likely to be social as not social (OR=0.988; 95% CI=0.904-1.08). The same result comes out for the analysis comparing AIAN being more social than White (OR=1.012; 95% CI=0.926-1.106).

Table 6: Cross-tabulating White and AIAN against being completely Social in Nursing Homes

		Race		Total	
		White	AIAN		
Social	Not Social	Count	1183013	4906	1187919
		% Within Social	99.6%	.4%	100.0%
		% Within Race	90.0%	90.1%	90.0%
	Social	Count	131328	538	131866
		% Within Social	99.6%	.4%	100.0%
		% Within Race	10.0%	9.9%	10.0%
Total	Count	1314341	5444	1319785	
	% Within Social	99.6%	.4%	100.0%	
	% Within Race	100.0%	100.0%	100.0%	

DISCUSSION

The analysis resulted in three significant findings. AIANs are more likely to be independent than White patients in NHs. AIAN NH residents are a third more likely to have lived alone or in another NH/residential facility prior to the present NH placement. And the final finding in this study was that AIAN NH residents are less likely to have someone supporting them during the participation of the MDS assessment process. The general premise of this analysis is therefore that family or friend involvement is limited prior to, and during NH placement, but that AIANs are more likely to be independent and require "no setup or physical help from staff."

CONCLUSION

Tribes acknowledge the need to build new nursing homes on reservations, support or enhance existing tribal nursing homes, and work with non-Indian homes to bring traditional foods, language, and activities to the elders who reside there. However, these identified needs cannot be filled with current limited resources (Benson et al., 2002). It is also dif-

icult to address the migration of adults out of reservation or trusts lands to find work when reservations have chronic unemployment.

Demographic changes have repercussions. Social upheaval results when younger cohorts move away from a reservation to find work. These young migrants are likely to be better educated and healthier, and their departure leaves noticeable gaps in their community. We have started to examine only one aspect of this vacuum; elder care. Other repercussions from this demographic transition may involve the status of younger children, economic development, and cultural discontinuity. Moving to more urban communities with better infrastructures, employment prospects, and higher standards of living means that few are prepared to return home and accept the conditions at their original communities. The impression is that these conditions will be long-rather than short-term.

This study looked at an aspect of these implications on NH placement among AIANs. The implications from this demographic transition suggest that AIANs enter NHs at earlier stages of need. The analysis satisfied this premise. AIANs are more likely to be independent than White patients in NHs.

That AIANs were a third more likely to have lived alone or in NH/residential facility prior to their present NH placement attests to the likelihood that they did not have caregivers within the community. Again this does not seem to be a temporary phenomenon. Because AIAN NH residents were less likely to have someone supporting them during the MDS assessment process it is likely that contact with family and friends in NH is more limited than for White residents.

This study raises a number of potential issues with AIANs in NHs. Of interest is the sequence of events before AIAN elders are admitted to a NH. While residing in NHs it would be of interest to examine what barriers exist for family and friends to visit, and to examine transportation issues.

This study is a wakeup call to examine the continuum of care for American Indian and Alaska Native elders. Demographic changes within the community have direct repercussions on AIAN elders. Delaying entry to nursing homes might be

a reachable goal among Native communities. With the migration of young people out of Native communities, and with a lack of social services infrastructure, Native elders are being placed in nursing homes much earlier than is necessary.

ACRONYMS

AIAN	American Indian and Alaska Native
MDS	Minimum Data Set, an intake form used to evaluate all patients in Nursing Homes
NHs	Nursing Homes
ResDAC	The Research Data Assistance Center, at the University of Minnesota
CMS	Centers for Medicare and Medicaid Services, a federal agency

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APPENDIX 1

1. Resident Internal ID
2. State ID
3. Encrypted CCW BENE_ID
4. (A10B) Do Not Resuscitate
5. (A7G) Self/Family Pay Full Per Diem
6. (A9A) Legal Guardian
7. Matched on CCW RES_INT_ID/STATE_ID
8. (A5) Marital Status
9. (A9C) Power of Attorney/Health Care
10. (A9D) Power of Attorney/Financial
11. (A9E) Family Member Responsible
12. (A9F) Patient Responsible for Self
13. (A9G) None of Above Legal Guardian
14. (A10A) Living Will
15. (A10C) Do Not Hospitalize
16. (A10D) Organ Donation
17. (A10E) Autopsy Request
18. (A10F) Feeding Restrictions
19. (A10G) Medication Restrictions
20. (A10H) Other Treatment Restrictions
21. (A10I) None of the Above Advanced Directives
22. (AA3) Birth Date
23. (AA4) Race/Ethnicity
24. (AB1) Date of Entry
25. (AB3) Lived Alone Prior to Entry
26. (AB4) ZIP Code of Prior Primary Residence
27. (AB5A) Prior Stay in This Nursing Home
28. (AB5B) Stay in Other Nursing Home
29. (AB5C) Other Residential Facility
30. (AB5D) MH/Psychiatric Setting
31. (AB5E) MR/DD Setting
32. (AB5F) None of Above Residential History
33. (AB6) Lifetime Occupation
34. (AB7) Education
35. (AB8A) Language
36. (AB8B) Other Language
37. (AB9) Mental Health History
38. (AB10A) No MR/DD
39. (AB10B) Downs Syndrome
40. (AB10C) Autism
41. (AB10D) Epilepsy
42. (AB10E) Other Organic Condition Related to MR/DD
43. (AB10F) MR/DD with No Organic Condition
44. (AB11) Background Information Completed Date
45. (AC1A) Stays Up Late at Night
46. (AC1B) Naps Regularly During Day
47. (AC1C) Goes Out 1+ Days a Week
48. (AC1D) Stays Busy With Hobbies/Reading/Fixed Daily Routine
49. (AC1E) Spends Most of Time Alone/Watching TV
50. (AC1F) Moves Independently Indoors
51. (AC1G) Use of Tobacco Products at Least Daily
52. (AC1H) None of Above Cycle of Daily Events
53. (AC1I) Distinct Food Preferences
54. (AC1J) Eats Between Meals
55. (AC1K) Use of Alcoholic Beverages at Least Weekly
56. (AC1L) None of Above Eating Patterns
57. (AC1M) In Bedclothes Much of Day
58. (AC1N) Wakens to Toilet Most Nights
59. (AC1O) Has Irregular Bowel Movement Pattern
60. (AC1P) Showers for Bathing
61. (AC1Q) Bathing in PM
62. (AC1R) None of Above ADL Patterns
63. (AC1S) Daily Contact with Relatives/Close Friends
64. (AC1T) Usually Attends Church/Temple/Synagogue
65. (AC1U) Finds Strength in Faith
66. (AC1V) Daily Animal Companion/Presence
67. (AC1W) Involved in Group Activities
68. (AC1X) None of Above Involvement Patterns
69. (AC1Y) Unknown Customary Routine
70. (B1) Comatose

71. (B2A) Short Term Memory
72. (B2B) Long Term Memory
73. (B3A) Current Season
74. (B3B) Location of Own Room
75. (B3C) Staff Names/Faces
76. (B3D) That He/She is in Nursing Home
77. (B3E) None of Above are Recalled
78. (B4) Daily Decision Making Skills
79. (B5A) Easily Distracted
80. (B5B) Altered Perception
81. (B5C) Disorganized Speech
82. (B5D) Restlessness
83. (B5E) Lethargy
84. (B5F) Varied Mental Function
85. (B6) Change in Cognitive Status
86. (C1) Hearing
87. (C2A) Hearing Aid Present and Used
88. (C2B) Hearing Aid Present and Not Used Regularly
89. (C2C) Other Receptive Communication Techniques Used
90. (C2D) None of Above Communication Devices
91. (C3A) Speech
92. (C3B) Writing Messages to Express Needs
93. (C3C) American Sign Language/Braille
94. (C3D) Signs/Gestures/Sounds
95. (C3E) Communication Board
96. (C3F) Other Mode of Expression
97. (C3G) None of Above Modes of Expression
98. (C4) Making Self Understood
99. (C5) Speech Clarity
100. (C6) Ability to Understand Others
101. (C7) Change in Communication/Hearing
102. (D1) Vision
103. (D2A) Side Vision Problems
104. (D2B) Experiences Seeing Halos/Rings Around Light/Flashes of Light
105. (D2C) None of Above Visual Limitations
106. (D3) Visual Appliances
107. (E1A) Negative Statements
108. (E1B) Repetitive Questions
109. (E1C) Repetitive Verbalizations
110. (E1D) Persistent Anger
111. (E1E) Self Depreciation
112. (E1F) Unrealistic Fears
113. (E1G) States Something Terrible About to Happen
114. (E1H) Repetitive Health Complaints
115. (E1I) Repetitive Anxious Complaints
116. (E1J) Unpleasant Mood
117. (E1K) Insomnia
118. (E1L) Sad Facial Expressions
119. (E1M) Crying
120. (E1N) Repetitive Physical Movements
121. (E1O) Withdrawal
122. (E1P) Reduced Social Interaction
123. (E2) Mood Persistence
124. (E3) Change in Mood
125. (E4AA) Wandering Frequency
126. (E4AB) Wandering Alterability
127. (E4BA) Verbally Abusive Frequency
128. (E4BB) Verbally Abusive Alterability
129. (E4CA) Physically Abusive Frequency
130. (E4CB) Physically Abusive Alterability
131. (E4DA) Socially Inappropriate Behavior Frequency
132. (E4DB) Socially Inappropriate Behavior Alterability
133. (E4EA) Resists Care Frequency
134. (E4EB) Resists Care Alterability
135. (E5) Change in Behavioral Symptoms
136. (F1A) At Ease Interacting with Others
137. (F1B) At Ease Doing Planned Activities
138. (F1C) At Ease Doing Self-Initiated Activities
139. (F1D) Establishes Own Goals
140. (F1E) Pursues Involvement in Life of Facility
141. (F1F) Accepts Invitations Into Most Group Activities
142. (F1G) None of Above Sense of Initiative
143. (F2A) Covert/Open Conflict with Staff
144. (F2B) Unhappy With Roommate
145. (F2C) Unhappy With Residents Other Than Roommate
146. (F2D) Openly Express Conflict with Family/Friends
147. (F2E) Absence of Personal Contact with Family/Friends
148. (F2F) Recent Loss of Close Family Member/Friend
149. (F2G) Does Not Adjust Well Easily to Change in Routine
150. (F2H) None of Above Unsettled Relationships
151. (F3A) Strong Identifications with Past Roles
152. (F3B) Expresses Sadness/Anger Over Lost Roles
153. (F3C) Perceived Daily Routine is Very Different from Prior Pattern in Community
154. (F3D) None of Above Past Roles
155. (G1AA) Bed Mobility Self Performance
156. (G1AB) Bed Mobility Support Provided
157. (G1BA) Transfer Self Performance
158. (G1BB) Transfer Support Provided
159. (G1CA) Walk In Room Self Performance
160. (G1CB) Walk in Room Support Provided
161. (G1DA) Walk In Corridor Self Performance
162. (G1DB) Walk in Corridor Support Provided
163. (G1EA) Locomotion on Unit Self Performance
164. (G1EB) Locomotion on Unit Support Provided
165. (G1FA) Locomotion off Unit Self Performance
166. (G1FB) Locomotion off Unit Support Provided
167. (G1GA) Dressing Self Performance
168. (G1GB) Dressing Support Provided
169. (G1HA) Eating Self Performance
170. (G1HB) Eating Support Provided
171. (G1IA) Toilet Use Self Performance
172. (G1IB) Toilet Use Support Provided
173. (G1JA) Personal Hygiene Self Performance
174. (G1JB) Personal Hygiene Support Provided
175. (G2A) Bathing Self Performance
176. (G2B) Bathing Support
177. (G3A) Balance while Standing
178. (G3B) Balance while Sitting
179. (G4AA) Neck Range of Motion
180. (G4AB) Neck Voluntary Movement
181. (G4BA) Arm Range of Motion
182. (G4BB) Arm Voluntary Movement
183. (G4CA) Hand Range of Motion
184. (G4CB) Hand Voluntary Movement
185. (G4DA) Leg Range of Motion
186. (G4DB) Leg Voluntary Movement
187. (G4EA) Foot Range of Motion
188. (G4EB) Foot Voluntary Movement
189. (G4FA) Other Limitation of Range of Motion
190. (G4FB) Other Limitation of Voluntary Movement
191. (G5A) Cane/Walker/Crutch
192. (G5B) Wheeled Self
193. (G5C) Other Person Wheeled
194. (G5D) Wheelchair Primary Mode of Locomotion
195. (G5E) None of Above Modes of Locomotion
196. (G6A) Bedfast All/Most of Time
197. (G6B) Bed Rails Used for Bed Mobility/Transfer
198. (G6C) Lifted Manually
199. (G6D) Lifted Mechanically
200. (G6E) Transfer Aid
201. (G6F) None of Above Modes of Transfer
202. (G7) Task Segmentation
203. (G8A) Resident Believes he/she Capable of Increased Independence
204. (G8B) Staff Believes Resident is Capable of Increased Independence
205. (G8C) Resident Able to Perform Tasks/Activity but is Slow
206. (G8D) Difference in ADL Performance Morning to Evening
207. (G8E) None of Above Rehabilitation Potential
208. (G9) Change in ADL Function
209. (H1A) Bowel Continence
210. (H1B) Bladder Continence

211. (H2A) Bowel Elimination Pattern Regular
 212. (H2B) Constipation
 213. (H2C) Diarrhea
 214. (H2D) Fecal Impaction
 215. (H2E) None of Above Bowel Elimination Pattern
 216. (H3A) Any Scheduled Toileting Plan
 217. (H3B) Bladder Retraining Program
 218. (H3C) External Condom Catheter
 219. (H3D) Indwelling Catheter
 220. (H3E) Intermittent Catheter
 221. (H3F) Did Not Use Toilet Room/Commode/Urinal
 222. (H3G) Pads/Briefs Used
 223. (H3H) Enemas/Irrigation
 224. (H3I) Ostomy Present
 225. (H3J) None of Above Appliances and Programs
 226. (H4) Change in Urinary Continence
 227. (I1A) Diabetes Mellitus
 228. (I1AA) Seizure Disorder
 229. (I1B) Hyperthyroidism
 230. (I1BB) Transient Ischemic Attack
 231. (I1C) Hypothyroidism
 232. (I1CC) Traumatic Brain Injury
 233. (I1D) Arteriosclerotic Heart Disease
 234. (I1DD) Anxiety Disorder
 235. (I1E) Cardiac Dysrhythmias
 236. (I1EE) Depression
 237. (I1F) Congestive Heart Failure
 238. (I1FF) Manic Depression Bipolar Disease
 239. (I1G) Deep Vein Thrombosis
 240. (I1GG) Schizophrenia
 241. (I1H) Hypertension
 242. (I1HH) Asthma
 243. (I1I) Hypotension
 244. (I1II) Emphysema/COPD
 245. (I1J) Peripheral Vascular Disease
 246. (I1JJ) Cataracts
 247. (I1K) Other Cardiovascular Disease
 248. (I1KK) Diabetic Retinopathy
 249. (I1L) Arthritis
 250. (I1LL) Glaucoma
 251. (I1M) Hip Fracture
 252. (I1MM) Macular Degeneration
 253. (I1N) Missing Limb
 254. (I1NN) Allergies
 255. (I1O) Osteoporosis
 256. (I1OO) Anemia
 257. (I1P) Pathological Bone Fracture
 258. (I1PP) Cancer
 259. (I1Q) Alzheimer's Disease
 260. (I1QQ) Renal Failure
 261. (I1R) Aphasia
 262. (I1RR) None of Above Diseases
 263. (I1S) Cerebral Palsy
 264. (I1T) Cerebrovascular Accident/Stroke
 265. (I1U) Dementia Other than Alzheimer's Disease
 266. (I1V) Hemiplegia/Hemiparesis
 267. (I1W) Multiple Sclerosis
 268. (I1X) Paraplegia
 269. (I1Y) Parkinson's Disease
 270. (I1Z) Quadriplegia
 271. (I2A) Antibiotic Resistant Infection
 272. (I2B) Clostridium Difficult
 273. (I2C) Conjunctivitis
 274. (I2D) HIV Infection
 275. (I2E) Pneumonia
 276. (I2F) Respiratory Infection
 277. (I2G) Septicemia
 278. (I2H) Sexually Transmitted Diseases
 279. (I2I) Tuberculosis
 280. (I2J) Urinary Tract Infection
 281. (I2K) Viral Hepatitis
 282. (I2L) Wound Infection
 283. (I2M) None of Above Infections
 284. (I3A) Other Diagnosis/ICD-9 Codes
 285. (I3B) Other Diagnosis/ICD-9 Codes
 286. (I3C) Other Diagnosis/ICD-9 Codes
 287. (I3D) Other Diagnosis/ICD-9 Codes
 288. (I3E) Other Diagnosis/ICD-9 Codes
 289. (J1A) Weight Gain/Loss of 3+ Pounds
 290. (J1B) Inability to Lie Flat Due to Shortness of Breath
 291. (J1C) Dehydrated/Output Exceeds Input
 292. (J1D) Insufficient Fluid
 293. (J1E) Delusions
 294. (J1F) Dizziness/Vertigo
 295. (J1G) Edema
 296. (J1H) Fever
 297. (J1I) Hallucinations
 298. (J1J) Internal Bleeding
 299. (J1K) Recurrent Lung Aspirations
 300. (J1L) Shortness of Breath
 301. (J1M) Syncope/Fainting
 302. (J1N) Unsteady Gait
 303. (J1O) Vomiting
 304. (J1P) None of Above Problem Conditions
 305. (J2A) Pain Frequency
 306. (J2B) Pain Intensity
 307. (J3A) Back Pain
 308. (J3B) Bone Pain
 309. (J3C) Chest Pain while Doing Usual Activities
 310. (J3D) Headache
 311. (J3E) Hip Pain
 312. (J3F) Incisional Pain
 313. (J3G) Joint Pain
 314. (J3H) Soft Tissue Pain
 315. (J3I) Stomach Pain
 316. (J3J) Other Pain Site
 317. (J4A) Fell in Past 30 Days
 318. (J4B) Fell in Past 31-180 Days
 319. (J4C) Hip Fracture in Last 180 Days
 320. (J4D) Other Fracture in Last 180 Days
 321. (J4E) None of Above Accidents
 322. (J5A) Conditions/Disease Make Residents Mood/Behavior Unstable
 323. (J5B) Resident Experiencing Episode of Recurrent/Chronic Problem
 324. (J5C) End Stage Disease
 325. (J5D) None of Above Stability of Conditions
 326. (K1A) Chewing Problem
 327. (K1B) Swallowing Problem
 328. (K1C) Mouth Pain
 329. (K1D) None of Above Oral Problems
 330. (K2A) Height
 331. (K2B) Weight
 332. (K3A) Weight Loss
 333. (K3B) Weight Gain
 334. (K4A) Complains About the Taste of Many Foods
 335. (K4B) Regular Complaints of Hunger
 336. (K4C) Leaves 25 percent or more Food Uneaten at Most Meals
 337. (K4D) None of Above Nutritional Problems
 338. (K5A) Parenteral IV
 339. (K5B) Feeding Tube
 340. (K5C) Mechanically Altered Diet
 341. (K5D) Syringe Oral Feeding
 342. (K5E) Therapeutic Diet
 343. (K5F) Dietary Supplement Between Meals
 344. (K5G) Plate Guard, Stabilized Built-Up Utensil, Etc
 345. (K5H) On a Planned Weight Change Program
 346. (K5I) None of Above Nutritional Approaches
 347. (K6A) Calories Received in Last 7 Days
 348. (K6B) Fluid Intake Per Day
 349. (L1A) Debris Present in Mouth Prior to Going to Bed
 350. (L1B) Has Dentures/Removable Bridge
 351. (L1C) Some/All Natural Teeth Lost
 352. (L1D) Broken/Loose/Carious Teeth

353. (L1E) Inflamed/Swollen/Bleeding Gums
 354. (L1F) Daily Cleaning of Teeth/Dentures
 355. (L1G) None of Above Oral Status
 356. (M1A) Stage 1 Ulcers
 357. (M1B) Stage 2 Ulcers
 358. (M1C) Stage 3 Ulcers
 359. (M1D) Stage 4 Ulcers
 360. (M2A) Pressure Ulcers
 361. (M2B) Stasis Ulcers
 362. (M3) History of Resolved Ulcers
 363. (M4A) Abrasions/Bruises
 364. (M4B) Burns 2nd/3rd Degree
 365. (M4C) Open Lesions Other Than Ulcers/Rashes/Cuts
 366. (M4D) Rashes
 367. (M4E) Skin Desensitized to Pain/Pressure
 368. (M4F) Skin Tears/Cuts
 369. (M4G) Surgical Wounds
 370. (M4H) None of Above Skin Problems
 371. (M5A) Pressure Relieving Devices for Chair
 372. (M5B) Pressure Relieving Devices for Bed
 373. (M5C) Turning/Repositioning Program
 374. (M5D) Nutrition/Hydration Intervention to Manage Skin Problems
 375. (M5E) Ulcer Care
 376. (M5F) Surgical Wound Care
 377. (M5G) Application of Dressings
 378. (M5H) Application of Ointments/Medications
 379. (M5I) Other Preventative or Protective Skin Care
 380. (M5J) None of Above Skin Treatments
 381. (M6A) Resident Has 1 or More Foot Problems
 382. (M6B) Infection of Foot
 383. (M6C) Open Lesions on Foot
 384. (M6D) Nails/Calluses Trimmed on Foot
 385. (M6E) Received Preventative/Protective Foot Care
 386. (M6F) Application of Dressings to Foot
 387. (M6G) None of Above Foot Problems
 388. (N1A) Morning
 389. (N1B) Afternoon
 390. (N1C) Evening
 391. (N1D) None of Above Time Awake
 392. (N2) Time Involved in Activities
 393. (N3A) Prefers Own Room
 394. (N3B) Prefers Day/Activity Room
 395. (N3C) Prefers Inside NH/Off Unit
 396. (N3D) Prefers Outside Activity
 397. (N3E) None of Above Preferred Activity Settings
 398. (N4A) Cards/Other Games
 399. (N4B) Crafts/Arts
 400. (N4C) Exercises/Sports
 401. (N4D) Music
 402. (N4E) Reading/Writing
 403. (N4F) Spiritual/Religious Activities
 404. (N4G) Trips/Shopping
 405. (N4H) Walking/Wheeling Outdoors
 406. (N4I) Watching TV
 407. (N4J) Gardening or Plants
 408. (N4K) Talking or Conversing
 409. (N4L) Helping Others
 410. (N4M) None of Above Activity Preferences
 411. (N5A) Type of Activities Currently Involved In
 412. (N5B) Extent of Involvement
 413. (O1) Number of Medications
 414. (O2) New Medications
 415. (O3) Injections
 416. (O4A) Antipsychotic
 417. (O4B) Antianxiety
 418. (O4C) Antidepressant
 419. (O4D) Hypnotic
 420. (O4E) Diuretic
 421. (P1AA) Chemotherapy
 422. (P1AB) Dialysis
 423. (P1AC) IV Medication
 424. (P1AD) Intake/Output
 425. (P1AE) Monitoring Acute Medical Condition
 426. (P1AF) Ostomy Care
 427. (P1AG) Oxygen Therapy
 428. (P1AH) Radiation
 429. (P1AI) Suctioning
 430. (P1AJ) Tracheostomy Care
 431. (P1AK) Transfusions
 432. (P1AL) Ventilator/Respirator
 433. (P1AM) Alcohol/Drug Treatment Program
 434. (P1AN) Alzheimer's/Dementia Special Care Unit
 435. (P1AO) Hospice Care
 436. (P1AP) Pediatric Unit
 437. (P1AQ) Respite Care
 438. (Q1B) Resident Supported by Someone Positive Toward Discharge
 439. (Q1C) Discharge within 90 Days
 440. (Q2) Change in Care Needs
 441. (R1A) Resident Participated in Assessment
 442. (R1B) Family Participation in Assessment
 443. (R1C) Significant Other Participation in Assessment
 444. (VA01A) Delirium Triggered
 445. (VA01B) Delirium Care Planning Decision
 446. (VA02A) Cognitive Loss Triggered
 447. (VA02B) Cognitive Loss Care Planning Decision
 448. (VA03A) Visual Function Triggered
 449. (VA03B) Visual Function Care Planning Decision
 450. (VA04A) Communication Triggered
 451. (VA04B) Communication Care Planning Decision
 452. (VA05A) ADL Functional Potential Triggered
 453. (VA05B) ADL Functional Potential Care Planning Decision
 454. (VA06A) Urinary Incontinence Triggered
 455. (VA06B) Urinary Incontinence Care Planning Decision
 456. (VA07A) Psychosocial Well-being Triggered
 457. (VA07B) Psychosocial Well-being Care Planning Decision
 458. (VA08A) Mood State Triggered
 459. (VA08B) Mood State Care Planning Decision
 460. (VA09A) Behavioral Symptoms Triggered
 461. (VA09B) Behavioral Symptoms Care Planning Decision
 462. (VA10A) Activities Triggered
 463. (VA10B) Activities Care Planning Decision
 464. (VA11A) Falls Triggered
 465. (VA11B) Falls Care Planning Decision
 466. (VA12A) Nutritional Status Triggered
 467. (VA12B) Nutritional Status Care Planning Decision
 468. (VA13A) Feeding Tubes Triggered
 469. (VA13B) Feeding Tubes Care Planning Decision
 470. (VA14A) Dehydration Triggered
 471. (VA14B) Dehydration Care Planning Decision
 472. (VA15A) Dental Care Triggered
 473. (VA15B) Dental Care Planning Decision
 474. (VA16A) Pressure Ulcers Triggered
 475. (VA16B) Pressure Ulcers Care Planning Decision
 476. (VA17A) Psychotropic Drug Use Triggered
 477. (VA17B) Psychotropic Drug Use Care Planning Decision
 478. (VA18A) Physical Restraints Triggered
 479. (VA18B) Physical Restraints Care Planning Decision
 480. (VB2) RAP Date
 481. Assessment Correction Version
 482. Facility Internal ID
 483. Submission Date

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