

# AMELIA M. HAVILAND

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## CONTACT INFORMATION

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Heinz College, Carnegie Mellon University  
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## CURRENT POSITION

**Carnegie Mellon University**, Pittsburgh, PA  
*Associate Professor of Statistics and Health Policy*, H. John Heinz III College of Public Policy & Management

**July 2011 – Present**

**RAND Corporation**, Pittsburgh, PA  
*Senior Statistician, Adjunct Full Statistician Associate Statistician*

**May 2011 – Present**

September 2004 – June 2007

## EDUCATION

**Carnegie Mellon University**, Pittsburgh, PA  
Ph.D., Joint Degree in Statistics and Public Policy, October 2003.  
Dissertation Title: “Understanding Gender and Racial Wage Gaps among the Highly Educated”  
Co-chairs: Stephen Fienberg, Prof. of Statistics, Lowell Taylor, Prof. of Economics  
M.S., Statistics, May 2000

**Hampshire College**, Amherst, MA  
B.A., Concentration in Mathematics and Education, May, 1991

## HONORS AND AWARDS

Received Anna Loomis McCandless Professorship, an endowed Chair, October, 2011.

Received Thomas Lord Distinguished Scholar award in 2009 from the RAND Institute for Civil Justice. Award given for excellence in research and institutional contributions.

Fellowship for Younger Scholars, a dissertation fellowship, MacArthur Research Network on Social Interactions and Economic Inequality, 2002–2003

Wray Jackson Smith Scholarship, Section on Government Statistics, American Statistical Association, August 2002

DeGroot Fellowship, Department of Statistics, Carnegie Mellon University, 1998–1999

## JOURNAL PUBLICATIONS

Farley, Donna, Haviland, Amelia, Haas, Ann, Pham, Chau, Battles, James, Munier, William. “Changes in Hospital Adverse Event Reporting Systems, 2005 and 2009.” *BMJ Quality & Safety* (forthcoming, 2012).

Snodgrass, G. Matthew, Blokland, Arjan, Haviland, Amelia M., Nieuwebeerta, Paul, Nagin, Daniel S. “Does the Time Cause the Crime? An Examination of the Relationship Between Time Served and Reoffending.” *Criminology* (forthcoming, 2012).

Haviland, Amelia M., Jones, Bobby L., Nagin, Daniel S. “Group-Based Trajectory Modeling Extended to Account for Non-Random Subject Attrition”, *Sociological Methods & Research* (forthcoming, 2012).

MacDonald, John M., Brame, Robert, Haviland, Amelia M., Morral, Andrew R. “Assessing the Effect of Community-Based Substance Use Treatment on Dimensions of Criminal Involvement,” *Journal of Experimental Criminology* (forthcoming, 2012).

- Klein DJ, Elliott MN, Haviland AM, Saliba D, Burkhart Q, Edwards C, Zaslavsky AM. (2011) "Understanding Nonresponse to the 2007 Medicare CAHPS Survey." *The Gerontologist*, doi: 10.1093/geront/gnr046
- Amelia M. Haviland, Neeraj Sood, Roland D. McDevitt, and M. Susan Marquis (2011) "The Effects of Consumer-Directed Health Plans on Episodes of Health Care," *Forum for Health Economics & Policy*, 14(2) (Health Policy), Article 9. <http://www.bepress.com/fhpep/14/2/9>
- Haviland, Amelia M., Sood, N., McDevitt, R. and Marquis, S.M. (2011) "How Do Consumer-Directed Health Plans Affect Vulnerable Populations?," *Forum for Health Economics & Policy*, 14(2) (Health Policy), Article 3. <http://www.bepress.com/fhpep/14/2/3>
- Farley Donna O., Elliott Marc N., Haviland Amelia M., Slaughter Mary, Heller Amy. (2011) "Understanding Variations in Medicare CAHPS Scores: California as an Example" *Health Services Research*. doi: 10.1111/j.1475-6773.2011.01279.x
- Beeuwkes-Buntin, Melinda, Haviland, Amelia M., McDevitt, Roland, Sood, Neeraj. (2011) "Healthcare Spending and Preventive Care in High-Deductible and Consumer-Directed Health Plans," *American Journal of Managed Care*, 17(3):222-230.
- Elliott, Marc N., Haviland, Amelia M., Orr, Nate, Hambarsoomian, Katrin, Cleary, Paul D. (2011) "How Do the Experiences of Medicare Beneficiary Subgroups Differ Between Managed Care and Original Medicare?" *Health Services Research Journal*, DOI: 10.1111/j.1475-6773.2011.01245.x , [Epub Feb 2011].
- Haviland, Amelia, M., Elliott, Marc N., Hambarsoomian, Katrin, Lurie, Nicole. (2011) "Immunization Disparities by Hispanic Ethnicity and Language Preference," *Archives of Internal Medicine*, 171(2):158-165.
- Shadel, William G., Martino, Steven C., Haviland, Amelia M., Setodji, Claude Messan, Primack, Brian, A. (2010) "Smoking Motives in Movies are Important for Understanding Adolescent Smoking: A Preliminary Investigation," *Nicotine & Tobacco Research*, 12(8):850-854.
- Liu, Hangsheng, Burns, Rachel M., Schaefer, Agnes G., Ruder, Teague, Nelson, Christopher, Haviland, Amelia M., Gray, Wayne B. and Mendeloff, John. (2010) "The Pennsylvania Certified Safety Committee Program: An Evaluation of Participation and Effects on Work Injury Rates," *American Journal of Industrial Medicine*, 53(8):780-791.
- Haviland, Amelia M., Burns, Rachel M., Gray, Wayne B., Ruder, Teague, Mendeloff, John M. (2010) "What Kinds of Injuries do OSHA Inspections Prevent?" *Journal of Safety Research*, 14:339-345.
- Heller, Amy, Elliott, Marc N., Haviland, Amelia M., Klein, David J., Kanouse, David E. (2009). "Patient Activation Status as a Predictor of Patient Experience among Medicare Beneficiaries," *Medical Care*, 47(8):850-857.
- Ramchand, Rajeev, MacDonald, John M., Haviland, Amelia M., Morral, Andrew R. (2009). "A Developmental Approach for Measuring the Severity of Crimes," *Journal of Quantitative Criminology*, 25:129-153.
- Yu, Hao, Greenberg, Michael D., Haviland, Amelia M., Farley, Donna O. (2009). "Canary Measures among the AHRQ Patient Safety Indicators," *American Journal of Medical Quality*, 24(6):465-473.

- Ghosh-Dastidar, Bonnie, Elliott, Marc N., Haviland, Amelia M. (2009). "Composite Estimates from Incomplete and Complete Frames for Minimum-MSE Estimation in a Rare Population: An Application to Families with Young Children," *Public Opinion Quarterly*, 73(4):761-784.
- MacDonald, John M., Haviland, Amelia M., Morral, Andrew R. (2009) "Assessing the Relationship Between Violent and Nonviolent Criminal Activity Among Serious Adolescent Offenders," *Journal of Research in Crime and Delinquency*, 46(4):553-580.
- Schultz, Dana, Tharp-Taylor, Shannah, Haviland, Amelia M., Jaycox, Lisa H. (2009). "The Relationship Between Protective Factors and Outcomes for Children Investigated for Maltreatment," *Child Abuse & Neglect*, 33(10):684-698.
- Tharp-Taylor Shannah, Haviland, Amelia, M., D'Amico, Elizabeth J. (2009). "Victimization from Mental and Physical Bullying and Substance Use in Early Adolescence," *Addictive Behaviors*, 34(6/7):561-567.
- Elliott, Marc N., Haviland, Amelia M., Kanouse, David E., Hambarsoomian, Katrin, Hays, Ron D. (2009). "Adjusting for Subgroup Differences in Extreme Response Tendency in Ratings of Health Care: Impact on Disparity Estimates," *Health Services Research Journal*, 44(2):542-561.
- Sorbero, Melony E., Ricci, Karen A., Lovejoy, Susan, Haviland, Amelia M., Smith, Linda, Bradley, Lily A., Hiatt, Liisa, Farley, Donna O. (2009) "Assessment of Contributions to patient Safety Knowledge by the Agency for Healthcare Research and Quality-Funded Patient Safety Projects," *Health Services Research Journal*, 44(2p2), 646-664.
- Greenberg, Michael, Haviland, Amelia M., Yu, Hao, Farley, Donna O. (2008). "Safety Outcomes in the United States: Trends and Challenges in Measurement," *Health Services Research, Patient Safety Evaluation Special Issue*, 44(2p2):739-755.
- Farley, Donna O., Haviland, Amelia M., Champagne, Stacey, Jain, Arvind, Battles, JB, Munier, William B., Loeb, Jerod M. (2008). "Adverse Event Reporting Practices by U.S. Hospitals Results of a National Survey," *Quality Safety Health Care*, 17(6):416-423.
- Dausey, David J., Chandra, Anita, Schaefer, Agnes G., Bahney, Benjamin, M., Haviland, Amelia M., Zakowski, Sarah, Lurie, Nicole. (2008). "Measuring the Performance of Telephone-Based Disease Surveillance," *American Journal of Public Health*, 98(9):1706-1711.
- Haviland, Amelia M., Nagin, Daniel S., Rosenbaum, Paul, Tremblay, Richard. (2008). "Combining Group-Based Trajectory Modeling and Propensity Score Matching for Causal Inferences in Nonexperimental Longitudinal Data," *Developmental Psychology*, 44(2):422-436.
- Black, Dan, Haviland, Amelia M., Sanders, Seth, Taylor, Lowell. (2008). "Gender Wage Disparities among the Highly Educated," *Journal of Human Resources*, 43(2):630-659.
- Elliott, Marc N., Haviland, Amelia M. (2007). "Use of a Web-based Convenience Sample to Supplement a Probability Sample," *Survey Methodology*, 33(2):211-215.
- Haviland, Amelia M., Nagin, Daniel S., Rosenbaum, Paul. (2007). "Combining Propensity Score Matching and Group-Based Trajectory Analysis in an Observational Study," *Psychological Methods*, 12(3):247-267.
- Haviland, Amelia M., Nagin, Daniel S. (2007). "Using group-based trajectory modeling in conjunction with propensity scores to improve balance," *Journal of Experimental Criminology*, 3:65-82.
- Apel, Robert, Brame, Robert, Bushway, Shawn, Haviland, Amelia, M., Nagin, Daniel S., Paternoster. (2007). "Unpacking the Relationship Between Adolescent Employment and Antisocial Behavior: A Matched Samples Comparison," *Criminology*, 45(1):67-97.

Beeuwkes-Buntin, Melinda, Damberg, Cheryl, Haviland, Amelia, Kapur, Kanika, Lurie, Nicole, McDevitt, Roland, Marquis, M. Susan. (2006). "Consumer-Directed Health Care: Early Evidence About Effects On Cost and Quality," *Health Affairs*, 25(6):516-530.

Black, Dan, Haviland, Amelia, Sanders, Seth, Taylor, Lowell. (2006). "Why Do Minority Men Earn Less? A Study of Wage Differentials among the Highly Educated," *Review of Economics and Statistics*, 88(2):300-313.

Haviland, Amelia M., Nagin, Daniel S. (2005). "Causal Inferences with Group Based Trajectory Models: A Gang Membership and Delinquent Violence Application," *Psychometrika*, 70(3):557-578.

Daponte, Beth O., Haviland, Amelia M., Kadane, Joseph B. (2004). "To What Degree Does Food Assistance Help Poor Households Acquire Enough Food?" *Journal of Poverty*, 8(2):63-87.

Fienberg, Stephen, Haviland, Amelia M. (2003). "Can We Measure the Causal Effect of Discrimination?" A Comment on 'Statistics and Causal Inference: A Review' by Judea Pearl," *Test*, 12(2):319-327.

Jacobs, Alice K., Johnston, Janet M., Haviland, Amelia M., Mori Brooks, Maria, Kelsey, Sheryl F., et al. (2002). "Improved Outcomes For Women Undergoing Contemporary Percutaneous Coronary Intervention: A Report From the National Heart, Lung, and Blood Institute Dynamic Registry." *Journal of the American College of Cardiology*, 39(10):1608-1614.

Holubkov, Richard, Laskey, Warren K., Haviland, Amelia, M., Slater, James C., Bourassa, Martial G., et al. (2002). "Angina One Year after Percutaneous Coronary Intervention: A Report from the NHLBI Dynamic Registry." *American Heart Journal*, 144(5):826-833.

RAND  
PUBLICATIONS

Greenberg, Michael, D., Haviland, Amelia, M. Ashwood, Scott, J., Main, Regan. *Is Better Patient Safety Associated with Less Malpractice Activity?: Evidence from California*, Santa Monica, Calif.: RAND Corporation, TR-824-ICJ, 2010.

Farley, Donna O., Greenberg, Michael D., Haviland, Amelia M. *Prioritizing Patient Safety Outcomes Measures: Results of an Expert Consensus Process*, Santa Monica, Calif.: RAND Corporation, WR-601-AHRQ, 2008.

Farley, Donna O., Ridgely, M. Susan, Mendel, Peter, Teleki, Stephanie S., Damberg, Cheryl, Shaw, Rebecca, Greenberg, Michael, Haviland, Amelia, M., Hussey, Peter S., Dembosky, Jacob W., Yu, Hao, Brown, Julie, Pham, Chau, Ashwood, Scott J. *Assessing Patient Safety Practices and Outcomes in the U.S. Health Care System*, Santa Monica, Calif.: RAND Corporation, TR-725-AHRQ, 2009.

Greenberg, Michael, D., Haviland, Amelia, M. *Issues and Performance in the Pennsylvania Workers' Compensation System*, Santa Monica, Calif.: RAND Corporation, OP-216-PA, 2008.

Greenberg, Michael, D., Haviland, Amelia, H. *Workers' Compensation in Pennsylvania: How Is the System Performing? How Should It Be Reformed?*, Santa Monica, Calif.: RAND Corporation, RB-9333-PA, 2008.

Farley, Donna O., Damberg, Cheryl, Ridgely, M. Susan, Sorbero, Melony E., Greenberg, Michael D., Haviland, Amelia M., Teleki, Stephanie S., Mendel, Peter, Bradley, Lily A., Dembosky, Jacob W., Fremont, Allen M., Nuckols, Teryl K., Shaw, Rebecca, Straus, Susan G., Taylor, Stephanie, Yu, Hao, Tharp-Taylor, Shannah. *Assessment of the AHRQ Patient Safety Initiative Final Report: Evaluation Report IV*, Santa Monica, Calif.: RAND Corporation, TR-563-AHRQ, 2008.

Beeuwkes Buntin, Melinda, Damberg, Cheryl, Haviland, Amelia M., Kapur, Kanika, Lurie, Nicole, McDevitt, Roland, Marquis, M. Susan. *Consumer-Directed Health Care: Early Evidence About Effects On Cost And Quality*, Santa Monica, Calif.: RAND Corporation, RB-9234, 2007.

Dausey, David J., Chandra, Anita, Schaefer, Agnes G., Bahney, Benjamin, Haviland, Amelia M.

Zakowski, Sarah, Lurie, Nicole. *Improving and Enhancing Telephone-based Disease Surveillance Systems in Local Health Departments*, Santa Monica, Calif.: RAND Corporation, WR-469-DHHS, 2007.

Haviland, Amelia M., Savych, Bogdan. *A Description and Analysis of Evolving Data Resources on Small Business*, Santa Monica, Calif.: RAND Corporation, WR-293-1-ICJ, 2007.

Farley, Donna O., Damberg, Cheryl, Ridgely, Susan M., Sorbero, Melony E., Greenberg, Michael D., Haviland, Amelia M., Meili, Robin, Teleki, Stephanie S., Bradley, Lily A., Dembosky, Jacob W., Fremont, Allen M., Nuckols, Teryl K., Shaw, Rebecca, Taylor, Stephanie L., Yu, Hao. *Assessment of the AHRQ Patient Safety Initiative: Focus on Implementation and Dissemination Evaluation Report III*, Santa Monica, Calif.: RAND Corporation, TR-508-AHRQ, 2007.

Farley, Donna O., Greenberg, Michael D., Haviland, Amelia M., Lovejoy, Susan. *Prioritizing Patient Safety Outcomes Measures: Results of an Expert Consensus Process*, Santa Monica, Calif.: RAND Corporation, PM-2329-AHRQ, 2007.

Farley, Donna O., Morton, Sally C., Damberg, Cheryl, Ridgely, Susan M., Fremont, Allen M., Greenberg, Michael D., Sorbero, Melony E., Teleki, Stephanie S., Mendel, Peter. *Assessment of the AHRQ Patient Safety Initiative: Moving from Research to Practice Evaluation Report II (2003-2004)*, Santa Monica, Calif.: RAND Corporation, TR-463-AHRQ, 2007.

Mendeloff, John M., Nelson, Christopher D., Ko, Kilkon, Haviland, Amelia M.. *Small Businesses and Workplace Fatality Risk: An Exploratory Analysis*, Santa Monica, Calif.: RAND Corporation, TR-371-ICJ, 2006.

Mendeloff, John M., Nelson, Christopher, Ko, Kilkon, Haviland, Amelia M. *Are Small Businesses Riskier Than Larger Ones?*, Santa Monica, Calif.: RAND Corporation, RB-9181-ICJ, 2006.

#### UNPUBLISHED PAPERS

Daponte, Beth O. and Haviland, Amelia M. (January, 2001). *An Examination of the Quality of 1990 Census Data on the U.S. Child Population: Comparing Census Data with Data from Administrative Records*. Prepared for the U.S. Census Monitoring Board, Presidential Members. Available at [www.cmbp.gov /downloads/undercount-intro.pdf](http://www.cmbp.gov/downloads/undercount-intro.pdf).

#### FUNDED GRANTS AND CONTRACTS

##### **Current**

Project Title: Health Care Use and Quality in High-Deductible Health Plans  
Client: California HealthCare Foundation  
Funding Dates: 3/8/06-2/28/11  
Total Funding: \$2,069,475  
Role: Principal Investigator (initially Investigator, co-PI: S. Marquis)

Project Title: Health Care Use and Quality in High-Deductible Health Plans  
Client: Robert Wood Johnson Foundation  
Funding Dates: 8/1/06-2/28/11  
Total Funding: \$2,000,000  
Role: Principal Investigator (initially Investigator, co-PI: S. Marquis)

Project Title: Analysis of the Medicare CAHPS Survey  
Client: Centers for Medicare and Medicaid Services  
Funding Dates: 9/29/06-9/28/11  
Total Funding: \$13,830,000  
Role: Investigator (PI: M. Elliott)

Project Title: Evaluation of the Effectiveness of California's Injury Illness and Prevention Program  
Client: California Department of Industrial Relations  
Funding Dates: 5/6/09-7/6/11  
Total Funding: \$237,767

Role: Investigator (Statistician on proposal, developed methods, lead one aim)

Project Title: Modeling the Effect of Cigarette Advertising on Adolescent Smoking

Client: NIH/NIDA

Funding Dates: 4/1/08-3/31/11

Total Funding: \$1,233,643

Role: Investigator (Statistician on proposal, developed methods)

***Past***

Project Title: Patient Safety Evaluation Center

Client: AHRQ

Funding Dates: 9/16/02-9/15/08

Total Funding: \$7,380,921

Role: Investigator (Co-led Outcomes Evaluation Team with M. Greenberg)

Project Title: Evaluation of Safe-Start- Promising Approaches for Children Exposed to Violence

Client: US Department of Justice

Funding Dates: 9/1/05-8/31/09

Total Funding: \$5,252,509

Role: Investigator (Statistician on proposal, developed methods)

Project Title: Treatment Effects on Desistance from Youth Violence

Client: Center for Disease Control and Prevention

Funding Dates: 9/12/05-8/31/08

Total Funding: \$707,265

Role: Investigator

**ACADEMIC  
EXPERIENCE**

**Carnegie Mellon University**, Pittsburgh, PA

*Post Doctoral Fellow*

**June, 2003 – June, 2004**

Includes research on nonparametric balancing methods, causal analysis with trajectories, bootstrap methodology, and wage gaps and teaching 36–303 Surveys, Sampling, and Society, an upper level undergraduate statistics course spring 2004.

*Doctoral Student*

**August, 1998 – October, 2003**

Completed coursework and all qualifying exams in both the statistics and public policy Ph.D. programs in addition to thesis research requirements.

*Research Assistant*

**May, 2001 – May, 2002**

Studied gender and racial/ethnic wage gaps among highly educated workers living in the U.S. using the National Survey of College Graduates (1993) and the 1990 Long Form of the Census.

*NSF VIGRE Teaching Fellow*

**January – December, 2000**

The Vertical Integration of Research and Education in Statistics and Mathematical Sciences (VIGRE) grant, funded by the National Science Foundation, allows for the mentoring of future academics in course development. Duties included discussion of course structure and teaching methodology, shared administrative responsibilities, teaching a weekly review session and fielding all student inquiries.

*Teaching Assistant*

**August 1998 – May 2001**

Duties included office hours, leading weekly computer lab exercises, assisting in course administration, fielding student inquiries, giving lectures, and grading.

**PREVIOUS WORK  
EXPERIENCE**

H. John Heinz III School of Public Policy & Management,, Carnegie Mellon University,  
Pittsburgh, PA

*Adjunct Faculty*

**August 2008 – July 2011**

**Epidemiology Data Center**, Graduate School of Public Health, University of Pittsburgh, PA  
*Statistician* **Summer 1999, Summer 2000**  
Analyzed epidemiological data for the National Heart, Lung and Blood Institute Dynamic Registry, presented work at weekly Registry Meetings, and jointly authored papers pertaining to the Registry.

**Heathwood Hall Episcopal School**, Columbia, SC  
*High School Mathematics Teacher* **August, 1994 – June, 1998**  
Developed curriculum for and taught integrated algebra, geometry, trigonometry, probability, and statistics courses. Served as faculty advisor to a group of 15 students and the math team. Chaired thesis committees for senior advisees and supervised the school's peer counseling program.

**Hampshire College**, Amherst, MA  
*Director, Quantitative Skills Program* **August, 1992 – July, 1994**  
Restructured the college's mathematics resource center, expanding and improving its computer lab, budget, staff, and resources. Coordinated a drop-in tutoring program for students in all disciplines. Hired, trained, and supervised student tutors. Created and taught courses and workshops on topics such as math for the sciences, calculus, statistics, and GRE preparation.

**Calculus in Context Project, Five Colleges, Inc.**, Amherst, MA  
*Project Evaluator* **January, 1989 – December, 1991**  
Investigated the effectiveness of an experimental calculus program through interviews with over 250 college students and observations of classes and problem sessions. Developed a set of assessment criteria. Provided written reports and presented results to members of the math departments at Smith College, Mount Holyoke College, the University of Massachusetts, and Hampshire College and to the National Science Foundation.

PROFESSIONAL ACTIVITIES Referee for the *Journal of Human Resources*, *Journal of the American Statistical Association*, *Applications and Case Studies*, *Statistics in Medicine*, *Health Services Research*, *Criminology*, and *Journal of Quantitative Criminology*.

PROFESSIONAL ORGANIZATIONS The American Statistical Association  
American Association for Public Opinion Research

COMPUTER SKILLS Statistical Packages: R, SAS, and Stata.  
Operating Systems: Unix/Linux, Windows.  
Document Preparation: LaTeX and GNU Emacs, Microsoft Word.