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Research Letter

Medical and Mental Health Care Challenges in Nursing Homes, Assisted Living, and Programs of All-Inclusive Care for the Elderly (PACE) During COVID-19

Much has been written about COVID-19 in nursing homes (NHs),[1] and some has been written on assisted living (AL)[2]; however, virtually no research has addressed its impact in community-based long-term care programs such as the Program of All-Inclusive Care for the Elderly (PACE). Because AL residents have many of the same morbidities as NH residents,[3] and because PACE participants are required to be NH eligible,[4] a comparative understanding of the impact of COVID-19 across settings is overdue and can inform the ongoing evolution of models of long-term care. This research uses statewide data to examine experiences regarding medical and mental health care in NHs, AL, and PACE programs.

Methods

There are 12 PACE programs in North Carolina, serving 37 of the 100 counties. All NC PACE programs and NHs were eligible to participate, as were AL communities that had at least 35 licensed beds (the national average).[5] The NH and AL community closest to each PACE program was invited to participate until 12 of each were recruited. Administrators participated in a Zoom interview, received $50 for their time, and provided consent. The study was determined to be exempt by the Institutional Review Board of The University of North Carolina at Chapel Hill.

Data were primarily qualitative but also included a small number of close-ended questions; the quantitative data related to medical and mental health care are shown in Table 1. Interviews were conducted December 2020–January 2021, and questions referred to the entirety of the COVID-19 experience during 2020. Results were summarized overall and by setting type using univariate statistics. Given the small samples, differences by type were tested using Kruskal-Wallis tests with ties (continuous variables) or Fisher exact tests with the Mehta-Patel extension (nominal

variables). For comparisons demonstrating a $P \leq .15$ difference, further post hoc individual tests were conducted using Dunn's test. Data were analyzed using Stata, version 16.1.

Results

Administrators from all 12 PACE organizations participated; participation rates for NHs and AL communities were 67% and 71% to recruit 12 of each type, respectively. On average, the NHs and AL communities were 2.9 miles from their matched PACE site. Of the 36 sites, almost all had COVID-19 cases among residents and staff (33 and 35, respectively). As shown in the table, although NHs had significantly more cases than both other setting types, there were no differences by setting type in the other variables under study. Most administrators reported challenges providing on-site medical and mental health care (69% and 78%, respectively), and telemedicine was used for 29% and 42% of visits, respectively, with related satisfaction between "somewhat" and "moderately." Exemplar quotes were "We had a big hurdle . . . with a lot of outside practices wanting to see the residents in their offices. And unfortunately, when you send a resident out to a doctor's office you don't have any way to control the situation, like what's in the waiting room or whether the family has removed the resident's mask or whether the family is wearing a mask. And because of those unknown circumstances, when the resident comes back to the building the protocol would be to isolate them again. So yeah, it caused . . . anguish," and "How crucial of a need is that appointment . . . when county numbers are increasing? Do we need to put that appointment off or is it something that is just medically absolutely necessary, and then looking on the flip side, is it an appointment that could be done virtually, so that they don't have to go off-site?" Almost all respondents (94%) felt that the pandemic permanently changed their future model of care delivery.

Discussion

Findings of more COVID-19 in NHs may relate to the higher acuity of their residents[3] and more compacted living and social spaces compared to AL and PACE.[6] Although NH administrators more often reported challenges providing medical and mental health care, no one setting reported challenges significantly more than others, and differences regarding mental health care were especially minor. These findings, the first to compare all 3 setting types, underscore that AL and PACE programs—both home-and-community based settings (HCBS)—depend on the availability of medical and mental health care for service delivery. Given that virtually all respondents recognize that their model of care delivery will change going forward, the role of medical and mental health providers in HCBS is clearly a critical component of evolving models of long-term care.

Table 1
COVID-19 and Perceptions of Medical and Mental Health Care, by Setting Type (N = 36)

	Overall (N = 36)	Nursing Home (n = 12)	Assisted Living (n = 12)	PACE (n = 12)	P Value
	Mean (SD) or n (%)	Mean (SD) or n (%)	Mean (SD) or n (%)	Mean (SD) or n (%)	
COVID-19 cases (per 100 PACE participants or 100 beds)					
Positive participant/resident cases	21.6 (23.7)	35.7 (29.6)	15.8 (23.8)	13.4 (3.3)	.046*
Positive staff cases	11.2 (11.5)	19.4 (13.0)	9.9 (10.9)	4.3 (2.4)	.009†
Medical and mental health care provision					
Had challenges having medical providers visit on-site	25 (69.4)	10 (83.3)	8 (66.7)	7 (58.3)	.54
Had challenges having mental health care providers visit on-site	28 (77.8)	10 (83.3)	9 (75.0)	9 (75.0)	>.99
Percentage of medical care by telemedicine (past month)‡	25.9 (28.9)	25.5 (35.5)	29.5 (32.3)	22.3 (17.5)	.54
Satisfaction with telemedicine for medical care§	2.8 (0.9)	2.6 (1.1)	2.9 (1.0)	2.8 (0.8)	.69
Percentage of mental health care by telemedicine (past month)	35.6 (41.8)	37.5 (47.1)	25.8 (42.9)	44.2 (35.6)	.36
Satisfaction with telemedicine for mental health care§	2.8 (1.1)	3.0 (1.4)	3.3 (1.2)	2.4 (0.7)	.15
Impact on future care					
Pandemic permanently changed model of care delivery	34 (94.4)	12 (100.0)	11 (91.7)	11 (91.7)	>.99

*P values: NH vs AL = .009, NH vs PACE = .036, PACE vs AL = .28.
†P values: NH vs AL = .029, NH vs PACE = .001, PACE vs AL = .13.
‡One nursing home respondent reported "don't know" and is not included in the data.
§Score is based on 1 = not at all/a little; 2 = somewhat; 3 = moderately; 4 = very much; total mean score ranges from 1.0 to 4.0.

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