Dementia as Disparity: Access to High Quality Long term Care in America

Vincent Mor, Ph.D.

Florence Grant Pirce Professor of Public Health

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ADRD Population & Residential Long Term Care

- Growth of Oldest Old (85+) means growth of ADRD population and those requiring institutional long term care
- Nursing Homes serve two populations:
  - Post-Acute Care for Rehabilitation & Recuperation
  - Long Stay Residents
- Huge Growth in Post Acute population
- Little growth in long stay population in last two decades; NH population shrinking!

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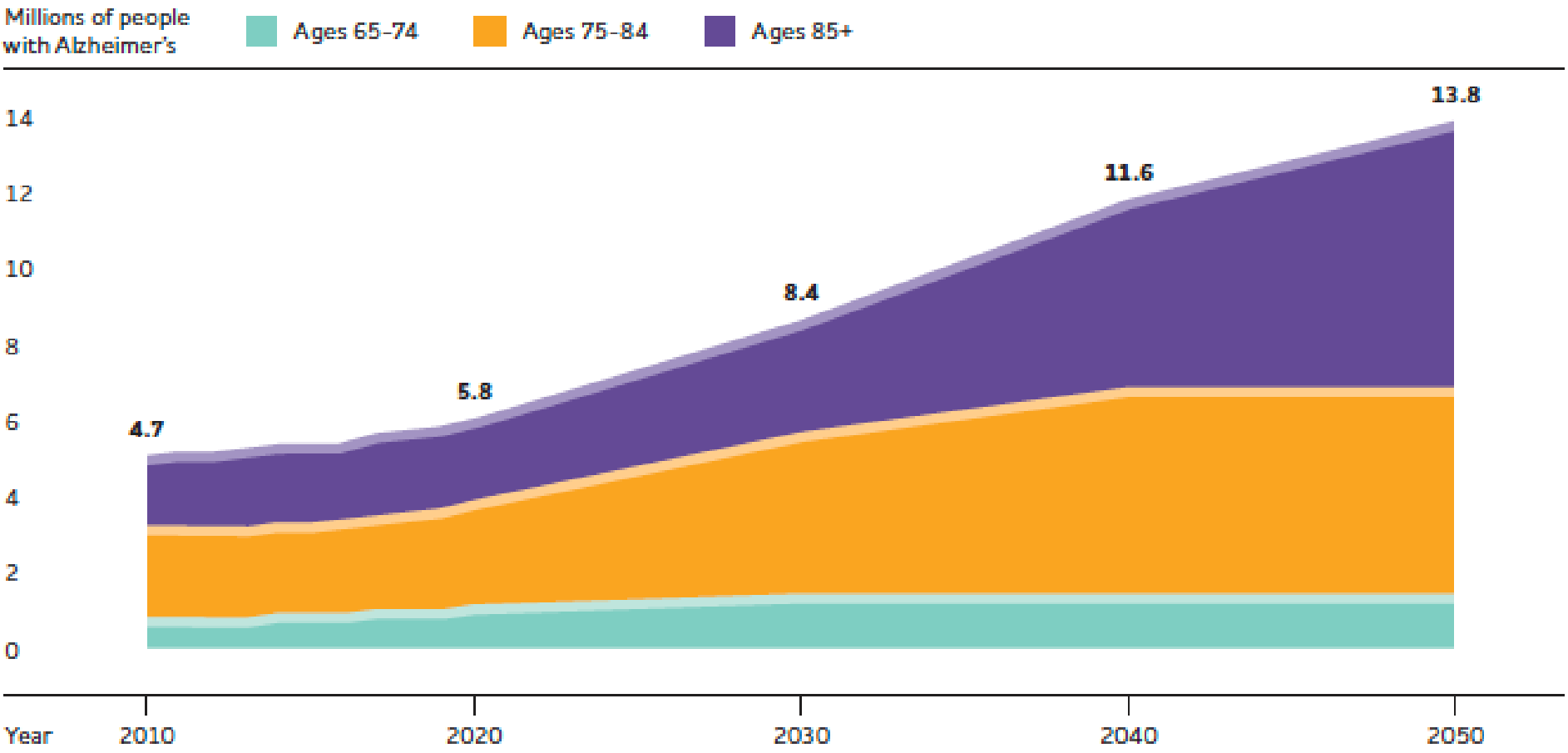
Projected Number of People Age 65 and Older (Total and by Age) in the U.S. Population with Alzheimer's Dementia, 2010 to 2050



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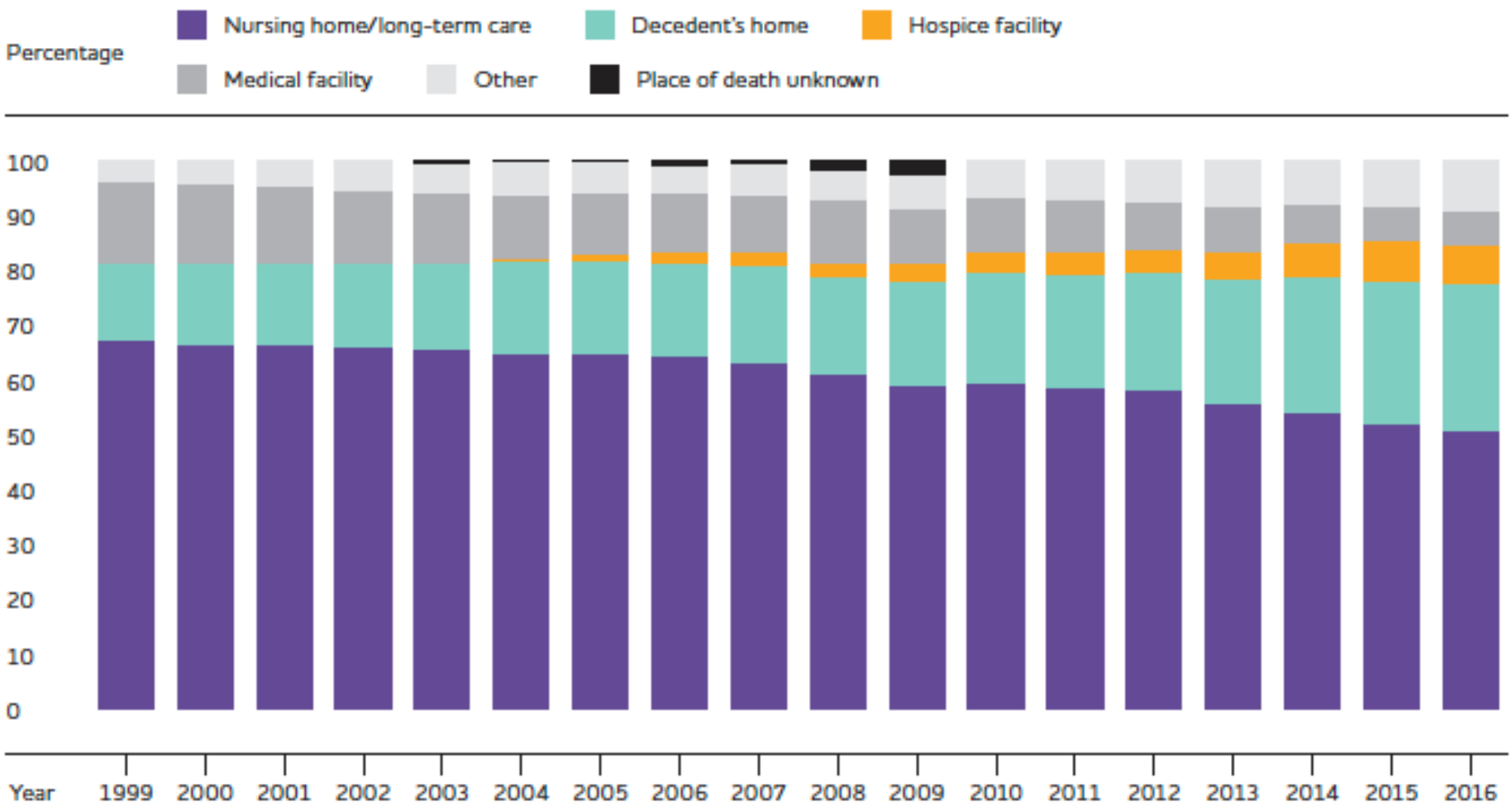
Place of Death Due to Alzheimer's Disease, 1999 to 2016



Created from data from the National Center for Health Statistics.[248]

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Background: ADRD in PAC

- The improving Medicare Post-Acute-Care Transformation (IMPACT) Act of 2014 mandated new quality measure of *successful community discharge* from post-acute care (PAC) services. However, little is known about skilled nursing facility (SNF) patient's success in returning and staying home post-discharge.
- Upon discharge from the hospital to a SNF, new PAC patients with ADRD whose behavioral problems exceed the SNF's capacity to accommodate them are at high risk of rehospitalization, being transferred to another nursing home or "getting stuck" in long term care.

Background

- NHs face financial incentives to turn away persons with ADRD because:
  - more clinically and behaviorally complex, requiring more staff time
  - use fewer therapy hours so generate less revenue per bed day than other patients
  - require longer lengths of stay and have a lower likelihood of leaving the NH.
- ADRD admissions make “successful discharge” quality metric hard to meet and become Medicaid

Objective

- To characterize the PAC experience of Medicare beneficiaries with ADRD, including the quality of facilities they enter, their likelihood of experiencing rehospitalization, becoming a permanent resident or transitioning from one facility to another between 2007 and 2017.

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Methods

- Study Design

- Retrospective cross-sectional *trend study*
  - 100% Medicare claims data linked to the Center for Medicare & Medicaid Services' Minimum Data Set for each calendar year from January 1, 2007 through September 30, 2015.

- Setting;
  CMS-certified skilled nursing facilities (n=16,763)

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Methods

- Participants:
  - Fee-for-service Medicare beneficiaries aged ≥ 66 years discharged from a hospital to a SNF who had not entered a nursing home during the 12 months prior to hospitalization.
- Exposure:
  - ADRD defined by the Chronic Condition Data Warehouse (CCW).
- Outcome Measures:
- 1) Admission to a Quality NH (CMS Star Rating 4+)
- 2) successful discharge [in SNF 90 days, then discharged back to the community, alive without subsequent inpatient health care utilization for 30 continuous days];
- 3) long-stay resident: still in SNF after 90 days of entering;
- 4) death in SNF within 30 days of entering;
- 5) readmitted to hospital within 30 days of entering SNF;
- 6) transferred to another nursing home.

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Methods

- Statistical Analysis:
  - We used logistic regression adjusting for age, gender, race/ethnicity, dual eligibility, Medicare Advantage penetration, and % dual-eligible in zip code of residents. Adjusted predictive rates are presented.

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Characteristics of FFS Medicare beneficiaries aged 66 years and older with first hospital discharge to a nursing home: 2007-2015

	Jan 1 – Dec 31, 2007		Jan 1 – Dec 31, 2011		Jan 1 – Sep 30, 2015	
	ADRD N= 211,518	**No ADRD N= 406,667**	**ADRD N= 277,751**	**No ADRD N= 484,728**	**ADRD N= 217,990**	**No ADRD N= 370,702**
Age, mean	84.1	80.5	84.5	80.3	84.6	80.0
Female (%)	67.0	67.7	66.5	66.9	64.9	64.9
Black race (%)	8.0	6.2	8.4	6.6	8.6	6.9
Other race (%)	3.4	3.1	4.1	3.5	4.6	3.9
Dual eligible (%)	18.0	11.4	18.1	11.0	16.9	10.3
Number of days hospitalized, mean	8.1	8.6	7.6	7.8	7.4	7.7

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Nursing Home Quality by ADRD & Dual Status: 2013-14

	Non-Dual		Dual	
Star-Rating	No ADRD	ADRD	No ADRD	ADRD
1 & 2	24.2%	27.5%	10.6%	11.8%
3	17.2	18.1	18.7	19.2
4 & 5	58.6	54.4	23.2	22.0
Total N	1,826,634	689,513	397,553	228,852

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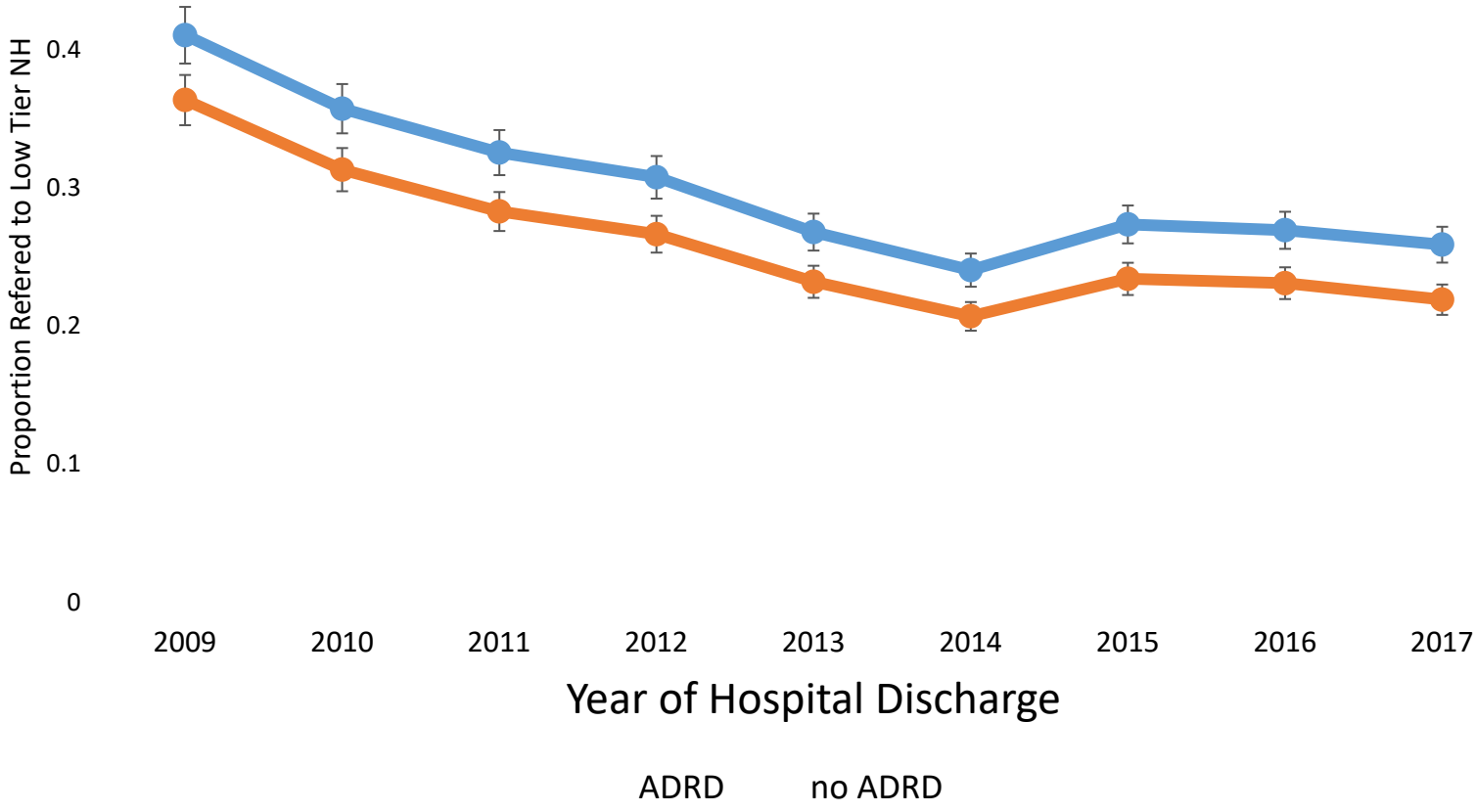
Adjusted proportion of referral to low quality nursing home upon hospital discharge by ADRD status among Medicare Beneficiaries aged >65 years



Adjusted for age, sex, race, dual eligible status, % MA penetration in zipcode, % dual eligible in zipcode

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Results

- The proportion of traditional Medicare beneficiaries with ADRD who had a successful discharge from the SNF to the community increased from 2007 to 2015 (average annual percent change (AAPC) 2.0 (1.8, 2.2)); those without ADRD also increased (AAPC: 1.0 (0.8, 1.2)) but not as much as those with ADRD ($p<0.01$).

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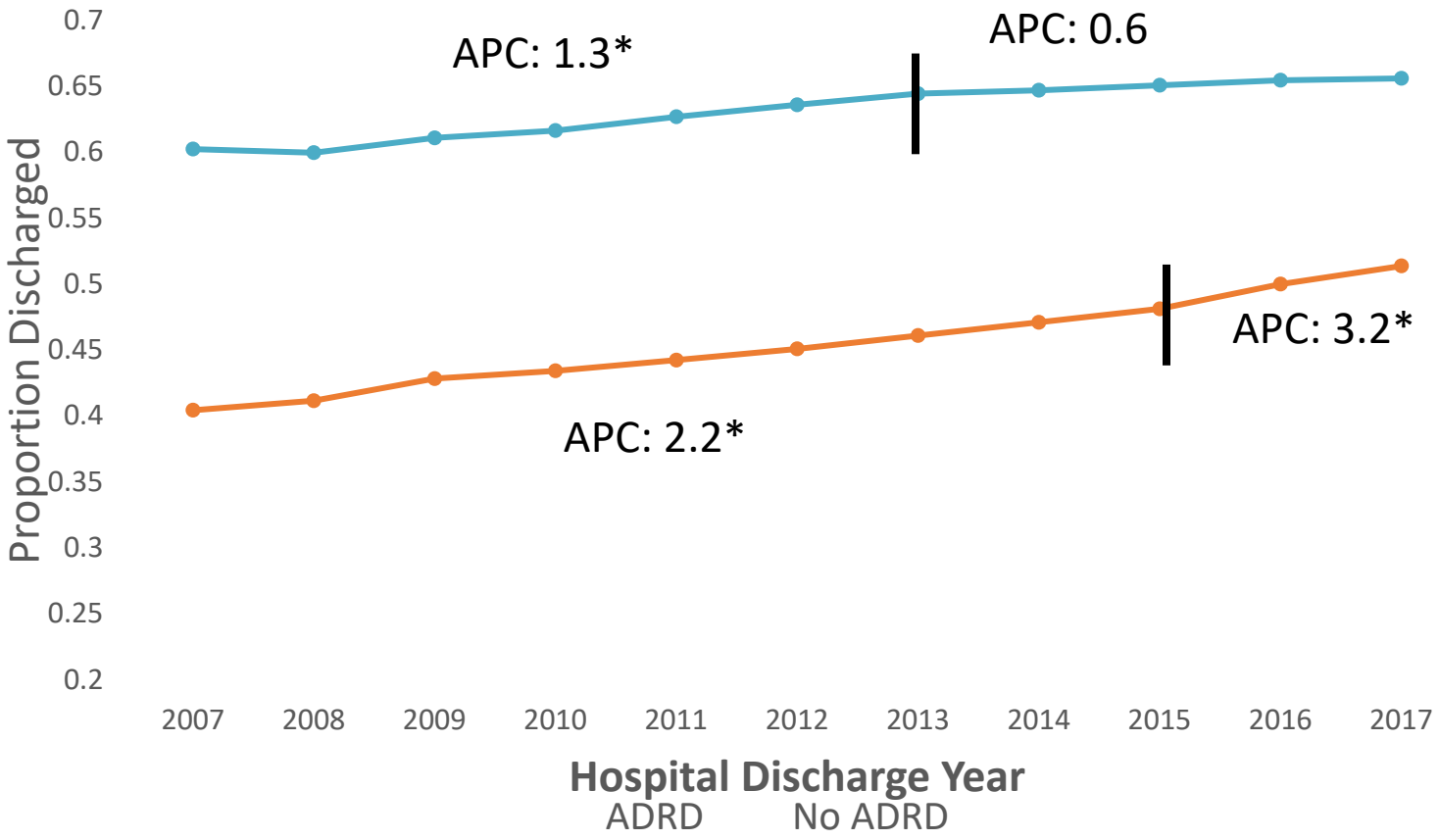
Unadjusted proportion with **successful SNF to community discharge** upon hospital discharge by ADRD status among FFS Medicare Beneficiaries aged >65 years, January 1, 2009 through June 30, 2017



APC: annual percent change; * denotes statistical significance <0.05

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Results

- The proportion of beneficiaries who became long stay, who died in the SNF or were readmitted to the hospital within 30 days decreased statistically significantly among all beneficiaries; however the disparity remained between those with and without ADRD.

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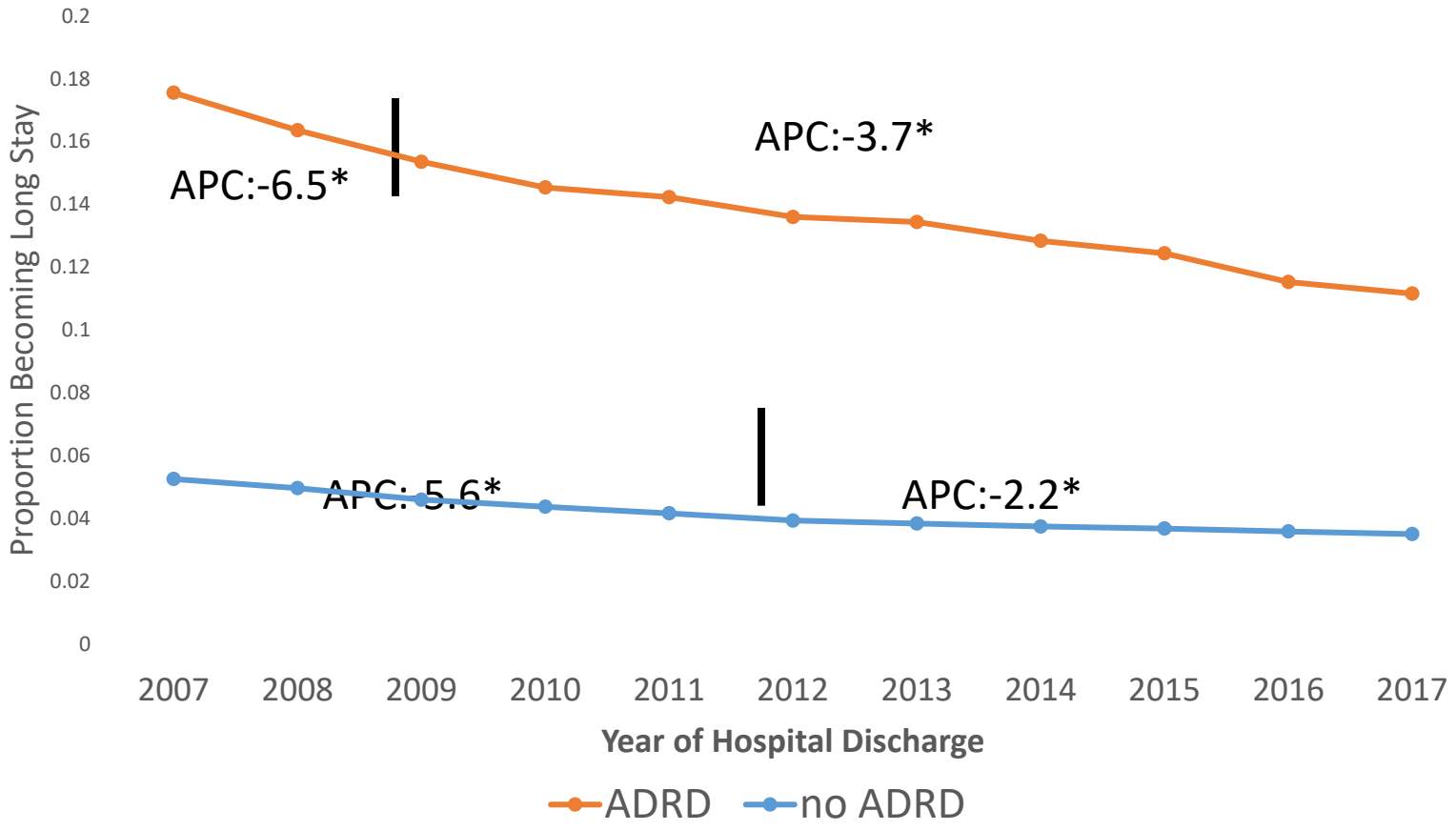
Unadjusted proportion becoming **long stay (>100 days in SNF)** after hospital discharge by ADRD status 1/1/2009 thru 6/30/2017



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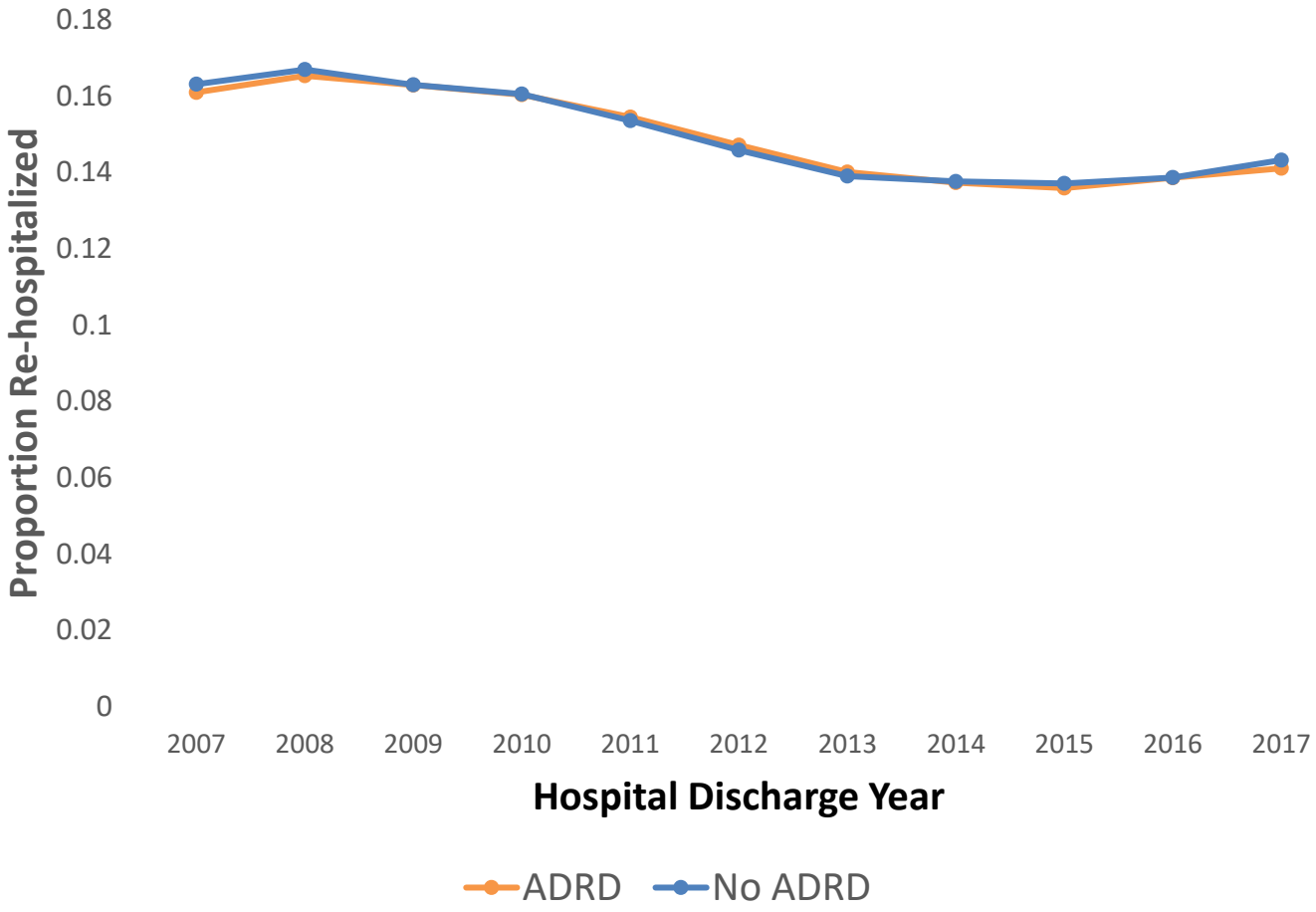
Unadjusted proportion **readmitted to the hospital within 30 days** of hospital discharge by ADRD status 1/1/2009 thru 6/30/2017



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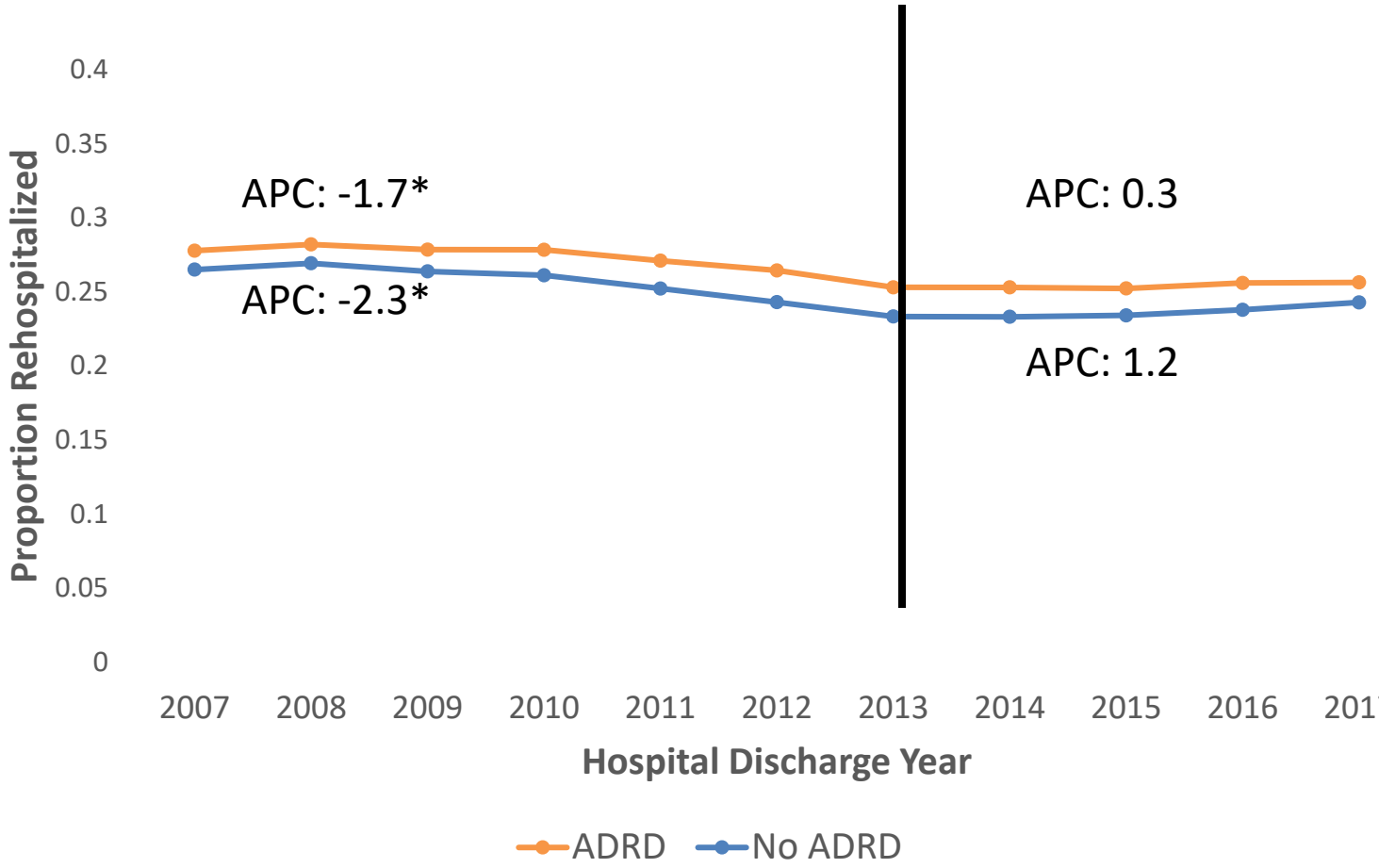
Unadjusted proportion **readmitted to the hospital within 90 days** of hospital discharge by ADRD status
1/ 1/2009 thru 6/6/2017



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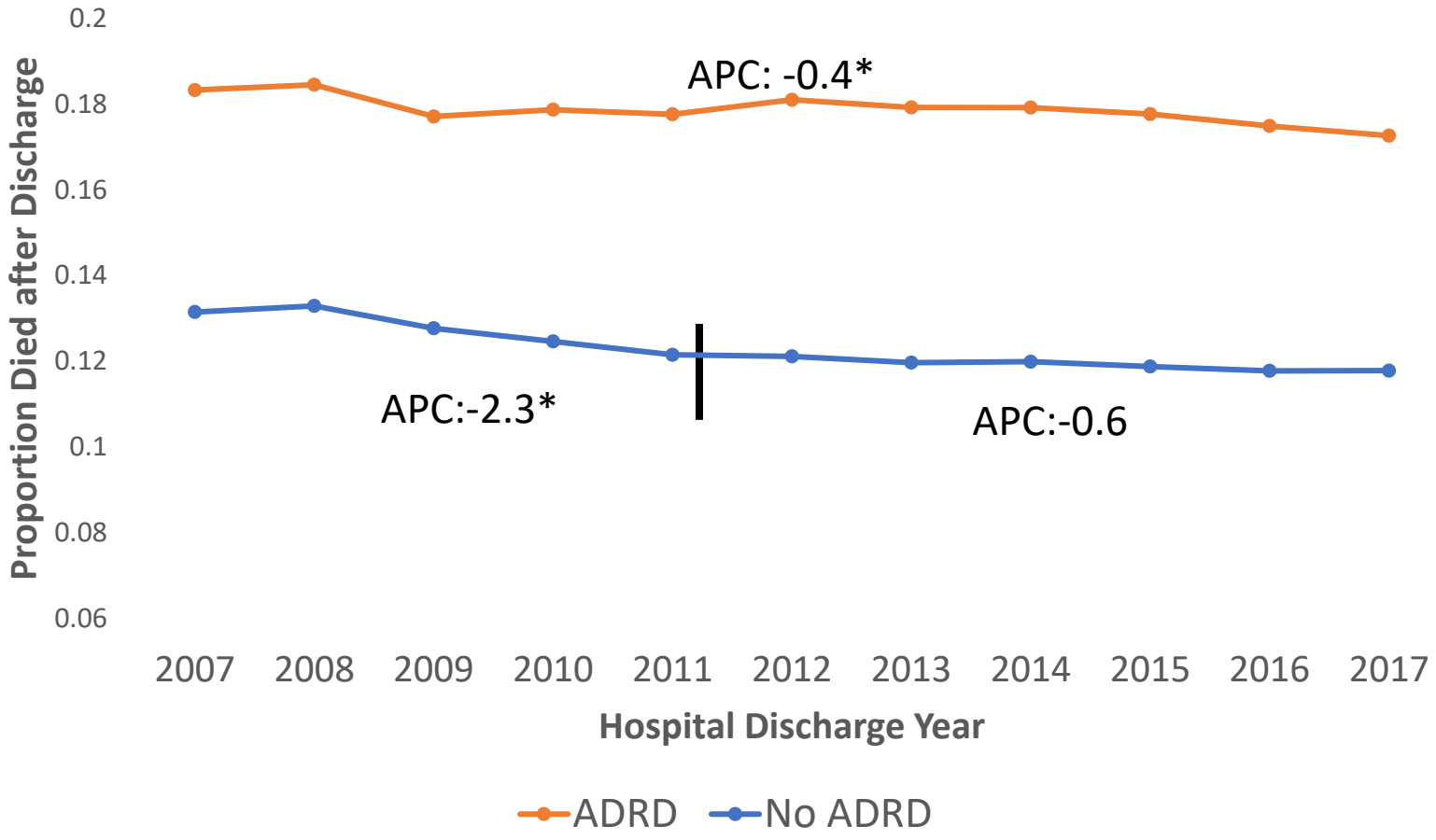
Unadjusted proportion **died within 90 days of** hospital discharge by ADRD status
1/1/2009 thru 6/30/2017



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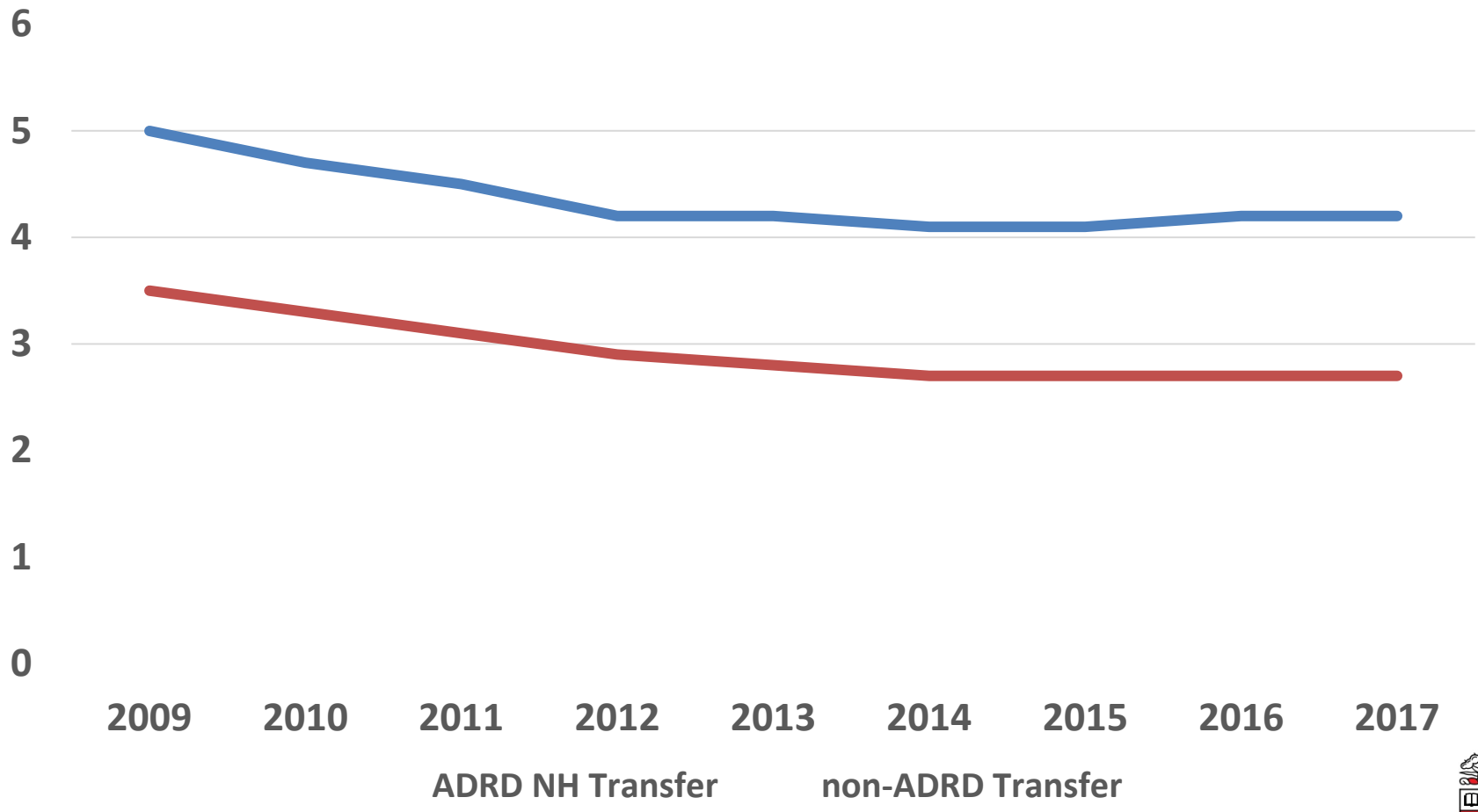
Proportion of Transfers at end of PAC by ADRD Status



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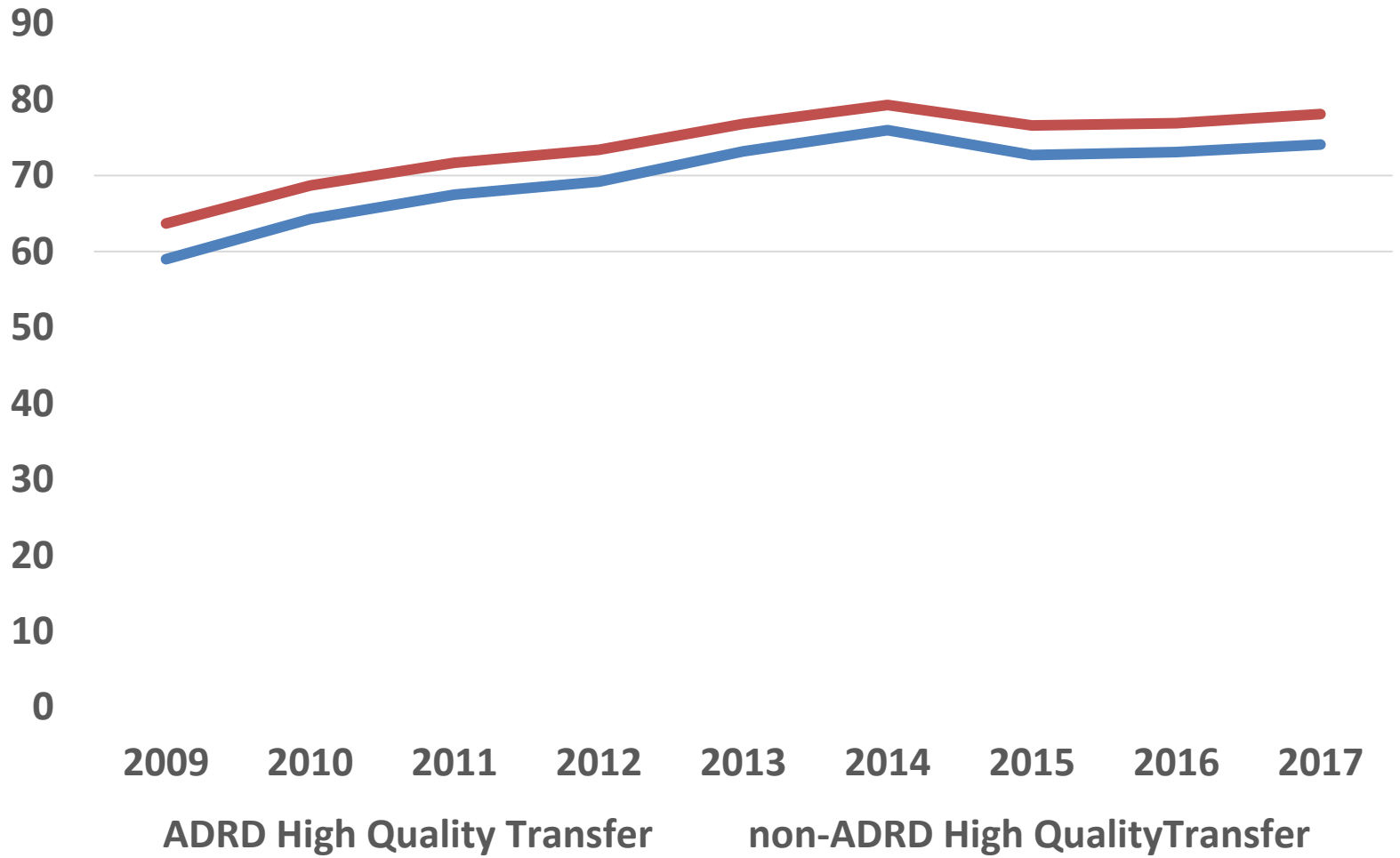
Transfers Entering a High Quality Nursing Home by ADRD Status



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Summary

- Higher rates of successful discharge from SNF, fewer deaths, re-hospitalizations, transfers, and permanent stays among beneficiaries with ADRD is encouraging.
- However, even adjusting for other factors, ADRD patients go to lower quality NHs and are more likely to get stuck and transfer to less high quality homes.

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Limitations

- Use of SNF care after hospitalization increased due to more PAC use of SNF
- May be that more recent entrants to SNF are ‘healthier,’ resulting in a decrease in deaths, transfers, rehospitalizations, and long-stays.
- Increase in ADRD diagnosis makes it hard to know whether observed changes are real of result of coding, case-mix.

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Discussion

- Hospital Readmission penalty stimulated major reduction in re-hospitalizations that affected ADRD and non-ADRD PAC users equally.
- Improvements in Successful discharge have been dramatic; may explain ongoing decline in the long stay NH population
- Aging of Baby Boomers may change everything

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