



Annual Report Illinois Health and Hazardous Substances Registry

July 2010 through June 2011

December 2011

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Illinois Health and Hazardous Substances Registry
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A Report to Governor Pat Quinn
and the 97th General Assembly
from the
Illinois Department of Public Health
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Acronyms

Acronyms used in the Illinois Health and Hazardous Substances Registry Annual Report

ABLR	Adult Blood Lead Registry
ACS	American Cancer Society
AHRQ	Agency for Healthcare Research Quality
APORS	Adverse Pregnancy Outcomes Reporting System
CDC	U.S. Centers for Disease Control and Prevention
CFOI	Census of Fatal Occupational Injuries
CINA	Cancer in North America
FY	Fiscal Year
GIS	Geographic Information System
IARC	International Agency for Research on Cancer
IBCCP	Illinois Breast and Cervical Cancer Program
ICCCP	Illinois Comprehensive Cancer Control Program
IDHFS	Illinois Department of Healthcare and Family Services
IDHS	Illinois Department of Human Services
IDPH	Illinois Department of Public Health
IHDDI	Illinois Health Data Dissemination Initiative
IHHSR	Illinois Health and Hazardous Substance Registry
INEDSS	Illinois National Electronic Disease Surveillance System
IRB	Institutional Review Board
ISCR	Illinois State Cancer Registry
NAACCR	North American Association of Central Cancer Registries
NAD	North American Datum
NBDPN	National Birth Defects Prevention Network
NCI	National Cancer Institute
NIH	National Institutes of Health
NPCR	National Program of Cancer Registries
ODR	Occupational Disease Registry
OSH	Occupational Safety and Health Survey
OSHA	Occupational Safety and Health Administration
PSA	Public Service Administrator
SOII	Survey of Occupational Injuries and Illnesses
UIC	University of Illinois at Chicago
VA	Veteran's Administration
VR	Division of Vital Records

1. Executive Summary

The Illinois Department of Public Health's Division of Epidemiologic Studies is responsible for developing and managing the Illinois Health and Hazardous Substances Registry (IHHSR). The registry was created by the Illinois Health and Hazardous Substances Registry Act (410 ILCS 525/1 *et seq.*), enacted on September 10, 1984, and currently has the following components: the Illinois State Cancer Registry (ISCR), the Adverse Pregnancy Outcomes Reporting System (APORS), the Occupational Disease Registry (ODR) [which further contains the Adult Blood Lead Registry (ABLR), Census of Fatal Occupational Injuries (CFOI) and the Survey of Occupational Injuries and Illnesses (SOII)], and a research and data dissemination section. This is the registry's 25th annual report and it describes accomplishments and research activities from July 2010 through June 2011 (FY11).

The mission of the IHHSR includes the following:

- Collect and maintain statewide reports on the incidence of cancer, adverse pregnancy outcomes, and occupational diseases and injuries;
- Conduct epidemiologic analyses on health outcomes defined by IHHSR;
- Provide a source of information for the public;
- Monitor changes in incidence to detect potential public health problems, trends and progresses;
- Use data to help target intervention resources for communities, patients and their families;
- Inform health professionals and citizens about risks, early detection and treatment of cancers in their communities; and
- Promote high quality research to provide better information for disease prevention and control.

1.1 Illinois Health and Hazardous Substances Registry (IHHSR) Goal

The basic goal of the registry, according to the act, is to develop and maintain a unified system for the collection and compilation of statewide information on cancer incidence, adverse pregnancy outcomes, occupational diseases and injuries, and hazardous exposures; for correlation and analysis of information on public health outcomes and hazardous substances; and for use of this information in decision making and public health policy development.

1.2 Fiscal Year 2011 Highlights

- Received \$1,697,878 from federal funds and \$6,364 from other non-general revenue sources, often through a competitive process, to support activities of the Department's Division of Epidemiologic Studies.
- Collected detailed case reports on Illinois residents with 63,837 newly diagnosed cancer cases (2008), 12,363 adverse pregnancy outcomes, 201 adult lead poisoning cases (2010), 42,730 representative non-fatal occupational disease and injury sample records (2009), 203 fatal occupational injuries (2010) and 28 fatal occupational illnesses (2010).
- Responded to 86 requests for general information about the registry, 125 requests for epidemiologic reports and registry data, and 14 special data requests or collaborations from outside researchers.
- Responded to 49 inquiries about perceived cancer excesses in local communities and neighborhoods.
- Prepared and submitted six grant proposals to support the registry's operations and research.
- Released six reports in the Epidemiologic Report Series , prepared four written reports for quality control studies of registry data, and submitted or published two articles in peer-reviewed journals (with Division staff as authors or co-authors).
- Data released by the Registry were used in at least 21 published studies by outside researchers.
- Actively participated in national and statewide health programs, provided data, information and epidemiologic support as needed. Illinois children with adverse birth outcomes were referred to programs that provide follow-up services; and referred 26 employees from 10 employers with elevated blood lead levels to the U.S. Occupational Safety and Health Administration (OSHA)
- Delivered two presentations at professional meetings.

1.3 Illinois Health and Hazardous Substances Registry Coordinating Council

The IHHSR Act defined the Health and Hazardous Substances Coordinating Council comprising the following persons, ex officio or their designees: dean of the School of Public Health of the University of Illinois at Chicago, the directors of the Illinois departments of Agriculture, Labor, Natural Resources, Nuclear Safety (now part of the Illinois Emergency Management Agency), Public Health, and of the Illinois Environmental Protection Agency. Due to travel restrictions and time and budgetary constraints, the council did not have a face-to-face meeting in fiscal year 2011. Instead, the council reviewed and approved the annual report via written ballot.

1.4 Goals for Fiscal Year 2012

1. Continue to collect complete, timely, and quality data to monitor disease distributions and trends among Illinois residents.
2. Engage partners, stakeholders and communities in data dissemination and utilization to support health research and programs.
3. Respond to public concerns about disease clusters in various geographic areas in Illinois with registry data and information.
4. Conduct activities stipulated or required by federal cooperative or research grants.
5. Pursue grants and other funding opportunities in order to sustain and enhance the division's programs.
6. Conduct epidemiologic studies with registry data to provide information to the public health community and policy makers.
7. Provide epidemiological data and information to federal, state, and local health education and intervention programs.
8. Work with the Department's Data Release and Research Committee to provide researchers with high-quality and timely registry data to support research advancing scientific knowledge and improving public health.
9. Provide health regulatory agencies with health surveillance information to enhance their intervention and regulatory programs and to improve public health and safety.

10. Participate in national registry certification and data submission activities to maintain registry's certification status and data utilization.

2. Program Data

Table 2.1 and 2.2 summarize the registry's data collection and dissemination activities for last year compared with data from the previous years. In order to be consistent with the common reporting schedule, numbers in Table 2.1 are expressed in calendar years during which cases were diagnosed or defined. There is normally a two-year time delay for cases being reported to IHHSR. Due to the dynamic nature of the registry databases, the numbers in the table may not be the same as previously reported. These numbers represent cases processed or estimated by the registry and they do not reflect rates which would require population denominators, nor case completeness which would require independent evaluations. Projections or forecasts for the future year also are included.

Table 2.1 Registry Data Collection

	Calendar 2005	Calendar 2006	Calendar 2007	Calendar 2008	Calendar 2009	Estimated 2010
ISCR Invasive Neoplasms (including bladder <i>in situ</i>)	61,468	63,213	64,213	63,837	64,330 ¹	65,180
Breast <i>in situ</i>	2,096	2,138	2,316	2,291	2,700 ¹	2,700
APORS Cases	12,610 12,192 ²	12,495 12,085 ²	12,566 12,129 ²	12,363	12,800 ¹	12,500
Occupational Disease Reports						
ABLR Lead Poisoning						
New reports	182	251	241	233	299	201 ³
Total reports	847	667	672	613	686	620 ³
Occupational Fatality Cases	1,355	1,112	1,035	614	186	231 ³
Injuries	194	207	182	193	159	203 ³
Illnesses	1,161	905	853	421	27	28 ^{3,4}
Occupational Safety and Health Survey⁵						
Estimated Cases	53,760	48,500	47,500	45,780	42,730	43,000
Sprains, strains	20,840	20,120	19,870	19,110	16,570	16,000
Bruises, contusions	4,560	4,150	5,730	5,880	3,290	3,000
Cuts, lacerations	4,740	4,620	4,310	3,550	3,750	3,500
Fractures	4,450	4,280	4,320	4,270	3,160	3,000
Multiple injuries	1,590	1,550	1,380	1,960	1,620	1,500
Carpal tunnel syndrome	1,280	970	1,300	800	520	500
Heat burns	770	420	480	360	1,020	1,000
Tendonitis	310	150	110	140	110	100
Amputations	450	230	330	210	320	300
Chemical burns	280	710	210	280	220	200
Occupational Illnesses⁶						
Asbestosis	404	394	321	546	491	466
Silicosis	58	51	48	57	63	58
Coal Workers Pneumoconiosis	161	145	132	172	164	149
Hazardous Substances (GIS)⁷						
Geocoding registry cases	All	All	All	All	All	All

¹Reporting is not complete for the calendar year indicated. The numbers are estimated based on the current projected incidence.

²APORS cases excluding those whose only case criterion was admission to a neonatal intensive care unit

³Actual counts for 2010

⁴Occupational illnesses are lower due to operational changes in data collection starting in FY09. (See Section 5.2)

⁵Private industries only, cases with days away from work include those that result in days away from work with or without job transfer or restriction.

⁶Inpatient hospital discharge data for Illinois residents with either a primary or secondary diagnosis of asbestosis, silicosis or coal workers pneumoconiosis; numbers represent discharges, not patients and one patient could have been hospitalized numerous times.

⁷For specific results of geocoding of APORS and cancer cases for the IHHSR, see Section 6.

Table 2.2 Registry Data Dissemination, Reports, and Publications

	FY07	FY08	FY09	FY10	FY11	Estimated FY12
Data Requests						
General information	122	147	120	141	89	80
Data and reports	195	184	176	196	125	120
Cluster inquiries ¹	46	70	81	93	49	50
Confidential data released for research	9	13	8	19	14	15
Confidential data applications				5	6	5
Quality Assurance Studies²						
<i>Casefinding visits</i>						
APORS	280 ³	317	364	375	397	380
ISCR	36 ⁴	155	171	277	123	198
<i>Cases added from casefinding visits</i>						
APORS ⁵	3,122 ³	2,815 ³	4,091 ³	2,542 ³	2,538	2,500
ISCR	279 ⁶	1,592 ⁶	1,128 ⁶	1,466	1,204	1,500
<i>Internal quality control</i>						
APORS	2	1	2	1	3	2
ISCR	7	7	5	3	1	1
Public Use Microdata Files	3	3	3	3	3	3
Publications						
Epi report series	7	6	4	5	6	5
Peer-reviewed publications	1	10	7	3 ⁸	2 ⁸	2 ⁸
Other publications	25	19	36	13	21	18
Oral/poster presentations	59	34	69	5 ⁷	2	1
Grant Proposals Funded	6	6	6	7	6	6

¹ Cluster evaluations were discontinued in FY04 unless there is a known carcinogenic exposure. Cluster inquiries are presented to more accurately reflect the quantity of work performed.

² At the recommendation of the IHHSR Coordinating Council, quality assurance study counts were adjusted beginning FY05 to more accurately reflect the quantity of work performed and the outcome of that effort.

³ Reflects a rule change to no longer collect certain birth defects normal for premature infants and/or operational adjustments relative to staff changes

⁴ Reflects operational adjustments

⁵ Represents additional birth defects identified and confirmed through the active case verification process where the medical records or previously submitted cases are reviewed

⁶ Represents cases missed during hospital reporting and identified during casefinding visits

⁷ Oral/Poster presentations were reduced due to staffing shortages and travel restrictions.

⁸ Decline in peer-reviewed articles was due to reduction of research staff.

3. Illinois State Cancer Registry

The Illinois State Cancer Registry (ISCR) is the only population-based source for cancer incidence information in Illinois. Cancer cases are collected through mandated reporting by hospitals, ambulatory surgical treatment centers, non-hospital affiliated radiation therapy treatment centers, independent pathology labs, physicians and through the voluntary exchange of cancer patient data with 11 other states. For the 2008 diagnosis year, we received reports from five Veteran's Administration (VA) facilities in Illinois and one military hospital.

We continue to require all reporting facilities to submit cases in an electronic format. There are currently 184 reporting hospitals and all are reporting electronically. Dermatologists and pathology labs have been set up with access to our Web-based reporting system. Ambulatory centers and radiation therapy centers use either our free Abstract+ reporting software or the Internet-based Web-plus program.

3.1 Review and Evaluation of Fiscal Year 2011 Goals

3.1.1 Maintain Completeness and Timeliness of Reporting

- Met NAACCR gold certification standard for complete, accurate, and timely data.
- Maintained case reporting at all non-federal facilities by conducting 123 facility case finding visits for the 2009 diagnosis year. There were 1,204 missed cases identified.
- Completed interstate data exchange by transmitting 2,287 de-duplicated, edited state specific cases to 11 states and received and processed 6,473 unique cases from eight states.
- Completed death clearance for the 2008 death year and maintained a death certificate only rate of 1.9 percent. In total, 4,339 cancer diagnoses were followed back with 16,260 letters mailed to hospitals, physicians, nursing homes and hospice centers. Sixty percent of the letters were returned.
- Added 89 percent of cases for the 2009 diagnosis year to the ISCR database by December 2010.
- Added 99.6 percent of cases for the 2008 diagnosis year to the ISCR database by December 2010.

3.1.2 Maintain and Enhance Activities Related to Physician and Pathology

- Maintained reporting by dermatologists and pathology labs.

3.1.3 Provide Training for all Reporting Facilities and for Central Registry Staff

- Provided basic training by entering into a limited, 6-month personal services contract with NAACCR to provide three basic training sessions. The onsite sessions were presented in March and April, 2011 in south, central and northern Illinois. The trainer position (required by NPCR) has not been filled.
- Provided individual phone support for 325 calls related to technical support.
- Provided individual phone support for 772 calls related to reporting issues.
- Attended the national educational conferences of the National Cancer Registrar's Association and the North American Association of Central Cancer Registries.
- Attended the annual educational conference sponsored by the Cancer Registrars of Illinois.
- Provided access to 86 advanced training workshops for 794 reporters via WebEx® utilizing nationally developed advanced training materials.
- Provided limited individual training by the quality control field staff at 27 facilities.
- Provided ongoing educational opportunities for central registry staff through participation in 13 nationally broadcast education webinars.

3.1.4 Ensure Data Quality

- Maintained a duplicate rate of less than one per 1,000 primary cases.
- Met NPCR/NAACCR standards for data quality.
- Applied GenEDITS metafiles to the ISCR database and ran all standard-setter required edits and performed reconciliation for identified errors.
- Matched Vital Records death data to the ISCR database to update unknown values in the latter. Race codes: Of 13,864 cases with an unknown or missing race 388 (2.8 percent) cases were matched and updated with a valid data element. Maiden name: 209 cases (0.1 percent) were matched and updated with valid maiden names. Hispanic origin: 51 cases, or 2.7 percent, were matched and updated with valid data element codes for Hispanic origin. Birthplace: Of 435,501 cases with unknown or missing birthplace, 21,970 cases (5 percent) were matched and updated. Death variable information is updated

- Added census tract information to cancer database. All records were geocoded using MapMarker Version 22.1.0.21 and 89.3 percent of the addresses geocoded to an address specific level.
- Conducted reabstracting evaluations at 35 reporting facilities.
- Ensured override flags were within the NPCR average by reviewing the 2010 NPCR Data Evaluation Reports. This revealed that the percentage of over-ride flags in the ISCR submission file were lower for all associated edits than the NPCR or SEER Median.

3.1.5 Maintain Data Use Activities

- Produced annual cancer statistics including the public use data file, annual state cancer report, annual county cancer report and updated the cancer query system.
- Provided general cancer information for cancer inquiries.
- Provided data for the Illinois Comprehensive Cancer Control Program (ICCCP).
- Provided data for the Illinois Breast and Cervical Cancer Program (IBCCP).
- Performed linkage with the IBCCP data file and provided the required information back to the IBCCP program.
- Produced two epi reports and published/submitted two peer-reviewed journal articles.
- Produced one quality control report.
- Updated the code for Native American race through linkage with the Indian Health Service.
- Responded to 5 requests for confidential data from outside researchers.
- Updated incidence projections.
- Submitted 962,887 cases to NPCR and NAACCR for the 1995-2008 call for data.
- Submitted 64,420 cases to NPCR for the 2009 diagnosis year call for data.

3.1.6 Provide Adequate Program Management

- Kept staff informed of grant progress, standards changes, and reporting issues through monthly staff meetings for all registry staff.
- Monitored registry operations activities to meet grant objectives via an electronic tracker and developed additional tracking to evaluate the outstanding workload.

3.2 Fiscal Year 2011 Major Accomplishments

3.2.1 North American Association of Central Cancer Registries Gold Certification

For the 13th consecutive year, ISCR has been recognized as having met the **gold standard** – the highest standard for registry certification. To be awarded this honor, a registry must have 95 percent or better completeness of case ascertainment; 98 percent validity of information recorded for selected data variables (age, sex, race and state/county); death-certificate only cases less than 3 percent; duplicate primary cases fewer than one per 1,000; 100 percent of the records passing the NAACCR EDITS without error; and data submissions within 24 months of the close of the accession year.

3.2.2 Development of Cancer Registry Specific Job Titles

In 2003 the Division started exploring the possibility of creating a job title and career track or special option on an existing state job title for positions in the Illinois State Cancer Registry that require a certified tumor registrar designation. The purpose was to ensure that ISCR would be able to hire and retain certified tumor registrars. In 2011, the class study was completed and draft class specifications for Cancer Registrar I through V were written. Division staff met with CMS staff to determine at what level existing staff will be placed into the new titles. It is anticipated that implementation of the new titles will occur in FY12.

3.2.3 Collaboration with State and National Organizations

3.2.3.1 Illinois Comprehensive Cancer Control Program - Illinois Department of Public Health

The Illinois Department of Public Health has implemented the Comprehensive Cancer Control State Plan, which identified cancer prevention and control priorities for Illinois. Several division staff provides technical and operational support for the program through committee participation.

3.2.3.2 Illinois Health Data Dissemination Initiative

Staff continued to provide data to the initiative. The ISCR public data set (PDS) file, version 17 (1986-2007) was submitted in November 2010 and version 18 PDS (1986-2008) in March 2011. Staff prepared ISCR data for 16 indicators for the diagnosis years at a county level. The data were to be included on the Web-based data query system (WDQS) in development for the Health Data Initiative. During the last fiscal year, public use files prepared by staff also were sent.

3.2.3.3 Vital Records – Illinois Department of Public Health

Death certificate data from the Division of Vital Records (VR) are matched with the registry database on an ongoing basis. Follow-back is performed on non-matched cancer cases and death information is added to matched cases. Death information available from the VR death tape also is used to populate an Internet-based death query system that is accessible through password and ID. This system is used by hospital-based cancer registrars to obtain follow-up information on cancer patients from their facilities.

The VR death tape also contributes to the data quality and item-specific completeness of the ISCR database through a matching protocol. Known information from the VR death tape is imported into the ISCR database (when unknown on the ISCR database) for the following variables: race, birthplace, Hispanic origin and maiden name.

3.2.3.4 North American Association of Central Cancer Registries (NAACCR)

ISCR provided comprehensive data from 1995-2008 to NAACCR in response to the call for data and registry certification process. The data were used to support research and generate cancer descriptions in North America publications. Staff also participated in various NAACCR committees and workgroups, contributing knowledge and expertise to this volunteer organization.

3.2.3.5 CDC National Program of Cancer Registries (NPCR)

ISCR submitted comprehensive data from 1995-2008 to the CDC National Program of Cancer Registries call for data. All malignant tumors, whether *in situ* or invasive, were included. The annual submission satisfies the program requirements for reporting registry progress to CDC and contributes information to the national cancer surveillance effort.

3.2.3.6 Illinois Breast and Cervical Cancer Program (IBCCP)

ISCR provided data support for this state and federally-funded program, which focuses on developing comprehensive education, outreach and screening for breast and cervical cancer.

3.2.3.8 American Cancer Society, Illinois Division

Illinois statewide cancer incidence and mortality data were provided to ACS for its production of Illinois Cancer Facts and Figures. Registry staff regularly attend ACS activities in the area of data and epidemiology. The collaboration is ongoing.

3.2.3.9 Simmons Cancer Institute

Staff continued to participate in the establishment of Southern Illinois University School of Medicine's (SIU) Simmons Cancer Institute and its

Population Science Program. Several collaborations were planned to describe the cancer burden in southern Illinois.

3.2.4 Quality Control Reports

- 3.2.4.1** Parrish P. *Assessment of Duplicate Records for 1995-2008 Diagnosis Years*. Quality Control Report Series 10:04. Springfield, Ill.: Illinois Department of Public Health, November 2010.

3.3 Goals for Fiscal Year 2012

3.3.1 Maintain Completeness and Timeliness of Reporting of Cancer Incidence Cases to the Illinois State Cancer Registry

- Perform facility casefinding for the 2010 diagnosis year at selected reporting facilities in Illinois and track identified missed cases to ensure reporting.
- Maintain interstate data exchange and complete exchanges by November 2011.
- Continue death certificate clearance and maintain death certificate only rate of less than 3 percent.
- Achieve 90 percent case reporting for the 2010 diagnosis year by December 2011.
- Achieve 95 percent case reporting for the 2009 diagnosis year by December 2011.

3.3.2 Maintain and Enhance Activities Related to Physician and Pathology Reporting

- Maintain contact with existing dermatology offices for reporting and training (n=59).
- Maintain contact with existing pathology labs for reporting and training (n=20).

3.3.3 Provide Training for All Reporting Facilities and for Central Registry Staff

- Contract with NAACCR education staff to provide three basic training workshops in Illinois.
- Provide individual phone support for technical and operational issues from cancer incidence reporters and reporting facilities.
- Provide monthly advanced training workshops via Web, utilizing established seminars.

- Provide ongoing educational opportunities for central registry staff through webinars and attendance at relevant regional and national association and grant meetings.
- Update membership status in national associations.

3.3.4 Ensure Data Quality

- Maintain duplicate rate of less than 0.01 percent using routine database matching and Link Plus to review submissions for duplicate tumor reports and apply NAACCR duplicate protocol.
- Meet NPCR/NAACCR standards for data quality and over-ride flags.
- Perform gender verification using established ISCR procedure.
- Apply NPCR, NAACCR and Illinois-specific GenEDITS metafiles to ISCR database for reconciliation of inter- and intra-record inconsistencies.
- Update ISCR unknown variables by linking to the IDPH death file.
- Geocode all records on the ISCR database.

3.3.5 Maintain Data Use Activities

- Produce public use data set file, annual state and county report file, update cancer query system and produce annual report of incidence rates by local community.
- Respond to cluster inquiries.
- Provide data and support for IBCCP and ICCCP.
- Perform linkage with IBCCP and update data files.
- Produce two epidemiologic reports.
- Perform linkage with Indian Health Services and update code for Native American race.
- Process applications for confidential data.
- Update incidence and mortality projections.
- Submit the 1995-2009 NPCR/NAACCR file for combined call for data and submit the 2010 data file for NPCR call for data.

- Submit files for the Illinois Health Data Dissemination Initiative (IHDDI).

3.3.6 Provide Adequate Program Management

- Hold monthly staff meetings.
- Monitor grant activities tracker.
- Update Advisory Committee on grant progress and activities.

4. Adverse Pregnancy Outcomes Reporting System

The Adverse Pregnancy Outcomes Reporting System (APORS) collects information on Illinois infants born with birth defects or other abnormal conditions. The purpose of APORS is to conduct surveillance on birth defects, to guide public health policy in the reduction of adverse pregnancy outcomes, and to identify and refer children who require special services to correct and prevent developmental problems and other disabling conditions.

Mandated statewide data collection began in August 1988. All licensed Illinois hospitals are required to report adverse pregnancy outcomes to APORS. In addition, APORS receives reports from two hospitals in St. Louis, Mo., that are part of the southern Illinois perinatal network.

APORS cases meet one or more of the following criteria:

- The infant is diagnosed prior to hospital discharge as having a positive drug toxicity for any drug or shows signs and symptoms of drug toxicity or withdrawal;
- The infant is diagnosed with a congenital anomaly; a congenital infection; an endocrine, metabolic or immune disorder; a blood disorder; or another high-risk medical condition;
- The infant has a birth weight of less than 1,500 grams; or
- A neonatal or fetal death has occurred.

4.1 Review and Evaluation of Fiscal Year 2011 Goals

Having managed the APORS program for twelve years, the APORS manager retired in December 2010. APORS is now managed by the program's epidemiologist. In April 2011, a new staff was hired as the hospital liaison, a position that had been empty since August 2009. She is responsible for quality control and hospital training.

In March 2011, another new staff was hired as the abstractor in the Department's Bellwood office. Her job is to review charts of infants with birth defects to add to, delete and clarify reported conditions. She replaced an APORS staff who retired in November 2010.

An intra-agency agreement was signed between APORS and the Early Hearing Detection and Intervention Program (EDHI). This allows the EDHI program to refer children diagnosed with hearing loss, and with a failed newborn hearing screen, to APORS. APORS abstractors will review the charts to determine whether these children are APORS cases.

Improve Casefinding

- Collected 214 confirmed endocrine, hemoglobin and metabolic disorder cases among infants born in FY11.
- Made 348 consultations via telephone or e-mail with Illinois hospitals to improve APORS reporting and 4 training visits.
- Received quarterly electronic files, containing hospital discharge data for children as old as 2 years of age, from 18 of the 22 Level 3 hospitals, and an additional four Level 2 and one Level 1 hospitals.
- Obtained remote access to electronic medical records for abstracting cases at four of 131 hospitals. These hospitals account for 5.3 percent of APORS cases.
- 497 children with birth weights of less than 1500g previously unknown to the APORS program were identified by matching to the 2008 birth certificate.

Improve Quality of APORS Data

- Evaluated the timeliness of hospital reporting for cases reported in January through December 2009; provided hospital-specific feedback and used results to identify hospital training needs. In 2009, more hospitals (72 percent) met the APORS timeliness standard of reporting cases within seven days of infants' hospital discharge.
- Incorporated measures of transit time (days from hospital reporting to receipt by APORS) into the timeliness reports to assure prompt mailing of APORS forms.
- Processed APORS cases to geocode the infant's address as cases were submitted. As a result, 96.6 percent of the addresses are geocoded to a ZIP code level or higher.

Improve Program Effectiveness

- Referred 1,083 children who have developmental disabilities and delays to the Illinois Department of Human Services Early Intervention Program and 2,515 children who have special health care needs to the University of Illinois, Division of Specialized Care for Children.
- Referred 58 women to local health departments for neural tube defect recurrence prevention counseling.
- Obtained remote access to electronic medical records for abstracting cases at one additional hospital thus reducing travel expenses and decreasing the time needed to abstract cases.

- Evaluated the timeliness of APORS reporting and reported processing to identify areas for improvement through training and automation.
- Mailed samples of birth defect prevention materials to local health departments to remind them of the materials available.
- Distributed almost 25,000 pieces of birth defect prevention and healthy pregnancy promotional materials at the Illinois State Fair, a Chicago community health fair, and local health departments.
- Maintained linkages with key organizations such as the Illinois perinatal networks and the National Birth Defects Prevention Network, and provided data to these organizations for use in their efforts to promote birth defect prevention.
- Was awarded continuation of a five-year cooperative agreement with the U.S. Centers for Disease Control and Prevention.

4.2 Fiscal Year 2011 Major Accomplishments

4.2.1 Cooperative Agreement with the U.S. Centers for Disease Control and Prevention

APORS was approved for the continuation of our five-year cooperative agreement with the U.S. Centers for Disease Control and Prevention (CDC) to enhance Illinois birth defects surveillance, prevention and service referral. Total funding for 2011 is \$200,000.

4.2.2 Hospital Training

APORS staff have begun making visits to hospitals that are not in compliance with reporting requirements. The new hospital liaison is targeting the least compliant hospitals first. The self-directed training program is being distributed so that hospitals can train new staff between APORS visits.

4.2.3 Improved Birth Defects Surveillance

Hospital-reported cases are a starting point for birth defect surveillance. Potential birth defect cases were sent electronically to regional field staff, who then performed reviews of the infants' medical charts, verified the presence of birth defects, eliminated false positives and collected additional diagnoses. In FY11, the abstractors reviewed 7,966 birth defects reported by hospitals. Abstractors did not collect 515 reported birth defects that could not be found in the charts, or that had been ruled out by the facility. Of the hospital-reported birth defects, 740 were not collected because the infant did not have a major birth defect.

The abstractors verified 3,573 hospital reported diagnoses. They clarified 142 diagnoses and added 2,379 diagnoses. In total, 6,094 birth defects were verified.

4.2.4 Improved Genetic Disorder Casefinding

Beginning January 2009, APORS received confirmed cases of endocrine, hemoglobin and metabolic disorders from the Department's Genetics and Newborn Screening Program. Previously, hospitals reported the infants who failed newborn screening for these disorders but rarely was a confirmed diagnosis reported. In FY11, 214 confirmed cases were reported by the Newborn Screening Program with congenital hypothyroidism (72 cases), hemoglobinopathies (52 cases) and cystic fibrosis (30 cases) occurring most frequently. The cases were referred for follow-up services by local health departments.

4.2.5 Linkages with Other Programs and Activities

4.2.5.1 Perinatal Programs

- 4.2.5.1.1 Illinois Department of Human Services High-risk Infant Follow-up.** APORS continued to identify infants for the Illinois Department of Human Services (IDHS) perinatal management and high-risk infant tracking program. Approximately 11,500 infants were referred for local health department nurse visits. Physical and psychological development monitoring and counseling for parents are provided through the nurse visits. APORS conducted quarterly meetings with the high-risk infant follow-up managers to improve program coordination and communication.
- 4.2.5.1.2 Illinois Department of Public Health Division of Infectious Diseases.** APORS identified infants for the Department's Division of Infectious Diseases' congenital syphilis (80 newborns) and perinatal hepatitis B programs (118 newborns), which ensure that all infants with congenital syphilis and infants prenatally exposed to or diagnosed with a hepatitis B infection are offered services.
- 4.2.5.1.3 Illinois Department of Public Health Craniofacial Anomaly Program.** Data on all infants born with cleft lip and/or palate (201 newborns) were supplied to the Department's Division of Oral Health's craniofacial anomaly program to ensure these infants receive appropriate services at multidisciplinary clinics throughout the state.
- 4.2.5.1.4 Illinois Department of Human Services Early Intervention Program.** APORS refers newborns to the IDHS early

intervention program. The infants had conditions that could result in developmental disabilities or delays in movement, learning, interacting with others, behavior or use of existing skills. APORS was sought as a referral source so that infants can be identified earlier in life. A total of 1,083 infants were referred in FY11.

4.2.5.1.5 University of Illinois at Chicago Division of Specialized Care for Children. APORS refers newborns to the University of Illinois at Chicago (UIC) Division of Specialized Care for Children for free diagnostic services and assistance with medical treatment. The infants have, or are suspected of having, a treatable chronic medical condition. The conditions include orthopedic, visual, auditory, craniofacial, heart and urinary defects. In FY11, APORS referred 2,515 cases.

4.2.5.1.6 APORS refers newborns reported to the program with possible metabolic conditions to the **Department's Newborn Screening (NMS) Program**. This program assures that children receive timely follow-up for these severe conditions. Several children with hypo-thyroidism previously unknown to the NMS program have been identified.

4.2.5.2 National Birth Defects Prevention Network (NBDPN)
APORS submitted data for the National Birth Defects Prevention Network's annual report. The APORS epidemiologist served on the state data committee and attended the NBDPN's annual conference.

4.2.5.3 Perinatal Networks
APORS maintained communications with the perinatal network administrators to facilitate hospital reporting of APORS cases. Timeliness for APORS reporting is used as one quality measure for hospitals' annual perinatal assessment.

4.2.5.4 U.S. Centers for Disease Control and Prevention (CDC)
APORS submitted biannual reports on neural tube defects as part of CDC's and the National Birth Defects Prevention Network's efforts to monitor trends in the disease.

4.2.6 Quality Control Reports

4.2.6.1 Easton K, Fornoff J, Wilson T. *Timeliness Study – Hospital Reports of Adverse Pregnancy Outcomes Received in 2009*. Quality Control Report Series 10:02. Springfield, Ill.: Illinois Department of Public Health, July 2010.

4.2.6.2 Ghandour E, Fornoff J. *A Survey of Confidentiality Practices among APORS partners*. Quality Control Report Series 10:03. Springfield, Ill.: Illinois Department of Public Health, July 2010.

4.2.6.3 Jenkins V, Fornoff J. *Timeliness Study – Hospital Reports of Adverse Pregnancy Outcomes Received In 2010*. Quality Control Report Series 11:01. Springfield, Ill.: Illinois Department of Public Health, June 2011.

4.3 Goals for Fiscal Year 2012

Improve Casefinding

- Provide consultation and training to supplement the self-directed training for hospital nursing staff when indicated.
- Develop on-line tools for training smaller hospitals remotely.
- Develop a three-year training plan to assure that all hospitals receive on-going training in APORS reporting.
- Match information from periodic hospital discharge information reports to the APORS newborn cases and identify potential birth defect cases.
- Review medical reports of infants identified in hospital discharge matching to ascertain and collect new birth defect cases.
- Match APORS newborn cases with Vital Records (VR) birth data to identify missed newborn cases.
- Match APORS cases with VR infant death data to identify birth defect cases.
- Perform active case verification with new case finding of hospital-reported cases by performing hospital chart review.
- Expand the use of remote access to hospital medical records from three to six hospitals.
- Evaluate linkages with the Illinois Department of Public Health newborn hearing screening programs that can lead to new data sources for APORS.

Improve Quality of APORS Data

- Evaluate the accuracy of hospital reporting in terms of timeliness and accuracy, provide hospital-specific feedback and use results to identify hospital training needs.
- Evaluate the quality of the active case verification process in terms of timeliness and accuracy, provide individual-specific feedback and use results to identify staff training needs.
- Provide consultations and supplemental training to hospitals that have been identified as problem reporters in terms of timeliness, accuracy or case completeness.
- Consult with the Illinois perinatal center administrators and provide regional training for hospitals.

Improve Program Effectiveness

- In consultation with partners, evaluate the conditions reported to APORS and the referral process to determine whether modifications should be made.
- Implement the decisions made about hospital reporting and referrals to the local health agencies.
- Begin work on a server-based data system for the APORS program to replace the current mainframe software.
- Expand the use of remote access to hospital records from three to six hospitals to reduce travel costs and increase the timeliness of case abstraction.
- Use APORS surveillance data for birth defects prevention.
- Promote birth defects prevention and healthy pregnancies through distribution of educational materials at conferences, to local health departments and service providers, hospitals, colleges, schools and public.
- Maintain linkages with key organizations, such as the Illinois perinatal networks, the Illinois Perinatal Statewide Quality Council, National Organization on Fetal Alcohol Syndrome Illinois, the Greater Illinois Chapter of the March of Dimes, and the National Birth Defects Prevention Network.
- Collaborate with Illinois Department of Public Health, state and local health programs to assure the provision of perinatal services for high-risk infants.
- Produce statewide and county surveillance reports.

- Monitor activities and accomplishments associated with meeting the goals and objectives set forth in the CDC cooperative agreement.

5. Occupational Disease Registry

The Occupational Disease Registry (ODR) has three components: the Adult Blood Lead Registry (ABLR), the Census of Fatal Occupational Injuries (CFOI) and the Survey of Occupational Injuries and Illnesses (SOII) formerly referred to as the Occupational Safety and Health Survey (OSH).

5.1 Adult Blood Lead Registry (ABLR)

ABLR collects data on all cases of elevated blood lead levels for adults 16 years of age and older and notifies federal enforcement agencies to trigger inspections and/or interventions. Currently, laboratories are only mandated to report levels of 25 micrograms per deciliter ($\mu\text{g}/\text{dL}$) and above, however the registry accepts and processes all cases of elevated blood lead $\geq 10 \mu\text{g}/\text{dL}$. This program is funded through a purchase order for data with the U.S. Centers for Disease Control and Prevention (CDC). Due to funding limitations, no in-depth verification or quality checks are conducted.

5.1.1 Fiscal Year 2011 Accomplishments

- Notified OSHA quarterly of any company that had employees with elevated blood lead levels higher than $40 \mu\text{g}/\text{dL}$ of blood.
- ABLR data were sent to the CDC's National Institute for Occupational Safety and Health (NIOSH) on a semi-annual basis in 2010.

5.1.2 Interventions Resulting from ABLR Notifications of Elevated Lead Results

In calendar year 2010, ABLR made 26 referrals (employees) to OSHA for 10 companies with employees who had blood lead levels greater than or equal to $40 \mu\text{g}/\text{dL}$ of blood. One safety inspection was triggered by the quarterly OSHA report. The employer was found to be compliant with lead safety requirements and no citations were issued.

5.1.3 Goals for Fiscal Year 2012

- Notify OSHA quarterly of any company that has employees with elevated blood lead levels $\geq 40 \mu\text{g}/\text{dL}$.
- Send data file to CDC's NIOSH on a semi-annual basis.
- Make changes to the Illinois Administrative Code related to elevated blood lead definition and collection to reflect the new guidelines defining elevated blood levels at $10 \mu\text{g}/\text{dL}$.
- Notify OSHA within 24 hours of any case with an elevated blood lead level $\geq 60 \mu\text{g}/\text{dL}$.

5.2 Census of Fatal Occupational Injuries and Illnesses (CFOI)

The U.S. Bureau of Labor Statistics (BLS) developed the Census of Fatal Occupational Injuries (CFOI) as a cooperative venture between the states and the federal government to gather data about these events. The Illinois Department of Public Health has participated in CFOI since 1993. The data compiled by the CFOI program are published each year and contain information on the workers involved and the events surrounding each fatality.

The 2010 fatal occupational injuries returned to a level more consistent with other years before 2009. Occupational illnesses were collected passively when other supporting documentation initiated the case and cases previously collected based on occupation, known occupational exposures and cause of death were not captured.

5.2.1 Review and Evaluation of Fiscal Year 2011 Goals

- The summary report of the 2009 fatal occupational injury data was completed.
- Provided information on fatal occupational injuries to the BLS, the funding source, in accordance with the required schedule.

5.2.2 Goals for Fiscal Year 2012

- Publish a summary report of the 2010 fatal occupational injury data by December 2011.
- Meet the deadlines for data completion required by BLS.

5.3 Survey of Occupational Injuries and Illnesses (formerly Occupational Safety and Health Survey)

The Survey of Occupational Injuries and Illnesses (SOII) focuses on surveillance of non-fatal workplace injuries and illnesses. The Illinois SOII is supported through a cooperative agreement between the states and the U. S. Bureau of Labor Statistics (BLS). The Illinois data are pooled with that from other states to provide the total injury and illness rate for each industrial group at the national level. Because of Illinois' participation, the data also are published annually for Illinois to give information on incidence rates for the type of injury, body part of the injury, the source of the injury and the event causing the injury.

5.3.1 Review and Evaluation of Fiscal Year 2011 Goals

- Submitted data files on all reported occupational injuries and illnesses of the surveyed companies to the BLS.
- Collected, coded and entered all 2009 data prior to BLS deadlines.

5.3.2 Survey Process and Achievements for Fiscal Year 2011

In January 2011, BLS and ODR sent survey forms to 6,165 companies for 2010 data. A second request for data was sent in February, a third request was sent in April and a fourth request was sent in May. Non-responding companies were

then contacted by telephone to solicit data. The final, overall survey rate was 85.78 percent, which met the cooperative agreement minimum requirement for data publication.

5.3.3 Goals for Fiscal Year 2012

- Continue all data collection activities in FY11 and maintain the high standards achieved by the program.
- Complete the descriptive reports of 2010 occupational injuries and illnesses
- Meet the deadlines assigned by BLS.

6. Hazardous Substances Registry

The Hazardous Substances Registry component of the IHHSR is not funded. As a result, only geocoding activities are performed through support from funded components on registry cases that can be used in disease cluster evaluations. The geocodes assigned to cancer and birth defect incident reports form the basis for future development of a comprehensive Geographic Information System (GIS) capacity within the IHHSR system.

6.1 Geocoding Process and Accomplishments

6.1.1 Geocoding Cancer and Birth Defects Data

Population-based data for the Illinois State Cancer Registry and the Adverse Pregnancy Outcomes Reporting System were geocoded in-house using software program, Map Marker USA v.22®.

The records were assigned geocodes using the North American Datum (NAD) 83 standard, which is the most recent available. NAD is the base set of coordinate readings used to assign latitude and longitude coordinates in the United States. The new standard reflects emerging knowledge about the shape of the earth and corrects for large numbers of surveying errors accumulated in the old datum (NAD27).

The process includes: address standardization; verification of ZIP code based on city; assignment of ZIP +4 based on address and assignment of latitude and longitude codes, including specificity level of the code or reason the record could not be coded.

The level of completeness for each geocode element varied little by year of diagnosis (see range in Table 6.1.1.1). A detailed quality assessment of the geocoding results for cancer data has been completed and will serve as a reference document for researchers using geocoded registry data.

Table 6.1.1.1 Percentage of IHHSR Reports with Complete Geocoding as of November 2010

Range of Percentage Complete by Diagnosis Year			
	Average all years	Lowest	Highest
Cancer Reports (n=1,310,085 cases for diagnosis years 1986-2008)			
ZIP code	100.0	100.0	100.0
ZIP +4 code	96.4	95.0	97.5
Lat/Lon code ¹	100.0	100.0	100.0
address specific	89.3	85.7	93.1
centroid ZIP +4	1.5	1.2	1.8
centroid ZIP +2	1.6	0.9	2.6
centroid ZIP	7.6	4.8	11.4
APORS Reports (n= 337,714 cases for birth years 1989-2010)			
ZIP code	98.0	95.1	100.00
ZIP +4 code	91.9	87.7	97.6
Lat/Lon code ¹	96.6	91.8	100.0
address specific	90.7	86.4	96.3
centroid ZIP +4	1.2	0.7	1.6
centroid ZIP +2	1.9	0.9	3.7
centroid ZIP	2.7	0.8	5.3
¹ Latitude and longitude			

6.2 Goals for Fiscal Year 2012

- Continue to geocode all new records submitted to ISCR and APORS.

7. Cluster Inquiries and Assessments

7.1 Review and Evaluation of Fiscal Year 2011 Goals

- Responded to all inquiries with information and educational materials regarding cancer diseases.

7.2 Fiscal Year 2011 Accomplishments

In FY11, the Department received 49 calls concerning perceived cancer excesses. The response protocol requires staff to first discuss general epidemiologic information about cancer with the caller, explain the cluster protocol and expected outcomes, and send educational materials when appropriate. For 11 of these calls, previous cancer cluster evaluations were already available to answer the concerns. Staff used published cancer rates by county, epidemiologic reports and data from the public data files (n=25) or general information about the frequency of cancer or causes of cancer to help address

the callers' concerns. No written requests were received to conduct in-depth cluster evaluations when there was a known carcinogenic exposure.

In FY10, Division staff undertook an extensive cancer assessment for Crestwood (Cook County), Illinois. Two documents were produced and made available to the public via the Department's web page. The presence of these two documents continued in FY11. These two documents are:

- 7.2.1 Crestwood (Cook County) Cancer Assessment – Fact Sheet.
http://www.idph.state.il.us/about/epi/pdf/Crestwood_Report_Fact_Sheet_3-5-10.pdf
- 7.2.2 Incidence of Cancer in the Village of Crestwood, (Cook County) Illinois, 1994-2006.
http://www.idph.state.il.us/about/epi/pdf/Crestwood_Cancer_Incidence_Report_3-5-10.pdf

7.3 Fiscal Year 2012 Objectives

- Respond to all inquiries with information and educational materials regarding cancer diseases.
- Complete cluster assessments within 12 months of the written request when there is a known carcinogenic exposure and a cancer assessment is launched.

8. Research Program

The research section of the Illinois Health and Hazardous Substance Registry represents a crucial link between data collection and data dissemination and between raw data and information. Through various formats, registry data were summarized, tabulated, analyzed, and presented to policy makers, health professionals and the public.

8.1 Fiscal Year 2011 Major Accomplishments

8.1.1 Provision of Epidemiologic Support to Department-wide Activities

Division staff continued to chair and participate in the Department's Data Release and Research Committee, the Committee on Public Use Files, Illinois Health Data Dissemination Initiative (IHDDI), and Illinois Health Information Exchange Committee (HIE). Five staff continued to serve on different committees in various capacities.

8.1.2 Technical Assistance

Technical assistance has been provided by ISCR staff in the areas of statistics/epidemiology, research methods, data confidentiality review, FOIA requests, data linkage, SAS® programming, data analysis and interpretation, data de-duplication, surveillance system evaluation, quality control, and research data requests continued to be provided by Division researchers to

various Department offices and divisions. Division researchers were frequently called upon by the Director's office and other Department programs for expertise on different technical and research issues, such as program evaluation, de-identification of individual data records, and formation of a Department Institutional Review Board (IRB). Division researchers also provided crucial guidance and technical assistance to the Department of Healthcare and Family Services (IDHFS) in its effort to establish new policy and practices for public data release and to the Chicago Department of Public Health in its effort to re-examine how it reports cancer data.

8.2 Scientific Publications in Fiscal Year 2011

The following articles have been submitted, accepted or published.

- 8.2.1** Ma F, Fornoff J, Lehnher M, Shen T. Childhood Cancer Incidence in Proximity to Nuclear Power Plants in Illinois. *Archives of Environmental and Occupational Health* 2011;66:87-94.
- 8.2.2** Engels E, Pfeiffer R, Fraumeni Jr J, Kasiske B, Israni A, Snyder J, Wolfe R, Goodrich N, Bayakly A, Clarke C, Copeland G, Finch J, Fleissner M, Goodman M, Kahn A, Koch L, Lynch C, Madeleine M, Pawlish K, Rao C, Williams M, Castenson D, Curry M, Parsons R, Fant G, Lin M. Spectrum of Cancer Risk among U.S. Solid Organ Transplant Recipients: The Transplant Cancer Match Study. Submitted to *Journal of the American Medical Association*.

8.3 Other Recent Reports or Publications That Used Registry Data

- 8.3.1** Agency for Healthcare Research Quality (AHRQ) *2010 National Healthcare Quality Report*. Rockville, Md.: U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality. March 2011. AHRQ Pub. No. 11-0004.
- 8.3.2** National Birth Defects Prevention Network (NBDPN). December 2010. State Birth Defects Surveillance Program Directory. *Birth Defects Research Part A Journal*. 88(12):1124-1125.
- 8.3.3** National Birth Defects Prevention Network (NBDPN). 2010. Birth defects surveillance data from selected states, 2003-2007. December 2010. *Birth Defects Research Part A Journal*. 88(12):1062-1123
- 8.3.4** Adult Blood Lead Epidemiology and Surveillance – United States, 2008-2009. *Morbidity and Mortality Weekly Report*. 2011;60(25):841-845.
- 8.3.5** U.S. Centers for Disease Control. *State Cancer Profiles*. Interactive query available at <http://statecancerprofiles.cancer.gov/>; U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.
- 8.3.6** U.S. Cancer Statistics Working Group. *United States Cancer Statistics: 1999-2007 Incidence and Mortality Web-based Report*. Atlanta, Ga.: U.S. Department

of Health and Human Services, U.S. Centers for Disease Control and Prevention and National Cancer Institute; 2010.

- 8.3.7** Kohler BA, Ward E, McCarthy BJ, Schymura MJ, Ries LAG, Ehemann C, Jemal A, Anderson RA, Ajani UA, Edwards BK. Report to the Nation on the Status of Cancer, 1975-2007, Featuring Tumors of the Brain and Other Nervous System. *J Natl Cancer Inst* 2011; 103:1-23.
- 8.3.8** Copeland G, Lake A, Firth R, Wohler B, Wu XC, Stroup A, Russell C, Kimberley B, Niu X, Schymura M, Hofferkamp J, Kohler B (eds). *Cancer in North America: 2004-2008. Volume One: Combined Cancer Incidence for the United States and Canada*. Springfield, Ill.: North American Association of Central Cancer Registries, Inc. May 2011.
- 8.3.9** Copeland G, Lake A, Firth R, Wohler B, Wu XC, Stroup A, Russell C, Kimberley B, Niu X, Schymura M, Hofferkamp J, Kohler B (eds). *Cancer in North America: 2004-2008. Volume Two: Registry-specific Cancer Incidence in the United States and Canada*. Springfield, Ill.: North American Association of Central Cancer Registries, Inc. May 2011.
- 8.3.10** Greenlee RT, Goodman MT, Lynch CF, Platz CE, Havener LH, Howe HL. The occurrence of rare cancers in U.S. adults, 1995-2004. *Public Health Rep*. 2010 Jan-Feb;125(1):28-43. PMID 20402194.
- 8.3.11** Simard EP, Pfeiffer RM, Engels EA. Cumulative Incidence of Cancer Among Individuals With Acquired Immunodeficiency Syndrome in the United States. *Cancer*. 2011;117(5):1089-1096.
- 8.3.12** Ziao-Cheng W, Zingzhao Y, Andrews P, Ranganath P, Qiao B, Ajani U, Wohler B, Zhang Z. Comparisons of Directly Coded SEER Summary Stage 2000 and Collaborative Staging Derived SEER Summary Stage 2000. *Journal of Registry Management*. 2010;37(4):137-140.
- 8.3.13** Racial/Ethnic Disparities and Geographic Differences in Lung Cancer Incidence--- 38 States and the District of Columbia, 1998-2006. *Morbidity and Mortality Weekly Report (MMWR)*. 2010;59(44):1434-1438
- 8.3.14** Sabatino SA, Stewart SS, Wilson R. Racial and ethnic variations in the incidence of cancers of the uterine corpus, United States 2001-2003. *Journal of Women's Health*. 2009;18(3):1-10.
- 8.3.15** Coughlin SS, Richardson L, Orelie J, Thompson T, Richards TB, Sabatino SA, Wu W, Cooney D. Contextual Analysis of Breast Cancer Stage at Diagnosis among Women in the United States, 2004. *The Open Health Services and Policy Journal*, 2009;2:29-40.
- 8.3.16** Holman DM, Soman A, Watson M, Weir HK, Trivers KF, White MC. Trends in thyroid cancer incidence rates and disparities among young females in the

United States, 1999-2007. Poster presented at the 35th Annual Meeting of the American Society of Preventive Oncology; 2011 Mar 5-8; Las Vegas, Nevada.

- 8.3.17** Townsend JS, Richardson LC, German RR. Incidence of testicular cancer in the United States, 1999-2004. *Am J Mens Health*. 2010 Dec;4(4):353-60. Epub 2009 Dec 22.
- 8.3.18** Tangka FK, Subramanian S, Cole Beebe M, Trebino D, Michaud F. Economic Assessment of Central Cancer Registry Operations, Part III: Results from Five Programs. *Journal of Registry Management*. 2010;37(4):152-155.
- 8.3.19** Henley SJ, King JB, German RR, Richardson LC, Plescia M. Surveillance of Screening-Detected Cancers (Colon and Rectum, Breast, Cervix) – United States, 2004-2006. *MMWR Surveill Summ*. 2010 Nov 26;59(9):1-25.
- 8.3.20** Rim SH, Seeff LC, Ahmed F, King JB, Coughlin SS. Colorectal cancer incidence in the United States, 1999-2004: an updated analysis of data from the National Program of Cancer Registries and the Surveillance, Epidemiology, and End Results Program. *Cancer*. 2009 May; 115(9):1967-76.
- 8.3.21** Henley J. Association of thyroid cancer incidence with predicted indoor radon levels, United States, 2004-2007. In progress.

8.4 Epidemiologic Report Series

The following reports were released in the Department's Epidemiologic Report Series; all reports are available to the public upon request.

- 8.4.1** Nguyen V, Bostwick J, Shen T. Survey of Nonfatal Workplace Injuries and Illnesses Illinois, 2008. Epidemiologic Report Series 10:07. Springfield, Ill.: Illinois Department of Public Health, November 2010.
- 8.4.2** Fornoff JE, Ghandour E, Easton K, Wilson T, Shen T. Trends in the Prevalence of Birth Defects in Illinois and Chicago 1989-2007. Epidemiologic Report Series 10:08. Springfield, Ill.: Illinois Department of Public Health, December 2010.
- 8.4.3** Nguyen V., Wamack J, Bostwick J, Shen T. Census of Fatal Occupational Injuries and Illnesses, Illinois, 2009. Epidemiologic Report Series 11:01. Springfield, Ill.: Illinois Department of Public Health, January 2011.
- 8.4.4** Nguyen V, Shen T. Survey of Occupational Injuries and Illnesses in Illinois, 2009. Epidemiologic Report Series 11:02. Springfield, Ill.: Illinois Department of Public Health, June 2011.
- 8.4.5** Garner K, Shen T. Illinois County Cancer Statistics Review Incidence, 2004-2008. Epidemiologic Report Series 11:03. Springfield, Ill.: Illinois Department of Public Health, June 2011.

- 8.4.6** Garner K. Colorectal Cancer in Illinois: An Overview of Key Statistics. Epidemiologic Report Series 11:04. Springfield, Ill.: Illinois Department of Public Health, June 2011.

8.5 Fiscal Year 2011 Presentations by Division Staff

Due to state travel restrictions, staff presentations and attendance at professional meetings were severely curtailed.

Title	Event	Date
Traditional and Non-Traditional Roles in the Health Information Management Profession	Southwestern Illinois College class (Belleville)	September 2010
Population-based Cancer Registries	Taiwan Nurses Delegation	July 2010
APORS Reporting (in-service training)	Advocate Trinity (Chicago)	June 2011
APORS Reporting (in-service training)	Decatur Memorial	June 2011
APORS Reporting (in-service training)	St. Francis Hospital (Litchfield)	June 2011
APORS Reporting (in-service training)	Riverside Medical Center (Kankakee)	June 2011

8.6 Research Data Release and Collaborations

Principal Investigator (Affiliation)	Title	Date	Funding Source
U.S. Centers for Disease Control and Prevention	Neural Tube Defect Rapid Ascertainment Project	August 2010 and April 2011	CDC
Larry Hubbard Illinois Healthcare and Family Services	Healthcare and Family Services Data Warehouse	Ongoing monthly	
Teri Shupert Midlothian School District	Conditions likely to lead to developmental delays	April 2011	
U.S. Centers for Disease Control and Prevention	Prevalence Data by Race for Selected Birth Defects for publication in <i>Birth Defects Research</i>	July 2010	
Marc T. Goodman, Ph.D. University of Hawaii Cancer Center	Incidence of Small Bowel Cancer in the United States, 1995-2007.		
Lynn Rosenberg, Sc.D., M.S. Sloan Epidemiology Center Boston University	Black Women's Health Study	Ongoing February 2007	NIH/NCI
Rosalind Ramsey-Goldman, M.D., Dr.PH Northwestern University	Exposure to Immunosuppressive Drugs and Cancer Risk in Systemic Lupus Erythematosus	Ongoing August 2004	NIH/NCI
Meir Stampfer, M.D. Channing Laboratory Brigham and Women's Hospital	Health Professionals Follow-up Study/Nurses' Health Study I and II	Ongoing January 2004	NIH
Eugenia Calle, Ph.D. American Cancer Society	Cancer Prevention Study II	Ongoing 1995	ACS
Gary Fraser, M.D., Ph.D. Loma Linda University	Cancer Epidemiology in Adventists (AHS-2)	April 2009	NIH
Eric Engels, M.D., M.P.H. Viral Epidemiology Branch, National Cancer Institute	Cancer Risk in Solid Organ Transplant Recipients and End-Stage Renal Disease: The Transplant Cancer Match Study	Ongoing February 2008	NCI
Sujha Subramanian, Ph.D. RTI International	Oral Health Disparities Among Medicaid Beneficiaries	Ongoing October 2009	National Institute of Dental and Craniofacial Research (NIDCR)

Principal Investigator (Affiliation)	Title	Date	Funding Source
Alicia Gilsean, Ph.D. RTI International	Forteo Patient Registry	Ongoing February 2010	Eli Lilly and Company
Mardge Cohen, M.D. Women's Interagency HIV Study (WIHS)	Women's Interagency HIV Study (WIHS)	Ongoing 2000	NIH
NOTE: Following are definitions of acronyms used in the above table: American Cancer Society (ACS), U.S. Centers for Disease Control and Prevention (CDC), Cancer in North America (CINA), Department of Human Services (DHS), Geographic Information System (GIS), International Agency for Research on Cancer (IARC), National Institute of Allergy and Infectious Diseases (NIAID), National Cancer Institute (NCI), National Institutes of Health (NIH), Surveillance of Epidemiology and End Results (SEER), Women's Interagency HIV Study (WIHS)			

9. Grants

The table below summarizes the division grant awards for FY2011.

Grant	Agency	Status
Occupational and Health Survey in Illinois (continuation)	BLS	Funded October 2010
Census of Fatal Occupational Injuries in Illinois (continuation)	BLS	Funded October 2010
Adult Blood Lead Epidemiology and Surveillance (continuation)	CDC	Funded July 2010
Improvement of Birth Defects Surveillance Program	CDC	Funded January 2011
Perinatal Hepatitis B Program (submitted by IDPH, Division of Infectious Disease) (continuation)	CDC	Funded January 2011
National Cancer Prevention and Control Program-National Program of Cancer Care (continuation)	CDC	Funded July 2010
NOTE: Full titles of acronyms used in the above table are U.S. Centers for Disease Control and Prevention (CDC), Bureau of Labor Statistics (BLS), and Illinois Department of Public Health (IDPH).		

9.1 Funded Grants

The Division of Epidemiologic Studies received a total of \$1,697,878 in grant awards in fiscal year 2011. This is a 6.6 percent decrease from FY2010 because of reductions in federal funding, even though the total number of grants remained the same.

9.1.1 Survey of Occupational Injuries and Illnesses in Illinois (formerly Occupational and Health Survey)

The Department received \$106,650 in October 2010 from the U.S. Bureau of Labor Statistics to support the 13th year of the Survey of Occupational Injuries and Illnesses (SOII) in Illinois. This project is described in Section 5.

9.1.2 Census of Fatal Occupational Injuries in Illinois

The Department received \$97,350 in October 2010 from the U.S. Bureau of Labor Statistics to support the 19th year of the Census of Fatal Occupational Injuries (CFOI) in Illinois. This project is described in Section 5.

9.1.3 Adult Blood Lead Epidemiology and Surveillance

In July 2010, CDC contracted with the Department to provide quarterly data to the CDC, Adult Blood Lead Epidemiology, and Surveillance program. The Department received \$21,500 to provide the data for the tenth year of this agreement. The progress for this project is described in Section 5.

9.1.4 Improvement of Birth Defects Surveillance Program

In February 2011, the Department received \$200,000 for year two of the third round of surveillance grants. This was a competitive application. The progress for this project is described in Section 4.

9.1.5 Perinatal Hepatitis B Program

The division received \$30,000 in January 2011 to continue expansion of APORS surveillance and data collection (12th year) to include perinatal hepatitis B and to develop a tracking system to identify newborn infants requiring follow-up immunization services. The progress for this project is described in Section 4.

9.1.6 National Cancer Prevention and Control Program

In July 2010, CDC awarded the Department \$8.1 million in funding for the fourth year of a second five-year project period year of the National Cancer Prevention and Control Program. The awarded funds remain at level funding from year five of the previous grant period. This grant combines three previous separate grants: the National Breast and Cervical Cancer Early Detection Program, the National Comprehensive Cancer Control Program and the National Program of Cancer Registries (NPCR). The division received \$1.2 million for the NPCR component, which is in its 16th year. NPCR continues to focus on four aspects of the existing program: achieve 95 percent completeness of reporting; expand the quality control program; redesign the database in a personal computer environment; and collect, code and computerize treatment data and occupation and industry information. The progress for this project is described in Section 3.

10. Cancer Reporting Facilities That Have Not Completed Reporting for the 2009 Year by July 15, 2011

Due to significant changes to cancer reporting requirements and subsequent delays in implementation of reporting software, the close-out deadline for reporting for the 2010 diagnosis year was not enforced.

