

Objective: To Describe and assess the efficacy of interventions taken by a School of Public Health and Community Medicine in the urban planning of Jerusalem and its surroundings.

Material and Methods: Overview of the current tools used by health professionals in Israel's planning process: coalition with stakeholders, education, submission of statement of objection to government planning committee, and helping local groups identify and formulate specific health-related objections. We apply available tools and prior knowledge on the direct and indirect effects of urban sprawl on public health to a plan to build new ring roads and suburban development in hills adjacent to Jerusalem.

Results: The intervention taken by the school of public health contributed to (1) A statement by the National Planning Committee inspector that the impact on public health must be evaluated in such a planning process. The impacts in this case include air pollution, road injury, commuting time, loss of green spaces, damage to aquifers, and diversion of budgets away from essential services (2) The ministry of health representative voted against the plan (3) Education on the interactions of public health and urban planning for policy makers, key stakeholders, and the public with attention to health impacts of alternative planning and transportation strategies. The plan to expand Jerusalem was rejected by the National Planning Committee.

Conclusions: Current tools available to health professionals are sufficient to bring public health considerations into the planning process. There is a need to expand and improve the knowledge, motivation, and involvement of Israeli public health and environmental professionals in intersectoral interventions pertaining to how urban planning impinges on community health. These interventions can occur without health impact assessment (HIA) as a formal part of the planning process. It remains to be seen whether a formal requirement for an HIA is necessary or beneficial.

ISEE-390

Secondhand Smoke Exposure and Respiratory Symptoms in US Trucking Industry Workers

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Objective: There is a large body of epidemiologic evidence supporting an association of adult exposures to secondhand smoke (SHS) with adverse effects on respiratory health. Epidemiologic studies have considered exposure in the home and the workplace, including white-collar or office environments and service industry locations, but no study has focused on blue-collar environments. In this study we examined the association of SHS exposure with chronic respiratory tract symptoms among employees in the United States unionized trucking industry.

Material and Methods: We mailed a questionnaire, including questions on health and lifetime exposure to secondhand smoke, to 3689 current and recently retired unionized trucking industry workers. Using logistic regression we examined the association of recent and lifetime exposures to secondhand smoke with chronic phlegm, chronic cough, and any wheeze, as defined by American Thoracic Society criteria. We considered confounding by age, gender, race, BMI, work shift, region of the country, urban residence, and occupational exposures. Analyses were performed stratified by smoking status.

Results: A total of 2294 questionnaires were returned (64% response rate), and the responders were representative of the mailing population. In analyses adjusted for age, gender, race, education, smoking status (current, former, never), job title, retirement, work shift, region of the country, and urban residence, the odds ratio for any respiratory symptoms was greater

for those who reported recent exposure to secondhand smoke compared with those who did not (OR = 1.59; 95% CI = 1.15–2.19). Among never smokers, the adjusted OR for chronic cough was 1.67 (95% CI = 1.00–2.81), for chronic phlegm OR = 1.59 (95% CI = 0.98–2.59), and for any wheeze OR = 1.90 (95% CI = 1.41–2.56).

Conclusions: In this group of trucking industry employees, recent exposures to secondhand smoke were related to elevations in respiratory symptoms.

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Pregnancy Outcome of Female Refinery Workers Exposed to Nickel

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Objective: It has not yet been established whether exposure to nickel compounds may cause reproductive toxicity. This reflects the paucity of both animal and human evidence. The aim was to investigate whether pregnant women employed in nickel-exposed work areas are at elevated risk of an adverse pregnancy outcome.

Material and Methods: A register-based cohort study of a well-defined population. Data about the newborn, maternal occupation, and workplace were obtained using the Kola Birth Registry (KBR). Each record in the KBR was assigned a categorical nickel (Ni) exposure rating according to the occupation the delivering woman had at the time of becoming pregnant. This was achieved by using as a guideline the water-soluble Ni subfraction of the inhalable aerosol fraction obtained by personal monitoring for nickel- and copper-refinery workers or/and measured urinary-Ni concentrations. Information about spontaneous abortions was obtained by interviews, and the risk assessed in a case-control study. The reference population was delivering women from the source population with background exposure level. The association of the outcomes with the assigned exposure ratings were analyzed in multivariate logistic regression models.

Results: The adjusted odds ratio for women working in Ni-exposed areas to deliver a newborn small for gestation (SGA) was 0.84 (95% confidence interval: 0.75–0.93); with musculoskeletal defect(s) 0.96 (0.76–1.21); with genital malformation 0.81 (0.52–1.26); and miscarriage 1.14 (0.95–1.37).

Conclusions: We found no effect of maternal exposure to water-soluble Ni in early pregnancy on the risk of delivering a newborn with a defect, SGA, or miscarriage. The results should be interpreted in light of the challenges in trying to assess the effect of a single-exposure component from other exposures and occupational factors.

ISEE-392

Improving Post Natural Disaster Surveillance for Effective Decision Making

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Objective: To provide paper and Web-based data collection instruments along with analyses packages that will improve local capacity for surveillance in shelters and acute care settings in the aftermath of natural disasters.

Material and Methods: Well-developed surveillance capacity is critical to describe the distribution of injuries, illnesses, and deaths; detect outbreaks of disease early; design effective interventions; and evaluate public health response to disasters. Traditional public health surveillance is often insufficient to effectively monitor for the increased burden of human health effects related to these events. Implementing active surveillance in a variety of settings (shelters, temporary clinics, etc) and using different sources and collection methods in various geographic locations have been a challenge to providing timely, coordinated surveillance results. In response to

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