

## Where are the Women Cardiologists?

Laura Gerik, MS

HOUSTON METHODIST DEBAKEY HEART & VASCULAR CENTER, HOUSTON, TEXAS

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Cardiology has a gender problem. The problems with underrepresentation of women in clinical trials are well documented, but there's also a striking disparity on the clinician side. Even as the numbers of women going into medicine continues to grow—about half of medical students and internal medicine residents are female—few of these young physicians choose to specialize in cardiology.

As of 2015, only a fifth of general cardiology fellows were women (among cardiologists of all ages, women make up only about 10%). The picture gets worse when you look at invasive fields; according to the Association of American Medical Colleges 2015 report, only 8.4% of interventional cardiology fellows are women, with similar representation among electrophysiology fellows, giving these fields the ignominious distinction of having the smallest proportions of women of any medical specialty training program. Vascular and interventional radiology came in second with 9.3%, and general cardiology crept in at a dismal 6th (21.4% women).<sup>1</sup>

### WOMEN MATTER

Discussions of feminism and gender equality aside, cardiology's gender gap hurts the profession and patients alike. As baby boomers age, the demand for cardiologists is expected to rise by 20% from 2013 to 2025.<sup>2</sup> Given the high proportion of cardiologists nearing retirement and relatively slow increases in trainee recruitment, many analysts predict a critical shortage of cardiologists on the horizon.<sup>3</sup>

Lack of female trainees is not entirely responsible for the physician shortage, but it certainly doesn't help. Pam Douglas, M.D., former American College of Cardiology (ACC) president, points out: "If 50% of our feeder pool of internal medicine residents are women and 20% of internal medicine residents choose cardiology, but only 20% of our trainees are women, we're losing access to 30% of the potential talent in our field. That's not a long-term recipe for success. We're a great profession with a lot of brilliant people, but in the long term you want to be able to access 100% of the talent pool."



Pamela Douglas, M.D.

Moreover, the shortage of female cardiologists affects patient choice. As much as we would like to think that medicine is gender neutral, research shows that physician gender still matters to some patients—and women are more likely than men to prefer physicians of the same gender.<sup>4-6</sup> Thus, female cardiologists fill an important niche.

Karla Kurrelmeyer, M.D., cardiologist at Houston Methodist Hospital, says taking care of women is one of the most rewarding parts of her career. "As women, we can offer a type of understanding that patients may not have been getting before. That's why they flock to see us in clinic, saying, 'I've seen multiple other cardiologists, nobody's listening to me, nobody can figure out what's wrong with me, so that's why I chose to come to you,'" she says.

Claire Duvernoy, M.D., an interventional cardiologist at the University of Michigan and chair of the ACC Women in Cardiology (WIC) Section, agrees: "I've had both male and female patients tell me that women listen better, so they prefer seeing female providers." Indeed, studies show that female physicians communicate differently, with more positive-talk and partnership-building—which may be one of the reasons some women feel more comfortable with female doctors.<sup>8</sup>



Claire Duvernoy, M.D.



Karla Kurrelmeyer, M.D.

So what is it about cardiology that seems to deter women? Douglas currently co-chairs the ACC Task Force on Diversity, which is developing recommendations to promote gender and racial diversity in cardiology. Her task force surveyed internal medicine residents to find out about their life and work priorities and perceptions of cardiology. “Preliminary evidence shows that the most important needs of trainees were work/life balance and mentorship and that the strongest perceptions of cardiology are of a negative culture and job description,” she says. “Noncardiologists and women valued work/life balance more and had more negative perceptions of cardiology than men and those who chose cardiology.”

#### POOR WORK-LIFE BALANCE

According to the WIC’s 2015 Professional Life Survey, a major issue is the perception that cardiology is not conducive to having a family, and thus not female friendly.

“We see several themes emerge that are probably partially to blame for the lack of women in cardiology. One is that cardiology is still perceived as an old boy’s network,” Duvernoy explains. “There can be an atmosphere that discourages women from entering the field, the sort of well-meaning but ultimately paternalistic advice that ‘maybe you shouldn’t do something so strenuous if you want to have a family.’ There’s the radiation exposure that can be fear inducing in women as they think about pregnancy and childbearing and the potential risks of radiation. Then there are unpredictable hours and the perception that you don’t have time for a family. All of those things combine to make cardiology a less attractive field for women.”

As Duvernoy mentions, there are a lot of little things that add up to this perception. Although most physicians face long hours, some cardiologists point to the high number of call

hours in their field. Kurrelmeyer reflects, “That means if you have kids, there has to be someone at your house all the time because you may get a call in the middle of the night and have to be at the hospital in 15 minutes. That’s not conducive to family life at all, regardless of whether you’re male or female.” She points out that subspecialties with the highest call volume, such as interventional cardiology, attract the fewest women, whereas female cardiologists seem to gravitate to the relatively low-call fields of imaging and heart failure.

However, interventional cardiology fellow Emily Perdoncin, M.D., from the University of Michigan, has a slightly different take. “I’m not sure if we can attribute the lack of women to the hours or call schedule. There are also long hours in surgery and OB-GYN, and there are many more women in those fields than in cardiology,” she points out. Indeed, women account for 38% of general surgery residents and 83% of OB-GYN residents.<sup>1</sup>

#### GENDER BIASES

Perhaps the reason for the difference in those fields is more cultural than logistical. Balancing work and family life is not a concern exclusive to women, but there is a pervasive attitude in cardiology that lays those burdens more heavily on women. It is notable that female cardiologists are significantly less likely to be married or have children than their male counterparts, and pregnancy itself can be seen as an obstacle to career success. Duvernoy recounts instances where “fellows and program directors, instead of saying congratulations to a pregnancy announcement, said, ‘We’ll have to deal with this somehow.’”

Even after pregnancy and childbirth, the challenges of raising children seem to fall heavier on female cardiologists, who are 44% less likely to have a stay-at-home spouse than their male counterparts.<sup>9</sup> Of course, in the United States, the disparity between stay-at-home mothers and fathers is a societal issue that reaches much farther than cardiology, but it still adds to the pressure on female cardiologists.

However, it’s important not to leap too quickly to the conclusion that family concerns are entirely to blame for the gender gap. More to the point, focusing too heavily on work-life balance as a women’s issue misses other critical gender disparities that must be corrected—and contributes to the paternalistic culture that may turn women away in the first place. The misconceptions about women’s motivations are illustrated in a 2014 survey by the European Association of Percutaneous Cardiovascular Interventions Women Committee, which asked more than 1700 cardiologists worldwide why they did or did not choose interventional

Notably, the top reason for men and women was the same: lack of opportunity. Both genders ranked family reasons as the least important motivation (family issues were the top concern of 8% of women and less than 1% of men surveyed), with call hours also near the bottom of the list.

Nevertheless, when men were asked why so few women chose interventional cardiology, they cited the long hours and call, an environment too challenging for women, and family issues. Study authors reported responses from men such as “women do not have good hand working under stress conditions” and “it needs more adrenaline and testosterone.”<sup>10</sup> Although one survey isn’t enough to make a blanket statement about cardiologists everywhere, the attitudes expressed here jibe with the anecdotal experiences of many women in cardiology. It’s easy to see how workplaces that exhibit such a disconnect (not to mention negative stereotyping) would indeed turn off potential female applicants—and perhaps give the impression of lack of opportunity.

#### GLASS CEILING?

Unfortunately, the perceived lack of opportunity is a problem across cardiology, and the numbers show that it’s not just in women’s heads. Women in cardiology are paid less than men, consistently earning nearly \$34,000 (academic cardiologists) to \$38,000 (private practice) per year less than their male peers.<sup>11</sup> Duvernoy points out that the numbers came out the same even when accounting for over 150 covariates—including type of work, call hours, and part-time work—and using two different statistical methods. As to the reasons?

“I think some of the issue might be that women are not promoted to leadership roles, and often there is a salary increment for someone who heads a program,” Duvernoy says. “Women are underrepresented in leadership roles, and we didn’t have access to who had compensation for that or not. It’s possible that there are some other confounders we don’t know about.”

Research confirms that women are significantly less likely to advance to the highest ranks of cardiology than their male colleagues. Twenty-six percent of female cardiologists in the Professional Life Survey reported lower or much lower career advancement than their contemporaries compared to 8% of men. This holds true across academic and private practice.<sup>9</sup>

It’s a problem that may stem from the very beginning, when they submit fellowship applications. Duvernoy and Kurrelmeyer recall an undercurrent of sexism in the fellowship application process, wherein they felt that given two equal candidates, the man was more likely to be chosen.

“I went through training in a different generation and things were different,” recalls Duvernoy. “When I was applying to

cardiology fellowship in the early 1990s, I definitely felt there was a quota. They were only going to take one woman, so if there was another woman applying, it felt like we were pitted against each other, which was unfortunate.”

While Kurrelmeyer agrees, she feels that the problem isn’t entirely a thing of the past. “Once you’ve finished your internal medicine residency, it’s very

competitive to get those coveted fellowship spots, and most of those are dominated by men,” she explains. “The superstars are going to get in, but if you’re in the average pool, I think it’s much less likely for the woman to get accepted over the male candidates.

On the other hand, Perdoncin’s recent experience entering her interventional cardiology fellowship was more positive. “I was only greeted with open arms,” she says. “As a resident, I definitely had people ask, ‘Are you sure this is what you want to do?’ but I certainly never had anyone tell me not to go into this field.”

Despite the challenges, Kurrelmeyer, Douglas, and Duvernoy all demonstrate that high career advancement is certainly achievable for women. Ultimately, their advice to women is the same as it would be to men. To medical students and residents, Kurrelmeyer advises going into a strong internal residency program and building up a standout résumé with “a whole lot of research and great clinical evaluations.” All three emphasize the importance of speaking up and making a point to stand out positively at work while making use of support systems—hired or otherwise—to ease stress at home.

And, as isolating as it may seem at times to be the only woman in the room, Douglas points out that such uniqueness can be an asset.

“I think I benefited a little bit from visibility,” Douglas muses. “In the 90s, there were just not a lot of women around, and when I walked into a room of 30 men, they all knew who I was because I was the only one who looked like me. I think to some extent that’s still true, and to some extent that may have helped me. I don’t think I was in any way affirmative actioned. It just helped to be visible, articulate, engaged, and willing to work hard and find opportunities.”



Emily Perdoncin, M.D.

## BRIGHTER OUTLOOK

It's often said that the first step in solving a problem is recognizing that the problem exists. The good news is that the cardiology community at large is talking about the gender gap and looking at ways to make the profession more attractive to women. The ACC's Women in Cardiology Section and new Diversity Inclusion Task Force (led by Douglas) are key drivers of the ACC's efforts to promote diversity, gender based and otherwise.

WIC is a home for women across cardiology, offering workshops and mentorships and a sense of solidarity. Kurrelmeyer recalls that the first female mentors she found in her career were through joining WIC as a young faculty member. In addition, their Professional Life Survey, administered every 10 years since 1996, has revealed key trends in how women and men perceive their field. By shining light on gender disparities, WIC is taking the ACC's first major steps toward a solution.

The Diversity Inclusion Task Force is still in its early stages and will be presenting recommendations to the ACC for ways to combat those negative perceptions. "You should look to see major position papers and statements coming from the ACC that will hopefully change the field, not only to make it more attractive to women but also to other underrepresented minorities," says Duvernoy.

One of the ACC's latest efforts to change the profession's monolithic reputation is the #ILookLikeACardiologist hashtag, a social media campaign to show the many faces of modern cardiology.

In Douglas's three decades in cardiology, she's seen some positive changes, and she's optimistic about the ACC's latest attempts to attract women. "There are a lot more women than there used to be. I think for the first ten years I personally knew every single woman in cardiology across the country. Now I know the senior women because they're the people I grew up with," she says. "The Diversity and Inclusion Task Force is a huge change from the ACC's past attitudes, which have been 'the women need to figure this out themselves, it's on them,' as opposed to saying it's on us as an organization to make ourselves more diverse, because that's what we need to do for our future to accomplish our mission."

Most importantly, women in cardiology enjoy their jobs. WIC's survey has seen female cardiologists' career satisfaction rise from 80% in 1996 to 88% in 2016, and Douglas, Perdoncin, Duvernoy, and Kurrelmeyer are unanimous in their enthusiasm for their careers. "I love what I do, it's a great profession, and I'm totally happy that I'm a cardiologist," says Douglas. "I like the work, I think it's intellectually challenging and rewarding, and I like the opportunity to help people."

To women interested in cardiology, these physicians are unequivocal in their advice: Go for it!

"Cardiology is an amazing field if you've got the passion for it," Kurrelmeyer confirms. "Sure the hours are long, but you can find something in cardiology that is conducive to a good work-life balance. And the hours don't seem so long if it's something that brings you great fulfillment."

### Corresponding Author:

lgerik@houstonmethodist.org

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## REFERENCES

1. ACGME Residents and Fellows by Sex and Specialty, 2015 [Internet]. American Association of Medical Colleges. September 6, 2016 [cited January 11, 2018]. Available from: <https://www.aamc.org/data/workforce/reports/458766/2-2-chart.html>
2. Shortage ahead: Which doctors will be in highest demand? [Internet]. Advisory Board Daily Briefing. November 6, 2013. [cited January 30, 2018]. Available from: <https://www.advisory.com/daily-briefing/2013/11/06/shortage-ahead-which-doctors-will-be-in-highest-demand>
3. Saurer J. Cardiology Workforce Analysis [Internet]. Medaxiom Consulting. [cited January 30, 2018]. Available from: [https://www.medaxiom.com/clientuploads/documents/Workforce\\_Analysis.pdf](https://www.medaxiom.com/clientuploads/documents/Workforce_Analysis.pdf)
4. Fennema K, Meyer DL, Owen N. Sex of physician: patients' preferences and stereotypes. *J Fam Pract*. 1990 Apr;30(4):441-6.
5. Sherman J. Patient gender preferences for medical care [Internet]. KevinMD.com. November 5, 2010 [cited January 27, 2018]. Available from: <https://www.kevinmd.com/blog/2010/11/patient-gender-preferences-medical-care.html>
6. The Portrait of a Modern Patient [Internet]. Hanover Research and Weatherby Healthcare. 2017 [cited January 27, 2018]. Available from: [http://3d48d5394e5c26eba97c-c2cd0437cc11d2b508db932a8299b2de.r74.cf1.rackcdn.com/media/images/PortraitModernPatient\\_Executive\\_rw\\_v4\\_f.pdf](http://3d48d5394e5c26eba97c-c2cd0437cc11d2b508db932a8299b2de.r74.cf1.rackcdn.com/media/images/PortraitModernPatient_Executive_rw_v4_f.pdf)
7. Best PJ, Skelding KA, Mehran R, et al. SCAI consensus document on occupational radiation exposure to the pregnant cardiologist and technical personnel. *Catheter Cardiovasc Interv*. 2011 Feb 1;77(2):232-41.
8. Schmid Mast M, Hall JA, Roter DL. Disentangling physician sex and physician communication style: their effects on patient satisfaction in a virtual medical visit. *Patient Educ Couns*. 2007 Sep;68(1):16-22.
9. Lewis SJ, Mehta LS, Douglas PS. Changes in the Professional Lives of Cardiologists Over 2 Decades. *J Am Coll Cardiol*. 2017 Jan 31;69(4):452-462.
10. Capranzano P, Kunadian V, Mauri J, et al. Motivations for and barriers to choosing an interventional cardiology career path: results from the EAPCI Women Committee worldwide survey. *EuroIntervention*. 2016 May 17;12(1):53-9.
11. Jaggi RJ, Biga C, Poppas A, et al. Differences in work activities and compensation of male and female cardiologists in community practice in 2013. *J Am Coll Cardiol*. 2016; 67:529-41.