

Chapter 3. Diagnoses, Selected Illnesses and Conditions of Patients

This chapter provides data describing the magnitude, distribution, and major demographic characteristics of illnesses and health conditions seen by the NYS Occupational Health Clinic Network (OHCN). Patients are presented by the first time a diagnosis is made. These diagnoses may change with subsequent visits due to further testing and presentation of symptoms. In order to present the patient load of some of these conditions, data is occasionally presented by number of visits per year. Patients seen in the NYS OHCN may have underlying conditions such as high cholesterol that are diagnosed through health screenings at workplaces or as part of the patient examination. Therefore, other health conditions that may not be directly related to the primary diagnosis of concern are often diagnosed and recorded in the patient database. However, due to differences in operations between the Clinics, these data are not always included in the patient database and do not necessarily provide an accurate indication of co-morbid and underlying conditions.

Disease categories were classified utilizing the International Classification of Diseases Ninth Revision (ICD-9-CM) main categories¹:

- 001-139: Infectious and parasitic diseases;
- 140-239: Neoplasms;
- 240-279: Endocrine, nutritional, and metabolic diseases, and immunity disorders;
- 290-319: Mental disorders;
- 320-389: Diseases of the nervous system and sense organs;

- 390-459: Diseases of the circulatory system;
- 460-519: Diseases of the respiratory system;
- 520-579: Diseases of the digestive system;
- 680-709: Diseases of the skin and subcutaneous tissue;
- 710-739: Diseases of the musculoskeletal system and connective tissue;
- 780-799: Symptoms, signs, and ill-defined conditions;
- 800-999: Injury and poisoning; and
- V01-V84: Supplementary classification of factors influencing contact with health services.

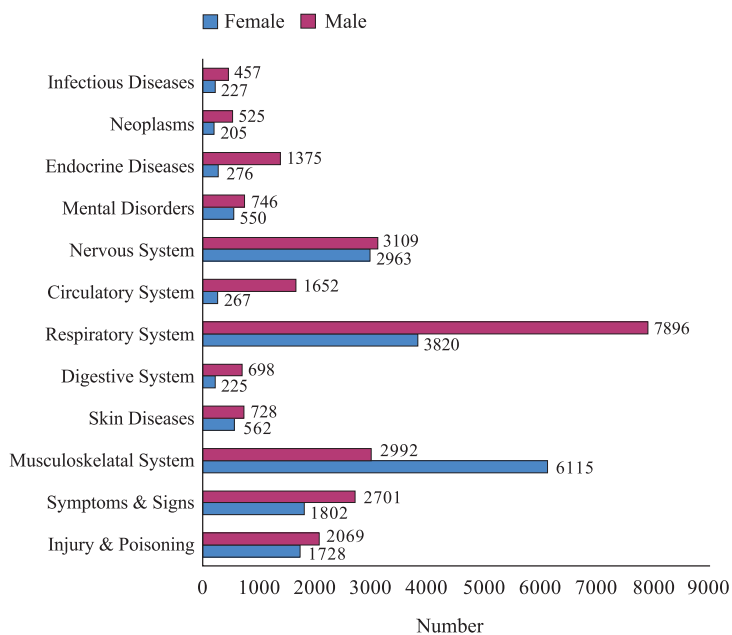
Because of the small number of patients seen, the following categories were combined into a group classified as “other”:

- 280-289: Diseases of the blood and blood-forming organs;
- 580-629: Diseases of the genitourinary system;
- 630-677: Complications of pregnancy, childbirth, and the puerperium;
- 740-759: Congenital anomalies; and
- 760-779: Certain conditions originating in or during the perinatal period.

Use of these categories does not always accurately reflect the types of diseases experienced by the NYS OHCN patients. For example, repetitive stress disorders are categorized under both “Diseases of the nervous system and sense organs” and “Diseases of the musculoskeletal system and connective tissue”.

Figure 3.1. Number of diagnoses in NYS OHCN patients, by main ICD-9-CM diagnostic categories and sex. Overall, there were 75,730 diagnoses made for the 47,210 patients seen by the Clinic Network between 1988 and 2003. Males were seen primarily for diseases of the respiratory system (n=7,896), nervous system (n=3,109), musculoskeletal system (n=2,992), and for signs and symptoms (n=2,701). Females were seen primarily for diseases of the musculoskeletal system (n=6,115), respiratory system (n=3,820), and nervous system (n=2,963). There were 31,417 NYS OHCN diagnoses with V-codes (data not shown). These were patients who were not currently sick but visited the NYS OHCN for some specific purpose, such as to receive prophylactic vaccinations or to be screened for conditions for which the patients were at high risk.

Figure 3.1. Number of Diagnoses in NYS OHCN Patients, by Main ICD-9-CM Diagnostic Categories and Sex



Infectious and Parasitic Diseases (ICD-9-CM Codes 001-139)

Figure 3.2. Number of infectious and parasitic disease diagnoses in NYS OHCN patients, by year and work-relatedness. Between 1988 and 2003, there were 684 diagnoses of an infectious or parasitic disease. Of these, 358 were work-related, 66 were possibly work-related and 260 were not related to work. Increases observed in certain years were a result of screenings conducted by one or more of the Clinics. There was a sharp increase in the number of non-work-related infectious disease diagnoses in 2003. Overall, there were 1,220 patient visits where infectious diseases were diagnosed (data not shown).

Figure 3.2. Number of Infectious and Parasitic Disease Diagnoses in NYS OHCN Patients, by Year and Work-relatedness

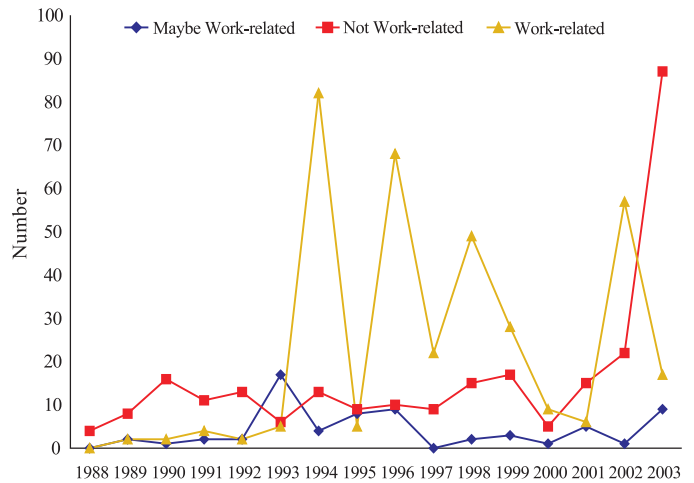
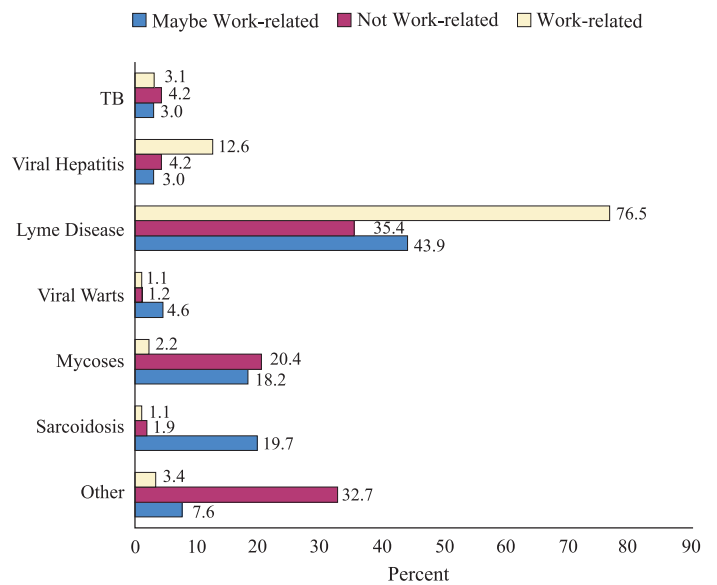


Figure 3.3. Percent of infectious and parasitic disease diagnoses in NYS OHCN patients, by type of disease and work-relatedness. The majority of these diagnoses were Lyme Disease (n=406), of which 77% were considered work-related. Of interest, is the increase seen in non-work-related patients (Figure 3.2) in 2003 was primarily due to screenings for Lyme Disease. Another 67 diagnoses were sarcoidosis, although only 1% of these were classified by the diagnosing physician as work-related. Of the 73 mycoses diagnoses, 8 were work-related and 25 were dermatophytosis.

Figure 3.3. Percent of Infectious and Parasitic Disease Diagnoses in NYS OHCN Patients, by Type of Disease and Work-relatedness



Neoplasms (ICD-9-CM Codes 140-239)

Figure 3.4. Number of diagnoses of neoplasms in NYS OHCN patients, by year and work-relatedness. Overall, there were 730 diagnoses of neoplasms between 1988 and 2003, of which 40% were work-related, 31% were possibly work-related and 29% were not related to work. The Clinics as centers of referral are used to assess work-relatedness of neoplasms. The sharp increase of work-related neoplasms seen between 1995 and 1997 was due primarily to one clinic conducting skin cancer screenings. There were 889 patient visits where neoplasms were diagnosed (data not shown).

Figure 3.4. Number of Diagnoses of Neoplasms in NYS OHCN Patients, by Year and Work-relatedness

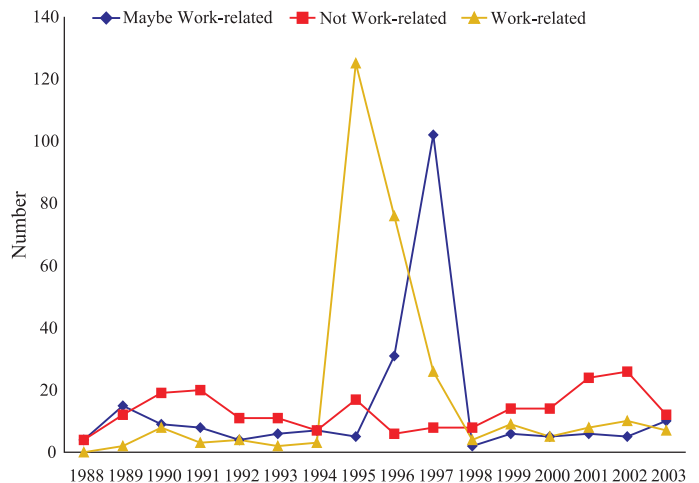
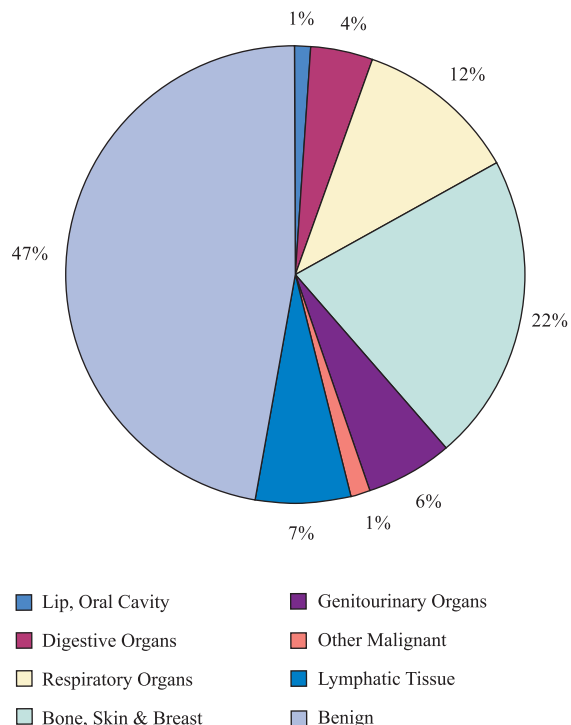


Figure 3.5. Percent of neoplasm diagnoses in NYS OHCN patients, by type of neoplasm. There were 135 malignant skin cancer diagnoses and an additional 282 benign skin lesion diagnoses. These were diagnosed as part of skin cancer screenings of high-risk populations conducted by the Clinics, displaying the effectiveness of these screenings. Other primary neoplasms diagnosed include cancer of the colon and rectum (n=22), of which 55% were work-related and 36% were possibly work-related; and cancer of the trachea, bronchus, lung and pleura (n=64), of which 53% were work-related and 28% were possibly work-related (data not shown).

Figure 3.5. Percent of Neoplasm Diagnoses in NYS OHCN Patients, by Type of Neoplasm



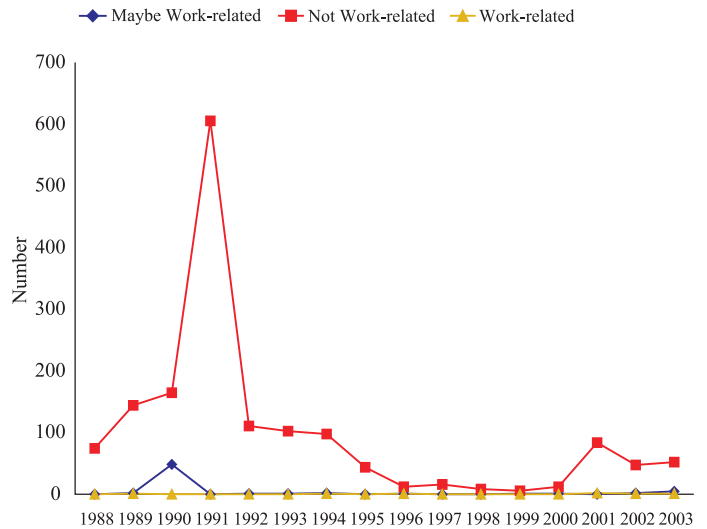
Of the malignant skin neoplasms diagnosed, 55% were work-related. These occurred primarily among those working in the agricultural or logging industry (93%). Females accounted for 43% of this group (data not shown).

Endocrine, Nutritional, and Metabolic Diseases and Immunity Disorders (ICD-9-CM Codes 240-279)

Figure 3.6. Number of endocrine, nutritional and metabolic disease and immunity disorder diagnoses in NYS OHCN patients, by year and work-relatedness.

There were 1,651 diagnoses of diseases in this category, of which only 7 were related to work, and another 64 were possibly work-related. Patients, either as part of their clinical examination or part of a health screening, have co-morbid conditions identified and recorded in the database. It is anticipated that the data presented is an underreport of those seen with these conditions since some of the Clinics do not include this information in the database. Therefore, even though a small percent of the diagnoses in this category were work-related, 91% of the diagnoses were made on patients seen for an occupational condition and 70% were recorded as part of a group screening (data not shown). The majority of these diagnoses were hypercholesterolemia (58%), and another 13% were diabetes. The large increase seen in 1991 was primarily due to more patients participating in group screenings that year, compared to all other years. Overall, there were 2,069 patient visits where diseases in this category were diagnosed (data not shown).

Figure 3.6. Number of Endocrine, Nutritional and Metabolic Disease and Immunity Disorder Diagnoses in NYS OHCN Patients, by Year and Work-relatedness



Mental Disorders (ICD-9-CM Codes 290-319)

Figure 3.7. Number of mental disorder diagnoses in NYS OHCN patients, by year and World Trade Center (WTC) status. There were 1,296 diagnoses of diseases in this category, of which 914 (71%) were not related to the World Trade Center (WTC) disaster. Overall, there were 3,855 visits to the NYS OHCN where mental conditions were diagnosed with 62% of the visits among those with definite work-related conditions. The impact of work-related conditions often extends beyond physical impairment. Many NYS OHCN patients exhibit changes in their ability to perform daily tasks including recreational activities and work duties as a result of their diseases. Moreover, patients can face financial concerns from being out of work and prolonged delays in receiving Workers' Compensation benefits. These issues can overwhelm patients' coping resources and necessitate professional intervention. To address these needs, many of the Clinics have a social worker or nurse advocate on staff to provide counseling regarding the financial, social and psychological aspects of work-related illness and injury. Those patients diagnosed with mental disorders not related to the WTC presented primarily for back injuries (n=53) and sprains and strains of the back (n=20), general symptoms and symptoms involving the head and neck (n=68 and n=51, respectively), asthma (n=57), chronic pharyngitis and sinusitis (n=43), lead poisoning (n=32), respiratory conditions due to chemical fumes and vapors (n=28), disorders of soft tissues (n=26), and carpal tunnel syndrome (n=20) (data not shown). It is anticipated that the data presented reflects those patients who have a primary mental health condition, but under represents the true amount of mental disorders experienced by patients suffering from occupational disease since this is often not recorded in the database.

Figure 3.7. Number of Mental Disorder Diagnoses in NYS OHCN Patients, by Year and World Trade Center Status

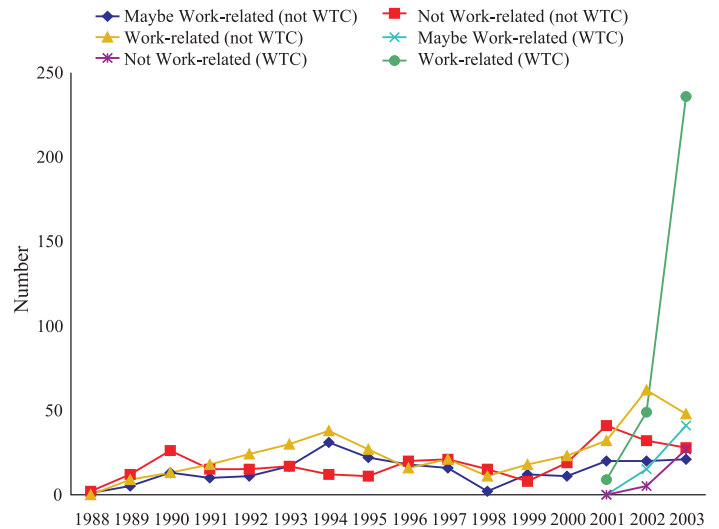


Figure 3.8. Number of work-related mental disorder diagnoses in NYS OHCN patients, by industry of employment and World Trade Center (WTC) status.

The majority of the work-related mental condition diagnoses not related to the WTC disaster occurred among those employed in the services industry (33%) followed by those employed in manufacturing (27%), public administration (15%), transportation (10%) and construction (5%). One-third of the work-related mental disorder diagnoses related to the WTC disaster were among those employed in the public administration industry (33%), with 26% and 24% of the diagnoses occurring among those working in the services and construction industries, respectively.

Figure 3.8. Number of Work-related Mental Disorder Diagnoses in NYS OHCN Patients, by Industry of Employment and World Trade Center (WTC) Status

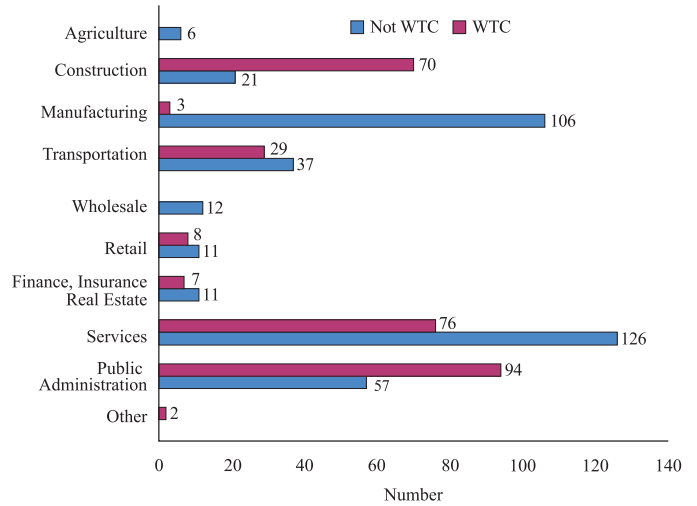
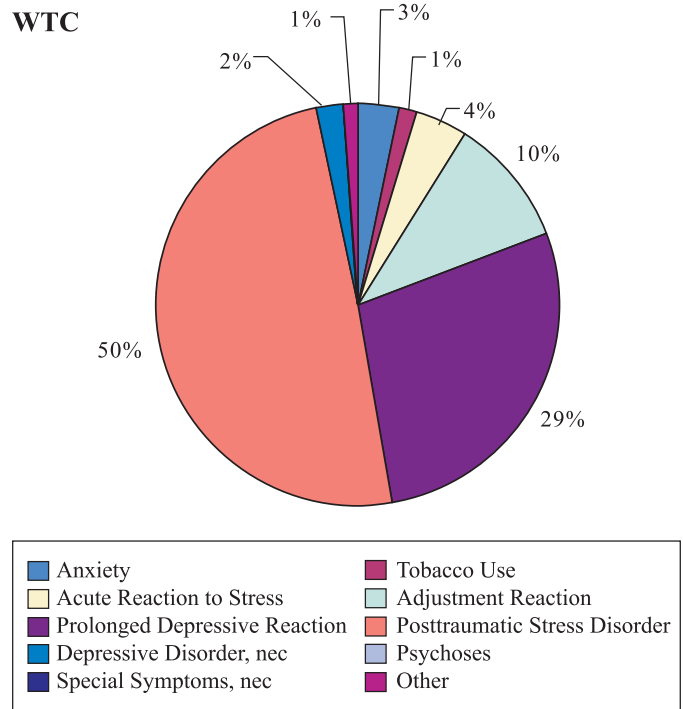


Figure 3.9. Percent of mental disorder diagnoses in NYS OHCN patients, by type of disorder and World Trade Center (WTC) status. There were 382 diagnoses of mental disorders attributable to the WTC disaster. Of these, 294 (77%) were work-related. The primary diagnosis (n=189) in this group were posttraumatic stress disorder (ICD-9-CM code 309.81) and 107 diagnoses of prolonged depressive reaction (ICD-9-CM code 309.1). Among these 382 diagnoses, there were 923 patient visits between 2001 and 2003 for these and other conditions related to the WTC disaster.

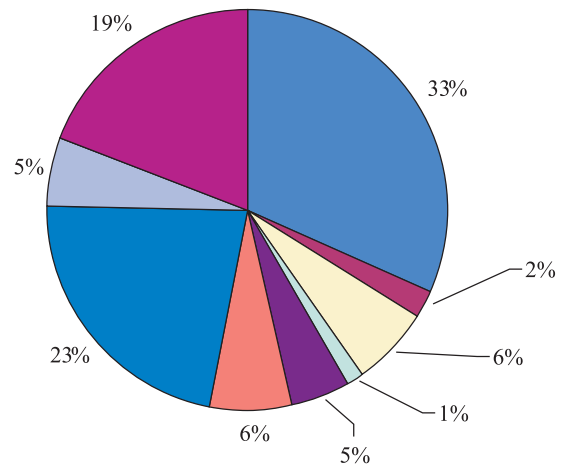
Of those patients not related to the WTC disaster, 390 (43%) were work-related conditions, of which 103 were diagnoses of dysthymic disorder (ICD-9-CM code 300.4) which includes anxiety depression and reactive depression; 76 were depressive disorders (ICD-9-CM code 311) and 41 were posttraumatic stress syndrome (ICD-9-CM code 309.81).

The mental disorders not related to the WTC disaster were almost evenly divided between males (51%) and females (49%). The majority of these diagnoses were among residents of NYS outside of NYC (90%) and were White (84%) (data not shown). A much higher percent of WTC-related patients were male (74%) compared to the non-WTC patients (51%). A large percent of the WTC patients (70%) were residents of NYC (data not shown). The NYS OHCN has provided care to many of the workers and area residents involved in this tragedy - emphasizing that the effects of this tragedy are far-reaching in both geography and time.

Figure 3.9. Percent of Mental Disorder Diagnoses in NYS OHCN Patients, by Type of Disorder and World Trade Center (WTC) Status



Not WTC



Diseases of the Nervous System and Sense Organs (ICD-9-CM Codes 320-389)

Figure 3.10. Number of diagnoses of diseases of the nervous system and sense organs in NYS OHCN patients, by year and work-relatedness. There were 6,080 diagnoses of diseases in this category, of which 68% were work-related and 25% were possibly related to work. The majority of the diagnoses in this category were carpal tunnel syndrome (n=2,166) of which 89% were work-related; noise-induced hearing loss (n=1,521) of which 42% were work-related while another 56% were possibly work-related; cubital tunnel syndrome (n=656) of which 90% were work-related; toxic encephalopathy (n=351) of which 69% were work-related; and nerve root and plexus disorders (n=302) of which 85% were work-related (data not shown).

Figure 3.10. Number of Diagnoses of Diseases of the Nervous System and Sense Organs in NYS OHCN Patients, by Year and Work-relatedness

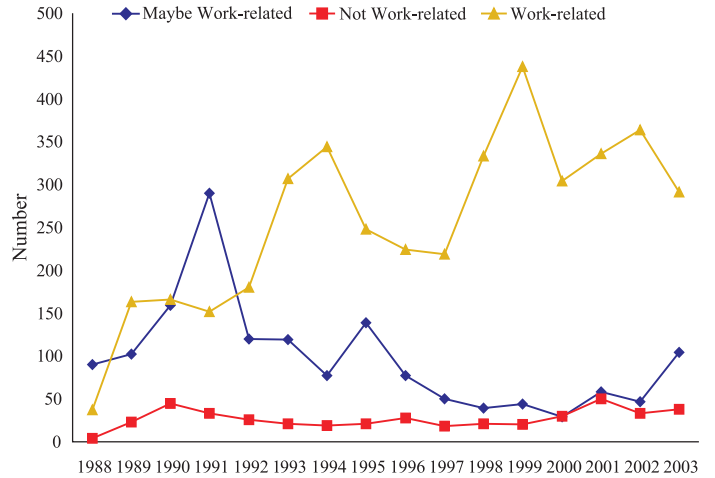
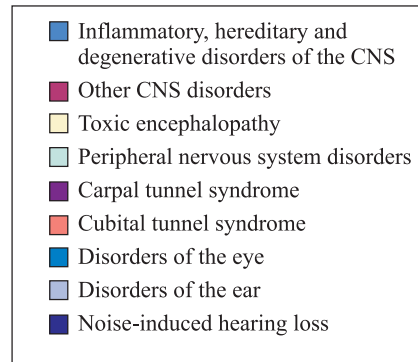
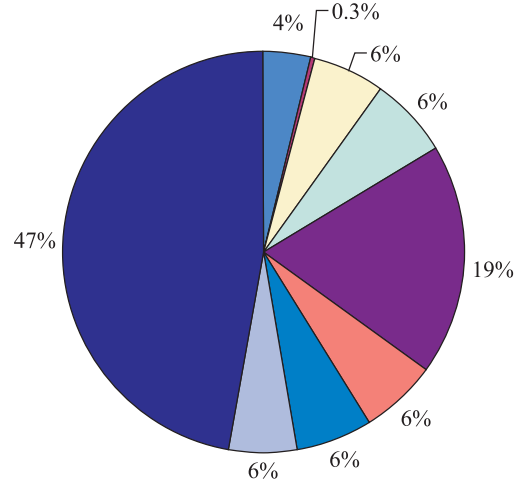


Figure 3.11. Percent of diagnoses of diseases of the nervous system and sense organs in NYS OHCN patients, by type of disease and sex. An almost even number of diagnoses of diseases within this category occurred among males (n=3,109) and females (n=2,963). Almost half (47%) of the diagnoses among males were noise-induced hearing loss (NIHL), while over half (54%) of the diagnoses among females were carpal tunnel syndrome. Among the NIHL diagnoses, 96% resided in NYS outside of NYC (data not shown).

Figure 3.11. Percent of Diagnoses of Diseases of the Nervous System and Sense Organs in NYS OHCN Patients, by Type of Disease and Sex

Male



Female

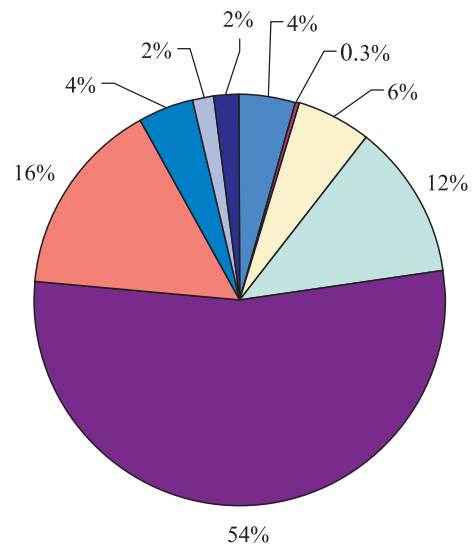
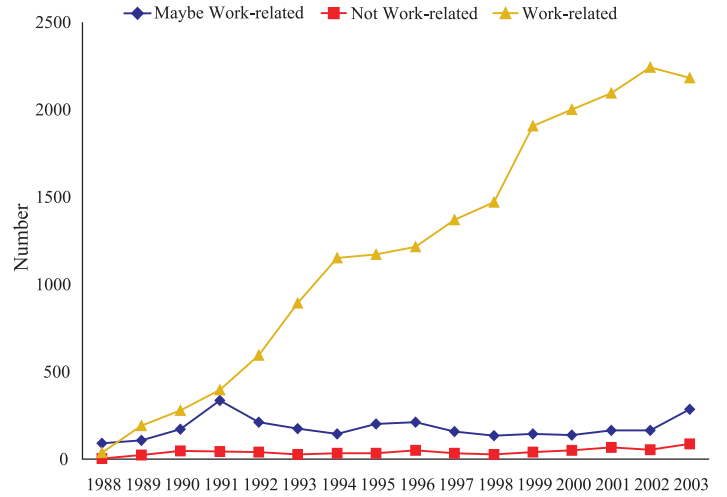


Figure 3.12. Number of NYS OHCN patient visits for diseases of the nervous system and sense organs, by year and work-relatedness. There were 22,680 patient visits for these conditions, primarily among those diagnosed with work-related conditions (85%). Patients with repetitive stress disorders such as carpal tunnel syndrome (12,327 visits), cubital tunnel syndrome (2,423 visits), and nerve root and plexus disorders (1,495 visits) accounted for the majority of the patients seen in multiple visits for their conditions. The chronic nature of these conditions necessitates multiple visits.

Figure 3.12. Number of NYS OHCN Patient Visits for Diseases of the Nervous System and Sense Organs, by Year and Work-relatedness



Diseases of the Circulatory System (ICD-9-CM Codes 390-459)

Figure 3.13. Number of circulatory system disease diagnoses in NYS OHCN patients, by year and work-relatedness. There were 1,919 diagnoses of diseases of the circulatory system, of which 3% were work-related and 14% were possibly work-related. However, 94% of these patients were being seen for an unrelated occupational condition, indicating that the Clinics are also diagnosing other health conditions as part of their clinical work. Increases observed in certain years were a result of screenings conducted by one or more of the Clinics. The majority of these patients (72%) were diagnosed with hypertension. Slightly more than 70% of the patients resided in NYS outside of NYC, and the vast majority of the patients diagnosed with diseases of the circulatory system were male (86%). Overall, there were 3,011 patient visits where diseases in this category were diagnosed (data not shown).

Figure 3.13. Number of Circulatory System Disease Diagnoses in NYS OHCN Patients, by Year and Work-relatedness

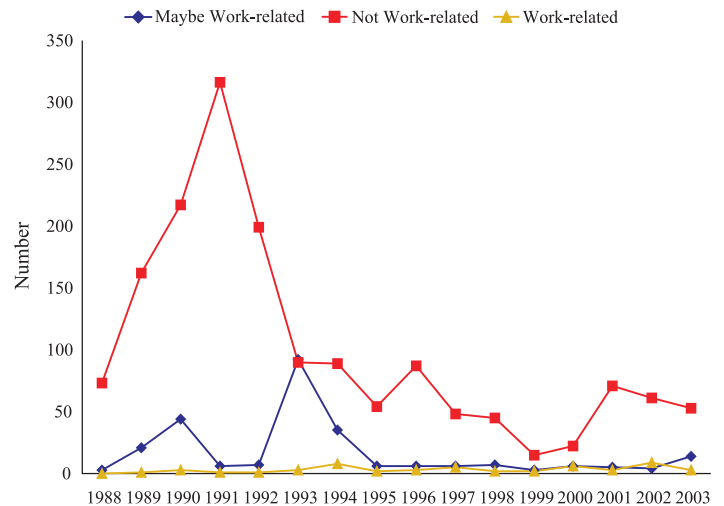
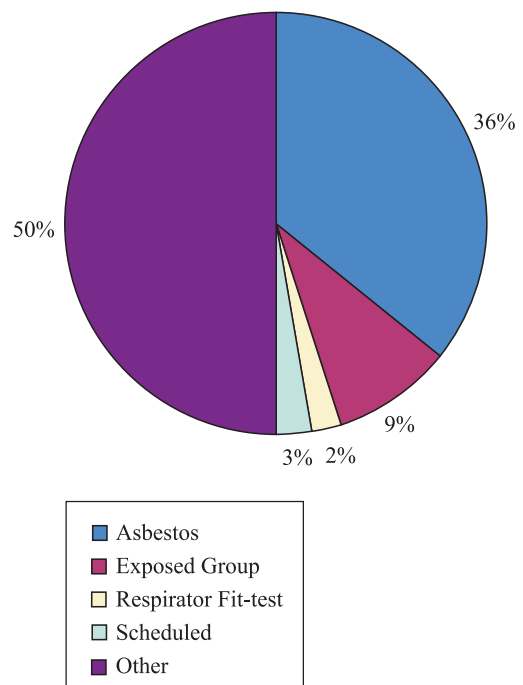


Figure 3.14. Type of group screening for NYS OHCN patients diagnosed with diseases of the circulatory system. Of the diagnoses of a disease of the circulatory system, 1,045 (54%) were diagnosed as part of a group screening. The majority of these patients (68%) were seen as part of asbestos exposure follow-up exams. Another 18% were screened due to a suspected exposure, such as for lead poisoning, Lyme disease, or a chemical spill.

Figure 3.14. Type of Group Screening for NYS OHCN Patients Diagnosed with Diseases of the Circulatory System



Diseases of the Respiratory System (ICD-9-CM Codes 460-519)

Figure 3.15. Number of respiratory system disease diagnoses in NYS OHCN patients, by year and World Trade Center (WTC) status. There were 11,747 diagnoses of a disease of the respiratory system. Of these diagnoses, 63% were work-related and another 24% were possibly related to work. There were 2,271 (19%) respiratory system disease diagnoses related to the WTC disaster.

Figure 3.15. Number of Respiratory System Disease Diagnoses in NYS OHCN Patients, by Year and World Trade Center (WTC) Status

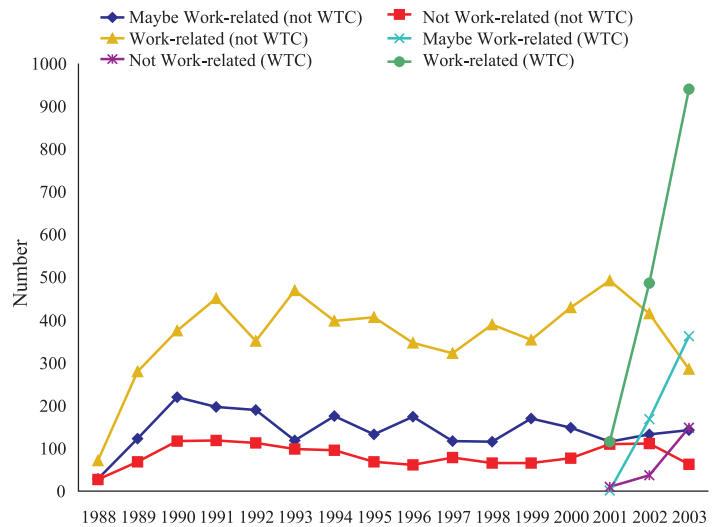


Figure 3.16. Number of NYS OHCN patient visits for diseases of the respiratory system, by year and World Trade Center (WTC) status. There were 22,698 visits for respiratory system disease diagnoses. Of these visits, 69% were work-related and 14% of those were related to the WTC disaster. There has been a steady increase in the number of visits for work-related respiratory diseases displaying the burden of these chronic conditions to both the patients and the NYS OHCN.

Figure 3.16. Number of NYS OHCN Patient Visits for Diseases of the Respiratory System, by Year and World Trade Center (WTC) Status

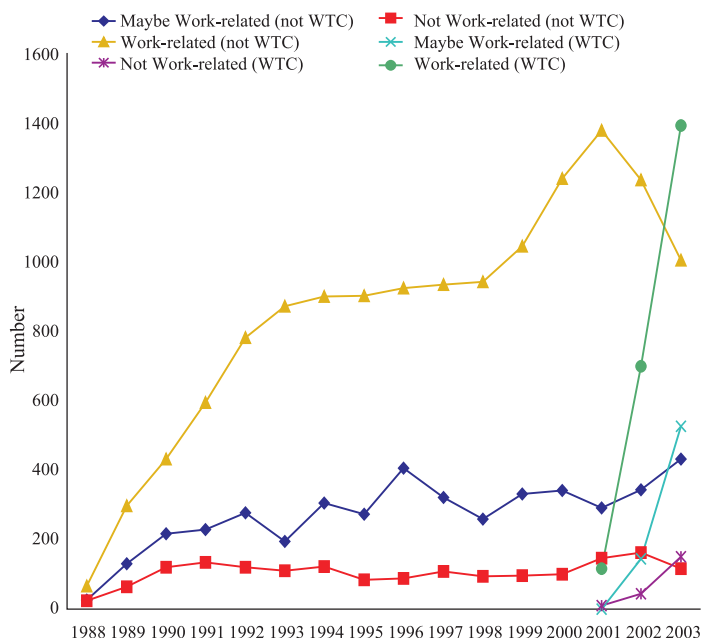
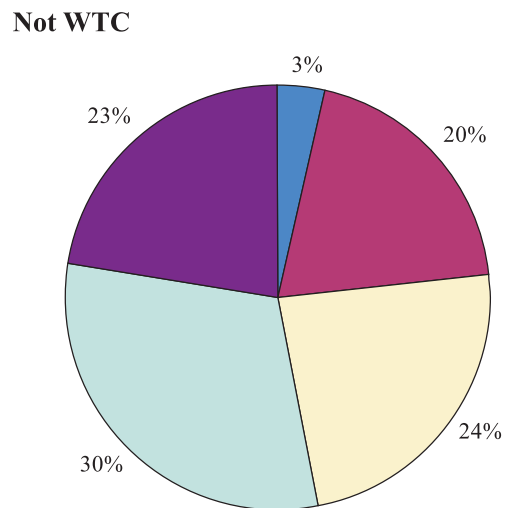
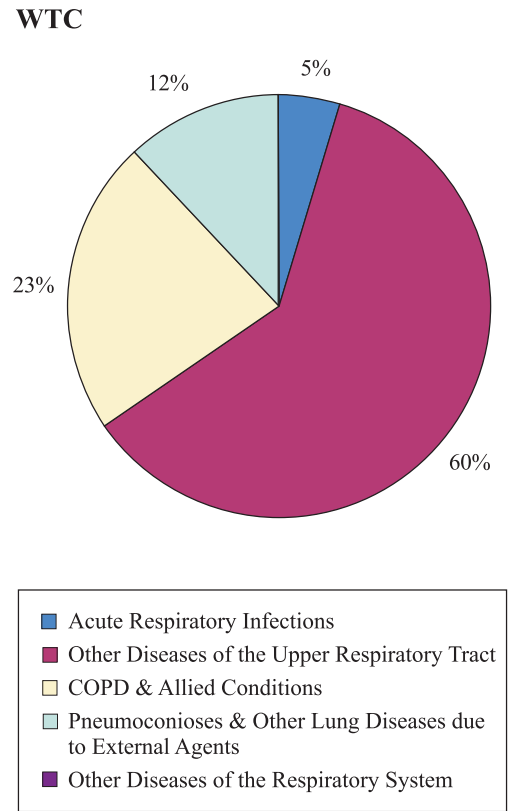


Figure 3.17. Percent of work-related respiratory disease diagnoses in NYS OHCN patients, by type of disease and World Trade Center (WTC) status. The majority of the WTC-related respiratory system disease diagnoses were in the category “Other Diseases of the Upper Respiratory Tract” (ICD-9-CM Codes 470-478). These included work-related chronic pharyngitis and chronic sinusitis (ICD-9-CM Codes 472 and 473) which accounted for 1,318 diagnoses, of which 713 (54%) were related to the WTC disaster. Almost a third of the work-related non-WTC respiratory system disease diagnoses (30%) were classified as “Pneumoconioses and Other Lung Diseases due to External Agents” (ICD-9-CM Codes 500-508) compared to 12% of the WTC diagnoses. This included 873 diagnoses of asbestosis not related to WTC. Also included in this group are respiratory conditions due to chemical fumes and vapors (ICD-9-CM Code 506) which accounted for 984 of the work-related diagnoses of which 178 (18%) were related to WTC exposures. Approximately 23% of both the WTC and non-WTC diagnoses were “Chronic Obstructive Pulmonary Disease and Allied Conditions (ICD-9-CM Codes 490-496). This included 1,308 work-related asthma diagnoses (ICD-9-CM Code 493) of which 307 (23%) were related to WTC.

Figure 3.17. Percent of Work-related Respiratory Disease Diagnoses in NYS OHCN Patients, by Type of Disease and World Trade Center (WTC) Status



Work-related Asthma

Work-related asthma diagnoses (ICD-9-CM Code 493) that were not associated with the WTC disaster were relatively equally divided between males (48%) and females (51%); three-quarters of the work-related asthma diagnoses associated with WTC exposures occurred among males (76%). Non-WTC related diagnoses occurred among those primarily from NYS outside of NYC (72%) and among those who were White (78%); WTC-related diagnoses occurred primarily among those from NYC (63%) and among those who were White (64%) (data not shown).

Figure 3.18. Percent of work-related asthma diagnoses in NYS OHCN patients, by industry of employment and World Trade Center (WTC) status. The majority of non-WTC work-related asthma diagnoses occurred among those employed in the services industry – particularly health (11%) and educational (13%) services, followed by the manufacturing industry (23%). The principal occupations at risk for work-related asthma, excluding the WTC disaster, included administrative support (15%), machine operators (15%), cleaning and building services, households (9%), farm managers and workers (9%) and professional specialties (7%) including teachers (7%) (data not shown). Work-related asthma diagnoses among those with WTC-related exposures occurred among those employed in construction (22%), public administration (39%), and services (19%) industries. The principal occupations at risk for work-related asthma among the WTC exposed population included protective services (22%), construction trades (18%) and professional specialties (8%).

Figure 3.18. Percent of Work-related Asthma Diagnoses in NYS OHCN Patients, by Industry of Employment and World Trade Center (WTC) Status

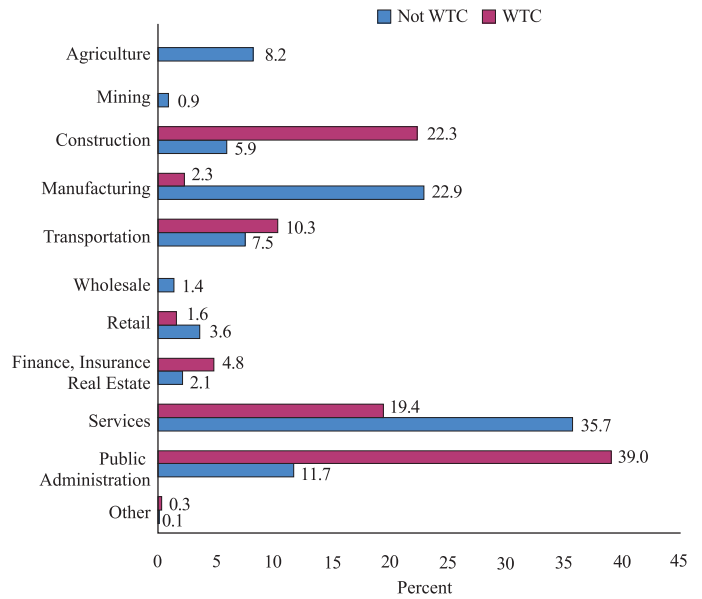
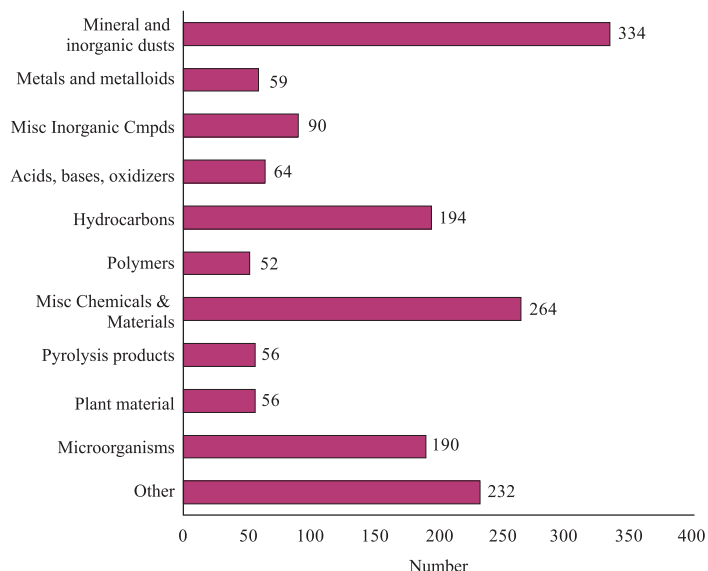


Figure 3.19. Number of work-related asthma diagnoses in NYS OHCN patients, not World Trade Center (WTC) related, by source of exposure. There were 1,923 exposures associated with diagnosed of work-related asthma, of which 1,604 were not associated with the WTC disaster. Of these non-WTC exposures, 334 were to dusts (21%), with 295 exposures non-specified dusts (data not shown). Miscellaneous chemicals and materials accounted for 264 exposures, primarily exposures to indoor air pollutants (n=132), cleaning materials (n=45), and chemical dusts (n=38); and miscellaneous inorganic compounds accounted for 90 exposures, primarily 63 irritant gas exposures. Microorganisms accounted for 190 exposures, primarily molds (n=176); and hydrocarbons accounted for 194 exposures with 97 exposures to solvents. Patients could be exposed to more than one agent.

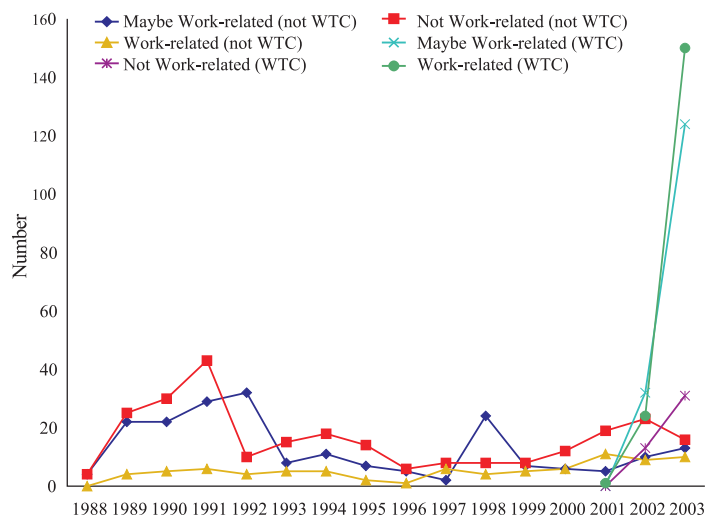
Figure 3.19. Number of Work-related Asthma Diagnoses in NYS OHCN Patients, not World Trade Center (WTC) Related, by Source of Exposure



Diseases of the Digestive System (ICD-9-CM Codes 520-579)

Figure 3.20. Number of digestive system disease diagnoses in NYS OHCN patients, by year and World Trade Center (WTC) status. There were 924 diagnoses of diseases of the digestive system. Of these diagnoses, 258 (28%) were work-related and 363 (39%) were possibly related to work. There were 375 diagnoses associated with the WTC disaster (41%). The majority of diagnoses (n=428) were diagnosed with gastroesophageal reflux (ICD-9-CM Code 530.81) including 359 (84%) of the diagnoses associated with WTC-related exposures. Another 121 of the non-WTC diagnoses were diagnosed with melena (ICD-9-CM Code 578.1), and 73 were diagnosed with diseases of the liver, primarily hepatitis (data not shown). Overall, there were 1,150 patient visits where diseases in this category were diagnosed (data not shown).

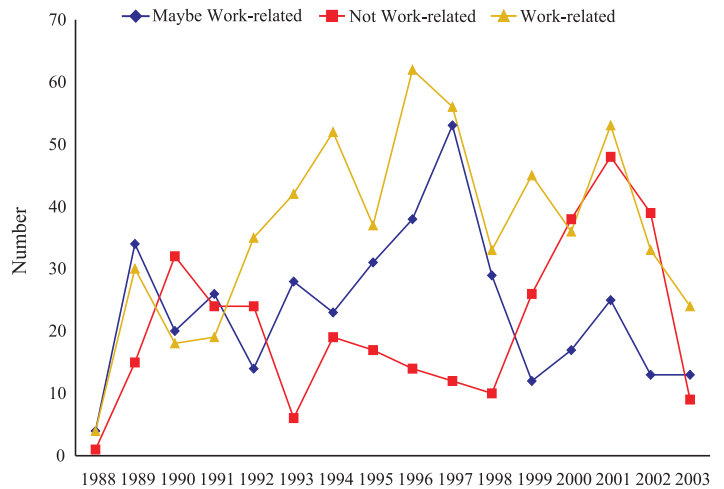
Figure 3.20. Number of Digestive System Disease Diagnoses in NYS OHCN Patients, by Year and World Trade Center (WTC) Status



Diseases of the Skin and Subcutaneous Tissue (ICD-9-CM Codes 680-709)

Figure 3.21. Number of skin and subcutaneous tissue disease diagnoses in NYS OHCN patients, by year and work-relatedness. There were 1,293 diagnoses of a disease of the skin and subcutaneous tissue, of which 45% were work-related and 29% were possibly work-related. There were 676 diagnoses of contact dermatitis (ICD-9-CM Code 692) of which 56% were work-related (data not shown). Another 179 diagnoses were of dermatoses including actinic keratosis and seborrheic keratosis (ICD-9-CM Codes 702.0 and 702.1). These were often identified in skin cancer screenings conducted by the Clinics. Overall, there were 3,122 patient visits where diseases in this category were diagnosed (data not shown).

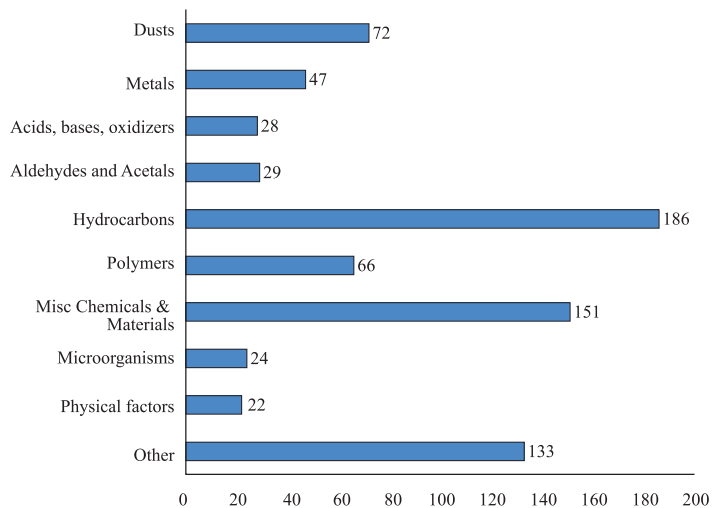
Figure 3.21. Number of Skin and Subcutaneous Tissue Disease Diagnoses in NYS OHCN Patients, by Year and Work-relatedness



Contact Dermatitis

Figure 3.22. Number of contact dermatitis diagnoses in NYS OHCN patients, by source of exposure. There were 379 diagnoses of contact dermatitis. Exposures among these patients include 186 hydrocarbon exposures which included 59 exposures to cutting oils and 101 exposures to non-specified solvents. Another 151 exposures were to miscellaneous chemicals and materials, which included 27 indoor air pollutant exposures, 42 chemical dust exposures, 14 to non-specified pesticides, and 24 to cleaning materials (data not shown). Patients could be exposed to more than one agent.

Figure 3.22. Number of Contact Dermatitis Diagnoses in NYS OHCN Patients, by Source of Exposure



Diseases of the Musculoskeletal System and Connective Tissue (ICD-9-CM Codes 710-739)

Figure 3.23. Number of musculoskeletal system and connective tissue disease diagnoses in NYS OHCN patients, by year and work-relatedness. There were 9,132 diagnoses of a disease of the musculoskeletal system of which 82% were work-related and another 11% were possibly related to work. In general, there has been a steady increase in the diagnosis of these conditions. Among the diagnoses of work-related musculoskeletal conditions, 5,098 (68%) were among females; 3,904 (52%) were among NYC residents; and 4,591 (62%) were among Whites, 1,395 (19%) among African-Americans and 1,039 (14%) among Hispanics (data not shown). Overall, there were 26,338 patient visits where diseases in this category were diagnosed. There has also been a steady increase in the number of visits for work-related musculoskeletal diseases with over 3,990 patient visits in 2003, thus displaying the burden of these conditions to both the patients and the NYS OHCN.

Figure 3.23. Number of Musculoskeletal System and Connective Tissue Disease Diagnoses in NYS OHCN Patients, by Year and Work-relatedness

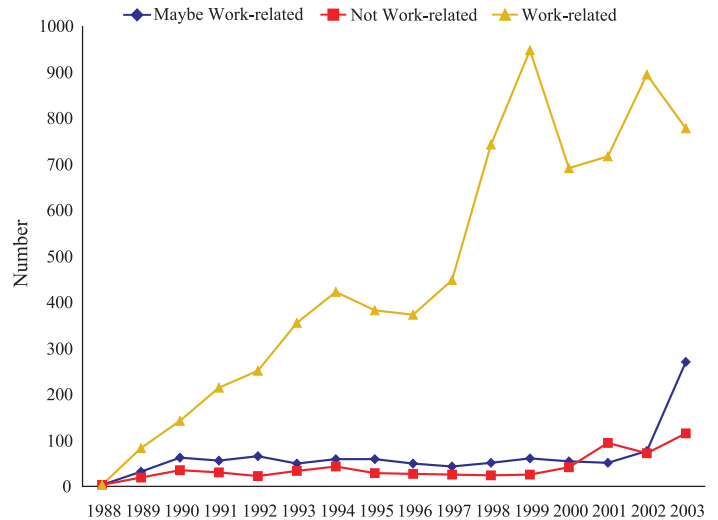


Figure 3.24. Percent of work-related musculoskeletal system and connective tissue disease diagnoses, in NYS OHCN patients, by occupation and ethnicity. Over one-fourth (28%) of the diagnoses of musculoskeletal diseases worked in administrative support occupations. There were 528 diagnoses among African-Americans (38% of all musculoskeletal disease diagnoses among African-Americans) who worked in administrative support occupations. There were 1,924 diagnoses (26%) who worked in executive and professional specialty occupations with 549 diagnoses among editors and reporters. Thirty-two percent of the diagnoses of musculoskeletal diseases among Asians and Whites worked in these occupations. There were 780 musculoskeletal disease diagnoses among those who worked in service occupations including 260 among nursing aides and 108 among janitors and cleaners, of which 283 (42%) were African-American; 836 were diagnosed among machine operators with 260 among Hispanic workers and 100 among Asian workers. Among the machine operators diagnosed with musculoskeletal diseases, 259 worked with textile machines.

Figure 3.24. Percent of Work-related Musculoskeletal System and Connective Tissue Disease Diagnoses, in NYS OHCN Patients, by Occupation and Ethnicity

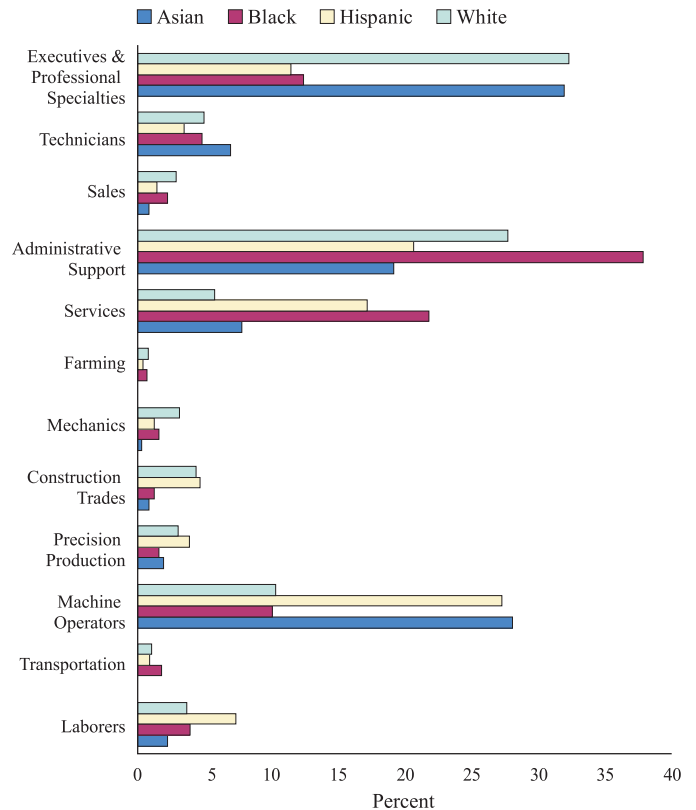
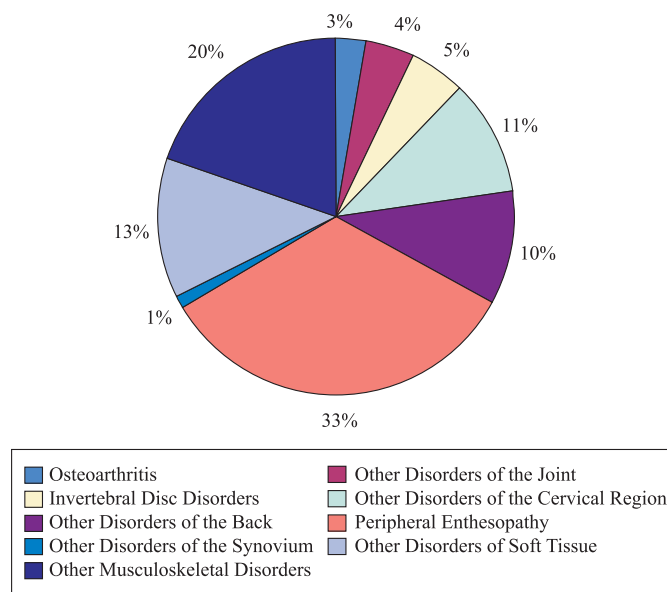


Figure 3.25. Percent of musculoskeletal system and connective tissue disease diagnoses in NYS OHCN patients, by type of disease. There were 976 diagnoses of disorders of the cervical region (ICD-9-CM Code 723) of which 366 were cervicalgia and 373 were cervical radiculitis. There were 925 diagnoses of other disorders of the back (ICD-9-CM Code 724) of which 533 were lumbago and 138 were radicular syndrome of lower limbs. Slightly more than a third (n=3,060) of the diagnoses were peripheral enthesopathies (ICD-9-CM Code 726) including 695 with rotator cuff syndrome, 1,080 with enthesopathy of the elbow (362 with medial epicondylitis and 668 with lateral epicondylitis), 525 diagnoses of enthesopathy of the wrist, and 531 with unspecified enthesopathy. An additional 1,393 diagnoses were made for other disorders of the synovium (ICD-9-CM Code 727) of which 497 were de Quervain's disease and 496 were other tenosynovitis of the hand and wrist. Other disorders of the soft tissue (ICD-9-CM Code 729) accounted for 1,164 diagnoses including 736 for myalgia and myositis.

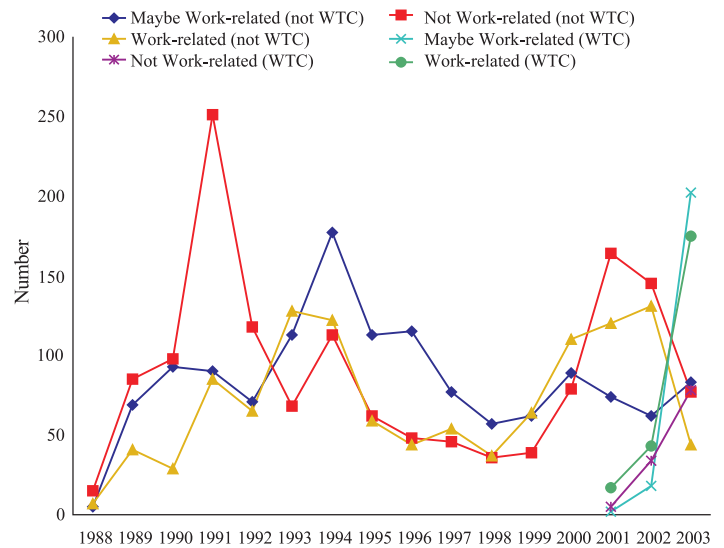
Figure 3.25. Percent of Musculoskeletal System and Connective Tissue Disease Diagnoses in NYS OHCN Patients, by Type of Disease



Symptoms, Signs and Ill-defined Conditions (ICD-9-CM Codes 780-799)

Figure 3.26. Number of symptoms, signs and ill-defined condition diagnoses in NYS OHCN patients, by year and World Trade Center (WTC) status. There were 4,508 diagnoses of symptoms, signs or ill-defined conditions, of which 1,375 (31%) were work-related and 1,572 (35%) were possibly related to work. There were 574 (13%) diagnoses in this category related to the WTC disaster. Increases in the non-work-related patients, observed in certain years, were a result of screenings conducted by one or more of the Clinics; while the increase seen in 1993 and 1994 among work-related patients was primarily attributed to coding patterns by a single physician. There were 7,964 patient visits where patients presented for symptoms and signs. Diagnoses were primarily for symptoms involving respiratory system and other chest symptoms including shortness of breath and wheezing (n=1,024 not related to the WTC disaster and 403 related to WTC), general symptoms (n=874 not related to WTC) which includes dizziness and fatigue; and 807 symptoms involving the head and neck such as headaches (data not shown).

Figure 3.26. Number of Symptoms, Signs and Ill-Defined Condition Diagnoses in NYS OHCN Patients, by Year and World Trade Center (WTC) Status



Injuries and Poisonings (ICD-9-CM Codes 800-999)

Figure 3.27. Number of injury and poisoning diagnoses in NYS OHCN patients, by year. There were 3,840 diagnoses of injuries or poisonings, of which 81% were work-related and another 9% were possibly related to work. There were 12,001 patient visits where patients were diagnosed with injuries and poisonings (data not shown). Until 1998, there was a steady increase in the number of patients seen for these conditions over time. The increase observed in 1998 among the work-related patients was a result of screenings conducted by one or more of the Clinics.

Figure 3.27. Number of Injury and Poisoning Diagnoses in NYS OHCN Patients, by Year

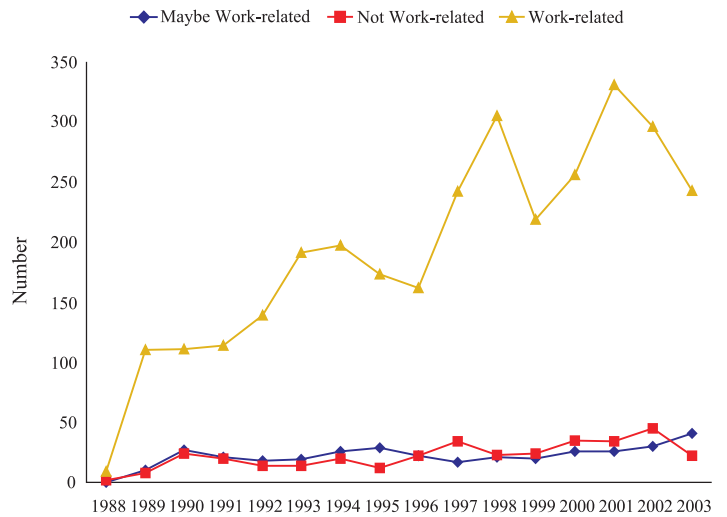
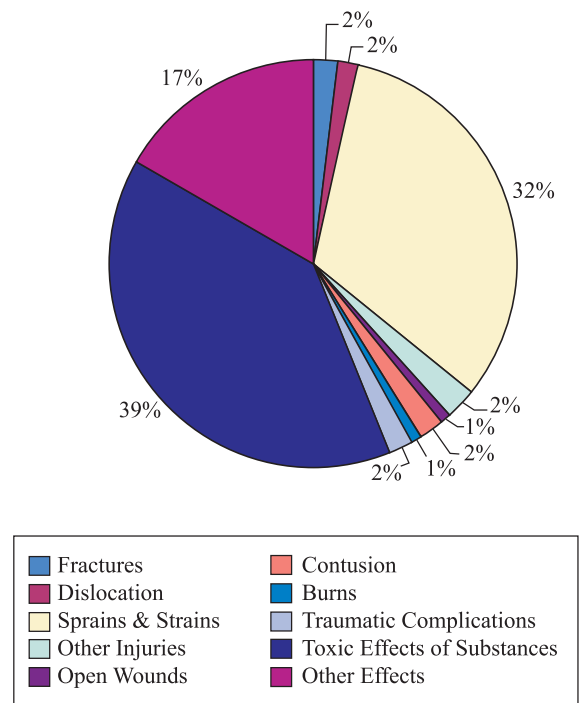


Figure 3.28. Percent of injury and poisoning diagnoses in NYS OHCN patients, by type of injury or poisoning. There were 1,495 diagnoses (39%) seen for toxic effects of substances that included 902 diagnoses of toxic effects from lead (ICD-9-CM Code 984). Another 1,233 (32%) diagnoses were sprains and strains including 476 back sprains or strains to unspecified parts of their backs and 329 sprains and strains to shoulders.

Figure 3.28. Percent of Injury and Poisoning Diagnoses in NYS OHCN Patients, by Type of Injury or Poisoning



Diseases of Other Systems

Figure 3.29. Number of diagnoses of diseases in all other categories in NYS OHCN patients, by year and work-relatedness. There were 545 diagnoses in “other” disease categories including diseases of the blood and blood-forming organs (n=166) (ICD-9-CM Codes 280-289), diseases of the genitourinary system (n=329) (ICD-9-CM Codes 580-629), complications of pregnancy, childbirth and the puerperium (n=7) (ICD-9-CM Codes 630-677), congenital anomalies (n=41) (ICD-9-CM Codes 740-759), and certain conditions originating the perinatal period (n=2) (ICD-9-CM Codes 760-779). Overall, there were 838 patient visits where diseases in these categories were diagnosed (data not shown). Most patients diagnosed with diseases in these categories were identified as a result of screenings, which is apparent by the increases seen in 1989 and 1991 when large group screenings were conducted by one or more of the Clinics.

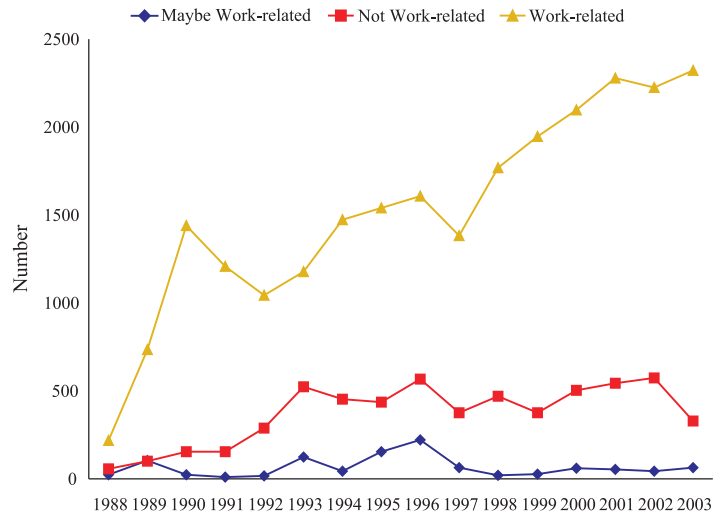
Figure 3.29. Number of Diagnoses of Diseases in all Other Categories in NYS OHCN Patients, by Year and Work-relatedness



V-Codes (ICD-9-CM Codes V01-V84)

Figure 3.30. Number of diagnoses for patients not currently sick, seen for a specific purpose in NYS OHCN patients, by year and work-relatedness. Patients recorded with V-codes in their medical records by the NYS OHCN were patients who were not currently sick and encountered the NYS OHCN for some specific purpose such as to receive prophylactic vaccinations or to be screened for conditions for which the patients were at high risk (such as Lyme disease, asbestos screenings, and lead screenings). There were 31,417 diagnoses classified with V-codes, of which 24,463 (78%) were work-related. Of all patients recorded with V-codes, 22,452 (71%) were seen as part of group screenings. There has been a steady increase in the number of screening patients seen by the NYS OHCN. Overall, there were 46,319 patient visits where patients were seen for specific purposes, not related to diseases (data not shown).

Figure 3.30. Number of Diagnoses for Patients Not Currently Sick, Seen for a Specific Purpose in NYS OHCN Patients, by Year and Work-relatedness



References

- ¹ International Classification of Diseases. 9th Revision. Clinical Modification. Sixth Edition. 2005. Practice Management Information Corporation.