

ORIGINAL RESEARCH

General Medicine

Factors associated with emergency physician income

Earl J. Reisdorff MD¹ | Leah E. Masselink PhD² | Fiona E. Gallahue MD³ |
Robert E. Suter DO^{4,5} | Brad P. Chappell DO⁶ | Dian D. Evans NP⁷ |
Ed Salsberg PhD² | Catherine A. Marco MD⁸

¹American Board of Emergency Medicine, East Lansing, Michigan, USA

²George Washington University Fitzhugh Mullan Institute for Health Workforce Equity, Washington, DC, USA

³Department of Emergency Medicine, The University of Washington, Seattle, Washington, USA

⁴Department of Emergency Medicine, University of Texas Southwestern, Dallas, Texas, USA

⁵Department of Military Medicine, Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA

⁶Department of Emergency Medicine, University of California, Harbor-UCLA Medical Center, Los Angeles, California, USA

⁷Emory University Nell Hodgson Woodruff School of Nursing, Atlanta, Georgia, USA

⁸Department of Emergency Medicine, Penn State Health, Hershey Medical Center, Hershey, Pennsylvania, USA

Correspondence

Earl J. Reisdorff, MD, American Board of
Emergency Medicine, East Lansing, MI 48823,
USA.

Email: ereisdorff@abem.org

Funding and support: By *JACEP Open* policy, all authors are required to disclose any and all commercial, financial, and other relationships in any way related to the subject of this article as per ICMJE conflict of interest guidelines (see www.icmje.org). The authors have stated that no such relationships exist.

Prior Presentation: This is the first and only submission of this manuscript and there are no foreseeable copyright concerns.

Abstract

Objective: Income fairness is important, but there are limited data that describe income equity among emergency physicians. Understanding the magnitude of and factors associated with income differences may be helpful in eliminating disparities. This study analyzed the associations of demographic factors, training, practice setting, and board certification with emergency physician income.

Methods: We distributed a survey to professional members of the American College of Emergency Physicians. The survey included questions on annual income, educational background, practice characteristics, gender, age, race, ethnicity, international medical graduate status, type of medical degree (MD vs DO), completion of a subspecialty fellowship, job characteristics, and board certification. Respondents also reported annual income. We used linear regression to determine the respondent characteristics associated with reported annual income.

Results: From 45,961 members we received 3407 responses (7.4%); 2350 contained complete data for regression analysis. The mean reported annual income was \$315,306 (95% confidence interval [CI], \$310,649 to \$319,964). The mean age of the respondents was 47.4 years, 37.4% were women, 3.2% were races underrepresented in medicine (Black, American Indian, or Alaskan Native), and 4.8% were Hispanic or Latino. On linear regression, female gender was associated with lower reported annual

Supervising Editor: Marna Rayl Greenberg, DO, MPH.

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial-NoDerivs](https://creativecommons.org/licenses/by-nc-nd/4.0/) License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2023 The Authors. *JACEP Open* published by Wiley Periodicals LLC on behalf of American College of Emergency Physicians.

income; difference $-\$43,565$, 95% CI, $-\$52,217$ to $-\$34,913$. Physician age, degree (MD vs DO), underrepresented racial minority status, and underrepresented ethnic minority status were not associated with annual income. Fellowship training was associated with lower income; Accreditation Council for Graduate Medical Education (ACGME) program difference $-\$30,048$; 95% CI, $-\$48,183$ to $-\$11,912$, non-ACGME-program difference $-\$27,640$, 95% CI, $-\$40,970$ to $-\$14,257$. Working at a for-profit institution was associated with higher income; difference $\$12,290$, 95% CI, $\$3,693$ to $\$20,888$. Board certification was associated with higher income; difference, $\$43,267$, 95% CI, $\$30,767$ to $\$55,767$.

Conclusions: This study identified income disparities associated with gender, practice setting, fellowship completion, and American Board of Emergency Medicine or American Osteopathic Board of Emergency Medicine certification.

KEYWORDS

emergency physician, income disparities, linear regression, salary pay gap

1 | INTRODUCTION

1.1 | Background

Physician income is associated with factors such as specialty, gender, race, ethnicity, academic practice, board-certification status, and work intensity.¹⁻⁵ Specialties differ as to the magnitude of the effect of these factors on income.⁶⁻¹¹ When controlling factors such as work intensity, much of the variance in income can be explained.^{12,13} Nonetheless, when controlling for demographic, educational, and practice differences, a pay difference of 20% to 30% persists between male and female physicians.^{14,15} Over the course of a medical career, it is estimated that male physicians earn over \$2 million more than female physicians.¹⁶

1.2 | Importance

Income fairness is a desired element for creating an optimal working environment for emergency physicians. Understanding the factors associated with differences in emergency physician income, as well as the magnitude of those differences, is key to creating income transparency and parity. Although some health care systems and some specialties have mitigated income inequities, the degree to which income differences exist in emergency medicine is unknown.^{17,18} Despite the long-standing awareness of income inequity, many income differences persist among physicians.^{1,14,19,20}

1.3 | Goals of this investigation

The American College of Emergency Physicians (ACEP) workforce study characterized current demographics, educational characteris-

tics, and practice experiences for emergency physicians, including reported annual salary. We used these data to identify factors associated with emergency physician income.²¹

2 | METHODS

2.1 | Design and setting

2.1.1 | Survey instrument

We conducted the [Emergency Medicine Physicians Survey](#) online. The survey collected data on emergency physician demographic characteristics, educational background, practice characteristics, board certification, and income. The survey also solicited participants' perceptions of nurse practitioner and physician assistant roles in emergency medicine, job satisfaction, and future career plans. The survey was adapted from similar surveys used by the Fitzhugh Mullan Institute for Health Workforce Equity at the George Washington University for studies of other physician specialties^{22,23} (See [Supplementary Material](#)).

2.1.2 | Survey dissemination

We distributed the survey to all US-based ACEP members via email using ACEP's membership contact list. We excluded trainees and retirees. Reminders were sent to non-respondents every 2 weeks (up to 2 reminders). Completion of the survey was voluntary; we did not provide incentives for survey completion. Data were collected using the REDCap survey platform.²⁴ The study was reviewed and approved by the George Washington University Office of Human Research.

2.2 | Outcomes and measures

The primary outcome was physician-reported annual income, which was derived from answers to the following survey question, “What is your current total income from your work in emergency medicine?” The survey question asked respondents to report their income in categories of \$10,000 increments.

Other measures in the survey pertained to respondent characteristics and work setting. Demographic characteristics included (1) age; (2) gender (female vs male); (3) self-identified race (American Indian, Alaskan native, or Black); and (4) self-identified ethnicity (Hispanic or Latino; yes/no). Specifically, physicians were asked to self-identify their own race and ethnicity. Physicians who responded “other” were not included in the race or ethnicity groups.

Training characteristics included (1) international medical graduate status (yes/no); (2) type of medical degree (MD vs DO); (3) completion of an Accreditation Council for Graduate Medical Education (ACGME)–accredited emergency medicine fellowship (yes/no); and (4) completion of another fellowship (yes/no), which could include non-ACGME-accredited fellowships and/or ACGME-accredited fellowships outside of emergency medicine. International medical graduate status included all physicians who did not train in the United States or Canada.

Job characteristics included (1) practice setting (academic vs nonacademic); (2) working for a for-profit organization (yes/no); (3) service population density (rural vs nonrural location); (4) full-time job status (yes/no); and (5) working a secondary emergency medicine job (yes/no).

Certification status was defined by whether the physician was board certified by the American Board of Emergency Medicine (ABEM) and/or American Osteopathic Board of Emergency Medicine (AOBEM). The variable was derived from answers to the following survey question: “Are you board certified by any of the following? (Select all that apply).” Respondents who checked either ABEM or AOBEM (or both) received values of yes (1) and those who checked neither received values of no (0).

2.3 | Statistical analysis

We used linear regression to identify independent predictors of physician reported annual salary. In the survey, respondents reported salary in a categorical variable in \$10,000 increments. To enable the use of linear regression, we converted the categorical income variable to a continuous variable, defining continuous annual salary as the midpoint of the respective \$10,000 category. For example, a respondent reporting salary in the \$320,000–\$329,999 category received a value of \$325,000 for the continuous variable. We defined continuous annual salary as the dependent variable. We entered all participant characteristics into the multivariable model as independent variables. We used a multivariable model to adjust for potential confounding between variables. We retained all variables in the final model; we did not perform a stepwise variable selection. We conducted

The Bottom Line

Income fairness is important, but not well described in emergency medicine. This survey of 3,407 American College of Emergency Physicians medical professionals identified income disparities associated with female gender, fellowship training, employment by a for-profit institution, and emergency medicine board certification. The survey highlights important areas for further study.

all statistical analyses in Stata version 17 (Stata Corp LLC, College Station, TX).

3 | RESULTS

We distributed the survey to 45,961 ACEP members and received 3407 completed responses (response rate 7.4%). A total of 2558 respondents provided annual income information. We excluded 307 responses from physicians not in clinical practice and 117 responses from physicians outside of emergency medicine. We excluded an additional 208 responses due to incomplete demographic information. The remaining 2350 had complete data for inclusion in the regression analysis. The mean (SD) age of the analysis sample was 47.4 (10.9) years, and the median age was 46 years (Table 1). These findings are similar to data from the 2019 American Medical Association Physician Masterfile, where the mean age was 49.7 years, and the median age was 48 years. The percentage of female physicians in the sample (37.4%) was similar to that noted by the Association of American Medical Colleges in their 2019 diversity report.²⁵

Of the respondents, 17.2% were osteopathic physicians, 5.6% had completed an ACGME-accredited fellowship, and 11.8% had completed non-ACGME-accredited fellowships. More than one third (38.4%) of respondents reported working in academic settings, 41.5% worked for for-profit organizations, 17.6% were in rural locations, and 84.4% had primary jobs that were full-time. Most respondents (87.8%) were certified by ABEM or AOBEM. Average physician income was \$315,306 (95% confidence interval [CI], \$310,649 to \$319,964).

On multivariable analysis, female gender was independently associated with lower income; difference –\$43,565, 95%CI, –\$52,217 to –\$34,913 (Table 1). Physician age, degree (MD vs DO), underrepresented racial status and underrepresented ethnicity status were not associated with annual income. Both ACGME-accredited and non-ACGME fellowship training were associated with lower income; differences \$30,048; 95% CI, –\$48,183 to –\$11,912 and –\$27,640, 95% CI, –\$40,619 to –\$14,661, respectively. Income was higher for those working at for-profit institutions (difference \$12,290, 95% CI, \$3693 to \$20,888) and those with a full-time primary job; difference \$126,315, 95% CI, \$114,677 to \$137,953). ABEM or AOBEM

TABLE 1 Participant characteristics and associations with reported annual income. Income differences determined from a multivariable linear regression model with reported income as the dependent variable and all participant characteristics entered as independent variables. Income difference reflect predict change in annual income with the presence of each factor.

Category	Characteristic	Variable	N (%)	Income difference [95% confidence interval]
Demographics	Gender	Female	879 (37.4%)	-43,565* [-52,217 to -34,913]
		Male	1,471 (62.6%)	Reference
	Race	Black, Alaskan Native, American Indian	76 (3.2%)	10,335 [-12,566 to 33,236]
		Not Black, Alaskan Native, American Indian	2,274 (96.8%)	Reference
	Ethnicity	Hispanic, Latino	112 (4.8%)	-10,157 [-29,209 to 8,896]
		Not Hispanic, Latino	2,238 (95.2%)	Reference
Age	Mean years (SD)	47.4 (10.9)	-232 [-624 to 159]	
Training	Training location	International medical graduate ^a	106 (4.5%)	-7,746 [-27,453 to 11,961]
		US or Canadian graduate	2,244 (95.5%)	Reference
	Degree type	Osteopathic medical degree	405 (17.2%)	6,251 [-4,618 to 17,121]
		Allopathic medical degree	1,945 (82.8%)	Reference
	Fellowship training	ACGME-accredited subspecialty	131 (5.6%)	-30,048* [-48,183 to -11,912]
		No ACGME-accredited subspecialty	2,219 (94.4%)	Reference
		Other subspecialty fellowship	277 (11.8%)	-27,640 [-40,619 to -14,661]
No fellowship training	2,073 (88.2%)	Reference		
Job characteristics	Work setting	Academic	903 (38.4%)	-25,039* [-34,283 to -15,796]
		Non-academic	1,447 (61.6%)	Reference
	Organization type	For-profit	975 (41.5%)	12,290* [3,693 to 20,888]
		Not-for-profit	1,375 (58.5%)	Reference
	Location	Rural	413 (17.6%)	-3,295 [-14,406 to 7,815]
		Non-rural	1,937 (82.4%)	Reference
	Primary job	Full-time	2,036 (84.4%)	126,315* [114,677 to 137,953]
		Not full-time	367 (15.6%)	Reference
Secondary job	Has a secondary job	590 (25.1%)	-8,380 [-17,793 to 1,032]	
	No secondary job	1,760 (74.9%)	Reference	
Board certification	Certification type	ABEM or AOBEM certified	2,064 (87.8%)	43,267* [30,767 to 55,767]
		Not ABEM or AOBEM certified	286 (12.2%)	Reference

Abbreviations: ABEM, American Board of Emergency Medicine; ACGME, Accreditation Council for Graduate Medical Education; AOBEM, American Osteopathic Board of Emergency Medicine.

^aInternational Medical Graduates were defined as physicians who completed medical school outside the United States or Canada.

* $p < 0.01$.

certification was associated with higher income; difference, \$43,267, 95% CI, \$30,767 to \$55,767.

4 | LIMITATIONS

This study has several limitations. First, the survey had a low response rate. Although this is not unexpected because physician surveys often have low response rates, the large sampling frame still generated a robust sample that enabled sufficient statistical power to identify fac-

tors associated with income and mostly aligned with demographic metrics from the American Medical Association Physician Masterfile data on emergency physicians. The study sample slightly overrepresented women (37% vs 30% ACEP members) and was slightly younger. Despite these minor discrepancies, when a weighted regression model was used, the overall findings were similar. The number of respondents who were ABEM and AOBEM certified was similar to the number of ABEM- and AOBEM-certified physicians in the workforce. It is possible that these findings were affected by nonresponse to specific questions, such as the board certification question. Because respondents were

only asked to indicate which certifications they had, it is not possible to determine whether those who did not respond had no certifications or simply skipped the question.

The continuous income variable was created from a survey question with categorical response options. It is possible that the magnitude of estimated differences in income associated with training, job, and demographic characteristics could be slightly different using precise income figures for each respondent. However, by using narrow income ranges as response options, we likely collected more complete and cleaner income data for use in the analyses. The factors found to be significantly associated with income were all highly statistically significant, so it is unlikely that variation within income ranges would have affected the overall conclusions of the analysis.

The term “full-time primary job” was not defined. Although survey respondents did not appear to have difficulty answering the question, it is possible that different respondents might have had disparate interpretations of the term. The model only demonstrates associations among demographic, training, and job characteristics on average; they do not necessarily suggest specific causal relationships. Finally, all responses were self-reported and were not verified by the investigators.

5 | DISCUSSION

This study identified several important factors associated with income among emergency physicians. We found that annual reported income was higher for male physicians, those who worked at for-profit organizations and in non-academic settings, and physicians who had emergency medicine board certification. Most striking is the \$43,565 in lower pay for women even after accounting for other training and job characteristics. Additional findings of note are the absence of pay differences for underrepresented racial minority and ethnic minority physicians found in other specialties. Of note, in other specialties completing a subspecialty fellowship (eg, cardiology) leads to higher income. The opposite association was found for emergency physicians in this study.

The lower reported income for women is consistent with reports from other fields of medicine. For example, Weeks and Wallace found that gender-based pay gap for White family physicians was \$34,033 in the 1990s.⁶ Using similar methodology over the same time period, Weeks and Wallace found an average gender-based gap for emergency physicians of \$47,854,¹⁴ a gap that has persisted into the 2020s according to our findings. In the academic community, female physicians in academic emergency medicine work more clinical hours, are paid less, and hold fewer leadership roles.^{12,26–29} Our findings are also consistent with a longitudinal study of academic emergency physician income, which found persist gender-based pay gaps between 2013 and 2017.²⁸ The underlying cause of this persist gap is unclear. Many specialties report a similar gender-related income gap.^{16,30} When variables such as work volume, race, years of experience, clinical hours, and academic rank are considered, the gap persists.¹² One suggestion for this discrepancy is that men are better at negotiating salaries than

women, but this explanation is speculative.^{12,28} In any case, income differences are concerning to the field because they may contribute to women being at higher risk for burnout and for considering changing or leaving employment in midcareer.³¹

Although prior studies have shown varied associations between physician race and ethnicity and income,^{2,6,9} our analysis did not find statistically significant differences in income for underrepresented minority race physicians or Hispanic/Latino physicians after accounting for other factors. Although the lack of significant disparities is encouraging, the findings should be interpreted with caution because the small numbers of minority respondents led to a high degree of uncertainty (wide confidence intervals) around the estimates in our regression model. Given evidence of race- and ethnicity-based income disparities in other specialties, this is important to continue monitoring and studying as the emergency medicine workforce becomes more diverse.

The lower income associated with completing a subspecialty fellowship in emergency medicine may be explained by different practice choices in academic medicine settings where most emergency medicine subspecialists likely work. Unlike subspecialists in other fields, many emergency physicians continue to maintain a core clinical practice in the emergency department. This practice pattern is different than for many of the internal medicine-based subspecialties (eg, gastroenterology, oncology). However, fellowship training likely enhances opportunities in academic departments of emergency medicine, where we found that emergency physicians earn less than their colleagues in other settings, which is consistent with previously published reports.^{32–35} The differences may be due, in part, to institutional funding, but may also be influenced by clinical revenue, clinical hours, negotiating skills, or other factors. Physicians in academic settings may also be motivated less by income than other physicians. A recent study found that academic physicians' professional fulfillment was associated with meaningfulness of work, perceived appreciation, and academic work environment.³⁶

Our findings add to our knowledge of income patterns among emergency physicians and suggest ways in which income may affect the emergency physician workforce. Awareness of income disparities and strategies to improve income inequity are important steps to address these disparities. Public payment policy initiatives can have a significant impact on physician income and could potentially be used to affect the distribution and availability of health care resources, including emergency physicians. To contribute to the continued success of the specialty, future research should more specifically define how changes in employment practices can lead to greater financial equity. Longitudinal studies and more detailed regression models that seek to identify variables that affect income are needed.

There is an opportunity for the specialty of emergency medicine to reflect on its value system regarding financial equity. Reaching income equity will be difficult due to the difficulty of accurately identifying underlying causes. Although the specialty has been aware of the gap, root causes have been elusive—less aggressive negotiation by women is likely an insufficient explanation. One solution would be to have publicly reported, statistically compared, and objectively explained

physician incomes drawing the employer into a more accountable environment.

Although equity among different groups is highly desirable, achieving income equity will be challenging. This report offers a starting point in the necessary discussion for our specialty to embrace financial parity, especially for women. Eliminating gender-based inequity requires a review of hiring practices in private and academic organizations. More transparent sharing of peer-to-peer income and policies that prohibit income differentials might be important in the future.

In summary, this study identified income disparities associated with gender, practice setting, fellowship completion, and ABEM or AOBEM certification.

AUTHOR CONTRIBUTIONS

Earl J. Reisdorff: Study design, manuscript review. Leah E. Mas-selink: Study design, data analysis, institutional review board submission, manuscript review. Fiona E. Gallahue: Study design, manuscript review. Robert E. Suter: Manuscript review. Brad P. Chappell: Study design, manuscript review. Dian D. Evans: Manuscript review. Ed Sals-berg: Study design, data analysis. Catherine A. Marco: Study design, manuscript review.

ACKNOWLEDGMENTS

After the manuscript was prepared, it was reviewed and approved by the American College of Emergency Physicians Board of Directors. The original project survey was funded by a consortium of emergency medicine organizations led by the American College of Emergency Physicians. The secondary analysis was supported by a financial grant from the American Board of Emergency Medicine.

CONFLICT OF INTEREST STATEMENT

Earl J. Reisdorff is employed by the American Board of Emergency Medicine.

Catherine A. Marco is a former member of the Board of Directors of the American Board of Emergency Medicine.

REFERENCES

- Chen YW, Westfal ML, Chang DC, Kelleher CM. Underemployment of female surgeons? *Ann Surg*. 2021;273(2):197-201. doi:10.1097/SLA.0000000000004497
- Leigh JP, Tancredi D, Jerant A, Kravitz RL. Physician wages across specialties: informing the physician reimbursement debate. *Arch Intern Med*. 2010;170(19):1728-1734. doi:10.1001/archinternmed.2010.350
- Nasseh K, Vujicic M. Earnings of employed and self-employed US health care professionals, 2001 to 2015. *JAMA Netw Open*. 2018;1(2):e180431. doi:10.1001/jamanetworkopen.2018.0431
- Ly DP, Seabury SA, Jena AB. Differences in incomes of physicians in the United States by race and sex: observational study. *BMJ*. 2016;353:i2923. doi:10.1136/bmj.i2923
- Jagsi R, Griffith KA, Stewart A, Sambuco D, DeCastro R, Ubel PA. Gender differences in the salaries of physician researchers. *JAMA*. 2012;307(22):2410-2417. doi:10.1001/jama.2012.6183
- Weeks WB, Wallace AE. The influence of race and gender on family physicians' annual incomes. *J Am Board Fam Med*. 2006;19(6):548-556. doi:10.3122/jabfm.19.6.548
- Weeks WB, Wallace AE. Race and gender differences in pediatricians' annual incomes. *Ambul Pediatr*. 2007;7(2):196-200. doi:10.1016/j.ambp.2006.12.004
- Weeks WB, Wallace AE. The influence of physician race and gender on obstetrician-gynecologists' annual incomes. *Obstet Gynecol*. 2006;108(3 pt 1):603-611. doi:10.1097/01.AOG.0000231720.64403.6f
- Weeks WB, Wallace AE. Race and gender differences in general internists' annual incomes. *J Gen Intern Med*. 2006;21(11):1167-1171. doi:10.1111/j.1525-1497.2006.00592.x
- Yu MM, Merillat SA, Weathers AL, Evans DA, Wolf RA, Ney JP. Gender discrepancies in neurologist compensation. *Neurology*. 2022;98(9):e893-902. doi:10.1212/WNL.0000000000013281
- Lin JC, Bowser KE, Drudi LM, DiLosa KL, Yi J. Equal pay for equal work: disparities in compensation in vascular surgery. *J Vasc Surg*. 2021;74(2S):215-285. doi:10.1016/j.jvs.2021.03.052
- Madsen TE, Linden JA, Rounds K, et al. Current status of gender and racial/ethnic disparities among academic emergency medicine physicians. *Acad Emerg Med*. 2017;24(10):1182-1192. doi:10.1111/acem.13269
- Gilbert SB, Allshouse A, Skaznik-Wikiel ME. Gender inequality in salaries among reproductive endocrinology and infertility subspecialists in the United States. *Fertil Steril*. 2019;111(6):1194-1200. doi:10.1016/j.fertnstert.2019.02.004
- Weeks WB, Wallace AE. Differences in the annual incomes of emergency physicians related to gender. *Acad Emerg Med*. 2007;14(5):434-440. doi:10.1197/j.aem.2006.12.013
- Apaydin EA, Chen PGC, Friedberg MW. Differences in physician income by gender in a multiregion survey. *J Gen Intern Med*. 2018;33(9):1574-1581. doi:10.1007/s11606-018-4462-2
- Whaley CM, Koo T, Arora VM, Ganguli I, Gross N, Jena AB. Female physicians earn an estimated \$2 million less than male physicians over a simulated 40-year career. *Health Aff*. 2021;40(12):1856-1864. doi:10.1377/hlthaff.2021.00461
- Do MH, Lipner SR. Contribution of gender on compensation of Veterans Affairs-affiliated dermatologists: a cross-sectional study. *Int J Womens Dermatol*. 2020;6(5):414-418. doi:10.1016/j.ijwd.2020.09.009
- Hayes SN, Noseworthy JH, Farrugia G. A structured compensation plan results in equitable physician compensation: a single-center analysis. *Mayo Clin Proc*. 2020;95(1):35-43. doi:10.1016/j.mayocp.2019.09.022
- Langwell KM. Differences by sex in economic returns associated with physician specialization. *J Health Polit Policy Law*. 1982;6(4):752-761. doi:10.1215/03616878-6-4-752
- Freund KM, Raj A, Kaplan SE, et al. Inequities in academic compensation by gender: a follow-up to the national faculty survey cohort study. *Acad Med*. 2016;91(8):1068-1073. doi:10.1097/ACM.0000000000001250
- Marco CA, Courtney DM, Ling LJ, et al. The emergency medicine physician workforce: projections for 2030. *Ann Emerg Med*. 2021;78(6):726-737.
- Lee AI, Masselink LE, De Castro LM, et al. Burnout in U.S. hematologists and oncologists: impact of compensation models and advanced practice provider support. *Blood Adv*. published online ahead of print April 27, 2022. doi:10.1182/bloodadvances.2021006140
- Salsberg E, Quigley L, Mehfood N, Masselink L, Collins A. *The US adult nephrology workforce 2016: developments and trends. Prepared for the American Society of Nephrology*. Accessed July 7, 2022. https://www.asn-online.org/education/training/workforce/Nephrology_Workforce_Study_Report_2016.pdf
- Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)—a metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inform*. 2009;42(2):377-381.

25. Association of American Medical Colleges. Diversity in medicine: facts and figures 2019. Figure 19: Percentage of physicians by sex. 2018. Accessed February 3, 2021. <https://www.aamc.org/data-reports/workforce/interactive-data/figure-19-percentage-physicians-sex-2018>
26. Catenaccio E, Rochlin JM, Simon HK. Addressing gender-based disparities in earning potential in academic medicine. *JAMA Netw Open*. 2022;5(2):e220067. doi:10.1001/jamanetworkopen.2022.0067
27. Wiler JL, Wendel SK, Rounds K, McGowan B, Baird J. Salary disparities based on gender in academic emergency medicine leadership. *Acad Emerg Med*. 2022;29(3):286-293. doi:10.1111/acem.14404
28. Wiler JL, Rounds K, McGowan B, Baird J. Continuation of gender disparities in pay among academic emergency medicine physicians. *Acad Emerg Med*. 2019;26(3):286-292. doi:10.1111/acem.13694
29. Watts SH, Promes SB, Hockberger R. The Society for Academic Emergency Medicine and Association of Academic Chairs in Emergency Medicine 2009–2010 emergency medicine faculty salary and benefits survey. *Acad Emerg Med*. 2012;19(7):852-860. doi:10.1111/j.1553-2712.2012.01400.x
30. Doximity. Doximity 2018 physician compensation report. Published March 27, 2018. Accessed April 20, 2022. <https://blog.doximity.com/articles/doximity-2018-physician-compensation-report>
31. Lall MD, Perman SM, Garg N, et al. Intention to leave emergency medicine: mid-career women are at increased risk. *West J Emerg Med*. 2020;21(5):1131-1139. doi:10.5811/westjem.2020.5.47313
32. Kellermann AL. Are you considering an academic career? Emergency medicine residents' association. Accessed April 22, 2022. <https://www.emra.org/residents-fellows/career-planning/practice-types/are-you-considering-an-academic-career/>
33. ZipRecruiter. Academic emergency medicine salary. Accessed April 22, 2022. <https://www.ziprecruiter.com/Salaries/Academic-Emergency-Medicine-Salary>
34. Doximity. Doximity 2019 physician compensation report: third annual study. Doximity. 2019. Accessed April 22, 2022. https://s3.amazonaws.com/s3.doximity.com/press/doximity_third_annual_physician_compensation_report_round3.pdf
35. Martin KL. Medscape emergency medicine physician compensation report 2021. Published May 14, 2021. Accessed April 22, 2022. <https://www.medscape.com/slideshow/2021-compensation-emergency-medicine-6013847#2>
36. Lu DW, Lee J, Alvarez A, et al. Drivers of professional fulfillment and burnout among emergency medicine faculty: a national wellness survey by the Society for Academic Emergency Medicine. *Acad Emerg Med*. 2022;29(8):987-988. Epub March 19, 2022. doi:10.1111/acem.14487

SUPPORTING INFORMATION

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

How to cite this article: Reisdorff EJ, Masselink LE, Gallahue FE, et al. Factors associated with emergency physician income. *JACEP Open*. 2023;4:e12949. <https://doi.org/10.1002/emp2.12949>