

ORIGINAL RESEARCH

Experiences of Lesbian, Gay, Bisexual, Transgender, and Queer Cardiology Physicians and Fellows in Training



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ABSTRACT

BACKGROUND The number of practicing lesbian, gay, bisexual, transgender, and queer (LGBTQ+) cardiologists is unknown despite diversity initiatives focused on understanding workforce demographics.

OBJECTIVES The aim of this study was to evaluate the prevalence, sources of mistreatment, and measures of wellness among the LGBTQ+ cardiology community.

METHODS An online survey was sent to the American College of Cardiology Fellow in Training and Early Career Professional Listservs and shared on social media sites. The survey included the Short-Negative Acts Questionnaire and LGBTQ+ -specific harassment questions. Chi-square analysis and Fisher exact tests were performed to compare responses between LGBTQ+ and non-LGBTQ+ respondents.

RESULTS A total of 188 respondents completed the survey (56% Fellow in Training). One-third (33%) identified as LGBTQ+. Gender identity data included: transgender (3%), nonbinary (2%), gender queer (1%), and agender (1%). LGBTQ+ physicians were less likely to agree with the statements 'LGBTQ+ patients were treated fairly' (40% vs 66%, $P < 0.001$), and 'leadership dealt with people demonstrating poor behavior fairly' (34% vs 51%, $P = 0.029$) compared to heterosexual peers. LGBTQ+ physicians were more likely to report gender policing and heterosexist harassment compared to heterosexual peers ($P = 0.002$). The majority of physicians (91%) were satisfied with their decision to become a cardiologist.

CONCLUSIONS This current analysis of LGBTQ+ cardiologists in the workplace identifies opportunities to address mistreatment impacting the LGBTQ+ community. Despite experiencing mistreatment, LGBTQ+ cardiologists report high job satisfaction. Further work is necessary to create a safe space and diverse cohort of physicians required to meet the needs of LGBTQ+ patients at risk for cardiovascular disease. (JACC Adv. 2025;4:101545) © 2025 The Authors. Published by Elsevier on behalf of the American College of Cardiology Foundation. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

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**ABBREVIATIONS
AND ACRONYMS****ACC** = American College of
Cardiology**FIT** = fellow in training**GME** = graduate medical
education**GPH** = gender policing
harassment**HH** = heterosexist harassment**LGBTQ+** = lesbian, gay,
bisexual, transgender, queer**SOGI** = sexual orientation/
gender identity**BACKGROUND**

An estimated 25.3 million adults identify as lesbian, gay, bisexual, transgender or queer (LGBTQ)+ in the United States.¹ This figure has increased by 5.6% over the last 4 years, in large part due to intentional and careful survey methods. Unfortunately, this population often experiences considerable stigma related to their sexual orientation or gender identity. Stigma can be enacted through a variety of mechanisms, including discrimination or mistreatment. Mistreatment by the health care community is pervasive, including inadequate knowledge about LGBTQ+ health care needs, refusal of health care services, and even verbal harassment.² Consistent with minority stress models, the internalization of negative health care experiences specific to LGBTQ+ people (eg, fear of disrespect or mistreatment related to gender identity,³ negative interactions with providers⁴) combined with general life stressors may contribute to cardiovascular health care disparities in LGBTQ+ adults.⁵

A more diverse workforce in medicine improves quality of care through cultural competency in patient-provider relationships, higher levels of patient satisfaction and trust, expanding minority patients' access to and utilization of health services, and enhancing the breadth of research beyond racial/ethnic perspectives.⁶ However, while the number of Black, Hispanic, and Indigenous American health care professionals is increasing, there is a lack of data about the proportion of LGBTQ+ physicians.⁷ The lack of data and the exclusion of LGBTQ+ physicians in research perpetuate the sense of 'invisibility' among these physicians within the cardiovascular workforce. For example, a recent survey performed to determine the demographic status of cardiologists in the US, the data collected from this study regarding sex was only binary (male/female).⁸ Yet, every person has a sexual orientation and gender identity (SOGI) that could be easily and reliably measured. Documenting these demographic characteristics is core to understanding this population's representativeness and experiences in delivering health care.

The aim of this study is to evaluate the prevalence, sources of mistreatment, and measures of wellness among the LGBTQ+ cardiology community.

METHODS

A voluntary survey ([Supplemental Appendix](#)) designed to evaluate the prevalence of LGBTQ+ individuals in cardiovascular medicine was offered to

American College of Cardiology (ACC) Fellows in Training (FITs) and early career professional cardiologists via respective listservs. Early career cardiologists and FITs were sampled as factors influencing career choice among LGBTQ+ trainees remains unknown. The survey was also available via a 'mobile' URL on X (Twitter) and Facebook. The survey was open from January 18 to May 18, 2023. The survey was advertised as an 'ACC Gender Minority Stress Survey' thus avoiding response rates from either LGBTQ+ or non-LGBTQ+ respondents. Multiple strategies were employed to mitigating false inputs/bots including monitoring internet protocol (IP) addresses (track IP addresses to identify potential bot activity, look for multiple responses from same IP address within limited time frame), analyze patterns of responses for inconsistencies/repetitive answers, and analyze unstructured code for bad data. A random drawing of one of 5 \$100 Amazon electronic gift cards was offered as an incentive for study participation. All respondents who completed the survey were given the opportunity to be taken to a separate URL page *not* linked to the survey to enter their name and email address for the drawing. In addition to standard demographic data (race/ethnicity, age, marital status), respondents' SOGI data were queried. The survey included a 2-step gender identity and birth sex question endorsed by transgender researchers in the United States.⁹ Respondents were categorized as LGBTQ+ if they responded as identifying as gay, lesbian, or other sexual orientation. Respondents were also categorized as LGBTQ+ if they identified as transgender or other gender identity (either in addition to or independent of identifying as gay, lesbian, or other sexual orientation). Respondents that identified as heterosexual/straight and did not identify as transgender were classified as non-LGBTQ+.

Respondents were then asked about work experiences during the prior academic year (July 2022-May 2023). The Short-Negative Acts Questionnaire; a validated 9-item tool, was utilized to assess self-perceived bullying in the workplace.¹⁰ Additional questions specific to sexual and gender minorities included an examination of gender policing harassment (GPH) and heterosexist harassment (HH). Four items were used to assess GPH, defined as a form of gender harassment characterized by negative treatment for deviating from one's traditional gender role.¹¹ HH, a distinct form of identity-based harassment that targets individuals who deviate from the norm by being LGBTQ+ (*or perceived as being such*) was measured by 3 items from the HH measurement scale.¹² These questions were asked on a 5-point

Likert scale (0 = never; 4 = many times). For those that reported bullying or harassment in the workplace, respondents were then asked to identify the sources of mistreatment or harassment: 1) patient (or family member), 2) leadership personnel (eg, attending cardiologist; chief), 3) colleague, 4) administrator, and 5) support staff. Respondents were asked about measures of well-being in the workplace (LGBTQ+ education, inclusive LGBTQ+ culture, LGBTQ+ policy, etc) and career satisfaction. Lastly, LGBTQ+ respondents were provided an optional open-ended question to share any negative consequences experienced in the cardiology workplace.

Chi-square analysis and Fisher exact tests were performed to compare mistreatment, sources of mistreatment, and perception of work environment between LGBTQ+ and non-LGBTQ+ respondents. Analysis of responses was performed using IBM SPSS Statistics for Windows Version 27.0. Advarra Institutional Review Board (IRB) Services reviewed the study protocol and using the Department of Health and Human Services regulations found at 45 CFR 46.104(d) (2), the IRB determined that the research project is exempt from IRB oversight.

RESULTS

A total of 188 respondents completed the survey. Over half (56%) of survey respondents were FITs. One-third of respondents (n = 62) identified as LGBTQ+. Of these respondents, 25% identified as lesbian or gay, 6% bisexual, 2% queer, 1% other sexual orientation, and 5% identified as transgender or nonbinary [Table 1](#).

LGBTQ+ WORKPLACE EXPERIENCES. The majority of respondents (75%), both LGBTQ+ and non-LGBTQ+, reported exposure to at least one negative behavior over the prior year. These negative experiences included being ignored or excluded (45%), persistent criticism of work and effort (36%), repeated reminders of errors/mistakes (36%), spreading gossip and rumors about you (36%), and being ignored or facing hostile reaction when you approach (34%). Compared to early career clinicians, FITs were more likely to experience being shouted at (37% vs 27%, $P = 0.262$), ignored (39% vs 23%, $P = 0.060$), and reminded of their errors (40% vs 32%, $P = 0.368$).

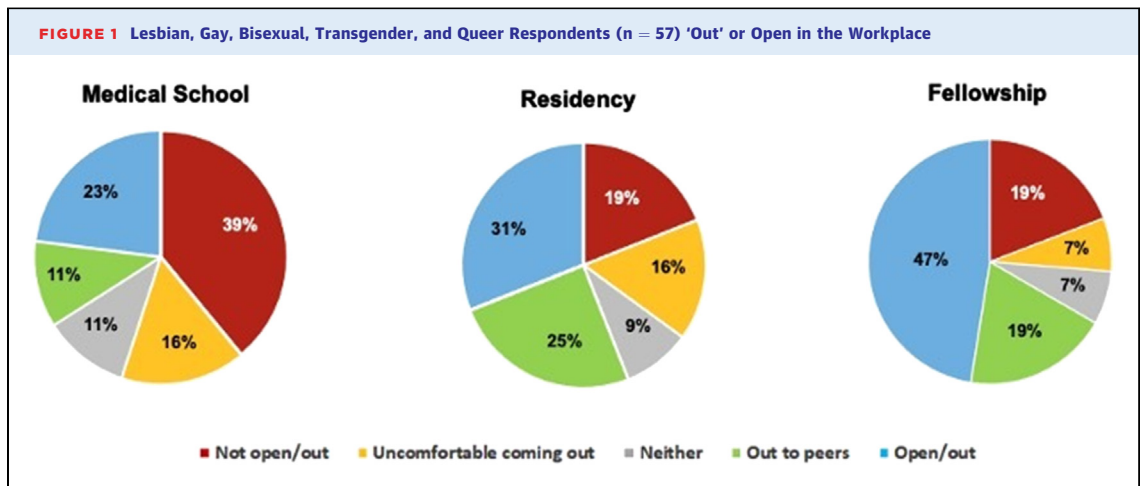
Compared to non-LGBTQ+ respondents, LGBTQ+ respondents experienced higher levels of both GPH and HH. The most common form of GPH was questioning one's masculinity or femininity (LGBTQ+ [26%] vs non-LGBTQ+ [10%]; $P = 0.007$). HH included someone telling/overhearing offensive jokes

TABLE 1 Characteristics of Cardiology Respondents (N = 188)

Age group (y)	
<29	9 (5%)
30-39	133 (71%)
40-49	30 (16%)
>50	15 (8%)
Race	
White	98 (52%)
Asian (South Asian, East Asian, other Asian)	52 (28%)
LatinX	30 (16%)
Black	11 (6%)
Middle Eastern/North African	9 (5%)
Native American	2 (1%)
Native Hawaiian/Pacific Islander	1 (1%)
Other	2 (3%)
Career stage	
FIT	106 (56%)
Early career	44 (23%)
Mid-late career	30 (16%)
Non-MD clinician	8 (4%)
Sexual orientation	
Heterosexual	127 (68%)
Lesbian	10 (5%)
Gay	39 (21%)
Bisexual	11 (6%)
Queer	3 (2%)
Asexual	2 (1%)
Decline	2 (1%)
Gender identity	
Cisgender man	114 (61%)
Cisgender woman	66 (35%)
Transgender man	1 (1%)
Transgender woman	2 (2%)
Nonbinary	2 (2%)
Other	2 (1%)
Values are n (%).	
FIT = fellow in training.	

or remarks about lesbian women, gay men, or bisexual people (LGBTQ+ [60%] vs non-LGBTQ+ [32%], $P < 0.001$), someone making offensive remarks to you about your sexual orientation to you either publicly (eg, at work) or privately (LGBTQ+ [16%] vs non-LGBTQ+ [3%], $P = 0.002$) and someone calling you or someone else 'slurs regarding your sexual orientation' in your presence (LGBTQ+ [21%] vs non-LGBTQ+ [12%], $P = 0.111$). With regards to all forms of negative work experiences, sources of unwanted behaviors included colleagues: attendings, coworkers, fellows, or residents (42%); physician leadership (34%); cardiovascular support staff: nurses or advanced practitioners (27%); and patients (26%).

Of 57 LGBTQ+ respondents, 23% reported they were 'out' in medical school, 11% were open to their



peers only in medical school, and 39% had not disclosed their SOGI status in medical school. By residency, 32% had come 'out' at work. At the time of cardiology fellowship 47% had come 'out' at work. At the time of cardiology fellowship, 19% still had not disclosed their SOGI status (Figure 1). One respondent reported, "Prior to coming out at work, which took 6 years, I had significant workplace stress and anxiety from being 'in the closet.' I had overheard negative comments about the LGBTQ+ community which made me feel guarded, less than and feelings of shame. I had been told not to advertise that I'm gay because I won't succeed at my institution."

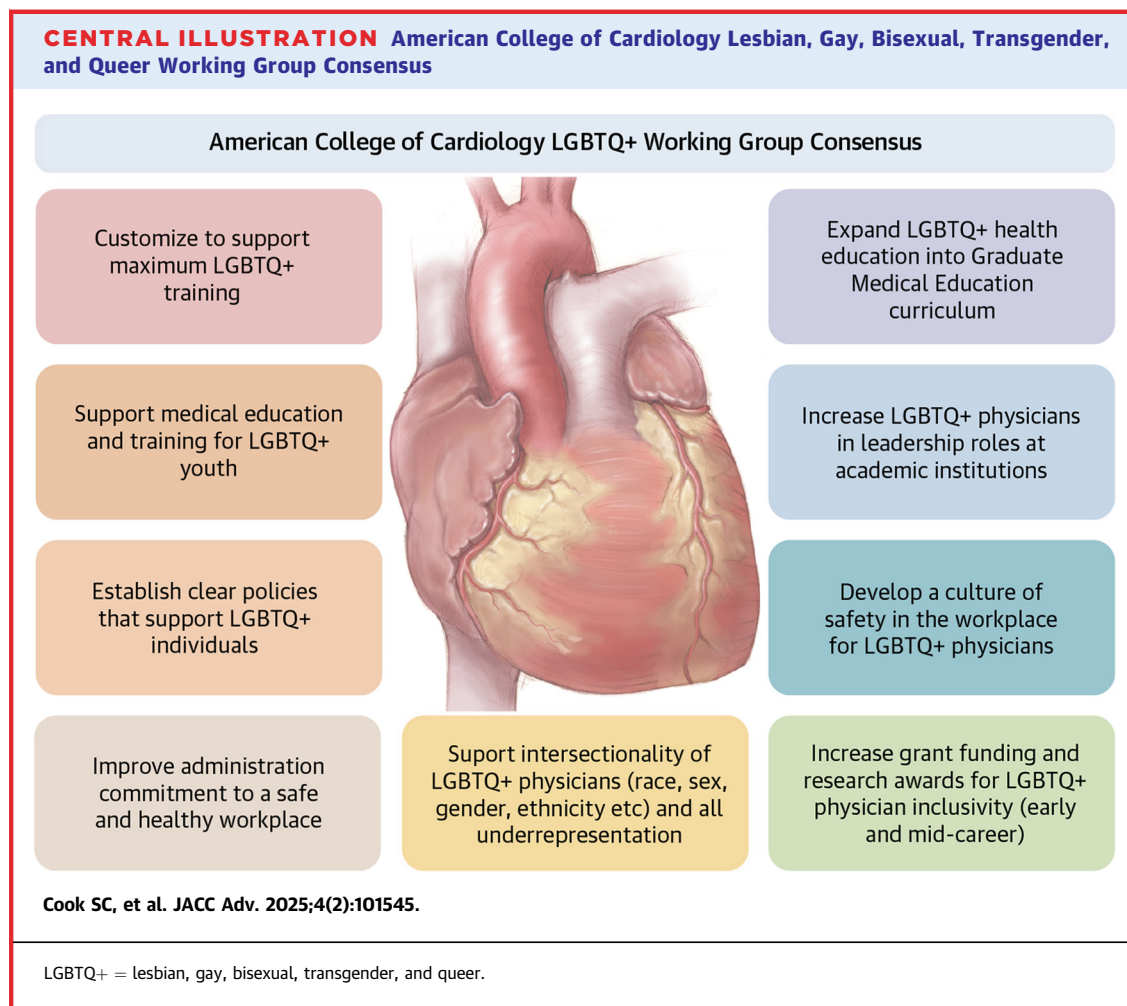
TRAINING PROVIDED FOR SEXUAL AND GENDER MINORITY PATIENTS. While few survey respondents reported appropriate education about sexual and gender minority patients' health care during training, LGBTQ+ respondents more often reported a lack of education as compared to non-LGBTQ+ respondents (LGBTQ+ [8%] vs non-LGBTQ+ [19%], $P = 0.045$). LGBTQ+ respondents were also less likely to agree with the statement 'cardiology leadership dealt effectively with behaviors of bullying toward sexual and gender minorities at my institution' (LGBTQ+ [34%] vs non-LGBTQ+ [51%], $P = 0.029$). Still, both LGBTQ+ and non-LGBTQ+ respondents reported that they were very satisfied with their decision to become a cardiologist (60%, very satisfied).

DISCUSSION

In this survey of FITs and early career cardiologists, 31% identified as lesbian, gay, bisexual, or other sexual orientation and 5% identified as transgender or nonbinary. Similar to previous studies, our study

found that mistreatment was common among all respondents.¹³ In addition, mistreatment was more commonly encountered among FITs compared to early career cardiologists. In a large study of medical residents, microaggressions in the workplace most commonly took the form of verbal harassment (80%).¹⁴ In contrast to prior studies on harassment in the workplace, our study contributes novel information about how harassment impacts sexual and gender minority cardiologists in the workplace. LGBTQ+ cardiologists were more likely to report both HH and GPH compared to their non-LGBTQ+ peers. The most common form of GPH experienced by LGBTQ+ cardiologists was harassment by questioning their femininity, masculinity, or manhood. This pattern of GPH is important to recognize as prior studies have demonstrated that instances of GPH may have substantial consequences for well-being, retention, and productivity in academic medicine.¹⁵ More commonly, cardiologists experienced all forms of HH in the workplace. It has been well demonstrated that the implications of HH include a negative work environment for sexual and gender minorities, in addition to psychological consequences such as depression.¹⁶ Sources of unwanted GPH and HH included not only colleagues and physician leadership but also patients. These results demonstrate that there are norms around heterosexuality in the cardiology workplace, and harassment aimed at preserving these norms is experienced by LGBTQ+ cardiologists and FITs.

Our study also revealed that a greater percentage of respondents were 'out at work' during fellowship compared to being 'out' during medical school. This is likely attributable to increasing rank as a medical



trainee. The heteronormative working environment for the LGBTQ+ medical trainee may lead to nondisclosure. However, it is important to recognize the LGBTQ+ trainee faces unique challenges during training such as: 1) lack of LGBTQ+ health care education curricula perpetuating a sense of invisibility; 2) discriminatory social interactions with peers and supervisors in training environments; 3) complex interactions with patients and their own cultural biases; and 4) higher mental health burden.¹⁷ Thus, it is not surprising that 20% of respondents were not 'out' at work during their cardiology fellowship. The persistence of a hostile environment for the LGBTQ+ trainee and/or physician makes the adjustment to the rigor of training more challenging leading to 8-fold higher levels of burnout compared to non-LGBTQ+ peers.¹⁸ Every effort should be made to enhance the cultural climate for LGBTQ+ FITs and cardiologists through the development and enforcement of anti-discrimination policies in the workplace. Outcomes from one of the largest studies to evaluate 'outness in

the workplace determined that factors associated with being 'out' included employment >10 years, working in a LGBTQ+ friendly environment, and LGBTQ+ antidiscrimination policies.¹⁹ Through the creation of a safe environment, academic institutions can normalize LGBTQ+ identities and increase visibility of the entire LGBTQ+ cardiovascular health care team. By being out in the workplace, more LGBTQ+ cardiovascular health care professionals can serve as mentors for trainees and provide opportunities for academic, professional, and personal development.^{20,21} The ACC has recognized not only the need to increase the visibility of their LGBTQ+ professionals but also expand opportunities for LGBTQ+ trainees to become cardiovascular professionals. In 2022, the ACC held its inaugural LGBTQ+ Internal Medicine Cardiology program. This program is designed to create a diverse and inclusive field of future cardiovascular physicians by connecting them with LGBTQ+ mentors and resources to understand the field of cardiology. Data from these

cohorts are incoming and future analysis will reveal the impact of this program and factors (eg, inclusiveness, work-life balance, personality fit, etc) influencing choice in the field of cardiology. A work environment that promotes inclusion and equity is more likely to recruit and retain LGBTQ+ cardiologists. For the LGBTQ+ cardiologist, this environment leads to an increased sense of self-dignity and job satisfaction. This requires commitment from academic medical centers to include sexual and gender minority content within graduate medical education (GME) (**Central Illustration**). Today, medical training is so deficient in the specific needs of the transgender population such that approximately 50% of transgender respondents reported having to teach their health care providers about transgender care.²² This is highlighted by our study where LGBTQ+ respondents reported a lack of sexual and gender minority health content during their training. Current trainees are not prepared to address sexual and gender minority health with regards to: 1) terminology relevant to sexual and gender minority patients; 2) health disparities and preventive care issues affecting sexual and gender minority patients; and 3) substance use and mental health issues unique to sexual and gender minority patients.²³ As a result, these trainees also conflated terminology including sexual orientation, gender identity, and gender expression. Through thoughtful development of LGBTQ-specific topics into GME, medical educators will be able to reduce explicit bias and eliminate disparities experienced by LGBTQ+ adults. Cardiology program directors at academic centers should begin to define learning objectives and competencies for LGBTQ-specific learning (eg, curricular committee for sexual and gender minority health education).^{24,25} Inclusion of sexual and gender minority health into clinical, educational and research infrastructures will increase the knowledge of future generations and mitigate the responsibility on already vulnerable LGBTQ+ patients.

Understanding the prevalence of sexual and gender minorities within the field of cardiology and the challenges of sexual and gender minorities in the workplace would not have been possible without the collection of SOGI data. Currently, there is a lack of data in the field of cardiology to understand physician workforce diversity that includes either sexual orientation or gender identity data. This lack of SOGI data does not foster a sense of inclusion for those who belong to medically marginalized communities such as the LGBTQ+ community. Omitting SOGI questions from cardiovascular research propagates systemic marginalization, lack of value by

LGBTQ+ physicians and a sense of “othering” or the process of not ‘belonging’ to the group. In 2023, the Human Rights Campaign saw a record number of Fortune 500 companies tracking SOGI data in their human resource information systems, representing a 77% increase compared to 2022.²⁶ In contrast to most academic medical centers, Fortune 500 companies understand the importance of collecting SOGI data to build intentional initiatives that impact every employee positively. Yet, these data are lacking in cardiology, workforce diversity in health care and cardiovascular research. Despite the advantages of collecting SOGI data, there remains a paucity of cardiovascular research that includes these data. Furthermore, as a result of lack of education received during undergraduate and graduate medical training, studies have shown that trainees are ill-prepared to provide culturally competent care for LGBTQ+ patients.^{23,24} Trainees who lack the knowledge regarding terminology relevant to LGBTQ+ patients or understand cardiovascular issues pertinent to this population are unlikely to develop research studies that include this underrepresented minority, thereby widening health care disparities experienced by this group.

STUDY LIMITATIONS. This study has several limitations. This study is limited by the small sample size of LGBTQ+ respondents to assess the total population of LGBTQ+ FIT and early-career cardiologists. The survey was sent to members of the ACC listserv that may have led to selection bias among our sample. Recruitment strategies may have also selected for those respondents who are engaged with LGBTQ+ research. However, for those individuals who are not ‘out’ in the workplace may not have participated, for fear of participating in LGBTQ+ research despite anonymity of patient SOGI data. Although this study largely focused on negative LGBTQ+ experiences, this remains important to understand as there are few studies examining the experiences of the LGBTQ+ cardiovascular workforce. More importantly, a recent study demonstrated higher levels of burnout and lower levels of professional fulfillment among academic physicians.²⁷ Social stigma, reduced sense of belonging or ‘othering,’ mistreatment, and lack of mentorship were all considered as potential factors leading to burnout and lack of professional fulfillment. In the absence of routine SOGI data collection, it remains unclear if this cohort represents an overestimate or underestimate of the number of LGBTQ+ cardiologists and FITs. Regardless, it remains an *initial* estimate of LGBTQ+ cardiologists and FITs. Once SOGI data are

collected routinely, and targeted interventions have been incorporated to foster an inclusive environment, future research can then evaluate the occupational well-being of the LGBTQ+ cardiovascular workforce. Due to the small sample size of the cohorts studied, we were not able to examine the differences in harassment between LGBTQ+ and non-LGBTQ+ respondents to help further understand important differences in harassment between LGBTQ+ race and ethnicity groups. Intersectionality among LGBTQ+ trainees and professionals are important to recognize as there may be intersecting and shared systems of oppression at work. Today, there is a paucity of research regarding intersectionality among LGBTQ+ trainees.

CONCLUSIONS

Despite a climate of increasing acceptance for the LGBTQ+ community, this is the first inclusionary evaluation of cardiovascular LGBTQ+ trainees and early career physicians. Importantly, this study identified LGBTQ+-specific harassment and sources of mistreatment faced not only during postgraduate medical training but also during subsequent employment. Given the absence of LGBTQ+ education in undergraduate and graduate medical education, this work highlights the urgent need to educate current and future physicians about this unique population. Unconscious bias as it relates to the LGBTQ+ community has significant implications and should be addressed to create a more inclusive and safer professional environment.

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The authors have reported that they have no relationships relevant to the contents of this paper to disclose.

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PERSPECTIVES

COMPETENCY IN MEDICAL KNOWLEDGE: We assessed the prevalence, sources of mistreatment, and measures of wellness among the lesbian, gay, bisexual, transgender, and queer (LGBTQ+) cardiovascular workforce. We found that gender policing and heterosexist harassment is more common among LGBTQ+ physicians compared to heterosexual peers. These results demonstrate the 'norms' regarding heterosexuality in the cardiology workplace and harassment aimed at preserving these norms experienced by LGBTQ+ cardiologists and trainees.

TRANSLATIONAL OUTLOOK: This study highlights the importance of comprehensive demographic information to understanding the needs of all underrepresented minorities in cardiovascular medicine. Inclusive demographic data should now incorporate sexual orientation and gender identity data. This work now provides strong support to create a safe and inclusive environment for cardiovascular LGBTQ+ trainees and physicians and implement measures to increase educational efforts to reduce health care disparities for LGBTQ+ adults at risk for cardiovascular disease.

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KEY WORDS cardiovascular medicine, diversity, LGBTQ+, minority physicians, mistreatment

APPENDIX For an expanded Methods section, please see the online version of this paper.