

window. The risk was especially pronounced for lifting/carrying compared to pushing/pulling. We did not find indications of safe exposure intensities.

Pesticides

0-111 TRANSLATING OBSERVATIONAL RESEARCH INTO REGULATORY SCIENCE: THE ROLE OF U.S. EPA'S OFFICE OF PESTICIDE PROGRAMS IN EVALUATING EPIDEMIOLOGIC EVIDENCE

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Introduction The U.S. Environmental Protection Agency's Office of Pesticide Programs (OPP) is a licensing program that regulates pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Food, Drug, and Cosmetic Act (FFDCA). As part of this program, OPP has a regulatory mandate to evaluate research on the health effects of pesticides and plays a critical role in translating epidemiologic research into regulatory science and policy.

Objectives OPP has developed a framework to ensure that pesticide risk assessments include systematic evaluation of epidemiologic research on the potential adverse effects of pesticide exposure. The objective of the presentation is to raise awareness about how epidemiologic research on pesticides can inform risk assessment and occupational health policy by: (1) Providing background on OPP's risk assessment process, (2) Describing how OPP evaluates epidemiologic research using an approach that is scientifically robust and transparent; and (3) Highlighting opportunities for collaboration between researchers and risk assessors on the translation of epidemiologic research into risk assessment.

Methods OPP has extensive experience evaluating epidemiology studies on pesticides and is required to review all registered pesticides according to a 15-year registration review schedule. Building off of this experience, OPP will provide a survey of its evaluation approach and explore challenges that may be promising areas for future collaboration between researchers and risk assessors.

Results and Conclusions EPA/OPP routinely evaluates epidemiology research on pesticides and is guided by a systematic review framework that is scientifically robust and transparent. While epidemiologic research increasingly plays important role in the risk assessment process, there are important regulatory challenges that often limit the ability of OPP to translate research findings into policy. Therefore, there is a critical need to strengthen collaboration between researchers and risk assessors to better understand the scientific capabilities and data needs across occupational health disciplines.

0-188 PESTICIDE EXPOSURE DURING APPLICATION WITH BACKPACK SPRAYERS IN GREENSPACES: A FIELD STUDY ON GLYPHOSATE APPLICATION

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Introduction Data on pesticide exposure during occupational knapsack spraying is scarce.

Objective This field study assessed its levels and determinants.

Methods Private landscapers/gardeners and municipal workers in the Normandy region, France, were enrolled between March and May 2011. They were equipped with cotton undergarments and gloves to assess actual dermal exposure to glyphosate, and with cotton coveralls separately for each phase to assess the contribution of mixing/loading and spraying and the distribution on 11 body areas. A field monitor observed the whole workshift and filled in a standardized observation grid. Respiratory samplings were also systematically performed, and additional surface wipes obtained from various equipment.

Results Twenty-four workers were included, all men, with a median age of 40 years old, and a median experience in pesticide use of 14.5 years. The total work time varied between 110 and 360 min (median 210), and the number of mixing/loading-spraying cycles ranged from 1 to 8 (median 2). Spraying was more exposing than mixing/loading for all body parts except hands. Hands contributed to nearly 90% of body exposure during mixing/loading, and 30% during spraying, followed by back for spraying (14%). The median actual body contamination was 5,256 µg, with a median of 4,620 µg for hands. Dermal PPE use was associated with a decreased actual dermal exposure (estimate -0.81, p=0.001), and the number of mixing/spraying cycles with an increased exposure (more or less than 2 cycles: estimate 0.85, p=0.0006).

Conclusion Given their large contribution to overall dermal exposure, caution should be paid to handwashing and common hygiene rules during knapsack spraying. To our knowledge, our study is the first to report a high contamination of the back during spraying.

0-283 RECALL ABILITY OF PESTICIDE USERS IN UGANDA AND THE UK: RESULTS FROM THE IMPRESS STUDY

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Introduction Epidemiological studies on occupational exposure to pesticides commonly use self-reported questionnaire or interview data, so insight into recall accuracy is crucial to understand study findings.

Objectives To evaluate farmers' and farmworkers' recall of occupational exposure to pesticides and other exposure determinants, and to estimate the size of any recall bias.

Methods We used data from the IMPRESS project (www.impress-project.org), which includes three occupational cohorts of farmers' and farmworkers' exposure to pesticides in the UK and one in Uganda. Participants were surveyed at baseline to ascertain the frequency of their pesticide use, personal protective equipment (PPE) practices, and other information that may affect their exposure to pesticides; re-assessment occurred 2–14 years later, depending on the cohort. To assess recall, we examined the percentage of overall agreement, sensitivity, specificity, and any trends by demographic characteristics using regression analysis.

Results Across the four cohorts, 899 participants provided responses at two time-points. Preliminary analysis identified