

**ASSESSMENT OF THIRTEEN DATA SOURCES
FOR OCCUPATIONAL HEALTH SURVEILLANCE
IN MICHIGAN**

May, 2003

State of Michigan

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INTRODUCTION

Workplace injuries and illnesses create enormous personal and societal costs, affecting the health and livelihood of thousands of workers every year in Michigan and nationally. These adverse health events are not unavoidable; they are highly preventable. Occupational health surveillance is crucial to the development of well-targeted prevention strategies by quantifying and characterizing injury and illness incidents.

In October 2000, the Michigan Department of Community Health received funding from the National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention, to establish occupational health surveillance as an integral part of the public health disease and injury prevention system in Michigan. One of the objectives of this cooperative agreement was to develop a written assessment of existing data sources for occupational health surveillance to assist potential end-users in learning the salient features of these sources, along with their strengths and weaknesses.

Thirteen data sources were identified for evaluation. They included those that were specifically designed to provide data on occupational health (e.g., Occupational Disease Reports) and those that were developed for other purposes, but can be used to obtain information on work-related injuries and illnesses (Michigan Inpatient Database). To be included in the assessment, data sources had to provide statewide coverage.

This document presents a brief summary of the thirteen data sources, followed by detailed assessments of each data source in tabular form. Each assessment is comprised of the following components: Summary, Data Attributes, Data Collection and Processing, System Attributes, and Usefulness for Occupational Health. Notable components include: 1) contact information to learn more about the system or inquire about obtaining data; 2) data items available; and 3) practical issues (e.g., confidentiality, cost) pertaining to obtaining the data. Most of the information was provided by the contact person or users of the data.

Supplemental notebooks containing database documentation for each source are maintained at MDCH. Included in the documentation are: data collection instruments; instructions for data collection; laws pertaining to reporting, data collection or release; and a complete list of data items collected. Copies of portions of the documentation notebook can be provided upon request.

Due to the ever-changing nature of these systems, these assessments likely will be revised periodically. In addition, as MDCH learns of additional occupational health data sources, they will be added to the assessment.

Summary of Data Sources

Adult Blood Lead Epidemiology and Surveillance (ABLES)

Since 1997, Michigan law has required all laboratories to report all blood lead results to MDCH, which does data entry and follow-up on children and provides data on adults to the MI Department of Consumer and Industry Services (CIS). Michigan State University (MSU), under contract with CIS, administers this reporting law for individuals 16 and older by maintaining the database and conducting follow-up. There are about 10,000 reports annually on adults, 90% of which are from occupational exposure.

Behavioral Risk Factor Surveillance System (BRFSS)

Ongoing telephone survey administered by MDCH using national questionnaire with optional state modules. Collects information on health status and risk factors on 2,500 Michigan residents annually. Does not include questions on work-related injury. Questions on work-related asthma and work-related hearing loss have been included for selected years.

Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses

National data based on a statistical sample of employers; used to generate national and state-specific estimates of rates. The survey collects summary data on all occupational injury and illness and case-specific data on cases with lost workdays. Sample excludes small employers, self-employed, and federal employees.

Census of Fatal Occupational Injuries (CFOI)

Database of all fatal occupational injuries in Michigan, collected as part of the national surveillance system administered by the Bureau of Labor Statistics. CFOI gathers data from multiple sources (e.g., death certificates, medical examiners offices, OSHA notifications, Fatality Analysis Reporting System, newspaper accounts, police reports). Multiple sources are used to optimize sensitivity. Source documents are matched so that each incident is counted only once.

Death Certificates

Statewide computerized database containing demographics and cause of death information for all Michigan resident deaths and non-residents dying in Michigan. There is an item specifying whether an injury occurred at work, but nothing on whether an illness was possibly work-related.

Michigan Cancer Registry

Registry is maintained by MDCH and contains demographic, diagnostic, and treatment information on all incident cancer cases in Michigan. Collects occupation and industry on incident cases when information is available.

Michigan Department of Agriculture Pesticide Complaint Database

Contains data from complaints of potential pesticide use that are submitted to the MI Department of Agriculture (MDA). Program conducts investigations in response to complaints to determine if there are violations of application requirements. Has not been used for occupational health surveillance.

Michigan Emergency Department Community Injury Information Network (MEDCIIN)

A system of 23 hospitals selected to represent the state that voluntarily provide data on emergency department injury visits to MDCH. First year of data collection was 1999, with 20 of the 23 hospitals submitting data. When all hospitals are participating, an estimated 250,000 injury cases will be captured annually. There is no item that specifically indicates whether an injury was work-related. Best method for ascertaining work-related injuries is to select cases for which Workers Compensation was the payment source.

Michigan Inpatient Database (MIDB)

Demographic and clinical information collected statewide on patients hospitalized in acute care hospitals in Michigan and Michigan residents hospitalized in contiguous states. There is no “work-related” item. Best method for ascertaining work-related hospitalizations is to select cases for which Workers Compensation was the payment source or to select conditions which are considered work-related such as pneumoconiosis. Data are collected by the Michigan Health and Hospital Association and purchased by MDCH.

Michigan Workers’ Compensation Reports

Compilation of employer reports of work-related injuries and illnesses. Employers who are required to provide Workers Compensation insurance (all public employers, private employers with three or more full time employees, and other specified employers) are required to file these reports. Data items collected include demographics, nature of illness or injury, part of body affected, and whether employee died. Information on cause of injury and the object or substance causing the injury or illness is collected, but not entered into the database. Between 50,000 and 70,000 reports are submitted annually.

Occupational Disease Reports

All health care providers and employers are required to report all known or suspected work-related illnesses to CIS (injuries are excluded). MSU is contracted by CIS to maintain the system which contains about 20,000 cases annually. Reporting is incomplete because of poor compliance with reporting requirements by health care providers. Large employers may be more apt to report.

Occupational Safety and Health Administration Data Initiative

The Occupational Safety and Health Administration (OSHA) annually collects injury and illness data from a sample of employers (N~3,300 in MI). These data are originally collected on OSHA forms that employers are required to maintain. The Data Initiative also obtains number of hours worked and number of employees. Some employers who are exempt from OSHA injury/illness recordkeeping are included in the sample. The BLS Annual Survey of Occupational Injury and Illness collects the same type of information except it does not ascertain employer name. BLS estimates that about 10% of its sample is also in the OSHA Data Initiative. The survey is conducted nationally with CIS responsible for the collection of Michigan data.

Poison Control Centers

Database of all calls received by the two poison control centers in Michigan (Detroit and Grand Rapids). De-identified data are transmitted into a national database. Information collected includes: some demographics, reported signs, symptoms, clinical findings, substance exposed to, whether the exposure was intentional, unintentional or an adverse reaction, reason for exposure (including occupational), and if a visit was made to a health care facility. Combined, the two centers receive about 115,000 calls annually.

ADULT BLOOD LEAD EPIDEMIOLOGY AND SURVEILLANCE

Summary

Brief description	Since 1997, Michigan law has required all laboratories to report all blood lead results to the MDCH, which does data entry and follow-up on children and provides data on adults to CIS. MSU under contract with CIS administers this reporting law for individuals 16 years or older by maintaining the database and conducting follow-up. (N=10,000 reports annually; 90% are from occupational exposure). MSU submits data to NIOSH quarterly because NIOSH provides funding for ABLES.
Purpose and use	Surveillance and intervention to prevent occupational lead toxicity
Name and address of responsible program/agency	Mary Scoblic Childhood Lead Program MDCH (517) 335-8915 ScoblicM@michigan.gov (legal authority for collection of data)
Name, address, phone, e-mail of contact person	Ken Rosenman, MD Amy Sims Department of Medicine Occupational and Environmental Medicine Michigan State University 117 W. Fee E. Lansing , 48824-1316 517-353-1846 rosenman@msu.edu Amy.Sims@ht.msu.edu (responsible for maintaining the data at MSU)

Data Attributes

What case identifying information is captured?	Name-yes Address-yes Birthdate-yes SS#-yes (from Blood Lead Analysis Report)
What demographic information is captured?	Sex-yes Race-yes Ethnicity-yes Age-yes (from Blood Lead Analysis Report)
What disease/injury diagnostic information is captured and how?	Blood lead levels. No limit on the number of BLLs per case.

ADULT BLOOD LEAD EPIDEMIOLOGY AND SURVEILLANCE

What disease/injury etiology information is captured and how?	Would have to go to case interview and workplace inspection report. All individuals with BLL $\geq$ 25 ug/dl are interviewed. Selected individuals with BLLs 10-24 ug/dL are interviewed. “Work-related” is captured.
What health care utilization information is captured (e.g. physician, hospital name; payer; cost data)?	Name and address of ordering physician or clinic. Lab name
What occupation/industry information is captured? (Type and coding system; employer name/address)	Name and address of employer. (from Blood Lead Analysis Report) “Employer” is captured, but often not completed. Employer SIC (coded by MSU) MIOSHA workplace inspection information. (Available in case interview database (minimal information entered by MSU))

Data Collection and Processing

Procedure in which data are collected and processed	Physicians order BLL either because individual is employed where lead exposed, as part of company blood lead surveillance, or because physician has concerns based on symptoms etc. Labs report all test results to MDCH Childhood Lead Program; MDCH does data entry and gives data to MSU on those 16+ years old. MSU submits data to NIOSH quarterly.
What legal mandates/regulations exist for collection of these data?	Administrative Rule # R325.9082 and R325.9083
Who collects the data?	MDCH Childhood Lead Poisoning Prevention Program
How long has the computerized system been in place?	11/1997
How many records are added annually?	>10,000
What is the lag time between time disease/injury is identified and data collection?	Months
Are any quality assurance procedures performed?	The database is routinely checked to avoid duplicate cases. Routine provider requests are made to complete missing information.
Are any modifications planned in any aspect of data collection, processing, etc.	MI ABLES spent 2001-02 reprogramming the tracking system because NIOSH has developed new reporting requirements. Previous to the last quarter of 2001, MSU simply submitted raw numbers by quarter. Now, they provide a datafile consisting of several mandatory fields (e.g., BLL date, BLL, age, sex).

ADULT BLOOD LEAD EPIDEMIOLOGY AND SURVEILLANCE

Is a data dictionary/codebook available? (Attach or give reference/contact)	This is currently being developed by Amy Sims at MSU in 2003.
Would there be costs to the Program to obtain the data?	Probably not

System Attributes

What are access issues for the Program?	None for basic demographic information. Questionnaire data are confidential.
Are there written laws/rules/policies and/or procedures on release of the data? (include any as attachments)	The basic demographic data is from MDCH. Questionnaire data are collected by MSU and Human Subjects Review Committee at MSU precludes release.
What are confidentiality concerns/requirements of agency owning the data?	See above.
What is the timeliness between data collection and date data are available to the Program?	Three months.
What biases/potential biases exist in the data produced by this system?	Doesn't capture individuals exposed but not tested; more likely to capture complete data in large companies that perform lead monitoring.
How does this dataset vary re the attributes described above among regions in MI	Probably doesn't vary.

Usefulness for Occupational Health

How have data been used for occupational health surveillance and research?	MSU has put out annual reports since 1998 and publications in medical literature.
What are some opportunities for using the data in occupational health?	A lot of data, combining ABLES data set with interview and employer inspection data, for additional analysis
What are the main limitations of the data for occupational health?	Not representative of all lead exposure in the state, but captures <u>all</u> blood lead testing performed in the state. More complete data in certain companies. Less likely to obtain data in small companies.
Recommendations	Come up with plan for additional data analysis with MSU, if appropriate.

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

Summary

Brief description	Telephone survey administered by MDCH using national (CDC) questionnaire with optional state modules, collecting information on health behavior risks.
Purpose and use	National and state data on health behaviors for targeting interventions
Name and address of responsible program/agency	Epidemiology Services Division MDCH
Name, address, phone, e-mail of contact person	Harry McGee Epidemiology Services Division MDCH (517) 335-9081 McGeeH@michigan.gov

Data Attributes

What case identifying information is captured?	None
What demographic information is captured?	Sex-yes Race-yes Ethnicity-yes (Hispanic/non-Hispanic) Age-yes Residence county Residence city (Detroit only)
What disease/injury diagnostic information is captured and how?	The 2001 survey included modules on occupational asthma and worksite health promotion programs. The 2003 survey includes a set of questions on noise-induced hearing loss.
What disease/injury etiology information is captured and how?	Periodically, injury questions are included. Most recently, the 2000 survey asked if respondents had sustained an injury requiring medical attention in the past 12 months. If so, did it occur during recreation, exercise, or physical activity other than at work.
What health care utilization information is captured (e.g. physician, hospital name; payer; cost data)?	Self-reported information about access, insurance, and use of health care services
What occupation/industry information is captured? (Type and coding system; employer name/address)	Generally respondents are not asked what occupation/industry they work in. In the 2001 survey in the module of questions pertaining to occupational asthma, people were asked what their occupation and industry was. These verbatim responses are currently being recoded into standard occupation/industry classifications by Ken Rosenman and Ann Rafferty.

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

Data Collection and Processing

Procedure in which data are collected and processed	Random digit dial telephone survey. Administered by MSU survey research center on contract with MDCH
What legal mandates/regulations exist for collection of these data?	None – voluntary survey
Who collects the data?	MDCH
How long has the computerized system been in place?	1987
How many records are added annually?	1,500
What is the lag time between time disease/injury is identified and data collection?	Questions pertain to the past year.
Are any quality assurance procedures performed?	Supervisors make callbacks on 10% of responses and ask a subset of questions and compare these responses to those that the original interviewers obtained. Supervisors also listen in (non-intrusively) on about 5% of calls selected randomly. Quality control programs ensure that entries are not out of range. CDC runs a program on core questions asked by each state and MSU runs a program on Michigan-specific questions. Interviewers are monitored during questionnaire pilot period to identify and address potential interviewer bias.
Are any modifications planned in any aspect of data collection, processing, etc.	Questions are modified annually, with states having option to add modules.
Is a data dictionary/codebook available? (Attach or give reference/contact)	Data dictionaries are available for each year. A copy for any year can be obtained from Harry McGee.
Would there be costs to the Program to obtain the data?	Probably not. However, it would be most cost effective to have Ann Rafferty perform the data analysis for which there is no cost.

System Attributes

What are access issues for the Program?	None
Are there written laws/rules/policies and/or procedures on release of the data? (include any as attachments)	Not applicable. As mentioned above, it would be more efficient to have Ann Rafferty perform whatever runs are needed.

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

What are confidentiality concerns/requirements of agency owning the data?	None
What is the timeliness between data collection and date data are available to the Program?	Annual data are available for analysis 3 months after the end of the survey year.
What biases/potential biases exist in the data produced by this system?	Self-reported information with recall bias, selection bias (people who have phones, people who agree to participate vs. refusals; see below).
How does this dataset vary re the attributes described above among regions in MI	Phone ownership varies by race: 96% overall, 97% white; 92% black. It is not known if the response rate varies by region.

Usefulness for Occupational Health

How have data been used for occupational health surveillance and research?	Being used by MSU.
What are some opportunities for using the data in occupational health?	Analysis of added questions on occupational asthma. Could look at worksite health promotion issues; smoking prevalence by type of industry.
What are the main limitations of the data for occupational health?	Work-related questions very limited. Can't be used for follow-back investigations. It is unknown if the sample size of those reporting that they had sustained a work-related injury/illness within the past year would be large enough to make population estimates. Response rates have been decreasing over the past 5-7 years. Two measures of this: cooperation rate (# of completed interviews (R answers q's up through demographics) / eligible HH contacted with eligible person (18+ years) residing) 1996: 56%; 2000: 43%. CASRO rate, which assigns a proportion of calls for which eligibility of the HH and person is unknown as eligible, 1996: 55%; 2000: 39%.
Recommendations	Survey explicitly excludes questions about work-related injury, on assumption that work injury data are better elsewhere. May want to revisit this next year when call comes around to add or modify questions on the survey.

BUREAU OF LABOR STATISTICS
SURVEY OF OCCUPATIONAL INJURIES AND ILLNESSES

Summary

Brief description	National system of collecting data from a sample of employers. Sample is designed to allow generation of state-specific estimates. (N=176,000 agencies nationally, N=7,300 in MI.) Summary data are collected on all occupational injuries and illnesses and case-specific data are collected on cases where injury/illness involved days away from work.
Purpose and use	Counts, state and national, for occupational injuries and illnesses. Data can be used to evaluate effectiveness of safety and health programs, compare incidence rates across industries, compare states, and measure trends.
Name and address of responsible program/agency	Michigan Department of Consumer and Industry Services (MDCIS). At the national level, the responsible agency is the Bureau of Labor Statistics, Department of Labor.
Name, address, phone, e-mail of contact person	Laurie Lorish MIOSHA Information Division MI Department of Consumer and Industry Services State Secondary Office 7150 Harris Drive PO Box 30643 Lansing, MI 48909 phone: 517-322-5258 fax: 517-322-5117

Data Attributes

What case identifying information is captured?	Two parts to the survey: Part 1: summary information for all injuries/illnesses; Part 2: case-specific information for incidents with days away from work. Part 1: no case identifying information Part 2: Name-yes Address-no Birthdate-yes SS#-no
What demographic information is captured?	Part 1: none Part 2: Sex – yes Race (including Hispanic ethnicity) – yes Age – yes Other – employees' length of service at the establishment at the time of the incident

BUREAU OF LABOR STATISTICS
SURVEY OF OCCUPATIONAL INJURIES AND ILLNESSES

What disease/injury diagnostic information is captured and how?	Part 1: injuries and illnesses are quantified separately; injuries are not broken down by type, just by severity (death, days away from work, no lost workdays); illnesses are broken into the following categories: skin, dust diseases, respiratory conditions due to toxic agents, poisoning, disorders due to physical agents, repetitive trauma, other. Part 2: form queries “what was the injury or illness?”; responses are subsequently categorized using an Occupational Injury and Illness Classification System; there are standard codes for nature of injury/illness and body part affected; injury severity is quantified by number of days away from work and days of restricted work activity
What disease/injury etiology information is captured and how?	Part 1: none captured Part 2: the following queries provide this information: “What was employee doing just before incident?” “What happened?” “What object or substance directly harmed employee?” Responses are subsequently categorized using the OIICS. Two standard codes provide information on cause of injury/illness: “Source of injury” (eg, machinery, handtool) and “Event or exposure” (eg, fall, assault)
What health care utilization information is captured (e.g. physician, hospital name; payer; cost data)?	None
What occupation/industry information is captured? (Type and coding system; employer name/address)	Part 1: SIC/NAICS for employer (NAICS = North American Industry Classification System) Employer name and address Part 2: “employee’s occupation” (coded using SOC), SIC/NAICS for employer and employer name and address.

Data Collection and Processing

Procedure in which data are collected and processed	Survey sent to sample of employers by MDCIS; results processed by MDCIS and sent to BLS.
What legal mandates/regulations exist for collection of these data?	Federal law (authority delegated to MDCIS under MIOSHA) Public Law 91-596. “All establishments that receive this survey must complete and return it within 30 days, even if they had no occupational injuries and illnesses.”

BUREAU OF LABOR STATISTICS
SURVEY OF OCCUPATIONAL INJURIES AND ILLNESSES

Who collects the data?	MDCIS
How long has the computerized system been in place?	At least 20 years
How many records are added annually?	Approximately 5,000
What is the lag time between time disease/injury is identified and data collection?	Survey done annually months after the close of the calendar year.
Are any quality assurance procedures performed?	BLS has extensive QA procedures in place
Are any modifications planned in any aspect of data collection, processing, etc.	BLS will shift to NAICS codes by 2002 and cease using SIC codes for employers
Is a data dictionary/codebook available? (Attach or give reference/contact)	Laurie Lorish MDCIS
Would there be costs to the Program to obtain the data?	No

System Attributes

What are access issues for the Program?	Summary data are available on the BLS website and also on a CD-ROM titled "Occupational Injuries and Illnesses in the United States Profiles Data." Some summary data that are not available on the BLS website can be obtained via "researcher file" (need to contact Dan Curran in Chicago (312-353-7200x410)). Compilations using an actual datafile can only be performed at the Dept of Labor in D.C. Confidentiality is a major concern, thus the information that can be taken from the D.C. office is limited. Requests for MI specific data should be directed to Laurie Lorish at MDCIS.
Are there written laws/rules/policies and/or procedures on release of the data? (include any as attachments)	Yes.
What are confidentiality concerns/requirements of agency owning the data?	BLS is highly concerned about confidentiality. Companies are assured confidentiality in return for reporting, thus there is a major emphasis on limited access to the datafile and identifiers.

BUREAU OF LABOR STATISTICS
SURVEY OF OCCUPATIONAL INJURIES AND ILLNESSES

What is the timeliness between data collection and date data are available to the Program?	2001 Michigan data were not available as of September 2002.
What biases/potential biases exist in the data produced by this system?	Reporting is by employers; incentives for employers to under-report. The following are not included in the sampling frame: self-employed, workers on farms with less than 11 employees, federal government agencies. Captures injury much better than illness data
How does this dataset vary re the attributes described above among regions in MI	Unknown if under-reporting by employers varies across the state in some systematic way.

Usefulness for Occupational Health

How have data been used for occupational health surveillance and research?	Used extensively by BLS to publish annual reports. Not used for research because of confidentiality concerns by BLS. MSU is using the data for a study matching data in a variety of datasets. Our program has used the BLS data to generate proposed occupational health indicators.
What are some opportunities for using the data in occupational health?	Data would provide good source of information on injuries and illnesses not seen in other data sources. Would prove useful in developing the annual report.
What are the main limitations of the data for occupational health?	Confidentiality of the data disallowing identification of employers and employees for follow-up (to obtain additional data and/or develop specific interventions) Without the actual database, which is difficult to obtain, the types of analyses that can be conducted are limited. The data available on the BLS website and on the BLS CD are pre-designed tables – data analyses are limited to what these tables illustrate.
Recommendations	Utilize the CD and the website as much as possible. To obtain data that is unavailable via CD or website, make a request through MDCIS.

CENSUS OF FATAL OCCUPATIONAL INJURIES

Summary

Brief description	Database of all fatal occupational injuries occurring in MI, collected as part of the national surveillance system administered by the Bureau of Labor Statistics, following their standardized protocol that required multiple data sources.
Purpose and use	To provide surveillance data, and as complete a count as possible, of work-related fatal injuries occurring in Michigan.
Name and address of responsible program/agency	MIOSHA MDCIS
Name, address, phone, e-mail of contact person	Laurie Lorish MIOSHA Information Division Michigan Department of Consumer and Industry Services (CIS) State Secondary Office 7150 Harris Drove PO Box 30643 Lansing 48909-8143 W: 517-322-1851 F: 517-322-5117

Data Attributes

What case identifying information is captured?	Name-yes Address-no Birthdate-yes SS#-yes (MIOSHA does not necessarily release all of these)
What demographic information is captured?	Sex-yes Race-yes Ethnicity-yes Age -yes Age group Other-state of residence, county of residence, foreign birthplace
What disease/injury diagnostic information is captured and how?	Nature of injury/illness, part of body affected – coded using OSH system
What disease/injury etiology information is captured and how?	Source, event, secondary course, cause, worker activity how occurred - Coded using OSH system; county of occurrence

CENSUS OF FATAL OCCUPATIONAL INJURIES

What health care utilization information is captured (e.g. physician, hospital name; payor; cost data)?	None
What occupation/industry information is captured? (Type and coding system; employer name/address)	Employer name, size, SIC, occupation code (based on Occupational Classification System developed by Census Bureau), length of service, usual lifetime industry and occupation.

Data Collection and Processing

Procedure in which data are collected and processed	State collects data from multiple sources (death certs, ME reports, OSHA notifications, FARS,) and codes and data enters.
What legal mandates/regulations exist for collection of these data?	None
Who collects the data?	MIOSHA
How long has the computerized system been in place?	Approx 10 years.
How many records are added annually?	170
What is the lag time between time disease/injury is identified and data collection?	Variable
Are any quality assurance procedures performed?	BLS has many procedures in place
Are any modifications planned in any aspect of data collection, processing, etc.	?
Is a data dictionary/codebook available? (Attach or give reference/contact)	Yes. MSU has a copy. This is probably not that big of a deal since we will likely not obtain a CFI dataset.
Would there be costs to the Program to obtain the data?	Unknown

System Attributes

What are access issues for the Program?	Name of case/employer considered confidential. Possible to get this if the original data source agrees to release. MSU is in the process of doing this as part of their data linkage study.
Are there written laws/rules/policies and/or procedures on release of the data? (include any as attachments)	Yes

CENSUS OF FATAL OCCUPATIONAL INJURIES

What is the timeliness between data collection and date data are available to the Program?	“Provisional” state data are available usually in September or October following the end of the year of interest. These data are considered “final” 12 months later.
What biases/potential biases exist in the data produced by this system?	Probably very few, as confined to injury and sensitivity of the system to ascertain cases is high.
How does this dataset vary re the attributes described above among regions in MI	Shouldn’t be any variation.

Usefulness for Occupational Health

How have data been used for occupational health surveillance and research?	Data are published annually by BLS nationally and by state.
What are some opportunities for using the data in occupational health?	MSU is using the data in a data linkage study and as part of their fatal injury investigation project.
What are the main limitations of the data for occupational health?	Release of confidential information. MIOSHA retains computerized data for two years. Thus, in January 2003, they have data for 2001, but no further back Send data to feds, but feds do not have information such as county of incidence.
Recommendations	Collaborate with MSU on additional data analysis.

DEATH CERTIFICATES

Summary

Brief description	Statewide computerized database containing demographics and cause of death information for all MI residents (out-of-state deaths included) and non-MI residents dying in MI
Purpose and use	Legal record of deaths; surveillance for monitoring the health of citizens; research
Name and address of responsible program/agency	Kathy Humphrys Michigan Department of Community Health Vital Records and Health Data Development Section 3423 N. ML King Blvd PO Box 30195 Lansing, MI 48909
Name, address, phone, e-mail of contact person	Glenn Copeland, DVRHS (517) 335-8677 copelandg@state.mi.us

Data Attributes

What case identifying information is captured?	Name-yes Address-yes Birthdate-yes SS#-yes Other information-next-of-kin/informant, death certificate number
What demographic information is captured?	Sex-yes Race-yes Ethnicity-yes (included within Ancestry) Age-yes Age group-yes
What disease/injury diagnostic information is captured and how?	Cause of death – underlying and contributing – E-codes; ICD 10 since 1999
What disease/injury etiology information is captured and how?	Injury at work Date of injury Date of death City/county/state of occurrence Type of place of occurrence How injury occurred (text; since 1993)
What health care utilization information is captured (e.g. physician, hospital name; payer; cost data)?	Hospital of death Name of physician certifying death

DEATH CERTIFICATES

What occupation/industry information is captured? (Type and coding system; employer name/address)	Usual occupation and industry coded with Census system – uses SOAC computer system, has trained coders to complete where computer can't; 1990-1999 coded
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Data Collection and Processing

Procedure in which data are collected and processed	Funeral director completes demographic & disposition portion of death certificate; physician, or medical examiner in cases of unexpected or injury deaths, complete the cause of death portion (including time, date, place, how injury occurred, and injury at work); local registrar certifies certificate (issues burial permit) and submits to State
What legal mandates/regulations exist for collection of these data?	Reporting of deaths mandatory for legal purposes. Section 2843 of Public Act of 1978
Who collects the data?	Funeral directors, physicians (or other hospital staff), medical examiners
How long has the computerized system been in place?	30 years
How many records are added annually?	75,000 – 85,000
What is the lag time between time disease/injury is identified and data collection?	Death certificate must be submitted to local registrar within 72 hours of death. Certificates are transmitted to State monthly.
Are any quality assurance procedures performed?	Yes, both at State and also when data are submitted to the National Center for Health Statistics.
Are any modifications planned in any aspect of data collection, processing, etc.	Software (SuperMICAR) used to code cause of death may in the future code external cause of injury
Is a data dictionary/codebook available? (Attach or give reference/contact)	Yes. Copy is in Documentation notebook.
Would there be costs to the Program to obtain the data?	No

System Attributes

What are access issues for the Program?	None other than following program requirements
Are there written laws/rules/policies and/or procedures on release of the data? (include any as attachments)	Yes, written procedure/application for access to death data

DEATH CERTIFICATES

What are confidentiality concerns/requirements of agency owning the data?	Access to data application includes requirement for maintaining confidentiality.
What is the timeliness between data collection and date data are available to the Program?	8 months after close of calendar year
What biases/potential biases exist in the data produced by this system?	Collects death data only. ICD system not specific for work-relatedness except for a limited number of diseases and injuries. Studies have found that death certificates undercount occupational fatalities that are traffic-related.
How does this dataset vary re: the attributes described above among regions in MI	No systematic variation is apparent. Involvement and investigation by county medical examiners may vary by county, which could affect quality of cause of death information when the ME is involved.

Usefulness for Occupational Health

How have data been used for occupational health surveillance and research?	Used by MSU for condition-specific surveillance systems and research.
What are some opportunities for using the data in occupational health?	Numerous surveillance and hypothesis generating projects possible. High quality data with lots of linkages possible. Program will create subsets of the data on request.
What are the main limitations of the data for occupational health?	Occupation/industry on death certificate does not necessarily represent where injury/illness occurred. Work-relatedness pertains to injuries only, not illness. There are no ICD codes specific for occupational diseases, except for the ICD codes for the pneumonconioses. The E849 range (location of injury incident) of ICD9 can be used to identify likely occupational injuries (e.g., E8491 (farm); E8492 (mine/quarry); E8493 (industrial place)). In ICD10, codes are: 7 (farm), 6 (industrial & construction).
Recommendations	Glenn wants to see the occ/industry data used; develop data analysis plan, including “routine data display” (could link with Cancer Registry)

MICHIGAN CANCER REGISTRY

Summary

Brief description	This statewide registry was formed in 1985 under the authority of Act 82 of 1984, which established cancer as a reportable disease in the state. The registry is comprised of reports of incident cases of Michigan residents regardless of the state of diagnosis. The registry is regularly linked to death certificate data. The database currently contains 1.1 million reports concerning 890,000 cases of primary cancer and contains demographic, diagnostic, and treatment information on all incident cancer cases.
Purpose and use	Surveillance and research on cancer. A subset of the data in the registry includes Surveillance, Epidemiology, and End Results (SEER) data. The SEER Program of the National Cancer Institute is an authoritative source of information on cancer incidence and survival in the United States. Case ascertainment for SEER began on January 1, 1973, in the metropolitan areas of Detroit including Macomb, Oakland, and Wayne counties. The SEER Registries routinely collect data on patient demographics, primary tumor site, morphology, stage at diagnosis, first course of treatment, and follow-up for vital status.
Name and address of responsible program/agency	The Michigan Cancer Surveillance Program Vital Records and Health Data Development Section Division of Epidemiology Services Michigan Department of Community Health 3423 North Martin Luther King, Jr. Boulevard PO Box 30691 Lansing, MI 48909
Name, address, phone, e-mail of contact person	Glenn Copeland, MBA Vital Records and Health Data Development Section Division of Epidemiology Services Michigan Department of Community Health 3423 North Martin Luther King, Jr. Boulevard PO Box 30691 Lansing, MI 48909 517-335-8678 CopelandG@michigan.gov

MICHIGAN CANCER REGISTRY

Data Attributes

What case identifying information is captured?	Name-yes Address--yes Birthdate-yes SS#-yes Other information-patient ID number
What demographic information is captured?	Sex-yes Race-yes Ethnicity-yes Age at diagnosis-yes Age group-no Other information-marital status
What disease/injury diagnostic information is captured and how?	Collected and coded to ICD-O (oncology). Detailed information on cancer morphology, histology, behavior, staging, method of diagnosis, and treatment. ICD-9/ICD-10 for mortality.
What disease/injury etiology information is captured and how?	None
What health care utilization information is captured (e.g. physician, hospital name; payer; cost data)?	Hospital and laboratory identification numbers and primary payer at diagnosis. No physician information is available.
What occupation/industry (O/I) information is captured? (Type and coding system; employer name/address)	O/I is coded using the 1990 Census coding system. It is collected on incident cases from the reporting source. It is also available on death certificates for linked records. For some linked records, O/I per the incident report differs from the O/I per the death certificate. O/I on incident cases is often incomplete and has been found to be unreliable.

Data Collection and Processing

Procedure in which data are collected and processed	Reporting of cancer cases is required of hospitals, laboratories, health clinics, dentists, and physicians. Additional information is obtained from nursing homes, hospice, and from 15 other state registries which exchange resident case information with the Michigan registry. Reports are received in electronic and paper form from, and data are processed using standardized edit package to conform to National Program of Cancer Registries (NPCR) requirements. The registry is routinely linked to the Michigan death registry to maintain the vital status of patients and to augment the registry with demographic and other information from the death certificate.
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MICHIGAN CANCER REGISTRY

What legal mandates/regulations exist for collection of these data?	Part 26 of the Public Health Code (Act 368 of 1978) required cancer reporting and required that summaries of collected information be published and made available to the public by July 1984. As a result of this requirement, the registry began as a statewide registry in 1985 under the authority of Act 82 of 1984, which established cancer as a reportable disease in the state.
Who collects the data?	MDCH
How long has the computerized system been in place?	Since 1984.
How many records are added annually?	75,000 records on 55,000 new cases and 25,000 new deaths
What is the lag time between time disease/injury is identified and data collection?	6 months to 14 months
Are any quality assurance procedures performed?	Meets North American Association of Central Cancer Registries (NAACCR) and NPCR (CDC) standards.
Are any modifications planned in any aspect of data collection, processing, etc.	Annual changes to the data are made based upon recommendations of CDC and NPCR
Is a data dictionary/codebook available? (Attach or give reference/contact)	Yes (See appendix)
Would there be costs to the Program to obtain the data?	Depends upon use. Costs generally are minimal.

System Attributes

What are access issues for the Program?	Access to identifiable cancer registry data is restricted and does require appropriate approval. Process includes application, review by MDCH IRB, review by Scientific Advisory Panel (SAP), and director's approval. The SAP includes representatives from MALPH, MSMS, MOA, each Medical School (MSU, WSU, UM), and the Michigan Cancer Registrar's Association. (See description of SAP, procedures for research data request, and criteria for release of confidential data in appendix.)
Are there written laws/rules/policies and/or procedures on release of the data?	Procedures and criteria for release of confidential data have been developed (See procedures for research data request, and criteria for release of confidential data in appendix).
What are confidentiality concerns/requirements of agency owning the data?	Access is regulated by Michigan law and restricted to research use only. Procedures and criteria for release of confidential data have been developed (see appendix).

MICHIGAN CANCER REGISTRY

What is the timeliness between data collection and date data are available to the Program?	Roughly 18 months
What biases/potential biases exist in the data produced by this system?	No obvious biases in system.
How does this dataset vary re the attributes described above among regions in MI?	O/I data ascertained via linkage between incident records and death certificates may be of poorer quality in Michigan counties that border other states. Residents of border counties are commonly treated, hospitalized, and die in nearby states. The quality of O/I information on death records from other states may be inferior to Michigan death certificate O/I data.

Usefulness for Occupational Health

How have data been used for occupational health surveillance and research?	Registry staff collaborates with and otherwise provide data and services to further 6 to 12 research studies annually being conducted by researchers both within and outside MDCH.
What are some opportunities for using the data in occupational health?	Count SHE-O's (Sentinel Health Event-Occupational). Could do proportional cancer incidence ratio (PCIR) studies. Special research studies
What are the main limitations of the data for occupational health?	O/I data on incident cases not useful due to incompleteness and poor reliability.
Recommendations	Look at completeness of the data when comparing incident and mortality data. Look at O/I completeness re: mesothelioma.

**MICHIGAN DEPARTMENT OF AGRICULTURE
PESTICIDE COMPLAINT DATABASE**

Summary

Brief description	Contains data from complaints of potential pesticide misuse that are submitted to MDA. Program conducts investigations in response to complaints to determine if there are violations application requirements.
Purpose and use	Logs and tracks complaints of potential pesticide misuse, follow-up investigations, and enforcement actions.
Name and address of responsible program/agency	Pesticide and Plant Pest Management Division Pesticide Enforcement Program MDA PO Box 30017 Lansing MI 48909
Name, address, phone, e-mail of contact person	Tom Benner Pesticide Enforcement Manager (same address as above) bennert9@michigan.gov

Data Attributes

What case identifying information is captured?	Name: yes Address: no in database but yes in paper file Birthdate: no SS#: no Other information: none
What demographic information is captured?	Sex: no Race: no Ethnicity: no Age: no Age group: no Other: none
What disease/injury diagnostic information is captured and how?	Brief narrative: complainants health concerns, if any. Self-reporting only
What disease/injury etiology information is captured and how?	All presumed to be regarded by complainant as related to pesticide exposure. Database may note if investigation concludes that alleged health effects are unrelated to exposure. Great deal of information about the product(s) of concern (e.g., name, active ingredients, EPA registration number etc.)

**MICHIGAN DEPARTMENT OF AGRICULTURE
PESTICIDE COMPLAINT DATABASE**

What health care utilization information is captured (e.g. physician, hospital name; payer; cost data)?	None
What occupation/industry information is captured? (Type and coding system; employer name/address)	Name and address of firm and/or applicator being complained about, including whether they are certified/registered.

Data Collection and Processing

Procedure in which data are collected and processed	Complaints are received by telephone, either in one of MDA's field offices or in the Pesticide Enforcement Program office in Lansing. A paper report is filled out (P.I.- 147) and e-mailed or faxed to Lansing. Data entry occurs in Lansing.
What legal mandates/regulations exist for collection of these data?	State laws and regulations, which are adopted from federal FIFRA law, require pesticide complaint investigations, in accordance with ACT 451, Part 83
Who collects the data?	MDA pesticide and plant pest management division
How long has the computerized system been in place?	Since approximately 1994
How many records are added annually?	Approximately 200
What is the lag time between time disease/injury is identified and data collection?	Usually data are entered within a few days of complaint,; information is added later to complete the investigation.
Are any quality assurance procedures performed?	none
Are any modifications planned in any aspect of data collection, processing, etc.	The current database is a dbf file. An Access database has been designed but there are problems in uploading data from one to the other. Currently the two databases are being run simultaneously.
Is a data dictionary/codebook available? (Attach or give reference/contact)	See appendix
Would there be costs to the Program to obtain the data?	No.

**MICHIGAN DEPARTMENT OF AGRICULTURE
PESTICIDE COMPLAINT DATABASE**

System Attributes

What are access issues for the Program?	An MOU to establish sharing of data procedures and confidentiality has been signed at MDCH and is under review at MDA..
Are there written laws/rules/policies and/or procedures on release of the data? (include any as attachments)	While an investigation is active, the information is not subject to FOIA, but after it is closed it is. Name of complainant is FOIA-able.
What are confidentiality concerns/requirements of agency owning the data?	See above
What is the timeliness between data collection and date data are available to the Program?	MDCH will be notified by telephone as soon as any paper form (P.I.-147) is received in Lansing where the report is “exposure-human”. This should generally be within days of the exposure event.
What biases/potential biases exist in the data produced by this system?	Reporting is self-reported. No verification of true illness or causality. There may be more information in the paper files than the database; therefore paper files should be checked before we close each case
How does this dataset vary re the attributes described above among regions in MI	No variation.

Usefulness for Occupational Health

How have data been used for occupational health surveillance and research?	Currently used as one of the reporting sources for MDCH’s occupational pesticide illness and injury surveillance system.
What are some opportunities for using the data in occupational health?	One of the few sources of data on pesticide expose/potential illness
What are the main limitations of the data for occupational health?	Illness information self-reported.
Recommendations	We are ready to start. Need to be sure to double check computer file and paper file before we close cases.

MICHIGAN EMERGENCY DEPARTMENT COMMUNITY INJURY INFORMATION NETWORK

Summary

Brief description	A voluntary data collection system using a representative sample of 23 emergency departments throughout the state, providing data on injury visits. The system captures approximately 20% of all ED visits for injury or approximately 250,000 cases per year. Data collection began in 1999. It is anticipated that 2001 will be the first year that complete data from all hospitals will have been collected.
Purpose and use	Surveillance data on injuries. Additional data beyond the core dataset are obtained for cases of intimate partner violence against women (IPVAW).
Name and address of responsible program/agency	Division of Chronic Disease and Injury Control MDCH Also, contract with MPHI to provide technical support for the system.
Name, address, phone, e-mail of contact person	Linda Scarpetta Childhood & Unintentional Injury Prevention Section Division of Chronic Disease and Injury Control MDCH (517) 335-8397 scarpettal@state.mi.us

Data Attributes

What case identifying information is captured?	Name-yes, for cases of IPVAW only Address-yes, for cases of IPVAW only Birthdate – yes SS#-no Medical record number-yes Date of ED visit - yes
What demographic information is captured?	Sex-yes Race-yes Ethnicity-yes Age-yes Age group-no County/State of residence-yes
What disease/injury diagnostic information is captured and how?	Injury information only Diagnoses (up to 20 fields) (ICD-9-CM) (primary diagnosis must be injury, but subsequent diagnoses are not limited to injuries)
What disease/injury etiology information is captured and how?	E-code (ICD-9-CM) (external cause of injury code). In 2000, the E-coding rate was 69%.

MICHIGAN EMERGENCY DEPARTMENT COMMUNITY INJURY INFORMATION NETWORK

What health care utilization information is captured (e.g. physician, hospital name; payer; cost data)?	Hospital Source of payment Charges
What occupation/industry information is captured? (Type and coding system; employer name/address)	None

Data Collection and Processing

Procedure in which data are collected and processed	Hospitals submit data on cases meeting the case definition during a prescribed time period (generally quarterly) to MPHI.
What legal mandates/regulations exist for collection of these data?	None – voluntary
Who collects the data?	Data are collected on patients by staff in the emergency department and documented in medical records. These data are subsequently coded and computerized by medical records departments.
How long has the computerized system been in place?	The earliest data are for 1999 when full or partial year data were submitted by 20 hospitals.
How many records are added annually?	In 1999, 150,000 records were added, but not all hospitals submitted that for that year. It is estimated that 250,000 records will be entered annually when the system is fully operational.
What is the lag time between time disease/injury is identified and data collection?	Data are collected at the hospital during a patient's visit. Data are generally provided quarterly to MPHI with a three-month lag time (e.g., Jan-Mar data are due to MPHI in July).
Are any quality assurance procedures performed?	Yes. MPHI inspects the data visually for basic data integrity. They run frequencies and cross tabulations to check for missing cases, out-of-range values, cases outside of timeframe, or anything unusual. Data problems are resolved via discussion with hospitals.
Are any modifications planned in any aspect of data collection, processing, etc.	It is possible that some data items could be eliminated if the MEDCIIN Oversight Committee determines that the information they provide is not useful. In 2003, three hospitals discontinued participation. Replacements were identified and agreed to participate.
Is a data dictionary/codebook available? (Attach or give reference/contact)	Yes. In Documentation notebook..
Would there be costs to the Program to obtain the data?	At this time, there is no cost associated with obtaining data.

MICHIGAN EMERGENCY DEPARTMENT COMMUNITY INJURY INFORMATION NETWORK

System Attributes

What are access issues for the Program?	All requests for data must be approved by the MEDCIIN Data Use Subcommittee. Identifying information cannot be accessed.
Are there written laws/rules/policies and/or procedures on release of the data?	Yes, see Documentation notebook.
What are confidentiality concerns/requirements of agency owning the data?	Confidentiality is a primary concern. No identifying information on patients will be released. Requestors must sign an agreement that they will in no way release information that could be used to identify patients or hospitals.
What is the timeliness between data collection and date data are available to the Program?	It is likely that only annual data will be available for external use. A usable data set should be available about 9 months following the year of interest.
What biases/potential biases exist in the data produced by this system?	Because MEDCIIN represents a sample of hospitals, the data will be biased if the participating hospitals are not truly representative of all MI hospitals. Injury patients treated in emergency departments have been found to differ from those who seek treatment for injury elsewhere.
How does this dataset vary re the attributes described above among regions in MI	Injuries in the Upper Peninsula may be undercounted due to the size and location of the sample hospitals. The estimates for cases treated in the Southwest Region will be more precise than in other regions as a relatively large number of hospitals in that region participate. Certain hospitals E-code to a much lesser degree than others. If their cause of injury profile is different than hospitals that do E-code, the overall cause of injury profile will not be truly representative.

Usefulness for Occupational Health

How have data been used for occupational health surveillance and research?	Some preliminary work has been done looking at patients for whom the payor source was workers compensation and comparing these data to hospitalized injury patients.
What are some opportunities for using the data in occupational health?	This is a unique and rich data set. There are no access issues as long as confidentiality protocols are adhered to. Using workers compensation as the payor source is the only way to ascertain work cases. Plans are to develop an injury report in 2003/2004 using weighted data to allow for statewide estimates.

**MICHIGAN EMERGENCY DEPARTMENT
COMMUNITY INJURY INFORMATION NETWORK**

What are the main limitations of the data for occupational health?	There is no data item indicating work-relatedness of an injury. E-codes indicating the cause of injury are missing in about 25% of records. No data are collected for cases with illness as the principal diagnosis.
Recommendations	Obtain annual data as soon as available. Use weighted data to allow for statewide estimates. Keep apprised of the status of participation levels and any other considerations that must be taken into account during the analysis phase.

MICHIGAN INPATIENT DATABASE

Summary

Brief description	Demographic and clinical information collected statewide on patients discharged from acute care MI hospitals and of Michigan residents discharged from hospitals in contiguous states; purchased by the MDCH from the Michigan Hospital Association which collects and compiles the data.
Purpose and use	Used by the MDCH for health policy and planning, research, and the Certificate of Need process; used by individual hospitals for internal planning.
Name and address of responsible program/agency	Michigan Health and Hospital Association 6215 W. St. Joseph Highway Lansing, MI 48917
Name, address, phone, e-mail of contact person	Carol Getts Division for Vital Records and Health Statistics MDCH (517) 335-9975 GettsC@michigan.gov

Data Attributes

What case identifying information is captured?	Name-no Address-no Birthdate-yes (confidential) SS#-no Other information: medical record number (confidential) hospital (confidential)
What demographic information is captured?	Sex-yes Race-yes (Hispanic listed as one selection) Ethnicity-no (not separate item) Age -yes Age group-yes Other information: State of residence Zip code
What disease/injury diagnostic information is captured and how?	Diagnosis (up to 62 allowed), coded ICD-9-CM Procedure codes Discharge disposition (includes "Died")
What disease/injury etiology information is captured and how?	Injury etiology is captured via E-codes (codes indicating the external cause of injury)

MICHIGAN INPATIENT DATABASE

What health care utilization information is captured (e.g. physician, hospital name; payor; cost data)?	Hospital (confidential) Physician (confidential) Principal Payor (including Workers' Comp) Length of stay Total charges – is available, but according to Vital Records/Health Statistics the information “does not appear to be correct” so they have never used it.
What occupation/industry information is captured? (Type and coding system; employer name/address)	None

Data Collection and Processing

Procedure in which data are collected and processed	Hospital staff collect information during a patient's stay and document within the medical record. This information is computerized and hospitals submit data to the MHA which compiles them and makes them available annually.
What legal mandates/regulations exist for collection of these data?	None; voluntary system
Who collects the data?	Hospitals - MHA
How long has the computerized system been in place?	Starting 1982.
How many records are added annually?	In 2000, 1.25 million Michigan residents were discharged.
What is the lag time between time disease/injury is identified and data collection?	Very short; data entered over the course of the patient stay.
Are any quality assurance procedures performed?	Probably variable across hospitals. MHA has QA checks. Hospitals review what they get back from MHA and flag problems.
Are any modifications planned in any aspect of data collection, processing, etc.	Will have to go to ICD-10 when HCFA does – no earlier than 2004.
Is a data dictionary/codebook available? (Attach or give reference/contact)	Yes. In Database Documentation.
Would there be costs to the Program to obtain the data?	No. The Core Surveillance project has obtained data for 1995-2001. This was at no cost.

MICHIGAN INPATIENT DATABASE

System Attributes

What are access issues for the Program?	None on condition that the program agrees to adhere to requirements of the MHA that MDCH cannot identify patients or individual hospitals by name.
Are there written laws/rules/policies and/or procedures on release of the data? (include any as attachments)	There is an agreement between MHA and MDCH that specifies the limitations on how the data can be used. (Agreement is in documentation notebook.)
What are confidentiality concerns/requirements of agency owning the data?	The MHA does not allow release of information that would identify patients or hospitals. Information on hospitals can be obtained with permission from MHA.
What is the timeliness between data collection and date data are available to the Program?	Approximately 13 months after the close of the calendar year. (2002 data will be available in about March 2004). The MHA may be able release provisional data sooner.
What biases/potential biases exist in the data produced by this system?	Errors should be low due to high level of QA. In 2000, the E-coding rate was 84%. Those cases not E-coded may differ from those that are. Population-based: Captures all hospitalizations. Race data may not be that accurate. Hospitalizations generally represent the most serious cases other than death. They may not be representative of all illnesses and/or injuries.
How does this dataset vary re the attributes described above among regions in MI	Because E-coding rates vary significantly by hospital, completeness of cause of injury information varies by county of patient residence.

Usefulness for Occupational Health

How have data been used for occupational health surveillance and research in MI?	Used extensively by MSU for their surveillance systems (asthma, silicosis) and related research projects.
What are some opportunities for using the data in occupational health?	Data at MSU are rich and ready for analysis. Special research studies (e.g. agricultural injuries) could be performed. Could examine cases where payor is Worker's Comp.
What are the main limitations of the data for occupational health?	Restrictions on patient and hospital follow-up by MDCH rule out the traditional occupational health sentinel surveillance model (case identification leading to worksite interventions) in the Program. No information on patient occupation/industry. No data item "injury/illness work-related."
Recommendations	Use the MIDB annually utilizing Pay Source = Workers' Compensation to identify cases.

MICHIGAN WORKERS' COMPENSATION REPORTS

Summary

Brief description	Certain employers (e.g., all public employers, private employers with 3 or more full time employees, other specified employers) are required to submit a Form 100 (Employer's Basic Report of Injury) in certain instances of worker injury/disease to allow a worker to receive benefits via Workers Compensation. An injured employee who wants a hearing files a Form 104 (Application for mediation/hearing). An employer or insurance company files a Form 107 (Notice of dispute) when they have a question about the employee's claim. There is considerable overlap and no file is complete, although Form 100 file is the most complete. Comments below apply to Form 100, the primary database.
Purpose and use	The Form 100 is used to identify and initiate the appropriate benefits for an eligible worker.
Name and address of responsible program/agency	Bureau of Workers and Unemployment Compensation (BWUC) MI Dept of Consumer and Industry Services (CIS)
Name, address, phone, e-mail of contact person	Kathy Rademacher Bureau of Workers and Unemployment Compensation MI Dept of Consumer and Industry Services State Secondary Office 7150 Harris Drive Lansing MI 48909-8143 W: (517) 322-1883 F: (517) 322-1808 kradem@michigan.gov

Data Attributes

What case identifying information is captured?	Name-captured yes/available no Address- captured yes/available no Birthdate- captured yes/available yes SS#- captured yes/available no
What demographic information is captured?	Sex-captured yes/available yes Race-not captured Ethnicity-not captured Age-captured yes/available yes Employee zip code- captured yes/available yes

MICHIGAN WORKERS' COMPENSATION REPORTS

What disease/injury diagnostic information is captured and how?	Nature of injury or illness and part of body affected. Employer describes injury and BWUC staff subsequently assign codes for these (codes are contained in the Database Documentation notebook). Whether death occurred.
What disease/injury etiology information is captured and how?	Whether the injury occurred on employer's premises. There are places for narratives on Form 100, but these narratives are not keyed, including: "Describe events which caused the injury" and "name the object or substance which directly injured the employee."
What health care utilization information is captured (e.g. physician, hospital name; payer; cost data)?	None.
What occupation/industry information is captured? (Type and coding system; employer name/address)	Employer name, address, city, zip code, class code (codes that identify specific type of business, e.g., Christmas tree farm), payroll, number of employees. (All coding schemes are provided in the Database Documentation notebook except class code due to its length. Class code definitions can be found at http://www.caom.com/Manuals/ccmanual.pdf .) Employer SIC, employee occupation, and date employee hired are on Form 100, but these data are not keyed in.

Data Collection and Processing

Procedure in which data are collected and processed	General scenario: a worker sustains an injury or illness and reports this to the employer. The employer sends the employee to a healthcare professional selected by the company and also submits a report of the incident to the company's insurance carrier. If the injury or illness results in death, certain injuries (e.g., amputation of hand – see Section 361 for all eligible injuries), or it appears that the worker will miss more than 7 consecutive days (which does not include the incident day), the employer completes a Form 100 and submits this to BWUC. Some employers submit a Form 100 to BWUC even when it's not mandated (i.e., doesn't meet above criteria). Form 100's that are submitted for cases not meeting criteria for benefits receive a claim status of "NLT."
What legal mandates/regulations exist for collection of these data?	Public Act 317 of 1969 ("Workers Disability Compensation Act") (this Act is in the Database Documentation notebook). Note that there are no penalties for not reporting.

MICHIGAN WORKERS' COMPENSATION REPORTS

Who collects the data?	Employer ascertains all the required information and completes Form 100.
How long has the computerized system been in place?	Since June, 1991. They cannot purge anything in the system until it has been in the system 20 years. Thus, purging will begin in 2011.
How many records are added annually?	In 1999-2001, there were approximately 50,000-60,000 cases annually.
What is the lag time between time disease/injury is identified and data collection?	Generally, this lag time will be short since the employee usually informs the employer shortly after the incident. However, an employee has up to 2 years to report an incident.
Are any quality assurance procedures performed?	The computer system conducts internal checks (e.g., ensures valid dates). If certain fields are left blank (e.g., Federal ID Number), the form is returned to the employer for completion.
Are any modifications planned in any aspect of data collection, processing, etc.	Files will be electronically submitted (starting in 2003 or 2004).
Is a data dictionary/codebook available? (Attach or give reference/contact)	Yes, see Database Documentation notebook.
Would there be costs to the Program to obtain the data?	No.

System Attributes

What are access issues for the Program?	None. The Program has already obtained data for 1999-2001 at no cost.
Are there written laws/rules/policies and/or procedures on release of the data? (include any as attachments)	Section 230 describes the confidentiality of the data and limitations as to how the data can be released.
What are confidentiality concerns/requirements of agency owning the data?	No follow-up is allowed. Data can only be used for statistical/research purposes. They do not provide employee name, address, or social security number.
What is the timeliness between data collection and date data are available to the Program?	Data for a calendar year are available about 6 months after the close of that calendar year.

MICHIGAN WORKERS' COMPENSATION REPORTS

What biases/potential biases exist in the data produced by this system?	There is underreporting of work-related illnesses, especially ones with long latency, because employers/employees often don't recognize the etiology as work-related. Will miss some claims if only looking at database of Form 100s because Form 104's contain workers claims not necessarily reported in a Form 100. The Form 100 was not designed to capture "medical only" cases, however, the datafile does contain a substantial number of these. These "false positives" are likely not randomly submitted, but are submitted by certain employers. Theoretically, all Form 107's should overlap with Form 100's because they are in response to a claim. However, in reality, there are 107's that do not match up with the other forms. Note that merging the three forms would be very difficult and probably not worth effort right now. MSU is doing this for 1999 – we should look at the results of that.
How does this dataset vary re the attributes described above among regions in MI	Unknown.

Usefulness for Occupational Health

How have data been used for occupational health surveillance and research?	MSU has been using for surveillance and special research studies. For internal purposes, BWUC generates simple counts of the number of Forms received quarterly. They have done no analytical reports.
What are some opportunities for using the data in occupational health?	Particularly useful for injury surveillance.
What are the main limitations of the data for occupational health?	Not so useful for illness surveillance.
Recommendations	Add data annually to our existing Workers Compensation Form 100 database. Use the database to generate data for Occupational Health Profiles Report.

OCCUPATIONAL DISEASE REPORTS

Summary

Brief description	All health care providers and employers are required to report all known or suspected work-related illness (but NOT injuries) to the Michigan Department of Consumer and Industry Services (MDCIS). MSU has been contracted to maintain the data system. (N=20,000 annually)
Purpose and use	Surveillance and intervention
Name and address of responsible program/agency	MIOSHA MDCIS
Name, address, phone, e-mail of contact person	Ken Rosenman, MD Mary Jo Reilly Department of Medicine Occupational and Environmental Medicine Michigan State University 117 W. Fee E. Lansing , 48824-1316 517-353-1846 rosenman@msu.edu reilly@msu.edu

Data Attributes

What case identifying information is captured?	Name-yes Address-yes on form but not on record layout Birthdate-no SS#-yes
What demographic information is captured?	Sex-yes Race-yes Ethnicity-no Age-yes
What disease/injury diagnostic information is captured and how?	Date of diagnosis One 3-digit ICD code. Yes/no if patient died
What disease/injury etiology information is captured and how?	Five causes - coding scheme developed by MSU
What health care utilization information is captured (e.g. physician, hospital name; payor; cost data)?	Name of doctor – in computer file Address of doctor not computerized
What occupation/industry information is captured? (Type and coding system; employer name/address)	SIC Number of employees Name and address of employer

OCCUPATIONAL DISEASE REPORTS

Data Collection and Processing

Procedure in which data are collected and processed	Reports submitted to MDCIS; forwarded to MSU for data entry.
What legal mandates/regulations exist for collection of these data?	Part 56 of PA of 1978
Who collects the data?	MDCIS
How long has the computerized system been in place?	Since 1991
How many records are added annually?	20,000
What is the lag time between time disease/injury is identified and data collection?	Variable
Are any quality assurance procedures performed?	Annual validation and consistency checks
Are any modifications planned in any aspect of data collection, processing, etc.	No
Is a data dictionary/codebook available? (Attach or give reference/contact)	Yes
Would there be costs to the Program to obtain the data?	Probably not

System Attributes

What are access issues for the Program?	None
Are there written laws/rules/policies and/or procedures on release of the data? (include any as attachments)	There are some confidentiality provisions in the reporting law.
What are confidentiality concerns/requirements of agency owning the data?	None regarding MDCH
What is the timeliness between data collection and date data are available to the Program?	Variable
What biases/potential biases exist in the data produced by this system?	Incomplete reporting because of generally poor compliance with reporting requirements among health care providers. Biased towards more complete reporting by large employers.

OCCUPATIONAL DISEASE REPORTS

How does this dataset vary re the attributes described above among regions in MI	Larger employers, who are more likely to report, are probably more likely to be located in high population density areas.
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Usefulness for Occupational Health

How have data been used for occupational health surveillance and research?	Used extensively by MSU for surveillance and special studies
What are some opportunities for using the data in occupational health?	Use to develop profiles of occupational health in MI and other descriptive studies.
What are the main limitations of the data for occupational health?	Doesn't collect injury data.
Recommendations	Explore with MSU some additional data analysis possibilities.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION DATA INITIATIVE

Summary

Brief description	The Occupational Safety and Health Administration (OSHA) annually collects injury and illness data from a sample of employers (N~3,300 in MI). These data are originally collected on OSHA forms that employers are required to maintain. Form 300A is the Summary of Work-related Injuries and Illnesses containing summary data on numbers of cases and rates. The OSHA Data Initiative collects info from 300A and also obtains number of hours worked and number of employees. Some employers who are exempt from OSHA injury/illness recordkeeping are included in the sample. The BLS Annual Survey of Occupational Injury and Illness collects the same type of information except it does not ascertain employer name. BLS estimates that about 10% of its sample is also in the OSHA Data Initiative.
Purpose and use	Allows OSHA/MIOSHA to have establishment-specific injury and illness information, and have employer name (which is not allowed by BLS), so it can be used for targeting and benchmarking. Nationally, the 13,000 employers with the highest injury and illness rates are listed on a website.
Name and address of responsible program/agency	MIOSHA Michigan Department of Consumer and Industry Services (CIS)
Name, address, phone, e-mail of contact person	Martha Yoder MIOSHA Information Division Michigan Department of Consumer and Industry Services (CIS) State Secondary Office 7150 Harris Drove PO Box 30643 Lansing 48909-8143 517-322-1814 Information on system overall was provided by: Dave Schmidt, National OSHA office (202) 693-1886

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION DATA INITIATIVE

Data Attributes

What case identifying information is captured?	Name-no Address-no Birthdate-no SS#-no Date of incident – year only
What demographic information is captured?	Sex-no Race-no Ethnicity-no Age -no Age group-no Other-no
What disease/injury diagnostic information is captured and how?	For each reporting company, annual number of: injuries, skin disorders, respiratory conditions, poisonings, all other illnesses.
What disease/injury etiology information is captured and how?	None
What health care utilization information is captured (e.g. physician, hospital name; payor; cost data)?	None
What occupation/industry information is captured? (Type and coding system; employer name/address)	Name and address of establishment, SIC/NAICS code of employer, # of employees, # of worker-hours.

Data Collection and Processing

Procedure in which data are collected and processed	MIOSHA mails out a survey to employers. Employers must respond within 30 days generally. All employers receiving a survey are required to respond, even if they are generally exempt from keeping MIOSHA injury and illness records.
What legal mandates/regulations exist for collection of these data?	OSHA of 1970 requires certain employers to prepare and maintain records of work-related injuries and illnesses. OSHA revised recordkeeping Rule 29 CFR 1904. The revision became effective 1/1/02.
Who collects the data?	Employers. CIS aggregates the sample data.
How long has the computerized system been in place?	OSHA has been collecting data since 1995, although they were not allowed to disclose any info from that year. So data are available from 1996 on.
How many records are added annually?	Approximately 3,000

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION DATA INITIATIVE

What is the lag time between time disease/injury is identified and data collection?	An employer is required to complete an Injury and Illness Incident Report within 7 days of learning of the incident. The OSHA survey is conducted between April and September following the year of interest.
Are any quality assurance procedures performed?	?
Are any modifications planned in any aspect of data collection, processing, etc.	New recordkeeping rules were effective as of 1/1/02. These rules created simpler forms and promoted the use of computers rather than paper. In addition, specific language was added regarding the recording of needlestick, hearing loss, and tuberculosis cases.
Is a data dictionary/codebook available? (Attach or give reference/contact)	It would be made available if the database were obtained.
Would there be costs to the Program to obtain the data?	No cost.

System Attributes

What are access issues for the Program?	Due to the confidential nature of the database (i.e., it contains employer name), the microdata are not made available to the public. The Program could obtain the data if they develop an agreement with OSHA. OSHA does not generate standard tables and release this information via website or CD (in contrast to how BLS makes SOII data available).
Are there written laws/rules/policies and/or procedures on release of the data? (include any as attachments)	The data are generally exempt from the Freedom of Information Act. Federal OSHA provides MI data to MIOSHA and MSU has an agreement of some kind in order to obtain that data from MIOSHA.
What are confidentiality concerns/requirements of agency owning the data?	High. Data contains employer name.
What is the timeliness between data collection and date data are available to the Program?	Data are available in December following the year of interest.
What biases/potential biases exist in the data produced by this system?	Generally excludes employers with less than 11 employees and, starting in 2002, "low hazard" businesses (e.g., Beauty Shops) (although these employers must still report if an injury or illness results in death or the hospitalization of at least 3 employees). Employers have incentive to under-report. Injuries such as suicide attempts are excluded.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION DATA INITIATIVE

How does this dataset vary re the attributes described above among regions in MI	Unknown.
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Usefulness for Occupational Health

How have data been used for occupational health surveillance and research?	New system is under evaluation at MSU.
What are some opportunities for using the data in occupational health?	Will be useful to explore the implications of these data. Given confidential nature of data, ability to follow back to employer is highly unlikely.
What are the main limitations of the data for occupational health?	Not much specific information. Under-reporting could be an important issue.
Recommendations	Would be interesting to obtain and evaluate the data.

POISON CONTROL CENTERS

Summary

Brief description	All calls that come into the two MI poison control centers are tracked electronically. Currently, the databases are separate, but they are being linked by a T-1 line. The software is called Toxicall. This database is set up to transmit data into the national database of poison control centers called TESS (Toxic Exposure Surveillance System). The MDCH Bioterrorism program is purchasing the software so they can do “real type syndromic surveillance.”
Purpose and use	Managing and tracking poison control center activity.
Name and address of responsible program/agency	1) Children’s Hospital of Michigan (CHM) Regional Poison Control Center (18 counties) 4160 John R, Suite 616 Detroit, MI 48201 2) DeVos Regional Poison Control Center (65 counties) 1840 Wealthy, SE Grand Rapids, MI 49506
Name, address, phone, e-mail of contact person	1) Susan Smolinski, PharmD Children’s Hospital of MI (313) 745-5430 ssmolins@dmc.org 2) John H. Trestrail, III DeVos Children’s Hospital (616) 774-5329 john.trestrail@spectrum-health.org

Data Attributes

What case identifying information is captured?	Name: yes Address: Zip always, rest of address sometimes Birthdate: no SS#: no Other information: Case ID assigned by PCC
What demographic information is captured?	Sex: yes Race: no Ethnicity: no Age: yes Age group: yes
What disease/injury diagnostic information is captured and how?	All reported signs, symptoms, and clinical findings – TESS has its own lists/codes. Medical outcome (e.g., none, serious, death).

POISON CONTROL CENTERS

What disease/injury etiology information is captured and how?	Reported exposure; substance (coded by "Poisindex"); whether unintentional, intentional, adverse reaction; reason for exposure (includes occupational); possible relationship of clinical effects to reported exposure; scenario details.
What health care utilization information is captured (e.g. physician, hospital name; payer; cost data)?	Types of health care facilities used. No facility names are provided.
What occupation/industry information is captured? (Type and coding system; employer name/address)	Exposure site: workplace (no names are provided).

Data Collection and Processing

Procedure in which data are collected and processed	SPI (specialist in poison information) answers hotline and fills out the electronic chart.
What legal mandates/regulations exist for collection of these data?	Public Act 606 of 1978 provides for creation of a poison control system including a system for data collection and reporting.
Who collects the data?	The two centers.
How long has the computerized system been in place?	CHM: since July 1998 DeVos: since January 2000
How many records are added annually?	CHM: about 69,000 DeVos: 46,622 in 2000
What is the lag time between time disease/injury is identified and data collection?	Immediate
Are any quality assurance procedures performed?	Yes, many. See Database Documentation notebook.
Are any modifications planned in any aspect of data collection, processing, etc.	Data had been Access-based, however, it will go to SQL format in spring, 2003.
Is a data dictionary/codebook available? (Attach or give reference/contact)	Yes
Would there be costs to the Program to obtain the data?	No

POISON CONTROL CENTERS

System Attributes

What are access issues for the Program?	CHM now provides MDCH access to the data. MDCH will be receiving data from both centers once the connection between the two is complete.
Are there written laws/rules/policies and/or procedures on release of the data? (include any as attachments)	Unknown. Law does not address this issue specifically, but mandates PCCs to make policies and procedures in general.
What are confidentiality concerns/requirements of agency owning the data?	These records are considered protected medical records.
What is the timeliness between data collection and date data are available to the Program?	To be determined.
What biases/potential biases exist in the data produced by this system?	Not sure of biases, but calls most likely represent an undercount of the true number of exposures.
How does this dataset vary re the attributes described above among regions in MI	Unknown

Usefulness for Occupational Health

How have data been used for occupational health surveillance and research?	Currently all occupational calls are submitted to MSU as reportable occupational diseases. Occupational pesticide calls are provided to MDCH. Several studies from PCCs in other states use the TESS data set.
What are some opportunities for using the data in occupational health?	Trend and cluster analysis. California has developed a follow-back protocol for occupational calls.
What are the main limitations of the data for occupational health?	May not be possible to obtain identifiers.
Recommendations	• Obtain policy/procedure documents to evaluate for release of data issues. • Obtain legacy data for initial analysis. • Explore the possibility of developing a system for additional data collection for occupational calls as has been done in California.