

An Analysis of Longevity Among Senior Housing Residents

Research funded by the National Investment
Center for Seniors Housing & Care (NIC)

Summary Report
Spring 2024



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Research & Background

This analysis is to understand how moving into senior housing impacts longevity outcomes of residents compared to outcomes of older adults living in other settings.

The research was supported by a grant from NIC and led by an independent team of researchers at NORC at the University of Chicago.

Study Overview

This research builds a holistic picture of longevity for older adults who have recently moved into senior housing communities



**Types of anti-psychotic medications are defined on slide 24*

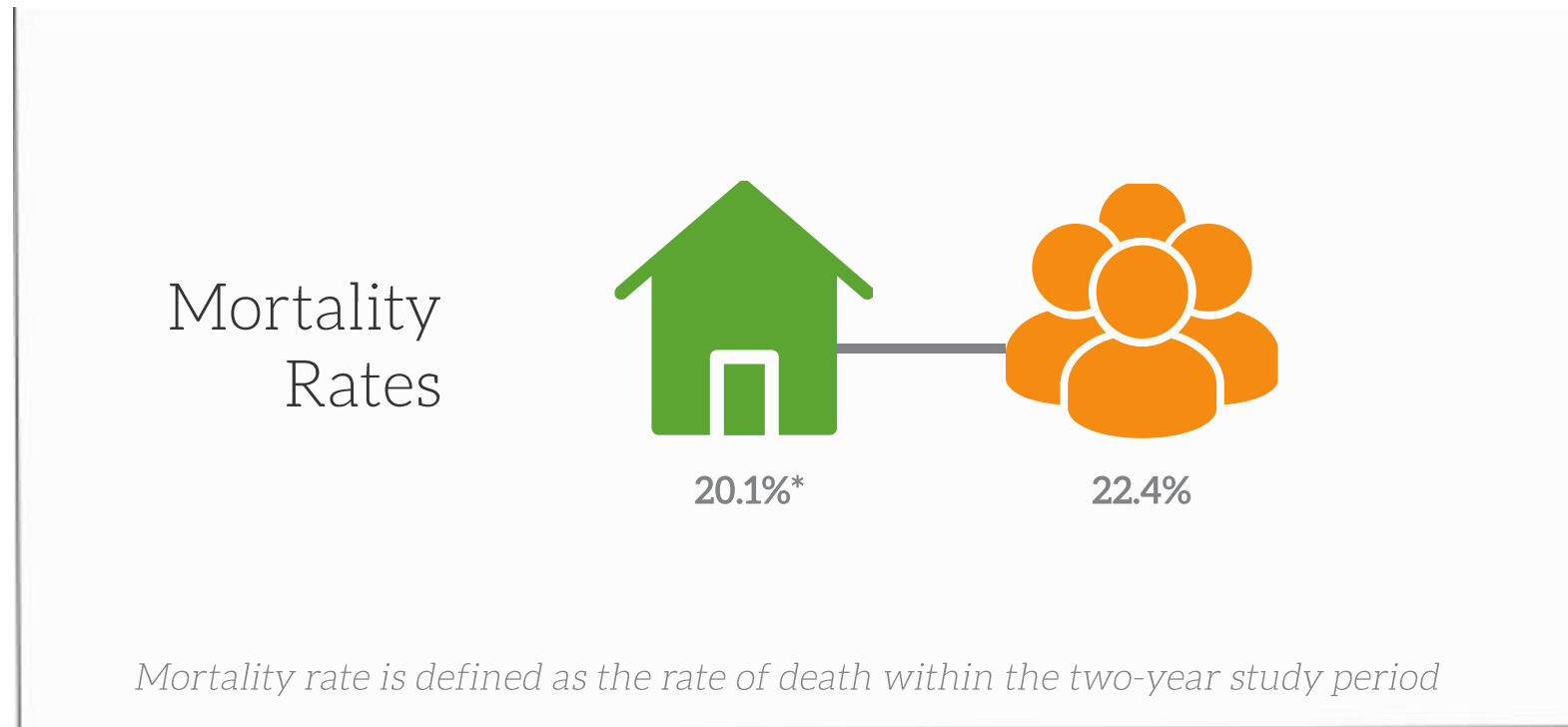
Executive Summary

This study tracks longevity outcomes for individuals who moved into a senior housing community in 2017 for two years (2017-2019 or until death) compared with a matched community-dwelling peer group.*

1. Older adults who moved into senior housing **live longer than those who do not.**
2. Senior housing communities **outperform** other settings in **managing residents' anti-psychotic medications.**
3. Older adults who live in senior housing are **more likely to receive care and preventative services** at home than older adults who live in the community.
4. Older adults' longevity is better in top-performing senior housing facilities.

**See methodology on slide 19*

Senior housing residents have a **lower mortality rate** in the two years after move-in than their peers in the community

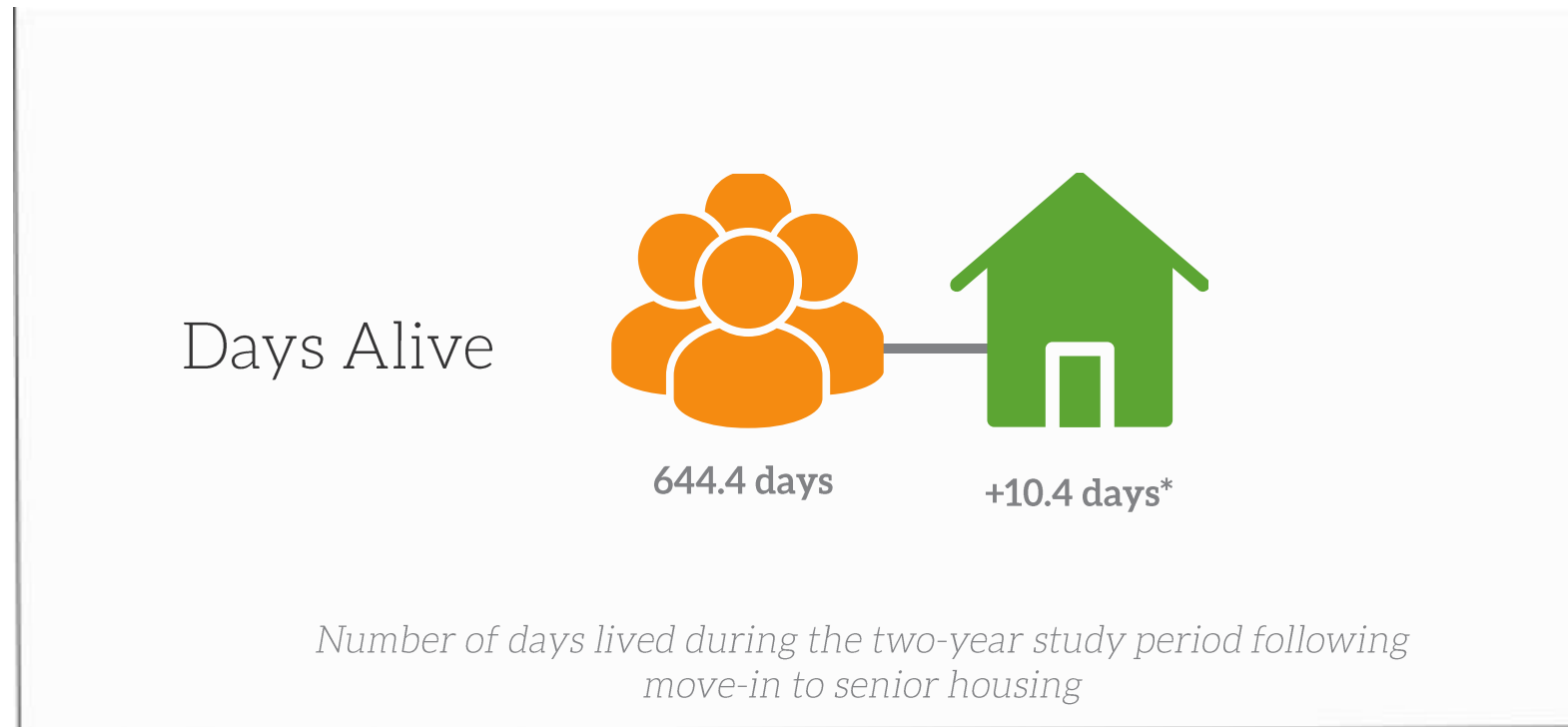


 Older Adults in the Community

 Senior Housing Residents

* Statistically significant at the 99 percent confidence level

Senior housing residents **live longer** than older adults who live in the community

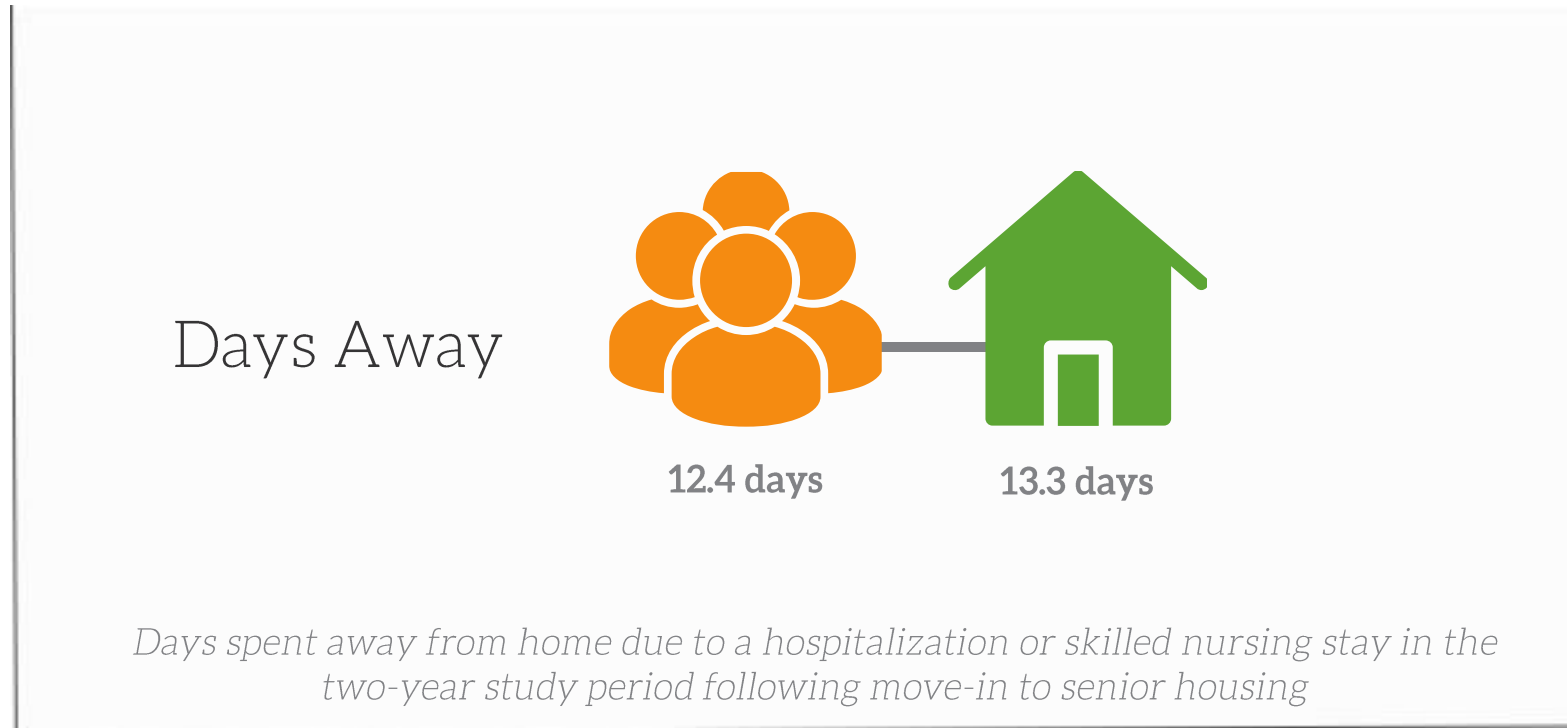


Older Adults in the Community



Senior Housing Residents

Senior housing residents and older adults in the community experience **comparable days away from home** for medical care

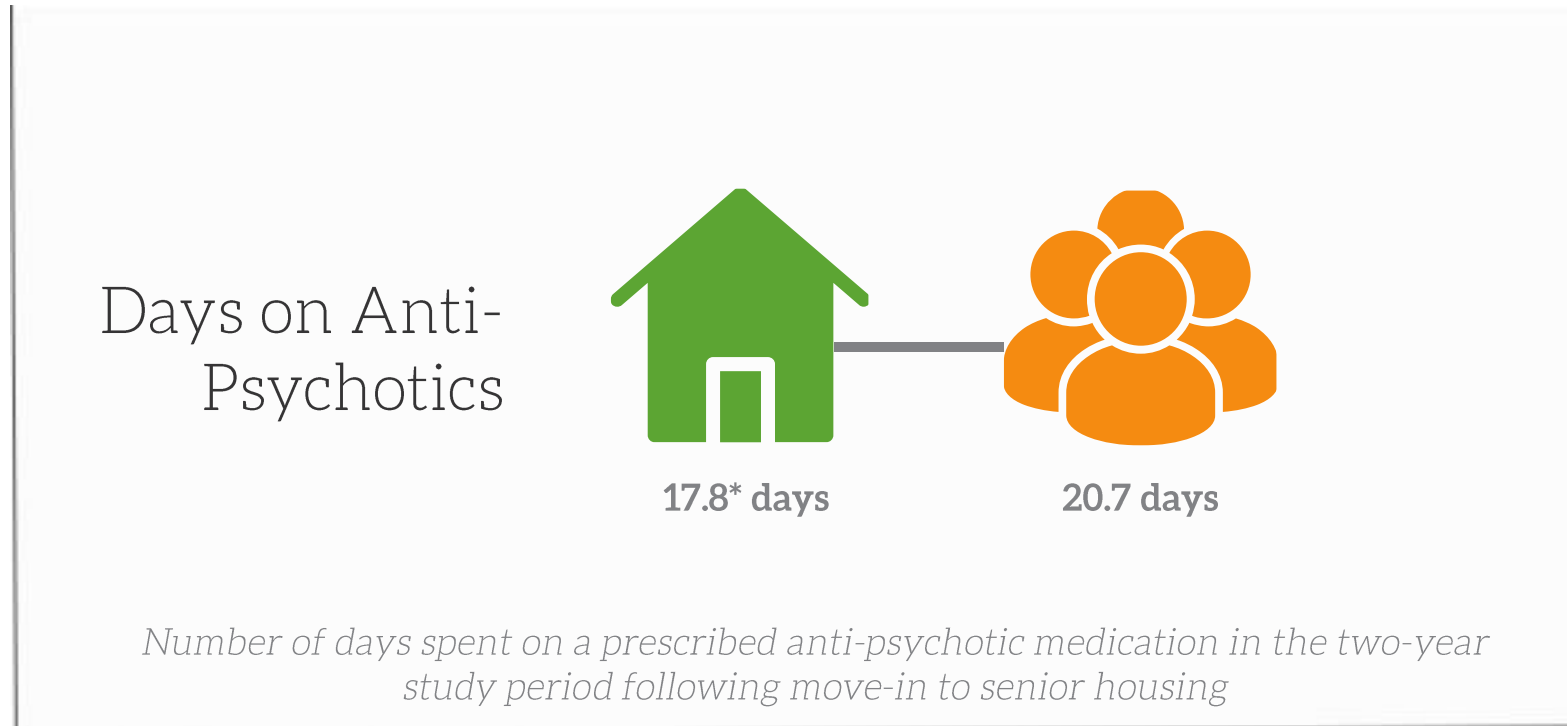


Older Adults in the Community



Senior Housing Residents

Senior housing residents spend **fewer days on anti-psychotic medications**[^] than older adults who live in the community



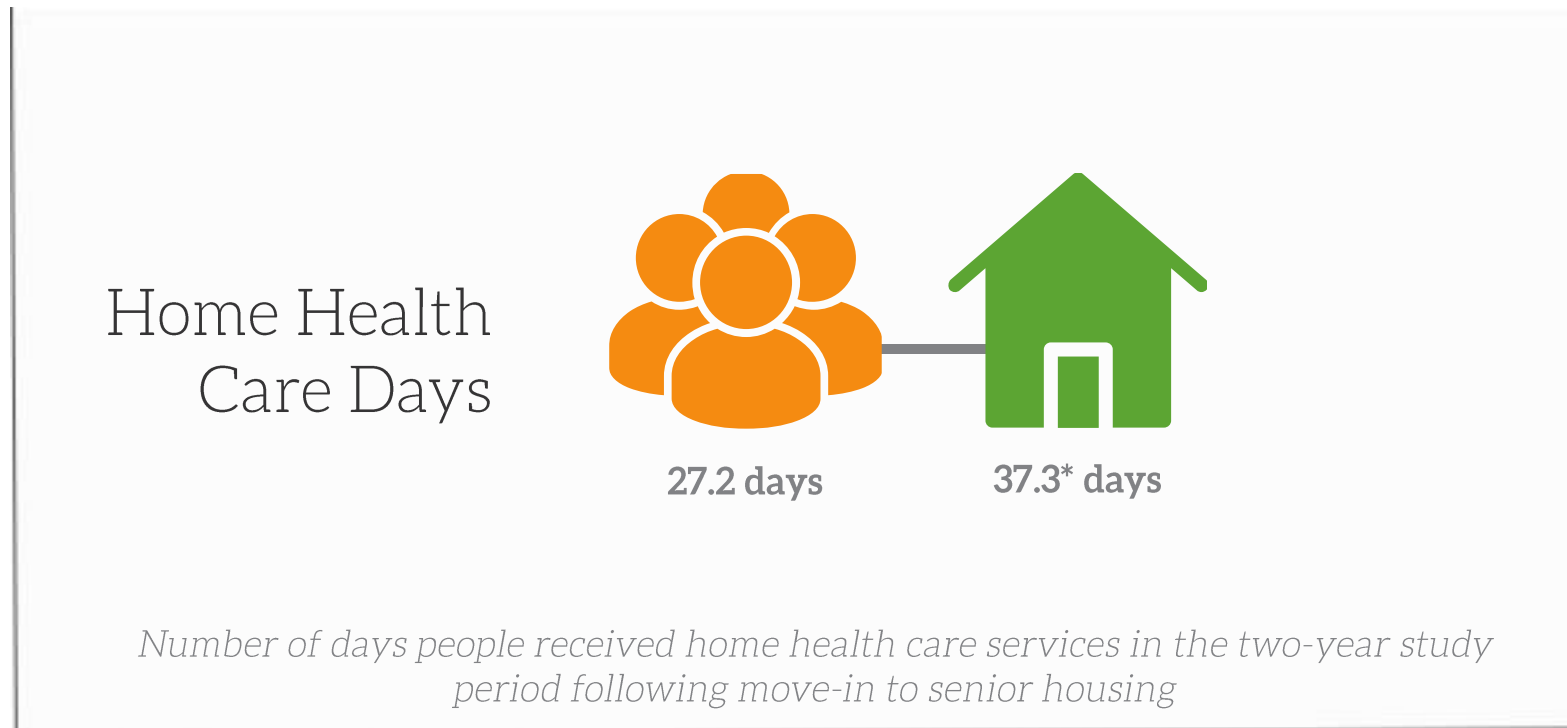
 Older Adults in the Community

 Senior Housing Residents

[^]Anti-psychotics are defined on slide 24

* Statistically significant at the 99 percent confidence level

Senior housing residents receive **more home health care days** than older adults in the community



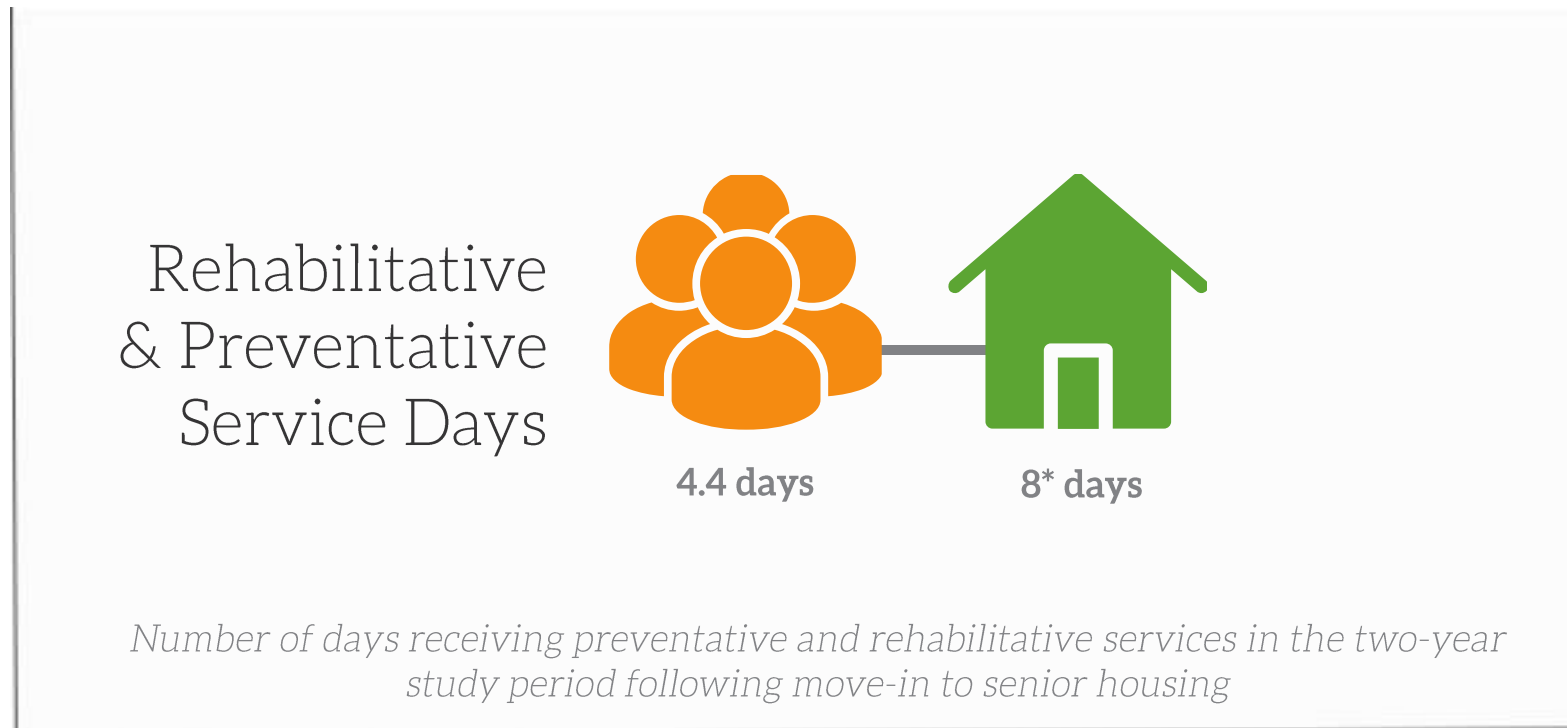
Older Adults in the Community



Senior Housing Residents

* Statistically significant at the 99 percent confidence level

Senior housing residents receive **more rehabilitative and preventative service days** than older adults in the community



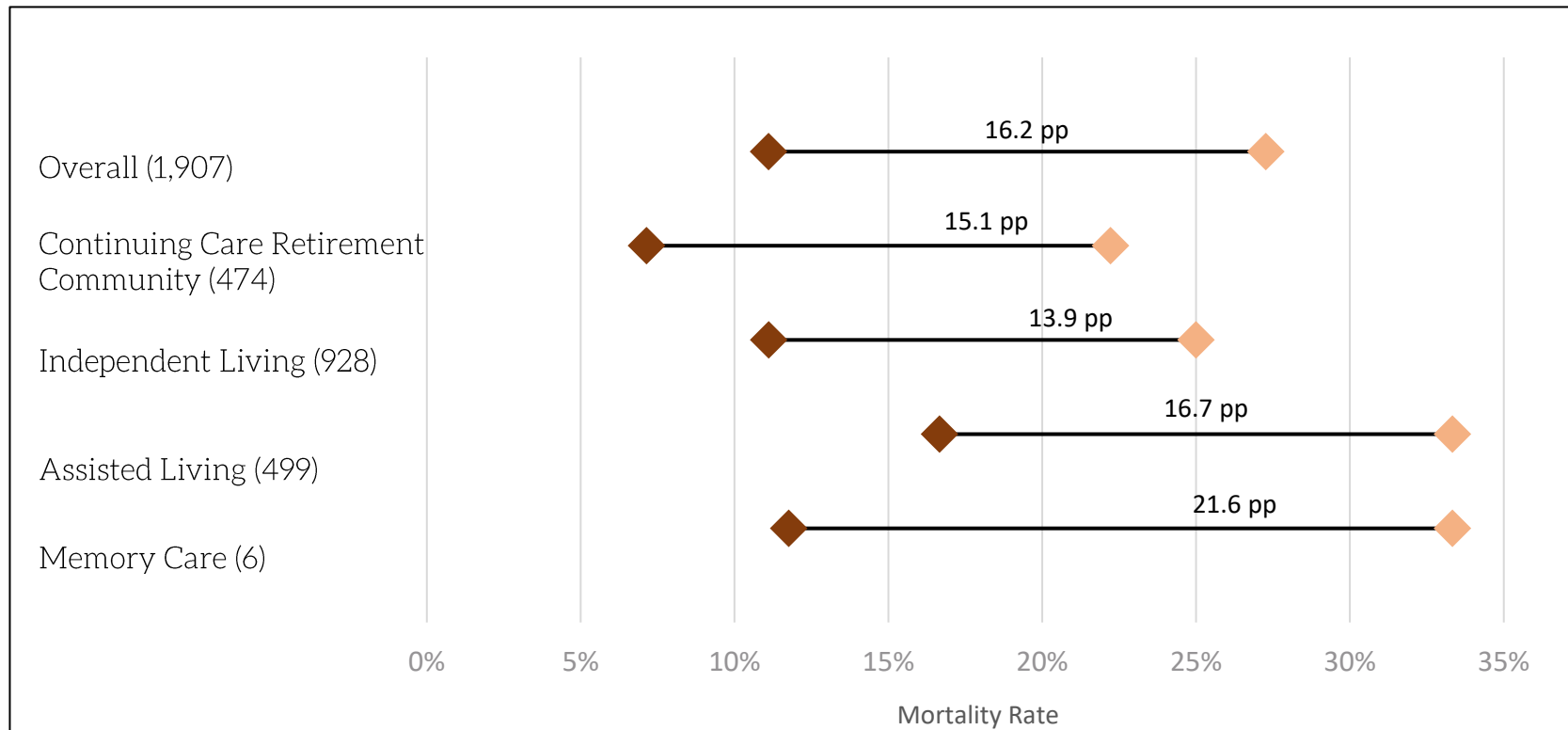
 Older Adults in the Community

 Senior Housing Residents

Community Level Results

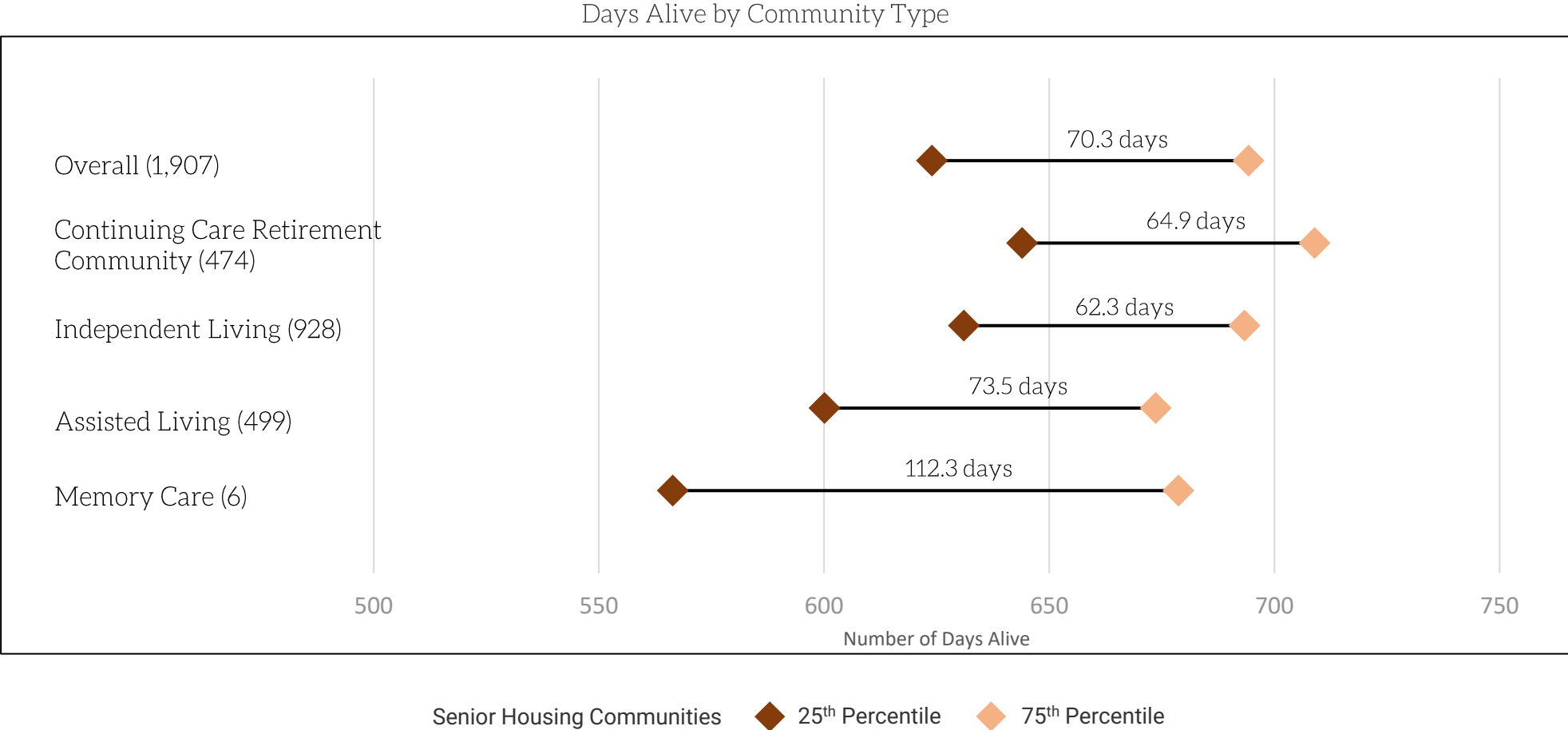
Senior living communities exhibit **wide variation in mortality rates** between top 25% and bottom 25% of communities

Mortality Rates by Community Type



Senior Housing Communities ◆ 25th Percentile ◆ 75th Percentile

Residents in the top 25% of senior housing communities live more than **two months longer** than residents in the bottom 25% of communities



Residents in Continuing Care Retirement Communities (CCRC) live **almost two weeks longer** than older adults in the community

CCRC Days Alive vs. Matched Non-Congregate Peer Group



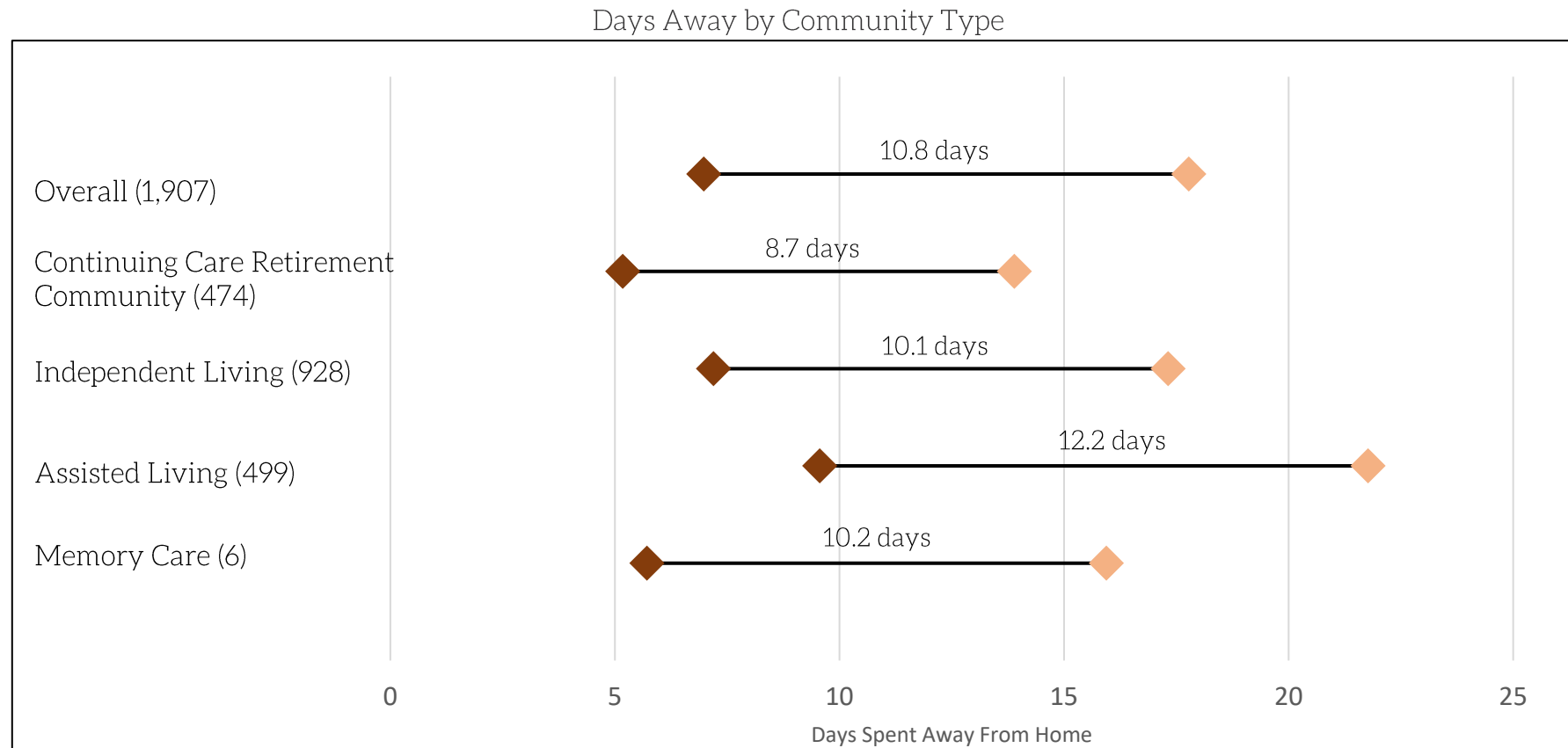
Observed Distribution Amongst CCRC Properties



Key

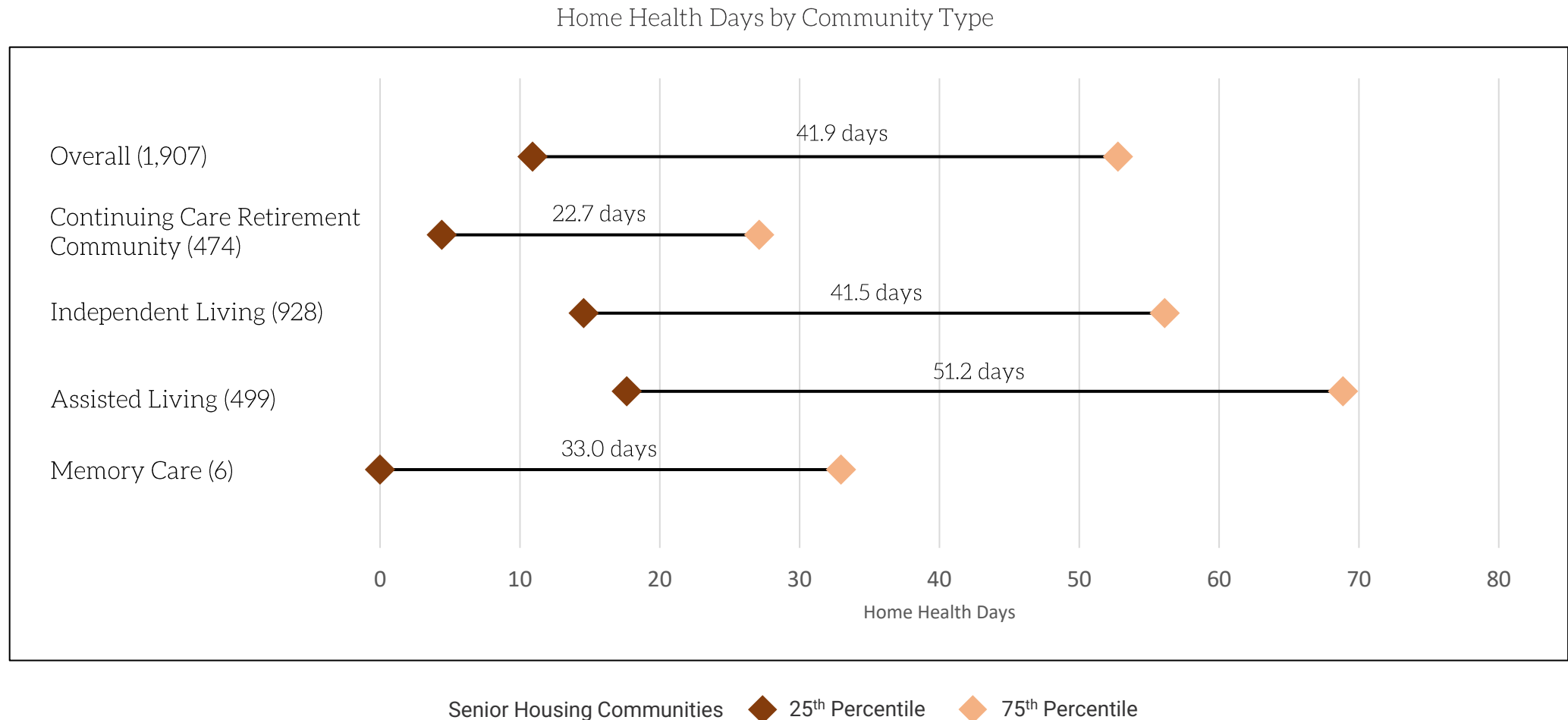
| | |
|--|--|
|  Senior Housing |  Matched Peer Group |
|--|--|

Residents in the top 25% of communities spend almost **two weeks less time away from home** than peers in the bottom 25% of communities



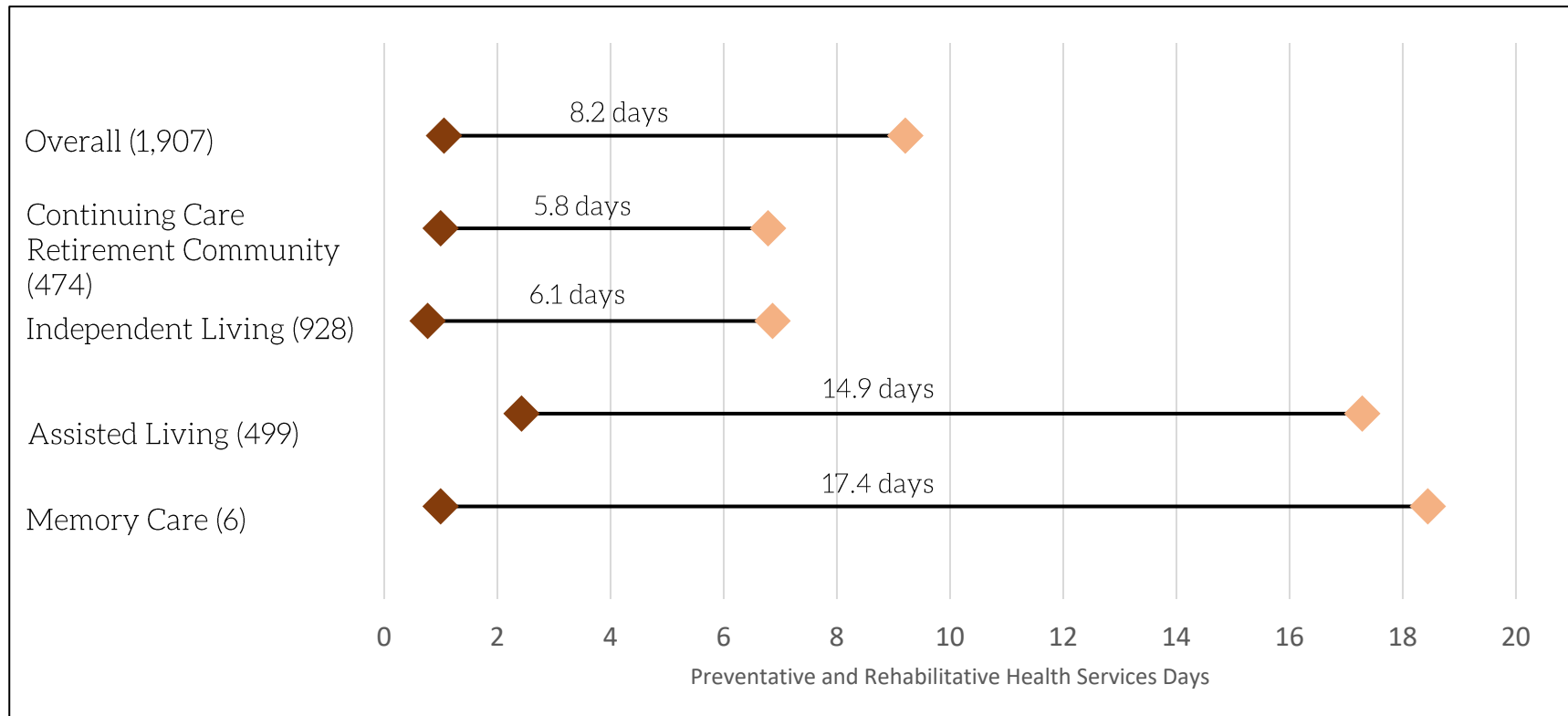
Senior Housing Communities ◆ 25th Percentile ◆ 75th Percentile

Residents in the top 25% of IL and AL communities receive **40 more days** of home health visits than peers in the bottom 25% of communities



AL and MC communities had the **greatest variation** in days with preventative and rehabilitative health services

Days Away by Community Type



Senior Housing Communities ◆ 25th Percentile ◆ 75th Percentile

Methodology

Project Overview

The National Investment Center for Seniors Housing & Care (NIC) commissioned NORC at the University of Chicago (NORC) to assess the relationship between senior housing and longevity outcomes for older adults

- NORC conducted a comparative analysis of **mortality, days away from home due to adverse health events, and preventative and rehabilitative health services days** to understand the impact of senior housing on longevity—the length and quality of older adults’ lives.
- The study **focuses on older adults who moved into senior housing properties in 2017 and resided in properties until their death, or the end of the two-year study period.** NORC tracked individuals for two years (730 days) following their move-in date. This study does not analyze longevity outcomes of residents who resided in senior housing properties before 2017. Furthermore, findings are not risk-adjusted for individual-level demographic or clinical characteristics such as age, race, gender, or health status.
- Individuals who moved into senior housing properties (“senior housing residents”) were **matched with a comparable non-congregate population** (“non-congregate peer group”) based on age, gender, frailty (claims-based frailty) level groups, and select chronic conditions.

Data Sources & Purpose

NIC MAP Vision Database

Identify senior housing communities using 9-digit ZIP code.

CMS Enrollment Database (EDB)

Use change-of-address data to identify senior housing move-ins.

CMS Master Beneficiary Summary File (MBSF)

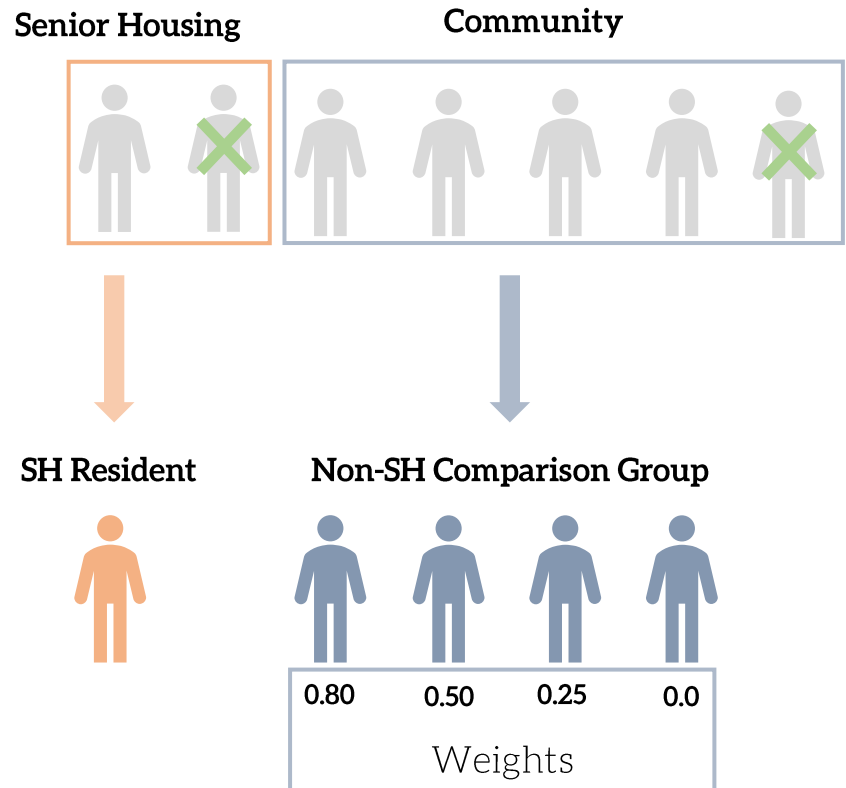
Calculate mortality and days-alive measures.

CMS Research Identifiable Files (RIF)

Calculate claims-based frailty (CFI) and utilization-based longevity measures.

Methodology to Create the Non-Congregate Comparison Group

NORC used a weighting approach to create an analogous non-congregate comparison group. The specific approach used is called “entropy balancing”.



1. Attribute Medicare beneficiaries to “senior housing” or “non-congregate peer group.”
2. Remove beneficiaries who do not meet study inclusion criteria (e.g., must live in a senior housing property zip code, not have hospice in prior year, etc.)
3. This approach assigns a weight to every member of the non-congregate peer group based on how similar they are to the senior housing group.
 - Frailty (CFI) groups
 - Demographics (e.g., age, gender)
 - Enrollment information (e.g., Duals status)
 - Select Condition groups
4. Multiply weights against each observation’s outcomes measures to form an average weighted outcome to give the most apt population comparison

Study Limitations

The study is limited to senior housing properties included in the NIC MAP Vision Database.

The study is limited to properties that had 11 or more new residents in 2017 who continued to live in that community for the duration of the study period (730 days) or until their death.

The study is limited by property type. The study includes Continuing Care Retirement Community, Independent Living, Assisted Living, and Memory Care properties and non-congregate comparison groups. The study does not include Nursing Care properties or a non-congregate comparison group for this population.

Full list of medications included in Anti-psychotic Rx measure (1/2):

Abilify

Abilify Discmelt

Abilify Maintena

Abilify Maintena Prefilled Syringe

Adasuve

Aripiprazole

Aristada

ChlorproMAZINE Hydrochloride

CloZAPine

Clozaril

Compazine

Compro

Fanapt

FazaClo

FluPHENAZine Decanoate

FluPHENAZine Hydrochloride

Geodon

Haldol

Haldol Decanoate

Haloperidol

Haloperidol Decanoate

Haloperidol Lactate

Invega

Invega Sustenna

Invega Trinza

Latuda

Loxapine Succinate

Loxitane

Molindone Hydrochloride

Olanzapine

Full list of medications included in Anti-psychotic Rx measure (2/2):

Orap

Paliperidone ER

Perphenazine

Pimozide

Prochlorperazine

Prochlorperazine Edisylate

Prochlorperazine Maleate

QUetiapine Fumarate ER

Quetiapine Fumarate

Rexulti

RisperDAL

RisperDAL Consta

RisperDAL M-Tab

RisperiDONE

SEROquel

SEROquel XR

Saphris

Saphris Black Cherry

Thioridazine Hydrochloride

Thiothixene

Trifluoperazine Hydrochloride

Versacloz

Vraylar

Ziprasidone Hydrochloride

ZyPREXA

ZyPREXA Relprevv

ZyPREXA Zydis

Fluoxetine Hydrochloride-Olanzapine

Perphenazine-Amitriptyline

Symbyax



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