

Medical Education Outcomes

- Meet LCME-accreditation standard
- Inform faculty and administration regarding curricular strengths and weaknesses
- Determine extent to which school is meeting educational mission and goals

Widely-used Outcomes Measures

- State medical-licensure status
- Program-director survey responses
- Graduate survey responses: during residency, long-term follow-up
- Practice setting data

American Board of Medical Specialties (ABMS)- Member Board certification (BC)

- Evidence-based measure in “Quality of Care” movement
- Used to evaluate physicians for hospital privileges / insurance provider organizations
- *De facto* requirement for clinical leadership positions
- Lack of BC associated with medical state-board disciplinary action

Purpose of Study

- Identify predictors of ABMS-member-board-certification (BC) among contemporary US allopathic medical graduates



Methods

- Graduates from 6 mid-west medical schools in classes of 1997 - 2002
- Demographic : graduation year, gender, race/ethnicity, educational debt at graduation
- Academic: 1st attempt, 3-digit Step I and 2CK scores
- Specialty choice at graduation: intended specialty for ABMS-member board certification
- Board-certification status: ABMS-member board certification information in AMA Physician Master file (12/07)

Methods

- IRB exemption/approval at all schools
- AAMC provided individualized, linked MSQ-GQ records to each school for all their graduates who completed both MSQ and GQ with identifiers
- AMA Physician Master file records provided to each school for all their graduates, 1997 - 2002
- USMLE Step I, Step 2CK available at each school
- School –specific files de-identified prior to merger of all six files into a single data base for analysis

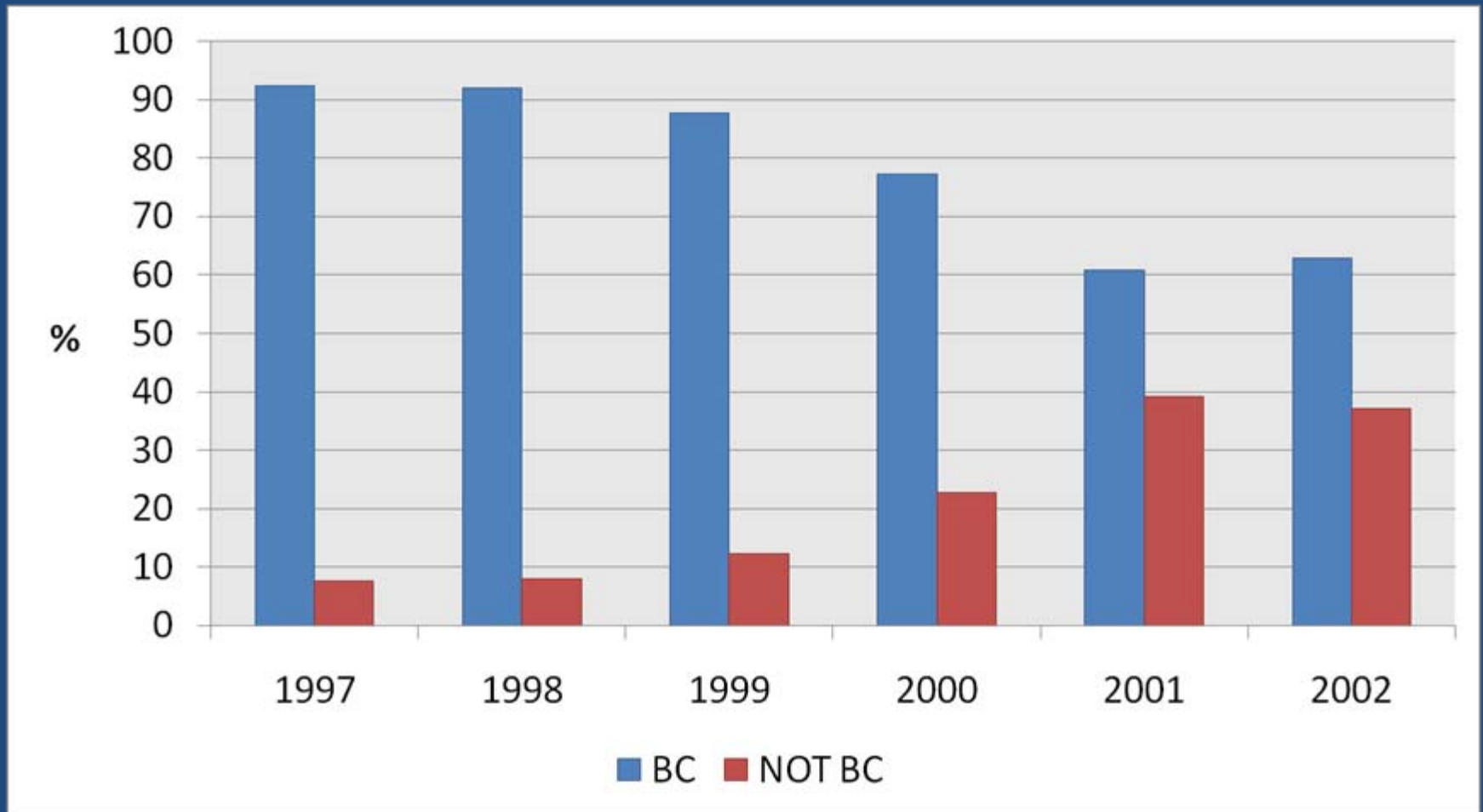
Statistical Analysis

- Descriptive statistics: Chi-square tests, One-way ANOVA tested associations between BC status and each variable of interest
- Multivariable logistic regression model : predictors of BC from among all variables of interest
- 2-sided p-values

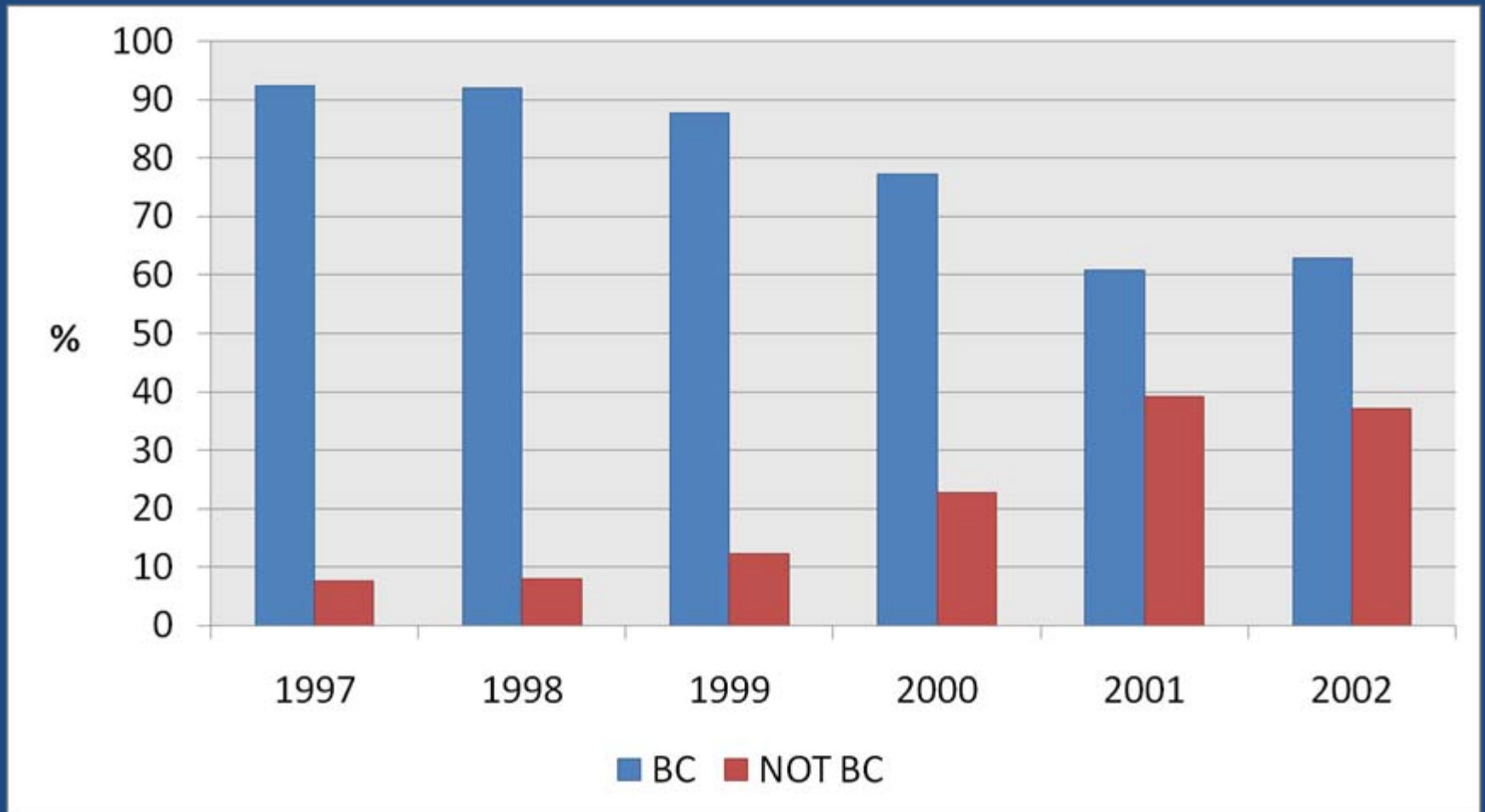
Results

- 2,480 graduates with linked AAMC and AMA Master file data (53% of our schools' 4,678 graduates from 1997 to 2002)
- 2,013 graduates included in present study (408 graduates still in GME as of 2007 and 59 graduates with incomplete data excluded)
- 1,578 of 2,013 graduates (78%) were BC

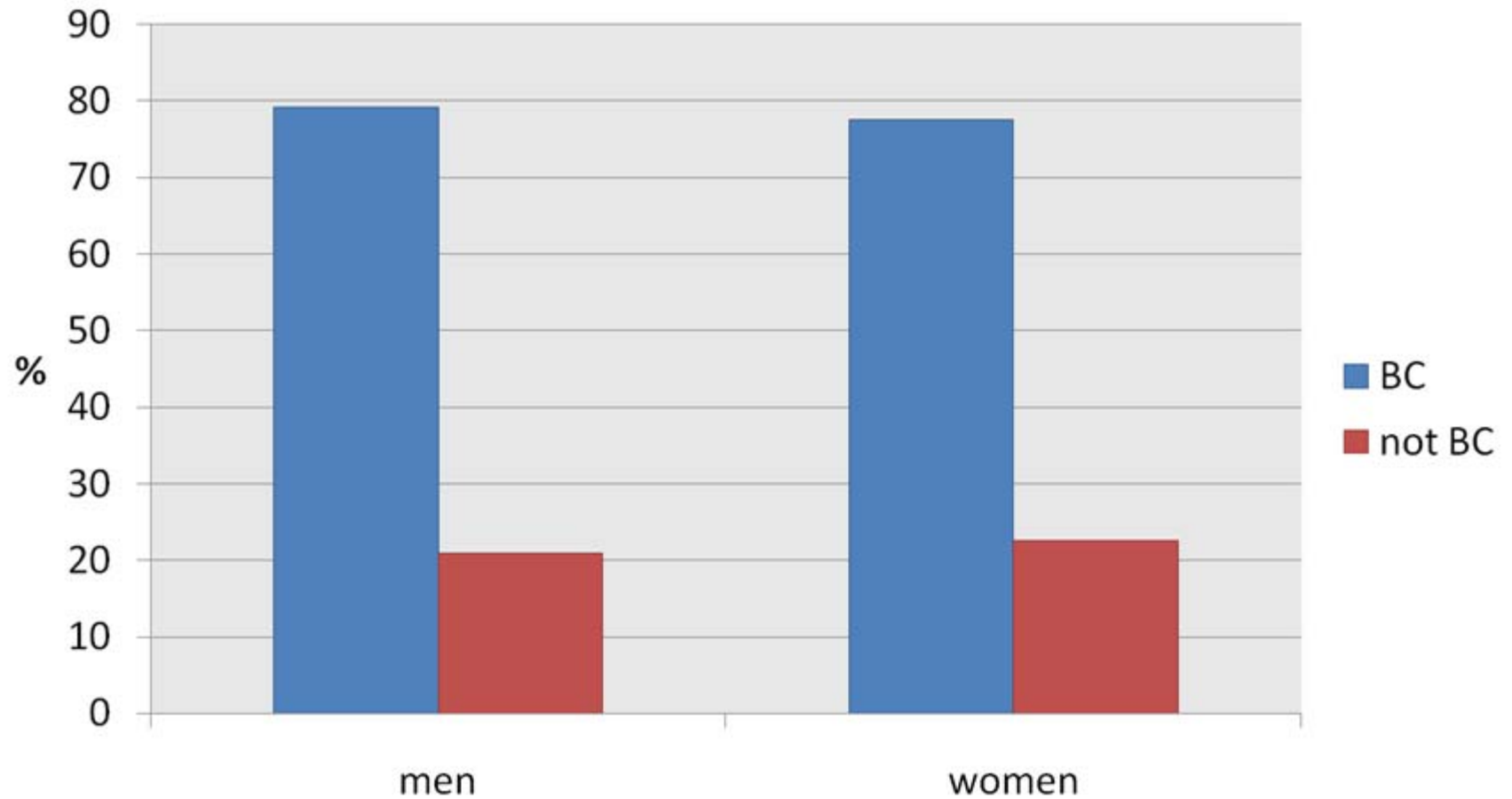
BC vs. Graduation year (p <.001)



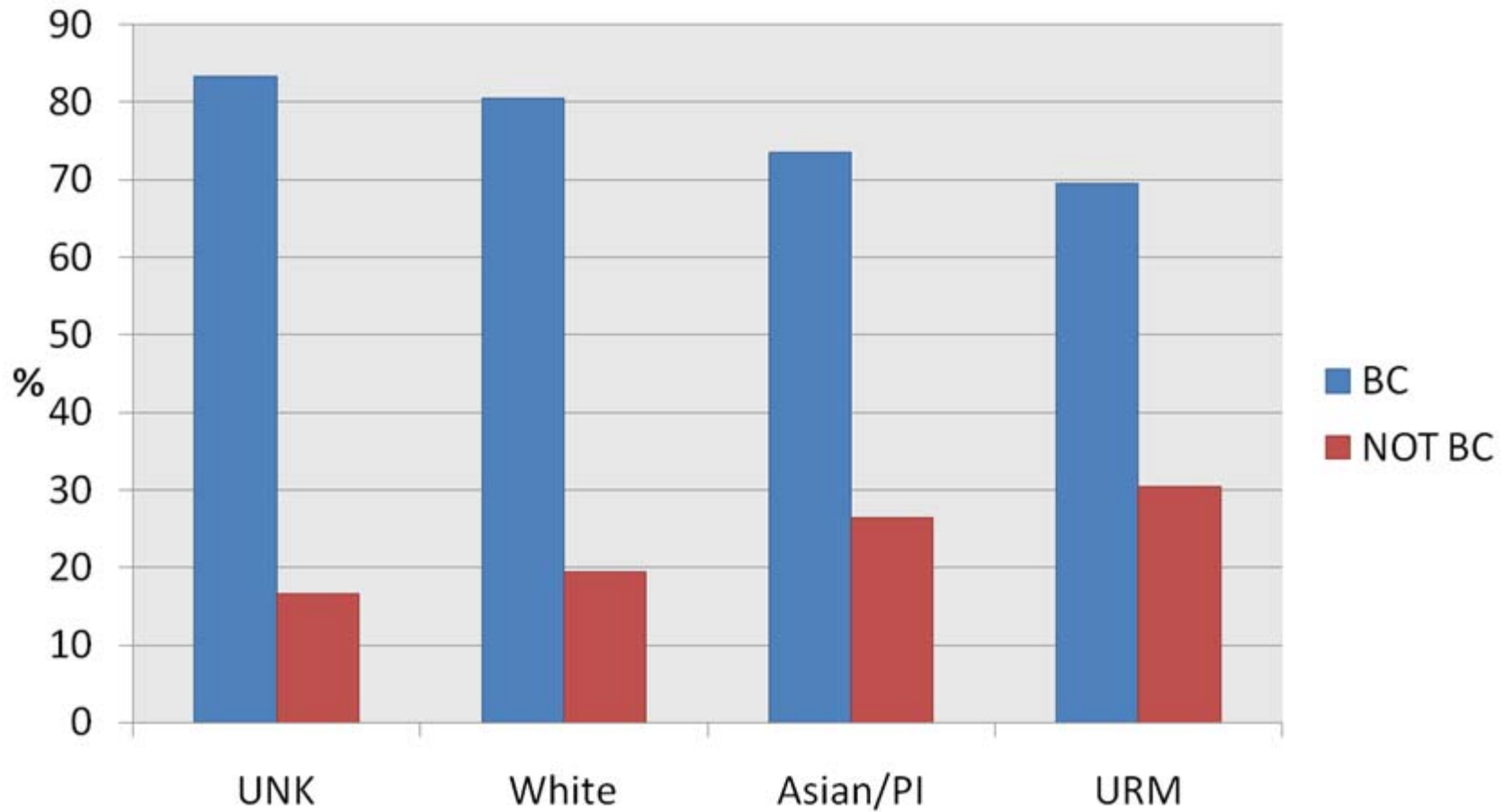
BC vs. Graduation year (p <.001)



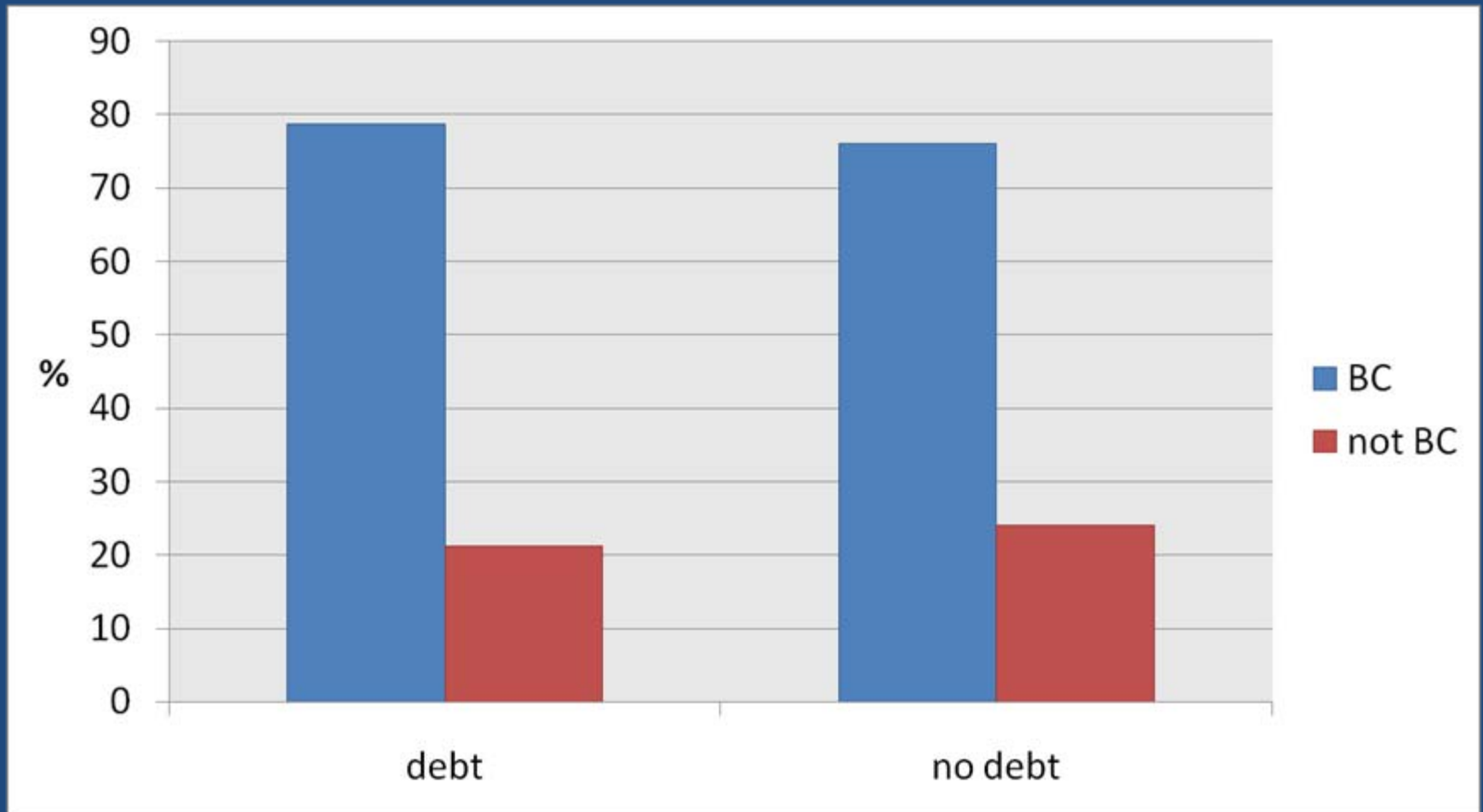
BC vs. gender (p = .408)



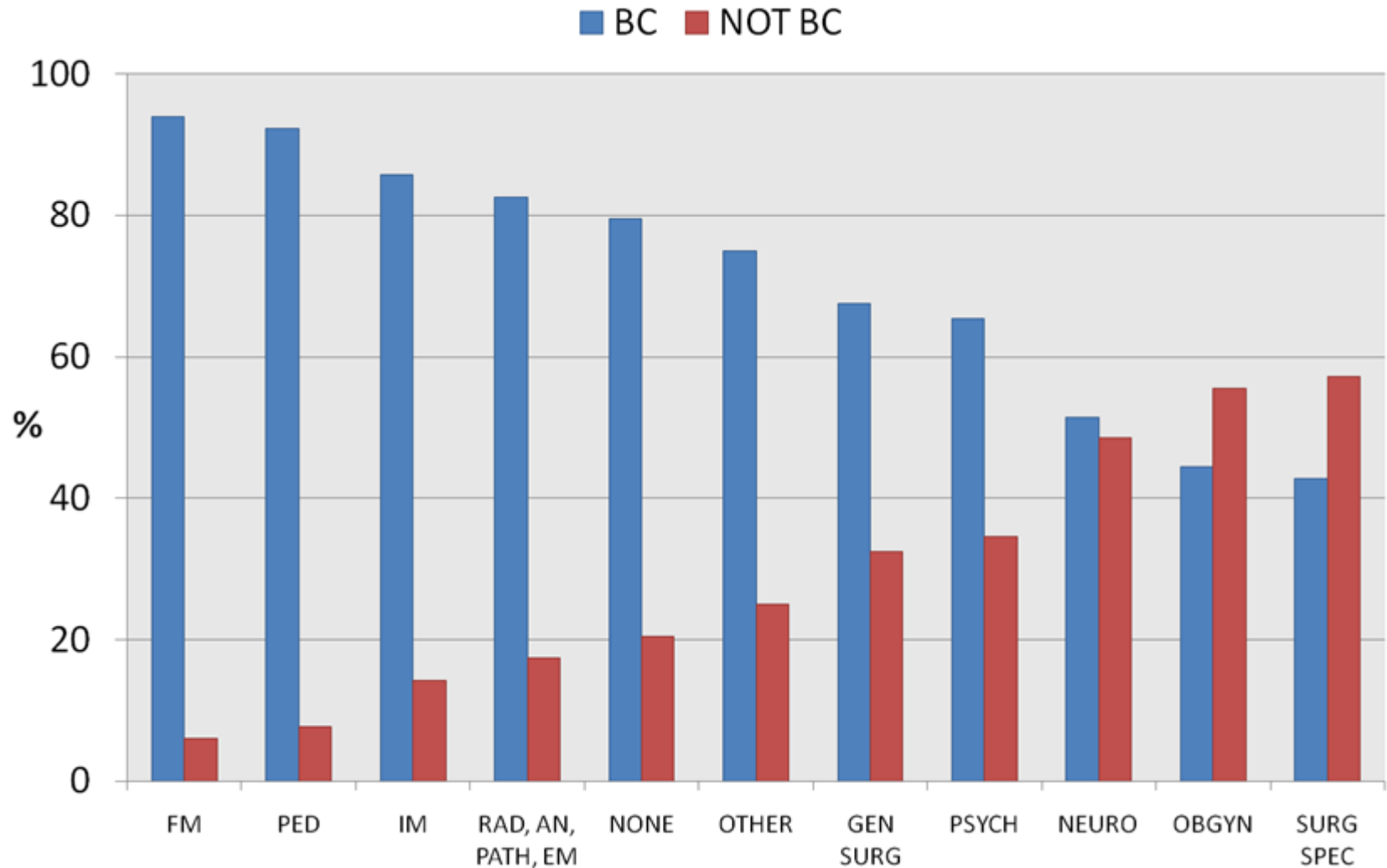
BC vs. race/ethnicity (p = .001)



BC vs. educational debt ($p = .322$)



BC vs. Specialty (P <.001)



BC vs. USMLE scores

Variable	Mean (SD) BC graduates	Mean (SD) non-BC graduates	P-value
USMLE Step 1 score	217.6 (18.4)	217.4 (22.3)	.859
USMLE Step 2CK score	218.6 (20.5)	215.2 (23.9)	.004

Independent predictors of BC

Variable	OR	95% CI	P-value
More recent GQ year	0.500	0.452 – 0.553	<.001
Specialty			
INTERNAL MEDICINE (ref)	1.000		
FAMILY MEDICINE	3.914	2.252 – 6.802	<.001
PEDIATRICS	2.694	1.448 – 5.010	.002
FACILITIES-BASED	1.227	0.770 – 1.956	.389
NONE	1.173	0.653 – 2.105	.594
OTHER	0.947	0.543 – 1.652	.849
GEN SURG	0.333	0.171 – 0.648	.001
PSYCH	0.407	0.195 – 0.851	.017
NEURO	0.195	0.087 – 0.436	<.001
SURG SPECIALTIES	0.086	0.052 – 0.143	<.001
↑USMLE Step 2CK score	1.021	1.011 – 1.031	<.001

Limitations

- AMA Master file data: +/- BC, but not name of member board or type of ABMS-member board certificate (general or subspecialty)
- Self-selected group of graduates (only those who completed MSQ & GQ with identifiers)
- Non-BC graduates: heterogeneous group-graduates may not have completed GME requirements, chose not to take boards exams, or taken and failed them

Conclusions: ABMS-board certification

- LONG-TERM outcome measure
- BC varied on basis of specialty (which impacts timing and nature of BC process) and Step 2CK score
- Although many program directors use Step I score in selecting applicants for their training programs, Step 2CK score better predicts timely BC achievement

Acknowledgements

- Six-schools' collaborative project: Washington University School of Medicine; University of Iowa Roy J. and Lucille A. Carver College of Medicine; University of Michigan School of Medicine; Michigan State University College of Human Medicine; Ohio State University; Southern Illinois University School of Medicine
- Study was supported by a Collaborative Projects Grant from the AAMC Central Group on Educational Affairs
- We thank Jason Cantow, MS, MBA at the AAMC for data provision and coding assistance