

New York State: Occupational Health and Safety Surveillance in New York State – Occupational Health Indicators (July 1, 2011 – June 30, 2012)

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BRIEF OVERVIEW OF PROJECT

This project supports general occupational health surveillance activities including the occupational health indicators, the NYS Occupational Health Clinic Network, the Heavy Metals Registry, and special projects.

ACCOMPLISHMENTS AND OUTPUTS

Occupational Health Indicators

- The New York State Department of Health (NYSDOH) has collected all 19 designated occupational health indicators (OHIs), and has added an additional indicator on hospitalizations for work-related low back disorders through 2009.
- Some of the OHIs have been calculated at the county level and provided to the Community Health Assessment Clearinghouse to improve community access to occupational health data in a user-friendly environment.
 - Three-year rates on work-related hospitalizations and elevated blood lead levels (>-25 mcg/dL) were included in the [NYS Prevention Agenda Toward the Healthiest State](#).
 - Three-year rates for all pneumoconiosis hospitalizations, asbestosis hospitalizations, work-related hospitalizations, elevated blood lead levels for both ≥ 10 mcg/dL and ≥ 25 mcg/dL, and fatal work-related injuries for each county were compared to the NYS rate as part of the [NYS Community Health Data Set](#).
 - Three-year rates for each county mapped for all pneumoconiosis hospitalizations, asbestosis hospitalizations, work-related hospitalizations, and elevated blood lead levels among adults (≥ 10 mcg/dL) were included in the [County Health Assessment Indicators](#).
- Staff is working to incorporate information from six occupational health indicators into the Environmental Public Health Tracking (EPHT) program at the state level. This includes elevated blood lead levels, both ≥ 10 mcg/dL and ≥ 25 mcg/dL, work-related hospitalizations, pneumoconiosis hospitalizations, asbestosis hospitalizations, fatal occupational injuries, and mesothelioma.
- Staff has also worked to integrate information from the adult blood lead indicator into the New York State's Minority Health Report. The report was generated to document racial and ethnic differences in health status and health care access and quality.
- Occupational health indicator data were used to help develop the NYS Prevention Agenda, Healthy Environment Workplace Injury Objectives. The NYS Prevention Agenda was developed as a call to action to local health departments, health care providers, health plans, schools, employers and businesses to collaborate at the community level to

improve the health status of New Yorkers through increased emphasis on prevention. Occupational health data included in the objectives are adult blood lead levels (≥ 25 ug/dL), work-related hospitalizations, and fatal work-related injuries. These are being updated for the State Health Improvement Plan for 2014-2018.

Special Projects

The Injury Prevention Program has been merged with the Bureau of Occupational Health to create the Bureau of Occupational Health and Injury Prevention. Opportunities for joint projects are currently being explored including prevention of motor vehicle crashes and falls in the elderly.

- A MOU with the NYS Workers' Compensation (WC) Board has been signed which allows Health Department staff to gain access to WC data for use in identifying the burden of occupational injuries and diseases.
- Staff has gained access to the National Poison Control System data for New York, a real-time surveillance source that can be used to identify possible occupational cases. We are piloting the feasibility of the system to identify occupational cases.
- Staff continues to collaborate with the NYS Young Workers Safety and Health Project to bring the Passport to Safety to 5000 high school students in NYS. This is an on-line training course about occupational safety and health issues.
- Staff has completed an analysis of blood mercury data reported from 2001 to 2008. This has been submitted for peer-reviewed publication.
- An update of the OHCN Report to include data from 2004-2010 has been completed and is undergoing review.
- Staff is working with the Occupational and Environmental Health Center of Eastern NY and the University of Albany, School of Public Health to create an educational conference for health care providers about diagnosing occupational disease. This conference will be held on September 28th. CME and CNE credits will be available, and select populations will be able to participate on-line.
- Staff has developed a report summarizing data from the Heavy Metals Registry for 2006-2010. This is undergoing internal review.
- Staff has participated in workgroups with the Governor's Traffic Safety Committee, with the Healthy Homes program, and with climate change surveillance programs, exploring areas of collaboration and incorporation of occupational health and safety practices into other arenas.
- Staff continues to explore the incorporation of industry and occupation variables in Health Department databases.

Presentations

- "Fundamentals of Industrial Hygiene and Occupational Fatal Injury Prevention". Environmental and Occupational Epidemiology course, March 2012, SUNY Albany School of Public Health
- "Occupational Health Surveillance. Environmental and Occupational Epidemiology Course, April 2012, SUNY Albany School of Public Health.
- "Bureau of Occupational Health and Injury Prevention – Surveillance and Epidemiology." Quarterly meeting, NYS Occupational Health Clinic Network, June 2012, New York State Department of Health.

POTENTIAL OUTCOMES

Publications

Scott EE, Pavelchak N, DePersis R. Impact of Housekeeping on Lead Exposure in Indoor Law Enforcement Shooting Ranges, *Journal of Occupational and Environmental Hygiene*, 2012;9(3): D45-D51.

Zhu J, Franko E, Pavelchak N, Depersis R. Worker Lead Poisoning during Renovation of a Historic Hotel Reveals Limitations of the OSHA Lead in Construction Standard, *Journal of Occupational and Environmental Hygiene*, 2012; 9(8).

New York State: Fatality Assessment and Control Evaluation (NY FACE) (July 1, 2011 – June 30, 2012)

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BRIEF OVERVIEW OF PROJECT

The New York State Department of Health (NYSDOH) Fatality Assessment and Control Evaluation (FACE) program investigates work-related fatalities where appropriate prevention methods or materials are not available. NY FACE also works with partners in high-risk industries to develop prevention materials to reduce injuries and fatalities.

ACCOMPLISHMENTS AND OUTPUTS

- Staff identified 117 work related fatalities. Since the implementation of the study in 2002, NY FACE identified 1397 occupational fatality cases. Quarterly case reviews were conducted to ensure data quality and identify trends.
- A total of 44 fatality investigations have been completed since 2002 (two investigations were completed and three were initiated during this period). All FACE reports are shared with the victims' employers, EMS, OSHA, Sheriff's offices, State Police, labor unions, equipment manufacturers and trade associations.
- By the end of this period, NY FACE has developed a total of 33 FACE injury prevention products, in addition to the 44 fatality investigation reports. Injury prevention products include biannual fatality summary reports, program brochure, tailgate training manuals, hazard alert, FACE fact sheets, training handbook, journal article, newsletter article, employee on-site training and presentations.

Presentations:

- "Preventing Excavation Fatalities: Causes and Solutions - A Case Study ([07NY033](#))."
Presented at Underground Damage Prevention and Excavation Safety Seminar hosted by Capital Region Damage Prevention Council and Dig Safely New York, Albany, NY, November 17, 2011.
- "Industrial Hygiene and Occupational Fatality Prevention." Presented at Environmental and Occupational Epidemiology class in SUNY School of Public Health, East Greenbush, NY, February 8, 2012.
- "Snowmaking Safety-Challenges and Solutions." Presented at Massachusetts Lift Maintenance Seminar, Jiminy Peak, MA, April 17, 2012.

Newsletter Articles:

The following articles were published in the Injury Prevention Program's listserv and NY FACE Injury Prevention Updates which reach approximately 800 individuals who focus on injury prevention throughout New York State:

- "Remember Your Friends in High Places"
- "Chainsaw Safety during Spring Cleaning"
- "Bathtub Refinishers and Exposure to Methylene Chloride"
- "Older Worker Fatalities"

OUTCOMES

POTENTIAL OUTCOMES

- NY FACE reports 07NY107 "[*Master Stonemason Dies in Fall from Handmade Work Platform attached to Powered Industrial Truck*](#)" and 07NY033 "[*A Plumber Dies After the Collapse of a Trench Wall*](#)" were posted on the NY FACE and NIOSH websites for public access. All NY FACE reports are shared with the victims' employers, OSHA, PESH, Sheriff's offices, State Police, and applicable labor unions, equipment manufacturers and trade associations.
- Staff provided New York Center for Agricultural Medicine and Health (NYCAMH) with "[*Chainsaw Safety for Homeowners*](#)" and the list of NYSDOH handouts addressing flood related issues for NYCAMH to share with the farms that have sustained substantial flood damage during the summer.
- Staff provided 20 copies of the hazard alert "[*Fatal Injuries among Animal Handlers in New York State*](#)" to Dr. McMahon of the Occupational and Environmental Health Center of Eastern New York (OEHCEENY) who used it for a backstretch worker training at the Saratoga Race Track.
- Staff provided NY FACE program information and the solar installation safety information developed by CA FACE to Patricia Watt, EHS Director of Hudson Valley Community College (HVCC), and Penny Hill, Associate Dean of HVCC Training and Education Center for Semiconductor Manufacturing and Alternative and Renewable Technologies (TEC-SMART). Ms. Watt shared the information with the faculty.

INTERMEDIATE OUTCOMES

- Staff did a presentation at Underground Damage Prevention and Excavation Safety Seminar and discussed a FACE case (07NY033 [*A Plumber Dies After the Collapse of a Trench Wall*](#)). More than 125 construction company supervisors and workers, excavation contractors, safety and health professionals and representatives of state agencies and OSHA attended the seminar.
- Power point slides on construction safety developed by NY FACE staff were used by Mr. Van Raalte, Director of Industrial Hygiene Services of OEHCEENY for a presentation on Construction Safety for 18 students of the Youth Construction Initiative Program in Troy. The FACE cases, 05NY039 ([*Three Construction Workers Killed after being Struck by a Bus in a Highway Work Zone*](#)) and 07NY015 ([*Construction Laborer Dies after Falling Off Collapsed Precast Concrete Floor Slab*](#)), were discussed during the session.

- NY FACE case report [City Engineer Killed in Landfill Manhole when Retrieving Flow Meter](#) (03NY027) was included in an eight hour confined space hazard training that was provided by Mr. Van Raalte to 30 operating engineers in Albany.
- Two NY FACE investigation reports (07NY080 [Mechanic Killed When Aerial Work Platform Collapses](#) and 07NY015 [Construction Laborer Dies after Falling Off Collapsed Precast Concrete Floor Slab](#)) were tweeted by NIOSH.

Logging/tree-work Injury Prevention Project

Logging has consistently been one of the most hazardous occupations in the United States. NY FACE developed [Logging Safety: A Field Guide](#) based on WV FACE model in 2009 and collaborated with many injury prevention partners to disseminate the Guide and provide logging safety training.

- NY FACE has disseminated approximately 8,100 copies of [Logging Safety: A Field Guide](#) to agricultural workers, loggers, rural landowners, trade school students, snowmobile club members, and public sector workers.
- Staff identified 87 cases of tree work related fatalities between 2002 and 2010 and the case information was shared with Erika Scott, Senior Research Coordinator for New York Center for Agricultural Medicine and Health (NYCAMH) and Northeast Center for Agricultural and Occupational Health (NEC). Ms. Scott used the data to develop presentations for NY Farm Show and a rural landowners meeting.
- The Park Manager of the Town of Schodack requested copies of the [Logging Safety: A Field Guide](#). Ten copies were provided and will be used for safety training for both the park and public works staff.
- NY FACE project Game of Logging Training for Farmers was featured by the NIOSH eNews December 2011 issue in the column "News from Our Partners".
- NY FACE received a request for information on worker safety while doing tree work near power lines and on roadways with traffic hazards from a self-employed tree service worker who received the FACE Updates. Staff provided the caller with the link to the NIOSH FACE website and explained how to use the search engine with specific key words to find publications of his interest. Numerous FACE reports on highway work zone fatalities and the NIOSH booklet "[Building Safer Highway Work Zone: Measures to Prevent Worker Injuries from Vehicles and Equipment](#)" were emailed to him. Staff also mailed him five copies of [Logging Safety: A Field Guide](#) which will be shared with his fellow tree care professionals.

Ski Industry Project

Employees of ski facilities in the U.S. have high non-fatal injury rate. New York State has the largest number of ski centers in the United States. Four worker fatalities occurred in NYS ski resorts (2007-2012). NY FACE partnered with Ski Areas of New York, Inc. (SANY), a trade association representing approximately 40 ski areas in New York State, to develop injury prevention training materials including three snowmaking safety posters and four training cards.

- Many positive comments were received regarding the [snowmaking safety materials](#). The Pennsylvania Ski Area Association (PSAA) members and risk managers indicated that the materials provided great information and that NY FACE national safety involvement was a huge asset and perfect partner to help accomplish shared goals. Pennsylvania is a non-FACE state.

- Three hundred thirty sets of snowmaking safety posters and training cards were mailed to the National Ski Areas Association (NSAA) per the NSAA President David Byrd's request. These materials were included in the NSAA annual SAFETY WEEK rollout package distributed to members of NSAA nationwide.
- Five hundred fifty sets of snowmaking training cards and 130 sets of posters were mailed to ski areas in New York. The ski areas used these materials to discuss safety procedures with the workers in toolbox talks, refresher training, safety meetings and tailgate training throughout the season.
- FACE staff coordinated and conducted a snowmaking safety class titled: "Snowmaking Safety-Challenges and Solutions" at the Massachusetts Lift Maintenance Seminar (LMS), an annual event organized by Ski Areas of Massachusetts. The Whiteface Mountain Safety manager, a workers' compensation consultant for the Ski Areas of New York (SANY) and NY FACE staff discussed the snowmaking hazards, SANY snowmaking injury data, a worker fatality (07NY013 [Mechanic Dies after being Pulled into a Snow Thrower](#)) and injury prevention measures. Sixteen snowmakers, supervisors, and project managers representing twelve ski resorts in eight states (CT, MA, ME, NC, NJ, NY, PA and VT) and Canada attended the class. Trainees shared their knowledge and experience in developing and implementing injury prevention measures with each other.

New York State: Work-related Asthma Surveillance Program (July 1, 2011 – June 30, 2012)

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BRIEF OVERVIEW OF PROJECT

The New York State Department of Health (NYSDOH), Bureau of Occupational Health and Injury Prevention's (BOHIP) Occupational Lung Disease Registry conducts surveillance of work-related lung disease, including work-related asthma (WRA), through state mandated reporting. Under the reporting regulations physicians, health facilities and clinical laboratories are required to report any patient with clinical evidence of occupational lung disease. Emergency department data and hospital discharge data are used to identify potential cases seen in hospitals. The NYSDOH also partners with other NYSDOH programs and State Agencies to identify WRA cases. The program analyzes the WRA data from the Occupational Lung Disease Registry and population-based data from the Behavioral Risk Factor Surveillance System Asthma Call Back Survey to characterize WRA in New York State. The program conducts worker and company follow-up and provides intervention services to help prevent ongoing or future exposures, and to protect other persons who may be at risk.

ACCOMPLISHMENTS AND OUTPUTS

Case Ascertainment

Hospital discharge data were reviewed for 2009 and 2010 to identify possible WRA cases that have not been reported to the Occupational Lung Disease Registry (OLDR). Traditionally, the primary ICD-9 code of 493 and a payment source of Workers' Compensation (WC) have been used to identify cases. However, the attribution of payer in the hospital discharge dataset is believed to not be a precise indicator of work. Not only does it represent the suspected payment source at time of admission, often individuals with work-related illnesses do not file for Workers' Compensation and certain classes of workers (e.g., self-employed) are not covered by state Workers' Compensation systems. Using this indicator is compounded additionally when a person has their asthma exacerbated by a workplace exposure. In addition, only using the primary ICD-9 code of 493 may exclude cases. Including all ICD-9 code of 493 diagnoses and WC payer potentially picks up cases where a person has a history of asthma but their work-related injury or illness is unrelated to their asthma. Therefore, the traditional means of identifying WRA cases provides an under-representation of the actual number of WRA cases. As a result, various algorithms have been established looking at various combinations of available variables, including pay sources, place of occurrence and other ICD-9 codes that may be related to asthma.

- The data review identified over 2,400 potential cases for which a medical record is being requested and reviewed to identify WRA cases. These are currently being reviewed and new standards for identification of WRA cases will be developed based upon this review.
- Hospitals in New York State were reminded of the reporting requirements to the Occupational Lung Disease Registry, which includes WRA. They were provided with the reporting regulations, guidelines on how medical records departments can report, and likely codes that would result in a reportable case.

In addition to physician and hospital reports of WRA, NYSDOH continues to take steps to gain access and utilize other data sources to identify cases.

- A MOU with the NYS Workers Compensation (WC) Board has been signed and access to the data on a case-by-case level has been granted. This has been a major accomplishment to the WRA program, and the BOHIP as a whole. WC data will help us identify cases that are missed by other data sources.
- Access to New York City Poison Control Center data has been obtained through the National Poison Control System data system. We were previously granted access to the Upstate New York Poison Control Center data. While there are limitations to the Poison Control Centers as a data source for WRA, it is routinely reviewed to identify potential new cases.
- A partnership has been established with New York State's National Toxic Substance Incidents Program to help identify potential cases.

Outreach

WRA information, including the availability of the "Is Your Asthma Work-Related" brochure, was included in outreach mailings. Targets of this outreach campaign were:

- Regional Asthma Coalitions
- Asthma Partnership of New York Steering Committee Members
- Health plans and hospitals participating in the NYC Eliminating Disparities in Asthma Care initiative
- Partners in the Healthy Neighborhoods Programs.

BOHIP is continuing its work around formaldehyde and hair straightening products.

- The Hazard Alert (<http://www.health.ny.gov/environmental/chemicals/formaldehyde/workers.htm>) that was developed to inform hair salon worker and owners about formaldehyde exposure associated with the use of Brazilian Keratin hair straightening treatments (BKT) has been distributed to over 102,000 licensed salon workers in New York State. This outreach is being done in conjunction with the NYS Department of State, which licenses the salon workers. Salon workers are receiving this information during licensing and renewal, so the outreach will continue into the coming year. The hazard alerts have also been made available on the NYS Department of State, Division of Licensing Services website.
- The fact sheets that were developed are being used by stylists and consumers around the world. BOHIP has received calls from stylists and consumers in United Kingdom, Ireland, South Africa and Canada, in addition to the calls from the United States.

BOHIP has continued its interest in developing outreach activities regarding work-related asthma and cleaning products. BOHIP, in collaboration with the Bureau of Toxic Substance Assessment

(BTSA), has obtained a mini-grant from the American Academy of Allergy, Asthma and Immunology (AAAAI) to conduct outreach to the hospitality industry regarding cleaning products and asthma.

Public Health Interventions

IH staff conducted follow-up on registry cases with varied exposures. Consultation was provided with workers and employers as well as local, state and federal public health agencies that included guidance and recommendations to prevent ongoing and future exposures. The following notable consultations were conducted:

- Consultation with a construction worker who had a history of asthma, and was exposed to strychnine while working on a condo demolition project. The walls had been treated many years ago with strychnine to kill rodents. The worker experienced inhalation and dermal symptoms and was hospitalized. The interventions included follow-up to ensure that no other workers were exposed and recommendations for the use of personal protective equipment to prevent future exposures on the project.
- Consultation with OSHA, other units in NYSDOH, and a county health department occurred following the death of a US Department of Agriculture Food and Safety Inspector stationed at a chicken processing plant. The inspector was hospitalized following hemoptysis with a history of respiratory illnesses, including asthma. The victim's wife informed IH staff that other workers were experiencing similar symptoms from exposures to various chemical and biological agents at the facility. One of the chemicals that the inspector was exposed to was peracetic acid used to sanitize the fowl. There have been cases of occupational asthma caused by peracetic acid and long-term exposure to high concentrations can cause permanent lung damage. An OSHA investigation is continuing with assistance from IH staff.
- Consultation with the Public Employee Safety and Health Bureau (PESH) at the NYS Department of Labor, regarding the death of a New York City Department of Parks cement mason. The worker was applying a sealer to a stone monument when he became lightheaded and slumped to his knees, he died later that day at the hospital. Investigation into the fatality is ongoing.

Collaborations and Partnerships

- We have been actively involved in the NYSDOH cross-organizational response to asthma which applies a systematic evidence-based approach in surveillance, environmental and occupational health, health care delivery and quality and community interventions. This approach is organized around three operational levels: 1) Executive Leadership Team, 2) Guidance Team, and 3) Core Teams. Staff from BOHIP sits on all three of these teams.
- We have continued our collaboration and integration of WRA into other public health programs. Staff continues to work with the State Asthma Plan to incorporate work-related asthma into its work. We also collaborate with programs on school health as well as green cleaning.
- We have worked to incorporate occupational activities into the New York State Prevention Agenda and State Health Improvement Plan on asthma.
- We participated in the NIOSH/State WRA Surveillance meeting in Morgantown WV and continue our involvement with state and national partners conducting surveillance of WRA.
- We are an active member of the Asthma Call Back Survey Workgroup.

POTENTIAL OUTCOMES

Peer-reviewed Publications

Gelberg KH, Brissette IF, Cummings KR. Evaluation of a Communications Campaign to Increase Physician Reporting to a Surveillance System. *Public Health Reports* 2011;126:19-27.

INTERMEDIATE OUTCOMES

NYS Department of State's Division of Licensing is using our *Health Alert for Beauty Salon Owners and Workers: Hair Straightening Products and Formaldehyde* to educate salon workers of potential hazards.

New York State: Pesticide Poisoning Surveillance Program (July 1, 2011 – June 30, 2012)

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BRIEF OVERVIEW OF PROJECT

The New York State Department of Health (NYSDOH) Bureau of Occupational Health and Injury Prevention's (BOHIP) Pesticide Poisoning Registry (PPR) was established in 1990 and requires a) physicians and health facilities to report suspected or confirmed pesticide poisonings, and b) clinical laboratories to report depressed cholinesterase results, indicative of some pesticide exposures, within 48 hours. Intervention is structured around individual reports. These may indicate an unanticipated hazard of a new product or the first report of a cluster of cases. The interview is an opportunity to discuss the hazards of pesticides, and ways to reduce or eliminate exposure through IPM, product substitution or use of protective equipment. In cases of occupational exposures or clusters, an industrial hygiene consultation is available.

ACCOMPLISHMENTS AND OUTPUTS

Case Ascertainment

- From July 1, 2011 to June 30, 2012, PPR staff reviewed almost 1,000 reports of suspected pesticide poisoning. Investigation of these reports can involve the collection and review of medical records, interview of cases, and review of literature and other information to determine a relationship between the exposure and the signs/symptoms. During the same time period, we finalized the data from our 2010 case investigations for submission to NIOSH.
- With the implementation of new data sources and continuation of old data sources (described below), reports of pesticide exposures that resulted in health effects increased 159% from the previous year.
- Hospital discharge data were reviewed for 2009 and 2010 to identify possible pesticide poisoning cases that have not been reported to the PPR. The review identified over 1,000 potential cases where the medical records are being requested and reviewed to identify pesticide poisoning cases that meet the national criteria.
- Upstate New York Poison Control Center: PCC/NPDS data surveillance definitions were set up so that a message will be sent daily indicating if a pesticide call had been received, the PCC is then contacted to obtain further information on the call. When a caller receives treatment through a medical facility, the facility is contacted for further information.

- New York City Regional Poison Control Center: The NYCPCC is located within the NYC Department of Health and Mental Hygiene. A mechanism to access the pesticide-related poisoning control data through their Environmental Data Exchange Network was established. The information is received monthly and contains identifiers, when available. If a caller receives treatment through a medical facility, the facility is contacted for further information.
- NYSDOH continues to take steps to utilize other data sources. A MOU with the NYS Workers Compensation (WC) Board has just been signed, access to the data granted. This is a major accomplishment for BOHIP. Use of this data as a source of work-related pesticide poisonings will be explored.
- The PPR continues to collaborate with the Bureau of Toxic Substance Assessment (BTSA) to ascertain reports of pesticide poisoning.
 - We regularly obtain FIFRA 6 (a)(2) reports from this Bureau which contain federally reported consumer initiated incidents where adverse health effects occur.
 - BTSA also supplies the PPR with information on cases where spills have been reported concerning the release of pesticides.
 - BTSA provides information on exposed individuals to the PPR when a pesticide has been used and follow-up details are required, or an intervention to prevent or reduce pesticide exposure is necessary.
- PPR staff continues to conduct case interviews to determine circumstances of exposure and to provide methods to prevent future exposure including alternative pest management practices and, if applicable, how to file a complaint regarding licensed applicators with the New York State Department of Environmental Conservation.

Outreach and Education

- A new PPR Brochure was printed for distribution in 2011. The new brochure contains more detailed information about the purpose of the PPR, reporting requirements and how it relates to public health.
- An outreach campaign to health care facilities medical records/health information units was conducted requesting that they review their current reporting procedures to ensure compliance with reporting requirements.
- We have developed articles to be published in various managed care organization newsletters. There are articles geared toward both educating the patient about hazards and the physician about diagnosing and reporting.
- We have been using social media outlets, such as Facebook and Twitter, as a mechanism to get information out to the public.
 - Information on the hazards of foggers was featured on both Facebook and through Twitter during Fire Prevention week with links to our fact sheet and contact information for the pesticide program.
- We have been providing outreach materials at various events including:
 - Workers' Rights Awareness Weekend,
 - Occupational Health Awareness Week,
 - Empire Farm Day, and
 - The New York State Fair.

Software Development

The NYSDOH developed, maintains, updates and improves the SENSOR Pesticide Incident Data Entry and Reporting (SPIDER) software program. This program is available for states conducting pesticide poisoning surveillance and allows for uniform collection of pesticide poisoning incidents across the country.

- SPIDER was updated to include all EPA product data as of October 2011.
- The age variable was recoded to distinguish between cases where the age was missing and the age was actually <0.1 year.
- Two new fields, latency and first care, were added to SPIDER.
- A new data retrieval tool was developed to automatically produce all tables and charts used by states for annual reports. This tool uses COM automation to move SPIDER data query results to Excel, and builds a formatted table and corresponding chart.
- The SPIDER update (version SPIDER 2g) was delivered to NIOSH at the SENSOR 'Winterfest' grantee meeting in January 2012. The changes to SPIDER were demonstrated.

POTENTIAL OUTCOMES

- Lee S, Mehler L, Beckman J, Diebolt-Brown B, Prado J, Lackovic M, Waltz J, Mulay P, Schwartz A, Mitchell Y, Moraga-McHaley S, Gergely R, Calvert GM. Acute Pesticide Illnesses Associated with Off-Target Pesticide Drift from Agricultural Applications: 11 States, 1998-2007. *Environmental Health Perspectives* 2011 Aug; 119(8):1162-1169.
- Acute Illnesses Associated with Insecticides Used to Control Bed Bugs – Seven States, 2003-2010. *MMWR* 2011; 60(37):1269-1274.
- Calvert GM, Keralis JM, Kasner E, Mehler L, Beckman J, Bonnar-Prado J, Lee S, Diebolt-Brown B, Mulay P, Lackovic M, Waltz J, Schwartz A, Mitchell Y, Moraga-McHaley S, Gergely R. Gender differences in acute pesticide poisoning among farm workers in the United States, 1998-2007. *American Journal of Industrial Medicine* 2012; 55(7):571-583.