

Mo-S-B2-03

Utilizing Internet Data, Social Media, and Community Networks to Gather Data for Characterization of Recovery Worker Exposures

R. Shih¹, R. Chari¹, C. Sellers¹, E. Yeampierre², R. Chavez², E. Bautista³, J. C. Osorio³, N. Dwyer³, C. Franklin⁴, K. Diskin⁴, E. Dederick⁴, C. F. Chaisson⁴; ¹RAND Corporation, Arlington, VA, ²UPROSE, Brooklyn, NY, ³New York City Environmental Justice Alliance, Brooklyn, NY, ⁴The LifeLine Group, Annandale, VA

Abstract: Following the devastation caused by Hurricane Sandy, response and recovery for the working-class neighborhoods in New York City's industrial waterfront areas required massive efforts by many different types of recovery workers, including residents, business owners and their employees, paid contractors, and volunteers both from within the affected communities and from other areas. For many, working with little or no training and protective gear, contact (dermal, inhalation and oral) with the debris and muck was inevitable. No systematic monitoring was completed in real-time to understand what types and duration of activities took place or what personal protective equipment was used by the various types of recovery workers. The rise of social media, Internet sharing sites, and mobile digital technologies can retrieve information about recovery worker activities through photos, videos, text narratives and other media, many of which are publicly available. With a unique community-based approach, we have pioneered a systematic collection of these media to understand and characterize exposure-related elements such as behaviors, recovery site tasks, protective equipment, and media comprising the muck and debris. We will discuss a community-based risk assessment approach for gathering and evaluating photographic, digital, and narrative information in order to characterize recovery worker exposures following Hurricane Sandy. The process utilized both a comprehensive media review to collect publicly-available information and a community-led effort to gather private media collections. Successes and challenges in data collection and use and lessons learned will also be presented.

Keywords: A-emergency response, A-activity patterns, D-community

Mo-S-B2-04

Assessing Exposure to Recovery Workers from Fugitive Chemicals after Sandy's flooding

C. F. Chaisson¹, K. Diskin¹, C. Franklin², E. Dederick³, J. C. Osorio⁴, E. Bautista⁴, N. Dwyer⁴, R. Shih⁵, R. Chari⁵, C. Sellers⁵, R. Chavez⁶, E. Yeampierre⁶; ¹The LifeLine Group, Annandale, VA, ²The LifeLine Group, Ottawa, Canada, ³The LifeLine Group, Bala Cynwyd, PA, ⁴NYC-EJA, Brooklyn, NY, ⁵RAND Corporation, Arlington, VA, ⁶UPROSE, Brooklyn, NY

Abstract: The exposure assessments are calculated using activity profiles constructed from the descriptive information collected by the community and estimates of chemical residue based on analyses of chemical disbursements from the source points in the flooded neighborhoods. These calculations and underlying assumptions are presented. In doing these exposure assessments, we can identify activities and scenarios contributing significantly to exposure. The exposure mitigation achieved by different patterns of protective clothing or changes in activity profiles are also presented. These exposure assessments are useful to community planners and health professionals as they prepare for future disaster responses. This approach could be applied in other communities for disaster planning, and the assessments can be used to prioritize monitoring sites, chemical security plans, and risk mitigation options.

Keywords: A-activity patterns, A-exposure models, D-community, A-aggregate exposure, A-emergency response

Mo-S-B2-05

Panel Discussion: The CBRA Approach for Guiding and Using Exposure Assessments for Community Planning for Disaster Resilience

C. F. Chaisson¹, C. Inserra², E. Yeampierre⁴, E. Bautista⁵, R. Shih³; ¹The LifeLine Group, Annandale, VA, ²NIOSH, Atlanta, GA, ³RAND, Arlington, VA, ⁴UPROSE, Brooklyn, NY, ⁵NYC-EJA, Brooklyn, NY

Abstract: The NIOSH project officer will focus the discussion among panelists from RAND, UPROSE, NYC-EJA and The LifeLine Group. Agencies like NIOSH and CDC recognize the challenges introduced by rising sea levels, changing climates and severe weather events. One of those challenges involves potential health threats from chemicals displaced from their storage/use sites during destructive weather events. Approaches used in



ISES 2014

Abstract Book

24th Annual Meeting of
The International Society of Exposure Science

Exposure Science Integration to Protect Ecological Systems,
Human Well-Being, and Occupational Health



October 12 - 16, 2014 — Cincinnati, Ohio