

# Executive Summary: Occupational Disease in CT, 2023

This report focuses on occupational *disease* reports for 2021 and recent trends in reported cases. It does not address traumatic occupational *injuries*; data for Connecticut injuries can be found at the national Bureau of Labor Statistics (<https://www.bls.gov/iif/oshstate.htm>). Occupational diseases are typically harder to detect than injuries, since they often occur over longer periods of time, and can have multiple (including non-occupational) risks. Therefore, this report uses data from three primary sources as a way of establishing a more complete picture of occupational disease: Workers' Compensation First Report of Injury cases (WCC), physician reports under the Occupational Illnesses and Injury Surveillance System (OISS), and the Bureau of Labor Statistics/Connecticut Dept. of Labor Annual Survey (BLS/CTDOL).

**Table A-1: Summary of Diseases Reported by Systems, 2019-2021**

Type of Disease	BLS/CTDOL			WCC			OISS (Physicians)			Unique Cases* (WCC and OISS)		
	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021
Lung & poisonings	100	6,400	4,100	448	414	169	198	92	127	605	478	277
Lead **							275	199	160	275	199	160
Skin	300	200	200	197	230	152	134	104	91	295	306	217
Musculoskeletal***	***	***	***	2,291	2,861	2,246	590	480	558	2,741	3,198	2,694
Infectious				1,309	6,485	2,107	1,329	979	934	2,387	7,280	2,919
Hearing loss	300	200	300	113	144	98	20	15	12	130	159	105
Other***	1,000	1,100	600	901	907	849	254	146	120	1,096	1,009	954
<b>Total****</b>	<b>1,700</b>	<b>8,000</b>	<b>5,200</b>	<b>5,259</b>	<b>11,041</b>	<b>5,621</b>	<b>2,800</b>	<b>2,015</b>	<b>2,002</b>	<b>7,529</b>	<b>12,629</b>	<b>7,326</b>

There were also an **additional 4,304 COVID-19 reports** to workers' compensation in 2021 (1,517 in 2020) from a unique database separate from the First Report of Injury database traditionally used for this report.

**Sources:** **BLS:** Bureau of Labor Statistics/CTDOL survey; **WCC:** CT Workers' Compensation Commission (First Report of Injury); **OISS:** Occupational Injury and Illness Surveillance System (physician reports primarily reported through occupational health clinics)

\***Unique cases** are the combined total of workers' compensation cases and physician reports, adjusted for cases reported to both systems.

\*\*Laboratory reports of adult blood lead levels are from the Connecticut Adult Blood Lead Epidemiology and Surveillance (ABLES) program

\*\*\* Musculoskeletal Disorders (MSD) definitions vary somewhat between systems. MSD is included in the "Other" category for BLS/CTDOL data.

\*\*\*\*BLS data sometimes does not sum to total due to rounding errors in the survey reporting.

Table A-1 summarizes the data from the three different sources for the past three years. The BLS/CTDOL survey rounds to the nearest 100, so the subcategories do not always sum exactly to the total and yearly changes should be viewed with caution. The OISS draws from the Physician's Report of Occupational Disease for known or suspected occupational illnesses and are required of all physicians but in practice are mostly from the network of occupational health clinics (and therefore are likely to greatly undercount cases seen in other hospitals or by community physicians).

Data from 2020 and 2021 was heavily affected by the COVID-19 pandemic and resulted in dramatic changes in the workplace including shutdowns, remote work, masking, social distancing, and supply chain issues. COVID-19 reports were handled differently in the three databases: BLS coded them primarily under lung conditions; workers' compensation under infectious disease (and which also had a supplemental database detailed below); physician reports from occupational health clinics did not include most COVID-19 cases which instead went through other areas such as emergency departments and special testing sites.

Approximately 5,200 cases of occupational disease were reported under the BLS/CTDOL survey, 5,621 through the workers' compensation first report of injuries (and an additional 4,304 COVID-19 cases reported through the supplemental database), and 2,002 reported by physicians for 2021. The number of reports in 2020-21 were dramatically higher than 2019 in both the BLS system and workers' compensation systems due to COVID-19 reports. Reports for COVID-19 went down considerably in 2021 for both BLS and Workers' Compensation and continued to largely not be reflected in the physician reports from occupational health clinics. If COVID-19

is not included reports were lower for all systems, as detailed below. After case matching between the workers' compensation and physician reports with adjustments made for reporting to both systems, there were 7,326 unique reports (plus the 4,304 supplemental reports for a grand total of 11,360 reports) made to either or both of those two systems (BLS is a survey and individual level data is not available for matching).

**Infectious disease** was the largest category of occupational disease reports from workers' compensation, with COVID-19 accounting for over one-quarter (27%) of cases reported through the FRI database (59% when including the supplemental database). Other infectious diseases add an additional 10% of cases. Infectious disease accounted for 51% of physician reports even though only 29 COVID-19 cases were in the database. Infectious disease is not broken out in the BLS system, but COVID-19 has pushed lung disease to account for 79% of those reports.

**Musculoskeletal disorders (MSD)** such as Carpal Tunnel Syndrome and tendonitis dominated other workers' compensation reports, accounting for 40% of reports and 30% of physician reports. MSD has not been broken out by BLS since 2002, but MSD cases are presumed to be the main portion of the "other illness" category.

**Respiratory diseases and poisonings**, which include respiratory conditions and lung disease such as asthma, as well as poisonings such as from carbon monoxide and lead, accounted for 3% of cases for workers' compensation and 7% of physician reports. **"Other diseases"**, which includes infectious diseases and MSD in BLS, physical hazards such as heat and cold exposures, allergies, cancer, and others in workers' compensation and physician reports, accounted for 17% (WCC), 7% of physician reports, and 12% of BLS. **Skin conditions** accounted for 3% (WCC), 5% (OISS), and 4% of BLS reports. **Lead poisoning** is tracked separately and is based on laboratory reports to the Connecticut Department of Public Health and is maintained by the Adult Blood Lead Epidemiology and Surveillance (ABLES) surveillance system; there were 160 reports of lead poisoning in 2021; very few of those cases are reported to the other systems.

There was an overall illness rate of 42.4 cases per 10,000 workers based on the BLS survey, 34% lower than the previous year. The CT rate was approximately equal to the average national rate of 43.7 and was the 16<sup>th</sup> highest out of the 41 states reporting data.

Based upon workers' compensation data, the rate of illness in 2021 was 35.3 cases per 10,000 workers, 51% lower than the 71.4 cases per 10,000 in 2020. The highest illness rates by broad industry sector were for Government (68.7 per 10,000 workers, approximately double the overall rate), Manufacturing (48.1), Education and Health (41.7), and Trade (41.3), with all other sectors below the average rate. Specific industries with the highest rates again largely reflect the incidence of COVID-19. Hardware Stores had the highest rate at 114.9 per 10,000 workers and an increase of 53% over 2020. Nursing and Residential Care Facilities was next highest with 111.7, although this was a 68% decrease from 2020. These was followed by Educational Services (90.8), Local Government (76.8), and Computer and Electronic Product Manufacturing (72.9).

Overall (based on workers' compensation reports) 50% of reports were for women, but this varied by type of case, with a higher proportion than average for infectious diseases (60% women) but lower for all other types of illness. Based on workers' compensation reports, occupational illnesses were fairly evenly distributed across age categories between the ages of 25 to 64.

While the broad term of "strains and sprains" accounted for two-thirds (67%) of workers' compensation reports of musculoskeletal disorders (MSD), the most common specific types were Carpal Tunnel Syndrome (10%), inflammation (6%), numbness (4%), and various types of tendonitis (4%). The most common specific **causes** (aside from the commonly used terms "repetition" or "cumulative") for MSD in workers' compensation reports were lifting and carrying, tool use, computer use and data entry, and pushing or pulling.

Nonspecific respiratory illnesses were the most common type of lung condition, with 44% of reports, followed by asbestos disease or exposures (13%), poisonings such as from carbon monoxide, lead, or mercury (9%), and asthma or reactive airways dysfunction syndrome (RADS) with 7%. In addition to the more general categories

of smoke, construction dust and mold, specific substances connected to the respiratory cases included cleaning chemicals, ammonia, or bleach (14 cases), grinding dust (2), dust from cleaning air ducts, ammonia and bleach combination, fire suppression/fire extinguisher chemical (3), Bravo floor stripper, a machine fire, Lysol, gas/propane fumes (4), welding fumes, painting fumes, a bleach storage tank, construction fumes, battery fumes, roofing fumes (2), smoke from a microwave, and aerosol chili sauce.

There were 1,521 **COVID-19** cases reported through the FRI (First Report of Injury) employer reports and an additional 4,304 reports from a special COVID database based on worker reports and requests for hearings. COVID-19 cases accounted for 72% of infectious cases in the FRI data and 27% of all occupational illness reports overall (59% when including the supplemental reports). Over half (51%) of COVID-19 cases were in the Education/Health sector with 16% in Local Government and 10% in wholesale and retail trade. When the sectors are broken down into more detail by far the largest rate (and number) is for Nursing and Residential Care Facilities with a rate of 351.0 cases per thousand (and 1,883 cases), followed by Couriers and Messengers (315.3), Hardware Stores (290.1), Local Government (69.1; local government also had a very high number of cases at 927), Hospitals (61.5), and Physician Offices (59.8). Almost all (95%) of reported cases from hardware store were from one large chain, so there are likely more cases that were not reported by other stores. Nursing home chains were also relatively concentrated, with the largest system accounting for 31% of COVID cases and the top 5 chains accounting for 51% of cases (out of approximately 170 nursing homes or chains).

Other infectious disease and exposures, based on workers' compensation reports, included 491 reports of potential exposure to bloodborne pathogens (including reports of exposure to HIV/AIDS and Hepatitis C), accounting for 23% of all infectious disease reports (and 92% of physician/clinic reports), including 211 needlestick or sharps exposures. There were 29 cases of tuberculosis infection and 35 reports of tick bites, rashes from tick bites and/or a diagnosis of Lyme disease attributed to occupational exposures.

Rates of illness varied widely by **municipality** based on workers' compensation reports. Often the highest rates appear to be related to having large employers in high-rate industries. There were 55 towns and cities with at least 25 cases of occupational disease reported to workers' compensation, and the overall state mean (average) was 35.3 cases per 10,000 employees. For towns with at least 25 cases, Vernon had the highest rate of 110.2 per 10,000 workers, over 3 times the state rate of 35.3. The other towns with the highest 10 rates were Guilford (85.1), Groton (78.4), Waterbury (66.6), Trumbull (62.1), Cheshire (62.0), Cromwell (59.7), Stonington (57.7), East Lyme (55.0), East Haven (54.8), Meriden (51.4) and Bristol (50.4). Overall, 36 towns had rates higher than the state average of 35.3.

Figure A-1, a map of the rates by town is below, with rates listed in Table D-6. The map is based on a minimum of 25 or more cases per town (prepared by Connie Cox Cantor at the Center for Population Health of UConn Health).

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