

Occupational and Environmental Disease Surveillance Database Overview

Background

The Association of Occupational and Environmental Clinics (AOEC) developed a national surveillance database in 1991 to capture newly diagnosed cases of occupational and environmental illnesses and chronic injuries seen at AOEC member clinics. The Occupational and Environmental Disease Surveillance Database (Database) has been supported in part by multi-year cooperative agreements with the National Institute for Occupational Safety and Health (NIOSH) since its inception. In addition, AOEC member clinics, clinicians and staff have volunteered time and effort to contribute case report data to the project and to provide along with oversight by the AOEC Board of Directors to the Database direction and oversight.

Since the founding of AOEC in 1987, the Association has grown to a network of more than 60 clinics and greater than 250 individual members committed to improving the practice of occupational and environmental medicine through information sharing and collaborative research. The chief long term goal of AOEC is to facilitate the prevention and treatment of occupational and environmental illnesses and injuries through collaborative reporting and investigation of health problems.

The first extensive report on the AOEC Database, “Summary of AOEC Database Case Reports, the First Three Years: 1991-1993”, was released in September 1995. The report summarized 2,774 cases that had been reported by the AOEC clinics to the Database. The second report described 3,080 occupational and environmental illness and occupational injury cases diagnosed during the time period of 1994-1996. The third report reviewed the 3,929 cases reported to the database from 1997 to 2000. The most recent report analyzed 2,215 cases in the Database that cover the time period from 2001-2004. This report also identified trends based on data from 1991 – 2004. All reports are available from the AOEC office.

Organization of the Reports

The reports provide summaries of case reports submitted by participating clinics for the given time frames. Inclusion of cases is based on a date of diagnosis during the time period. The reports are organized in the same format to allow for ease of comparison between the four previous reports (1991-1993, 1994-1996, 1997-2000 and 2001-2004). The reports are organized into five sections, each with accompanying tables and graphs. The five sections include:

- Summary of all cases with diagnoses related to occupational or environmental exposures. This first section provides a summary of all the data that is described in the subsequent detailed sections.
- Description of cases related to occupational exposures *other* than asbestos.
- Description of cases related to asbestos exposure.
- Description of cases related to environmental exposures.
- Description of cases *possibly* related to occupational or environmental exposures.

Methods

The Database is maintained at the AOEC office in Washington, DC by Katherine Kirkland (AOEC Executive Director) and Ingrid Denis (Program Coordinator). Case reports are submitted by participating member clinics to the AOEC office where the AOEC staff perform coding, data entry, and preliminary quality control. AOEC staff communicates frequently with member clinics regarding Database issues and questions on case reports. Further quality control and the summary reporting is provided by clinical members of the AOEC.

All AOEC member clinics are eligible to participate in the Database project. Participation by member clinics is voluntary and is currently limited to a small number of clinics. In order to be included in the Database a case must have a diagnosis/exposure related to work or the environment. There are two types of diagnosis/exposure relationships that are accepted for case inclusion. The first and predominant type of diagnosis/exposure relationship is “probable or definite”, where, in the physician’s judgment, the diagnosis is more than 50% likely to be causally related to occupational and/or environmental exposure(s). (“Probable” and “definite” are not distinguished in the Database.) “Causally related” includes cases in which the occupational or environmental exposure is the sole cause of a health condition as well as cases in which the exposure (occupational or environmental) exacerbates a pre-existing condition. This criterion was established jointly by the AOEC Database Committee and NIOSH at the start of the project in 1991.

The second type of diagnosis/exposure relationship is “possible”, where in the physician’s judgment a case might have been caused or exacerbated by occupational and/or environmental exposure(s), but for which there was insufficient evidence to meet the 50% criteria. These “possible” cases have been included in the Database since late 1992 and are included in this report.

A “case” is defined as one in which there has been a full clinical work-up to determine exposure relationship to the specific disease/injury. These have often been termed as “consult-level” cases. Clinics have been asked not to include screening cases unless there has been a full clinical follow-up. A number of clinics see large numbers of workers with acute occupational injuries, and these cases are not included in the Database unless a more extensive follow-up was needed at the member clinic. The AOEC Database excludes the following type of cases that do not have an occupational and/or environmentally-related diagnosis:

- post-exposure evaluations with no diagnosis (i.e. healthy patient);
- patients who have received counseling regarding potential risks of exposures;
- cases with valid diagnoses which are unrelated to any occupational or environmental exposures;
- cases with valid diagnoses thought to be caused by occupational and/or environmental factors, but where the exposure is unknown.

These types of excluded cases are not in the central Database, but member clinics have the option within the Database software to catalogue these cases within the individual clinic databases (termed as “clinic-only cases”).

Cases are submitted to the AOEC office in one of two formats: (1) on paper case report form (see form following text); or (2) on a diskette, a custom-designed software package that provides records in a DBASE IV format. All database fields with limited coding possibilities have pop-up

help screens and range-checks designed to provide the proper codes and ensure that required fields are not left blank. The description of the industry and occupation in which work-related exposure(s) occurred are indicated by the Standard Industrial Classification (SIC) and Standard Occupational Classification (SOC) codes, respectively. International Classification of Diseases, 9th Revision (ICD-9) codes are used to classify diagnoses. A hierarchical classification scheme was developed by Katherine Hunting and Susan McDonald in 1994 specifically for use in the Database for coding occupational and environmental exposures. The SIC, union code, exposure code and diagnosis code look-ups have all been integrated into the Database software. Clinics are encouraged to use the case-reporting software whenever possible. Participating clinics complete a variable amount of coding, depending on clinic resources and expertise, with the remainder of the coding completed by staff in the AOEC office.