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Email: robert.schonberger@yale.edu

Education:

B.A. Yale College (Philosophy) 1996

M.A. Jewish Theological Seminary (Philosophy) 2000

M.D. Yale University School of Medicine 2006

M.H.S. Yale University School of Medicine 2015

Career/Academic Appointments:

2006-2007 Intern (Transitional), Hospital of Saint Raphael, New Haven, CT

2007-2010 Resident (Anesthesiology), Yale-New Haven Hospital, New Haven, CT

2010-2012 Postdoctoral Fellow in Anesthesiology, Yale University, New Haven, CT

2011-2012 Fellow in Cardiothoracic Anesthesiology, Yale-New Haven Hospital, New Haven, CT

2012-2017 Assistant Professor, Department of Anesthesiology, Yale School of Medicine

2017-present Associate Professor, Department of Anesthesiology, Yale School of Medicine

Administrative Positions:

2014-present Associate Director of Clinical Research, Department of Anesthesiology, Yale University School of Medicine, New Haven, CT

2015-present Director of Clinical Scientist Track for residents

Board Certification:

2011-present American Board of Anesthesiology

2012-present Testamur Certificate in Advanced Perioperative Echocardiography

2016-present Clinical Informatics

Professional Honors & Recognition:

International/National/Regional

2016: Association of University Anesthesiologists (AUA) Associate Member

2012: Foundation for Anesthesia Education and Research (FAER) Research Scholar Award

2012: American Society of Anesthesiologists: Best Abstracts of the Meeting Award

University:

2006: Farr Scholar for Excellence in Research, Yale University School of Medicine

2005-2006: Doris Duke Foundation Clinical Research Fellowship

1996: Awarded Honors with Distinction in the major of Philosophy, Yale College

1994: B'nai Zion Excellence in Hebrew Study award, Yale College

Grant/Clinical Trials History:**Active Grants**

Agency: Anesthesiology Performance Improvement and Reporting Exchange (ASPIRE)

I.D.# PCRC 0032

Title: "Medication Errors"

P.I.: Mark S. Hausman, Jr. M.D.

Role on Project: Co-investigator

Percent effort: 5%

Direct costs per year: \$15,000

Total costs for project period: \$15,000

Project period: 04/01/2016 – 03/31/2017

Agency: NIH/NHLBI

ID#: K23 HL116641

Title: "Integrating Perioperative Care into the Treatment of Hypertension"

P.I.: Robert B. Schonberger

Role on Project: Principal Investigator

Percent effort: 75%

Direct costs per year: \$128,475

Total costs for project period: \$688,165

Project period: 08/1/2013 – 07/31/2018

Past Grants

Agency: American Society of Anesthesiologists Committee on Professional Diversity

I.D.# Mentoring Award for Research Training Grant in Anesthesiology

Title: Crawford Long and the Development of Anesthesia in Antebellum

P.I. Robert B. Schonberger (Mentor for Dr. Julia Rosenbloom, M.D.)

Role on Project: Principle Investigator and Mentor

Percent Effort: 1%

Total costs for project period: \$2,500

Project period: 07/01/2014 – 06/30/2015

Agency: Foundation for Anesthesia Education and Research (FAER)

I.D.# Mentored Research Training Grant in Health Services Research

Title: Integrating Perioperative Care into the Treatment of Hypertension

P.I. Robert B. Schonberger, M.D., M.A.

Role on Project: Principle Investigator

Percent Effort: 75%

Total costs for project period: \$175,000

Project period: 07/01/2013 – 07/31/2013 (Superseded by above K23 Grant)

Agency: NIH/NIGMS

I.D.# T32 GM086287

Title: “Research Training in Anesthesia”

P.I.: Laura E. Niklason, M.D., Ph.D.

Role on Project: Postdoctoral Trainee

Percent effort: 80%

Total costs for project period: \$150,000

Project period: 07/01/2010 – 06/30/2012

Invited Speaking Engagements, Presentations, Symposia & Workshops Not Affiliated With Yale:

International/National

2016: Panelist: International Anesthesia Research Society (IARS) annual meeting.

Title: International database research collaborations: The Multicenter Perioperative Outcomes Group experience.

2016: Visiting Professor: Pennsylvania State University – Hershey.

Title: “Postoperative Referral for Elevated Presurgical Blood Pressure”

2016: Visiting Professor: Dartmouth-Hitchcock Medical Center.

Title: “Hypertension Screening in the Perioperative Period: Whom Should We Refer?”

2015: Visiting Professor: Columbia College of Physicians and Surgeons.

Title: “Hypertension Screening in the Perioperative Period: Whom Should We Refer?”

Regional/Institutional

2017: Yale Department of Anesthesiology Grand Rounds

Title: “Progress and Lack of Progress on Lung Protective Ventilation During the First Six Months of ASPIRE.”

2016: Yale Cardiothoracic Fellow Lecture Series

Title: “Elimination of Gaseous Microemboli by Hypobaric Oxygenation”

2015: Yale Department of Anesthesiology Grand Rounds

Title: “Opportunities for Perioperative Database Research at Yale.”

2015: Works in Progress Seminar, Department of Veterans Affairs, West Haven, CT

Title: “Hypertension Screening in the Preoperative Period: Whom should we refer?”

2014 Visiting Professor: University of Connecticut Department of Anesthesiology (April 2014)

Title: “The Anesthesiologist and the Hypertensive Patient”

2013: Yale Center for Medical Informatics Lecture Series

Title: “Big Data – Little Problems”

- 2013: Medical Directors' Leadership Council Inaugural Research Meeting, Yale-New Haven Hospital.
Title: "Variation in SCIP adherence within hospital referral regions: do publicly reported surgical quality measures distinguish hospitals that patients are likely to choose from?"
- 2012: Works in Progress Seminar, Department of Veterans Affairs, West Haven, CT
Title: "Can Exposure to an Anesthesiologist Become a Risk-factor for Longer Life?"
- 2010: Department of Anesthesiology Grand Rounds – Yale School of Medicine
Title: Central Venous Catheter-Associated Blood Stream Infections
- 2008: Department of Anesthesiology Grand Rounds – Yale School of Medicine
Title: Diagnosing Pulselessness During Resuscitation

Peer-Reviewed Presentations & Symposia Given at Meetings Not Affiliated With Yale:

International/National

- 2016: International Anesthesia Research Society (IARS) National Meeting Panelist
Title of Panel: International Database Collaborations; The MPOG Experience
- 2015: American Society of Anesthesiologists Annual Journal Symposium
Title: The Association between postsurgical medical follow-up and mortality.
- 2015: Anesthesia Quality Institute: Definitions Conference III (DEFCON 3)
Title: "The process of choosing variables for a clinical prediction model."
- 2014: Oral Presentation at the American Society of Anesthesiologists Annual Meeting
Title: Day-of-Surgery Triage for Postoperative Primary Care Blood Pressure Evaluation.
- 2013: American Society of Anesthesiologists Annual Journal Symposium
Title: The Association between postsurgical medical follow-up and mortality.
- 2012: Oral Presentation at the Best Abstracts of the Meeting Session of the American Society of Anesthesiologists Annual Meeting
Title: The Effects of Differences in Disease Prevalence on Type 1 Error Rates When Comparing Mortality in Patients Matched on Imperfect Markers of Disease: A Database Simulation Study.

Professional Service

Journal Service:

Editor/Associate Editor

2016-present Section Editor, *Journal of Cardiothoracic and Vascular Anesthesia*

Reviewer

2010-present Reviewer for *Critical Care Medicine, Journal of Cardiothoracic and Vascular Anesthesia,*

2015-present Reviewer for *Circulation, Anesthesia & Analgesia, JAMA, JAMA Internal Medicine, Health Affairs*

Professional Service for Professional Organizations:

American Society of Anesthesiologists

2015-2016 ASA Committee on Health Services Research
2016-present ASA Committee on Professional Diversity
2016-present ASA Committee on Future Models of Anesthesia Care
2016-present ASA Committee on Cardiac and Thoracic Anesthesia

Yale University Service:

Medical School Committees

2015-present Yale School of Medicine Faculty Advisory Council

Departmental Committees

2016-present Departmental Internal Protocol Review Committee
2016-present Chair of Departmental Committee Overseeing Clinical Scientists Track Residents
2013-present Member, Academic Time Committee
2014-present Founder: Research Incubator / Works-In-Progress Lecture Series

Hospital Boards & Committees

2015-present Yale-New Haven Hospital Blood Conservation Committee
2013-2014 Yale-New Haven Hospital Surgical Site Infections Taskforce

Public Service:

2015-present Member of the City of New Haven Democratic Town Committee, Ward 26; New Haven, CT

Bibliography:

Peer-Reviewed Original Research

1. Louis ED, **Schonberger RB**, Parides M, Ford B, Barnes LF. Test-retest reliability of patient information on age of onset in essential tremor. *Movement Disorders* 2000;15:738-41. PMID: 10928590
2. **Schonberger RB**, Worden WS, Shahmohammadi K, Menn K, Silverman TJ, Stout RG, Shelley KH, Silverman DG. Topical non-iontophoretic application of acetylcholine and nitroglycerin via a translucent patch: a new means for assessing microvascular reactivity. *Yale Journal of Biology & Medicine* 2006;79:1-7. PMID: 17876370
3. **Schonberger RB**, Haddadin AS. The anesthesia patient with acute coronary syndrome. *Anesthesiology Clinics* 2010;28:55-66. PMID: 20400040
4. **Schonberger RB**, Burg MM, Holt NF, Lukens CL, Dai F, Brandt C. The relationship between day-of-surgery and primary care blood pressure among Veterans presenting from home for surgery. Is there evidence for anesthesiologist-initiated blood pressure referral? *Anesthesia & Analgesia* 2012;114:205-14. PMID: 22075017
5. **Schonberger RB**, Feinleib J, Lukens CL, Turkoglu OD, Haspel K, Burg M. Beta-blocker withdrawal among patients presenting for surgery from home. *Journal of Cardiothoracic & Vascular Anesthesia* 2012; 26(6):1029-33; PMID: 22418043

6. **Schonberger RB**, Burg M, Feinleib J, Dai F, Holt N, Brandt C, Atenolol Is Associated with Lower Day of Surgery Heart Rate as Compared to Long and Short-acting Metoprolol. *Journal of Cardiothoracic & Vascular Anesthesia* 2013; 27(2):298-304. PMID: 22889605
7. Odonkor CA, **Schonberger RB**, Dai F, Shelley KH, Silverman DG, Barash PG, New utility for an old tool: can a simple gait speed test predict ambulatory surgical discharge outcomes?, *American Journal of Physical Medicine and Rehabilitation* 2013; 92(10):849-63. PMID 24051992
8. Gipson KE, Rosinski DJ, **Schonberger RB**, Kubera C, Matthew ES, Nichols F, Dyckman W, Courtin F, Sherburne B, Bordey AF, Gross JB, Elimination of Gaseous Microemboli from Cardiopulmonary Bypass using Hypobaric Oxygenation, *Annals of Thoracic Surgery* 2014; 97:879-87. PMID: 24206970
9. **Schonberger RB**, Gilbertsen T, Dai F, The Problem of Controlling for Imperfectly Measured Confounders On Dissimilar Populations: A Database Simulation Study. *Journal of Cardiothoracic & Vascular Anesthesia* 2014;28:247-54. PMID: 23962461
10. **Schonberger RB**, Lampert RJ, Mandel EI, Feinleib J, Gong ZD, Honiden S, Handheld Doppler to Improve Pulse Checks during Resuscitation of Putative Pulseless Electrical Activity Arrest: A Case Series, *Anesthesiology* 2014;120: 1042-5. PMID: 24335750
11. Safavi K, Dai F, Gilbertsen T, **Schonberger RB**, Variation in surgical quality measure adherence within hospital referral regions: Do publicly reported surgical quality measures distinguish among hospitals that patients are likely to compare?, *Health Services Research* 2014;49:1108-20. PMID: 24611578
12. **Schonberger RB**, Feinleib J, Holt N, Dai F, Brandt C, Burg MM, Preoperative depression symptom severity and its impact on adherence to preoperative Beta-blocker therapy. *Journal of Cardiothoracic and Vascular Anesthesia* 2014;28: 1467-73. PMID: 25263776
13. Rosenbloom JM, **Schonberger RB**, Toward an understanding of the equality of pain: Crawford Long and the development of anesthesia in antebellum Georgia. *Journal of Anesthesia History* 2015; 1:14-7. PMID 25748368
14. Rosenbloom JM, **Schonberger RB**, The Outlook of Physician Histories: J. Marion Sims and “The Discovery of Anaesthesia.” *BMJ: Medical Humanities* 2015;41(2):102-6. PMID: 26048369
15. **Schonberger RB**, Dai F, Brandt C, Burg MM, Balancing Model Performance and Simplicity to Predict Postoperative Primary Care Blood Pressure Elevation. *Anesthesia & Analgesia* 2015;121(3):632-41. PMID: 26214552
16. **Schonberger RB**, Dutton R, Dai F, Is there evidence for systematic upcoding of American Society of Anesthesiologists Physical Status coincident with payer incentives? A regression discontinuity analysis of the National Anesthesia Clinical Outcomes Registry. *Anesthesia & Analgesia* 2016;122(1):243-50. PMID: 26360960
17. **Schonberger RB**, Dai F, Brandt C, Burg MM. Ambulatory Medical Follow-Up in the Year After Surgery and Subsequent Survival in a National Cohort of Veterans Health Administration Surgical Patients. *Journal of Cardiothoracic and Vascular Anesthesia*. 2016;30(3):671-9. PMID: 27021176
18. Akhtar S, Liu J, Heng J, Dai F, **Schonberger RB**, Burg MM. Does Intravenous Induction Dosing among Patients Undergoing Gastrointestinal Surgeries Follow Current Recommendations: A Study of Contemporary Practice. *Journal of Clinical Anesthesia*. 2016

Sep;33:208-15. PMID: 27555166

19. Akhtar S, Heng J, Dai F, **Schonberger RB**, Burg MM. A Retrospective Observational Study of Anesthetic Induction Dosing Practices in Female Elderly Surgical Patients: Are We Overdosing Older Patients? *Drugs and Aging*. 2016 Oct;33(10):737-46. PMID: 27581549
20. Nwozuzu A, Fontes ML, **Schonberger RB**. Mobile Extracorporeal Membrane Oxygenation (ECMO) Teams: The North American vs. European Experience; *Journal of Cardiothoracic and Vascular Anesthesia*. 2016 Dec;30(6):1441-1448. PMID: 27686513
21. Maracaja Neto L, Modak R, **Schonberger RB**. Orthogonal Views of Coronary Vessels: a Method for Imaging the Delivery of Blood Cardioplegia using TEE; *Anesthesia & Analgesia* 2017 Apr;124(4):1087-90.
22. Lee LO, Bateman BT, Kheterpal S, Klumpner TT, Housey M, Aziz MF, Hand KW, MacEachern M, Goodier CG, Bernstein J, Bauer ME; **Multicenter Perioperative Outcomes Group Investigators**. Risk of Epidural Hematoma after Neuraxial Techniques in Thrombocytopenic Parturients: A Report from the Multicenter Perioperative Outcomes Group. *Anesthesiology*. 2017 Apr 6 epub ahead of print. PMID:28383323
23. **Schonberger RB**, Dai F, Brandt C, Burg MM. The effect of race of post-surgical ambulatory medical follow-up among United States Veterans; *Journal of Clinical Anesthesia* 2017 (In Press).
24. Jiao Y, Gipson K, Bonde P, Mangi A, Hagberg R, Rosinski D, Gross J, **Schonberger RB**. Quantification of Postmembrane Gaseous Microembolization During Venous-Arterial Extracorporeal Membrane Oxygenation; *ASAIO Journal* (In Press).

Chapters, Books, and Reviews

25. **Schonberger RB**, Rosenbaum SH (Editors). Medically Complex Patients; Anesthesiology Clinics of North America; 34(4);Dec 2016. PMID: 27816137
26. **Schonberger RB**, Rosenbaum SH. Ethical Considerations. In: Ruskin KJ, Rosenbaum SH, eds. Anesthesia Emergencies second edition; Oxford: Oxford University Press, 2015.
27. **Schonberger RB**, Rosenbaum SH. Ethical Considerations. In: Ruskin KJ, Rosenbaum SH, eds. Anesthesia Emergencies Oxford: Oxford University Press, 2011:77-84.
28. **Schonberger RB**, Rosenbaum SH. Brain Death. In: Van Norman GA, ed. Clinical Ethics in Anesthesiology: A Case-Based Textbook Cambridge: Cambridge University Press, 2011:108-13.
29. **Schonberger RB**. Disorders of Fluid and Electrolytes. In: Hines RL and Marschall KE, ed. Stoelting's Anesthesia and Coexisting Disease, 6th Edition, Philadelphia: Churchill Livingstone, 2012
30. Grecu L, **Schonberger, RB**. Vascular Disease. In: Hines RL and Marschall KE, ed. Stoelting's Anesthesia and Coexisting Disease, 6th Edition, Philadelphia: Churchill Livingstone, 2012.

Invited Editorials and Commentaries

31. **Schonberger RB**, Barash PG. Impact vs. Impact Factor: Revisiting a Classic Article That Was Never Cited. [Short Title: Elmer I. McKesson and the Measurement of Blood Pressure], *Anesthesia & Analgesia* 2012; 115(6):1286-7; PMID: 22584555
32. **Schonberger RB**, Barash PG. They Did What...?. [Editorial accompanying Vannucci A, Jeffcoat A, Ifune C, Salinas CA, Duncan JR, Wall M. Retained Guidewires Following Intraoperative Placement of Central Venous Catheters.], *Anesthesia & Analgesia* 2013, 117(1):3-5.
33. **Schonberger RB**. The Importance of Cost as an Outcome in Anesthesiology Research, *Journal of Cardiothoracic and Vascular Anesthesia* 2016 Jan;30(1). PMID: 26711445

34. **Schonberger RB**. Rebranding the Perioperative Surgical Home: Lessons From the Duke Experience. *Journal of Cardiothoracic and Vascular Anesthesia* 2016 Aug;30(4):1064-6. PMID: 27313120

Case Reports, Technical Notes, Letters

35. **Schonberger RB**, Douglas L, Baum CR. Severe extrapyramidal symptoms in a 3-year-old boy after accidental ingestion of the new antipsychotic drug aripiprazole. *Pediatrics* 2004;114:1743. PMID: 15574656
36. **Schonberger RB**, Rosenbaum SH. Not much novel under the sun. *Science* 2009;326:1480-1. PMID: 20007882
37. **Schonberger RB**. Surgical demand time variance: a possible explanation for lunar effects and some other mysterious cycles. *Anesthesiology* 2009;111:204. PMID: 19546697
38. Schonberger LB, **Schonberger RB**. Etymologia: Prion. [Letter], *Emerg Infect Dis* 2012 Jun; 18:1030-1). PMID: 22607731
39. **Schonberger RB**. Ideal Blood Pressure Management and our Specialty: RE: Drummond, et al. "An Observational Study of the Influence of "White-coat Hypertension" on Day-of-Surgery Blood Pressure Determinations"; *Journal of Neurosurgical Anesthesiology* 2014 Jul;26:270-1. PMID: 24905036
40. **Schonberger RB**. Random Errors and Misclassification Bias; *Anesthesia and Analgesia* (2014 Aug;119:497-8). PMID: 25046792

Scholarship In Press

41. **Schonberger RB**, Barash PB. Aortic Regurgitation. In: Fleisher LA, Roizen, MF eds. Essence of Anesthesia Practice, 4th edition; Philadelphia: Saunders, 2016 (In Press).

Other Nationally Published Writings:

42. **Schonberger RB** Reclaiming the Hamantaschen: A Lifetime of Adventures Wrapped in One Cookie, *The Forward*, March 13, 2009.
43. **Schonberger RB**. Ask the Rabbi: What the Sages of Old Would Have Said About the Bailout. *The Wall Street Journal*. Vol. 252 (133), December 5, 2008.

Educational Courses:

March 2017: Anesthesiology Department Grand Rounds "Progress and Lack of Progress on Lung Protective Ventilation in the first 6 months of ASPIRE."

January 2016: Elimination of Gaseous Microemboli by Hypobaric Oxygenation: Cardiothoracic Fellow Lecture Series at Yale

January 2015: Gaseous Microemboli in Extracorporeal Circuits: Cardiothoracic Fellow Lecture Series at Yale

December 2014: Gaseous Microemboli and the Cardiopulmonary Bypass Patient: Cardiothoracic Fellow Lecture Series at Yale

January 2015: Gaseous Microemboli in Extracorporeal Circuits: Cardiothoracic Fellow Lecture Series at Yale

April 2013: Introduction to Cardiac Anesthesia: CA-1 Lecture Series at Yale

March 2013: Extracorporeal Circuits: Cardiothoracic Fellow Lecture Series at Yale