

Summary of the Sentinel Medical Providers Network of the Sentinel Event Notification System for Occupational Risks (SENSOR) Dermatitis Program

Safety and Health Assessment and Research for Prevention (SHARP)

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From April 1, 1994 through September 30, 2000, there were a total of 64 physicians in the sentinel provider network. The specialties of occupational health and dermatology represented 59% of the physicians. A total of 454 occupational dermatitis cases were reported and are summarized in this report (Table 1). Dermatologists and occupational health physicians reported 64% and 29% of the cases respectively (Table 2).

The most frequent agents reported causing dermatitis were soaps/detergents/water, latex, epoxy and thiuram (see Table 3). The most frequent occupations reported were nurses, hairdressers, painters and janitors/cleaners (see Table 4). Hospitals, aircraft, eating places and beauty shops were the most frequent industries reported (see Table 5). The high frequency of hand dermatitis caused by two sources—soaps/detergents/water and latex—is evident in the occupations and industries reported.

The greater frequency of hospitals and aircraft industries reported in the provider network as compared to workers' compensation data, shown in Table 5, is explained as follows. Many of the hospitals in the state of Washington are self-insured as is a large aircraft manufacturer. Because the agency does not collect complete data on "medical only" claims for self-insured employers, these industries are under represented by the workers' compensation data. For the state fund system, "medical only" claims represent 90% of the dermatitis claims.

As a result of the sentinel network, we have developed prevention efforts aimed at dermatitis caused by composite materials in the aircraft industry, chronic hand dermatitis from exposure to soaps/water and latex in the health care industry, and dermatitis in agricultural workers, especially exposure to poison oak/ivy. All of these prevention materials are available from SHARP (1-888-66-SHARP) or our website (www.wa.gov/lni/sharp/derm).

Site visits to industries were also performed based on analyzing clusters of cases reported and workers' compensation claims.

| Table 1. Washington SENSOR Dermatitis Program Sentinel Reports: April 1, 1994 to September 30, 2000 | | |
|--|--------|------------------|
| Contact Type | Number | Percent of Total |
| Occupational dermatitis cases | 454 | 12.7 |
| No cases (none reported that month) | 2,991 | 83.8 |
| Repeat report | 46 | 1.3 |
| Out of state employer | 5 | 0.14 |
| Inadequate information | 26 | 0.7 |
| Non-occupational cases | 24 | 0.7 |
| Non-dermatitis cases | 9 | 0.25 |
| Chemical burn | 9 | 0.25 |
| Heat burn | 3 | 0.08 |
| Frostbite | 1 | 0.03 |
| Total | 3,568 | 100 |

| Table 2. Washington SENSOR Dermatitis Program Sentinel Providers: Distribution by Specialty and Cases | | | | |
|--|-----------------------------|---------|--------------------|---------|
| Physician Specialty | Ever in Provider Network | | Cases by Specialty | |
| | Number | Percent | Number | Percent |
| Allergist | 6 | 9.4 | 15 | 3.3 |
| Dermatologist | 13 | 20.3 | 290 | 63.9 |
| Family Practice | 11 | 17.2 | 14 | 3.1 |
| General Practice | 4 | 6.3 | 3 | 0.7 |
| Occupational Health | 25 | 39.1 | 130 | 28.6 |
| Other | 3 | 4.7 | 2 | 0.4 |
| Total | 64 | 100 | 454 | 100 |

| Table 3. Washington SENSOR Dermatitis Program Frequency of Sources in Sentinel Provider Cases*: April 1, 1994 to September 30, 2000. | | |
|--|-----------|---------|
| Source | Frequency | Percent |
| Soaps/Detergents/Cleaning Agents | 83 | 18.0 |
| Latex | 64 | 13.9 |
| Epoxy | 43 | 9.3 |
| Thiuram | 24 | 5.2 |
| Chemical | 22 | 4.8 |
| Solvents | 19 | 4.1 |
| Hairdressing Chemicals | 16 | 3.5 |
| Formaldehyde | 15 | 3.2 |
| Pesticide | 11 | 2.4 |
| Adhesives | 11 | 2.4 |
| Preservatives | 11 | 2.4 |
| Chromates | 10 | 2.1 |
| Unknown | 9 | 1.9 |
| Mold/Fungus | 9 | 1.9 |
| Water | 9 | 1.9 |
| Plastics | 8 | 1.7 |
| Glutaraldehyde | 7 | 1.5 |
| Oils/Cutting Fluid | 7 | 1.5 |
| Food Additive | 6 | 1.3 |
| Metals | 6 | 1.3 |
| Paint | 6 | 1.3 |
| Plants | 5 | 1.1 |
| Fiberglass | 5 | 1.1 |
| Cement | 5 | 1.1 |
| Friction | 5 | 1.1 |
| Nickel | 5 | 1.1 |
| Petroleum Products | 4 | 0.9 |
| Animal | 3 | 0.7 |
| Irritants | 3 | 0.7 |
| Insect Bites | 3 | 0.7 |
| Paper | 3 | 0.7 |
| Specific Product | 3 | 0.7 |
| Ink | 3 | 0.7 |
| Virus | 2 | 0.4 |
| Bacteria | 2 | 0.4 |
| Heat | 2 | 0.4 |
| Propane | 2 | 0.4 |

*Sources associated with one case only (n=11) not listed here.

| Table 4. Washington SENSOR Dermatitis Program Frequency of Occupations in Sentinel Provider Cases*: April 1, 1994 to September 30, 2000 | | |
|--|-----------|---------|
| Occupation | Frequency | Percent |
| Nurses | 32 | 7.0 |
| Hairdressers | 20 | 4.4 |
| Painters | 19 | 4.1 |
| Janitors & Cleaners | 15 | 3.2 |
| Auto Mechanics | 14 | 3.0 |
| Farm Workers | 13 | 2.8 |
| Health Technician, Not Elsewhere Classified (NEC) | 12 | 2.6 |
| Dishwashers | 11 | 2.4 |
| Nursing Aides/Orderlies | 10 | 2.2 |
| Construction Laborers | 9 | 2.0 |
| Machine Operators, NEC | 8 | 1.7 |
| Cooks | 8 | 1.7 |
| Aircraft Engine Mechanics | 8 | 1.7 |
| Machinists | 7 | 1.5 |
| Carpenters | 7 | 1.5 |
| Aircraft Mechanics, Except Engines | 7 | 1.5 |
| Laborers | 7 | 1.5 |
| Mail Clerks | 7 | 1.5 |
| General Office Clerk | 7 | 1.5 |
| Truck Drivers, Except Logging | 6 | 1.3 |
| Clinical Lab Technician | 6 | 1.3 |
| Engineering Technician, NEC | 5 | 1.1 |
| Printing Machine Operators | 5 | 1.1 |
| Sales, Mining, Manufacturing | 5 | 1.1 |
| Maids & Housemen | 5 | 1.1 |
| Graders & Sorters, Agricultural | 5 | 1.1 |
| Occupation Not Recorded | 5 | 1.1 |
| Industrial Machine Repairers | 5 | 1.1 |
| Waiters & Waitresses | 5 | 1.1 |
| Plumbers/Pipefitters | 4 | 0.9 |
| Assemblers | 4 | 0.9 |
| Dental Lab & Medical Appliance Technicians | 4 | 0.9 |
| Insulation Workers | 4 | 0.9 |
| Managers/Administrators | 4 | 0.9 |
| Cashiers | 4 | 0.9 |
| Stock & Inventory Clerks | 4 | 0.9 |
| Teachers—Elementary School | 4 | 0.9 |
| Dental Assistants | 4 | 0.9 |
| Misc. Machine Operators, NEC | 4 | 0.9 |

*Occupations associated with less than 4 claims not listed here (n=145).

Table 5. Washington SENSOR Dermatitis Program Number of Cases of Dermatological Conditions Reported by Sentinel Providers, by SIC Code, Compared to the Rank by SIC Code for the Workers' Compensation (WC) Data*: April 1, 1994 to September 30, 2000.

| SIC Code | SIC Code Description | Number | Percent | WC Rank |
|----------|---|--------|---------|---------|
| 8062 | General Medical & Surgical Hospitals | 55 | 11.9 | ** |
| 3721 | Aircraft | 42 | 9.1 | ** |
| 5812 | Eating Places | 19 | 4.1 | 1 |
| 7231 | Beauty Shops | 18 | 3.9 | ** |
| 8211 | Elementary & Secondary Schools | 12 | 2.6 | ** |
| 8051 | Skilled Nursing Care Facilities | 11 | 2.4 | 8 |
| 8221 | Colleges, Universities & Professional Schools | 11 | 2.4 | 3.5 |
| 5411 | Grocery Stores | 10 | 2.2 | 10.3 |
| 8021 | Offices and Clinics of Dentists | 9 | 1.9 | 10.3 |
| 7331 | Direct Mail Advertising Services | 8 | 1.7 | ** |
| 7538 | General Automotive Repair Shops | 7 | 1.5 | ** |
| 7011 | Hotels & Motels | 6 | 1.2 | 7 |
| 3731 | Shipbuilding and Repairing | 6 | 1.2 | ** |
| 4213 | Trucking, Except Local | 5 | 1.1 | ** |
| 7532 | Top, Body and Upholstery Repair Shops & Paint Shops | 5 | 1.1 | ** |
| 7699 | Repair Services and Related Services, NEC | 5 | 1.1 | ** |
| 8011 | Offices and Clinics of Doctors of Medicine | 5 | 1.1 | 21 |
| 5148 | Fresh Fruits & Vegetables | 5 | 1.1 | 6 |
| 5211 | Lumber & Other Building Supplies | 5 | 1.1 | ** |
| 1521 | General Contractors—Single-Family Houses | 5 | 1.1 | ** |
| 1711 | Plumbing, Heating & Air-Conditioning | 5 | 1.1 | ** |
| 175 | Deciduous Tree Fruits | 4 | 0.9 | 3.5 |
| 2092 | Prepared Fresh or Frozen Fish and Seafoods | 4 | 0.9 | ** |
| 8059 | Nursing & Personal Care Facilities, NEC | 4 | 0.9 | ** |
| 1721 | Painting & Paper Hanging | 4 | 0.9 | ** |
| 3469 | Metal Stamping, NEC | 4 | 0.9 | ** |
| 3089 | Plastic Products, NEC | 4 | 0.9 | 3.5 |
| 181 | Ornamental Floriculture & Nursery Products | 3 | 0.6 | ** |
| 3949 | Sporting & Athletic Goods, NEC | 3 | 0.6 | 15.5 |
| 8731 | Commercial Physical & Biological Research | 3 | 0.6 | ** |
| 3728 | Aircraft Parts & Auxiliary Equipment, NEC | 3 | 0.6 | 15.5 |
| 3543 | Industrial Patterns | 3 | 0.6 | ** |

*Industries associated with less than three claims (n=150) or missing data (n=9) not listed here.

WC rank = the rank of the SIC code in the Workers' Compensation data.

**WC rank is greater than 63 (includes many industries which have numerous self-insured companies).