

ORIGINAL RESEARCH

Early-Career Compensation Trends Among Family Physicians

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Purpose: Family medicine incomes are often cited as a key reason for shortages of family physicians. The purpose of this study was to identify family physician income trends and to test how income varies among early-career family physicians.

Methods: We used data from the 2016 to 2020 American Board of Family Medicine National Graduate Survey (NGS) collected from early-career family physicians (n = 9566; response rate = 63.9%). The NGS asked practice income, practice activities, practice site, and setting. We performed an income trend analysis and conducted multivariate regression to test for associations of personal and workplace characteristics with income.

Results: Average income across the full sample of early-career family physicians (after inflation adjustments) was \$224,292. Overall, income growth outpaced inflation from 2016 to 2020. There are significant differences in income based on personal and work characteristics, and income growth varied dramatically. Notably, women respondents reported earnings of \$33,522 below those of men respondents in adjusted models. In addition, the incomes of several groups lagged behind inflation, including those practicing geriatrics (−0.67%), employed by the Indian Health Service (−1.72%), and respondents who identified as Black or African American (−0.85%). Greatest increases in inflation-adjusted incomes were observed among those in palliative care (4.61%) and at nonfederal government clinics (4.46%).

Conclusions: Though income is only one factor physicians consider in deciding where and how to work, it is concerning to see lower incomes among groups that traditionally experience shortages (eg, geriatrics and government-associated practice sites). Differences in expected income among family physicians choosing different work may exacerbate workforce challenges. (J Am Board Fam Med 2023;36:851–863.)

Keywords: Family Medicine, Family Physicians, Gender Equity, Income, Workforce

Introduction

For family physicians entering the workforce, especially when considering the high debt levels among those graduating with educational debt,^{1–3} there is

concern about whether income is keeping pace with rising costs. From 2016 to 2020, the average rate of inflation (Consumer price index for all urban consumers, CPI-U) remained relatively stable at just more than 2%.⁴ Even at this modest level, inflation can increase one's cost of living by more than 10% in just 5 years.

Concerns about income trends in family medicine are exacerbated by pre-existing disparities in pay among specialties.^{5,6} Observing US physician incomes generally, the Medscape Physician Compensation Report of 2020 found that specialists earn \$346,000 on average whereas primary care physicians earn \$243,000 on average.⁷ From an income perspective, it seems that the health care system places more value on tertiary and quaternary care, particularly procedural care, than primary and

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preventive care. According to the Merritt Hawkins 2021 Review of Physician and Advanced Practitioner Recruiting Incentives,⁸ although family medicine continues to be one of the most recruited specialties in medicine, it is among the lowest paid. The American Association of Medical Colleges (AAMC) estimates the shortage of primary care physicians lies between 17,800 and 48,000 physicians.⁹ If shortages of family physicians are to be lessened,¹⁰ income must at least keep pace with rising costs.¹¹

Although many studies have included physician income as part of a broader analysis, few have focused on changes in income over time. These income-related studies have explored such themes as gaps in income by gender and race,^{12–14} differences in income among rural and urban family physicians,^{15,16} differences in income among solo and group practices,¹⁷ and the association of income and satisfaction.¹⁸

Our purpose was twofold: (1) to explore income trends in family medicine and (2) to observe differences in income among early-career family physicians who are currently in the workforce. The data analyzed in the study allowed us to assess changes in income over the period studied; how those changes occurred based on gender, race/ethnicity, and various work characteristics; and differences in incomes among those who have recently started careers in family medicine.

Methods

We conducted both a trend analysis as well as a pooled, cross-sectional analysis of responses to the 2016 to 2020 American Board of Family Medicine (ABFM) National Graduate Survey (NGS). Respondents answer the survey 3 years after the completion of their residency programs. The full sample of respondents practicing direct patient care over this period was 10,526 (response rate = 63.9%). Before performing analysis, the data were deidentified.

For the variable on income, respondents entered a dollar value based on the following prompt: “In the most recent tax year, what was your pretax clinical income, combined from all sources, including bonuses but excluding benefits (yours alone, not household)?” Where insufficient information on income and hours worked was provided, observations were dropped (42 observations). All reported incomes were converted to

2020 dollars using the CPI-U to account for inflation over the 5 years analyzed.⁴

We geocoded the practice address and used county level Rural Urban Continuum Codes to classify rural or urban practice location.¹⁹

The variables on race and ethnicity were only available for the years 2017 to 2020 and are included only in secondary analyses described later. Data on race were collected in a “select best” question. Due to small sample sizes in some categories, for analysis we created a 4-category variable: “Asian,” “Black or African American,” “White,” and “Other” (“Other” includes American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, and an explicit “other” category²⁰. White is the reference category). Ethnicity is grouped into “Not Hispanic or Latino” and “Hispanic or Latino” (Not Hispanic or Latino is the reference category).

Summary statistics were calculated to describe the analytic sample. We then observed income trends by calculating mean incomes among groups and finding income growth from 2016 to 2020 (race and ethnicity were analyzed from 2017 to 2020). Income growth was calculated as an inflation-adjusted dollar increase from 2016 to 2020 as well as an annualized increase over this period (assuming annually-compounding rates of growth after inflation). We used an ANOVA test to observe whether these trend differences were statistically significant. Finally, multiple linear regression analysis was performed to allow us to observe how each of these variables was associated with income in a pooled, cross-sectional model.

Analytic sample sizes varied based on the items included in the model. All models include variables on income, gender, weekly hours worked, degree type, rural/urban, and region in the US. In addition to these variables, Model 1 includes a detailed variable on principal professional activity (n = 9566). Model 2 instead includes a variable on principal practice site as well as a control for continuity care (n = 8024). In analyses limited to 2017 to 2020 due to data availability, Models 1 and 2 were repeated with race and ethnicity variables added (see Appendices 1 and 2).

All data analysis was performed using Stata version 16.1. This study was approved by the American Academy of Family Physicians Institutional Review Board.

Results

Descriptive statistics of the analytic samples can be found in Table 1. Among respondents included in Model 1, 5392 (56%) were women, 7800 (82%) were allopathic physicians, and 8059 (84%) worked in

urban areas. The distribution of the sample by region was fairly even, with the Northeast being the least common response (1278, 13%) and the South being the most common (3298, 34%). The majority of the sample (7760, 81%) stated continuity care as their

Table 1. Characteristics of Early-Career Family Physicians from the National Graduate Survey, 2016–2020

	Model 1: Incl. Detailed Princ. Prof. Activities Number (%)	Model 2: Incl. Princ. Practice Site Number (%)
Full Sample	9,566 (100)	8,024 (100)
Gender		
Man	4,174 (44)	3,293 (41)
Woman	5,392 (56)	4,731 (59)
Degree Type		
M.D.	7,800 (82)	6,460 (81)
D.O.	1,766 (18)	1,564 (19)
Principal Professional Activity ^a		
Continuity Care	7,760 (81)	7,760 (97)
Emergency Medicine	280 (3)	
Geriatrics	30 (0)	
Hospitalist	850 (9)	
Palliative Care	67 (1)	
Sports Medicine	61 (1)	
Urgent Care	415 (4)	
Other ^b	103 (1)	
Population Density		
Rural	1,507 (16)	1,294 (16)
Urban	8,059 (84)	6,730 (84)
Region		
Midwest	2,271 (24)	1,962 (24)
Northeast	1,278 (13)	1,076 (13)
South	3,298 (34)	2,607 (32)
West	2,719 (28)	2,379 (30)
Principal Practice Site ^c		
Academic Health Center/Faculty Practice		943 (12)
Federal		379 (5)
Federally Qualified Health Center or Look-Alike		1,002 (12)
Government Clinic, Non-Federal		127 (2)
Hospital/Health System Owned Medical Practice		3,191 (40)
Independently Owned Medical Practice		1,071 (13)
Indian Health Service		84 (1)
Managed Care/HMO Practice		576 (7)
Rural Health Clinic (Federally Qualified)		359 (4)
Work Site Clinic		104 (1)
Other		188 (2)

Abbreviation: HMO, Health maintenance organizations.

Note: Data collected by the ABFM from board-certified Diplomates three years after completing residency. Total percentage may not add up to 100 due to rounding.

^aModel 2 includes a variable indicating continuity care or non-continuity care.

^bFurther information about this group of physicians is available upon request.

^cSample size differs when including principal practice site in the model (excludes those with the following principal professional activities: emergency medicine, hospitalist, and urgent care).

^dData collected on race and ethnicity only available from 2017–2020. When race and ethnicity are included in Model 1, total sample size reduced to 7467 (See appendix for descriptive statistics including these variables).

principal professional activity, with hospitalist being the next largest group (850, 9%).

The composition of the sample differed only slightly between Models 1 and 2 (see Table 1). Model 2 included more women respondents (4731, 59%) and more with a principal professional activity of continuity care (7760, 97%). The most common principal practice sites identified were hospital/health system owned medical practice (3191, 40%), independently owned medical practice (1071, 13%), Federally Qualified Health Center or look-alike (1002, 12%), and academic health center/faculty practice (943, 12%).

Income Average and Trend Analysis

After adjusting for inflation, the mean overall income within the sample was \$224,292 (see Table 2). The sample's nominal (ie, not adjusted for inflation) mean income increased by more than \$24,000 from 2016 to 2020. As can be seen in Figure 1, the growth rate of family physician incomes has outpaced general inflation over the period analyzed. After adjusting for inflation, the overall buying power of early-career family physicians increased by \$5,766 from 2016 to 2020.

Income averages and trends for early-career family physicians are available in Table 2. Overall, the mean incomes of women respondents trailed those of men respondents by more than \$44,000, though the incomes of women respondents increased at a higher rate than men respondents (1.14% compared with 0.04%).

Large differences in income were also detected based on principal professional activity. Those who stated that their principal professional activity was outpatient continuity care on average reported incomes of \$214,007. Emergency medicine respondents on average reported the highest incomes (\$365,684), followed by hospitalist and sports medicine physicians (\$281,968 and \$227,227, respectively). Average incomes of those in other, palliative care, and urgent care have experienced substantially higher real (ie, inflation-adjusted) growth rates (4.87%, 4.61%, and 2.71%, respectively), whereas real growth in incomes among geriatrics, sports medicine, and continuity care has lagged (−0.67%, 0.30, and 0.51%, respectively).

Similar averages were calculated based on the principal site of practice. Higher average inflation-adjusted incomes were reported by physicians working at Rural Health Clinics, managed care/HMO

practices, and hospital/health system-owned medical practices (\$249,291, \$231,520, and \$228,450, respectively). The real annualized rate of income growth was greatest among government clinics (nonfederal); Federally Qualified Health Centers or look-alike; and managed care/HMO practices (4.46%, 1.82%, and 1.69%, respectively), whereas other and Indian Health Service real income growth lagged behind inflation (−4.09% and −1.72%, respectively).

Significant variation was also observed based on where the respondent worked. Respondents working in rural areas earned almost \$33,000 more than those working in urban areas. In addition, respondents living in the South reported the highest average income, with those living in the Northeast reporting the lowest (\$232,286 and \$203,495, respectively). From 2016 to 2020, the incomes of physicians in the Northeast and South increased at the highest inflation-adjusted, annualized rates (1.39% and 1.18%, respectively) whereas the average incomes of physicians in the Midwest increased at an after-inflation rate of 0.02%.

Relatively small differences were observed based on degree type, race, and ethnicity. On average, allopathic physicians earned slightly more than osteopathic physicians (around \$4,000). Incomes of White respondents, on average, were the highest (\$226,270) with incomes of Asian respondents being the lowest (\$222,832). The increase in the incomes of Black or African American respondents trailed inflation (−0.85%) whereas the incomes of those who stated Other or White surpassed inflation by 2.32 and 1.59%, respectively. The difference between the average incomes of Hispanic or Latino and Non-Hispanic or Latino respondents was less than \$1,000, though the real income growth of Hispanic or Latino respondents (3.29%) was greater than Non-Hispanic or Latino respondents (0.87%).

Results of an ANOVA test do not indicate that these trends were statistically significant when controlling for gender, degree type, principle professional activity, rural/urban, and region (results not shown).

Pooled Analysis of Early-Career Family Physicians

The following results were found by pooling survey responses (2016 to 2020) to analyze income differences among early-career family physicians who are currently practicing. Model 1 includes a detailed

Table 2. Income Trends Among Early-Career Family Physicians, 2016–2020

	Avg. Income Overall ^a	Increase (\$) 2016–2020 ^a	Annualized Increase (%) 2016–2020 ^a
Full sample	\$224,292	\$5,766	0.64%
Gender			
Man	\$249,248	\$408	0.04%
Woman	\$204,974	\$9,398	1.14%
Degree Type			
M.D.	\$225,023	\$6,733	0.75%
D.O.	\$221,065	\$1,656	0.19%
Principal Professional Activity			
Continuity Care	\$214,007	\$4,370	0.51%
Emergency Medicine	\$365,684	\$8,886	0.61%
Geriatrics	\$205,449	−\$6,046	−0.67%
Hospitalist	\$281,968	\$8,108	0.71%
Palliative Care	\$210,323	\$39,704	4.61%
Sports Medicine	\$227,227	\$2,873	0.30%
Urgent Care	\$219,055	\$23,147	2.71%
Other	\$172,737	\$34,096	4.87%
Population Density			
Rural	\$251,982	\$1,496	0.15%
Urban	\$219,114	\$6,453	0.74%
Region			
Midwest	\$232,286	\$153	0.02%
Northeast	\$203,495	\$11,226	1.39%
South	\$230,471	\$10,792	1.18%
West	\$219,897	\$3,466	0.40%
Principal Practice Site ^b			
Academic Health Center/Faculty Practice	\$196,313	\$7,640	0.99%
Federal	\$148,077	\$6,006	1.00%
Federally Qualified Health Center or Look-Alike	\$183,380	\$13,254	1.82%
Government Clinic, Non-Federal	\$192,543	\$34,595	4.46%
Hospital/Health System Owned Medical Practice	\$228,450	\$6,411	0.70%
Independently Owned Medical Practice	\$218,222	\$9,277	1.05%
Indian Health Service	\$207,897	−\$14,632	−1.72%
Managed Care/HMO Practice	\$231,520	\$15,385	1.69%
Rural Health Clinic (Federally Qualified)	\$249,291	\$1,430	0.14%
Work Site Clinic	\$214,951	\$4,913	0.56%
Other	\$204,028	−\$33,856	−4.09%
Race ^c			
Asian	\$222,832	\$89	0.01%
Black or African American	\$223,364	−\$5,676	−0.85%
White	\$226,270	\$10,605	1.59%
Other	\$224,520	\$15,227	2.32%
Ethnicity ^c			
Non-Hispanic or Latino	\$225,342	\$5,848	0.87%
Hispanic or Latino	\$224,584	\$21,828	3.29%

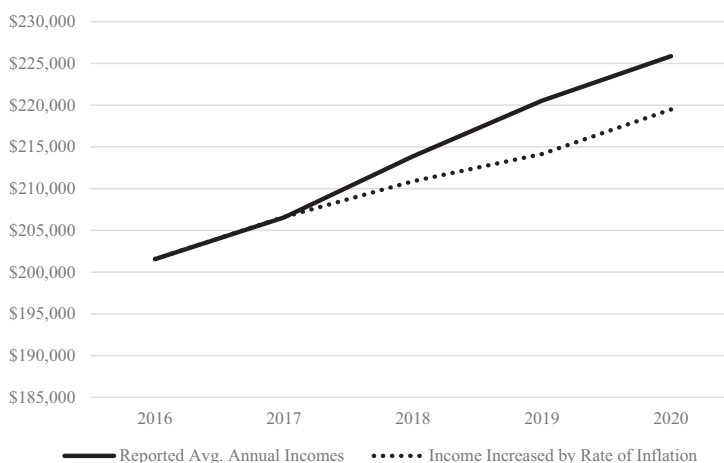
Note: Data collected by the ABFM from board-certified Diplomates three years after completing residency.

^aIncomes have been adjusted for inflation using the CPI-U to reflect their value in 2020 dollars.

^bAnalysis sample differs when including principal practice site in the model (see Table 1).

^cData collected on race and ethnicity only available from 2017–2020.

Figure 1. Average income growth of early-career family physicians against rate of inflation (CPI-U), 2016 to 2020.



Note: Data collected by the ABFM from board-certified Diplomates three years after completing residency.

variable on principle practice activity and Model 2 includes a variable on principal practice site.

Multiple Regression Analysis: Model 1

The results of a multiple linear regression using Model 1 (see Table 3) indicate that even after controlling for hours worked, degree type, principal professional activity, rural/urban, and region, being a woman is associated with earning \$33,522 less than being a man. Each additional reported hour worked per week was associated with a small increase in income (\$500 per year). When compared with the incomes of those working in continuity care, emergency medicine, hospitalist, and urgent care earned \$133,608, \$55,815, and \$10,646 more per year, respectively (those stating other earned \$33,661 less). Those working in the Northeast earned \$15,489 less each year than those working in the West, whereas those working in the Midwest earned \$5,169 more than those working in the West. Furthermore, working in a rural area was associated with earning \$23,000 more than working in urban areas. When we included race and ethnicity in this model, no statistically significant differences in incomes were found (see Appendix 2).

Multiple Regression Analysis: Model 2

Substantial variation is found when including principal practice site in the model (Model 2, see Table 4) with the largest differences being observed

among government-associated practice sites. Those working at federal; Federally Qualified Health Center or look-alike; government clinic (nonfederal); and Indian Health Service sites earned \$61,273, \$38,674, \$34,572, and \$33,132 less than those working in hospital/health system owned medical practices, respectively. Similarly, those working in academic health center/faculty practice, other, and independently owned medical practice trailed hospital/health system owned medical practice incomes by \$27,131, \$20,805, and \$13,440, respectively.

Discussion

Based on our findings, the incomes of early-career family physicians are improving faster than the general rate of inflation. In other words, the quantity of goods and services that may be purchased on the average income of an early-career family physician has improved from 2016 to 2020. However, the real annualized increase over the period studied (0.64%) was slower than the real income growth rate that was measured for all primary care physicians from 2008 to 2017 (1.6%).²¹ In addition, we observed that this improvement was not experienced uniformly by all groups within family medicine. In this analysis, we have sought to detect income differences within family medicine and understand how income changes have occurred over time.

Table 3. Adjusted Associations Between Personal and Practice Characteristics with Income for Early-Career Family Physicians, 2016–2020: Model 1

Independent Variable	Income Coef./ (Std. Err.)	P value
Gender: Woman Ref: Man	−\$33,522 (1475)	0.001
Weekly Hours Worked	\$500 (40)	0.001
Degree Type: D.O. Ref: M.D.	\$579 (1864)	0.756
Principal Professional Activity Ref: Continuity Care		
Emergency Medicine	\$133,608 (4341)	0.001
Geriatrics	−\$482 (12,888)	0.970
Hospitalist	\$55,815 (2627)	0.001
Palliative Care	\$6,541 (8649)	0.449
Sports Medicine	\$6,815 (9081)	0.453
Urgent Care	\$10,646 (3565)	0.003
Other	−\$33,661 (6993)	0.001
Population Density: Rural Ref: Urban	\$23,000 (2020)	0.001
Region		
Midwest	\$5,169 (2018)	0.010
Northeast	−\$15,489 (2395)	0.001
South	−\$645 (1843)	0.726
Ref: West		
R ²	0.235	

Note: Data collected by the ABFM from board-certified Diplomates three years after completing residency. Incomes have been adjusted for inflation using the CPI-U to reflect their value in 2020 dollars.

Although the respondents have only been practicing for 3 years after residency, and their cohort was by many measures more diverse than later-career family physicians,²² a large difference in income was observed when comparing the incomes of women and men respondents. When controlling for hours worked, degree type, principal professional activity, rural/urban, and region, we found that on average women family physicians earned around \$33,000 less than men family physicians. This finding aligns with previous research.^{12,13,23,24} Not only did women family physicians earn substantially less, but, this income gap is not closing meaningfully.

It is concerning that the average incomes of Black or African American respondents trailed inflation (−0.85%), whereas all other groups (ie, Asian, White, and Other) outpaced inflation over the period studied. This finding warrants further attention as any disparities in income growth over

time will lead to gaps in pay. Though no significant difference in income was found by race or ethnicity in this study, differences have been found in prior studies when interacting race/ethnicity and gender.^{25,26}

Average incomes and income growth varied markedly by principal professional activity. Whereas family physicians working in emergency medicine consistently earned the most, the incomes of those practicing in the lowest-paying professional activities (ie, other and palliative care) generally grew the most rapidly. This indicates that differences in pay among professional activities may be shrinking. However, geriatrics, among the lowest-paid professional activities, was the only professional activity whose mean income growth lagged behind inflation. This trend is particularly concerning given the current and projected shortages of physicians practicing in geriatrics (shortages estimated at almost 27,000 physicians by 2025²⁷ and between 37,800 and 124,000 physicians by 2034).²⁸

Notably, the average growth rate in the incomes of those practicing continuity care (more than 80% of the sample) lagged behind the growth rates of other types of practice. Despite widespread recognition that the nation is experiencing a shortage of primary care, and efforts toward compensating high value preventive care, there are growing financial incentives for family physicians to focus their practices on emergency medicine, hospitalist, and urgent care. Taken together, these physicians comprised 16% of board-certified family physicians in this cohort.

Substantial differences were also found based on where early-career family physicians practiced. Although those working at Rural Health Clinics had the highest average incomes, the growth rate of their incomes was relatively low. In contrast, those working at either government clinic (nonfederal) or Federally Qualified Health Centers (or Look-Alike) experienced relatively rapid income growth (4.46% and 1.82% above inflation annually, respectively), but continue to be among the lowest-paid physicians by practice site (Federal being the lowest paid). Of particular concern is the income trend among physicians in the Indian Health Service, whose nominal (ie, preinflation adjustment) incomes were relatively stable, but whom, when accounting for inflation, experienced a decrease in purchasing power of 1.72% year over year from 2016 to 2020.

Limitations

These findings should not be generalized across the physician workforce, the general primary care workforce (eg, those board certified in internal medicine or pediatrics), nor across all family medicine. We analyzed a sample of family physicians who had completed their residency training 3 years before completing the survey. Therefore, interpretation should be limited to this group. In addition, income is self-reported. Inaccuracies may exist due to differences in rounding (ie, mental accounting), financial awareness, misunderstanding of the question, etc. We sought to control for some of these issues by removing responses that were clearly incorrect (incomes lower than minimum wage when accounting for hours worked), but recognize that, as with all self-reported data, inaccuracies may continue to exist.

On a related note, to compare incomes across the years, reported incomes were adjusted by one of the broadest, most commonly-used indicators of inflation (CPI-U). This is an approximation, as inflation is likely felt differently by individuals in differing areas of population density, regions, etc.

Conclusions

The purpose of this study was to identify income trends as well as to test how income varies among early-career family physicians. Family physicians' reported income grew at rates surpassing inflation between 2016 and 2020. However, the growth rates of income of those practicing primarily continuity care were slower, and the compensation of geriatric physicians did not surpass rates of inflation. Those working for Federally Qualified Health Centers

Table 4. Adjusted Associations Between Personal and Practice Characteristics with Income for Early-Career Family Physicians, 2016–2020: Model 2

Independent Variable	Income Coef./(Std. Err.)	P value
Gender: Woman Ref: Man	−\$32,236 (1432)	0.001
Weekly Hours Worked	\$584 (45)	0.001
Degree Type: D.O. Ref: M.D.	\$2,531 (1782)	0.156
Continuity Care Ref: Non-Continuity Care	\$8,608 (3983)	0.031
Population Density: Rural Ref: Urban	\$20,762 (2081)	0.001
Region		
Midwest	−\$3,803 (1999)	0.057
Northeast	−\$16,968 (2350)	0.001
South	−\$4,016 (1830)	0.028
Ref: West		
Principal Practice Site		
Academic Health Center/Faculty Practice	−\$27,131 (2338)	0.001
Federal	−\$61,273 (3874)	0.001
Federally Qualified Health Center or Look-Alike	−\$38,674 (2317)	0.001
Government Clinic, Non-Federal	−\$34,572 (5678)	0.001
Independently Owned Medical Practice	−\$13,440 (2222)	0.001
Indian Health Service	−\$33,132 (7032)	0.001
Managed Care/HMO Practice	\$4,183 (2928)	0.153
Rural Health Clinic (Federally Qualified)	\$4,472 (3653)	0.221
Work Site Clinic	−\$10,144 (6228)	0.103
Other	−\$20,805 (4750)	0.001
Ref: Hospital/Health System Owned Medical Practice		
R ²	0.200	

Abbreviation: HMO, Health maintenance organizations.

Note: Data collected by the ABFM from board-certified Diplomates three years after completing residency. Incomes have been adjusted for inflation using the CPI-U to reflect their value in 2020 dollars.

and look-alikes; and the Indian Health Service experience both relatively low incomes and low income growth, which may make it difficult to attract family physicians to this work.²⁹

Certainly, income is only one factor when considering the total value one derives from working. Aspects such as flexibility, autonomy, incentive structures, scope of practice, and meaningfulness of work have not been included in this analysis. Future research is needed to explore how these and other workplace characteristics complement and interact with income in enhancing physician satisfaction. In addition, future studies including the more recent period of rapid inflation as well as studies taking a focused look at various aspects studied here (eg, gender, race, and region) would likely yield valuable perspectives. This study was restricted to discussion of principal practice (site and activity). Additional research on those working at multiple sites would add insight into this common practice. Finally, it is concerning to see that such large differences in income already exist at this early stage in a family physician's career. Further research is needed to determine whether these disparities expand throughout the working life of family physicians.

To see this article online, please go to: <http://jabfm.org/content/00/00/000.full>.

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Appendix.

Appendix 1. Characteristics of Early-Career Family Physicians from the National Graduate Survey Including Race and Ethnicity, 2017–2020: Models 1 and 2

	Model 1: Incl. Detailed Principal Prof. Activities Number/(%)	Model 2: Incl. Principal Practice Site Number/(%)
Full Analysis Sample	7,467 (100)	6,277 (100)
Gender		
Man	3,294 (44)	2,615 (42)
Woman	4,173 (56)	3,662 (58)
Degree Type		
M.D.	6,002 (80)	4,979 (79)
D.O.	1,465 (20)	1,298 (21)
Principal Professional Activity		
Continuity Care	6,075 (81)	6,075 (97)
Emergency Medicine	218 (3)	
Geriatrics	20 (0)	
Hospitalist	654 (9)	
Palliative Care	52 (1)	
Sports Medicine	52 (1)	
Urgent Care	320 (4)	
Other	76 (1)	
Population Density		
Rural	1,177 (16)	1,018 (16)
Urban	6,290 (84)	5,259 (84)
Region		
Midwest	1,775 (24)	
Northeast	1,006 (13)	
South	2,558 (34)	
West	2,128 (28)	
Principal Practice Site		
Academic Health Center/Faculty Practice		769 (12)
Federal		312 (5)
Federally Qualified Health Center or Look-Alike		773 (12)
Government Clinic, Non-Federal		94 (1)
Hospital/Health System Owned Medical Practice		2,508 (40)
Independently Owned Medical Practice		800 (13)
Indian Health Service		63 (1)
Managed Care/HMO Practice		446 (7)
Rural Health Clinic (Federally Qualified)		284 (5)
Work Site Clinic		78 (1)
Other		150 (2)
Race ^a		
Asian	1,577 (21)	1,241 (20)
Black or African American	544 (7)	421 (7)
White	5,114 (68)	4,424 (70)
Other ^b	232 (3)	191 (3)

Continued

Appendix 1. Continued

	Model 1: Incl. Detailed Principal Prof. Activities Number/(%)	Model 2: Incl. Principal Practice Site Number/(%)
Ethnicity ^a		
Non-Hispanic or Latino	6,836 (92)	5,736 (91)
Hispanic or Latino	631 (8)	541 (9)

Abbreviation: HMO, Health maintenance organizations.

Note: Data collected by the ABFM from board-certified Diplomates three years after completing residency. Total percentage may not add up to 100 due to rounding.

^aData collected on race and ethnicity only available from 2017–2020.

^b“Other” includes American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, and an explicit “other” category.

Appendix 2. Adjusted Associations Between Personal and Practice Characteristics with Income for Early-Career Family Physicians Including Race and Ethnicity, 2017–2020: Model 1

Independent Variable	Income Coef./(Std. Err.)	<i>P</i> value
Gender: Woman	−\$32,840 (1,673)	0.001
Ref: Man		
Weekly Hours Worked	\$505 (45)	0.001
Degree Type: D.O.	−\$1,182 (2,100)	0.574
Ref: M.D.		
Principal Professional Activity		
Emergency Medicine	\$139,786 (4,920)	0.001
Geriatrics	−\$13,185 (15,802)	0.404
Hospitalist	\$54,740 (3,014)	0.001
Palliative Care	\$3,422 (9,815)	0.727
Sports Medicine	\$5,033 (9,840)	0.609
Urgent Care	\$14,159 (4,069)	0.001
Other	−\$32,741 (8,139)	0.001
Ref: Continuity Care		
Population Density: Rural	\$23,072 (2,306)	0.001
Ref: Urban		
Region		
Midwest	\$5,068 (2,302)	0.028
Northeast	−\$14,648 (2,711)	0.001
South	−\$492 (2,113)	0.816
Ref: West		
Race		
Asian	−\$417 (2,111)	0.843
Black or African American	−\$2,033 (3,270)	0.534
Other	−\$1,477 (4,772)	0.757
Ref: White		
Ethnicity: Hispanic or Latino	\$594 (3,033)	0.845
Ref: Not Hispanic or Latino		
R ²	0.236	

Abbreviation: HMO, Health maintenance organizations.

Note: Data collected by the ABFM from board-certified Diplomates three years after completing residency. Incomes have been adjusted for inflation using the CPI-U to reflect their value in 2020 dollars.

Appendix 3. Adjusted Associations Between Personal and Practice Characteristics with Income for Early-Career Family Physicians Including Race and Ethnicity, 2017/2020: Model 2

Independent Variable	Income Coef./(Std. Err.)	<i>P</i> value
Gender: Woman Ref: Man	−\$31,188 (1,615)	0.001
Weekly Hours Worked	\$683 (52)	0.001
Degree Type: D.O. Ref: M.D.	\$1,076 (1,995)	0.590
Continuity Care Ref: Non-Continuity Care	\$10,319 (4,560)	0.024
Population Density: Rural Ref: Urban	\$19,541 (2,370)	0.001
Region Midwest Northeast South Ref: West	−\$3,803 (1,999) −\$16,968 (2,350) −\$4,016 (1,830)	0.040 0.001 0.051
Principal Practice Site Academic Health Center/Faculty Practice Federal Federally Qualified Health Center or Look-Alike Government Clinic, Non-Federal Independently Owned Medical Practice Indian Health Service Managed Care/HMO Practice Rural Health Clinic (Federally Qualified) Work Site Clinic Other Ref: Hospital/Health System Owned Medical Practice	−\$27,454 (2,591) −\$90,373 (3,819) −\$38,089 (2,626) −\$32,782 (6,551) −\$14,448 (2,544) −\$33,605 (8,109) \$6,526 (3,328) \$3,878 (4,111) −\$11,893 (7,172) −\$23,694 (5,293)	0.001 0.001 0.001 0.001 0.001 0.001 0.050 0.346 0.097 0.001
Race Asian Black or African American Other Ref: White	−\$4,050 (2,081) −\$4,197 (3,267) −\$4,051 (4,661)	0.052 0.199 0.385
Ethnicity: Hispanic or Latino Ref: Not Hispanic or Latino	\$3,014 (2,912)	0.301
R ²	0.208	

Abbreviation: HMO, Health maintenance organizations.

Note: Data collected by the ABFM from board-certified Diplomates three years after completing residency. Incomes have been adjusted for inflation using the CPI-U to reflect their value in 2020 dollars.