GSA 2025

Personal Care Aide Staffing in U.S. Residential Care Communities:

The Role of Aide Training Hours, Training Reimbursement, and Organizational Structures

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Disclosures

Conflict of interest statement:

The authors have no conflicts of interest.

Funding:

The research reported/outlined here was supported by the Department of Veterans Affairs, Veterans Health Administration, VISN 1 Career Development Award to Katherine Kennedy.

Disclaimer:

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Data availability:

The data used in this study is publicly available.

Introduction

Personal Care Aides (PCAs) in Residential Care Communities (RCCs)

- **RCC** (or **Assisted Living Community**) is a residential long-term care setting
  - with a home-like environment,
  - providing meals,
  - 24/7 supervision, and
  - assistance with daily activities (Zimmerman et al., 2022).
- In 2023, there were **34,600 RCCs** employing **~700,000 personal care aides (PCAs)** who support over **1.3 million older residents** (Jutkowitz et al., 2025; PHI, 2024).
- **PCAs** (or **Direct Care Workers**) spend **3h 48min per resident per day**, and provide care for:
  - 75% of residents needing help with physical functioning (Sengupta et al., 2025),
  - 70% of residents with cognitive impairments; 42% diagnosed with dementia (AHCA & NCAL, 2024).
- PCAs make up **75% of the workforce in RCCs** (Sengupta et al., 2025), and the demand is rising – **8.9 million projected job openings** in the next decade (PHI, 2024).
- PCAs are not licensed health professionals; training is governed by state regulations, which vary widely (U.S. Bureau of Labor Statistics, 2025; Carder et al., 2015).

Research Gap, Purpose & Hypotheses

Gap

Enhancing the RCC workforce through better training, increased staffing and wages, and staffing standards are recommended (Zimmerman et al 2024).

However, evaluation is limited by a lack of comprehensive data on training provision and impact (Travers Atlizer et al., 2025).

Little is known about how initial/onging training, training reimbursement, and organizational factors relate with staffing challenges (PHI, 2024; Kennedy et al., 2021, 2023)

Purpose

To explore how PCA training hours, reimbursement, and RCC characteristics relate to staffing level, measured as aide hours per resident day (HPRD).

Hypotheses

H1: More than 20 hours of initial training will be associated with higher HPRD.

H2: More than 10 hours of ongoing education will be associated with higher HPRD.

H3: Reimbursement for training will be associated with higher HPRD.

H4: Nonprofit RCCs will have higher HPRD.

H5: Higher Medicaid participation will be associated with lower HPRD.

Methods

Data Source

- **2022 National Post-acute and Long-term Care Study (NPALS)**
- Publicly available, biennial national survey including 50 states and DC
- Overseen by the National Center for Health Statistics
- The 2022 NPALS was conducted between September 2022 and March 2023

Setting and Sample

- Including RCCs regulated by a state & had at least four beds
- Excluding RCCs serving exclusively severely mentally ill or intellectually or developmentally disabled populations
- N = 518 RCCs (only those with aides and complete data)

Variables

Training Variables
Initial training (>60, (20-60], ≤20)
Continuous training (>20, (10-20], ≤10)
Reimbursement (Yes/No)

Organizational Structure
Nonprofit (Yes/No)
Size (< 50 beds, ≥ 50 beds)
Occupancy rate (>85%, ≤85%)
Chain (Yes/No)
% of current residents paid by Medicaid (None, Less than 25%, 25% or more)
Contract staff (Yes/No)
Dementia wing (Yes/No)

Outcome Variable
Aide hours per resident per day (HPRD)

Results

Descriptive Statistics of Personal Care Aide in U.S. Residential Care Communities (N=518)

		N – unweighted	Weighted Percent	s.e. of percent weighted
	Training			
H1	Training hours prior to providing care			
	20 or less hours	211	29.6	5
	21-60 hours	249	50	6.5
	More than 60 hours	58	20.3	6.4
H2	Continuing education or in-service training			
	10 or less hours	90	13.4	3.1
	11-20 hours	327	70.4	5.3
	More than 20 hours	101	16.2	4.4
H3	Reimburse/pay for initial training	443	80.1	5.8
	Structure			
H4	Non-profit/Government	167	20.1	3.5
	Part of a chain	364	63.2	6.5
	50 or more beds	362	36.6	4.9
	More than 85% occupancy rate	162	49.3	6.6
	Dementia wing / only residents with dementia	265	27.1	3.7
H5	Participation in Medicaid			
	No, Does not participate	294	48.8	6.5
	Yes, Medicaid paid for 0 residents	96	19.6	5
	Yes, Medicaid paid less than 25% of residents	66	12.4	4.1
	Yes, Medicaid paid 25% or more of residents	62	19.2	6.3
	Use contract staff	149	32.5	6.6
	Personal care aide hours per resident day (DV)	518	3.88	0.5

Results

Weighted Regression Model Estimates for Personal Care Aide Hours Per Resident Day (N=518)

	Variable	Estimate	s.e.	p-value
	Intercept	4.14	.52	<.001
H1	Training prior to start (Ref: 20 hours or less)			
	21-60 hours	-.04	.43	.925
	More than 60 hours	-1.36	.58	.02
H2	Continuing education (Ref: 10 hours or less)			
	11-20 hours	-.05	.39	.906
	More than 20 hours	-.49	.44	.274
H3	Reimbursement for initial training	.84	.36	.019
H4	Non-profit/Government (Ref= For Profit)	-.20	.27	.473
H5	Medicaid (Ref=Not authorized)			
	0% residents in last moth	-.34	.55	.540
	Less than 25% residents in last month	-1.19	.57	.037
	More than 25% residents in last month	-2.01	.51	<.001
	Chain ownership	.64	.43	.142
	50 or more beds	-2.14	.30	<.001
	Greater than 85% occupancy rate	.82	.34	.018
	Dementia-focus	-.10	.38	.786
	Use contract staff	.58	.70	.404

Discussion

Training Reimbursement and Staffing Level

- RCCs reimbursing aides had significantly higher staffing levels → Consistent with literature in supporting **investment in direct care training** (Carder et al., 2023; Scales, 2022).

Training Duration and Staffing Level

- No significant association between 21-60 hrs of initial training and staffing level versus those with ≤ 20 hrs.
- No significant association between >10 hrs of ongoing training and staffing level versus those with ≤ 10 hrs.
  - **Quality or format of training** may matter more than duration (Kemeny & Mabry, 2015; Carder et al., 2023)
- However, RCCs with >60 hrs of initial training had lower staffing than those with ≤20 hrs
  - Staffing issues could be a barrier to training, such as **competing demands on PCAs' time and capacity** (Beeber et al., 2010; Surr et al., 2020)
  - May delay onboarding and resident care → Training time may trade off with staffing availability (MacDonald & Walton, 2007)

Medicaid Coverage and Staffing Level

- RCCs with ≥25% Medicaid residents had significantly lower staffing → **Medicaid rates may limit staffing capacity** (Hawk et al., 2022; Cornell et al., 2023)

Implications

Practice Implications

- Reimbursement for training may help maintain staffing
- Balance training and staffing needs
- Digital microlearning and flexible formats could enhance training access
- Large RCCs and high Medicaid participation may need targeted support

Policy Implications

- States should consider Medicaid rate reform to improve staffing
- Training reimbursement programs could be scaled nationally

Research Implications

- Need for longitudinal data (e.g., NDWS, future NPALS waves) to explore:
  - Training content quality
  - Incentives for retention
  - Organizational characteristics and staffing outcomes
- Qualitative studies to understand aide perspectives

Limitations and Strengths

Limitations

- Cross-sectional approach cannot infer causal relationship.
- Categorical variables (e.g., training hours, % of Medicaid residents, capacity, occupancy rate) may mask non-linear patterns.

Strengths

- The first to examine relationships in RCCs between aide training hours, training reimbursement, and organizational structures on aide staffing levels.
- Highlight the existing implication of investing in the training of staff on the care quality and staff turnover rates.

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THANK YOU!

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