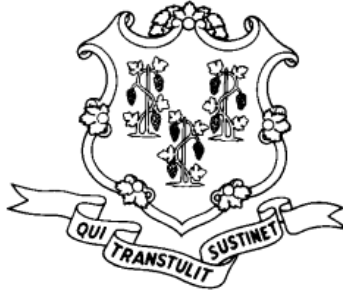


# Occupational Disease in Connecticut, 2023



This report covers data for 2021  
and was prepared under contract for the  
State of Connecticut Workers' Compensation Commission  
Stephen M. Morelli, Chairperson

As part of the Occupational Disease Surveillance Program, in cooperation  
with the Connecticut Department of Labor and the Connecticut  
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## A. Executive Summary

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% (OIIS), 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).

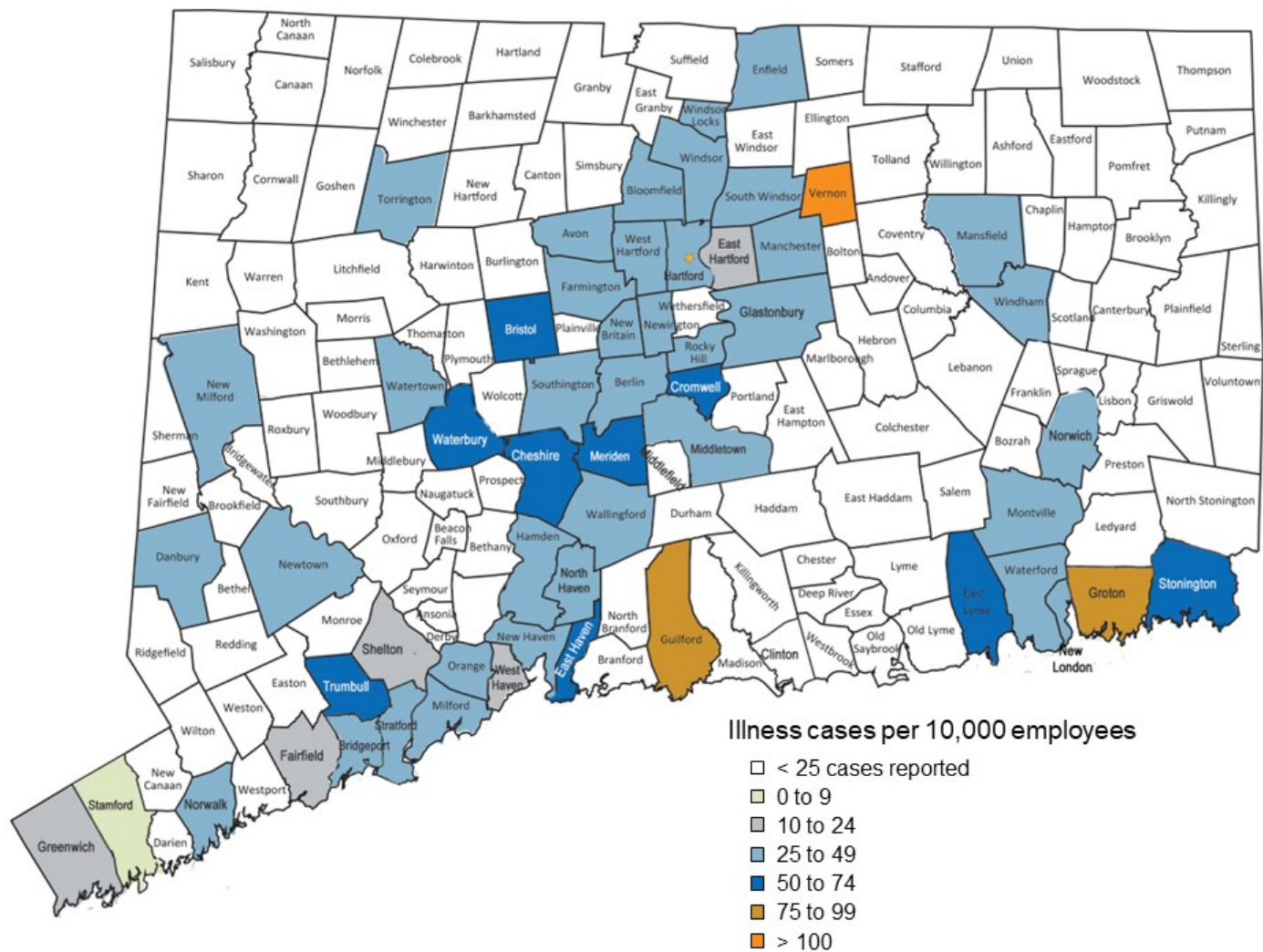
Other infectious disease and exposures, based on workers' compensation reports, included 491 reports of potential exposure to bloodborne pathogens (including reports of exposure to HIV/AIDS and Hepatitis C), accounting for 23% of all infectious disease reports (and 92% of physician/clinic reports), including 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).

*Special thanks to Amanda Deloreto and Ivan Cherniack at the CT Dept of Public Health, Erin Wilkins at the CT Dept. of Labor, and Martin Resto and Richard Eighme at the CT Workers' Compensation Commission for their assistance in compiling and reviewing the data.*

**Figure A-1: Map of Occupational Illness Rates by Town, 2021** (map prepared by Connie Cox Cantor, Center for Population Health, UConn Health)

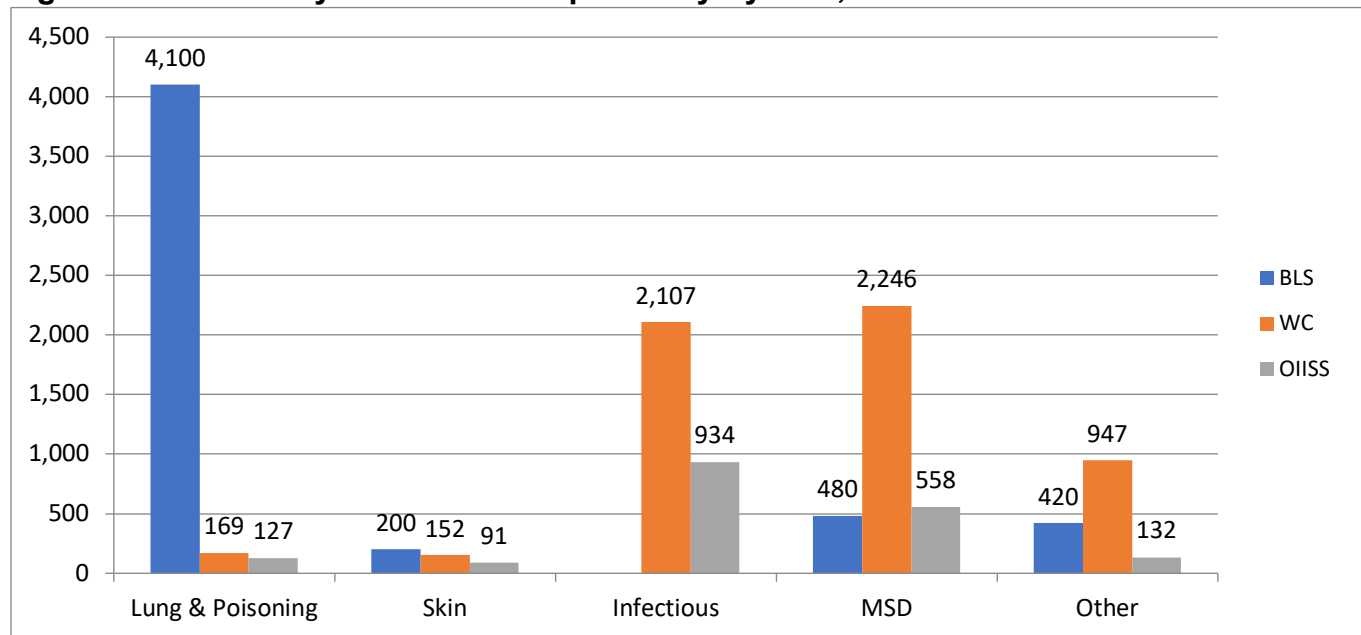




## B. Summary of Diseases

Figure B-1 shows the totals by disease category for 2021 for the three reporting systems: the Bureau of Labor Statistics/CT Dept. of Labor (BLS) survey, the Occupational Injury and Illness Surveillance System (OIIS, based on physician reports) and the Workers' Compensation (WC) First Reports of Injury. Categories have been combined to make comparisons as close as possible; however, differences in the systems' definitions make comparisons complex. For example, Workers' Compensation only requires reporting for lost-time or restricted duty cases; the BLS system requires all occupational illnesses to be reported, although the BLS data is based on only a sample of employers. The BLS/CTDOL system discontinued collecting "repetitive trauma" as a category in 2002, so MSD has been estimated based on the proportion of "other illness" in the 2001 dataset, which was 85%. COVID-19 cases were classed under lung conditions for the BLS system and infectious for workers' compensation; the OIIS system did not receive most COVID-19 reports since patients were not typically seen in occupational health clinics. See Appendix 1 for a complete description of methods.

**Figure B-1: Summary of Diseases Reported by System, 2021**



**Notes:** BLS=Bureau of Labor Statistics/ConnOSHA survey; WC=Workers' Compensation First Report of Injury Database; OIIS=Occupational Illness and Injury Surveillance System (physician reports). MSD for the BLS database was estimated using prior proportions from "other" (85%) since they are no longer broken out by BLS.

**OIIS does not contain most COVID-19 reports, which were classed as lung conditions by BLS and infectious for WCC.**

The Workers' Compensation database showed the highest number of cases, with 5,621 total cases reported, 2,002 for the OIIS, and 5,200 for the BLS survey. COVID-19 cases dominated reports in the BLS system (contained in the 4,100 lung and poisoning category) and workers' compensation (contained in the 6,485 infectious disease reports). MSD reports were dramatically higher for the workers' compensation system than the other two sources.

### Case Matching and Total of Unique and Estimated Cases of Occupational Illness

There is a fairly low number of cases that are reported to both workers' compensation and by physicians although in theory they should generally be reported to both. In order to get a better estimate of the total number of cases of occupational illness in Connecticut, cases were matched by name, employer, and type of illness for the WC and OIIS reports (Table B-1). This allows a sum of unique cases that were reported to at least one of the two systems and an estimate of cases that were not reported to either. Individual level BLS/ConnOSHA data from their survey was not available for matching, and lab-based lead reports did not have enough detail to match, so BLS and lead reports are not included, nor are the additional cases reported in the special workers' compensation COVID-19 dataset.

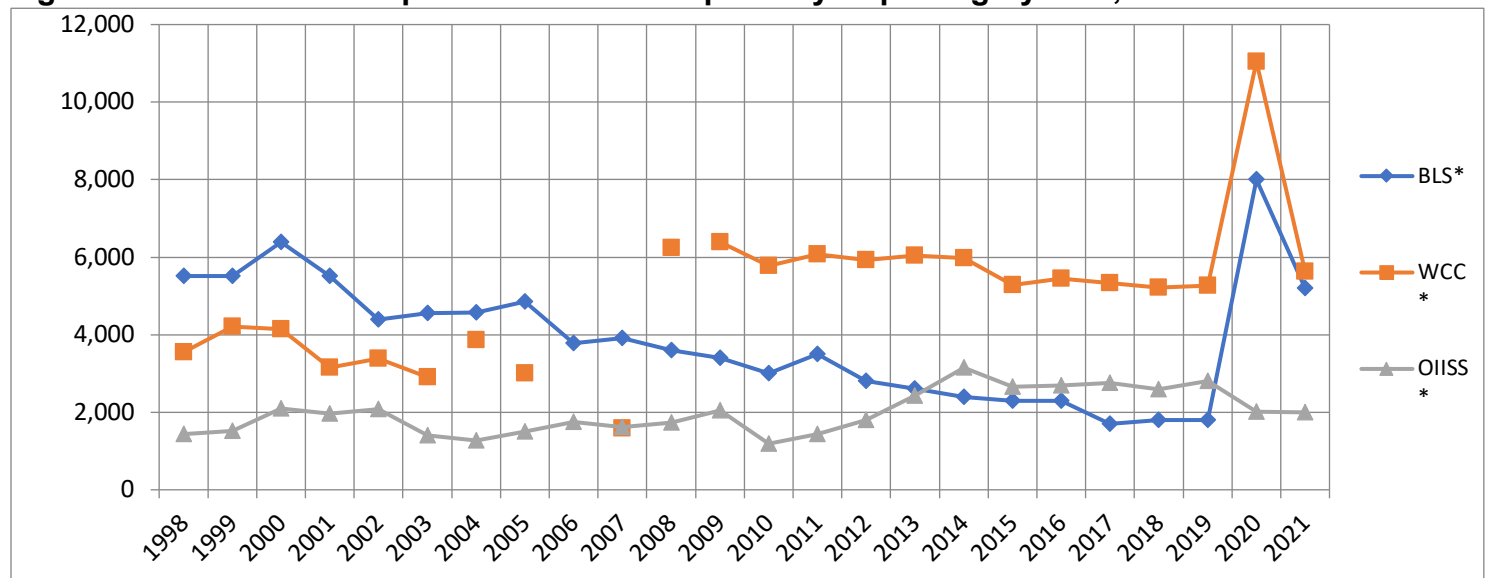


**Table B-1: Matched, Unique, and Estimated Total Cases of Occupational Illness, CT, 2021**

Illness Type	Matched	WC Only	OIISS Only	Unique Cases	Estimated Unreported	Estimated Total
Infectious	104	482	801	1,387	3,712	5,099
COVID-19 (FRI & OIISS)	18	1503	11	1,532	919	2,451
Lung	19	150	108	277	853	1,130
MSD	110	2136	448	2,694	8,699	11,393
Other	20	927	112	1,059	5,191	6,250
Skin	26	126	65	217	315	532
<b>Subtotal</b>	<b>297</b>	<b>5,324</b>	<b>1,545</b>	<b>7,166</b>	<b>27,696</b>	<b>34,862</b>
Lead (lab report data)				160		160
Additional COVID Cases		4,304		4,304		4,304
<b>Total*</b>	<b>297</b>	<b>9,628</b>	<b>1,545</b>	<b>11,630</b>	<b>27,696</b>	<b>39,326</b>

\*Total is different than the sum of the categories due to rounding errors in estimating subcategories. Lead data is from a separate reporting system from laboratories. Additional COVID cases are those reported to the Workers' Compensation Commission in other ways than the First Report of Injury from employers, such as from employee reports or requests for hearings.

There was a total of 297 cases that were reported to **both** workers' compensation (WC) and by physicians to OIISS; 1,545 cases were reported only to the physician report (OIISS) system, and an additional 5,324 cases were reported only to the workers' compensation system. This gives a total of 7,166 unique cases that were reported to at least one of the two systems, with approximately 2,919 infectious cases, 277 lung cases, 2,694 musculoskeletal (MSD) cases, 217 skin conditions, and 1,059 "other" cases. Using a statistical method called "capture-recapture" analysis, an estimate was made of the unreported cases (cases not reported to either workers' compensation nor by physicians), which was 27,696 unreported cases. When combined with the unique cases, this provides an estimate of 34,862 occupational illness cases. There were also an additional 4,304 COVID-19 cases reported to workers' compensation through other data sources (such as employee reports or requests for hearings) and 190 lead poisoning cases reported by testing labs, for a final total of 11,630 unique reported cases and an estimate of 39,323 occupational illnesses unreported cases.

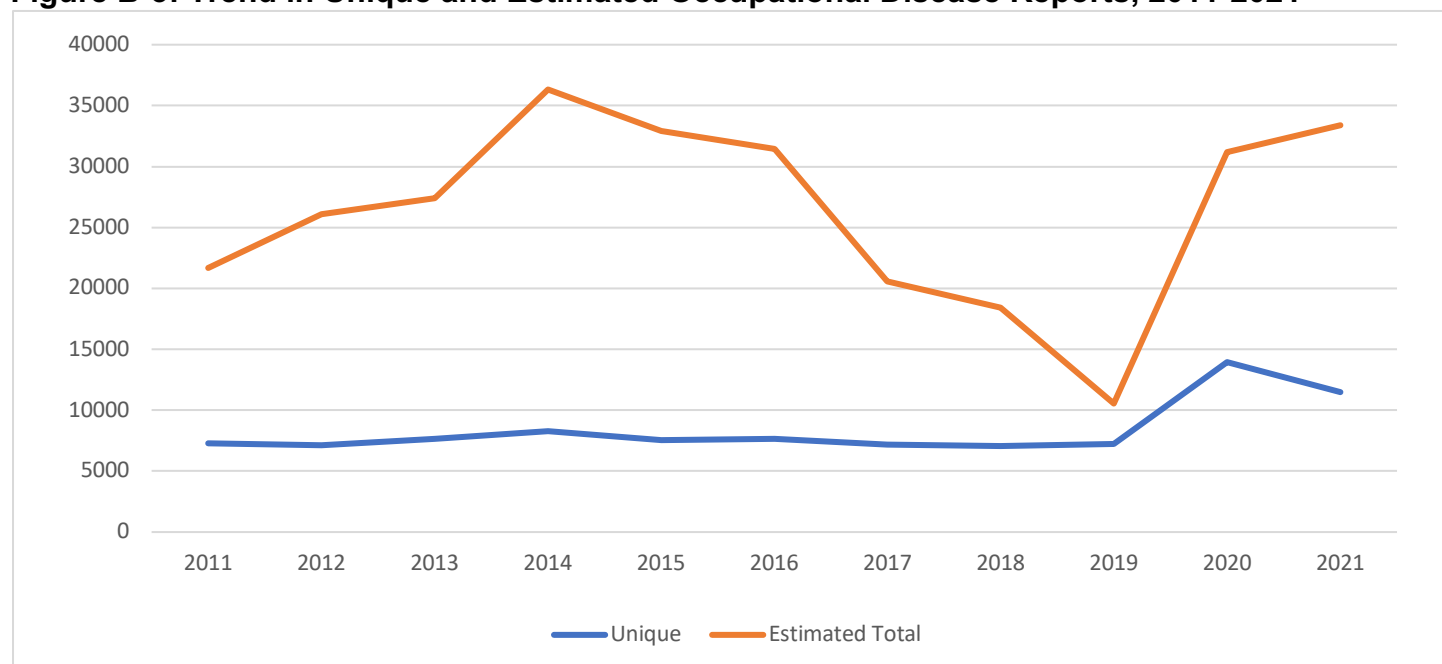
**Figure B-2: Trend in Occupational Disease Reports by Reporting System, 1998-2021**

**Notes:** BLS= Bureau of Labor Statistics/CTDOL survey; WCC= Workers' Compensation First Report of Injury; OIISS= Occupational Illness and Injury Surveillance System (physician reports). BLS figures starting in 2002 not comparable to prior years due to changes in data collection. WCC data was not complete for 2003 and 2005-2007. OIISS was not complete for 2010 and did not include most bloodborne infectious diseases/exposures in 2011.

Longer term trends in number of reports are complex (Figure B2) and should be interpreted with caution due to some changing definitions as well as incomplete data for some years (see notes for Figure B-2). Up to the dramatic increase with COVID-19 cases starting in 2020, **BLS** reports had plateaued since 2015 after almost two decades of decline. **Workers' Compensation** (WCC-FRI) data was generally declining between 2008-15 (the Workers' Compensation database appears incomplete in 2003 and 2005-2007) and was level between 2015-2019, then rising dramatically with COVID-19 cases in 2020. **Physician reports** (OIISS) have had more fluctuation but generally increased between 2010 and 2014 and then leveled off since 2015; COVID-19 cases were typically not reported by occupational health clinics so there was not an increase in 2020.

Figure B-3 shows the trends since 2011 in unique (cases reported either to workers' compensation or to OIISS) and estimated totals based on an estimate of unreported cases using capture-recapture methods. Unique cases stayed fairly flat (7,000-8,000) over time until the COVID-19 increase shown for 2020-21. Estimated cases peaked in 2014 and declined until the increase in 2020-21 due to COVID-19.

**Figure B-3: Trend in Unique and Estimated Occupational Disease Reports, 2011-2021**



## C. Bureau of Labor Statistics/Connecticut Dept. of Labor Surveys

In cooperation with the U.S. Bureau of Labor Statistics (BLS), the Connecticut Department of Labor's (CTDOL) Office of Research conducts an annual survey of employers for job-related injuries and illnesses; data on **injuries** in Connecticut can be accessed through the national Bureau of Labor Statistics website at <https://www.bls.gov/iif/oshstate.htm>. This report focuses on **illnesses** and includes data from CTDOL that is not published in that report. Since these statistics are based on a survey rather than a census, numbers and rates are estimated and rounded. The Connecticut Department of Labor acknowledges that the BLS/CTDOL survey under-counts occupational diseases, particularly chronic diseases, since these are frequently not recognized nor reported.

### Occupational Illnesses in 2021

There were approximately 5,200 reported cases of occupational illnesses in 2021 (Table C-1 and Figure C-1) with an overall rate of 42.4 per 10,000 workers, a 34% decrease in rates from the prior year. The decrease was due primarily to a 36% reduction in respiratory conditions driven by a reduction in COVID-19 reports (there had been an almost 50 times increase in respiratory cases in 2020). Skin (-30%) and "other" conditions (which include repetitive trauma/musculoskeletal conditions, -41%) rates went down in 2021, while hearing loss reports, which are relatively low in absolute numbers, increased by 69%.

**Table C-1: Occupational Disease by Type, BLS/CTDOL 2020-2021**

	2020		2021		% Change in Rate
	Cases	Rates	Cases	Rates	
Respiratory	6,400	52.0	4,100	33.5	-35.6%
Skin	200	2.0	200	1.4	-30.0%
Hearing Loss	200	1.3	300	2.2	69.2%
Poisonings					
Other*	1,100	9.0	600	5.3	-41.1%
<b>Total</b>	<b>8,000</b>	<b>64.4</b>	<b>5,200</b>	<b>42.4</b>	<b>-34.2%</b>

**Source:** BLS/CTDOL; Rates are per 10,000 workers, adjusted for hours worked. The data includes public sector. Blanks indicate numbers that are too small or unreliable to publish. Total illnesses may differ from sum due to rounding errors.

\*Musculoskeletal disorders (MSD) are categorized under the "Other" category by BLS.

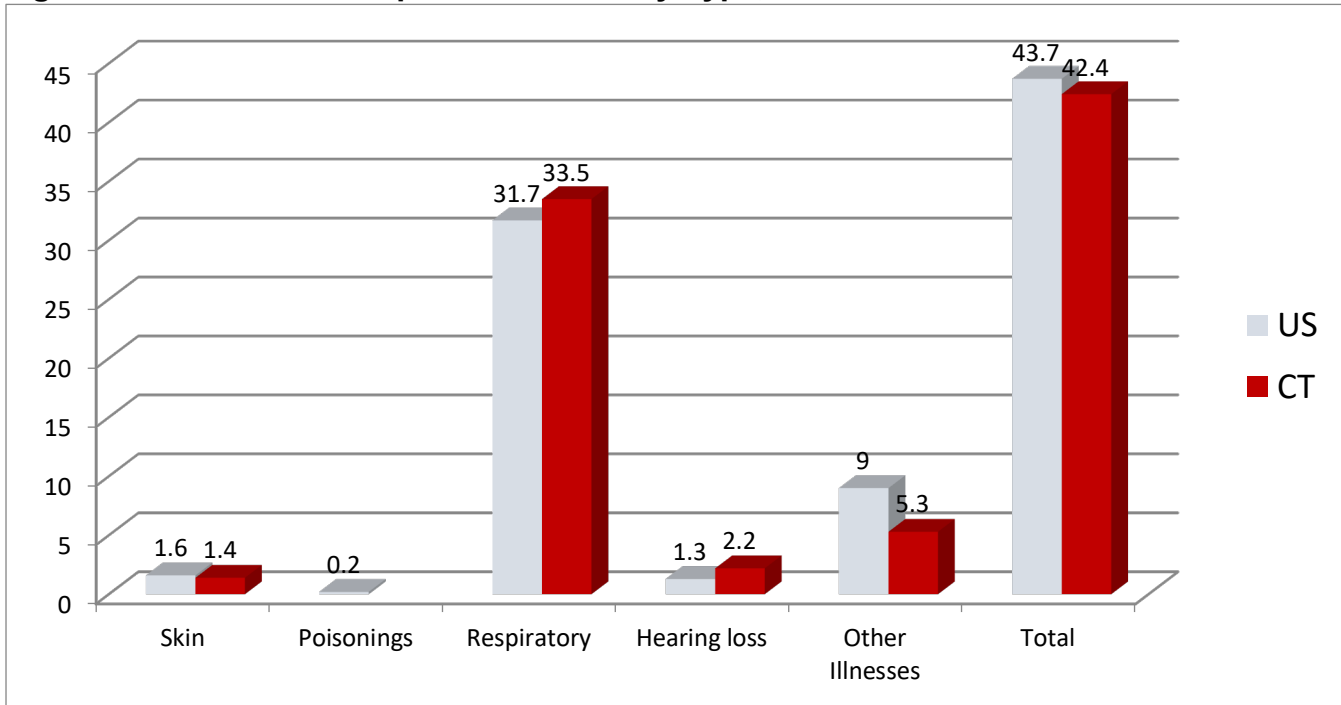
Overall rates for Connecticut in 2021 were approximately equal to U.S. rates. Rates in Connecticut were slightly higher for respiratory illnesses and hearing loss, but lower for skin conditions and "other" illnesses. Rates had increased dramatically in the prior year (2020) for both Connecticut and the U.S. due to COVID-19.

Connecticut's illness rate of 42.4 cases per 10,000 workers ranked 16<sup>th</sup> highest out of 41 states with publishable data (15 states had higher rates and 25 had lower rates). California had the highest rate of 70.5 and Wisconsin had the lowest at 19.2. Since these rates were driven primarily from COVID-19 and reporting may have been highly variable in relation to work-related COVID-19, these national comparisons should be viewed with caution.

Private sector rates for occupational illness were 45.1 in Connecticut and 37.7 nationally. The U.S. rate for the public sector was approximately 4 times as high as Connecticut: The Connecticut public sector rate was 21.2 vs. the U.S. rate of 84.5.

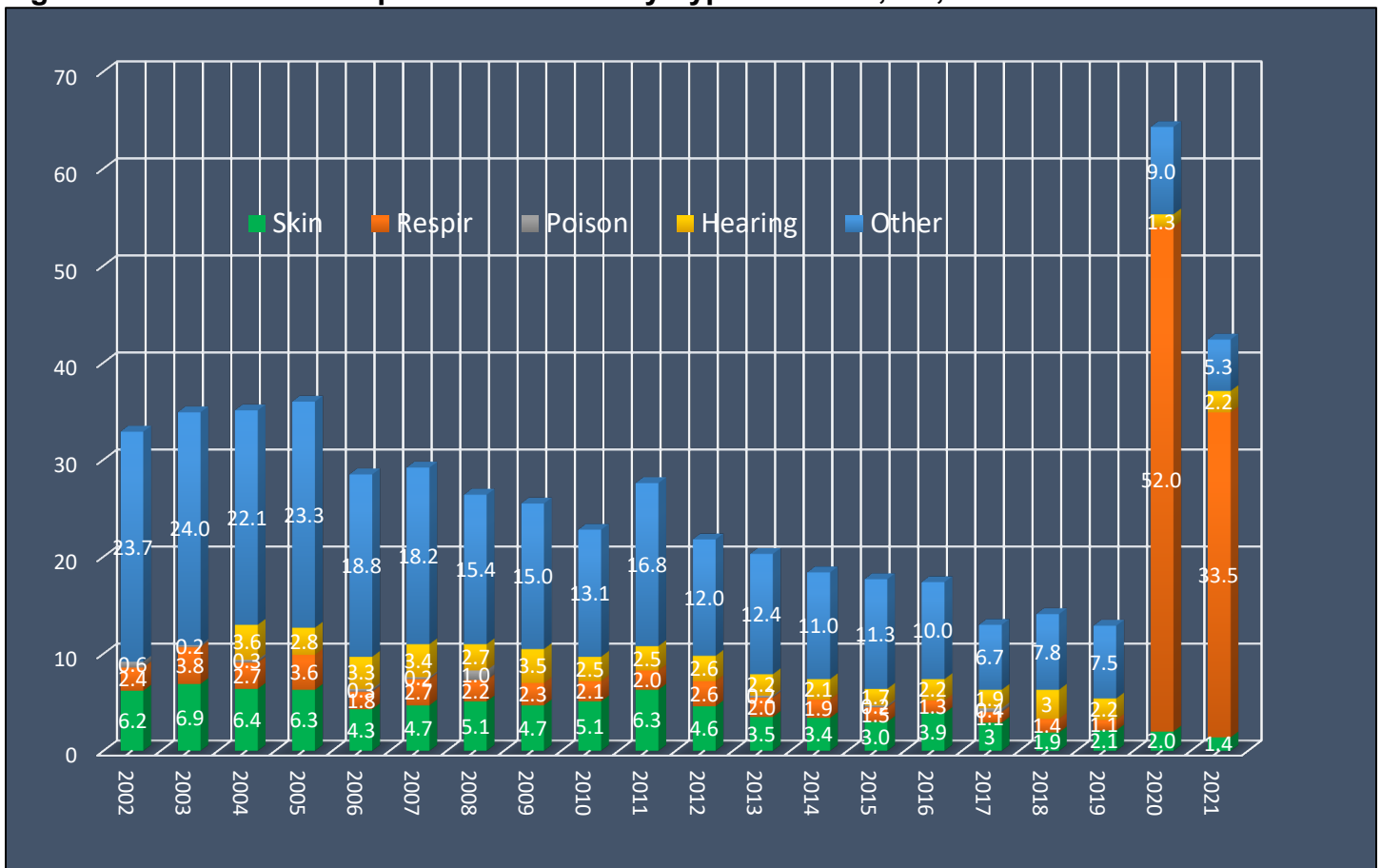
In Connecticut, the rate of illnesses increased slightly from 2002-2005, generally decreased through 2017 with the exception of 2011, then generally level through 2019, with a dramatic increase in 2020 and then a big drop in 2021, though not yet down to even the highest pre-pandemic rates (Figure C-2).

**Figure C-1: Rates of Occupational Illness by Type, US and CT, 2021**



Source: BLS and CTDOL. Rates per 10,000 workers, adjusted for hours worked.

**Figure C-2: Rates of Occupational Disease by Type and Year, CT, 2002-2021**



Source: BLS and CTDOL. Rates per 10,000 workers, adjusted for hours worked.

## Illnesses by Industry

Numbers and rates by industry sector for 2021 are presented in Table C-2. Overall, the adjusted rate was 42.4 cases of occupational illness per 10,000 CT workers. The overall private sector rate was 45.1, with a government rate of 21.2.

**Table C-2: Illnesses by Industry Sector and Type of Illness, CT, 2021**

	Total		Skin		Respiratory		Poisonings		Hearing Loss		Other Illnesses	
Industry sector	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
<b>All Industries</b>	5.2	42.4	0.2	1.4	4.1	33.5			0.3	2.2	0.6	5.3
<b>Private Industry</b>	4.9	45.1	0.1	1.3	4.0	36.8			0.2	2.2	0.5	4.7
<b>Goods producing</b>	0.8	39.9	0.1	2.5	0.4	20.7			0.2	11.2	0.1	5.1
Natural resources and mining												
Construction												
Manufacturing	0.8	53.7		2.9	0.4	28.1			0.2	15.5	0.1	6.7
<b>Service providing</b>	4.1	46.3	0.1	1.0	3.6	40.5					0.4	4.7
Trade, transportation, and utilities	0.5	22.1		0.8	0.3	15.3					0.1	5.9
Retail Trade	0.4	29.4			0.3	23.9					0.1	5.1
Transportation and warehousing	0.1	25.9				10.1					0.1	15.1
Finance, insurance, and real estate												
Professional and business services												
Educational and health services	2.5	107.2		1.6	2.3	97.2					0.2	8.3
Education		7.6				5.0						
Health care and social assistance	2.5	129.3		1.9	2.3	117.7					0.2	9.7
Leisure, entertainment, and hospitality	0.7	96.1			0.7	91.1						2.5
Arts, entertainment, recreation	0.6	568.1			0.6	565.7						
Accommodation and food services	0.2	27.0										2.6
Other services (except public administration)	0.1	40.2										
<b>State and Local Government</b>	0.3	21.2		2.1	0.1	7.5				2.1	0.1	9.4
State Government		4.8		4.1								
Local Government	0.3	29.4			0.1	11.3				3.2	0.1	13.7

**Source:** CTDOL; Rates are adjusted for hours worked and are per 10,000 full-time workers. Number of cases are in thousands (i.e 0.2 means 200 cases). Blanks indicate too little data for reliable estimates. Detailed subcategories with no publishable data are omitted.

As would be expected with numbers still so driven by COVID-19, overall rates were dominated by respiratory illnesses (BLS generally categorizes COVID-19 as a respiratory condition rather than infectious disease). Industries are broken down by industry sector (in blue), major industry (in bold), and detailed sector.

The highest *detailed* sector rate was for “Arts, Education and Recreation” at 568.1 cases per 10,000, almost entirely due to respiratory cases, followed by “Health Care and Social Assistance” at 129.3, also driven mainly by respiratory.

For *major* industry categories, the highest overall rates were “Educational and Health Services” at 107.2, “Leisure, Entertainment and Hospitality” (96.1) and “Manufacturing” (53.7); all other major categories were below the overall rate of 42.4.

Also, for *major* industry categories, Other Illnesses, which includes musculoskeletal conditions due to repetitive exposures, was led by Local Government (13.7), Education and Health Services (8.3), and Manufacturing (6.7). Hearing loss was primarily reported in Manufacturing (15.5). Skin conditions was led by State Government (4.1) and Manufacturing (2.9). There were no industries with reportable numbers for Poisonings.

## Lost-Time Illnesses

BLS has changed their reporting system for lost time illnesses to consolidate survey responses for every two years, and so data will not be available for 2021 until combined with 2022 and released in November 2023, so the data reported here only goes to 2020. BLS obtains additional data for the subset of cases that result in lost worktime and provides additional detail on specific conditions and causes. The following draws from this data for conditions that are more chronic in nature (usually classified as occupational illness). Restricted work cases are not included in this data, which is generally about half again the number of lost worktime cases.

## Infectious Disease

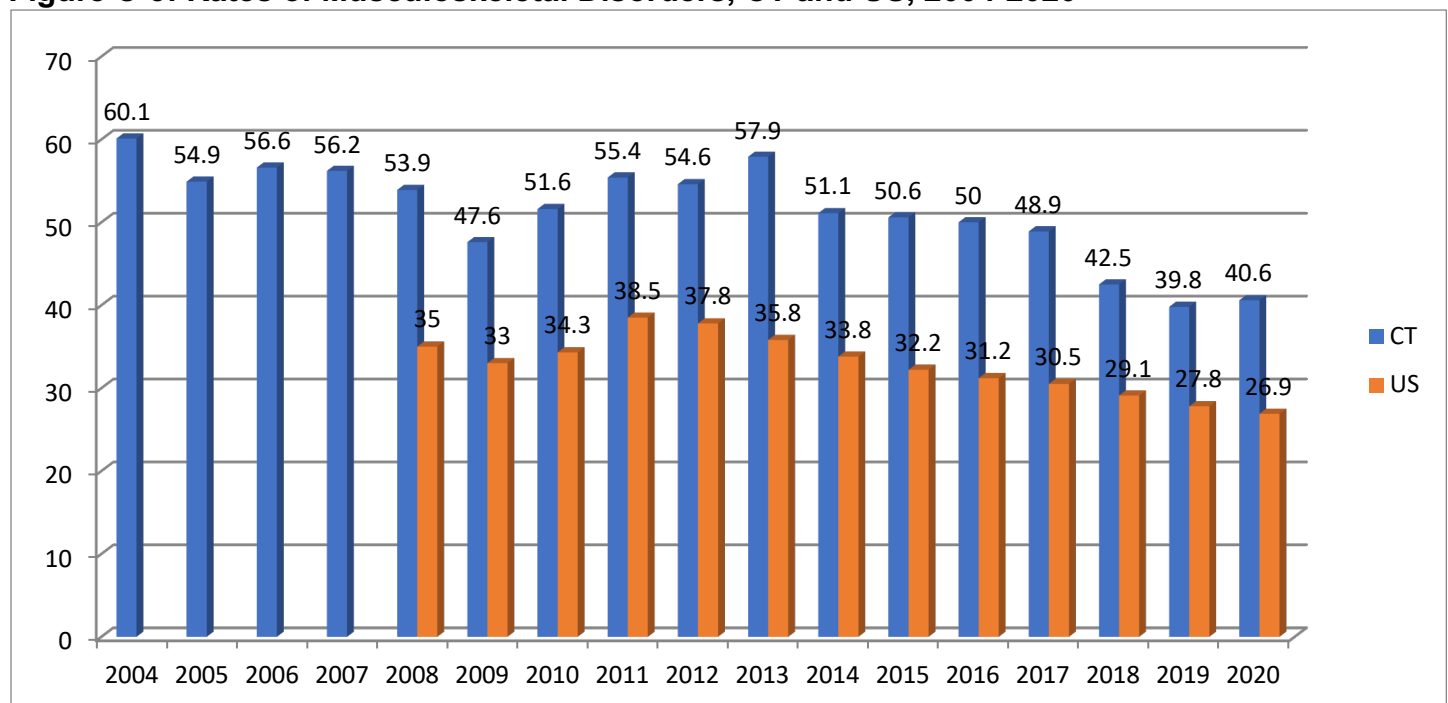
COVID-19 cases could be classified under several different categories, including respiratory and viral cases. Viral diseases with lost time increased dramatically in 2020 due to COVID-19. Connecticut had a rate of viral disease of 40.1 per 10,000 workers, almost identical to the U.S. rate of 40.0, with 4,950 cases reported in that category in Connecticut and an average of 14 days lost time.

## Musculoskeletal Conditions

The rate of musculoskeletal disorders (MSD) with lost time in Connecticut was essentially the same as the previous year at 40.6 cases per 10,000 workers compared to the 2019 rate of 39.8 (Figure C-3). The Connecticut rate is 51% higher than the national MSD rate of 26.9. MSD rates in Connecticut have generally decreased over the last seven years. National rates for all private and public employees have only been available since 2008.

Musculoskeletal conditions are the most common category of specific injury and illness conditions and is a category that includes both chronic conditions and sprains and strains from overexertion. BLS defines this fairly complex category as “includes cases where the nature of the injury or illness is pinched nerve; herniated disc; meniscus tear; sprains, strains, tears; hernia (traumatic and non-traumatic); pain, swelling, and numbness; carpal or tarsal tunnel syndrome; Raynaud's syndrome or phenomenon; musculoskeletal system and connective tissue diseases and disorders, when the event or exposure leading to the injury or illness is overexertion and bodily reaction, unspecified; overexertion involving outside sources; repetitive motion involving microtasks; other and multiple exertions or bodily reactions; and rubbed, abraded, or jarred by vibration.”

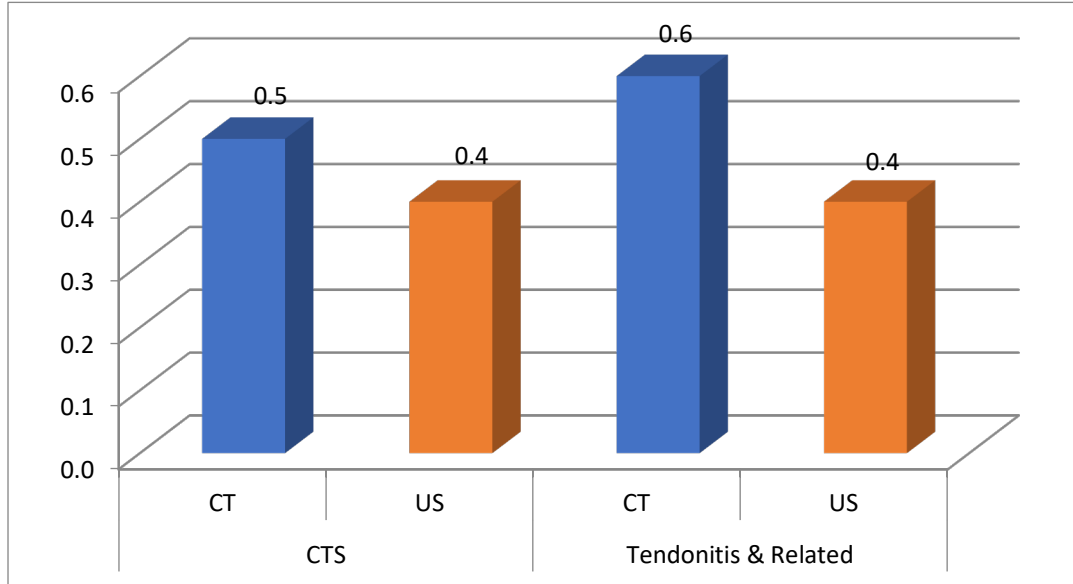
**Figure C-3: Rates of Musculoskeletal Disorders, CT and US, 2004-2020**



**Source:** U.S. Bureau of Labor Statistics (Customized Tables); <http://data.bls.gov>  
Rates are cases per 10,000 full time employees, public and private

**Tendonitis** was the most common specific lost-time illness in CT with a rate of 0.6 cases per 10,000 workers in 2020 (Figure C-4), and 0.5 cases per 10,000 of **Carpal Tunnel Syndrome (CTS)**. The rate of CTS in CT was 25% higher than the national rate and 50% higher for tendonitis. CTS had a very high number of lost workdays, with a median of 48 days of lost time per case (compared to 14 days for all cases of injury and illness in 2020) in CT. Tendonitis (and related soft-tissue disorders) was also high at 31 days, and musculoskeletal disorders had 16.

**Figure C-4: Rates of Lost-time Carpal Tunnel (CTS) and Tendonitis, US & CT, 2020**



Source: BLS Website <http://www.bls.gov> customized tables, private and public, cases per 10,000 full time employees.

Connecticut lost time cases coded as “**repetitive motion**” for cause decreased slightly to 1.9 cases per 10,000 workers from 2.3 in the previous year (Table C-3). Microtasks was the largest specific cause of repetitive motion, followed by tool use, grasping, and computer use. The CT rate was 12% higher than the national rate of 1.7. Repetitive motion lost time cases in CT had a median of 27 days away from work in 2020.

**Table C-3: Rates of Repetitive Motion by Type, CT, 2019-2020**

Repetitive Motion Injuries	2019	2020
Microtasks (unspecified)	0.7	0.6
Tools	0.6	0.5
Grasping, placing, moving	0.5	0.5
Typing and computer	0.4	0.3
All repetitive with microtasks (total)	<b>2.3</b>	<b>1.9</b>

### Lost Time

Average amounts of lost time (for illnesses that had lost time) varied widely. Skin conditions averaged 3 lost days, Carpal Tunnel Syndrome 48 days, tendonitis and related conditions 31 days, musculoskeletal conditions 8 days, viral diseases 14 days, and mental disorders 80 days.



## D. Workers' Compensation First Report of Injury Data

There was a total of 5,621 reports in the Workers' Compensation First Report of Injury (FRI) Database for 2021 (Table D-1), coming down 49% from the COVID-19-dominated 11,041 cases in 2020. There were still 1,521 COVID-19 cases reported through the FRI data, as well as an additional 4,304 reported to workers' compensation through other reporting such as employee notice of claims, resulting in a total of 5,825 COVID-19 reports, a decrease of 16% from the 6,926 cases in 2020.

This resulted in a total of 9,925 cases reported to workers compensation through some means in 2021, a decrease of 21% from 2020. Other conditions all were down dramatically from 2020, with a 21% decrease in musculoskeletal disorders, a 34% decrease in skin disorders, a 59% decrease in lung conditions, a 46% decrease in infectious diseases besides COVID-19, and a 10% decrease in other conditions such as heart conditions, stress, and hearing loss.

Excluding the extra COVID-19 cases reported through other means, COVID-19 accounted for 27% of all occupational illness FRI reports, with an additional 10% from other infectious diseases. Musculoskeletal disorders (MSD) were 40% of total cases, other illnesses 17%, lung conditions 3%, and skin disorders 3%.

**Table D-1: Occupational Disease by Type, WCC, 2020-2021**

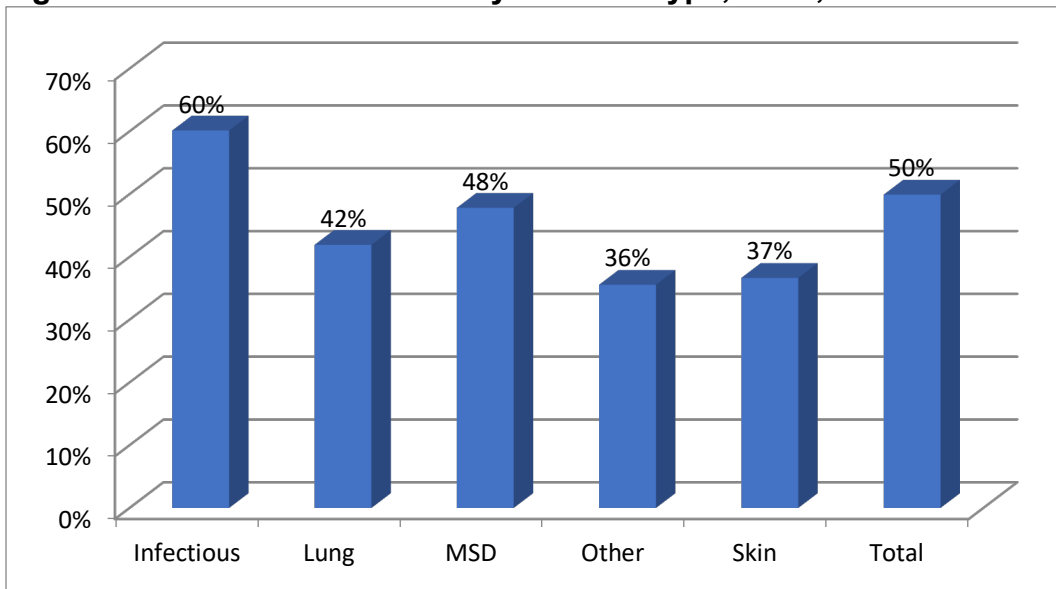
	2020	2021		
Illness type	Cases	Cases	% of Total	% Change
Musculoskeletal Disorders (MSD)	2,861	2,246	40%	-21%
Infectious Disease (w/o COVID)	1,076	586	10%	-46%
COVID-19*	5,409	1,521	27%	-72%
Lung Disorders	414	169	3%	-59%
Skin Disorders	230	152	3%	-34%
Other Illnesses	1,051	947	17%	-10%
<b>Total</b>	<b>11,041</b>	<b>5,621</b>	<b>100%</b>	<b>-49%</b>
<b>Additional COVID-19 cases*</b>	<b>1,517</b>	<b>4,304</b>		<b>184%</b>
<b>Total</b>	<b>12,558</b>	<b>9,925</b>		<b>-21%</b>

\*There were an additional 4,304 cases of COVID-19 reported to the workers' compensation Commission through other reporting mechanisms in 2021, including worker notice of claim (Form 30-c) or requests for hearing, resulting in a combined total of 5,825 COVID-19 cases.

Overall, 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 (Figure D-1). Women comprised approximately 47% of the overall Connecticut workforce in 2021, so occupational disease rates appear higher for women than men, but this is almost entirely driven by infectious disease (and in particular, COVID-19).

Reported occupational illnesses was distributed evenly across most age groups (Table D-2), with 22% involving workers between 45-54, 23% for 55-64 years old, 20% for 25-34, and 20% for 35-44. Rates of illness (adjusted for the size of the workforce) gradually go up as workers age, with the highest rate for workers between 55 and 64 (48 per 10,000 workers). Both the percentage of cases as well as rates were lower for the youngest workers (16-24) and the oldest workers (65+).

**Figure D-1: Percent of Women by Disease Type, WCC, 2021**



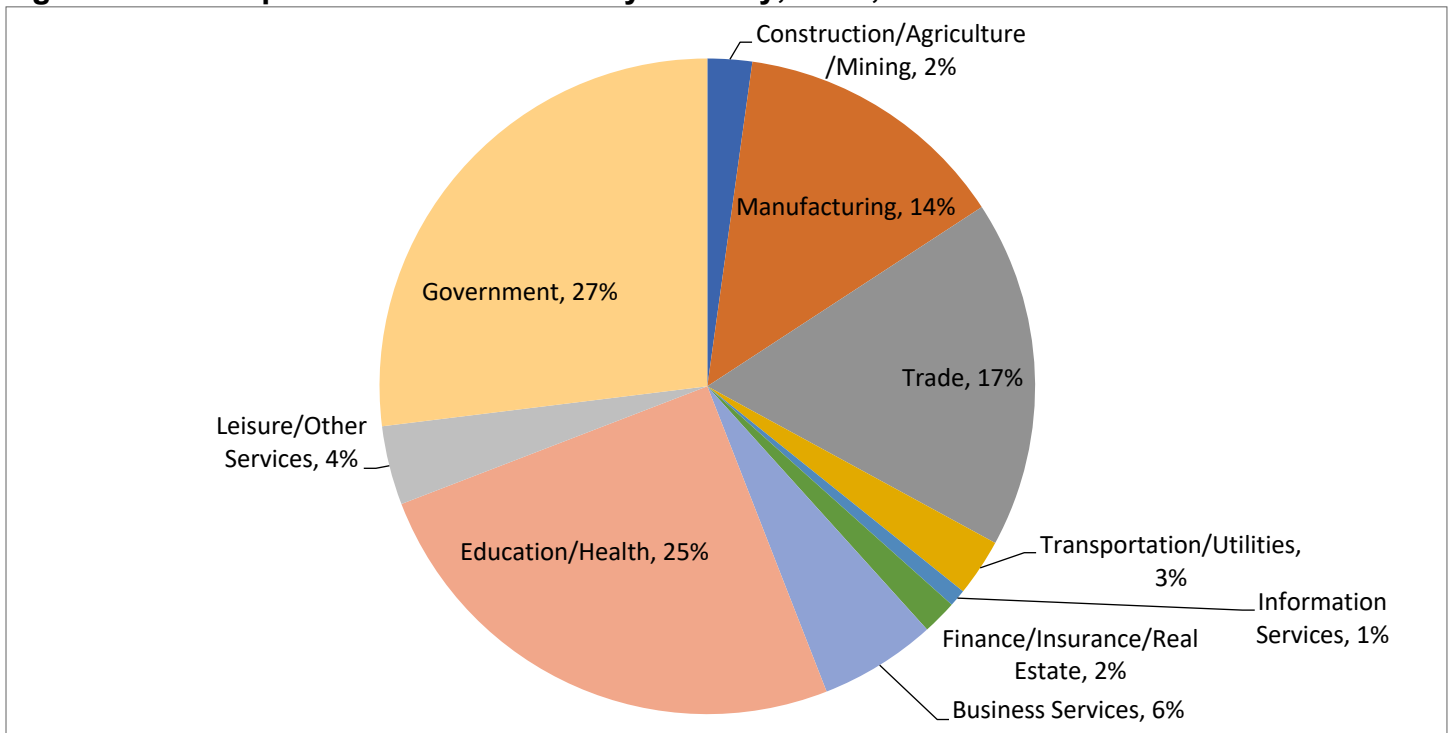
**Table D-2: Occupational Illnesses and Rates by Age, 2021**

Age	Cases	Percent	Workforce*	Rate/10,000
16-24	423	8%	192,528	22.0
25-34	1,124	20%	289,391	38.8
35-44	1,150	20%	273,818	42.0
45-54	1,240	22%	267,318	46.4
55-64	1,282	23%	267,681	47.9
65+	362	6%	104,142	34.8
Unknown	40	1%		
<b>Total</b>	<b>5,621</b>	<b>100%</b>	<b>1,394,879</b>	<b>40.3</b>

Workforce data obtained from the Census Quarterly Workforce Indicators bases on the 3<sup>rd</sup> Quarter of 2021 (<https://ledextract.ces.census.gov/static/data.html>)

Numbers and rates of occupational illnesses by industry sector are presented by major North American Industry Classification System (NAICS) classifications in Figure D-2 and Table D-3. Ninety-eight percent (98%) of reported cases were able to be coded for major industry sector. The largest sectors in terms of overall numbers were combined local and state Government (27%), Education/Health (25% of all cases; there are also health and education cases classified under government, such as employees in public schools, so this figure is for private sector schools and healthcare), Trade (17%), and Manufacturing (14%). The number of cases in Education and Health were driven largely by COVID-19 cases in the healthcare sector (see below).

**Figure D-2: Occupational Illness Cases by Industry, WCC, 2021**



**Table D-3: Cases and Rates of Occupational Disease by Major Industry Sector, WCC, 2021**

Industry Sector	Cases	%	Employment	%	Rate/10,000
Construction/Agriculture/Mining	119	2%	64,200	4%	18.5
Manufacturing	736	14%	152,859	10%	48.1
Trade	928	17%	224,538	15%	41.3
Transportation/Utilities	153	3%	65,419	4%	23.4
Information Services	46	1%	29,908	2%	15.4
Finance/Insurance/Real Estate	92	2%	116,067	8%	7.9
Business Services	312	6%	213,595	14%	14.6
Education/Health	1,358	25%	325,649	22%	41.7
Leisure/Other Services	211	4%	84,796	6%	24.9
Government	1,459	27%	212,385	14%	68.7
Unknown	207		1,943		
<b>Total</b>	<b>5,621</b>		<b>1,591,837</b>		<b>35.3</b>

**Notes:** Employment is adjusted for hours worked. A small number of reports that could not be coded for industry are categorized as unknown. Rates are illnesses per 10,000 workers. Total employment and percent do not equal the sum of components due to rounding errors. Government sector includes cases that could alternately be classified under health and education (i.e. public schools). NAICS is the North American Industry Classification System. Employment is based on the CT Labor Dept. QCEW ([http://www1.ctdol.state.ct.us/lmi/202/202\\_annualaverage.asp](http://www1.ctdol.state.ct.us/lmi/202/202_annualaverage.asp))

The number of illnesses by industry may be compared to the size of employment in those industries to understand which industries are at higher risk for illness (Table D-3). Overall, 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 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.

Table D-4 provides the detail of industry sector by type of condition. Patterns differed by the type of illness, although Government and Education/Health were relatively high in all categories. Table D-4 shows **numbers** of cases and not **rates**, so they are not adjusted for employment size in the different sectors (rates are shown in Tables D-3 and D-5).

**Table D-4: Number of Diseases by Industry Sector, WCC, 2021**

	Other		Lung		Infectious		MSD		Skin		Total	
Construction/Agric/Mining	20	2%	8	5%	6	0%	80	4%	5	3%	119	2%
Manufacturing	113	12%	27	17%	47	2%	525	25%	24	17%	736	14%
Trade	198	21%	20	13%	225	11%	470	22%	15	10%	928	17%
Transport/Utilities	28	3%	5	3%	48	2%	71	3%	1	1%	153	3%
Information Services	10	1%	1	1%	6	0%	29	1%	0	0%	46	1%
Finance/Insurance/RE	27	3%	4	3%	15	1%	44	2%	2	1%	92	2%
Business Services	50	5%	12	8%	83	4%	148	7%	19	13%	312	6%
Education/Health	87	9%	26	16%	942	46%	277	13%	26	18%	1,358	25%
Leisure/Other Services	65	7%	8	5%	40	2%	88	4%	10	7%	211	4%
Government	324	35%	49	31%	636	31%	408	19%	42	29%	1,459	27%
<b>Subtotal</b>	<b>922</b>	<b>100%</b>	<b>160</b>	<b>100%</b>	<b>2,048</b>	<b>100%</b>	<b>2,140</b>	<b>100%</b>	<b>144</b>	<b>100%</b>	<b>5,414</b>	<b>100%</b>
Unknown	25		9		59		106		8		207	
<b>Total</b>	<b>947</b>		<b>169</b>		<b>2,107</b>		<b>2,246</b>		<b>152</b>		<b>5,621</b>	

Government had a high number of cases in all categories of illnesses. **Infectious diseases** were concentrated in Education/Health (46%) primarily due to the very high number of COVID-19 cases, followed by Government (31%) and Trade (11%). **Lung diseases** were concentrated in Government (31%), Education/Health (16%), Manufacturing (17%), and Trade (13%). **Musculoskeletal disorders** (MSD) were spread across Manufacturing (25%), Trade (22%), Government (19%), and Education/Health (13%). **Skin disorders** were spread across Government (29%), Education/Health (18%), Manufacturing (17%) and Trade (10%). **“Other” illnesses**, including heart conditions and hypertension, stress, and hearing loss cases (see below) were most common in Government (35%), Trade (21%), and Manufacturing (12%).

Table D-5 shows those specific industry subsectors (3-digit NAICS code) that reported 25 or more cases of occupational illness in 2021, ordered by the highest **rate** of illness. 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, 21 sectors were above the state average of 35.3 cases per 10,000. In addition to the five mentioned above these were State Government, Transportation Equipment Manufacturing, Non-store Retailers, Food and Beverage Stores, Hospitals, Chemical Manufacturing, Merchant Wholesalers (Nondurable Goods), Couriers and Messengers, Miscellaneous Retail Stores, Telecommunications, Electrical Equipment Manufacturing, Fabricated Metal Product Manufacturing, Accommodation, General Purpose Machinery Manufacturing, General Merchandise Stores, and Food Products.

**Table D-5: Specific Industry Sectors with over 25 Cases of Occupational Disease, WCC, 2021**

Specific Industry Sector	NAICS	2021 #	Employed	2021 Rate	2020 Rate	Change
Hardware Stores	444	185	16,096	114.9	75	53%
Nursing and Residential Care Facilities	623	599	53,643	111.7	349.3	-68%
Educational Services	611	523	57,571	90.8	100.7	-10%
Local Government	Local	1030	134,074	76.8	164.2	-53%
Computer and Electronic Product Manufacturing	334	73	10,017	72.9	92.4	-21%
State Government	State	429	60,058	71.4	97.9	-27%
Transportation Equipment Manufacturing	336	300	44,618	67.2	81.7	-18%
Non-store Retailers	454	50	8327	60.0	110.4	-46%
Food and Beverage Stores	445	244	41,519	58.8	72	-18%
Hospitals	622	343	59,986	57.2	243.9	-77%
Chemical Manufacturing	325	42	7,832	53.6	52.3	3%
Merchant Wholesalers, Nondurable Goods	424	107	20,256	52.8	65.1	-19%
Couriers and Messengers	492	62	12,751	48.6	101.3	-52%
Misc. Retail Stores	453	39	8,280	47.1	61.7	-24%
Telecommunications	517	28	6,066	46.2	49.4	-7%
Electrical Equip, Appliance, Component Manuf	335	30	7,113	42.2	88.3	-52%
Fabricated Metal Product Manufacturing	332	115	27,516	41.8	73.1	-43%
Accommodation	721	30	7,583	39.6	56.2	-30%
General Purpose Machinery Manufacturing	333	48	12,870	37.3	48.2	-23%
General Merchandise Stores	452	101	27,138	37.2	34	9%
Food Products	311	30	8,112	37.0	72.5	-49%
Trucking	484	27	7971	33.9	28.3	20%
Physician Offices	621	274	92,435	29.6	85.6	-65%
Clothing and clothing accessories	448	33	12,088	27.3	33.9	-19%
Administrative and Support Services	561	214	81,662	26.2	79.1	-67%
Motor Vehicle Dealers	441	48	20,383	23.5	27.3	-14%
Merchant Wholesalers, Durable Goods	423	71	30,548	23.2	40.2	-42%
Non-residential Construction	236	25	10,826	23.1	54.6	-54%
Repair and maintenance	811	27	12,602	21.4	22.3	-4%
Residential Building Leasing	531	26	14,090	18.5	23.5	-21%
Specialty Trade Contractors	238	76	41,445	18.3	25.2	-27%
Religious and civic	813	25	14,020	17.8	14.9	20%
Credit Intermediation and Related (Banks)	522	30	21,392	14.0	15.5	-10%
Social Assistance	624	64	62,014	10.3	15.5	-33%
Professional, Scientific, and Technical Services	541	81	95,314	8.5	18.1	-53%
Food Services and Drinking Places	722	84	103,587	8.1	10.6	-23%
Insurance Carriers and Related Activities	524	25	54,435	4.6	11.1	-59%
<b>Connecticut</b>		<b>5,621</b>	<b>1,591,837</b>	<b>35.3</b>	<b>71.4</b>	<b>-50.6</b>

Note: Rates are cases per 10,000 employees.

## Illnesses by Town/Municipality

Occupational illnesses were coded by the town where the illness occurred (typically the town where the employer is located). Table D-6 (and Figure A-1 in the Summary section) show the rates of illness per 10,000 employees per town (based on total employment by town of employment, provided by the CT Dept. of Labor) for all towns and municipalities with at least 25 cases of occupational illness reported in 2021. The table is ordered by rates, with the highest rates first. Rates of illness varied widely by municipality; often high-rate towns appear to have large employers in high-rate industries (and for 2021, this includes large healthcare workplaces such as hospitals and nursing homes). The overall state 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.

**Table D-6: Illnesses by Town/Municipality, 25 or more cases, WCC, 2021**

Town	Employment	Cases	Rate per 10,000	Rank*
Vernon	7,350	81	110.2	1
Guilford	7,874	67	85.1	2
Groton	27,936	219	78.4	3
Waterbury	36,063	240	66.6	4
Trumbull	13,845	86	62.1	5
Cheshire	15,643	97	62.0	6
Cromwell	7,038	42	59.7	7
Stonington	7,273	42	57.7	8
East Lyme	5,095	28	55.0	9
East Haven	6,026	33	54.8	10
Meriden	20,812	107	51.4	11
Bristol	20,819	105	50.4	12
Middletown	27,554	130	47.2	13
Newington	16,303	73	44.8	14
New Haven	84,695	371	43.8	15
Mansfield	11,248	49	43.6	16
Manchester	25,960	113	43.5	17
South Windsor	14,147	61	43.1	18
Torrington	14,175	60	42.3	19
Bloomfield	20,323	86	42.3	20
Rocky Hill	15,660	66	42.1	21
Avon	7,498	31	41.3	22
Windsor Locks	12,353	51	41.3	23
Orange	10,549	43	40.8	24
Enfield	17,233	68	39.5	25
Stratford	24,852	98	39.4	26
Southington	16,993	67	39.4	27

Milford	25,468	97	38.1	28
Newtown	8,231	31	37.7	29
Windsor	25,960	97	37.4	30
Hamden	19,148	71	37.1	31
Watertown	8,745	32	36.6	32
Bridgeport	39,409	143	36.3	33
New London	12,410	45	36.3	34
Windham	9,503	34	35.8	35
Danbury	41,089	147	35.8	36
Farmington	30,317	106	35.0	37
Wallingford	27,077	94	34.7	38
New Britain	23,435	79	33.7	39
Montville	9,617	32	33.3	40
Hartford	105,735	342	32.3	41
New Milford	8,128	26	32.0	42
Waterford	9,882	31	31.4	43
Berlin	11,022	34	30.8	44
West Hartford	27,334	84	30.7	45
North Haven	24,028	65	27.1	46
Glastonbury	16,468	42	25.5	47
Norwalk	39,448	97	24.6	48
Fairfield	23,949	54	22.5	49
Norwich	15,750	33	21.0	50
Shelton	24,852	51	20.5	51
West Haven	14,308	28	19.6	52
East Hartford	30,383	48	15.8	53
Greenwich	32,096	48	15.0	54
Stamford	71,542	71	9.9	55
<b>Total Towns, &gt;25 cases</b>	<b>1,230,651</b>	<b>4,576</b>	<b>37.2</b>	<b>NA</b>
<b>Total Towns, &lt;25 cases</b>	<b>361,109</b>	<b>885</b>	<b>24.5</b>	<b>NA</b>
<b>Connecticut</b>	<b>1,591,760</b>	<b>5,621</b>	<b>35.3</b>	<b>NA</b>

\*The town ranked first has the highest rate of illness. Ranks are based on the towns with at least 25 cases of illness reported for the year. Employment figures are based on the town of employment. The Connecticut rate is the average of all towns, not just those with 25 or more cases.

## Musculoskeletal Disorders (MSD)

“Musculoskeletal disorders” are conditions also known as cumulative trauma disorders or repetitive strain injuries. There were 2,246 cases of MSD reported to Workers’ Compensation in 2021, a 21% decrease from 2020 (Table D-7). MSD accounted for 40% of the reported occupational diseases to Workers’ Compensation First Report of Injury (FRI) database. MSD do not include cases for conditions determined to be injuries caused from sudden events (this is a different definition than that used by BLS/CTDOL for lost time MSD shown earlier in the report, which includes some acute injuries). Most cases for the lower back are not included (since the descriptions of back conditions are typically insufficient to be able to distinguish between acute injuries and cumulative back injuries) unless they specifically noted that they were due to repetitive exposures.



Strains and sprains (which do not include acute strains or sprains such as those from single events/accidents) was the most common category of MSD, with 67% of reports (Table D-7). Carpal Tunnel Syndrome (CTS), which is a very debilitating pinching of the median nerve at the wrist, accounted for 10% of total MSD reports. Other nerve-related problems (with descriptions of numbness or tingling) accounted for an additional 4% of cases. Tendon-related problems including tendonitis and tenosynovitis, epicondylitis (“tennis elbow” or “golfer’s elbow”), trigger finger, and rotator cuff accounted for 4% of cases. Many cases did not have a specific description other than inflammation, swelling, pain or no specific description.

**Table D-7: Musculoskeletal Disorders (MSD) by Type, WCC, 2020-2021**

	2020	2021		
MSD Type	Cases	Cases	%	Change
Sprain/strain	1,719	1,498	67%	-13%
Carpal Tunnel Syndrome	380	233	10%	-39%
Inflammation	208	136	6%	-35%
Numbness	132	80	4%	-39%
Tendonitis/tenosynovitis	27	25	1%	-7%
Trigger finger	25	26	1%	4%
Ganglion cyst	18	7	0%	-61%
Rotator cuff	16	17	1%	6%
Epicondylitis	13	16	1%	23%
Arthritis/bursitis	6	8	0%	33%
Other/Unknown	317	200	9%	-37%
<b>Total</b>	<b>2,861</b>	<b>2,246</b>	<b>100%</b>	<b>-21%</b>

Approximately two-thirds (66%) of the cases of MSD were in the upper limbs of the body such as hands, arms, elbows, and shoulders (Table D-8). Another 14% were for the lower extremity (legs, knees and feet), and 14% for the neck, upper back, and torso (note that lower back cases were excluded from these figures unless they explicitly indicated they were due to cumulative exposures).

**Table D-8: Musculoskeletal Disorders by Part of Body, WCC, 2021**

Part of body	Cases	Percent
Lower Arm, Wrist, Hand	808	36%
Upper Arm, Shoulder, Upper Extremity	535	24%
Legs, Knees, and Feet	321	14%
Neck, Back, Torso	325	14%
Elbow	143	6%
Multiple	97	4%
Other/Unknown	17	1%
<b>Total</b>	<b>2,246</b>	<b>100%</b>

Causes of conditions were often incomplete, overlapping, and not consistently coded nor described. Approximately 87% of MSD cases had enough description to show some cause. Of the MSD that could be classified (Table D-9), the most frequently mentioned cause was the broad category of “repetitive” or “cumulative” (39% of cases). This term is often used as a general description to describe any chronic

musculoskeletal problem. Repetitive motion was followed by lifting and carrying (16%), tool use (including references specifically to pneumatic tools or vibration exposure; 11%), computing and clerical tasks (7%), and pushing or pulling (6%).

**Table D-9: Musculoskeletal Disorders (MSD) with Identified Cause, WCC, 2021**

<b>Cause of MSD</b>	<b>Reports</b>	<b>%</b>
Repetitive	754	39%
Lifting/carrying	317	16%
Tools/vibration	209	11%
Computer/clerical	131	7%
Push/pull	109	6%
Driving	52	3%
Bending/kneeling/crawling	50	3%
Twisting	47	2%
Assembly	46	2%
Reaching	39	2%
Grasping/gripping/squeezing	29	1%
Machine	27	1%
Patient care	26	1%
Climbing	25	1%
Walking/running/moving	24	1%
Cleaning/mopping/sweeping	18	1%
Shoveling/raking	17	1%
Sitting/standing	12	1%
Scanning/cashier	12	1%
<b>Sub-Total</b>	<b>1,944</b>	<b>100%</b>
Unknown/other	302	
<b>Total</b>	<b>2,246</b>	

## Infectious Diseases

There were 2,107 reports of infectious diseases or exposures in the “First Report of Injury” (FRI) database (the primary database used here) for 2021 (Table D-10) including 1,521 reports of COVID-19 illness and/or exposure, a 68% decrease from the previous year primarily due to the 72% drop in COVID-19 reports in the FRI data. Infectious disease reports include both actual disease and exposure to infectious agents. In addition, there were 4,304 additional COVID-19 cases that were reported through a separate workers’ compensation database of worker reports through 30-C “Notice of Claim” and related reports. Cases were matched between the databases to exclude duplicate reports. Adding in the COVID-19 cases from both databases results in a total of 6,411 infectious disease reported to workers’ compensation in some way, a 20% reduction from 2020 (this was less than the decrease in the FRI report since there were more COVID-19 reports in the alternative data set).

The 1,521 COVID-19 cases in the FRI database accounted for 72% of infectious disease reports (details of COVID-19 reports are given below). If COVID-19 reports are excluded, there were 586 other infectious diseases reported, a decrease of 46% from 2020.

There were 491 reports of exposure to bloodborne pathogens (including reports of exposure to HIV/AIDS and Hepatitis C), accounting for 23% of all infectious disease reports and a 46% decrease from the previous year. These included 211 needlestick injuries or cuts from sharps or surgical instruments that may have resulted in exposure to a patient's blood, 215 reports of exposures to human bites (cases were excluded if they specifically indicated the skin was not broken), and 65 reports of skin or eye exposure to blood or bodily fluids. There were additional reports of exposure to "spit" or "sputum" that are not reported here, since risks tend to be extremely low from such exposures. Diseases that can be contracted through blood and body fluid exposures include hepatitis B and C and HIV.

It is notable that sharps exposures decreased by 57% (after a 56% increase last year) and body fluid exposures decreased by 68%. This could possibly be indirectly related to the decrease in the COVID-19 epidemic (particularly serious cases needing hospitalizations) which eased the burden on hospitals (particularly Emergency and Intensive Care units) which is where many needlesticks occur. The COVID-19 epidemic also very likely impacted other infectious diseases due to the major changes in work practices (remote learning/work, for example) which would, for example, reduce exposures to other airborne infectious disease.

Human bites are relatively low risk exposures in terms of bloodborne disease transmission. Exposure to blood and fluids are somewhat higher risk (especially if the worker has open wounds or sores). Sharps (i.e., scalpels) and needlesticks are considered the highest risk (especially if they are deep cuts or injections). Incidents concerning prisoners or clients (including special needs students) accounted for most human bites as well as some of the other bloodborne exposures. The data does not have consistent information on whether the source patient is known to be infected with a bloodborne illness such as HIV or hepatitis, so many of these reported incidents will have little or no actual risk of disease transmission. However, preventive efforts focus on universal precautions, so it is important to reduce these incidents regardless of whether patients/clients are known to be infected.

**Table D-10: Infectious Diseases and Exposures by Type, WCC, 2020-2021**

Illness	2020		2021		Change
	Cases	%	Cases	%	
COVID	5,409	83%	1,521	72%	-72%
Bloodborne: Sharp and needlestick exposures	491	8%	211	10%	-57%
Bloodborne: Human bite	226	3%	215	10%	-5%
Bloodborne: Blood/body fluids	200	3%	65	3%	-68%
TB/ppd conversion/exposure	52	1%	29	1%	-44%
Lyme Disease/Tick bite	45	1%	35	2%	-22%
Chicken pox, measles, whooping cough	1	0%	1	0%	0%
Meningitis exposure	1	0%	0	0%	-100%
Rabies	8	0%	5	0%	-38%
Scabies/lice	4	0%	0	0%	-100%
MRSA/staph/strep	2	0%	0	0%	-100%
Other infectious	46	1%	25	1%	-46%
<b>Total</b>	<b>6,485</b>	<b>100%</b>	<b>2,107</b>	<b>100%</b>	<b>-68%</b>
COVID: Additional cases from 30C data	1,517		4,304		<b>184%</b>
<b>Total</b>	<b>8,002</b>		<b>6,411</b>		<b>-20%</b>

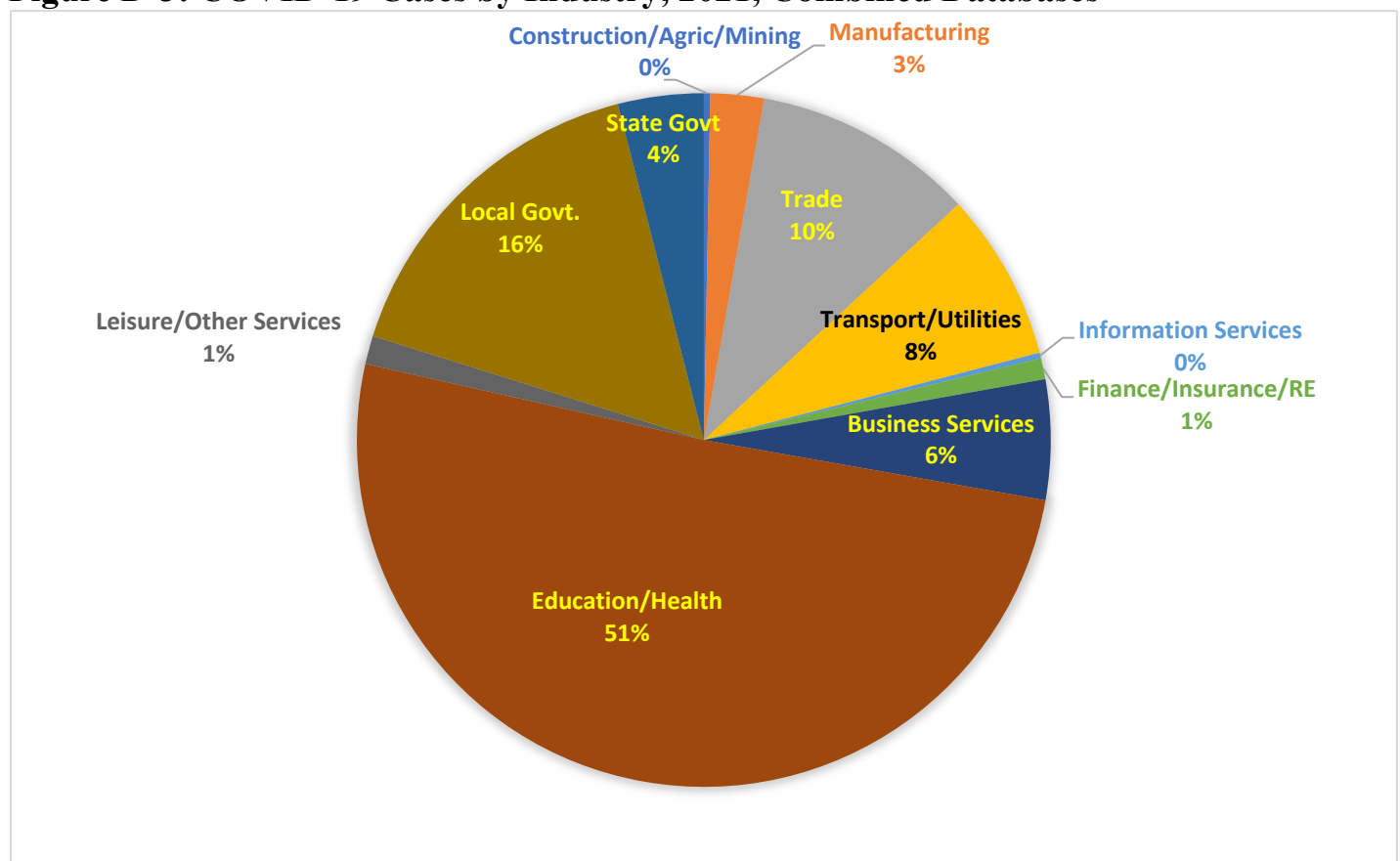
There were 29 cases of tuberculosis (TB) infection (usually determined by PPD conversion, a skin test based on immune response to TB) or exposure to clients with TB; this was a large decrease of 44% from 2020. There were 35 reports of tick bites, rashes from tick bites and/or a diagnosis of Lyme disease attributed to occupational exposures, a 22% decrease. There was only one (1) case of chicken pox, measles or whooping cough and 5 cases of exposure to rabies.

Court decisions have broadened the definition of compensable disease under Workers' Compensation to include exposures, particularly where exposure requires medical treatment such as prophylactic treatments for tuberculosis (TB) and AIDS (HIV) exposures. It is often difficult to determine whether the first report of injury was actual disease or only exposure (for example, actual Lyme disease or only a report of a tick bite).

## COVID-19

COVID-19 cases again dominated all categories of illness in 2021, accounting for 72% of all FRI-reported infectious disease cases (and 91% if the 4,304 additional cases from other databases are included).

**Figure D-3: COVID-19 Cases by Industry, 2021, Combined Databases**



Workers' compensation reports of COVID-19 cases and exposures were very likely affected by changes in the law in 2020 and 2021. Pursuant to the Workers' Compensation Act, Governor Lamont's Executive Orders and case law, the Workers' Compensation Commission administered COVID-19 claims in the same manner as claims for other occupational illnesses. Executive Order 7JJJ (<https://portal.ct.gov/-/media/Office-of-the-Governor/Executive-Orders/Lamont-Executive-Orders/Executive-Order-No-7JJJ.pdf>) stated that "Whereas, health care professionals, grocery store clerks, first responders and other essential workers kept others safe and well throughout height of the COVID-19 pandemic, and it is essential to their health and the broader public health to ensure that they have a timely, straightforward opportunity to claim benefits they may be due through the workers compensation system". It established a "rebuttable presumption" that a claim was compensable in

the situation where an employee missed a day or more of work between March 10, 2020 and May 20, 2020 due to a lab-confirmed diagnosis of COVID-19 provided that the employee worked outside the home and that the employer was defined as essential under other executive orders. While other “non-essential” workers who were exposed and/or contracted COVID-19 at work would be potentially eligible for workers’ compensation, they would need to establish that the workplace was likely to have been the source of the infection. These legal definitions likely affected the statistics presented here.

**Table D-11: COVID-19 Cases and Rates by Industry, 2021, 10 or More Cases, Combined**

<b>Specific Industry Sector</b>	<b>NAICS Code</b>	<b>COVID Cases</b>	<b>Employed</b>	<b>Rate/ 10,000</b>
Nursing and Residential Care Facilities	623	1883	53,643	351.0
Couriers and Messengers	492	402	12,751	315.3
Hardware Stores	444	467	16,096	290.1
Local Government	Local	927	134,074	69.1
Hospitals	622	369	59,986	61.5
Physician Offices	621	553	92,435	59.8
State Government	State	229	60,058	38.1
Computer and Electronic Product Manufacturing	334	35	10,017	34.9
Administrative and Support Services	561	275	81,662	33.7
Misc. Retail Stores	453	19	8,280	22.9
Accommodation	721	17	7,583	22.4
Plastics and Rubber Products Manufacturing	326	11	5,172	21.3
Educational Services	611	117	57,571	20.3
Residential Building Leasing	531	27	14,090	19.2
Clothing and clothing accessories	448	22	12,088	18.2
Transit and Ground Passenger Transport	485	21	11,636	18.0
Merchant Wholesalers, Nondurable Goods	424	26	20,256	12.8
Social Assistance	624	58	62,014	9.4
Transportation Equipment Manufacturing	336	39	44,618	8.7
Membership associations and organizations	813	11	14,020	7.8
General Purpose Machinery Manufacturing	333	9	12,870	7.0
Personal and Laundry Services	812	12	19,208	6.2
Fabricated Metal Product Manufacturing	332	15	27,516	5.5
Food and Beverage Stores	445	18	41,519	4.3
Professional, Scientific, and Technical Services	541	41	95,314	4.3
Insurance Carriers and Related Activities	524	15	54,435	2.8
Food Services and Drinking Places	722	27	103,587	2.6
Specialty Trade Contractors	238	10	41,445	2.4

Sources: Workers’ Compensation First Report of Injury (FRI) combined with other workers compensation notifications including employee-filed Notice of Claims (30c); Education and health cases were coded under local and state government if workers worked in the public sector (such as public schools or hospitals). NAICS is the North American Industry Classification System.

In addition, the Connecticut Legislature passed the Essential Workers' COVID-19 Assistance Fund (<https://www.ctessentialworkerrelief.org>) which provided for lost wages, out-of-pocket medical expenses, and burial expenses for essential workers who lived in Connecticut, contracted COVID-19, became ill and were unable to work (or died) between March 10, 2020 and July 20, 2021. For the most part, "essential workers" were defined based on the categories established by the U.S. CDC for vaccination priority and related issues.

COVID-19 cases were analyzed for industry using the combined cases from both the FRI and 30C datasets. Over half (51%) of cases were in the Education/Health sector (see Figure D-3), with 16% in Local Government and 10% in wholesale and retail trade. When the sectors are broken down into more detail (Table D-11) for subsectors with 10 or more cases, 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).

## Respiratory Illness and Poisonings

There were 75 cases of respiratory illnesses (mostly nonspecific respiratory illness from relatively acute chemical or biological exposures) for 2021 (Table D-12), a 66% decrease from 2020. There were 16 cases of poisonings from carbon monoxide, other gases, mercury, or lead, a 20% decrease from the previous year, 75% of which were from carbon monoxide or exposure to gas. There was only 1 report of lead poisoning in the workers' compensation database; refer to the lab reporting of lead cases in the physician report section for a more complete accounting. *Chronic* lung disease such as asbestos-related illnesses, asthma, and lung cancer are addressed in the following section.

Smoke or fire were the most common cause of respiratory illness (35% of cases), followed by chemical exposures (31%), dust or fumes (13%), and general indoor air quality (IAQ) or mold (4%).

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, bleach storage tank, construction fumes, battery fumes, roofing fumes (2), smoke from a microwave, and aerosol chili sauce.

**Table D-12: Respiratory Conditions and Poisonings by Cause, WCC, 2020-2021**

Cause	2020		2021		Change
	Cases	%	Cases	%	
<b>Respiratory</b>					
Smoke, Fire	49	22%	26	35%	-47%
Chemical Exposure	90	41%	23	31%	-74%
Dust/fumes	43	20%	10	13%	-77%
IAQ/mold/odor	12	5%	3	4%	-75%
Other Respiratory	26	12%	13	17%	-50%
<b>Respiratory subtotal</b>	<b>220</b>	<b>100%</b>	<b>75</b>	<b>100%</b>	<b>-66%</b>

Poisoning	Cases	%	Cases	%	Change
Carbon monoxide/gas	13	65%	12	75%	-8%
Lead	1	5%	1	6%	0%
Other Poisoning	6	30%	3	19%	-50%
<b>Poisoning Subtotal</b>	<b>20</b>	<b>100%</b>	<b>16</b>	<b>100%</b>	<b>-20%</b>
<b>Total Respiratory and Poisoning</b>	<b>240</b>	<b>100%</b>	<b>91</b>	<b>100%</b>	<b>-62%</b>

## Chronic Lung Conditions

There were 78 cases of chronic lung conditions in 2021, a 55% decrease from the previous year (Table D-13). There were 11 cases of occupational asthma or bronchitis, 6 lung-related allergies, and 39 other chronic lung conditions. Acute respiratory illnesses are classified under respiratory conditions and poisonings (above).

There were 22 reports of asbestos-related disease or exposures in 2021, a 49% decrease from the prior year. The descriptions of the cases often make it difficult to determine whether the cases are actual disease or exposure to asbestos; the notations may be either describing historic exposures that contributed to current disease, or current exposures that raise the risk of future disease. Cancers, including those caused by asbestos, are noted below (under “other illnesses”). Asbestos exposure is known to increase the risk of lung disease and cancer. If disease occurs as a result, it often appears between 10-40 years after exposure. Diseases caused by asbestos exposure are known to be under-reported by traditional surveillance sources such as Workers’ Compensation.

**Table D-13: Chronic Lung Diseases by Type, WCC, 2020-2021**

Illness	2020	2021	Change
Asthma/bronchitis	31	11	-65%
Asbestos-related	43	22	-49%
Allergies	5	6	20%
Other chronic lung	95	39	-59%
<b>Total</b>	<b>174</b>	<b>78</b>	<b>-55%</b>

## Skin Conditions

There were 152 skin conditions in the database in 2021 (Table D-14), a decrease of 34% over the previous year. These included 39 cases of contact dermatitis from poison ivy or other plants (26% of all skin cases), up 26% from the previous year. There were 52 cases of skin conditions caused by chemicals, as well as 12 additional cases attributed specifically to cleaning chemicals. There were 10 cases caused by allergic reactions to clothing, gloves, or latex. There were 39 cases of poorly defined skin conditions, frequently just described as rashes.

**Table D-14: Skin Diseases by Cause, WCC, 2020-2021**

Category	2020	2021	%	Change
Poison Ivy/plants	31	39	26%	26%
Chemical	38	52	34%	37%
Soap/Cleaning	24	12	8%	-50%
Gloves/Latex/clothing	12	10	7%	-17%
Rash/Other/Unknown	125	39	26%	-69%
<b>Total</b>	<b>230</b>	<b>152</b>	<b>100%</b>	<b>-34%</b>



In addition to cleaning chemicals, bleach and latex, specific chemicals associated with skin conditions included: solvents, stripping wax, degreaser (3 cases), constant hand washing/Purell/Ultradex/hand sanitizer (4 cases), hard primer, Bravo, antifreeze, calibration fluid, dishwasher solution, ammonia, chrome plating, uv ink, brake cleaner, dialysis solution, metalizing, spray foam, gasoline, Virex, fire extinguisher, coil cleaner, chlorhexidine, and plastiwash cleaner.

## Stress and Heart Conditions

**Table D-15: Heart, Hypertension and Stress Conditions by Type, WCC, 2020-2021**

Category	2020	2021	%	Change
Heart attack/severe symptoms	125	141	52%	13%
Hypertension	32	17	6%	-47%
Stroke/clots	21	13	5%	-38%
Stress/anxiety/depression	102	99	37%	-3%
<b>Total</b>	<b>280</b>	<b>270</b>	<b>100%</b>	<b>-4%</b>

### Heart and Hypertension

There were 270 cases involving heart conditions, stroke, chest pain, hypertension, or stress in the database for 2021 (Table D-15), a decrease of 4% from the previous year. Reports noted 141 cases of heart attacks, myocardial infarctions or acute heart events and 13 reported strokes or blood clots, often associated with emergency care at a hospital. There were 17 cases that described the condition as hypertension or “heart and hypertension” (the usual legal term for heart or hypertension cases that are covered under workers’ compensation for police and fire fighters).

Over half of the heart cases (69% of cases) appeared to involve police or firefighters or other municipal (77 cases) and state employees (20 cases) who are frequently covered under heart and hypertension laws that presume those conditions to be work-related for Workers’ Compensation purposes.

### Mental Stress

There was a total of 99 stress-related claims in the database in 2021, a 3% decrease over the previous year. Over half (28 cases, or 56%) of the cases where cause was noted referred to violence or post-traumatic stress disorders after experiencing or observing violence or auto accidents (Table D-16), 6 cited either harassment or a hostile work environment, and 9 noted conflicts with supervisors, co-workers, or customers. There were no reported stress conditions attributed to experiencing or observing COVID-19 cases, down from 4 in 2020.

**Table D-16: Stress Conditions by Cause, WCC, 2020-2021**

Sources of Stress Conditions	2020	2021	%
Violence/robbery/trauma/auto accident	35	28	56%
Supervisor/co-worker/customer	11	9	18%
Harassment/hostile work environment	8	6	12%
COVID	4		0%
Excessive work demands	1	7	14%
Unknown/other	43	49	NA
<b>Total</b>	<b>102</b>	<b>99</b>	

Stress-related claims that are not also associated with a physical injury are typically not compensable under the Workers’ Compensation statute, so it is likely that there are additional unreported (non-compensable) cases. It

should be noted that this report is based on First Reports of Injury for compensation, and the number of cases that were ultimately awarded compensation was not determined.

## Other Occupational Diseases

### Hearing Loss

There were 98 reports of hearing loss in 2021 (Table D-17), a 32% decrease from the previous year. Most (81%) were from chronic exposures to noise. The acute (single incident) cases included sudden noises such as alarms (2 cases), machine malfunctions, tire explosions (2), an O-ring blowout on a nitrogen container, a small cannon firing, a sandblasting equipment pop, a student screaming in ear (2), and gunfire (2).

### Other Disease Conditions

There were 196 reports of workers becoming **dizzy, fainting, or seizures**, a 4% increase. Some of these are likely from pre-existing conditions that occurred while at work (such as epilepsy or diabetes) and some of these were accompanied by an injury from a fall. Some may reflect more serious conditions such as heart attacks but are just described based on initial symptoms. There were 125 reports of **chemical exposures to the eyes** (this does not include other physical acute eye injuries such as particles or dust), an 8% decrease. There were 59 reports of temperature-related problems from **heat or cold**, a 27% decrease from the previous year. There were 16 cases of **cancer** reported, which included asbestos-related cancers, a decrease of 76% from the prior year. There were 58 cases of **allergic reactions** reported in addition to those noted above under respiratory and skin conditions, a 49% increase from the previous year. There were 125 “**other**” conditions that were difficult to classify, usually due to incomplete information.

**Table D-17: Other Occupational Illnesses, WCC, 2020-2021**

Type of illness	2020	2021	%	Change
Dizziness/fainting/seizure	189	196	29%	4%
Hearing loss	144	98	14%	-32%
Chemicals in eye	136	125	18%	-8%
Cold/heat related conditions	81	59	9%	-27%
Cancer	68	16	2%	-76%
Allergic	39	58	9%	49%
Other conditions	114	125	18%	10%
<b>Total</b>	<b>771</b>	<b>677</b>	<b>100%</b>	<b>-12%</b>

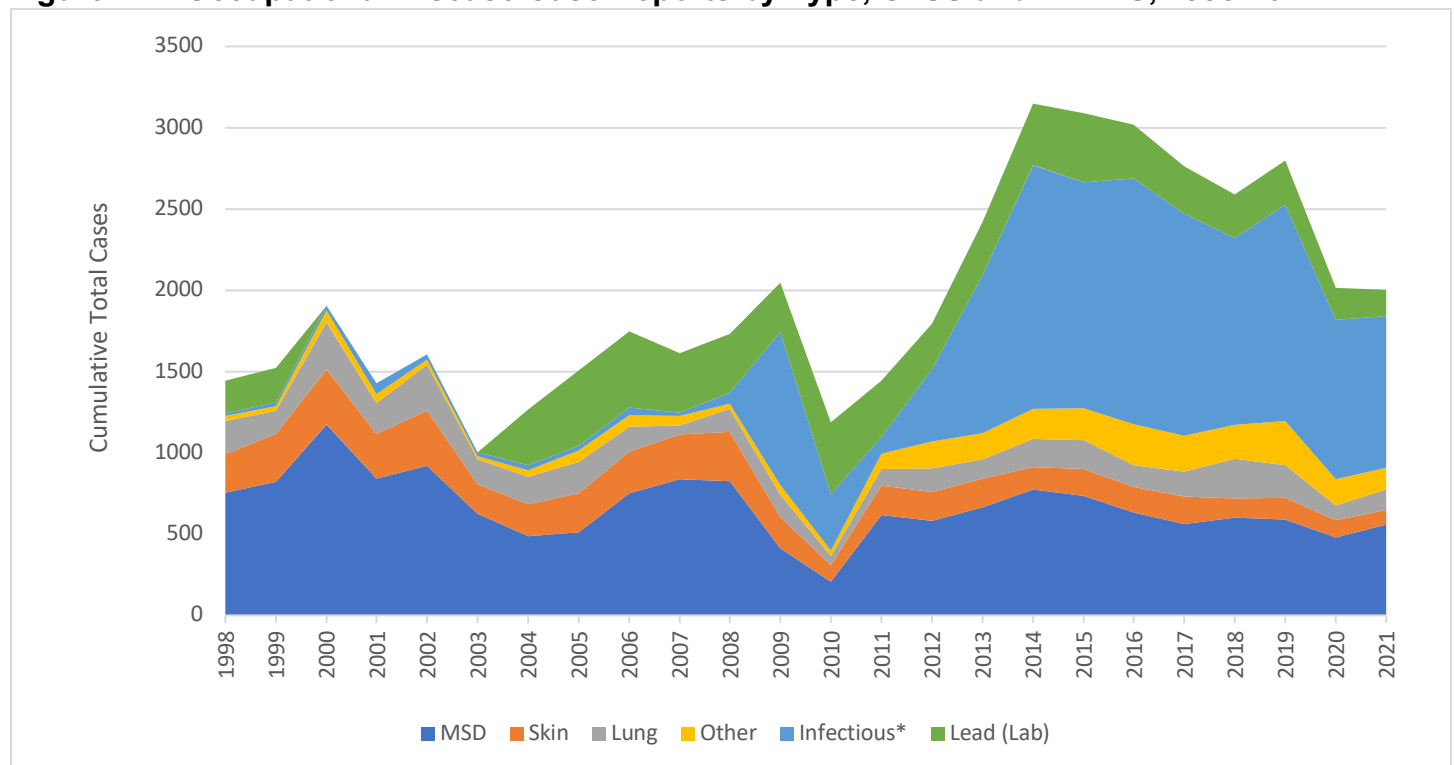
## E. Occupational Illnesses and Injury Surveillance System (OIISS)

Physicians are required to report known and suspected occupational disease to the Occupational Illnesses and Injury Surveillance System (OIISS) that is maintained by the Department of Public Health. Although all physicians are required to report, most reports are from Connecticut's occupational health clinics and industrial medicine programs. Information on blood lead level laboratory reports is received from the Connecticut Adult Blood Lead Epidemiology and Surveillance (ABLES) program. **Most COVID-19 cases were not reported through occupational health clinics since there were separate diagnostic and reporting mechanisms (such as Emergency Departments and testing locations) which do not appear in this database.**

**Table E-1: Occupational Disease Case Reports by Type, OIISS and ABLES, 2012-2021**

Category	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	% change 2020-21
MSD	580	666	774	734	633	562	603	590	480	558	16%
Skin	180	174	140	166	158	168	118	134	104	91	-13%
Lung	146	120	171	178	133	155	241	198	92	127	38%
Other	164	159	184	195	250	220	210	274	161	132	-18%
Infectious	443	973	1500	1,390	1,513	1,365	1,148	1,329	979	934	-5%
<b>Sub-total</b>	<b>1,513</b>	<b>2,092</b>	<b>2,769</b>	<b>2,663</b>	<b>2,687</b>	<b>2,470</b>	<b>2,320</b>	<b>2,525</b>	<b>1,816</b>	<b>1,842</b>	<b>1%</b>
Lead (Lab)	283	327	379	425	330	292	268	275	199	160	-20%
<b>Total</b>	<b>1,796</b>	<b>2,419</b>	<b>3,148</b>	<b>3,088</b>	<b>3,017</b>	<b>2,762</b>	<b>2,588</b>	<b>2,800</b>	<b>2,015</b>	<b>2,002</b>	<b>-1%</b>

**Figure E-1: Occupational Disease Case Reports by Type, OIISS and ABLES, 1998-2021**



\*Infectious category did not include most bloodborne pathogen exposures up to 2008, and again in 2011.

\*Infectious category did not include most COVID-19 cases in 2020-2021

\*\* Lead values for 1998-99 did not include cases in the blood lead level range of 10-19 micrograms per deciliter (ug/dL).

In general, 2020-2021 were very different years for occupational illnesses due to the COVID-19 pandemic, which resulted in dramatically different workplace patterns including widespread workplace closures, working from home where possible, mask wearing, social distancing, and disruptions to the supply chain. Therefore, comparisons to prior years must be viewed with these patterns in mind and the potential for dramatically different exposures to workplace hazards (for example, skin and musculoskeletal problems from reduced work and telework and other infectious diseases from mask wearing and social distancing).

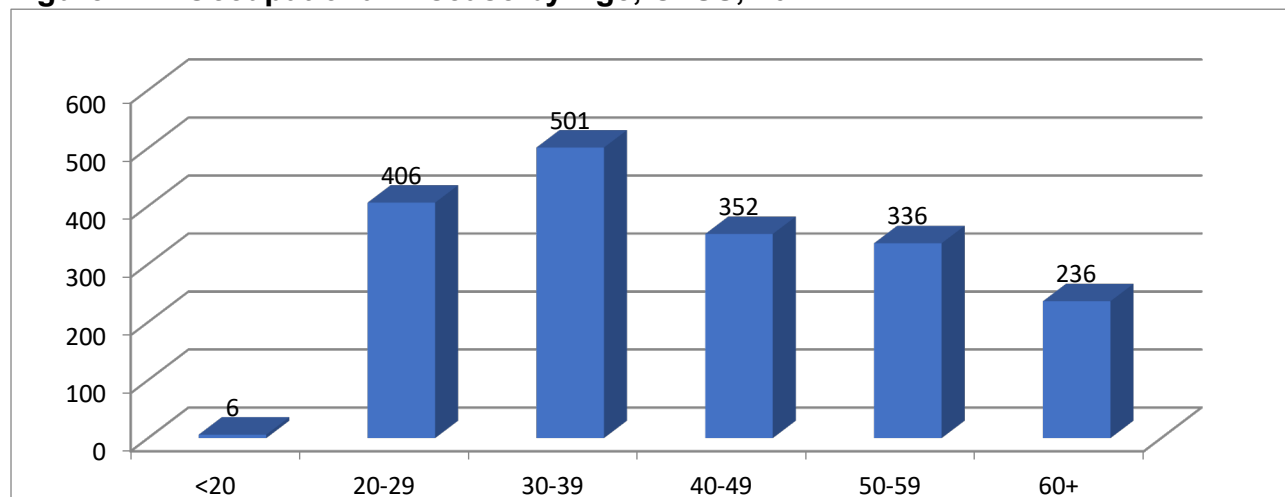
There were 1,842 occupational illness reports received from physicians for 2021 (Table E-1). Physician reports increased slightly (1%) in 2021 compared to the prior year. Infectious disease such as bloodborne diseases and exposures was the largest category, accounting for 51% of the reports; however, most COVID-19 cases were not included in these reports. These were followed by musculoskeletal conditions (MSD) such as tendonitis and carpal tunnel syndrome (30%). Skin disorders, including poison ivy and chemicals as causes, accounted for 5%. Lung conditions, including respiratory conditions, asthma, and other lung diseases, comprised 7% of the physician reports. “Other” conditions, including heart disease, stress, and noise-induced hearing loss, accounted for 7%. There were 160 laboratory-reported adult blood lead levels of 10 micrograms per deciliter (ug/dL) or greater (a 20% decrease from the prior year), giving a total of 2,002 occupational illnesses reported by physicians or laboratories in 2021.

In 2021, 82 physicians from 17 clinics/clinic networks reported at least one case of occupational illness to the OIIS. Twelve of the physicians reported 50 or more cases, accounting for 53% of the reports. Seven clinics reported 100 or more cases and contributed 76% of the cases.

Many workers with occupationally related illness seek care from their primary care providers. Although it is a state law that known and suspected occupational diseases diagnosed by any physician in the state must be reported to CT Departments of Labor and Public Health (CGS § 31-40a) within 48 hours, in practice the majority of reporters are from the academic and auxiliary occupational health clinics that are funded under the state occupational disease surveillance network. Therefore, these reports should be viewed as a small portion of the physician-diagnosed occupational diseases in Connecticut.

Where certainty was reported, 75% of the cases were classed as “high certainty” for being an occupationally-related disease, 18% were “moderate certainty,” and 7% “low certainty”. There was a fairly low amount of reporting on whether exposure was continuing or if others are likely to be exposed, but 18% of those reported that the exposure that caused the illness was continuing, and 10% reported other workers were likely to be exposed to the same hazard.

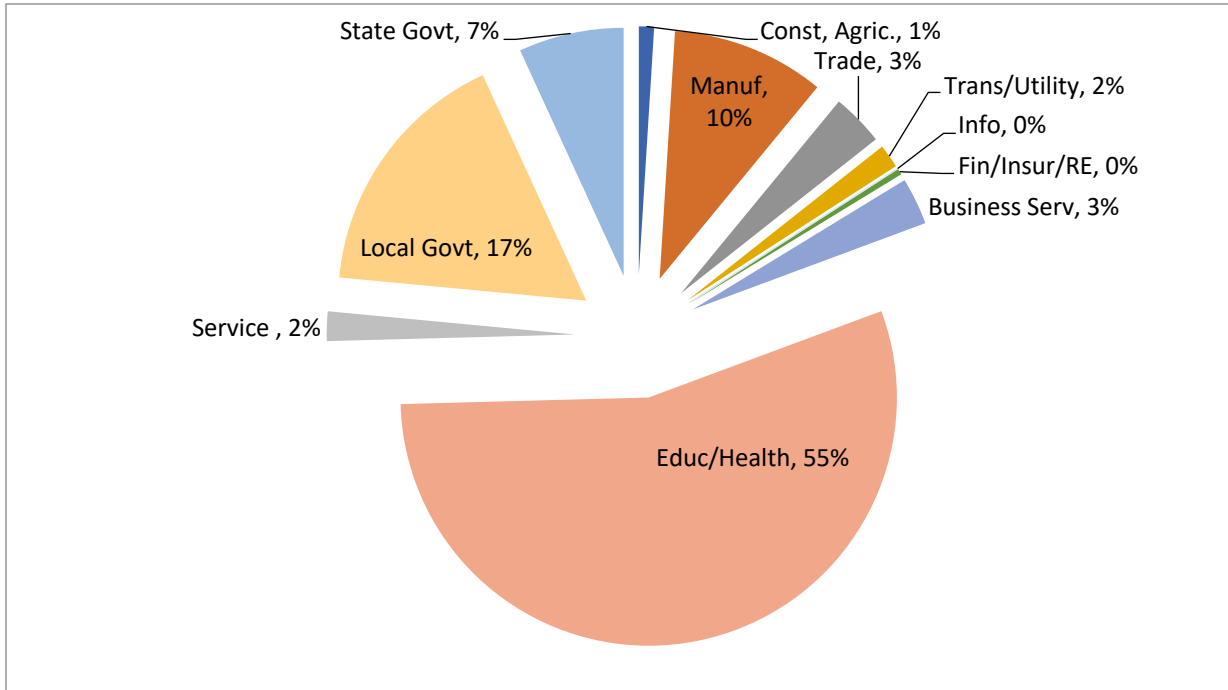
**Figure E-2: Occupational Disease by Age, OIIS, 2021**



Of the reports where race or ethnicity were known/reported, 17% were identified as black and 21% were identified as Hispanic. Figure E-2 shows the age distribution of reported cases where data was available. The most common age was workers in their 30's with 27% of cases, followed by 20's (22%), 40's (19%), and 50's (18%).

The Education and Health sector had the most cases (55%), followed by Local Government (17%), Manufacturing (10%), and State Government (7%); see Figure E-3 and Table E-2. It should be noted that the Education and Health sector workplaces that were also government workers, such as public schools or hospitals, were counted as government.

**Figure E-3: Occupational Disease by Industry Sector, OIIS, 2021**



**Table E-2: Type of Illness by Industry Sector (NAICS\*), OIIS, 2021**

Industry	All		Infectious		Lung		MSD		Other		Skin	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Construction/ Agriculture	18	1%	<5	--	<5	--	9	2%	5	4%	<5	--
Manufacturing	182	10%	6	1%	19	15%	129	23%	15	11%	13	14%
<5	62	3%	5	1%	<5	--	44	8%	5	4%	5	5%
Transport/Utilities	28	2%	<5	--	<5	--	19	3%	<5	--	<5	--
Information Services	0	0%	<5	--	<5	--	<5	--	<5	--	<5	--
Finance/Insur/Real Estate	7	0%	<5	--	<5	--	<5	--	<5	--	<5	--
Business Service	56	3%	13	1%	5	4%	30	5%	<5	--	6	7%
Education/Health	1,008	55%	720	77%	53	42%	150	27%	62	47%	23	25%
Other Services	35	2%	5	1%	7	6%	18	3%	<5	--	<5	--
Local Govt	304	17%	120	13%	15	12%	101	18%	33	25%	35	38%
State Govt	125	7%	59	6%	8	6%	49	9%	<5	--	<5	--
Unknown	17	1%	<5	--	8	6%	5	1%	<5	--	<5	--
<b>Total</b>	<b>1,842</b>	<b>100%</b>	<b>934</b>	<b>100%</b>	<b>127</b>	<b>100%</b>	<b>558</b>	<b>100%</b>	<b>132</b>	<b>100%</b>	<b>91</b>	<b>100%</b>

\* North American Industry Classification System. OIIS is the CT Occupational Illness and Injury Surveillance System.

Industry distribution was somewhat different by condition (Table E-2), although Education and Health was prominent in all the categories of illness. **Infectious** disease was highly concentrated in Education and Health (77%), with Local Government contributing another 13%. **MSD** (musculoskeletal disorders) were primarily from Education and Health (27%), Manufacturing (23%), and Local Government (18%). **Dermatitis** (skin disorders) was primarily from Local Government (38%), Education and Health (25%), and Manufacturing (14%). **Respiratory** cases (“Lung”) were primarily from Education and Health (42%), Manufacturing (15%), and Local Government (12%). **“Other”** illnesses were from Education and Health (47%), Local Government (25%) and Manufacturing (11%).

## Musculoskeletal Disorders (MSD)

There was a total of 558 reports of musculoskeletal disorders (MSD) in 2021, an increase of 16% from the previous year (Table E-3). This table does not include MSD caused by acute incidents such as falls or individual lifts and also excludes all lower back diagnoses unless specifically defined as caused by cumulative strain. The most common specific diagnoses for musculoskeletal disorders were strains and sprains (28%), epicondylitis (tennis elbow) with 13% of the cases, carpal tunnel syndrome (9%), tendonitis (8%), and nerve disorders/numbness (8%).

Musculoskeletal disorders (also referred to as cumulative trauma disorders or repetitive strain injuries) include tendon-related conditions, nerve problems, circulatory, as well as combined conditions.

### *Tendon Disorders*

- Tendonitis: swelling of the tendons
- Epicondylitis: tendon irritation in the elbow area, including “golfer’s elbow” and “tennis elbow”
- Rotator Cuff Syndrome: tendonitis in the shoulder area
- Tenosynovitis: inflammation of the tendon sheaths, particularly in the hand
- deQuervain’s Syndrome: tendon sheath disorder of side of wrist and base of thumb
- Trigger Finger: a bump on the tendon that catches on the tendon sheath that makes the finger or thumb difficult to move
- Ganglion Cysts: swelling of the tendon sheaths from excess lubricating fluid
- Bursitis: inflammation of the fluid-filled sacs around ligaments and tendons

**Table E-3: Musculoskeletal Disorders (MSD) by Type, OIIS, 2020-2021**

Illness	2020	2021	Percent	Change
Strain/Sprain	114	154	28%	35%
Other MSD	84	82	15%	-2%
Epicondylitis	75	72	13%	-4%
Carpal Tunnel Syndrome (CTS)	46	50	9%	9%
Other Neuropathy & Radiculopathy (nerve disorder)	36	46	8%	28%
Tendonitis	25	42	8%	68%
DeQuervains syndrome	19	26	5%	37%
Bursitis/Arthritis	25	25	4%	0%
Trigger Finger	23	17	3%	-26%
Rotator Cuff	13	15	3%	15%
Plantar fasciitis	<5	12	2%	--
Ganglion	<5	10	2%	--
Tenosynovitis	14	7	1%	-50%
<b>Total</b>	<b>480</b>	<b>558</b>	<b>100%</b>	<b>16%</b>

### *Nerve Disorders*

- Carpal Tunnel Syndrome: pinching of the median nerve in the wrist, usually by swollen tendons that pass through the carpal tunnel (median and ulnar nerves can also be pinched in the elbow, shoulder, or neck)

### *Circulatory/Combined/Other*

- Thoracic Outlet Syndrome: pinching of the nerves and blood vessels in the neck/ shoulder area

**Table E-4: Common causes of MSD, OIIS, 2020-2021**

<b>Cause</b>	<b>2020</b>	<b>2021</b>	<b>Percent</b>	<b>Change</b>
Repetitive	80	99	31%	24%
Lifting	54	62	20%	15%
Tools, Machines & Vibration	21	36	11%	71%
Computer/clerical	31	28	9%	-10%
Push/pull	21	26	8%	24%
Gripping/grasping/reaching	14	14	4%	0%
Patient-related	5	14	4%	180%
Bending/twisting/posture	7	10	3%	43%
Sitting/walking/climbing	<5	10	3%	--
Assembly/scanning	5	7	2%	40%
Medication	<5	6	2%	--
Driving	<5	<5	1%	--
<b>Sub-Total</b>	<b>244</b>	<b>315</b>	<b>100%</b>	<b>29%</b>
<b>Unknown</b>	<b>236</b>	<b>243</b>		
<b>Total</b>	<b>480</b>	<b>558</b>		

The most common specific causes noted for MSD (Table E-4) were lifting (62 cases), tool and machine use (36 cases), computer use and data entry (28), and pushing or pulling (26). Ninety-nine (99) additional cases were attributed to the general description of “repetitive”.

### **Skin Conditions**

There were 91 reports of skin disorders in 2021 (Table E-5), a 13% decrease from the previous year. The largest single cause was poison ivy or other plant exposures (35% of all cases). Specific causes of dermatitis or other skin conditions included cleaning chemicals, oil or coolants, and other chemicals.

**Table E-5: Skin Conditions by Type, OIIS, 2020-2021**

<b>Illness</b>	<b>2020</b>	<b>2021</b>	<b>Percent</b>	<b>Change</b>
Poison ivy & other plants	23	32	35%	39%
Allergic	19	13	14%	-32%
Dermatitis/rash	41	36	40%	-12%
Other skin conditions	21	10	11%	-52%
<b>Total</b>	<b>104</b>	<b>91</b>	<b>100%</b>	<b>-13%</b>

### **Lung/Respiratory Diseases and Poisonings**

There were 127 cases of respiratory and other lung diseases and poisonings reported by physicians in 2021 (Table E-6), an increase of 38% from the previous year. Nonspecific respiratory illnesses were the most



common type of condition, with 20% of reports, followed by poisoning (17 of the poisoning cases were from mercury exposure), asthma or reactive airways dysfunction syndrome (RADS; 15%), and fibrosis or interstitial lung disease, including asbestos-related cases (12%; cancers caused by asbestos are categorized under “other diseases”; below). In addition to asbestos and mercury, causes of lung conditions included chemicals (31 cases), smoke (14 cases), and mold or indoor air quality (25 cases).

**Table E-6: Respiratory Diseases and Poisoning by Type, OIIS, 2020-2021**

<b>Illness</b>	<b>2020</b>	<b>2021</b>	<b>Percent</b>	<b>Change</b>
Respiratory	30	25	20%	-17%
Poisoning	5	21	17%	320%
Asthma/RADS	12	19	15%	58%
Asbestos exposure/fibrosis/interstitial	<5	15	12%	--
Rhinitis/sinusitis	8	5	4%	-38%
Cough/dyspnea	17	<5	3%	-76%
Bronchitis	<5	<5	2%	--
Allergic/Hypersensitivity Pneumonitis	8	<5	2%	--
Other Lung	10	34	27%	240%
<b>Total</b>	<b>92</b>	<b>127</b>	<b>100%</b>	<b>38%</b>

### Lead Poisoning (Laboratory Reports)

Connecticut requires laboratories to report all blood lead tests of 10 micrograms per deciliter (ug/dL) of whole blood or greater to the Connecticut Department of Public Health (CGS § 19a-110). These cases are classified into childhood (less than 16 years of age) and adult cases (only adult cases are reported here), with most of adult cases being attributed to an individual’s occupation (although some cases occur in individuals engaged in activities such as home paint removal or recreational indoor shooting range use). Up to a third or more of cases in recent years are related to the use of indoor shooting ranges. The numbers are based on the highest level measured for each individual during the calendar year; they do not include multiple tests on the same individual. OSHA medical removal protections apply at the level of 50 ug/dl of whole blood or above (and require a reduction to 40 ug/dl before return to work). Lead can have neurological, reproductive, and other negative effects on health at much lower levels of exposure.

The 160 lead poisoning reports in 2021 decreased 20% from the previous year. The lowest category (10-24 ug/dL) of recorded elevated lead levels accounted for 78% of all cases (Table E-7) and decreased by 21%. Almost all the reported lead poisoning cases (90% of cases) occurred in men; there were only 17 reports for women. Thirty-four percent (34%) were under 40 years old, 41% were between 40 and 59, and 24% were age 60 or older.

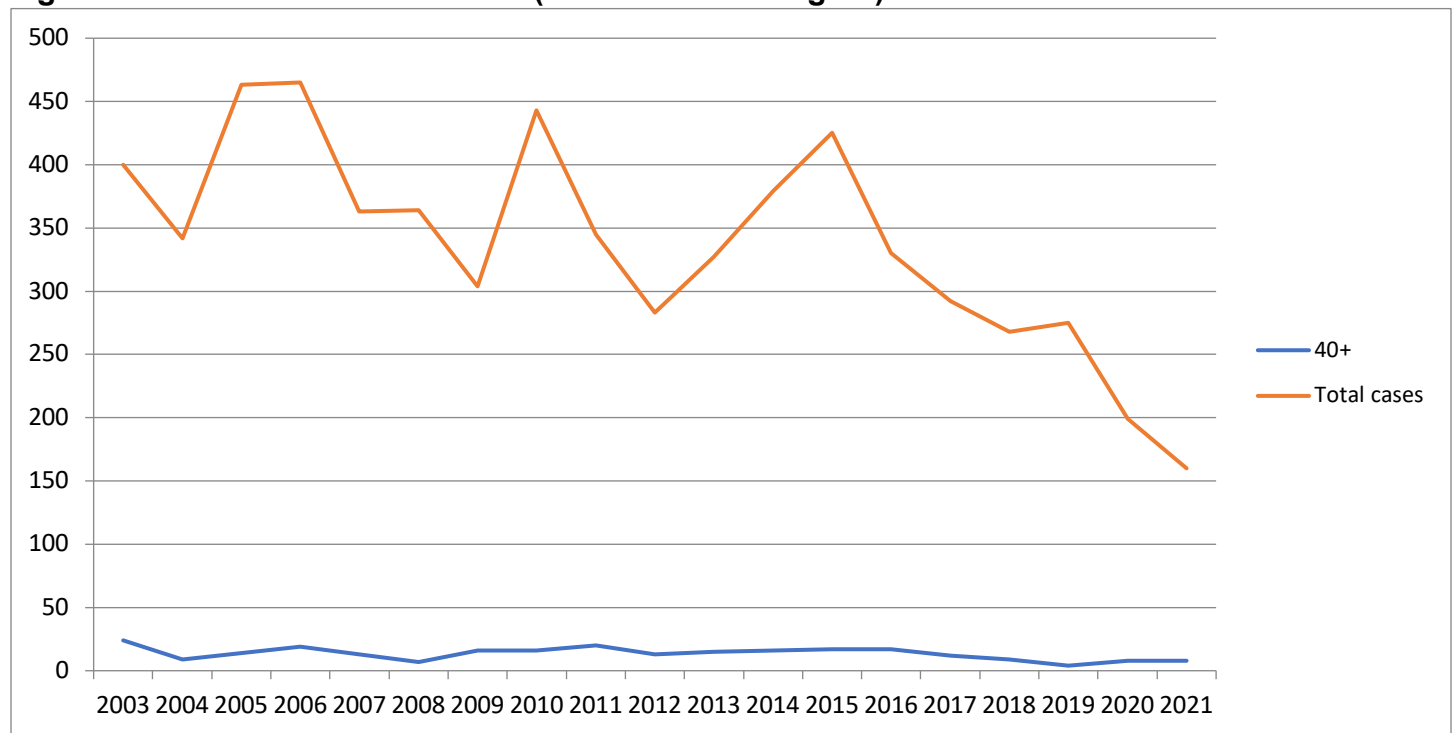
**Table E-7: Lead Cases by Level of Blood Lead, CT ABLES, 2020-2021**

<b>Blood lead level*</b>	<b>2020</b>	<b>2021</b>	<b>Percent</b>	<b>Change</b>
10-24	157	124	78%	-21%
25-39	34	28	18%	-18%
40-49	<5	5	3%	67%
50-59	<5	<5	1%	--
>=60	<5	<5	1%	--
<b>Total</b>	<b>199</b>	<b>160</b>	<b>100%</b>	<b>-20%</b>

**Source:** Connecticut Adult Blood Lead Epidemiology and Surveillance (ABLES program), CT Dept. of Public Health

\* Micrograms per deciliter (ug/dl) of whole blood. Number of individuals with elevated lead levels (multiple tests for individuals were eliminated.)

**Figure E-4: Lead Cases 2003-2021 (cases above 10 ug/dL)**



Lead cases in Connecticut have fluctuated since 2003, from 400 in 2003 to 199 in 2020, with a high of 465 cases in 2006 and a low of 160 cases in 2021. Cases at or above the OSHA level of 40 ug/dl stayed relatively constant at 15 to 20 cases since 2004 (Figure E-5) but have dropped since 2016 to a low of 4 in 2019 (8 in 2021). Fluctuations of reporting in the past have been observed due to lead screening programs and special bridge maintenance projects involving the removal of lead paint.

NIOSH (The National Institute of Occupational Safety and Health) has lead level data for 19 states for 2020 (2021 data is not yet available; see NIOSH Elevated Blood Levels Charts at <https://wwwn.cdc.gov/NIOSH-WHC/chart/ables-ab/exposure?OU=L03&T=ZS&V=C> ). Connecticut was the 6<sup>th</sup> highest among those states for the rate of lead levels above 10 ug/dl, with a rate of 1.15 per 10,000 employed adults (compared to the mean of 0.92 for the states as a whole). Connecticut was 3<sup>rd</sup> highest for rates of lead levels equal or above 25 ug/dl, with a rate of 0.23 compared to the overall mean of 0.15.

## Infectious and Other Diseases

Occupational disease reports from physicians primarily come from occupational health clinics. Most COVID-19 cases that occurred in 2020 and 2021 were seen in other healthcare settings (such as Emergency Departments, testing sites or home testing) and so were not reported through occupational health clinics. Additionally, in 2021 there was not a Governor's emergency declaration that presumed a COVID-19 case in frontline workers was an occupational disease.

Despite these circumstances, there were still 29 cases that were reported by occupational health clinics in 2021. Overall, reported infectious diseases decreased 5% to 934 cases in 2021. Bloodborne pathogen exposures (to needlesticks, blood, body fluids or human bites) or diseases (such as HIV or Hepatitis) were the most common infectious diseases reported, with 865 reports in 2021, virtually the same to 2020. Bloodborne exposures are of most concern when there is a needlestick or other sharp injury, particularly if there is an injection of blood into the caregiver's body. Almost three-quarters (71%) of the bloodborne disease reports involved needlesticks or other exposures to sharps such as scalpels, while 15% were from bites and 13% from blood or body fluids. These reports do not generally specify whether the source patient/client was infected with a bloodborne illness

such as HIV or Hepatitis B or C. Bites often do not have a description on whether these bites penetrated the skin; cases were not counted if it was noted that there was no skin penetration or bleeding or if they were described as contusions. Exposure to saliva is not included in these numbers, since the risk of disease transmission is very low in those cases.

There was a large (66%) decrease in reports of potential exposure to tuberculosis (TB) or positive PPD tests for TB (after another large decrease last year) with 19 cases in 2021 compared to 56 cases in 2020. In addition to bloodborne disease/exposures and TB exposures, there were 10 cases of Lyme disease or tick bites. Most of the “Other Infectious” cases were not well-defined in the database and may include additional cases of the more common reports (such as COVID-19, bloodborne or TB). Infectious disease reports such as TB and meningitis also may reflect exposures rather than actual illness.

In addition to the infectious diseases, there were 132 other occupational illnesses reported by physicians in 2021 (Table E-8), a decrease of 18%. This included 44 cases of chemical exposures to the eyes, 15 cases of headache, dizziness, or similar symptoms, 12 cases of hearing loss, 9 cases of heart, stroke or stress-related conditions, and less than 5 cases each of over-exposures to heat or cold, allergic reactions to substances or foods and cancer. There were 46 cases of occupational illnesses that were difficult to classify due to lack of detailed descriptions.

**Table E-8: Infectious and Other Illnesses, 2020-2021**

<b>Illness</b>	<b>2020</b>	<b>2021</b>	<b>% Change</b>
Bloodborne	863	865	0%
COVID-19*	26	29	-12%*
TB/PPD	56	19	-66%
Lyme/tick bite	7	10	43%
Rabies	9	<5	--
Measles/chickenpox	<5	<5	--
Scabies	<5	<5	--
Meningitis	<5	<5	--
Other infectious	13	<5	--
<b>Subtotal: Infectious</b>	<b>979</b>	<b>934</b>	<b>-5%</b>
<b>Other Illnesses</b>	<b>2020</b>	<b>2021</b>	<b>% Change</b>
Chemicals in eyes	48	44	-8%
Headache/dizzy	12	15	25%
Hearing loss	15	12	-20%
Stress/heart/stroke	13	9	-31%
Heat/cold	13	<5	--
Allergic	7	<5	--
Cancer	<5	<5	--
Other	52	46	-12%
<b>Total Other Illnesses</b>	<b>161</b>	<b>132</b>	<b>-18%</b>
<b>Total</b>	<b>1,140</b>	<b>1,066</b>	<b>-6%</b>

\*Does not include most COVID-19 cases

## F. Appendix 1: Databases and Methods

Determining the incidence of occupational illness is difficult. The problem is two-fold: 1) occupationally-related illness is not consistently recognized as work-related; and 2) the cases reported to either the Department of Labor and/or the Occupational Health Surveillance Division of the Department of Public Health are not complete. Consequently, this assessment of occupational disease reviews a number of sources of information: the Workers' Compensation Commission's First Report of Injury database (WCC), the Bureau of Labor Statistics/Connecticut Dept. of Labor Survey of Occupational Injuries and Illnesses (BLS), the Occupational Illnesses and Injury Surveillance System (OISS), and the Connecticut Adult Blood Level Epidemiology Surveillance Program (ABLES). The Workers' Compensation database was provided in electronic form from the CT Workers' Compensation Commission and the physicians' reports from the CT Department of Public Health. The BLS survey data was provided in table form from the Connecticut Department of Labor and derived from the U.S. BLS website at <https://www.bls.gov/iif/#data>.

### Assumptions and Conventions

The Workers' Compensation Commission's First Reports of Injury database and the Occupational Illnesses and Injury Surveillance System (OISS, referred to as Physicians' Reports) were reviewed in depth. A rationale for the data review was developed to differentiate occupational *illnesses* from acute traumatic *injuries* and to classify the workplace reports by nature and cause of the illness. Each entry was reviewed for internal consistency and reasonableness. Specifically, the process employed the following steps:

- 1) **Clear acute injuries were eliminated.** In assessing the Workers' Compensation First Reports of Injury, a line by line review of injury descriptions, nature descriptions and codes, listed causes, and part of body were used to differentiate whether an injury vs. illness was described. The determination relied most heavily on the text description and then on the other data fields in the order listed above.

The Physician Reports are organized differently. Numerical ICD10 (International Classification of Disease) and "Nature of Injury or Illness" codes from the Bureau of Labor Statistics Occupational Injury and Illness Classification System (ANSI Z16.2-1995, American National Standard for Information Management for Occupational Safety and Health) were used as the primary indicators to evaluate the records. Cause, certainty, diagnosis, ICD codes, suspected agent and symptom fields were also reviewed in determining illness or injury. Categories that were eliminated included all burns, eye problems such as conjunctivitis or objects in the eye (other than chemical exposures), lower back problems (including sciatica) unless clearly and specifically labeled as a cumulative injury, hernias, infected wounds or burns, insect and animal bites (with the exception of tick bites because of the relationship with Lyme disease), and electrical shocks.

- 2) **Validity of remaining records was determined.** Records were reviewed to be sure that the coding of types of disease was consistent with other information in the record. In addition, diseases were categorized by type of disease. Several approaches were utilized to eliminate duplicate records such as line by line review and matching on first and last name, date of birth and employer (to identify reports with misspellings or reversed first and last names), etc.
- 3) **Fields were either revised or added to the databases: *Illness Type* and *Nature of Illness*.** The *Nature of Illness* was based on the information in the databases, research, and general information about the illnesses. Then each entry was categorized by *Illness Type*. The specific nature categories were grouped into broader categories to support graphic representation. For the Workers' Compensation database, the description of injury was used as the key description of the illness if it disagreed with the coding for other variables. This coding was categorized into illness types (i.e.

skin, lung, infectious, MSD, other), specific illness (i.e. Carpal Tunnel Syndrome, heart conditions, asthma), and cause (i.e. chemical exposure, computer use, needlesticks).

- 4) **Employers were coded for industry** utilizing a comprehensive list of Connecticut employers from the CT Department of Labor and coded based on the NAICS (North American Industry Classification System). Employers who could not be found from previous datasets from the Dept. of Labor were coded based on an internet search using such databases as Manta or naics.com. Physician reports were coded by the Connecticut Dept. of Labor. Rates were calculated using employment figures from the U.S. Bureau of Labor Statistics based on Connecticut Dept. of Labor figures.
- 5) **Data was cleaned, tabulated and put into presentation form** using Microsoft Excel and Word software. Breakdowns of conditions with fewer than 5 cases in the physician report databases (OIIS and lead) are not detailed in agreement with CT Dept. of Health policy. Cases were matched between the workers' compensation and physician report databases to eliminate duplicates based upon comparison of birthdates, names, and employers; multiple reports of similar conditions on or near the same date of injury were considered duplicates.
- 6) **The report is reviewed** and approved by the Connecticut Workers' Compensation Commission prior to publication.

## Appendix 2: Occupational Disease Detail by Type and Year

**Table G-1: Cases of Occupational Disease, by Type, BLS/CT Dept. of Labor, 1979 – 2021**

	Employ.*	All Ill	Skin	MSD	Lung-dust	Respir.	Poison	Physical	Other
1979	1,358,000	3,322	1,716	471	25	317	175	250	368
1980	1,394,000	3,066	1,586	513	88	214	66	199	400
1981	1,409,000	3,214	1,509	701	38	290	89	192	395
1982	1,400,000	2,549	1,130	580	31	223	31	216	323
1983	1,419,000	2,930	1,236	665	20	154	152	176	519
1984	1,490,000	2,735	1,109	665	24	273	65	162	432
1985	1,528,000	2,809	928	727	44	233	51	130	693
1986	1,567,000	2,719	808	761	39	274	65	235	538
1987	1,607,000	4,643	1,352	1,430	31	300	62	704	754
1988	1,637,000	4,364	1,257	405	35	332	56	405	733
1989	1,634,000	5,844	1,248	2,629	57	277	74	468	1,087
1990	1,593,000	5,307	1,032	2,535	93	457	54	496	641
1991	1,518,000	6,094	946	3,454	62	422	113	501	591
1992	1,483,000	6,458	1,084	3,852	37	471	53	349	612
1993	1,487,000	8369	965	5526	52	512	166	346	802
1994	1,501,800	7,319	957	4,482	74	410	97	313	986
1995	1,520,000	6,787	884	4,220	80	323	35	349	896
1996	1,538,000	6,021	827	3,711	40	418	34	235	756
1997	1,570,500	5,419	620	3,335	21	287	70	150	936
1998	1,596,900	5,510	989	3,398	10	459	45	92	517
1999	1,630,100	5,513	793	3,306	20	386	71	265	671
2000	1,653,000	6,396	897	3,827	65	438	29	137	1,003
2001	1,571,000	5,514	916	3,220	10	630	29	118	591
	Employ.*	All Ill	Skin	Not Available	Not Available	Respir.	Poison	Hearing	Other
2002	1,602,000	4,387	831			320	78	--	3,159
2003	1,605,000	4,559	903			490	32	--	3,132
2004	1,603,100	4,572	832			354	35	466	2,886
2005	1,614,100	4,850	848			480	8	381	3,134
2006	1,635,700	3,787	575			235	38	439	2,500
2007	1,666,600	3,904	624			358	22	457	2,443
2008	1,666,600	3,562	690			293	130	360	2,088
2009	1,675,000	3,400	600			300	--	500	2,000
2010	1,639,300	3,000	700			300	--	300	1,700
2011	1,578,200	3,500	800			300	--	300	2,100
2012	1,628,028	2,800	600			300	--	300	1,500
2013	1,640,223	2,600	500			300	--	300	1,600
2014	1,653,547	2,400	400			200	--	200	1,400
2015	1,662,822	2,300	400			200	--	200	1,500
2016	1,666,580	2,300	500			200	--	300	1,300
2017	1,669,766	1,700	400			100	--	200	900
2018	1,673,867	1,800	300			200	--	400	1,000
2019	1,670,639	1,700	300			100	--	300	1,000
2020	1,545,731	8,000	200			6,400	--	200	1,100
2021	1,591,837	5,200	200			4100	--	300	600

Source: U.S. Bureau of Labor Statistics (BLS) and the Connecticut Dept. of Labor, Office of Research. Data collection methods and categories changed in 2002 and are not comparable to prior years (for example, MSD was combined with "Other"). Employment in thousands. Since this data is based on a weighted survey, some of these numbers (particularly the smaller numbers) are not reliable. "--" indicates not available or too small to report.

**Table G-2: Rate per 10,000 Workers of Occupational Disease, by Type,  
Bureau of Labor Statistics/CT Dept. of Labor, 1979-2021**

Year	Employed	Skin	MSD	Resp/Lung	Poisoning	Other	Hearing	Total
1979	1,358,000	12.6	3.5	2.5	1.3	8.2		24.5
1980	1,394,000	11.4	3.7	2.2	0.5	8.6		22
1981	1,409,000	10.7	5	2.3	0.6	9.4		22.8
1982	1,400,000	8.1	4.1	1.8	0.2	8.2		18.2
1983	1,419,000	8.7	4.7	1.2	1.1	9.7		20.6
1984	1,490,000	7.4	4.5	2	0.4	8.6		18.4
1985	1,528,000	6.1	4.8	1.8	0.3	10.4		18.4
1986	1,567,000	5.2	4.9	2	0.4	10		17.4
1987	1,607,000	8.4	8.9	2.1	0.4	18.2		28.9
1988	1,637,000	7.7	2.5	2.2	0.3	9.6		26.7
1989	1,634,000	7.6	16.1	2	0.5	26		35.8
1990	1,593,000	6.5	15.9	3.5	0.3	23.6		33.3
1991	1,518,000	6.2	22.8	3.2	0.7	30.4		40.1
1992	1,483,000	7.3	26	3.4	0.4	32.7		43.5
1993	1,487,000	6.5	37.2	3.8	1.1	45.2		56.3
1994	1,501,800	6.4	29.8	3.2	0.6	39		48.7
1995	1,520,000	5.8	27.8	2.7	0.2	36.5		44.7
1996	1,538,000	5.4	24.1	3	0.2	30.8		39.1
1997	1,570,500	3.9	21.2	2	0.4	28.3		34.5
1998	1,596,900	6.2	21.3	2.9	0.3	25.2		34.5
1999	1,630,100	4.9	20.3	2.5	0.4	26.1		33.8
2000	1,653,000	5.4	23.2	3	0.2	30.4		38.7
2001	1,571,000	5.8	20.5	4.1	0.2	25.1		35.1
Year	Employ	Skin		Respiratory	Poison	Other	Hearing	Total
2002*	1,602,000	6.2	*	2.4	0.6	23.7	*	32.9
2003	1,605,000	6.9	*	3.8	0.2	24	*	34.9
2004	1,603,100	6.4	*	2.7	0.3	22.1	3.6	34.9
2005	1,614,100	6.3	*	3.6	*	23.3	2.8	36
2006	1,635,700	4.3	*	1.8	0.3	18.8	3.3	28.4
2007	1,666,600	4.7	*	2.7	0.2	18.2	3.4	29.2
2008	1,666,600	4.7	*	2.7	0.2	18.2	3.4	29.2
2009	1,675,000	5.1	*	2.2	1	15.4	2.7	26.3
2010	1,639,300	5.1	*	2.1	*	13.1	2.5	23.1
2011	1,578,200	6.3	*	2	*	16.8	2.5	27.8
2012	1,628,028	4.6	*	2.6	*	12	2.6	21.9
2013	1,640,223	3.5	*	2	0.2	12.4	2.2	20.3
2014	1,653,547	3.4	*	1.9	*	11.0	2.1	18.7
2015	1,662,822	3	*	1.5	0.2	11.3	1.7	17.7
2016	1,666,580	3.9	*	1.3	*	10.0	2.2	17.4
2017	1,669,766	2.9	*	1.1	0.4	6.7	1.9	12.9
2018	1,673,867	1.9	*	1.4	*	7.8	3	14.1
2019	1,670,639	2.1	*	1.1	*	7.5	2.2	13.0
2020	1,545,731	2.0	*	52.0	*	9.0	1.3	64.4
2021	1,591,837	1.4	*	33.5	*	5.3	2.2	42.4

**Source:** U.S. Bureau of Labor Statistics (BLS) and the Connecticut Dept. of Labor, Office of Research. "Other" includes the pre-2002 categories of MSD, Physical, Lung-dust, and Other. \*Data collection methods and categories changed in 2002 and are not comparable to prior years.

## Appendix 3: Internet Resources for Job Safety and Health: 2023

### General Health and Safety Sites

One of the best sources of information for job health and safety on the internet is the **OSHA (Occupational Safety and Health Administration)** homepage, which includes an ergonomics homepage, worker rights, employer assistance, sector-specific and topic-specific standards and advice, a searchable index of standards, e-tools, COVID-19 guidelines and many other resources. <http://www.osha.gov>

To look up **OSHA citations** by company or industry: <http://www.osha.gov/pls/imis/establishment.html>

OSHA funds a number of **training programs for workers**, community groups and managers across the U.S. through their Susan Harwood Training grants at <https://www.osha.gov/dte/sharwood>.

OSHA has a resource page for **medical clinicians** at <https://www.osha.gov/dts/oom/clinicians/index.html>

The **Bureau of Labor Statistics** tracks occupational injuries and illnesses as well as fatalities. Both summaries and the actual data are available at <https://www.bls.gov/iif>.

**NIOSH** (the National Institute for Occupational Safety and Health) is another good general source. A searchable section on diseases and injuries briefly describes conditions with updates on current research and guidance on prevention, including personal protective equipment tests and advice. There are also resources on health hazard evaluations, conferences, state-based materials, rulemaking, chemicals, disease statistics, and many other topics.

<http://www.cdc.gov/niosh/homepage.html>

<http://www.cdc.gov/niosh/topics/diseases.html>

NIOSH supports a large number of **Education and Research Centers (ERCs)** based at universities across the US. Expert centers also include **agriculture, construction, and total worker health centers** (for example, see the link for the UConn CPH-NEW program below). ERCs primary purpose is to train health and safety professionals, so the various ERCs host a broad array of training programs for safety experts, industrial hygienists, ergonomists, occupational physicians and nurses and other professionals. In addition, the programs provide extensive in-service training programs for professionals already in the field as well as occasional programs for workers, health and safety committee members, and managers. They are also home to extensive research programs and consultation programs. The list of ERC's and related centers can be found at <https://www.cdc.gov/niosh/oep/ercportfolio.html>.

NIOSH has a **workplace health promotion** website which includes tools for assessing health and health promotion programs at <https://www.cdc.gov/workplacehealthpromotion/initiatives/resource-center/index.html>

**EPA** (the Environmental Protection Agency) has a number of sites relevant to occupational health on indoor air quality, office and school environments, climate change, and other topics. [www.epa.gov](http://www.epa.gov) [www.epa.gov/iaq/](http://www.epa.gov/iaq/)

**American Family Physician** also has a number of articles on occupational health for clinicians at <https://www.aafp.org/afp/topicModules/viewTopicModule.htm?topicModuleId=89>.

The **Veterans Administration (VA)** occupational health department has resources on **safe patient handling, wellness, and workplace violence prevention**. <https://www.publichealth.va.gov/about/occhealth/index.asp>



The **Council of State and Territorial Epidemiologists (CSTE)** has links to reports, contacts and resources in occupational health <https://www.cste.org/page/CSTEPublications>. Occupational health indicators are posted at <https://www.cste.org/page/OHIndicators>.

The **Canadian Centre for Occupational Health and Safety** has hundreds of resources on their health and safety internet resource list, including Cheminfo, occupational mental health and stress. <http://www.ccohs.ca>

**New Jersey Department of Health** has 1,600 excellent **chemical hazard factsheets** that are free, independently researched, and clearly written (900 in Spanish) on hundreds of substances. <http://web.doh.state.nj.us/rtkhsfs/indexfs.aspx>

**MSDSonline** is a commercial website but has free searches for Safety Data Sheets (SDS) under the Globally Harmonized system at <https://www.msdsonline.com/sds-search>.

**Several safety organizations have useful websites:**

<a href="http://www.nsc.org">www.nsc.org</a>	The National Safety Council
<a href="http://www.aiha.org">www.aiha.org</a>	The American Industrial Hygiene Association
<a href="http://www.assp.org">www.assp.org</a>	American Society of Safety Professionals
<a href="http://www.nfpa.org">www.nfpa.org</a>	National Fire Protection Association
<a href="http://www.safetycentral.org">www.safetycentral.org</a>	International Safety Equipment Association
<a href="http://www.hfes.org">http://www.hfes.org</a>	Human Factors and Ergonomics Society

The **national AFL-CIO** includes a health and safety page. <http://www.aflcio.org/Issues/Job-Safety>

**COSH (Coalitions for Occupational Safety and Health)** are labor-oriented nonprofit groups based in many states, including Connecticut, with information on a variety of hazards. They can all be accessed through the National Coalition for Occupational Safety and Health <http://www.coshnetwork.org>

The **Cal-OSHA Reporter** (California OSHA) carries current stories on job health and safety. <http://www.cal-oshareporter.com>

Some **blogs carry job health and safety news and commentary.**

The USMWF United Support and Memorial for Workplace Fatalities posts current stories about workers who have been killed on the job and their families <https://www.facebook.com/USMWF> or [www.usmwf.org](http://www.usmwf.org)

Workers' compensation issues are covered at the Workers' Compensation Research Institute at <http://www.wcrinet.org> and at the insider publication <http://workerscompinsider.com>.

The **Toxic Use Reduction Institute** at UMass Lowell has extensive resources on safer alternatives to toxic substances, including a database on alternatives to solvents. <http://www.turi.org>

**UMass-Lowell's Center for Sustainable Production** has information on changing chemical policies. <http://www.sustainableproduction.org/>

The **Health and Safety Executive of Great Britain** has extensive information on the European Union's REACH (Registration, Evaluation, and Authorization of Chemicals). <http://www.hse.gov.uk/reach/index.htm> <http://www.hse.gov.uk/index.htm>

OSHA has a discussion of the US program that responds to the International Globally Harmonized System for Hazard Communication. <http://www.osha.gov/dsg/hazcom/global.html>.

ACOEM (American College of Occupational and Environmental Medicine has an occupational health guide for clinicians <https://acoem.org/Practice-Resources/Basic-Occupational-Health-Guide>

## State of Connecticut and Select Other Resources

The **Connecticut Workers' Compensation Commission** has an excellent website, including information on the locations of offices, a searchable version of the workers' compensation statutes, new decisions, and other information. <http://wcc.state.ct.us>

The **Connecticut (CT)** website allows access to all branches of state government. <https://portal.ct.gov>

The **CT Department of Public Health** occupational health program has database access, health alerts and fact sheets on a variety of occupational health topics including lead. <http://www.ct.gov/dph/occupationalhealth>

The **CT Department of Labor** includes an occupational health services site which includes information on their free Conn-OSHA consultation program and a great set of links to other health and safety sites including regulations, training, and Spanish publications. [www.connosha.com](http://www.connosha.com)

The **Connecticut General Assembly** website lets you search for any bill being considered or get information about relevant committees such as Labor and Public Employees or Public Health. <http://www.cga.ct.gov>

You can track national bills on the **National Library of Congress** site. <https://www.congress.gov/>

Search the medical literature at **US National Library of Medicine**. <http://www.ncbi.nlm.nih.gov/pubmed/>

Search general academic literature through **Google Scholar**. <http://scholar.google.com/schhp?tab=ws>

**UConn Health's Division of Occupational and Environmental Medicine** has information and links on job health and safety. <http://health.uconn.edu/occupational-environmental>

The **Center for the Promotion of Health in the New England Workplace (CPH-NEW)** is a research-to-practice initiative led by investigators from the UMass Lowell and UConn Health. <http://health.uconn.edu/occupational-environmental/academics-and-research/cph-new/>

**UConn Health's Center for Indoor Environments and Health** provides guidance on environmental exposures in indoor settings including schools and office buildings <http://health.uconn.edu/occupational-environmental/consultation-and-outreach/cieh/>

## Apps for occupational health

There are a number of apps developed for smart phones (both Android and Apple) that have been developed by government agencies that can be quite useful. Some useful apps include:

- **ILO Ergonomic Checkpoints** from the International Labour Office allows for creating checklists for ergonomic issues in the workplace.
- The **NIOSH Sound Level Meter** is a free, non-ad app developed by NIOSH that lets you use your phone as a sound level meter.

- The **NIOSH Lifting Equation Calculator** (NLE Calc) lets you evaluate jobs based on characteristics of the lifting hazards guidance issued by NIOSH (the International Centre for Safety Ergonomics and Human Factors also has a free NIOSH lifting equation calculator called **MMH Calculator**).
- The **OSHA-NIOSH Heat Safety Tool** combines local weather with NIOSH and OSHA guidance on heat stress.
- Chemical hazards can be evaluated using the **Chemical Safety Data Sheets – ICSC** app which calls up 2-page independently developed chemical data sheets (similar to material safety data sheets) from the UN, the International Labor Office (ILO) and the World Health Organization (WHO).

There are also a wide number of commercial apps on occupational health. **Searching in the app store** on your phone or tablet using terms such as the ergonomics, chemicals, job safety, OSHA, NIOSH, or similar terms will bring up a large number of apps which you can sort by customer ratings.

## Ergonomic Sites and Links

**Thomas Bernard's** website at **University of South Florida** has many of the standards and excellent free electronic ergonomic analysis tools such as the NIOSH lifting equation and heat stress, including apps.

<https://health.usf.edu/publichealth/tbernard>

**Ergoweb** has good factsheets, documents, and news. <https://ergoweb.com>

**Tom Armstrong** at the **University of Michigan** runs one of the most respected university training programs for ergonomics, and has extensive information, tools, and lectures. <http://www-personal.umich.edu/~tja>

**Cornell University's Alan Hedge** has an active ergonomics program, with reports posted on graduate student projects and evaluation of ergonomic products. <http://ergo.human.cornell.edu>

The **National Ergonomics Conference & Ergo Expo** has provided a forum on ergonomics, safety and wellness programs. <http://www.ergoexpo.com>

**The National Health Service/UK** has information about repetitive strain injuries/RSI <http://www.nhs.uk/conditions/Repetitive-strain-injury/Pages/Introduction.aspx>

Paul Landsbergis has a good website on job stress. <http://unhealthywork.org/about-us/team/paul-a-landsbergis>

The **European Agency for Health and Safety at Work's Job Stress Network** has info on to increasing job stress and its impact on health <https://osha.europa.eu/data/links/795>

*Internet Resources for Job Safety and Health is compiled by Tim Morse, Ph.D., at UConn Health. To update or add a listing, please contact Tim at [tmorse@uchc.edu](mailto:tmorse@uchc.edu).*

## Appendix 4: Who's Who: Resources in Connecticut on Job Safety and Health

### OSHA

#### **Connecticut Department of Labor's Division of Occupational Safety and Health/CTDOL**

CONN-OSHA enforces state occupational safety and health regulations as they apply to state and municipal employees, and offers free consultations to public agencies, school districts and private companies.

**Director:** John Rosa

**Address:** 38 Wolcott Hill Rd., Wethersfield, CT 06109

**Phone:** (860) 263-6900

**Fax:** (860) 263-6940

**Email:** John.Rosa@ct.gov

**Web:** [www.connosha.com](http://www.connosha.com)

**Publications:** ConnOSHA Quarterly <https://www.ctdol.state.ct.us/osha/Quarterly/coqtrly.htm>

**OSHA (Occupational Safety and Health Administration):** Federal OSHA inspects workplaces in the private sector for violations of standards, and also has information and pamphlets.

**National Website:** <https://www.osha.gov>

**OSHA Bridgeport Office** (Fairfield, New Haven, and Middlesex counties).

**Area Director:** Catherine Brescia

**Address:** 915 Lafayette Blvd, Room 309, Bridgeport, Connecticut 06604

**Phone:** (203) 579-5581; National Hotline after hours: (800) 321-OSHA (6742)

**Fax:** (203) 579-5516

**e-mail:** oshabridgeport@dol.gov

#### **OSHA Hartford Office**

**Area Director:** Dale Varney

**Address:** 135 High Street, Suite 361, Hartford, CT 06103

**Phone:** (860) 240-3152; National Hotline after hours, etc.: (800) 321-OSHA (6742)

**Fax:** (860) 240-3155

**e-mail:** oshahartford@dol.gov

### Organizations

#### **Coalition for a Safe and Healthy Connecticut**

This is a community-based coalition of environmental, public health, and labor organizations providing resources and advocacy for reducing the use of toxic chemicals through substitution of safer alternatives.

**Coordinator:** Anne B. Hulick, RN MS JD

**Address:** c/o Clean Water Action, 2074 Park St, Suite 308, Hartford, CT 06106

**Phone:** (860) 232-6232

**e-mail:** ahulick@cleanwater.org

**Web:** <https://safehealthyct.wordpress.com>

#### **ConnectiCOSH (The Connecticut Council for Occupational Safety and Health)**

CTCOSH is a union-based non-profit organization for education and political action on job safety and health.

They have conferences, fact sheets, and speakers.

**Director:** Mike Fitts and Pamela Puchalski (Co-Executive Directors)

**Address:** 683 No. Mountain Rd, Newington, CT 06111

**Phone:** (860) 953-COSH (2674); **Fax:** (860) 953-1038

**e-mail:** [mike@ctcosh.org](mailto:mike@ctcosh.org)

**Web:** <http://connecticosh.org>

### **The Ergonomic Technology Center (ErgoCenter) at UConn Health**

The ErgoCenter is a center for prevention of repetitive strain injuries based at UCONN Health, which does training, research, and clinical care.

**Contact:** Thomas Varghese, M.S., CPE

**Address:** 263 Farmington Ave, Farmington, CT 06030-2940

**Phone:** (860) 679-4096; **Fax:** (860) 679-1349

**e-mail:** [tvarghese@uchc.edu](mailto:tvarghese@uchc.edu)

**Web:** <https://health.uconn.edu/occupational-environmental/consultation-and-outreach/ergonomics-consultation/>

### **The Center for the Promotion of Health in the New England Workplace (CPH-NEW)**

CPH-NEW is a NIOSH-funded center for scientific research and education, based in participatory action research, integrating occupational health and safety with worksite health that is administered by UConn Health with UMass Lowell and UConn Storrs.

**Center co- Director:** Jennifer Cavallari, Sc.D., CIH

**Total Teacher Health Principal Investigator:** Jennifer Cavallari, Sc.D., CIH

**Address:** 263 Farmington Ave, Farmington, CT 06030-2940

**Phone:** (860) 679-8946; **Fax:** (860) 679-4720

**e-mail:** [cavallari@uchc.edu](mailto:cavallari@uchc.edu)

**Web:** <http://health.uconn.edu/occupational-environmental/academics-and-research/cph-new/>

### **Health Improvement Through Employee Control (HITEC) Program**

In September 2021, HITEC transitioned from part of the CPH-NEW NIOSH-funded center to primarily supported through the State of Connecticut with the goal of incorporating the HITEC participatory program focus on workforce participation in the design and implementation of selected integrated health, safety and well-being interventions into the Connecticut Department of Correction.

**Director, HITEC IV Project:** Martin Cherniack, MD, MPH

**Address:** 263 Farmington Ave, Farmington, CT 06030-2940

**Phone:** (860) 679-4916; **Fax:** (860) 679-4720

**e-mail:** [cherniack@uchc.edu](mailto:cherniack@uchc.edu)

**Web:** [Safety & Health in Corrections](#) | [CPH-NEW](#) | [Research](#) | [UMass Lowell \(uml.edu\)](#)

### **UConn Health- Center for Indoor Environments and Health (CIEH)**

The CIEH at the University of Connecticut Health Center works with public health agencies, companies, clinics and individuals to promote indoor environments which protect the health of building occupants and provide productive, creative spaces for learning and work.

**Director:** Paula Schenck, MPH

**Address:** 263 Farmington Ave, Farmington, CT 06030-2940

**Phone:** (860) 679-2368; **Fax:** (860) 679-1349

**e-mail:** [schenck@uchc.edu](mailto:schenck@uchc.edu)

**Web:** <http://health.uconn.edu/occupational-environmental/consultation-and-outreach/cieh/>

## Academic Occupational Health Clinics

### UConn Occupational and Environmental Medicine Clinic

**Clinic Director:** George W. Moore, M.D., M.Sc., FACPM, FACOEM

**Address:** UCONN Health, 300 UConn Health Blvd, Farmington, CT 06032-2940

**Clinic address:** UCONN Main Building (Hospital Entrance), Room CG228

**Phone:** (860) 679-2893; **Fax:** (860) 679-4587

**e-mail:** [occmedehs@uchc.edu](mailto:occmedehs@uchc.edu)

**Web:** <http://health.uconn.edu/occupational-environmental/clinical-services/>

### Yale Occupational Health

**Director:** Carrie A Redlich, MD, MPH

**Address:** 367 Cedar Street, ESHA 2nd Floor, New Haven, CT 06510

**Clinic address:** 135 College St. Rm. 392, New Haven, CT 06510

**Phone:** (203) 785-4197 or 203-785-6434; **Fax:** (203) 785-7391

**e-mail:** [Carrie.Redlich@yale.edu](mailto:Carrie.Redlich@yale.edu)

**Web:** <http://medicine.yale.edu/intmed/occmed/> or <https://www.yalemedicine.org/departments/occupational-environmental-medicine-program>

## Other Occupational Health Clinics

### Connecticut Occupational Medicine Partners, LLC

**Vice President:** Tina Robinson, [Tina.Robinson@TrinityHealthOfNE.org](mailto:Tina.Robinson@TrinityHealthOfNE.org)

**Business Representative:** Mallory Davis, [Mallory.Davis@trinityhealthofne.org](mailto:Mallory.Davis@trinityhealthofne.org), 860-714-2773

**Address:** St. Francis Hospital and Medical Center, 1000 Asylum Avenue, Suite 4310, Hartford, CT 06105

**Phone:** (860) 714-2801; **Fax:** (860) 714-8291

**Email:** [tina.robinson@trinityhealthofne.org](mailto:tina.robinson@trinityhealthofne.org)

**Web:** [compllc.org](http://compllc.org)

#### Network Practice Sites:

**St Francis Hospital & Med Ctr:** 1000 Asylum Ave, Suite 4320, Hartford, CT 06105, Phone: 860-714-4270

**St Francis Hospital & Medical Center:** 100 Deerfield Road, Windsor, CT 06095, Phone: 860-714-9444

**St. Mary's Hospital:** 1312 West Main St, Waterbury, CT 06708, (203) 709-3740

**Johnson Memorial Occupational Medicine Center:** 155 Hazard Avenue, Suite 6, Enfield, CT 06082, Phone: (860) 763-7668

**MedWorks (Bristol Hospital):** 975 Farmington Avenue, Bristol, CT 06010, Phone: (860) 589-0114

**CorpCare (ECHN):** 2800 Tamarack Avenue, Suite 001, South Windsor, CT 06074, Phone: (860) 647-4796

**Mercy Hospital:** 300 Stafford Street, Suite 256, Springfield, MA 01104, Phone: (413) 748-6869

### Concentra

**Medical Director:** Varun Nagarajan, MD, MBA

**Operations Manager:** Lori Lamson, MSOL, [lori.lamson@concentra.com](mailto:lori.lamson@concentra.com)

**Address:** 701 Main Street, East Hartford, CT 06108

**Phone:** (860) 289-5561; **Fax:** (860) 291-1895

**e-mail:** [vaNagarajan@concentra.com](mailto:vaNagarajan@concentra.com)

**Web:** <http://www.concentra.com/employers/occupational-health/>

**Other Offices:** 972 West Main Street, **New Britain** (860) 827-0745; 1080 Day Hill Road, **Windsor** (860) 298-8442; 900 Northrop Rd, **Wallingford**, (203) 949-1534; 8 South Commons Rd, **Waterbury** (203) 759-1229; 333 Kennedy Drive, Suite 202, **Torrington** (860) 482-4552; 315 West Main St, **Norwich**, (860) 859-5100; 370 James Street, Suite 304, **New Haven** (203) 503-0482; 60 Watson Blvd, **Stratford** (203) 380-5945; 15 Commerce Road, 3rd Floor, **Stamford**, (203) 324-9100



**Griffin Hospital Occupational Medicine Center****Director:** Myra Odenwaelder, DPT**Address:** 10 Progress Drive, Shelton, CT 06484**Phone:** (203) 944-3718; **Fax:** (203) 929-3068**e-mail:** [gkrueger@griffinhealth.org](mailto:gkrueger@griffinhealth.org)**Web:** <http://www.griffinhealth.org/locations/shelton/griffin-hospital-occupational-medicine-center>**Hartford HealthCare Medical Group—Occupational Medicine****Business Development Director:** Suzanne Cutter**Admin e-mail:** [hhcmgocc.health@hhchealth.org](mailto:hhcmgocc.health@hhchealth.org)**Phone:** (860) 524-2690**Web:** <https://hartfordhealthcaremedicalgroup.org/specialties/primary-care/occupational-medicine>**East Region HHCMG Occ Medical Director:** William H. Hernandez III MD**Fairfield Region HHCMG Occ and UC Medical Director:** Syed Z. Hussain MD, MBA, MRO**Clinic Offices: West Hartford:** 445 South Main Street, West Hartford, 06110, Phone: 860.696.2200, option 5;**Uncasville:** 80 Norwich-New London Tnpk, Uncasville, 06382, Phone: 860-848-1297, option 5; **Shelton:** 15Armstrong Rd, Shelton, 06484, Phone: 203.929.1109; **Willimantic:** 1703 West Main St., Willimantic, 06226,Phone: 860.456.1252; **Stratford:** 3272 Main St, Stratford, CT 06614, Phone: 203.380.3920; **Fairfield:** 1262Post Rd, Fairfield, 06824 Phone: 203.259.3440; **Trumbull:** 900 White Plains Rd, Trumbull, 06611, Phone:203.696.3500; **Monroe:** 401 Monroe Tpk, Monroe 06468 Phone: 203.268.2501; **Norwalk:** 192 Westport Ave,Norwalk Phone 203.853.2610; **Westport:** 374 Post Road East, Westport Phone: 203-221-3390**THOCC - Occupational Health Network****Web:** <https://thocc.org/services/occupational-health>**OHN Medical Director:** Sandor Nagy Jr., MD**Phone:** (860) 827-6910**Practice Manager:** Michelle Cadiz**Plainville:** 440 New Britain Ave, Plainville, 06062 Phone: 860.747.9441**Email:** [OHNPlainville@hhchealth.org](mailto:OHNPlainville@hhchealth.org)**Yale New Haven Health Occupational Health (3 Campuses):****Web:** <https://www.ynhh.org/services/occupational-health.aspx>**Yale-New Haven Health Systems****Asst. Mgr of Clinical Operations (YNHH):** Joelle Buntin**E-mail:** [joelle.buntin@ynhh.org](mailto:joelle.buntin@ynhh.org)YNHH, 20 York St., **New Haven**, 203-688-2462; 2080 Whitney Ave., Suite 150, **Hamden** (203) 789-6242**Asst. Mgr. for Clinical Operations (St. Raphael campus):** Tara DiCapua**Senior Medical Director (SRC):** Raj Ahsan, MD, MPH**Phone:** (203) 789-3721; **Fax:** (203) 789-5174**e-mail:** [tara.dicapua@ynhh.org](mailto:tara.dicapua@ynhh.org)175 Sherman Avenue, **New Haven**, CT 06511, 5<sup>th</sup> Floor; 260 Long Ridge Rd, Suite 2140. **Stamford**, (203)863-3483; **Greenwich Hospital**, 5 Perry Ridge Rd, 3<sup>rd</sup> Fl, Room 289, (203) 863-3402; 226 Mill Hill Ave,**Bridgeport Hospital**, (203) 384-3613**Yale New Haven Health Occupational Medicine and Wellness Services (L&M/Groton)****Asst. Mgr of Clinical Operations:** Meghan McManus**Medical Director:** Cullen Taplin, DO**Address:** 52 Hazelnut Hill Rd., Groton, CT 06340**Phone:** (860) 446-5175; **Fax:** (860) 448-6961**Email:** [meghan.mcmanus@lmhosp.org](mailto:meghan.mcmanus@lmhosp.org)

**Middlesex Hospital Occupational Medicine****Director:** Matthew Lundquist, MD, MPH**Address:** 534 Saybrook Rd., Middletown, CT 06457**Phone:** (860) 358-2750; **Fax:** (860) 358-2757**e-mail:** [occupationalmedicine\\_middletown@midhosp.org](mailto:occupationalmedicine_middletown@midhosp.org)**Web:** <https://middlesexhealth.org/occmed>**Other Office:** Essex Medical Building, 252 Westbrook Road, Essex (860) 358-3840**Academic Programs and Courses****Central Connecticut State University, School of Technology****Type of Degree:** Certificate Program in Environmental and Occupational Safety**Faculty contact:** Dan Kirby, Department Chair**Address:** Applied Innovation Hub - Room 214, CCSU, 1615 Stanley Rd., New Britain, CT 06050**Phone:** 860-832-1830**e-mail:** [kirbyerd@ccsu.edu](mailto:kirbyerd@ccsu.edu)**Web:** <http://www.ccsu.edu/mcm/environmentalOccupationalSafetyOCP.html>**UConn College of Agriculture, Health and Natural Resources, Department of Allied Health Sciences****Type of Degree and Program:** Bachelor in Allied Health Sciences with an Occupational and Environmental Health and Safety Concentration; and an Online Occupational Safety and Health Post-Baccalaureate Certificate Program**Faculty contact:** Paul Bureau, MS CIH**Address:** Koons Hall Room 100-H, 358 Mansfield Road, Unit 1101, Storrs, CT 06269-1101**Phone:** 860-486-8816**e-mail:** [paul.bureau@uconn.edu](mailto:paul.bureau@uconn.edu)**Web:** <http://osh.uconn.edu>**UConn Health, Department of Public Health Sciences****Type of Degree:** Masters in Public Health program with ergonomic/occupational health courses**Director:** David Gregorio, PhD**Address:** UCONN Health, 263 Farmington Ave., Farmington, CT 06030-6325**Phone:** (860) 679-5480; **Fax:** (860) 679-1581**e-mail:** [gregorio@uchc.edu](mailto:gregorio@uchc.edu)**Web:** <https://mph.uconn.edu>**UConn Health, Department of Public Health Sciences****Type of Degree:** Ph.D. in Public Health with courses in Occupational and Environmental Health Sciences**Faculty Contact:** Helen Swede, Ph.D.**Address:** UCONN Health, 263 Farmington Ave., Farmington, CT 06030-6325**Phone:** (860) 679-5568; **Fax:** (860) 679-1581**e-mail:** [swede@uchc.edu](mailto:swede@uchc.edu)**Web:** <https://phd.publichealth.uconn.edu>



## Professional Associations

### **American Industrial Hygiene Association (AIHA), Connecticut River Valley Section**

AIHA is a professional association for industrial hygienists.

**President:** Chandra Deeds Gioiello, MS, CIH, SDSRP (Jan 2023- Dec 2024)

**Phone:** (203) 929-3473 ext. 2

**Email:** [c.gioiello@ih-sc.com](mailto:c.gioiello@ih-sc.com) or [crvaiha@wildapricot.org](mailto:crvaiha@wildapricot.org)

**Web:** <http://www.crvaiha.wildapricot.org>

**President:** Terri Dominguez, MSPH, CSP (Jan 2024- Dec 2025)

**Email:** [terridesp@gmail.com](mailto:terridesp@gmail.com) or [crvaiha@wildapricot.org](mailto:crvaiha@wildapricot.org)

**Web:** <http://www.crvaiha.wildapricot.org>

### **American Society of Safety Professionals (ASSP)**

American Society of Safety Professional members are dedicated to creating safe work environments by preventing workplace fatalities, injuries and illnesses. Sound safety practices are a legal requirement, socially responsible and good business, leading to increased productivity, a better reputation and higher employee satisfaction.

#### ***Connecticut Valley Chapter***

**President:** Benjamin Weidman

**e-mail:** [president@ctvalley.assp.org](mailto:president@ctvalley.assp.org)

**Web:** <http://ctvalley.assp.org>

### **Connecticut Trial Lawyers Association, Workers' Compensation Committee**

CTLA is a professional association of attorneys whose mission reads *Trial lawyers protecting individual rights through fair laws and access to justice*. The purpose of this section is to ensure that workers who have been injured or suffered illness arising out of and in the course of their employment are provided the benefits to which they are entitled under the Connecticut Workers' Compensation Act.

**Executive Director:** Joan D. Maloney

**Workers' Compensation Section Chair:** Meghan Lyon

**Address:** 100 Pearl St, FL-10, Hartford, CT 06103

**Phone:** (860) 522-4345

**Fax:** (860) 522-1027

**e-mail:** [jmaloney@cttriallawyers.org](mailto:jmaloney@cttriallawyers.org)

**Web:** <https://www.cttriallawyers.org>

### **Connecticut Bar Association, Workers' Compensation Section**

This is a professional association of attorneys who concentrate in workers' compensation.

**Chair:** Donna Civitello

**Phone:** (203) 389-7000

**E-mail:** [dc@carterandcivitello.com](mailto:dc@carterandcivitello.com)

**Web:** <https://www.ctbar.org/members/sections-and-committees/sections/workers'-compensation>

### **New England College of Occupational and Environmental Medicine/NECOEM**

NECOEM is a not-for-profit organized community of physicians that strives to improve the health and safety of workers, workplaces, and environments and holds an annual conference.

**Executive Director:** Tom Coté, MBA, CAE

**Address:** 22 Mill Street, Groveland, MA 01834

**Phone:** (978) 373-5597

**e-mail:** [executive.director@necoem.org](mailto:executive.director@necoem.org)

**Web:** <http://www.necoem.org/>

**Connecticut Association of Occupational Health Nurses (CTOHN)**

CTAOHN is an association of occupational health nurses, including most of the nurses working in industry.

**CT President:** Richard Sandrib, BSN, MS, APRN

**Address:** BMS, 3551 Lawrenceville Road, Princeton, NJ 08540

**Phone:** (609) 252-3643 (office) or (860) 806-1721 (cell)

**e-mail:** richard.sandrib@bms.com

**Web:** <https://ctaohn.nursingnetwork.com>

**Connecticut State Agencies****Department of Public Health (DPH), Occupational Health Unit**

This unit investigates clusters of occupational diseases. Programs for radon, asbestos, drinking water, lead, asthma, CT Schools Environmental Resource Team, TB control and infectious disease are also at the DPH.

**Director:** Amanda Deloreto

**Address:** DPH/ OHP, 410 Capitol Ave, MS #11EOH, PO Box 340308, Hartford, CT 06134-0308

**Phone:** 860) 509-7740

**Fax:** (860) 509-7785

**e-mail:** [Amanda.DeLoreto@ct.gov](mailto:Amanda.DeLoreto@ct.gov)

**Web:** <http://www.ct.gov/dph/occupationalhealth>

**State Department of Emergency Services and Public Protection**

The Department of Emergency Services and Public Protection (DESPP) is comprised of the Commission on Fire Prevention and Control, the CT State Police, Emergency Management and Homeland Security, the Police Officers Standards and Training Council, Scientific Services, and Statewide Emergency Telecommunications.

**Address:** 1111 Country Club Rd, Middletown, CT 06457

**Phone:** 860-685-8000

**Web:** <https://portal.ct.gov/despp>

**State Emergency Response Commission, Department of Energy and Environmental Protection**

This commission oversees plans for response to chemical accidents and collects chemical information for the public under the Emergency Planning and Community Right to Know Act.

**Chairman:** Gerard P. Goudreau

**Address:** 79 Elm St, Hartford, CT 06106-5127

**Phone:** (860) 424-3373

**e-mail:** [deep.ctepcra@ct.gov](mailto:deep.ctepcra@ct.gov)

**Web:** <https://portal.ct.gov/SERC>

**Connecticut Fire Academy, Commission on Fire Prevention & Control**

Safety training & standards compliance

**Training Director:** P.J. Norwood, Training Director

**Address:** 34 Perimeter Road, Windsor Locks, CT 06096-1069

**Phone:** 860-264-9272 or toll free (877) 5CT-FIRE (only in CT); **Fax:** (860) 654-1889

**e-mail:** [paul.norwood@ct.gov](mailto:paul.norwood@ct.gov)

**Web:** <http://www.ct.gov/cfpc/site/default.asp>

**Connecticut Department of Environmental Protection, Radiation Safety Unit**

**Director:** Jeff Semancik

**Phone:** (860) 424-3029; (860) 424-3333 24/7 Emergency; **Fax:** (860) 706-5339

**e-mail:** [jeffrey.semancik@ct.gov](mailto:jeffrey.semancik@ct.gov)

**Web:** [http://www.ct.gov/deep/cwp/view.asp?a=2713&q=324824&deepNav\\_GID=1639](http://www.ct.gov/deep/cwp/view.asp?a=2713&q=324824&deepNav_GID=1639)

## **Workers' Compensation Commission**

### **Office of the Chairperson and Compensation Review Board**

The Workers' Compensation Commission (WCC) administers the workers' compensation laws of the State of Connecticut with the ultimate goal of ensuring that workers injured on the job receive prompt payment of wage loss benefits and appropriate medical treatment. To this end, the Commission approves voluntary agreements, adjudicates disputes, issues findings and awards, hears and rules on appeals, and closes out pending cases through full and final stipulated agreements.

The WCC Education, Safety & Health Services unit assists employers with implementation of the workers' compensation regulations regarding "Establishment and Administration of Safety and Health Committees at Work Sites."

**Chairperson:** Stephen M. Morelli

**Address:** 21 Oak St., 4<sup>th</sup> Floor, Hartford, CT 06106-8011

**Phone:** (860) 493-1500

**Information:** (800) 223-WORK (9675)

**Fax:** (860) 247-1361

**e-mail:** [wcc.chairmansoffice@po.state.ct.us](mailto:wcc.chairmansoffice@po.state.ct.us)

**Web:** <http://portal.ct.gov/wcc>

### **Workers' Compensation District Offices**

- 1.** 999 Asylum Ave., **Hartford**, CT 06105; (860) 566-4154; Fax: (860) 566-6137
- 2.** 55 Main St., **Norwich**, CT 06360; (860) 823-3900; Fax: (860) 823-1725
- 3.** 700 State St., **New Haven**, CT 06511; (203) 789-7512; Fax: (203) 789-7168
- 4.** 350 Fairfield Ave., 2nd Floor, **Bridgeport**, CT 06604; (203) 382-5600; Fax: (203) 335-8760
- 5.** 55 West Main St., **Waterbury**, CT 06702; (203) 596-4207; Fax: (203) 805-6501
- 6.** 24 Washington St., **New Britain**, CT 06051; (860) 827-7180; Fax: (860) 827-7913
- 7.** 111 High Ridge Rd., **Stamford**, CT 06905; (203) 325-3881; Fax: (203) 967-7264
- 8.** 649 South Main St., **Middletown**, CT 06457; (860) 344-7453; Fax: (860) 344-7487

*The Who's Who is compiled by Tim Morse, Ph.D., at UConn Health. To update or add a listing, please contact Tim at [tmorse@uchc.edu](mailto:tmorse@uchc.edu).*