

Center for Health Studies
Universidad del Valle de Guatemala
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EDUCATION

- Harvard University, Boston, MA, School of Public Health – ScD** 9/01 to 6/07
- Departments of Environmental Health and Epidemiology
 - Thesis: Respiratory and Cardiovascular Effects of Household Biomass Smoke in Guatemala
- U.S. Fulbright Fellowship for Graduate Study and Research Abroad** 5/98 to 7/99
- Instructor in Masters Program in Public Health, University of San Carlos, Guatemala City
 - Environmental health research related to household energy and air pollution
- University of California, Berkeley, CA, School of Public Health – MPH** 9/95 to 5/97
- Master of Public Health in Environmental Health Science
 - Minor in International Health
- Tufts University, Medford, MA, Department of Biology – BS** 9/90 to 5/94
- Bachelor of Science in Biology
 - Semester abroad in Ecuador with School for International Training

WORK EXPERIENCE

- Center for Health Studies, Universidad del Valle de Guatemala, Guatemala**
Director, Infectious Disease Epidemiology and Prevention Unit 10/11 to present
- Design and implement surveillance system that serves as a research platform for evaluation of public health programs
 - Provide scientific leadership, manage program, and supervise team of 71 epidemiologists, microbiologists, data managers, medical personnel, and administrators
 - Teach masters-level epidemiology courses for Field Epidemiology Training Program
 - Mentor masters of public health students (currently 5) for completion of capstone data analysis projects, presentation at international conference, and manuscript preparation
- Center for Health Studies, Universidad del Valle de Guatemala, Guatemala**
Senior Epidemiologist 11/09 to 10/11
- Monitor and evaluate infectious disease surveillance system and implement improvements in pneumonia surveillance
 - Perform epidemiological analyses related to acute respiratory infections, including evaluation of case definitions, descriptive epidemiology of etiological agents, and contribution to global project to estimate burden of pneumonia
 - Strengthen local capacity in epidemiology through teaching and collaborating on research projects with epidemiologists from the Guatemalan Ministry of Health

Harvard School of Public Health, Harvard University, Boston, MA

Research Associate

6/07 to present

- Department of Biostatistics: developed statistical analyses for research projects within the Environmental Statistics Core Program on topics including gut microbiota diversity, spatiotemporal influenza patterns, cardiovascular effects of airplane flight, and longitudinal decline in lung function
- Department of Environmental Health: analyzed data and prepared manuscripts on cardiovascular health effects of indoor air pollution in Guatemala

UC Berkeley School of Public Health, Berkeley, CA

Postdoctoral Trainee

6/07 to 11/08

- Analyzed data and prepared manuscripts on association between acute lower respiratory infections and indoor air pollution in Guatemala

Harvard School of Public Health, Harvard University, Boston, MA

Research Specialist

10/99 to 8/04

- Conducted field projects to measure particulate and gaseous air pollution
- Managed and analyzed large data sets using SAS

Center for Entrepreneurship in International Health, University of California, Berkeley

Research Analyst

6/01 to 2/03

- Wrote background statement on health impacts of household energy use in developing countries
- Designed and conducted randomized trial to measure impact of improved stoves in Nicaragua
- Analyzed data and submitted report to the World Bank

World Health Organization Indoor Air Pollution Working Group, Guatemala

Field Project Manager

5/98 to 9/99

- As a Fulbright Fellow, evaluated environmental and economic impacts of improved wood and gas cooking stoves
- Trained and supervised field workers to collect data on air pollution, fuel consumption, nutritional status, socioeconomic status, and terminology for signs and symptoms of respiratory diseases

Fundación Solar, Guatemala

Grant Proposal Writer

1/98 to 3/98

- Planned improved cooking stove project to reduce indoor air pollution and household energy expenditures in communities without access to modern cooking fuels
- Wrote successful grant proposal for a project to construct 2,300 improved cooking stoves

UC Berkeley School of Public Health, Berkeley, CA

Graduate Student Researcher

5/97 to 11/97

- Reviewed literature on indoor air pollution and acute respiratory infections in developing countries
- Led training workshop at International Health Programs, Santa Cruz, CA : The Global Burden of Disease Study and the Disability Adjusted Life Year (DALY)
- Organized International Health Core Course for MPH students

TEACHING EXPERIENCE

Universidad del Valle de Guatemala, Guatemala

Field Epidemiology Training Program 2009-12

- Lectures on several topics in epidemiology, including study design, sampling and sample size estimation, confounding and other biases, effect modification, regression analysis, and burden of disease estimation
- Lead workshop for personnel from Central American Ministries of Health on study designs to estimate burden of foodborne illness

Harvard School of Public Health, Boston, MA

Department of Environmental Health, Teaching Assistant Fall 2005

- Introduction to Environmental Health

Department of Epidemiology Teaching Assistant Fall 2004

- Elements of Epidemiological Research

University of California School of Public, Berkeley, CA

Environmental Health Sciences Program, Graduate Student Instructor Spring 1997

- Introduction to Environmental Health

International Health Program, Graduate Student Researcher Fall 1997

- Organized Introduction to International Health course

AWARDS

1. Rebecca James Baker Memorial Prize, International Society for Environmental Epidemiology Conference in Johannesburg, South Africa (Student and new investigator award for work that demonstrates a commitment to research as a tool to foster international understanding and public health improvement) 2005
2. Fulbright Fellowship for Graduate Research Abroad, Guatemala 1998
3. School of Public Health Alumni Scholarship Award, U.C. Berkeley 1997
4. Center for Latin American Studies Research Grant, U.C. Berkeley 1996
5. Howard Hughes Scholarship for Undergraduate Research 1993

LANGUAGE: Spanish

REASEARCH GRANTS

1. Impact of influenza vaccination on pregnant women and their infants 2011-2013
US CDC 1U01GH000028-03
Role: PI (\$175,000)

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| 2. | Effectiveness of rotavirus vaccine
US CDC 1U01GH000028-03
Role: PI (\$265,000) | 2011-2013 |
| 3. | Integrated Community Surveillance
US CDC 1U01GH000028-03
Role: PI (\$932,838) | 2011-2012 |
| 4. | Enhancing surveillance, outbreak investigation and response
US CDC 1U01GH000028-03
Role: PI (\$241,162) | 2011-2012 |

JOURNAL ARTICLES

1. Smith KR, **McCracken JP**, Weber MW, Hubbard A, Jenny A, Thompson LM, Balmes J, Diaz A, Arana B, Bruce N. 2011. Effect of reduction in household air pollution on childhood pneumonia in Guatemala (RESPIRE): a randomized trial. *Lancet*, 378(9804):1717-26.
2. **McCracken JP**, Smith KR, Stone P, Diaz A, Arana B, Schwartz J. 2011. Intervention to lower woodsmoke exposure in Guatemala reduces ST-segment depression on electrocardiograms. *Environ Health Perspect*, 119(11): 1562-8.
3. Baccarelli A, Barretta F, Dou C, Zhang X, **McCracken JP**, Diaz A, Bertazzi PA, Schwartz J, Wang S, Hou L. 2011. Effects of particulate air pollution on blood pressure in a highly exposed population in Beijing, China: a repeated measure study. *Environmental Health*, 10(1): 108.
4. Northcross A, Chowdury Z, **McCracken J**, Canuz Smith KR. 2010. Estimating personal PM_{2.5} exposures using CO measurements in Guatemalan households cooking with wood fuel. *J Environ Monit* 12(4):873-8.
5. **McCracken J**, Baccarelli A, Hoxha M, Dioni L, Melly S, Coull B, Suh H, Vokonas P, Schwartz J. 2010. Annual ambient black carbon associated with shorter telomeres in elderly men: Veterans Affairs Normative Aging Study. *Environ Health Perspect* 118(11):1564-70.
6. Smith KR, **McCracken JP**, Thompson L, Edwards R, Shields KN, Canuz E, Bruce N. 2010. Personal child and mother carbon monoxide exposures and kitchen levels: methods and results from a randomized trial of woodfired chimney cookstoves in Guatemala (RESPIRE). *J Expo Sci Environ Epidemiol* 20(5):406-16.
7. Smith-Sivertsen T, Díaz E, Pope D, Lie RT, Díaz A, **McCracken J**, Bakke P, Arana B, Smith KR, Bruce N. 2009. Effect of reducing indoor air pollution on women's respiratory symptoms and lung function: the RESPIRE Randomized Trial, Guatemala. *Am J Epidemiol* 170(2):211-20.
8. **McCracken JP**, Schwartz J, Bruce N, Mittleman MA, Ryan L, Smith KR. 2009. Combining individual- and group-level exposure information: child carbon monoxide in the Guatemala woodstove randomized control trial. *Epidemiology* 20(1): 127-136.

9. Forno E, Onderdonk AB, **McCracken JP**, Litonjua AA, Laskay D, Delaney ML, Dubois AM, Gold DR, Ryan LM, Weiss ST, Celedón JC. 2008. Diversity of gut microbiota and eczema in early life. *Clinical and Molecular Allergy* 22:6-11.
10. Bruce N, Weber M, Arabna B, Díaz A, Jenny A, Thompson L, **McCracken J**, Dherani M, Juarez D, Ordonez S, Klein R, Smith KR. 2007. Pneumonia case-finding in the RESPIRE Guatemala indoor air pollution trial: standardized methods for resource-poor settings. *Bull World Health Organ* 85(7):535-44.
11. **McCracken J**, Díaz A, Smith KR, Mittleman MA, Schwartz J. 2007. Chimney Stove Intervention to Reduce Long-term Woodsmoke Exposure Lowers Blood Pressure among Guatemalan Women. *Environmental Health Perspectives* 115(7):996-1001.
12. Díaz E, Smith-Sivertsen T, Pope D, Lie RT, Díaz A, **McCracken J**, Arana B, Smith KR, Bruce N. 2007. Eye discomfort, headache and back pain among Mayan Guatemalan women taking part in a randomised stove intervention trial. *J Epidemiol Community Health* 61(1):74-9.
13. Bruce N, **McCracken J**, Albalak R, Schei M, Smith KR, López V, West C. 2004. Impact of improved stoves, house construction and child location on levels of indoor air pollution exposures in young Guatemalan children. *Journal of Exposure Analysis and Environmental Epidemiology* 14(S1): S26-S33.
14. Schei M, Hessen J, Smith KR, Bruce N, **McCracken J**, López V. 2004. Childhood asthma and indoor woodsmoke from cooking in Guatemala. *Journal of Exposure Analysis and Environmental Epidemiology* 14(S1): S110-S117.
15. Albalak R, Bruce N, **McCracken J**, Smith KR, de Gallardo T. 2001. Indoor respirable particulate matter concentrations from an open fire, improved cookstove, and LPG/open fire combination in a rural Guatemalan community. *Environmental Science and Technology* 35(13): 2650-2655.

CONFERENCE ABSTRACTS

1. **McCracken J**. 2011. Standardization of chest radiograph interpretation of pneumonia surveillance in Guatemala. *American Society of Tropical Medicine and Hygiene*, Philadelphia, PA, USA.
2. **McCracken J**, Arvelo W, Gray J, Estevez A, Moscoso F, Olsen SJ, Fry A, Lindblade K. 2010. Performance of a case definition for surveillance of influenza infection leading to hospitalization: Guatemala. *International Conference of Emerging Infectious Diseases*, Atlanta, GA, USA.
3. **McCracken J**, Arvelo W, Gray J, Estevez A, Moscoso F, Olsen SJ, Fry A, Lindblade K. 2010. Predictors of influenza infection among hospital admissions with acute respiratory infection in Guatemala. *International Conference of Emerging Infectious Diseases*, Atlanta, GA, USA.
4. **McCracken J**, Baccarelli A, Barbullushi M, Dioni L, Suh H, Coull B, Vokonas P, Schwartz J. 2009. Ambient black carbon associated with shorter telomeres in the Greater Boston Area: VA Normative Aging Study. *International Society for Environmental Epidemiology*, Dublin, Ireland.

5. **McCracken J**, Smith K, Díaz-Artiga A, Stone P, Schwartz, J. 2008. Chimney Stove Intervention to Lower Woodsmoke Exposure Reduces ST-Segment Depression among Guatemalan Women. *American Thoracic Society*, Toronto, Canada.
6. **McCracken J**, Ryan L, Díaz A, Mittleman M, Schwartz J, Smith KR. 2006. Child woodsmoke exposure in RESPIRE Guatemala: Between-subject predictors or short-term measures to estimate a long-term time-varying exposure? In Proceedings: *International Society of Environmental Epidemiology Conference*, Paris, France.
7. **McCracken J**, Díaz A, Arana B, Smith KR, Schwartz J. 2005. Improved biomass stove intervention reduces blood pressure among rural Guatemalan women. In Proceedings: *International Society of Environmental Epidemiology Conference 2005*, Johannesburg, South Africa.
8. **McCracken J**, Smith KR, Edwards R, Canú E. 2004. Improvements in household PM-1 in Guatemala: Randomized trial of improved stoves. In Proceedings: *International Society of Exposure Analysis 14th Annual Conference*, Philadelphia, PA, USA.
9. **McCracken J**, Smith KR, Edwards R, Canú E. 2003. Personal integrated carbon monoxide as a surrogate for PM_{1.0} in wood-burning households of Highland Guatemala. In Proceedings: *International Society of Exposure Analysis 13th Annual Conference*, Stresa, Italy.
10. **McCracken J**, Smith KR, Bruce N, Straume B, and Albalak R. 1999. Can carbon monoxide be used as a proxy for exposure to suspended respirable particles from combustion of biomass fuels? In Proceedings: *The 8th International Conference on Indoor Air Quality and Climate*, Edinburgh, Scotland.