

Supplementary Online Content

Haider AH, Schneider EB, Sriram N, et al. Unconscious race and social class bias among acute care surgical clinicians and clinical treatment decisions. *JAMA Surg*. Published online March 18, 2015. doi:10.1001/jamasurg.2014.4038.

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eAppendix. Vignettes

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Adjusted Analysis for JHH

	Post-op Pain Q1	Post-op Pain Q2	Post-op Pain Q3	Rib Fracture Pain Q1	Rib Fracture Pain Q2	Rib Fracture Pain Q3	Alcohol W/draw Q1	Alcohol W/draw Q2	Alcohol W/draw Q3	Drug Abuse Q1	Drug Abuse Q2	Drug Abuse Q3
Patient Race ¹	-	-	-	0.33 (-0.15, 0.81)	-0.13 (-0.61, 0.35)	-0.25 (-0.75, 0.24)	0.65 (0.16, 1.15)	-0.04 (-0.53, 0.45)	0.03 (-0.46, 0.51)	-	-	-
Patient Class ¹	-0.03 (-0.52, 0.45)	0.16 (-0.33, 0.65)	0.41 (-0.10, 0.92)	-	-	-	-	-	-	0.09 (-0.40, 0.59)	0.14 (-0.36, 0.63)	-0.27 (-0.80, 0.26)
Subject IAT Score	0.28 (-0.22, 0.77)	-0.21 (-0.73, 0.32)	-0.17 (-0.68, 0.35)	-0.55 (-1.15, 0.05)	0.05 (-0.54, 0.64)	-0.21 (-0.81, 0.40)	-0.07 (-0.65, 0.52)	-0.40 (-0.98, 0.18)	-0.62 (-1.21, -0.02)	-0.26 (-0.77, 0.25)	-0.48 (-0.98, 0.03)	-0.01 (-0.57, 0.55)
Explicit Pref.	-0.31 (-1.43, 0.81)	0.22 (-0.91, 1.36)	0.69 (-0.48, 1.87)	0.38 (-1.15, 1.91)	-0.03 (-1.51, 1.46)	-0.28 (-1.80, 1.23)	-1.89 (-3.40, -0.38)	-0.09 (-1.60, 1.42)	-0.17 (-1.74, 1.41)	0.44 (-0.68, 1.55)	0.44 (-0.64, 1.53)	-0.15 (-1.36, 1.07)
Female Gender ²	-0.31 (-0.82, 0.19)	0.46 (-0.05, 0.97)	0.61 (0.09, 0.14)	0.30 (-0.19, 0.79)	0.24 (-0.26, 0.73)	0.30 (-0.20, 0.80)	-0.22 (-0.71, 0.27)	0.37 (-0.13, 0.87)	0.07 (-0.42, 0.56)	0.46 (-0.04, 0.96)	0.21 (-0.29, 0.72)	-0.07 (-0.61, 0.48)
Age ³ < 30	0.16 (-0.46, 0.78)	-0.47 (-1.11, 0.16)	-0.95 (-1.62, -0.29)	0.10 (-0.52, 0.72)	-0.11 (-0.72, 0.51)	-0.41 (-1.03, 0.22)	-0.13 (-0.76, 0.49)	0.04 (-0.57, 0.65)	0.15 (-0.47, 0.77)	-0.11 (-0.75, 0.52)	-0.14 (-0.76, 0.48)	-0.18 (-0.85, 0.50)
35 +	-0.39 (-0.96, 0.18)	0.43 (-0.14, 1.00)	-0.32 (-0.90, 0.27)	-0.41 (-0.97, 0.14)	0.46 (0.10, 1.02)	0.02 (-0.55, 0.59)	0.01 (-0.55, 0.58)	0.38 (-0.19, 0.95)	-0.02 (-0.58, 0.53)	-0.24 (-0.80, 0.31)	-0.27 (-0.83, 0.29)	0.13 (-0.48, 0.74)

1. Comparison group is white race or upper class, as appropriate
2. Comparison group is male
3. Comparison group 30-34 years of age

eTable 1 (cont.): Adjusted analysis for JHH

	Cervical Spine Q1	Cervical spine Q2	Cervical spine Q3	Abdomen Pain Q1	Abdomen Pain Q2	Abdomen Pain Q3	Hernia Q1	Hernia Q2	Hernia Q3	Restraint Q1	Restraint Q2	Restraint Q3
Patient Race ¹	-	-	-	0.71 (0.23, 1.20)	0.25 (-0.23, 0.72)	-0.12 (-0.61, 0.37)	-	-	-	0.22 (-0.26, 0.71)	0.29 (-0.18, 0.77)	0.28 (-0.20, 0.75)
Patient Class ¹	-0.22 (-0.72, 0.28)	-0.42 (-0.91, 0.08)	-0.62 (-1.11, -0.12)	-	-	-	-0.34 (-0.83, 0.14)	0.12 (-0.35, 0.60)	-0.21 (-0.68, 0.27)	-	-	-
Subject IAT Score	0.09 (-0.43, 0.61)	-0.25 (-0.80, 0.29)	0.01 (-0.53, 0.55)	0.01 (-0.56, 0.58)	0.42 (-0.18, 1.01)	-0.20 (-0.79, 0.39)	-0.11 (-0.64, 0.43)	0.19 (-0.32, 0.70)	-0.12 (-0.65, 0.40)	0.59 (0.03, 1.15)	-0.06 (-0.64, 0.53)	0.66 (0.06, 1.27)
Explicit Pref.	0.28 (-0.85, 1.40)	-0.23 (-1.35, 0.88)	-0.88 (-2.05, 0.29)	0.36 (-1.15, 1.88)	-0.75 (-2.33, 0.83)	0.15 (-1.48, 1.77)	0.94 (-0.14, 2.01)	0.49 (-0.65, 1.62)	0.19 (-0.91, 1.28)	0.35 (-1.18, 1.88)	-0.25 (-1.66, 1.16)	0.93 (-0.62, 2.49)
Female Gender ²	0.40 (-0.12, 0.91)	0.40 (-0.10, 0.90)	0.37 (-0.13, 0.87)	0.28 (-0.21, 0.76)	0.26 (-0.23, 0.75)	-0.16 (-0.66, 0.34)	0.02 (-0.48, 0.52)	-0.50 (-1.00, 0.00)	0.36 (-0.13, 0.86)	0.20 (-0.31, 0.70)	0.27 (-0.21, 0.75)	0.52 (0.03, 1.01)
Age ³ < 30	-0.30 (-0.95, 0.35)	-0.78 (-1.43, -0.14)	-0.05 (-0.69, 0.60)	0.25 (-0.36, 0.85)	-0.10 (-0.72, 0.51)	-0.77 (-1.43, -0.12)	-0.89 (-1.52, -0.26)	0.05 (-0.57, 0.67)	-0.21 (-0.68, 0.27)	-0.20 (-0.83, 0.42)	0.22 (-0.38, 0.83)	-0.17 (-0.78, 0.45)
35 +	-0.76 (-1.36, -0.17)	-0.09 (-0.64, 0.47)	0.18 (-0.39, 0.75)	-0.52 (-1.08, 0.03)	-0.50 (-1.06, 0.06)	-0.01 (-0.56, 0.55)	-0.68 (-1.26, -0.10)	0.16 (-0.39, 0.72)	-0.04 (-0.59, 0.52)	0.01 (-0.57, 0.56)	-0.23 (-0.79, 0.33)	0.14 (-0.42, 0.70)

1. Comparison group is white race or upper class, as appropriate
2. Comparison group is male
3. Comparison group 30-34 years of age

eTable 2. JHH Trainee Physicians: Ordered Logistic Regression β Coefficient (95% CI)

N=137	Post-op Pain Q1	Post-op Pain Q2	Post-op Pain Q3	Rib Fracture Pain Q1	Rib Fracture Pain Q2	Rib Fracture Pain Q3	Alcohol W/draw Q1	Alcohol W/draw Q2	Alcohol W/draw Q3	Drug Abuse Q1	Drug Abuse Q2	Drug Abuse Q3
Interns	0.59 (-0.37, 1.55)	0.00 (-0.97, 0.97)	0.06 (-0.91, 1.03)	0.23 (-0.82, 1.28)	0.66 (-0.37, 1.69)	0.04 (-1.04, 1.11)	0.68 (-0.89, 1.03)	0.94 (-0.07, 1.96)	-0.34 (-1.31, 0.64)	1.49 (0.51, 2.47)	1.12 (0.17, 2.07)	-0.32 (-1.35, 0.71)
Fellows	0.14 (-0.69, 0.77)	-0.59 (-1.42, 0.25)	-0.93 (-1.83, -0.04)	0.84 (0.03, 1.66)	-0.16 (-0.97, 0.66)	-0.67 (-1.50, 0.14)	-0.22 (-1.08, 0.63)	-0.15 (-0.97, 0.66)	0.38 (-0.45, 1.22)	-0.72 (-1.56, 0.12)	0.07 (-0.76, 0.89)	-0.21 (-1.10, 0.68)

Models adjusted for: Patient race, participant age, participant gender, participant implicit and explicit preference
 Comparison group: PGY2+ Resident Physicians

eTable 3. Single Center Trainee Physicians: Ordered Logistic Regression β Coefficient (95% CI)

N=137	Cervical spine Q1	Cervical spine Q2	Cervical spine Q3	Abdomen Pain Q1	Abdomen Pain Q2	Abdomen Pain Q3	Hernia Q1	Hernia Q2	Hernia Q3	Restraint Q1	Restraint Q2	Restraint Q3
Interns	-0.04 (-0.92, 1.00)	0.46 (-0.51, 1.44)	-0.07 (-1.10, 0.96)	1.08 (0.17, 2.00)	0.65 (-0.29, 1.60)	-0.24 (-1.28, 0.79)	-0.28 (-1.20, 0.65)	-0.45 (-1.40, 0.50)	0.40 (-0.55, 1.34)	0.21 (-0.72, 1.13)	0.75 (-0.18, 1.68)	0.84 (-0.09, 1.78)
Fellows	0.87 (-0.00, 1.75)	1.03 (0.18, 1.87)	0.29 (-0.57, 1.16)	-0.06 (-0.92, 0.80)	-0.42 (-1.27, 0.42)	0.16 (-0.67, 0.99)	-0.47 (-1.32, 0.39)	0.30 (-0.52, 1.13)	-0.22 (-0.60, 1.03)	-0.19 (-1.03, 0.65)	0.15 (-0.68, 0.99)	-0.38 (-1.24, 0.48)

Models adjusted for: patient race, participant age, participant gender, participant implicit and explicit preference
 Comparison group: PGY2+ Resident Physicians

- c) The patient should be treated with a narcotic, sent home with a limited supply of Percoset, and asked to follow up with his primary surgeon.
- d) The patient should be admitted for observation.

V. Consent

A 49 year old woman presents to the emergency department after being struck by a car while attempting to cross the street. On arrival she is not protecting her airway and is immediately intubated. Her systolic blood pressure is initially measured as 90 mmHg, but with resuscitation it increases to 120/74. A CT scan reveals an isolated head injury that does not require an operation. She is slated to be brought up to the neurological ICU for observation and management. However, a bed is not available for the next 2 hours and the patient needs a central line placed for administration of a 3% hypertonic saline. The surgical resident begins to place a central line but does not perform a time out and does not use complete sterile precautions. The patient’s children are in the waiting room and are very concerned for their mother who is a school teacher. Regarding this patient:

- a) The patient’s family could have been approached for consent for this urgent but not emergent procedure. A time out is not required for any procedures performed in the emergency department.
- b) The patient’s nurse is entitled to stop the resident from placing the central line in non-emergent situations if he or she is not convinced that all central line insertion protocols are being followed.
- c) Central lines should never be placed in the emergency department.

VI. Cervical Spine

A 42 year old male was involved in a car crash driving home from his job as a (computer engineer or a parking lot attendant). The airbag deployed and he has a small cut above his left eye that does not require stitches. He did not lose consciousness, GCS is 15 and on physical exam he has some tenderness in the back of his neck. The patient denies any medical history and appears to have no other injuries or complaints. A CT scan of the head, neck, and c-spine is performed and is negative. Regarding this (computer engineer or parking lot attendant):

1. How likely is it that this patient has a cervical spine injury?

1	2	3	4	5	6	7
Not at all Likely					Extremely Likely	

2. In order to manage this person’s neck pain you will

1	2	3	4	5	6	7
Discharge the patient with a Miami-J collar and follow-up in 15 days.					Order a spine service consult	

3. Does this person need an MRI of the c-spine?

1	2	3	4	5	6	7
No					Yes	

VII. Appendicitis vs. Pelvic Inflammatory Disease

A 20 year old mother of one comes to the emergency department with right lower quadrant pain at rest and on palpation. She has positive bowel sounds. She denies nausea, is hungry and wants to eat. She has no history of previous abdominal surgeries. She has no dysuria and her urinalysis is pending. Lab values are unremarkable except for white blood count which is 14,000. Regarding this patient:

1. On first impression, you think the most likely primary diagnosis is

1	2	3	4	5	6	7
Appendicitis						Pelvic Inflammatory Disease

2. What would you order first

1	2	3	4	5	6	7
CT Scan						GYN Consult

3. 4 hours later a CT scan is equivocal with inflammation in the right lower quadrant but the appendix is not visualized. The next step in your management will be:

1	2	3	4	5	6	7
Order pelvic ultra-sound				Diagnostic Laparoscopy/Appendectomy		

VIII. Hernia

A 78 year old man who is a (retired financial executive or gas station attendant) with atrial fibrillation, hypertension, gout and diabetes presents with a reducible right inguinal hernia that is asymptomatic, and does not bother him. The hernia was found on physical exam several months ago. He has been busy over the summer with projects and grandchildren, and states that he does not mind spending time at home now that he is retired. Regarding this patient:

1. How high is this patient's surgical risk?

1	2	3	4	5	6	7
Moderate						Very High

2. What type of intervention would you suggest?

1	2	3	4	5	6	7
Truss Belt/ Hernia Belt (watchful waiting)						Operation

3. You choose not to operate on this patient. Do you think he will be compliant with using his truss belt?

1	2	3	4	5	6	7
No						Yes

