Beyond a Dichotomy:
Differences in EM trainee caseload & faculty ratings associated with supervising faculty gender
I do not have an affiliation (financial or otherwise) with a pharmaceutical, medical device or communications organization.

Je n’ai aucune affiliation (financière ou autre) avec une entreprise pharmaceutique, un fabricant d’appareils médicaux ou un cabinet de communication.
DIFFERENCES EXIST

Comparison of Male vs Female Resident Milestone Evaluations by Faculty During Emergency Medicine Residency Training

 Importance: Although explicit bias in medical training has long been suspected, it has been difficult to verify using objective measures. The influence of sex and gender on medical education and training is now generally acknowledged. The emergency medicine (EM) training program was designed to reduce gender differences and improve learning outcomes. However, despite numerous interventions, gender differences persist in emergency medicine residencies.

 Objective: To compare the outcomes of male and female residents in the same EM training program and to identify factors that may contribute to these differences.

 Design, Setting, and Participants: A prospective, multicenter, randomized study of 202 male and 202 female residents in an EM training program. The study was conducted from July 1, 2013, to June 30, 2015.

 Main Outcomes and Measures: Milestone achievement, resident satisfaction, and program completion rates.

 Results: Compared with female residents, male residents were more likely to achieve all milestones and to complete the program. Male residents also reported higher satisfaction scores than female residents.

 Conclusion: Gender differences in EM training persist, despite efforts to reduce them. Further research is needed to identify and address the underlying factors contributing to these differences.
Locally, our data showed that gender differences existed in faculty evaluations.
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WHY?
METHODS

- Faculty evaluations collected from 4 main teaching sites at McMaster University
- Residents self-report workload
- 3592 evaluations of 82 faculty were included
  - 28 Female
  - 54 Male
Overall teaching effectiveness

Female
Male
Overall teaching effectiveness

6.12 6.21

p=0.002
Overall teaching effectiveness

Number of patient encounters

- 1-4
- 5-9
- 10+
MEASURES & ANALYSIS

\[ x^{1/2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \]

\[ x^2 + px + q = 0 \]

ANOVA
RESULTS

• Comparing trainee workload, there was a significant main effect of gender
  [ANOVA F(1,3592)=41.0,p<0.0001]
RESULTS

- Association between
  - gender and evaluation scores
  - gender and workload
RESULTS

- Association between
  - gender and evaluation scores
  - gender and workload

- Adjusted for caseload, gender difference in faculty evaluations disappeared
  
  \[ \text{ANOVA } F(1,3) = 0.332, \ p = 0.80 \]
Adjusted for caseload, gender difference in faculty evaluations disappeared
LIMITATIONS

• Retrospective
• Resident evaluations are anonymous
• Gender not a binary!
PRACTICAL IMPLICATIONS

• What do residents value?
• Implications for faculty development
PRACTICAL IMPLICATIONS

- Differences have modifiable contributors
- Contributors may deserve further exploration
PRACTICAL IMPLICATIONS

Physician Gender Differences in General and Cancer-Specific Prevention Attitudes and Practices

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Abstract

Background—Findings are inconsistent regarding physician gender differences in general prevention practices and cancer-specific attitudes and practices.

Methods—We analyzed cross-sectional data from randomly selected physicians (N = 722) to test associations of gender with prevention practices and attitudes.

Results—Chi-square analyses (P < .05) showed gender differences for 14% (749) of the general and cancer-specific practices and attitudes tested. Multivariate analyses revealed that gender significantly (P < .05) predicted general prevention practices and cancer-specific attitudes in 4 models. Female gender predicted discussion of physical activity, violence, and use of substances. Male gender predicted belief in effectiveness of prostate-specific antigen screening.

Conclusions—Overall, male and female physicians showed more similarities than differences, associated with a number of important general and cancer-specific implications for general health prevention and cancer screening.
PRACTICAL IMPLICATIONS

Physician Gender Effects on Preventive Screening and Counseling: An Analysis of Male and Female Patients’ Health Care Experiences

Jillian T. Henderson, MPH, and Carol S. Weisman, PhD

BACKGROUND. Studies have documented that patients of female physicians receive higher levels of preventive services. However, most studies include patients of only one gender, examine mainly gender-specific screening services, and do not examine patient education and counseling.

OBJECTIVES. This study tests both physician- and patient-gender effects on screening and counseling services received in the past year and considers effects of gender-matched patient-physician pairs.

RESEARCH DESIGN. Multivariate analyses are conducted to assess direct and interactive (physician × patient) gender effects and to control for important covariates.

SUBJECTS. Data are from the 1998 Commonwealth Fund Survey of Women’s Health, a nationally representative sample of U.S. adults. The analytic sample includes 1,661 men and 1,288 women ages 18 and over.

MEASURES. Dependent variables are measures of patient-reported screening and counseling received, including gender-specific and gender-nonspecific services and counseling on general health habits and sensitive topics.

RESULTS. Female physician gender is associated with a greater likelihood of receiving preventive counseling for both male and female patients. For female patients, there is an increased likelihood of receiving more gender-specific screening (OR = 1.36, P < 0.05) and counseling (OR = 1.40, P < 0.05). These analyses provide no evidence that gender-matched physician-patient pairs provide an additional preventive care benefit beyond the main effect of female physician gender.

CONCLUSIONS. Female physician gender influences the provision of both screening and counseling services. These influences may reflect physicians’ practice and communication styles as well as patients’ preferences and expectations.

Key words: Physician gender; patient gender; preventive services. (Med Care 2001;39:1281–1292)
PRACTICAL IMPLICATIONS

Comparison of Hospital Mortality and Readmission Rates for Medicare Patients Treated by Male vs Female Physicians

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**IMPORTANCE** Studies have found differences in practice patterns between male and female physicians, with female physicians more likely to adhere to clinical guidelines and evidence-based practice. However, whether patient outcomes differ between male and female physicians is largely unknown.

**OBJECTIVES** To determine whether mortality and readmission rates differ between patients treated by male or female physicians.

**DESIGN, SETTING, AND PARTICIPANTS** We analyzed a 20% random sample of Medicare fee-for-service beneficiaries 65 years or older hospitalized with a medical condition and treated by general internists from January 1, 2011, to December 31, 2014. We examined the association between physician sex and 30-day mortality and readmission rates, adjusted for patient and physician characteristics and hospital fixed effects (effectively comparing male and female physicians within the same hospital). As a sensitivity analysis, we examined only physicians focusing on hospital care (hospitalists), among whom patients are plausibly quasi-randomized to physicians based on the physician’s specific work schedule. We also investigated whether differences in patient outcomes varied by specific condition or by underlying severity of illness.

**MAIN OUTCOMES AND MEASURES** Patients’ 30-day mortality and readmission rates.

**RESULTS** A total of 1,583,028 hospitalizations were used for analyses of 30-day mortality (mean [SD] patient age, 80.2 [8.5] years; 621,412 men and 961,616 women) and 1,540,797 were used for analyses of readmission (mean [SD] patient age, 80.1 [8.5] years; 602,115 men and 938,682 women). Patients treated by female physicians had lower 30-day mortality (adjusted mortality, 11.07% vs 11.49%; adjusted risk difference, -0.42%; 95% CI, -0.57% to -0.28%; P < .001; number needed to treat to prevent 1 death, 233) and lower 30-day readmissions (adjusted readmissions, 15.02% vs 15.57%; adjusted risk difference, -0.55%; 95% CI, -0.71% to -0.39%; P < .001; number needed to treat to prevent 1 readmission, 182) than patients cared for by male physicians, after accounting for potential confounders. Our findings were unaffected when restricting analyses to patients treated by hospitalists.
Comparison of postoperative outcomes among patients treated by male and female surgeons: a population based matched cohort study

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Abstract

Objective To examine the effect of surgeon sex on postoperative outcomes of patients undergoing common surgical procedures.

Design Retrospective, matched cohort study from 2007 to 2015.

Setting Population based cohort of all patients treated in Ontario, Canada.

Participants Patients undergoing one of 35 surgical procedures performed by a female surgeon were matched by patient age, patient comorbidity, surgery volume, surgeon age and hospital to patients undergoing the same operation by a male surgeon.

Interventions Sex of surgeon is an independent variable, with outcomes by surgeon sex in patients who had emergency surgery, where patients do not usually choose their surgeon.

Conclusions After accounting for patient, surgeon, and hospital characteristics, patients treated by female surgeons had a small but statistically significant increase in 30-day mortality and minor surgical outcomes (length of stay, complications, and rehospitalizations), compared with those treated by male surgeons. These findings support the need for further examination of the surgeon outcomes and relationship between the characteristics of patients and the underlying outcomes.
PRACTICAL IMPLICATIONS

Comparison of posttreated by male and
based matched co

Christopher JD Wallis: resident*; surgeon* and associate chair and professor**; Raj Satkunarajah

ABSTRACT

Objectives: To determine whether patients treated by male or female physi
can code leader gender was independently associated with sustained return of ap
dicectomy and with mortality.

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Introduction

Background: Studies have found that women are inferior leaders of cardiology association with

Male 1

RESULTS: A total of 115 (mean SD) patients were used for analysis and 938, 622 women (adjusted mortality

-0.28; p<0.001) and 92,003 were

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NEXT STEPS

• What other practice differences might contribute to differences in evaluations?

• What drives practice differences between genders?
QUESTIONS?

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