



More Women Choose Careers in Surgery

Bias, Work-Life Issues Remain Challenges

Bridget M. Kuehn

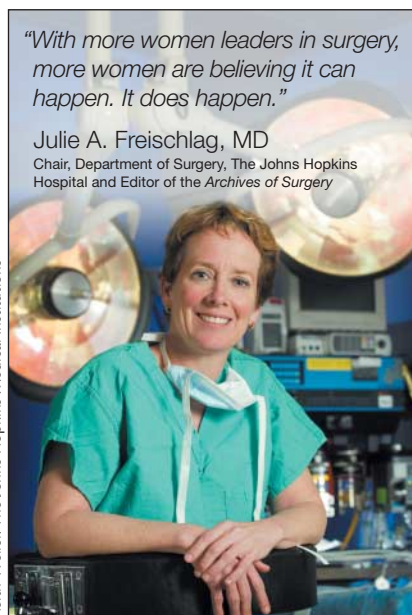
A GROWING PROPORTION OF women who graduate from US medical schools are choosing to pursue a career in surgery. These individuals are no longer greatly outnumbered by their male colleagues during training, and they have a small but growing number of women surgeons in leadership roles to seek for mentorship. But analyses suggest that women surgeons continue to suffer stigma associated with pregnancy during their training years and face other challenges—such as sex bias and obstacles to career advancement—as they progress in their careers.

GROWING SEX BALANCE

The student population at most US medical schools is now roughly half male and half female. A recent analysis of data from the Association of American Medical Colleges and the American College of Surgeons by Elisabeth C. Davis, MA, of the American College of Surgeons and her colleagues found that the proportion of women among residents entering general surgical training programs after graduating from US medical schools grew from 32% in the 2000-2001 academic year to 40% in 2005-2006 (Davis EC et al. *J Am Coll Surg*. 2011;212[3]:320-326). However, women still make up only about 11% to 18% of the graduates of medical schools outside the United States who are entering general surgery programs, the analysis found.

Some general surgery programs are having even greater success at attracting women. Julie A. Freischlag, MD, chair of the department of surgery at

Johns Hopkins Hospital and editor of *Archives of Surgery*, said that women make up 60% of the applicants to the general surgery training program at Hopkins and that 11 of the 15 top candidates this year were women.



“With more women leaders in surgery, more women are believing it can happen,” she said. “It does happen.”

Freischlag, who was the first woman to lead the surgical program at Johns Hopkins and the first woman to edit *Archives of Surgery*, is part of a small but growing wave of women taking on leadership roles in this specialty. The percentage of women surgical faculty at US medical schools increased from 12.6% in 2000 to 16.3% in 2005. Evidence supports the importance of having such high-profile women on staff in influencing the decisions of women to enter surgical specialties. Davis and her

colleagues noted that most women who select surgical residencies graduated from medical schools with higher percentages of women surgical faculty.

Such women mentors are one likely reason more women are viewing surgery as a viable career option. Other changes in the culture of surgical training may also have contributed to a more favorable view of surgery among women.

The 80-hour cap on work hours during residency instituted in 2003 is one example. Davis and her colleagues cited evidence that women who completed their clerkship after the reduction in work hours were more likely than those who completed clerkship before the limits to view surgery favorably and to have more positive views of the personal lives of women surgeons.

A PREGNANT PAUSE

Because surgical training can stretch throughout a woman's prime years for childbearing, concerns about the feasibility of a pregnancy during this high-intensity training may deter some women from choosing the specialty.

“A lot of people wonder if you can physically do it,” said Freischlag.

A recent survey of about 3000 members of the Association of Women Surgeons or the American College of Surgeons probed attitudes about pregnancy during surgical training and the timing of childbearing by female surgeons (Turner PL et al. *Arch Surg*. doi: 10.1001/archsurg.2011.1693 [published online February 20, 2012]). The response rate was 49.6%. The survey found that most women surgeons defer childbearing until they complete training, but growing percent-



ages of more recent graduates gave birth during training. For example, 61.5% of women who completed their training 30 or more years ago reported having any pregnancy after training, compared with 36.9% of those who finished training less than 10 years ago. Among this younger cohort, 18% reported a pregnancy during their research fellowship, 15% during their clinical fellowship, and 14.7% in their fifth clinical year. By comparison, only 4% of women who graduated 30 or more years ago had a pregnancy during their research fellowship, 11.5% during their clinical fellowship, and 6.9% in their fifth year of training.

Childbirth during residency is much more common in other medical specialties, with 38% of female pediatric residents reporting a pregnancy during residency. Patricia L. Turner, MD, who conducted the survey along with colleagues at the University of Maryland School of Medicine and who is now at the American College of Surgeons, explained that in specialties with a disproportionately high number of women, pregnancy during training has been less controversial, “because there is no way around it.”

“One could argue that as percentages of women in surgery shift at the leadership level, it will become less of an issue,” Turner said.

LINGERING STIGMA

One of the factors that may continue to discourage women surgeons from starting their families during training is the stigma associated with doing so and strong negative attitudes about pregnancy during training that pervade the ranks of surgeons, whether women or men, residents or faculty. The survey found that 76% of women who graduated 30 or more years ago reported such a stigma compared with 67% of the most recent graduates.

“I wasn’t surprised at the stigma,” Turner said. “I was surprised by the depth of antipregnancy sentiment.”

Despite such pressures, Freischlag, who had a child at age 40 years and also has 2 stepchildren, encouraged women

surgeons to have their children earlier. She explained that with flexibility on the part of both the surgical resident and the program, it should be possible to accommodate a pregnancy during surgical training. For example, she noted some of the resident’s hours could be covered by nurse practitioners or physician assistants as well as the other residents. She did note that women who take time off for maternity leave during a residency may have to add a couple of months to their training.

“The biggest piece is making sure you are well trained; you may have to stay a little longer to make that happen,” she said.

GLASS CEILING

Social and institutional barriers to career advancement also pose obstacles for women after they complete surgical training. But leaders in the field say these obstacles can be overcome and argue for cultural and structural changes in the profession to help it attract and retain the top candidates regardless of sex.

An article by Omaidia C. Velazquez, MD, chief of the division of vascular and endovascular surgery at the University of Miami Miller School of Medicine, and her colleagues identified some of the factors that contribute to a “glass ceiling” effect for women surgeons and proposed ways to help them reach their full career potential (Zhuge Y et al. *Ann Surg.* 2011;253[4]:637-643). The article cited 3 main constraints to the career advancement of women surgeons: traditional sex roles in which women bear the lion’s share of family duties, sexism in the profession, and a shortage of women mentors. For instance, the article noted that women are paid less and receive less institutional and mentoring support than their male colleagues in surgery; additionally, they are more likely to face discrimination than their male colleagues. Both institutions and individuals need to take responsibility for overcoming these constraints, Velazquez said.

Freischlag encouraged women to speak up or seek support when they

encounter disparaging remarks. “Subtleties are what discrimination is all about these days,” she said.

Surgical programs need to work harder to “capture the imaginations” of women during medical school and provide them with factual information about the pluses and minuses of this career choice, Velazquez said. “Surgeons at every level should make an effort to educate women medical students about the personal and professional rewards of a career in surgery,” she said.

In conversations with medical students, Velazquez, who has 2 children, said she has found that female medical students with an interest in surgery say they don’t see a realistic path to career success in surgery or fear that they “wouldn’t be able to have a balanced and normal life.”

“That’s no longer true,” Velazquez said. She counsels such women that family life is possible with planning. She noted that women surgeons need to arrange help with child care duties during their working hours, whether by having a spouse or other family member take over those duties or by having live-in or off-site help that is flexible and available during those hours.

Programs are also slowly becoming more accommodating. Trainees now have more consistent hours, Velazquez noted. Turner added that adjustments in the timing of surgical board examinations and residency program designs are allowing more flexibility if women choose to have a pregnancy or 2 during their training years.

On-site daycare is one improvement that has been proposed to further aid female surgeons with families. Velazquez said such accommodations are common for nurses because that field has long been predominantly female but are “unheard of” for academic surgeons. Additionally, more flexibility is needed in the paths to career advancement. Freischlag said women in academia or private practice need part-time options that allow them to slow down while they raise children.



“You have a whole career to be successful,” Freischlag said. “That’s a culture shift.”

Velazquez also cited the need for more flexibility on the academic tracks toward tenure. Davis and colleagues sug-

gested that part-time appointments or adjustments to the time requirements for achieving tenure may also be helpful.

Turner and Velazquez agreed that with women making up half of US medical graduates, surgical programs

must work harder to attract the best and brightest.

“We can’t afford to frighten away a willing and well-qualified candidate as a result of something we could have improved,” Turner said. □

Bariatric Surgery Continues to Show Benefits for Patients With Diabetes

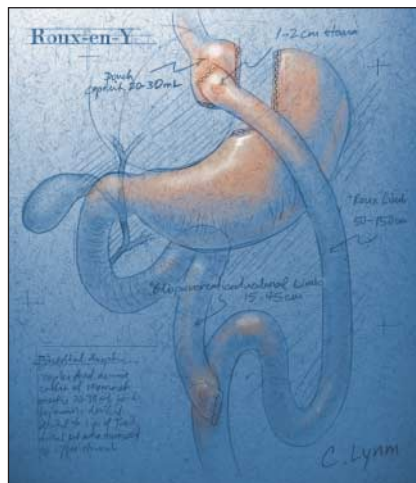
Mike Mitka

CHICAGO—Studies continue to show benefits of bariatric surgery in helping obese patients lose weight, but whether the procedure can actually “control or cure” those who have gone on to have diabetes remains to be seen.

Researchers from the Cleveland Clinic in Ohio and Brigham and Women’s Hospital in Boston presented the newest findings on the procedure in March at the scientific session of the American College of Cardiology. The team found that in obese patients with uncontrolled type 2 diabetes, those undergoing bariatric surgery and optimal medical therapy were more likely to have achieved glycemic control at 1 year than those receiving optimal medical therapy only (Schauer PR et al. *N Eng J Med*. doi:10.1056/NEJMoa1200225 [published online March 26, 2012]). The bariatric surgeries were so successful that many who underwent the procedure were able to reduce or eliminate the medicines they were taking to control their diabetes.

The researchers followed up 41 patients receiving optimal medical therapy only, 50 obese patients receiving the therapy plus Roux-en-Y gastric bypass surgery, and 49 patients receiving therapy plus sleeve gastrectomy. At the start of the study, the patients had an average glycated hemoglobin level of about 9.2%, an average age of 49 years, and an average body mass index (BMI) of about 37; 66% were women. At 12 months, 12% of patients receiving medical

therapy only had reached the study’s primary end point of achieving an average glycated hemoglobin level of 6.0% or less, while 42% undergoing gastric bypass and 37% undergoing sleeve



New research found bariatric surgery along with optimal medical therapy offered better glycemic control than optimal medical therapy alone for patients with type 2 diabetes.

gastrectomy reached the goal level. Also, although patients in all 3 study groups lost weight, those receiving only medical therapy lost an average of 5.4 kg, while those undergoing gastric bypass lost about 29 kg, and those undergoing sleeve gastrectomy lost about 25 kg.

“It’s an excellent study addressing an important clinical problem. It confirms previous observational studies and does so with a study design that provides the highest grade of clinical evidence that can be generated,” said Bruce M. Wolfe, MD, a professor of surgery

at Oregon Health & Science University in Portland, who was not part of the research team, in an interview.

The study’s lead investigator, Philip Schauer, MD, professor of surgery and director of the Bariatric and Metabolic Institute, Cleveland Clinic, said his team hopes to follow up these patients for a total of 5 years to see if the glycemic control continues and whether bariatric surgery improves other outcomes, such as risks for myocardial infarction, stroke, renal failure, and blindness. They also hope to conduct further interim studies. “We’re looking at microvascular changes, and a good way to do that is to look at retinopathy and its progression from baseline,” he said. “Hopefully, by next year, we will have some answers.”

Schauer also wants to further study the mechanism behind the surgery’s effect on glycemic control, as the lower glycated hemoglobin percentages emerged quickly after patients underwent the procedures and could not be explained fully by subsequent weight loss. Donna H. Ryan, MD, professor emeritus, Pennington Biomedical Research Center, Baton Rouge, La, does not think the answer is all that mysterious: “We know that when you eat less and exercise more, you get this immediate impact on glycemic control. What the Schauer paper emphasizes is the importance of making a greater effort for weight management in type 2 diabetes.”

Schauer speculated that if larger, more rigorous trials confirm his team’s