BRIEF REPORT

Artificial Intelligence (AI) Adoption, Policies, and Goals in Family Medicine: A Survey of Department Chairs

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Background: **Artificial Intelligence (AI) has the potential to reshape family medicine by enhancing clinical, educational, administrative, and research operations. Despite AI's transformative potential, its adoption is inconsistent, and strategic frameworks remain limited. This study explores current AI adoption, organizational policies, integration priorities, and budget allocations within family medicine departments.**

Methods: **A survey of 218 family medicine department chairs in the US and Canada was conducted via SurveyMonkey from August 13 to September 20, 2024, as part of the Council of Academic Family Medicine (CAFM) Educational Research Alliance (CERA) omnibus project. Survey questions assessed current and planned AI utilization, presence of formal departmental or organizational policies (defined as written guidelines, strategic plans, or frameworks), integration priorities, and budget allocations. Data were analyzed using Chi-square tests, Wilcoxon Rank Sum tests, and Kruskal-Wallis tests, with a primary focus on bivariate comparisons.**

Results: **The survey achieved a 50.9% response rate (111/218). Current AI use was reported by 56.9% (62/109), while 37.6% (41/109) indicated formal organizational policies. Primary goals for AI integration included improving clinical operations (52.3%), administrative streamlining (16.5%), educational applications (11.9%), and research (4.6%). Budget allocations were minimal (median, 0%; mean 2.4%), though departmental budgets likely underestimate actual institutional investment in AI. Departments reporting AI use had significantly more full-time equivalent faculty (median, 40.0 vs 25.5, *P* = .023). Geographic and chair demographics were not significantly associated with differences in AI adoption.**

Conclusions: **AI integration in family medicine departments is viewed as essential, though current adoption is limited by uncertain strategic planning and minimal departmental budget allocations, potentially reflecting reliance on centralized institutional information technology (IT) investments. While AI is widely viewed as important, structured policy frameworks and implementation strategies are still developing. Further research is essential to guide policy development and strategic investment to ensure AI's safe, efficient, and effective integration into family medicine. (J Am Board Fam Med 2025;38:740–744.)**

Keywords: **Artificial Intelligence, Chi-Square Test, Clinical Decision-Making, Diagnostic Techniques and Procedures, Family Medicine, Family Physicians, Health Personnel, Health Policy, Health Services, Information Systems, Information Technology, Medical Education, Medical Faculty, Medical Informatics, Organizational Innovation, Physician's Role, Primary Health Care, Technology**

Introduction

Artificial Intelligence (AI) has the potential to reshape family medicine by enhancing clinical, educational, administrative and research operations. Clinically, AI has the capability to enhance diagnostic accuracy and patient management, driving improvements in health

This article was externally peer reviewed.

Submitted 3 January 2025; revised 14 March 2025; accepted 31 March 2025.

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Funding: The project described was supported by the National Center for Advancing Translational Sciences, National Institutes of Health, through Grant UL1 TR002014. The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH.

Conflict of interest: The authors have no conflicts of interest to declare.

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care efficiency.[1,2] In education, AI supports personalized learning and streamlines assessments, improving precision and outcomes.[3,4] Administratively, AI could optimize workflows and resource allocation, aligning with operational goals to improve health care delivery.[2,5,6] Furthermore, AI enables advanced data analyses and innovative research methodologies, driving data-driven health care advancements.[7–9]

In 2024, as part of the Council of Academic Family Medicine (CAFM) Educational Research Alliance (CERA) omnibus project (further details available at https://www.stfm.org/Research/CERA), a survey was conducted among family medicine department chairs to assess current AI utilization, the existence of formal departmental or organizational policies (defined herein as any written guideline, strategic plan, or framework), and future integration priorities. This study provides early insights into the state of AI adoption in family medicine and underscores the need for developing strategies and the ongoing uncertainty regarding optimal AI use potential.

Methods

Survey Design and Distribution

A total of 218 family medicine department chairs, identified via the Association of Departments of Family Medicine (ADFM), were invited to participate via e-mail. The survey was administered through SurveyMonkey from August 13 to September 20, 2024. Institutional review board approval was obtained from the American Academy of Family Physicians Institutional Review Board. Detailed methods are described elsewhere.[10]

Survey Content

The survey included items on current and planned AI use in family medicine departments, the existence of organizational AI policies, perceived importance of AI over the next 5 years, primary goals for AI integration (clinical operations, research, administrative processes, and educational applications), and the estimated proportion of departmental budgets allocated to AI development. Responses for several items were collected using a 6-point Likert scale (0 = "no plans to use" to 5 = "extensive plans to use"). The survey questions were developed by the study team, piloted with educators outside the target population, and refined following review by the CERA Steering Committee.

Statistical Analysis

Data analysis involved comparing medians and proportions to examine relationships between departmental characteristics and AI use. Bivariate comparisons were the primary focus, with regression methods considered but not used due to sample size limitations. Categorical variables were analyzed with Chi-square tests to assess differences across groups with an exact version used if table cell sizes were small enough to violate the assumptions of the asymptotic test. For non-normally distributed data, medians and interquartile ranges (IQR) were emphasized, with means provided for context. The Wilcoxon Rank Sum test compared 2 groups, and the Kruskal-Wallis test was used for more than 2 groups, followed by pairwise comparisons as needed. Variables such as location, community size, and primary AI goals were grouped to enhance result interpretability. All analysis was performed using SAS software version 9.4 (SAS Institute, Cary, NC).

Results

A total of 111 respondents completed the survey (50.9% response rate); of these, 109 completed the AI-focused section of the survey. Demographic characteristics are summarized in Table 1. Current AI use was reported by 56.9% (62/109), while 37.6% (41/109) had organizational policies guiding AI use.

Geographic Trends in AI Adoption

Due to a limited sample size from Canada (n = 6), geographic analysis was restricted to US respondents. AI adoption was reported by 65.2% (15/23) of chairs in the Northeast, 55.3% (21/38) in the South, 51.9% (14/27) in the Midwest, and 46.7% (7/15) in the West. There were no statistically significant differences across US regions ($P = .774$).

Primary AI Goals

The most frequently cited goal for AI integration was improving clinical operations, reported by 52.3% (57/109) of respondents. Other goals included administrative streamlining (16.5%, 18/109), educational applications (11.9%, 13/109), and research (4.6%, 5/109). An additional 4.6% (5/109) identified other unspecified goals, while 10.1% (11/109) reported no specific goals for AI integration.

Perceived Importance of AI and Organizational Policies

AI was broadly perceived as important to family medicine over the next 5 years. Respondents rated AI as very important (43.5%, 47/109), extremely important (34.3%, 37/109) or somewhat important

Table 1. Demographic and Department Characteristics of Family Medicine Chairs Collected via CAFM Educational Research Alliance (CERA) survey August 13–September 20, 2024

Demographic Characteristics of Respondents (n = 111)	Number (Percentage)
Age (n = 111)	
30 to 39 years old	1 (0.9%)
40 to 49 years old	20 (18.0%)
50 to 59 years old	46 (41.4%)
60 to 69 years old	35 (31.5%)
70+ years old	9 (8.1%)
Location (n = 111)	
Northeast (CT, MA, ME, NH, NJ, NY, PA, RI, VT)	24 (21.6%)
South (AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, PR, SC, TN, TX, VA, WV)	38 (34.2%)
Midwest (IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI)	27 (24.3%)
West (AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY)	15 (13.5%)
Canada	7 (6.3%)
Size of community (n = 111)	
Small (population less than 150,000)	23 (20.7%)
Medium (population 150,001 to 500,000)	30 (27.0%)
Large (population more than 500,000)	58 (52.3%)
Type of residency program associated with your department (n = 111)	
Other	9 (8.1%)
Medical school based	57 (51.4%)
Community-based, medical school affiliated	26 (23.4%)
Community-based, medical school administered	11 (9.9%)
Community-based, non-affiliated	1 (0.9%)
Don't have a residency	7 (6.3%)
Gender (n = 111)	
Female/Woman	47 (42.3%)
Male/Man	60 (54.1%)
Choose not to disclose	4 (3.6%)
Race/Ethnicity (n = 111)	
American Indian/Alaska Native/Indigenous	1 (0.9%)
Asian	8 (7.2%)
Black or African American	13 (11.7%)
Hispanic/Latino/of Spanish Origin	4 (3.6%)
Middle Eastern/North African	3 (2.7%)
Native Hawaiian/other Pacific Islander	1 (0.91%)
White	72 (64.9%)
Choose not to disclose	9 (8.1%)
I self-identify as underrepresented in medicine. (n = 111)	
No	90 (81.1%)
Yes	20 (18.0%)
No response	1 (0.9%)
	Mean (median)
How many years have you been in your current department chair role? (n = 111)	5.4 (4.0)
How many total years have you served as a department chair? (n = 111)	6.7 (4.5)
How many full-time FTEs (MD, DO, PhD, PharmD, and other types of faculty does your department have? (n = 107)	52.8 (31)

22.2% (24/109). Departments with and without available AI policies had similar median importance scores (4.0), with no statistically significant difference ($P = .892$).

Budget Allocation for AI and Organizational Characteristics

Budget allocations for AI were minimal, with a median departmental allocation of 0% (mean = 2.4%). Three-quarters of departments allocated less than 5% of their budget to AI. It is important to note that these figures reflect only departmental allocations, whereas many AI investments may occur through centralized institutional channels. Departments using AI had significantly more full-time equivalent faculty (median, 40.0 vs 25.5; $P = .023$), suggesting that larger organizations may have access to centralized AI resources. No significant associations emerged with chairs' demographics or years in their position.

Discussion

This study provides preliminary insights in family medicine's approach to AI integration. AI holds potential benefits for clinical care, administrative efficiency, education and research, yet the scope and depth of its application remain limited and preliminary. Notably, minimal budget allocations reported by department chairs may not indicate true financial barriers but rather reflect the centralization of AI resources within institutional information technology (IT) budgets. Most AI applications suitable for primary care, such as Electronic Health Record (EHR)-embedded clinical decision support and documentation assistance, logically fall within institutional IT investments which may be more readily available at larger organizations. This emphasizes the need to understand other potential factors influencing adoption, such as centralized IT resources, institutional strategic priorities, and faculty AI expertise.

The absence of clear AI policies likely mirror broader uncertainty about how AI should and could be effectively integrated into primary care. As AI in health care remains in early development, it is understandable that departments and institutions lack clear, standardized strategic frameworks. The rapidly evolving nature of AI technology itself further compounds the difficulty of formulating precise policies at this stage. Future AI applications in primary care in the coming years are expected to differ substantially from current uses, underscoring the need for ongoing adaptive and responsive policy development.

Limitations

Several limitations should be noted. This study relied on self-reported data, which may introduce potential bias toward respondents favorable to AI, and provided minimal detail regarding institutional-level funding and strategic decisions. The perspectives of department chairs may not fully reflect AI implementation at the institutional level, where funding and infrastructure decisions are often made. Budget allocation estimates were based on departmental reports and may not capture centralized institutional investment in AI. The small sample size from Canada limited cross-national comparisons. The response rate of 50.9% may limit generalizability. In addition, this study provides a cross-sectional perspective. Future research should investigate institutional structures and decision making processes in greater depth and include a longitudinal assessment to understand the evolving role of AI in primary care.

Conclusion

AI adoption in family medicine is in an early stage characterized by uncertainty, minimal departmental budget allocations (potentially offset by centralized institutional resources), and unclear strategy frameworks. While AI is widely viewed as important, structured policy frameworks and implementation strategies are still developing. Further research is essential to guide policy development and strategic investment to ensure AI's safe, efficient, and effective integration into family medicine.

The authors acknowledge the use of ChatGPT, an AI language model developed by OpenAI, for language editing and drafting support. All content drafting, final edits, and interpretations were made by the authors to ensure accuracy and adherence to academic standards.

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