

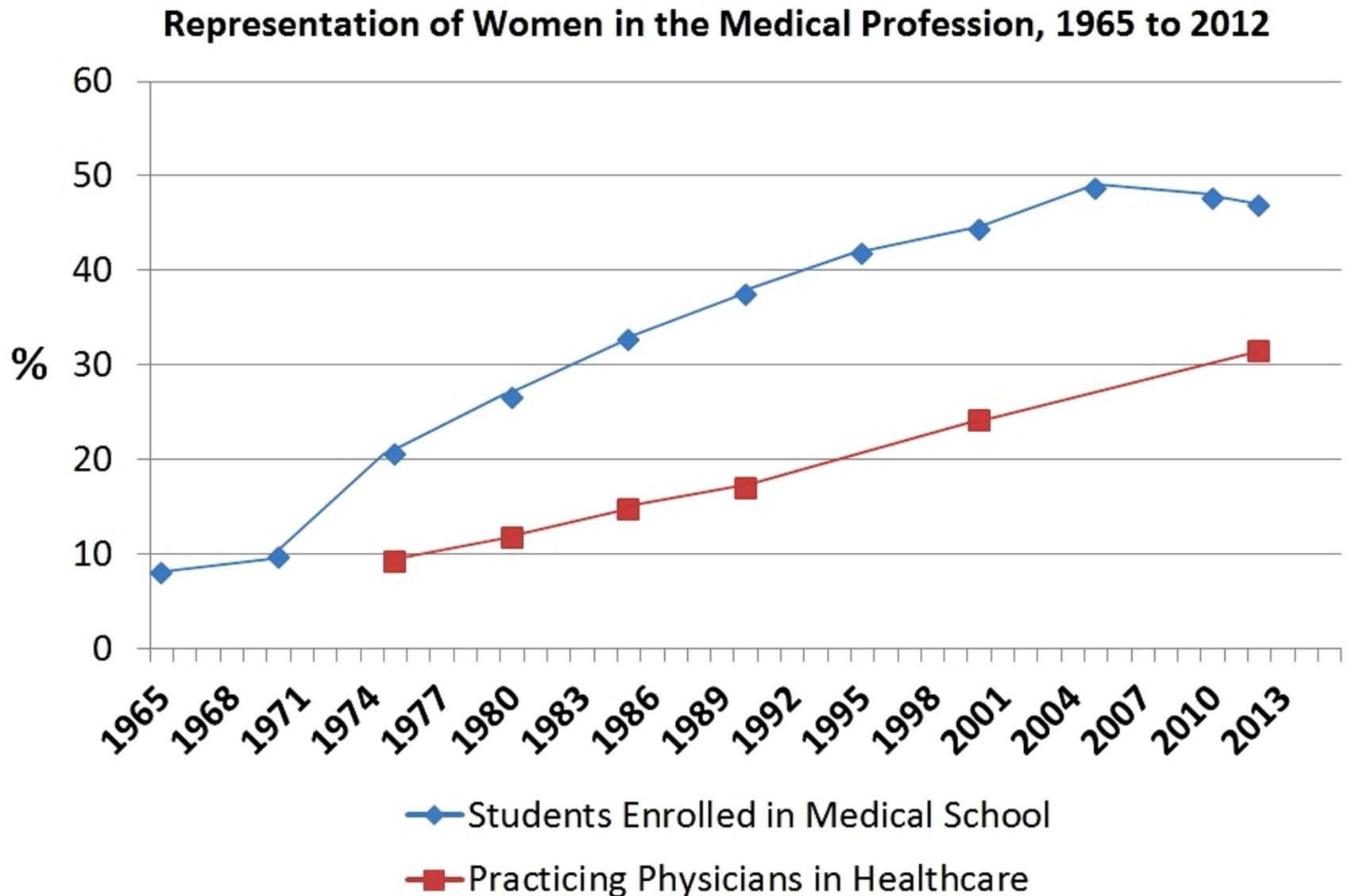
# Promoting Gender Equity and Success in Academic Medicine

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# Outline

- Women's current participation in medicine
- Evidence suggesting dysfunction in the pipeline
- Challenges/barriers/mechanisms underlying the dysfunction
- Targeted interventions

# Women in the Medical Profession





# Women in Academic Medicine

- Low proportions of senior positions are held by women
  - In 2013-2014
    - 21% of full professors were women
    - 15% of department chairs were women
    - 16% of medical school deans were women

SPECIAL ARTICLE

# The “Gender Gap” in Authorship of Academic Medical Literature — A 35-Year Perspective

Reshma Jagsi, M.D., D.Phil., Elizabeth A. Guancial, M.D.,  
Cynthia Cooper Worobey, M.D., Lori E. Henault, M.P.H., Yuchiao Chang, Ph.D.,  
Rebecca Starr, M.B.A., M.S.W., Nancy J. Tarbell, M.D.,  
and Elaine M. Hylek, M.D., M.P.H.

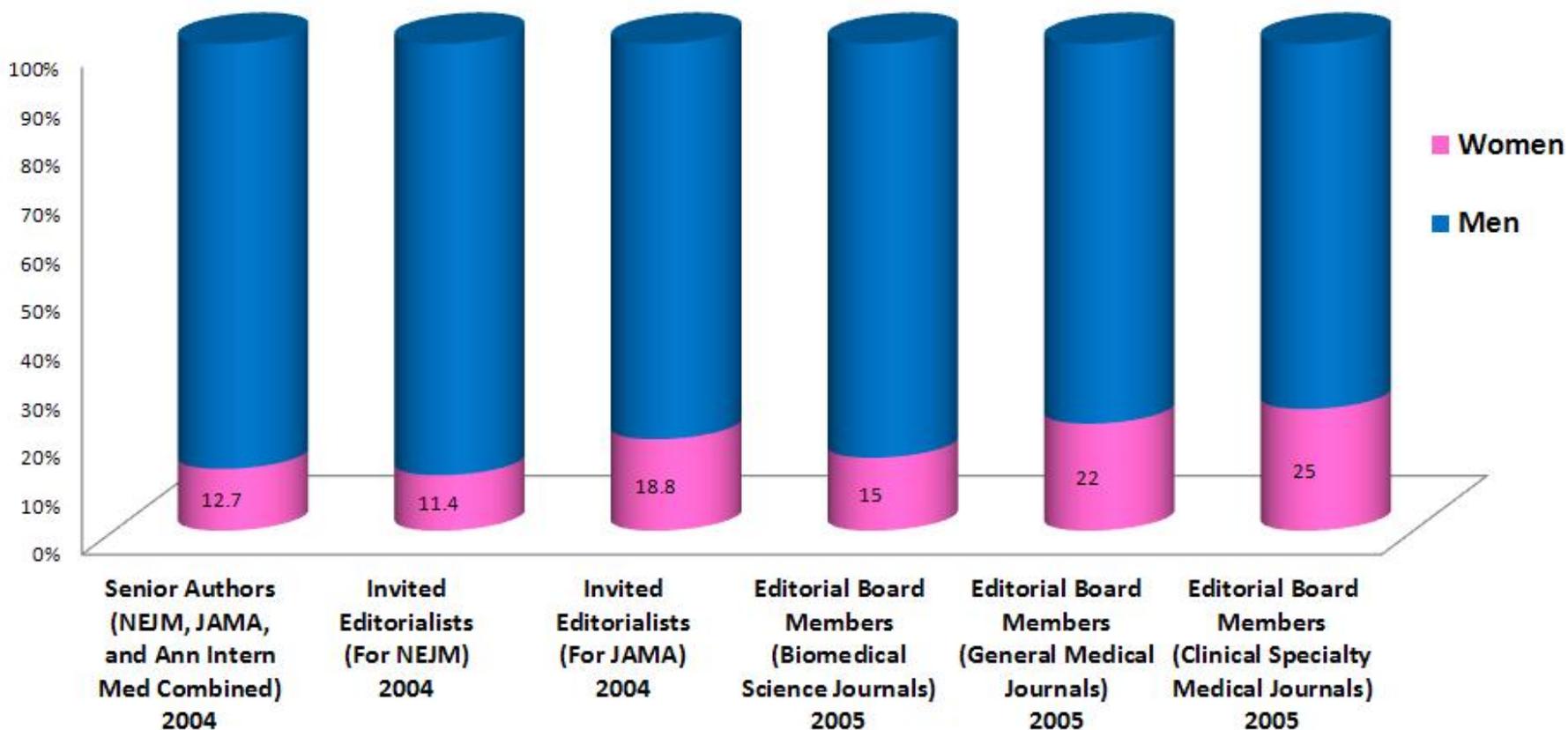
## RESEARCH LETTER

*Arch Intern Med.* 2008;168(5):544-548.

### The Representation of Women on the Editorial Boards of Major Medical Journals: A 35-Year Perspective

Reshma Jagsi, MD, DPhil  
Nancy J. Tarbell, MD

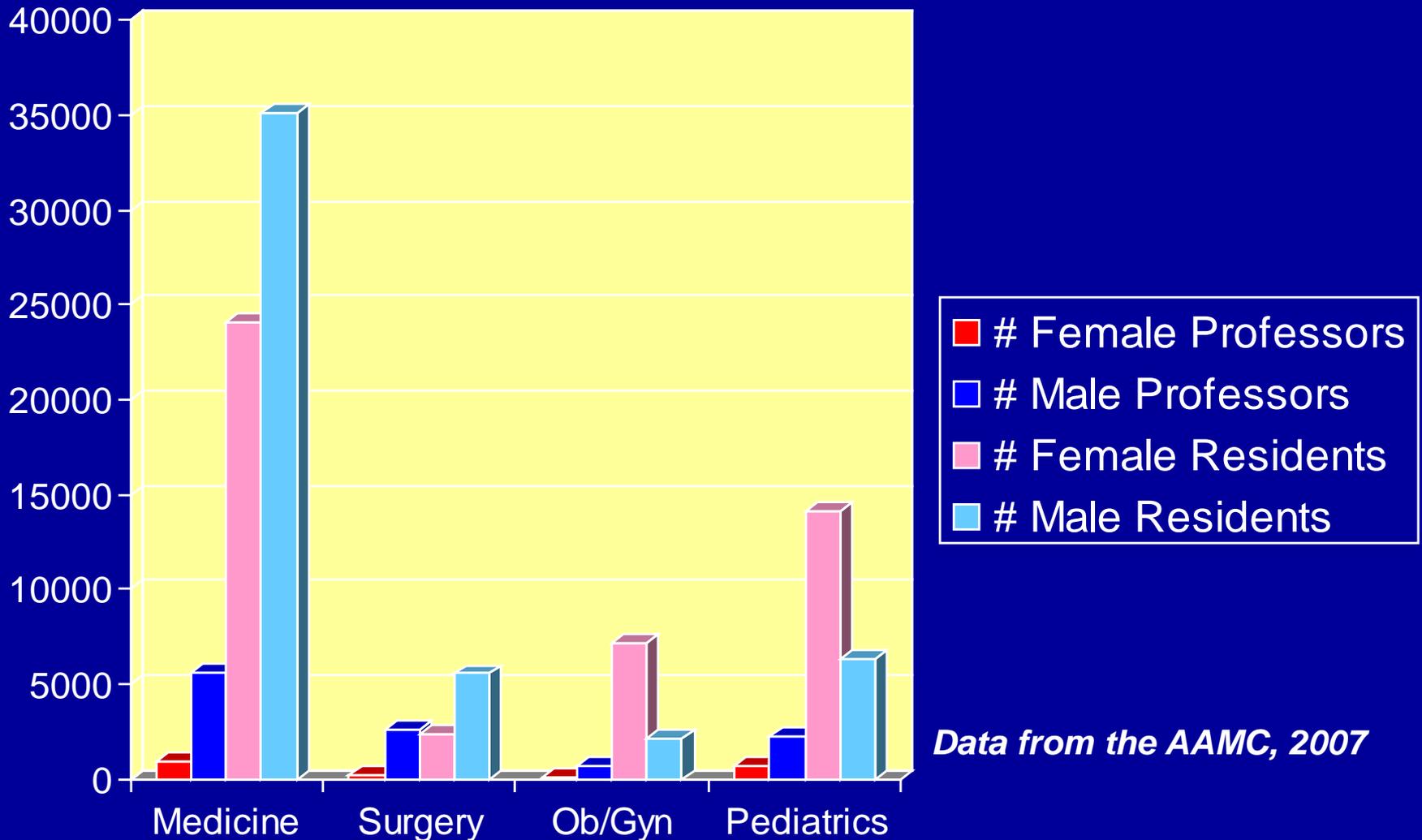
Lori E. Henault, MPH  
Yuchiao Chang, PhD  
Elaine M. Hylek, MD, MPH



# Does it matter?

- Deontological arguments
- Teleological arguments

# Role Models in Academic Medicine



*Data from the AAMC, 2007*

# Should we worry?

- Pipeline hypothesis
- Nonnemaker (N Engl J Med 2000;342:399-405)
  - 15 cohorts graduating medical school 1979-1993
  - proportion of women who advanced to associate professor significantly lower than expected in all but 2 of the 15 cohorts
  - even women who reached the rank of associate professor less likely to become full professor than male counterparts
  - criticisms
- Need for further research

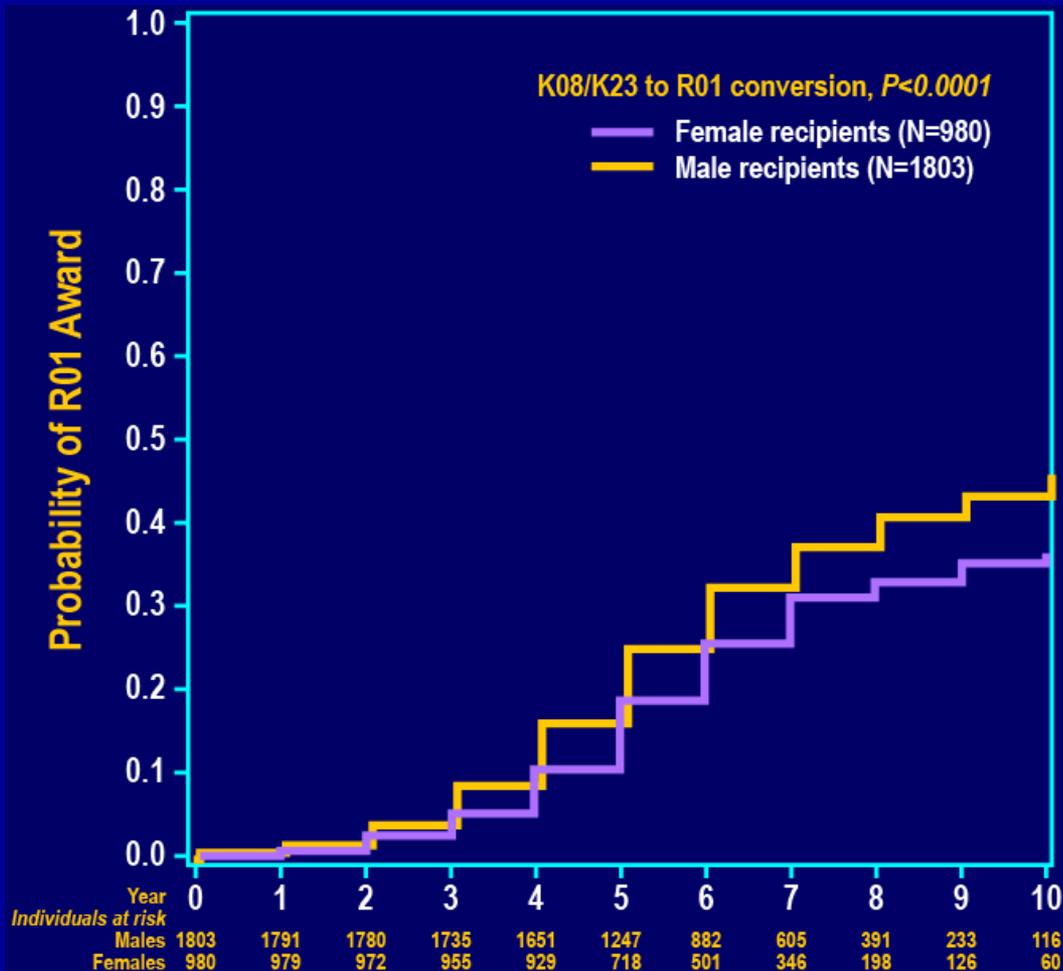
# NIH K08 and K23 Awards

- Highly competitive grants made to junior academic medical faculty
  - clinical doctorates
  - demonstrated aptitude and commitment towards research careers
- Articulated goal: to foster career development into independent investigators
- Ideal study population: homogeneous & recent cohort among whom success would be expected
- Lends insights into the mechanisms underlying observed gender differences

## Sex Differences in Attainment of Independent Funding by Career Development Awardees

Reshma Jaggi, MD, DPhil; Amy R. Motomura, BSE; Kent A. Griffith, MS; Soumya Rangarajan, MPP; and Peter A. Ubel, MD

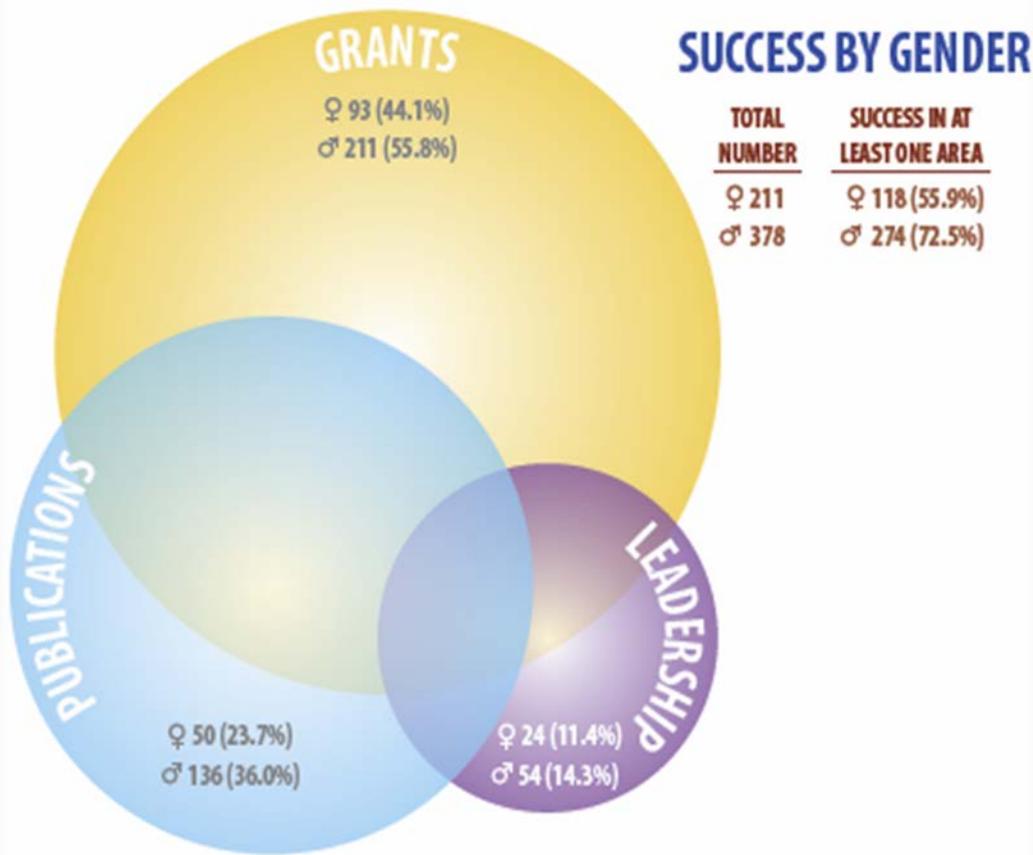
- 5-yr rate of R01 attainment: 19% among women and 25% among men
- Gender (HR 0.8,  $p=0.002$ ) independently significant predictor of R01 attainment on multivariate analysis controlling for K award type, year of award, funding institute, institution, and specialty



## Similarities and Differences in the Career Trajectories of Male and Female Career Development Award Recipients

Reshma Jaggi, MD, DPhil, Rochelle DeCastro, MS, Kent A. Griffith, MS, Soumya Rangarajan, MPP, Cristina Churchill, Abigail Stewart, PhD, and Peter A. Ubel, MD

Acad Med. 2011;86:1415-1421.  
First published online September 26, 2011  
doi: 10.1097/ACM.0b013e3182305aa6



# Salary

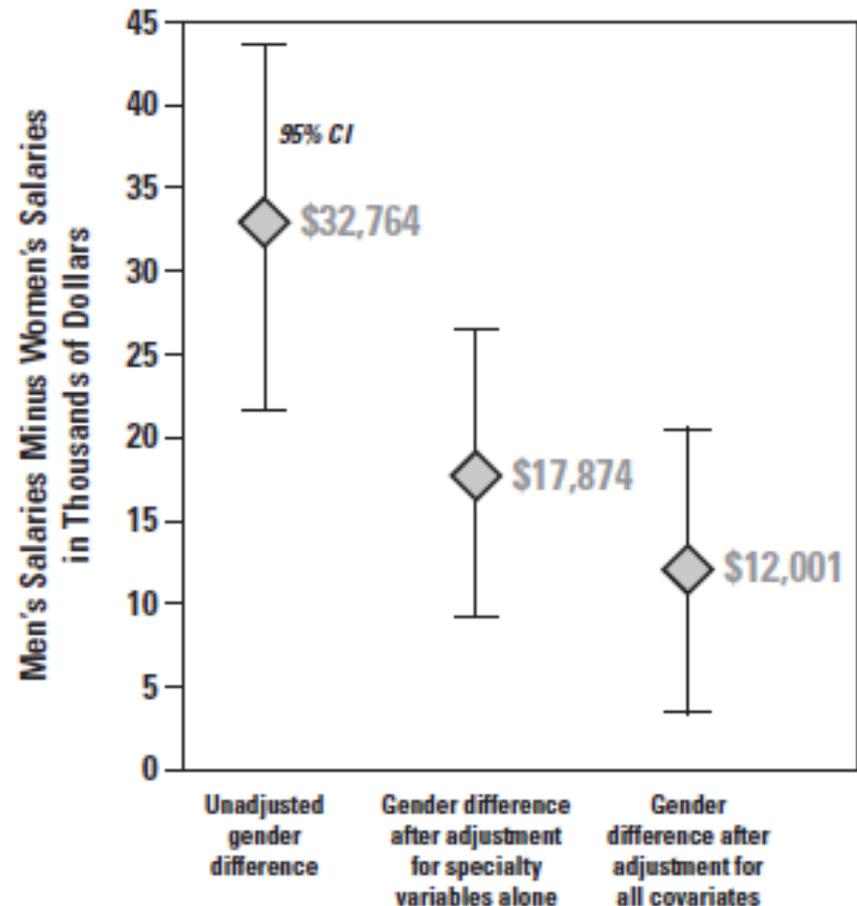
- 800 MDs who were still working at academic institutions responded to our surveys of K awardees from 2000-2003
- Significant gender difference in annual salary even after adjustment for numerous measures of success/productivity, specialization, and other factors
  - Age
  - Race
  - Marital status
  - Parental status
  - Additional doctoral degree
  - Academic rank
  - Leadership positions
  - Specialty
  - Current institution type (public/private)
  - Current institution region
  - Current institution NIH funding rank group
  - Whether changed institutions since K award
  - K award type
  - Years since K award
  - K award funding institute
  - Receipt of R01 or >\$1 million in grants
  - Publications
  - Work hours
  - Percent time in research

ORIGINAL CONTRIBUTION

**JAMA** The Journal of the  
American Medical Association

Reshma Jagsi, MD, DPhil  
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Abigail Stewart, PhD  
Dana Sambuco, MPPA  
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Peter A. Ubel, MD

## Gender Differences in the Salaries of Physician Researchers



# What Drives These Differences?

- Specialty “choice”
  - Women may be encouraged to occupy lower-paid specialties, specialties chosen by women may pay less partly because they are predominated by women or involve less valued “feminine” behaviors
- Differences in productivity, hours, and “willingness” to change institutions
  - Constraints of a gender-structured society
- Differences in rank and leadership
  - May reflect biased processes for determining rewards
- But a substantial unexplained gender difference remained even after accounting for all of these factors and more

# Gender Differences in Values or Behavior?

- Perhaps mothers are more likely to sacrifice pay for unobserved job characteristics such as flexibility and fathers wish to earn more to support their families
  - Relatively homogeneous job type
  - No interaction between gender and parental status; even women without children had lower pay than men
- Perhaps women don't ask

# Differences in Employer Behavior towards Men and Women?

- Statistical discrimination
  - employers make inferences based on the mean characteristics of a group rather than considering individual characteristics when setting salaries
- The concept of the family wage

# Unconscious Biases

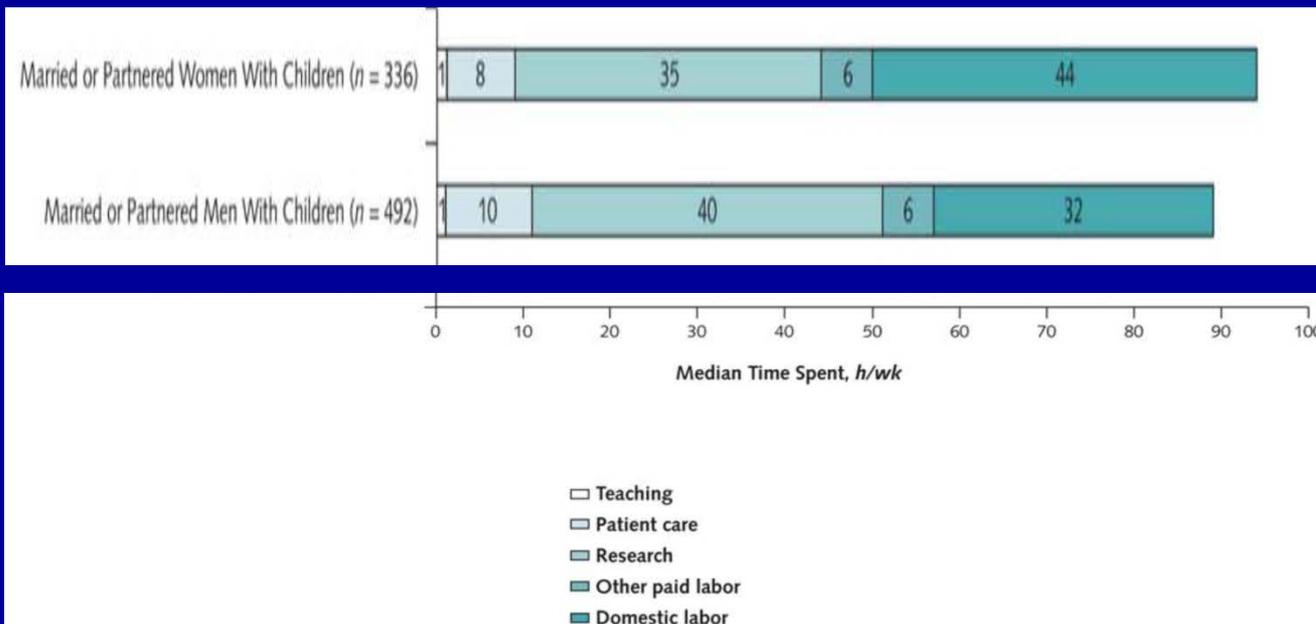
- Deeply ingrained notions of gender roles
- NAS report
  - *“An impressive body of controlled experimental studies and examination of decision-making processes in real life show that, on the average, people are less likely to hire a woman than a man with identical qualifications, are less likely to ascribe credit to a woman than to a man for identical accomplishments, and, when information is scarce, will far more often give the benefit of the doubt to a man than a woman.”*
- Qualitative studies & anecdotes

# Not a Level Playing Field

- Seemingly gender-neutral norms, practices, and policies can have a disparate negative impact upon women
  - Examples
    - Leave policies
      - Jagsi, Weinstein, Tarbell, *N Engl J Med* 2007
    - Expectations regarding work hours
      - Jagsi & Surender, *Soc Sci Med* 2002
    - Tenure clocks & limits on grant eligibility
  - Mechanisms
    - forcing collision of biological & professional clocks
    - magnifying the inequities of the traditional gendered division of labor in our society, in which many women continue to bear the greater burden of domestic responsibility

## Gender Differences in Time Spent on Parenting and Domestic Responsibilities by High-Achieving Young Physician-Researchers

Ann Intern Med. 2014;160(5):344-353. doi:10.7326/M13-0974

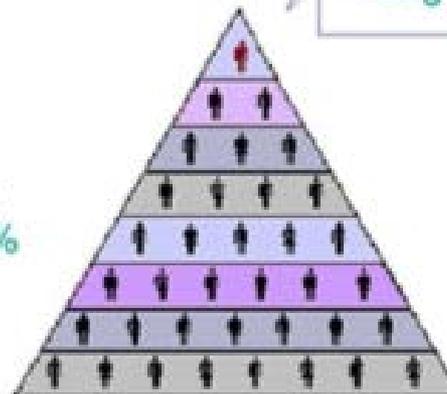


- Among married or partnered respondents with children, after adjustment for work hours, spousal employment, and other factors, women spent 8.5 more hours per week on domestic activities.
- In the subgroup with spouses or domestic partners who were employed full-time, women were more likely to take time off during disruptions of usual child care arrangements than men (42.6% vs. 12.4%).

# Accumulation of Disadvantage

Martell, Lane, and Emrich's (1996) model assumed a tiny bias in favor of men, which accounted for only 1% of variance in promotion.

After many iterations the top level was 65% male.



Operating at a systematic minute disadvantage can have substantial long term effects.

# Developing Targeted Interventions

- Concrete, targeted interventions necessary
- Just as many practices contributing to gender inequity appear gender-neutral, interventions need not be obviously gender-specific either
- Success with initiatives at one institution should be shared to promote development of similar programs elsewhere

# Mentoring Programs

- May allow women access to opportunities that otherwise might be allocated by an informal old-boy's network to which they are not privy
  - Tracy EE, Jagsi R, Starr R, Tarbell NJ. Outcomes of a pilot faculty mentoring program. *Am J Obstet Gynecol.* 2004;191(6):1846-50.
- May help women to “play games” not learned in childhood
  - DeCastro R, Sambuco D, Ubel PA, Stewart A, Jagsi R. Batting 300 Is Good: Perspectives of Faculty Researchers and Their Mentors on Rejection, Resilience, and Persistence in Academic Medical Careers. *Acad Med* 2013;88(4):497-504.
- May teach negotiation skills
  - Sambuco D, Dabrowska A, Decastro R, Stewart A, Ubel PA, Jagsi R. Negotiation in Academic Medicine: Narratives of Faculty Researchers and Their Mentors. *Acad Med* 2013;88(4):505-511.
- Should help develop mentor networks rather than hierarchical dyads
  - Decastro R, Sambuco D, Ubel PA, Stewart A, Jagsi R. Mentor Networks in Academic Medicine: Moving Beyond a Dyadic Conception of Mentoring for Junior Faculty Researchers. *Acad Med* 2013;88(4):488-496.
- Still, must be careful not to focus exclusively on “fixing the women”

# Institutional Changes

- Ultimately, gender equity must be promoted through recognition and changes at the institutional level
  - Interventions to provide support at stages of particular vulnerability
    - Distinguished Scholar Awards
      - Jagsi R, Butterson J, Starr R, Tarbell NJ. A Targeted Intervention to Promote Women's Careers in Academic Medicine. Arch Intern Med 2007.
  - Bias literacy and cultural transformation
    - Hopkins (Task Force), Mount Sinai (Just Desserts), Michigan (ADVANCE: recruitment, retention, climate, leadership), Wisconsin (WISELI: Bias Literacy Workshop), Penn (cultural transformation initiative)
  - Development of transparent & consistent criteria for advancement & compensation

# Conclusions

- Women have made substantial strides, but a gender gap remains at senior levels
- Gender equity is important, and there is cause for concern
- The cause is not simply a slow pipeline: even similarly situated men and women do not appear to be rewarded similarly even today
- Institutions must develop targeted interventions to support gender equity and the success of this major contingent of the medical workforce

# Acknowledgments

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- Rebecca Starr, MSW, MBA
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