

JOB EXPOSURE PROFILES: A SYSTEM FOR MANAGING EXPOSURE INFORMATION FOR EPIDEMIOLOGIC STUDIES AND SURVEILLANCE

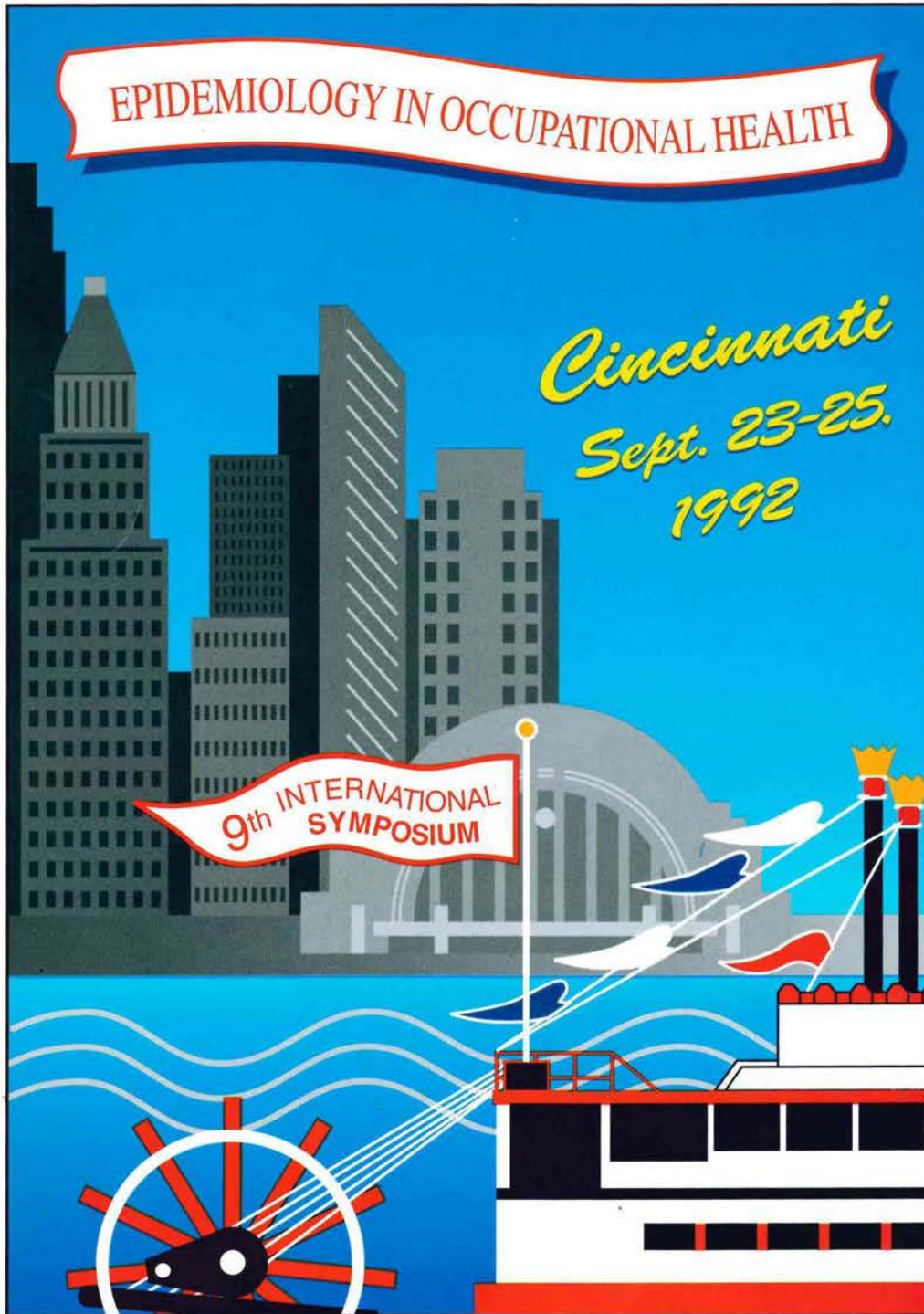
P. STEWART, J. ZEY, D. LEMANSKI, D. WHITE, R. HERRICK, M. MASTERS, J. RAYNER, M. DOSEMECI, M. GOMEZ, L. POTTERN

Patricia STEWART, Deborah WHITE, Mustafa DOSEMECI, Manuel GOMEZ, Linda POTTERN: National Cancer Institute, Executive Plaza North 418, Rockville, MD 20892, USA; John ZEY, Robert HERRICK: National Institute for Occupational Safety and Health; David LEMANSKI, Mary MASTERS, Judy RAYNER, Westat

Assessing exposures in industry-based epidemiologic studies often requires the collection of large amounts of data. These data are in a variety of formats and often cover multiple departments and jobs so that organization of these data in a system to allow easy reference when assessing exposures can be somewhat difficult. In addition, investigators often do not identify what information was known and what information was assumed when estimating exposure levels, creating the industrial hygienist's "black box". We are conducting an epidemiologic study of 27,000 workers exposed to acrylonitrile since the 1950's in eight worksites. In this study, 270,000 job entries were abstracted from the work history records and collapsed into 150 to 600 jobs in each of the plants in the study for a total of about 3000 job titles. Exposure information was collected from the employers and from other sources by interviewing long-term workers, taking walk-through surveys of the facilities, conducting air monitoring of about ten jobs over a week's period and collecting historical records. Over 400 pages of documents per plant were collected and, in addition, over 15,000 monitoring results were obtained which had been collected by the companies since the 1960's. To handwrite out all of the information describing the exposure characteristics and idiosyncracies of each job was determined to be impractical, so an interactive computerized program was developed which files all the exposure information by job title. In this system, the 3000 job titles were incorporated into a data base. The user then entered information for 17 exposure variables, e.g., process description, frequency of exposure, use of personal protective equipment, etc. which describes the exposure environment experienced by each particular job throughout the duration of the manufacturing process under study. Identification was made as to where the information could be found in the collected documents or, if the information was based on judgement, what the basis of that judgement was. Various reports were developed which summarized the entered information. This data management system is described. This electronic data base allowed easy reference to all the exposure information available on each job. The uniqueness of this system is that the data are fed into a second program, which when linked to the air monitoring results available on each job, can be used to estimate historical exposures. The system, therefore, also provided documentation as to what information was available to the industrial hygienist when assessing exposures. The system can be used for other retrospective epidemiologic studies, for prospective studies or for hazard and/or medical surveillance systems.

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BOOK OF ABSTRACTS