

## Residency Redesign to Accommodate Trends in Geriatrics: An RC-FM Variance to Establish a Patient-centered Medical Home in an Assisted Living Facility

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**BACKGROUND AND OBJECTIVES:** Family physicians are poised to provide medical care to older adults residing in the broad range of facilities now currently available to this population. To date, geriatric training has focused on skilled nursing facilities, particularly for the required Review Committee for Family Medicine (RC-FM) longitudinal experience. This article describes the development and evaluation of an RC-FM approved assisted living curricular variance to the current nursing home longitudinal experience with emphasis on the principles of the Patient-centered Medical Home (PCMH) model and an interprofessional team concept.

**METHODS:** Second- and third-year family medicine residents were assigned as the primary care providers for two continuity patients in an assisted living facility. Patients were seen bimonthly within the construct of an interprofessional geriatric team. During the 2-year curricular variance, assessment of residents' skills, knowledge, and attitudes of the residents was conducted before and after the experience through direct skills observations, written testing, and focus groups.

**RESULTS:** Of 18 geriatric competencies evaluated by direct observation, there was statistically significant improvement in seven areas. The composite score for these competencies was statistically significant. The attitudinal scores were initially high and remained high throughout the 2-year period. Knowledge testing was not significantly different before or after the experience.

**CONCLUSIONS:** The assisted living facility is a viable clinical educational setting to develop geriatric competencies within a PCMH model. Providing geriatric clinical opportunities across the continuum of care can better prepare family medicine residents for future practice.

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The health care delivery landscape for the older adult has changed substantially with the expansion of home- and community-based services (HCBS) and residential living settings. No longer are older adults with chronic health conditions and functional deficits faced with relying solely on family, home health care, or nursing homes for assistance. These older patients require

longitudinal care that incorporates their biological, social, and mental health needs. The Patient-centered Medical Home (PCMH) model recommends principles of care to meet these health needs and focuses on practice organization, health information technology, quality measures, patient experience, and coordination of care.

Assisted living facilities (ALF) serve as a bridge between fully independent living and nursing home care and are one of the fastest growing residential settings. ALF provide an intermediate level of long-term care offering assistance with activities of daily living, while addressing cost containment efforts in rebalancing long-term care. HCBS are less costly than nursing homes, and this translates into cost savings.<sup>1,2</sup> In addition, to older adults, delivery of care in the home is preferable to nursing home care. Based on the population growth of persons 75 years and older, it is projected that the demand for assisted living could double by 2030.<sup>3</sup>

Primary care physicians provide half of the ambulatory visits for older patients.<sup>4</sup> Residency education must adapt to this growth and the increasing trend in HCBS by training physicians to manage chronic health conditions and address independence, functionality, and quality of life. Family physicians need to be able to lead interprofessional teams in the PCMH to provide comprehensive care to this population.<sup>4</sup>

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This project involved the implementation of a redesigned geriatric longitudinal curriculum to train residents to provide longitudinal care in an assisted living setting under an innovative variance from the Review Committee for Family Medicine (RC-FM) of the Accreditation Council for Graduate Medical Education (ACGME).

## Methods

An innovative variance was granted by the RC-FM of the ACGME to replace the required longitudinal nursing home experience with one offered in a nonprofit ALF serving older, low-income, and/or mentally disabled patients. Initially, we developed educational assessment tools and conducted orientations for faculty, residents, and ALF staff. The ALF created a dedicated clinic space, in which family medicine residents and faculty conducted three half-day clinics each month. Second- and third-year residents provided continuity and acute care for assisted living patients under the supervision of the interprofessional residency faculty team. This team included family medicine/geriatrics physicians, a clinical pharmacist, a nutritionist/gerontologist, a physician assistant, and facility staff. Study approval was obtained from the University of Utah Institutional Review Board.

A comprehensive geriatric assessment instrument (CGAI) was developed as a clinical and educational tool integrated into the electronic medical record (EMR). This multidimensional instrument was modeled after standard geriatric assessment instruments that include the domains of medical, mental, physical, and care preferences of older patients, reflecting the whole person orientation of the PCMH.<sup>5-8</sup> The Web-based nature of the CGAI reflected the focus on health information technology within the PCMH. Residents were trained in the content of the CGAI through the clinical and educational facets of the ALF experience.

A standardized direct observation tool was developed to evaluate resident performance on the CGAI. Eighteen competency areas were assessed. Faculty participated in three training sessions on administering the standardized direct observation tool. Residents were evaluated twice by direct observation and by knowledge and attitude examinations. The knowledge examination consisted of a validated true/false test, and multiple choice test questions were from the Geriatric Review Syllabus, American Geriatric Society; all evaluations were administered as a pretest and a posttest.<sup>9,10</sup> After the pretesting was completed, interactive educational discussions on geriatric topics, related to the 18 competencies, occurred prior to each clinic session.

In recognition of the need to assess the quality of care delivered within the PCMH from multiple perspectives, we developed a multi-source questionnaire for gathering quality of care input from ALF patients, family, and staff. Prior to and at specified intervals throughout this experience, a trained facilitator not involved with the program conducted focus groups with physician residents.

## Results

Seven of the 18 competencies on the standardized direct observation of CGAI showed statistically significant change between the pretests and posttests. The overall composite score demonstrated a statistically significant improvement (Table 1).

The written knowledge exams were not statistically significant in pretest-posttest testing, with residents scoring in the 50th percentile each time. The attitudinal exam was not statistically significant with the residents scoring above average at each time tested.

Focus groups were conducted four times. Prior to the experience, resident concerns focused on needing to have adequate time to see their geriatric patients. Once the experience began, the following issues emerged:

challenges of adapting to care provided in a non-medical facility, satisfaction in caring for a more highly functional patient population compared to the previous experience, and a higher level of comfort overall regarding the assisted living setting.

## Discussion

Diverse residential and health care options are available to the older adult. These emerging settings have created the opportunity to develop PCMH training sites for residents. This project investigated the ALF as a potential PCMH training site, utilizing an RC-FM variance. The three assessment tools used to evaluate this experience were direct observations of a comprehensive geriatric assessment, knowledge and attitude testing, and focus groups. The focus group discussions reflected resident interest in and positive attitude toward this ALF setting. The multi-source questionnaire responses from patients and families reflected their perception of improved access to and coordination of care.

The direct observations provided an opportunity for faculty to work directly with residents, review concepts of geriatric assessment, and provide immediate feedback. This direct observation assessment differed from a standard medical evaluation in that it focused on older patients with complex problems, emphasized functional status and quality of life, and utilized an interprofessional team of faculty as evaluators. The direct observation proved to be the most sensitive evaluation of each resident's progress. The lack of improvement in the multiple choice question examination likely reflected questions that were too difficult for residents at this stage in their training.

Four of the six ACGME competencies overlap directly with the principles of the PCMH. For example, faculty modeled the Patient Care and the Interpersonal and Communication Skills competencies by effective and respectful communication with patients, faculty, and staff

**Table 1: Residents' Competency Scores at Initial and Final Assessment**

Domain	Initial		Final		Difference	P Value
	Mean	SD	Mean	SD		
<b>Medical</b>						
Medications	7.5	0.5	8.0	0.9	0.5	.602
Nutrition and dentition	5.1	1.1	7.5	0.8	2.3	.953
Hearing	5.9	0.9	7.6	0.9	1.8	.172
Pain	5.1	0.8	6.8	0.8	1.7	.05
Bladder	5.5	1.0	8.6	0.8	3.1	.188
Bowel	4.4	1.0	7.2	1.0	2.7	.391
<b>Mental</b>						
Depression	5.3	0.9	7.5	0.9	2.2	.125
Memory	4.6	1.2	7.7	1.1	3.1	.5
Mental Status Screen	3.9	1.0	6.1	1.2	2.1	.078
<b>Physical</b>						
Outside support care	6.2	0.8	8.6	0.6	2.4	.047*
Adaptive devices	7.1	0.6	7.7	0.7	0.6	.828
Falls/fracture/osteoporosis	5.6	0.8	7.8	0.8	2.2	.016*
Activities of daily living (ADL)	5.6	0.9	8.0	0.6	2.4	.125
Instrumental activities of daily living (IADL)	3.0	0.8	6.8	0.8	3.8	.004*
Mobility/strength/balance	2.7	0.7	6.7	1.1	4	.016*
<b>Goals of care</b>						
Advance Directives	2.6	1.0	7.4	1.1	4.8	.031*
Care planning	5.3	0.6	7.7	0.6	2.3	.063
<b>Patient/provider relationship</b>						
Initial rapport	7.6	0.4	8.5	0.4	0.9	.02*
Final impression	6.3	0.5	8.1	0.5	1.9	.008*
<b>Cumulative performance score</b>	5.3	1.1	7.8	1.9	2.5	.001*

\* P value &lt;.05

All differences reflect improvements from initial to final assessment.

Ordinal scores (1–10) were assigned for each observable competency. Available scores were averaged for the residency classes of 2009 and 2010 at each timepoint. Difference from baseline was tested by Wilcoxon signed rank tests for residents with data available for both timepoints. The number of residents assessed per domain increased above the expected number (16 for the two combined residency classes) when off-cycle residents were present and decreased below the expected number due to residents who were not captured in this assessment or for assessments in which a faculty member determined that the relevant domain was not applicable.

within the physician-led interprofessional team approach that is the hallmark of the PCMH. An electronic health record served as the platform for practice-based learning and improvement by facilitating comprehensive geriatric assessment and

team-based care planning. The quality of the residents' education was enhanced by participation in presentation of geriatric topics to the interprofessional team, including geriatric syndromes, atypical presentation of disease, and functionality. In

addition, focus groups assessed patient, trainee, and staff perceptions of the quality of care delivered in this environment. The emphasis on familiarizing family medicine residents with options for appropriate placement of older adults in various long

term care settings in the context of available local, state, and national aging community resources fulfilled the Systems Based Practice competency, and reflects the coordination of care emphasized in the PCMH. Although the Medical Knowledge and Professionalism competencies are indirectly related to the PCMH, family medicine residents' professional development in leading interdisciplinary teams within this curriculum should increase their comfort in leading long-term care components of the PCMH in their own practices.

Most health care needs of patients in HCBS involve primary care. Assisted living facilities continue to increase nationally, reflecting a trend toward cost-effective community-based care. Assisted living facilities can serve as effective training sites that demonstrate key attributes of the PCMH in the care of older adults.

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