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Rural-Urban Differences in PACE Organization and Enrollee Characteristics

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Key Findings

- The Program of All-Inclusive Care for the Elderly (PACE) supports older adults and people with disabilities (age 55 and older) with comprehensive services to help participants remain in the community when possible.
- Rural PACE organizations serve fewer enrollees, on average, than urban PACE organizations (159 vs. 495, p<0.001).
- Enrollees in rural PACE organizations are more likely than those in urban PACE organizations to be younger than age 65 (12.9% vs. 9.3%, p<0.01) and less likely to be age 85 or older (18.5% vs. 22.2%, p<0.05).

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Purpose

The Program of All-Inclusive Care for the Elderly (PACE) operates in the majority of states and numerous rural areas. Despite well-documented differences in population socio-demographic characteristics between rural and urban areas, as well as unique challenges and strengths related to providing long-term services and supports in rural areas, little is known about how PACE enrollee characteristics vary between rural and urban areas. This brief addresses that gap.

Background and Policy Context

As the U.S. population ages, there is an increasingly urgent need for innovation in the long-term services and supports (LTSS) space to meet the health needs and personal preferences of older adults with complex care requirements. LTSS encompasses a broad range of services to help people with disabilities, functional limitations, and chronic health conditions, including assistance with activities of daily living, health care, and personal care. The Program of All-Inclusive Care for the Elderly (PACE) is an example of such innovation, supporting older adults and people with disabilities (age 55 and older) with wrap-around services to help participants remain in the community when possible.[1,2] This includes providing a suite of medical and social services, including medical care, transportation, meal services, respite care, and home care to participants. In doing so, PACE reflects the preference of most older adults to age in place; that is, remain in their home and community even if their health and functional status changes.[3]

PACE began in the 1970s and has been funded through waivers from the Centers for Medicare & Medicaid Services (CMS) since 1990; CMS was known as the Health Care Financing Administration until July, 2001.[1,4] Today, 150 PACE organizations operate across 33 states and the District of Columbia. While the majority of those PACE organizations are headquartered in urban areas, there has been an effort to increase the availability of PACE into rural areas since the passage of the Rural PACE Pilot Grant Program through the 2005 Deficit Reduction Act.[5]

The growth of PACE in rural areas reflects the needs of

rural populations, which are older, on average, than urban populations, and have higher rates of underlying health conditions and disabilities.[6,7] Further, rural areas have unique challenges to accessing LTSS, including workforce shortages and declining availability of institutional long-term care.[8–13] Yet, little is known about whether, and how, rural and urban PACE organizations and enrollees differ. This policy brief addresses this gap, providing information that can inform policy and programming for PACE going forward.

Approach

Data for this analysis come from the National PACE Association (NPA), which collects data from PACE organizations. NPA provided summary data on PACE organizational and enrollee characteristics as of December 2022, including the location of each organizational headquarters. We classified PACE organizations in this analysis into those that are headquartered in rural counties vs. urban counties, using the Federal Office of Rural Health Policy (FORHP) definition of rural. FORHP relies on a broad definition of rural, encompassing U.S. Census, Office of Management and Budget, and Rural-Urban Commuting Area codes in order to capture the broad range of rurality across the U.S.[14,15]

For this analysis, we generated the mean, median, and interquartile range (IQR) for a variety of organizational and enrollee characteristics, including number of enrollees per program, eligibility and insurance coverage, years enrolled in PACE, age, and gender. We calculated p-values using two sample t-tests to detect statistically significant differences between enrollees in rural- and urban-headquartered PACE organizations. Because the data did not include enrollee geographic variables, all analyses are based on the location of the PACE program in which the enrollee participates in, not the enrollee's residence. Therefore, some enrollees may live in a rural area but are served by an urban-headquartered PACE organization, or vice versa.

Results

PACE organization and enrollee characteristics are shown in Table 1. Rural-headquartered PACE organizations had significantly fewer enrollees (mean: 159 vs. 495, $p<0.001$), but PACE enrollees at rural- and urban-headquarters sites were similar in terms of insurance coverage and eligibility. In both cases, approximately 90% of all enrollees were dual Medicare and Medicaid eligible.

Urban-headquartered PACE enrollees had been in the program an average of one year longer than rural-headquartered PACE enrollees (4.2 years vs. 3.2 years), although the difference was not statistically significant ($p<0.066$). Rural-headquartered PACE enrollees were significantly more likely to be under 65 than urban PACE enrollees (12.9% vs. 9.3%, $p<0.01$) and less likely to be 85 and older (18.5% vs. 22.4%, $p<0.05$). Approximately two-thirds of all enrollees were female, regardless of headquarter location.

Discussion and Implications

Overall, we found that rural-headquartered PACE organizations are smaller (have fewer enrollees) than urban-headquartered PACE organizations. This may pose different challenges; for urban-headquartered PACE organizations, it means serving a larger population, some of whom may be rural residents. For rural-headquartered PACE organizations, it means less funding coming in (because of the nature of per capita funding), which may limit overall capacity for staffing, infrastructure, marketing, and programming. In particular, the requirement for PACE organizations to have a full interdisciplinary team may be more challenging to achieve for organizations with fewer enrollees. Further, rural PACE organizations may serve a wider geographic area by nature of their rural setting, which could create additional staffing and infrastructure capacity constraints, especially related to transportation.

Most PACE enrollees in rural- and urban-headquartered PACE organizations are dual eligible, comporting with program eligibility and funding through both Medicaid and Medicare for PACE services,[1] and PACE enrollees are more likely to be female in both rural and urban-headquartered locations. However, PACE enrollees in rural-headquartered PACE organizations are, on average, younger than enrollees in urban-headquartered PACE organizations. This is a counterintuitive finding, given that rural populations, on a whole,

Table 1. PACE Organization and Enrollee Characteristics by Rural and Urban Location

	Rural Headquarters (n=18)		Urban Headquarters (n=137)		
Measure	**Mean**	**Median (IQR)**	**Mean**	**Median (IQR)**	**P-value**
Enrollment (n)	159	121 (90,209)	495	287 (160,536)	**<0.001**
Eligibility					
Dual eligible	90.4	91.2 (87.4, 93.5)	87.9	92.2 (86.4, 94.9)	0.156
Medicaid only	9.0	8.1 (4.3, 11.3)	11.6	7.6 (4.9, 13.6)	0.142
Medicare only	0.5	0 (0, 0.7)	0.7	0 (0, 0.6)	0.340
Veterans Affairs	0.1	0 (0, 0)	0.1	0 (0, 0)	0.916
Other	0.0	0 (0, 0)	0.1	0 (0, 0)	0.125
Average years in PACE	3.2	3.0 (2.6, 4.6)	4.2	3.5 (2.7, 4.2)	0.066
Missing (n)	6		51		
Age (%)					
55-64	12.9	12.5 (10.1, 14.0)	9.3	8.8 (6.0, 11.5)	0.003
65-74	33.8	33.6 (30.3, 38.7)	35.3	34.9 (30.3, 41.0)	0.311
75-84	35.6	34.6 (33.1, 38.1)	33.5	34.0 (30.6, 36.6)	0.101
85+	18.5	18.4 (15.7, 22.2)	22.4	22.2 (16.0, 27.2)	0.027
Gender					0.374
Female	67.4	66.5 (65.2, 71.0)	66.0	66.3 (62.6, 70.6)	
Male	32.6	33.5 (29.0, 34.8)	34.0	33.8 (29.4, 37.4)	

P-values are two sample t-tests.

are older.[6,16] This finding may be reflective of PACE's ability to serve complex needs for younger populations in rural areas where fewer other options are available and could be an indication of PACE filling a critical service gap.

PACE enrollees spend an average of 3.2 years in the program in rural-headquartered PACE organizations compared with 4.2 year in urban-headquartered PACE organizations, but this difference in median duration was not statistically significant (p=0.07). However, the interquartile range (IQR) showed a similar lower quartile (2.6 vs. 2.7) for rural- and urban-headquartered PACE organizations, but a higher upper quartile for rural- than urban-headquartered PACE organizations (4.6 vs. 4.2). Altogether, this suggests that there is more variability in the length of time participants spend in rural-headquartered PACE organizations. More research is needed to understand the factors impacting enrollment duration and program participation between rural and urban locations.

Conclusion

This policy brief provided an overview of enrollee characteristics and program participation between rural- and urban-headquartered PACE organizations. While they differed in number and age of participants, they were similar in terms of enrollee program eligibility, participation duration, and gender. These findings provide helpful context on how PACE differs (or not) based on rurality, while suggesting areas for future research, including on how PACE enrollee experience and participation varies by rurality, as well as how PACE organizations in rural areas meet the needs of their participants despite lower enrollment numbers.

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References

1. McNabney MK, Fitzgerald P, Pedulla J, Phifer M, Nash M, Kinosian B. The Program of All-Inclusive Care for the Elderly: An Update after 25 Years of Permanent Provider Status. *J Am Med Dir Assoc*. 2022;23(12). doi:10.1016/j.jamda.2022.09.004

2. Gonzalez L. A Focus on the Program of All-Inclusive Care for the Elderly (PACE). *J Aging Soc Policy*. 2017;29(5). doi:10.1080/08959420.2017.1281092

3. Henning-Smith C, Mulcahy J, Lahr M, Tanem J. Preferences for Long-Term Care Arrangements among Rural and Urban Older Adults. Minneapolis, MN; 2021. https://rhrc.umn.edu/publication/preferences-for-long-term-care-arrangements-among-rural-and-urban-older-adults/. Accessed May 21, 2021.

4. National PACE Association. PACE History. https://www.npaonline.org/starting-expanding-a-pace-program/understanding-the-pace-model-of-care/pace-history. Published 2024. Accessed August 23, 2024.

5. Bloom S. The History and Growth of the Rural PACE Center: Support for rural aging in place: charting the success of rural PACE centers. *Generations*. 2019;43(2):84-87. http://ezproxy.library.arizona.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=138019388&site=ehost-live.

6. Tuttle C, Tanem J, Lahr M, Schroeder J, Tuttle M, Henning-Smith C. *Rural-Urban Differences among Older Adults*. Minneapolis, MN; 2020. https://rhrc.umn.edu/wp-content/uploads/2020/08/Rural-Urban-Older-Adults_Chartbook_Final_8.25.20.pdf. Accessed September 16, 2020.

7. Day JC, Hays D, Smith A. *A Glance at the Age Structure and Labor Force Participation of Rural America.*; 2016. https://www.census.gov/newsroom/blogs/random-samplings/2016/12/a_glance_at_the_age.html. Accessed February 12, 2018.

8. Dill J, Henning-Smith C, Zhu R, Vomacka E. Who Will Care for Rural Older Adults? Measuring the Direct Care Workforce in Rural Areas. *J Appl Gerontol.* 2023;Epub ahead of print.

9. Sharma H, Bin Abdul Baten R, Ullrich F, MacKinney AC, Mueller KJ. Nursing home closures and access to post-acute care and long-term care services in rural areas. *J Rural Heal.* 2024;40(3). doi:10.1111/jrh.12822

10. Henning-Smith C, Casey M, Prasad S, Kozhimannil K. *Medical Barriers to Nursing Home Care for Rural Residents | The University of Minnesota Rural Health Research Center.* Minneapolis; 2017.

11. Henning-Smith C, Kozhimannil KB, Casey MM, Prasad S. Beyond Clinical Complexity: Nonmedical Barriers to Nursing Home Care for Rural Residents. *J Aging Soc Policy*. 2018;30(2):109-126. doi:10.1080/08959420.2018.1430413

12. Henning-Smith C, Cross D, Rahman A. Challenges to Admitting Residents: Perspectives from Rural Nursing Home Administrators and Staff. *Inq (United States)*. 2021;58. doi:10.1177/00469580211005191

13. Henning-Smith C, Kozhimannil K, Prasad S. Barriers to Nursing Home Care for Nonelderly Rural Residents. *J Appl Gerontol.* December 2017:073346481774677. doi:10.1177/0733464817746772

14. Bennett KJ, Borders TF, Holmes GM, Kozhimannil KB, Ziller E. What Is Rural? Challenges And Implications Of Definitions That Inadequately Encompass Rural People And Places. *Health Aff (Millwood)*. 2019;38(12):1985-1992. doi:10.1377/hlthaff.2019.00910

15. Health Resources & Services Administration. Defining Rural Population. https://www.hrsa.gov/rural-health/about-us/what-is-rural. Published January 2024. Accessed August 23, 2024.

16. Davis JC, Rupasingha A, Cromartie J, Sanders A. *Rural America at a Glance: 2022 Edition*. Washington, DC; 2022.

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