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PASSIVE TOBACCO SMOKE EXPOSURE IN THE WORKPLACE: EVIDENCE INDICATES IT IS SUBSTANTIAL

Passive Tobacco Smoke (PTS) contamination, as measured by nicotine and respirable particulate concentrations, has been monitored in various work environments. Published studies show that the range of average nicotine concentrations in office workplaces is very similar to that of residential environments. However, in restaurants and transportation facilities nicotine exposures are significantly higher. Survey studies that examined the magnitude of nonsmoker exposure indicate that over 75% of nonsmokers are exposed to PTS while at work and that nonsmoking blue collar workers have excessive exposure to PTS, relative to nonsmoking white collar workers. The purpose of this paper is to summarize the differences and similarities of reported PTS contaminant levels in various work environments, including industrial and nonindustrial work places that may or not have smoking control policies. Summary statistics of PTS exposure distributions in various workplaces are presented indicating that workers of all classes and occupations are potentially are risk.

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INTERVENTION RESEARCH IN OCCUPATIONAL HEALTH

L.M. Goldenhar and P.A. Schulte

In the last 40 years, knowledge of the causes of work-related disease and disability has grown dramatically. However, studies on the application of this knowledge and on ways to conduct occupational safety and health intervention research are sparse. This paper reviews occupational health and safety intervention research published between 1988-1993 and makes recommendations for future research. Thirty-three engineering, behavioral, and administrative intervention studies were reviewed. The studies evaluated a wide range of interventions including ergonomic, chemical, and physical hazards in such occupational settings as construction, hospitals, agriculture, and manufacturing. The findings revealed that the studies often lacked a theoretical basis, used small samples, and tested interventions lacking the intensity to cause the desired change. Most designs were either nonexperimental or quasi-experimental with uncontrolled sources of bias. Recommendations for future research include methods of minimizing these problems and biases and include more attention to study design, careful sample selection, use of reliable and valid measures, as well as testing appropriate interventions. Also, nonmethodological issues such as intervention cost and the cultural dimensions of the workplace play a role. Although many concerns associated with conducting field-based research are not easily addressed, researchers should make stronger attempts to deal with these issues if occupational health and safety intervention research is to be productive and result in safer workplaces.

PASSIVE TOBACCO SMOKE: OCCUPATIONAL RISK TO NONSMOKERS

The risk of material impairment of health in nonsmokers exposed to Passive Tobacco Smoke (PTS) has been recognized by various public health agencies. Two of the most serious conditions are lung cancer and cardiovascular disease. Exposure to PTS, in general, has been estimated to cause between 3,000 and 5,000 deaths due to lung cancer and between 32,000 and 40,000 deaths due to cardiovascular disease. Extrapolations to the working population indicate that there is significant lifetime risk of death in nonsmokers exposed to PTS in the workplace. Based on data from epidemiologic studies with occupational information, annual and lifetime estimates of risk attributable to occupational exposure for lung cancer and cardiovascular disease were developed and are presented. Discussion will focus on the quality of the available data, techniques for assessing uncertainties in the data, methodology for estimating annual and working lifetime risk, and results presented.

COMMUNITY, LABOR AND INDEPENDENT SCIENTIFIC OVERSIGHT OF A D.O.E.-FUNDED WORKERS' HEALTH STUDY AT A NUCLEAR FACILITY

Larry Billick, M.S.W. and Robert Harrison, M.D.

In 1990, grassroots community concerns about the possible health effects of over forty years of nuclear research and development at a U.S. Department of Energy-funded facility in Southern California led to demands for worker and environmental health studies. The efforts of state and federal officials working with leaders of the community resulted in the D.O.E. providing funds for a workers' health study. Although the California Department of Health Studies, the D.O.E. and a major university (as the research subcontractor) are involved in the study implementation, an advisory panel which includes community members, independent scientists and a representative of organized labor chose the subcontractor and has retained ongoing oversight of the study. The process has often been contentious, but has resulted in a unique relationship between a variety of seemingly disparate parties. An examination of this process can help other public and community stakeholders develop new organizational structures that address the issues of study oversight and community confidence in the results.

ENVIRONMENTAL TOBACCO SMOKE: AN EMERGING OCCUPATIONAL HEALTH ISSUE

Since the federal Environmental Protection Agency issued its landmark 1992 report classifying ETS as a Group A carcinogen, workplace exposure to ETS increasingly has been viewed as a major occupational health hazard.

This paper will examine the shifting focus of ETS regulation from public places to other workplaces, using California as an example.

The respective roles and perspectives of labor, business, state and local government and health groups in regulating ETS as an occupational health hazard will be discussed.

A STUDY OF MUSCULOSKELETAL SYMPTOMS IN DAYCARE WORKERS: REFLECTIONS ON "ACTION" / PARTICIPATORY RESEARCH

Susan Stock MD MSc. Montreal Department of Public Health

Project objectives: to assist the 21 daycare workers and their 2 administrators of a particular centre assess the extent of work-related musculoskeletal symptoms among these workers, to identify potential contributing factors, and to find solutions to reduce the number of symptoms among them and prevent development of new symptoms; Study objectives: to identify the prevalence of musculoskeletal symptoms; perceived discomfort associated with work tasks; perceived environmental and organisational difficulties; perceived work stressors; statistical relationships between musculoskeletal symptoms and socio-demographic factors, work tasks, environmental/work organisational factors.

Project steps: 1-initial work site evaluation; 2-descriptive epidemiologic study; 3-reporting of findings to staff; 4-staff education on work-related musculoskeletal disorders; 5-facilitate small group problem priority setting and solution identification by workers; (6-solution implementation; 7-evaluation).

Study results: 62% had disabling back pain in the previous 12 months; 24% disabling neck or shoulder pain; 19% disabling hand, wrist or forearm pain; 10% disabling lower limb pain. Tasks perceived to be associated with discomfort by more than 50% of workers: lifting objects > 10 lbs; lifting and carrying children; moving furniture; playground related activities; carrying and storing beds for naps; sitting in child sized chairs; carrying children and furniture up/down stairs. Environmental/organisational problems identified by 50% of workers: workload too high; children with behavioral problems; noise level.

Discussion: will focus on methodologic issues/limitations; definitions of "action" research; utility of HHE-type studies associated with worker small group problem solving exercises following presentation of results.

ORGANIZATIONAL FACTORS AFFECTING SMOKING AT WORK: RESULTS FROM FOCUS GROUP INTERVIEWS WITH SMOKERS AND EX SMOKERS

Linda G. Pucci and Bo JA Haglund

A theoretical model addressing worksite factors affecting health behaviors was applied to data from focus group interviews with smokers and ex-smokers. Organizational factors that might have influenced implementation of restrictive smoking policies at two human service districts were identified. Greater policy awareness at the district using active information dissemination strategies was not associated with less of on-the-job smoking there. Nor were there differences in support for and/or barriers to quitting in line with better information. Instead, findings suggest that organizational factors, inherent in human service agencies, impact smoking behavior of employees. In addition, changes in policy formulation and application which take into account work itself and not only the worker, are warranted.

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Bakshi, Kulbir, PhD; Bucher, John, PhD; Ohannian, Edward, PhD; Whall, Jr., Clifford W., PhD; and Douglass, Chester W., PhD; Reactor.
Panel Moderator: Barbara Z. Park, RDH,MPH

THE SAFETY AND EFFICACY OF FLUORIDE: TOXICITY AND THERAPEUTIC UPDATE

Research on the safety and efficacy of fluorides in preventing dental caries and its effects in human health continues to be examined. The results of these studies and/or reviews support the continued use of fluorides, (e.g. water fluoridation, topical fluorides, and dietary fluoride supplements). This session will provide an overview of four recent events concerning the safety and efficacy of fluoride as relates to public policy: (1) National Academy of Sciences' review of the health effects of ingested fluoride; (2) National Institute of Environmental Health Sciences' research on fluoride toxicity; (3) Environmental Protection Agency's review of the primary and secondary drinking water standards; and (4) the American Dental Association's modification of the fluoride supplement schedule, conducted in cooperation with the American Academy of Pediatrics and the American Association of Pediatric Dentistry.

ABSTRACTS

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