



Editorial

Are Women Really Better Physicians Than Men Are?

I recently had to say a difficult goodbye to a longstanding, dear and trusted friend who my immediate family members and I have known for nearly 4 decades. During that time, this man tended to our health care needs ranging from the negligible or annoying to life-threatening and terminal; ordered and interpreted innumerable screening and diagnostic test results; wrote referrals to necessary specialists; investigated the history and course of each health problem; provided treatments, therapies, and starting doses of medications; offered explanations that helped us understand and participate effectively in our care; asked and answered hundreds of questions; allayed our concerns whenever possible; communicated both encouraging and crushing prognoses with compassion and concern; ran from his office to help transfer my husband into a wheelchair when his health was acutely failing; and made time in his filled schedule to examine and treat any of us when we needed his care. His letter to patients announcing his imminent retirement was filled with expressions of gratitude to those he served for 45 years. At his retirement party, as hundreds of his appreciative patients shared our sadness at his departure from our lives, we were not surprised to learn that many of us remained in his care at great financial cost, as he did not participate in their health insurance network, and that others drove long distances to remain his patients despite moving from the area. Although he is now my retired primary care provider, I will always remember him with deep

appreciation as our family doctor, the embodiment of a competent, compassionate, patient- and family-centered health care provider. His successor, a woman I met with briefly, seems to be an extremely personable, experienced and capable physician, though she is not him, so it will take many years before she could possibly rise to the same beloved status. We all wish her, and ourselves, well.

So why am I relating this story about my primary care provider passing the torch from a male physician trusted for decades to a relatively unknown female physician? To be quite honest, I had never given any thought to the sex of my health care providers until recently, when I noted findings from a study that suggested that women make better physicians than men. Given my personal circumstances and curiosity, that seemed worthy of investigating further. I will share a brief background on the issue, provide a synopsis of the study and its findings, and offer some reflections on that assertion.

Background: Process Differences in Practice Patterns of Female Versus Male Physicians

There are discernable, statistically significant differences in how men and women provide medical care. For example, research evidence reveals that compared with their male peers, female physicians more often provide the following to patients:

- Adherence to clinical guidelines and evidence-based practice¹⁻³
- Preventive care⁴⁻¹¹

©2018 American Association of Critical-Care Nurses
doi: <https://doi.org/10.4037/ccn2018609>

- Patient-centered communication (including patients as partners in care and sharing some decision-making)¹²⁻¹⁶
- Psychosocial counseling (asking more psychosocial questions, offering encouragement and reassurance)¹⁴
- More time with patients^{14,16}

Despite these recognized differences in practice, however, did patient outcomes differ between male and female physicians?

Outcome Differences: Lower Mortality and Fewer Readmissions When Physicians Are Women

Researchers at Harvard School of Public Health designed a study¹⁷ to determine whether mortality and readmission rates differ for patients treated by male or female physicians. Accessing a random 20% sample of US Medicare beneficiaries 65 years and older, hospitalized with any of 8 most common medical conditions (acute renal failure, arrhythmia, chronic obstructive pulmonary disease, gastrointestinal bleeding, heart failure, pneumonia, sepsis, urinary tract infection), and treated by general internists from January 1, 2011, to December 31, 2014, Tsugawa et al¹⁷ examined the association between physician sex and 30-day mortality and readmission rates. After adjusting for patient and physician characteristics and hospital-related effects and considering only physicians who were hospitalists, they also investigated patient outcomes relative to specific conditions and to severity of illness.¹⁷ A total of 58 344 general internists were included; of these, 18 751 (32.1%) were female. More than 1.5 million hospitalizations were analyzed. Findings included the following:

- Patients treated by female internists had lower 30-day mortality (adjusted mortality, 11.07% vs 11.49%; adjusted risk difference, -0.43%; $P < .001$) than those treated by male internists. This improved mortality related to female internists was greatest for the most severely ill patients.
- Patients treated by female internists had lower 30-day hospital readmissions (adjusted readmissions, 15.02% vs 15.57%; adjusted risk difference, -0.55%; $P < .001$) than patients cared for by male internists.
- These differences in mortality and readmission were observed across all 8 medical conditions, across the full range of illness severity, and when analyses were restricted to hospitalists.¹⁷

These findings were consistent with results from earlier studies related to process measures of quality.

In addition, if those results are projected to the more than 10 million Medicare hospitalizations related to medical conditions in the United States annually, an estimated 32 000 fewer patients would die annually if male physicians achieved the same outcomes as female physicians. If the association between physician sex and patient mortality also held for younger, non-Medicare populations, the number of patient deaths that could be prevented would be even larger.^{17(p212)}

Additional Outcome Benefits Related to Women Physicians

The benefits associated with female physicians extend beyond internists to include family physicians and surgeons. In a large study from Ontario, Canada, researchers found that patients with female family physicians were more likely to receive recommended cancer screening, recommended diabetes management, and to have fewer emergency department visits, fewer hospitalizations, and more referrals than were patients with male physicians.¹⁸

In another study of 104 630 patients from Ontario, researchers found that patients with female surgeons were less likely to die, have complications, or be readmitted to a hospital within 30 days of their surgery (5810 of 52 315 [11.1%]) compared to those with male surgeons (6046 of 52 315 [11.6%]; $P = .02$). When each of those outcomes was examined individually, patients with female surgeons had a statistically significant 4% lower likelihood of death within 30 days of surgery ($P = .04$) than did patients with male surgeons; differences in readmissions and complications were not statistically significant.¹⁹

In contrast to a finding of no association between the treating physician's sex and patient mortality in a smaller study (sample about 20 000) of relatively healthy patients in an outpatient setting by Jerant et al,²⁰ the much larger and more recent studies reported by Tsugawa et al¹⁷ on hospitalized older medical patients and Wallis et al¹⁹ on postoperative patients showed a 4% relative risk reduction in mortality for patients treated by female physicians. Although that relative difference in mortality is nominal, it should not be interpreted as negligible as it could add up to thousands of saved lives.

Reflections on Findings

Armed with 2 studies^{17,19} that support the assertion that practice patterns of female physicians are associated with lower patient mortality and hospital readmissions

and one other study¹⁸ that evidenced other beneficial outcomes (ie, receiving recommended cancer screening and diabetes care, more referrals to specialists, fewer emergency department visits), is it valid to conclude that female physicians are better than male physicians? Clearly, one cannot legitimately generalize to that extent on the basis of 3 studies. What these findings do afford, however, is confirmation that the identified differences in practice patterns between male and female physicians are more than just process variations, but may bear relevant clinical implications for important patient outcomes such as mortality and readmission. In addition, although no research has yet isolated the factors or reasons why or how those practice pattern differences influence patient outcomes, one might anticipate some multifactorial mix that may relate to differences in communication with patients and/or colleagues, in problem-solving strategies, or in some other as yet unrecognized facet of clinical practice.

Unfortunately, potentially charged topics such as this occasionally generate a dismissive reception marked by derision rather than balanced consideration of their merits and weaknesses. One example, published as a response to the Tsugawa study,¹⁷ appeared with a press title of “Fake Medical News,” and while acknowledging that the findings were statistically significant, nonetheless disparaged the factual evidence: “this study and others like it will create and perpetuate the myth that women are better at medicine than men.”^{21(p422)} I am not aware of any study that has ever reached such an unfounded conclusion.

Closing

Despite our ignorance of how or why these beneficial patient outcomes are associated with female physicians, the more relevant point is the need to continue honing these investigations so that we can all learn what factor or combination of factors contribute to improving patient outcomes. If women physicians are doing something different than men that not only reduces patient readmissions but improves their survival, then the salient pursuit is identifying what that is so that all physicians (and, perhaps, nurses too) can employ those practices to improve outcomes for all patients. [CCN](http://www.ccnonline.org)



JoAnn Grif Alsapach, EdD, MSN, RN
Editor

References

1. Kim C, McEwen LN, Gerzoff RB, et al. Is physician gender associated with the quality of diabetes care? *Diabetes Care*. 2005;28(7):1594-1598.
2. Berthold HK, Gouni-Berthold I, Bestehorn KP, Böhm M, Krone W. Physician gender is associated with the quality of type 2 diabetes care. *J Intern Med*. 2008;264(4):340-350.
3. Baumhäkel M, Müller U, Böhm M. Influence of gender of physicians and patients on guideline-recommended treatment of chronic heart failure in a cross-sectional study. *Eur J Heart Fail*. 2009;11(3):299-303.
4. Andersen MR, Urban N. Physician gender and screening: do patient differences account for differences in mammography use? *Women Health*. 1997;26(1):29-39.
5. Frank E, Dresner Y, Shani M, Vinker S. The association between physicians' and patients' preventive health practices. *CMAJ*. 2013;185(8):649-653.
6. Frank E, Harvey LK. Prevention advice rates of women and men physicians. *Arch Fam Med*. 1996;5(4):215-219.
7. Franks P, Bertakis KD. Physician gender, patient gender, and primary care. *J Womens Health (Larchmt)*. 2003;12(1):73-80.
8. Franks P, Clancy CM. Physician gender bias in clinical decision making: screening for cancer in primary care. *Med Care*. 1993;31(3):213-218.
9. Kruger J, Shaw L, Kahende J, Frank E. Health care providers' advice to quit smoking. National Health Interview Survey, 2000, 2005, and 2010. *Prev Chronic Dis*. 2012;9:E130.
10. Lurie N, Slater J, McGovern P, Ekstrum J, Quam L, Margolis K. Preventive care for women: does the sex of the physician matter? *N Engl J Med*. 1993;329(7):478-482.
11. Smith AW, Borowski LA, Liu B, et al. US primary care physicians' diet-, physical activity-, and weight-related care of adult patients. *Am J Prev Med*. 2011;41(1):33-42.
12. Bertakis KD, Helms LJ, Callahan EJ, Azari R, Robbins JA. The influence of gender on physician practice style. *Med Care*. 1995;33(4):407-416.
13. Krupat E, Rosenkranz SL, Yeager CM, Barnard K, Putnam SM, Inui TS. The practice orientations of physicians and patients: the effect of doctor-patient congruence on satisfaction. *Patient Educ Couns*. 2000;39(1):49-59.
14. Roter DL, Hall JA, Aoki Y. Physician gender effects in medical communication: a meta-analytic review. *JAMA*. 2002;288(6):756-764.
15. Roter DL, Hall JA. Physician gender and patient-centered communication: a critical review of empirical research. *Ann Rev Public Health*. 2004; 25:497-519.
16. Jefferson L, Bloor K, Birks Y, Hewitt C, Bland M. Effect of physicians' gender on communication and consultation length: a systematic review and meta-analysis. *J Health Serv Res Policy*. 2013;18(4):242-248.
17. Tsugawa Y, Jena AB, Figueroa JF, et al. Comparison of hospital mortality and readmission rates for Medicare patients treated by male vs female physicians. *JAMA Int Med*. 2017;177(2):206-213.
18. Dahrouge S, Seale E, Hogg W, et al. A comprehensive assessment of family physician gender and quality of care: a cross-sectional analysis in Ontario, Canada. *Med Care*. 2016;54(3):277-286.
19. Wallis CJD, Ravi B, Coburn N, et al. Comparison of postoperative outcomes among patients treated by male and female surgeons: a population based matched cohort study. *BMJ*. 2017;359:j4366.
20. Jerant A, Bertakis KD, Fenton JJ, Franks P. Gender of physician as the usual source of care and patient health care utilization and mortality. *J Am Board Fam Med*. 2013;26(2):138-148.
21. Ladouceur R. Fake medical news. *Can Fam Physician*. 2017;63(6):422.