

## EDUCATIONAL DILEMMA:

This study examined whether male versus female emergency medicine (EM) residents had a different rate of milestone attainment during evaluations throughout residency training.

### Reference

Dayal A, O'Connor M, Qadri U, Arora VM. Comparison of Male vs Female Resident Milestone Evaluations by Faculty During Emergency Medicine Residency Training. JAMA Intern Med 2017 Mar 6; epub ahead of print. DOI: [10.1001/jamainternmed.2016.9616](https://doi.org/10.1001/jamainternmed.2016.9616).

PMID:28264090

<https://www.ncbi.nlm.nih.gov/pubmed/28264090>

### Why is this paper relevant to Emergency Medicine education?

This study suggests that faculty should be aware of possible gender bias in medical education and residency training.

The authors suggest "one way to interpret our findings is that a widening gender gap is attributable to the cumulative effects of repeated disadvantages and biases that become increasingly pronounced at senior levels of training." In other words, female senior residents who display qualities such as independence or assertiveness may receive lower marks than their male colleagues.

Recognizing and further characterizing this possible bias is important as we move towards competency-based assessment models in EM and other training programs.

**Level of Evidence:** N/A

**Level of Learning:** Postgraduate

**Funding Sources:** NIH and University of Chicago Diversity Research & Small Grants Program

**Study Design:** Multicentre longitudinal cohort study

**Setting:** Eight community and academic EM training programs across the United States.

## Synopsis

This multicentre study examined over 33 000 milestone evaluations of 359 EM residents (237 men and 122 women) over a two-year period. Milestone evaluations are direct faculty observations of specific skills or subcompetencies. Female and male residents achieved similar milestone levels during their first year

of residency. By the end of a three-year training program, male residents received higher evaluations in all categories – including medical knowledge, airway management, patient safety and team communication.

The rate of milestone attainment was 12.7% higher for men through all levels of residency. In other words, evaluations of male residents placed them over three months ahead of female residents in the same training programs, where residents gain, on average, 0.5 milestone levels per year.

There were no statistically significant differences in scores based on gender of the faculty evaluator (194 men and 91 women) or gender pairing between evaluator and resident.

The paper did not identify specific reasons for their observed gender gap in evaluations, but highlighted the need for faculty to be cognizant of possible gender bias and for further research in this area to be performed.

## BOTTOM LINE:

Male and female residents in this cohort received similar evaluations during their first year of a three-year residency program. By graduation, male residents received higher scores than female residents in all 23 categories – which include medical knowledge, airway management, patient safety and team communication.

The authors hypothesize this observed evaluation gap may be due to implicit gender bias in residency training.