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Why Care About Recruiting and Keeping Women in Cardiovascular Research and Medicine?

Cardiovascular disease is the leading cause of death in women. For years, some women with acute myocardial infarction were undeniably misdiagnosed because the established clinical indicators, which focused heavily on chest pain, were based on research conducted primarily in middle-aged men. Women often have more adverse side effects from drug therapy than men; for example, statin use increases the risk of diabetes mellitus more in women than men, where it is postulated that the smaller size of women may be the culprit. Efficacy and adverse effects of Food and Drug Administration–approved drugs have often been based on results from randomized controlled trials that were populated primarily by average-sized middle-aged men. Although we can never know how cardiovascular clinical practice may have developed had there been more gender parity, it is feasible that greater involvement of women may have led to more research that was better designed to address these important questions of symptomatology and adverse drug effects. What we do know is that the corporate world has made some effort to embrace gender equity, and a recent report in the Atlantic Monthly found that companies using women in large numbers outperform their competitors on every measure of profitability. For these reasons, the leaky pipeline should be a top priority for cardiovascular medicine and research.

Facts About the Leaky Pipeline

Let us start with some numbers. Women have reached parity or surpassed men in completion of undergraduate programs but lag in graduate and professional programs. In the latest report from the American Association of Medical Colleges, 46% of graduates are women. In science, technology, engineering, and mathematics, 39% of PhDs are granted to women. The overall percentage of women in academic medicine is 38%, and the proportion of women recruited to academic medicine has increased to 47% of all recruits in the past decade. However, during the same period, women left in a slightly greater percentage (5%), accounting for 41% of all departures. This trend contributes to the consistent finding that the percentage of women declines in academic settings at higher ranks (ie, associate professors, 34%; professors, 21%) and in key leadership positions (ie, chairs, 15%; deans, 16%). In science, technology, engineering, and mathematics, the pattern is identical (ie, at 4-year colleges and universities, associate professors, 31%; full professors 18%). The end result of this persistent leaky pipeline is that gender parity at the highest academic ranks may never be achieved.

One of the key contributors to academic success is securing extramural funding for scholarly activities. At the National Institutes of Health, success rates since 2009 overall have been greater for women than men (Figure). Comparable findings have been observed in the American Heart Association funding: for one of its longest standing grant programs, the Grant-in-Aid, the success rate for women outpaced men by 2% from 2009 to 2013, when the percentages flipped in favor of men by about the same magnitude. These success rates hide 2 important facts. First, the percentage of women applying for grants is markedly lower: in 2008, 5590 women (27%) compared with 14,995 men (73%) applied for an National Institutes of Health Project Grant (R01). The disparities are greater for larger projects, for example, Program Project Grants (P01s): in 2008, just 75 women (17%) versus 316 men (83%) submitted

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(Circ Cardiovasc Qual Outcomes. 2015;8:S63-S64. DOI: 10.1161/CIRCOUTCOMES.115.001757.)

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Circ Cardiovasc Qual Outcomes is available at http://circoutcomes.ahajournals.org

DOI: 10.1161/CIRCOUTCOMES.115.001757
Figure. Grant application success rates at the US National Institutes of Health (data from National Institutes of Health Research Portfolio Online Reporting Tools)."
Plugging the Leaking Pipeline: Why Men Have a Stake in the Recruitment and Retention of Women in Cardiovascular Medicine and Research
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_Circ Cardiovasc Qual Outcomes_. 2015;8:S63-S64; originally published online February 24, 2015; doi: 10.1161/CIRCOUTCOMES.115.001757

_Circulation: Cardiovascular Quality and Outcomes_ is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
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Print ISSN: 1941-7705. Online ISSN: 1941-7713

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circoutcomes.ahajournals.org/content/8/2_suppl_1/S63

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