The Impact of Resident Gender on Educational Outcomes

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The Review Committee for Family Medicine (RC-FM) of the Accreditation Council on Graduate Medical Education (ACGME) has a requirement that “Each resident has experience with all age groups having adequate gender distribution, in volumes sufficient to achieve competency in all aspects of family medicine.” Program directors and faculty often consider this requirement only in general terms. They tend to interpret this requirement to mean the residents should have a broad exposure to an adequate range of patient problems and a distribution of patients by age and gender. However, also implied in this particular requirement (and elsewhere in the program requirements for family medicine) is an expectation that the all residents within the same program will reach a minimum threshold level of competence for core conditions and procedures.

The article in this month’s *Family Medicine* by Guarin-Nieto and Krugman sheds light on the real challenge of providing adequate training for all residents within a program, regardless of the gender of the resident. In their article, they review the educational experience in women’s health at a single residency program over a 5-year time period. The authors hypothesized that in comparison to female family medicine residents, male residents might have reduced exposure to women’s health experiences in the family medicine center. They also hypothesized that “Male residents would be less comfortable providing women’s health care and thus demonstrate lower scores on the women’s health portion of the family medicine in-service exam.”

Their study results indicate that, indeed, female residents are more likely to provide care for both acute and preventive women’s services as compared to their male counterparts. In addition, they note that the male residents did not score as well on the women’s health section of the annual In-training Exam (ITE) of the American Board of Family Medicine (ABFM) for 2 of the 5 years during the study.

While their findings demonstrate fewer visits for women’s health issues for male residents, the second hypothesis about the lower level of “comfort” of male residents in caring for women’s health issues remains unsubstantiated. The authors conducted a survey of alumni to assess their training in specific areas of women’s health. In fact, 97.8% of the graduates from the study years noted their women’s health training as “appropriate.”

While the authors provide us with data regarding the performance by gender of the residents on the subsection of the ITE for women’s health, there are both limitations and a methodological problem in their study. Do male residents under-perform female residents in this program in all or some subsection content areas or in the women’s health subsection alone? More importantly, we do not know if the composite scores (the only score that reaches statistical significance) on the exam differ by gender of the test taker.

The ABFM has repeatedly cautioned residency program directors in the past to recognize the limitations of subsection analysis of the ITE. Subsection analysis is problematic because of the small number of test questions in each subsection of the examination. The same methodological limitation would be true if one were to combine the results of all of the male and all of the female residents from a particular program within a given year of the exam (personal communication, American Board of Family Medicine).

The difference in the volume of visits for male and female residents in this program points to a larger question unanswered in this study.
The question is whether these differences in the volume of experiences correlate with a difference in competence in women’s health care based upon the gender of the resident. While the authors found a difference in ITE scores, it still remains to be established that male residents were less competent than female residents with regard to the diagnosis and treatment of women’s health issues or in performing procedures such as Pap smears. Unfortunately, we are not presented with any data about performance on Objective Structured Clinical Exams (OSCEs) or other measures to assess competence.

As the authors note, the results of their study need to be viewed with caution since their results reflect activity within only a single program. We do not know how patient visits for preventive or acute visits are scheduled in this residency program. Are patients asked if they have a gender preference for the physician that they will see? Is there gender bias against male residents involving patient assignment? Anecdotally, I have witnessed subtle gender bias within my own program when receptionists have asked female patients, “Wouldn’t you like to see Dr X?,” and Dr X is a female physician.

Despite some of the limitations noted above, it is my opinion that the article by Guarin-Nieto and Krugman represents an important step in increasing our medical knowledge in family medicine education about the influence of gender on educational outcomes. Their work suggests that gender does make a difference in at least women’s health care education. Emmons et al found that satisfaction with education and comfort in managing women’s health conditions increased with the proportion of women seen during training. As noted in the accompanying commentary, however, the study only measured satisfaction and comfort and was not designed to measure abilities.

All residency programs are challenged to review how they assure an equal training experience for all residents regardless of a resident’s gender. While the article in this issue of *Family Medicine* suggests that female residents are more likely to see women’s health issues, the reverse is likely true for male residents—ie, that they are more likely to see men’s health issues. Thus, the same potential problem likely occurs for other gender-specific topics and procedures. These include a host of female conditions such as amenorrhea, dysfunctional uterine bleeding, vaginitis, mastitis, and menopausal symptoms, and female-specific procedures include endometrial biopsy, colposcopy, and maternity-related procedures. Common male conditions include erectile dysfunction, epididymitis, testicular torsion, prostatitis, and prostate cancer, along with the male-specific procedure of vasectomy.

How do programs ensure that all residents have sufficient exposure to specific diagnoses and procedures to ensure competence, especially when the diagnosis or procedure is gender specific? Completion of the ACGME’s annual Accreditation Data Survey (ADS) can provide a useful exercise for documenting common diagnoses and procedures within a program. This should act as a springboard for programs to examine potential discrepancies in both experiences and competency between residents by gender. For example, if a residency program states that all residents are required to perform vasectomies, do all female residents develop competence in vasectomy procedures?

Residency programs need to assure adequate exposure in all core areas of family medicine as defined by the RC-FM to ensure competence. The educational community must continue to attempt to define competency for these core areas and develop robust educational research to ensure that we are on the right track. Future RC-FM program requirements should be further refined based upon sound educational evidence.

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**References**


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