

# Brian M. Paciotti, Ph.D., M.S.

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## Summary

I am a motivated data scientist and medical writer. As a data scientist, I combine health care domain knowledge and technical skills to transform complex data into actionable information. Working as a medical writer, I leverage my experience publishing scientific papers and industry white papers to create concise reports about complex medical research and technology.

## Skills

<u>Data Science</u>	<u>Writing</u>
<b>Statistics, Data Mining, Visualization</b> <ul style="list-style-type: none"><li>• Predictive modeling, regression</li><li>• Clustering, neural networks, association rules</li><li>• Graphical displays, dashboards</li></ul>	<b>Medical Writing</b> <ul style="list-style-type: none"><li>• Publishing scientific research, technical reports</li><li>• Ghost writing for health insurance vendor</li><li>• Concise writing style, proficient at English grammar</li></ul>
<b>Statistical Programming</b> <ul style="list-style-type: none"><li>• R, SAS, Enterprise Guide, JMP, STATA, WEKA</li><li>• Certified SAS programmer</li></ul>	<b>Health Care</b>
<b>Database Programming</b> <ul style="list-style-type: none"><li>• SQL, MS Access, Visual Basic</li></ul>	<b>Health Policy Analysis</b> <ul style="list-style-type: none"><li>• Efficient retrieval of information from online resources</li><li>• Interpretation of clinical and evidence-based research</li></ul>
<b>Data Management</b> <ul style="list-style-type: none"><li>• Administration of large relational databases</li><li>• Performing SQL queries on large datasets</li><li>• Writing data scripts to improve data quality</li></ul>	<b>Health Informatics</b> <ul style="list-style-type: none"><li>• Understanding of electronic health records</li><li>• Project management, software development</li><li>• Design of decision support applications</li></ul>
<b>Implementation of Business Intelligence Systems</b> <ul style="list-style-type: none"><li>• SAS Business Intelligence Platform</li></ul>	<b>Healthcare Outcomes Research / Quality</b> <ul style="list-style-type: none"><li>• Performance measurement, risk-adjustment</li><li>• Methods to implement evidence-based medicine</li></ul>

## EDUCATION

### Ph.D. Human Ecology, University of California, Davis 2002

- Organizational behavior, public health, disease ecology, statistical methods
- Research about the impact of cultural processes on teamwork and cooperation

### M.S. Health Informatics, University of California, Davis 2010

- Thesis: Text mining, cluster analysis, and visualization techniques to evaluate under-reporting of medical errors. Evaluation of cluster analyses for risk-adjustment of hospital outcomes
- Coursework: Electronic health records, coding standards, clinical decision support, project management, telemedicine, object-oriented programming, database management, construction of ontologies

### **B.S. Natural Resource Management, Second Major, Anthropology Colorado State University, 1994**

- Graduated Cum Laude.

## **CERTIFICATIONS**

- SAS statistical software (Certified Base Programmer 9.2, Winter 2008)

## **WORK HISTORY**

### **Volunteer Clinical Faculty, August 2014 to present**

Department of Public Health Sciences, University of California, Davis

### **Quality Scientist, November 2012 to present**

Institute for Population Health Improvement, University of California, Davis (consultant to California Medicaid "Medi-Cal")

- Analysis of claims and encounter data to understand utilization patterns and costs
- Creation of performance measures using administrative data
- Use of OSHPD patient discharge data to improve Medi-Cal performance measurement
- Publication of health disparities report
- Analysis of eligibility and enrollment for various Medi-Cal programs

### **Vice President of Analytics, March 1, 2014 to August 31, 2014**

Pulse8 Inc. Annapolis Maryland

- Development of risk-adjustment software for health plans in ACA exchanges
- Actuarial and predictive modeling to understand gaps in medical coding of patient diagnoses

### **Programmer Analyst VI, March 2011 to November 2012**

Biomedical Informatics, Research IT, University of California, Davis Health System

- Data manager for the Autism Phenome Project (UC Davis MIND Institute)
- Construction of relational databases, migration of spreadsheets into databases, SQL queries to retrieve data
- Implementation of electronic data capture tools
- Statistical modeling (generalized linear models, data visualization)

### **Research Scientist III, 2005 to 2011**

California Office of Statewide Health Planning and Development. Aug. 2006 to March 2011

- Creating hospital quality "report cards" using statistical risk-adjustment methodology
  - Hospital Mortality Indicators for California; Patient Safety Indicators: A Preliminary Report
  - Community-Acquired Pneumonia: Hospital Outcomes in California 2003-2005
- Implementation of SAS Business Intelligence Platform to automate reports and check the quality of data
- Applying biostatistics and data mining algorithms to assess the quality of healthcare data
- Presentation of sensitive scientific results to medical industry stakeholders

California Department of Corrections and Rehabilitation. Dec. 2005 - Aug. 2006

- Development of performance measurement system and business dashboards to monitor evidence-based practices
- Evaluation of program effectiveness using statistical models

#### University Lecturer, 2002-2005

- California State University, Chico. Department of Sociology. *Statistics, Criminology, Ethnic Conflict*. 2005
- University of California, Davis. Department of Sociology. *Criminology* (Five quarters) *Social Psychology* (Eight quarters) *Social Conflict* (One quarter). 2002-2005

#### Post-Doctorate Researcher, 2002-2005

- University of California, Davis. Evaluating the influence of culture on cooperative behavior. 2003-2005
- National Consortium on Violence Research. Study of ethnicity and homicide. 2002-2004

#### Teaching Assistant, 1995-2001

- University of California, Davis. *Social Problems, Immigration, Social Movements, Human Evolutionary Biology, Human Ecology, Cultural Ecology, Environmental Political Science*.

#### Research Assistant, 1995-1998

- UC Davis, Department of Anthropology. Determinates of Children's Health in Tanzania, East Africa. 1998
- Museo de Terrapaca, Arica Chile. Disease and Health of of the Chilean Atacama Desert. 1995
- Buffalo Bill Historical Center, Cody Wyoming. Impacts of Native Americans on Bison Populations. 1995

## SELECTED PUBLICATIONS

### Journal Articles

Breece, E., Paciotti, B., Nordahl, C., Ozonoff, S., Van de Water, J., Rogers, S., Amaral, D., Ashwood, P. (2013) Myeloid dendritic cells frequencies are increased in children with autism spectrum disorder and associated with amygdala volume and repetitive behaviors. *Brain, Behavior, and Immunity* 31(69-75).

Paciotti, B., Efferson, C., Richerson, R., McElreath, R., Lubell, M., Waring, T., Baum, W. (2011) Evaluating How Much Religious Variables Influence Altruistic Behavior. *Research in Economic Anthropology*

Efferson, C., Richerson, R., McElreath, R., Lubell, M., Waring, T., Paciotti, B., Baum, W. (2006) Learning, Productivity, Noise: An experimental study of cultural transmission on the Bolivian Altiplano. *Human Behavior and Evolution*.

McElreath, R., M. Lubell, P.J. Richerson, T.M. Waring, W. Baum, E. Edsten, C. Efferson, B. Paciotti. (2005) Applying evolutionary models to the laboratory study of social learning. *Evolution and Human Behavior*.

Paciotti, B and Craig Hadley (2005) Large-Scale Cooperation among Sungusungu "Vigilantes" of Tanzania: Conceptualizing Micro-economic and Institutional Approaches. *Research in Economic Anthropology*.

Paciotti, B and M. Borgerhoff Mulder (2004). Sungusungu: The Role of Preexisting and Evolving Social Institutions among Tanzanian Vigilante Organizations. *Human Organization* 63 (1).

Baum, W., Richerson, P., Efferson, C. and Paciotti, B. (2004) An Experimental Model of Cultural Evolution Including both Verbal and Nonverbal Traditions. *Human Evolution and Behavior* 25(5)

Paciotti, B. (2004) Homicide in Seattle's Chinatown, 1900-1940. *Homicide Studies* 9(3).

Paciotti, B and Craig Hadley (2003) The Ultimatum Game among Sympatric Ethnic Groups in Southwestern Tanzania: Ethnic Variation and Institutional Scope. *Current Anthropology*

### Book Chapters

Paciotti, B and Peter Richerson (2004) Cultural Evolutionary Theory: A Synthetic Theory for Fragmented Disciplines (Van Lange, P. A.M. (Ed.). *Bridging social psychology: The benefits of transdisciplinary approaches*. Hillsdale, NJ, Erlbaum.).

Richerson, P., Boyd R. and B. Paciotti, (2002) "An Evolutionary Theory of Commons Management." In *The Drama of the Commons* edited by Paul Stern. National Research Council.

### **Popular Articles**

Paciotti, B., C. Hadley, C. Holmes and M. Borgerhoff Mulder (2005) Grass-roots Justice in Tanzania. American Scientist.

## **SELECTED PRESENTATIONS**

Using Suunto Monitors to Evaluate Heart Rate Variability. American Medical Informatics Association. Fall 2009

Administrative Data for Creating Hospital Report Cards. OSHPD Data Users Conference. Spring 2009

Evaluation of the AHRQ Patient Safety Indicators: Hospital-Level Patterns and Trends. NAHDO Conference Fall 2009

A Sub-County Geographic Analysis of Ambulatory Care Sensitive Conditions in California. American Public Health Association. Fall 2009

Care for Community-Acquired Pneumonia in California Hospitals: A Report Card. Sacramento Statistical Association. Spring 2007

Applications of Experimental Economics to Assessment of Business Organizational Culture. Cultural Evolution and Application to Business Workshop. Fall 2005

## **AWARDS**

Institute for Research on Unlimited Love Grant. Funded \$100,000. 2002

Summer Research Fellowship, University of California, Davis. 2001

National Science Foundation Dissertation Improvement Grant. Funded \$10,920. 1998

Citizens Appreciation Award. City of Davis, California. 1998

## **LANGUAGES**

Swahili - Conversational and Written Proficiency.