When Laura J. Collins, MD, a cardiologist at the University of Texas Southwestern Medical Center in Dallas, presented at her first scientific meeting she was blown away, “Where are the women?” she recalled thinking at the time. When she interviewed for her first job, she’d never met a woman cardiologist. Now, she works in a cardiology program that takes pride in having many female faculty members.

Although much has changed for young women entering the field of cardiology, there remains a significant disparity between the number of women and men in the field. A 2015 survey of >2000 cardiologists presented by Sandra Lewis, MD, a cardiologist at Northwest Cardiovascular Institute, at the 2016 American College of Cardiology Annual Scientific Session found that <1 in 5 cardiologists is a woman. By contrast, women make up about half of medical school graduates and internal medicine specialists. Women cardiologists are also more likely to be single than their male counterparts (15% versus 5%) and less likely to have children (72% versus 86%), Lewis found.

“We need to understand the barriers to women entering cardiology and work toward breaking down those barriers,” said Lewis in a statement.

A variety of factors have been identified as potentially deterring women from entering cardiology, including extended training and potential radiation exposure during prime childbearing years, high debt loads, a demanding lifestyle, lower pay for women cardiologists, and a culture that may be unwelcoming.

“It’s not just one thing, its multiple things together,” Collins said.

But efforts to combat these barriers are focusing on mentoring and creating more flexibility in training and work settings.

**A BUMP IN THE ROAD**

The long training period for cardiologists puts many women smack in the middle of their prime childbearing years during fellowship, which can pose considerable logistical and other challenges. For example, Collins remembers being asked to double up on lead shields to protect herself and her growing baby from radiation exposure during her fellowship.

“The amount of radiation you are exposed to is not enough to cause a red flag,” said Collins. “But women want the option of opting out.”

Women may also find an unpredictable call schedule unappealing during the early years of child rearing and choose another schedule with more predictable hours, Collins said.

But she noted that creative scheduling could help to overcome these challenges. For example, she noted that her first child was born just 3 days after her fellowship began, but she was able to structure her fellowship to do her research upfront for the first 2 years.

“Medicine teaches us we have to be perfect all the time, that we can’t fail,” said Michelle Albert, MD, MPH, a professor at the University of California-San Francisco.

“It’s okay to fail. What is really important is how resilient you are. It’s okay to make mistakes and learn from them.”

“It gave me time to get through the postpartum period, and get my son into preschool,” she said.

Fellowship programs might want to consider shared fellowships for women who are interested in more flexible scheduling during their training, suggested Collins. She noted that some programs have also expressed interest in accelerated residencies. Her program has allowed women to make up clinical time...
missed as a result of pregnancy during the third year of fellowship.

"If you want to attract the best candidate, and some of those candidates are women, it’s a plus [to be flexible]," Collins said.

Once in the workplace, some advanced planning can help women cardiologists accommodate pregnancy-related work limitations, Collins said. For example, she noted that later in pregnancy it may be difficult for women to reach the table to perform catheterizations, so women may need to cut back on doing them after 3 months. For those pursuing interventional cardiology, she suggested that they pursue training in echocardiography and nuclear cardiology, so they can take on other duties during the later stages of pregnancy. She also suggested that women may want to take on a greater share of call duties early in pregnancy, so they can scale back on call duties closer to their due date.

"Thinking outside the box is very important," she said.

Women should discuss their plans and what flexibility is available to them with potential fellowship programs or employers, advised Collins. "If it is not going to be a good fit, you are not going to be happy there," Collins said.

CULTURE AND LEADERSHIP

Other barriers women cardiologists face may be subtler. For Michelle Albert, MD, MPH, a professor at the University of California-San Francisco who is also black, it is hard to disentangle her experiences as a woman and as an underrepresented minority in cardiology. Starting as a medical student or resident, individuals from both groups may encounter lower expectations or have instructors not make eye contact, Albert said. They also may be left out of social gatherings.

"Being a black woman always put me on a separate track of isolation," she said. "The nonverbal and verbal cues start early in medical school."

Many individuals who enter academic cardiology may come from very comfortable backgrounds that may make it easier to manage the challenges of a long period of training, Albert noted. But underrepresented minorities are less likely to have those resources. This may contribute to low representation of blacks who make up an estimated 2% of cardiologists and Hispanics who make up ≈4% of the specialty.

"There may be a culture [in academia] that doesn't embrace differences or is subliminally hostile," Albert said. "[Women or underrepresented minorities] may make choices that take them off the traditional academic pathway."

Even when women do choose cardiology, they are less likely to enter interventional cardiology and are likely to be paid less than their male counterparts even when their productivity is taken into account. Only 11.4% of women cardiologists practice an interventional subspecialty versus 39.3% of men. The analysis also found that women make on average $31,749 less than expected based on their productivity.

But mentoring can help women and other underrepresented groups to get a foothold in cardiology and to advance their careers.

"Seeing [and] interacting with women in leadership positions is half of the battle in academics," said Niasha Parikh, MD, a cardiologist and assistant professor of medicine at the University of California-San Francisco. "It is hard to strive for something you cannot visualize [or] that does not seem tangible."

Parikh noted that networking luncheons and seminars for women held at American Heart Association and American College of Cardiology meetings can be great places to meet and interact with other women cardiologists.

Albert, who was recognized with the American Heart Association’s 2016 Women in Cardiology Mentoring Award, also emphasizes the importance of mentoring. "It’s the thing that matters to me most," said Albert, who mentors both men and women.

Albert suggests that young cardiologists establish a network of mentors inside and outside their institution and even in other fields of medicine. She said, for example, that participating in American Heart Association committees and in the Association of Black Cardiologists helped her meet leaders in the field. She also suggested that individuals take leadership and career development courses and training outside medicine, which she said also has helped her.

Above all, Albert emphasized the importance of resilience in building a successful career in cardiology.

"Medicine teaches us we have to be perfect all the time, that we can’t fail," she said. "It’s okay to fail. What is really important is how resilient you are. It’s okay to make mistakes and learn from them."
Flexibility and Mentoring Key to Boosting the Ranks of Women in Cardiology
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