

State of Illinois
Rod R. Blagojevich, Governor

Department of Public Health
Damon T. Arnold, M.D., M.P.H., Director



Annual Report Illinois Health and Hazardous Substances Registry

July 2007 through June 2008

September 2008

Annual Report

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**A Report to Gov. Rod R. Blagojevich
and the 95th General Assembly
from the
Illinois Department of Public Health
Damon T. Arnold, M.D., M.P.H.
Director**

Prepared by the

Division of Epidemiologic Studies

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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 Occupational Safety and Health Survey [OSH]), and a research and data dissemination section. This is the registry's 22nd annual report and it describes accomplishments and research activities from July 2007 through June 2008 (FY08).

The mission of the IHHSR includes the following:

- Collect and maintain high quality reports on the incidence of cancer, adverse pregnancy outcomes, and occupational diseases and injuries;
- Conduct epidemiologic assessments on public health outcomes and hazardous substances;
- Provide a source of information for the public;
- Monitor changes in incidence to detect potential public health problems, trends and progresses;
- Use data to target intervention resources for communities and patients and their families;
- Inform health professionals and citizens about risks, early detection and treatment of cancers found to be elevated 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 2008 Highlights

- Received \$1,768,697 from federal funds and \$11,225 from other non-general revenue sources, often through a competitive process, to support activities of the Department's Division of Epidemiologic Studies.
- Responded to 70 inquiries about perceived cancer excesses in local communities and neighborhoods.
- Collected detailed case reports on Illinois residents with 61,429 newly diagnosed cancer cases (2005), 12,189 adverse pregnancy outcomes (2006), 241 adult lead poisoning cases (2007), 48,500 representative non-fatal occupational disease and injury sample records (2006), 182 fatal occupational injuries (2007) and 853 fatal occupational illnesses (2007).
- Responded to 147 requests for general information about the registry, 184 requests for epidemiologic reports and registry data, and 44 special data requests or collaborations from outside researchers.
- Developed and produced an audiovisual training module to educate hospital nurses and related staff in APORS reporting.
- Prepared and submitted six grant proposals to support the registry's operations and research.
- Released six reports in the Epidemiologic Report Series and prepared eight written reports for quality control studies of registry data.
- Actively participated in national and statewide health programs, provided data, information and epidemiologic support as needed.
- Delivered eight presentations at professional meetings and 26 training workshops at medical facilities and IDPH offices.
- Achieved national "best in class" or "above average" status for all registry components that could be externally evaluated.
- Completed a comprehensive revision of the IHHSR Rules to bring national standards and best practice into registry operations.

1.3 IHHSR 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. Since 2005, a Department of Human Services representative has been invited to the annual meeting because of the council's recommendation in 2004. The council met on September 10, 2008, to hear division accomplishments, to discuss current issues, and to approve the fiscal year 2008 annual report.

1.4 Goals for Fiscal Year 2009

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 usefulness.

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 four 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. Projections or forecasts for the future year also are included.

Table 2.1 Registry Data Collection

	Calendar 2002	Calendar 2003	Calendar 2004	Calendar 2005	Calendar 2006	Estimated 2007
ISCR Invasive Neoplasms (including bladder <i>in situ</i>)	61,777	60,237	60,310	59,337	60,060 ¹	60,830
Breast <i>in situ</i>	1,918	1,910	2,065	2,092	2,100	2,100
APORS Cases	19,012 10,247 ²	14,157 11,307 ²	13,332 12,845 ²	12,615 12,176 ²	12,189 11,766 ²	11,000 11,000
Occupational Disease Reports ABLR lead poisoning						
New reports	252	266	150	182	251	241 ³
Total reports	1,462	1,016	725	847	667	672 ³
Occupational Fatality Cases						
Injuries	993	1,228	1,341	1,355	1,112	1,035 ³
Illnesses	190	200	208	194	207	182 ³
Total	803	1,028	1,133	1,161	905	853 ³
Occupational Safety and Health Survey Estimated Cases						
Sprains, strains	62,634	55,320	55,700	53,760	48,500	48,000
Bruises, contusions	25,756	24,560	22,640	20,840	20,120	19,920
Cuts, lacerations	3,898	4,980	4,950	4,560	4,150	3,890
Fractures	4,949	4,090	3,100	4,740	4,620	3,730
Multiple injuries	5,132	3,860	4,300	4,450	4,280	3,820
Carpal tunnel syndrome	1,608	1,860	2,580	1,590	1,550	1,560
Heat burns	1,480	1,520	1,260	1,280	970	1,170
Tendonitis	1,345	760	800	770	420	690
Amputations	165	300	450	310	150	250
Chemical burns	453	540	280	450	230	360
Total	276	270	280	280	710	310
Hazardous Substances (GIS)⁴ 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 2007

⁴For specific results of geocoding of APORS and cancer cases for the Health and Hazardous Substances Registry, see Section 6.

Table 2.2 Registry Data Dissemination, Reports, and Publications

	FY04	FY 05	FY06	FY07	FY08	Estimated FY09
Data Request						
General information	114	106	171	122	147	135
Data and reports	113	128	190	195	184	185
Cluster inquiries ¹	78	67	104	46	70	60
Confidential data for research	9	16	13	9	13	10
Quality Assurance Studies²						
Casefinding visits						
APORS		417	464	280 ³	317	320
ISCR		395	252	36 ⁴	155	170
Cases added from casefinding visits						
APORS ⁵		7,122	8,256	3,122 ³	2,815	3,000
ISCR		1,781 ⁶	2,289 ⁶	279 ⁶	1,592 ⁶	1,600
Internal quality control						
APORS		5	5	2	1	3
ISCR		17	16	7	7	7
Public Use Files	4	3	3	3	3	3
Publications						
Epi Report Series	5	5	13	7	6	5
Peer-reviewed publications	2	2	2	1	10	6
Other Publications	19	13	25	25	19	20
Oral/Poster presentations	63	52	91	59	34	12 ⁷
Grant Proposals Funded	9	11	7	6	6	6

¹ Cluster evaluations were discontinued in FY04. 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 estimates are reduced due to in-state and out-of-state travel restrictions.

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 2005 diagnosis year, we received reports from three Veteran's Administration (VA) facilities in Illinois and two military hospitals.

During the last year, we have required all reporting facilities to submit cases in an electronic format. Of the 197 reporting hospitals, all are currently 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 2008 Goals

Maintain/Enhance Completeness of Reporting

- Increased incidence reporting to include all (100 percent) of the ASTC and RT facilities in Illinois diagnosing and/or treating cancer patients.
- Failed to add an additional staff person to investigate and implement physician reporting as required by the CDC NPCR grant. Program staff will work on this project as time allows.
- Added 3,157 previously unidentified cases to the ISCR database through the ongoing interstate data exchange. These cases were added to the last complete diagnosis year (2005).
- Due to the loss of one technical support staff position, the facility-specific report for timeliness, completeness and data quality was not distributed during this fiscal year.
- Completed the death certificate clearance activities for the 2005 death year in November 2007. An additional 2.1 percent of cancer cases were identified and added to the database as a result of this activity.
- Achieved 95 percent completeness of reporting by all hospitals (non-federal) in Illinois.
- Completed processing of 89 percent of the 2006 incidence data within 12 months of close of the diagnosis year. For the 2006 diagnosis year, the expected number of new cases is 60,100 and there were 53,670 cases (invasive plus bladder in situ) on the database as of December 2007.

- Completed processing of 95 percent of the 2005 incidence data within 24 months of close of the diagnosis year. For the 2005 diagnosis year, the expected number of new cases is 59,350 and there were 59,337 cases (invasive plus bladder in-situ) on the database as of December 2007. This is 99.9 percent of the expected number.
- The final estimated completeness for the 2005 diagnosis year, adjusted for reference mortality and duplicate records was 100 percent.

Enhance Electronic Data Submission to 95 percent for non-hospital reporters

- Improved electronic reporting from pathology labs to 85 percent of all cases submitted. Eleven of 19 Illinois labs currently reporting to ISCR are reporting electronically.
- Implemented Web-based reporting for dermatologists with 43 of 60 dermatology reporters submitting cases via our Web-based application.
- Implemented electronic reporting with encryption for interstate data exchange.

Provide training for all reporting facilities and central registry staff

- Trained cancer reporters in basics of cancer incidence reporting and abstracting at three basic training workshops.
- Informed reporters of changes to national reporting rules and requirements by offering 12 Web training sessions via Webex. The sessions were developed by the National Cancer Institute.
- Provided opportunity for interaction between reporters and ISCR staff by providing 49 individual on-site training sessions. ISCR also provides phone support and handled 1,473 phone calls during this fiscal year.
- Discontinued the new abstractor program, which provided training and review for new facility staff, because ISCR staffing has decreased and the staff time required for this program could not be justified.
- ISCR staff participated in 11 webinars sponsored by the North American Association of Central Cancer Registries and focusing on new multiple primary rules. Staff members also attended the annual Cancer Registrar's of Illinois meeting, the annual meeting of the National Cancer Registrar's Association, the annual meeting of the North American Association of Central Cancer Registries, and the annual NPCR Train the Trainer workshop.

Ensure Data Quality

- Assessed quality of radiation therapy treatment reporting in Illinois for the validity and reliability of all radiation treatment variables.
- Monitored data quality through monthly review of identified variables for 165 data sets and made updates and corrections as necessary.
- Applied GenEDITS Lite program to ISCR database.
- Ensured over-ride flags within NPCR average.
- Completed re-abstracting evaluations at 36 reporting facilities.
- Added census tract and lat/lon codes to the cancer database prior to the submission of the 2008 Call for Data file.

Maintain Data Use Activities

- Produced the annual cancer statistics report, two epidemiologic reports and IPLAN data.
- Responded to 70 cluster inquiries.
- Provided data for ICCCP and IBCCP programs and performed a data linkage with the IBCCP program.
- Updated information on Native American race through linkage with the Indian Health Service.
- Responded to 13 requests for confidential data from outside researchers.
- Updated Illinois incidence and mortality projections.
- Submitted non-confidential cancer case files to NPCR (January 2008) and NAACCR (December 2007) for the yearly call for data.

3.2 Fiscal Year 2008 Major Accomplishments

3.2.1 North American Association of Central Cancer Registries Gold Certification

For the 10th 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 Electronic Reporting

During the past year, ISCR has been focusing on complete electronic reporting. This effort involves more than 450 reporting facilities in Illinois and multiple pathology labs outside the state that process specimens on Illinois residents. Submission requirements follow the reporting guidelines established by NAACCR. Currently, 100 percent of the records submitted by Illinois hospitals are received in electronic format while 91 percent of all other records from non-hospital sources are received electronically.

3.2.3 Cancer Incidence in Five Continents Publication

ISCR has been notified that data from our registry will be included in the upcoming issue of *Cancer Incidence in Five Continents IX*. This document is an international collaborative project, to produce reliable and accurate data on cancer incidence which can be compared with confidence between populations from any part of the world. The data presented are collected, coded, and analyzed in a standard manner and are included only after an objective assessment of quality. The document is published by the International Association of Cancer Registries and the World Health Organization.

3.2.4 Collaboration with State and National Organizations

3.2.4.1 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 provide technical and operational support for the program through committee participation.

3.2.4.2 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 are imported into the ISCR database (when unknown on the ISCR database) for the following variables: race, birthplace, Hispanic origin and maiden name.

3.2.4.3 University of Illinois at Chicago

ISCR continues to collaborate with the University of Illinois on conducting rapid case ascertainment (RCA) activities to facilitate early identification and recruitment of breast cancer patients to an epidemiologic study funded by the National Cancer Institute (NCI). The study, “Breast Cancer Care in Chicago,” is exploring how women are diagnosed with breast cancer at the various stages of disease and why women receive different kinds of treatment for their cancer. Patient accrual for this study began in May 2005 and all key targets for the recruitment have been met. The study and collaboration are still ongoing.

3.2.4.4 North American Association of Central Cancer Registries (NAACCR)

ISCR provided comprehensive data from 1995-2005 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.

3.2.4.5 CDC National Program of Cancer Registries (NPCR)

ISCR submitted comprehensive data from 1995-2005 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.

3.2.4.6 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.

3.2.4.7 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.

3.2.4.8 SimmonsCooper Cancer Institute

With the establishment of Southern Illinois University School of Medicine's (SIU) SimmonsCooper Cancer Institute and its nascent establishment of a population science program, collaboration with SIU started during the last fiscal year. A representative of the Registry was sitting on the Cancer Institute's Advisory Committee and its Population Science Program Steering Committee. Further collaborative activities will be laid out in the near future.

3.2.5 Quality Control Reports**3.2.5.1** Parrish P. *Assessment of Duplicate Records for 1995-2005 Diagnosis Year*. Quality Control Report Series 07:05.

Springfield, Ill.: Illinois Department of Public Health; November 2007.

3.2.5.2 Parrish P. *Item-Specific Completeness Report for 2005 Diagnosis Year*. Quality Control Report Series 07:06. Springfield, Ill.:

Illinois Department of Public Health; December 2007.

3.2.5.3 Parrish P and Ma F. *Reabstracting Study for Hospital Facilities for Diagnosis Year 2005*. Quality Control Report Series 07:06.

Springfield, Ill.: Illinois Department of Public Health; December 2007.

- 3.2.5.4** Koch L. *Accuracy of Coded Gender According to First Name*. Quality Control Report Series 07:08. Springfield, Ill.: Illinois Department of Public Health; November 2007.
- 3.2.5.5** Koch L. *Linking Illinois State Cancer Registry Records with Vital Records Death Master File to Enhance Data Completeness*. Quality Control Report Series 07:09. Springfield, Ill.: Illinois Department of Public Health; November 2007.
- 3.2.5.6** White S. *Review of Selected Hispanic Origin Codes*. Quality Control Report Series 08:01. Springfield, Ill.: Illinois Department of Public Health; January 2008.
- 3.2.5.7** Parrish P. *Reliability of Histology Codes for Prostate Cancer Cases Diagnosed in 2007*. Quality Control Report Series 08:02. Springfield, Ill.: Illinois Department of Public Health; March 2008.

3.3 Goals for Fiscal Year 2009

3.3.1 *Maintain Completeness and Timeliness of Reporting*

- Achieve 95 percent reporting at all non-federal facilities as measured by casefinding visits.
- Maintain interstate data exchange.
- Continue death certificate clearance activities and achieve rate of less than 3 percent.
- Receive 90 percent of cases for the 2007 diagnosis year by December 2008.
- Receive 95 percent of cases for the 2006 diagnosis year by December 2008.

3.3.2 *Enhance Electronic Data Submission to 95 percent for non-hospital reporters*

- Identify sources of physician information for Illinois dermatologists and urologists.
- Develop physician database.
- Develop an electronic report form for physician reporting.

3.3.3 *Enhance Electronic reporting*

- Expand electronic lab reporting.
- Maintain electronic reporting at current levels.

3.3.4 *Provide training for all reporting facilities and for central registry staff*

- Train cancer reporters in basics of reporting and abstracting through basic workshops, individual training and individual phone support.
- Provide six advanced training workshops.
- Provide ongoing educational opportunities for central registry staff.
- Provide quarterly in-service trainings for central registry staff.
- Continue subscriptions to professional journals.
- Maintain membership in national associations.

3.3.5 *Ensure data quality*

- Maintain duplicate rate of less than 1 per 1,000 primary cases.
- Update/Edit database information by identifying and correcting unknown and incorrect values.
- Match VR file to ISCR database to verify gender, maiden name, place of birth, race, Social Security number, and Hispanic origin.
- Apply NPCR and NAACCR edits at the record and inter-record level and perform reconciliation for edits.
- Add census tract information to cancer database.
- Conduct reabstracting evaluations at 36 reporting facilities.
- Ensure over-ride flags within NPCR average.

3.3.6 *Maintain Data Use Activities*

- Produce annual cancer statistics including public use data file, annual state cancer report, annual county cancer report and updated cancer query system.

- Provide general cancer information for cluster inquiries.
- Provide data for ICCCP.
- Provide data for IBCCP program.
- Provide linkage with IBCCP.
- Produce two Epi reports.
- Update code for Native American race.
- Respond to requests for confidential data from outside researchers.
- Update incidence and mortality projections.
- Prepare IPLAN data.
- Submit to NPCR call for data.
- Submit to NAACCR call for data.

3.3.6 *Provide adequate program management*

- Keep staff informed of grant progress, standards changes and reporting issues.
- Monitor grant activities via electronic tracker.

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. A few Indiana and Iowa hospitals also voluntarily report Illinois children.

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 2008 Goals

Improve Casefinding

- Conducted training at 20 hospitals regarding case identification.
- Produced a self-directed training video and reference materials for distribution to Illinois hospitals.
- Received quarterly electronic files, containing hospital discharge data for children as old as 2 years of age, from 19 of the 22 Level 3 hospitals, and an additional three Level 2+ hospitals.
- Performed active case verification with new case finding, identifying 188 new children with birth defects, by performing hospital chart review.

Improve Quality of APORS Data

- Evaluated the timeliness of hospital reporting for cases reported in 2005 and 2006; provided hospital-specific feedback and used results to identify hospital training needs.
- Evaluated the quality of the active case verification process in terms of timeliness and accuracy; provided individual-specific feedback and used results to identify staff training needs.
- Initiated weekly processing of APORS cases to geocode the infant's address as cases were submitted. As a result, 96.3 percent of the addresses are geocoded to a ZIP code level or higher.
- Conducted training at 20 hospitals with emphasis on timely and accurate reporting, and case completeness.
- Developed and distributed new materials to improve hospitals' documentation of newborn hepatitis B cases.

Improve Program Effectiveness

- Referred 60 women to local health departments for neural tube defect recurrence prevention counseling.
- Evaluated the timeliness of APORS reporting and reported processing to identify areas for improvement through training and automation.
- Distributed more than 12,000 pieces of birth defect prevention and healthy pregnancy promotion materials at conferences and the Illinois State Fair, and to colleges and local health departments.
- Prepared and presented best practices for birth defect prevention and healthy pregnancy promotion at a workshop, in collaboration with the Illinois Chapter of the March of Dimes.
- Used the University of Illinois at Chicago School of Public Health's assessment and action plan to make program improvements that enhance birth defect surveillance.
- Maintained linkages with key organizations such as the Illinois perinatal networks, the Illinois Perinatal Statewide Quality Council, the Greater Illinois Chapter of the March of Dimes and the National Birth Defects Prevention Network, and provided data to these organizations for use in their efforts to promote birth defect prevention.

- Continued development of a new data system for hospital-reported cases. The new system is expected to be completed in 2009 and will connect with the APORS birth defects surveillance data system.
- Received approval of a continuation application for a seven-month extension of the existing cooperative agreement with the U.S. Centers for Disease Control and Prevention.

4.2 Fiscal Year 2008 Major Accomplishments

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

APORS completed its fifth year of a five-year cooperative agreement with the U.S. Centers for Disease Control and Prevention (CDC) to enhance Illinois birth defects surveillance and service referral.

4.2.2 Hospital Training

4.2.2.1 In-service Training

In-service training for medical staff was conducted at 20 hospitals throughout the state. The purpose of the training was to promote the reporting of infants exposed to or diagnosed with hepatitis B and to review APORS reporting. Case identification and timeliness of reporting were emphasized.

4.2.2.2 Computerized Training

An audiovisual training program was developed for educating hospital nurses and related staff in APORS reporting. The videos and reference manual will be distributed to Illinois birthing and children's hospitals early in July 2008. Hospital nurses will be asked to review the audiovisual CDs when they begin working in a nursery or labor and delivery unit and annually to maintain competence in APORS reporting.

4.2.3 Improved Birth Defects Surveillance

APORS continued its hybrid of passive case reporting as a starting point to identify potential birth defect cases. Cases within the APORS Birth Defects Surveillance (ABDS) system were electronically sent 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 FY08, the abstractors reviewed 6,589 birth defects reported by hospitals. Many of these diagnoses are conditions associated with prematurity; APORS has created stringent rules that do not consider these birth defects. Abstractors, therefore, eliminated 933 diagnoses associated with prematurity and an additional 2,190 false

positive diagnoses. This resulted in 3,230 verified, passively reported diagnoses. Abstractors clarified 192 diagnoses and added 2,808 diagnoses. As a result, 6,038 birth defects were verified, an increase of 87 percent over accurate passive hospital reporting of diagnoses not associated with prematurity. The number of birth defects reviewed is lower than in previous years because of the loss of one-third of the abstracting staff and subsequent operational adjustments.

4.2.4 Birth Defects Prevention Activities

4.2.4.1 Primary Prevention

APORS staff distributed more than 12,000 birth defects prevention and healthy pregnancy promotion brochures, posters, bookmarks and “Be Healthy” bracelets. APORS staff distributed these at the Illinois and DuQuoin state fairs, three state health conferences and several colleges. These materials also were sent to schools, community organizations and local health departments.

4.2.4.2 Secondary Prevention

A workshop, “Preventing Birth Defects and Promoting Healthy Pregnancies” was developed and presented with the assistance of the March of Dimes. Seventeen staff members attended from six local health departments, all of which serve a population that is high risk for neural tube defects. Sessions included information about problem pregnancies, where to find information, identifying a target audience, how to engage communities, and evaluating programs. The workshop was created to encourage local health department staff to design, implement and evaluate new interventions for addressing adverse pregnancy outcomes.

4.2.5 Linkages with Other Programs and Activities

4.2.5.1 Perinatal Programs. APORS continued to identify infants for the Illinois Department of Human Services’ perinatal management and high-risk infant tracking program. Approximately 11,000 infants were referred from local health department nurse visits. Physical and psychological development monitoring and counseling for parents are provided through the nurse visits. APORS also identified infants for the Illinois Department of Public Health Division of Infectious Diseases’ congenital syphilis and perinatal hepatitis B programs, which ensure that all infants with congenital syphilis and infants prenatally exposed to or diagnosed with a hepatitis B infection are offered services. Data on all infants born with cleft lip and/or palate were supplied to the Department’s Division of Oral

Health's craniofacial anomaly program to ensure these infants receive appropriate services.

- 4.2.5.2 Perinatal Health System of Illinois.** The Perinatal Health Statewide Quality Council serves in an advisory capacity to APORS. Neonatologists, perinatal center administrators and other professionals assist the program regarding medical aspects of adverse pregnancy outcome surveillance. The APORS epidemiologist serves on the council.
- 4.2.5.3 March of Dimes.** The March of Dimes is coordinating the Illinois Folic Acid Campaign to increase awareness that consumption of folic acid will prevent neural tube defects (NTDs). APORS is providing quarterly surveillance data on NTDs and other data reports to assist the March of Dimes in targeting its activities. APORS collaborated with the March of Dimes in hosting the "Preventing Birth Defects and Promoting Healthy Pregnancies" workshop.
- 4.2.5.4 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. The APORS manager gave a presentation at the NBDPN's annual conference using abstractors to supplement passive case ascertainment and quality assessment activities. In addition, the epidemiologist presented a poster about the use of vital records data to enhance birth defects surveillance.
- 4.2.5.5 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. A presentation on APORS reporting requirements was made to hospitals in the St. John's perinatal region.
- 4.2.5.6 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. The CDC provided an introduction to the APORS training video.

4.2.6 Quality Control Reports

- 4.2.6.1** Easton K., Fornoff J., Wilson T. *Timeliness Study – Hospital Reports of Adverse Pregnancy Outcomes Reported in 2005 and 2006*. Quality Control Report Series 07:07. Springfield, Ill.: Illinois Department of Public Health; September 2007.

4.3 Goals for Fiscal Year 2009

Improve Casefinding

- Distribute the APORS self-directed training program to nursing staff at Illinois birthing and children’s hospitals to improve understanding of case criteria and importance of reporting high-risk children, and assess the usefulness of the program.
- Provide training to supplement the self-directed training for hospital nursing staff when indicated.
- 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.
- Develop linkages with the Illinois Department of Public Health newborn metabolic and 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.
- Geocode new APORS cases and increase the percentage of cases geocoded to the exact street level to 92 percent from the current 90 percent.
- Provide 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

- Use APORS surveillance data for birth defects prevention.
- Co-host a meeting with the March of Dimes that highlights best practices in neural tube defect prevention.
- Join with the March of Dimes in providing birth defect prevention information at high school-based health clinics.
- 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, the Greater Illinois Chapter of the March of Dimes, the Illinois Folic Acid Campaign 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.
- Implement a new data system for hospital-reported cases. The new system will connect with the APORS birth defects surveillance data system.
- Produce a competitive application for a new cooperative agreement with the U.S. Centers for Disease Control and Prevention.

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 Occupational Safety and Health Survey (OSH).

5.1 Adult Blood Lead Registry (ABLR)

ABLR collects data on cases of elevated blood lead levels of 25 micrograms per deciliter (mcg/dL) and above for adults 16 years of age and older and notifies federal enforcement agencies to trigger inspections and/or interventions. Currently, 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 2008 Accomplishments

- Received 69 percent of the ABLR laboratory reports electronically.
- Notified federal Occupational Safety and Health Administration (OSHA) within 10 days of any company found to have employees with blood lead levels higher than 60 micrograms per deciliter of blood.
- Notified OSHA quarterly of any company that had employees with elevated blood lead levels higher than 40 micrograms per deciliter of blood.
- ABLR data were sent to the CDC's National Institute for Occupational Safety and Health (NIOSH) on a quarterly basis in 2007 and a semi-annual basis starting in 2008.

5.1.2 Interventions Resulting from ABLR Notifications of Elevated Lead Results

In calendar year 2007, ABLR reported to OSHA the names of 15 companies with employees who had blood lead levels greater than or equal to 40 micrograms per deciliter of blood. OSHA reported two site evaluations in Illinois during calendar year 2007 because of ABLR referrals.

5.1.3 Goals for Fiscal Year 2009

- Receive more than 75 percent of the ABLR laboratory reports electronically.

- Notify OSHA within 10 days of any company found to have employees with blood levels higher than 60 micrograms per deciliter of blood.
- Notify OSHA quarterly of any company that has employees with elevated blood lead levels higher than 40 micrograms per deciliter of blood.
- On a scheduled basis, notify CDC's NIOSH of those cases that were entered into the registry.

5.2 Census of Fatal Occupational Injuries (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.

5.2.1 Review and Evaluation of Fiscal Year 2008 Goals

- Published a summary report of the 2006 fatal occupational injury data in February 2008. Wamack J, Evans L. *Census of Fatal Occupational Injuries and Illnesses in Illinois 2006*. Epidemiologic Report Series 08:02. Springfield, Ill.: Illinois Department of Public Health; February 2008.
- 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 2009

- Publish a summary report of the 2007 fatal occupational injury data by December 2008.
- Meet the deadlines for data completion set out by the BLS.

5.3 Occupational Safety and Health Survey (OSH)

The Occupational Safety and Health Survey (OSH) focuses on surveillance of non-fatal workplace injuries and illnesses. The Illinois OSH 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 2008 Goals

- Submitted data files on all reported occupational injuries and illnesses of the surveyed companies to the BLS.
- Collected, coded and entered all 2006 data prior to BLS deadlines.

5.3.2 OSH Survey Process and Achievements for Fiscal Year 2008

In January 2007, BLS and ODR sent survey forms to 6,055 companies for 2006 data. A second request for data was sent to 3,071 non-responding companies on February 16, 2007. A third request, on March 19, 2007, went to 2,013 non-responding companies. In May 2007, non-responding companies were contacted by telephone to solicit data. The final, overall survey rate was 88 percent, which met the cooperative agreement requirement of a minimum 85 percent survey rate.

5.3.3 Goals for Fiscal Year 2009

- Continue all activities in FY08 and maintain the high standards achieved by the program.
- 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 using an in-house software program (Map Marker 13.1® and Map Info Professional® Version 9.0).

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; assignment of census tract; assignment of block group; 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 2007			
Range of Percentage Complete by Diagnosis Year			
	Average all years	Lowest	Highest
Cancer Reports (n=1,106,783 cases for diagnosis years 1986-2005)			
ZIP code	100.0	100.0	100.0
ZIP +4 code	93.1	91.9	94.6
Census Tract	98.0	96.5	98.6
Lat/Lon code ¹	100.0	100.0	100.0
address specific	90.7	88.2	92.5
centroid ZIP +4	0.5	0.4	0.6
centroid ZIP +2	1.8	1.4	2.7
centroid ZIP	7.0	5.0	10.0
APORS Reports (n= 298,859 cases for birth years 1989-2007)			
ZIP code	98.7	91.8	100.00
ZIP +4 code	90.9	87.6	95.2
Census Tract	94.5	90.9	99.0
Lat/Lon code ¹	96.3	91.2	99.9
address specific	89.7	85.5	94.1
centroid ZIP +4	1.2	0.1	1.6
centroid ZIP +2	1.9	1.2	3.6
centroid ZIP	3.5	1.6	10.3
¹ Latitude and longitude			

6.2 Goals for Fiscal Year 2009

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

7. CLUSTER INQUIRIES AND EVALUATIONS

7.1 Review and Evaluation of Fiscal Year 2008 Goals

- Responded to all inquiries with information and educational materials regarding cancer diseases.
- Completed all cluster evaluations within six months of the written request.

7.2 Fiscal Year 2008 Accomplishments

In FY08, the Department received 70 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 nine 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=44) 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.

7.3 Fiscal Year 2009 Objectives

- Respond to all inquiries with information and educational materials regarding cancer diseases.
- Complete cluster evaluations within 12 months of the written request.

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 2008 Major Accomplishments

8.1.1 Provision of Epidemiologic Support to Department-wide Activities

Division staff continued to participate in the Department's Data Release and Research Committee, the Committee on Public Use Files, and the Cervical Cancer Task Force Using Data for Public Health Decision Making, Illinois Violent Death Reporting System Advisory Committee. Five staff continued to serve on different committees in various capacities.

8.1.2 Technical Assistance

Technical assistance in the areas of using the PSA-6C option for hiring epidemiologists/statisticians, data confidentiality review, FOIA requests, data linkage between ISCR and IBCCP for breast and cervical cancer, SAS programming, data analysis and interpretation, data de-duplication, surveillance system evaluation, quality control, and research data request continued to be provided by Division researchers to various IDPH 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.

8.1.3 Special Projects

Since 2004, Division staffs have participated in the CDC-led Cancer Patterns of Care (POC) study, which involved eight other states in the United States. A number of manuscripts were drafted during FY08 by the POC group to publish the study finding.

8.2 Scientific Publications in Fiscal Year 2008

The following articles reported in the previous annual reports as being prepared or submitted, have been published or accepted for publication.

8.2.1 Alley LG, Fulton JP, Wike JM, Kahn A, Roshala W, Chen VS, Rycroft RK, Bolick-Aldrich S, German RR, Snodgrass J. Studying Patterns of Care: An Evaluation of a Project Using CDC-NPCR Data. *Journal of Registry Management*. 2008; 35(1):27-33.

8.2.2 Alley LG, Chen V, Wike J, Schymura M, Rycroft R, Shen T, Bolick-Aldrich S, Roshala W, Fulton J. CDC-NPCR's Breast, Colon, and

Prostate Cancer Data Quality and Patterns of Care Study: Overview and Methodology. *Journal of Registry Management*. 34(4):148-157.

- 8.2.3** Wu, X, Richardson LC, Khan A, Fulton JP, Cress RD, Shen T, Wolf HJ, Bolick-Aldrich S, Chen VW. Survival Differences Between Non-Hispanic Black and Non-Hispanic White Women With Localized Breast Cancer: The Impact of Guideline-Concordant Therapy. *Journal of the National Medical Association*. 2008; 100(5): 490-498.
- 8.2.4** Howe HL, Lake A, Firth R, Lehnerr M, Bayakly R, Copeland G, Wu XC, Stroup A, Roney D (eds). Cancer in North America, 2001-2005. Volume One: Combined Cancer Incidence for the United States and Canada. Springfield, Ill.: North American Association of Central Cancer Registries, Inc. May 2008.
- 8.2.5** Howe HL, Lake A, Firth R, Lehnerr M, Bayakly R, Copeland G, Wu XC, Stroup A, Roney D (eds). Cancer in North America, 2001-2005. Volume Two: Registry-specific Cancer Incidence in the United States and Canada. Springfield, Ill.: North American Association of Central Cancer Registries, Inc. May 2008.
- 8.2.6** Howe HL, Lake A, Firth R, Lehnerr M, Bayakly R, Copeland G, Wu XC, Stroup A, Roney D (eds). Cancer in North America, 2001-2005. Volume Three: Cancer Mortality Statistics for the United States and Canada. Springfield, Ill.: North American Association of Central Cancer Registries, Inc. May 2008.
- 8.2.7** Rodriguez G, Ma F, Federman D, Rouhani P, Chimento S, Multach M, Kirsner R. Predictors of skin cancer screening practice and attitudes in primary care. *Journal of the American Academy of Dermatologists*. 2007 Nov;57(5):775-81.
- 8.2.8** Ma F, Collado-Mesa F, Hu S, Kirsner R. Skin Cancer Awareness and Sun Protection Behaviors in White Hispanic and White Non-Hispanic High School Students in Miami, Fla. *Archives of Dermatology*. 2007;143(8):983-8.
- 8.2.9** Byers T, Wolf H, Bauer K, Bolick-Aldrich S, Chen VW, Flich J, Fulton J, Schymura M, Shen T, Hees SV, Yin X. The impact of socioeconomic status on cancer survival in the United States: Findings from the National Program of Cancer Registries Patterns of Care Study. *Cancer*. 2008; 113(3):582-591.
- 8.2.10** German R, Wike J, Wolf H, Schymura M, Roshala W, Shen T, Schmidt B, Stuckart E. The Quality of Cancer Registry Data: Findings from CDC-

NPCR's Breast, Colon, and Prostate Cancer Data Quality and Patterns of Care Study. *Journal of Registry Management*. 2008; 35:67-74.

8.3 Other Reports or Publications That Used Registry Data

- 8.3.1** Agency for Healthcare Research Quality (AHRQ) *2007 National Healthcare Quality Report*. Rockville, Md: U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality. February 2008. AHRQ Pub. No. 08-0040.
- 8.3.2** National Birth Defects Prevention Network (NBDPN). 2007. State Birth Defects Surveillance Program Directory. *Birth Defects Research Part A Clinical Molecular Teratology*. 79(12):815-74.
- 8.3.3** Curado MP, Edwards B, Shin HR, Storm H, Ferlay J, Heanue M and Boyle P, eds (2007) *Cancer Incidence in Five Continents, Vol. IX*. IARC Scientific Publications No. 160, Lyon, IARC.
- 8.3.4** 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.
- 8.3.5** U.S. Cancer Statistics Working Group. *United States Cancer Statistics: 2004 Incidence and Mortality*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; December 2007.
- 8.3.6** *Skin cancer by state*. State driven resource on Web site of SELF Magazine; April, 2008.
- 8.3.7** Wang F, McLafferty S, Escamilla V, and Luo L. Late-Stage Breast Cancer Diagnosis and Health Care Access in Illinois. *The Professional Geographer*. 60(1):54-69.
- 8.3.8** Larson T, Melnikova N, Davis J, Jamison P. Incidence and Descriptive Epidemiology of Mesothelioma in the United States, 199-2002. *International Journal of Occupational and Environmental Health*. 2007; 13:398-403.
- 8.3.9** Wingo PA, Tucker TC, Jamison PM, Martin H, McLaughlin C, Bayakly R, Bolic-Aldrich S, Colsher P, Indian R, Knight K, Neloms S, Wilson R, Richards TB. Cancer in Appalachia, 2001-2003. *Cancer*. 2008; 112:181-192.

- 8.3.10** Stewart SL, Wike JM, Foster SL, Michaud F. The incidence of primary fallopian tube cancer in the United States. *Gynecologic Oncology*. 2007; 107:392-397.
- 8.3.11** Barrett R, Cho Y, Weaver K, Ryu K, Campbell R, Dolecek T, Warnecke R. Neighborhood Change and Distant Metastasis at Diagnosis of Breast Cancer. New York, NY: *Annals of Epidemiology*. August 2007.
- 8.3.12** Howe H. *Cancer Research in Hispanic Populations*. Panel Presentation at Redes en Accion Steering Committee annual meeting. August 2007.
- 8.3.13** Howe H. Cancer Surveillance: *Yesterday, Today and Tomorrow*. Plenary presentation at CDC Cancer Conference. August 2007.
- 8.3.14** Zeig-Owens R, Knowlton R, Gershman ST, Howe HL. *CINA Highlights of Cancer Incidence and Mortality in the United States and Canada, 2000-2004*. Springfield, Ill.: North American Association of Central Cancer Registries; October 2007.
- 8.3.15** Wu XC, Chen VS, Andrews PA, Ruiz B, Correa P. Incidence of esophageal and gastric cancers among Hispanics, non-Hispanic whites and non-Hispanic blacks in the United States: subsite and histology differences. *Cancer Causes and Control*. August 2007; 18(6):585-93.
- 8.3.16** Goodman MT, Hernandez BY, Shvetsov YB. Demographic and pathological differences in the incidence of invasive penile cancer in the United States, 1995-2003. *Cancer Epidemiology Biomarkers and Prevention*. September 2007; 16(9):1833-9.
- 8.3.17** Carozza SE, Li B, Elgethun K, Whitworth R. Risk of childhood cancer associated with residence in agriculturally intense areas of the United States. *Environmental Health Perspectives*. April 2008; 116(4):559-65.
- 8.3.18** Yamamoto JF, Goodman MT. Patterns of leukemia in the United States by subtype and demographic characteristics, 1997-2002. *Cancer Causes and Control*, May 2008; 19(4):379-90.
- 8.3.19** Espey DK, Wu XC, Swan J, Wiggins C, Jim MA, Ward E, Wingo PA, Howe HL, Ries LA, Miller BA, Jemal A, Ahmed F, Cobb N, Kaur JS, Edwards BK. Annual report to the nation on the status of cancer, 1975-2004, featuring cancer in American Indians and Alaska Natives. *Cancer*. Nov 15, 2007; 110(10):2119-52.

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** Fornoff JE, Lehnerr M, Shen T. *Guidelines for Generating and Maintaining Public Use Microdata Files*. Epidemiologic Report Series 07:07 Springfield, Ill.: Illinois Department of Public Health; August 2007
- 8.4.2** Ma F, Shen T. *Invasive Breast Cancer Incidence Among Illinois Women, Temporal Trends 1990-2004*. Epidemiologic Report Series 08:01. Springfield, Ill.: Illinois Department of Public Health; February 2008.
- 8.4.3** Wamack J, Evans L. *Census of Fatal Occupational Injuries and Illnesses in Illinois, 2006*. Epidemiologic Report Series 08:02. Springfield, Ill.: Illinois Department of Public Health; February 2008.
- 8.4.4** Evans L, Wamack J. *Survey of Nonfatal Workplace Injuries and Illnesses Illinois, 2005*. Epidemiologic Report Series 08:03. Springfield, Ill.: Illinois Department of Public Health; April 2008
- 8.4.5** Ma F, Lehnerr M, Shen T. *Illinois Cancer Statistics Review and Update, 1986-2005*. Epidemiologic Report Series 08:05. Springfield, Ill.: Illinois Department of Public Health; June 2008.
- 8.4.6** Ma F, Lehnerr M, Shen T. *Illinois County Cancer Statistics Review Incidence 2001-2005*. Epidemiologic Report Series 08:04. Springfield, Ill.: Illinois Department of Public Health; June 2008.

8.5 Fiscal Year 2008 Presentations by Division Staff

Title	Event	Date
APORS-Case Identification and Completion of Form (in-service training)	Abraham Lincoln Memorial Hospital (Lincoln)	July 2007
APORS-Case Identification and Completion of Form (in-service training)	Trinity Medical Center (Rock Island)	July 2007
APORS-Case Identification and Completion of Form (in-service training)	Pekin Hospital	August 2007
APORS-Case Identification and Completion of Form (in-service training)	St. John's Hospital (Springfield) two sessions	August 2007

Title	Event	Date
IDPH Data Collection and Health Surveillance Activities (overview)	Chinese Health Delegation meeting (Chicago)	August 2007
APORS-Case Identification and Completion of Form (in-service training)	McDonough Hospital (Macomb)	September 2007
APORS-Birth Defect Prevention Activities (informational booth)	Prevention First's annual meeting (Rosemont)	September 2007
Cancer Surveillance and Registration (lecture to graduate students)	University of Illinois at Chicago's School of Public Health	September 2007
APORS-Case Identification and Completion of Form (in-service training)	Gateway Regional Medical Center (Granite City)	October 2007
APORS-Case Identification and Completion of Form (in-service training)	Richland Memorial Hospital (Olney)	October 2007
APORS-Case Identification and Completion of Form (in-service training)	St. Anthony's Medical Center (Effingham)	October 2007
APORS-Case Identification and Completion of Form (in-service training)	St. Francis Hospital (Litchfield)	October 2007
APORS-Case Identification and Completion of Form (in-service training)	St. John's Hospital (Springfield)	October 2007
APORS-Case Identification and Completion of Form (in-service training)	St. Mary's Health Center (St. Louis, Missouri)	October 2007
APORS-Birth Defect Prevention Activities (informational booth)	2007 Illinois Women's Health Conference (Oak Brook)	November 2007
Basic Epidemiology (demonstration to students)	Concordia Lutheran School (Springfield)	November 2007
APORS-Case Identification and Completion of Form (in-service training)	St. Anthony's Hospital (Rockford)	November 2007
APORS-Timeliness of reporting cases and recommendations for improvement (informational presentation)	Good Shepherd Hospital (Barrington)	January 2008

Title	Event	Date
APORS Operations Update and Reporting Changes (informational presentation)	St. John's Perinatal Network Regional Hospitals meeting (Springfield)	January 2008
APORS-Case Identification and Completion of Form (in-service training)	Fairfield Memorial Hospital	January 2008
APORS-Case Identification and Completion of Form (in-service training)	Good Samaritan Regional Health Center (Mt. Vernon)	January 2008
APORS-Case Identification and Completion of Form (in-service training)	Sarah Bush Lincoln Hospital (Mattoon)	January 2008
APORS-Illinois Experience in the Use of Abstractors and of Quality Assessment Activities	National Birth Defects Prevention Network's 2008 Conference (Washington, DC)	February 2008
APORS-Examining the Usefulness of Vital Record Data in Enhancing the Illinois Birth Defect Registry (poster presentation)	National Birth Defects Prevention Network's 2008 Conference (Washington, DC)	February 2008
APORS-Preventing Birth Defects and Promoting Healthy Pregnancies (workshop)	DuPage County Health Department (Wheaton)	April 2008
APORS-Case Identification and Completion of Form (in-service training)	Methodist Medical Center (Peoria)	April 2008
APORS-Case Identification and Completion of Form (in-service training)	Northwestern Memorial Hospital (Chicago)	April 2008
APORS-Case Identification and Completion of Form (in-service training)	Adventist Bolingbrook Hospital	April 2008
APORS-Case Identification and Completion of Form (in-service training)	Blessing Hospital (Quincy)	May 2008
ISCR-Basic Training Workshop	James R. Thompson Center (Chicago)	May 2008
ISCR-Purpose and History of the Illinois State Cancer Registry (informational presentation)	Southern Illinois Collegic Community Market College (Herrin)	May 2008
ISCR-Basic Training Workshop	St. Joseph's Hospital (Bloomington)	June 2008

Title	Event	Date
ISCR-Basic Training Workshop	Kishwaukee Hospital (DeKalb)	June 2008
APORS-Case Identification and Completion of Form (in-service training)	St. Joseph's Hospital (Bloomington)	June 2008

8.6 Research Data and Collaborations

Principal Investigator (Affiliation)	Title	Date	Funding Source
Katrina Armstrong, M.D., M.S.C.E., University of Pennsylvania	Segregation and Racial Disparities in Prostate Cancer	Completed 9/07	NCI
Lillian Pezzin, Ph.D., J.D., Medical College of Wisconsin	Incident Breast Cancer	Completed 5/07	NIH/NCI
Laura Rogers, M.D., M.P.H., Southern Illinois University School of Medicine	Exercise and Breast Cancer Survivors (Sangamon County)	Completed 7/04	SIU-SOM
Dick Warnecke, Ph.D., University of Illinois at Chicago	Neighborhood and Individual Effects on Stage at Diagnosis	Ongoing RCA 11/04	NCI
Robert Biggar, M.D., National Cancer Institute	National AIDS/Cancer Match Registry Project	Ongoing 01/06	NCI/NIH
Sally Urwin, Chicago Women's Interagency HIV Study (WIHS)	Women's Interagency HIV Study	Ongoing 03/06	NIH/NIAID
Lynn Rosenberg, Sc.D., M.S., Boston University, Sloan Epidemiology Center	Black Women's Health Study: A Follow-up Study	Ongoing 2/6/07	NIH/NCI
Frank Groves, M.D., M.P.H., University of Louisville, School of Public Health	Birth Characteristics and Risk of Childhood Acute Lymphoblastic Leukemia in Illinois	Ongoing 6/05	University of Louisville
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 2/08	NCI
Sujha Subramanian, Ph.D., RTI International	The Impact of State Medicaid Co-payment Policies on Access to Quality Cancer Treatment	Ongoing 4/08	ACS
Therese Dolecek, Ph.D., University of Illinois at Chicago	Pilot Study Evaluation of Breast Cancer Disparities Using Large Data Set Linkage	Ongoing 5/08	IDPH
Meir Stampfer, M.D., Dr. P.H., Channing Laboratory Brigham and Women's Hospital	Health Professionals Follow- Up Study/Nurses' Health Study I and II	Ongoing 1/04	NIH
Eugenia Calle, Ph.D., American Cancer Society	Cancer Prevention Study II	Ongoing 1995	ACS

Principal Investigator (Affiliation)	Title	Date	Funding Source
Yongping Hao, American Cancer Society, National Office	Trends in Colorectal Cancer Incidence Rate by County-level Poverty in U.S. 1995-2003	Ongoing 4/07	
Yongping Hao, American Cancer Society, National Office	Trends in Colorectal Cancer Incidence Rate by County-level Poverty in U.S. 1995-2004	Ongoing 4/07	
Jill Barnholtz-Sloan, Ph.D., Moffitt Cancer Center	Racial/Ethnic Differences in National Incidence Trends of Primary, Invasive Cervical Cancer. 1995-2004	7/07	
Bob Greenlee, Holly Howe, Ph.D., Marc Goodman, Chuck Lynch, Charles Platt (NAACCR Research Group)	Overview of Rare Tumors	7/07	
Frank Boscoe (GIS Committee), Chris Johnson, Holly Howe, Ph.D.	Training Tool for GIS	7/07	
Holly Howe, Ph.D., Brenda Edwards, Maria Schymura, Andy Lake	Ecologic Method to Estimate Specific Latino Subgroup Cancer Rates	8/07	
Christina Clarke Dur, Northern California Cancer Center (Greater Bay Area SEER)	Racial/Ethnic and Socioeconomic Variations in Breast Cancer Incidence Trends: U.S. and Canada, 1995-2004	10/07	
Marc T. Goodman, Hawaii Tumor Registry	Comparative Incidences of Fallopian Tube Cancer, Primary Peritoneal Cancer and Ovarian Cancer in the United States, 1995-2004	10/07	
David Stinchcomb, NCI	Geographic Patterns of Cervical Cancers in the United States: Incidence, Mortality, and Related Factors	11/07	
Mei Chin Hsieh, Louisiana Tumor Registry	Incidence Soft Tissue Sarcoma in Older Adolescents and Young Adults in the United States, 1995-2004	11/07	

Principal Investigator (Affiliation)	Title	Date	Funding Source
NAACCR	Creation of CINA+ Online Variable Data Set in SEER*Stat Format	5/07	
Brenda Edwards	Table of Lung/Bronchus by Histology	10/07	
Holly Howe, Ph.D.	Hispanic Data	7/07	
Holly Howe, Ph.D.	Cancer in the United States Hispanics: Not All Disparities Are Bad	11/07	
Holly Howe, Ph.D.	Cancer Registry Overview: Relative Risk Variables, availability and access	12/07	
Governor's Press Office	Health Statistics for Birth Defects, Very Low Birth Weight and Fetal Deaths for U.S. Compared to Other Place of Maternal Birth	7/07	
IDPH Hepatitis B Program	Demographic Information About Infants Exposed to Hepatitis B	7/25/07; monthly thereafter	
Doris Turner, IDPH	Measures of Disparity by Race/Ethnicity for APORS Outcomes	9/6/07	
Manoj Mohanty, Associate Professor Southern Illinois University Carbondale	Number of Adverse Pregnancy Outcomes and Premature Births, by County for 2003-2005 and 1998-2002.	10/15/07	
Kurt Fenton Director, Community Health and Prevention Peoria City/County Health Department	Number of Neural Tube Defects for 2001-2005	11/16/07	
Jennifer Upshaw Friend, Family Health Center	Number of APORS Cases, Children With Birth Defects, Deaths During Newborn, 2001-2003	11/27/07	
Mary Wright, Congressional Research Service	State Data on Heart Defects	12/12/07	

Principal Investigator (Affiliation)	Title	Date	Funding Source
Diana Grigsby-Toussaint, Assistant Professor, Kinesiology and Community Health, University of Illinois, Champaign	Maternal Characteristics of APORS Cases, 2001-2005 Combined, by Census Tract. Number of Cases by Birth Defect Categories.	1/7/08	
Beverly English, Chief Maternal-Infant Health, DHS	Number of Children Referred to DHS Who Died During Their First Year of Life, by Year and Race for 2001-2005	1/8/08	
Paul Winchester, Director of Neonatology, St. Francis Hospital and Health Centers, Indianapolis	Birth Defect Rates: All Birth Defects, and for Major Categories of Birth Defects for 1996-2002 by County.	2/19/08	
Jan Weber, Maternal Child Health Services Supervisor, McLean County Health Department	Rates of Defects in McLean County Plus a Breakdown of the Cardiovascular System Defects 2001-2005.	3/9/08	
Jessica Tencza, CDC, and Lisa Dye, M.Ed., March of Dimes, Illinois Chapter	CDC Rapid Ascertainment of Neural Tube Defects	9/25/07 and 3/31/08	CDC and March of Dimes
Diana Grigsby-Toussaint, Assistant Professor, Kinesiology and Community Health, University of Illinois Champaign	Poster Judging	4/10/08	
Kyle Garner, Bureau of Performance Support Services, DHS	Risk Factors for Having a Very Low Birth Weight Infant	4/15/08	
National Birth Defects Prevention Network	Number and Rate of Birth Defects for 2001-2005 Combined. Number and Rate of Trisomies by Maternal Age	6/26/08	
Lois Nelson, Director of Grant Procurement, Cystic Fibrosis Institute	Numbers and Rates of Cystic Fibrosis Cases in Illinois, Cook and the Collar Counties	6/11/08	
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), 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 FY2008.

Grant	Agency	Status
Occupational and Health Survey in Illinois (continuation)	BLS	Funded 08/07
Census of Fatal Occupational Injuries in Illinois (continuation)	BLS	Funded 08/07
Adult Blood Lead Epidemiology and Surveillance (continuation)	CDC	Funded 07/07
Cooperative Agreements for the Development of State-based Birth Defects Surveillance Programs and the Use of Surveillance Data for Public Health Programs (continuation) and seven-month cost extension	CDC	Funded 07/07 Funded 6/07
Perinatal Hepatitis B Program (submitted by IDPH, Division of Infectious Disease) (continuation)	CDC	Funded 01/08
National Cancer Prevention and Control Program-National Program of Cancer Care (new five-year project period)	CDC	Funded 07/07
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 \$1,768,697 in grant awards in fiscal year 2008. This is a 6 percent increase from FY07.

9.1.1 Occupational and Health Survey in Illinois

The Department received \$107,800 in August 2007 from the U.S. Bureau of Labor Statistics to support the ninth year of the Occupational and Health Survey (OSH) in Illinois. This project is described in Section 5.

9.1.2 Census of Fatal Occupational Injuries in Illinois

The Department received \$77,200 in August 2007 from the U.S. Bureau of Labor Statistics to support the 16th 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 2007, CDC contracted with the Department to provide quarterly data to the CDC, Adult Blood Lead Epidemiology, and Surveillance program. The Department received \$20,486 to provide the data for the seventh year of this agreement. The progress for this project is described in Section 5.

9.1.4 Improvement of Birth Defects Surveillance Programs

In July 2007, the Department was awarded \$190,000 from CDC for year five of a five-year project period to evaluate, improve and expand the state birth defects surveillance program (APORS). In June 2007, CDC awarded the Department \$110,833 to cover costs to extend the fifth year another seven months. The progress for this project is described in Section 4.

9.1.5 Perinatal Hepatitis B Program

The division received \$15,000 in January 2008 and \$5,000 in June 2008 to continue expansion of APORS surveillance and data collection 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 2007, CDC awarded the Department \$7.1 million in funding for the first year of a second five-year project period year of the National Cancer Prevention and Control Program. Although this was a new five-year project period, the awarded funds were 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 \$1,242,378 for the NPCR component, which is in its 13th 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 PC environment; and collect, code and computerize treatment data and occupation and industry information. The program for this project is described in Section 3.

10. CANCER REPORTING FACILITIES THAT HAVE NOT COMPLETED REPORTING FOR THE 2007 YEAR BY JULY 13, 2008

FACILITY NAME	CITY
900 North Surgical Center	Chicago
Advanced Radiation Oncology Center	Gurnee
Advocate Lutheran General Hospital	Park Ridge
Advocate South Suburban Hospital	Hazel Crest
Ambulatory Surgicenter of Downers Grove	Downers Grove
Anderson Hospital - Warren Billhartz Cancer Center	Maryville
Belleville Oncology Institute	Belleville
Bethany Advocate Hospital	Chicago
Blessing Hospital	Quincy
Breese Oncology	Breese
Community General Hospital Medical Center	Sterling
Cancer Treatment Center	Swansea
Carlinville Area Hospital	Carlinville
Center For Digestive Health	Bourbonnais
Clay County Hospital	Flora
Crawford Memorial Hospital	Robinson
Crossroads Cancer Center	Effingham
Edwardsville Ambulatory Surgery Center, LLC	Glen Carbon
Elmhurst Outpatient Surgery Center	Elmhurst
Eureka Community Hospital	Eureka
Evanston Northwestern Healthcare	Evanston
Fairfield Memorial Hospital	Fairfield
Franklin Hospital	Benton
Graham Hospital	Canton
Hammond-Henry District Hospital	Geneseo
Hardin County General Hospital	Rosiclare
Harrisburg Cancer Center Inc.	Harrisburg
Harrisburg Medical Center	Harrisburg
Healthsouth Surgery Center of Hawthorne	Libertyville
Hillsboro Hospital	Hillsboro
Hoffman Cancer Center	Joliet
Illini Community Hospital	Pittsfield
Illinois Regional Cancer Center	DeKalb
Ingalls Same Day Surgery	Tinley Park
Intercommunity Cancer Center-Western Illinois	Galesburg
Jackson Park Hospital and Medical Center	Chicago
Jacksonville Oncology Institute	Jacksonville
Jersey Community Hospital	Jerseyville
John and Mary E. Kirby Hospital	Monticello
John H. Stroger Jr. Hospital of Cook County	Chicago
Kendall Pointe Surgery Center	Oswego
Lakeshore Cancer Care	Chicago

FACILITY NAME	CITY
Lawrence County Memorial Hospital	Lawrenceville
Leonard C. Ferguson Cancer Center	Freeport
Lincoln Park Hospital	Chicago
Litchfield Oncology Institute	Litchfield
Loyola Ambulatory Surgery at Oak Brook	Oak Brook Terrace
Loyola University Medical Center	Maywood
Marion Health Care, LLC	Marion
Maryville Oncology	Maryville
Mason District Hospital	Havana
Massac Memorial Hospital	Metropolis
Memorial Hospital	Carthage
Memorial Hospital	Belleville
Memorial Medical Center	Springfield
Mercer County Hospital	Aledo
Mercy Hospital and Medical Center	Chicago
Methodist Medical Center of Illinois	Peoria
Michael Reese Hospital and Medical Center	Chicago
Midwest Medical Center	Galena
Naperville Surgical Centre	Naperville
North Shore Endoscopy Center	Lake Bluff
North Shore Radiation Oncology	Skokie
Northwest Surgicare Healthsouth	Arlington Heights
OSF Holy Family Medical Center	Monmouth
Our Lady Resurrection Medical Center	Chicago
Paris Community Hospital	Paris
Passavant Area Hospital	Jacksonville
Pekin Memorial Hospital	Pekin
Peoria ASTC/Soderstrom Dermatology	Peoria
Pinckneyville Community Hospital	Pinckneyville
Provena Covenant Medical Center	Urbana
Provena St. Joseph Medical Center	Joliet
Provident Hospital of Cook County	Chicago
Red Bud Regional Hospital	Red Bud
Rockford Endoscopy Center	Rockford
Roseland Community Hospital	Chicago
Rush Surgicenter	Chicago
Sacred Heart Hospital	Chicago
Saint Anthony's Health Center	Alton
Saint Joseph Hospital	Chicago
Sarah Bush Lincoln Health Center	Mattoon
Sarah Culbertson Memorial Hospital	Rushville
Sherman Hospital	Elgin
South Suburban Cancer Center	Hazel Crest
Southern Cook Radiation Treatment Center	Blue Island
Sparta Community Hospital	Sparta

FACILITY NAME	CITY
St. Anthony's Memorial Hospital	Effingham
St. Elizabeth's Hospital	Belleville
St. Francis Hospital	Litchfield
St. Francis Hospital and Health Center	Blue Island
St. James Hospital and Health Centers	Olympia Fields
St. Joseph's Hospital	Breese
St. Joseph's Hospital	Highland
St. Mary's Hospital	Decatur
Swedish American Hospital	Rockford
Swedish Covenant Hospital	Chicago
The Suburban Surgery Center of DuPage	Addison
Thorek Hospital and Medical Center	Chicago
Touchette Regional Hospital	Centreville
Trinity Hospital	Chicago
Union County Hospital District	Anna
University of Chicago Medical Center	Chicago
University of Illinois Medical Center at Chicago	Chicago
Valley Ambulatory Surgery Center	St. Charles
Valley Cancer Center	Spring Valley
Watertower Surgicenter, LLC	Chicago
Westlake Community Hospital	Melrose Park

11. ACRONYMS

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

ABDS	APORS Birth Defects Surveillance
ABLR	Adult Blood Lead Registry
ACS	American Cancer Society
AHRQ	Agency for Healthcare Research Quality
APORS	Adverse Pregnancy Outcomes Reporting System
ASTC	Ambulatory Surgical Treatment Center
BLS	Bureau of Labor Statistics
CDC	Centers for Disease Control and Prevention
CFOI	Census of Fatal Occupational Injuries
CINA	Cancer in North America
FOIA	Freedom of Information Act
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
IDPH	Illinois Department of Public Health
IHHSR	Illinois Health and Hazardous Substance Registry
IPLAN	Illinois Project for Local Assessment of Needs
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
NIOSH	National Institute for Occupational Safety and Health
NPCR	National Program of Cancer Registries
NTD	Neural Tube Defects
ODR	Occupational Disease Registry
OSH	Occupational Safety and Health Survey
OSHA	Occupational Safety and Health Administration
POC	Patterns of Care
PSA	Public Service Administrator
RCA	Rapid Case Ascertainment
RT	Radiation Therapy Center
VA	Veteran's Administration
VR	Division of Vital Records

