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OCCUPATIONAL HEALTH

The Environmental Epidemiology and Occupational Health Division (EEOH) of the Department of Public Health and Addiction Services (DPHAS) in collaboration with the Department of Labor (DOL) and Workers Compensation Commission (WCC) is responsible for the surveillance of occupational diseases (OD) for which Connecticut workers are at risk.

There is a serious problem of under-recognition and under-ascertainment of often debilitating workplace diseases. A conservative estimate in Connecticut of the annual number of new cases of OD is 10,000 and an estimated 66,000 persons have symptoms related to OD in a given year. Deaths due to acute and chronic workplace exposures are estimated to range from 750-1700 annually. Over 240,000 workers are exposed to

the five most common exposures in Connecticut - asbestos, lead, silica, noise and solvents.

In recent years, OD has received heightened attention as a preventable public health concern. An intensive cooperative effort by health care professionals and EEOH is needed in the areas of education, reporting, and intervention for OD.

This edition of the *Connecticut Epidemiologist* is devoted to the recognition, reporting and surveillance of occupational diseases (OD). Examples of active surveillance and intervention initiatives are provided through discussion of collaborative programs to prevent lead toxicity and occupational asthma.

THE OCCUPATIONAL DISEASE SURVEILLANCE SYSTEM (ODSS)

The ODSS is a 3-year-old interagency surveillance program, managed by EEOH, in which DPHAS, the Department of Labor (DOL), and the Workers Compensation Commission (WCC) cooperate. It stems from legislation in 1990 (C.G.S. 31-296-302), the Occupational Health Clinics Bill. The initial focus was on reporting from "sentinel" providers. Now EEOH is seeking OD reports directly from all health care providers. From these reports, outbreaks, clusters and trends in the state are recognized, and priorities for follow-up and action are established. This confidential system is separate from the WCC so that identification of suspect cases can occur more rapidly and that public health responses can be developed.

Laws on the Reporting of Occupational Disease

Many health care professionals are unaware that since 1949 they have been mandated by law (Title 31, Sec. 31-40a of the General Statutes) to report all diseases that are suspected to be work-related. Information from these reports are required by state statute to be held in strict confidence (C.G.S. Sec. 19a-25). These OD include: repetitive motion disorders, respiratory diseases, acute/chronic chemical poisoning, heavy metal absorption, contact dermatitis, solvent-related toxicity, metal-fume fever and beryllium disease, and others. Note: Physicians need *not* report *injuries* other than repetitive trauma. In addition, the following work-related diseases are required to be reported, using the PD-23 reporting form, to the local health department and DPHAS **within 12 hours** of recognition (Sec. 19a-36-A2 of Public Health Code): blood lead ≥ 20 micrograms per deciliter (ug/dL), occupational asthma, and silicosis.

How to report?

Complete a copy of the Physician's Report of Occupational Disease (PROD) or PD-23 Reportable Disease Case Report and send it to the address at the bottom of the form. For forms, statutes or additional information, please call Carolyn Jean Dupuy at 240-9029.

PROFILE OF OCCUPATIONAL DISEASES REPORTED, 1992 - 1994

Table 1 displays the types of occupational diseases that were reported to the ODSS from 1992 through August 1994. During 1992-93 reports were primarily received from occupational health clinics. Following an extensive mailing to primary care physicians at the end of 1993, reports are now being received from a broad spectrum of providers.

Disease	1992	1993	1994
Allergy/Dermatitis	34	61	50
Chemical Exposure	21	109	21
Lead Toxicity	14	38	18
Repetitive Trauma			
Carpal Tunnel Syndrome	71	121	137
Hand Arm Vibration	55	8	4
Muskuloskeletal	34	32	42
Nervous System	26	15	15
Tendonitis	96	60	86
Vibration White Finger	34	6	1
Respiratory			
Asbestosis	38	11	7
Asthma	20	11	8
Bronchitis	7	4	3
Pleural Plaque	34	5	2
Reactive Airway	2	3	1
Silicosis	1	1	2

ADULT BLOOD LEAD SURVEILLANCE PROGRAM (ABLES)

The Connecticut Adult Blood Lead Surveillance Program (ABLES), part of the Occupational Health Surveillance Program in EEOH, receives funding from the National Institute of Occupational Safety and Health (NIOSH).

Objectives

1. To implement a laboratory-based surveillance system that detects workers/workplaces with elevated blood lead levels (BLLs).
2. To investigate and intervene when elevated BLLs occur in workers/workplaces.
3. To identify and conduct outreach to workers and lead-using industries that currently do not employ lead risk reduction measures.

Reporting Requirements

Laboratories are required by law (C.G.S. 19a-110) to report BLLs ≥ 10 ug/dL to the DPHAS using the Laboratory Report of Significant Finding form. Health care providers are mandated to report BLLs ≥ 20 ug/dL to the DPHAS.

DPHAS Follow-up and Referral Protocol

EEOH's protocol involves follow-up and referral of workers with BLLs ≥ 20 ug/dL. Workers are sent a letter explaining their blood lead levels, a fact sheet on lead exposure, and a questionnaire. For levels ≥ 40 ug/dL, the worker is personally contacted and re-sent materials. At this level the employer is also sent a letter, and is contacted by the ABLES industrial hygienist to review strategies for the reduction of lead exposure in the workplace.

Memorandum of Understanding with OSHA

A Memorandum Of Understanding (MOU) has been in place since 1993 between EEOH and the federal Occupational Safety and Health Administration (OSHA) to work cooperatively towards the goal of blood lead monitoring and intervention for Connecticut workers. With the MOU, EEOH can refer companies to OSHA that fail to respond satisfactorily to DPHAS notification. For reporting forms, information on educational materials or the ABLES program, please call Betty Jung or Marian Heyman at 240-9029.

CRISP CONNECTION

A special statewide blood lead surveillance and intervention pilot project housed at DPHAS is CRISP (Connecticut Road Industry Surveillance Project), which serves to protect Connecticut bridge workers. The project operates under the auspices of Yale University's Occupational and Environmental Medicine Program, funded by NIOSH, and has worked extensively with the Connecticut Department of Transportation (CONNDOT) and worker groups.

Statewide Monitoring System

The CRISP program uses a single statewide monitoring system through 20 CRISP-affiliated clinics. A report of any worker with elevated BLLs ≥ 25 ug/dL initiates an immediate CRISP intervention. At BLLs ≥ 35 ug/dL, there is immediate medical follow-up and the CRISP industrial hygienist will work with the company and their IH firm to control the lead exposure. *For more information* on the CRISP program and enrollment call 566-1454.

OCCUPATIONAL ASTHMA

Making Progress with Clinic Collaboration

Studies of occupational asthma suggest that early intervention is critical. When an occupational cause has been identified and controlled within six months of the onset of symptoms, over 50 percent of cases resolved.^{1,2} When asthma persisted for two years or more, less than 10 percent of cases resolved even after removal from the occupational exposure.³

Minimizing disability and chronic suffering for workers with occupational asthma is the goal of the UCONN Occupational and Environmental Medicine Section's (SOEM) "Non-Pharmacological Asthma Intervention Project." The UCONN SOEM has developed three instruments to assist in the diagnosis of occupational asthma and identify the causes.

Standardized Diagnostic Protocol

The standardized diagnostic protocol used by SOEM includes: (1) a questionnaire to assess asthma symptoms, home and workplace exposures, smoking, and general respiratory health; (2) patient's recordings of peak flows eight times per day for two weeks; and (3) pulmonary function tests conducted before and after a work shift on one day. Patients are considered to have occupational asthma if their asthma diagnosis is confirmed by a physician, their symptoms or

pulmonary function test results have a temporal association with work or if they work with the over 200 known asthmagens.

Worksite Environment Evaluation

After obtaining an occupational history, an industrial hygienist visits the workplace to evaluate exposures, noting especially the exposures associated with the tasks that the patient relates to symptoms. The most important aspect of the evaluation is the determination of exposure controls.

Home Environment Evaluation

As with the worksite, an industrial hygienist evaluates sources of dust, moisture and other asthma agents in the home. Intervention recommendations are made to control exposures with the goal of keeping the patients at work and symptom-free.

Six months after controls are recommended, the diagnostic protocol and worksite evaluation will be repeated to determine if the recommended

intervention was implemented and, if implemented, to determine if the asthma is relieved.

For more information about diagnosing occupational asthma or for a copy of the complete diagnostic protocol contact Dr. Eileen Storey or Dr. Michael Hodgson at 203-679-2893.

References:

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2. Nelson HS, Kirsh RS, Ohman JL. Recommendations for the use of aircleaning devices in the treatment of allergic respiratory disease. *J. Allergy Clin Immunol* 1988; 82: 66-69.
3. Allard C, Cartier A, Ghezzi H, Maio JL. Occupational asthma due to various agents: absence of clinical and functional improvement at an interval of four or more years after cessation of exposure. *Chest* 1989; 96: 1046-49.

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