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ORIGINAL RESEARCH

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Supporting faculty development for obesity education: A National Survey of United States family medicine residency programme directors

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Summary

Obesity is the most common chronic condition in the United States (US), yet primary care physicians face barriers in providing obesity treatment. This study examines the prevalence of American Board of Obesity Medicine (ABOM) certified obesity specialists on the faculty of US Family Medicine residency training programmes, the preparedness of graduating resident physicians to treat obesity, and residency training programme director preferences for supporting faculty development to improve residency education in obesity management. This cross-sectional on-line survey of programme directors addressed the number of ABOM-certified faculty, perceived graduate preparedness to treat obesity, and priorities to improve faculty expertise and obesity curriculum. Of 672 eligible programme directors, 298 (44%) responded to our survey. Most programmes (76%) had no ABOM-certified faculty. The proportion of programme directors assessing their graduates as prepared to care for patients with obesity has significantly decreased in the last 5 years (2018: 74%, 2022: 58%, $p = .016$). Residents in programmes with ABOM-certified faculty member were more likely to be assessed as very prepared to provide medical care (18% vs. 7.8% $p = .047$). A majority (54%) of programme directors identified limited faculty training and expertise as the biggest faculty and resident-level barrier to quality obesity care. This study demonstrates an important trend towards increasing ABOM-certification among Family Medicine residency programme faculty and an urgent need to prioritise faculty development to improve faculty expertise and resident training to address the obesity epidemic.

KEYWORDS
faculty development, obesity treatment, primary care, residency education

Jonathan Gabison, Lauren Oshman, and Amal Othman are Diplomates of ABOM.

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What is already known about this subject?

- Most US Family Medicine residency training programme directors report that their graduates are unprepared to practice obesity medicine.
- Practicing family physicians in the United States are seeking additional training and board certification in obesity medicine from the American Board of Obesity Medicine (ABOM).

What this study adds

- US family medicine programme directors in this study identify lack of faculty expertise as the biggest barrier to improving evidence-based obesity care.
- Increasing numbers of residency programme faculty members are seeking American Board of Obesity Medicine board certification.
- More US Family Medicine residency programme directors favour faculty development (47%) for existing faculty over supporting a faculty member to obtain ABOM certification (22%).

1 | INTRODUCTION

Obesity is the most common chronic condition in the United States and a leading risk factor for countless chronic conditions treated in primary care, including cancer, cardiovascular disease, type 2 diabetes, dementia, sleep apnea and osteoarthritis.[1] In 2020, 42% of US adults and 22% of US children had obesity.[2] Rates of severe obesity have doubled since 2000, with disproportionate impact on both Black and Hispanic people and people with lower socioeconomic status.[3–5] The most common primary care specialties in the US include family medicine (40%), general internal medicine (33%) and paediatrics (23%).[6] Primary care physicians of all specialties report barriers in knowledge, attitudes related to obesity bias, and difficulty incorporating obesity care into clinical practice.[7] Due to these barriers, patients rarely receive evidence-based care in primary care settings, with only 40% report receiving counselling and 1% receiving a prescription for a weight management medication.[8,9]

Prior studies of US medical school curricula demonstrate that obesity-related nutrition topics are inadequate. Specifically, the Family Medicine medical school clerkship curricula was found to be most often limited to covering only comorbid conditions, diet and exercise.[10–12] In the United States, graduating medical students may enter a three- or four-year residency programme in Family Medicine, Internal Medicine, or Paediatrics prior to entering primary care practice. These training programmes generally provide ambulatory clinical care at a 'teaching practice', where patients seeking care may reside in communities with lower income, more food deserts, and less walkable neighbourhoods affected by higher prevalence of obesity.[13] A 2018 study demonstrated that future family physicians are ill-prepared to provide comprehensive, team-based obesity care, with the majority of Family Medicine programme directors reporting their graduates to be unprepared to manage obesity.[14] The Obesity Medicine Education Collaborative (OMEC) published obesity competencies in 2019 to guide and assess educational outcomes, and efforts are ongoing to improve the quality of medical school training in the care of people with obesity.[15]

These limitation in formal obesity education have led over 1700 US family physicians to seek additional expertise and board certification through the American Board of Obesity Medicine (ABOM) (American Board of Obesity Medicine, personal communication, August 26, 2022). However, little is known about how these obesity specialists are utilised in teaching, faculty development, and providing medical care in Family Medicine residency training programmes in order to address the obesity epidemic.

The primary aim of this study is to assess the current prevalence of ABOM-certified obesity specialists in US Family Medicine residency programmes. The secondary aims are to assess graduating family physician preparedness to treat obesity and programme director interest in supporting faculty development to improve education on obesity management.

2 | MATERIALS AND METHODS

This study was part of a national cross-sectional web-based survey of Family Medicine residency programme directors in the United States conducted by the Council of Academic Family Medicine Educational Research Alliance (CERA), of which the methodology has been previously described.[16,17] All 672 ACGME-accredited US Family Medicine residency programme directors were eligible for participation. The survey was emailed between April 13 and May 16, 2022, and approved by the American Academy of Family Physicians Institutional Review Board.

The 10 survey questions explored the number of ABOM-certified obesity specialists on faculty, graduate preparedness to provide obesity care and prescribe weight management medications and programme directors' assessment of the most significant barriers to high-quality obesity treatment and desired interventions to improve faculty expertise and obesity curriculum. We developed the survey questions based on a literature review and prior published surveys, pre-tested them with four ABOM-certified physician faculty educators, and refined them through cognitive testing, pilot testing, and feedback from the CERA Steering Committee (Online Supplement S1).

2.1 | Data analysis

All data were anonymised centrally by the CERA team. We summarised descriptive statistics to the key variables of interest and performed

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TABLE 1 Characteristics of responding US family medicine residency programme directors and programmes ($n = 298$).

Demographic	N (%)
Residency programme type	
Community-based university- affiliated	169 (57%)
Community-based non-affiliated	78 (26%)
University-based	41 (14%)
Military	5 (1.7%)
Other	5 (1.7%)
Size of community served by residency	
> 150 000	156 (53%)
75 001-150 000	71 (24%)
< 75 000	67 (23%)
Total number of residents	
19–31	137 (46%)
< 19	109 (37%)
> 31	50 (17%)
Total number of American board of obesity medicine-certified faculty	
0 and none are planning to become certified in the next year	227 (76%)
0 and at least one is planning to become certified in the next year	31 (10%)
1	24 (8.1%)
2	8 (2.7%)
3+	8 (2.7%)
To what extent does the teaching practice serve a medically underserved area/population?	
Not at all underserved	2 (0.7%)
To a very little extent underserved	6 (2.0%)
To some extent underserved	65 (22%)
To a great extent underserved	223 (75%)
Unknown	2 (0.7%)

Pearson's Chi-squared tests and Fisher's exact tests to explore associations between the presence or absence of ABOM-certified faculty and the key variables of interest. We used a four-category Likert scale categorical variable to assess resident preparedness and conducted a two-sided proportion test to compare the proportion of programme directors who assessed residents as very prepared versus fairly, somewhat, or not at all prepared with respect to providing medical care and prescribing medication; and the proportion who assessed residents as very and fairly prepared compared to somewhat or not at all prepared for 2018 responses compared to 2022 responses. We used the software RStudio (RStudio)[18] for all analyses.

3 | RESULTS

Of 672 eligible programme directors, 298 (44%) responded to our survey. Characteristics are presented in Table 1. Most programme directors reported no faculty members with current or planned board certification in obesity medicine (227, 76%). Thirty one (10%) reported a faculty member planning on obtaining certification in upcoming year, 24 (8.1%) reported one ABOM-certified faculty member, eight (2.7%) reported two and eight (2.7%) reported three or more. While the primary care physician was the most common usual source of evidence-based obesity care in the residency practice (199, 66%), programmes employing ABOM-certified obesity specialists on faculty more frequently used these experts as the usual source of evidence-based obesity care (12, 30%) compared to those without ABOM-certified physicians on faculty (14, 5%, $p < .001$) [Table 2].

Only 9.1% (27) of programme directors in this survey assessed their graduating residents as very prepared to provide obesity care and only 8.1% (24) assessed them as very prepared to prescribe weight management medications. Compared to 2018, fewer programme directors in this survey assessed their residents as fairly or very prepared to provide high quality obesity care (74% vs. 58%, $p = .016$).[14] Residents in programmes with 1+ ABOM-certified faculty member were more likely to be very prepared to provide medical care compared to those without ABOM-certified faculty members (18% vs. 7.8% $p = .047$).

Programme directors identified limited faculty training and expertise as the most common barrier to providing high-quality obesity care in the residency practice (159, 54%) (Figure 1). When asked what would most help improve faculty expertise in obesity treatment, 47% (137) of programme directors selected additional training in obesity treatment for faculty preceptors who teach and supervise resident physicians in clinical settings, 22% (65) selected supporting a faculty to obtain ABOM certification and become an obesity specialist, 20% (60) selected participation in a quality improvement collaborative on obesity treatment, and 11% (32) selected adding didactic lectures to the curriculum. When asked which common US health care system barriers most impacted high-quality obesity care, respondents stated insurance coverage for anti-obesity medications or bariatric surgery (77, 26%), lack of team-based care (74, 25%) and limited clinical and schedule access to see patients (47, 16%) (Figure 2).

4 | DISCUSSION

This is the first study to examine the prevalence of ABOM board-certified obesity specialists on faculty in US Family Medicine residency programmes. While only 13.5% of programmes currently have an ABOM-certified faculty member, we anticipate this number will double with an additional 10% of programmes reporting that a faculty member plans to obtain certification in the next year. Furthermore, 22% of programme directors report that supporting a faculty member to obtain ABOM certification would most benefit obesity treatment in their training programme. Physicians in the US may obtain ABOM certification either through a fellowship programme or by obtaining 60 h of in-person or online CME credit before sitting for an online board exam, requiring a substantial investment on the part of the residency programme employer to provide protected time and financial support.[19] About a third of programmes with an ABOM-certified faculty

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TABLE 2 Prevalence (*n*, %) of programme characteristics related to high quality obesity care by presence of American board of obesity medicine (ABOM)-certified faculty.

Variable	Overall, $N = 298$	No ABOM-certified faculty, $N = 258$	1+ ABOM-certified faculty, $N = 40$
Resident preparedness to provide medical care for patients with obesity[a]			
Very prepared[b]	27 (9.1%)	20 (7.8%)	7 (18%)
Not at all, somewhat or fairly	271 (90.9%)	237 (92.2%)	33 (82.5%)
Resident preparedness to prescribe medication for patients with obesity[a]			
Very prepared	24 (8.1%)	18 (7.0%)	6 (15%)
Not at all, somewhat or fairly	273 (91.9%)	239 (92.9%)	34 (85%)
Clinician providing evidence-based obesity treatment in Family Medicine Practice (FMP)[a]			
Primary care physician	196 (66%)	177 (69%)	19 (48%)
A clinician without ABOM certification who practices in the FMP	50 (17%)	47 (18%)	3 (7.5%)
A clinician practicing at an obesity medicine practice outside the FMP	32 (11%)	26 (10%)	6 (15%)
A clinician with ABOM certification who practices in the FMP[c]	14 (4.7%)	2 (0.8%)	12 (30%)
None of the above	5 (1.7%)	5 (1.9%)	0 (0%)
What would be most helpful to improve faculty expertise in obesity treatment at your residency programme?[d]			
Training on obesity treatment to faculty preceptors in the FMP	137 (47%)	116 (46%)	21 (52%)
Financial and time support for a faculty to become ABOM certified	65 (22%)	53 (21%)	12 (30%)
Participating in a quality improvement collaborative on obesity treatment	60 (20%)	55 (22%)	5 (12%)
Inviting non-Family Medicine faculty experts to teach a curriculum on obesity (e.g., specialists, dieticians, pharmacists)	32 (11%)	30 (12%)	2 (5.0%)
Which are you most likely to add to your curriculum next year?[e]			
Didactic lecture hours	131 (44%)	114 (44%)	17 (42%)
Obesity treatment integrated into resident continuity clinic at the FMP	82 (28%)	67 (26%)	15 (38%)
An elective rotation experience	19 (6.4%)	16 (6.2%)	3 (7.5%)
A required rotation experience	5 (1.7%)	3 (1.2%)	2 (5.0%)
None of the above	61 (20%)	58 (22%)	3 (7.5%)

[a] $n = 297$.
[b] ABOM certified faculty significantly associated with being very prepared to provide medical care ($p = .047$).
[c] ABOM certified faculty significantly associated with ABOM certified faculty being the usual source of care in the FMP ($p < .001$).
[d] $n = 294$.
[e] ABOM-certified faculty significantly associated with next year curriculum addition ($p = .046$).

report using these experts as the usual source of evidence-based obesity care in the teaching practice.

Programmes with an ABOM-certified faculty are more likely to add obesity treatment into the residents' continuity clinic, highlighting the importance of the obesity specialist in serving as a leader in practice transformation regarding obesity medicine, including in resident continuity clinic settings. Given that 75% of the programmes in this study operate in underserved settings where there is a critical need for quality obesity care, the role of ABOM-certified faculty becomes even more vital. These findings are also consistent with other studies demonstrating that ABOM-certified physicians working in multi-disciplinary teams can be leveraged to improve population-level obesity outcomes within large health systems and suggest that having these physicians as faculty members in the residency programme may be associated with improved evidence-based care for patients at the residency teaching practice.[20,21] Our results suggest the need for further study on innovations that optimise the use of these scarce experts to improve residency and faculty education and population health.

In comparison to a 2018 benchmarking survey, 16% fewer residency programme directors assessed their residents as fairly or very prepared to provide obesity care in 2022, with few (8.1%) perceiving

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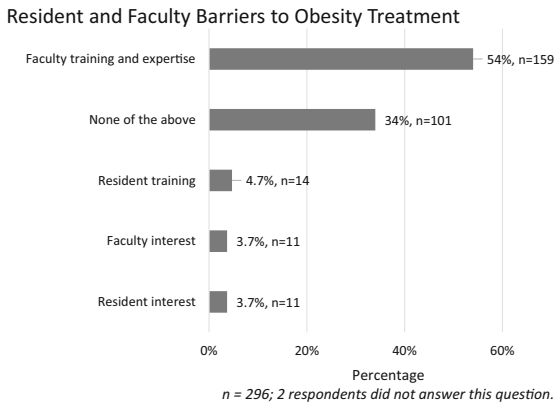


FIGURE 1 Resident and faculty barriers to obesity treatment. Bar chart highlighting perceived barriers for resident and faculty to obesity treatment with faculty training and expertise being the most significant barrier (54%).

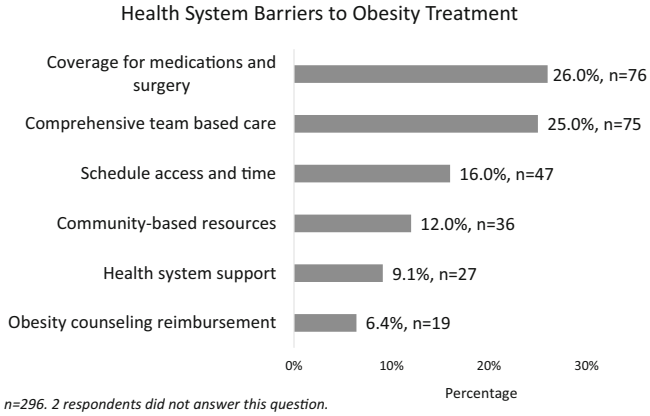


FIGURE 2 Health system barriers to obesity treatment. Distribution of perceived health system barriers to obesity treatment, highlighting that coverage for medications and surgery (26%) and comprehensive team-based care (25%) are the most significant barriers.

their graduates to be very prepared to prescribe weight management medications.[14] While this difference may be due to a higher response rate in our survey, it is also notable that rates of obesity increased during the COVID-19 pandemic at the same time that residents spent less time on ambulatory care and more time caring for hospitalised patients with COVID-19. Since that benchmarking study, OMEC's educational competencies were released, highlighting deficits in obesity education. We also found that programme directors were more likely to view their residents as very prepared to provide obesity care if an ABOM-certified faculty member was associated with the residency programme, highlighting the benefit of an obesity specialist in improving resident education. While much attention has been paid to improving education at the medical student and resident physician level, 54% of our respondents identify lack of faculty expertise as the biggest barrier to high quality obesity treatment, and 47% feel preceptor training would most help with faculty development. We know of no current models or collaboratives to support preceptor training. Juxtaposed with the fact that the majority (76%) of residency programmes do not have ABOM-certified faculty, these results raise a call to action for leaders in obesity education to provide faculty development opportunities that can reach the hundreds of primary care training programmes in need, particularly those in smaller programmes or communities without access to ABOM-certified faculty.

Limitations of this study include a 44% response rate, which may not capture the experiences of all US Family Medicine programme directors. Programme director assessment of usual source of obesity care may not be accurate. The CERA survey format is brief and precluded our ability to obtain qualitative or in-depth detail regarding the role of ABOM-certified obesity specialists in residency programmes in more detail.

5 | CONCLUSION

This study demonstrates a trend towards increasing ABOM-certification among US Family Medicine residency programme faculty and an urgent need to leverage large scale faculty development opportunities to improve Family Medicine faculty expertise and resident training to address the obesity epidemic.

AUTHOR CONTRIBUTIONS

JG, DH, AO and LO conceived of the study design and prepared the survey instrument; BP conducted the data analysis; all authors contributed to data interpretation and manuscript writing.

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CONFLICT OF INTEREST STATEMENT

Dr. Oshman reports stock holdings from Procter and Gamble, Johnson and Johnson, Merck, Abbvie, Eli Lilly, Abbott and Dupont, outside the submitted work. Dr. Harper reports a research contract with Roche, outside the submitted work. The other authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

All data is controlled by the CAFM Educational Research Alliance. Requests for data sharing should be sent to: sgrammer@stfm.org.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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