



State of Illinois  
Department of Public Health

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# Annual Report Illinois Health and Hazardous Substances Registry

July 2021 through June 2022

January 2023



Annual Report  
Illinois Health and Hazardous Substances Registry  
July 2021 through June 2022



A Report to Gov. JB Pritzker  
and the 103rd General Assembly  
from the  
Illinois Department of Public Health  
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Prepared by the  
Division of Epidemiologic Studies  
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## Table of Contents

Acronyms .....	iii
1. Executive Summary .....	1
<b>1.1 Illinois Health and Hazardous Substances Registry (IHHSR) Goal</b> .....	<b>1</b>
<b>1.2 Fiscal Year 2022 Highlights</b> .....	<b>2</b>
<b>1.3 Illinois Health and Hazardous Substances Registry Coordinating Council</b> .....	<b>3</b>
<b>1.4 Goals for Fiscal Year 2023</b> .....	<b>3</b>
2. Program Data .....	5
<b>Table 2.1 Registry Data Collection</b> .....	<b>5</b>
<b>Table 2.2 Registry Data Dissemination, Reports, and Publications</b> .....	<b>6</b>
3. Illinois State Cancer Registry .....	7
<b>3.1 Review and Evaluation of Fiscal Year 2022 Goals</b> .....	<b>7</b>
3.1.1 Maintain Completeness and Timeliness of Reporting of Cancer Incidence Cases to the Illinois State Cancer Registry.....	7
3.1.2 Maintain and Enhance Activities Related to Physician and Pathology Reporting.....	8
3.1.3 Provide Training for Reporting Facilities and for Central Registry Staff.....	8
3.1.4 Ensure Data Quality.....	9
3.1.5 Maintain Data Use Activities .....	9
3.1.6 Provide Adequate Program Management .....	10
<b>3.2 Fiscal Year 2022 Major Accomplishments</b> .....	<b>10</b>
3.2.1 North American Association of Central Cancer Registries Gold Certification .....	10
3.2.2 National Program of Cancer Registries (NPCR) Registry of Excellence .....	10
3.2.3 Collaboration with State and National Organizations.....	11
3.2.4 Quality Control Reports.....	12
<b>3.3 Goals for Fiscal Year 2023</b> .....	<b>12</b>
3.3.1 Maintain Completeness and Timeliness of Reporting of Cancer Incidence Cases to the Illinois State Cancer Registry.....	12
3.3.2 Maintain and Enhance Activities Related to Physician and Pathology Reporting.....	13
3.3.3 Provide Training for Reporting Facilities and for Central Registry Staff.....	13
3.3.4 Ensure Data Quality.....	14
3.3.5 Maintain Data Use Activities .....	14
3.3.6 Provide Adequate Program Management .....	15
4. Adverse Pregnancy Outcomes Reporting System .....	15
<b>4.1 Review and Evaluation of Fiscal Year 2022 Goals</b> .....	<b>16</b>
<b>4.2 Fiscal Year 2022 Major Accomplishments</b> .....	<b>17</b>
4.2.1 Addition of New Case Conditions.....	17
4.2.2 Enhancement of the APORS Database .....	18
COVID-19 in Pregnancy.....	18
4.2.3 Improved Birth Defects Surveillance.....	18
4.2.4 Evaluation of Case Management Services Provided to APORS Cases .....	19
4.2.5 Linkages with Other Programs and Activities.....	19
4.2.6 Quality Control Reports.....	21
<b>4.3 Goals for Fiscal Year 2023</b> .....	<b>21</b>
5. Occupational Disease Registry .....	22
<b>5.1 Adult Blood Lead Registry (ABLR)</b> .....	<b>23</b>
5.1.1 Fiscal Year 2022 Accomplishments .....	23
5.1.2 Interventions Resulting from ABLR Notifications of Elevated Lead Results.....	23
5.1.3 Goals for Fiscal Year 2023 .....	23
<b>5.2 Census of Fatal Occupational Injuries and Illnesses (CFOI)</b> .....	<b>23</b>
5.2.1 Review and Evaluation of Fiscal Year 2022 Goals .....	24
5.2.2 Goals for Fiscal Year 2023 .....	24

<b>5.3 Survey of Occupational Injuries and Illnesses (SOII) (formerly Occupational Safety and Health Survey)</b>	<b>24</b>
5.3.1 Review and Evaluation of Fiscal Year 2022 Goals .....	24
5.3.2 Survey Process and Achievements for Fiscal Year 2023.....	25
5.3.3 Goals for Fiscal Year 2023 .....	25
<b>5.4 Illinois Occupational Surveillance Program (IOSP)</b> .....	<b>25</b>
<b>Table 5.4.1 Occupational Health Indicators</b> .....	<b>26</b>
<b>Table 5.4.2 Hospitalizations and Emergency Department Visits for Pesticide Related Illness, Illinois, 2018-2019</b>	<b>27</b>
<b>Table 5.4.3 Classification of Occupational Pesticide Related Illness (PRI) cases by Pesticide Type* 2018</b> .....	<b>27</b>
6. Hazardous Substances Registry .....	28
6.1 Geocoding Process and Accomplishments .....	<b>28</b>
6.1.1 Geocoding Cancer and Birth Defects Data .....	28
Table 6.1.1.1 Percentage of IHHSR Reports with Complete Geocoding as of November 2021 .....	29
<b>6.2 Goals for Fiscal Year 2023</b> .....	<b>29</b>
7. Cluster Inquiries and Assessments .....	29
<b>7.1 Review and Evaluation of Fiscal Year 2022 Goals</b> .....	<b>29</b>
<b>7.2 Fiscal Year 2022 Accomplishments</b> .....	<b>29</b>
<b>7.3 Fiscal Year 2023 Objectives</b> .....	<b>30</b>
8. Research Program .....	30
<b>8.1 Fiscal Year 2022 Major Accomplishments</b> .....	<b>30</b>
8.1.1 Provision of Epidemiologic Support to IDPH Committees and Workgroups.....	30
8.1.2 Provision of Peer-Review Service to Scientific Publication .....	30
8.1.3 Provision of Epidemiologic Supervision and Tutoring.....	30
8.1.4 Publication of the IDPH Illinois Morbidity and Mortality Bulletin (IMMB).....	30
8.1.5 Technical Assistance.....	30
8.1.6 IDPH Institutional Review Board .....	31
<b>8.2 Scientific Publications in Fiscal Year 2022</b> .....	<b>31</b>
<b>8.3 Other Recent Reports or Publications That Used Registry Data</b> .....	<b>31</b>
<b>8.4 Epidemiologic Report Series</b> .....	<b>35</b>
<b>8.5 Fiscal Year 2022 Presentations by IDPH Division of Epidemiologic Studies Staff</b> .....	<b>35</b>
<b>8.6 Research Data Release and Collaborations</b> .....	<b>37</b>
9. Grants .....	39
<b>9.1 Funded Grants</b> .....	<b>39</b>
9.1.1 Survey of Occupational Injuries and Illnesses in Illinois (formerly Occupational Safety and Health Survey) .....	39
9.1.2 Census of Fatal Occupational Injuries in Illinois .....	40
9.1.3 National Cancer Prevention and Control Program.....	40
9.1.4 Perinatal Hepatitis B Program .....	40
9.1.5 Surveillance, Epidemiology, and End Results .....	40
9.1.6 COVID-19 in Pregnancy .....	40
9.1.7 Illinois Occupational Surveillance Program .....	41

## Acronyms

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### 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
ATSDR	Agency for Toxic Substances and Disease Registry
BLS	Bureau of Labor Statistics (U.S. Department of Labor)
CDC	U.S. Centers for Disease Control and Prevention
CFOI	Census of Fatal Occupational Injuries
FY	Fiscal Year
IBCCP	Illinois Breast and Cervical Cancer Program
ICCCP	Illinois Comprehensive Cancer Control Program
IDCFS	Illinois Department of Children and Family Services
IDHFS	Illinois Department of Healthcare and Family Services
IDPH	Illinois Department of Public Health
IHDDI	Illinois Health Data Dissemination Initiative
IHHSR	Illinois Health and Hazardous Substances Registry
IMMB	IDPH's Illinois Morbidity and Mortality Bulletin
IOSP	Illinois Occupational Surveillance Program
IRB	Institutional Review Board
ISCR	Illinois State Cancer Registry
NAACCR	North American Association of Central Cancer Registries
NAD	North American Datum
NAS	Neonatal Abstinence Syndrome
NBDPN	National Birth Defects Prevention Network
NCCR	National Childhood Cancer Registry
NCI	National Cancer Institute
NIH	National Institutes of Health
NIOSH	National Institute of Occupational Safety and Health
NPCR	National Program of Cancer Registries
ODR	Occupational Disease Registry
OSHA	Occupational Safety and Health Administration
SEER	Surveillance of Epidemiology and End Results
SOII	Survey of Occupational Injuries and Illnesses
VA	Veteran's Administration
VR	Division of Vital Records

## 1. Executive Summary

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The Illinois Department of Public Health's (IDPH) 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 includes 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 36<sup>th</sup> annual report and it describes major registry activities and accomplishments from July 2021 through June 2022 (FY22).

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 and health assessments at the state and local levels.
- 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.
- Promote high-quality research to provide better information for disease prevention and control.

### 1.1 Illinois Health and Hazardous Substances Registry (IHHSR) Goal

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The basic goal of the registry, according to the Act, is to develop and to 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 to use this information in decision making and public health policy development.

## 1.2 Fiscal Year 2022 Highlights

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- Received \$3.5 million in federal funds and nearly \$30 from other non-general state revenue sources, mostly through competitive processes, to support activities of the Division of Epidemiologic Studies.
- Collected detailed case reports on Illinois residents with 72,340 newly diagnosed cancer cases (2020), 11,195 children with adverse pregnancy outcomes (2019), 1,852 adult lead poisoning cases (2021), 35,071 representative non-fatal occupational disease and injury sample records (2020), and 154 fatal occupational injuries (2020).
- Dr. Tiefu Shen, who had been deputy director of the Office of Policy, Planning, and Statistics, and acting division chief since 2019, retired January 1, 2022. Dr. Jane Fornoff, Adverse Pregnancy Outcomes Reporting System manager, has been acting division chief since Dr. Shen's retirement.
- Responded to five requests for general information about the registry, 24 requests for epidemiologic reports and registry data, and eight special data requests or collaborations from outside researchers.
- Responded to six inquiries about perceived cancer excesses in local communities and neighborhoods.
- Prepared and submitted one grant proposal to support the registry's operations and research.
- Released five reports in the Epidemiologic Report Series and prepared two written reports for quality control studies of registry data.
- Authored or co-authored one scientific paper for a peer-reviewed journal.
- Data released by the registry were used in at least seven published studies by outside researchers.
- Data collected by the IHHSR were submitted to federal and other collaborating agencies and organizations to add to various national and international health surveillance data systems.
- Actively participated in national and statewide health programs; provided data, information, and epidemiologic support as needed.
- Referred Illinois children with adverse birth outcomes to programs that provide follow-up services.
- Referred 19 employees from 19 employers with elevated blood lead levels to the U.S. Occupational Safety and Health Administration (OSHA) for onsite inspection.
- Delivered presentations at five professional meetings.

- Provided leadership and management support to the IDPH Institutional Review Board (IRB), with two Division of Epidemiologic Studies staff serving as members -- one as vice chair and one as the IRB's standing coordinator.

### **1.3 Illinois Health and Hazardous Substances Registry Coordinating Council**

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The IHHSR Act lists the composition of the Health and Hazardous Substances Coordinating Council as follows: 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), and Public Health; and director of the Illinois Environmental Protection Agency. Due to time and budgetary constraints, the council did not have a face-to-face meeting in fiscal year 2022. Instead, the council reviewed and approved the annual report via written ballot.

### **1.4 Goals for Fiscal Year 2023**

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1. Continue to collect complete, timely, and high-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 Illinois with registry data and information.
4. Conduct activities stipulated or required by federal cooperative or research grants and contracts.
5. Pursue grants and other funding opportunities to sustain and to enhance the Division of Epidemiologic Studies' programs.
6. Conduct epidemiologic studies with registry data to provide information to the public health community and to policy makers.
7. Provide epidemiological data and information to federal, state, and local health education and intervention programs.
8. Work through the Division of Epidemiologic Studies Program Review and IDPH's Institutional Review Board (IRB) 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 the registry's certification status and data utilization.

## 2. Program Data

Tables 2.1 and 2.2 summarize the registry's data collection and dissemination activities for 2021 and compare 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 up to the time of this report and they do not reflect rate calculations that would require population denominators, nor case completeness that would require independent evaluations. Projections or forecasts for the future year also are included.

Table 2.1 Registry Data Collection

	Calendar 2016	Calendar 2017	Calendar 2018	Calendar 2019	Calendar 2020	Estimated 2021
<b>ISCR Invasive Neoplasms</b> (including bladder <i>in situ</i> )	70,210	70,440	69,575	71,070	72,340	73,400
Breast <i>in situ</i> female only	2,450	2,481	2,341	2,400	2,400	2,400
Brain – benign/borderline	2,668	2,714	2,587	2,000	2,400	2,400
<b>APORS Cases – All</b>	12,122	12,302	11,843	11,195	10,440 <sup>1</sup>	11,000
NBDPN children	2,821	2,755	2,789	3,774	4,060 <sup>1</sup>	3,750
# NBDPN birth defects	5,593	5,656	4,997	4,060	2,550 <sup>1</sup>	4,000
# Cases neonatal abstinence syndrome <sup>2</sup>				415	261 <sup>1</sup>	400
<b>Occupational Disease Reports</b>						
ABLR lead poisoning						
New reports	852	770	908	1,087	637	477 <sup>3</sup>
Total reports	2,918	2,463	2,580	2,970	2,076	1,852 <sup>3</sup>
<b>Occupational Fatality Cases</b>	171	163	166	184	154	170
<b>Occupational Safety and Health Survey<sup>4</sup></b>						
<b>Estimated Cases based on Sampling</b>	33,170	37,400	37,812	27,272	35,071	34,155
Sprains, strains	11,940	12,850	13,768	13,637	13,500	13,139
Bruises, contusions	2,580	2,790	2,994	2,900	2,900	2,833
Cuts, lacerations	2,810	4,590	3,382	3,300	3,500	3,516
Fractures	3,070	4,690	3,764	3,988	3,980	3,898
Multiple injuries	420	300	751	727	730	586
Carpal tunnel syndrome	290	240	335	275	275	283
Heat burns	530	560	494	498	535	523
Tendonitis	70	130	98	81	85	93
Amputations	300	190	217	213	220	228
Chemical burns	60	140	133	126	140	120
<b>Hazardous Substances</b>						
Geocoding registry cases	All	All	All	All	All	

<sup>1</sup> As of 8/25/22 – data are not complete

<sup>2</sup> APORS started reviewing medical records of infants with NAS in 2020

<sup>3</sup> Actual counts for 2020

<sup>4</sup> Private industries only. Cases with days away from work include those that result in days away from work with or without job transfer or restriction.

Table 2.2 Registry Data Dissemination, Reports, and Publications

	FY18	FY19	FY20	FY21	FY22	Estimated FY23
<b>Data Requests</b>						
General information	15	20	18	11	5	5
Data and reports	33	30	36	28	18	15
Cluster inquiries	9	8	1	3	6	5
Confidential data released and research collaborations	19	18	15	13	6	10
Confidential data applications	0	1	5	2	2	4
<b>Quality Assurance Studies</b>						
<i>Casefinding visits</i>						
ISCR	69	42	0	0	0	25
<i>Cases added from active casefinding</i>						
APORS <sup>1,2</sup>	14,163	11,395	12,142	9,899	4,877	10,000
ISCR <sup>3</sup>	1,182	917	0	0	0	300
<i>External audits of facility data</i>						
ISCR	0	1	2	2	3	2
<i>Internal quality control reports issued</i>						
APORS	4	4	4	2	2	3
ISCR	2	2	2	2	2	2
<b>Public Use Microdata Files</b>	5	5	5	5	5	5
<b>Publications</b>						
Epidemiologic report series	8	1	7	3	4	5
IMMB and other publications	1	1	1	1	0	0
Peer-reviewed publications	4	5	6	8	1	5
Publications by outside researchers	19	23	26	12	25	8
Oral/poster presentations	10	4	0	2	4	1
<b>Grant Proposals Funded</b>	5	5	5	7	6	1

<sup>1</sup> Represents additional birth defects identified and confirmed through the active case verification process where the medical records or previously submitted cases are reviewed.

<sup>2</sup> The APORS program carried out additional chart review in FY18-FY19 on infants born in 2015-2017 with Zika-associated birth defects in collaboration with the U.S. Zika Birth Defects Registry.

<sup>3</sup> Represents cases missed by hospital reporting but identified by ISCR during casefinding visits. COVID-19 required suspension of all in-person casefinding activities.

### 3. Illinois State Cancer Registry

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As the only population-based source for cancer incidence information in Illinois, the Illinois State Cancer Registry (ISCR) collects cancer incidence information 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 2019 diagnosis year, ISCR received reports from one Veteran's Administration (VA) facility in Illinois.

ISCR continues to require reporting facilities to submit data in an electronic format. There are currently 177 reporting hospitals in Illinois, and all are reporting electronically. Dermatologists and pathology labs have been set up with access to a web-based reporting system. Ambulatory centers and radiation therapy centers use either the free Abstract Plus reporting software or the Internet-based Web-Plus program.

The COVID-19 pandemic made it necessary for registry staff to move to a remote work setting on March 18, 2020. ISCR staff were well situated to this type of work environment as all data are received, processed, and produced electronically and have been for more than a decade. This is true of much of the cancer surveillance's work environment in the United States. Hospital cancer registrars often worked remotely prior to the pandemic and were easily adapted to continue cancer case capture and submission to ISCR. However, COVID-19 did require in-person training workshops and casefinding audits of reporting facilities to be canceled. ISCR was able to highlight available on-demand webinar coding training already present on the ISCR website and provide additional phone support to meet the training needs of cancer reporters. ISCR staff continue to complete all registry tasks and are on track for submission of 2020 diagnosis year data to SEER, the U.S. Centers for Disease Control and Prevention's (CDC) National Program of Cancer Registries (NPCR), and the North American Association of Central Cancer Registries (NAACCR) in November 2022.

ISCR became part of the NCI's Surveillance, Epidemiology, and End Results (SEER) Program in March 2021 and was awarded a contract totaling \$22,752,223, over seven years. As part of this contract, ISCR had the opportunity to migrate the Illinois cancer database to a new software system known as SEER\*DMS. ISCR began preparation activities in March 2022 and completed the successful migration of almost 2.8 million records to the new data system in June 2022.

#### 3.1 Review and Evaluation of Fiscal Year 2022 Goals

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

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- Met NAACCR gold certification standard for complete, accurate, and timely data for the 24<sup>th</sup> consecutive year.
- In-person casefinding visits for the 2020 diagnosis year were suspended due to the COVID-19 pandemic. However, case reporting was maintained as reporting facilities continued to submit cases for processing by ISCR staff.

- Completed interstate data exchange by transmitting 4,218 de-duplicated, edited state-specific cases to 11 states and received and processed 11,928 cases from 11 states.
- Completed death clearance for the 2019 death year and maintained a death certificate only rate of 0.9%. In total, 3,057 cancer diagnoses were followed with 371 letters or lists mailed to hospitals, physicians, nursing homes, and hospice centers.
- Added 78% of cases for the 2020 diagnosis year to the ISCR database by December 2021.
- Added 100% of cases for the 2019 diagnosis year to the ISCR database by December 2021.

### 3.1.2 Maintain and Enhance Activities Related to Physician and Pathology Reporting

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- Maintained reporting by physicians and pathology labs.
- Expanded reporting by physicians in Illinois by 5% through focused targeting and training.

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

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- In-person training was canceled due to the COVID-19 pandemic.
- Provided on-demand access to 30 training webinars on a variety of topics through the ISCR training website, including access to cancer site-specific coding training from NAACCR.
- Provided on-demand access to a nine-part "Introduction to Cancer Reporting" webinar training series available to cancer reporters across the state.
- Provided on-demand access to a melanoma coding webinar designed specifically for dermatology clinics.
- Provided individual phone or email support for 1,385 requests related to technical support and reporting issues.
- Attended the national educational conferences of the National Cancer Registrars Association and the NAACCR, along with the SEER Advanced Workshops, which were held virtually due to the COVID-19 pandemic.
- Certified tumor registrar staff attended the virtual annual educational conference sponsored by the Cancer Registrars of Illinois.
- Provided access to 30 advanced training workshops for reporters via WebEx® utilizing nationally developed advanced training materials.

- Provided limited individual training conducted by the quality control field staff via phone, as necessary.
- Provided ongoing educational opportunities for central registry staff through participation in 12 nationally broadcast education webinars.

### 3.1.4 Ensure Data Quality

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- Maintained a duplicate rate of fewer than 1 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 22,353 cases with an unknown or missing race, 597 (2.7%) cases were matched and updated with a valid race. Maiden name: 20,123 (4%) cases were matched and updated with valid maiden names. Hispanic origin: 157 cases, or 1.3%, were matched and updated with valid data element codes for Hispanic origin. Birthplace: of 607,892 cases with unknown or missing birthplace, 22,219 (3.7%) cases were matched and updated with a valid birthplace. Updated death variable information.
- Added census tract information to the cancer database. All records were geocoded using MapMarker® Version 31; 93.9% of the addresses were geocoded to an address specific level.
- Ensured override flags were within the NPCR average by reviewing the NPCR Data Evaluation Reports revealing that the percentage of override flags in the ISCR submission file were lower for all associated edits than the NPCR median.

### 3.1.5 Maintain Data Use Activities

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- Produced annual cancer statistics, including public use data files, annual state cancer incidence and mortality reports, annual county cancer incidence report, and updated the cancer query system.
- Provided general cancer information for cancer inquiries and conducted cancer assessments when there was evidence of long environmental contaminations by carcinogens.
- Provided data for the Illinois Comprehensive Cancer Control Program (ICCCP).
- Provided data for the Illinois Breast and Cervical Cancer Program (IBCCP).

- Formed the Illinois Cancer Coalition in conjunction with the ICCCP and IBCCP to foster collaboration, cooperation, and data-driven practices among programs within IDPH that impact cancer prevention and control.
- Produced two quality control reports.
- Updated incidence projections.
- Submitted 1,745,976 cases to NPCR and NAACCR for the 1995-2019 diagnosis years call for data in November 2021.
- Submitted 1,497,487 cases to SEER for the 2000-2020 diagnosis years call for data in November 2021.
- Submitted 50,132 cases to NPCR and NAACCR for the 2020 diagnosis year call for data in November 2021.
- Submitted 98,141 cases to SEER for the National Childhood Cancer Registry 1995-2019 diagnosis years call for data in November 2021.
- Submitted 1,516,481 cases to SEER for the 2000-2021 diagnosis years call for data in February 2022.

### 3.1.6 Provide Adequate Program Management

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- Kept registry staff informed of grant progress, standards change, and reporting issues through monthly staff meetings.
- Monitored registry operations activities to meet grant objectives via an electronic tracker and streamlined registry operations through more efficient use of staff and resources.

## 3.2 Fiscal Year 2022 Major Accomplishments

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### 3.2.1 North American Association of Central Cancer Registries Gold Certification

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For the 24<sup>th</sup> 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% or better completeness of case ascertainment; 98% validity of information recorded for selected data variables (age, sex, race, and state/county); death-certificate only cases less than 3%; duplicate primary cases fewer than 1 per 1,000; 100% 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 National Program of Cancer Registries (NPCR) Registry of Excellence

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The Registry of Excellence recognition was again suspended by NPCR for the 2021 NPCR data submission due to delayed national implementation of data

collection requirements associated with cases diagnosed in 2018. The delayed implementation was considered beyond registry control by NPCR. Nevertheless, ISCR met all standards associated with the Registry of Distinction quality standard indicating complete, timely, and high-quality data available for cancer control activities.

### 3.2.3 Collaboration with State and National Organizations

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#### 3.2.3.1 Illinois Comprehensive Cancer Control Program - Illinois Department of Public Health (IDPH)

IDPH has implemented the Comprehensive Cancer Control State Plan, which identified cancer prevention and control priorities for Illinois. Several Division of Epidemiologic Studies staff provided technical and operational support for the program through committee participation.

#### 3.2.3.2 Vital Records – IDPH

Death certificate data from the IDPH 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 file 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 seen at their facilities.

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

#### 3.2.3.3 North American Association of Central Cancer Registries

ISCR provided comprehensive data from 1995-2019 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.



**3.2.3.4 National Program of Cancer Registries (NPCR)**

ISCR submitted comprehensive data from 1995-2019 to the CDC NPCR 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.

**NCI's Surveillance, Epidemiology, and End Results (SEER) Program**

ISCR submitted comprehensive data from 2000-2020 to the SEER call for data in November 2021 and again for diagnosis years 2000-2021 in February 2022 in accordance with the NCI/SEER contract. These bi-annual data submissions contribute Illinois data to the national cancer surveillance effort and include Illinois in all SEER data products.

**NCI's National Childhood Cancer Registry (NCCR)**

The NCCR is a public health surveillance data resource with the primary goal to better understand the causes, outcomes, effective treatments, and the later effects of cancer among children, adolescents, and young adults in the U.S. ISCR submitted data from 1995-2020 to this effort for the November 2021 call for data.

**3.2.3.5 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.

**3.2.3.6 CDC Agency for Toxic Substances and Disease Registry (ATSDR)**

ISCR is participating in the pilot of a multi-site investigation into cancer incidence in people living near ethylene oxide emitters. This is in conjunction with CDC and ATSDR.

**3.2.4 Quality Control Reports**

**3.2.4.1** Redeford B. *Assessment of Duplicate Records for 1995-2019 Diagnosis Years*. Quality Control Report Series 21:03. Springfield, Ill.: Illinois Department of Public Health, October 2021.

**3.2.4.2** Squires, K. *Linking Illinois State Cancer Registry Records with Vital Records Death Master File to Enhance Data Completeness*. Quality Control Report Series 21:04. Springfield, Ill.: Illinois Department of Public Health, October 2021.

**3.3 Goals for Fiscal Year 2023****3.3.1 Maintain Completeness and Timeliness of Reporting of Cancer Incidence Cases to the Illinois State Cancer Registry**

- Perform limited facility case finding for the 2021 diagnosis year at selected reporting facilities in Illinois and track identified missed cases to ensure reporting when circumstances permit (COVID-19).
- Maintain interstate data exchange and complete exchanges by October 2022.
- Continue death certificate clearance and maintain a death certificate only rate of less than 1.5%.
- Achieve 98% case reporting for the 2021 diagnosis year by February 2023.
- Achieve 100% case reporting for the 2020 diagnosis year by October 2022.

### 3.3.2 Maintain and Enhance Activities Related to Physician and Pathology Reporting

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- Maintain contact with existing physician offices for reporting and training (n=144).
- Maintain contact with existing pathology labs for reporting and training (n=16).
- Expand reporting of physician offices in Illinois by identifying offices, training personnel, and implementing reporting for those not currently submitting cases to ISCR.
- Perform facility case finding and implement any additional training needed at newly reporting physician offices in Illinois when circumstances permit (COVID-19).

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

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- Develop, update, and maintain a cancer reporting training website for Illinois cancer reporters.
- Provide individual phone support for technical and operational issues from cancer incidence reporters and reporting facilities.
- Provide monthly advanced training workshops via the web, utilizing established seminars.
- Provide on-demand basic training webinars for cancer reporting.
- Provide on-demand staging training webinars for cancer reporting.
- 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

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- Maintain duplicate rate of less than 0.01% using MatchPro to review submissions for duplicate tumor reports and apply NAACCR duplicate protocol.
- Meet SEER/NPCR/NAACCR standards for data quality and override flags.
- Perform sex verification using established ISCR procedure.
- Apply SEER, 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's death file.
- Geocode all records on the ISCR database.
- Update case vital status via linkage with the National Death Index.

### 3.3.5 Maintain Data Use Activities

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- Produce public use data set files, annual state and county incidence reports, annual state mortality report, and update cancer query system.
- Respond to cluster inquiries.
- Provide data and support for IBCCP and ICCCP.
- Perform linkage with IBCCP and update data files.
- Produce two epidemiologic reports.
- Produce a publication for the layperson on cancer in Illinois.
- Perform linkage with Indian Health Services and update code for Native American race.
- Process applications for confidential data.
- Update incidence and mortality projections.
- Provide data to the National Childhood Cancer Registry and participate in associated linkage and research activities.
- Submit the 1995-2020 SEER/NPCR/NAACCR/NCCR files for the annual call for data. Submit the 2021 data file for NPCR/NAACCR call for data in November and the 2022 data file for SEER call for data in February.
- Provide assistance to IDPH with the COVID-19 response as required.

### 3.3.6 Provide Adequate Program Management

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- Hold monthly staff meetings.
- Monitor grant activities.
- Update advisory committee on grant progress and activities.

## 4. Adverse Pregnancy Outcomes Reporting System

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The Adverse Pregnancy Outcomes Reporting System (APORS) collects information on Illinois infants and young children 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 to refer children who require special services to correct and to prevent developmental problems and other disabling conditions.

Mandated statewide data collection began in August 1988. Licensed Illinois hospitals are required to report adverse pregnancy outcomes to APORS. In addition, APORS receives reports from four hospitals in St. Louis 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; shows signs and symptoms of drug toxicity or withdrawal; or the mother admits to illegal drug use, or cannabis use, during the pregnancy.
- The infant or young child (less than 2 years of age) 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 was born at less than 31 completed weeks of gestation.
- A neonatal or fetal death has occurred.

The ongoing COVID-19 pandemic has kept registry staff working remotely, with occasional short trips to the central office to scan incoming paper reports and fax chart requests to hospitals. Data collection has continued as normal. COVID-19 still prevents in-person training workshops.

The APORS manager is contributing to the IDPH COVID-19 response as the lead for the IDPH modeling and data teams and providing additional assistance with analyses. She is also overseeing a temporary staff member who is abstracting maternal and infant records where the mother contracted COVID-19 during her pregnancy. Data are being entered using software known as REDCap (Research Electronic Data Capture) and are being provided to the CDC's COVID-19 mother and infant registry. These responsibilities are time-consuming and, as a result, some planned activities have been delayed.

## 4.1 Review and Evaluation of Fiscal Year 2022 Goals

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### *Improve Casefinding*

- Eighty-three (85.6%) of the 97 birth facilities that are part of the Illinois Perinatal Network have been trained on and are using the APORS database; 91.8% of cases were reported to APORS electronically. The database automatically generates APORS case reports for newborns who are premature ( $\leq 30$  completed weeks); are part of triplet or higher order births; who have a serious infection, birth defect, or seizures marked on the birth certificate; or who die before the birth certificate is filed.
- While webinars have been suspended because of the COVID-19 pandemic, training in APORS reporting continued through formal on-line trainings, use of the SharePoint® site for hospital staff, computer-based trainings, conversations with hospital staffs, and responses to emailed questions.
- Provided 12 trainings by phone or WebEx call and held 1,657 consultations via telephone or email with Illinois hospitals to improve APORS reporting.
- Updated the SharePoint® site with revised manuals and appendices and the most recent of the quality control reports; reminders were posted when patterns of problems are identified.
- Reviewed the medical records of 452 infants identified from hospital discharge data; 71.0% of these cases were found to have conditions that meet the APORS review criteria.
- Reviewed charts of 992 mothers who experienced a fetal death to determine whether any birth defects were associated with the fetus. Of the reviewed charts, 9.7% were confirmed to be cases meeting the APORS case criteria. In FY22, four genetic clinics have reported 111 mothers carrying babies with prenatally suspected significant birth defects. Of these reports,
  - Seven were ruled out as cases by subsequent testing.
  - Eighty-four were subsequently matched to live births or fetal deaths reported to APORS.
  - Three were live-born cases that had not been identified from another source.
  - Three were not reported to APORS and case finding is being done to identify potential conditions.
  - Six are likely miscarriages or terminations.
  - Five were not reported to APORS, and no follow-up is being done because their prenatal screening tests indicated that the condition was possible, but not likely.
  - Two are not yet due to be born.
  - One was not reported to APORS because the mother is not an Illinois resident.

### *Improve Quality of APORS Data*

- Evaluated the timeliness of hospital reporting for cases reported in January through December 2021; provided hospital-specific feedback and used results to identify hospital training needs. In 2021, 81.8% of hospitals met the APORS timeliness standard of reporting cases within seven days of infants' hospital discharge. This is a substantial improvement over the 73.3% of hospitals that were compliant in 2020 and is similar to the 81.6 rate seen in in 2019. Hospitals are notified twice yearly of their timeliness status and provide more intensive education to facilities that are non-compliant.
- Evaluated the rates of hospital reporting in 2020. The case reporting rates ranged from 0.0% to 18.6% with the average being 6.5%. This degree of variation is not unexpected, since hospitals providing the highest level of care have the most cases to report.
- APORS aims to complete active case verification for a birth cohort during the following year. Case verification for the 2019 birth cohort was completed on time in December 2021.
- Abstractors reviewed 440 charts of infants suspected to have neonatal abstinence syndrome (NAS), following the Council of State and Territorial Epidemiologists' recommendations. Of these, 99.0% were confirmed to have NAS. Another 29 cases were identified during chart review for other conditions.
- Hospitals are contacted if a report is incomplete or is internally contradictory. These contacts are used as training opportunities when appropriate. If hospital staffs are unaware that reports have been automatically generated by the APORS database, APORS staff notifies them and asks for the reports to be completed.

### *Improve Program Effectiveness*

- The APORS SharePoint® sites have been updated with revised manuals, appendices, and quality control reports. Hospitals and local health departments can also access the forms to request additional materials.
- 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.
- The APORS program worked with IDPH, state, and local programs to assure the ongoing provision of perinatal services for high-risk infants.
- A surveillance report examining the prevalence of birth defects and other adverse pregnancy outcomes were published to the Division of Epidemiologic Studies website.

## **4.2 Fiscal Year 2022 Major Accomplishments**

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### **4.2.1 Addition of New Case Conditions**

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On February 1, 2022, new administrative rules were promulgated that added three prenatal conditions to the APORS case definition. These were cannabis exposure, Hepatitis C exposure, and HIV exposure. Referrals for prenatal cannabis and Hepatitis C exposure are made to the DHS's High-risk Infant Follow-up Program. Referrals for HIV exposure are made to the IDPH HIV/AIDS Section.

#### 4.2.2 Enhancement of the APORS Database

##### COVID-19 in Pregnancy

The APORS program has been collaborating with the IDPH Office of Health Protection's Division of Infectious Diseases, and the IDPH Office of Women's Health and Family Services, to better understand the impact of COVID-19 on pregnancy. APORS staff and contractual abstractors reviewed medical records from 2,590 mothers who had COVID-19 during their pregnancy and the medical records for their babies. They have collected data about the mothers' health, pregnancies, and COVID-19 experiences; the infants' health at delivery and newborn stays; and COVID-19 testing for both. The data are being submitted to CDC for national level analysis and are also being analyzed by the IDPH Office of Women's Health and Family Services at the Illinois level.

#### 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 abstractor staff members, who then reviewed the infants' medical charts, verified the presence of birth defects, eliminated false positives, and collected additional diagnoses. In FY22, the abstractors reviewed reports of 4,799 birth defects submitted by hospitals. The table shows the disposition of the conditions reviewed by the APORS staff.

Source	Reported	Confirmed	Deleted
Hospital Nursery Reporting	3,249	2,117	1,132
Hospital Discharge Data	1,569	1,403	166
Chart Review	0	4,877	0
Any Source	4,799	8,397	1,298

Abstractors deleted 75 reported birth defects that could not be found in the charts, or that had been ruled out by the facility. Another 979 were not collected because the infant did not have a collected birth defect or because the birth defect did not meet specific criteria (often conditions considered normal in a premature infant). Some conditions were deleted because they were included as parts of confirmed complex conditions (225). The remaining 19 conditions were deleted for other reasons.

Case abstraction for 2019 birth cohort was completed in December 2021. The goal is to be complete within two years of the birth year.

#### 4.2.4 Evaluation of Case Management Services Provided to APORS Cases

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Home nursing visits have been suspended during the COVID-19 pandemic. Services have been offered by telephone where community health agencies had the resources to do so. A survey to evaluate case management services was not undertaken this year.

#### 4.2.5 Linkages with Other Programs and Activities

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##### 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. Most (10,539) infants were referred for contacts by local health department nurses. Counseling for parents are provided through the nurse visits, and referrals to necessary services were offered where possible. Included are 49 children with neural tube defects, whose families were referred for prevention counseling.

**4.2.5.1.2 IDPH Division of Infectious Diseases.** APORS identified infants for the IDPH Division of Infectious Diseases' sexually transmitted disease (81 newborns) and perinatal hepatitis B programs (188 newborns), which ensure infants with congenital syphilis and infants prenatally exposed to or diagnosed with a hepatitis B infection are offered services.

**4.2.5.1.3 IDPH Craniofacial Anomaly Program.** Data on infants born with cleft lip and/or palate (142 newborns) were supplied to the IDPH Division of Oral Health Craniofacial Anomaly Program to ensure these infants receive appropriate services at multidisciplinary clinics throughout the state.

**4.2.5.1.4 University of Illinois at Chicago Division of Specialized Care for Children (DSCC).** APORS refers newborns to the DSCC 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 FY21, APORS referred 3,792 cases.

**4.2.5.1.5 Illinois Department of Human Services Early Intervention Program (EI).** APORS refers newborns to the EI for free developmental services. The infants have, or are suspected of having, a condition that will



impact their intellectual or physical development. The conditions include brain, spinal, visual, auditory, craniofacial, and chromosomal defects. In FY21, APORS referred 1,503 cases.

**4.2.5.1.6 IDPH's Newborn Metabolic Screening (NMS) Program.** APORS refers newborns reported to the program with possible metabolic conditions to IDPH's NMS Program. This program assures children receive timely follow-up for these severe conditions. A number of children with hypothyroidism, previously unknown to the NMS program, have been identified. In FY21, APORS referred 101 cases.

**4.2.5.1.7 Illinois Department of Children and Family Services (DCFS).** Data are provided to DCFS monthly through the IHFS data warehouse. The data are pulled into individual eHealth Passports that travel with children in DCFS custody as they move between placements. This helps assure children receive the services they need in a timely manner.

**4.2.5.1.8 Illinois Department of Healthcare and Family Services (IDHFS).** APORS data are provided monthly to IDHFS for inclusion in the Enterprise Data Warehouse. This links APORS surveillance data to case management and public aid data. Before confidential APORS data can be accessed by anyone outside the program, requests are reviewed through the Division of Epidemiologic Studies' centralized review process. Any concerns about the application are then referred back to the researcher; once these are addressed, the application is submitted for IRB approval.

#### **4.2.5.2 National Birth Defects Prevention Network (NBDPN)**

APORS staff contributed data to and participated in a number of analyses. The APORS manager, Jane Fornoff, and data manager, Theresa Sandidge, served on the NBDPN Data Committee. The abstractor liaison, Jodi Snow, served on the NBDPN Surveillance Guidelines and Standards and the Surveillance Guidelines committees.

#### **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. Administrators also were kept notified about the need to provide remote access to electronic medical records and the new APORS data system.

#### 4.2.5.4 Pregnancy Risk Assessment Monitoring System (PRAMS)

The APORS manager served on the PRAMS Steering Committee. The committee provided recommendations about the questions that should be retained, added, or dropped from the PRAMS questionnaire.

### 4.2.6 Quality Control Reports

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**4.2.6.1** Sandidge T. *Rates of Hospital Reporting of Adverse Pregnancy Outcomes in 2020*. Quality Control Report Series 22:01. Springfield, Ill.: Illinois Department of Public Health, January 2022.

**4.2.6.2** Lingleo L, Sandidge T. *Timeliness Study – Hospital Reports of Adverse Pregnancy Outcomes Received in 2021*. Quality Control Report Series 22:01. Springfield, Ill.: Illinois Department of Public Health, January 2022.

## 4.3 Goals for Fiscal Year 2023

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### *Improve Casefinding*

- Train and support hospitals in the use of the APORS database to ensure cases automatically generated by the database (premature infants, triplet, or higher order births and those with birth defects marked on the birth certificate) are completed in a timely manner.
- Enhance the SharePoint® site for hospital staff to include materials that supplement face-to-face and telephone consultation and training offered by APORS staff.
- Match information from bi-annual hospital discharge information reports to the APORS newborn cases and identify potential birth defect cases and NAS cases.
- Review medical reports of infants identified in hospital discharge matching to ascertain and collect new birth defect cases.
- Explore the use of hospital discharge data to ascertain infants with prenatal birth defect diagnoses, and women with early induction of labor or excessive vaginal bleeding to ascertain new birth defect cases. (Postponed from FY21 due to both the APORS manger and the data steward providing the hospital discharge data being extensively involved in the IDPH COVID-19 response).
- Review maternal medical records where the pregnancy ended with a fetal death to ascertain and collect new birth defect and NAS cases.

- Recruit additional genetic clinics to increase prenatal case findings.

#### *Improve Quality of APORS Data*

- Evaluate the accuracy of hospital reporting in terms of timeliness, completeness, 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 identified as problem reporters in terms of timeliness, accuracy, or case completeness.
- Obtain hospital discharge data for infants with NAS to identify additional cases for chart review for infants suspected of having NAS to improve surveillance (Postponed from FY21 due to both the APORS manger and the data steward providing the hospital discharge data being extensively involved in the IDPH COVID-19 response).
- Implement an annual training plan for APORS abstractors.

#### *Improve Program Effectiveness*

- Enhance SharePoint® sites for hospitals and community health agencies that contain relevant reference and training materials for the different groups.
- Maintain linkages with key organizations, such as the Illinois perinatal networks and the National Birth Defects Prevention Network.
- Collaborate with IDPH, state, and local health department programs to assure the provision of perinatal services for high-risk infants.
- Continue the collaboration with CDC to provide data to the U.S. COVID-19 mother and infant registry.
- Produce statewide and county surveillance reports.

## **5. Occupational Disease Registry**

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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).

The COVID-19 pandemic required registry staff to move to a remote work setting on March 18, 2020. Because of the pandemic, many businesses were closed (temporarily or permanently) or their staff were also working remotely and did not have access to the information required to

complete the survey. Although the U.S. Bureau of Labor Statistics provided a remotely accessible portal for the survey, staff were unable to make and to receive phone calls and faxes remotely. To compensate for this, ODR staff returned to the central office on a rotation that ensured recommendations for social distancing were maintained.

## 5.1 Adult Blood Lead Registry (ABLR)

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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 site inspections and/or interventions. The Illinois Administrative Code 77 Ill Adm Code 840 defines elevated blood levels as 10  $\mu\text{g}/\text{dL}$  or higher. Laboratories are mandated to report results at or above this level. This program does not have federal or dedicated state funding. ABLR staff maintain a database of blood lead levels of 10  $\mu\text{g}/\text{dL}$  and higher and refer employers with an employee with a blood lead level of at least 40  $\mu\text{g}/\text{dL}$  to OSHA in accordance with the memorandum of understanding. In calendar year 2021, 1,852 new lab reports were added to the ABLR database.

### 5.1.1 Fiscal Year 2022 Accomplishments

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- Notified OSHA quarterly of 19 companies that had, between them, 19 employees with elevated blood lead levels of  $\geq 40 \mu\text{g}/\text{dL}$ .
- Notified OSHA within 24 hours of three cases with an elevated blood lead level of  $\geq 60 \mu\text{g}/\text{dL}$ .

### 5.1.2 Interventions Resulting from ABLR Notifications of Elevated Lead Results

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In calendar year 2021, the quarterly ABLR reports to OSHA led to no safety inspections in Illinois.

### 5.1.3 Goals for Fiscal Year 2023

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- Notify OSHA quarterly of any company that has employees with elevated blood lead levels equal to or greater than 40  $\mu\text{g}/\text{dL}$ .
- Notify OSHA within 24 hours of any case with an elevated blood lead level equal to or greater than 60  $\mu\text{g}/\text{dL}$ .

## 5.2 Census of Fatal Occupational Injuries and Illnesses (CFOI)

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

In 2020, Illinois CFOI recorded 135 work related deaths. Beginning in 2012 and moving forward, BLS ceased collecting work-related illness fatalities. BLS has determined that because the capture of illnesses cannot be comprehensive, they would prefer staff spend time collecting and verifying injuries only. CFOI staff currently use several methods of capturing data for the annual reporting of injuries. They currently use a news reporting service that scours local news agencies for potential workplace death; the Illinois Vital Records tags and reports any death certificate that are marked workplace injury; quarterly OSHA reports provided by BLS; National Highway Transportation and Safety Administration annual spreadsheet; and coroner and medical examiner case fatality form.

### 5.2.1 Review and Evaluation of Fiscal Year 2022 Goals

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- Completed the summary report of the 2020 fatal occupational injury data. The report is currently under IDPH review and has not been published.
- 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 2023

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- Publish an enhanced summary report of the 2021 fatal occupational injury data.
- Meet the deadlines for data completion required by BLS.

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

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SOII focuses on surveillance of non-fatal workplace injuries and illnesses. The Illinois SOII is supported through a cooperative agreement between the state and the BLS. The Illinois data are pooled with data collected by 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 and specifically 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 2022 Goals

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- Submitted data files on all reported occupational injuries and illnesses of the surveyed companies to the BLS.
- Collected, coded, and entered all 2021 data prior to BLS deadlines.

### 5.3.2 Survey Process and Achievements for Fiscal Year 2023

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In January 2022, BLS and ODR sent survey forms to a sample of 4,790 private and 360 public employers for 2021 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 and email to solicit data. The final, overall survey response rate was 85%, which met the cooperative agreement minimum requirement for data publication at the time of this report.

In early 2022, many of the companies contacted were working remotely. This made data collection difficult as many of the contacts did not have the required information at home. As the survey proceeded, many returned to the workplace and data collection improved. The pandemic also closed many establishments permanently or temporarily, which meant that less data was collected than had been expected when the sample was selected.

### 5.3.3 Goals for Fiscal Year 2023

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- Continue all data collection activities in FY23 and maintain the high standards achieved by the program.
- Complete the descriptive report of 2022 Survey of Occupational Injuries and Illnesses (SOII).
- Meet the deadlines assigned by BLS.

## 5.4 Illinois Occupational Surveillance Program (IOSP)

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The Illinois Occupational Surveillance Program (IOSP; [illinoisinjuryprevention.org](http://illinoisinjuryprevention.org)) is a NIOSH-funded worker surveillance program housed at UIC School of Public Health that operates in collaboration with IDPH and other state agencies. IOSP serves as the bona fide agent of IDPH in this grant program. IOSP is ending the first year of funding of a five-year cycle and will continue to collaborate with the Occupational Surveillance Program, as well as the Illinois Partnership for Safety, managed by IDPH under the CDC's Injury and Violence Prevention program.

Table 5.4.1 Occupational Health Indicators

	2017	2018	2019	2020
Number of employed persons, >16 years	6,156,000	6,196,000	6,197,000	5,677,000
Percentage of civilian employed by industry				
Mining and logging	0.2	0.3	0.1	0.1
Construction	5.1	5.8	5.5	5.6
Manufacturing: Durable goods	7.6	7.2	7.3	6.7
Manufacturing: Nondurable goods	5.3	4.3	4.7	4.7
Wholesale and retail trade	13.4	13.2	11.3	12.3
Transportation and utilities	6.4	6.7	7.0	6.5
Information	1.7	1.7	1.7	1.8
Financial activities	7.1	7.4	8.1	8.7
Professional and business services	12.6	12.7	13.6	14.7
Education and health services	22.1	23	22.9	22.7
Leisure and hospitality	9.2	8.3	8.5	7.2
Other services	4.9	4.7	4.6	4.4
Public administration	3.4	3.9	3.7	3.9
Agriculture and related industries	1.1	0.8	0.9	0.8
Work-related amputations requiring days away from work	190	260	360	250
Number musculoskeletal disorders with days away from work	12,630	12,650	10,700	9,570
Hospitalizations for all pneumoconiosis	190	260	360	250
Hospitalizations for coal workers pneumoconiosis	12,630	12,650	10,700	9,570
Hospitalizations for asbestosis	190	260	360	250
Hospitalizations for silicosis	12,630	12,650	10,700	9,570
Number pneumoconiosis deaths	190	260	360	250
Number pesticide poisoning cases called to Illinois Poison Center	12,630	12,650	10,700	9,570
Number occupational pesticide poisoning cases called to Illinois Poison Center	82	71	75	50
Number of hospitalized occupational pesticide cases paid for by workers' compensation	7	4	9	5
Number of mesothelioma cases	126	114	135	n/a
Number of workers in high morbidity risk industries	695,792	712,367	1,097,709	n/a
Number of workers in high mortality risk occupations	546,742	533,382	734,338	n/a
Number of workers reporting asthma caused or exacerbated by work	368,244	367,302	412,206	n/a
Number of workers visiting ED for heat related illness	95	138	255	166
Number occupational eye injuries	41	52	34	32

Table 5.4.2 Hospitalizations and Emergency Department Visits for Pesticide Related Illness, Illinois, 2018-2019

Age Group	2018	2019	2020	Total 2016-2020	Percent of Total
0-4 years	70	68	38	357	29.2
5-9 years	10	6	3	32	2.6
10-14 years	2	2	3	24	2.0
15-19 years	9	4	7	33	2.7
20-24 years	20	12	6	51	4.2
25-34 years	54	25	14	148	12.1
35-44 years	39	16	15	113	9.3
45-54 years	39	23	18	135	11.1
55-64 years	40	23	18	146	12.0
>65 years	32	29	27	182	14.9

Table 5.4.3 Classification of Occupational Pesticide Related Illness (PRI) cases by Pesticide Type\* 2018

Case Classification**	Disinfectant (n=24)	Insecticide (n=40)	Herbicide (n=7)	Algicide (n=1)	Mixed (n=5)	Rodenticide (n=1)
1 Definite	4 (80%)	1 (20%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
1 Probable	6 (50%)	3 (25%)	1 (100%)	0 (0%)	1 (8%)	0 (0%)
3 Possible	3 (15%)	13 (65%)	4 (0%)	0 (0%)	0 (0%)	0 (0%)
4 Suspicious	1 (33%)	2 (67%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
6 Insufficient Information	5 (23%)	13 (59%)	0 (0%)	0 (0%)	3 (14%)	1 (5%)
7 Exposed/Asymptomatic	5 (31%)	8 (50%)	2 (0%)	0 (0%)	1 (6%)	0 (0%)

\* **Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)** is the federal statute that governs the registration, distribution, sale, and use of pesticides, including disinfectants, in the United States.

\*\*Based on the case definition of acute pesticide related illness by the National Institute for Occupational Safety and Health (NIOSH).



## 6. Hazardous Substances Registry

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The Hazardous Substances Registry component of the IHHSR is not funded. As a result, only geocoding activities are performed through support from other funded components to create value-added registry data. The geocodes assigned to cancer and birth defect incident reports form the basis for development of a comprehensive geographic information system capacity within the IHHSR system.

### 6.1 Geocoding Process and Accomplishments

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#### 6.1.1 Geocoding Cancer and Birth Defects Data

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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.31®.

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, and 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 2021

Range of Percentage Complete by Diagnosis Year			
	Average all years	Lowest	Highest
<b>Cancer Reports (n=2,096,624 cases for diagnosis years 1986-2019)</b>			
ZIP code	100.0	100.0	100.0
ZIP +4 code	96.5	92.0	99.4
<b>Lat/Lon code <sup>1</sup></b>	100.0	100.0	100.0
address specific	93.2	87.1	97.3
centroid ZIP +4	0.6	0.2	1.7
centroid ZIP +2	0.6	0.4	1.2
centroid ZIP	5.6	0.7	11.7
<b>APORS Reports (n= 450,907) cases for birth years 1989-2021)</b>			
ZIP code	98.9	94.7	99.4
ZIP +4 code	94.2	93.2	99.2
<b>Lat/Lon code <sup>1</sup></b>	97.8	97.5	100.0
address specific	93.1	91.6	98.9
centroid ZIP +4	1.1	0.3	1.8
centroid ZIP +2	1.6	0.2	3.7
centroid ZIP	2.1	0.1	5.3
<sup>1</sup> Latitude and longitude			

## 6.2 Goals for Fiscal Year 2023

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

## 7. Cluster Inquiries and Assessments

### 7.1 Review and Evaluation of Fiscal Year 2022 Goals

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

### 7.2 Fiscal Year 2022 Accomplishments

In FY21, IDPH received three requests for assistance 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. Staff used published cancer rates by county, epidemiologic reports, and data from the public data files or general information about the frequency of cancer or causes of cancer to help address caller concerns.

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### 7.3 Fiscal Year 2023 Objectives

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

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## 8. Research Program

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The research section of the IHHSR provides a crucial link between data collection and data dissemination and between raw data and information. Through various formats, registry data were summarized, tabulated, analyzed, presented, and disseminated to policy makers, health professionals, and the public.

One registry staff member leads the IDPH Modeling and Data Intelligence teams contributing to the IDPH COVID-19 response; other staff members have assisted with analyses. Registry staff have examined patterns and trends in cases, testing, positivity, hospital resource use, and deaths trends. They also have forecast future trends and resource needs.

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### 8.1 Fiscal Year 2022 Major Accomplishments

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#### 8.1.1 Provision of Epidemiologic Support to IDPH Committees and Workgroups

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Division of Epidemiologic Studies staff continued to co-chair and participate in IDPH's IRB, opioids projects/databases, IDPH Academic Partnership, IVRS Steering Committee, and Internal Data Sharing Workgroup. Six staff serve on different committees in various capacities. Division staff also supported data activities related to the response to the COVID-19 pandemic.

#### 8.1.2 Provision of Peer-Review Service to Scientific Publication

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Division of Epidemiologic Studies staff continued to provide professional reviews to the Journal of Health Security.

#### 8.1.3 Provision of Epidemiologic Supervision and Tutoring

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Division of Epidemiologic Studies staff provided supervisor roles and other assistance to various interns, CDC assignees, and CSTE fellows during FY21.

#### 8.1.4 Publication of the IDPH Illinois Morbidity and Mortality Bulletin (IMMB)

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Publication of the IMMB has been postponed indefinitely while research staff assist with the COVID-19 pandemic.

#### 8.1.5 Technical Assistance

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Technical assistance has been provided by staff to various IDPH offices and divisions in the areas of statistics/epidemiology, research methods, data

confidentiality review, Freedom of Information Act (FOIA) and media requests, data linkage, SAS® programming, data analysis and interpretation, data de-duplication, surveillance system evaluation, quality control, and research data requests. Division of Epidemiologic Studies researchers were frequently called upon by the IDPH Office of the Director, the Institutional Review Board (IRB), and other IDPH programs for expertise on different technical and research issues, such as program evaluation, de-identification of individual data records, the renewal of the Public Health Department Accreditation, and updating State Health Improvement Plan (SHIP) documents and statistics. The division researchers also continued to provide guidance and technical assistance to IDHFS in its effort to establish new policy and practices for public data release. Division staff also provided interviews and responses to medical requests on various disease issues.

### 8.1.6 IDPH Institutional Review Board

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The Division of Epidemiologic Studies continued to staff the IDPH IRB, with one staff serving as the IRB manager, one as vice-chair, and one serving on the board. A number of data requests from outside researchers and organizations were processed and fulfilled. The IRB also serves as a link between outside researchers and IDPH responsible individuals (RIs) in various programs.

## 8.2 Scientific Publications in Fiscal Year 2022

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The following articles have been submitted, accepted, or published.

- 8.2.1** Cabbage and Sauerkraut Consumption in Adolescence and Adulthood and Breast Cancer Risk among US-Resident Polish Migrant Women. *International Journal of Environmental Research and Public Health*. Dorothy Rybaczyk Pathak,, Aryeh D. Stein, Jian-Ping He, Mary M. Noel, Larry Hembroff, Dorothy A. Nelson, Fawn Vigneau, Tiefu Shen, Laura J. Scott, Jadwiga Charzewska, Bożena Wajszczyk, Karen Clark, Leszek A. Rybaczyk, Bogdan A. Pathak, Dorota Błaszczyk, Ann Bankowski and Walter C. Willett. *Int J Environ Res Public Health* 2021 Oct 14; 18(20). PMID: 34682540

## 8.3 Other Recent Reports or Publications That Used Registry Data

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- 8.3.1** Farhad Islami, MD PhD, Elizabeth M Ward, PhD, Hyuna Sung, PhD, Kathleen A Cronin, PhD, Florence K L Tangka, PhD, Recinda L Sherman, PhD, Jingxuan Zhao, MPH, Robert N Anderson, PhD, S Jane Henley, MSPH, K Robin Yabroff, PhD, Ahmedin Jemal, DVM, PhD, Vicki B Benard, PhD, Annual Report to the Nation on the Status of Cancer, Part 1: National Cancer Statistics, *JNCI: Journal of the National Cancer Institute*, 2021; djab131, <https://doi.org/10.1093/jnci/djab131>
- 8.3.2** Coogan PF, Rosenberg L, Palmer JR, Cozier YC, Lenzy YM, Bertrand KA. Hair product use and breast cancer incidence in the Black Women's Health Study. *Carcinogenesis*. 2021 Jul 16;42(7):924-930. doi: 10.1093/carcin/bgab041. PMID: 34013957; PMCID: PMC8496025.

- 8.3.3** Webber MP, Singh A, Zeig-Owens R, Salako J, Skerker M, Hall CB, Goldfarb DG, Jaber N, Daniels RD, Prezant DJ. Cancer incidence in World Trade Center-exposed and non-exposed male firefighters, as compared with the US adult male population: 2001-2016. *Occup Environ Med.* 2021 Oct;78(10):707-714. doi: 10.1136/oemed-2021-107570. Epub 2021 Sep 10. PMID: 34507965; PMCID: PMC8458058.
- 8.3.4** Palmer JR, Zirpoli G, Bertrand KA, Battaglia T, Bernstein L, Ambrosone CB, Bandera EV, Troester MA, Rosenberg L, Pfeiffer RM, Trinquart L. A Validated Risk Prediction Model for Breast Cancer in US Black Women. *J Clin Oncol.* 2021 Dec 1;39(34):3866-3877. doi: 10.1200/JCO.21.01236. Epub 2021 Oct 8. PMID: 34623926; PMCID: PMC8608262
- 8.3.5** Bertrand KA, O'Brien KM, Wright LB, Palmer JR, Blot WJ, Eliassen AH, Rosenberg L, Sandin S, Tobias D, Weiderpass E, Zheng W, Swerdlow AJ, Schoemaker MJ, Nichols HB, Sandler DP. Gestational diabetes and risk of breast cancer before age 55 years. *Int J Epidemiol.* 2022 Jan 6;50(6):1936-1947. doi: 10.1093/ije/dyab165. PMID: 34458915; PMCID: PMC8743115.
- 8.3.6** Petrick JL, Wilkinson JE, Michaud DS, Cai Q, Gerlovin H, Signorello LB, Wolpin BM, Ruiz-Narváez EA, Long J, Yang Y, Johnson WE, Shu XO, Huttenhower C, Palmer JR. The oral microbiome in relation to pancreatic cancer risk in African Americans. *Br J Cancer.* 2022 Feb;126(2):287-296. doi: 10.1038/s41416-021-01578-5. Epub 2021 Oct 30. PMID: 34718358; PMCID: PMC8770575.
- 8.3.7** Yusuf M, Recklitis C, Zhou ES, Bethea TN, Rosenberg L. A population-based psychometric analysis of the insomnia severity index in black women with and without a history of cancer. *J Sleep Res.* 2022 Feb;31(1):e13421. doi: 10.1111/jsr.13421. Epub 2021 Jun 14. PMID: 34128264.
- 8.3.8** Minihan AK, Patel AV, Flanders WD, Sauer AG, Jemal A, Islami F. Proportion of Cancer Cases Attributable to Physical Inactivity by US State, 2013-2016. *Med Sci Sports Exerc.* 2022 Mar 1;54(3):417-423. doi: 10.1249/MSS.0000000000002801. PMID: 34628449.
- 8.3.9** Abasilim C, Friedman LS. Comparison of health outcomes from heat-related injuries by National Weather Service reported heat wave days and non-heat wave days - Illinois, 2013-2019. *Int J Biometeorol.* 2022 Mar; 66(3):641-645. doi: 10.1007/s00484-021-02218-6. Epub 2021 Nov 16. PMID: 34782920.
- 8.3.10** Sargen MR, Cahoon EK, Yu KJ, Madeleine MM, Zeng Y, Rees JR, Lynch CF, Engels EA. Spectrum of Nonkeratinocyte Skin Cancer Risk Among Solid Organ Transplant Recipients in the US. *JAMA Dermatol.* 2022 Apr 1;158(4):414-425. doi: 10.1001/jamadermatol.2022.0036. PMID: 35262623; PMCID: PMC8908231.
- 8.3.11** Friedman LS, Almberg KS, Cohen RA. Reply: Radiologic Classification of Black Lung: Time for a New Gold Standard? *Ann Am Thorac Soc.* 2022 Apr; 19(4):702-

703. doi: 10.1513/AnnalsATS.202112-1333LE. PMID: 35030058; PMCID: PMC8996282.

- 8.3.12** Forst L, Bonney T. Health Equity and Worker Justice in Temporary Staffing: The Illinois Case. *Int J Environ Res Public Health*. 2022 Apr 22;19(9):5112. doi: 10.3390/ijerph19095112. PMID: 35564507; PMCID: PMC9101162.
- 8.3.13** U.S. Centers for Disease Control and Prevention. *State Cancer Profiles*. Interactive query available at <http://statecancerprofiles.cancer.gov/>; U.S. Department of Health and Human Services, U.S. Centers for Disease Control and Prevention.
- 8.3.14** Yiannakou I, Barber LE, Li S, Adams-Campbell LL, Palmer JR, Rosenberg L, Petrick JL. A Prospective Analysis of Red and Processed Meat Intake in Relation to Colorectal Cancer in the Black Women's Health Study. *J Nutr*. 2022 May 5;152(5):1254-1262. doi: 10.1093/jn/nxab419. PMID: 34910194; PMCID: PMC9071344.
- 8.3.15** U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on 2020 submission data (1999–2018): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; <https://gis.cdc.gov/Cancer/USCS/#/AtAGlance> June 2022.
- 8.3.16** National Program of Cancer Registries and Surveillance, Epidemiology, and End Results SEER\*Stat Database: NPCR and SEER Incidence – U.S. Cancer Statistics 2001–2018 Public Use Research Database, 2020 submission (2001–2018), United States Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute. Released June 2022. Available at [www.cdc.gov/cancer/uscs/public-use](http://www.cdc.gov/cancer/uscs/public-use).
- 8.3.17** Sherman R, Firth R, Charlton M, De P, Green D, Hofer B, Liu L, Hsieh M, Johnson C, Kohler B, Morawski B, Nash S, Qiao B, Wier H (eds). *Cancer in North America: 2014-2018. Volume One: Combined Cancer Incidence for the United States, Canada and North America*. Springfield, IL: North American Association of Central Cancer Registries, Inc. June 2022.
- 8.3.18** Sherman R, Firth R, Charlton M, De P, Green D, Hofer B, Liu L, Hsieh M, Johnson C, Kohler B, Morawski B, Nash S, Qiao B, Weir H (eds). *Cancer in North America: 2014-2018. Volume Two: Registry-specific Cancer Incidence in the United States and Canada*. Springfield, Ill.: North American Association of Central Cancer Registries, Inc. June 2022.
- 8.3.19** Sherman R, Firth R, Charlton M, De P, Green D, Hofer B, Liu L, Hsieh M, Johnson C, Kohler B, Morawski B, Nash S, Qiao B, Wier H (eds). *Cancer in North America: 2014-2018. Volume Three: Registry-specific Cancer Mortality in the United States and Canada*. Springfield, IL: North American Association of Central Cancer Registries, Inc. June 2022.

- 8.3.20** American Cancer Society. *Cancer Facts & Figures 2021*. Atlanta, GA.: American Cancer Society; 2022.
- 8.3.21** Johnson C, Wilson R, Mariotto A, Morawski B, Wier H, Firth R, Sherman R, Charlton M, De P, Hofer B, Hsieh M, Liu L, Nash S, Qiao B (eds). *Cancer in North America, 2014-2018. Volume Four: Cancer Survival in the United States and Canada 2011-2017*. Springfield, Ill.: North American Association of Central Cancer Registries, Inc. June 2022.
- 8.3.22** Johnson CJ, Wilson R, Mariotto A, Morawski B, Weir H, Firth R, Sherman R, Charlton M, De P, Hofer B, Hsieh M, Liu L, Nash S, Qiao B (eds). *Cancer in North America: 2014-2018 Volume Five: Cancer Prevalence in the United States and Canada 2008-2017*. Springfield, IL: North American Association of Central Cancer Registries, Inc. June 2022.
- 8.3.23** Yuan C, Kim J, Wang QL, Lee AA, Babic A; PanScan/PanC4 I-III Consortium, Amundadottir LT, Klein AP, Li D, McCullough ML, Petersen GM, Risch HA, Stolzenberg-Solomon RZ, Perez K, Ng K, Giovannucci EL, Stampfer MJ, Kraft P, Wolpin BM. The age-dependent association of risk factors with pancreatic cancer. *Ann Oncol*. 2022 Jul;33(7):693-701. doi: 10.1016/j.annonc.2022.03.276. Epub 2022 Apr 6. PMID: 35398288; PMCID: PMC9233063.
- 8.3.24** Coghill AE, Kim Y, Hodge JM, Bender N, Smith-Warner SA, Teras LR, Grimsrud TK, Waterboer T, Egan KM. Prospective investigation of herpesvirus infection and risk of glioma. *Int J Cancer*. 2022 Jul 15;151(2):222-228. doi: 10.1002/ijc.33987. Epub 2022 Mar 7. PMID: 35225352.
- 8.3.25** Go LHT, Alberg KS, Rose CS, Zell-Baran LM, Harris DA, Tomann M, Friedman LS, Weems DJ, Vonhof W, Mastel KM, Cohen RA. Prevalence and severity of abnormal lung function among US former coal miners with and without radiographic coal workers' pneumoconiosis. *Occup Environ Med*. 2022 Aug; 79(8):527-532. doi: 10.1136/oemed-2021-107872. Epub 2022 Feb 11. PMID: 35149597.

## 8.4 Epidemiologic Report Series

The following reports were released in IDPH's Epidemiologic Report Series; all reports are available to the public on the Division of Epidemiologic Studies' website:

Sandidge T, Fornoff JE, Shen T. *Birth Defects and Other Adverse Pregnancy Outcomes in Illinois 2014-2018*. Epidemiologic Report Series 22:01, Springfield, Ill.: Illinois Department of Public Health, July 2021.

Garner K, Fornoff J. Illinois State Cancer Incidence Review and Update, 1986-2019. Epidemiologic Report Series 22:04. Springfield, Ill.: Illinois Department of Public Health, April 2022.

Garner K, Fornoff J. Illinois County Cancer Statistics Review Incidence, 2015-2019. Epidemiologic Report Series 22:05. Springfield, Ill.: Illinois Department of Public Health, April 2022.

Garner K., Fornoff J. Illinois Cancer Mortality Review and Update, 1986-2019. Epidemiologic Report Series 22:06. Springfield, Ill.: Illinois Department of Public Health, April 2022.

## 8.5 Fiscal Year 2022 Presentations by IDPH Division of Epidemiologic Studies Staff

Title	Event	Date
APORS database	West Suburban, Oak Park by phone	July 2021
Introduction to APORS	WES Health System, Chicago by phone	July 2021
ISCR presentation on cancer surveillance	Chicago Cancer Health Equity Collaborative, virtual	July 2021
APORS database	Kendall County Health Department, Yorkville, by phone	August 2021
APORS database	Good Samaritan Regional Health Center, Mount Vernon, by WebEx	August 2021
APORS database	Adams County Health Department, Quincy, by WebEx	September 2021
APORS database	Memorial Hospital East, Shiloh, by phone	September 2021
Introduction to ISCR	SEER Manage and Quality Improvement Experts Meeting, virtual	September 2021
ISCR Updates	Cancer Registrars of Illinois Annual Educational Conference, virtual	October 2021
APORS-Introduction to APORS, IVRS database	Community Alternatives Unlimited, Chicago, by WebEx	December 2021



Title	Event	Date
APORS-Introduction to APORS, IVRS database	Centers for New Horizons, Chicago, by WebEx	December 2021
APORS-Introduction to APORS, IVRS database	Burr Ridge Birth Center, Burr Ridge, by WebEx	January 2022
APORS database	Perry County Health Department, Pinckneyville, by WebEx	February 2022
ISCR lecture on cancer surveillance to UIC graduate students	UIC School of Public Health in Chicago, virtual	April 2022
Perinatal Hepatitis B Prevention Webinar	APORS Hospital Reporters, by WebEx	May 2022
Cannabis reporting and APORS	University of Illinois, Chicago Perinatal Network Grantee/Educators Meeting, by WebEx	May 2022
ISCR data presentation to IBCCP Lead Agencies	IBCCP Lead Agencies meeting, virtual	June 2022
APORS database	Centers for New Horizons, Chicago, by WebEx	June 2022

## 8.6 Research Data Release and Collaborations

Principal Investigator (Affiliation)	Title	Date	Funding Source
Mark Canfield Texas Department of State Health Services	Study of Selected Birth Defects Among Minorities 1999-2007	July 2012, ongoing*	
Lynn Rosenberg, Sc.D., M.S. Sloan Epidemiology Center Boston University	Black Women's Health Study	February 2007, ongoing	NIH/NCI
Rosalind Ramsey-Goldman, M.D., Dr.PH. Northwestern University	Exposure to Immunosuppressive Drugs and Cancer Risk in Systemic Lupus Erythematosus	August 2004, ongoing	NIH/NCI
Meir Stampfer, M.D. Channing Laboratory Brigham and Women's Hospital	Health Professionals Follow- up Study/Nurses' Health Study I and II	January 2004, ongoing	NIH
Alpa V. Patel, Ph.D. American Cancer Society	Cancer Prevention Study II	1995, ongoing	ACS
Brinton, Trabert, Ph.D. National Cancer Institute	Infertility Follow-up Study	2012, ongoing	NCI
Mardge Cohen, M.D. Women's Interagency HIV Study (WIHS)	Women's Interagency HIV Study (WIHS)	2000, ongoing	NIH
Garth Rauscher, Ph.D. University of Illinois at Chicago	Comparative Effectiveness of Breast Imaging Modalities: A Natural Experiment	April 2013, ongoing	Agency for Health Research and Quality
Gary Fraser, M.D., Ph.D.	Adventist Health Study II	March 2015, ongoing	NCI
Herbert Chen, M.D.	Medullary Thyroid Carcinoma Surveillance Study – A Case-Series Registry	September 2014, ongoing	The MTC Registry Consortium
Alpa V. Patel, Ph.D.	Cancer Prevention Study III	September 2015, ongoing	ACS
Dr. Frank Bove, Sc.D.	Cancer Incidence Study of Marines/Navy Personnel and Civilian Employees Exposed to Contaminated	June 2020, ongoing	Agency for Toxic Substances and Disease Registry

Principal Investigator (Affiliation)	Title	Date	Funding Source
	Drinking Water at USMC Base Camp Lejeune		
Dr. Mayris Webber, DrPH	Maintenance and Extension of a Cohort of Career Firefighters as a Non-WTC Exposed Comparison for the FDNY Firefighter Cohort	June 2020, ongoing	National Institute for Occupational Safety and Health
Humberto Parada, Jr., PhD, MPH San Diego State University	Characterizing the Burden of Cancer among Adults from the Hispanic Community Health Study/Study of Latinos	May 2022	San Diego State University HealthLINK Center for Transdisciplinary Research
NOTE: Following are definitions of acronyms used in the above table: American Cancer Society (ACS), National Cancer Institute (NCI), National Institutes of Health (NIH), Women's Interagency HIV Study (WIHS)			
*Data set released; study remains open			

## 9. Grants and Contracts

The table below summarizes the IDPH Division of Epidemiologic Studies grant awards for FY22.

Grant or Contract	Agency	Status	Amount	Grant Period
Occupational and Health Survey in Illinois (continuation)	BLS	Funded September 2020	\$122,900	10/1/21 – 9/30/22
Census of Fatal Occupational Injuries in Illinois (continuation)	BLS	Funded September 2020	\$103,800	10/1/21 – 9/30/22
National Cancer Prevention and Control Program-National Program of Cancer Care (continuation)	CDC	Funded June 2020	\$1,100,000	7/1/21 – 6/29/22
Surveillance, Epidemiology, and End Results	NCI	Funded March 2021	\$254,128 \$1,946,567	3/3/21 – 4/30/21 5/1/21 – 4/30/22
Perinatal Hepatitis B Program (submitted by IDPH Division of Infectious Diseases) (continuation)	CDC	Funded 2018	\$50,000	7/1/21 – 6/30/22
Electronic Lab Capacity (ELC) COVID-19 (submitted by IDPH Office of Women's Health and Family Services)	CDC	Funded 2020	\$150,000	8/1/21-11/30/22
Illinois Occupational Surveillance Program (IOSP)	NIOSH	Funded July 2020	\$2,709,308	7/1/20 – 6/30/25

NOTE: Full titles of acronyms used in the above table are U.S. Centers for Disease Control and Prevention (CDC), U.S. Bureau of Labor Statistics (BLS), National Institute of Occupational Safety and Health (NIOSH), and Illinois Department of Public Health (IDPH).

### 9.1 Funded Grants and Contracts

The IDPH Division of Epidemiologic Studies and IOSP received \$3.9 million in grant awards in fiscal year 2021.

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

IDPH received \$122,900 in September 2021 from BLS to support the 24<sup>th</sup> year of the Survey of Occupational Injuries and Illnesses (SOII) in Illinois. This project is described in Section 5.

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### 9.1.2 Census of Fatal Occupational Injuries in Illinois

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IDPH received \$103,800 in September 2021 from BLS to support the 30<sup>th</sup> year of the Census of Fatal Occupational Injuries (CFOI) in Illinois. This project is described in Section 5.

### 9.1.3 National Cancer Prevention and Control Program

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In June 2021, CDC awarded IDPH \$8.6 million in funding for the last year of a five-year project period of the National Cancer Prevention and Control Program. This grant combines two previous separate grants: the National Comprehensive Cancer Control Program and the National Program of Cancer Registries (NPCR). The Division of Epidemiologic Studies received \$1.1 million for the NPCR component, which is in its 27<sup>th</sup> year. The progress for this project is described in Section 3.

### 9.1.4 Perinatal Hepatitis B Program

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The Division of Epidemiologic Studies received \$50,000 in January 2021 to continue expansion of APORS surveillance and data collection (22<sup>nd</sup> year) to include perinatal hepatitis B and to enhance a tracking system that identifies newborn infants requiring follow-up immunization services. The progress for this project is described in Section 4.

### 9.1.5 Surveillance, Epidemiology, and End Results

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In February 2020, the Division of Epidemiologic Studies applied for funding from the National Cancer Institute (NCI) for the Surveillance, Epidemiology, and End Results (SEER) program. The proposal was submitted for the eight-year project period and \$19 million in federal funding was requested. In March of 2021, NCI announced Illinois had been chosen for the SEER program and awarded the state a contract totaling \$22,752,223 including state matching funds, over seven years. Becoming a SEER registry has been an objective of the Illinois State Cancer Registry for many years, although funding opportunities for new states to become SEER registries occur infrequently. This achievement is significant and places Illinois in the top echelon of population-based cancer registries. Illinois' participation in the SEER program will significantly expand ISCR's cancer surveillance activities in Illinois to include patient follow-up, enhanced data collection, rigorous quality control of cancer data, and increased opportunities to participate in research projects and collaborations.

### 9.1.6 COVID-19 in Pregnancy

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The Division of Epidemiologic Studies received \$150,000 in January 2020 through the CDC's Epidemiology and Laboratory Capacity for Prevention and Control of Emerging Infectious Diseases Cooperative Agreement (ELC). These funds are for APORS to carry out chart review of women who contracted COVID-19 during their pregnancy and their infants. The program has contracted with a temporary employment agency to provide temporary abstractors so that this work can be accomplished. The funds have also supported two APORS

abstractors for six months, and the APORS manager and abstractor liaison to oversee the work and manage the necessary chart requests.

### 9.1.7 Illinois Occupational Surveillance Program

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IOSP received \$ 2,709,308 from NIOSH to submit the 29 Occupational Health Indicators for 2020-2025 by calendar year and to aid with the Adult Blood Lead Registry. In addition to the basic program (providing indicators, four separate programs were funded: Linking Occupational Surveillance Data, Work Practices, and OSHA Enforcement Activities; Pesticide Related Illness Surveillance Program; COVID-19 Supplemental Project to Address Vaccine Hesitancy among Essential Workers (one year, only); COVID-19 Cases in the Illinois Workers' Compensation Claims (one year, only).

