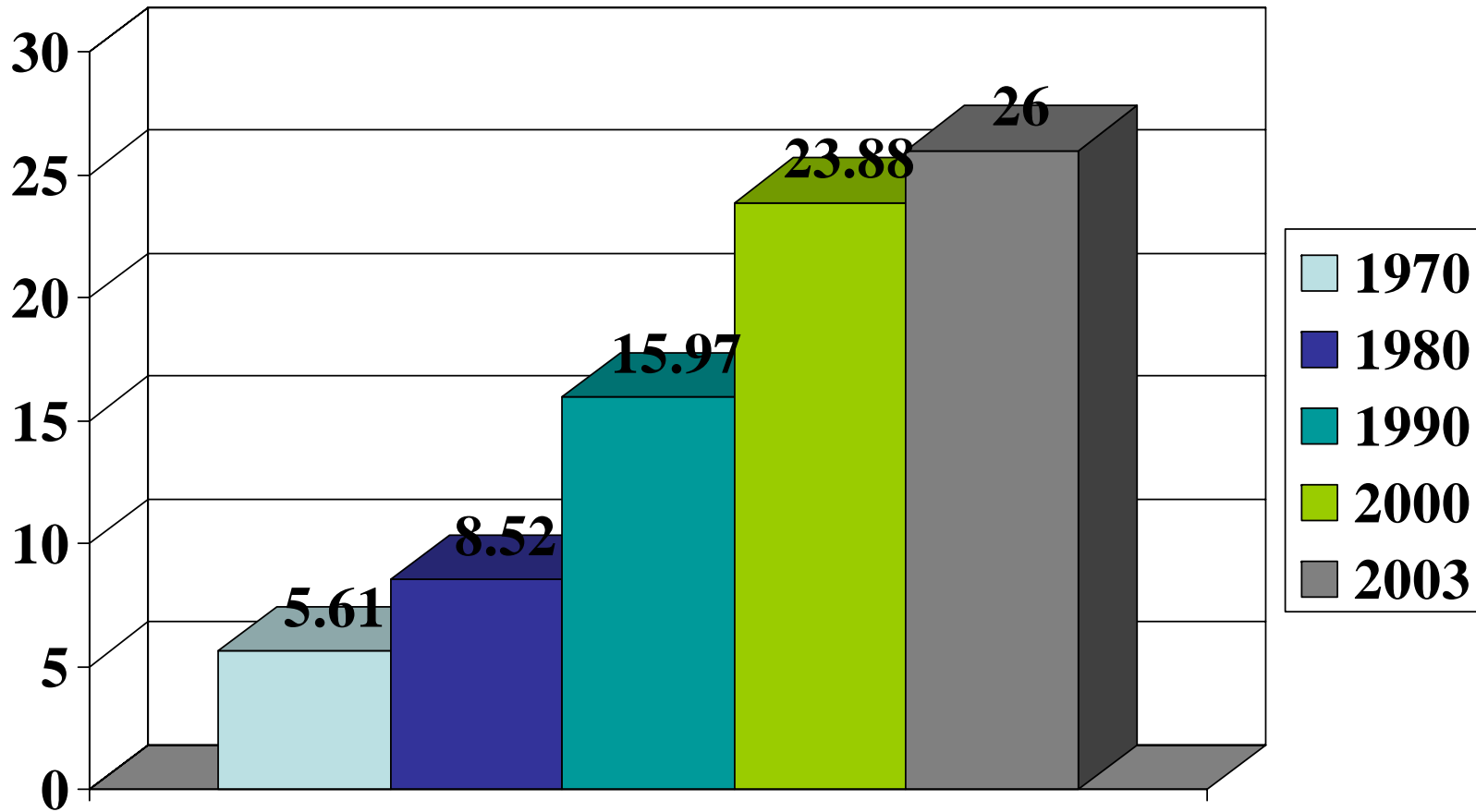


The Changing Face of Medicine

The Percent of US Physicians who are Female



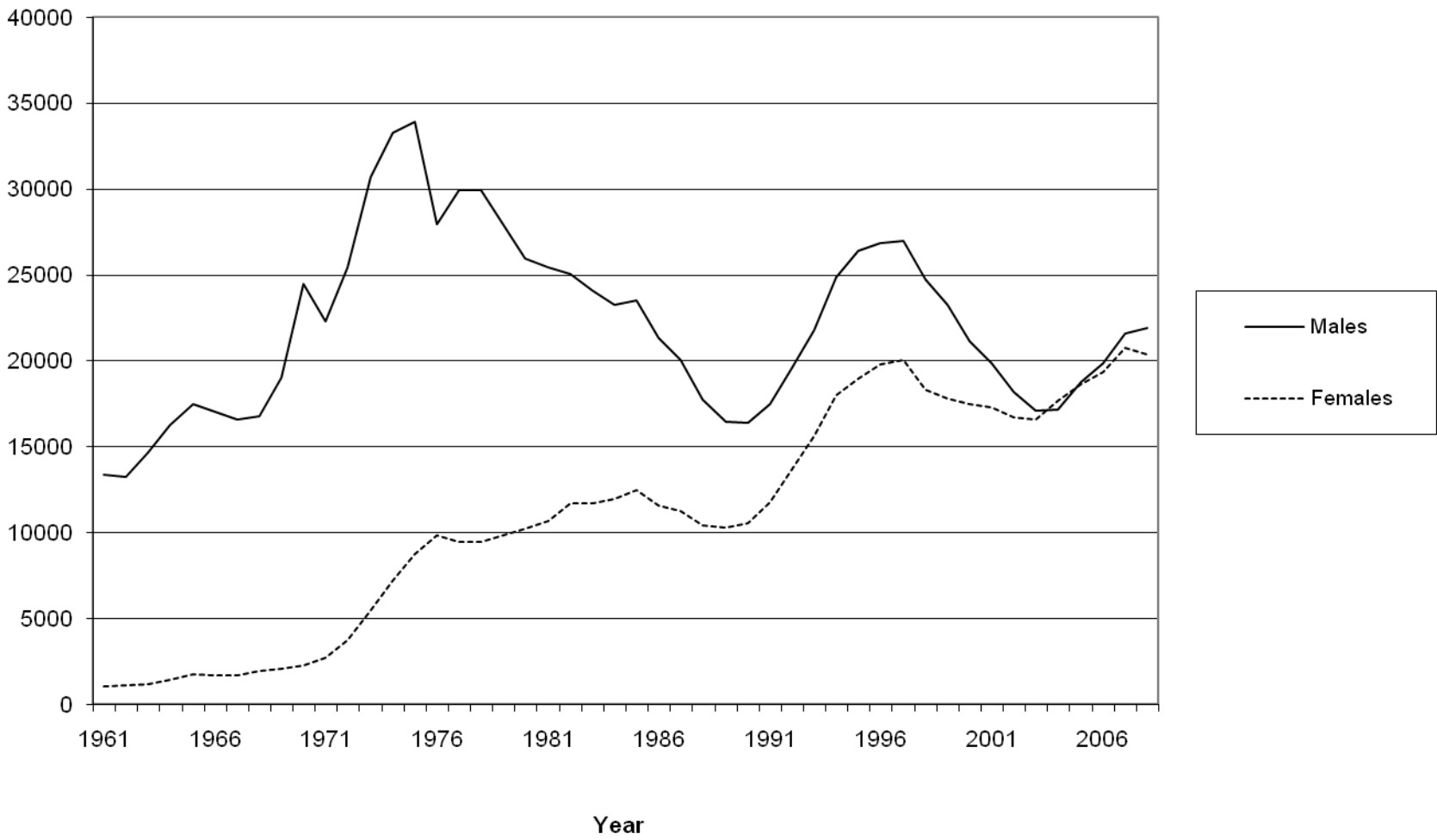
The Changing Face of Medicine

1. How and why did women enter the American medical profession?
2. Now that a sizeable portion of physicians are female, how are women physicians' coping?
3. What difference will the feminization of medicine make for health services and for the structure of the profession?

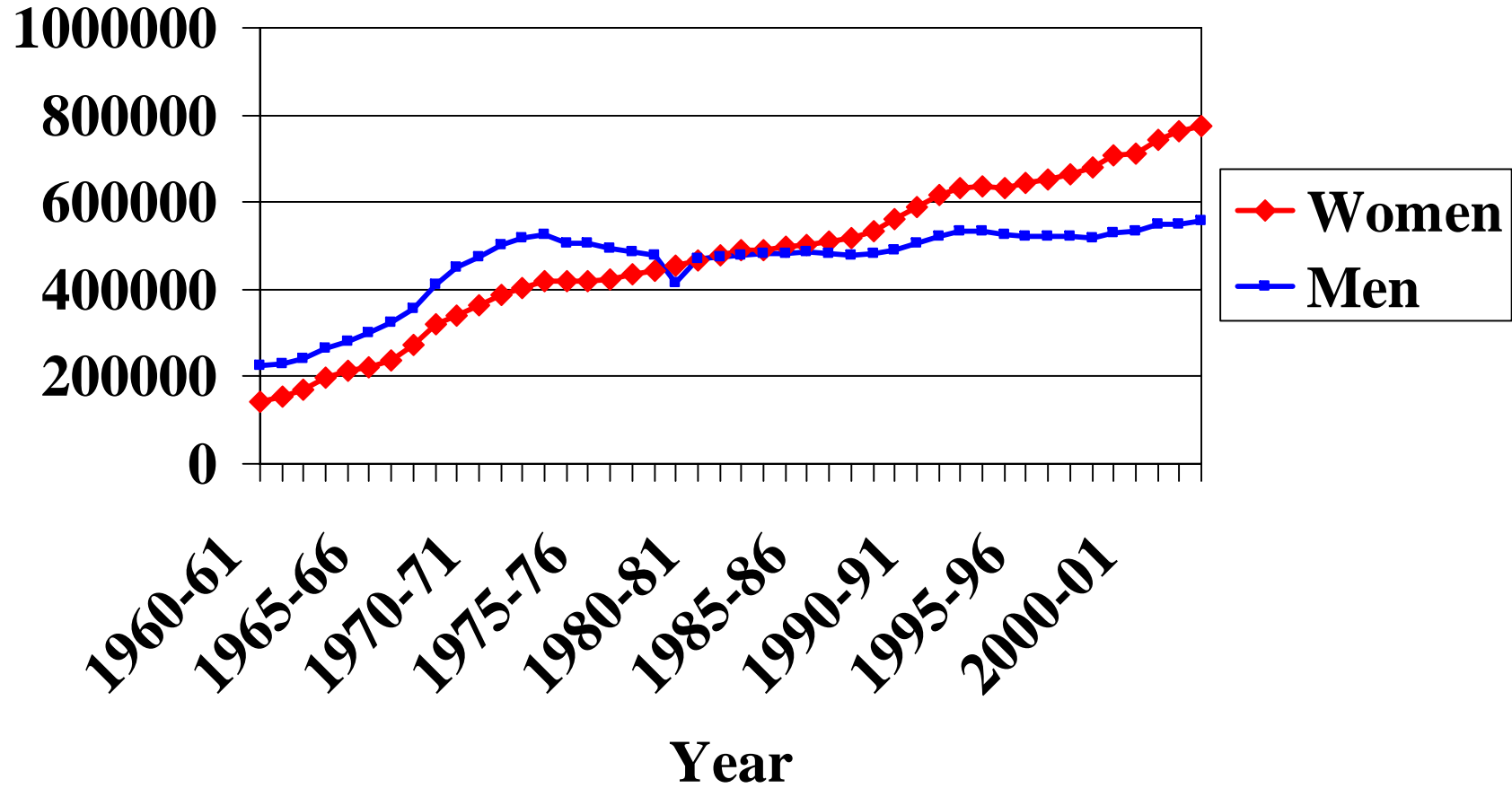
1.) What caused the increase in women's entry into medicine?

1. Changing social norms surrounding women and work
2. Dramatic increases in the our country's capacity to train medical students.
3. The feminization of foreign medical graduates
4. Challenges to male interest in medicine
 - The end of the military draft in the 1970s
 - The advent of personal computers and the internet in the 1980s and 1990s.

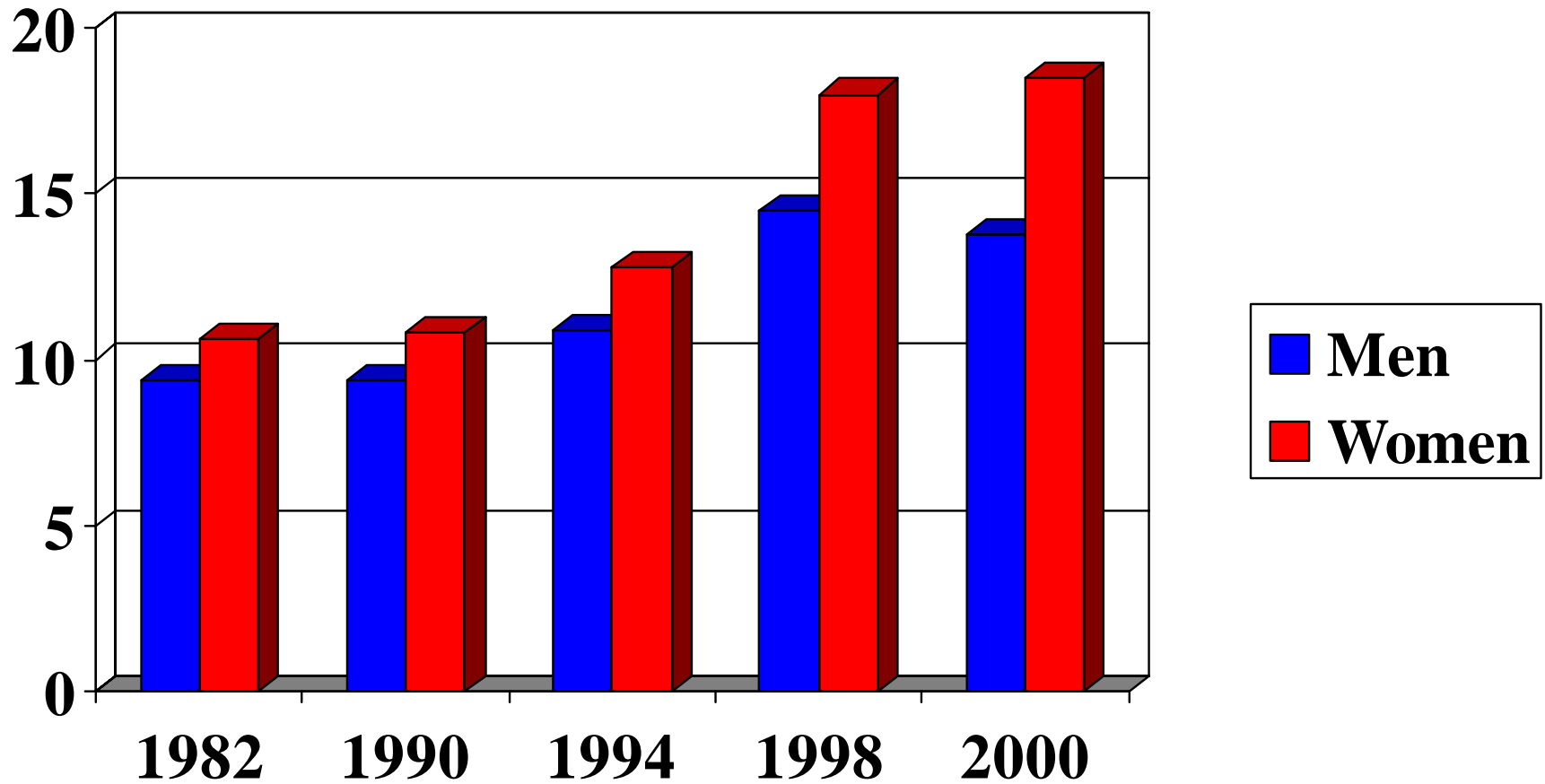
Trends in Medical School Applications, 1961-2008



US Bachelor's Degree Recipients



Percent of High School Graduates Taking AP/Honors Biology



Percent of College Graduates Majoring in Biology

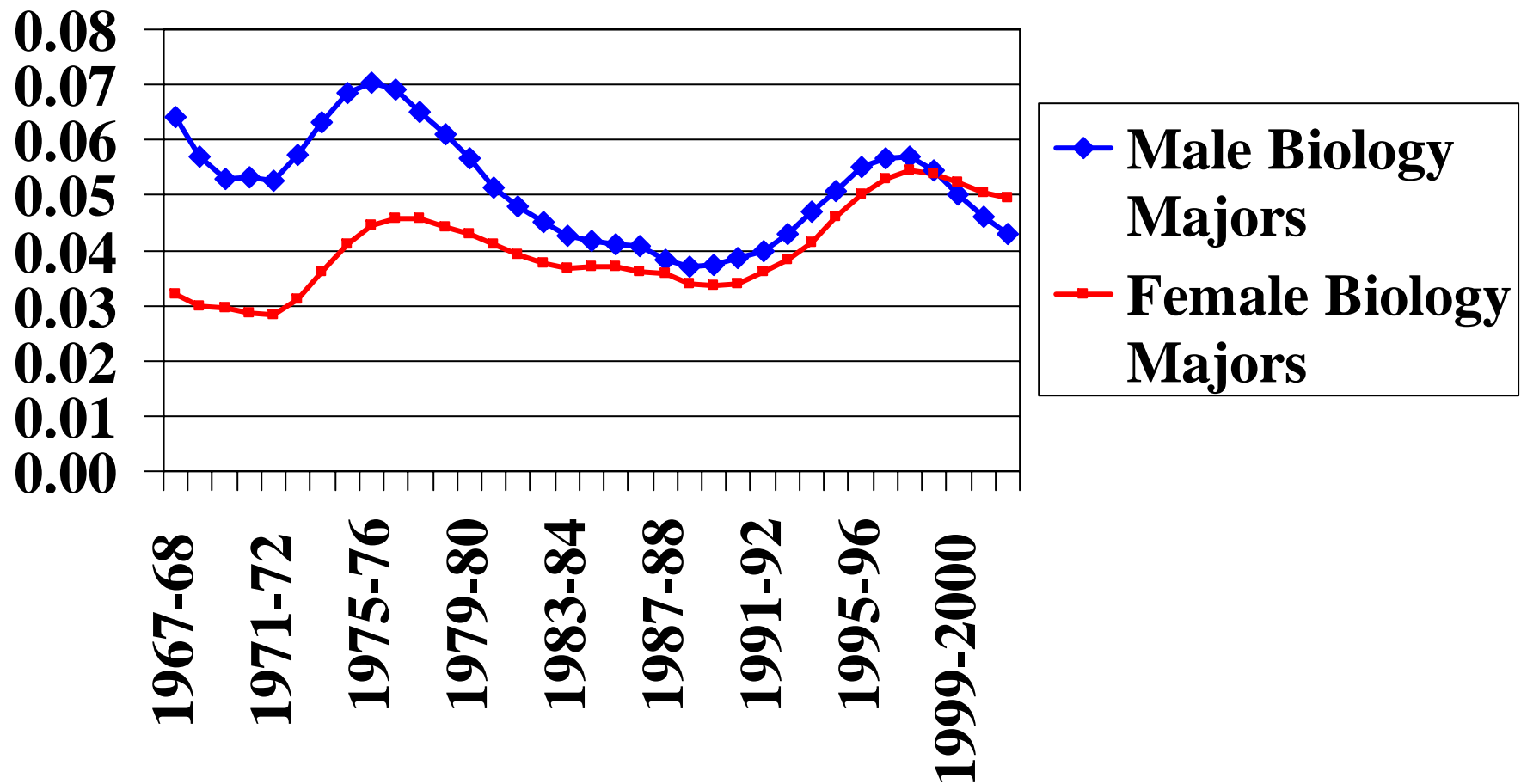
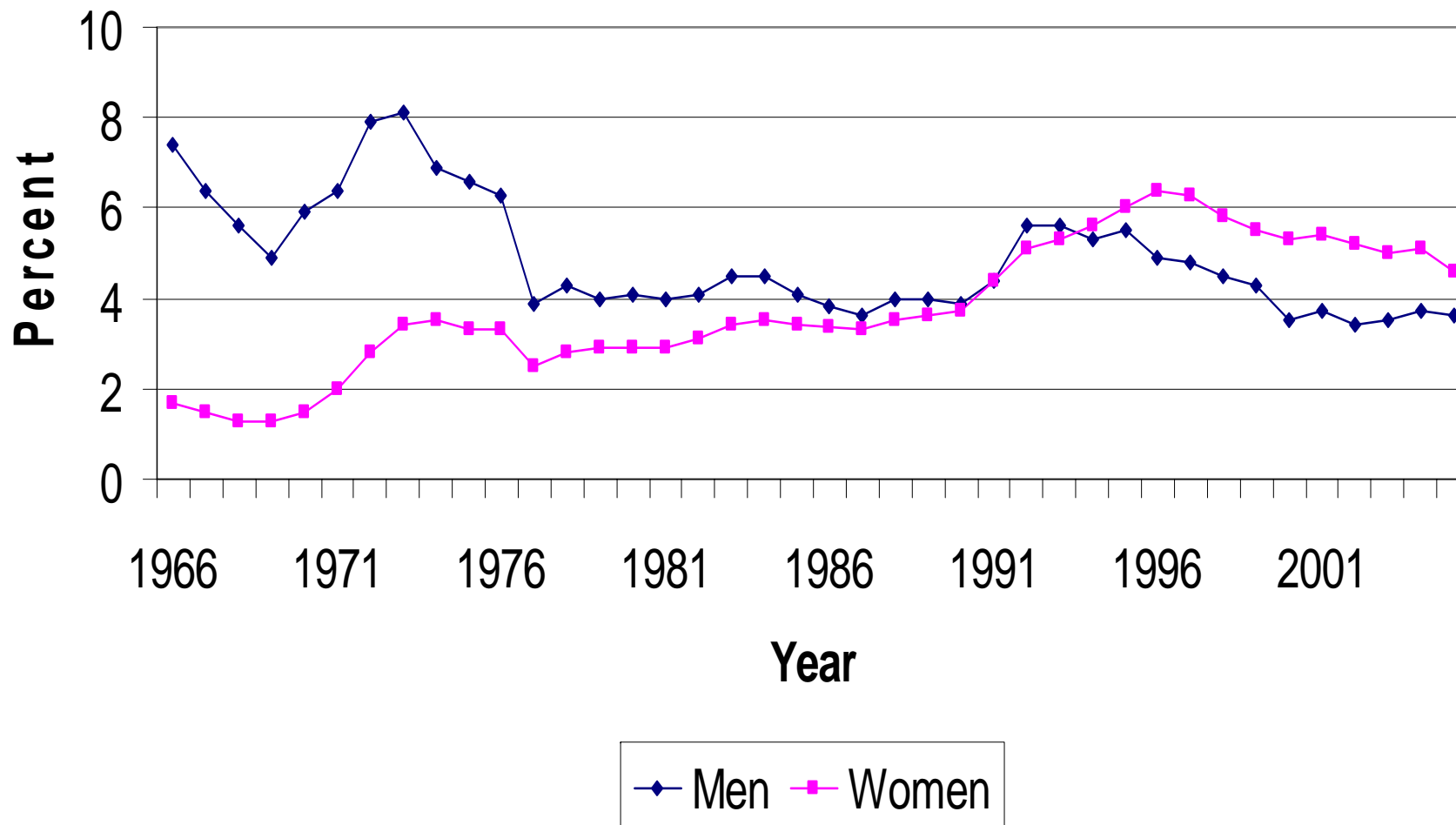
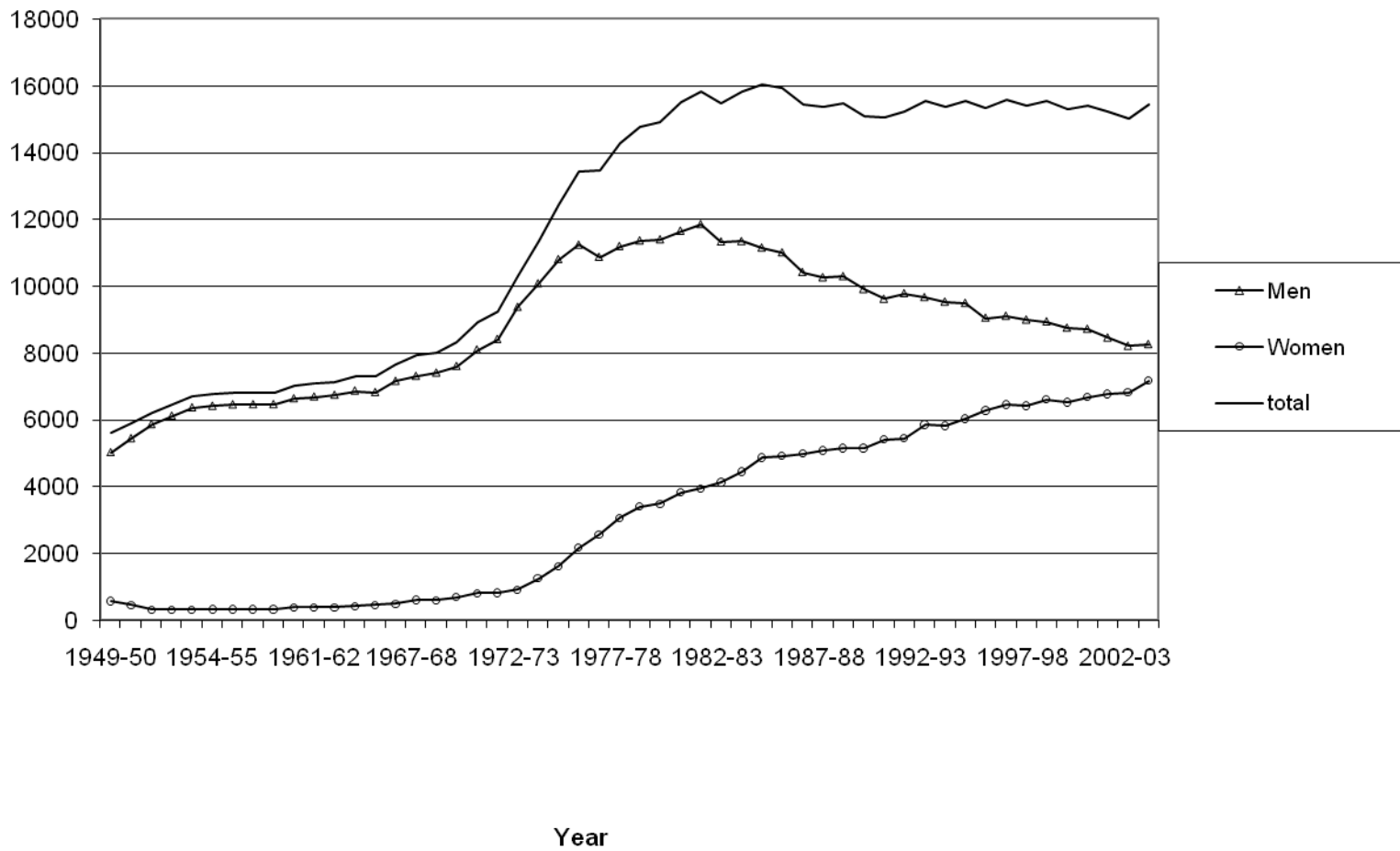


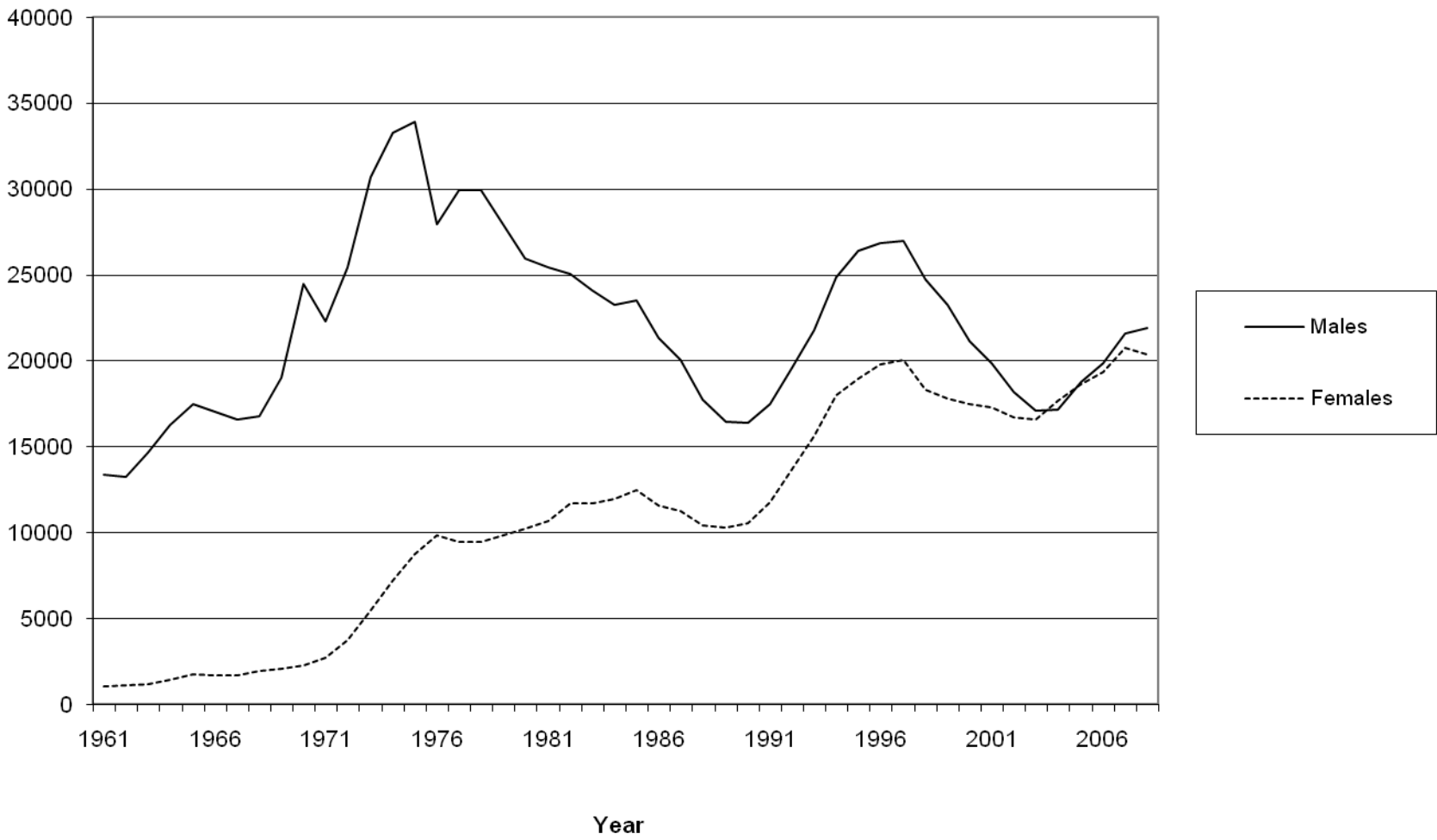
Figure 6. Freshmen Interest in Medical Careers by Gender, 1966-2004



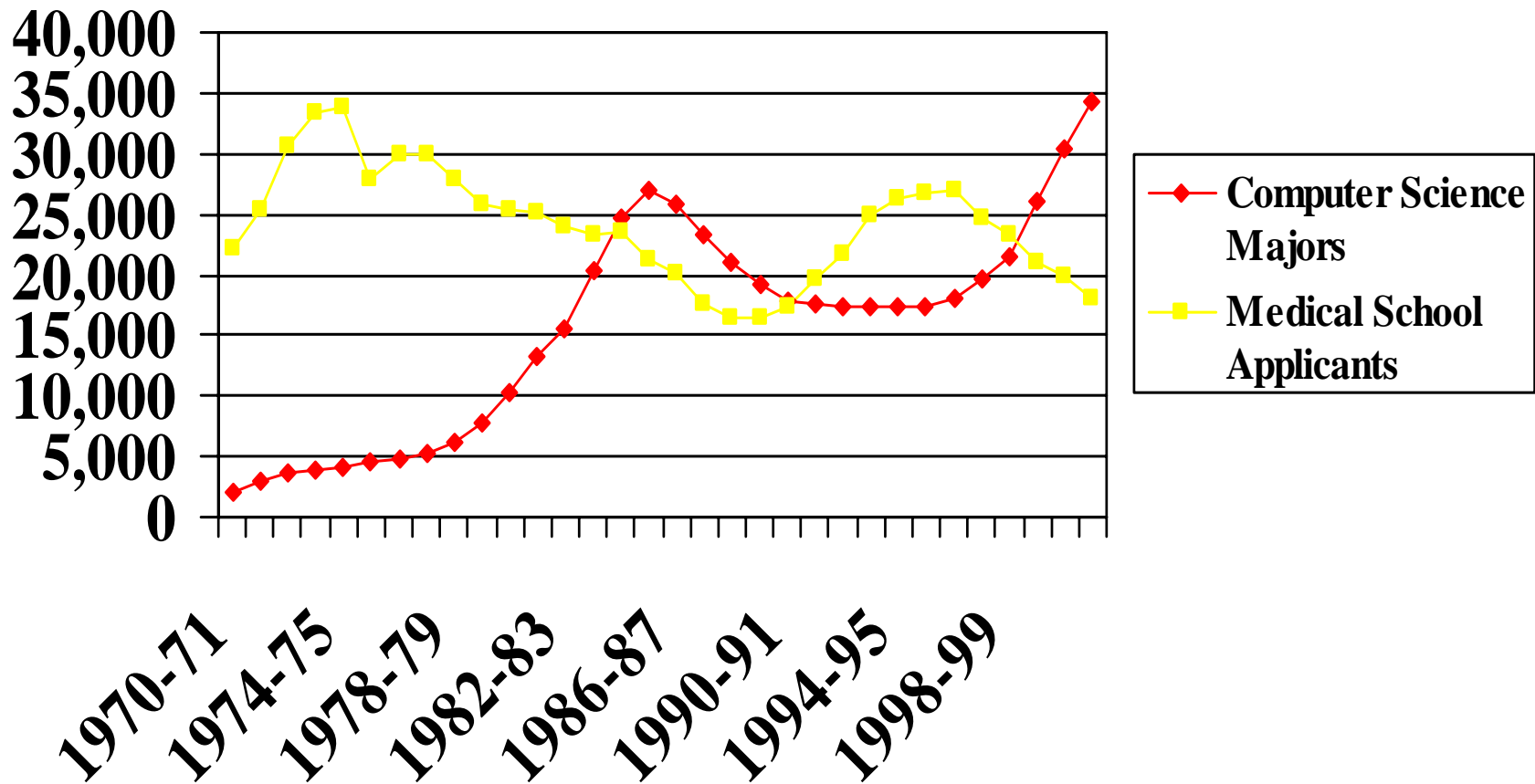
Number of New MD Degrees By Gender, 1950-2004



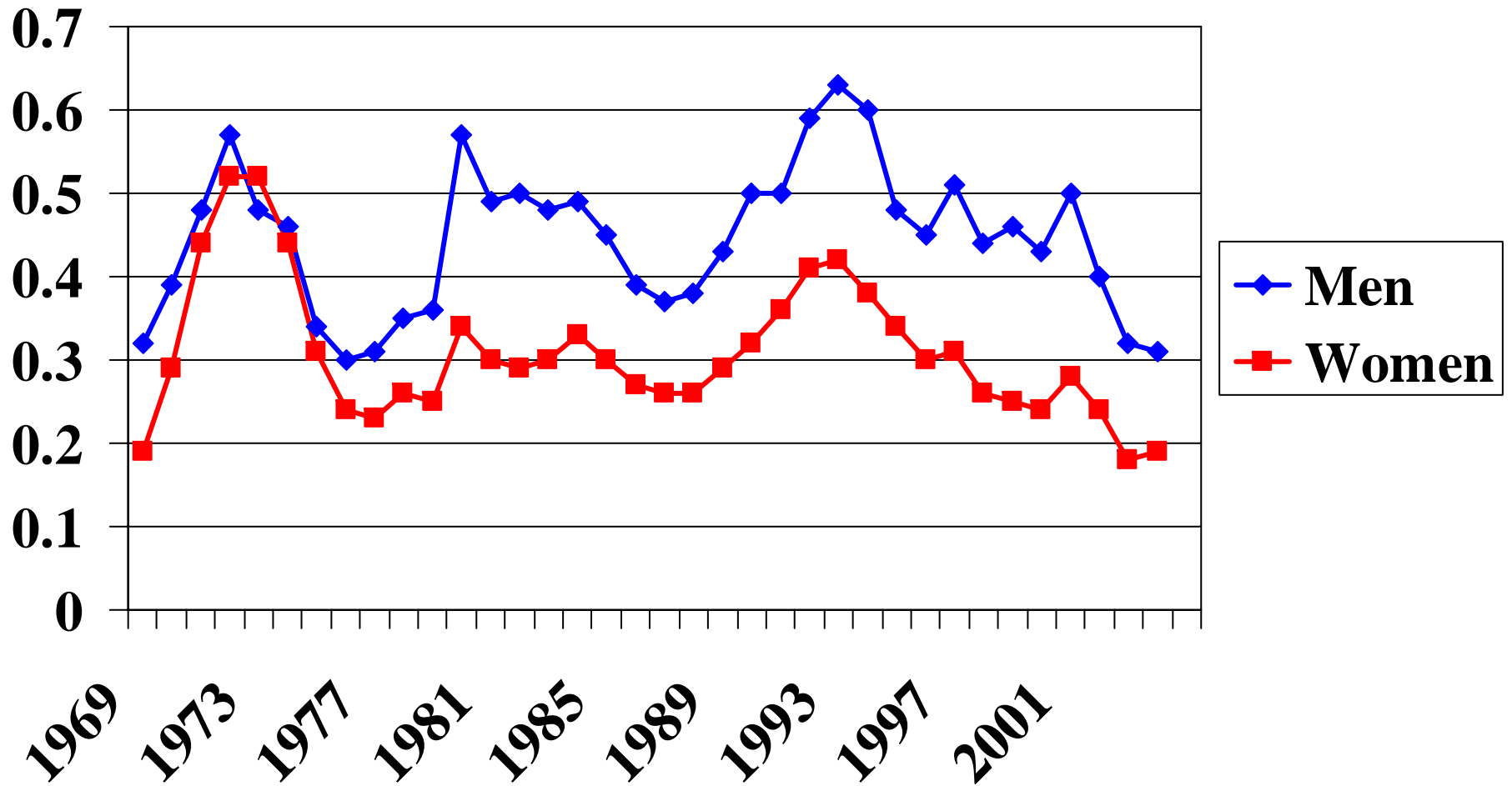
Trends in Medical School Applications, 1961-2008



Male College Graduates by Intended Career



Medical School "Yield"

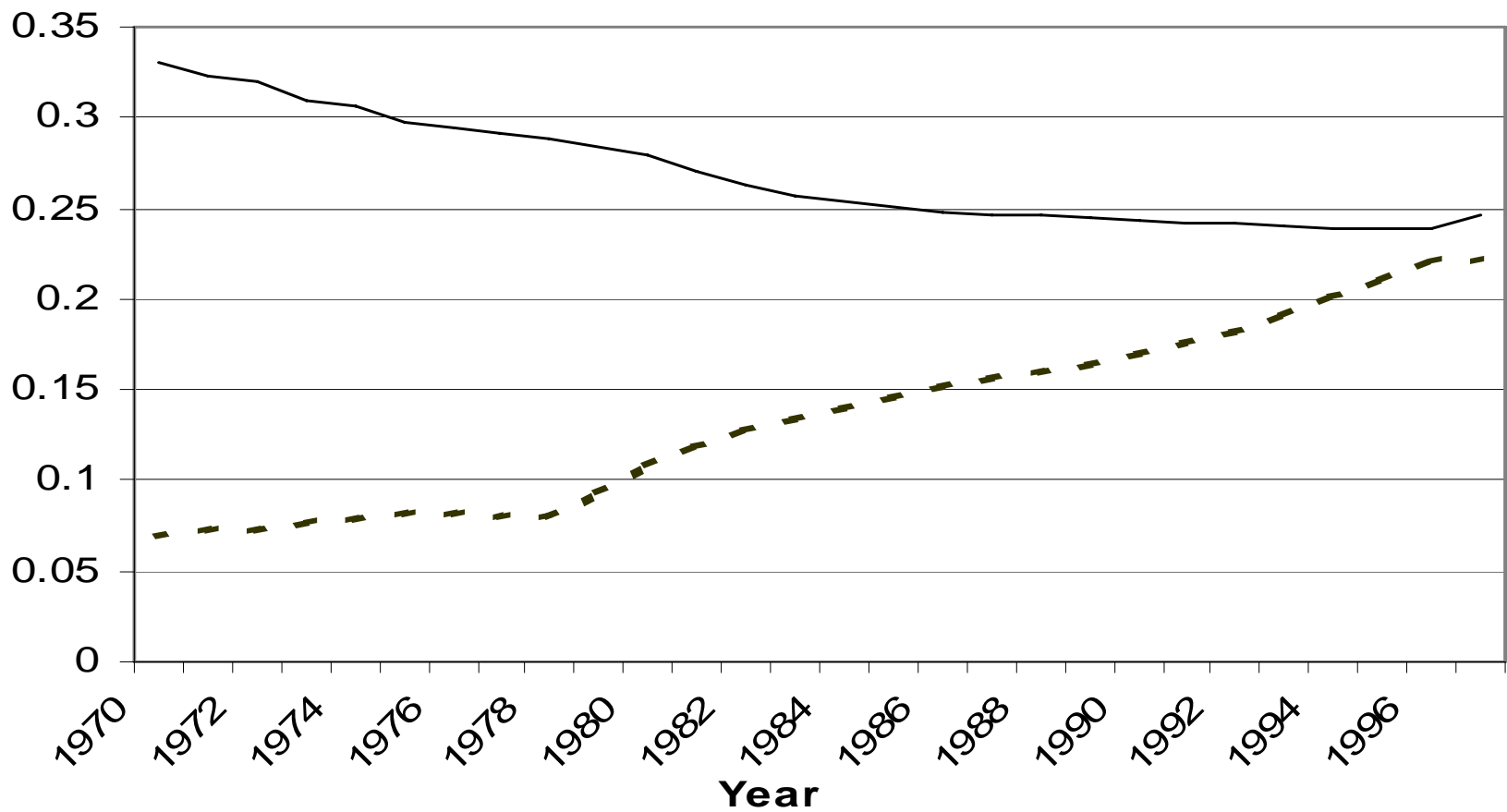


Note: This trend equals the number of medical school applicants divided By the number of freshmen interested in medicine four years earlier.

2.) How are women fairing in the profession?

- Significant absolute increases in the number of women in well remunerated, specialties.
- Women's entry into the higher paying fields is not occurring at the rate at which they are entering medicine overall.
- Male dominated fields have remained male dominated.

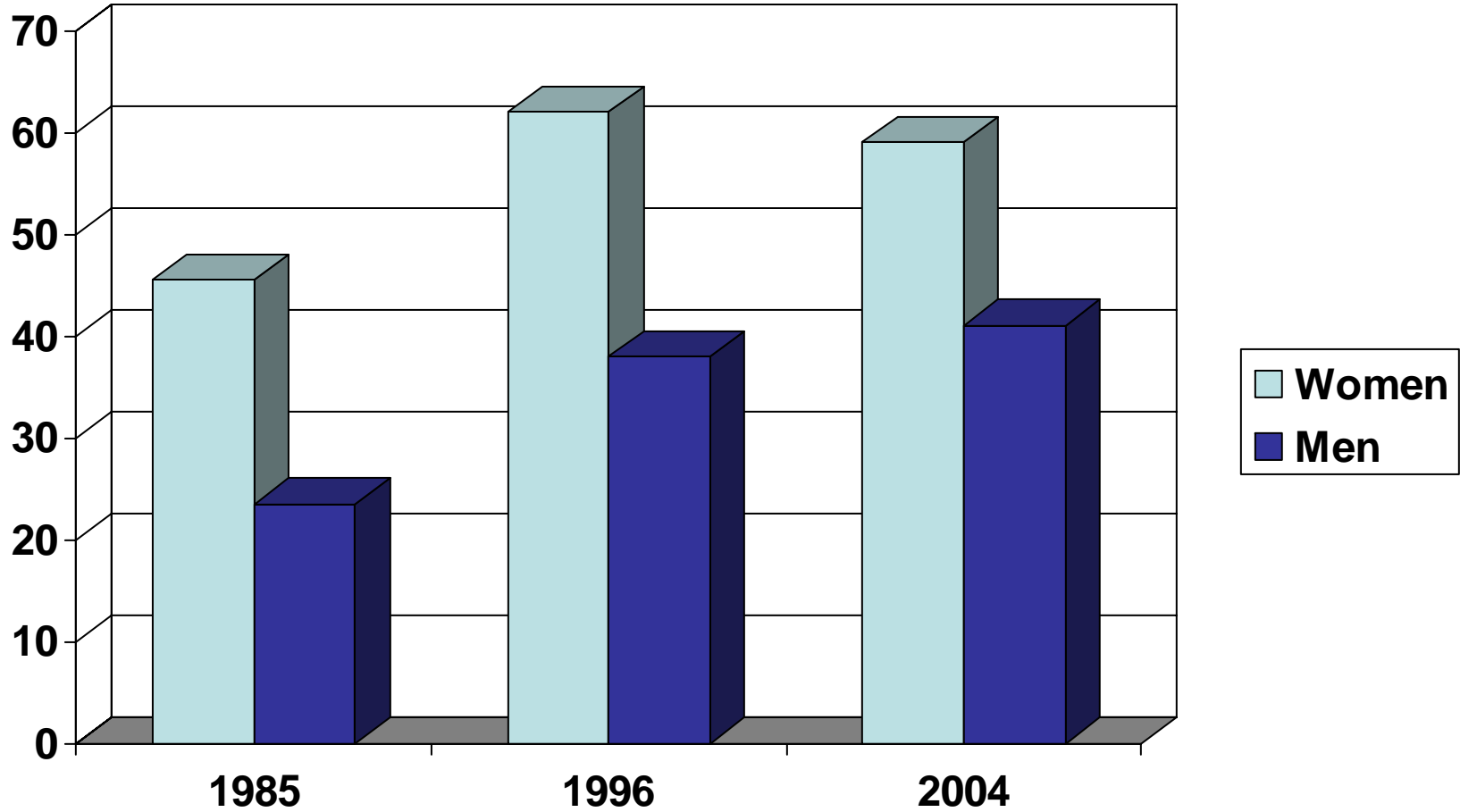
Figure 3: Gender Integration in Medicine



— Index of Dissimilarity

- - - % of Active Physicians who are Female

The Percent of Physicians Working as Employees by Year and Gender



2.) How are women physicians fairing in medical research?

- Over time, women have gone from being over-represented to under-represented among physicians whose primary professional activity is research.
 - In 1990, 17% of physician researchers were female and 17% of physicians were female
 - In 2000, women were 18% of physician researchers and 24% of physicians
- Physicians as of both genders are less likely to pursue research careers. Only 25% of NIH grants now go to MDs.
- The amount of NIH funding awarded to women is increasing over time because of women increasing presence among research scientists with Ph.D.s in life science.

2.) How are women physicians fairing professionally?

- Gender gaps in physician earnings that are not explained by specialty, work environment or work effort persist.
- The gap is closing but the trend toward equality is very slow.
 - 1996 CTS Study: Women earn \$24,090 less than men after controlling for all professional factors like specialty and work hours.
 - 2003 CTS Survey: Women earn \$21,340 less than men after controlling for all professional factors.

Question 3: What difference does it make?

- Gender differences in medical treatment
- Gender differences in communication and empathy
- Gender differences in leadership
- Medicine as a family friendly profession

Social Theory, Physician Gender and Medical Care

1. Professional Socialization:
 - Gender doesn't make a difference. Professional socialization trumps gender for physicians.
2. Different Voice Perspective:
 - Women are more nurturing and altruistic naturally so they provide more holistic and preventive care.
3. Discrimination Perspective:
 - Women work in different environments and see different patients.
4. Cohort Differences:
 - Women are younger.

Physician Gender and Medical Treatment for Gender Neutral Conditions

- Gender does not affect treatment of heart disease or diabetes (Rathore et al., 2001; Kim et al., 2005).
- Gender does not affect the diagnosis and treatment of children's psychosocial problems (Scholle et al., 2001).
- Gender does not affect the administration of pain medications to patients with back and abdominal pain in emergency rooms. (my work in progress)

Physician Gender and Biomedical (NOT PSYCHOSOCIAL) Advice and Counseling

- Male physicians spend more time discussing substance abuse (Bertakis et al., 2003)
- Female physicians spend more time discussing substance abuse (Frank and Harvey, 1996)
- Physician gender does not influence prevention in HMOs (Schmittdiel et al., 2000)

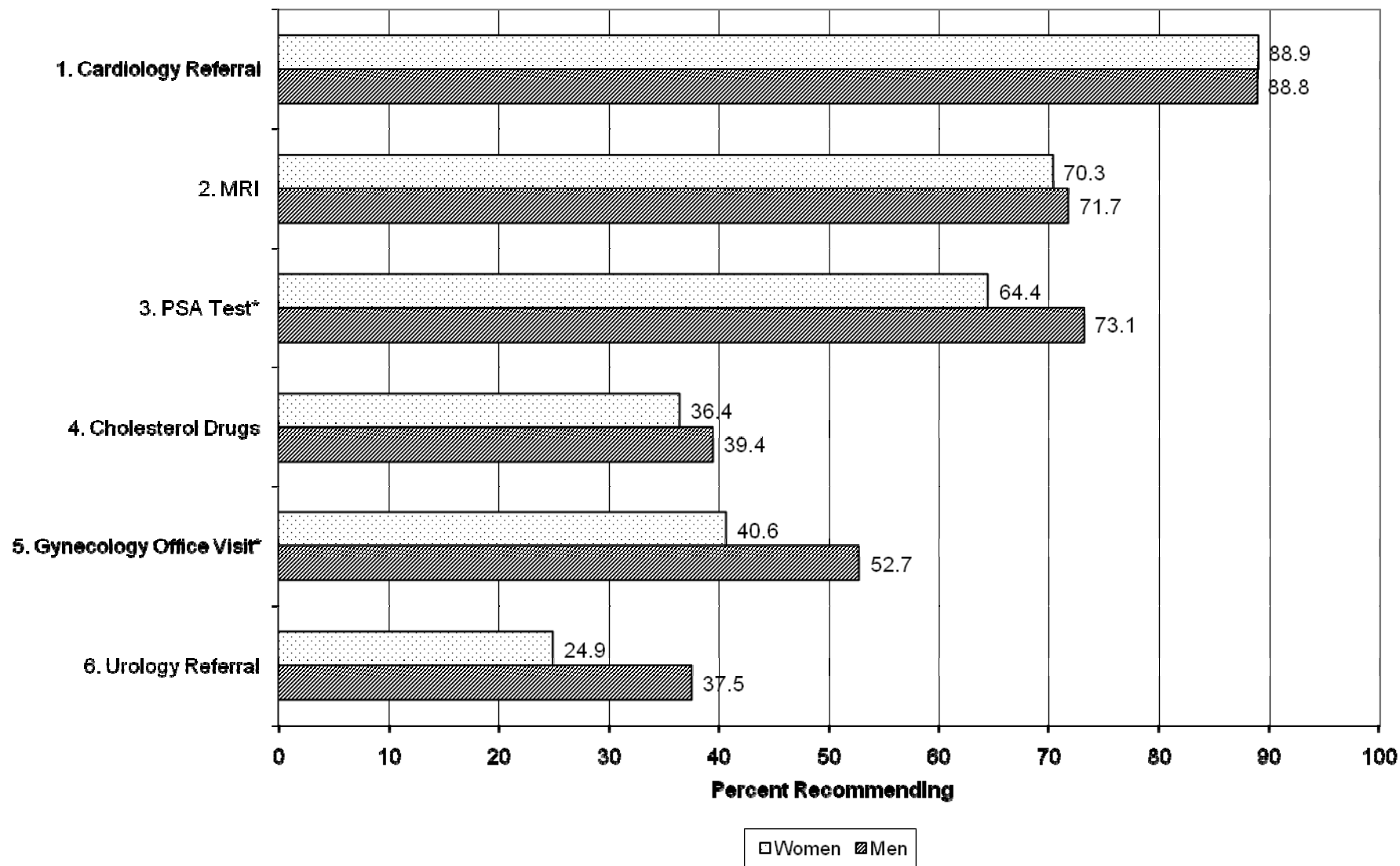
Gender Concordance and the Treatment of Sexually Explicit Conditions

1. Gender concordance may lead to greater training, familiarity and confidence.
2. Gender concordance stems from gendered patient expectations.
3. Gender concordance effects exist because providers are better able to empathize with patients who have conditions that they can contract and experience.

Summary of Treatment Vignettes in 1996 Community Tracking Physician Study

	<u>Description</u>	<u>Chief Complain/Condition</u>	<u>Medical History</u>	<u>Treatment: Physicians are asked for what percentage of such of such patients:</u>
1	50 year old white man	exertional chest pain	No medications. After 6 minutes of exercise, patient develops 2 millimeters of ST depression in leads II, III and F.	they would recommend a cardiology referral.
2	35 year old man	back pain	Man developed back pain after shoveling snow. On examination, there is a new left foot drop.	they would recommend an MRI
3	60 year old white man	n/a	No family history of prostate cancer and a normal digital rectal exam.	they would recommend a PSA test.
4	50 year old man	high cholesterol	No other cardiac risk factors. Cholesterol is 240; LDL is 150; HDL is 50; Total/ HDL cholesterol = 4.8. cholesterol-lowering agents.	they recommend
5	40 year old woman	vaginal discharge	Monogamous married woman has no abdominal pain or fever. Patient has had thick white vaginal discharge for two days	they would recommend an office visit to evaluate the discharge.
6	60 year old white man	Bothersome BPH symptoms	Man has no evidence of renal compromise or cancer. they recommend a urology	referral.

Gender and Treatment Outcomes



The Literature on Physician Gender, Empathy & Communication

- Female physicians use more partnership statements in their routine communication.
- Women are more likely to consult a book or colleague in front of a patient.
- Female physicians tend to be less verbally dominant than physicians.
- Female physicians do more probing of issues of a psychosocial nature and provide more psychosocial counseling.

A kinder profession?

- The magnitude of gender differences in empathy or communication are real but small.
- The communication skills of male and female physicians are lacking.
- Physician empathy and physician communication respond to educational and social interventions.
- Differences in empathy and communication may stem from patient expectations.

Kinder, Gentler, and No Longer in Primary Care

- Declining presence of male and female domestic medical graduates in primary care:
 - In 2007, only 57 percent of those who matched into internal medicine residency programs were seniors at US medical schools.
- Increasing role of FMGs who speak other languages:
 - In 2001, only 22 percent of FMGs seeking certification were native English speakers.
 - The percent of family practice residency spots occupied by FMGs increased from 16% in 1996 to 48% in 2001.
 - Increasingly, FMGs are from Asia rather than northern Europe.
- Increasing role of ‘extenders’
 - 23% of all primary care visits in 2004 were with an extender.

What about more inclusive leadership?

- Tremendous absolute growth in female leaders.
- Growth of female leaders not keeping pace with growth of female physicians.
- Women have been 30% of medical students since 1985, but even today are only 10% of departmental chairs in medical schools.
- Women have a long way to go before they achieve significant power in the medical hierarchy.

Gender and Leadership

- Research on gender and leadership is conflicting.
 - Eagly and Johnson (1990) find that women employ a more democratic leadership style.
 - Research by Catalyst (2005) fails to find significant gender differences in leadership
- Research on attitudes toward collaboration with nurses indicates that physician gender has no influence on beliefs about collegiality and collaboration.
- Some research on doctor nurse interaction reveals that nurses do not treat female and male physicians equally.
- Any effort to lead in medicine is circumscribed by organizational pressures and independent structural change.

Women physicians and the new family friendly medicine

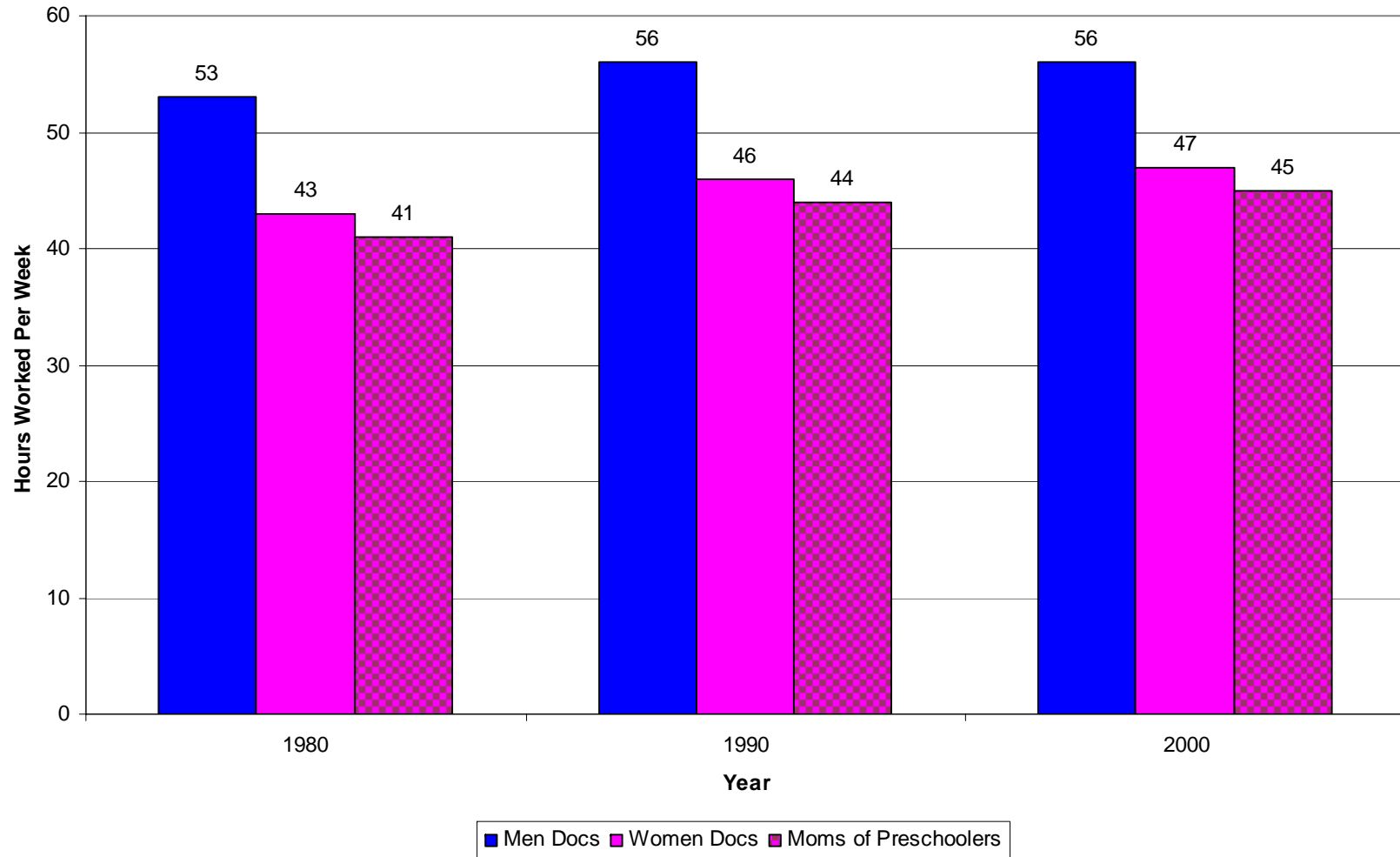
The Media

- “Shifting demographics and more physician mothers mean new opportunities” 12/1999 ACP Observer
- Practices must cope as more physicians work part-time hours 10/2002 AMA News
- “Women are changing the profession itself. The effects can be seen in the work family balance “ Levinson and Lurie, 2004 Annals of Internal Medicine

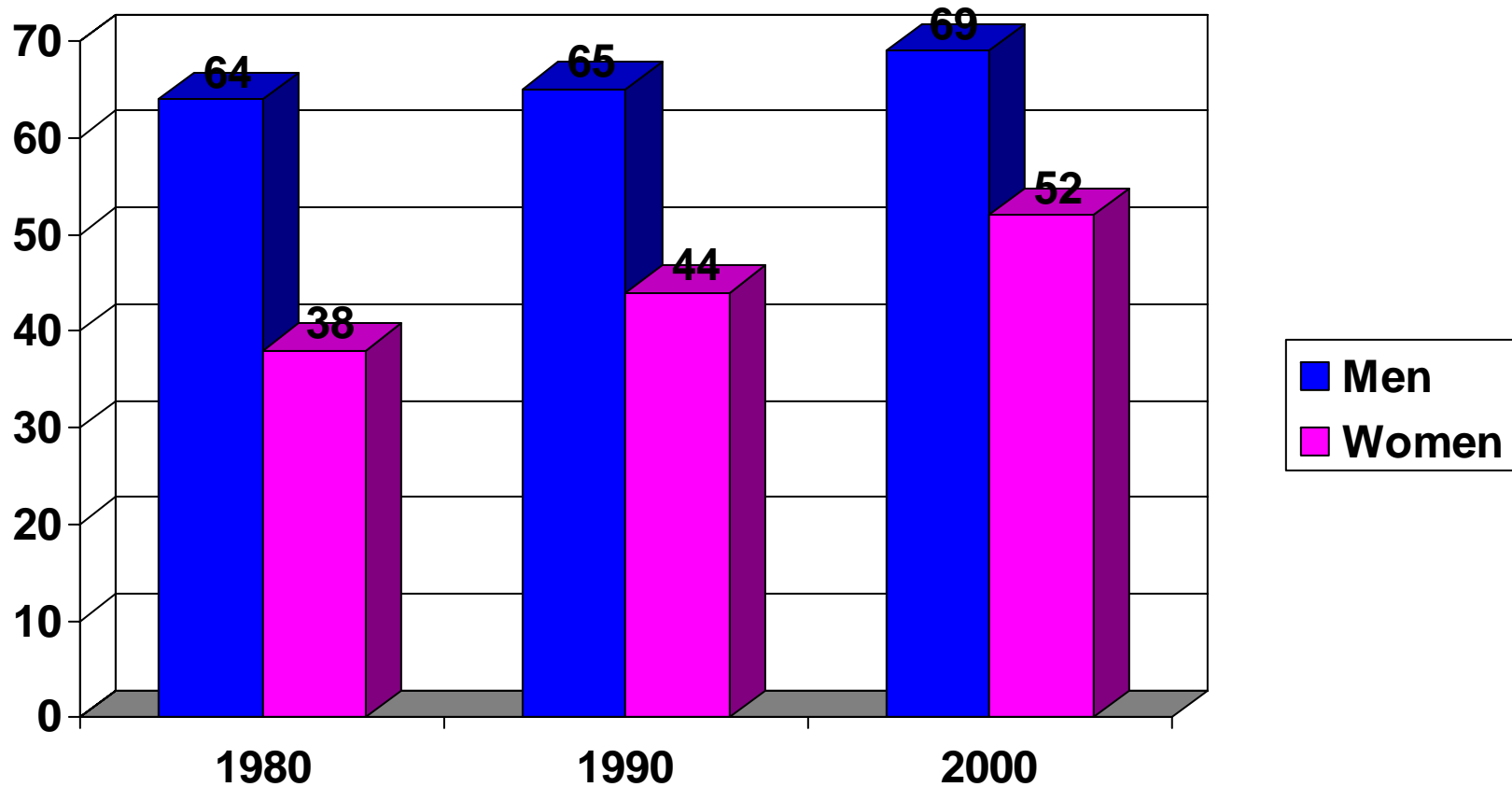
Family Friendly Reforms

- Increase in # of hospitals with maternity leave policies.
- Increase in the percent of physicians working part time in some specialties .
 - Pediatrics
- Eighty hour work rule for residents
- Increased attention to the need for formalized re-entry programs for physicians who take time off
 - 2000 Federal Office on Women's Health convenes task for on reentry
 - 6/2008: AMA Pledges to work for reentry programs

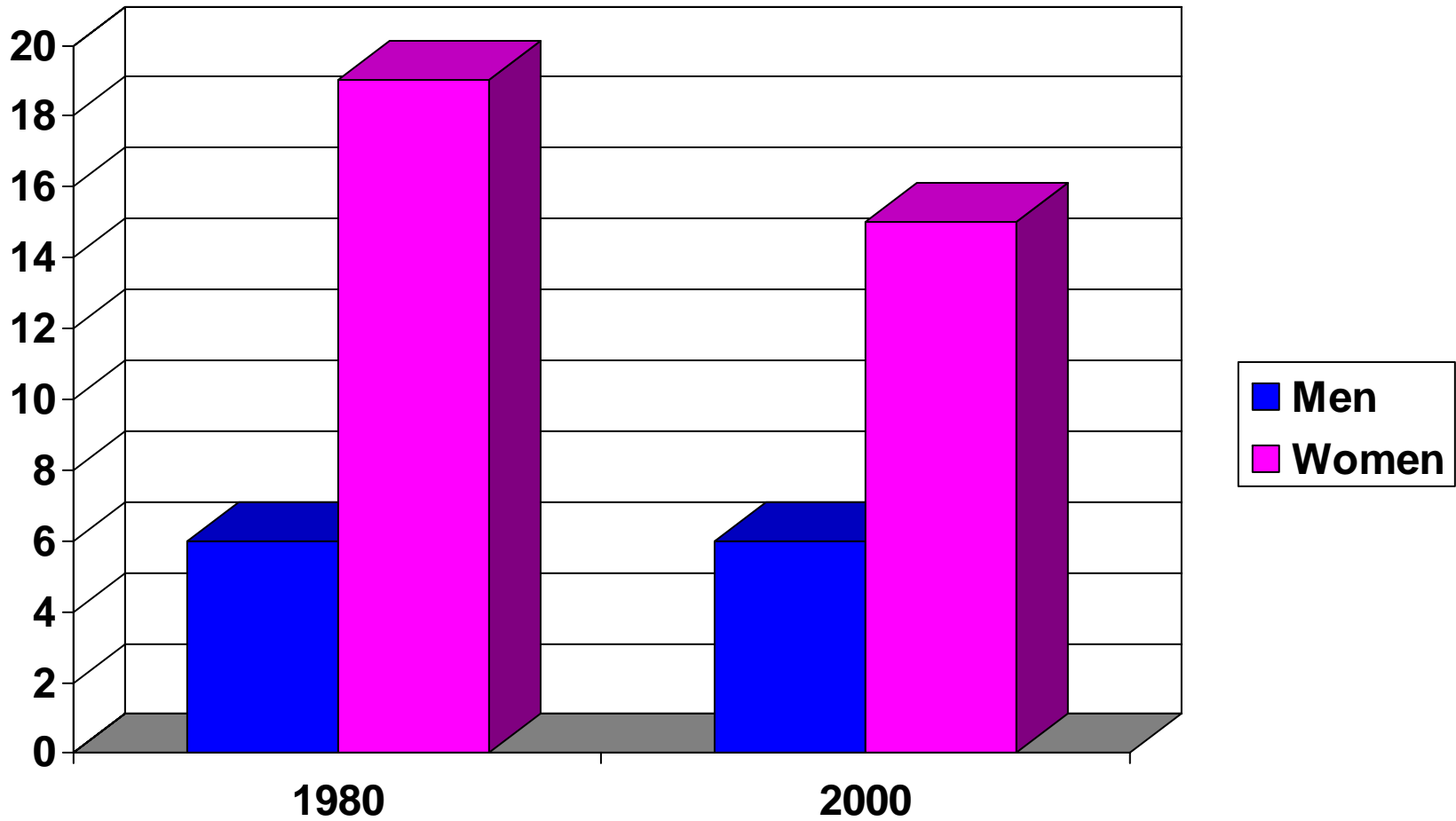
Average Work Week of Physicians Age 30-50, By Gender, 1980-2000



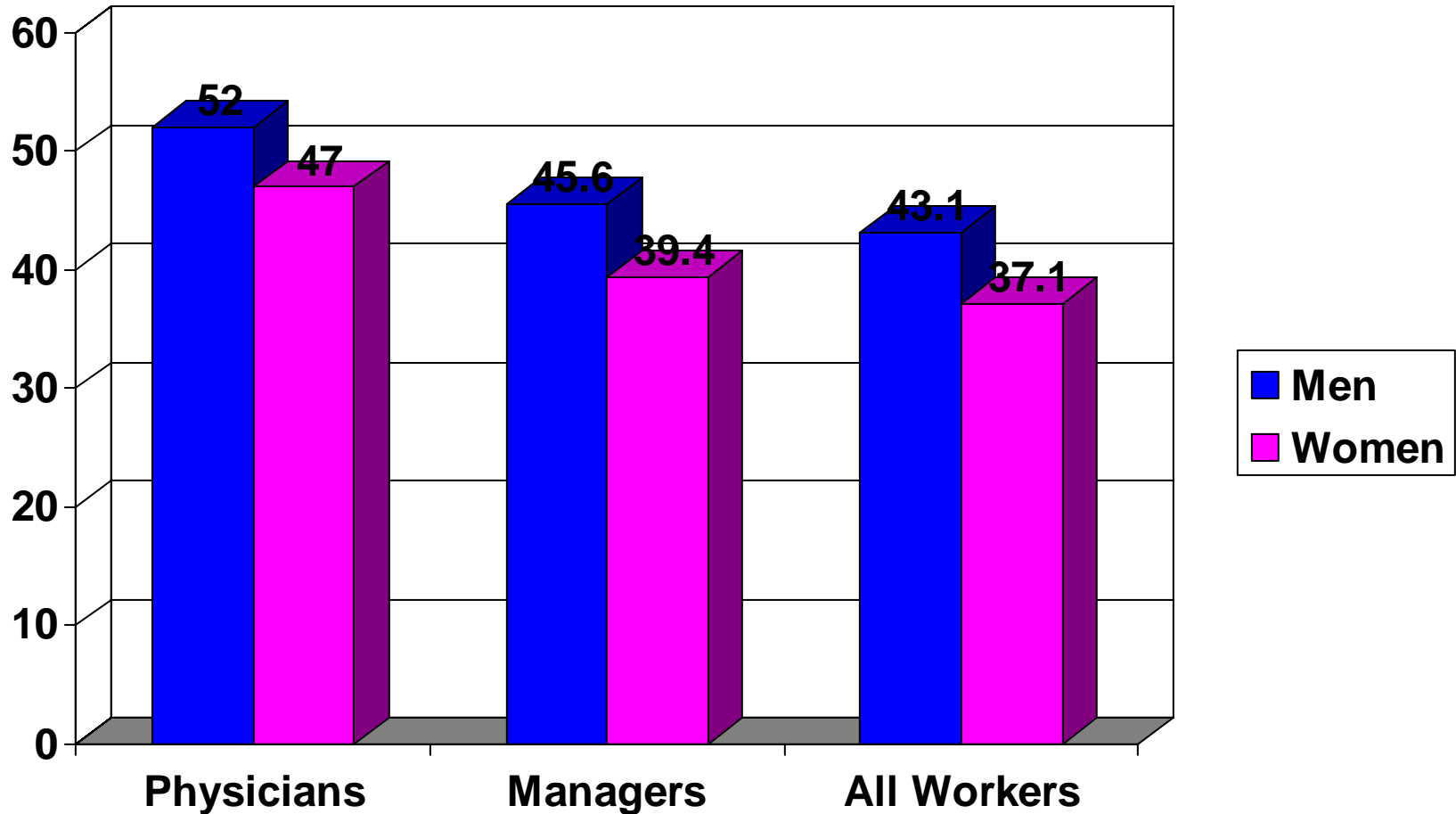
The Percent of Employed Physicians 30-50 Working 50 or More Hours Per Week by Year and Gender



The Percent of Physicians Aged 30-50 Working 30 or Fewer Hours Per Week by Gender and Year

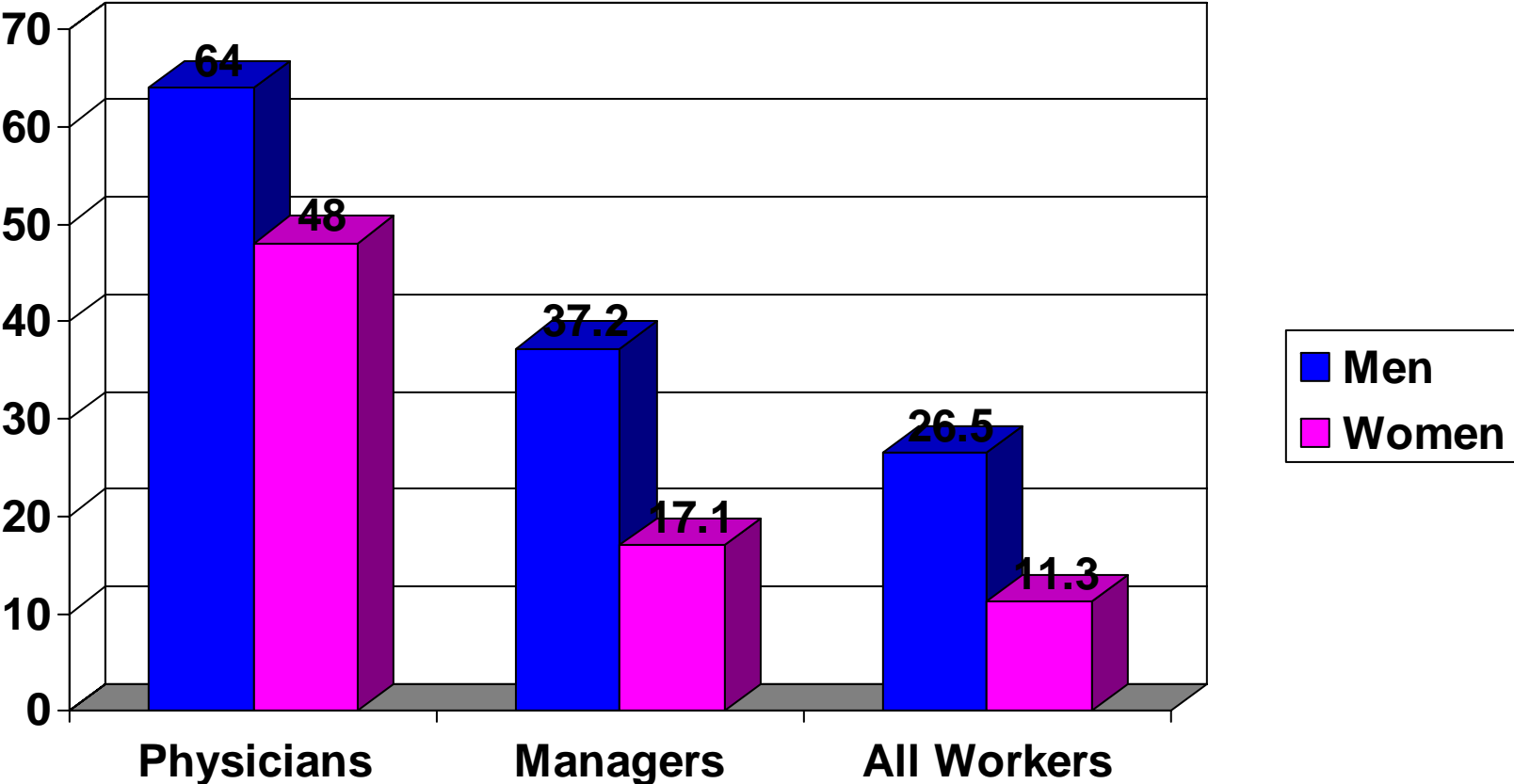


Average Work Week by Gender and Occupation in 2000

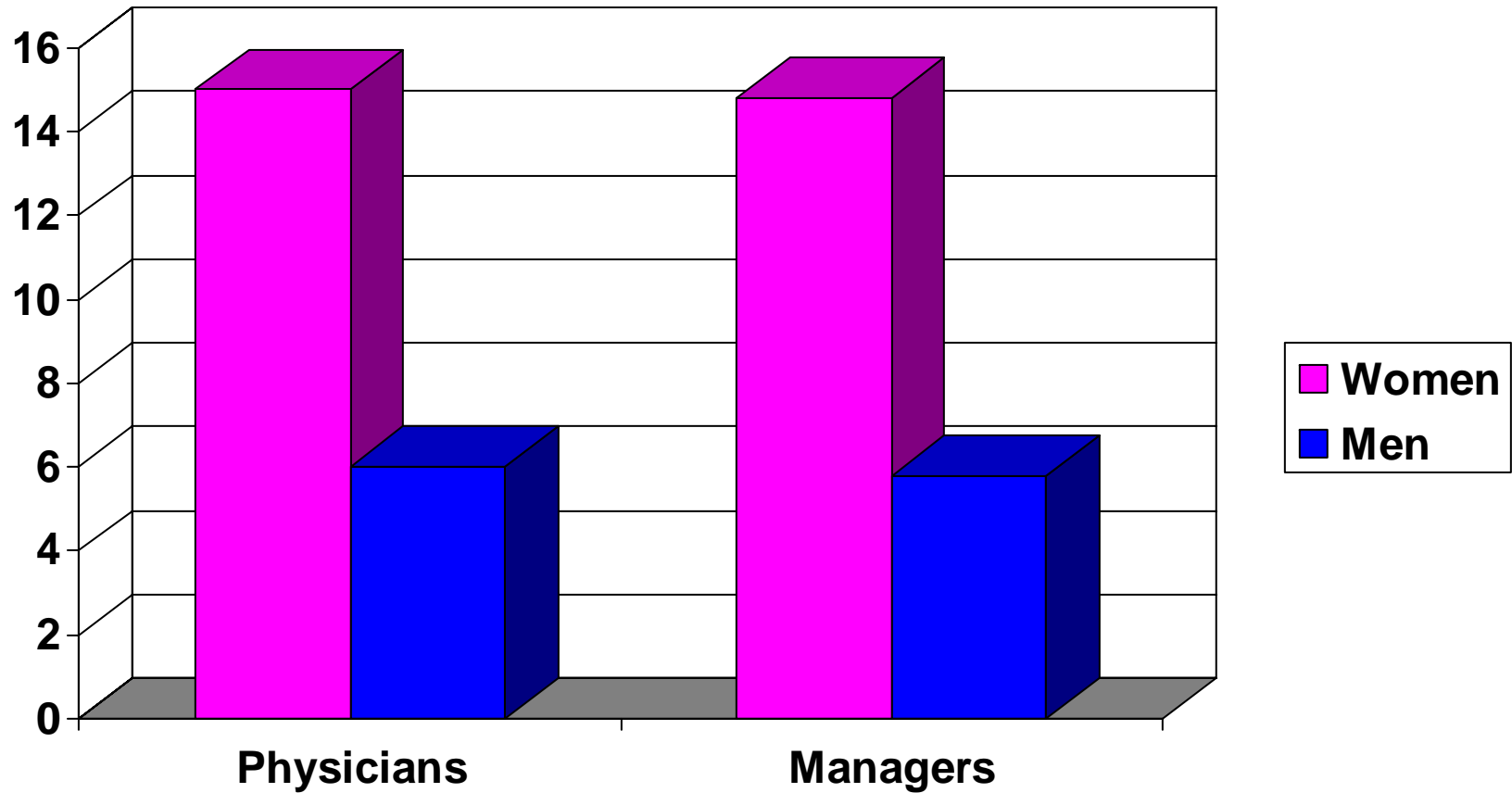


Source: Census; Note: Data are for workers <65 years

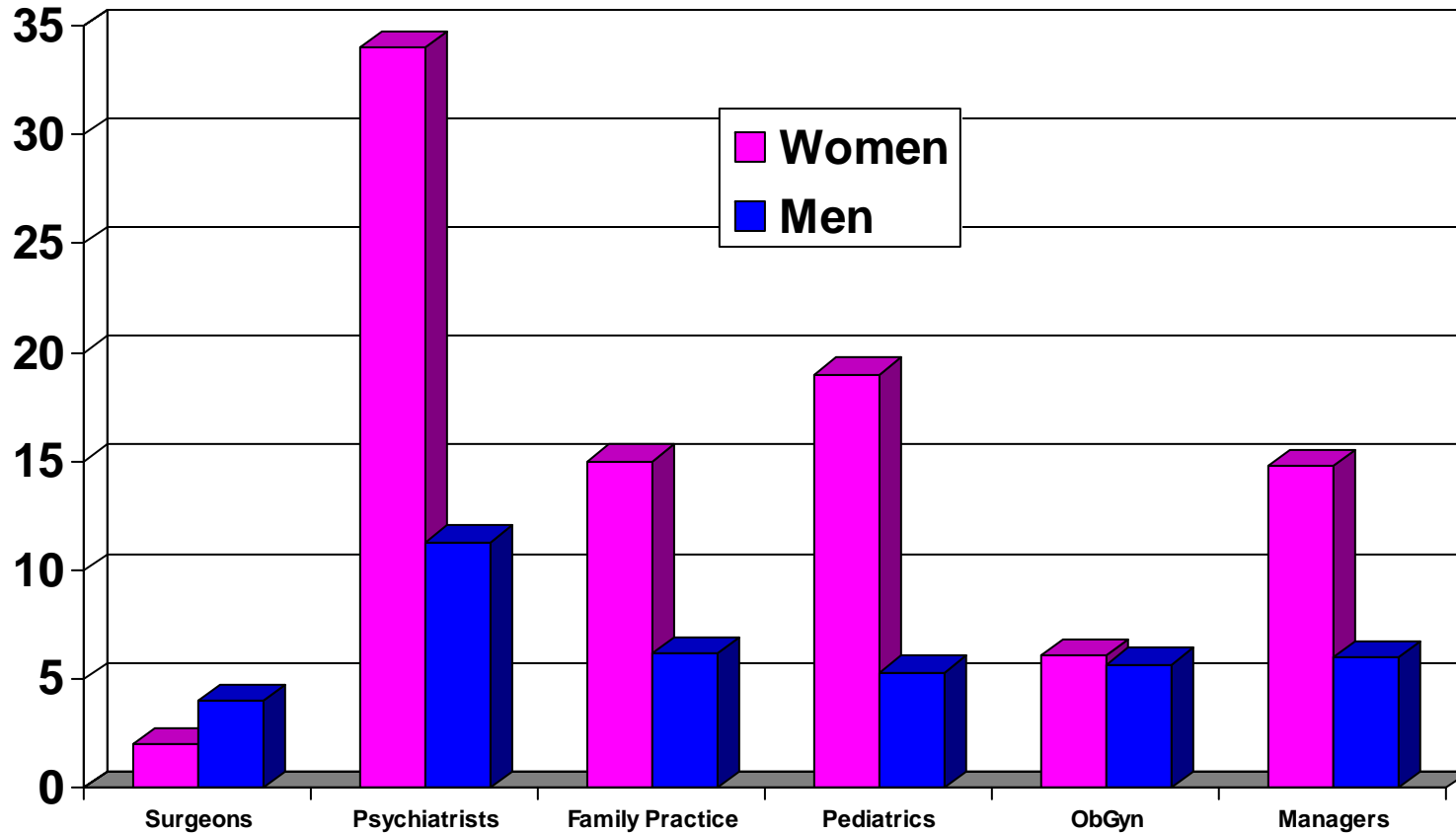
Percent of Workers Reporting at Least 50 Hours in a Normal Week by Occupation and Gender in 2000



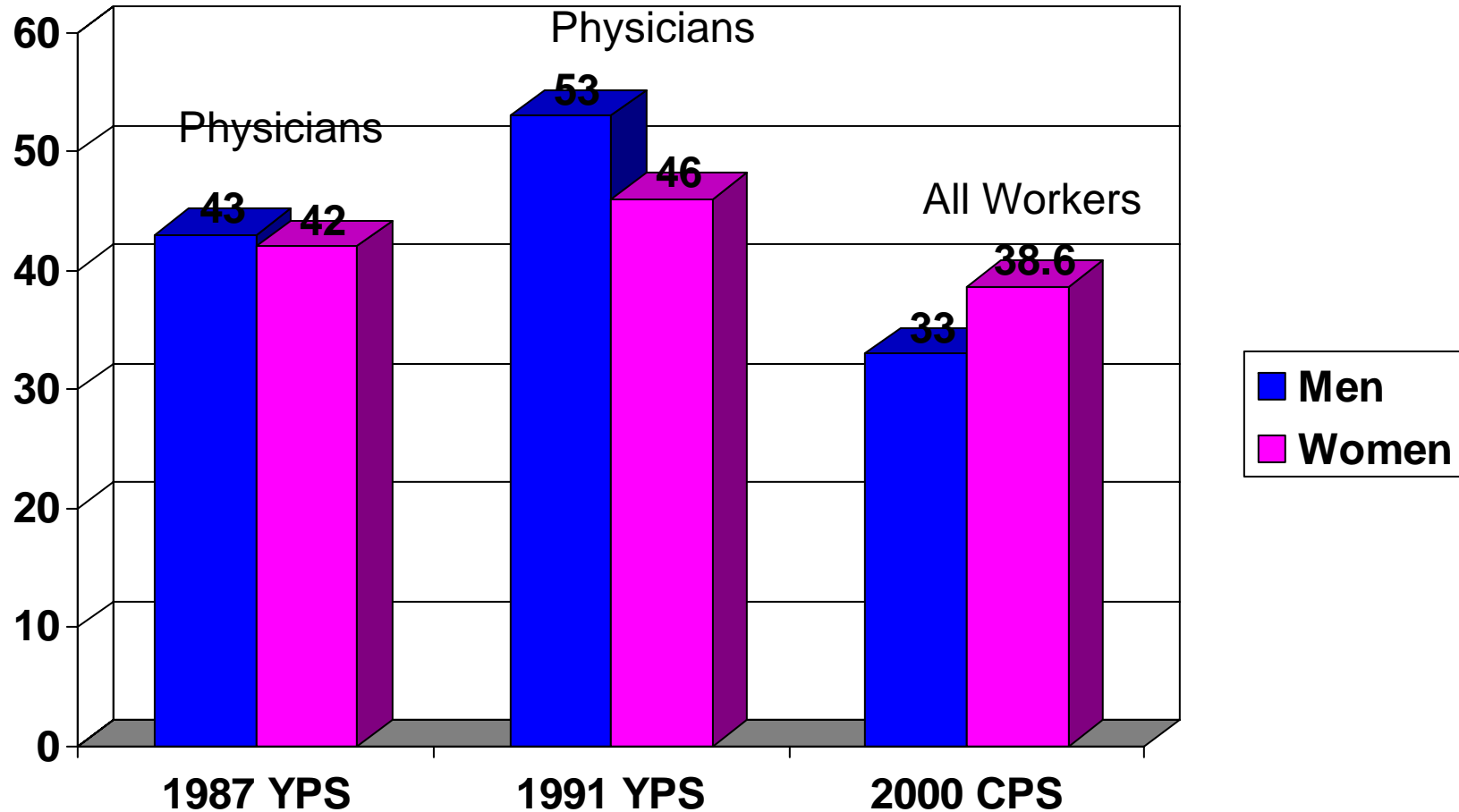
Percent of Workers Reporting 30 or Fewer Hours in a Normal Work Week in 2000 by Gender and Occupation



Percent of Physicians Reporting 30 or Fewer Hours in a Normal Week by Specialty 2004 CTS Physician Survey



Percent of Workers Reporting That They Want to Work Less



Note: YPS = Young Physicians Survey; CPS= Current Population Survey

Forces Creating Long Weeks

- Forces affecting all physicians
 - Increasing patient acuity
 - Declining reimbursements
 - Increasing bureaucracy
 - Increasing fixed costs (malpractice, student loans)
 - Increasing demands of patients
- Forces affecting female physicians
 - Increasing representation of women in specialties demanding long work weeks

Obstacles to Part Time Work

- Cultural and organizational factors
 - Supervisors do not create real part time jobs.
 - Scheduling bottlenecks require over time work.
- Penalties for part time status
 - Pay and promotion
 - Colleagues resent part time workers.

Obstacles to Part Time Work

- Financial constraints
 - Increasing student debt for physicians
 - Diminishing reimbursements
 - Fixed costs (malpractice)
- Quality of care
 - Continuous availability to patients for primary care physicians
 - Volume – Quality relationship for surgeons

Eighty Hour Work Rule –Family or Patient Friendly?

- Evidence suggests most women physicians have their first child during residency.
- Pregnant residents have higher rates of complications than male residents' wives:
 - Higher rates of pre-term labor
 - Higher rates of preeclampsia
 - Higher rates of restricted fetal growth

Eighty Hour Work Rule –Family or Patient Friendly?

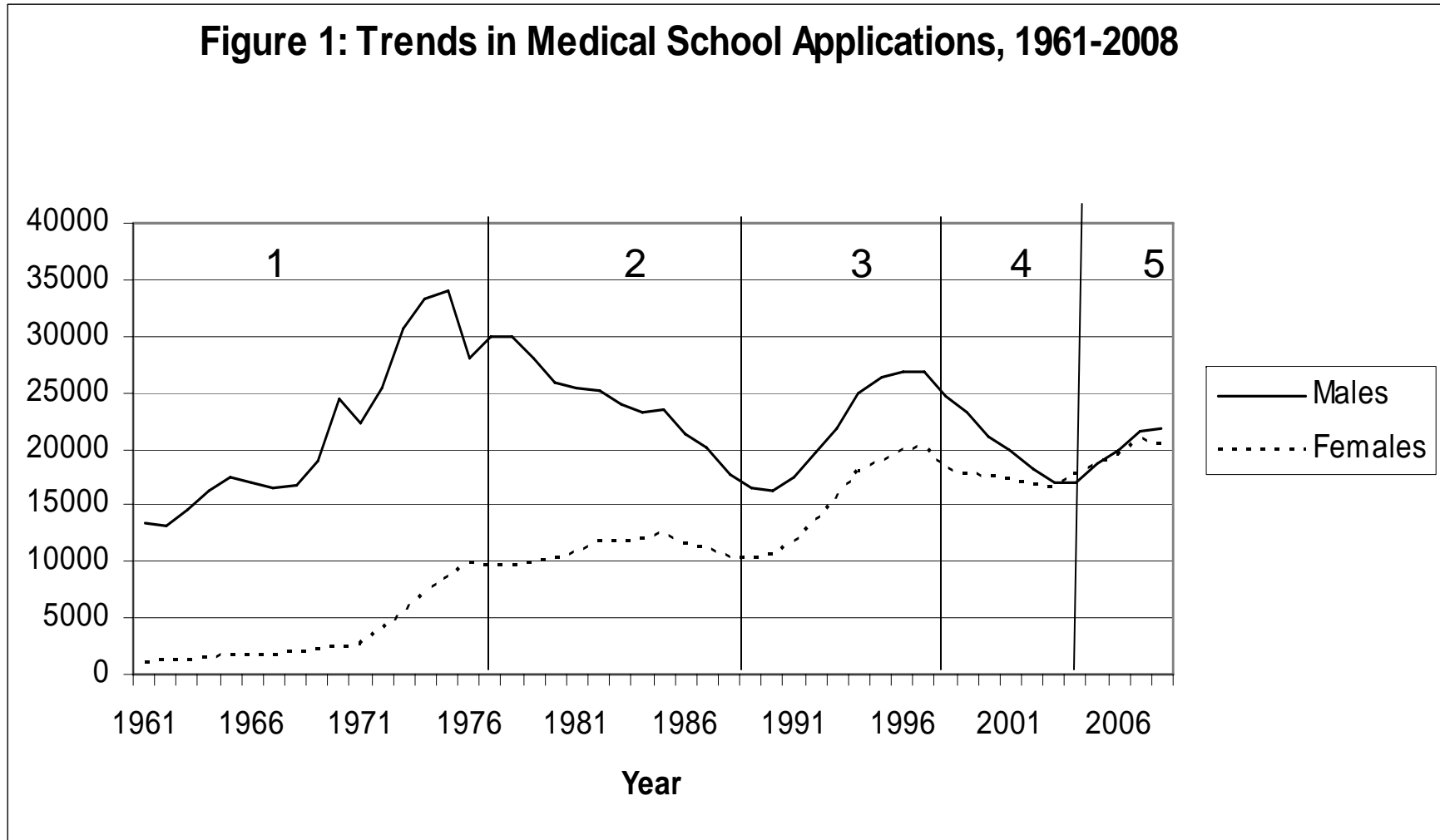
- Average maternity leave for residency is 4-8 weeks. It involves maternity leave and vacation time. Residents do NOT take 12 weeks.
- Residents do NOT return to work in stages.
- Residents experience high rates of difficulty with:
 - arranging child care
 - breastfeeding
 - guilt about being absent from their children

Obstacles to Maternity Leave for Residents

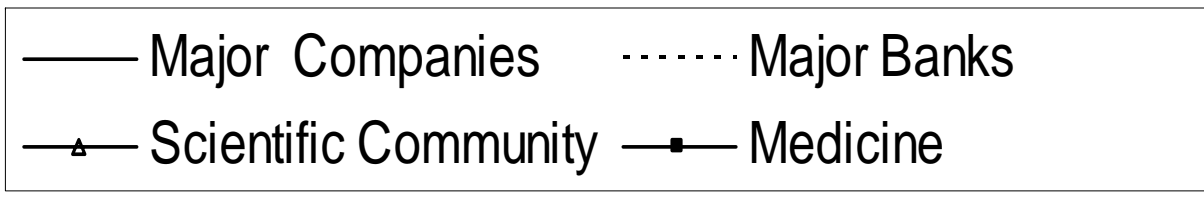
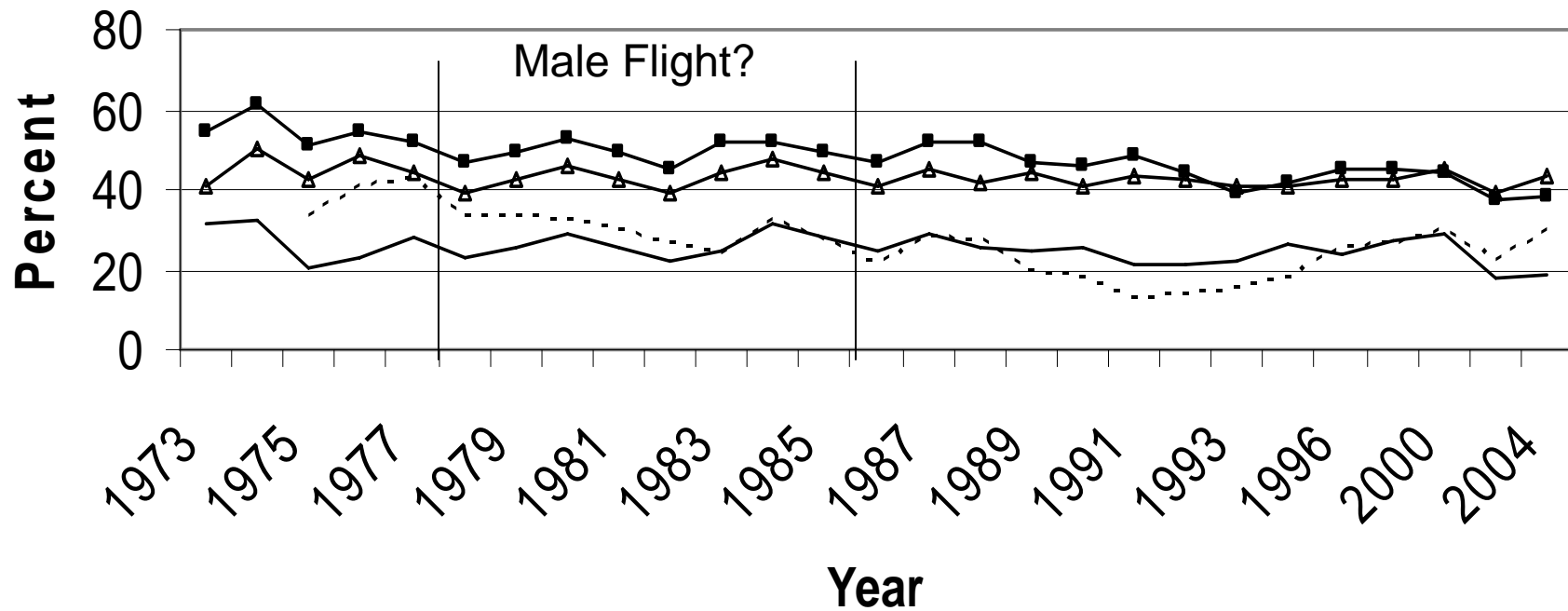
- Medicare Funding System
- Low salaries/high debt
- Unclear eligibility for Family and Medical Leave Act

Did women physicians get a ticket to ride AFTER the gravy train left the station?

Figure 1: Trends in Medical School Applications, 1961-2008



Percent of Public Indicating 'A Great Deal of Respect' for Various Institutions, 1973-2004



Nested Models Predicting Treatment

Note ***p<.001 **p<.01 *p<.05

	Female	+ MD characteristics	+ Practice characteristics	+ Community characteristics
Vignette				
1.) Cardiology Referral	1.18	0.7	-0.2	-0.2
2.) MRI	-1.7	-3.05	-4.43	-5.39
3.) PSA Test	-8.03***	-1.99	-1.84	-1.75
4.)Cholesterol Drugs	-3.73**	1.94	-0.29	-0.24
5.) Gyn Office Visit	-10.42***	-6.44**	-6.11**	-6.5**
6.) Urology Ref	13.12***	14.17**	13.55**	13.34**