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**CURRICULUM VITAE**

DANIEL OSCAR SCHARFSTEIN

**PERSONAL DATA***Home:*

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**EDUCATION AND TRAINING**

ScD	1996	Harvard University, School of Public Health	Biostatistics
MS	1994	Harvard University, School of Public Health	Biostatistics
MS	1990	Georgia Institute of Technology	Operations Research
BS	1988	University of Pennsylvania	Economics
BS	1988	University of Pennsylvania	Applied Science

**PROFESSIONAL EXPERIENCE**

2008-	Professor, Department of Biostatistics The Johns Hopkins University, Bloomberg School of Public Health
2003-	Director of Graduate Program, Department of Biostatistics The Johns Hopkins University, Bloomberg School of Public Health
2002-2008	Associate Professor, Department of Biostatistics The Johns Hopkins University, Bloomberg School of Public Health
1997-2002	Assistant Professor, Department of Biostatistics The Johns Hopkins University, Bloomberg School of Public Health
1996-1997	Postdoctoral Research Fellow, Department of Biostatistics Harvard University, School of Public Health
1992-1996	Research and Teaching Assistant, Department of Biostatistics Harvard University, School of Public Health
1990-1991	Research and Teaching Assistant, Department of Operations Management Massachusetts Institute of Technology, Sloan School of Management

**PROFESSIONAL EXPERIENCE (continued)**

- 1988-1990      Research Assistant, Department of Operations Research  
Georgia Institute of Technology
- Summer 1987    Quantitative Analyst, Salomon Brothers Inc.
- 1986-1987      Technical Consultant, Growth Properties, Inc.
- 1985-1986      System Programmer, Department of Decision Sciences  
University of Pennsylvania, Wharton School of Business

**PROFESSIONAL AFFILIATIONS***Memberships:*

American Statistical Association  
International Biometric Society  
Institute of Mathematical Statistics

**PROFESSIONAL ACTIVITIES**

- 2005            FDA/CBER Vaccines and Related Biological Products Advisory Committee –  
Herpes Zoster Vaccine (ZOSTAVAX)
- 2003-            NIAID Therapeutic Trials Data and Safety Monitoring Committee
- 2003-            FDA, Special Government Employee
- 2002-2003      IMS Program Chair for ENAR-2003
- 1999-2001      ENAR Regional Advisory Board
- 2000            Visiting Scholar, Department of Biostatistics, University of California at  
Berkeley

**EDITORIAL ACTIVITIES**

- 2006-            Editorial Board, *Clinical Trials*
- 2005-            Statistical Reviewer, *Journal of the American Medical Association*
- 1999-2007      Associate Editor, *Biometrics*

*Other Peer Reviewed Activities:*

The Annals of Statistics; Annals of the Institute of Statistical Mathematics;  
Applied Statistics; Biometrical Journal; Biometrics; Biometrika;  
Biostatistics; Econometric Reviews; Journal of the American Statistical Association;  
Journal of the Royal Statistical Society; Journal of Statistical Inference and Planning;  
NSF Grant Proposals; Risk Analysis; Sequential Analysis; Statistica Neerlandica;  
Statistica Sinica; Statistical Science; Statistics in Medicine; Clinical Trials; Health  
Services and Outcomes Research Methodology; Biometrical Journal; Journal of the  
American Medical Association; American Journal of Epidemiology

## HONORS AND AWARDS

2003	Advising, Mentoring and Teaching Recognition Award
2002	Golden Apple Award Nominee
2000-2001	Bloomberg School of Public Health's Ho-Ching Yang Memorial Faculty Award
2001	Golden Apple Award Nominee
2000	Advising, Mentoring and Teaching Recognition Award
1999	JASA Theory and Methods, Special Invited Paper
1999	George W. Snedecor Award for Best Paper in Biometry
1997	Travel Award, Statistica Sinica
1995	Student Travel Award, Society for Clinical Trials
1992-1994	National Institutes of Health Training Grant Recipient
1994	Student Travel Award, ENAR
1990	Outstanding Thesis Prize, Georgia Institute of Technology
1990	Summa Cum Laude, Georgia Institute of Technology
1988-1990	Presidential Fellow, Georgia Institute of Technology
1988	Magna Cum Laude, University of Pennsylvania
1988	Beta Alpha Psi Accounting Honor Society

## PUBLICATIONS

### *Journal Articles:*

Catalano PJ, **Scharfstein DO**, Ryan LM, Kimmel CA, and Kimmel GL: "Statistical Model for Fetal Death, Fetal Weight, and Malformation in Developmental Toxicity Studies," *Teratology* 47:281-290, 1993.

Catalano PJ, Ryan LM, and **Scharfstein DO**: "Modeling Fetal Death and Malformation in Developmental Toxicity Studies," *Risk Analysis* 14: 629-637, 1994.

**Scharfstein DO** and Williams PL: "Design of Developmental Toxicity Studies for Assessing the Joint Effects of Dose and Duration," *Risk Analysis* 14:1057-1071, 1994.

**Scharfstein DO**, Tsiatis AA and Robins JM: "Semiparametric Efficiency and Its Implication on the Design and Analysis of Group Sequential Studies," *Journal of the American Statistical Association* 92:1342-1350, 1997.

**Scharfstein DO** and Tsiatis AA: "The Use of Simulation and Bootstrap in Information-Based Group Sequential Studies," *Statistics in Medicine* 17:75-87, 1998.

**Scharfstein DO**, Tsiatis AA, and Gilbert, P: "Semiparametric Efficient Estimation in the Generalized Odds-Rate Class of Regression Models for Right-Censored Time to Event Data," *Lifetime Data Analysis*, 4, 355-392, 1998.

Rotnitzky A, Robins JM, and **Scharfstein DO**: "Semiparametric Regression for Repeated Outcomes with Non-ignorable Non-response," *Journal of the American Statistical Association*, 93, 1321-1339, 1998.

*Journal Articles (continued):*

**Scharfstein DO**, Rotnitzky A, and Robins, JM.: “Adjusting for Non-ignorable Drop-out Using Semiparametric Non-response Models (with discussion),” Special Invited Paper for the Theory and Methods Section of *Journal of the American Statistical Association*, 94, 1096-1146, 1999.

Guyer B, Hughart N, Strobino D, Jones A, and **Scharfstein DO**: “Assessing the Impact of Pediatric-Based Developmental Services on Infants, Families, and Clinicians: Challenges to Evaluating the Healthy Steps Program,” *Pediatrics*, 105:e33, 2000.

Robins JM, Rotnitzky A, and **Scharfstein DO**: “Sensitivity Analysis for Selection Bias and Unmeasured Confounding in Missing Data and Causal Inference Models,” in *Statistical Models for Epidemiology*, E. Halloran, Editor, Springer-Verlag, p1-94, 2000.

Rotnitzky A, **Scharfstein DO**, Su TL, and Robins JM: “A Sensitivity Analysis Methodology for Randomized Trials with Potentially Non-ignorable Cause-Specific Censoring,” *Biometrics*, 57:103-113, 2001.

**Scharfstein DO**, Robins JM, Eddings W and Rotnitzky A: “Inference in Randomized Studies with Informative Censoring and Discrete Time-to-Event Endpoints,” *Biometrics*, 57: 404-413, 2001.

Minkovitz C, Strobino D, Hughart N, **Scharfstein DO**, and Guyer, B. “Healthy Steps for Young Children Program,” *Archives of Pediatrics and Adolescent Medicine*, 155: 475-479, 2001.

**Scharfstein DO**, Liang K-Y, Eaton W, and Chen L-S: “The Quadratic Cumulative Odds Regression Model for Scored Ordinal Outcomes: Application to Alcohol Dependence,” *Biostatistics*, 2(4)473-483, 2001.

**Scharfstein DO** and Robins JM: “Estimation of the Failure Time Distribution in the Presence of Informative Right Censoring,” *Biometrika* 89:617-635, 2002.

**Scharfstein DO**, Daniels M, and Robins JM: “Incorporating Prior Beliefs About Selection Bias in the Analysis of Randomized Trials with Missing Data,” *Biostatistics*, 4: 495-512, 2003.

**Scharfstein DO** and Irizarry R: "Generalized Additive Selection Models for the Analysis of Non-ignorable Missing Data," *Biometrics*, 59, 601-613, 2003.

Minkovitz C, Strobino D, Hughart N, Miller T, **Scharfstein DO**, Bishai D, Guyer B: “Introduction of Developmental Specialists in Pediatrics Practices: Provider Perspectives from Healthy Steps,” *Ambulatory Pediatrics*, 3, 295-303, 2003.

*Journal Articles (continued):*

Minkovitz CS, Hughart N, Strobino D, **Scharfstein DO**, Grason H, Hou, W Miller T, Bishai D, Augustyn M, McLearn KT and Guyer, B: "A Practice-Based Intervention to Enhance Quality of Care in the First Three Years of Life: Results from the Healthy Steps for Young Children Program," *Journal of the American Medical Association*, 290: 3081-3091, 2003.

**Scharfstein DO**, Manski CF, and Anthony JC: "On the Construction of Bounds in Prospective Studies with Missing Ordinal Outcomes: Application to the Good Behavior Game Trial," *Biometrics*, 60: 154-164, 2004.

Lin H, **Scharfstein DO**, Rosenheck RA: "Analysis of Longitudinal Data with Irregular, Informative Follow-up," *Journal of the Royal Statistical Society, Series B*, 66: 791-813, 2004.

McLearn KT, Strobino DM, Hughart N, Minkovitz CS, **Scharfstein DO**, Marks E, Guyer B. "Developmental Services in Primary Care for Low-Income Children: Clinicians' Perceptions of the Healthy Steps for Young Children Program," *Journal of Urban Health*; 81:206-221, 2004.

Cotter DJ, Stefanik K, Zhang Y, Thamer M, **Scharfstein DO**, Kaufman J. "Hematocrit was Not Validated as a Surrogate End Point for Survival Among Epoetin-treated Hemodialysis Patients," *Journal of Clinical Epidemiology* 57: 1086-1095, 2004.

Minkovitz CS, Strobino D, **Scharfstein DO**, Hou W, Miller T, Mistry KB, and Swartz K: "Maternal Depressive Symptoms and Children's Receipt of Health Care in the First Three Years of Life," *Pediatrics* 115:306-314, 2005

Epstein JI, Sanderson H, Carter HB, **Scharfstein DO** "The Utility of Saturation Biopsy to Predict Insignificant Cancer at Radical Prostatectomy," *Urology* 66: 356-60, 2005.

Mackenzie EJ, Rivera FP, Jurkovich GJ, Nathens AB, Frey KP, Egleston BJ, Salkever DS, **Scharfstein DO** "A National Evaluation of the Effect of Trauma Center Care on Mortality," *New England Journal of Medicine* 354: 366-378, 2005.

Needham DM, Dennison CR, Dowdy DW, Mendez-Tellez PA, Ciesla N, Desai SV, Sevransky J, Shanholtz C, **Scharfstein DO**, Herridge MS, Pronovost PJ. "Study Protocol: The Improving Care of Acute Lung Injury Patients (ICAP) Study," *Critical Care* 10: R9, 2006.

Hogan J and **Scharfstein DO**. "Estimating Causal Effects from Multiple Cycle Data in Studies of in vitro Fertilization (IVF)," *Statistical Methods in Medical Research*. 15: 195-209, 2006

*Journal Articles (continued):*

**Scharfstein DO**, Halloran ME, Chu H, and Daniels MJ: “On Estimation of Vaccine Efficacy Using Validation Samples with Selection Bias,” *Biostatistics*, 7: 615-629, 2006.

Nathens AB, Rivera FP, MacKenzie EJ, Maier RV, Wang J, Egleston B, **Scharfstein DO**, Jurkovich GJ: “The Impact of an Intensivist-Model ICU on Trauma-Related Mortality,” *Annals of Surgery*. 244: 545-554, 2006.

Egleston B, **Scharfstein DO**, Freeman E, West S: “Causal Inference for Non-morbidity Outcomes in the Presence of Death,” *Biostatistics*, 8: 526-545, 2007.

Shardell M, **Scharfstein DO**, Bozzette SA: “Survival Curve Estimation for Informatively Coarsened Discrete Time-to-Event Data,” *Statistics in Medicine*, 26: 2184-2202, 2007.

Rotnitzky A, Farall A, Bergesio A, **Scharfstein DO**: “Analysis of failure time data under competing censoring mechanisms,” *Journal of the Royal Statistical Society, Series B*, 69: 307-327, 2007.

Li X, Caffo B, **Scharfstein DO**: “On the Potential for Ill-logic with Logically Defined Outcomes,” *Biostatistics*. 8: 800-804, 2007.

Minkovitz CS, Strobino D, Mistry KB, **Scharfstein DO**, Grason H, Hou W, Ialongo N, Guyer B: “Healthy Steps for Young Children: Sustained Results at 5 ½ Years,” *Pediatrics*, 120: e658-e668, 2007.

Eaton WW, Kalaydjian A, **Scharfstein DO**, Mezuk B, Ding Y: “Prevalence and Incidence of Depressive Disorder: the Baltimore ECA Followup, 1981-2204,” *Acta Psychiatrica Scandinavica*, 116: 182-188, 2007.

Rivara FP, MacKenzie EJ, Jurkovich GJ, Nathens AB, Wang J, **Scharfstein DO**: “Prevalence of pain in patients one year following major trauma,” *Archives of Surgery*, 143: 282-287, 2008.

Mackenzie EJ, Rivara FP, Jukovich GJ, Nathens AB, Egleston BL, Salkever DS, **Scharfstein DO**: “The Impact of Trauma Center Care on One-Year Functional Outcomes Following Major Lower Limb Trauma,” *Journal of Bone and Joint Surgery*, 90: 101-109, 2008.

**Scharfstein DO**, Ryea JL and Caffo B: “Accounting for Within Patient Correlation in Assessing Relative Sensitivity of an Adjunctive Diagnostic Test,” *Statistics in Medicine*, 27: 2110-2126, 2008.

Boult C, Reider L, Frey, K, Leff, B, Boyd CM, Wolff J, Wegener S, Marsteller J, Karm L, **Scharfstein DO**: “The Early Effects of "Guided Care" on the Quality of Health Care for Multi-Morbid Older Persons: A Cluster-Randomized Controlled Trial,” *Journal of Gerontology: Medical Sciences*, 63A: 321-327, 2008.

*Journal Articles (continued):*

Bozzette SA, Ake CF, Tam HK, Phippard A, Cohen D, **Scharfstein DO**, Louis TL: "Long term Survival and Serious Cardiovascular Events in HIV Patients Treated with Highly Active Antiretroviral Therapy," *Journal of AIDS*, In Press.

Brotman RM, Ghanem KG, Klebanoff MA, Taha TE, **Scharfstein DO**, Zenilman JM: "The Effect of Vaginal Douching Cessation on Bacterial Vaginosis: A Pilot Study," *American Journal of Obstetrics and Gynecology*, In Press.

Brotman RM, Klebanoff MA, Nansel T, Andrews WW, Zhang J, Schwebke JR, Kai FY, Zenilman JM, and **Scharfstein DO**: "A Longitudinal Study of Vaginal Douching and Disruption of Vaginal Flora - A Marginal Structural Modeling Analysis." *American Journal of Epidemiology*. In Press.

Egleston BL, **Scharfstein DO**, Mackenzie EJ: "On Estimation of the Survivors Average Causal Effect in Observational Studies when Important Confounders are Missing Due to Death," *Biometrics*. In Press.

Shardell M, **Scharfstein DO**, Vlahov D, Galai N: "Inference for Cumulative Incidence Functions with Informatively Coarsened Discrete Event-Time Data." *Statistics in Medicine*. In Press.

Shardell M, **Scharfstein DO**, Vlahov D, Galai N: "Sensitivity Analysis Using Elicited Expert Information for Inference with Coarsened Data: Illustration of Censored Discrete Event Times in ALIVE." *American Journal of Epidemiology*. In Press.

Dodd-o J, Hristopoulos M, **Scharfstein DO**, Brower R, Hassoun P, Becker P, Liu M, Wang W, King L, Rabb H: "Interactive Effects of Mechanical Ventilation and Kidney Health on Lung Function in an In Vivo Mouse Model" *American Journal of Physiology: Lung Cellular and Molecular Physiology*. In Press.

Joffe A, McNeely C, Johnson E, An M, Wang W, **Scharfstein DO**: "Evaluation of School-Based Multi- versus Single-Session Group Smoking Cessation Interventions for Self-Described Adolescent Smokers." *Pediatrics*, To Appear.

Wolff JL, Rand-Giovanetti E, Palmer, S, Wegener S, Rieder, L, Frey K, **Scharfstein DO**, Boulton CB "Caregiving and Chronic Care: The Guided Care Program for Families and Friends." *Journal of Gerontology: Medical Sciences*. To Appear.

*Articles Under Revision or Review:*

Egleston B, **Scharfstein DO**, Munoz B, West S: “Investigating mediation when counterfactuals are not metaphysical: Does sunlight UVB exposure mediate the effect of eyeglasses on cataracts?” Under Revision.

Jones AS, **Scharfstein DO**, Levine D, Camacho F: “Effect Size Measures for Binary Outcomes: Odds Ratio, Correlation Coefficient, and Binomial Effect Size Display,” Under Revision.

**Scharfstein DO**, Robins JM, van der Laan: “Semiparametric Bivariate Linear Regression Model for Analyzing Semi-Competing Risks Data.” Under Revision, *Journal of the American Statistical Association*.

Frick KD, **Scharfstein DO**, Clark MA, Munro MG, Dickersin K: “Statistical Considerations for QALY Estimators in Studies with Chronic and Intermittently Symptomatic Conditions,” Under Revision, *Medical Decision Making*.

Wang W, **Scharfstein DO**, Eaton WW: “Estimating Age-Specific Incidence Proportions in the Presence of Non-Response and Death” *Biometrics*, Under Revision.

**Scharfstein DO**, Onicescu G, Goodman S: “On the Analysis of Subgroup Effects in Randomized Trials When Subgroup Membership is Informatively Missing: Application to the MADIT II Study.” *Journal of Royal Statistical Society, Series A*, Under Review.

Wang W, **Scharfstein DO**, Tan Z, and MacKenzie EJ: “Causal Inference in Observational Studies with Outcome Dependent Sampling.” *Journal of Royal Statistical Society, Series B*, Under Revision.

**Scharfstein DO**, Achy-Brou A: “Global Sensitivity Analysis of Randomized Trials with Informative Drop-out: A Semi-parametric Perspective” *Drug Information Journal*. Under Review.

Needham DM, Wang W, Brower R, **Scharfstein DO**: “Does Physician Deviation from Treatment Protocol Improve Mortality in Trials of Lung Protective Mechanical Ventilation for Acute Lung Injury?” *American Journal of Respiratory Critical Care Medicine*, Under Review.

Wang W, **Scharfstein DO**, Needham D, Brower R: “Estimating the Causal Effect of Lower Tidal Volume Ventilation on Survival in Patients with Acute Lung.” *Journal of Royal Statistical Society, Series C*, Under Review.

Leff B, Reider L, Frick K, **Scharfstein DO**, Boyd C, Frey K, Karm L, Boulton C: “The Early Effects of ‘Guided Care’ on Multi-Morbid Older Patient’s Use and Cost of Health Services: A Randomized Controlled Trial.” *American Journal of Managed Care*, Under Review.

*Works in Progress:*

**Scharfstein DO**, Griswold M, Shi Y, Schwab B: “Sensitivity Analysis in Action: An Evaluation of the Effectiveness of Toprimate in the Presence of Informative Drop-out.”

Cohen D, Louis T, **Scharfstein DO**: “Refining Bounds on Partially Identified Probability Distributions Using Instrumental Variables.”

**Scharfstein DO**, Egleston B, MacKenzie E: “Do Trauma Centers Save Lives: Statistical Analysis of the NSCOT Study.”

Scharfstein DO and Hsu H-C: “The Use of Randomized Incentives in Studies with Missing Outcome Data.”

**Scharfstein DO**, Wang W, Achy-Brou A, McDemott A, Hulihan J, Wiegand F, and Olson WH: “Sensitivity Analysis for Randomized Trials with Potentially Informative Missing Outcomes: A Case Study.”

Daniels MJ and **Scharfstein DO**: “Bayesian Inference for Principal Stratification Treatment Effects in Randomized Trials with Protocol and Non-protocol Drop-out.”

**Scharfstein DO**, Wang S: An Analytical Strategy for A Smoking Cessation Trial with Informative Missing Data

Achy-Brou A, **Scharfstein DO**: Enhanced Sensitivity Analysis Procedures for Randomized Studies with Premature Loss to- Follow-up.

*Other:*

**Scharfstein DO**: “Analytical Performance Measures for the Miniload Automated Storage and Retrieval Systems.” Masters Thesis, Georgia Institute of Technology, 1990.