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Engineering & Scientific Consulting

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### Professional Profile

Dr. Fordyce has 16 years of experience with research protocols and procedures, study design and execution, statistical analyses, database development, and data collection and management. Dr. Fordyce has experience conducting occupational health and safety studies, including cohort and case-control studies. She is currently the project manager for an ongoing, large multi-company health and safety research program that examines the trends and risk factors for workplace injuries among electric utility workers. In addition, she has managed and conducted multiple cohort mortality studies since 2007.

Dr. Fordyce has performed epidemiologic evaluations, literature reviews, evaluation of healthcare resource utilization, and reviewed treatment patterns and adverse events of various diseases. Dr. Fordyce also has extensive experience in researching traffic safety issues, including the evaluation of passenger vehicle field performance, post-collision fires, safety belt usage, motorcycle lane-splitting, and airbag effectiveness. Dr. Fordyce has experience evaluating the human health effects of asbestos exposure. Her work has included researching the occupational epidemiology data and risk factors for lung cancer, mesothelioma, and various non-malignant diseases. She has also worked on numerous projects researching and interpreting scientific literature associated with asbestos and has provided support for testimony and expert witness preparation.

Prior to joining Exponent, Dr. Fordyce was employed as a Social Science Research Assistant II by the University of Michigan Transportation Research Institute, in the Social and Behavioral Analysis division.

### Academic Credentials & Professional Honors

Ph.D., Public Health, Walden University, 2015

M.P.H., Public Health, California College of Health Sciences, *with distinction*, 2007

M.S., Clinical Research Administration, Walden University, \_\_\_#!\$No value\$!#\_\_\_, 2016

B.A., Psychology, University of Michigan, Dearborn, *with high distinction*, 1997

James B. Angell Scholar

### Prior Experience

Social Science Research Assistant II, UMTRI, 1999-2001

Assistant Program Manager, HelpSource, 1997-1999

## Professional Affiliations

American College of Epidemiology

American Public Health Association — APHA

## Publications

Fordyce TA, Leonhard MJ, Chang ET. A critical review of developmental exposure to particulate matter, autism spectrum disorder, and attention deficit hyperactivity disorder. *Journal of Environmental Science and Health Part A* 2017; 1-31. <https://doi.org/10.1080/10934529.2017.1383121>.

Volberg V, Fordyce T, Leonhard M, Mezei G, Vergara X, Krishen L. Injuries among electric power industry workers, 1995-2013. *Journal of Safety Research* 2016. doi:10.1016/j.jsr.2016.11.001

Boffetta P, Fordyce TA, Mandel JS. A mortality study of beryllium workers. *Cancer Medicine* 2016; doi: 10.1002/cam4.918

Fordyce TA, Leonhard MJ, Watson HN, Mezei G, Vergara XP, Krishen L. An analysis of fatal and non-fatal injuries and injury severity factors among electric power industry workers. *American Journal of Industrial Medicine* 2016 Nov 1; 59(11):948-58.

Boffetta P, Fordyce TA, Mandel J. A mortality study of workers exposed to insoluble forms of beryllium. *European Journal of Cancer Prevention* 2014; 23(6):587-593.

Kelsh MA, Shum MS, Sheppard AR, McNeely M, Kuster N, Lau E, Wielding R, Fordyce T, Sulser C. Measured radiofrequency exposure in various mobile phone-use scenarios. *Journal of Exposure Science and Environmental Epidemiology* 2010; doi: 10.1038/jes.2010.12.

Fordyce T, Morimoto L, Kelsh M, Coalson, J, Mezei G. Neck injuries among electric utility workers: 1995-2007. *Journal of Occupational and Environmental Medicine* 2010; 52(4):441-449.

Bracken T, Kavet R, Patterson R, Fordyce T. An integrated job exposure matrix for electrical exposures of utility workers. *J Occup Environ Hyg* 2009 Aug; 6(8):499-509.

Kelsh MA, Fordyce TA, Lau EC, Mink PJ, Morimoto LM, Lu ET, Yager JW. Factors that distinguish serious versus less severe strain and sprain injuries: An analysis of electric utility workers. *Am J Ind Med* 2009; 52:210-220.

Fordyce TA, Kelsh MA, Lu E, Sahl JD, Yager JW. Thermal burn and electric shock injuries among electric utility workers 1995-2004. *Burns* 2007; 33:209-220.

Fordyce TA, Van Selow W, Resnick HT. Crashes accompanied by fire: What do the accident data tell us? SAE World Congress, SAE 2006 Transactions Journal of Passenger Cars: Mechanical Systems, pp. 710-720, 2007.

Ramachandran K, Fordyce TA, Ray R, Resnick HT. The relationship between airbags and injuries. SAE World Congress, SAE Technical Paper 2005-01-1231, Detroit, MI., 2005.

Kelsh MA, Lu ET, Ramachandran K, Jesser C, Fordyce TA, Yager JW. Occupational injury surveillance among electric utility employees. *J Occup Environ Med* 2004; 46(9):974-84.

Eby DW, Molnar LJ, Shope JT, Vivoda, JM, Fordyce, TA. Improving older driver knowledge and awareness through self-assessment: The driving decisions workbook. *Journal of Safety Research* 2003; 34(4):371-381.

Eby DW, Fordyce TA, Vivoda JM. A comparison of safety belt use in commercial and noncommercial vehicles. *Accident Analysis and Prevention* 2002; 34:285-291.

Eby DW, Vivoda JM, Fordyce TA. The effects of standard enforcement on Michigan safety belt use. *Accident Analysis and Prevention* 200; 34:101-109.

## **Presentations**

Fordyce TA, Leonhard MJ, Vergara XP, Bauman E. Risk factors for same level and different level falls: electric energy workers, 1995-2014. Presented at the American College of Epidemiology Annual Meeting, New Orleans, LA, September 2017.

Erickson, H, Fordyce TA, Leonhard MJ, Satin K. Leukemias in a cohort of crude oil workers, 1946-2012. Presented at the American College of Epidemiology Annual Meeting, New Orleans, LA, September 2017.

Leonhard MJ, Fordyce TA, Vergara XP, Bauman E. Injury outcomes for falls in older workers and by occupational group: electric energy workers, 1995-2016. Presented at the American College of Epidemiology Annual Meeting, New Orleans, LA, September 2017.

Fordyce TA, Leonhard MJ, Vergara XP, Krishen L. Injuries among older electric energy workers, 1995-2014. Presented at the American Public Health Association 144th Annual Meeting, Denver, CO, November 2016.

Fordyce TA, Leonhard MJ, Vergara XP, Krishen L. Injury risk profiles and outcomes by type of fall: Electric energy workers, 1995-2014. Presented at the American Public Health Association 141st Annual Meeting, Denver, CO, November 2016.

Leonhard MJ, Fordyce TA, Vergara XP, Krishen L. An analysis of sprains and strains among electric energy workers, 1995-2014. Presented at the American Public Health Association 141st Annual Meeting, Denver, CO, November 2016.

Boffetta P, Fordyce TA, Mandel J. Occupational exposure to beryllium and mortality from lung cancer and beryllium disease. Presented at the 48th Annual Meeting of the Society for Epidemiologic Research, Denver, CO, June 2015.

Fordyce TA, Volberg V, Mezei G, Vergara X, Krishen L. An in-depth analysis of fall related injuries among electric power industry workers, 1995-2013. Presented at the Centers for Disease Control and Prevention (CDC) National Occupational Injury Research Symposium, Kingwood, WV, May 2015.

Volberg V, Fordyce TA, Mezei G, Vergara X, Krishen L. Injuries among electric power industry workers, 1995-2013. Presented at the Centers for Disease Control and Prevention (CDC) National Occupational Injury Research Symposium, Kingwood, WV, May 2015.

Leonhard M, Fordyce TA, Volberg V, Mezei G, Vergara X, Krishen L. Injuries from motor vehicle crashes among electric power industry workers, 1995-2013. Presented at the Centers for Disease Control and Prevention (CDC) National Occupational Injury Research Symposium, Kingwood, WV, May 2015.

Fordyce TA. Crash risk associated with cellular phone use while driving. Presented at the American Public Health Association 141st Annual Meeting, Boston, MA, November 2013.

Vergara X, Mezei G, Fordyce TA, Campleman S. Occupational injury surveillance for the electric utility industry guiding ergonomics research and interventions. Presented at the American Public Health Association 140th Annual Meeting, San Francisco, CA, October 2012.

Fordyce TA, Mowat FS, Fryzek J, Lau EL. Incidence of metastatic hormone receptor positive (HR+) breast cancer in the United Kingdom (UK): Data needed! Presented at the International Society for Pharmacoeconomics and Outcomes Research, Washington, DC, June 2012.

Fordyce TA, Kelsh MA. Injury data analysis to evaluate the effectiveness of ergonomic interventions. Presented at the Centers for Disease Control and Prevention (CDC) National Occupational Injury Research Symposium, Morgantown, WV, October 2011.

Fordyce TA, Kelsh MA, Lau E. Using state crash data to assess the risk of cell phone use while driving. Presented at the Lifesavers Conference, Nashville, TN, March 2009.

Fordyce TA, Kelsh MA, Lau E. Characterization of motor vehicle crashes involving cell phone use in New York. Presented at the Lifesavers Conference, Nashville, TN, March 2009.

Fordyce TA, Kelsh MA, Morimoto, L, Mezei G. Work-related injury trends among electric utility workers. Presented at the Centers for Disease Control and Prevention (CDC) National Occupational Injury Research Symposium, Pittsburgh, PA, October 2008.

Fordyce TA, Kelsh MA, Morimoto, L, Mezei G. Work-related motor vehicle crashes among electric utility workers. Presented at the Centers for Disease Control and Prevention (CDC) National Occupational Injury Research Symposium, Pittsburgh, PA, October 2008.

Morimoto L, Kelsh MA, Fordyce TA. Factors that distinguish serious versus less severe strain and sprain injuries: An analysis of electric utility workers. Presented at the Centers for Disease Control and Prevention (CDC) National Occupational Injury Research Symposium, Pittsburgh, PA, October 2008.

Fordyce TA. Neck injuries among electric utility workers: 1995-2005. Presented at World Congress on Neck Pain, Los Angeles, CA, January 2008.

Fordyce TA, Van Selow W, Resnick HT. Motorcycle lane splitting. Presented at the Lifesavers Conference, Chicago, IL, March 2007.

Fordyce TA, Kelsh MA. Work-related motor vehicle crashes among electric utility workers. Presented at the Lifesavers Conference, Chicago, IL, March 2007.

Fordyce TA, Van Selow W, Resnick HT. Crashes accompanied by fire: What do the accident data tell us? Presented at 2006 Traffic Records Forum, Palm Desert, CA, July 2006.

Kelsh MA, Shum M, Fordyce TA, Sheppard, AR. Evaluation of power output of software modified mobile phones as a function of time of day. Presented at Bioelectromagnetics Society Annual Meeting, Cancun, Mexico, June 2006.

Fordyce TA, Van Selow W, Resnick HT. Crashes accompanied by fire: What do the accident data tell us? Presented at Society of Automotive Engineers (SAE) 2006 World Congress & Exhibition, Detroit, MI, April 2006.

Fordyce TA, Van Selow W, Resnick HT. Crashes accompanied by fire. Presented at the Lifesavers Conference, Austin, TX, April 2006.

Fordyce TA. The use of data from multiple states to identify and evaluate traffic safety issues. Presented at 2005 Traffic Records Forum, Buffalo, NY, July 31-August 4, 2005 (Session Moderator).

Van Selow W, Ramachandran K, Fordyce TA. Application of state data: effectiveness of side airbags and FMVSS 214 in injury prevention. Presented at 2005 Traffic Records Forum, Buffalo, NY, July 31-August 4, 2005.

Ramachandran K, Fordyce TA. What is the safest seating position for young children? Presented at the Lifesavers Conference, Charlotte, NC, March 2005.

Ramachandran K, Fordyce TA, Ray RM, Resnick HT. The relationship between airbags and injuries. Presented at Society of Automotive Engineers (SAE) 2005 World Congress & Exhibition, Detroit, MI, April 2005.

Ray RM, Fordyce TA, Ramachandran K. Is there really an increased crash risk associated with cellular phone use while driving? Presented at the Society for Risk Analysis 2004 Annual Meeting, Palm Springs, CA, December 2004.

Kelsh MA, Lu ET, Ramachandran K, Jesser C, Fordyce TA, Yager JW. Occupational injury surveillance among electric utility employees. Presented at the 37th Annual Meeting of the Society for Epidemiologic Research, Salt Lake City, UT, June 2004.

Ray RM, Ramachandran K, Fordyce TA. Effectiveness of side airbags and FMVSS 214 in injury prevention. Presented at the International Traffic Medicine Association, Budapest, Hungary, September 2003.

Kelsh MA, Lu ET, Ramachandran K, Jesser C, Fordyce TA, Yager JW. Workplace injuries and illness trends in the electric energy industry: Initial results from a comprehensive occupational health and safety surveillance system. Presented at the Centers for Disease Control and Prevention (CDC) National Occupational Injury Research Symposium, Pittsburg, PA, October 2003.

## **Technical Reports**

EPRI Occupational Health and Safety Annual Report 2016: Occupational Health and Safety Trends 1995-2014. EPRI, Palo Alto, CA, 2016.

EPRI Occupational Health and Safety Annual Report 2015: Occupational Health and Safety Trends 1995-2013. EPRI, Palo Alto, CA, 2015.

Occupational Health and Safety 1995-2013. Injury Surveillance Highlights - Focus on Injury Severity. EPRI, Palo Alto, CA, 2015.

Occupational Health and Safety 1995-2013. Injury Surveillance Highlights 2014 - Focus on Significant Weather Events. EPRI, Palo Alto, CA, 2014.

EPRI Occupational Health and Safety Database 2013: Annual Data Reporting Years 1995-2012. EPRI, Palo Alto, CA, 2014.

EPRI Occupational Health and Safety Annual Report 2009: Occupational Health and Safety Trends 1995-2008. EPRI, Palo Alto, CA, 2009.

EPRI Occupational Health and Safety Annual Report 2008: Occupational Health and Safety Trends 1995-2007. EPRI, Palo Alto, CA, 20062008.

EPRI Occupational Health and Safety Annual Report 2007: Occupational Health and Safety Trends 1995-2006. EPRI, Palo Alto, CA, 20062007.

Electric Energy Industry Workforce: Trends in Motor Vehicle Crashes. EPRI, Palo Alto, CA, 2007.

EPRI Occupational Health and Safety Annual Report 2006: Occupational Health and Safety Trends 1995-2005. EPRI, Palo Alto, CA, 2006.

EPRI Occupational Health and Safety Annual Report 2005: Occupational Health and Safety Trends 1995-2004. EPRI, Palo Alto, CA, 2006.

Donelson AC, Fordyce TA, Zhao K, Phillips, E. The Effectiveness of Retroreflective Tape on Heavy Trailers: A Review and Assessment of NHTSA's Conspicuity Study. Exponent Failure Analysis Associates, Menlo Park, CA, 2002.

Vivoda JM, Fordyce TA, Eby DW, Kostyniuk LP. Safety Belt Use in Michigan's Upper Peninsula. Report No. UMTRI-2000-43. University of Michigan Transportation Research Institute, Ann Arbor, MI, 2000.

Eby DW, Fordyce TA, Vivoda JM. Safety Belt Use in Five Wayne County Communities. Fall 2000 Report No. UMTRI-2000-46. University of Michigan Transportation Research Institute, Ann Arbor, MI, 2000.

Eby DW, Fordyce TA, Vivoda JM. Direct Observation of Safety Belt Use in Michigan. Fall 2000. Report No. UMTRI-2000-45. University of Michigan Transportation Research Institute, Ann Arbor, MI, 2000.

Eby DW, Fordyce TA, Vivoda JM. Michigan Safety Belt Use Immediately Following Implementation of Standard Enforcement. Report No. UMTRI-2000-25. University of Michigan Transportation Research Institute, Ann Arbor, MI, 2000.

Eby DW, Kostyniuk LP, Vivoda JM, Fordyce TA. Patterns of Child Restraint Use in Michigan. Report No. UMTRI-2000-30. University of Michigan Transportation Research Institute, Ann Arbor, MI, 2000.

Eby DW, Molnar LJ, Shope JT, Vivoda, JM, Fordyce, TA. Improvement of Older Driver Safety Through Self Evaluation: The Development of a Self-Evaluation Instrument. Report No. UMTRI-2000-04. University of Michigan Transportation Research Institute, Ann Arbor, MI, 2000.

Eby DW, Vivoda JM, Fordyce TA. The Effect of Standard Enforcement on Michigan Safety Belt Use: A 3-Month Follow-Up. Report No. UMTRI-2000-33. University of Michigan Transportation Research Institute, Ann Arbor, MI, 2000.

Eby DW, Vivoda JM, Fordyce TA. A Study of Michigan Safety Belt Use Prior to Implementation of Standard Enforcement. Report No. UMTRI-2000-08. University of Michigan Transportation Research Institute, Ann Arbor, MI, 2000.

Eby DW, Vivoda JM, Fordyce TA. Direct Observation of Safety Belt Use in Michigan. Fall 1999, Report No. UMTRI-99-33. University of Michigan Transportation Research Institute, Ann Arbor, MI, 2000.

Eby DW, Vivoda JM, Fordyce TA. Safety Belt Use in Five Wayne County Communities. Fall 1999 Report No. UMTRI-99-35. University of Michigan Transportation Research Institute, Ann Arbor, MI, 1999.