



Primary-care specialty choices of US medical graduates, 1997-2006

Donna B. Jeffe, PhD, Alison J. Whelan, MD,
Dorothy A. Andriole, MD

**Washington University School of
Medicine in St Louis MO**



Background: Primary care studies

- Different primary-care specialties combined into a single specialty category
- Analysis of one primary-care specialty may not be generalized to other primary-care specialties
- Generalist vs. subspecialist specialties
- Definition of “primary care” specialties



Study aim

- Identify variables associated with graduates' primary-care specialty choices during a “decade of declining interest” in primary care specialties, 1997 - 2006



Method

- Individualized, de-identified AAMC Matriculating Student Questionnaire (MSQ) & Graduation Questionnaire (GQ) respondents, 1997 – 2006; MD/PhD graduates excluded
- Primary medical care designation criteria of HRSA Bureau of Health Professions
- WU School of Medicine IRB approval

Specialty choice outcome = 2 GQ items

Generalist primary care

- Internal medicine (&IM/Peds)
- Family medicine
- Pediatrics
- Obstetrics and gynecology

Subspecialty primary care

- Internal medicine subspecialties
- Pediatrics subspecialties

“Other” choices

- No specialty choice :no /undecided re: board certification
- All other specialties (reference group)

Variables in our analysis

Demographic

- Graduation year
- Gender, race/ethnicity
- Total debt at graduation
- Parent occupation
- School-ownership

Career intentions at graduation:

- Plans to practice in underserved area
- Career setting preference for full-time faculty



Attitudinal MSQ variables

Importance of factors in choice of medicine as career

- Research/innovation (6 factors)
- Social responsibility (5 factors)
- Prestige (4 factors)

Perceptions about profession of medicine

- Altruistic beliefs about access to care (4 factors)
- Perceptions that demands of medicine interfere with family/other interests (2 factors)

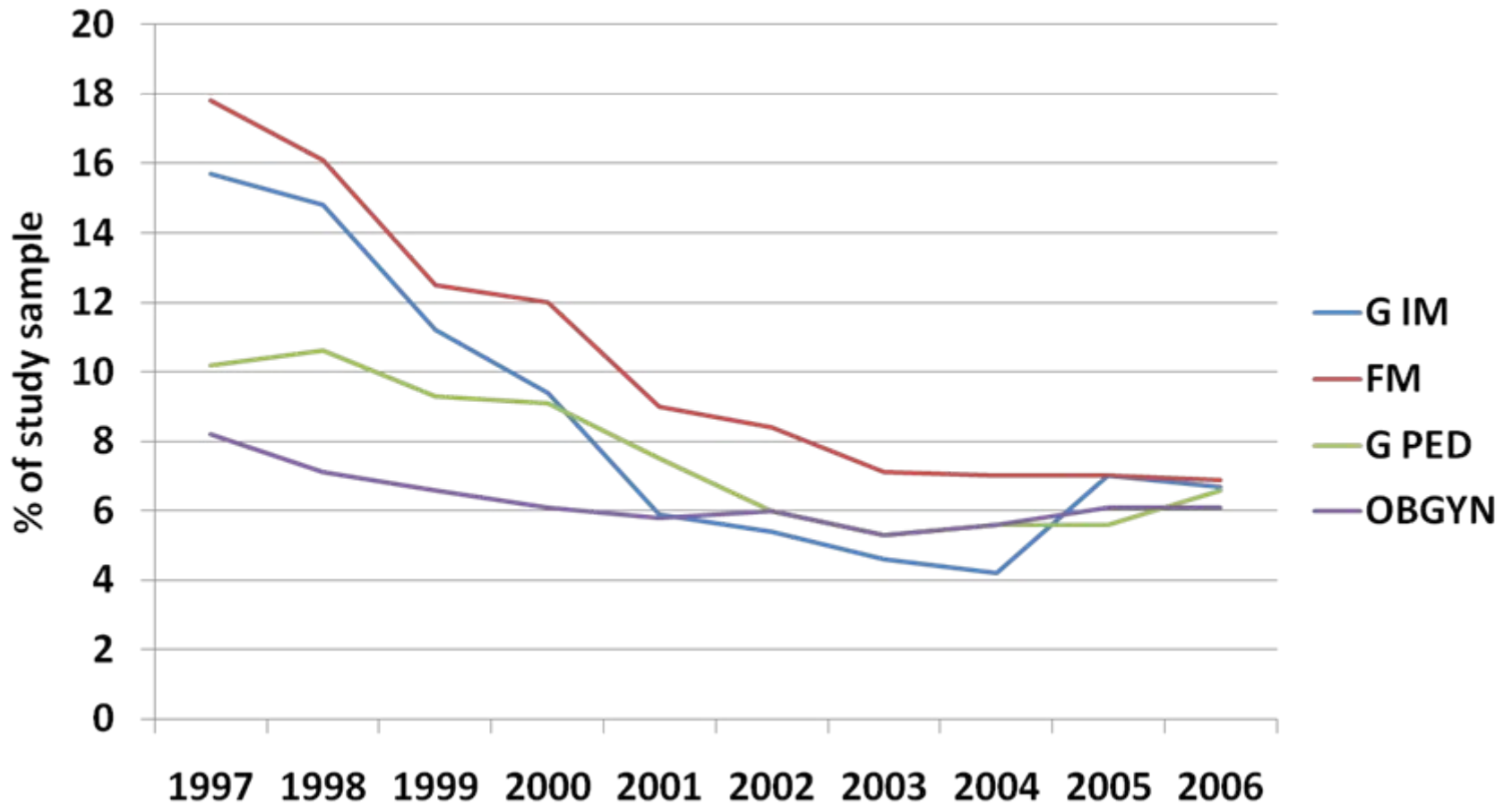
Data Analysis

- Associations between categorical variables: chi-square tests; continuous and categorical variables: ANOVA
- Multivariate logistic regression: predictors of each specialty of interest vs. “other specialties” reference

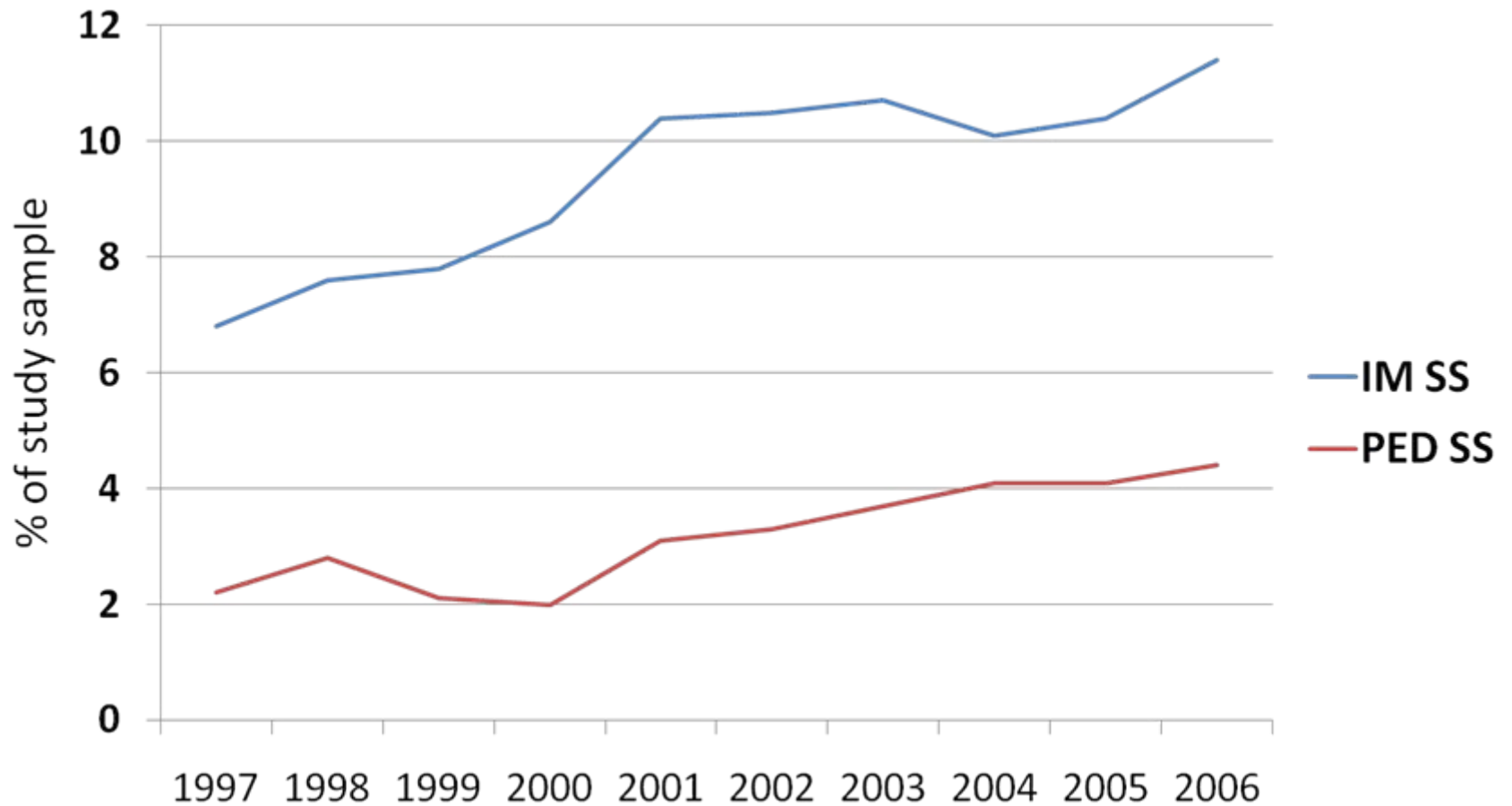
Results

- $N = 102,673$ graduates with complete MSQ,GQ data for all variables of interest
- 64.9% of all LCME-accredited U.S. medical school graduates in 1997 - 2006
- Regression model Pearson chi-square goodness-of-fit $P = .416$

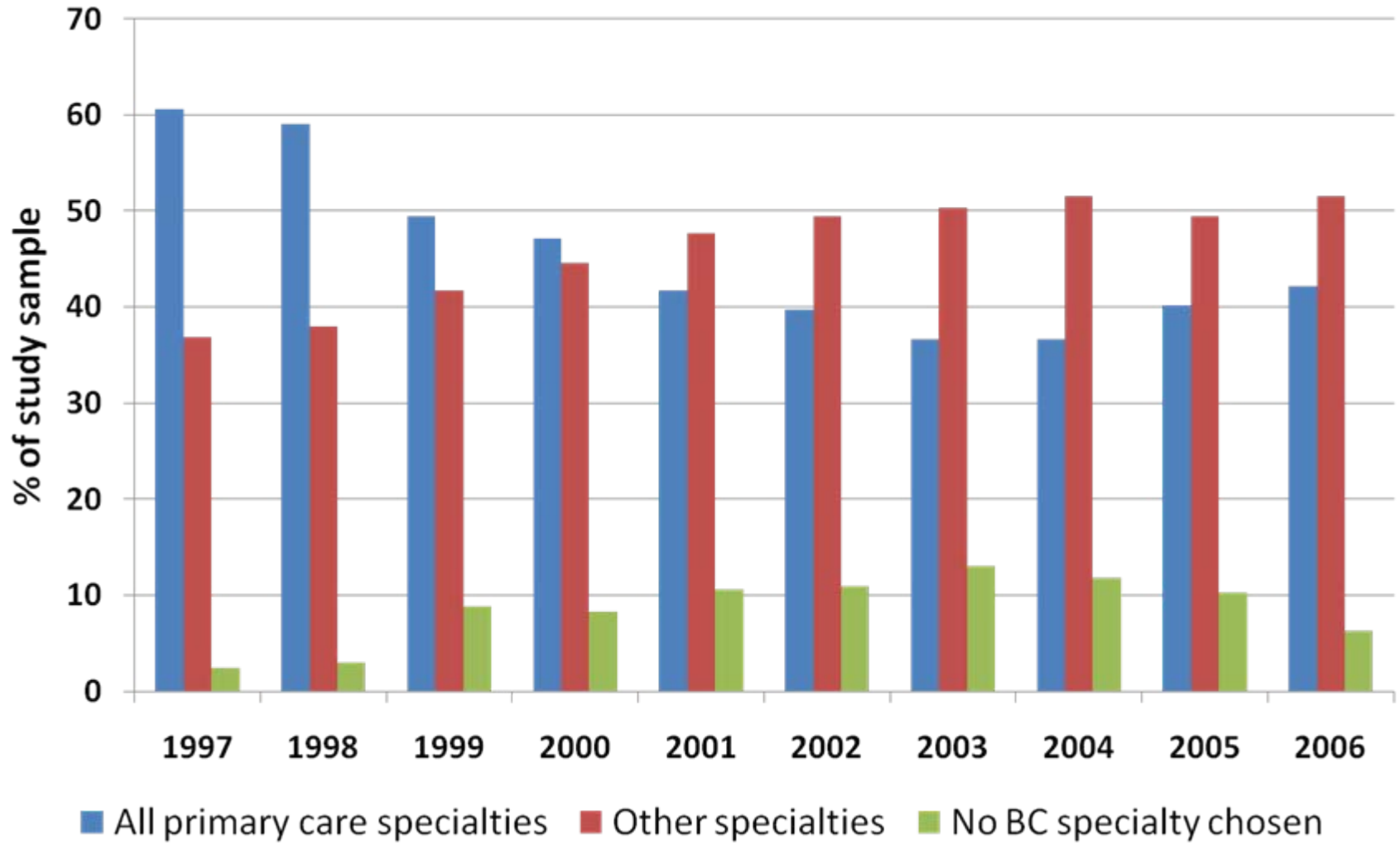
GQ year vs. generalist primary care choice



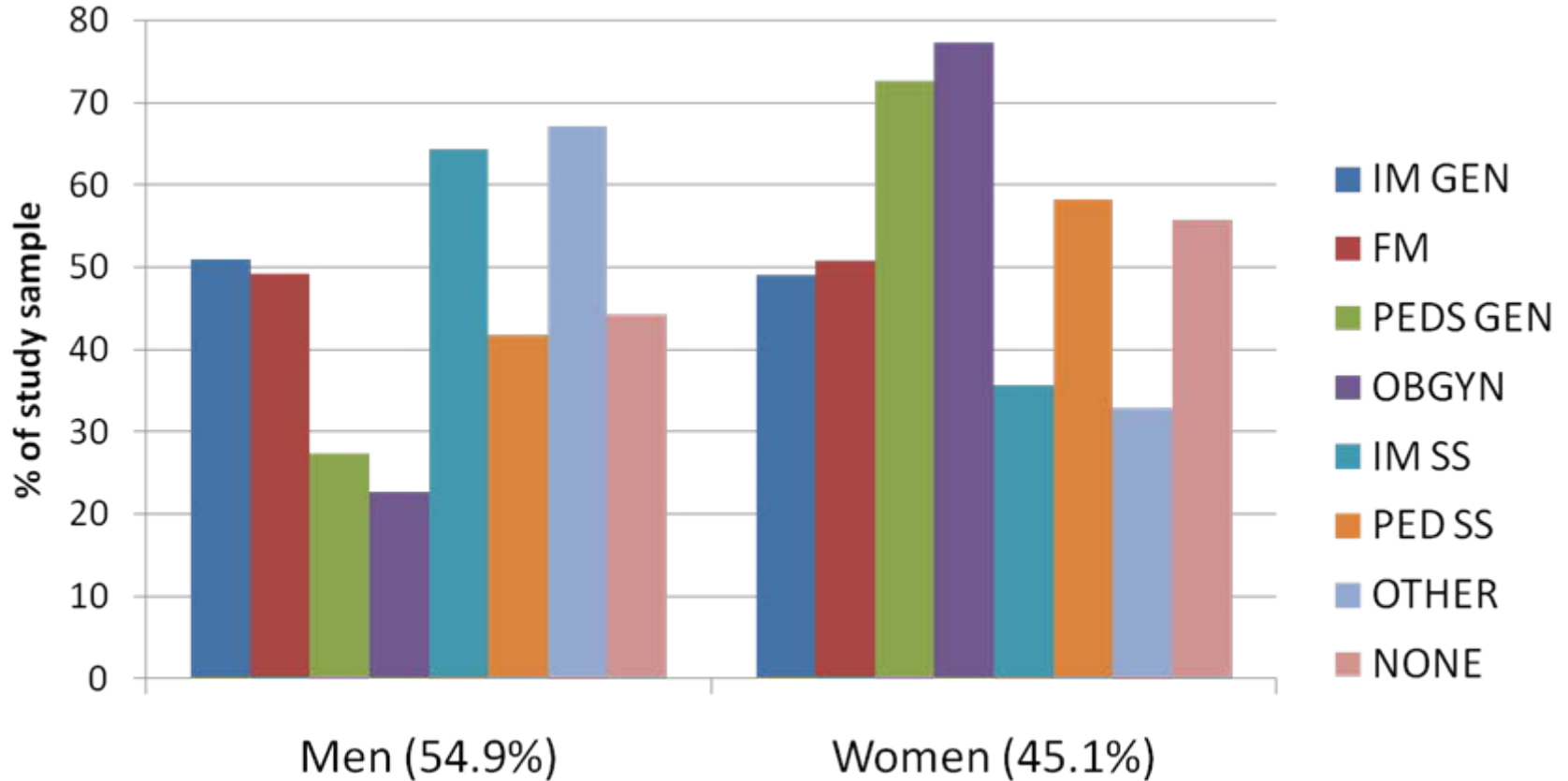
GQ year vs. subspecialty primary care choice



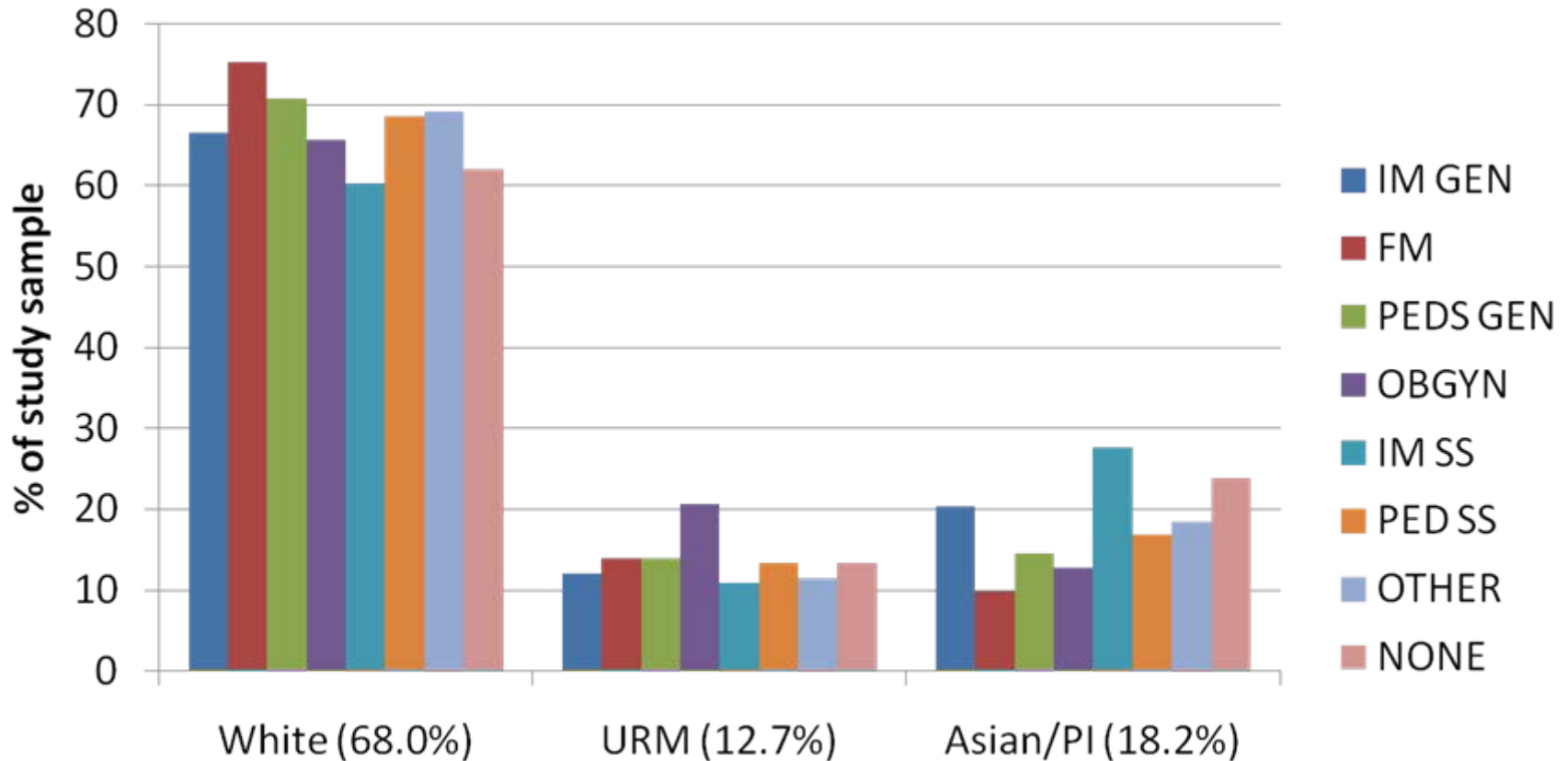
GQ year vs. specialty



Gender vs. specialty

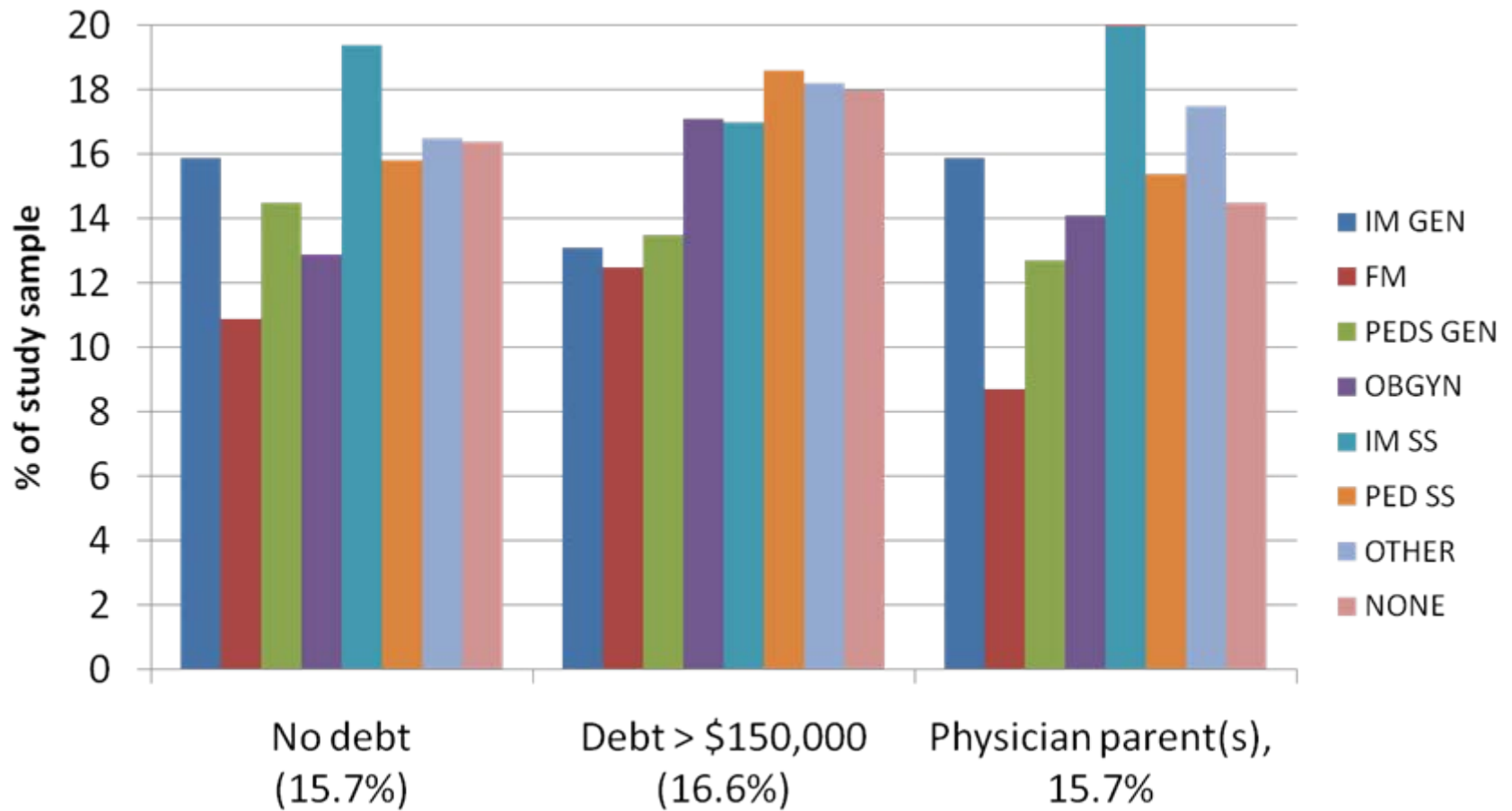


Race/ethnicity vs. specialty



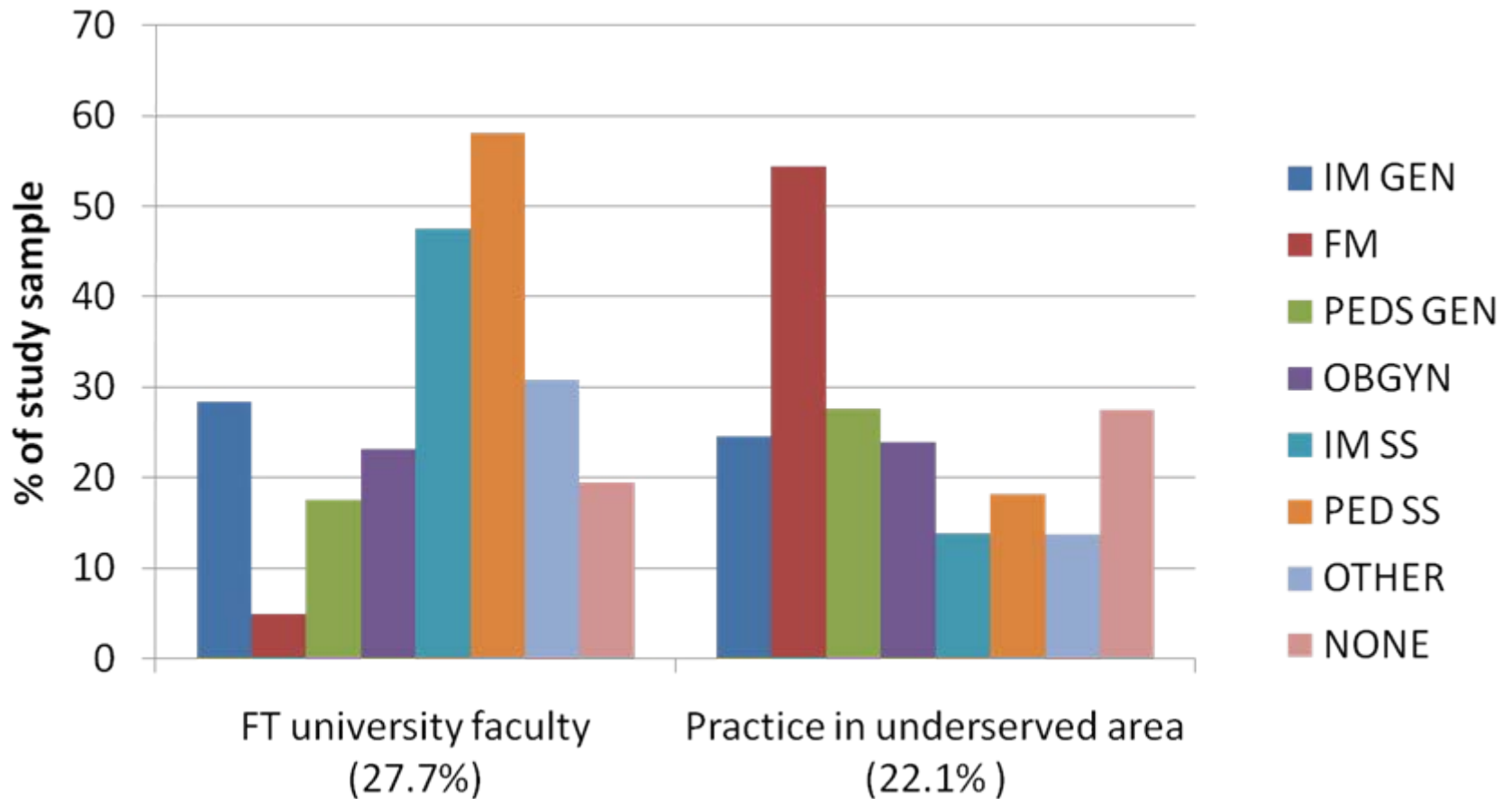


Socioeconomic vs. specialty





Career intentions* vs. specialty



Generalist primary care predictors

	GIM	FM	GPED	OBGYN
Women	1.78 (1.70-1.87)	1.88 (1.79 -1.98)	4.50 (4.25-4.76)	6.50 (6.09-6.92)
Practice in underserved area	2.68 (2.50-2.86)	12.07 (11.27-12.94)	2.89 (2.68-3.11)	1.73 (1.60-1.87)
Full-time faculty *	0.86 (0.82-0.91)	0.12 (0.10-0.13)	0.45 (0.42-0.48)	0.57 (0.53-0.61)
Physician parent	0.85 (0.79-0.91)	0.53 (0.49-0.58)	0.72 (0.67-0.78)	0.89 (0.82-0.97)
Increasing total Debt	0.96 (0.94-0.98)	1.00 (0.98-1.02)	0.94 (0.92-0.96)	*1.04 (1.02-1.07)
Race/ethnicity: URM	0.78 (0.72-0.84)	0.60 (0.56-0.65)	0.78 (0.72 -0.84)	*1.34 (1.24-1.44)
Race/ethnicity: Asian/PI	1.17 (1.10- 1.25)	0.68 (0.64-0.74)	0.81 (0.76-0.88)	0.74 (0.68-0.80)



Subspecialty , “no specialty choice” predictors

	IM SS	PED SS	NONE
Women	*1.03 (0.98-1.08)	2.29 (2.12-2.47)	2.11 (2.01-2.22)
Practice in underserved area	*1.01 (0.94-1.09)	1.13 (1.01-1.26)	2.74 (2.56-2.94)
Full-time faculty	1.85 (1.76-1.95)	3.16 (2.90-3.45)	0.56 (0.52-0.59)
Physician parent	*1.07 (1.01-1.14)	0.89 (0.80-1.00)	0.79 (0.73-0.84)
Increasing Total Debt	0.94 (0.92-0.96)	0.97 (0.94-1.00)	0.97 (0.95-0.99)
Race/ethnicity: URM	1.06 (0.99-1.15)	1.02 (0.91-1.15)	0.91 (0.85-0.98)
Race/ethnicity: Asian/PI	1.57 (1.49-1.66)	0.86 (0.78-0.95)	1.50 (1.41-1.58)

Attitudinal MSQ variable predictors

- ↑importance of social responsibility : ↑**likelihood** of all 7 specialty categories
- ↑ importance of prestige : ↓**likelihood** of all 7 specialty categories
- ↑Altruistic beliefs: ↑**likelihood** of all 7 specialty categories
- ↑importance of research/innovation : ↓**likelihood** of 6 specialty categories ; N/A IM SS
- ↑agreement that demands of medicine interfere with family/other interests: ↑**likelihood** of FM, ↓**likelihood** of OBGYN ; N/A other 5 specialty categories

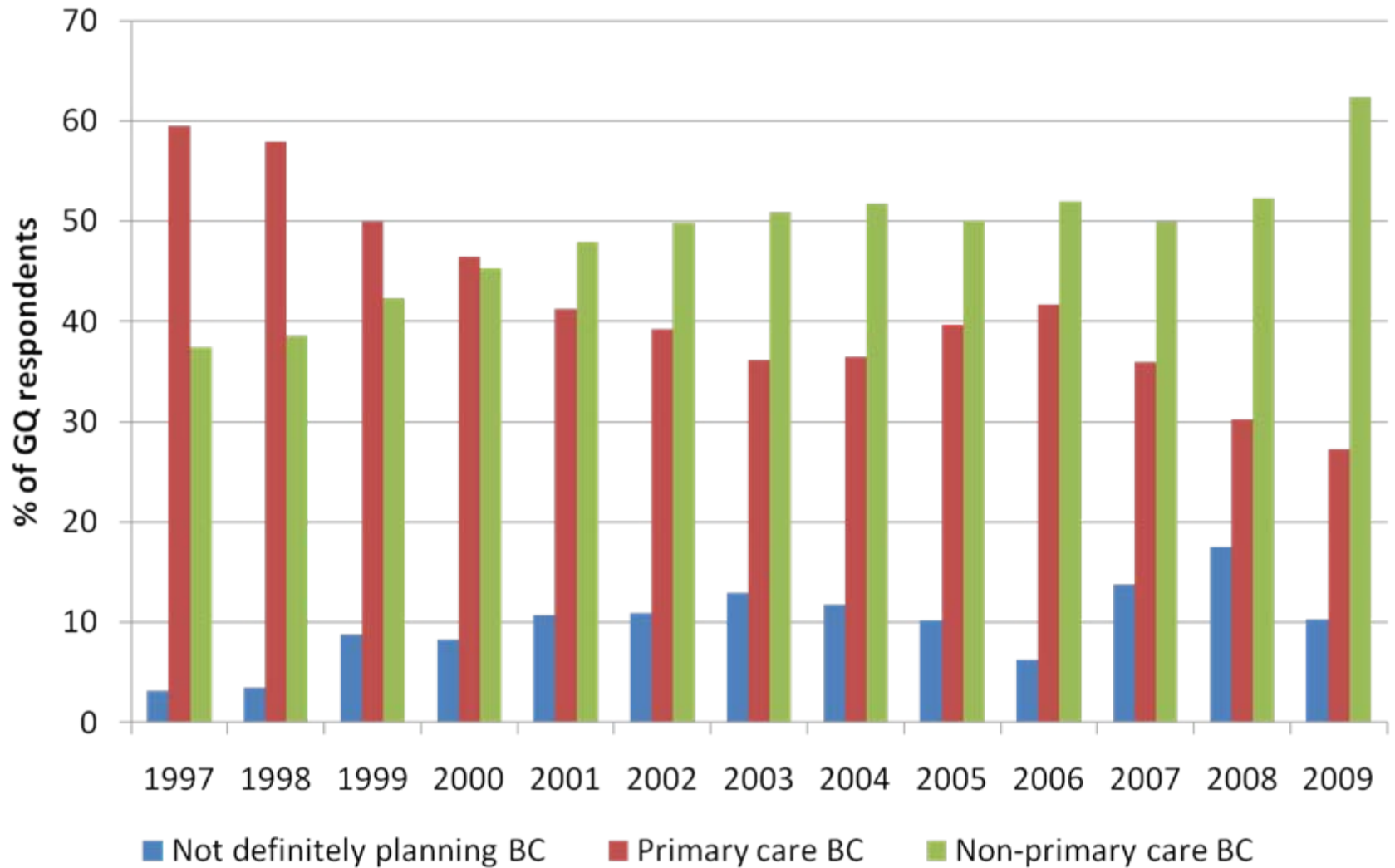
Conclusions

- Examine primary care on specialty-specific basis
- Shared altruistic beliefs ,perceptions about social responsibility ***at matriculation*** among graduates choosing all primary care specialties
- ↑ % of women : limited overall decline in generalist primary-care choices
- Academic medicine ≠ plans to practice in underserved areas: a missed opportunity?
- Career paths extending beyond “traditional” specialty BC paradigm?

Acknowledgments

- Jason Cantow, MS, MBA, and David Matthew, PhD, at AAMC, Washington, D.C., for data provision and coding assistance with
- Heather Hageman, MBA, Director, Educational Planning and Program Assessment, Office of Education at Washington University School of Medicine for assistance with data acquisition from AAMC

Programmatic GQ trends in specialty choice



Importance of innovation and research in choice of medicine (6 factors)

- Being a physician is one of the most intellectually challenging professions
- Profession provides opportunity for research
- Profession provides opportunity to develop expertise in a specialized area
- Physicians employ advanced diagnostic and therapeutic technologies
- Physicians use critical thinking to evaluate medical findings
- Profession provides opportunities for innovations

Importance of social responsibility in choice of medicine (5 factors)

- Physicians can educate patients about health promotion and disease prevention
- Profession provides opportunity to exercise social responsibility
- Profession provides opportunity to make a difference in people's lives
- Physicians can have continuing contact with their patients
- Dealing with behavioral/psychological aspects of patient care is rewarding

Importance of prestige in choice of medicine (4 factors)

- Doctors enjoy high status and prestige
- Profession offers possibility of high income
- Medical practice affords high job security
- Profession provides opportunity for authority

Altruistic beliefs (4 factors)

- Access to medical care continues to be a major problem in the U.S.
- Everyone is entitled to receive adequate medical care regardless of ability to pay
- Physicians have an opportunity to exercise greater influence on health promotion and disease prevention
- Physicians have an obligation to care for a reasonable number of patients who will be unable to pay for the services they receive

Demands of medicine (2 factors)

- The demands of a physician's work interfere with family relations
- The demands of a physician's work interfere with other interests