National Health Statistics Reports

Number 148 ■ December 04, 2020

# Characteristics of Residential Care Communities by Percentage of Resident Population Diagnosed With Dementia: United States, 2016

by Manisha Sengupta, Ph.D., and Christine Caffrey, Ph.D.

## Abstract

*Introduction*—Increasingly, residential care communities (RCCs) are becoming a source of care for older adults with Alzheimer's disease and other dementias. Nationally in 2016, 41.9% of RCC residents were diagnosed with dementia. This report examines selected characteristics of RCCs and characteristics of their residents by the prevalence of Alzheimer's disease and other dementias.

*Methods*—Data in this report are from the RCC survey component of the 2016 wave of the biennial National Study of Long-Term Care Providers (NSLTCP), conducted by the National Center for Health Statistics. RCCs were grouped into three categories indicating prevalence of Alzheimer's disease and other dementias in their communities: RCCs with less than 25% of their residents diagnosed with dementia, RCCs with 25%–75% of their residents diagnosed with dementia, and RCCs with more than 75% of their residents diagnosed with dementia. RCC characteristics included bed size, metropolitan statistical area location, provision of mental health services, and staff hours per resident day. Resident characteristics included selected conditions and need for assistance with activities of daily living.

*Results*—Approximately one-quarter of RCCs (25.3%) had more than 75% of their residents diagnosed with Alzheimer's disease and other dementias. More RCCs with over 75% of their residents diagnosed with dementia were in metropolitan statistical areas (90.5%) compared with RCCs with 25%–75% (81.4%) and less than 25% of their residents diagnosed with dementia (76.4%). Aide and activities staff hours per resident day were higher in RCCs with more than 75% of their residents diagnosed with dementia compared with the other dementia prevalence categories. The prevalence of depression and the need for assistance with activities of daily living were higher in RCCs with more than 75% of the residents diagnosed with dementia compared with the other dementia prevalence categories.

**Keywords:** assisted living • long-term services and supports • Alzheimer's disease • National Study of Long-Term Care Providers

## Introduction

Assisted living and similar residential care communities (RCCs) provide care to older adults and younger adults with disabilities who cannot live independently in their homes (1). On any given day in 2016, an estimated 811,500 residents lived in 28,900 RCCs. Increasingly, RCCs are becoming an important source of care for older adults with Alzheimer's disease and other dementias (2). Nationally in 2016, 41.9% of RCC residents were diagnosed with dementia (3).

RCCs are varied in the organizational characteristics and the services they provide (1). More than one-half (60.9%) of all RCCs have 4–25 beds and a majority are in metropolitan statistical area settings (82.5%) (1,4). RCCs provide a host of services, including dietary, pharmacy, therapeutic, mental health, and social work services.

Along with serving residents with Alzheimer's disease and other dementias, RCCs are increasingly serving residents with multiple and complex needs (1). In 2016, 30.9% of RCC residents had depression, 34.3% had heart disease, and 18.1% had diabetes (1). While all residents in RCCs may need services and supports, residents

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Health Statistics

*NCHS reports can be downloaded from: https://www.cdc.gov/nchs/products/index.htm.*

with dementia could have a greater need for mental health services and supports, as shown in community-based studies (5,6). This report examines the selected characteristics of RCCs and characteristics of their residents by prevalence of Alzheimer's disease and other dementias.

# Methods

## Data source

Data in this report are from the RCC survey component of the 2016 wave of the biennial National Study of Long-Term Care Providers (NSLTCP), conducted by the National Center for Health Statistics (NCHS). To be eligible for the study, a RCC must (a) have been regulated by the state to provide room and board with at least two meals a day, around-the-clock onsite supervision, and help with personal care such as bathing and dressing or health-related services such as medication management; (b) have had four or more licensed, certified, or registered beds; (c) have had at least one resident currently living in the community at the time of the survey; and (d) have been serving a predominantly adult population. The survey used a combination of probability sampling and taking a census.

Respondents to the survey were RCC administrators, directors, or otherwise knowledgeable staff. The survey was administered by mail, web, and computer-assisted telephone interviewing follow-up for nonrespondents. The questionnaire was completed for 4,578 eligible RCCs, for a weighted response rate of 50.7%. For additional information about NSLTCP and RCC survey methodology and variable construction, see the 2016 NSLTCP Survey Documentation (7,8). The 2016 NSLTCP data are accessible for restricted use only. Information on how to access the data is available from: https://www.cdc.gov/nchs/nsltcp/nsltcp_rdc.htm.

## Measures

Respondents were asked how many of their current residents had been diagnosed with Alzheimer's disease and other dementias. Using the percentage of residents diagnosed with Alzheimer's disease and other dementias, RCCs were grouped into three categories indicating prevalence: RCCs with less than 25% of their residents diagnosed with dementia, RCCs with 25%–75% of their residents diagnosed with dementia, and RCCs with more than 75% of their residents diagnosed with dementia. Approximately 10% of RCCs had no residents with dementia. These are included with the less than 25% category. More detailed information about the measures in this report can be found in the Technical Notes.

## Data analysis

Estimates of selected characteristics by the percentage of prevalence of dementia in the resident population in RCCs for 2016 are presented. Analyses took into account the complex survey design of the 2016 NSLTCP. Weights were used to adjust for unknown eligibility status of nonresponding RCCs and for nonresponse bias. Results are nationally representative. See the 2016 NSLTCP documentation for details about the weighting methods (7,8).

Cases with missing data were excluded on a variable-by-variable basis. The weighted percentage of cases with missing data for variables ranged from 0.4% for ownership to 0.7 % for depression, diabetes, and heart disease. Data analyses were performed using the following statistical packages: SAS, version 9.3 (SAS Institute, Cary, N.C.) (9); SAS-callable SUDAAN, version 11.0.0 (RTI International, Research Triangle, N.C.) (10); and Stata/SE, version 14 (StataCorp, College Station, T.X.) (11).

Statements of differences among subgroups were based on two-tailed *t* tests with significance at the $p < 0.05$ level. A weighted least-squares regression method was used to test the significance of linear trends. Statistically significant differences and trends are indicated in the figures and discussed in the Results section.

# Results

## Organizational characteristics size

- Across all RCCs, 28.9% had less than 25% of their residents diagnosed with dementia, 45.8% had 25%–75% of residents diagnosed with dementia, and 25.3% had more than 75% of residents diagnosed with dementia (data not shown).
- For all three dementia prevalence categories, bed size of 4–25 beds was most common and was highest among RCCs with more than 75% of residents diagnosed with dementia (77.5%) (Figure 1).
- Bed size of 26–50 (15.6%) was higher among RCCs with less than 25% of their residents diagnosed with dementia compared with more than 75% (11.0%). A bed size of 26–50 was also higher among RCCs with 25%–75% of residents diagnosed with dementia, compared with more than 75% of residents diagnosed with dementia but the observed difference was not significant.
- Bed size of more than 50 was higher among RCCs with less than 25% (23.2%) and 25%–75% (28.0%) of residents with RCCs with more than 75% (11.6%) of residents diagnosed with dementia.

## Metropolitan statistical area

- The percentage of RCCs in metropolitan statistical areas increased significantly from 76.4% in RCCs with less than 25% of residents diagnosed with dementia, to 81.4% in RCCs with 25%–75%, and 90.5% of RCCs with more than 75% of their residents diagnosed with dementia (Figure 2).
- The percentage of RCCs in nonmetropolitan statistical areas decreased with increasing resident population diagnosed with dementia, from 23.6% (less than 25%), to 18.6% (25%–75%), to 9.5% (more than 75%).

7. National Center for Health Statistics. 2016 National Study of Long-Term Care Providers: Survey methodology for the adult day services center and residential care community components. Hyattsville, MD. 2017. Available from: https://www.cdc.gov/nchs/data/nsltcp/NSLTCP_2016_survey_methodology_documentation.pdf.
8. National Center for Health Statistics. 2016 National Study of Long-Term Care Providers (NSLTCP) Residential Care Community Survey restricted data file: Data description and usage (readme). Hyattsville, MD. 2017. Available from: https://www.cdc.gov/nchs/data/nsltcp/NSLTCP_2016_RCC_Readme_RDC.pdf.
9. SAS Institute. SAS Statistical Software (Release 9.3) [computer software]. 2011.
10. RTI International. SAS-callable SUDAAN Statistical Software (Release 11) [computer software]. 2012.
11. StataCorp. Stata Statistical Software (Release 14) [computer software]. 2013.

# Technical Notes

## Definitions of variables

*Assistance with selected activities of daily living*—Refers to residents needing any help or supervision from another person, or use of assistive devices, with up to five limitations in activities of daily living (bathing, dressing, transferring in and out of a bed or chair, toileting, and eating) that reflect a resident's capacity for self-care.

*Community bed size*—Residential care communities (RCCs) were grouped based on the number of licensed, registered, or certified RCC beds (both occupied and unoccupied): 4–25 beds, 26–50 beds, and more than 50 beds.

*FTE*—Full-time equivalent is a measure of the workload of an employee working on a full-time basis.

*Heart disease*—Includes congestive heart failure, coronary or ischemic heart disease, heart attack, or stroke.

*Hours per resident per day*—Refers to the number of hours providing care for one resident per day for a given staff type. To calculate, the number of FTEs for a given staff was converted into hours by multiplying by 35 hours for the staff type, and dividing the total number of hours for the staff type by the number of current residents in the RCC, and by 7 days.

*Mental health services provision*—Refers to whether RCCs provided mental health services. These services target residents' mental, emotional, psychological, or psychiatric well-being, and may include diagnosing, describing, evaluating, and treating mental conditions. Mental health services could be provided by paid RCC employees, by outside service providers through arrangement, by referral, or all three.

*Metropolitan statistical area*—Geographic entities delineated by the Office of Management and Budget (OMB) for use by federal statistical agencies in collecting, tabulating, and publishing federal statistics. A metropolitan area contains a core urban area of 50,000 or more population, and a nonmetropolitan area contains an urban core of at least 10,000 (but less than 50,000) population.

*Residential care communities (RCCs)*—Includes assisted living communities and other RCCs (e.g., personal care homes, adult care homes, board care homes, or adult foster care) that meet the study eligibility criteria described in the Methods section.

**U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES**

Centers for Disease Control and Prevention
National Center for Health Statistics
3311 Toledo Road, Room 4551, MS P08
Hyattsville, MD 20782–2064





For more NCHS NHSRs, visit:
https://www.cdc.gov/nchs/products/nhsr.htm.

National Health Statistics Reports ■ Number 148 ■ December 04, 2020

**Suggested citation**

Sengupta M, Caffrey C. Characteristics of residential care communities by percentage of resident population diagnosed with dementia: United States, 2016. National Health Statistics Reports; no 148. Hyattsville, MD: National Center for Health Statistics. 2020.