

Title: New Mexico; Worker Health Surveillance (n Capacity)

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NIOSH Scientific Administrator: Linda Frederick, Ph.D.

Final Report Abstract:

The project funded by The National Institute of Occupational Safety and Health (NIOSH) in 2002, "Development of Worker Health Surveillance for New Mexico," has made significant steps in the formation of a comprehensive occupational illness and injury surveillance system. During the three years of the capacity building grant, the foundation for a comprehensive occupational health surveillance system has been laid through specific tasks including the enactment of regulations, the establishment of alliances and agreements with data holders and other entities, baseline assessments of occupational injury and illness, the development of a database for housing occupational health data, and the establishment of the New Mexico Occupational Health Registry as the official entity to receive reports of occupational illness and injury.

Impact of the Project:

Publications:

Moraga-McHaley S, Mulloy KB, Voorhees R. "Occupational Health Surveillance in New Mexico: Highlights from the CSTE Indicators Project." New Mexico Epidemiology Report. New Mexico Department of Health. July 2, 2004, #6, pp. 1-3.

Moraga-McHaley S, Mulloy KB, Voorhees R. "Occupational Injury Fatalities in New Mexico: 1998-2002." New Mexico Selected Health Statistics Annual Report for 2002. The

State Center for Health Statistics, Office of New Mexico Vital Records & Health Statistics.
June 2004, pp. S10-S16.

January 25, 2006

Peter E. Grandillo Jr.
Centers for Disease Control and Prevention
Procurement and Grants Office
626 Cochrans Mill Road
PO Box 18070 – MS P05
Pittsburgh, PA 15236

Dear Mr. Grandillo,

Enclosed is the Final report for the Worker Health Surveillance in New Mexico award number 1 U60 OH008339-01. We have made much progress in our State to conduct worker surveillance as a result of this award. I hope the attached report conveys these accomplishments.

Thank you for the opportunity to conduct this project. We look forward to continued progress under our new award. Our Final Financial Status Report was sent under separate cover in December.

Please feel free to call me at 505-841-5893 if you have any questions regarding this submittal or our ongoing worker surveillance activities in New Mexico.

Sincerely,



M. Helen Flowers
Chief, Environmental Health Epidemiology Bureau
New Mexico Department of Health
Principle Investigator for Worker Health Surveillance in New Mexico

Final Progress Report

Billing Code: 1 U60 OH008339-01

For the

Department of Health and Human Services

The Centers for Disease Control and Prevention and

The National Institute for Occupational Safety and Health

(CDC/NIOSH)

Worker Health Surveillance

in

New Mexico

Submitted by the

NM Department of Health

Epidemiology and Response Division

January 24, 2006

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Abstract

The project funded by The National Institute of Occupational Safety and Health (NIOSH) in 2002, "Development of Worker Health Surveillance for New Mexico," has made significant steps in the formation of a comprehensive occupational illness and injury surveillance system. During the three years of the capacity building grant, the foundation for a comprehensive occupational health surveillance system has been laid through specific tasks including the enactment of regulations, the establishment of alliances and agreements with data holders and other entities, baseline assessments of occupational injury and illness, the development of a database for housing occupational health data, and the establishment of the New Mexico Occupational Health Registry as the official entity to receive reports of occupational illness and injury.

Regulation

- In August 2003, occupational conditions were added to the New Mexico *List of Notifiable Conditions*, the official regulation that defines conditions that must be reported to the Department of Health by health care providers, facilities and other persons. The regulation established the New Mexico Occupational Health Registry. In addition, occupation was added as a required data element for all disease reports to the Department.

Partnerships and agreements

- An MOU was established with the Program in Occupational and Environmental Health at the University of New Mexico Health Sciences Center (UNM/HSC), which has created the joint project between New Mexico Department of Health (NMDOH) and UNM/HSC. A Scientific Advisory Committee has been formed and is assisting with the assessment of existing occupational illness and injury databases.
- NM joined the Silicosis Sentinel Event Notification Systems for Occupational Risks (SENSOR) states in yearly meetings and on going data analysis and intervention. NM has established contact with the SENSOR pesticide states and NIOSH to begin surveillance in NM.
- The NMOHR is collaborating with the NMDOH on establishing asthma surveillance in the workplace through the CDC Asthma Surveillance Grant granted to the Office of Epidemiology at NMDOH.
- Working relationships with dataset holders and agencies focused on occupational health in NM (Workers' Compensation, Vital Records and Health Statistics, Poison Center, Health Policy Commission, Tumor Registry, NM Department of Agriculture, NM Occupational Health and Safety Bureau) have been established. Formal data use agreements have been developed with some of these data holders.
- Grant funds support the training of coders at New Mexico Vital Records and Health Statistics (NMVRHS) to code occupation and industry on death certificates. Coding of occupations and industry has been conducted for all deaths from 2001.
- The project was conducted in collaboration with other NMDOH/CDC initiatives including the Environmental Public Health Tracking Program, Asthma and the NM State Lab Biomonitoring Program. Occupational studies continue to be pursued through these collaborations including assessing occupational exposure to heavy metals, cotinine, and pesticides. Additionally an occupational asthma workgroup was formed.

Surveillance

- In depth occupational injury mortality surveillance analysis was conducted utilizing Census of Fatal Occupational Injury (CFOI) and death certificate data for the years 1998-2002. Higher rates of fatality were found for non-US citizens, the self employed and older workers. Workers in rural counties were found to have higher rates of death than workers in more densely populated counties. Formal agreement for collaboration on prevention interventions of occupational injury fatality was established with the NM Bureau of Occupational Safety and Health.
- NM has participated in the joint (NIOSH), Council of State and Territorial Epidemiologists (CSTE) occupational health indicators phase II pilot project. New Mexico data generated through the indicators project has been incorporated into a summary report titled *Putting Data to Work: Occupational Health Indicators for 13 States from 2000*. Among the participating states, New Mexico was the third highest for occupational injury fatality rates and for rates of calls to poison control centers regarding on-the job pesticide exposures; and fourth highest for rates of total pneumoconiosis mortality. On the positive side, New Mexico had the lowest rates of carpal tunnel syndrome and work-related burns.
- Analyses of data from several programs of miners' medical surveillance in NM were completed and presented to the Silicosis SENSOR annual meetings in 2003 and 2005. The data have been incorporated into NMOHR and new cases of silicosis reported to NIOSH.
- Elevated blood lead levels among adults and industry of employment are being routinely reported to and incorporated into the NMOHR.
- Groundwork for the analysis of occupational exposure pesticide surveillance data was established during the grant funding period.

Outreach

- The first report on occupational health surveillance in New Mexico has been published in the NM Epidemiology Report July 2004 and has a statewide distribution to 4,000 medical providers.
- A brochure detailing reporting requirements and explaining the purpose of the newly established New Mexico Occupational Health Registry (NMOHR) was created and was distributed with the Epidemiology Report. A letter to NM NIOSH B-readers, occupational medicine physicians, pathologists, radiologists and pulmonologists was sent out to increase surveillance.
- An occupational health needs assessment of Native American tribes in New Mexico was conducted to establish contacts with sovereign tribal entities, to determine the specific needs and concerns of Native American communities regarding occupational health, to identify barriers to conducting occupational health and identify avenues for occupational health interventions in Native American populations in the future.

1. Highlights and Translation of Findings

The project funded by The National Institute of Occupational Safety and Health (NIOSH) in 2002, "Development of Worker Health Surveillance for New Mexico," has made significant steps in the formation of a comprehensive occupational illness and injury surveillance system. This report summarizes the activities and findings conducted in this three-year project. The Final Financial Status Report was submitted under separate cover in December 2005. All funds were expended as planned by the end of the grant period. The additional reporting requirement of the Final Invention Statement and Certification is provided as Attachment 1 to this report.

During the three years of the capacity building grant, the foundation for a comprehensive occupational health surveillance system has been laid through specific tasks including the enactment of regulations, the establishment of alliances and agreements with data holders and other entities, baseline assessments of occupational injury and illness, the development of a database for housing occupational health data, and the establishment of the New Mexico Occupational Health Registry as the official entity to receive reports of occupational illness and injury.

Highlights:

- ❖ Occupational conditions have been added to the New Mexico *List of Notifiable Conditions*, the official regulation that defines conditions that must be reported to the Department of Health by health care providers, facilities and other persons. The regulation also established the New Mexico Occupational Health Registry as the entity to receive these reports. In addition, occupation is being added as a required data element for all disease reports.
- ❖ The Scientific Advisory Committee has been formed and convened biannually to assist with the assessment of existing occupational illness and injury databases.
- ❖ A Memorandum of Agreement has been established with the Program in Occupational and Environmental Health at the University of New Mexico School of Medicine, which has hired the position of surveillance coordinator.
- ❖ Grant funds supported the training of coders at New Mexico Vital Records and Health Statistics to code occupation and industry on death certificates, a process that had ceased due to insufficient funds. Coding of all deaths was conducted for all deaths since January 1, 2003.
- ❖ NM joined the Silicosis Sentinel Event Notification Systems for Occupational Risks (SENSOR) states in yearly meetings and on going data analysis and intervention. NM has established contact with the SENSOR pesticide states and NIOSH to begin surveillance in NM.
- ❖ The NMOHR is collaborating with the NMDOH on establishing asthma surveillance in the workplace through the CDC Asthma Surveillance Grant granted to the Office of Epidemiology at NMDOH.
- ❖ Working relationships with dataset holders in NM (Workers' Compensation, Vital Records and Health Statistics, Poison Center, Health Policy Commission, and

Tumor Registry) have been established. Formal data use agreements have been developed with some of these data holders.

- ❖ Working relationships established with occupational health agencies responsible for regulations in NM including the NM Department of Agriculture and the NM Occupational Health and Safety Bureau. MOUs for collaborative work are in development.
- ❖ In depth occupational injury mortality surveillance analysis was conducted utilizing Census of Fatal Occupational Injury (CFOI) and death certificate data for the years 1998-2002. Higher rates of fatality were found for non-US citizens, the self employed and older workers. Workers in rural counties were found to have higher rates of death than workers in more densely populated counties. Formal agreement for collaboration on prevention interventions of occupational injury fatality was established with the NM Bureau of Occupational Safety and Health.
- ❖ NMOHR worked with two miners' medical surveillance programs in NM (NM Radiation Exposure Screening and Education Program and the Miners Colfax Medical Center Miners Outreach Program and Black Lung Clinic) to analyze data. The analyses were presented to the Silicosis SENSOR annual meetings in 2003 and 2005. The data have been incorporated into NMOHR and new cases of silicosis reported to NIOSH.
- ❖ NM has participated in the joint (NICSH), Council of State and Territorial Epidemiologists (CSTE) occupational health indicators phase II pilot project. New Mexico data generated through the indicators project has been incorporated into a summary report titled *Putting Data to Work: Occupational Health Indicators for 13 States from 2000*. Among the participating states, New Mexico was the third highest for occupational injury fatality rates and for rates of calls to poison control centers regarding on-the-job pesticide exposures; and fourth highest for rates of total pneumoconiosis mortality. On the positive side, New Mexico had the lowest rates of carpal tunnel syndrome and work-related burns.
- ❖ Elevated blood lead levels among adults and industry of employment are being routinely reported to and incorporated into the NMOHR.
- ❖ Groundwork for the analysis of occupational exposure pesticide surveillance data was established during the grant funding period.
- ❖ The first report on occupational health surveillance in New Mexico has been published in the NM Epidemiology Report July 2004 and has a statewide distribution to 4,000 medical providers.
- ❖ A brochure detailing reporting requirements and explaining the purpose of the newly established New Mexico Occupational Health Registry (NMOHR) was created and was distributed with the Epidemiology Report. A letter to NM NIOSH B-readers, occupational medicine physicians, pathologists, radiologists and pulmonologists was sent out to increase surveillance.
- ❖ An occupational health needs assessment of Native American tribes in New Mexico was conducted to establish contacts with sovereign tribal entities, to

determine the specific needs and concerns of Native American communities regarding occupational health, to identify barriers to conducting occupational health and identify avenues for occupational health interventions in Native American populations in the future.

- ❖ The project was conducted in collaboration with other NMDOH/CDC initiatives including the Environmental Public Health Tracking Program and the NM State Lab Biomonitoring Program. Occupational studies continue to be pursued through these collaborations including assessing occupational exposure to heavy metals, cotinine, and pesticides. Additionally an occupational asthma workgroup was formed.

2. Outcomes and Impacts

The occupational health surveillance state capacity building project has allowed for a partnership between the NM Department of Health and the University of New Mexico Health Sciences Center to build an infrastructure for occupational injury and illness surveillance that did not previously exist in the state of New Mexico. A significant first step was that occupational conditions were added to the New Mexico *List of Notifiable Conditions*, the official regulation that defines conditions that must be reported to the Department of Health by health care providers, facilities and other persons. The state regulation established the New Mexico Occupational Health Registry (NMOHR) as the entity to receive the reports. In addition, occupation was added as a required data element for all disease reports. A Memorandum of Understanding was established between the New Mexico Department of Health (NMDOH) and the Program in Occupational and Environmental Health (POEH) at the University of New Mexico Health Sciences Center (UNM/HSC) creating the joint project and the housing of NMOHR at UNM/HSC.

Grant funds support the training of coders at New Mexico Vital Records and Health Statistics (NMVRHS) to code occupation and industry on death certificates. The coding of occupation and industry had not been coded previously and without this information it was difficult to analyze trends in disease clusters in specific occupations. The grant has enabled NMOHR the ability to expand the usefulness of an important database.

An in depth occupational injury mortality surveillance analysis was conducted utilizing Census of Fatal Occupational Injury (CFOI) and death certificate data for the years 1998-2002. The analysis shows that New Mexico has consistently had a higher fatality rate for occupational injuries than the US as a whole. This analysis has prompted a partnership between NMOHR and the New Mexico Bureau of Occupational Safety and Health for educational intervention for prevention of fatal injuries.

The first report on occupational health surveillance in New Mexico has been published in the NM Epidemiology Report, July 2004, and has a statewide distribution to 4,000 medical providers. A brochure detailing reporting requirements and explaining the purpose of the newly established NMOHR was created and was distributed with the Epidemiology Report. The grant has helped to train physicians to recognize occupational injuries or illnesses in their busy rural practices. This network of trained physicians will help to capture a more accurate picture of the total burden of occupationally-related injury and illness in the state of New Mexico.

The project has become a vehicle of communication between various entities with interests in occupational health and safety. For instance, the NMOHR acts as an intermediary for the regulatory New Mexico Department of Agriculture's Pesticide Management Bureau and the New Mexico Poison Control Center for the purposes of data and information exchange. Relationships such as these are being formalized with Memorandums of Agreement and will allow the NMOHR to become the clearinghouse for occupational health and safety for New Mexico. In addition, there have been collaborative efforts established across state (Texas) and international (Mexico) borders to work on pesticide poisoning investigations among farm workers.

3. Scientific Report

This report documents the progress toward the implementation of worker surveillance in New Mexico. While the implementation of this project had several delays at the start, significant steps have been taken that form the foundation for a comprehensive occupational surveillance system.

There were two major delays during the initial months of the grant period. The Department charged the Principal Investigator with the responsibility for planning the state's initial smallpox vaccination program and with being the Adverse Event [Prevention] Coordinator for the project. This resulted in a near total time commitment to that project, at the expense of all other responsibilities that the PI had, including the portion of the PI's time that was dedicated to occupational surveillance. In year 2, the PI was changed on the project. The second delay resulted from a long series of events related to the proposed Memorandum of Agreement with the University of New Mexico to hire a full time Surveillance Coordinator and partially fund the Co-investigator's salary. By the end of the first year a Surveillance Coordinator was hired for the duration of the project.

The format for this report provides a progress report for each of the goals, objectives and activities outlined in the Research Plan and described in the 2002 grant application.

Goal 1: The overall goal of this funding is to establish an occupational illness, toxic exposure and injury surveillance program in the State of New Mexico utilizing existing data sources in state and federal public health and labor agencies, public and private healthcare provider data, academic institutions, and creating a single repository for combining these data into valid, reliable and useful surveillance information.

a. *Objective 1a: Develop surveillance infrastructure*

- i. *Activity:* Form surveillance subcommittee to work with NIOSH to determine core data elements for occupational surveillance datasets.

Progress: The Co-PI and Surveillance Coordinator at UNM have worked with the NIOSH/CSTE Occupational Health Surveillance Workgroup to standardize surveillance for the states focusing on coding standards for industry and occupation and other data elements. NMOHR continues as active participants in the joint NIOSH/CSTE occupational health indicator project.

- ii. *Activity:* Compile and assess existing coding of variables in use in existing datasets

1. Identifying information
2. Demographic information
3. Occupational coding
4. Provider information
5. Geographic locating information

Progress: A questionnaire was distributed to previously identified dataset holders. Completed questionnaires were obtained from the following agencies: New Mexico Trauma Registry, New Mexico Tumor Registry, and New Mexico Poison and Drug Information Center (NMPDIC). A second

questionnaire was distributed and completed by New Mexico Workers' Compensation Administration. Survey information from both surveys was compiled into a database for further analysis. The questionnaire is provided as Attachment 2.

- iii. *Activity:* Establish data use agreements with holders of existing databases to include:
1. Variables to be included
 2. Format
 3. Confidentiality
 4. Security

***Progress:* Meeting and discussions between the surveillance coordinator and the director of the NMPDIC were held. Discussions regarding the format for data transmittal, periodicity, and variables to be included in the transmittal were conducted.**

A data use agreement previously used by the NMPDIC was obtained and assessed for incorporation as a template for NMOHR data use agreements (Attachment 3). A signed MOU for data transfer was completed with NMPDIC.

The surveillance coordinator attended a workshop on compliance with Institutional Review Board requirements. A letter was issued from the New Mexico Health Department explaining that that all research conducted by the NMOHR is exempt. The letter is included as Attachment 4.

Activity: Create centralized surveillance database capable of combining data from existing datasets and transmitting data in approved formats

***Progress:* Detailed planning for this database is underway in collaboration with the Chief Information Officer for the Department of Health. New state requirements have been established for projects, which utilize any aspect of information technology. These include HIPAA requirements, interoperability requirements, and security standards. The database to be used for surveillance must meet these standards before data collection officially begins. The NMDOH IT standards are described in Attachment 5.**

- iv. *Activity:* Collaborate with individual data holders to identify means for increasing completeness of reporting for each specific dataset.

***Progress:* Discussions have occurred between the Surveillance Coordinator and the New Mexico Poison and Drug Information Center on methods of increasing reporting. A suggestion was made to supply worksites with reporting instructions, however, due to agreements which may exist between various chemical suppliers and Poison Information Centers, this may not be achievable. Informal discussions**

regarding reporting completeness have also taken place between the NMOHR coordinator and the NMWCA, NMTR, and NMVRHS.

- v. *Activity:* The Scientific Advisory Committee reviewed and recommended appropriate changes to the regulations regarding notifiable conditions of public health significance that are maintained by the Office of Epidemiology.

Progress: In August 2003, specific occupationally related illnesses and injuries were incorporated to the *List of Notifiable Conditions* official state regulation following a hearing process and approval process. The List identifies those conditions of public health significance that are required to be reported by health care professionals, health care facilities and other persons. The conditions that were adopted into regulation are:

- Asbestosis;
- Chronic beryllium lung disease;
- Coal worker's pneumoconiosis;
- Heavy metal poisoning;
- Hypersensitivity pneumonitis;
- Mesothelioma;
- Noise induced hearing loss;
- Occupational asthma;
- Silicosis;
- Other illnesses related to occupational exposure.

Additionally, the regulation was changed to require reporting of the patient's occupation for all disease reports, whether occupationally related or not. This will facilitate the identification of additional conditions in infectious diseases, other environmental conditions, and, potentially, cancer.

The adopted regulations also established the New Mexico Occupational Health Registry as the agency responsible for operating a statewide registry of occupationally-related illnesses and injuries. NM notifiable conditions are shown in Attachment 6. The case reporting form is provided in Attachment 7.

- b. *Objective 1b:* Restart coding of occupation on all death certificates by January 2003. This is crucial to avoid additional years of uncoded deaths. (Deaths have not been coded for the years 2001 and 2002 due to lack of funding.)
 - i. *Activity:* Ensure that training of coding staff at NMVRHS is current and update training as needed; complete training by December, 2002.
Progress: This activity has been completed.
 - ii. *Activity:* Assure that at least three staff persons are trained to ensure continuity and consistency of occupational coding.
Progress: This activity has been completed.

iii. *Activity:* Begin coding with deaths occurring in 2003 using SOC if feasible.

***Progress:* All deaths beginning January 1, 2003 have been recoded for occupation and industry using the NAICS and SOC coding systems. Furthermore, deaths for the years when coding was dropped (2001, 2002) where “death at work” was indicated on the death certificate, have been coded for industry and occupation. This was also done for deaths where pneumoconiosis was reported as the underlying cause of death.**

c. *Activity:* The Scientific Advisory Committee established priorities for surveillance of occupational health conditions, using the CSTE *Occupational Health Surveillance Indicators* as a guide. Priority conditions include:

- i. Acute work-related pesticide associated illnesses reported to the New Mexico Poison and Drug Information Center (Indicator #11; updated existing analysis of pesticide exposure carried out by Dr. Luis Escobedo.)
- ii. Non-fatal work-related injuries and illnesses (Indicator #2; uses BLS and WC data).
- iii. Work-related traumatic fatalities (Indicator #3; checks consistency between Census of Fatal Occupational Injuries, OMI and NMVRHS death certificate data).
- iv. Elevated blood levels in adults (Indicator #13. Currently, all blood lead levels are notifiable from both providers and laboratories, and are collected and investigated under ABLES.
- v. Mortality form or with pneumoconiosis (Indicator #10) uses occupationally coded death certificate through 2000 initially.
- vi. Incidence of malignant mesothelioma (Indicator #12). This uses well-established statewide SEER data.

***Progress:* The Scientific Advisory Committee supported this list as a working set of priorities. Additional refinement of the list is ongoing.**

d. *Objective 1c:* Increase the awareness of medical care providers of notifiable occupational injuries and illnesses.

i. *Activity:* Prepare information to healthcare providers regarding reporting of occupational illnesses and injuries, and disseminate through the *New Mexico Epidemiology Report*.

***Progress:* This activity has been completed. A report on occupational illnesses and injury surveillance activities has been published by the *New Mexico Epidemiology Report* and was distributed to over 4,000 health care providers in the state of New Mexico in 2004 (see Attachment 8). A separate brochure specifically detailing occupational illness and injury reporting requirements has also been written and distributed with the report (see Attachment 9). The brochure was developed as a supplement in order to set it apart from the report and to allow for distribution or redistribution as needed.**

ii. *Activity:* Provide education and assistance to health care providers (See Aim 6 below.)

Progress: Presentations on occupational health and safety issues have been delivered at multiple sites in New Mexico for education of health care providers in New Mexico (see list of presentations). In addition, presentations have been made to other groups involved in occupational health. There were presentations on occupational health surveillance in New Mexico to the Injury Surveillance Alliance in February, 2004 and the Albuquerque Area Indian Health Board in February 2005.

2. Goal 2: Establish a scientific advisory board, including academic, governmental, labor and industry representatives to facilitate data collection, analysis of findings, and to implement policy changes in the state of New Mexico for primary prevention of occupation injury and illness.

a. *Objective 2a:* Convene the first meeting of the New Mexico Occupational Health Advisory Committee by November, 2002.

Progress: Advisory Committee meetings were held twice a year in 2003, 2004, and 2005. The meetings were well attended and established the mission of the Scientific Advisory Committee to serve as active consultants to the Worker's Health Surveillance Project. The agenda for the meetings included a presentation on silicosis surveillance, occupational injury mortality surveillance, a description of existing datasets, a review of the proposed dataset assessment tool, occupational health needs assessment in Native American communities in NM, and a discussion of surveillance priorities.

i. *Activity:* An ad hoc membership and initial meeting planning committee was formed that include the PI, Co-Investigator and individuals who have already agreed to serve on the committee for the purpose of reviewing the proposed membership and recommending additions as needed.

Progress: This activity was completed.

ii. *Activity:* We established a broadly based advisory committee that developed priorities and plans for improving occupational health in New Mexico. The committee includes representatives from (at least) the following entities:

Advisory Committee Membership

- (a) New Mexico Department of Health, Public Health Division
 - (i) Office of Epidemiology (Surveillance) – Dr. Ronald Voorhees, Deputy State Epidemiologist
 - 1. Environmental Health Epidemiology Unit – Barbara Toth, Epidemiologist and toxicologist
 - 2. Injury Epidemiology Unit – Barbara Chatterjee, Program Manager and epidemiologist
 - (ii) Chronic Disease Bureau – Dr. Susan Baum, Medical Epidemiologist

- (iii) Injury Prevention and Emergency Medical Services Bureau – To be determined
 - (iv) District 3 Public Health Office (involved with migrant farmworkers, injuries and pesticide exposures) – Dr. Luis Escobedo, Medical Epidemiologist
 - (v) New Mexico Vital Records and Health Statistics (Death certificates) – Betty Hileman, Chief
- (b) New Mexico Environment Department
 - (i) Occupational Health and Safety Bureau – Sam Rogers, Bureau Chief
- (c) New Mexico Worker's Compensation Administration – Mark Llewellyn, Bureau Chief, Economic Research
- (d) University of New Mexico Health Sciences Center
 - (i) Occupational Health – Dr. Karen Mulloy, Co- Director, Program in Occupational and Environmental Health
 - (ii) Miner's Health Program – Dr. David James, Medical Director, Miner's Outreach Program
 - (iii) Office of the Medical Investigator – To be determined
 - (iv) New Mexico Tumor Registry – Dr. Charles Key, Director
 - (v) New Mexico Poison and Drug Information Center – Dr. Patrick McKinney, Medical Director
 - (vi) Institute for Public Health / Master's in Public Health Program – Dr. Andy Rowland, Occupational and Environmental Epidemiologist
- (e) Sandia National Laboratory (US Department of Energy) – Dr. Larry Clevenger, Director, Benefits and Health Services
- (f) Indian Health Service - To be determined
 - (g) American Indian tribal health authorities - To be determined
 - (h) Trade Union representatives – To be determined
 - (i) Industry/Employer representatives – To be determined

Progress: The Scientific Advisory Committee includes the following persons:

**Scientific Advisory Committee
New Mexico Worker's Health Surveillance**

Luis Escobedo, MD, Medical Epidemiologist, District 3, New Mexico Department of Health

Mr. Mark Llewellyn, Economic Research Bureau Chief, New Mexico Worker's Compensation

Chuck Wiggins, PhD, Director, New Mexico Tumor Registry, University of New Mexico School of Medicine

Will Athas, PhD, Epidemiologist, New Mexico Tumor Registry, University of New Mexico School of Medicine

Jess Benson, Pharm D, Director, New Mexico Poison Center, University of New Mexico School of Medicine

Andy Rowland, PhD, Environmental Epidemiology, Masters of Public Health Program, University of New Mexico School of Medicine

Larry Clevenger, MD, Medical Director, Occupational Medicine Department, Sandia National Laboratories

Cameron Crandall, MD, PhD, Associate Professor, Emergency Medicine and Center for Injury Prevention, Research and Education, University of New Mexico School of Medicine

Denece Kesler, MD, Medical Director, Employee Occupational Health Services, University of New Mexico School of Medicine

Daniel Rivera, Executive Director, NM Federation of Labor

Rebecca Irvine, MD, Forensic Pathologist, Office of the Medical Investigator, University of New Mexico School of Medicine

Susan Baum, MD, Medical Epidemiologist, Chronic Disease Bureau, New Mexico Department of Health

Barbara Chatterjee, MS, Program Manager, Injury Epidemiology Unit, Office of Epidemiology, New Mexico Department of Health

Barbara Toth, PhD, DABT, Toxicologist and Epidemiologist, Environmental Health Epidemiology Unit, Office of Epidemiology, New Mexico Department of Health

David James, MD, Associate Professor, Miner's Outreach Program and Radiation Exposure Screening and Education Program, University of New Mexico School of Medicine

Jerry Millard, Director of the Albuquerque Office, Mine Safety and Health Administration

Mike Lewis, MPH, REHS, Institutional Environmental Health Officer, Indian Health Service

Georgia Cleverley, Bureau Chief, NM Occupational Health and Safety Bureau

Camille Clifford, Systems Analyst, NM Health Policy Commission

Kimberly Peters, Statistical Research Director, NM Vital Records and Health Statistics

Glenda Hubbard, Asthma Epidemiologist, New Mexico Department of Health

3. Goal 3: Conduct a review and analysis of existing available surveillance data within the state, including preliminary analysis of existing data for patterns and problematic areas in occupational illness and injury.
Progress: This activity was completed for preliminary analysis and is ongoing in our new award.
 - a. *Objective 3a:* Assess the existing databases for their utility for occupational health surveillance by April, 2003. (These databases are described above in section C.1.c)
 - i. *Activity:* Evaluate each existing database using CDC Guidelines for Evaluating Surveillance systems, with special attention to use of NIOSH/BLS recommended codes.
 - ii. *Activity:* Assess the compatibility of each database for incorporation into an unduplicated surveillance database to be housed at NMDOH, including ability to transmit data to NIOSH.
 - iii. *Activity:* Work with the NEDSS data manager in the Office of Epidemiology to assess data compatibility with NEDSS.

4. Goal 4: Report data to NIOSH, the New Mexico Department of Health, labor and industry
Progress: This activity was completed.
 - a. *Objective 4a:* Develop mechanisms and procedures for production and dissemination of occupational surveillance data.
 - i. *Activity:* The project coordinator and database manager developed operating procedures for transmission of data and standard reports of surveillance data to NMDOH and NIOSH
Progress: Standard reporting was conducted by reporting surveillance activities on a quarterly basis to the NMDOH and biannually to NIOSH
 - ii. *Activity:* Prepare reports for the *New Mexico Epidemiology Report*.
Progress: A report on occupational health surveillance was published in the New Mexico Epidemiology Report in July 2004. In addition, a report on occupational injury mortality was published in the New Mexico Selected Health Statistics Annual Report for 2002 (see Attachment 10).
 - iii. *Activity:* Prepare and distribute press releases as appropriate when warranted by assessment or analysis results.
Progress: No press releases were issued during this grant cycle.

5. Develop and implement comprehensive surveillance activities and associated activities in New Mexico, including:
 - a. Assuring that data systems include NIOSH-recommended core variables;
 - i. *Objective 5a:* Develop a plan for utilizing NIOSH-recommended variables and coding in all existing databases by August 2003.
Activity: Project staff worked with NIOSH and other states with occupational health surveillance to define standards (see [1] above) and worked with existing dataset holders to transition to standard variables and coding.
 - b. Produce annual reports of the prevalence of occupational injuries and illnesses, based initially on analysis of existing data

- i. *Objective 5b:* By July, 2003, produce a report on the analysis of existing data on occupational injury and illness in New Mexico and the status of developing statewide surveillance.
 - 1. *Activity:* The surveillance coordinator and other project staff conducted descriptive analysis of existing data by July 2003 and produce a report of this data by September 2003. A summary of this report written and disseminated to all New Mexico physicians, other health care providers, hospitals, and other public health workers in the *New Mexico Epidemiology Report*.
- c. Expand occupational health surveillance activities to include Native American populations in New Mexico through partnerships with the Indian Health Service (IHS) and tribal governments.
 - i. *Objective 5c:* Assess utility and feasibility of IHS outpatient data for surveillance data
 - 1. *Activity:* Collaborate with Albuquerque and Navajo Area IHS epidemiologists and tribal representatives to evaluate data completeness, variables and coding in the outpatient dataset.
- d. Make more effective use of fatality data to identify potential points of preventive interventions.
 - i. *Activity:* Develop an Occupational Fatality Review Panel at the Office of the Medical Investigator to conduct an in-depth, multidisciplinary review of work-related deaths, using the very successful model that has been developed for other types of fatality (e.g., maternal, child, infant and infectious disease Fatality Review Panels). Identify appropriate prevention intervention recommendations and disseminate to appropriate entities.

Progress: These activities were completed and are further presented in Attachments 11, 12, and 13.

- 6. Extend the existing occupational health datasets to incorporate:
 - a. Increasing the reporting by medical providers and laboratories of heavy metal poisoning and other occupational injuries and diseases that are currently notifiable.

Progress: The PI, the Adult Blood Lead Surveillance (ABLES) coordinator and other Environmental Health Epidemiology staff have been developing strategies to promote appropriate lead testing in both children and adults who are served by the major managed care organizations in the state, especially those who contract with the state for provision of services under Medicaid. A brochure on mandatory reporting of occupational injury and illness events was sent to all health care providers in New Mexico. Methods to increase reporting by laboratories on organophosphate poisoning (acetylcholinesterase levels) is being proposed for a change in the Notifiable conditions regulations. Methods to capture reporting by the E-path system to the NMTR for other pathological findings such as silica or asbestos bodies is being explored.

- b. *Objective 6a:* Increase reporting of occupational injuries and illnesses by both urban and rural medical care providers, especially those serving minority populations and the US-Mexico border region:
- i. *Activity:* Provide education and assistance to community health centers serving migrant farmworkers in southern New Mexico (these workers are predominantly Hispanic)
 - 1. La Clinica de la Familia, (including Ben Archer and other locations in Doña Ana county)
 - 2. Hidalgo Medical Services in Hidalgo county
 - 3. Emergency department personnel, especially those in agricultural areas.
 - ii. *Activity:* Provide education and assistance to clinics, both Indian Health Service and tribal/pueblo, where American Indian workers are likely to present
 - iii. *Activity:* Present a session on surveillance of occupational injuries and illnesses at meetings of at least one of the following professional associations:
 - 1. Rural Primary Care Association
 - 2. New Mexico Academy of Family Practice
 - 3. New Mexico Chapter of the American College of Physicians
 - 4. New Mexico Osteopathic Medical Association
 - 5. New Mexico Association of Physician Assistants
 - 6. Indian Health Service meetings

Progress: These activities were completed (see list of presentations).

- c. Collection of summary data from private occupational health practices in New Mexico.
- i. *Objective 6b:* Increase reporting of occupational injuries and illnesses by occupational health providers.

Progress: We have established new reporting requirements for occupational conditions (see above) and sent a letter to all health care providers in the state explaining the changes (Attachment 14).

- 1. *Activity:* Present a session on surveillance for work related injury and illness at a regional conference for occupational health care providers.
 - a. New Mexico workers living along borders with other states are likely to receive care from health providers in those states that are closer than providers in New Mexico. Building relationships with those providers is important for improving surveillance reports from bordering states.

Progress: This activity was completed (see attachment 15 for abstracts and presentations made nationally and regionally under this grant).

4. Publications and Presentations

Publications

1. Moraga-McHaley S, Mulloy KB, Voorhees R. "Occupational Health Surveillance in New Mexico: Highlights from the CSTE Indicators Project." New Mexico Epidemiology Report. New Mexico Department of Health. July 2, 2004, #6, pp. 1-3.
2. Moraga-McHaley S, Mulloy KB, Voorhees R. "Occupational Injury Fatalities in New Mexico: 1998-2002." New Mexico Selected Health Statistics Annual Report for 2002. The State Center for Health Statistics, Office of New Mexico Vital Records & Health Statistics. June 2004, pp. S10-S16.

Abstracts – National and Regional Presentations

1. Mulloy KB, Moraga- McHaley S, Flowers L. "Occupational Health Needs Assessment among Tribes in New Mexico". 2005 CSTE Annual Conference, Albuquerque, NM, June 5-9, 2005.
2. Mulloy KB, Moraga- McHaley S, Flowers L. "Occupational Health Needs Assessment among Native American Communities in New Mexico." 3rd Maine Occupational Safety and Health Symposium, Biddeford, ME, May 25-26, 2005.
3. Mulloy KB, Moraga-McHaley S, Flowers L. "Occupational Mortality Surveillance in New Mexico & the NM Occupational Health Registry". NM Public Health Assoc. Annual Meeting, Albuquerque, NM, April 6-8, 2005.
4. Mulloy KB, Moraga-McHaley S, Flowers L. "Occupational Mortality Surveillance in New Mexico – 1998 – 2002". New Mexico Environmental Health Conference, Albuquerque, NM, October 18-20, 2004.
5. Mulloy KB, Moraga-McHaley S. "Silicosis Surveillance Among Uranium Miners in New Mexico". SENSOR Silicosis 2004 Workshop, Morgantown, WV, October 6 & 7, 2004.
6. Mulloy KB, Moraga-McHaley S, Voorhees R. "Occupational Injury Mortality in New Mexico – 1998 - 2002" Council of State and Territorial Epidemiologists, Boise, ID, June 6-10, 2004.
7. Mulloy KB, Voorhees R. "Silicosis Surveillance in New Mexico" Council of State and Territorial Epidemiologists, Hartford, CN, June 22-25, 2003.
8. Mulloy KB, Voorhees R. "Worker Health Surveillance in New Mexico-Silicosis" SENSOR Silicosis 2003 Workshop, Washington, DC, January 30 & 31, 2003.

Educational Presentations for Health Care Providers in New Mexico

1. "Environmental Exposures and the Pediatric Patient" Grand Rounds Cibola General Hospital, Grants, NM, 9/20/05.
2. "Health Effects & the Uranium Industry" Laguna Pueblo CHR, Laguna, NM 8/26/05.
3. "Air and Water Pollution and Health Effects" Grand Rounds, NM DOH District 1, Albuquerque, NM, 3/31/05.
4. "What Is That Rash – Occupational Dermatology" Regional Issues in Occupational & Environmental Health, Albuquerque, NM, 3/11-12/05.
5. "Walking Wounded- Occupational Health in the Uranium Mining Industry" Grand Rounds ACL Hospital, Acoma, NM, 9/23/04.
6. "Introduction to Occupational Medicine" and "Toxic Exposures and the Pediatric Patient" Grand Rounds Las Clinicas de Familia & Ben Archer Clinics, Las Cruces, NM 7/21/04.
7. "Pediatric Environmental Health" Regional Issues in Occupational & Environmental Health for the Primary Care Provider Conference, Navajo Nation – NM & AZ, Chinle, AZ, 4/29/04.
8. "Lead, It's Everywhere" Grand Rounds, UNM Department of Family & Community Medicine, Albuquerque, NM, 3/17/04.
9. "Agricultural Exposures and Lung Disease" NM Thoracic Society Annual Conference, Santa Fe, NM, 2/15/04.
10. "Lead, It's Everywhere" NM Osteopathic Medical Symposium, Taos, NM, 2/12/04.
11. "Water Pollution and Health Effects in the South Valley" CME presentation at UNM 1209 Clinic, Albuquerque, NM, 2/2/04.
12. "Outdoor Air Pollution and & Health Effects in the South Valley" CME presentation at UNM 1209 Clinic, Albuquerque, NM, 5/7/03.
13. "Pediatric Environmental Health" PH 506:Sec. 001. Environmental/Occupational Health. UNM MPH Program. Albuquerque, NM, 4/24/03.
14. "History of Occupational Safety and Health in the United States" PH 506:Sec. 001. Environmental/Occupational Health. UNM MPH Program. Albuquerque, NM, 3/27/03.
15. "Cold War Legacy – Silica Exposure and Vasculitis" Grand Rounds, UNM Department of Family & Community Medicine, Albuquerque, NM, 3/5/03.
16. "Epidemiology and Pediatric Environmental Health" Sponsored 8 hour training for Dona Ana County Promotores by Southern NM AHEC, Las Cruces, NM, 2/20/03.

17. "Toxic Exposures and the Pediatric Patient" Presented at the monthly meeting of the Border Health Council Environmental Health Committee and the Dona Ana County Maternal Child Health Council, Las Cruces, NM, 1/14 & 15/03.
18. "What the Doctor Never Asked Me-The Occupational History" Presented at the monthly meeting of former Los Alamos National Laboratory workers, Espanola, NM, 12/12/02.

Attachment 1

Final Invention Statement and Certification

Department of Health and Human Services
Final Invention Statement and Certification
(For Grant or Award)

DHHS Grant or Award No.
1 U60 OH008339-01

A. We hereby certify that, to the best of our knowledge and belief, all inventions are listed below which were conceived and/or first actually reduced to practice during the course of work under the above-referenced DHHS grant or award for the period

9-29-02 through 9-29-05
original effective date *date of termination*

B. Inventions (Note: If no inventions have been made under the grant or award, insert the word "NONE" under Title below.)

NAME OF INVENTOR	TITLE OF INVENTION	DATE REPORTED TO DHHS
	NONE	
<i>(Use continuation sheet if necessary)</i>		

C. First Signature — The person responsible for the grant or award is required to sign (in ink). Sign in the block opposite the applicable type of grant or award.

TYPE OF GRANT OR AWARD	WHO MUST SIGN <i>(title)</i>	SIGNATURE
Research Grant	Principal Investigator or Project Director M. Helen Flowers	
Health Services Grant	Director	
Research Career Program Award	Awardee	
All other types <i>(specify)</i> :	Responsible Official	

D. Second Signature — This block **must** be signed by an official authorized to sign on behalf of the institution.

Title Bureau Chief	Name and Mailing Address of Institution New Mexico Department of Health Environmental Health Epidemiology Bureau 1190 St. Francis Drive Santa Fe, NM 87502
Typed Name M. Helen Flowers	
Signature 	Date 1-24-06

Attachment 2

Dataset Holder Questionnaire

Occupational Health Surveillance Dataholder Survey
September, 2003
New Mexico Occupational Health Registry

Thank you for participating in our survey. It will help us understand the relevance of your agency's dataset to our project and help us discover the most efficient method of working with your agency.

1. NAME OF DATASET: _____ AGENCY NAME: _____
YOUR NAME _____ YOUR TITLE _____
2. GEOGRAPHIC RANGE OF DATASET:
 - a. State of New Mexico
 - b. Other (describe) _____
3. SAMPLING FRAME:
 - a. What occupations are included?
 - i. All occupations
 - ii. Selected occupations (describe) _____
 - iii. Occupation not specified
 - b. What employees are included?
 - i. All employees within included occupations
 - ii. Selected employees (describe) _____
4. UNIT OF OBSERVATION:
 - a. Employee
 - b. Employer
 - c. Jobsite
 - d. Other (describe) _____
5. VARIABLES IN DATASET:
 - a. Please list here, attach list or data dictionary
6. CODING SYSTEM:
 - a. (describe system used) _____
 - b. Coded for occupation?
 - i. (if yes, describe) _____
7. TIMEFRAME:
 - a. Date data collection began _____
 - b. End date (if applicable) _____
8. DATA COLLECTION: Data is collected:
 - a. Daily
 - b. Monthly
 - c. Quarterly
 - d. Annually
 - e. Other (describe) _____
9. DATA ENTRY: Data is entered into system and system updated:
 - a. Daily, as received
 - b. Quarterly
 - c. Annually
 - d. Other (describe) _____
10. DATA SOURCE: _____

- a. Employee report
- b. Employer report
- c. Questionnaire/interview
- d. Laboratory report
- e. Medical record
- f. Other (describe)

11. FORMAT OF DATA:

- a. Hard copy only
- b. Electronic files only (file type)
- c. Both hard copy and electronic files

12. OTHER AGENCIES/ENTITIES WITH WHOM DATASET IS SHARED

- a. Federal
- b. State
- c. Other

13. Are there barriers to incorporating this dataset into the New Mexico Occupational Health Registry?

- a. No
- b. Yes (please explain)

14. If answer to #11 was yes, would a data use agreement enable barriers to be overcome?

- a. No
- Yes
- Maybe

15. Please attach copies of data collection forms/instruments

16. Please attach copies of data entry forms

17. please attach examples of reports generated from data

18. CONTACT INFORMATION:

- a. Contact for administrative questions
 - i. Name
 - ii. Phone
 - iii. e-mail
- b. Dataset manager for technical questions
 - i. Name
 - ii. Phone
 - iii. E-mail

Thank you for your participation.

Attachment 3
Data Use Agreement

UNIVERSITY OF NEW MEXICO HEALTH SCIENCES CENTER

MEMORANDUM OF UNDERSTANDING
BETWEEN
SCHOOL OF MEDICINE,
DEPARTMENT OF INTERNAL MEDICINE
NEW MEXICO OCCUPATIONAL HEALTH REGISTRY
AND
COLLEGE OF PHARMACY
NEW MEXICO POISON AND DRUG INFORMATION CENTER

This Memorandum of Understanding (“MOU”) is entered into effective the ___ day of _____, 2004 by the School of Medicine, Department of Internal Medicine (“SOM”), for its New Mexico Occupational Health Registry (“NMOHR”), and the College of Pharmacy, New Mexico Poison and Drug Information Center (“COP”), both of which are components of the University of New Mexico Health Sciences Center (“UNMHSC”).

I. Recitals

- A. The New Mexico Department of Health (“DOH”) held hearings in August 2003 and issued regulations on the mandatory reporting of occupational illnesses. The NMOHR was established within the Program of Occupational and Environmental Health, Department of Internal Medicine, University of New Mexico School of Medicine, and designated as the official repository for the State of New Mexico to collect and maintain the reportable occupational illness and injury data. NMOHR will utilize existing data sources of state and federal public health and labor agencies, public and private healthcare providers, and academic institutions, and create a single repository for combining these data into valid, reliable and useful public health surveillance information. The NMOHR is authorized pursuant to 7.4.3 NMAC to access all records of physicians and surgeons, hospitals, outpatient clinics, nursing homes, and all other facilities, individuals or agencies providing healthcare services to patients that would identify or establish the characteristics or outcome of occupationally-related illnesses and injuries.
- B. The National Institute of Occupational Safety and Health (“NIOSH”) has provided a grant to the NMOHR to obtain and incorporate certain patient information into an occupational health surveillance database (“Database”) that is approved by the DOH.
- C. The SOM wishes to receive such patient information from the COP for incorporation into the Database.

- D. The COP is willing to provide access to the information under the terms and conditions of this MOU.

II. Data Acquisition

- A. On a quarterly basis, COP will electronically transmit the following information from the New Mexico Poison and Drug Information Center's data base: Individual records of calls received for selected classes of pesticide exposures where the exposure occurred at work or exposure reason was occupational, and where the exposed person is known to have had, or believed to have experienced an adverse effect.
- B. The SOM acknowledges that information acquired pursuant to this MOU will be used for the purpose of conducting public health surveillance and will not be used for any other purpose.

III. Reimbursement

There will be no remuneration for the data provided under this MOU.

IV. Term and Termination

- A. This MOU will be effective as of the date first set forth, and will remain in effect initially through September 30, 2005. This MOU may be extended upon written agreement of the parties if the SOM obtains extended funding from NIOSH of the occupational health surveillance project.
- B. Either party may terminate this MOU upon 30 days advance written notice to the other party.

V. Modifications

This MOU may be amended or reviewed upon written consent of the parties. Each party will consider in good faith modifications presented to the other party and will not unreasonably withhold consent to the proposed modifications.

VI. Dispute Resolution

Any disputes with respect to this MOU will be presented to the Vice President of the Health Sciences Center or designee for resolution. The decision of the Vice President will be final.

SCHOOL OF MEDICINE

By: _____
Paul B. Roth, M.D., Dean

Date _____

Approved:

By: _____
Pope Moseley
Chair, Internal Medicine

Date _____

COLLEGE OF PHARMACY

By: _____
John A. Pieper, Chair

Date _____

Approved:

By: _____
Blaine E. Benson
Director, NM Poison and Drug Information Center

Date _____

HEALTH SCIENCES CENTER

By: _____
Linda M. Easley
Interim Associate Vice President for Finance & Administration

Date _____

Approved as to form:

Jeffrey C. Gilmore
Associate University Counsel

Date _____

Attachment 4

IRB Approval Exempt Status Letter

NEW MEXICO
DEPARTMENT OF
HEALTH

Patricia T. Montoya, R.N., M.P.A.
Secretary

Bill Richardson Governor

Fredrick Sandoval, M.P.A.
Deputy Secretary

Gary L. J. Girón, M.B.A.
Deputy Secretary

Joyce Naseyowma-Chalan, M.P.H.
Division Director

C. Mack Sewell, Dr. P.H., M.S.
State Epidemiologist

July 22, 2003

Michael J. Galvin, Jr., Ph.D.
Office of Extramural Programs
MS E-74
National Institute for Occupational Safety and Health
1600 Clifton Road, NE
Atlanta, GA 30333

Re: Human Subjects Data collected as part of the U53/CCU622291 grant

Greetings:

I am writing to indicate that the collection of data on occupational illnesses and injuries falls under the authority granted to the New Mexico Department of Health under the New Mexico Public Health Act (Statutes: Statutory Chapters in New Mexico Statutes Annotated 1978: CHAPTER 24 HEALTH AND SAFETY : ARTICLE 1 PUBLIC HEALTH : 24-1-3. Powers and authority of department. (2001))

The Public Health Act gives the New Mexico Department of Health the authority to “investigate, control and abate the causes of disease, especially epidemics, sources of mortality and other conditions of public health” (24-1-3 sec. C).

The responsibility for administering and enforcing the collection of information on conditions of public health is located in the Office of Epidemiology, New Mexico Department of Health.

(New Mexico Administrative Code : Title 7 Health : Chapter 4 Disease Control (Epidemiology): Part 3 Control Of Disease And Conditions Of Public Health Significance: 7 NMAC 4.3.3 Statutory Authority:

These provisions set forth herein are promulgated by the Secretary of the Department of Health by authority of Section 9-7-6(E) NMSA 1978 and in conformity with the Public Health Act, particularly Sections 24-1-3, 24-1-7, 24-1-8, and 24-1-15 NMSA 1978. Administration and enforcement of these regulations are the responsibility of the Office of Epidemiology of the Department of Health. [12-20-79; 10-31-96, 1-15-98])

Under these regulations, the Office of Epidemiology establishes and maintains an index of “Notifiable Diseases/Conditions in New Mexico”, which establishes the conditions required to be reported by health care providers and others. While silicosis, asbestosis, pesticide poisoning and blood lead levels were previously reportable, other occupational illnesses and injuries were added to the list in the 2003 revision of the regulations, which also established the New Mexico Occupational Health Registry as the agency responsible for operating a statewide registry of occupationally-related illnesses and injuries. These new regulations (attached) become effective August 15, 2003.

If I can provide additional information, please let me know.

Sincerely yours,

Ronald E. Voorhees, M.D., M.P.H.
Deputy State Epidemiologist
Principal Investigator, State Occupational Surveillance Capacity-Building

NMAC 7.4.3 (effective 8/15/2003)

11. OCCUPATIONAL ILLNESS AND INJURY REPORTING

11.1 RESPONSIBLE AGENCY: The New Mexico Occupational Health Registry is the agency responsible for operating a statewide registry of occupationally-related illnesses and injuries.

11.2 REPORTING REQUIREMENTS-FACILITIES: Hospitals and other facilities providing screening, diagnostic or therapeutic services to patients with occupationally-related illnesses and injuries shall report such cases to the New Mexico Occupational Health Registry.

11.3 REPORTING REQUIREMENTS-HEALTH CARE PROFESSIONALS: Health care professionals diagnosing or providing treatment for patients with occupationally-related illnesses and injuries shall report such cases to the New Mexico Occupational Health Registry.

11.4 MEDICAL RECORDS: The New Mexico Occupational Health Registry is authorized to access all records of physicians and surgeons, hospitals, outpatient clinics, nursing homes, and all other facilities, individuals or agencies providing such services to patients that would identify or establish the characteristics or outcome of occupationally-related illnesses and injuries.

11.5 REPORTING FORMAT: Case data on occupationally-related illnesses and injuries shall be reported to the New Mexico Occupational Health Registry in such a format, with such data elements and in accordance with such standards of quality, timeliness and completeness as may be established by the New Mexico Occupational Health Registry.

11.6 CONFIDENTIALITY: All case data on occupationally-related illnesses and injuries reported to the statewide New Mexico Occupational Health Registry is confidential. Disclosure to any person of information reported to the New Mexico Occupational Health Registry that identifies, or could lead to the identification of an individual patient, except for disclosure to other state occupational health registries, local and state health officers, or researchers for the purposes of prevention, control or research, is prohibited.

11.7 RESEARCH USE OF REGISTRY DATA: Researchers authorized by the New Mexico Occupational Health Registry or the Department may conduct studies, utilizing statewide New Mexico Occupational Health Registry data, including studies of the sources and causes of occupationally-related illnesses and injuries, evaluations of the cost, quality, efficacy and appropriateness of screening, diagnostic, therapeutic, rehabilitative and preventive services and programs relating to occupationally-related illnesses and injuries and any other clinical, epidemiologic or other research.

Attachment 5

NMDOH Information Technology Requirements

NMDOH Information Technology Project Proposal

Title: NM Occupational Health Registry

Date: 6/24/05

Business Owner and organizational unit: Len Flowers, Bureau Chief, Environmental Health Epidemiology Bureau, Epidemiology and Response Division, NM Department of Health

Stakeholders:

- 1) NMDOH, Environmental Health Epidemiology Bureau
- 2) University of New Mexico, Health Sciences Center, Department of Internal Medicine, Division of Epidemiology, NM Occupational Health Registry
- 3) Data providers

Problem Definition including Business Drivers: Occupational illness and injuries are conditions that by law require mandatory reporting to the NMDOH, but there is no registry (i.e. database) yet to receive them. It is assumed that all stakeholders have Internet access.

Summary of Known Technical and Business Requirements: A database to which about eight different data providers can send protected health data. Data providers reside at the Health Policy Commission, the NM Department of Health, the University of New Mexico, and the NM Workers' Compensation Administration. An interface for not more than 10 DOH and non-DOH users at different access levels. Users should be able to query and create reports.

Estimated Number of Users: Up to 10 DOH and non-DOH users to access the NMOHR database.

Desired Outcomes:

- 1) The data providers can securely send their data to the NMOHR electronically.
- 2) The database is ready to receive batch data initially from:
 - a. Adult Blood Lead Epidemiology Surveillance
 - b. NM Workers' Compensation Administration (NMWCA)
 - c. NM Health Policy Commission Hospital Inpatient Discharge Data (NMHPC HIDD)
 - d. NM Poison Center (NMPC)
 - e. Office of the Medical Investigator
 - f. PreHospital Data Collection System
 - g. NM Tumor Registry (NMTR)
 - h. NM Radiation Exposure Screening and Education Program (NMRESEP)
 - i. NM Vital Records and Health Statistics Mortality data
 - j. Individual physicians as needed
- 3) The database can securely hold protected health information (PHI) and is password protected.
- 4) A mechanism is in place to ensure that the database is maintained and backed-up regularly.
- 5) There is a contact person within DOH ITSD who can be notified if the

database is malfunctioning.

- 6)
- 7) There is a password protected user interface that allows viewing, querying and generating ad hoc reports for all of the data.
- 8) The user interface is password protected.
- 9) There are three levels of access permissions:
 - a. Only enter data
 - b. Only view and query the data
 - c. View, query, add, change the data
- 10) Approved users, from both DOH and non-DOH, can access the data.
- 11) One-time user training is provided.
- 12) Ideal: A way for physicians to transfer individual records via a website interface.

Benefits to Users or Other Stakeholders:

It will enable DOH to receive notification of conditions that by law require mandatory reporting to the NMDOH. It will enable surveillance of occupational health in New Mexico.

Timeframe including Deadlines:

The project should be finished before September 29, 2005. Ideally, significant progress should be made before July 29, 2005, in order to make use of resources available only until that date.

Alignment with DOH Strategic Plan:

Please quote the portion of the current DOH strategic plan that includes this activity.

Funding Plan including Sources and Timing of Funds:

Funding will be provided by NMDOH until September 29, 2005 through the *Development of Worker Health Surveillance for New Mexico* grant. After then the funding will be provided by UNM through the *New Mexico Occupational Health Surveillance* grant until April 2008

Risks: What could cause this project to fail?

- Lack of participation by stakeholders
- Continuity of communication between UNM and DOH
- Not receiving requested funds
- Change in priorities of funding agency
- Exceeding required timeframe

Attachment 6
NM Notifiable Conditions

NOTIFIABLE CONDITIONS IN NEW MEXICO

12.1 ALL REPORTS MUST INCLUDE:

- 12.1.1 The disease or problem being reported;
- 12.1.2 Patient's name, date of birth/age, gender, race/ethnicity, address, telephone number, and occupation;
- 12.1.3 Physician (or laboratory) name and telephone number.
- 12.1.4 Laboratory or clinical samples for conditions marked with [†] are requested to be sent to the Scientific Laboratory Division.

12.2 EMERGENCY REPORTING OF COMMUNICABLE DISEASES:

The following diseases, confirmed or suspected, require immediate reporting by telephone to the Office of Epidemiology at 505-827-0006. If no answer, call 505-984-7044.

12.2.1 Infectious Diseases

Anthrax [†] Botulism (any type) [†] Cholera Diphtheria [†] <i>Haemophilus influenzae</i> invasive infections [†] Measles	Meningococcal infections, invasive [†] Pertussis [†] Plague [†] Poliomyelitis, paralytic Q fever Rabies	Rubella (incl congenital) Severe Acute Respiratory Syndrome (SARS) [†] Smallpox [†] Tularemia [†] Typhoid fever [†] Yellow fever
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12.2.2 Other Conditions

Suspected foodborne illness in two or more unrelated persons [†]	Illnesses suspected to be caused by the intentional or accidental release of biologic or chemical agents [†]	Severe smallpox vaccine reaction (includes accidental implantation, eczema vaccinatum, generalized vaccinia, progressive vaccinia)
Suspected waterborne illness in two or more unrelated persons [†]	Acute illnesses of any type involving large numbers of persons in the same geographic area	Other conditions of public health significance

12.2.3 Infectious Diseases in Animals

Anthrax Plague	Rabies Tularemia
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12.3 ROUTINE REPORTING

12.3.1 Infectious Diseases (Report case within 24 hours to Office of Epidemiology at 1-800-432-4404 or 505-827-0006; or contact the local health office)

Brucellosis <i>Campylobacter</i> infections Coccidioidomycosis Colorado tick fever Cryptosporidiosis Cysticercosis Cyclosporiasis <i>E. coli</i> O157:H7 infections [†] <i>E. coli</i> , shiga-toxin producing (STEC) infections [†] Encephalitis, other Giardiasis Group A streptococcal invasive infections [†] Group B streptococcal invasive infections [†] Hantavirus pulmonary syndrome	Hemolytic uremic syndrome, postdiarrheal Hepatitis A, acute Hepatitis B, acute or chronic Hepatitis C, acute or chronic Hepatitis E, acute Influenza, laboratory confirmed only Legionnaires' disease Leprosy Leptospirosis Listeriosis [†] Lyme Disease Malaria Mumps Psittacosis	Relapsing fever Rocky Mountain spotted fever Salmonellosis [†] Shigellosis [†] St. Louis encephalitis infections <i>Streptococcus pneumoniae</i> invasive infections [†] Tetanus Trichinosis Toxic shock syndrome Varicella <i>Vibrio</i> infections [†] West Nile Virus infections Western equine encephalitis infections <i>Yersinia</i> infections [†]
--	--	---

12.3.2 Infectious Diseases in Animals (Report case within 24 hours to Office of Epidemiology at 1-800-432-4404 or 505-827-0006; or contact the local health office)

Arboviral, other Brucellosis	Psittacosis West Nile Virus infections
---------------------------------	---

12.3.3 Tuberculosis[†] or Other Nontuberculous Mycobacterial Infections

Report suspect or confirmed cases within 24 hours to Tuberculosis Program, NM Department of Health, P.O. Box 26110, Santa Fe, NM 87502-6110; or call 505-827-2474 or 505-827-2473.

12.3.4 Sexually Transmitted Diseases

Report to Infectious Disease Bureau - STD Program, NM Department of Health, P.O. Box 26110, Santa Fe, NM 87502-6110, Fax 505-476-3638; or call 505-476-3636.

Chancroid <i>Chlamydia trachomatis</i> infections	Gonorrhea Syphilis
--	-----------------------

12.3.5 HIV (Human Immunodeficiency Virus) and AIDS (Acquired Immunodeficiency Syndrome).

Report to Office of Epidemiology, HIV/AIDS Epidemiology Unit, 625 Silver SW Suite 412, Albuquerque, NM 87102, Fax 505-841-5985; or call 505-841-5893 or 1-888-878-8992.

HIV: (1) confirmed positive HIV antibody test (screening test plus confirmatory test), or (2) any test for HIV RNA or HIV cDNA ('viral load'), or (3) any test to detect HIV proteins, or (4) any positive HIV culture, or (5) any other test or condition indicative of HIV infection as defined by the United States Centers for Disease Control and Prevention.

AIDS: Opportunistic infections, cancers, CD4 lymphocyte count (<200 per μ L or <14% of total lymphocytes), or any condition indicative of AIDS.

12.3.6 Occupational Illness and Injury

Report to New Mexico Occupational Health Registry, MSC 105550, 1 University of New Mexico, Albuquerque, NM 87131-0001.

Asbestosis	Hypersensitivity pneumonitis	Silicosis
Chronic beryllium lung disease	Mesothelioma	Other illnesses related to occupational exposure
Coal worker's pneumoconiosis	Noise induced hearing loss	
Heavy metal poisoning	Occupational asthma	

12.3.7 Health Conditions Related to Environmental Exposures and Certain Injuries

Report to Office of Epidemiology, NM Department of Health, P.O. Box 26110, Santa Fe, NM 87502-6110; or call 1-800-432-4404 or 505-827-0006.

Drug overdose	Pesticide poisoning	Other environmentally-induced health conditions
Firearm injuries	Spinal cord injuries	
Lead (all blood levels)	Traumatic brain injuries	

12.3.8 Adverse Vaccine Reactions

Report to Vaccine Adverse Events Reporting System, <http://www.vaers.org>. Send copy of report to Immunization Program Vaccine Manager, NM Department of Health, P.O. Box 26110, Santa Fe, NM 87502-6110; fax 505-827-1741.

12.3.9 Cancer

Report to New Mexico Tumor Registry, University of New Mexico School of Medicine, Albuquerque, NM 87131. Report all malignant and in situ neoplasms and all intracranial neoplasms, regardless of the tissue of origin.

12.3.10 Birth Defects

Report to Birth Defects Registry, Children's Medical Services, 2040 S. Pacheco, Santa Fe, NM 87505; or call 505-476-8854.

All birth defects diagnosed by age 14 years, including:

Defects diagnosed during pregnancy
Defects diagnosed on fetal deaths

[7.4.3.13 NMAC - Rp, 7 NMAC 4.3.12, 8/15/2003]

List of Notifiable Diseases/Conditions in New Mexico revised August 15, 2003

Attachment 7

NM Occupational Health Case Reporting Form



New Mexico Occupational Health Registry Confidential Case Report

When completed, please fax this form to NMOHR at (505) 272-5958

Name of person completing form: _____

Date completed: _____

Demographic information

Name of ill or injured person (last name, first name, middle name)				DOB (mm/dd/yyyy)		Gender: <input type="checkbox"/> M <input type="checkbox"/> F <input type="checkbox"/> Unk.	
Address at time of visit (Street)					Race/ethnicity <input type="checkbox"/> White <input type="checkbox"/> Am. Indian or Alaskan Native <input type="checkbox"/> Black or African American <input type="checkbox"/> Asian <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> Other <input type="checkbox"/> Unknown		
City	County	State	Zip				
Home Phone	May we contact? Y <input type="checkbox"/> N <input type="checkbox"/>	Social Security Number		Hispanic ethnicity Y <input type="checkbox"/> N <input type="checkbox"/>		NM Tribal Code	
Age	Job status	Insured? Y <input type="checkbox"/> N <input type="checkbox"/>		Payer			

Patient's visit and condition

Referred by	Date of visit	Date of diagnosis
Patient's complaint		
Diagnosis / ICD9	Exposure(s) related to diagnosis	
Comment		

Conditions – as per New Mexico Administrative Code 7.4.3.12

<input type="checkbox"/> Asbestosis	<input type="checkbox"/> Mesothelioma
<input type="checkbox"/> Chronic beryllium lung disease	<input type="checkbox"/> Noise induced hearing loss
<input type="checkbox"/> Coal worker's pneumoconiosis	<input type="checkbox"/> Occupational asthma
<input type="checkbox"/> Heavy metal poisoning [As, Hg, Cd, Pb]	<input type="checkbox"/> Silicosis
<input type="checkbox"/> Hypersensitivity pneumonitis	<input type="checkbox"/> Other illness or injury
<input type="checkbox"/> Suspected pesticide poisoning	<input type="checkbox"/> Confirmed pesticide poisoning

Occupation information (please complete for employment at time of suspected exposure)

Job title			Industry type			
Name of company			Company address (Street)			
City	State	Zip	Phone	Exposure/incident date or start date	Exposure end date	
Other employers/exposures (include dates)						

Reporting healthcare provider/healthcare facility/laboratory information

Name of physician		Physician specialty		Physician's phone		
Address (Street)		City		State		Zip
Name of facility/laboratory		Phone number		Contact person		
Address (Street)		City		State		Zip

Attachment 8

NM Epidemiology Report, July 2004

Occupational Health Surveillance in New Mexico
Highlights from the CSTE Indicators Project

Stephanie Moraga-McHaley, University of New Mexico School of Medicine
Karen B. Mulloy, D.O., MSCH, University of New Mexico School of Medicine
Ronald E. Voorhees, MD, MPH, Chief Medical Officer, New Mexico Department of Health

Workplace injuries and illnesses remain a significant problem in the United States. A worker is injured every five seconds [1, 2]. In 1996, an estimated 11,000 workers were disabled each day due to work-related injuries [3], and the Bureau of Labor Statistics (BLS) reported in 2000 that 5,915 workers in private industry died as a result of work related injuries [4]. It is estimated that 50,000 to 70,000 workers die each year from work-related diseases [5, 6]. Among special populations of workers, such as adolescents (two percent of the total workforce), the burden of injury may be disproportionately high. Seventy-four thousand young workers seek treatment in hospital emergency departments for work-related injuries each year, and 70 die each year of these injuries [5]. The National Safety Council estimated in 1996 that on-the-job injuries alone cost society \$121 billion. The 1992 combined U.S. economic burden for occupational illness and injury was an estimated \$171 billion [7].

In New Mexico, there has been little capacity to systematically assess illnesses and injuries occurring on the job. In 2002, the Office of Epidemiology in the New Mexico Department of Health, in partnership with the University of New Mexico Health Sciences Center's Program in Occupational and Environmental Health, received a grant from the National Institute for Occupational Safety and Health (NIOSH) to establish an occupational injury and illnesses surveillance system for New Mexico. The New Mexico Occupational Health Registry (NMOHR) was established to utilize existing data from state and federal public health and labor agencies, public and private healthcare providers, and academic institutions in order to create a single

repository for combining these data into valid, reliable and useful surveillance information. In order to more fully assess occupational injuries and illnesses, selected occupationally-related conditions were made reportable in 2003.

In 1998, NIOSH, in conjunction with the Council of State and Territorial Epidemiologists (CSTE), convened a work group to make recommendations to NIOSH for occupational health surveillance activities [9]. The work group developed the Occupational Health Indicators for the NIOSH state-based occupational health surveillance projects. Criteria for selection of indicators included: 1) the availability of easily attainable statewide data; 2) the public health importance of the occupational health effect or exposure to be measured; and 3) the potential for workplace intervention activities. The occupational health indicators provide standardized information about workplace injuries and illnesses. NMOHR is working with the CSTE/NIOSH Work Group on the occupational health indicators for the state of New Mexico.

New Mexico Worker Profile

New Mexico had 792,000 employed civilian workers in the year 2000. The unemployment rate was 4.9%; 9.2% of workers were self-employed and 18.1% were employed in part-time jobs. The male to female ratio in the workforce was 52 to 48. Young workers, aged 16 to 17 years, comprised 2.3% of the workforce, while 3.2% were 65 years of age or older. Hispanics made up 37.5% of New Mexico's workforce, the highest percentage of Hispanic workers among all CSTE participant states.

Fatal Work-related Injury

In 2000, 35 New Mexicans died on the job resulting in a fatality rate of 4.4 per 100,000 employed persons 16 years of age or older (FTEs), which was equal to the U.S. rate for that year. Most of the participating states fell below the national rate with the exception of North Carolina and Nebraska, which had crude fatality rates of 6.1 and 6.6 respectively. However, while U.S. rates are steadily declining, New Mexico rates have risen in recent years (Figure 1).

One possible explanation for New Mexico's occupational fatality rate may be the nature of the industries and occupations in which New Mexicans work. Indicator 17: *Percentage of Workers Employed in Industries and Occupations at High Risk for Occupational Mortality*, indicated that for the year 2000, 15.5% of New Mexico's workers were in high risk industries and seven percent were in high risk occupations, which is above the average for participant states. Some of the industries at high risk for occupational fatality include farming, mining, and construction while high risk occupations include excavation equipment operators, truck drivers, and farmers.

Non-fatal Illness and Injury Indicators

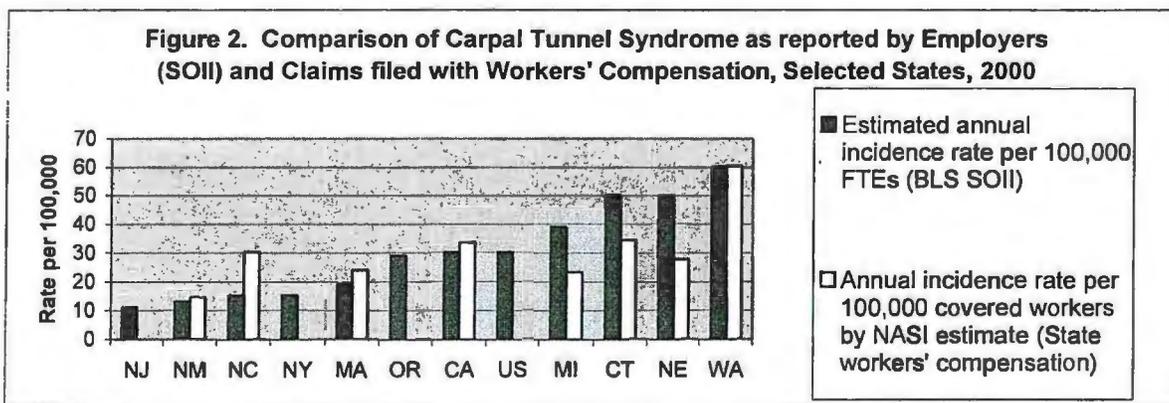
Several of the indicators describe non-fatal injury, both cumulative and traumatic. Much of the data for these indicators originates from the Bureau of

Labor Statistics Survey of Occupational Illness and Injury (SOII), an annual, mandatory survey of selected employers conducted by OSHA.

Numbers and rates are not published by the BLS if the sample sizes are insufficient to generate state specific rates. Therefore, SOII data is less descriptive for states with small populations, such as New Mexico. Other data sets for non-fatal occupational injury include state hospital discharge data, state workers' compensation data, and the American Association of Poison Control Centers data.

Some of the indicators of non-fatal occupational injury include non-fatal work related injuries and illnesses reported by employers, work-related amputations and musculoskeletal disorders reported by employers, amputations and carpal tunnel syndrome filed with the state workers' compensation system, hospitalizations for work-related burns, and acute work-related pesticide-associated illness and injury reported to poison control centers.

BLS SOII data and State Workers' compensation are not always in agreement. Each state workers' compensation program operates under its own state's law leading to inconsistencies from state to state on issues such as the type of worker covered under the law and the classification of injury type. In both datasets New Mexico had a low incidence of carpal tunnel syndrome compared to other participating states (Figure 2). New Mexico also had low rates of work-related burns (1.8 per



Source: Council of State and Territorial Epidemiologists Occupational Health Indicators Pilot Project

Data Sources: Bureau of Labor Statistics Survey of Occupational Illness and Injury; New Mexico State Workers' Compensation Administration, National Academy of Social Insurance

100,000 FTEs), musculoskeletal disorders (495 per 100,000 FTEs) and amputations (6.2 per 100,000 workers covered by NMWCA), when compared to the other states.

Chronic occupational illnesses are less likely to have been reported by employers, as symptoms may not manifest until long after the employee has left the workforce. The data sources for chronic illness indicators are hospital discharge databases, vital records, and state tumor registries. Indicators of chronic occupational illness include hospitalization and mortality due to pneumoconiosis and mesothelioma.

Almost all pneumoconioses are attributable to occupational exposure [9]. Indicator #9, *Hospitalization due to pneumoconiosis* quantifies hospital discharges due to all pneumoconioses, asbestosis, silicosis, coal workers' pneumoconiosis, and other and unspecified pneumoconioses and compares rates across states with the overall U.S. rate. Across the U.S. the incidence of pneumoconiosis varies from region to region depending on the types of industry prevalent in that region and the migration of affected workers.

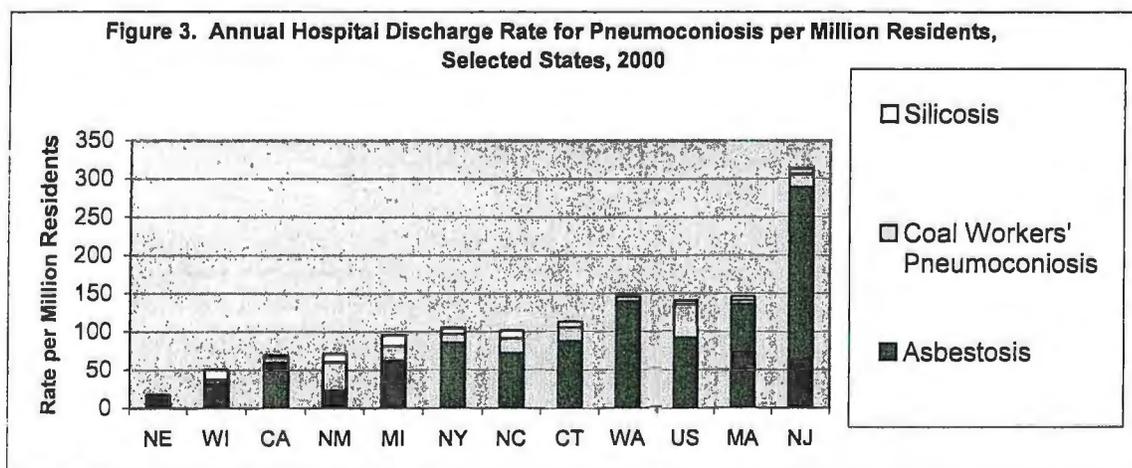
The proportion of total pneumoconiosis due to asbestosis is very high in states where manufacturing and ship building industries were historically present. New Mexico carries its

burden of pneumoconiosis in the form of coal worker's pneumoconiosis and silicosis which are commonly associated with mining activities, whereas the incidence rate for asbestosis in New Mexico is proportionately much smaller than for other participant states (Figure 3).

This initial assessment of occupational illness and injury is the first step toward comprehensive surveillance of occupational illness, which in turn can be used to target opportunities for prevention of these conditions.

References

- [1] Bureau of Labor Statistics (BLS). Work injuries and illnesses by selected characteristics, 1993. BLS News Publication 95-142, April 26, 1995.
- [2] BLS. Workplace injuries and illnesses in 1994. BLS News Publication 95-508, December 15, 1995.
- [3] National Safety Council. Accident Facts, 1998. Itasca, IL: the Council, 1999.
- [4] BLS. <http://stats.bls.gov/iif/oshcfoi1.htm#2000>.
- [5] CDC. Healthy People 2010 <http://www.health.gov/healthypeople/Document/HTML/Volume2/20OccSH.htm>
- [6] Centers for Disease Control and Prevention (CDC). National Occupational Research Agenda. Morbidity and Mortality Weekly Report 45:445-446, 1996.
- [7] Leigh, J.P.; Markowitz, S.B.; Fahs, M.; et al. Occupational injury and illness in the United States: Estimates of costs, morbidity, and mortality. Arch Int Med 1997; 157(14):1557-1568.
- [8] NIOSH. National Occupational Research Agenda. Pub. No. 96-115. Cincinnati, OH: NIOSH, 1996.
- [9] Council of State and Territorial Epidemiologists. <http://www.cste.org/pdffiles/Revised%20Indicators3.4.04.pdf>



Source: Council of State and Territorial Epidemiologists Occupational Health Indicators Pilot Project

Data sources: State Hospital Discharge Data; U.S. Bureau of the Census, 2000

Attachment 9

Worker Health Surveillance for NM Brochure

How to report:

Report cases to the NMOHR by calling (505) 272-4672, or by mail to: New Mexico Occupational Health Registry, MSC 10 5550, 1 University of New Mexico, Albuquerque, NM 87131-0001 and include the following information:

1. the disease or problem being reported;
2. patient's name, date of birth/age, gender, race/ethnicity, address, telephone number and occupation;
3. the diagnosing physician's (or laboratory's) name and telephone number.

To find out more:

Call Stephanie Moraga-McHaley, Coordinator, NMOHR at (505) 272-4672 or e-mail smoraga-mchaley@salud.unm.edu to obtain information on specific conditions, reporting requirements, or for any other information regarding the NMOHR.

Steenland, K. Burnett, C., Lalich, N., Ward, E., Hurrell, J. Dying for work: The magnitude of US mortality from selected causes of death associated with occupation. *Am. J. Ind. Med.* 43:461-482 (2003)

*NIOSH. Work-related lung disease surveillance report 2002. DHHS (NIOSH) Pub. No. 2003-111. May 2003.



NEW MEXICO
DEPARTMENT OF
HEALTH



THE UNIVERSITY OF NEW MEXICO • HEALTH SCIENCES CENTER

SCHOOL OF MEDICINE

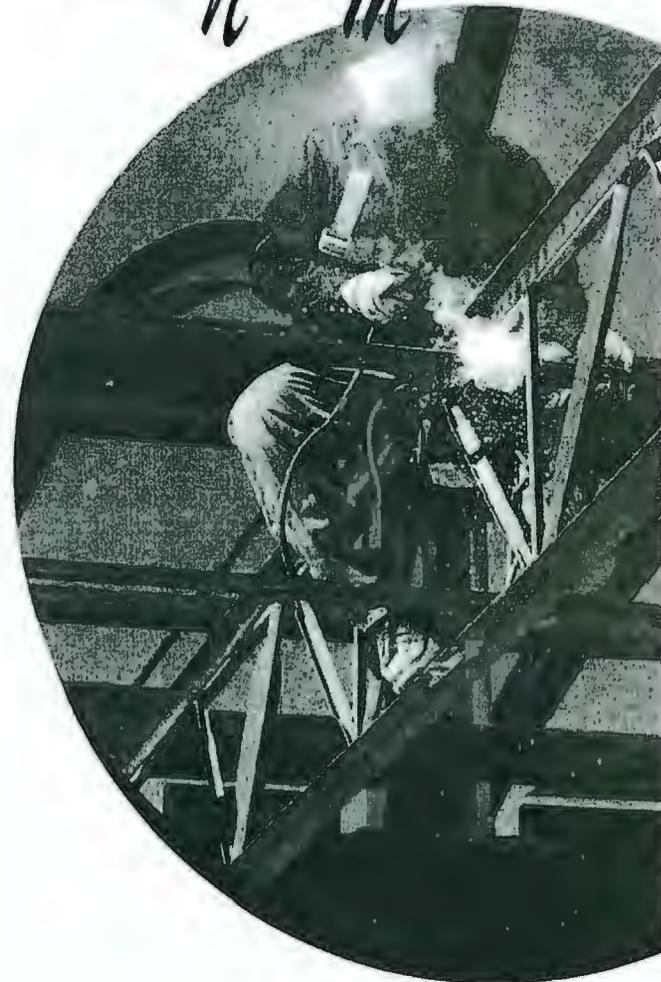
New Mexico Occupational Health Registry

MSC 10 5550

1 University of New Mexico

Albuquerque, NM 87131-0001

WORKER HEALTH SURVEILLANCE FOR NEW MEXICO



THE NEW MEXICO OCCUPATIONAL HEALTH REGISTRY

WORKER HEALTH SURVEILLANCE FOR NEW MEXICO

THE NEW MEXICO OCCUPATIONAL HEALTH REGISTRY

In August 2003, the State of New Mexico approved a revision to the list of Notifiable Diseases and Conditions (7.4.3. NMAC). A portion of the revision incorporated occupational illness and injury reporting into the list. The specific occupationally-related conditions to be reported are:

- Asbestosis
- Chronic beryllium lung disease
- Coal workers' pneumoconiosis
- Heavy metal poisoning
- Hypersensitivity pneumonitis
- Mesothelioma
- Noise induced hearing loss
- Occupational asthma
- Silicosis
- Other illnesses related to occupational exposure

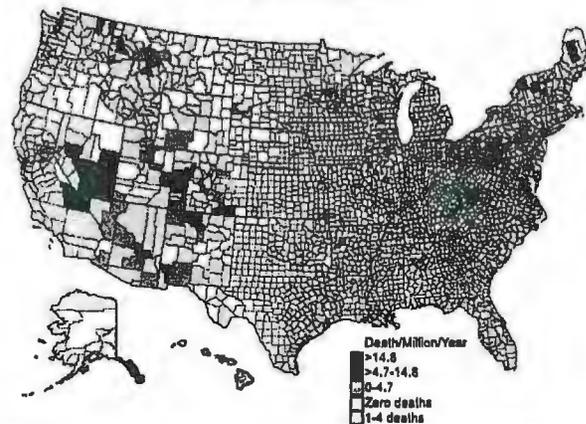
The New Mexico Occupational Health Registry is authorized to access all records of physicians and surgeons, hospitals, outpatient clinics, nursing homes, and all other facilities, individuals, or agencies providing such services to patients that would identify or establish the characteristics or outcome of occupationally-related illnesses and injuries.

Why has the New Mexico Department of Health established an occupational registry?

Workplace injuries and illnesses remain a significant problem in the United States. It is estimated that 26,000 to 72,000 workers die each year from occupationally-related diseases [1].

Condition-specific studies of occupational morbidity and mortality for New Mexico exist but no systematic surveillance has been conducted. According to the National Institute of Occupational Safety and Health (NIOSH), New Mexico ranked 5th among states in silicosis deaths in the years 1985-1999 experiencing an age-adjusted rate of 3.65 deaths per million residents, while Grant and San Juan counties had age-adjusted rates of 26.0 and 14.5 respectively [4].

SILICOSIS: AGE-ADJUSTED MORTALITY RATES BY COUNTY, U.S. RESIDENTS AGE 15 AND OVER — 1970-1999 —



NOTE: age-adjusted rates are not calculated for those counties with 1-4 deaths.
SOURCE: NIOSH Work-related Lung Disease Surveillance Report 2002.

Who must report occupational illnesses?

- Hospitals and other facilities providing screening, diagnostic or therapeutic services to patients with occupationally related illnesses and injuries;
- Health care professionals diagnosing or providing treatment for patients with occupationally-related illnesses and injuries.

All case data on occupationally-related illness and injuries reported to the NMOHR is confidential. Disclosure to any person of information that identifies, or could lead to the identification of an individual person, except for disclosure to other occupational health registries, local, and state health officers, or approved researchers for the purposes of prevention, control or research, is prohibited.

How will reports be used?

Researchers authorized by the NMOHR may conduct studies, utilizing statewide registry data, including the studies of the sources and causes of occupationally-related illnesses and injuries; evaluations of the cost, quality, efficacy and appropriateness of screening, diagnostic, therapeutic, rehabilitative and preventive services and programs relating to occupationally-related illnesses and injuries and any other clinical, epidemiologic or other research. The research will help to guide future work in preventing occupational injuries and illnesses.

Attachment 10

Occupational Injury Fatalities in NM: 1998-2002
Supplement in NM Health Statistics

Occupational Injury Fatalities in New Mexico: 1998-2002
Stephanie Moraga-McHaley, M.S. University of New Mexico Health Sciences Center
Karen Mulloy, D.O. MSCH, University of New Mexico Health Sciences Center
Ronald Voorhees, MD, MPH, New Mexico Department of Health
New Mexico Occupational Health Registry

Introduction

Workplace injuries and illnesses remain a significant problem in the United States. A worker is injured every five seconds [1, 2]. It was estimated in 1996 that 11,000 workers were disabled each day due to work-related injuries [3] and the Bureau of Labor Statistics (BLS) reported in 2000 that 5,915 workers in private industry died as a result of work related injuries [4]. The National Safety Council estimated in 1996 that on-the-job injuries alone cost society \$121 billion. The 1992 combined U.S. economic burden for occupational illnesses and injuries was an estimated \$171 billion [5].

In 2002, the New Mexico Department of Health in partnership with the University of New Mexico Health Sciences Center's Program in Occupational and Environmental Health applied for and received a grant from NIOSH to establish an occupational injury and illnesses surveillance system for the state of New Mexico. The New Mexico Occupational Health Registry (NMOHR) was established to utilize existing data sources in state and federal public health and labor agencies, public and private healthcare provider data, academic institutions, and create a single repository for combining these data into valid, reliable and useful surveillance information. The NMOHR has been designated the official entity to collect and maintain the reportable occupational illness and injury data. The registry is authorized to access all records of physicians and surgeons, hospitals, outpatient clinics, nursing homes, and all other facilities, individuals or agencies providing such services to patients that would identify or establish the characteristics or outcome of occupationally-related illnesses and injuries.

The NMOHR has been participating in the development and pilot testing of a set of occupational health indicators being developed in a collaborative effort between CSTE, NIOSH and federally funded states conducting occupational health surveillance. Criteria for selection of indicators included: 1) the availability of easily attainable state-wide data; 2) the public health importance of the occupational health effect or exposure to be measured; and 3) the potential for workplace intervention activities.

The current characterization of occupational fatality in New Mexico arose from the indicator project, which revealed a rate on par with the national rate for occupational fatality for the year 2000. Furthermore, the proportion of workers in high-risk occupations and industries was higher in New Mexico than for the majority of other states participating in the indicators project.

Methods

The Census of Fatal Occupational Injury (CFOI), from the Bureau of Labor Statistics provided much of the data for this report. Data from the New Mexico Vital Records and Health Statistics (NMVRHS) were also analyzed. Rates and confidence intervals were calculated where denominator data were available.

CFOI: The Census of Fatal Occupational Injury is administered by the Bureau of Labor Statistics. In the state of New Mexico, the New Mexico Occupational Health and Safety Bureau (NMOHSB) is the agency contracted for conducting the census annually. Each case is corroborated by a minimum of two sources, which may be from death certificates from NMVRHS, Office of the Medical Investigator reports, newspaper articles, or other approved sources. Some of the variables reported in CFOI include demographics, industry, occupation, place of injury (farm, industrial yard, highway, etc.), cause and event leading to death and part of body injured.

New Mexico Vital Records and Health Statistics (NMVRHS): Data set includes all death certificates for the years 1998 through 2002 where the "injury at work" box has been checked. All deaths that occurred in New Mexico are included regardless of the residence of the worker. Work-related deaths of New Mexico residents that did not occur in New Mexico were excluded from the dataset. Variables obtained from NMVRHS include residence county and city of decedent, county and city in which death occurred, the manner of death (accident, assault, suicide or undetermined), date of death (year, month, day), the underlying cause of death (1999-2002 by ICD-10 codes, 1998 by ICD-9 codes), industry and occupation codes, and citizenship status.

BLS Current Population Survey: The CPS is a sample survey of about 60,000 households nationwide conducted by the U.S. Census Bureau for the Bureau of Labor Statistics [6]

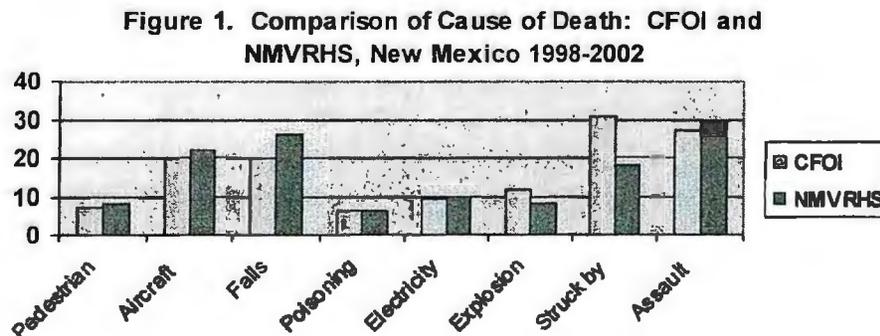
BLS Quarterly Census of Employment and Wages: Employment data under the QCEW program represent the number of covered workers who worked during, or received pay for, the pay period including the 12th of the month. Excluded are members of the armed forces, the self-employed, proprietors, domestic workers, unpaid family workers, and railroad workers covered by the railroad unemployment insurance system [7].

Risk of occupational injury fatality by industry and occupation: The definition of "high risk industry" is based on the twenty-seven industries have fatality rates higher than 10 deaths per 100,000 workers, representing approximately 17.2 million workers (14% of the private sector employment), but 58% of the occupational fatalities in 1998. "High-risk occupations" are the 24 occupations that have fatality rates higher than 20 deaths per 100,000 workers [8]. Percentages were determined for the year 2000.

Findings

Comparison of CFOI and NMVRHS for selected causes of death

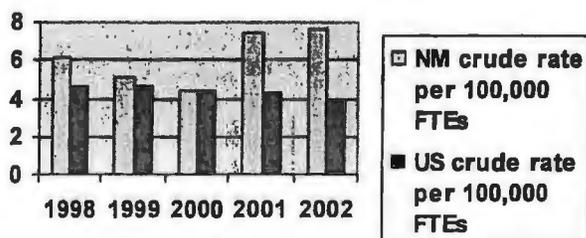
According to BLS CFOI data there were a total of 244 fatal occupational injuries in New Mexico from January 1998 to December 2002. In comparison, there were 248 death certificates marked "death at work" for the same time period. Because cause of death is categorized by the BLS Occupational Illness and Injury Classification System (OIICS) in the CFOI data set and death certificates causes are categorized by the ICD10 code, the two datasets are not directly comparable. However, general categorizations reveal some comparisons between the two data sets (figure1). The cause "death by poisoning" had 6 deaths reported in both data sets. Deaths by electricity and pedestrian-related deaths were the second most closely matched, with a discrepancy of one death for both causes. Assaults, explosions, and aircraft-related deaths were within two fatalities. The largest discrepancy was for the category of "struck by"; the CFOI data reported 31 deaths in this cause category while death certificates only reported 18.



Crude occupational fatality rates, CFOI

The crude occupational injury fatality rate has remained higher in New Mexico than for a nation as a whole. In 1995, the fatality rate was reported to be New Mexico rate was 7.9/100,000 workers, whereas the U.S. rate for same time period was 6.0/100,000 [9]. Figure 2 shows the fatality rate in New Mexico for the years 1998 to 2002. The combined rate for all five years was 6.14/100,000 in New Mexico versus 4.4/100,000 for the U.S.

Figure 2. U.S. and New Mexico crude occupational injury fatality rates: 1998-2002



Source: CFOI

Occupations and Industries at high risk of occupational injury fatality

For the year 2,000 New Mexico had the third highest percentage of workers (15.5%) in industries at high risk of occupational injury mortality among the 12 participating CSTE indicator states. A comparison of New Mexico with US percentages for selected industries indicates which of New Mexico's industries may be problematic for occupational fatalities. New Mexico had a much higher percentage of workers than does the nation as a whole employed in oil and gas extraction (1.69% vs. 1.30%), metal mining (0.6% vs. 0.04%) and agricultural livestock production (1.33% vs. 0.87%). New Mexico employed fewer people in agricultural crop production (0.65% vs. 0.81), however the percentages of workers employed in the trucking industry (1.91% vs. 1.92%) and construction (6.71% vs. 6.71%) are about equal for the US and NM.

With seven percent of the state's workforce employed in high risk occupations for fatality, New Mexico had the second highest percentage compared to the other CSTE indicator states and was higher than the national average of six percent. Some examples of high risk occupations include: Mining machine operators, truck drivers, farmers, roofers, electricians apprentices, airplane pilots and navigators, and garbage collectors.

Some examples of high risk occupations for fatality include: Mining machine operators, truck drivers, farmers, roofers, electricians apprentices, airplane pilots and navigators, and garbage collectors.

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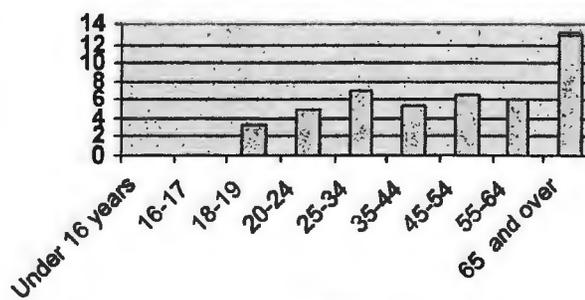
Occupational injury fatality rates by age

Nationally, there is a certain age at which the fatality rate for workers increases dramatically. New Mexico's workers follow this pattern as well. Workers aged 65 years and older have a fatality of 13.1 per 100,000 workers (95% C.I. 6.5 – 19.6), a rate twice that of any other age group except 25-34 year olds who have a fatality rate of 7 per 100,000 (95% C.I. 5.2 – 8.8) (figure 3).

Occupational injury fatality rates by industry and gender

Between the years of 1998-2002 males in New Mexico experienced an occupational injury fatality rate of 10.9/100,000 workers (95% C.I. 9.4 – 12.3) while females only experienced a rate 0.1/100,000 workers

Figure 3. Occupational injury fatality rates by age group, NM 1998-2002



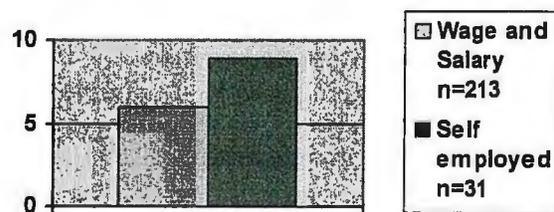
Source: CFOI

(95% C.I. 0.04 – 0.13) (CFOI). What are more informative are the industries represented and causes of death for women. The two industries where there were enough deaths of women workers to be reportable were transportation (five deaths), and retail (six deaths). Moreover, a full 31% of the fatalities in women were due to assault.

Occupational injury fatality rates by worker status

Workers in New Mexico who were self employed had about a third higher rate of death than wage and salary workers. [wage and salary workers: 5.9/100,000 workers, 95%C.I.(5.1-6.7), self employed workers 8.8/100,000 workers, 95%C.I.(5.6-12.0)] (Figure 4). Self-employed workers may be less likely insured than workers with more conventional employment. It is unclear from the data if the self-employed experienced death more frequently than wage and salary workers due to the lack of adequate, and/or timely medical treatment.

Figure 4. Occupational injury fatality rates by worker status, NM 1998-2002



Source: CFOI

Occupational injury fatality rates by industry and occupation

The top industries for fatalities in New Mexico from 1998-2002 were mining (30.9/100,000 workers), the transportation, communication and public utilities industry (29.2/100,000 workers), agriculture (24.1/100,000 workers) and construction (18.4/100,000 workers) (CFOI).

Workers employed in transportation and material moving in New Mexico were much more likely to die on the job than workers in any other occupation, with a rate of 37.5/100,000 workers. The occupation with the next highest injury fatality rate was farming with a rate of 19.9/100,000 workers, followed by protective service workers with a rate of 17.2/100,000 workers (CFOI).

Top 3 industries for occupational fatality by ethnicity, Comparison: 1981-1992 – 1998-2002

The table below lists the top three industries in which the highest percentages of deaths occurred, and shows a comparison between 1998-2002 data and an earlier study by Fullerton et. al. [9].

Table 1. Comparison of race/ethnicity and industry for occupational injury fatalities.

	White non-Hispanic	Hispanic	American Indian
1981-1992 (Fullerton, et. al)	Construction (38.1%), Oil & Gas (19.2%), Military (12.8%)	Construction (22.4%), Mining (13.6%), Agriculture (13.6%)	Construction (38.1%), Agriculture (38.1%)
1998-2002 (NMOHR)	Construction (14%), Public Administration (9%), Transportation (31%)	Construction (25%), Mining (14%), Transportation (16%)	Construction (29%), Agriculture (21%), Services (21%)

The only industry consistently dangerous for all groups over time was construction. Mining remained consistently fatal for Hispanics over time while agriculture persisted for American Indians. Transportation became a more fatal industry for both white non-Hispanics and Hispanics over time.

Occupational injury fatalities by U.S. citizenship status

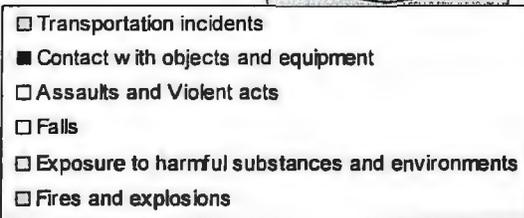
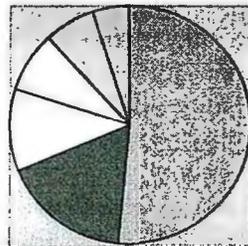
Nine percent of worker deaths in New Mexico occurred in non-US citizens; of those, six percent were Mexican Nationals. This percentage is close to that reported in a previous study where 10% of occupational injury fatalities occurred in immigrants nationwide [10].

Although it is not possible to count the number of non-U.S. citizens who are actually employed in New Mexico, crude estimates were calculated using Immigration and Naturalization Service counts of legal immigrants, plus an estimate of non-legal immigrants, then using U.S. Census Bureau's Current Population Survey micro data. The first method yielded an estimated a fatality rate of 10.7/100,000 workers, while the CPS denominator yielded a fatality rate of 10.3/100,000 non-citizen workers.

Occupationally-related deaths by cause or event

Figure 5. Occupational injury fatalities by event, NM 1998-2002

(CFOI)



As seen in figure 5, transportation incidents were the main factor in 52% of occupational injury fatalities in New Mexico from 1998-2002. Forty four percent were deaths resulting from a motor vehicle, while the remaining eight percent were air craft, or other mode of transport.

The second most common cause of fatality was contact with objects and equipment (17%), assaults and violent acts (11%), falls (8%), exposure to harmful substances and environments (7%), and fires and explosions. (5%).

Occupational injury fatalities by state of residence

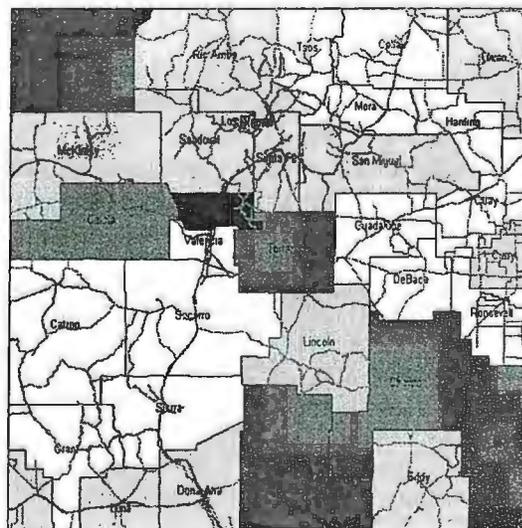
In the analysis of state of residence of decedents, 30% of occupational injury fatalities that occurred in New Mexico from 1998-2002 were non-New Mexicans (NMVRHS).

Work-related travel through the state appears to be particularly risky for out-of-state workers as 47% of transportation related deaths occurred in out-of state residents. Furthermore, 10% of air transport fatalities occurred in non-residents while only 8% of residents died in air transport events.

Figure 6. work-related ground transport fatalities by NM county

Occupationally-related ground transportation fatalities

New Mexico counties in which transportation deaths occurred did not align with the three interstates as expected (figure 6). Aside from Bernalillo County, I-25 did not pass through any county where the number of deaths was higher than six. Two counties along I-40 had between six and 12 work-related ground transport fatalities (Cibola and Torrance). Other counties with elevated numbers of ground transport deaths were

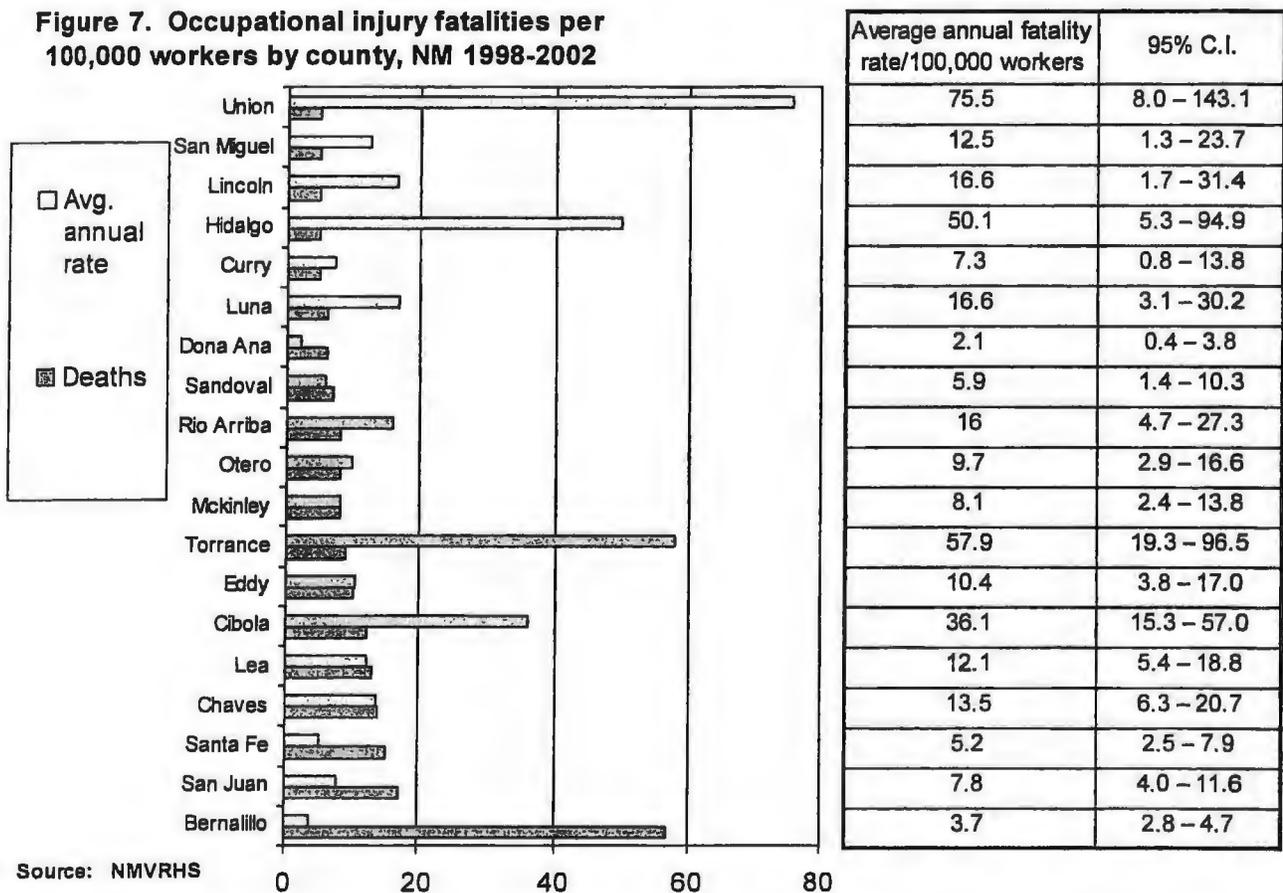


Source: NMVRHS

San Juan in the northwest corner of the state and a cluster of counties in the southwestern corner; Otero, Catron and Lea.

Occupational injury fatalities per 100,000 workers by county

Figure 7. Occupational injury fatalities per 100,000 workers by county, NM 1998-2002



Source: NMVRHS

Counties not listed: Colfax, Guadalupe, Quay, Taos, Catron, De Baca, Roosevelt, Socorro, Grant, Mora, Sierra, Harding, Los Alamos, and Valencia. Numbers and rates for counties with less than 5 deaths are not reported.

Figure 7 shows the range of occupational injury fatality rates for New Mexico's counties. Rates ranged from 75.5/100,000 workers in Union County, to 2.1/100,000 workers in Dona Ana County. Counties with no occupational injury fatalities from 1998 to 2002 were Los Alamos, Harding, and Valencia. The highest number of fatalities occurred in Bernalillo County, with 57 work-related fatalities from 1998-2002. Some of the higher fatality rates occurred in counties that are sparsely populated, such as Union, Hidalgo and Torrance.

Limitations

Because identifying information is not available through CFI, it was not possible to directly compare fatalities from the two datasets. Furthermore, there are differences between coding systems for the two datasets for variables such as cause of death, occupation, and industry.

Fatalities of workers younger than 16 may be included in the numerator but are not included in the denominator, since employment statistics are only available for those 16 years of age and older. Be-

cause the number of deaths among those less than 16 in any one state are small, these numbers are not broken out in the BLS tables and often do not meet the BLS publication criteria. Additionally, CFOI reports data on work-related fatalities by the state in which the fatal incident occurred, which is not necessarily the state of death or the state of residence. The denominator data used for calculating rates is an estimate of the civilian employed population who live in the state, thus rates may overestimate risk for a state if the fatal incidents involved victims who were out of state residents.

Conclusion

Males comprise the overwhelming number of occupational fatalities BUT 31% of fatalities in females were due to assaults.

Workers over the age of 65 have twice the rate of occupational injury fatalities of workers under 65.

The self employed have a one-third higher rate of fatal occupational injury than do wage and salary workers.

Non-US citizen workers have a higher rate of fatality than do US citizens in New Mexico.

Workers in rural counties have higher fatality rates than do workers in more populated New Mexico counties.

Transportation, construction, mining, and agriculture are the main industries represented among New Mexico's workers who are fatally injured.

Implications for next steps include: Outreach and intervention activities for older workers, workers in rural counties, immigrant workers, and the self employed.

The NMOHR plans to improve surveillance by:

- Exploring OMI and the UNM Hospital Trauma Registry for further information on occupational mortality.
- Distributing brochures on the New Mexico Occupational Health Registry to all physicians, hospitals and health care centers in the state.
- Improving accuracy of reporting by linking with IHS data and broadening data fields in the state trauma registries.

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[2] BLS. Workplace injuries and illnesses in 1994. BLS News Publication 95-508, December 15, 1995.

[3] National Safety Council. Accident Facts, 1998. Itasca, IL: the Council, 1999.

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[5] Leigh, J.P.; Markowitz, S.B.; Fahs, M.; et al. Occupational injury and illness in the United States: Estimates of costs, morbidity, and mortality. Arch Int Med 1997; 157(14):1557-1568.

[6] U.S. Census Bureau for the Bureau of Labor Statistics (BLS). <http://www.bls.gov/opub/gp/gpapnda.htm>.

[7] Overview, BLS Quarterly Census of Employment and Wages
<http://www.bls.gov/cew/cewover.htm>.

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[9] Fullerton L, Olson L, Crandall C, Sklar D, Zumwalt R. Occupational injury mortality in New Mexico. Ann Emerg Med. 1995 Oct;26(4):447-54.

[10] Windau, J. Occupational fatalities among the immigrant population. Compensation and Working Conditions, Spring, 1997

Attachment 11

NM Tribal Occupational Health Needs Assessment Survey

New Mexico Tribal Occupational Health Needs Assessment Survey



New Mexico Occupational Health Registry

**Program of Occupational and Environmental Health
Department of Internal Medicine
University of New Mexico Health Sciences Center**

Please return to:

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**New Mexico Tribal
Occupational Health Needs Assessment Survey**

A. Background Questions

Background of the person being interviewed

1. Name of tribe(s) that you work for or with in New Mexico *circle all that apply.*

- | | |
|---|--------------------------|
| 1 Jicarilla Apache | 17 Santa Clara Pueblo |
| 2 Mescalero Apache | 18 Santo Domingo Pueblo |
| 3 Navajo (excluding
Ramah, Alamo, or
Cañoncito) | 19 Taos Pueblo |
| 4 Pojoaque Pueblo | 20 Tesuque Pueblo |
| 5 Acoma Pueblo | 21 Zia Pueblo |
| 6 Cochiti Pueblo | 22 Zuni Pueblo |
| 7 Isleta Pueblo | 23 Ysleta del Sur Pueblo |
| 8 Jemez Pueblo | 24 Ramah Navajo |
| 9 Laguna Pueblo | 25 Alamo Navajo |
| 10 Nambé Pueblo | 26 ToHa'jiilee Navajo |
| 11 Picuris Pueblo | 27 Navajo, unspecified |
| 12 Sandia Pueblo | 28 Ute Mountain Ute |
| 13 San Felipe Pueblo | 29 Southern Ute |
| 14 San Ildefonso Pueblo | 98 Other |
| 15 San Juan Pueblo | 99 Refused |
| 16 Santa Ana Pueblo | 100 N/A |

2. Are you an enrolled member of the tribe(s) that you work for?

- a. yes
- b. no
- c. refused
- d. N/A

3. Name of the agency/tribal business/organization that you work for

Address _____ Phone _____

4. What is your occupational category?

- 1. **Clinician** health professional who is directly involved with the care and treatment of patients in a community/public health setting. Includes community/public health dental care providers, nurses, nutritionists, optometrists, pharmacists, physicians, social workers, substance abuse counselors, health educators, occupational medicine specialists, etc.

2. **Clinical Consultant:** Serves as a clinical consultant to other providers (see list in item 1).
3. **Behavioral Research or Social Scientist:** Uses social and behavioral science research methods to address health problems. Includes sociologists, anthropologists, economists, psychologists, etc.
4. **Biostatistician, Epidemiologist:** Uses mathematical and/or epidemiological models for compilation, analyses and reporting of information on health in populations.
5. **Disease Investigator:** Assists biostatisticians, epidemiologists or behavioral/social scientists in developing or conducting research and applying the knowledge gained to programs.
6. **Laboratory Scientist or Worker:** Conducts laboratory tests and procedures. Includes microbiologists, chemists, physicists, toxicologists, immunologists, etc. Worker describes those who assist laboratory scientists.
7. **Environmental Health Engineer or Specialist:** Applies engineering principles to prevent and control health hazards in the environment. Includes sanitary engineers, air pollution engineers, chemical engineers and non-engineering specialists.
8. **Occupational Health Specialist:** Reviews, analyzes and evaluates work environments to prevent disease or correct hazards. Includes industrial hygienists, safety specialists, etc.
9. **Auditor, Inspector or Surveyor:** Audits, inspects and surveys programs, institutions, equipment, products and personnel, using approved standards. Includes facilities and financial contract auditing.
10. **Health Communications Specialist:** Develops and implements communications to disseminate health information, programs, and policies through mass media, computer communications, written information and reports.
11. **Community Health Representative:** A Tribal or Native community-based, well-trained, medically-guided health care provider who may include traditional Native concepts in his/her work and is funded with IHS-CHR appropriations.
12. **Community Organizer/Involvement Specialist:** Works within communities to assess needs, build coalitions, and develop programs addressing health.
13. **Health Planner/Policy Analyst:** Analyzes health needs in populations with respect to program and legislative policies and allocation of health resources and plans program/policy structure.
14. **Program Manager:** Implements and evaluates community/public health programs including budgeting, data management, staff coordination/supervision, and contracts/fiscal monitoring.
15. **Administrator:** Plans, directs, and evaluates the use of health services resources and personnel on an agency/organizational level. Includes medical directors.
16. **Other profession/category (describe):** _____

17. Please briefly describe the agency, organization or business that you work for _____

B. Survey Questions

1. Is occupational health an important issue for the people in your tribe (the tribe(s) that you work for)? ("Occupational health issues include anything that affects the safety or health of people at work, whether directly related to job performance, such as an on-the-job injury, or indirectly, such as indoor air quality).
 - a. Yes
 - b. No
 - c. Not sure

2. What are important occupational health issues for your tribe (the tribe(s) that you work for)? *Circle all that apply.*
 - a. Agriculture safety
 - b. Cancer related to work
 - c. Chemical exposures, i.e. solvents
 - d. Construction safety
 - e. Ergonomics (human/environment interaction)
 - f. Indoor air issues including mold, 2nd hand smoke
 - g. Heat and cold exposure
 - h. Lead poisoning at work
 - i. Pesticide poisoning/exposure
 - j. Personal protective equipment and other prevention strategies
 - k. Violence in the workplace
 - l. Work-related injuries, i.e. falls, crush injuries, electrocution
 - m. Work-related illnesses, i.e. silicosis, asbestosis, dermatitis
 - n. Workplace security concerns regarding terrorism
 - o. Worksite health promotion
 - p. Other issues (which ones?)

 - q. Not sure

What makes these issues most important?

3. What kinds of occupational health related questions or complaints have the agency/tribal business that you work for received from the public? *Circle all that apply.*

- a. Agriculture safety
- b. Cancer related to work
- c. Chemical exposures, i.e. solvents
- d. Construction safety
- e. Ergonomics (human/environment interaction)
- f. Indoor air issues including mold, 2nd hand smoke
- g. Heat and cold exposure
- h. Lead poisoning at work
- i. Pesticide poisoning/exposure
- j. Personal protective equipment and other prevention strategies
- k. Violence in the workplace
- l. Work-related injuries, i.e. falls, crush injuries, electrocution
- m. Work-related illnesses, i.e. silicosis, asbestosis, dermatitis
- n. Workplace security concerns regarding terrorism
- o. Worksite health promotion
- p. Other issues (which ones?)

q. Not sure

4. In general how does your agency/tribal business respond to inquiries or complaints about occupational health/exposure problems? *Circle all that apply.*

- a. Refer to New Mexico Occupational Health and Safety Bureau (NM OSHA)
- b. Refer to IHS
- c. Refer to other agency/tribal business (which one?)

-
- d. Refer to private consultants
 - e. Provide telephone education and/or consultation
 - f. Refer to web sites or other resources (which ones?)

g. Visit/evaluate the site

h. Other _____

i. Not sure

5. Are you aware of any companies on your tribal land (land of the tribe that you work for) that have had a voluntary consultation/inspection by the NM Occupational Health and Safety Bureau or another governmental agency regulating occupational health and safety?

- a. Yes
- b. No
- c. Not sure

6. Are any of the following available to workers on your tribe's land? (circle all that apply)

- a. Occupational health clinics (a specialty clinic staffed by an occupational health specialist)
 - b. Primary care clinic staffed by an occupational health specialist
 - c. Primary care clinic who will see occupational health cases
 - d. Occupational health nurses
 - e. Emergency medical services (if not on site, where are the nearest emergency medical services?) _____
 - f. Health educators with knowledge of occupational health
 - g. Occupational health training programs (blood borne pathogen, respirator protection, lockout/tag out, HAZMAT, etc.)
 - h. Environmental health specialists
 - i. Industrial hygienists
 - j. Health and safety specialists
 - k. None
 - l. Not sure
 - m. Other _____
7. Does your agency/tribal business have any written procedures for handling questions or complaints about occupational health issues?
- a. Yes
 - b. No
 - c. Not sure
8. Does your agency/tribal business have written materials available to send out in response to such calls?
- a. Yes (if yes what are the materials?) _____
 - b. No
 - c. Not sure
9. Has your agency/tribal business conducted any proactive/planned occupational health activities, such as media campaigns, educational programs, or worksite inspections in the past five years?
- a. Yes (if yes, what?) _____
 - b. No
 - c. Not sure
10. Has your agency/tribal business compiled data on occupational illness and injury for the area under your jurisdiction in the past five years?
- a. Yes (for what purpose?) _____
 - b. No

c. Not sure

11. What would you put on your wish-list of items that could ensure that your agency/tribal business was adequately addressing occupational safety and health issues in your tribe? *Circle all that apply.*

- a. More staff with technical expertise in:
 - i. occupational epidemiology
 - ii. industrial hygiene
 - iii. safety
 - iv. health education/risk communication
 - v. other

b. Access to educational resources and materials in OH (list topics of interest):

- c. Access to expert consultants in occupational. medicine, industrial hygiene, toxicology, occupational health law
 - d. Access to data on occupational illness and injury in your community
 - e. Names of worksites in your community with high potential for workplace health problems
 - f. Names of worksites in your community that use highly toxic substances
 - g. Names of individuals/organizations in your community who are active in occupational health and safety.
 - h. Culturally appropriate occupational health and safety education programs.
 - i. Other items
-

12. Do you know of any other data sets that should be included in the New Mexico Occupational Health Registry?

- a. Yes (which ones?) _____
- b. No

13. How do you prefer to receive information on health-related issues?

- a. From the internet
- b. Newsletters
- c. Listserv
- d. Fax
- e. Other _____

14. How do you see that a worker health surveillance program in the state of New Mexico could best assist your tribe (tribe(s) that you work for) with occupational health and safety issues?

Thank you for your time filling out our survey.

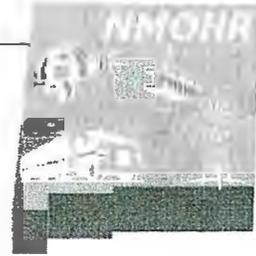
Attachment 12

NM Tribal Occupational Health Needs Assessment Report
to Native American Communities

New Mexico Occupational Health Registry

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New Mexico Tribal Occupational Health Needs Assessment: A Report to Native American Communities



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&



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Executive Summary

At 9.3% of New Mexico's population, Native Americans are a vital part of the state's workforce [US Census Bureau, 2005]. In recent years there has been a boom of industry on New Mexico's reservations, especially in the gaming industry. The establishment of new industries on reservations is important in alleviating economic disparities experienced by tribal members who live on reservations. The Bureau of Indian Affairs reports that 22% of New Mexico's employed Native Americans who live on or near reservations earn below federal level poverty guidelines [US Bureau of Indian Affairs, 2001].

While new industry on tribal lands brings employment for tribal members and other New Mexicans, it is important to provide those workers a safe and healthy environment. The New Mexico Occupational Health and Safety Bureau (NMOHSB) has jurisdiction over occupational health and safety regulations for the state of New Mexico but it has no authority on tribal lands (tribes with gaming compacts do agree to meet the federal Occupational Safety and Health act of 1970 [New Mexico Gaming Control Board, 2005]). There is a potential gap in the oversight of health and safety for people employed on tribal lands. Moreover, because NMOHSB supplies the Bureau of Labor Statistics with New Mexico's occupational illness and injury data there may be an undercount of such events occurring on New Mexico's Native American reservations and among Native American workers. This report describes an occupational health needs assessment of Native American communities in New Mexico conducted by the New Mexico Occupational Health Registry. The report includes an assessment of the industries where New Mexico's Native Americans are employed and the results of a survey of health, administrative, and environmental professionals who work for or with Native American tribes in New Mexico.

Introduction

In 2002, the Office of Epidemiology in the New Mexico Department of Health, in partnership with the University of New Mexico Health Sciences Center's Program in Occupational and Environmental Health, received a grant from the National Institute for Occupational Safety and Health (NIOSH) to establish an occupational injury and illnesses surveillance system for New Mexico. As part of the surveillance system, the New Mexico Occupational Health Registry (NMOHR) was established and instituted a system to combine existing data from state and federal public health and labor agencies, public and private healthcare providers, and academic institutions into a single repository to provide valid, reliable and useful occupational health surveillance information. The occupational health surveillance system would help to identify high injury or illness rates among sectors of New Mexican workers or in specific industries and would help to guide prevention strategies to reduce occupational injury and illness in New Mexico.

In August 2003, the New Mexico Department of Health held hearings to include occupational illnesses and injuries to the list of reportable diseases. The adopted regulations (NMAC 7.4.3.11) specifically mention the occupational lung diseases: silicosis, asbestosis, coal worker's pneumoconiosis, hypersensitivity pneumonitis, occupational asthma, and mesothelioma. It also addresses heavy metal poisoning, noise induced hearing loss, and other illnesses related to occupational exposure. Under the new regulations NMOHR is the official repository for all cases of occupational injury or illness and health care providers, facilities and other persons are required by law to report all suspected cases of occupational disease to the New Mexico Occupational Health Registry.

By 2004 NMOHR had reviewed data on silicosis, work-related pesticide and lead poisoning, and mortality from occupational injury for the state of New Mexico. It became clear that a missing piece in the data was from the 25 Native American tribes in New Mexico. In order to extend the work of NMOHR to all New Mexico's workers a project was proposed to conduct a needs assessment of Native American communities for whom data may not be captured by the traditional occupational health surveillance system datasets.

The New Mexico Native American Occupational Health Needs Assessment was conducted in the spring of 2005 with the following goals:

- To establish ties and contacts with sovereign tribal entities that will strengthen occupational health surveillance in New Mexico;
- determine the specific occupational health needs and concerns of Native American communities;
- identify possible barriers to conducting occupational health surveillance adequately in Native American populations in New Mexico and;
- identify avenues for occupational health interventions in Native American populations.

Methods

The assessment was conducted in two parts. The first task was to acquire and analyze employment data for Native Americans in New Mexico. These data were obtained from publicly available sources including the US 2000 Census, the US Department of the Interior Bureau of Indian Affairs, and the U.S. Economic Development Administration.

The second task was to survey public and environmental health professionals, health board members, and others who serve tribal interests regarding occupational health and safety. Participants were primarily identified with the assistance of the staff at the Environmental Health Services Office within the Albuquerque Area Indian Health Services. Other participants were identified by directly contacting tribal governments by telephone and requesting contact information for the person in the tribe who would have the most knowledge of occupational health and safety issues for the tribe.

Surveys were sent to the selected participants by mail with an explanation of the NMOHR surveillance project. Attempts were made to contact identified participants by telephone if surveys were not returned and potential participants were given the option to complete the survey over the telephone or fax a response.

Data analysis results from both employment data and the survey instrument were compiled and presented in aggregate form at the 3rd Annual Maine Occupational Safety & Health Research Symposium in May 2005, then at the National Council of State and Territorial Epidemiologists Annual Conference held in Albuquerque in June 2005. The written report of the data analysis is presented in this report and mailed to all survey participants, tribal governments and the State of New Mexico Department of Health, Epidemiology Bureau.

Employment data results

Using data from the Census 2000 American Indian and Alaska Native Summary File (AIANSF) Sample Dataset [US Census Bureau, 2005], the employment percentage for Native Americans was calculated by tribal affiliation and industry. The top five industry sectors that employ Native Americans in New Mexico are the Education, Health and Social Services sector employing 26.2%, followed by the Arts, Entertainment, and Recreation sector employing 12.1%, Public Administration at 10.7%, Retail Trade at 10.4% and the Construction industry with 9.2% (Table 1).

Table 1. Top five industries for Native American employment, New Mexico 2000

Industry Sector	Percent Native Americans Employed in Industry	Percent Non-Native Americans Employed in Industry	Total Number in Industry
Educational, health, and social services	26.2%	21.7%	165,897
Arts, entertainment, recreation, accommodation and food services	12.1%	9.8%	74,789
Public administration	10.7%	8.0%	61,382
Retail trade	10.4%	12.2%	92,766
Construction	9.2%	7.9%	60,602

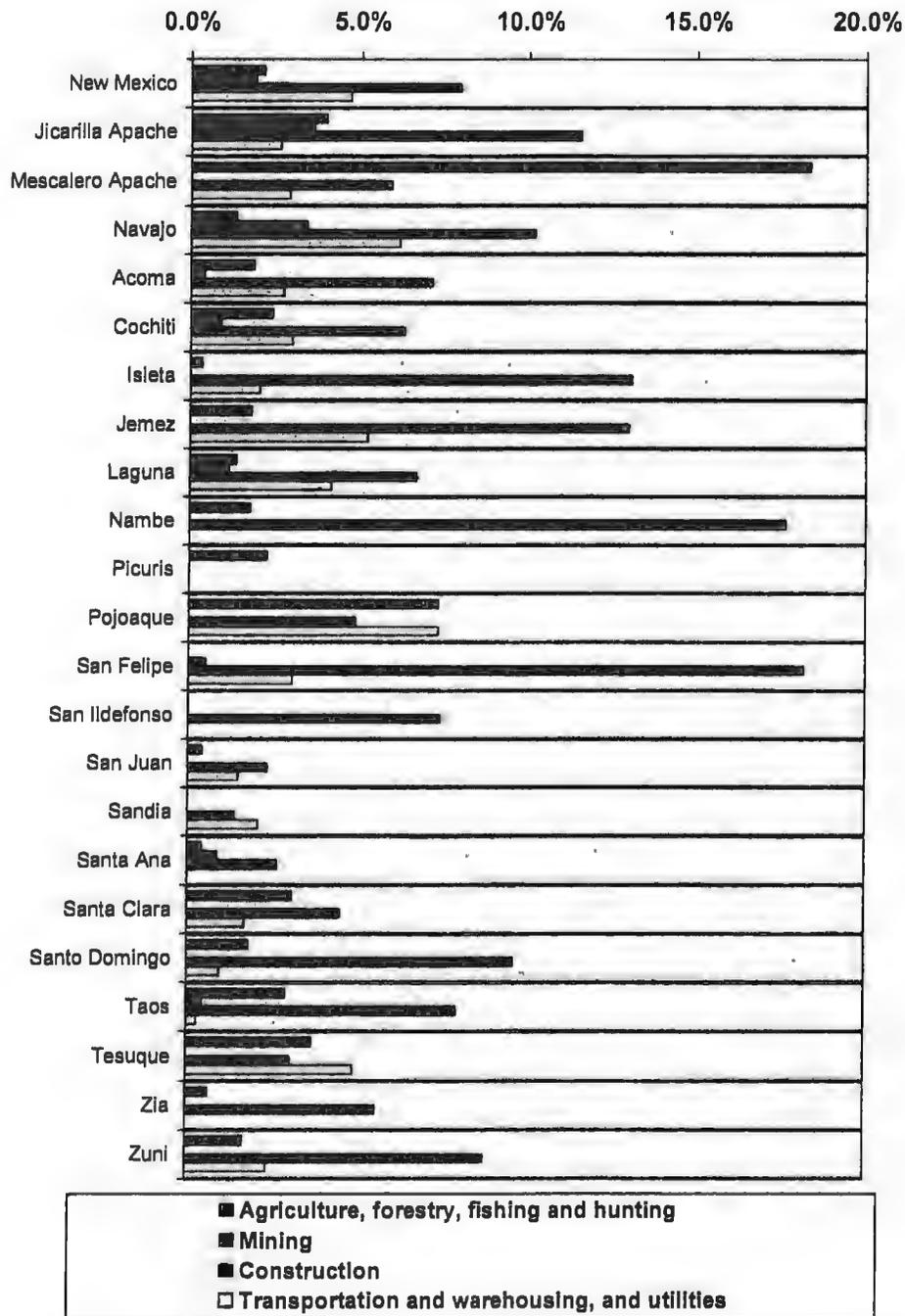
Employment in industries at high risk for occupational fatality

The industries in New Mexico with the highest fatality rate are mining (31 fatalities per 100,000 workers annually), transportation/communication/public utilities (29 per 100,000 workers) agriculture (24 per 100,000 workers) and construction (18 per 100,000 workers). Prevention measures are needed to reach workers and employers in these industries to reduce fatalities and it is important to determine how many Native Americans fall into this category. The employment percentage for Native Americans in these high risk industries out of all employed Native Americans claiming similar enrolled tribal membership, was calculated.

Employment percentages vary greatly by tribe for these four industries as shown in Figure 1. The Mescalero Apache tribe has the highest percentage of workers in the agricultural, forestry, fishing, and hunting industry at about 18.5 % in comparison to about 2% of all New Mexico workers. New Mexico has 8% of its total workforce employed in the construction industry while there are 8 tribes that exceed that percentage; the Jicarilla Apache (11.5%), the Navajo (10.2%), Isleta Pueblo (13.1%), Jemez Pueblo (13%), Nambe Pueblo (17.6%), San Felipe Pueblo (18.2%), Santo Domingo Pueblo (9.6%), and Zuni Pueblo (8.8%). The mining industry employs 1.9% of New Mexicans, but 3.6% of Jicarilla Apache workers are employed in mining as are 3.4% Navajo workers living in New Mexico.

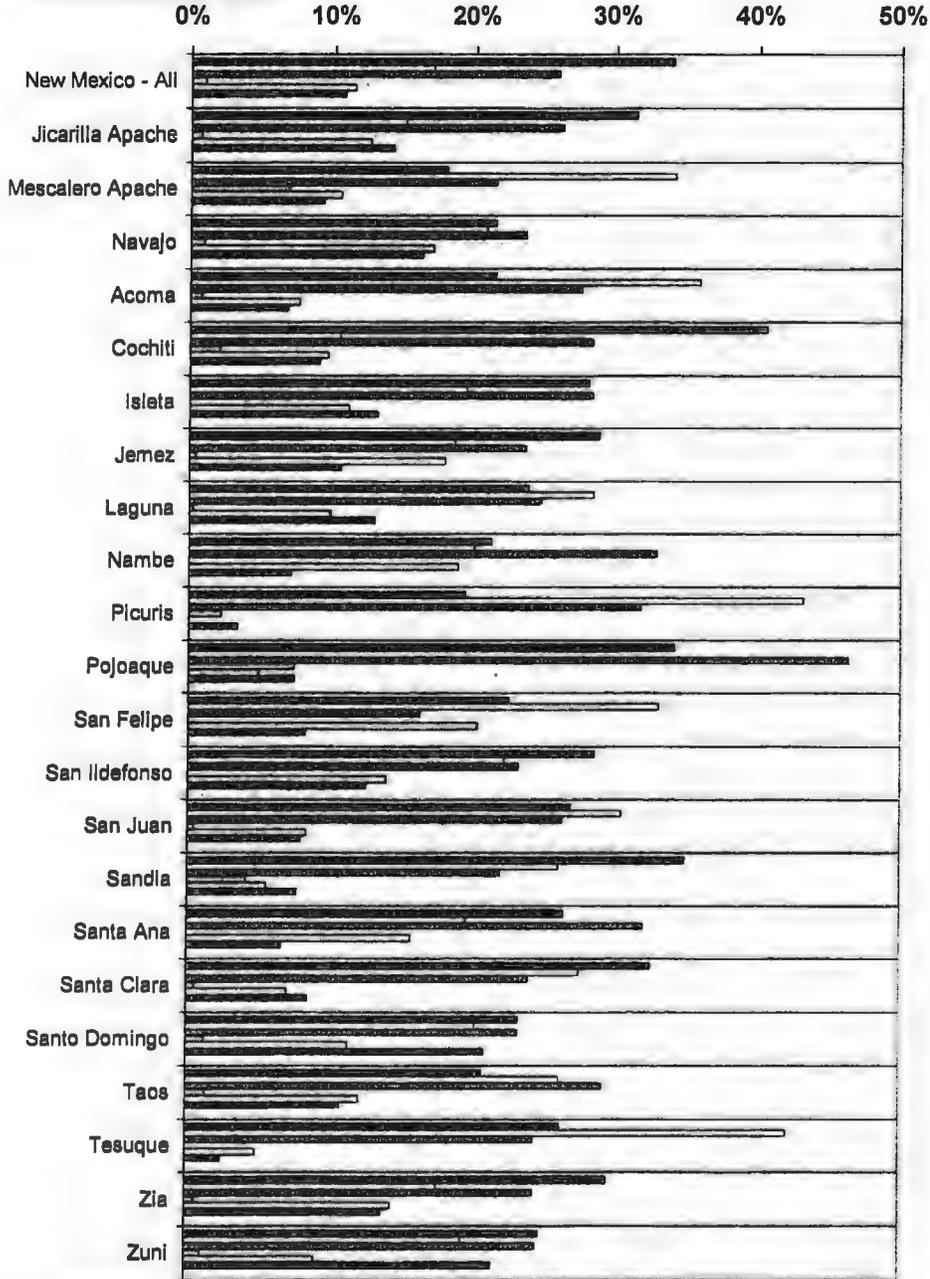
Figure 1. Percentage of Native Americans employed in industries at high risk for occupational fatality by enrolled tribal membership, New Mexico 2000

Percent of enrolled tribal members in high risk industry out of all employed members



*Note: Tribes not included in Figure 1, Ysleta del Sur, Ute Mountain Ute, and Southern Ute, did not meet the population threshold in New Mexico for the Census 2000 AIANSF Sample Data.

Figure 2. Percentage of Employed Native Americans by Occupation and Enrolled Tribal Membership, New Mexico 2000



■ Management, professional, and related occupations
 □ Service occupations
 ⊗ Sales and office occupations
 □ Farming, fishing and forestry occupations
 □ Construction, extraction and maintenance occupations
 ■ Production, transportation and material moving occupations

*Note: Tribes not included in Figure 2, Ysleta del Sur, Ute Mountain Ute, and Southern Ute, did not meet the population threshold in New Mexico for the Census 2000 AIANSF Sample Data.

Employment by occupation among Native American tribes in New Mexico

Occupation differs from industry data because it describes the type of job that is held by an individual, whereas industry describes the business where the individual works. Unfortunately it is difficult to summarize occupation data by sector as there are many different occupational descriptions; each sector has occupational subsets that are at greater risk for illness and injury than all occupations as a whole. For example, the "Management, professional and related occupations" category includes occupational titles such as "lawyers", "art and design workers", and "accountants" who may or may not work in industries at high risk for occupational illness and injury, but it also includes "farmers (farm owners) and farm managers", who typically work in the high risk agriculture industry. "Service occupations" include health care aides, fire fighters and police officers, food prep workers and servers, and building maintenance workers. Sales and office occupations include job titles such as cashiers, bookkeepers, and customer service representatives. The "construction, extraction and maintenance occupations" include jobs such as carpenters, pipe layers, and mining machine operators. The "production, transportation and material moving occupations" category is very broad with titles such as "assemblers and fabricators", "plant and system operators", "rail and water transportation workers", and "material moving laborers".

Figure 2 shows the percentage employment by tribal affiliation and occupational sector for Native Americans in New Mexico. Management, professional, and related occupations have the highest percentage of employees among the Cochiti Pueblo (41%), followed by the Sandia Pueblo (35%), Pojoaque Pueblo (34 %), Santa Clara Pueblo (33%), Jicarilla Apache (31%), and Zia Pueblo (30%). Statewide, 34% of all New Mexicans work in management, professional and related occupations. Seventeen percent of New Mexicans work in service occupations but the percentage of workers is twice that among the Picuris Pueblo (43%), Tesuque Pueblo (42%), Acoma (36%), and Mescalero Apache (34%). Sales and office occupations are the highest at Pojoaque Pueblo (46%) followed by Nambe Pueblo (33%), and the pueblos of Santa Ana and Picuris (32%). While only 1% of all New Mexicans work in farming, fishing and forestry occupations, 7% of enrolled Mescalero Apache and Pojoaque tribal members work in this occupational sector, as do 4% of Sandia Pueblo members.

Eleven percent of all New Mexicans work in the construction, extraction and maintenance occupational sector. This percentage is surpassed by several tribes including San Felipe Pueblo (20%), Nambe Pueblo (19%), Jemez Pueblo (18%), Navajo (17%), Santa Ana Pueblo (16%), San Ildefonso Pueblo (14%), Zia Pueblo (14%), Jicarilla Apache (13%), and Taos Pueblo (12%). Production, transportation, and material moving occupations account for 11% of employment for New Mexicans overall, but account for 21% of Santo Domingo and Zuni, 16% of Navajo, 14% of Zia and Jicarilla, 13% of Isleta and Laguna and 12% of San Ildefonso employment by enrolled tribal members.

Summary of Data from United States Economic Development Administration

Indian gaming has had a major impact on New Mexico's economy for over a decade. Currently, slightly over half the tribes (52%) in New Mexico have gaming [New Mexico Gaming Commission, 2005]. In addition to gaming, many tribes have other services and facilities associated with the casinos such as hotels, RV parks, and other recreational activities such as big game hunting, skiing, golfing, motor speedways and bowling. Approximately half the tribes that own casinos also operate golf courses.

The agricultural industry sector, which includes forestry, fishing, and hunting, is an important part of life for tribal members, although it doesn't play the significant economic role that it once did. Ninety-two percent of tribes still engage in some sort of agriculture. The involvement can range from a handful of family farms to significant cattle ranching and large cash crop operations. Forestry operations take place on approximately one third of reservations, although the yields vary greatly from reservation to reservation.

The mining industry is active on many reservations or has been in the past. The largest number of active mines is sand and gravel operations, but oil, gas and coal are also extracted. Historically, the Navajo and Laguna Pueblo have yielded uranium ore.

Table 2. Number and percentage of tribes with selected industries

	Number of tribes	Percent of tribes
Agricultural activities*	22	88
Forestry*	8	32
Gaming (casinos)†	13	52
Mining*	12	48
Golf courses†	7	28
Crafts and Arts*	21	84

*Velarde Tiller, 1995

†Tribal casino websites

Although the 1995 EDA report mentioned only 21 tribes in New Mexico as having tribal members employed in the arts and crafts industry this number may not reflect those members that are casually or intermittently employed in this industry. Traditional arts and crafts such as jewelry, pottery, weaving, drum making, and painting by Native Americans contribute significantly to New Mexico's economy and help shape its cultural identity.

Aside from economic activities on tribal lands, large numbers of enrolled tribal members are employed off the reservations. For instance, many members of San Ildefonso and Santa Clara pueblos hold positions at nearby Los Alamos National Laboratories. Members of Sandia, Santa Ana, and other middle Rio Grande pueblos are often employed in nearby Santa Fe, Rio Rancho and Albuquerque and hold a wide variety of positions in both white and blue collar industries.

Occupational Health Needs Assessment Survey Results

A total of 50 surveys (see Appendix A for a sample survey) were mailed, faxed or e-mailed to professionals within tribes, or agencies and organizations that work with tribes in New Mexico. The survey was sent to 18 pueblos, the Jicarilla and Mescalero Apache tribes, the Alamo and ToHa'jiilee Navajo bands, the Navajo Nation OSHA and the Navajo workers' compensation, as well as representatives of Indian Health Service and the Albuquerque Area Indian Health Board. The initial contact list was provided by Environmental Health Specialists with Albuquerque Area Indian Health Service who have occupational health components to their employment positions. Four of the 50 surveys were sent to other identified persons after it was determined that the initial contact was either no longer working in that position or the initial contact redirected the survey to a more suitable respondent within the organization. A total of 29 completed surveys were returned for a response rate of 63%.

Survey respondents

Section one of the survey asked questions about the person who was responding to the survey in order to determine who may be working in an occupational health capacity with the tribes and what were the characteristics of their professional backgrounds. Slightly over half of the survey respondents (15) stated that they were enrolled members of the tribe that they worked for or with, 12 responded they were not enrolled members and there was no response to the question by two respondents. One half (14) of the respondents worked for the federal government while another 14 were employed directly by tribes and one respondent worked for an organization that was neither federal nor tribal. To determine the type of jobs respondents held, a descriptive list of employment positions was provided in the survey. Respondents were free to choose as many positions as they felt were necessary to describe their particular job duties. The single most common occupation among respondents was "community health representative" (CHR). The CHRs work within the tribes in health care and are funded through IHS. The second most common responses were "environmental health engineer/specialist" and "administrator" with six responses each. Three of the 29 respondents described themselves as working as "occupational health specialists". Fourteen of the respondents described themselves as holding other job titles, such as director of risk management, claims adjuster, finance officer and utilities director.

Occupational Health Issues

Of the 29 respondents, 86% (25) stated that occupational health was an important issue for the tribe(s) that they work for or with. A list of 15 occupational illness and injury factors was provided and respondents were allowed to select as many as they thought were important issues for their tribe(s). Chemical exposures was the issue most frequently listed as being important (18 out of 29 listed this as an issue for the tribe), followed by personal protective equipment/other prevention strategies, and construction safety with 16 each (Table 3). Three other issues were indicated as being important by

more than half (15) of the respondents; worksite health promotion, ergonomics, and indoor air issues. Occupational lead poisoning was the issue that received the least number of responses (6). Occupational health issues described in the "other" category were unexploded ordinance in an abandoned bombing range on tribal land, asbestos in buildings, potential exposure to hantavirus among maintenance workers, and exposure to chemicals that may worsen the effects of diabetes.

Table 3. Comparison of the ranking of occupational health issues by the number of responses from (1.) professionals and (2.) public inquiries

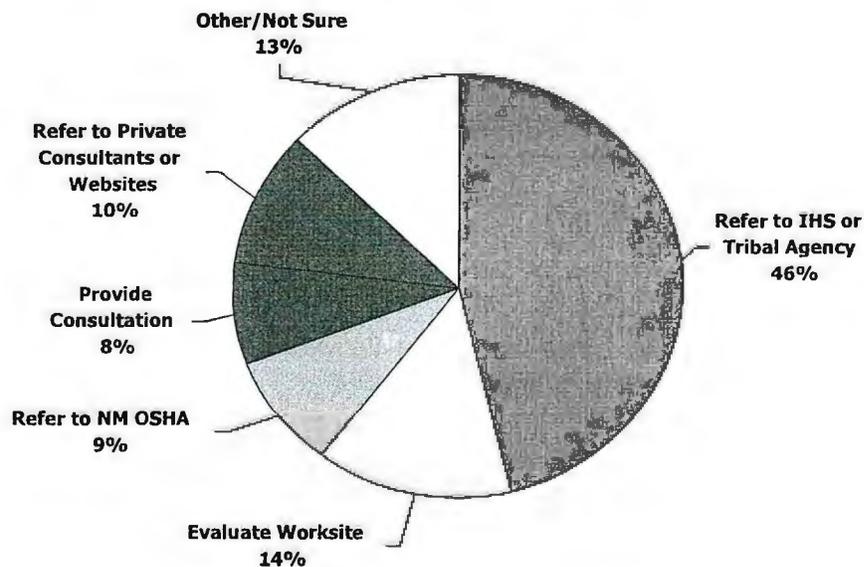
	1. Rank of issues important to tribes as indicated by respondents	2. Rank of issue for number of questions from the public
Chemical exposures	1st	3rd
Construction safety	2nd	5th
PPE/other prevention strategies	2nd	3rd
Ergonomics	3rd	2nd
Indoor air issues	3rd	2nd
Worksite health promotion	3rd	3rd
Work related injuries	4th	4th
Agricultural safety	5th	7th
Cancer related to work	6th	1st
Heat and cold exposure	7th	6th
Violence in the workplace	7th	9th
Work related illnesses	8th	6th
Pesticide poisoning/exposure	9th	8th
Workplace security regarding terrorism	9th	10th
Lead poisoning	10th	8th
Other issues	11th	3rd
Not sure	12th	8th

Respondents were also asked what occupational health-related questions or complaints were received from the public. The same list of 15 occupational illness and injury factors was provided to the respondents. The number one concern heard from the public was cancer related to a workplace exposure (Table 3), followed by ergonomics and indoor air issues. Construction safety, an issue indicated by many of the respondents to be important, was mentioned by the public only 6% of the time.

Some of the other occupationally-related health concerns that respondents had heard from the public included noise levels in the casinos, chemical exposures from Los Alamos National Laboratories, the rise in the use of illegal drugs on tribal lands, and zoonotic exposures such as tularemia.

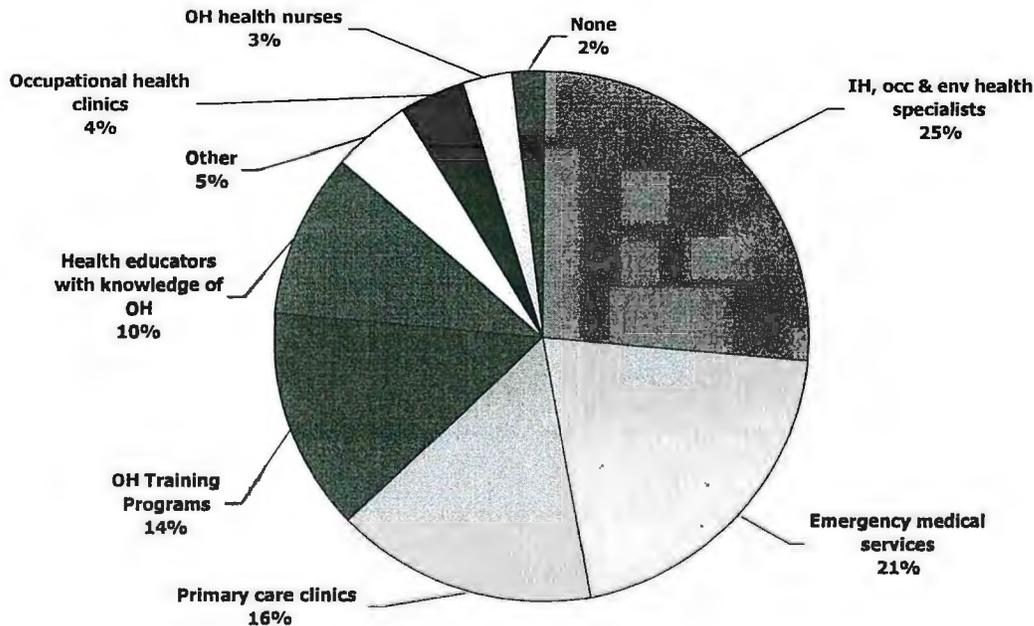
Respondents were asked how their agency or tribal business responds to occupational health concerns/complaints from tribal members. The most common response was referral to IHS or other tribal administrative office with a response rate of 46%. Fourteen percent of respondents replied that they performed a worksite evaluation, 13% said they weren't sure or took some other action, and 10% said that they referred callers to websites or private consultants. Only 9% said that they made referrals to the New Mexico Occupational Health and Safety Bureau (NMOHSB, the State's OSHA), while 8% said that they provided consultation over the telephone. State OSHA activities are limited on tribal lands. Only 10% of respondents said that they were aware of businesses on tribal land having any consultation from NMOHSB, while 69% said that the tribe or its businesses had not had an OSHA consultation and 21% were not sure if OSHA activities had taken place on tribal land.

Figure 3. How Do You Respond to Inquiries about Occupational Health Issues?



Respondents were asked to indicate what resources were available to tribes in the field of occupational health. Twenty-five percent of respondents said that there were environmental health, occupational health or industrial hygiene specialists available to tribes and 21% said that there were emergency medical services available to tribes to cover occupational health issues.

Figure 4. What occupational health services are available on tribal land?



Sixteen percent of respondents indicated that there were primary care clinics available to see occupational health cases and 14% had occupational health training programs available. Blood borne pathogen training was the most commonly cited type of training. Ten percent said that health educators with knowledge of occupational health issues served tribal members. Two percent of respondents said that there were no health services available to respond to occupational health issues.

Survey respondents were asked about the existence of written procedures for handling occupational health complaints or questions, the availability of written materials for responding to questions and if occupational health activities had been conducted by the respondent's organization within the past 5 years. Almost half of respondents were not sure if written procedures existed, while 24% said that they did not exist and the remaining 28% said that there were written procedures. Only six of the respondents described where or what the procedures were and most were uncertain about where procedures were housed. Forty-one percent of respondents were not sure if written materials on occupational health issues were available while 34% said that there were and 24% said materials were not available. The written materials that were available appeared to be specific to issues that respondents had encountered, such as tularemia, noise-induced hearing loss, and radon exposure. Blood-borne pathogen materials were cited as being a common request. At least one respondent said that a poster equivalent to OSHA form 101 was posted. Half of the respondents said that some sort of occupational health activity had been undertaken in the past five years, while one quarter said that such activities had not been conducted and the remaining quarter were not sure.

Activities ranged from environmental health assessments of the workplace, to onsite safety inspections and trainings, to hearing health screenings of employees.

Data collection

To better characterize occupational illness and injury among Native Americans the NMOHR is interested in determining the existence of tribal occupational health-related data. Forty-one percent of respondents said that data on occupational illness and injury had been compiled, while 34% stated that data had not been compiled and the remaining 24% were not sure. Most of the reasons cited for data collection were for control measures, such as risk management, workers' compensation purposes, and for quality assurance. Some cited the use of data to address specific occupational health problems. Only two respondents indicated that the existing data could be incorporated into the NMOHR, while the remaining respondents indicated that they did not know of any existing datasets that should be incorporated in NMOHR.

Occupational health capacity needs

Respondents were asked what resources they desired to ensure adequate occupational safety and health response for their tribe. Ranking of desired resources are shown in Table 4.

Occupational safety was cited as the expertise most desired for staff, followed by better education and/or risk management expertise, knowledge of occupational epidemiology, and industrial hygiene. Improved access to occupational health educational materials was the 6th most desired item. The only item specifically requested in this category was OSHA requirements. Other "wish list" items mentioned by respondents include funding to address occupational health issues, information about known or probable dangers in the workplace, and OSHA training to help tribes decide what is needed. The internet topped the list of ways by which respondents preferred to receive health-related information, followed by newsletters, listserv (e-mail), and fax.

The final question in the survey asked respondents how they thought that a worker health surveillance program in New Mexico might be able to assist tribes with addressing occupational health issues. Responses fell into five major categories:

1. Funding
2. Provide information, education, training on occupational health and safety
3. Communication to tribes, provide more information about the NMOHR to tribes
4. Consultation/guidance and or technical assistance on OH issues
5. Data – occupational health surveillance

Table 4. Rank and percent of "wish list" items for addressing occupational health

	Rank	Response
Better staffing with expertise in occupational health	#1	79%
Culturally appropriate occupational health education programs	#2	59%
High risk worksites in community identified	#2	59%
Access to tribe specific data on occupational illness and injury	#3	52%
Worksites in community using toxic substances identified	#4	48%
Occupational health and safety activist contacts	#4	48%
Access to occupational health consultant experts	#5	45%
Access to occupational health educational materials	#6	38%

Conclusion

There are several important factors that emerged from the occupational health needs assessment among New Mexico Native American communities. The first is that the great majority of professionals interviewed felt that the issue of occupational safety and health was important for tribes. However, resources were often cited as not being sufficient for the job that the respondents thought was necessary to ensure workplace health and safety. Inadequate funding was a theme that was repeated through many of the comments provided on the survey.

The second most important factor is that there are a substantial number of Native Americans employed in industries at high risk for occupational injury and fatality such as construction and mining. Many are employed in industries outside tribal lands where health and safety regulatory matters are covered by OSHA or the Mine Safety and Health Administration (MSHA). However, for those working in high risk industries on tribal lands, the issues of surveillance, education and training on occupational health and safety was thought to be a needed resource.

The third factor is noted as a need for training, educational materials, and technical support for tribes across the state. Many respondents indicated that culturally appropriate educational materials in the field of occupational health and safety were not available. The Indian Health Service (IHS) indicated that training on issues such as construction safety is available. IHS has conducted trainings for some tribes and the services are available to all tribes in the region. The contact for occupational safety and health training at IHS is Mike Lewis at mlewis@ihs.gov.

Other resources for occupational health and safety educational materials can be found on the websites for the National Institute for Occupational Safety and Health

(<http://www.cdc.gov/niosh/homepage.html>), Occupational Safety and Health Administration (<http://www.osha.gov/>), and Mine Safety and Health Administration (<http://www.msha.gov/>). Each of these websites has pamphlets, posters and brochures that can be downloaded to distribute to workers that describe health risks and prevention measures. There are pamphlets and posters for all sectors of the labor force such as construction workers, teen workers, and miners, and cover a variety of issues such as ergonomics, farm safety, confined spaces, log out/tag out, heat stress, silica exposure, and many chemical exposure hazards. In addition, NMOHR will work with individual tribes to develop appropriate educational materials that are important to the individual tribes.

NMOHR and the New Mexico Department of Health Bureau of Environmental Epidemiology received a grant from NIOSH in 2002 to develop an occupational health surveillance system for the state of New Mexico. The University of New Mexico School of Medicine, where the NMOHR is housed, and the NMDOH were recently granted funding to continue surveillance activities for another three years. As part of the grant activities NMOHR has compiled a lending library with materials in print, on CD-ROM and video that are available to all people in the state of New Mexico. This resource can be used by tribes to address workplace hazards. In addition, NMOHR and the physicians from UNM/HSC Program in Occupational and Environmental Health have conducted training in the past for the physicians and other health care providers with IHS on the issues of diagnosing and treating occupational injury and illness and will continue to provide that service to IHS.

Fourthly, the development of new industries on tribal lands, such as gaming and golf courses, present unique problems in the field of occupational health and safety. Some problems, such as noise in casinos, are being addressed while other issues, such as second-hand smoke, may be more difficult to address and risks may not be adequately assessed. The idea that surveillance of occupational illness and injury within tribes could help to call attention to emerging issues, especially if problems can be demonstrated as being an issue for different tribes was noted.

Finally, the lack of funding to address occupational health issues on tribal lands remains a hurdle that may be difficult to surmount. The best way to increase or secure funding is by demonstrating need. Reporting occupational illnesses and injuries (NMOHR Reporting Form Appendix 2) to the NMOHR can help bring attention to problems for tribes and for the state. Clinicians who work with tribes should be encouraged to report work-related illnesses and injuries to the NMOHR. In addition NMOHR plans to contact each tribal government to begin a dialogue on how to incorporate occupational injury and illness data into the NMOHR. Tribal occupational injury and illnesses data that can be summarized and reported to state and federal officials may improve the ability of tribal governments and NMOHR to secure funding to expand surveillance and prevention activities.

The New Mexico Occupational Health Registry wishes to thank the following individuals for their help in the survey development and distribution: Joyce Naseyowma-Chalan, UNM Center for Native American Health, Dawn McCusker, NMDOH Tribal Liaison, and Fan Robinson, Director of Environmental Health Services, Albuquerque Area Indian Health Service.

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Santa Ana Pueblo Santa Ana Star <http://www.santaanastar.com/> Accessed 14 April 2005.

Santa Clara Pueblo Big Rock Casino <http://www.bigrockcasino.com/> Accessed 14 April 2005.

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Attachment 13

State/Tribal Reporting Form for Pesticide Worker Safety

FY 2005 STATE/TRIBAL REPORTING FORM FOR PESTICIDE WORKER SAFETY

1. Information About State/Tribal Pesticide Investigations Involving Occupational Pesticide Exposure or Illness Incidents. States/Tribes are to report the total number of pesticide tips/complaints/incidents investigated by the State/Tribal Lead Agency for Pesticides that involved occupational pesticide exposure or illness. This should include all pesticide tips/complaints/incidents that were investigated that involved an alleged pesticide exposure or illness <u>that occurred in connection with employment or work activities</u> - and should include both agricultural and non-agricultural settings.	<u>Total Number of Incident Investigations</u>	
1A. For the incident investigations reported in item #1 above, please indicate how many of them resulted in the State/Tribe confirming that a pesticide exposure or illness occurred in connection with employment or work activities.	<u>Number of Confirmed Incidents</u>	
1B. For the confirmed incidents reported in item #1A above, please indicate the total number of individuals (or estimate as closely as possible) that were affected (i.e., those that reported and/or exhibited symptoms of pesticide exposure/illness or sought and received medical attention for pesticide exposure/illness as a result of the incident).	<u>Number of Individuals Affected by Incidents</u>	
1C. For the incident investigations reported in item #1 above, please indicate the number that were associated with agricultural versus non-agricultural occupations.	<u>Agricultural</u>	<u>Non-Agricultural</u>
1D. For the incident investigations reported in item #1 above, please indicate the number that were associated with misuse or label violations versus the number that were not associated with a violation such that the incident appeared to have resulted from normal use according to the label directions.	<u># Assoc. w/ Violation</u>	<u># Assoc. w/ No Violation</u>
1E. For the incident investigations reported above in item #1D that were associated with misuse or label violations, please indicate the number of these that were associated with a WPS violation versus some other non-WPS label violations.	<u>WPS Violation</u>	<u>Other Violation</u>
1F. For the incident investigations reported above in item #1E that were associated with WPS violations, please indicate the nature of the violations and number of each type (i.e., 7 cases w/ PPE violations, 2 cases w/ REI violations, 2 cases w/ training violations, 2 cases w/ posting violation, etc.).	<u>Nature of WPS Violations and Numbers of Each Type</u>	
1G. For the incident investigations reported above in item #1E that were associated with non-WPS label violations, please indicate the nature of the violations and number of each type (i.e., 4 cases w/ PPE violations, 2 cases w/ exceeded label rate violations, etc.).	<u>Nature of non-WPS Violations and Numbers of Each Type</u>	
2. Information About State/Tribal Pesticide Incident Reporting Programs and State/Tribal Coordination on Incidents Involving Occupational Pesticide Exposure or Illness. Does your State/Tribe have a legislatively mandated occupational pesticide incident reporting program such that occupational pesticide exposure/illness incidents are required to be reported to a State/Tribal agency or entity with jurisdiction (e.g., department of health, labor or agriculture, public health commission, etc.)?	<u>Yes</u>	<u>No</u>
2A. If you answered AYES@ to the question in item #2, please indicate which State/Tribal agency or entity has the primary regulatory responsibility for implementing and carrying out the pesticide incident reporting program (e.g., department of health, department of labor, department of agriculture, special public health commission, etc.); and list the primary point of contact for the program (name, phone number and email).	Indirectly. - NMAC requires reporting of occ. illness to NMOHR - pesticide poisonings to NM DOH env. health epi bureau. (see note below)	
	<u>Name of Lead Agency and Contact Info for Pesticide Incident Reporting Program</u> New Mexico Occupational Health Registry at the University of New Mexico Health Sciences Center Stephanie Moraga-McHaley - Surv. Coord. (505) 272-4672	

FY 2005 STATE/TRIBAL REPORTING FORM FOR PESTICIDE WORKER SAFETY

SMoraga-McHaley@salud.unm.edu

2B. If you answered **NO** to the question in item #2, then please indicate whether your State/Tribe has a State/Tribal agency or entity (e.g., department of health, labor or agriculture, public health commission, Poison Control Center, etc.) that tracks pesticide incidents and/or maintains a database/information on occupational pesticide incidents that may have been reported voluntarily and/or collected as part of a general information collection program.

Yes

No

2C. If you answered **YES** to the questions in item #2B, please indicate which State/Tribal agency or entity tracks the pesticide incidents and/or maintains the database/information on occupational pesticide incidents (e.g., department of health, department of labor, department of agriculture, special public health commission, etc.); and list the primary point of contact for the program (name, phone number and email).

Name of Lead Agency and Contact Info for Pesticide Incident Tracking System

New Mexico Occupational Health Registry at the University of New Mexico Health Sciences Center

Stephanie Moraga-McHaley - Surv. Coord.
(505) 272-4672

SMoraga-McHaley@salud.unm.edu

2D. If you answered **YES** to either of the questions in item #2 or #2B, and the State/Tribal agency or entity with jurisdiction (e.g., department of health, labor, or agriculture, public health commission, etc.) makes information about pesticide incidents available via the web, please provide the URL for the site.

URL for Website for Information on Pesticide Incidents

URL not yet established.

2E. Does the State/Tribal Lead Agency for Pesticides have any formal agreement or policies/procedures in place (regulations, written MOUs, written SOPs, etc.) regarding coordination with the State/Tribal health department (or similar agency) on occupational pesticide incidents/complaints that may get reported to that agency, or that they may investigate or otherwise deal with under their jurisdictional responsibilities?

Yes

No

MOU with NM Poison Control Center.

2F. Does the State/Tribal Lead Agency for Pesticides have any formal agreement or policies/procedures in place (regulations, written MOUs, written SOPs, etc.) regarding coordination with the State/Tribal labor department (or similar agency) on occupational pesticide incidents/complaints that may get reported to that agency, or that they may investigate or otherwise deal with under their jurisdictional responsibilities?

Yes

No

X

2G. Does the State/Tribal Lead Agency for Pesticides have any formal agreement or policies/procedures in place (regulations, written MOUs, written SOPs, etc.) regarding coordination with migrant clinics (or similar entities) on occupational pesticide incidents that may get reported to them or that they may or otherwise deal with in the course of their work?

Yes

No

X

3. Information About State/Tribal WPS Priorities. Report the top three priorities the State/Tribe has established for worker protection outreach and compliance monitoring activities (either through targeting efforts done in connection with OECA=s guidance or through your own targeting strategy effort or priority setting process).

Top 3 WPS Priorities

4. Information About State/Tribal Agreements with Training Providers Issuing WPS Training Verification Cards. Report the number of agreements the State/Tribe currently has with WPS training providers to issue WPS training verification cards; and report the total number of worker and/or handler verification cards issued to date to the training providers.

of Agreements

of Cards Issued

5. Information About New/Revised Pesticide Applicator Training Materials the State has developed. Did the State develop any new and/or revised pesticide applicator training materials (new/revised core or category

Yes

No

FY 2005 STATE/TRIBAL REPORTING FORM FOR PESTICIDE WORKER SAFETY

<p>manuals, new/revised exams or exam blueprints; new web-based training materials or programs, etc.)? [NOTE: If AYES@, the State should provide information about the materials through the national C&T resources website* maintained by WSU <http://pep.wsu.edu/psp/scripts/menu.asp> * Contact your EPA Regional C&T Coordinator if you need assistance.</p>		
<p>6. Information About ASupplemental Worker Safety Activities@ States/Tribes May Have Undertaken. Report on any Asupplemental worker safety activities@ listed in the guidance that were undertaken by the State/Tribe. Please list and briefly describe any such activities.</p>	<p><u>Briefly List and Describe Any Supplemental Worker Safety Activities</u></p>	
<p>7. Information About State/Tribal Certification and Training Programs and Accomplishments as Required by 40 CFR Part 171. States/Tribes must submit annual C&T accomplishment reporting information to EPA* as required under the Pesticide Applicator Certification regulation at 40 CFR Part 171 (Section 171.7(d)). The C&T reporting information required to be submitted to EPA by States/Tribes under this section of Part 171 includes the following:</p> <ul style="list-style-type: none"> § The total number of private and commercial applicators initially certified, by category, during the reporting period; § The total number of private and commercial applicators recertified, by category, during the reporting period; § The total number of private and commercial applicators holding certifications, by category, at the end of the reporting period; § The number of initial certification and recertification training programs that were monitored and/or participated in by the State/Tribe during the reporting period to assure quality and consistency of applicator training; § Any changes in private or commercial categories/subcategories during the reporting period; § A summary of any instances where the C&T program was used to address pesticide use problems identified through analysis of compliance data or enforcement trends, or through another mechanism enforcement activities related to use of RUPs during the reporting period; § A description of any significant proposed changes in standards of competency; § A description of any proposed changes in plans/procedures for enforcement activities related to use of RUPs; and § Any proposed changes to the State Plan for C&T that would significantly affect the State/Tribal C&T program. <p>* Please see note at right for reporting instructions.</p>	<p>NOTE: Starting in FY 2005, States/Tribes will use the C&T State Plan Template and Reporting Database system* for submitting the annual C&T accomplishment reporting information to EPA. The C&T State Plan Template and Reporting Database system contains a reporting section with specific fields designed to collect the required information noted in item #7. States/Tribes must enter all of the required information in the reporting section of the database according to database instructions in order for the system to generate the required annual C&T report for EPA. Failure to accurately provide all of the required annual C&T accomplishment reporting information may affect future cooperative agreement funding levels since this reporting information is used in EPA=s funding formulas for determining future C&T and enforcement program funding (as well as USDA=s PSEP funding formula for State Extension).</p> <p>* If States/Tribes have any questions regarding the process for submission of their C&T reporting information via the C&T State Plan Template and Reporting Database system , they should contact their EPA Regional C&T Coordinator for assistance.</p>	

NOTE: The New Mexico Occupational Health Registry at the University of New Mexico was granted bona fide agent status in 2004 by the New Mexico Department of Health, Office of Epidemiology to conduct occupational health surveillance for the state of New Mexico.

Attachment 14

Letter to Healthcare Providers



New Mexico Occupational Health Registry "Worker Health Surveillance for New Mexico"

Department of Internal Medicine
Division of Epidemiology
MSC10 5550, 1 University of New Mexico
Albuquerque, NM 87131-0001

Telephone: (505) 272-4672 Fax: (505) 272-5958



December 7, 2004

Dear Health Care Provider,

In 2002, the Office of Epidemiology in the New Mexico Department of Health, in partnership with the University of New Mexico Health Sciences Center's Program in Occupational and Environmental Health, received a grant from the National Institute for Occupational Safety and Health (NIOSH) to establish an occupational injury and illness surveillance system for New Mexico. As part of the surveillance system, the New Mexico Occupational Health Registry (NMOHR) was created to combine existing data from state and federal public health and labor agencies, public and private healthcare providers, and academic institutions into a single repository to provide valid, reliable and useful occupational health surveillance information.

In August 2003, the New Mexico Department of Health held hearings to include occupational illnesses and injuries to the list of reportable diseases in the State of New Mexico. The adopted regulations (NMAC 7.4.3)[†] specifically mention the occupational lung diseases: silicosis, asbestosis, coal worker's pneumoconiosis, hypersensitivity pneumonitis, occupational asthma, and mesothelioma. It also addresses heavy metal poisoning, noise induced hearing loss, and other illnesses related to occupational exposure. NMOHR was made the official repository for all reported cases of occupational injury or illness. Medical care providers are required by law to report all suspected cases of occupational diseases to the New Mexico Occupational Health Registry.

The reporting requirement allows NMOHR staff to provide timely assistance in situations where your patient or others could experience continued or repeated exposure to agents that cause occupational diseases. The goals of the Registry are to: 1) assist workers and employers in their efforts to manage situations with ongoing exposure risk; 2) develop strategies to reduce and prevent the occurrence of occupational disease; 3) identify etiologic agents; and 4) determine incidence and prevalence of occupational diseases in New Mexico. Without complete, accurate and timely reporting from providers, these goals cannot be achieved.

NMOHR is launching the physician-reporting requirement with a special emphasis on silicosis, work related asthma, and pesticide poisoning. Please review your records and report any cases of these diseases starting from January 1, 2004 forward. Please provide information as identified on the attached registry reporting form. The New Mexico Occupational Health Registry's authority in statute and regulation enables it to access and obtain this information in accordance with the requirements of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). The NMDOH has determined this to be the minimum necessary protected health information for the stated purpose in compliance with 45 C.F.R. 164.502. The HIPAA compliance statement is attached.

Case information can be mailed to the above address, faxed to (505) 272-5958, or reported by telephone to (505) 272-4672. If you have any questions, please contact our office at the previous number. We look forward to your prompt response to this request.

Sincerely,

Karen B. Mulloy, DO, MSCH, Medical Director Stephanie Moraga-McHaley, MS, Surveillance Coordinator

[†]<http://www.health.state.nm.us/alerts.html>

Attachment 15

Regional and National Abstracts and Presentations

Council of State and Territorial Epidemiologists

2005 Conference Abstract:

Occupational Health Needs Assessment among Tribes in New Mexico

Karen B. Mulloy, DO, MSCH, Stephanie Moraga-McHaley, MS and M. Helen Flowers, MS.

Program in Occupational and Environmental Health University of New Mexico School of Medicine (Dr. Mulloy and Ms. Moraga-McHaley)

MSC10 5550

1 University of New Mexico

Albuquerque, NM 87131-0001

505-272-4027

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kmulloy@salud.unm.edu

smoraga-mchaley@salud.unm.edu

New Mexico Department of Health

Epidemiology and Response Division

Environmental Health Epidemiology Bureau (Len Flowers, Bureau Chief)

1190 St. Francis Drive, N1320

P.O. Box 26110,

Santa Fe, NM 87502-6110

505-841-5893 (505-841-5895 fax)

len.flowers@doh.state.nm.us

Native Americans and their business enterprises are major components of the New Mexican economy. According to the 1997 Minority and Women-owned Business Survey, US Census Bureau, 7,000 businesses in New Mexico are owned by tribal membersⁱ. According to analysis of US Census Bureauⁱⁱ industry and occupational employment data over 4,000 Native American males were employed in the construction industry in 2000 making construction the number one employer of this population. Construction is also one of the top industries for occupational-injury mortality among Native Americans in NMⁱⁱⁱ. The Arts, Entertainment and Recreation industry is also a major employer of Native Americans in New Mexico, with several tribes having over 15% of their enrolled membership employed in the industry and is consistently in the top 10 for non-fatal occupational illness and injury in New Mexico from 1999-2002.

In an effort to increase the knowledge base of occupational illness and injury of New Mexico's Native American populations and of establishing viable working relationships with tribal entities, the New Mexico Occupational Health Registry conducted an occupational health needs assessment. The presentation plans to:

- summarize methods applied to conduct the needs assessment project, including the forging of collaborations and partnerships with sovereign tribal entities,
- discusses the results of a survey distributed to health and safety professionals working with tribes,

- provide conclusions and recommendations on the needs assessment approach for building coalitions for occupational health surveillance, and
- describe possible avenues for intervention for prevention among Native American communities.

ⁱ U.S. Census Bureau. 1997 Economic Census: Minority- and Women-Owned Businesses - New Mexico. <http://www.census.gov/epcd/mwb97/nm/NM.html>

ⁱⁱ U.S. Census Bureau. American Fact Finder. Census 2000 American Indian and Alaska Native Summary File (AIANSF) - Sample Data. http://factfinder.census.gov/home/saff/main.html?_lang=en

ⁱⁱⁱ Mulloy K., Moraga-McHaley S., Voorhees R. Occupational Injury Mortality in New Mexico 1998-2002. Presentation for the Council of State and Territorial Epidemiologists Annual Conference, Boise ID, June, 2004.

Occupational Injury Mortality Surveillance in New Mexico, 1998-2002

Karen B. Mulloy, DO, MSCH, Ronald E. Voorhees, MD, MPH, and Stephanie Moraga-McHaley

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Program in Occupational and Environmental Health
University of New Mexico School of Medicine
MSC10 5550
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Stephanie Moraga-McHaley, MS
Program in Occupational and Environmental Health
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MSC10 5550
1University of New Mexico
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505-2724672
505-272-5958 FAX
smoraga-mchaley@salud.unm.edu

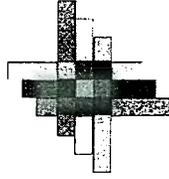
New Mexico Department of Health (Dr. Voorhees)
Public Health Division, Office of Epidemiology
NMDOH/PHD/Epidemiology
PO Box 26110
Santa Fe, NM 87502-6110
505-476-3573
505-827-0013 FAX
ronv@doh.state.nm.us

The Office of Epidemiology in the New Mexico Department of Health and the University of New Mexico Health Sciences Center Program in Occupational and Environmental Health have established an occupational illness, toxic exposure and injury surveillance program in the State of New Mexico – the New Mexico Occupational Health Registry (NMOHR). The project has been utilizing existing data to create a single repository for combining these data into valid, reliable and useful surveillance information. Data from New Mexico Vital Records and Health Statistics and the Census of Fatal Occupational

Injury has revealed a fatality rate of 4.4-7.6 deaths per 100,000 employed persons aged 16 years and older that is higher than the U.S. mortality rate of 4.0–4.6 deaths for the years 1998-2002. Analysis of the causes and distribution of the deaths was conducted. Preliminary findings showed that in the year 2000, 27% of the deaths were among Hispanic workers, that the rates were highest in rural counties, and that 15.6% of workers worked in industries and occupations at high risk for occupational mortality, compared with 6.6% nationally. The presentation will discuss the findings and plans for further development of occupational injury surveillance in New Mexico.

Topic Area – Approaches to occupational health surveillance

ABSTRACT SUBMISSION FORM



Weaving Threads: Connecting Environment, Community, and Public Health

New Mexico Public Health Association

There are a total of three forms that must be completed, including this page. One outline flow sheet must be completed for each presentation. Each presenter must complete a biographical data form. This information is necessary in order to apply for continuing education credits.

Presentations should:

- Be 30 minutes with 20 minutes of presentation and 10 minutes for questions and answers
- Have content related to how programs, research, and other activities are working in partnership or alliance with others

Title:

Occupational Injury Mortality in New Mexico and the New Mexico Occupational Health Registry

Author(s): Karen B. Mulloy DO, MSCH, Stephanie Moraga-McHaley, MS, Flowers L, MS.

Please provide a brief description of presentation, including how the presentation relates to the conference theme, how programs, research, and other activities are working in partnership or alliance with others.

The Office of Epidemiology in the New Mexico Department of Health and the University of New Mexico Health Sciences Center Program in Occupational and Environmental Health have established an occupational illness, toxic exposure and injury surveillance program in the State of New Mexico. Data from New Mexico Vital Records and Health Statistics and the Census of Fatal Occupational Injury has revealed a fatality rate of 4.4-7.6 deaths per 100,000 employed persons aged 16 years and older that is higher than the U.S. mortality rate of 4.0-4.6 deaths for the years 1998-2002. Analysis of the causes and distribution of the deaths was conducted. Findings showed that occupational fatality rates were highest in rural counties, and that 15.6% of workers worked in industries and occupations at high risk for occupational mortality, compared with 6.6% nationally in 2000. Additionally, differences in gender, race/ethnicity, and employment status were observed for occupational fatalities. The underlying factors for occupational injury mortality will be discussed.

Partnership with the health care community is critical to the success of an occupational health registry. Therefore, the second part of the presentation will discuss the New Mexico Occupational Health Surveillance Project and the New Mexico Occupational Health Registry, including purpose and objectives, statutory authority for establishing a registry and a discussion on how to submit a report.

Audio Visual equipment needs:

- Overhead projector
- Slide projector
- Flipchart and markers

TV/VCR

* PowerPoint projectors will not be made available.

Screen?

Return all completed forms by February 1, 2005 to:

Mallery Downs

NMPHA

P. O. Box 26433

Albuquerque, NM 87125-6433

New Mexico Public Health Association Annual Meeting
Weaving Threads: Connecting Environment, Community, and Public Health
 April 6 - 8, 2005

Outline Flow Sheet

Make as many copies of this form as necessary to provide the information required.

OBJECTIVES	CONTENT/TOPICS	TIME FRAME	PRESENTER(S)	INSTRUCTIONAL METHODS
<p>Objectives are stated in the form of measurable learner outcomes and used as a basis for determining content, learning experiences, and evaluation. For example: <i>At the completion of the presentation, the participant will be able to....</i></p>	<p>Content is relevant to the objectives. Provide a brief description or outline of the content to be presented.</p>	<p>Indicate contact time in minutes for each topic area. Time allotted is appropriate to objectives and content.</p>	<p>List the name of the presenter for each content area.</p>	<p>Teaching methods and learning experiences are appropriate to achieve the objectives and are based on principles of adult education.</p>
<p>At the conclusion of the presentation the participant will be able to:</p> <ol style="list-style-type: none"> 1. identify the top industries and occupations for occupational injury mortality for New Mexico 2. discuss underlying social determinants for occupational injury mortality in NM 3. describe the goals of the New Mexico Occupational Health Registry and how to file a report 	<ol style="list-style-type: none"> 1. Discussion of occupational injury mortality in New Mexico <ul style="list-style-type: none"> - by industry, occupation - by demographic characteristics - by geographic distribution 2. Discussion of the NMOHR <ul style="list-style-type: none"> - goals of surveillance project - Statutory authority for collecting data - How to report to the NMOHR 	<p>Item 1 - 15 to 20 minutes</p> <p>Item 2 - 10 minutes</p>	<ol style="list-style-type: none"> 1. Karen B. Mulloy DO MSCH 2. Stephanie Moraga-McHaley, MS 	<p>Didactic presentation of materials with presenter led discussion based on presented materials</p>

New Mexico Public Health Association Annual Meeting
Weaving Threads: Connecting Environment, Community, and Public Health
 April 6 - 8, 2005

Biographical Data Form

Make as many copies of this form as necessary to provide the information required. Do not send curriculum vitae or resumes.

Name: Karen B. Mulloy, DO, MSCH

Address: MSC10 5550, 1 University of New Mexico

City/State/Zipcode: Albuquerque, NM 87131-0001

Phone: 505-272-4027

Email: kmulloy@salud.unm.edu

Current Position

Title: Co-Director Program in Occupational and Environmental Health
 Assistant Professor, Department of Internal Medicine, Division of Epidemiology

Agency: University of New Mexico School of Medicine

Brief overview of current position: Dr. Mulloy is the Co-PI on the NIOSH grant for the development of a surveillance system for occupational injuries and illnesses for the state of New Mexico and is the Director of the New Mexico Occupational Health Registry

Education – include basic preparation through highest degree held.

DEGREE	INSTITUTION	MAJOR(S)	YEAR COMPLETED
DO	West Virginia School of Osteopathic Medicine	Medicine	1986
MSCH	Marshall University	Community Health	1991
BS	WV Institute of Technology	Biology	1982

New Mexico Public Health Association Annual Meeting
Weaving Threads: Connecting Environment, Community, and Public Health
 April 6 - 8, 2005

Biographical Data Form

Make as many copies of this form as necessary to provide the information required. Do not send curriculum vitae or resumes.

Name: Stephanie Moraga-McHaley

Address: NMOHR, MSC 10 5550, 1 University of New Mexico

City/State/Zipcode: Albuquerque New Mexico 87131-0001

Phone: (505) 272-4672

Email: smoraga-mchaley@salud.unm.edu

Current Position

Title: HSC Research Scientist 1

Agency: University of New Mexico School of Medicine

Brief overview of current position: Surveillance coordinator for the New Mexico Occupational Health Registry.

Education – include basic preparation through highest degree held.

DEGREE	INSTITUTION	MAJOR(S)	YEAR COMPLETED
Bachelor of Science	Colorado State University	Environmental Health	1995
Masters of Science	Colorado State University	Environmental Health	1999

Silicosis Surveillance Among Uranium Miners in New Mexico

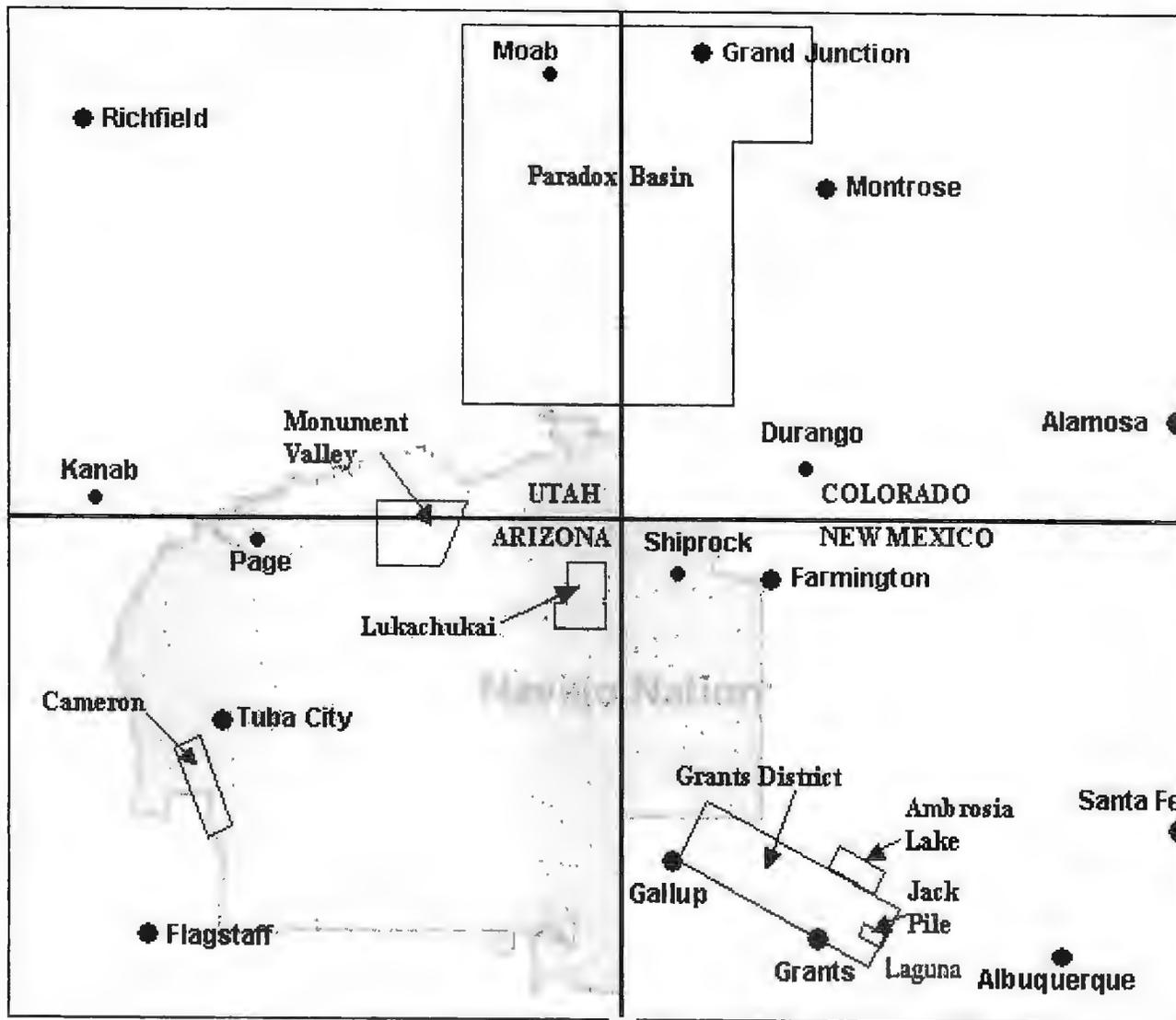
Karen B. Mulloy, DO, MSCH

Stephanie Moraga-McHaley

New Mexico Occupational Health Registry

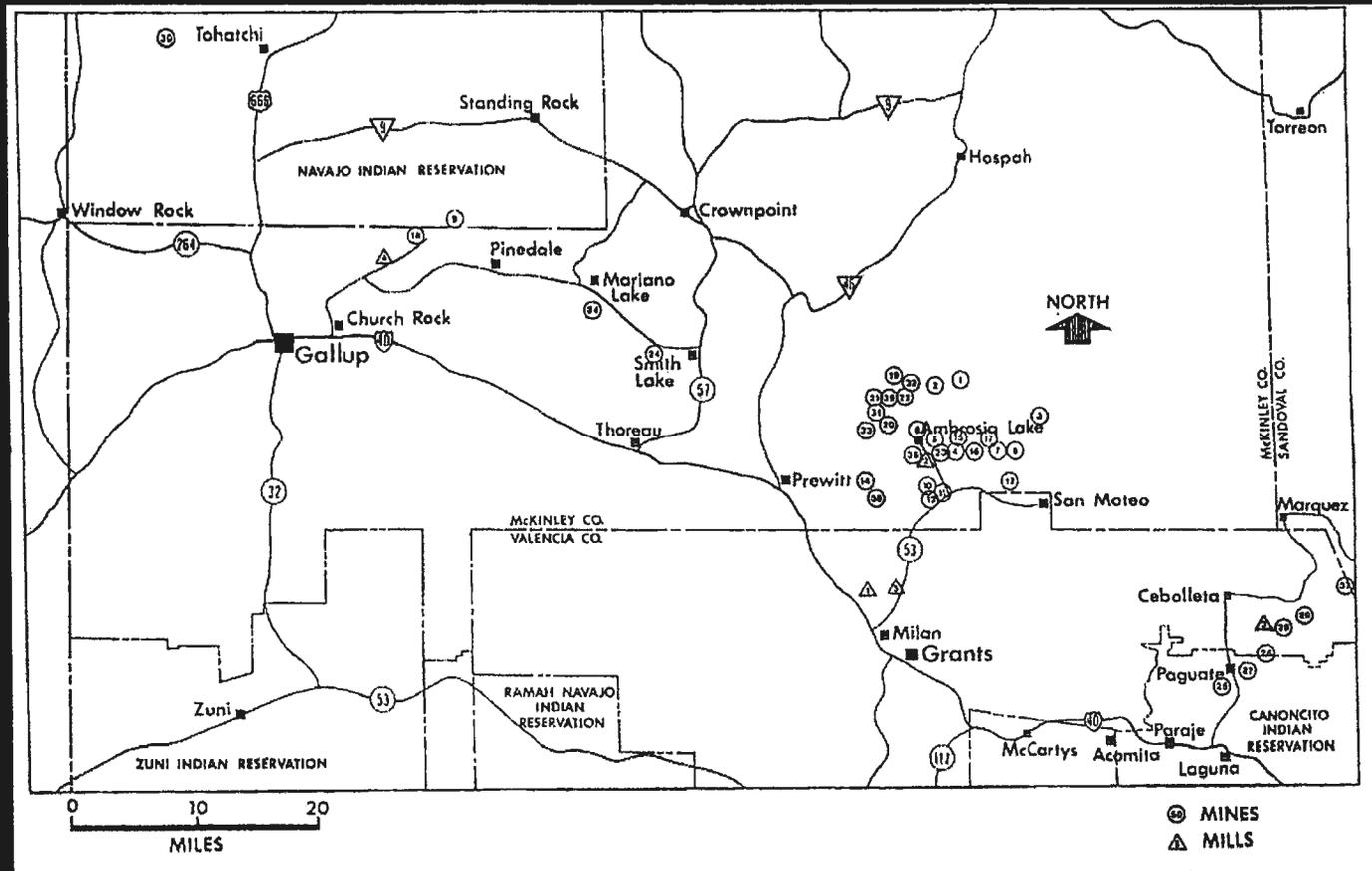
University of New Mexico Health Sciences Center

New Mexico Department of Health

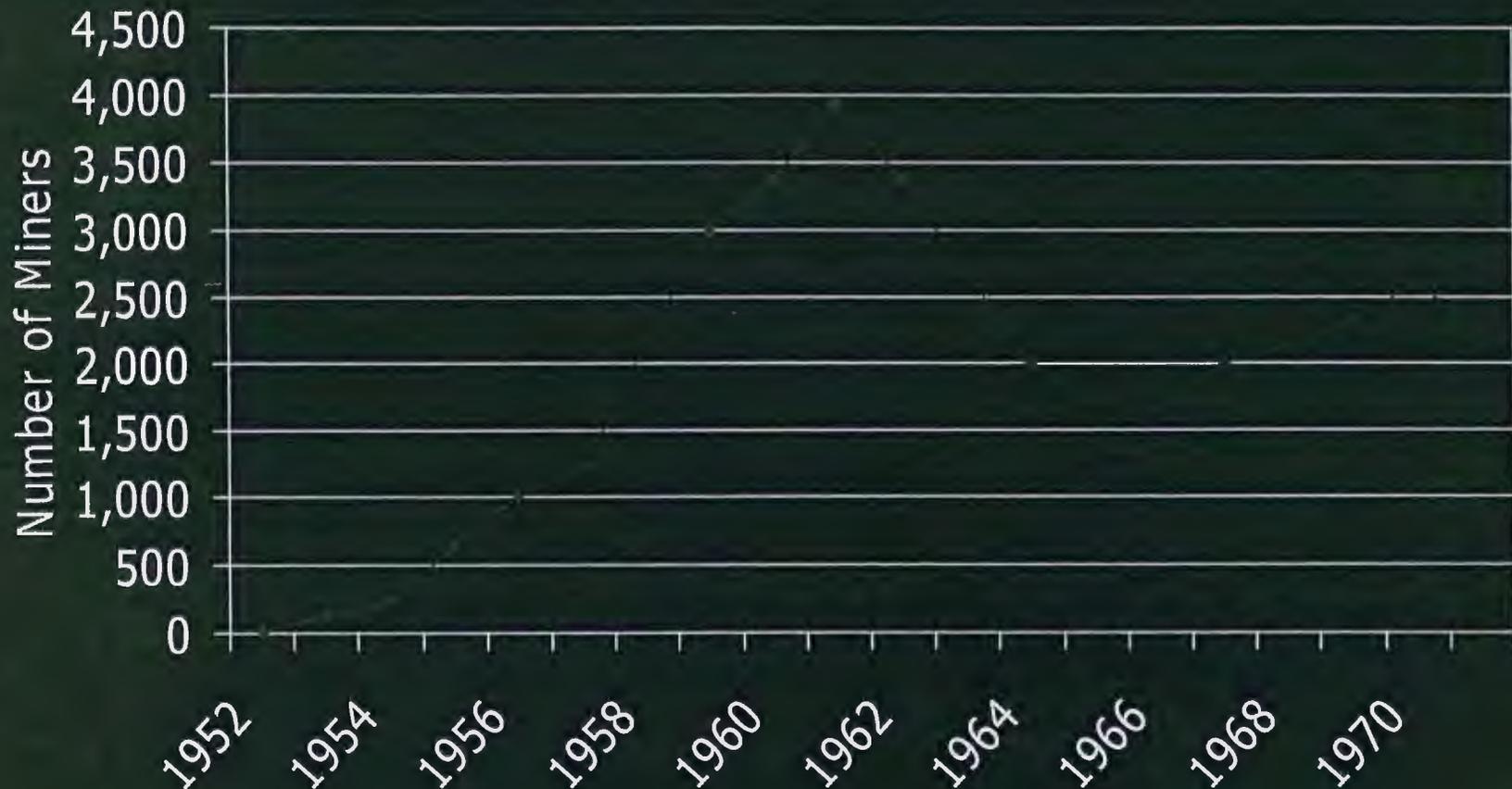


Uranium mines and mills in the Grants, NM region in 1979

US Department of Interior, 1981

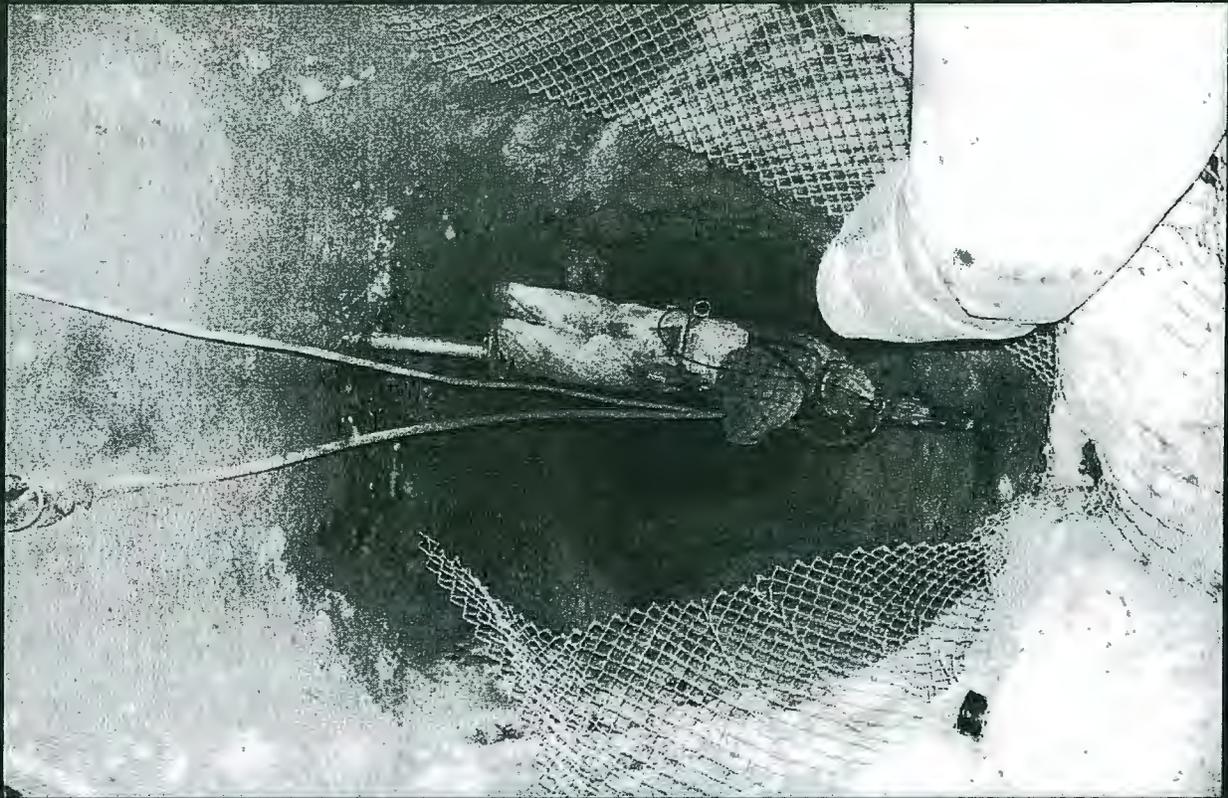


Uranium Mining Employment New Mexico, 1952-1971



New Mexico State Mine Inspector's Annual Reports, compiled by Phil Kozushko, NM Bureau of Mine Inspection.







Radiation Exposure Compensation Act (RECA)

Passed by the US Congress in 1990

“providing for compassionate payments to individuals who contracted certain cancers and other serious diseases as a result of radiation released during above-ground nuclear weapons tests or as a result of their exposure to radiation during employment in underground uranium mines.”

Radiation Exposure Compensation Act

Uranium Miners Claims (September 13, 2004)

	Approved	Approval Rate	Approval Amount
Uranium Miner	2,980	58.8%	\$297,391,500
Uranium Miller	397	76.5%	\$39,700,000
Uranium Ore Transporter	90	73.2%	\$9,000,000
Total	3,467	69.5%	\$346,091,150

Source: Radiation Exposure Compensation Program, US DOJ

Energy Employees Occupational Illness Compensation Program Act (EEOICPA)

Passed by the US Congress in 2000

- EEOICPA provides benefits to workers (or their survivors) who are ill or who died as a result of their employment in the nuclear weapons industry. This program pays workers who were approved for compensation under Section 5 of RECA, or their eligible survivors, an additional \$50,000 and future medical benefits related to the condition for which they were approved for compensation under RECA.
-

NM WELSP

Goal

Provide comprehensive, community-based education, health screening, outreach and eligibility assistance program for former uranium workers in the state of New Mexico exclusive of those residing on the Navajo Nation.

Medical Screening Protocol Miners

- Occupational & Environmental Health History
 - Complete Medical History
 - Focused Medical Examination
 - Pulse Oximetry – ABG if medically indicated
 - Spirometry
 - Chest X-ray, with B-Reading
-

Medical Screening Protocol Millers and Ore Transporters

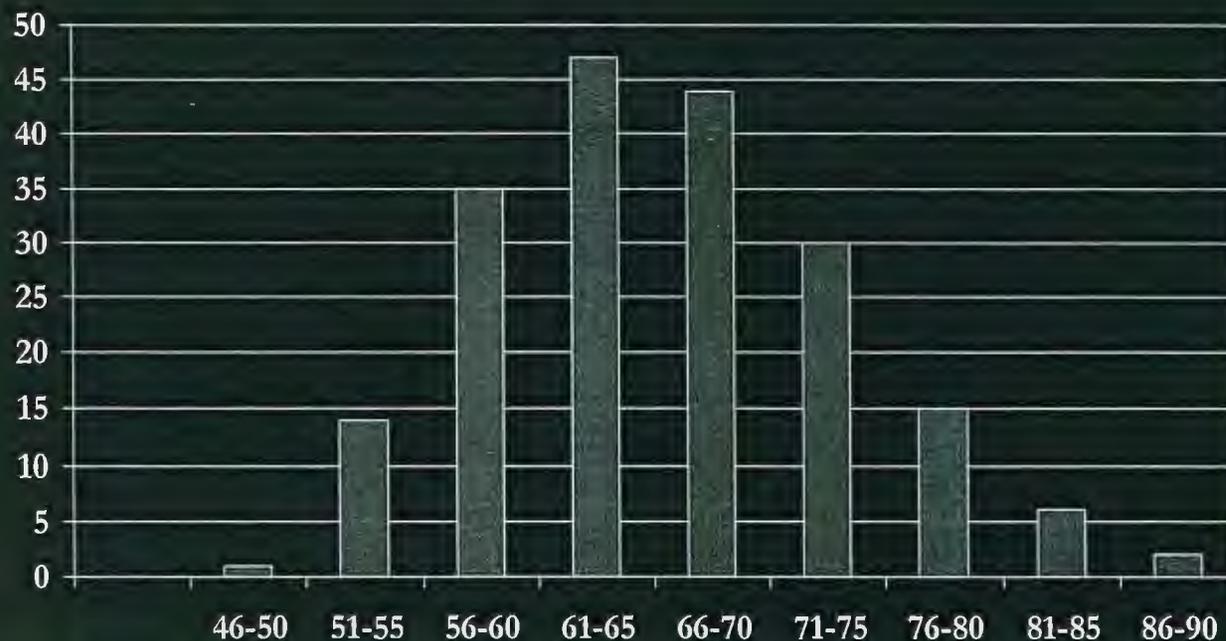
- Occupational & Environmental Health History
- Complete Medical History
- Focused Medical Examination
- Pulse Oximetry – ABG if medically indicated
- Spirometry
- Chest X-ray, with B-Reading
- BUN & Creatinine & UA

Patients seen through RESEP

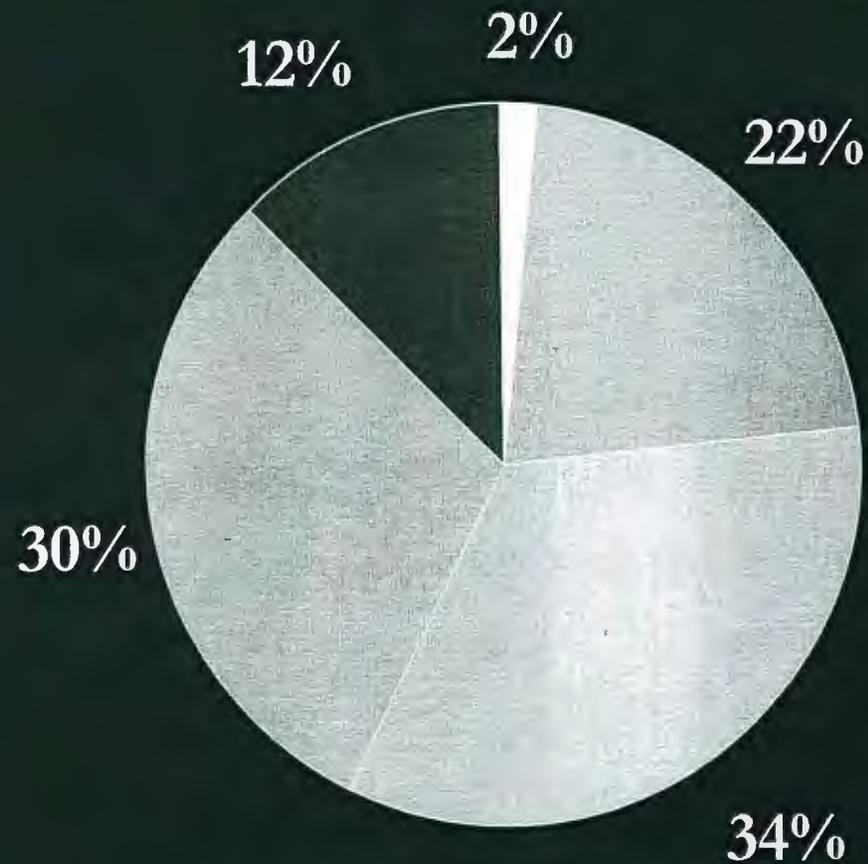
- Patients seen between April 22, 2003 (1st clinic) through August 25, 2004
 - 192 patients seen in clinic + one chart review + one diagnosis from patient who died before being seen in clinic
 - Total set = 194
-

Age of patients participating in RESEP program

- Mean age of participant: 66.1 years, SD 7.8
- Youngest 48 years, Oldest 87 years

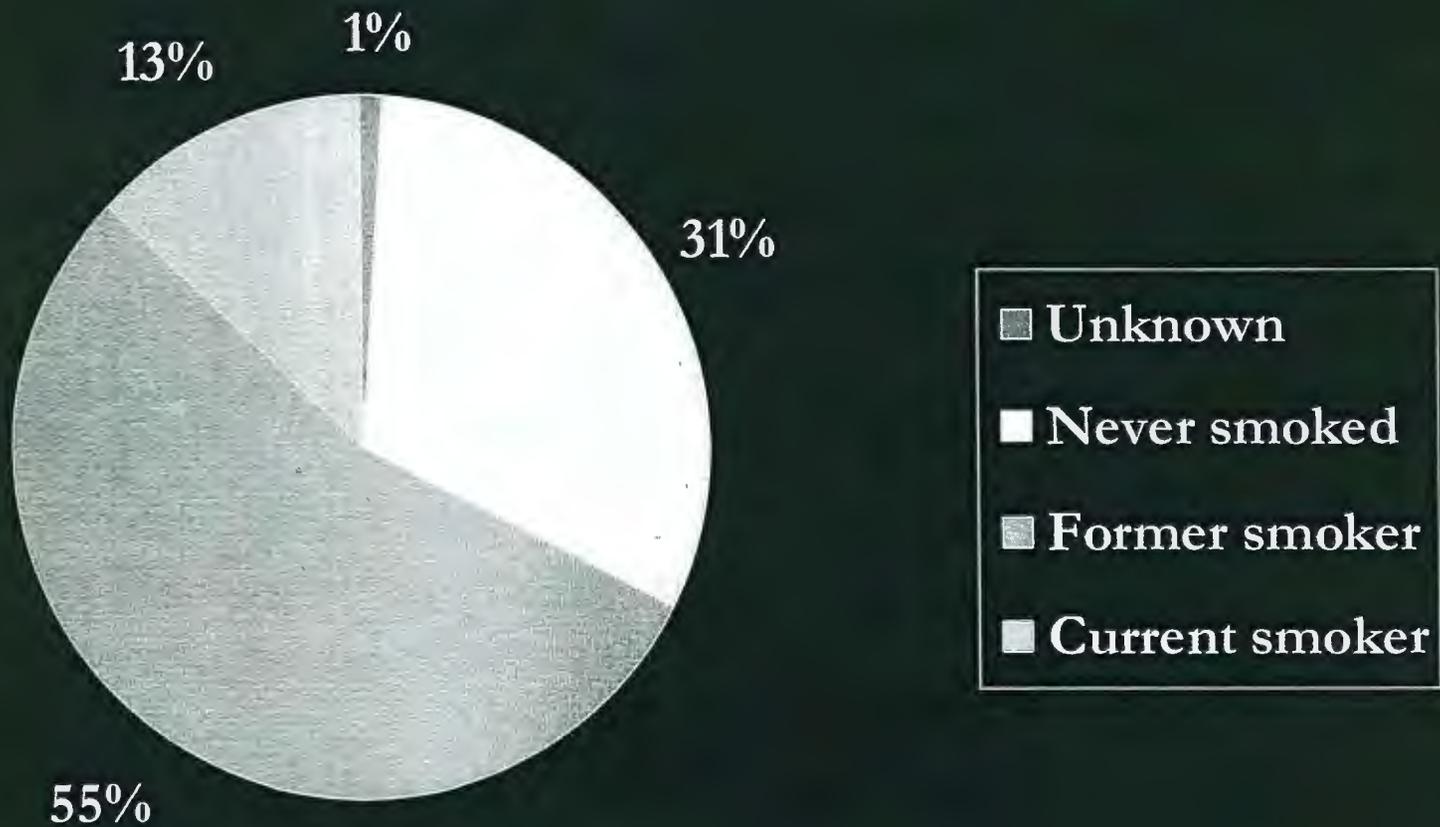


RESEP participants: years of mining

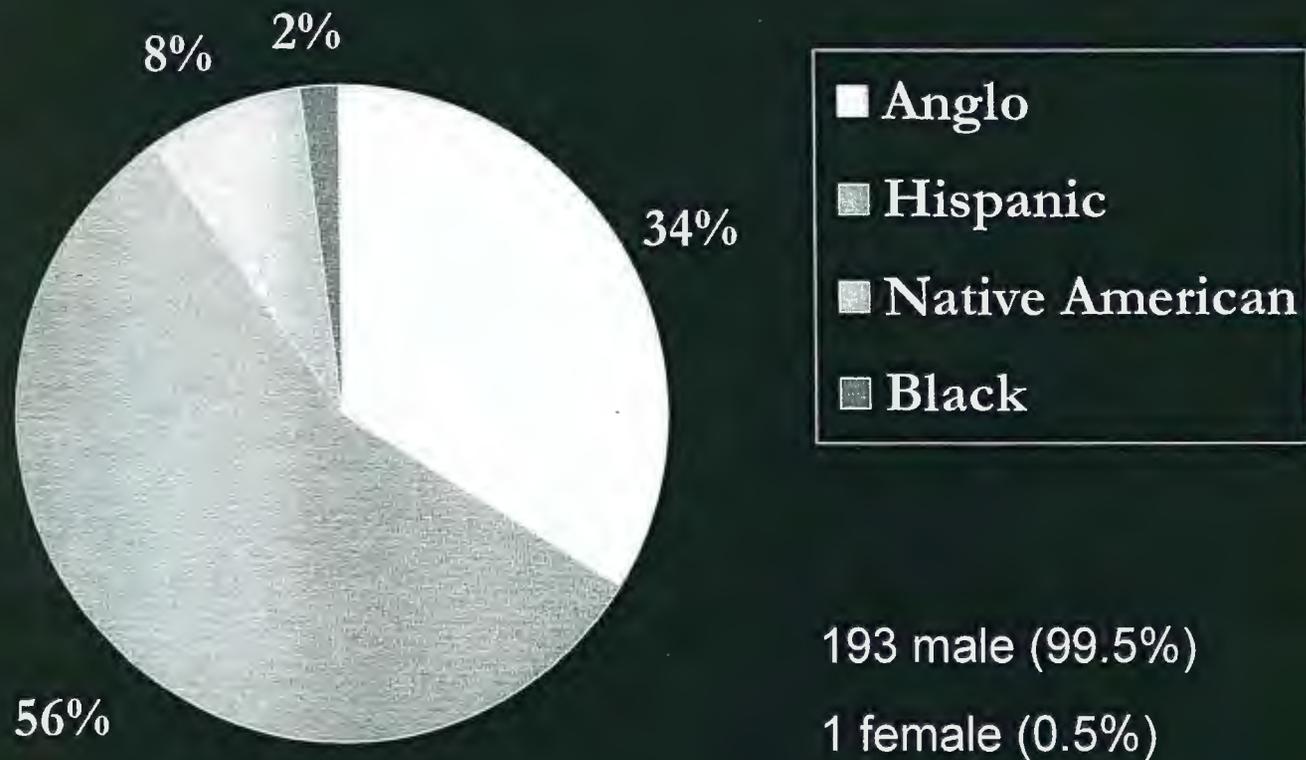


■ Unknown ■ 1-10 years ■ 11-20 years ■ 21-30 years □ 31+ years

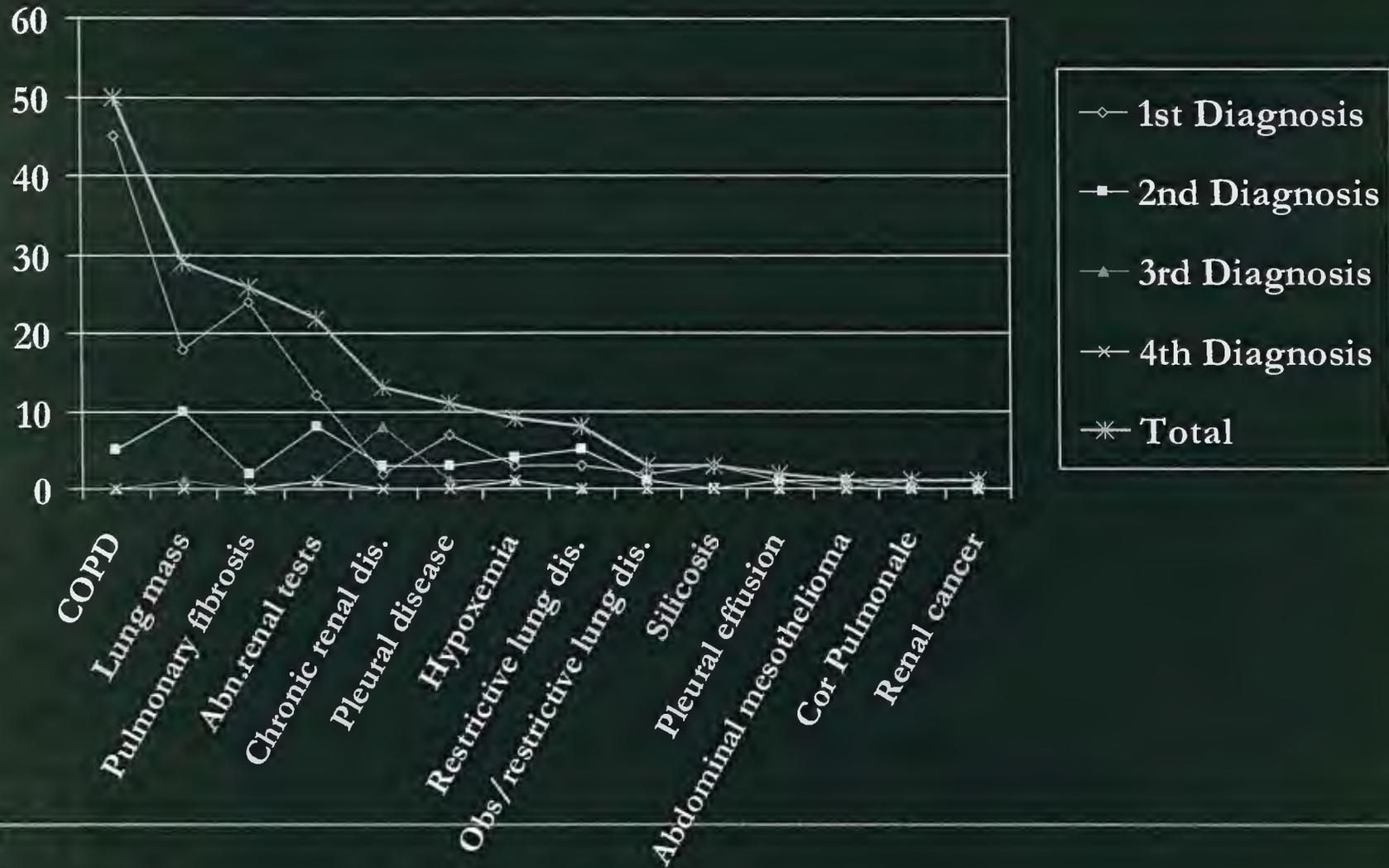
RESEP participants: Smoking status



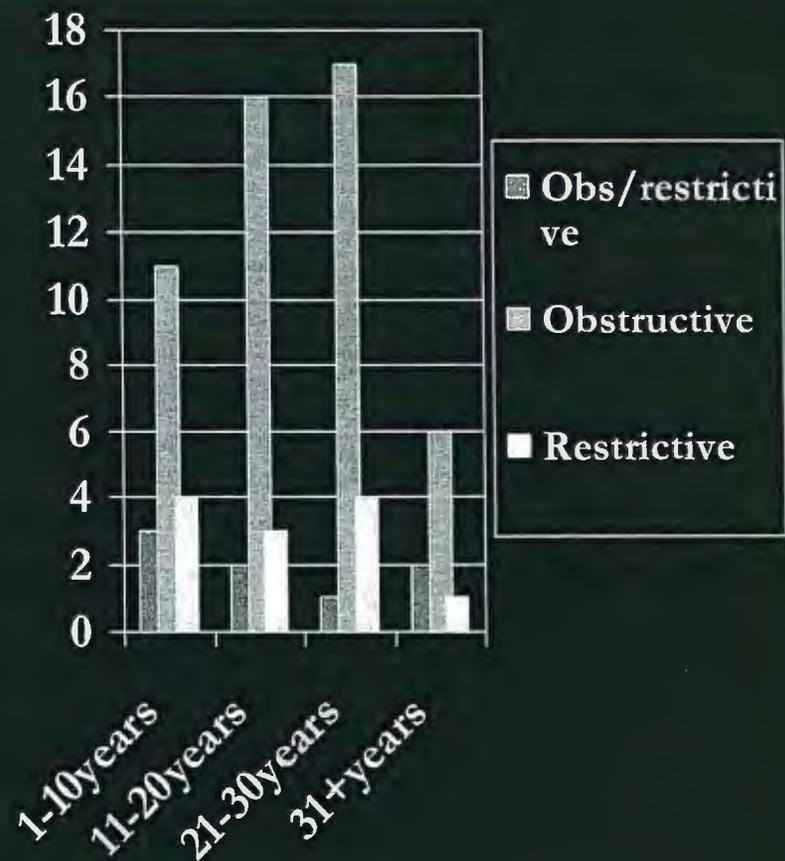
RESEP Participants: Ethnicity and Gender



RESEP diagnosis frequencies



Spirometry results & total time mining





Floyd Frank of Oakspring, Arizona tells of his experiences during the Cold War as a uranium miner in the Navajo Nation. "Uranium is really dangerous ... Why did they not tell us this?" Photo by Doug Brugge.

*"Memories Come To Us In the Rain and the Wind",
Oral Histories and Photographs of Navajo Uranium Miners & Their Families.*

Silicosis Surveillance in New Mexico

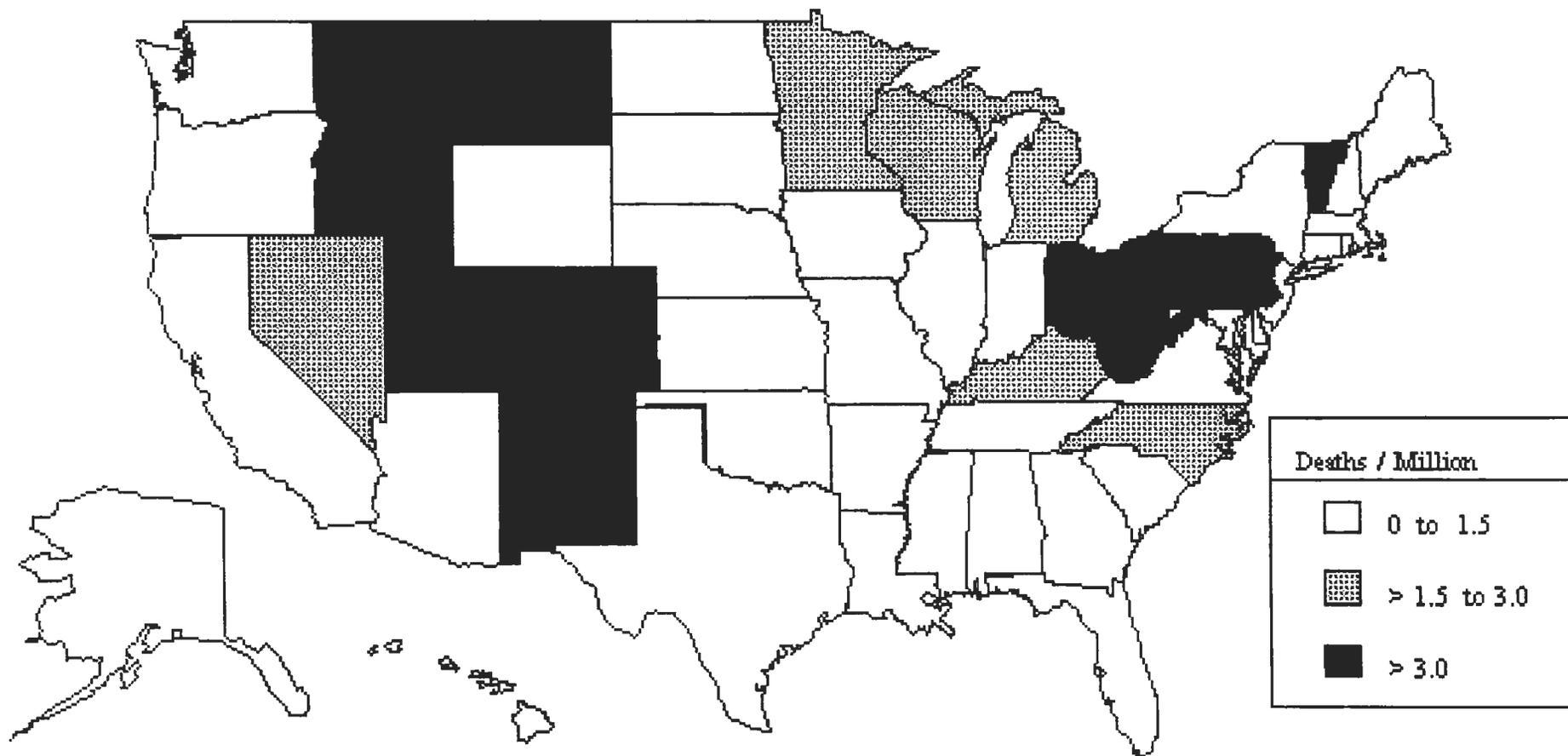
Karen B. Mulloy, DO, MSCH

**University of New Mexico School of Medicine
Program in Occupational and Environmental
Health**

Ronald E. Voorhees, MD, MPH

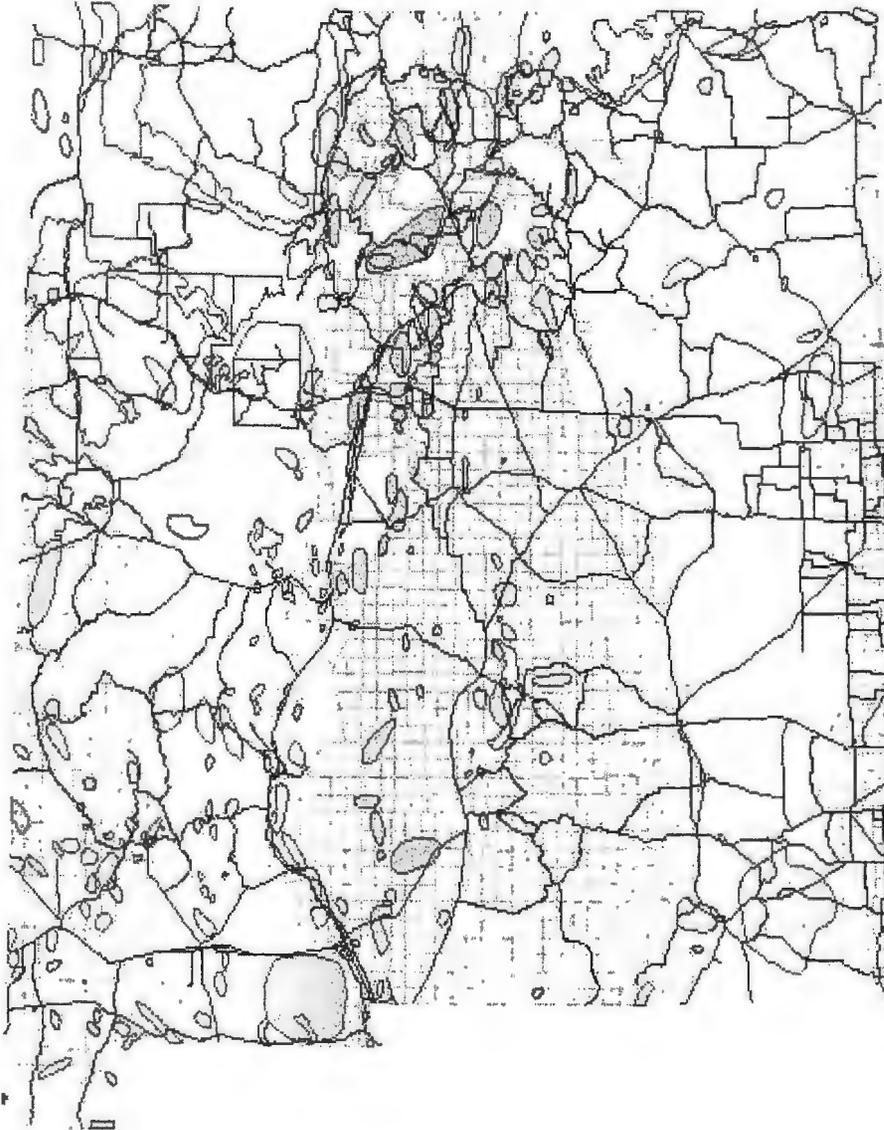
**New Mexico Department of Health
Public Health Division, Office of Epidemiology
CSTE - Hartford, CN - June 2003**

Silicosis: Crude mortality rates by state, U.S. residents age 15 and over, 1987-1996



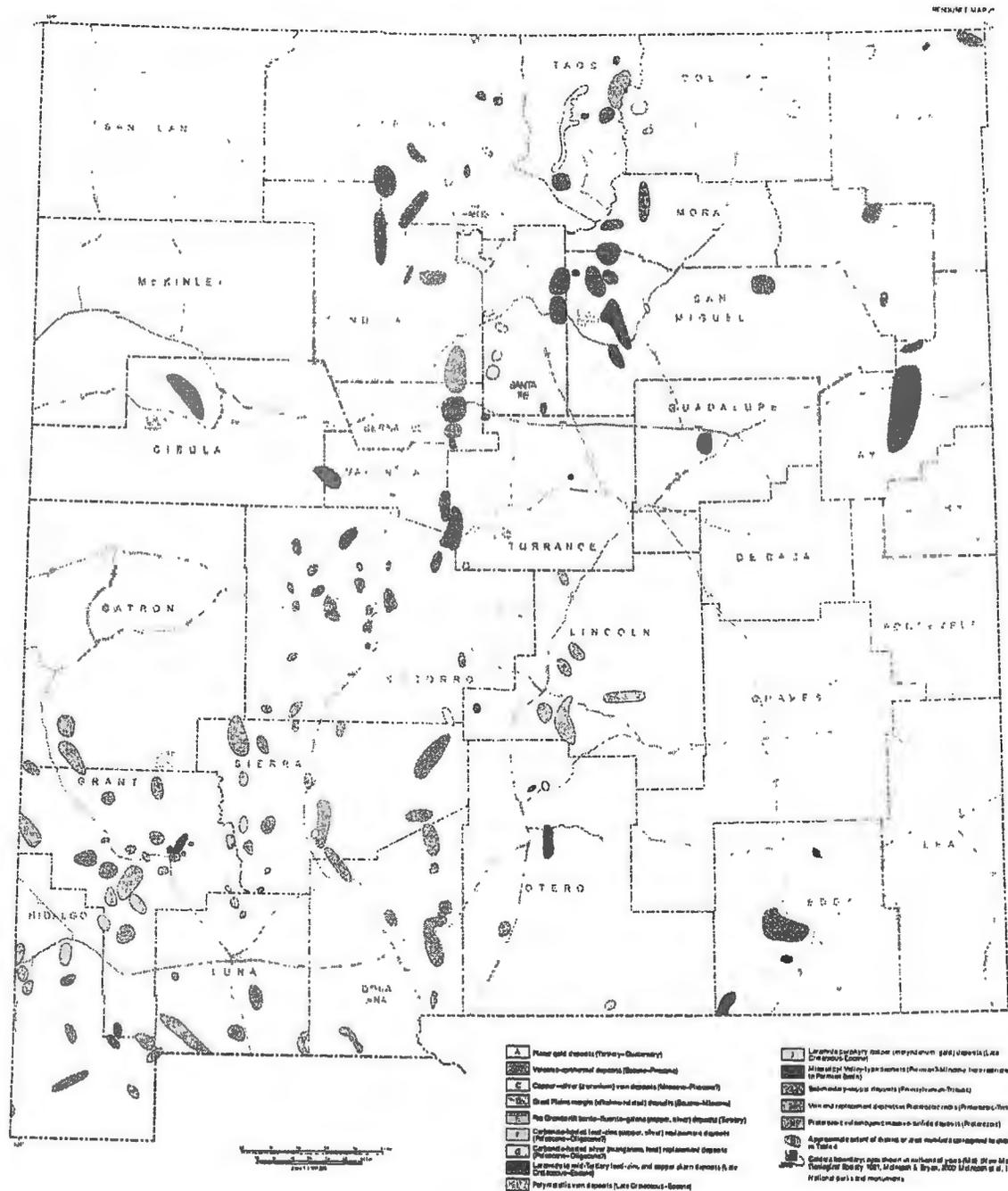
Historical Overview of Mining in New Mexico

New Mexico Mining Districts



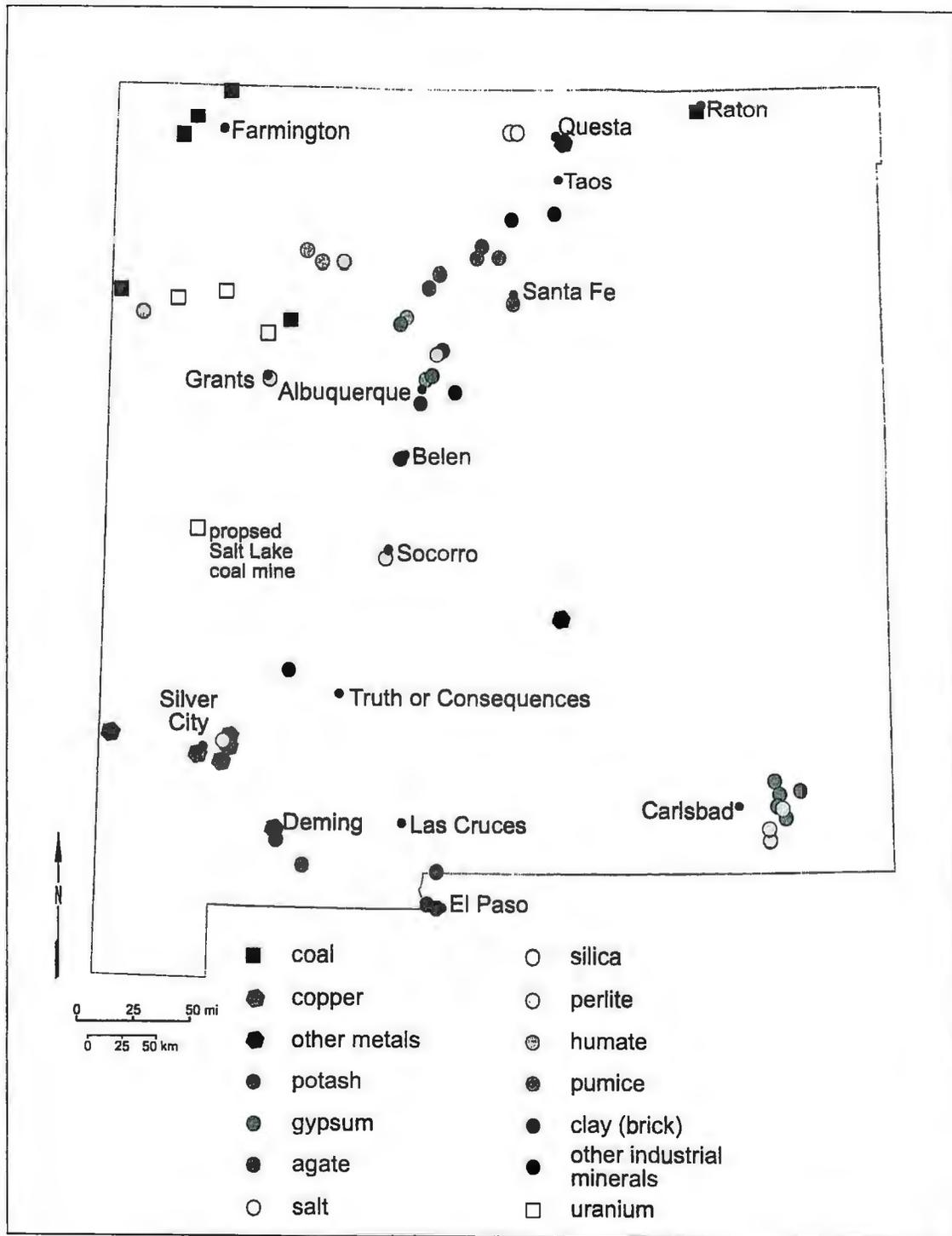
- Coal Fields**
- Metal Mining**
- Uranium**
- Industrial Minerals**
- Coal & Uranium**

NM Bureau of Mines



New Mexico Gold and Silver Mining Districts - Active and Inactive 2003

NM Bureau of Mines

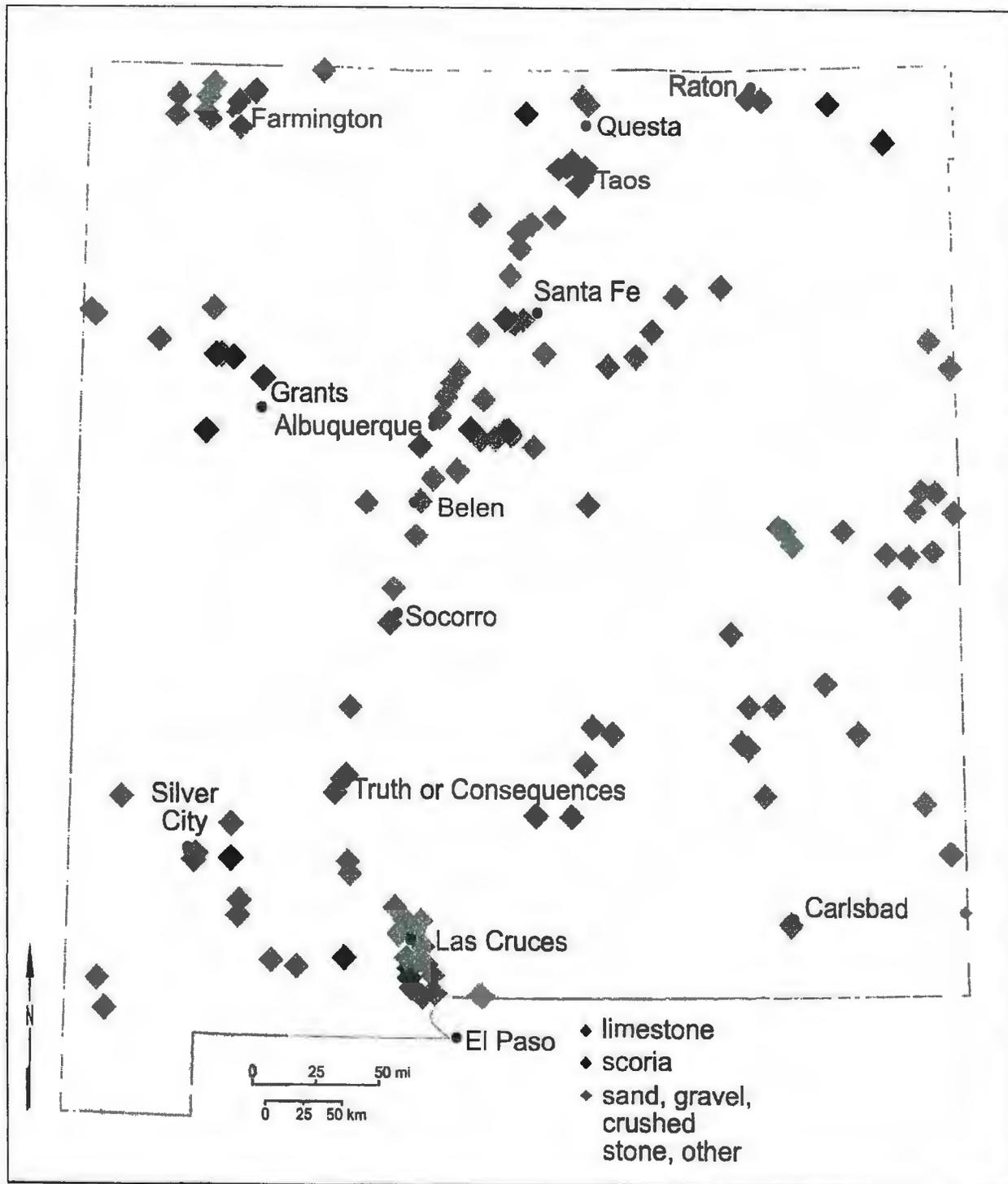


New Mexico Active Mines 2003

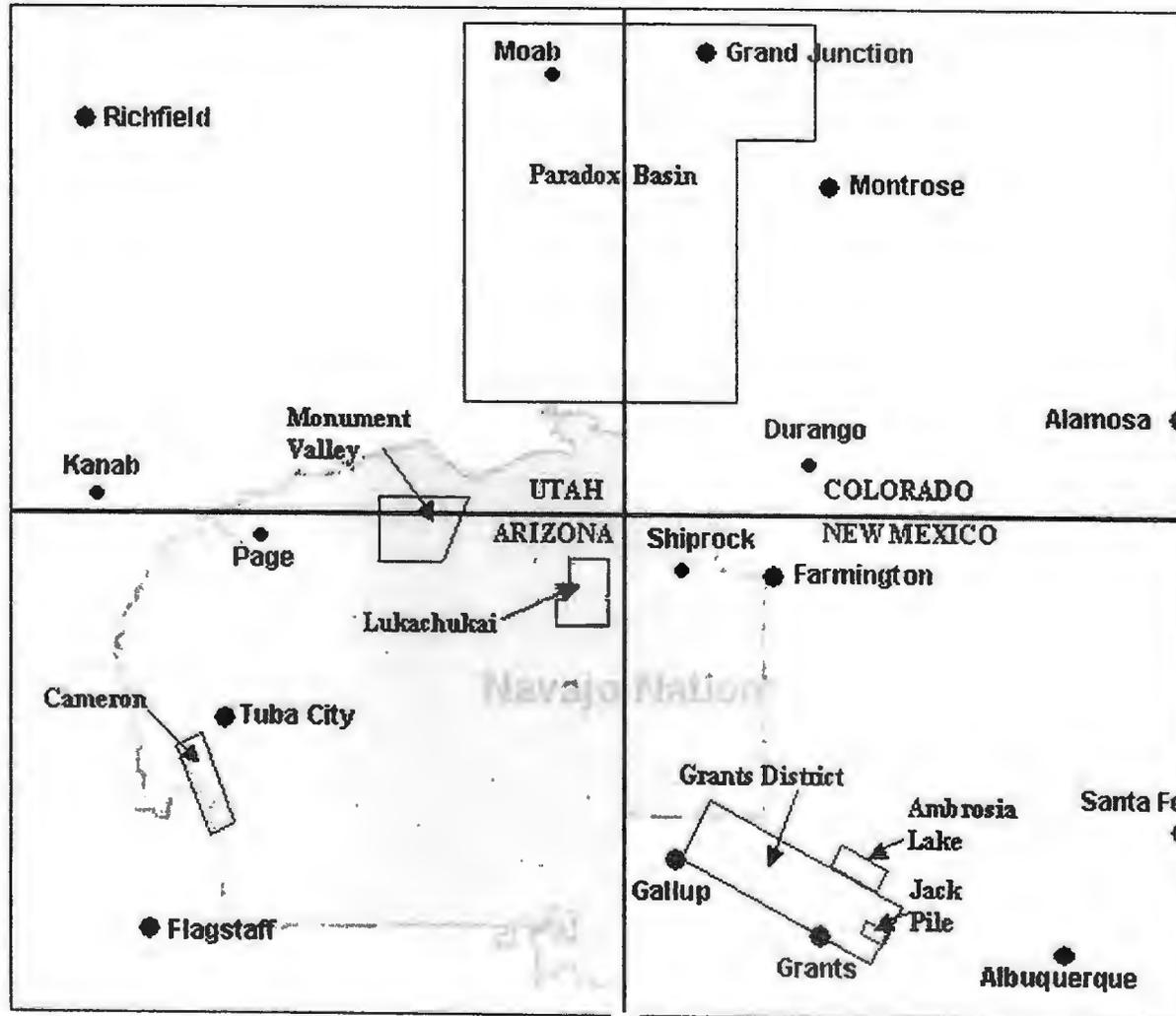
NM Bureau of Mines

New Mexico Active Gravel Pits 2003

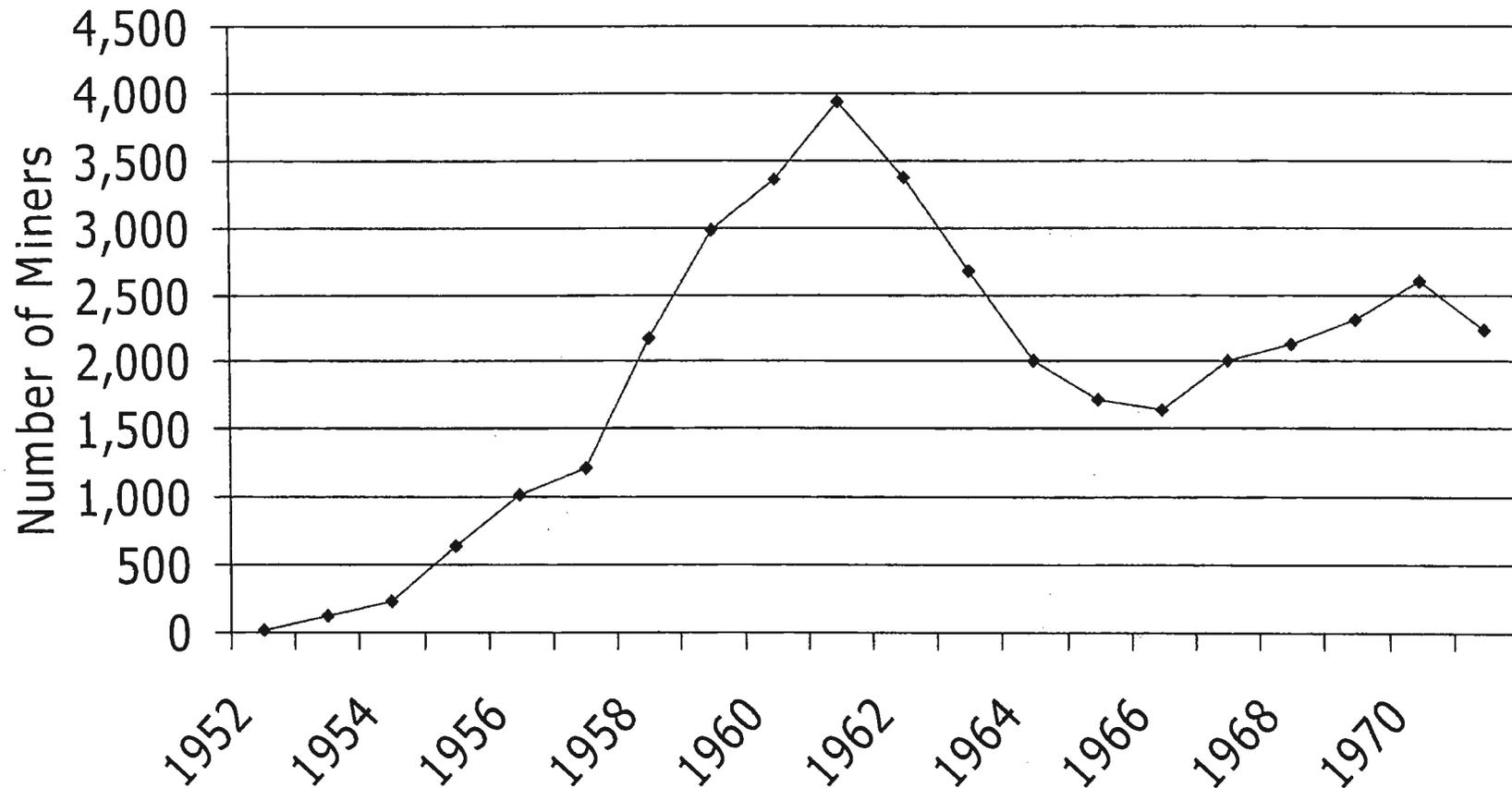
NM Bureau of Mines



Uranium Mining Districts in the Four Corners Area



Uranium Mining Employment New Mexico, 1952-1971



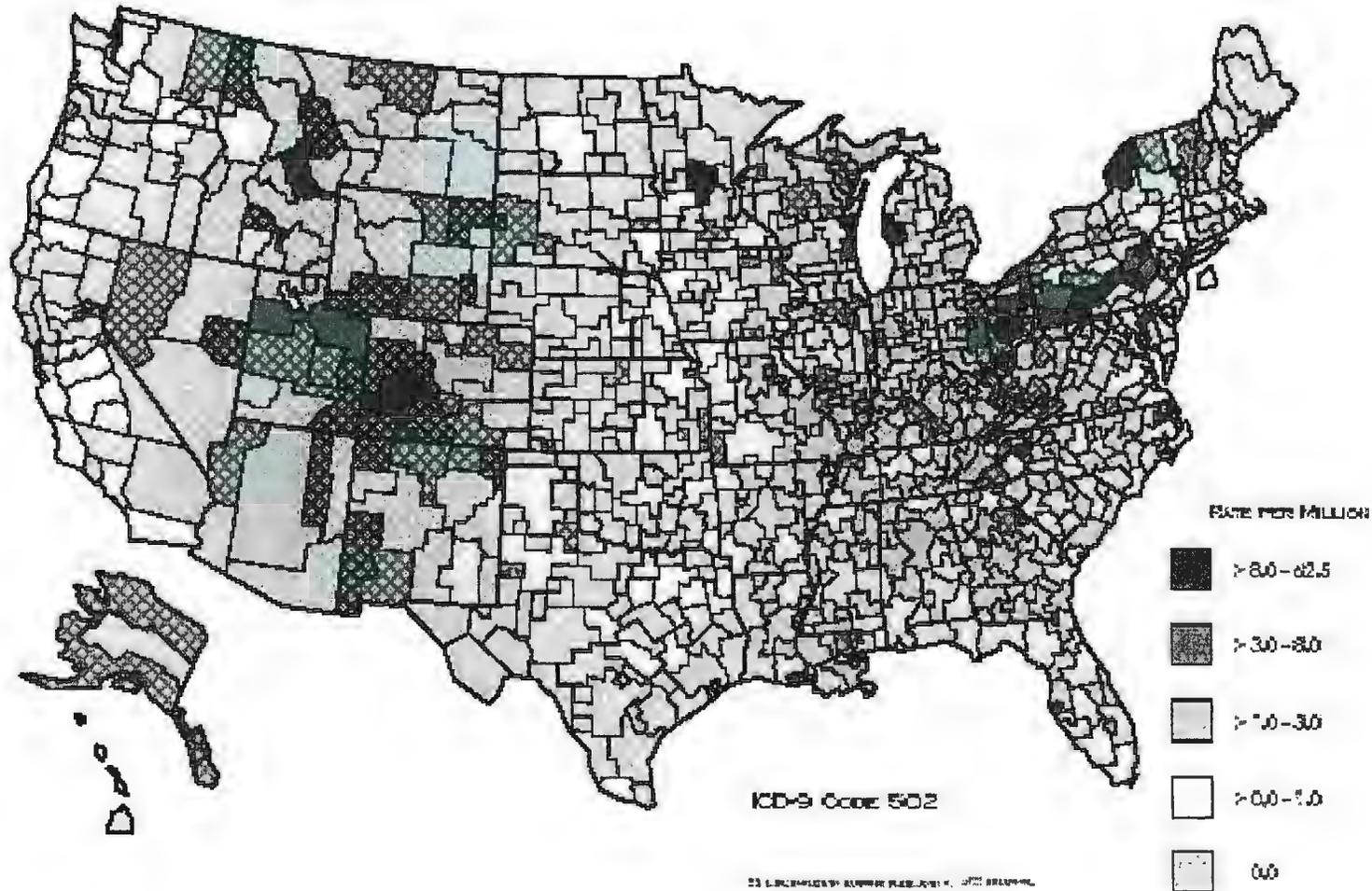
New Mexico State Mine Inspector's Annual Reports, compiled by Phil Kozushko, NM Bureau of Mine Inspection.

Silicosis Surveillance in New Mexico

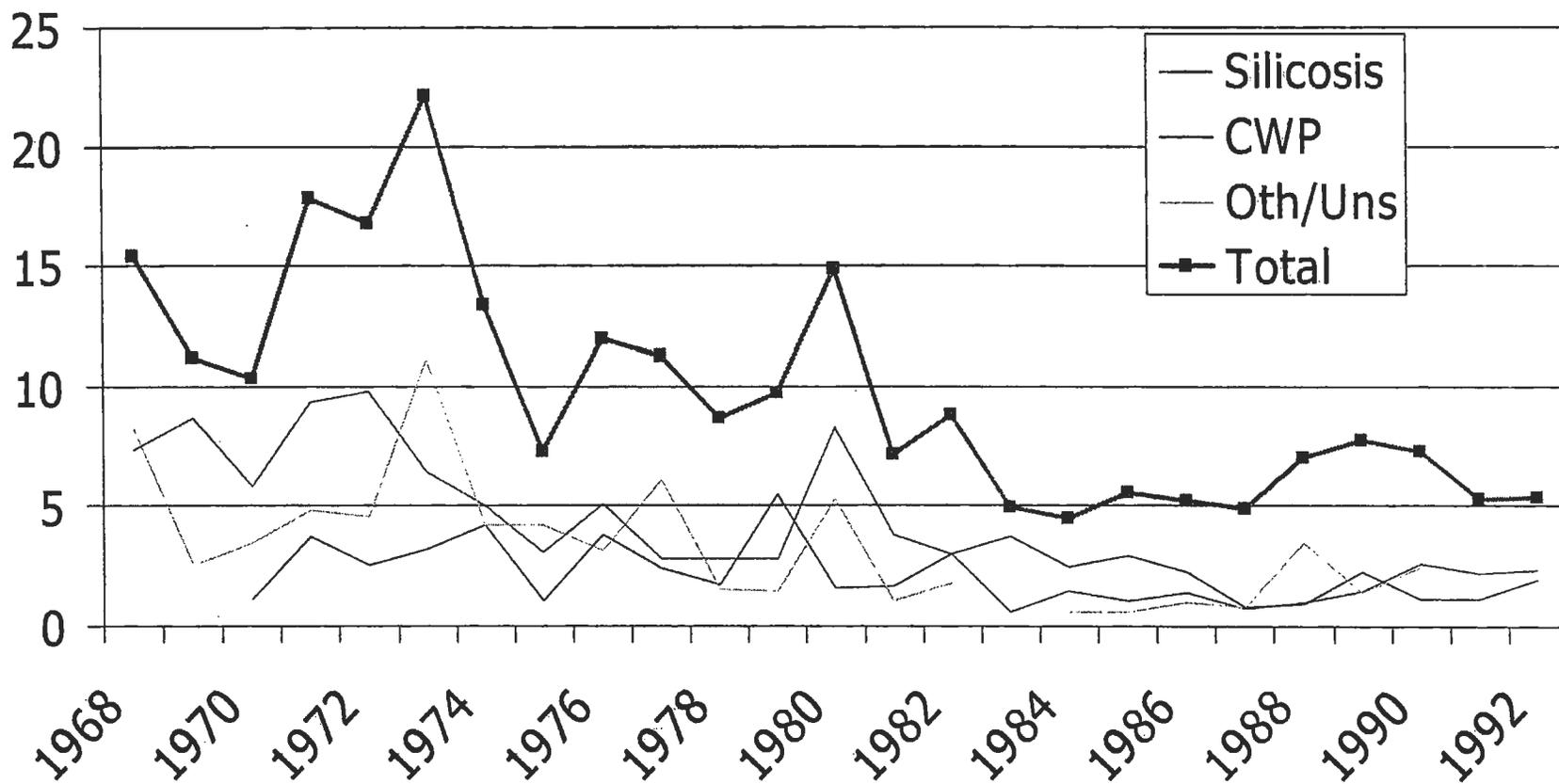
- **Identify and compare sources of data on the occurrence of silicosis in New Mexico:**
 - **Mortality:**
 - New Mexico Vital Records
 - **Occurrence:**
 - New Mexico Miner's Outreach Program
 - New Mexico Worker's Compensation Program
 - Miner's Safety and Health Administration



Silicosis: Age-Adjusted Death rates by HSA U.S. Residents 15 years of age and older, 1982-1993



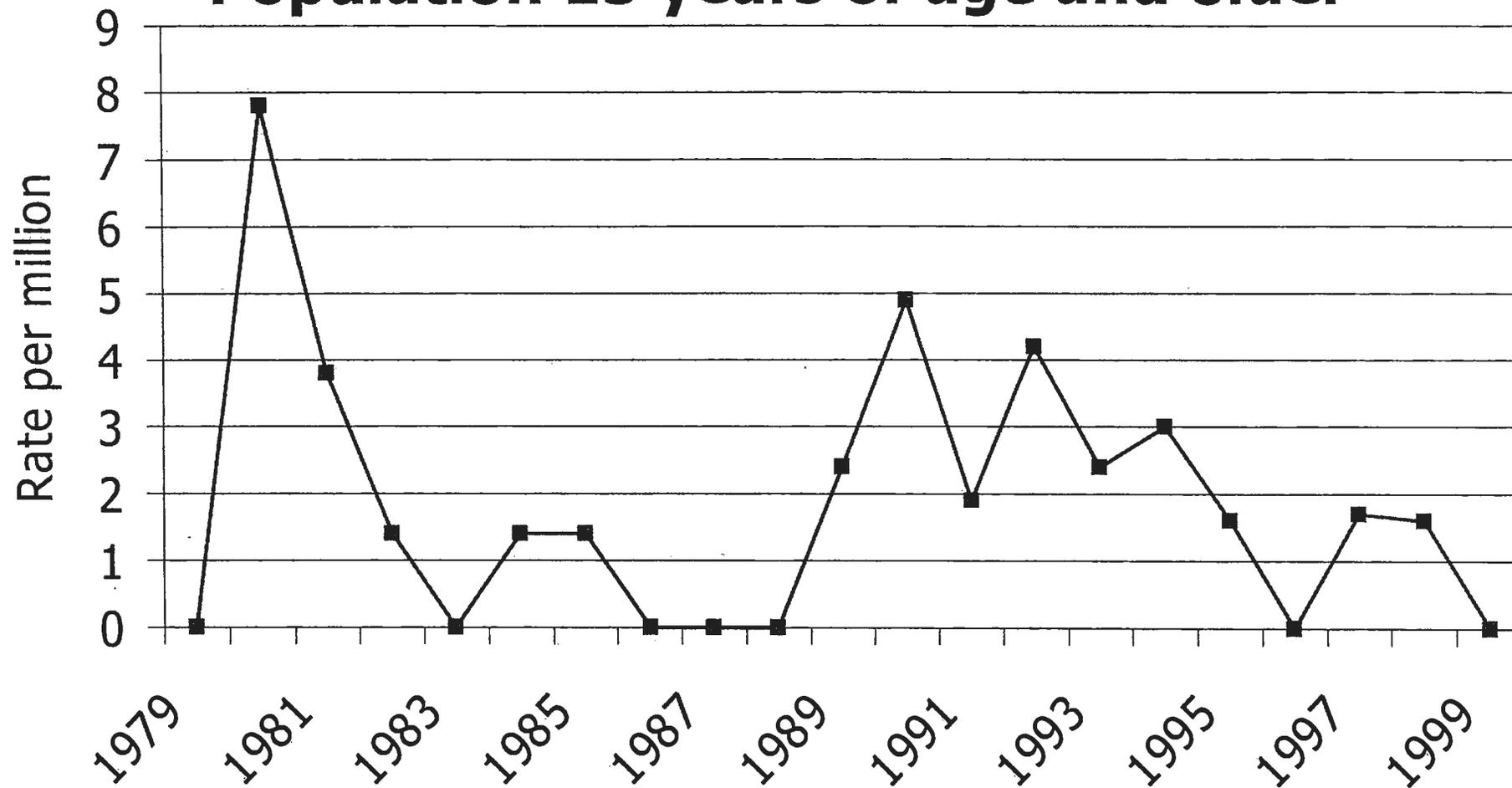
Pneumoconiosis in New Mexico 1968-1992



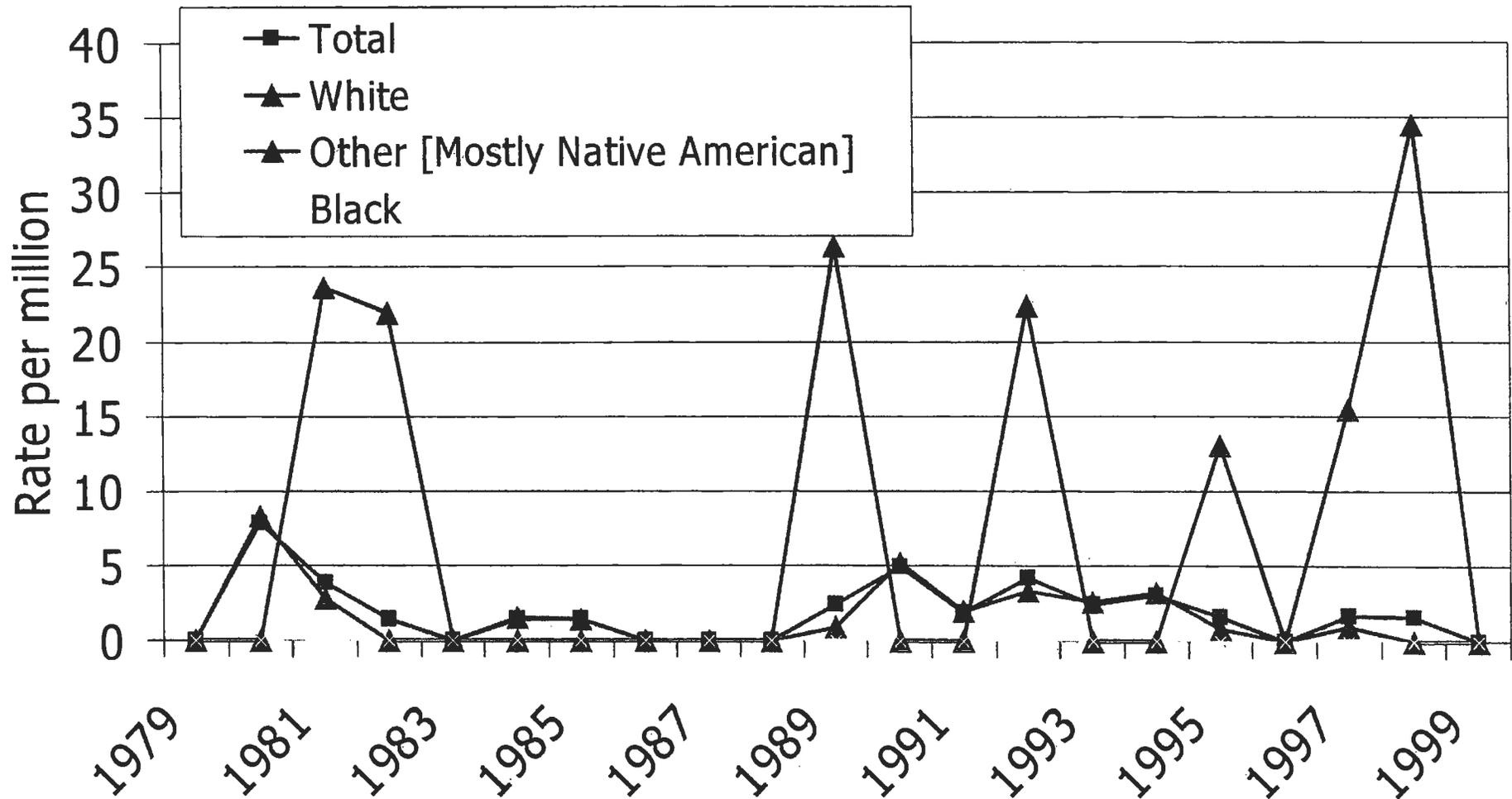
Database Analysis

- **Initial database evaluation**
 - NM Vital Records and Health Statistics
 - NM Workers' Compensation Administration
 - Mine Safety and Health Administration
 - NM Miners' Outreach Program

Age-adjusted Mortality due to Silicosis New Mexico, 1979-1999, by Race Population 15 years of age and older



Age-adjusted Mortality due to Silicosis New Mexico, 1979-1999, by Race Population 15 years of age and older



New Mexico Worker's Compensation

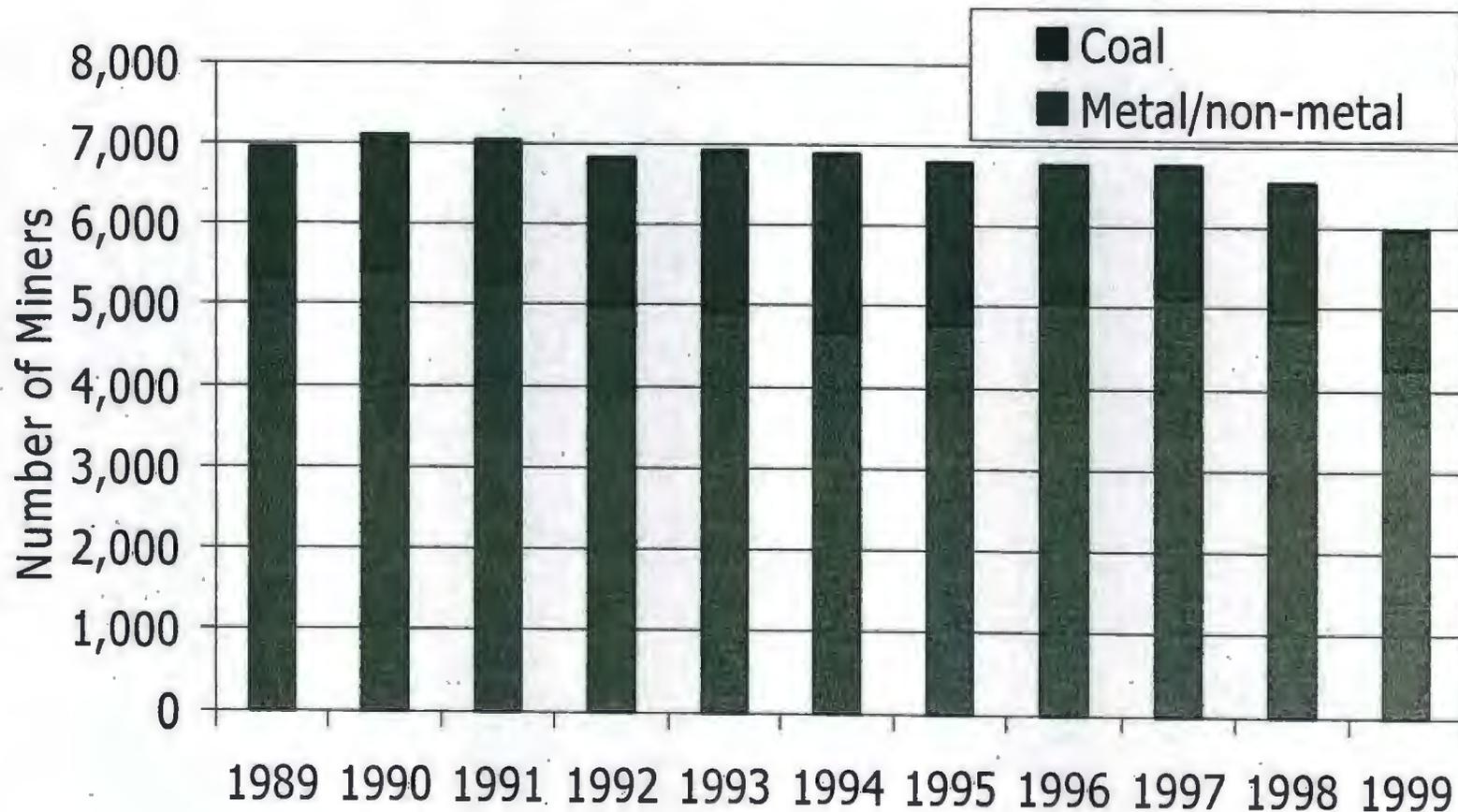
From 1989-1999:

- 20 claims for pneumoconiosis
 - 2 claims of silicosis
- Neither silicosis case indicated mining in SOC or NAICS code (1 employment services, 1 utility system construction)

Mine Safety and Health Administration

- **Mean number of miners:**
 - coal miners = 1,831
 - Metal/ Non-Metal miners = 4,947
- **From 1989-1999:**
 - 1 case of silicosis recorded
 - Male
 - Age Range = 50-60 years
 - Mining Experience = 26 years

Number of Miners in New Mexico, 1989-1999

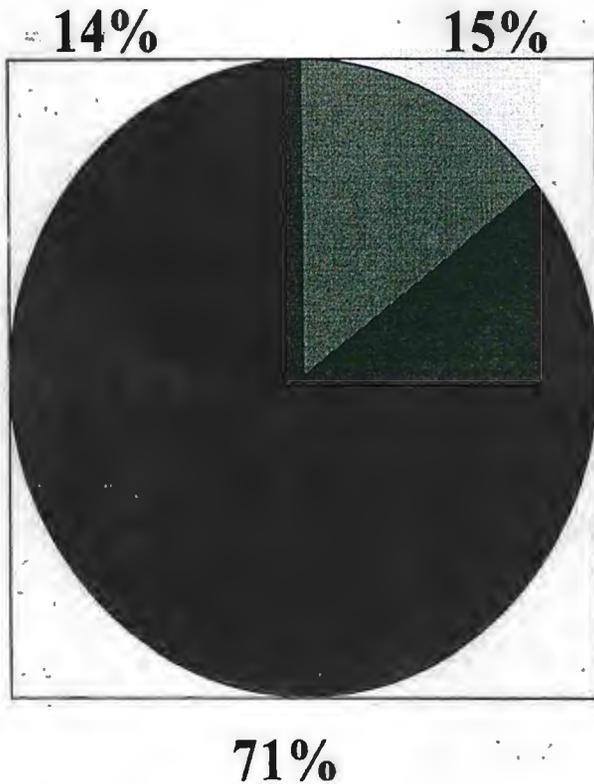


Miners' Outreach Program

- **Voluntary Health Screening Program since 1989 - Miners' Colfax Medical Center**
- **From 1989-1999:**
 - **3,788 miners evaluated**
 - **78% former miners**
 - **98% male**
 - **Mean Age=57 years**

New Mexico Miner's Outreach Program

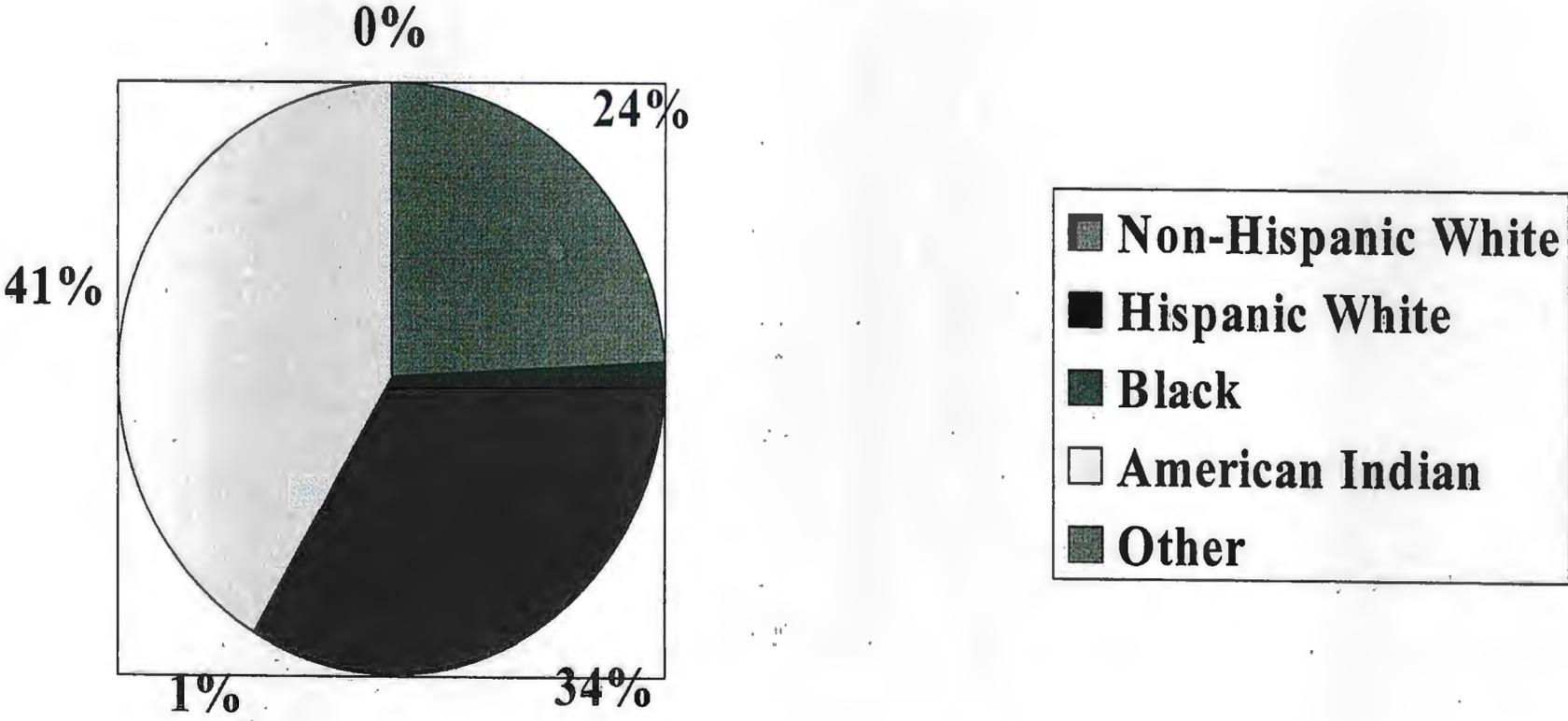
Type of Mine



- Above Ground
- Below Ground
- Open-pit or surface

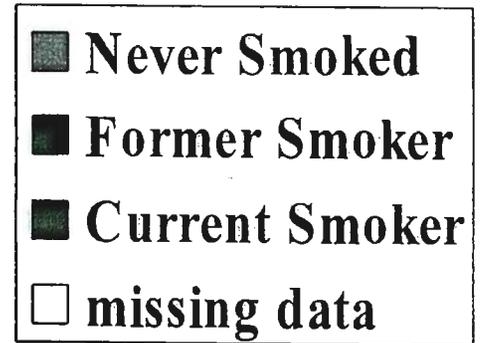
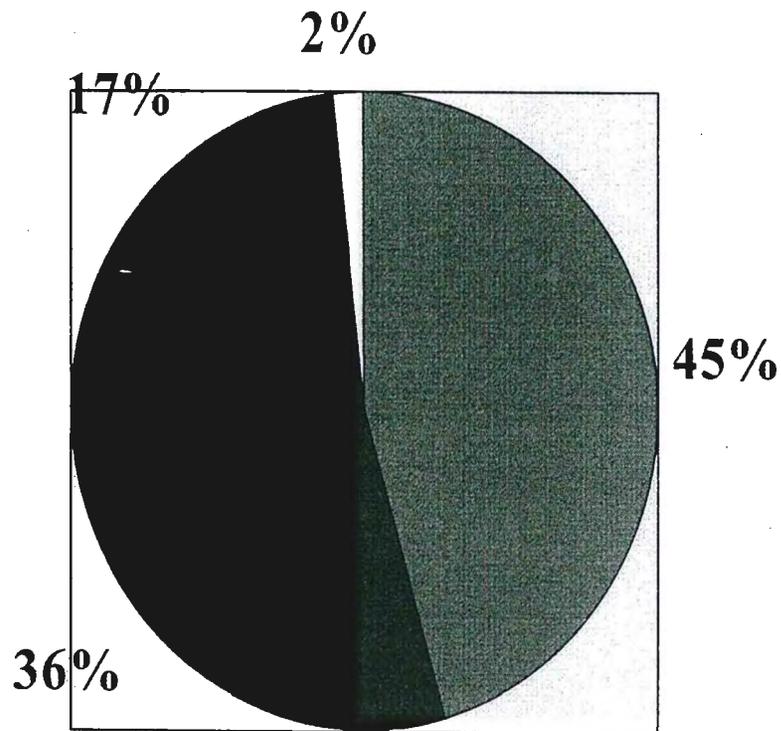
New Mexico Miner's Outreach Program

Ethnicity



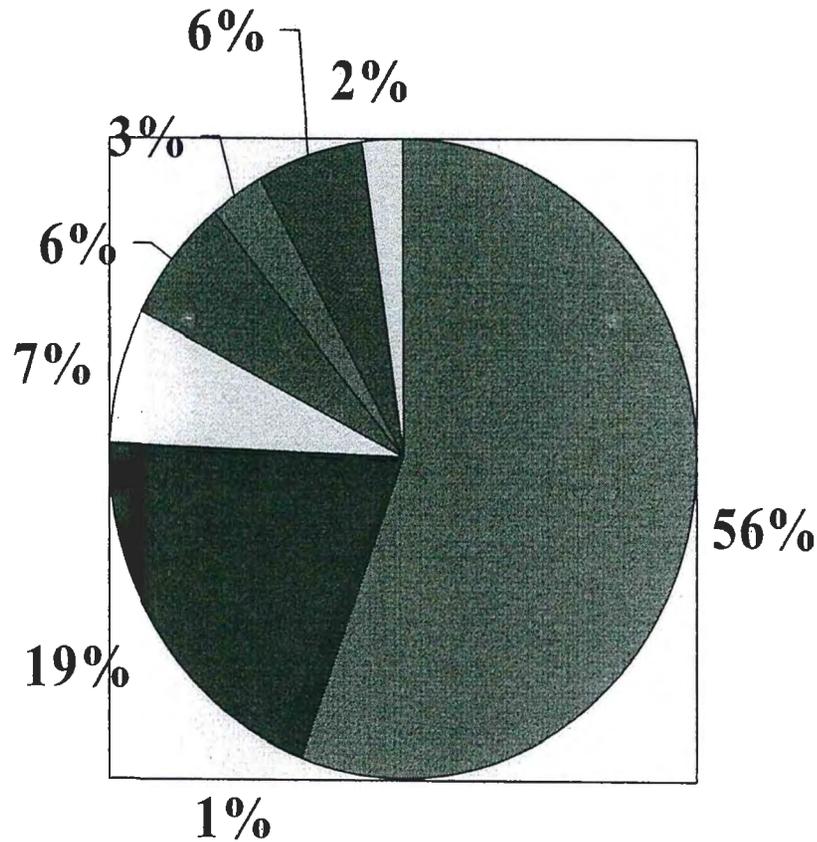
New Mexico Miner's Outreach Program

Smoking Status



New Mexico Miner's Outreach Program

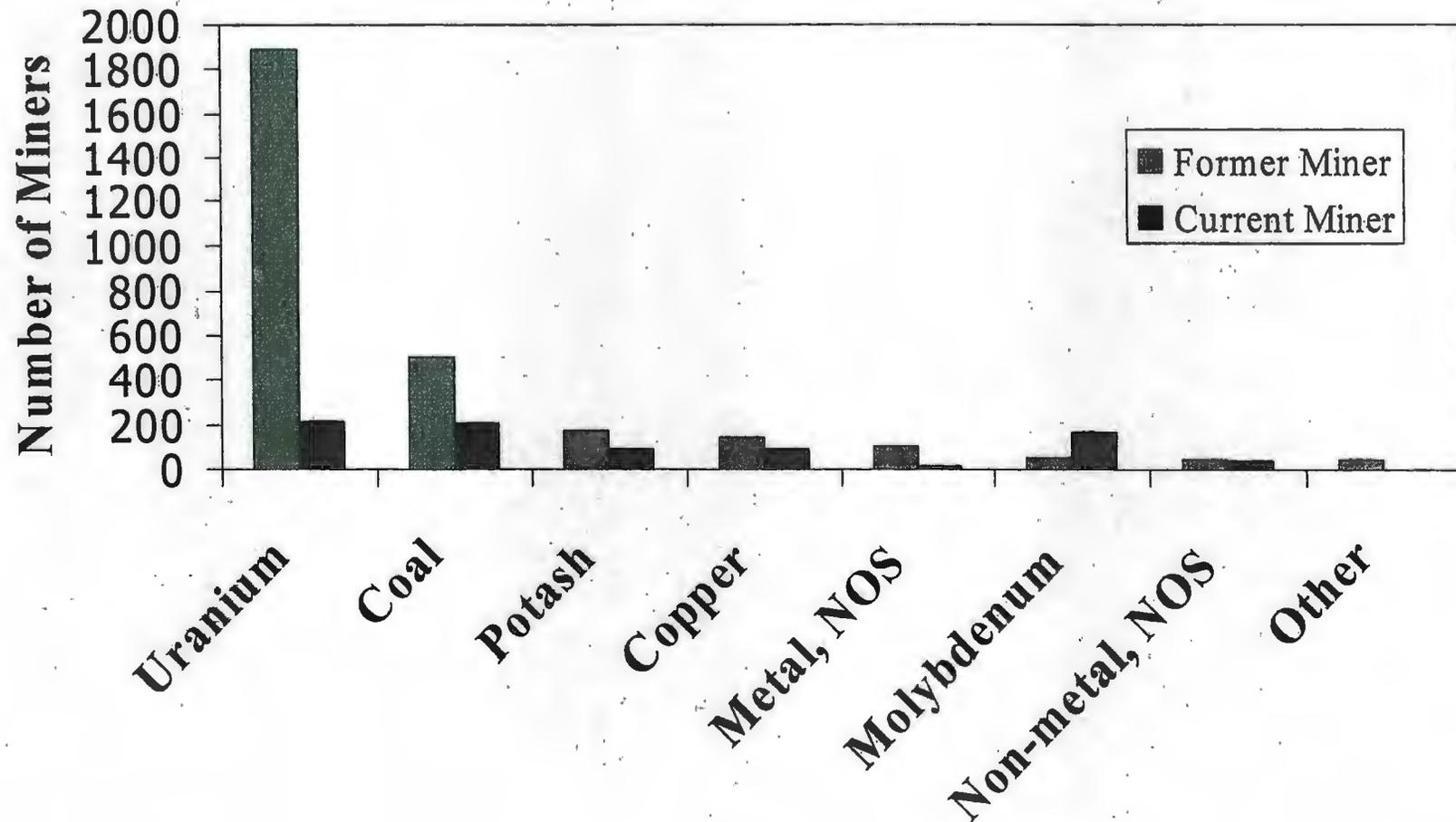
Mining Commodity



- Uranium
- Other
- Coal
- Potash
- Copper
- Metal, NOS
- Molybdenum
- Non-metal, NOS

New Mexico Miner's Outreach Program

Mining Commodity by Former/Current Miner

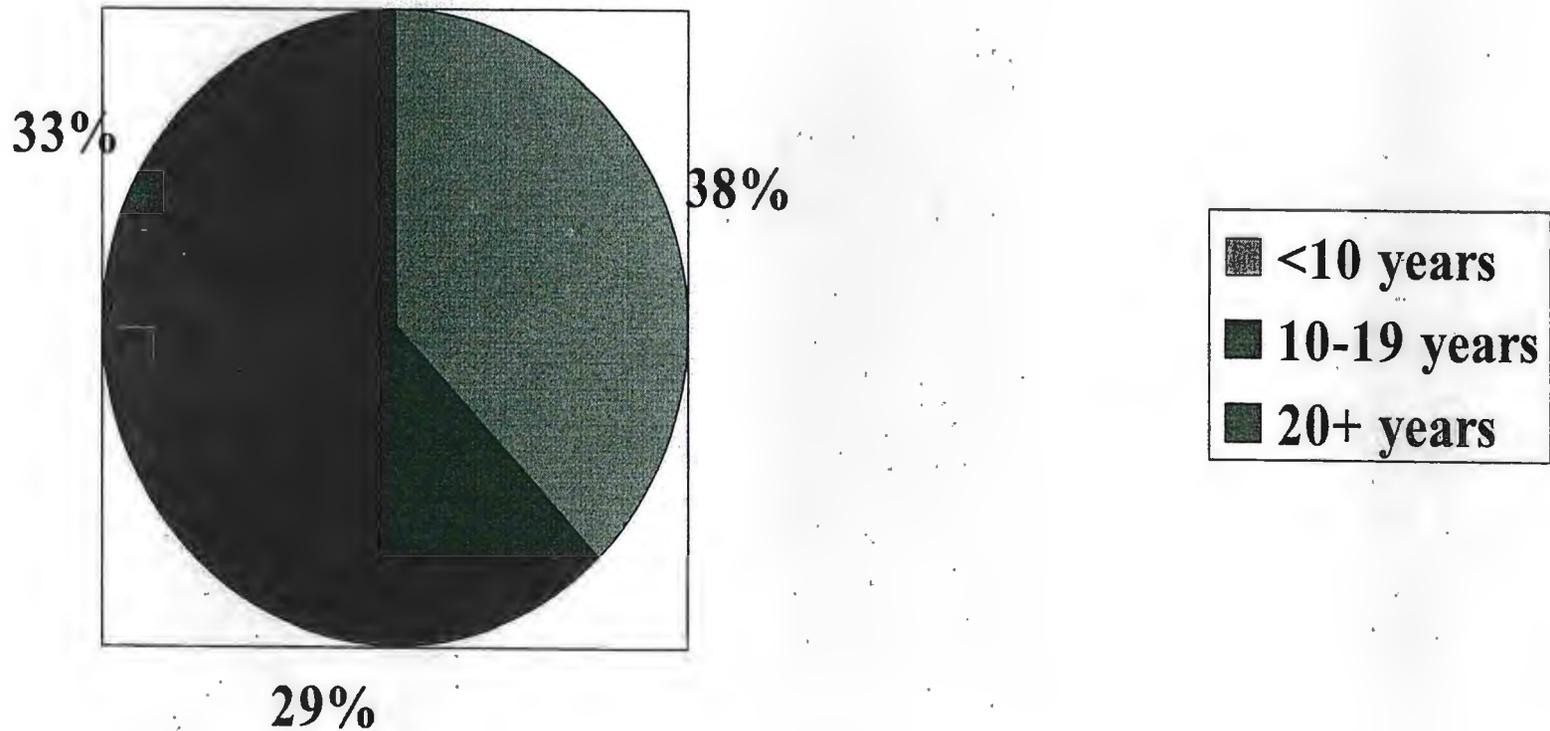


New Mexico Miners Outreach Program

- **Uranium miners- predominantly Native American (65%)**
- **Coal miners- mostly White (49% NHW, 33% HW)**
- **Copper miners-71% HW; Mo: 91% HW**
- **Potash miners- 76% Non-Hispanic White**

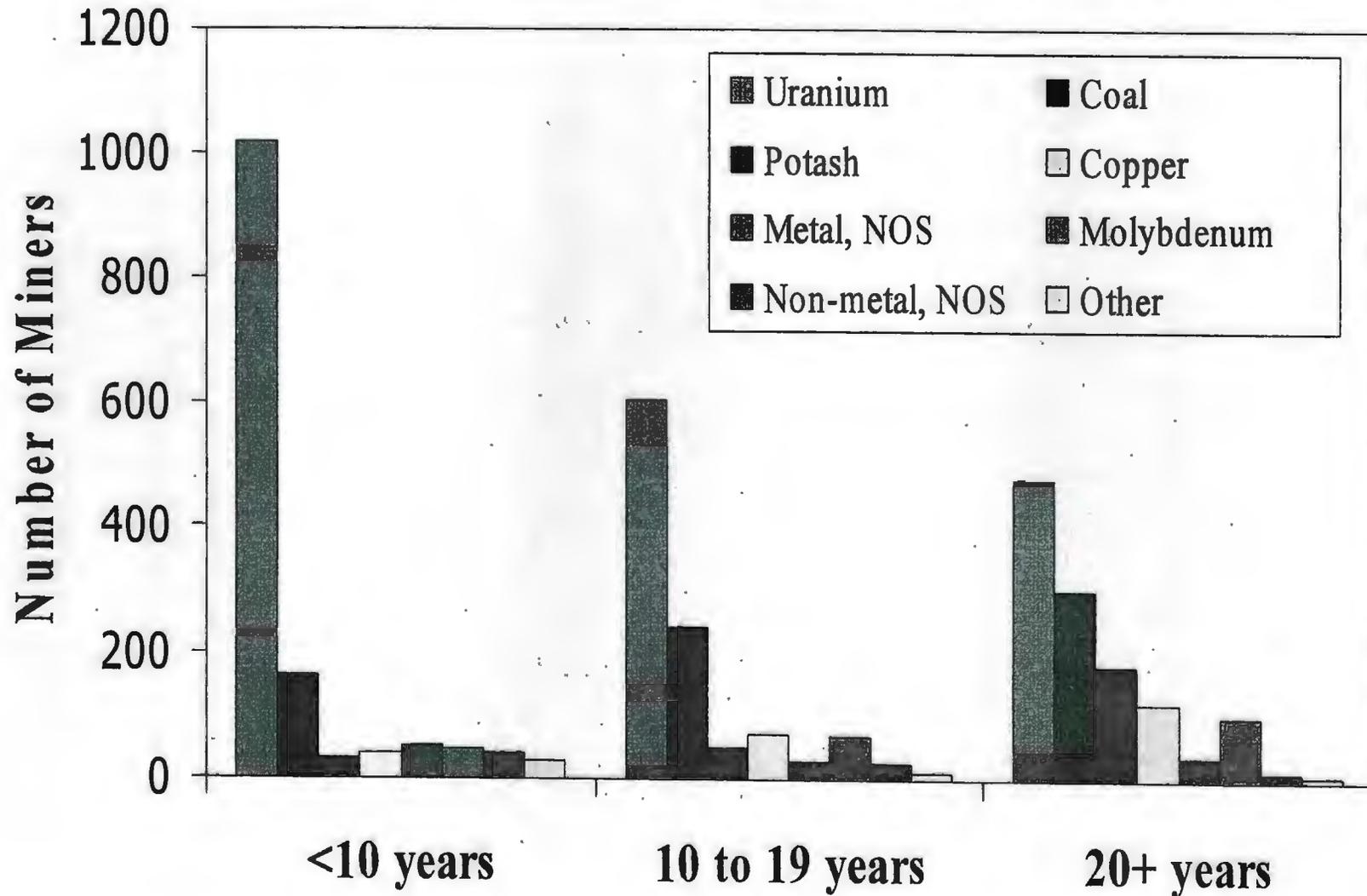
New Mexico Miner's Outreach Program

Years of Mining



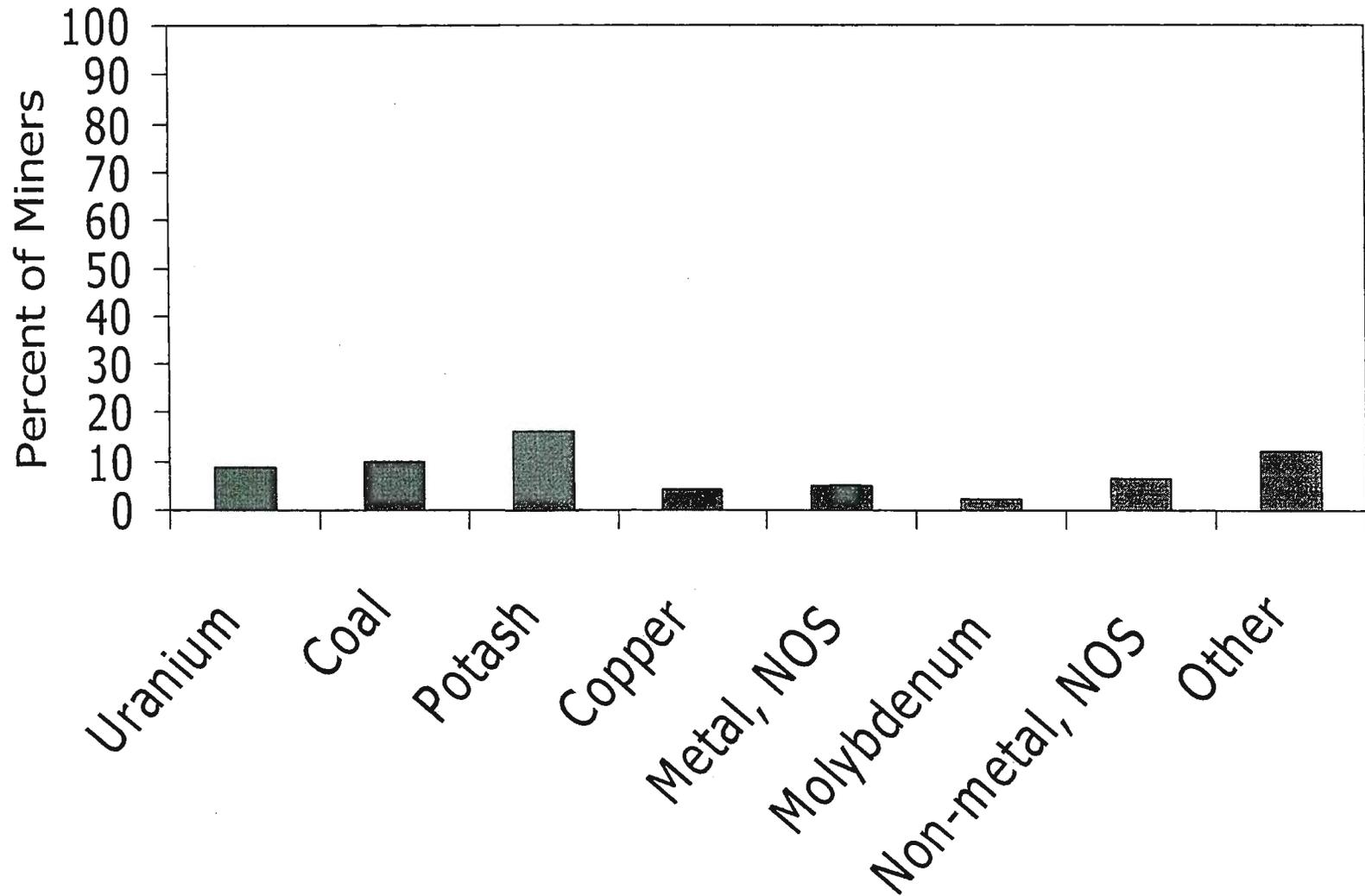
New Mexico Miner's Outreach Program

Mining Commodity by Years of Mining



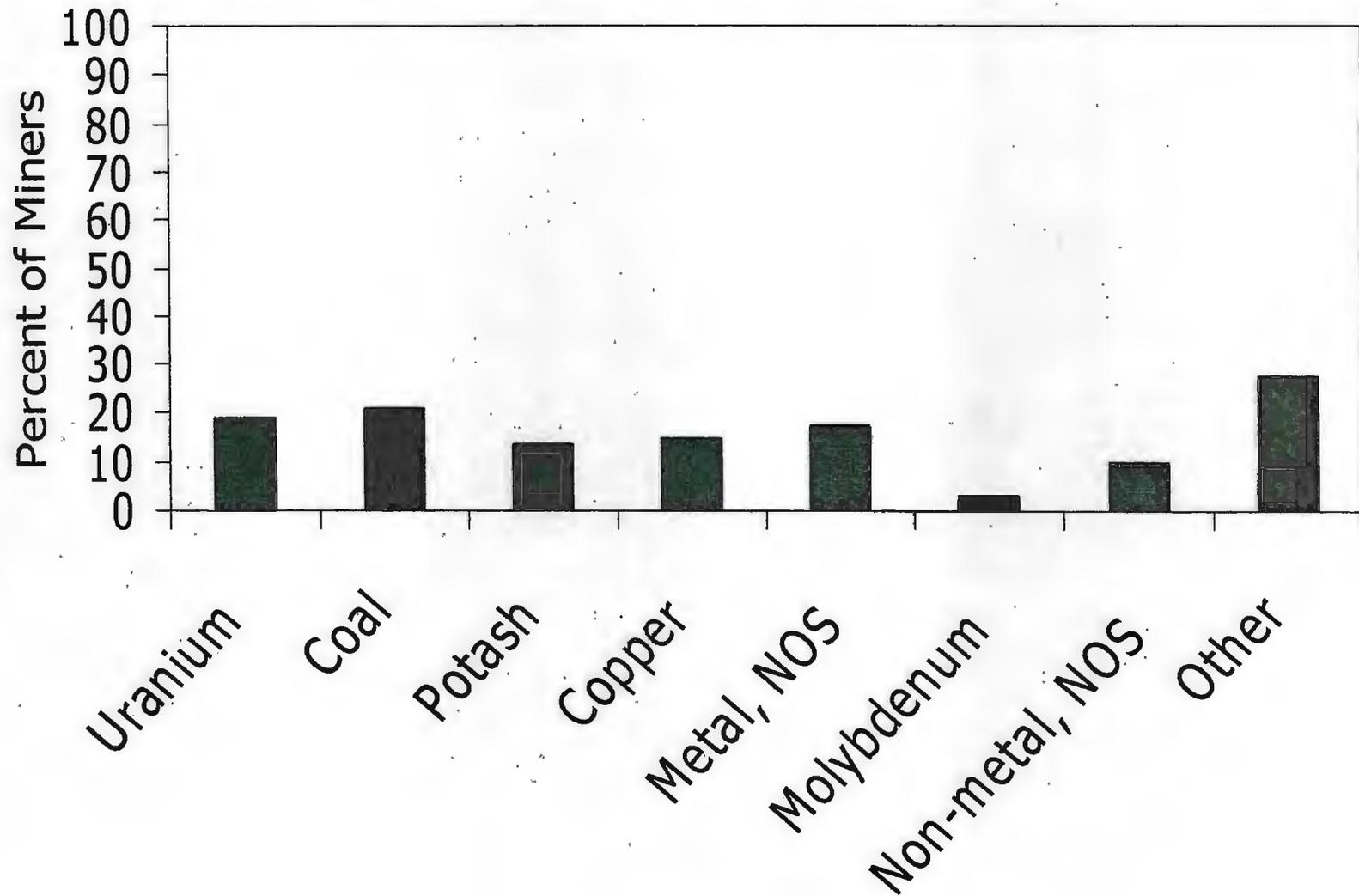
New Mexico Miner's Outreach Program

Asthma Diagnosis by Mining Commodity



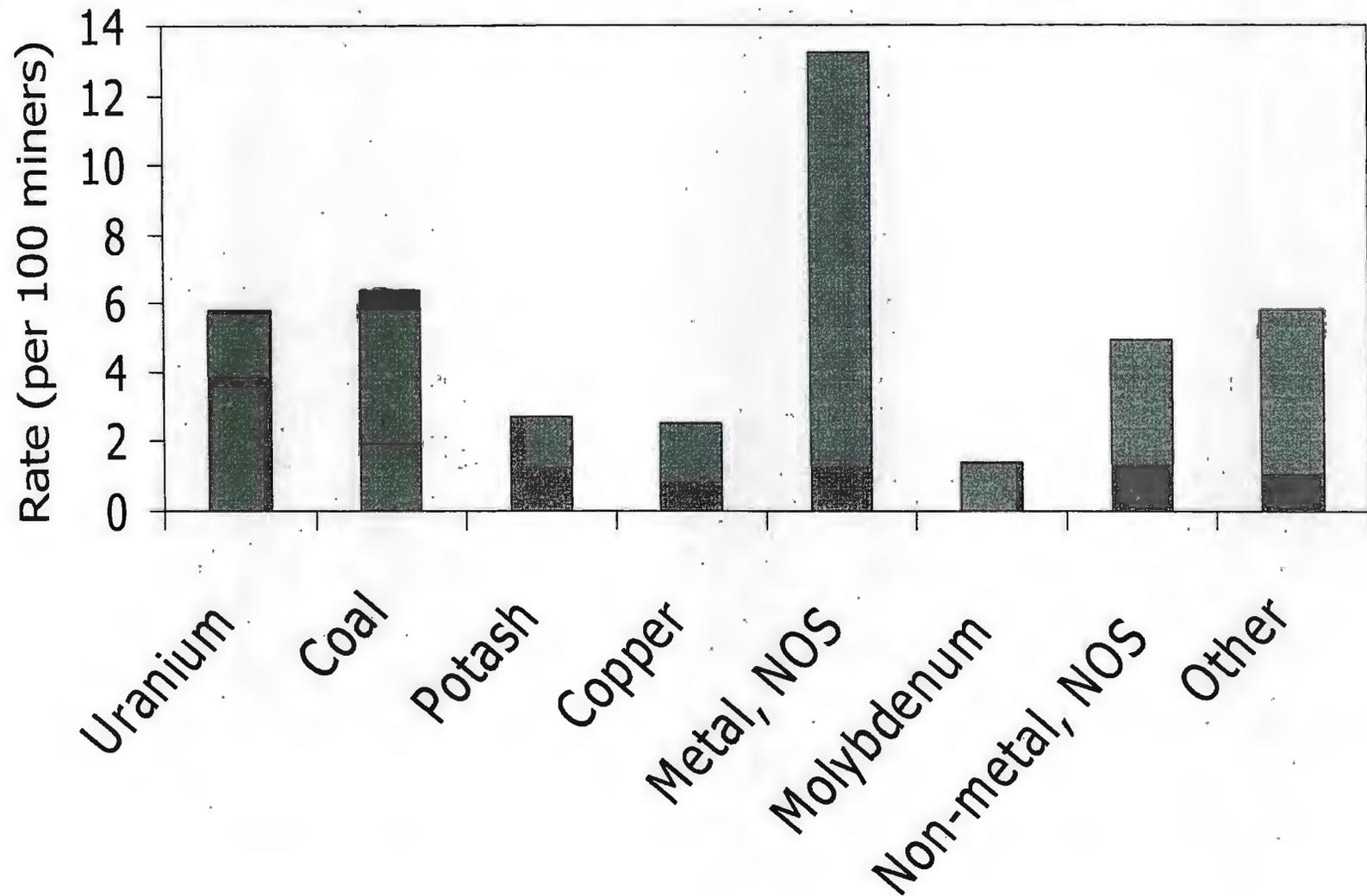
New Mexico Miner's Outreach Program

Bronchitis Diagnosis by Mining Commodity

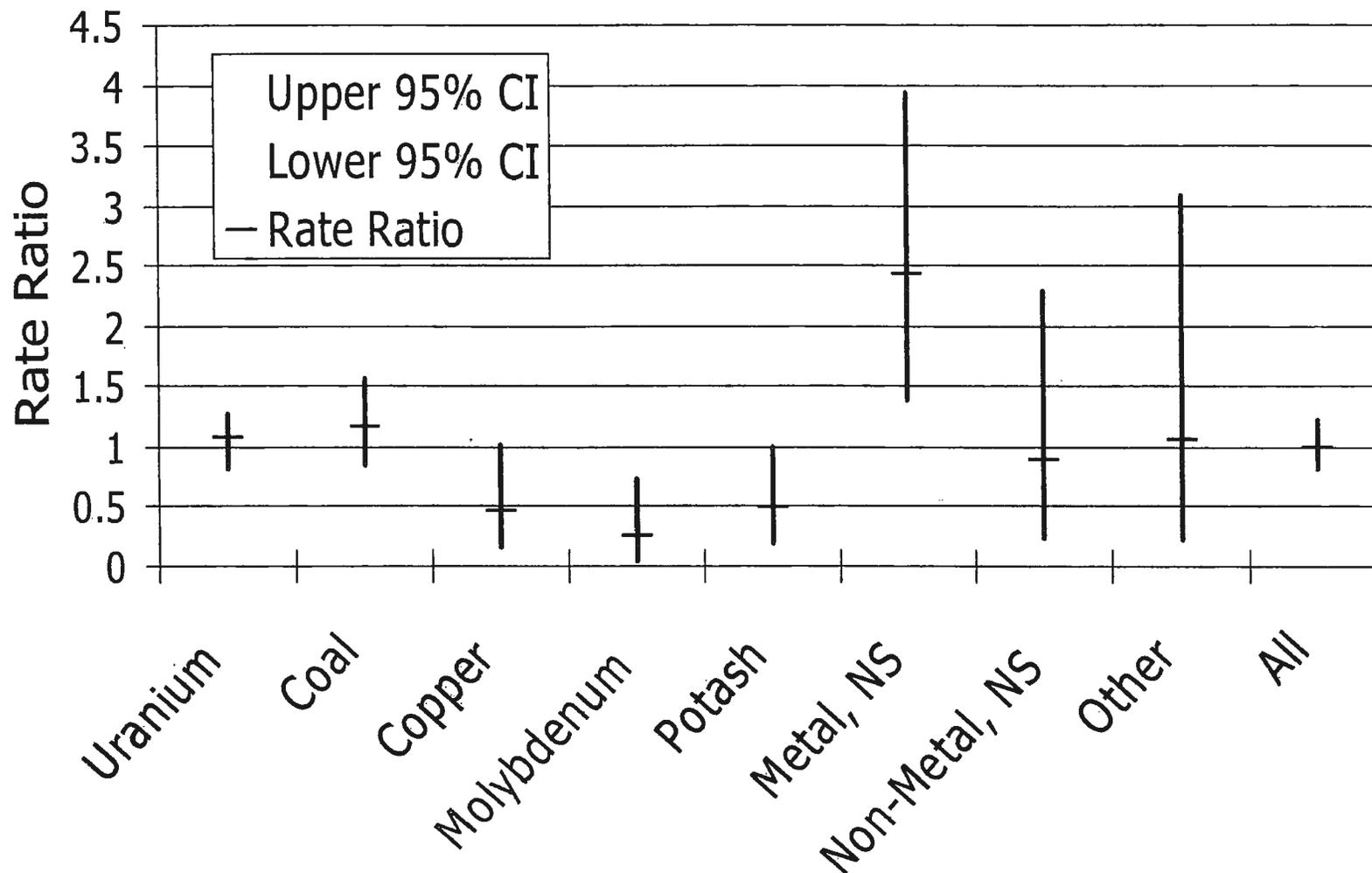


New Mexico Miner's Outreach Program

Rate of Pneumoconiosis by Mining Commodity

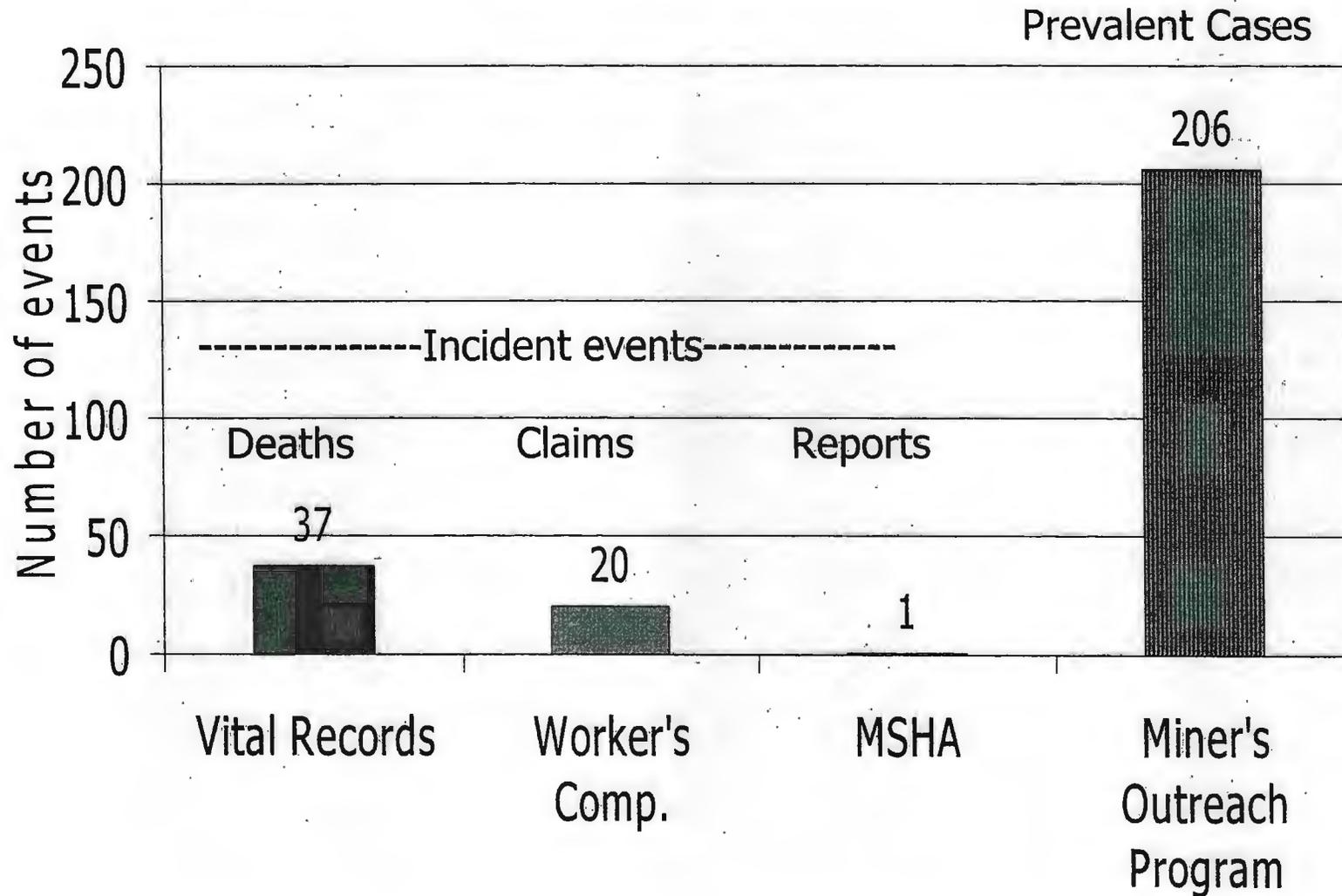


New Mexico Miner's Outreach Program Rate Ratios of Pneumoconiosis on Chest X-ray, by Primary Mining Commodity

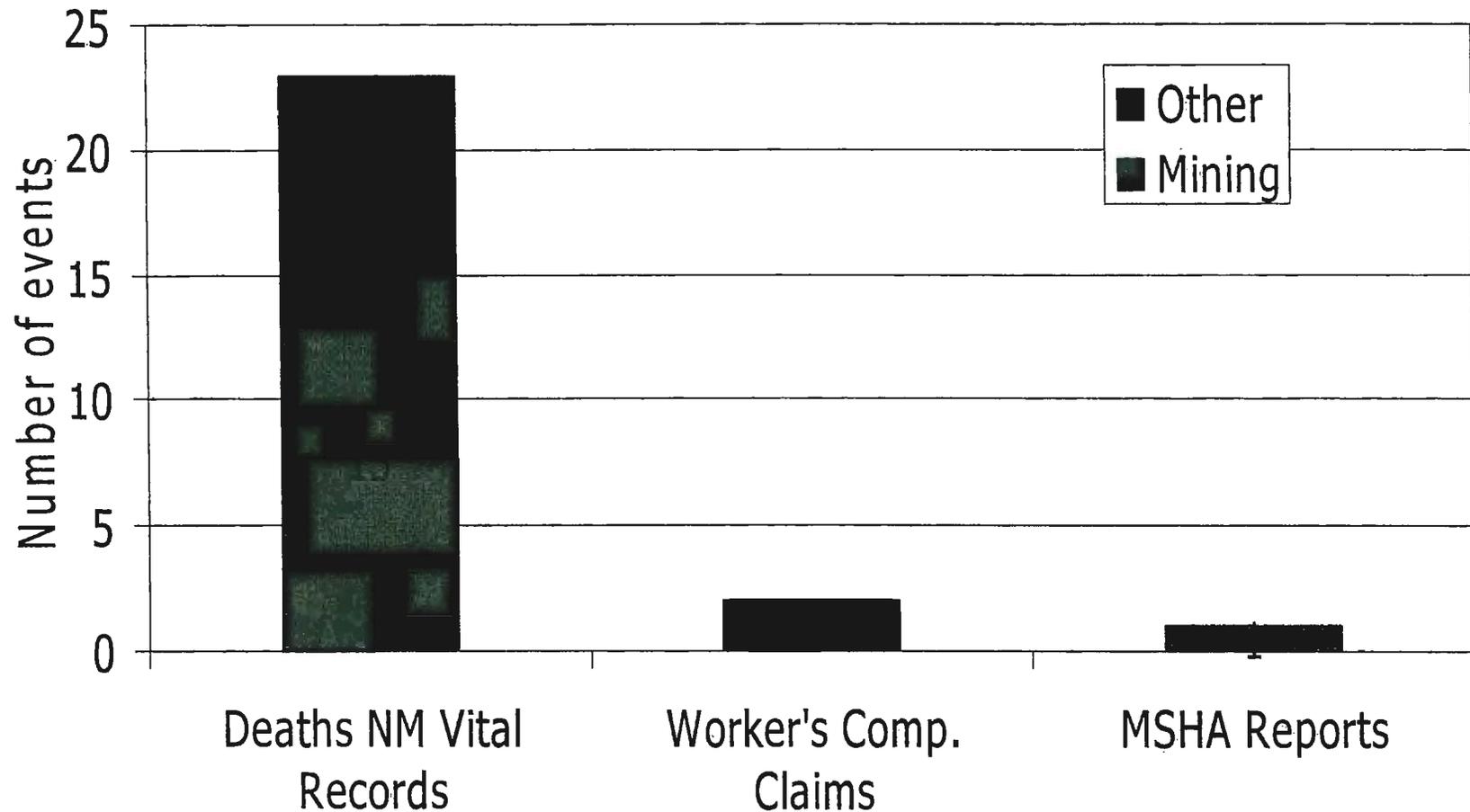


Data: New Mexico Miners' Outreach Program, Mining and Health Effects Program, Department of Internal Medicine, UNMHSC
 Analysis: New Mexico Worker's Health Surveillance Project, Office of Epidemiology, New Mexico Department of Health

Summary of Pneumoconiosis Events New Mexico, 1989-1998

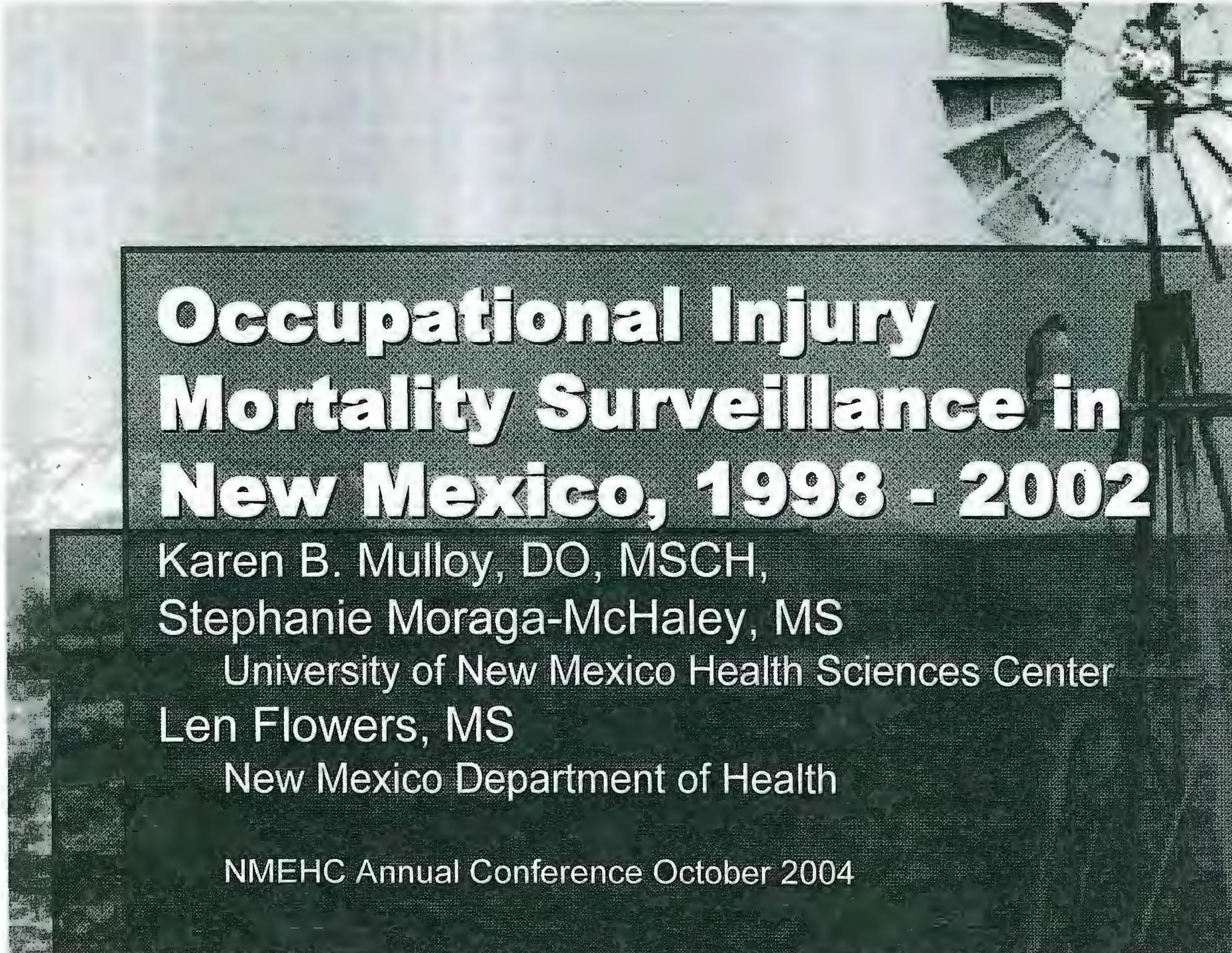


Summary of Silicosis Incident Events New Mexico, 1989-1999



Improving Silicosis Reporting in New Mexico

- Silicosis **has** been added to the *List of Notifiable Conditions*, the official regulations for reportable conditions in New Mexico.
- The Worker's Health Surveillance Project will actively encourage physicians, including radiologists and pathologists, as well as other health-care professionals, to report all diagnosed or suspected cases of silicosis. These reports should include persons with:
 - A. A physician's provisional or working diagnosis of silicosis, *Or*
 - B. A chest radiograph interpreted as consistent with silicosis, *Or*
 - C. Pathologic findings consistent with silicosis.



Occupational Injury Mortality Surveillance in New Mexico, 1998 - 2002

Karen B. Mulloy, DO, MSCH,

Stephanie Moraga-McHaley, MS

University of New Mexico Health Sciences Center

Len Flowers, MS

New Mexico Department of Health

NMEHC Annual Conference October 2004

Development of Worker Health Surveillance in NM - NIOSH

- **“..to establish an occupational illness, toxic exposure and injury surveillance program in the State of New Mexico utilizing existing data sources in state and federal public health and labor agencies, public and private healthcare provider data, academic institutions, and creating a single repository for combining these data into valid, reliable and useful surveillance information.”**

New Mexico Occupational Health Registry

August 2003 change to list of Notifiable Diseases and Conditions (7.4.3. NMAC)

- **Asbestosis**
- **Chronic beryllium lung disease**
- **Coal workers' pneumoconiosis**
- **Heavy metal poisoning**
- **Hypersensitivity pneumonitis**
- **Mesothelioma**
- **Noise induced hearing loss**
- **Occupational asthma**
- **Silicosis**
- *Other illnesses related to occupational exposure*

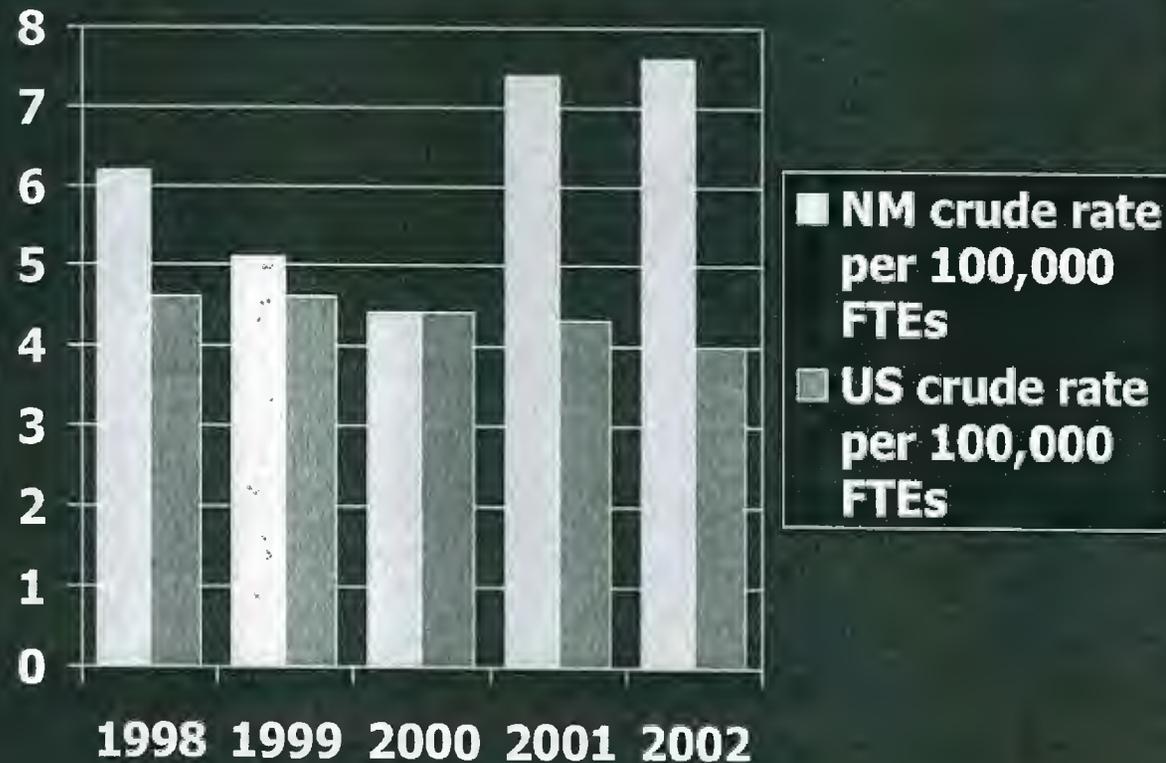
Council of State and Territorial Epidemiologists

- **CSTE Occupational Health Indicators Pilot Project**

- Indicator #3 – Fatal work-related injuries**

- **2000, New Mexico fatality rate 4.4 per 100,000 employed persons over 16 years of age –**
 - **Equal to US rate**

Comparison of Crude Occupational Injury Fatality Rates: NM and US, 1998-2002



Source: CFOI

Data Sources

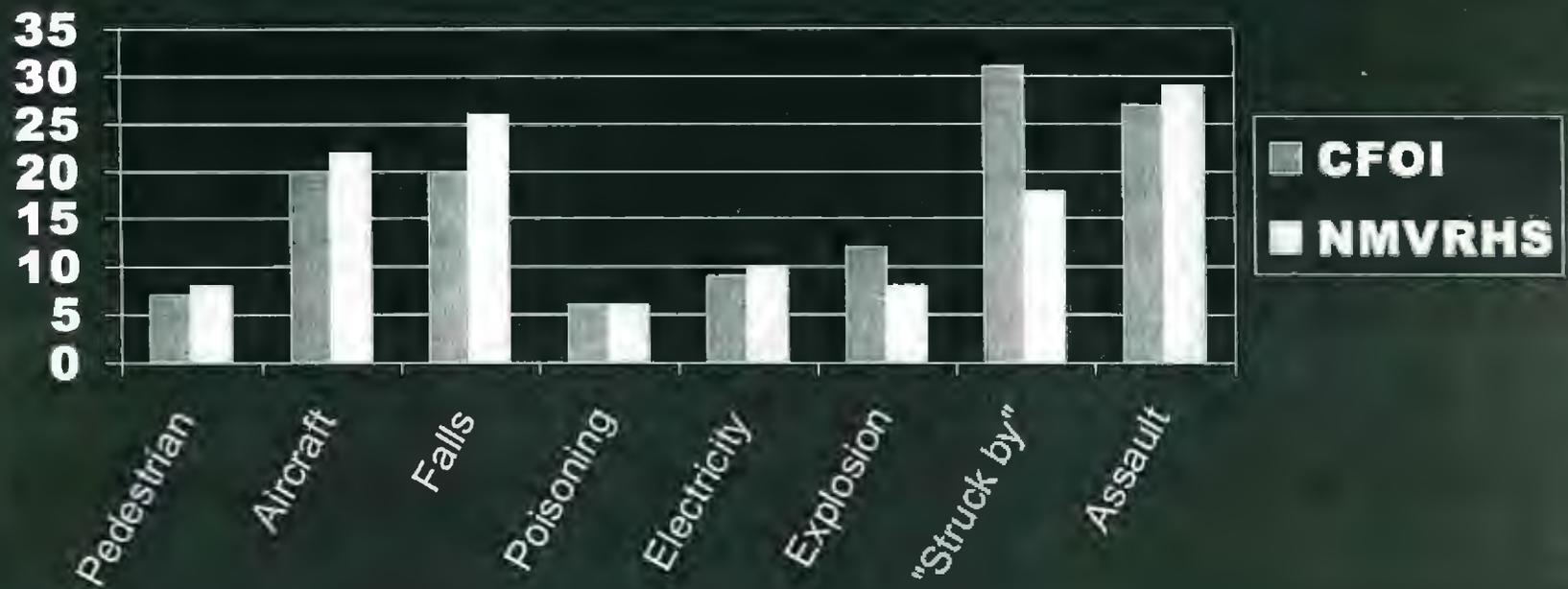
- United States Bureau of Labor Statistics (BLS), Census of Fatal Occupational Injuries (CFOI)
- New Mexico Vital Records and Health Statistics (NMVRHS)

Denominators: BLS Current Population Survey

Except county fatality rates: BLS Quarterly Census of Employment and Wages

Comparison of CFOI and NMVRHS for Selected Causes of Mortality 1998-2002

All causes: CFOI n=244, NMVRHS=248



New Mexico: Who We Are

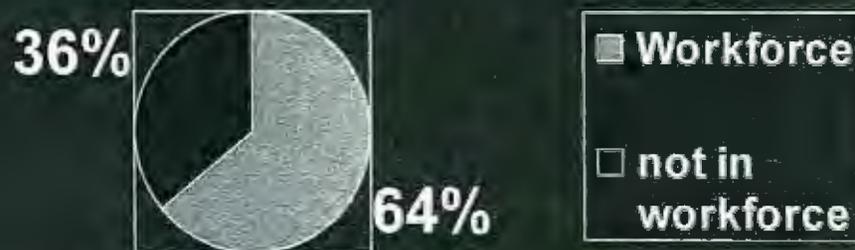
1998-2002

- Population of New Mexico, 16 years or older: 1,326,600
- Population of civilian workers: 838,000
- Employed persons age 16+ years: 792,800

New Mexico



United States



Source: Bureau of Labor Statistics Current Population Survey 1998-2002,
Graphs U.S. Census Bureau 2000 US Census

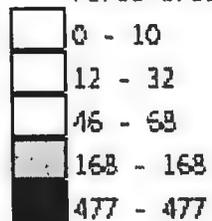
New Mexico, a low density
population state



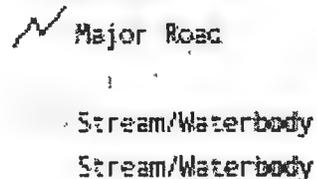
New Mexico Population Density U.S. Census 2000

Data Classes

Persons/Sq Mile



Features



Items in gray text
are not visible
at this zoom level



Approx. 485 miles across.



FEDERAL LANDS AND INDIAN RESERVATIONS

- Bureau of Indian Affairs
- Bureau of Land Management / Wilderness
- Bureau of Reclamation
- Department of Defense (Includes Army Corps of Engineers lakes)
- Fish and Wildlife Service / Wilderness
- Forest Service / Wilderness
- National Park Service / Wilderness
- Other agencies

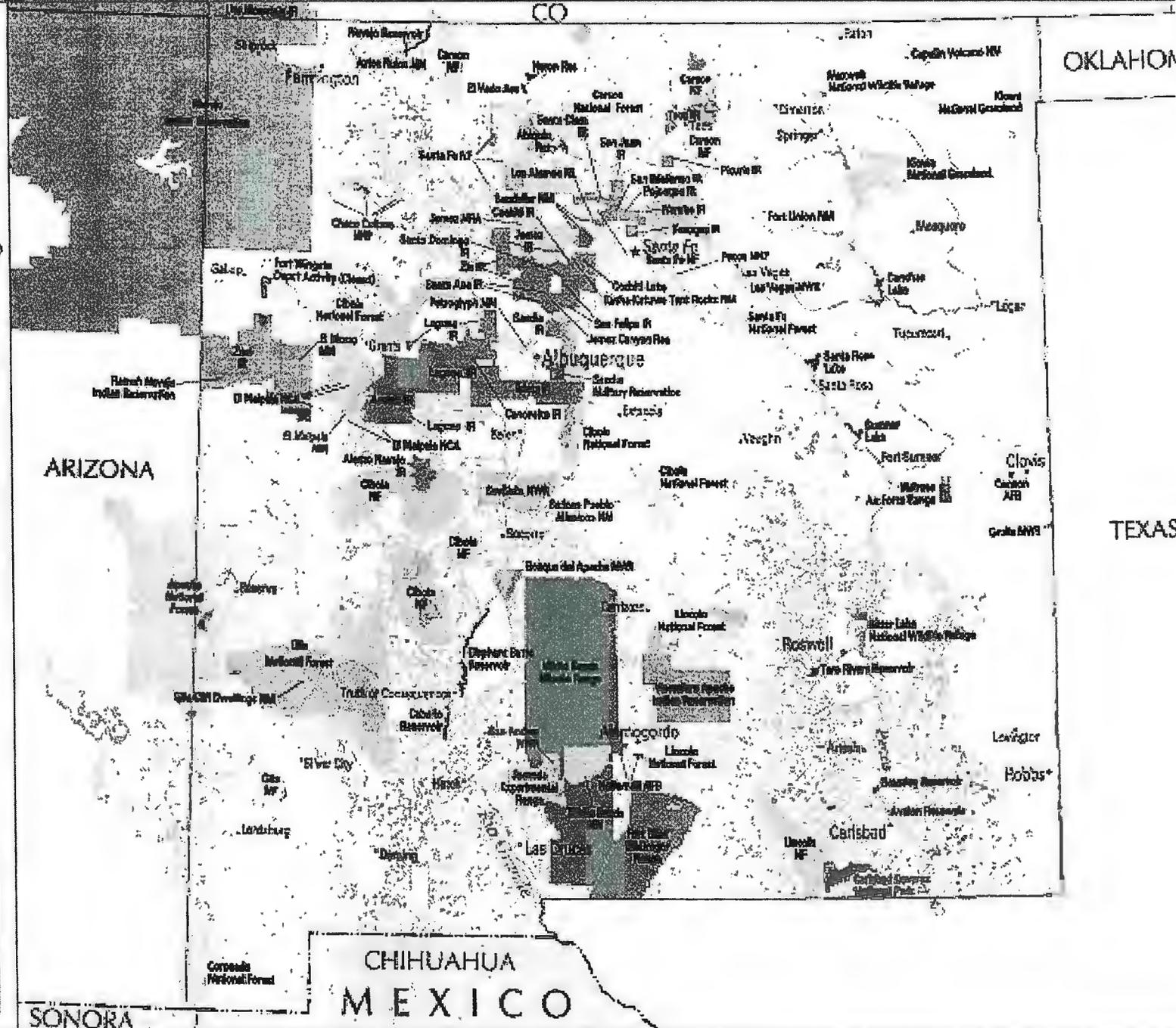
Some small sites are not shown, especially in urban areas.



Albers equal area projection

Abbreviations

- AFB Air Force Base
- IR Indian Reservation
- NCA National Conservation Area
- NF National Forest
- NHP National Historical Park
- NL National Laboratory
- NM National Monument
- NRA National Recreation Area
- NWR National Wildlife Refuge
- Res Reservoir



SONORA

CHIHUAHUA MEXICO

OKLAHOMA

TEXAS

NM: US workforce comparison, 1998-2002

	New Mexico	U.S.
% Unemployment	5.4	4.7
% Self-employed*	8.9	7.2
% Employed part-time	19.3	17.3
Males: Females	52.9:47.1	53.5:46.5
Age<18/ 18-64/ 65+	2.14%/ 94.73%/ 3.13	2.02% /94.89%/ 3.09%

Source: Bureau of Labor Statistics Current Population Survey 1998-2002, *1999-2002

New Mexico: Who We Are

- Per capita income 5 year average \$22,516.60
- Rank 46-48 for per capita income
- New Mexicans make \$6,700 less than the average American
- 18.4% of New Mexicans live below the poverty level

Source: US Census Bureau, Census 2000

New Mexico Census



Source: US Census Bureau, Census 2000

Percent Hispanic workers by state – CSTE occupational health indicator pilot states and U.S., 2000

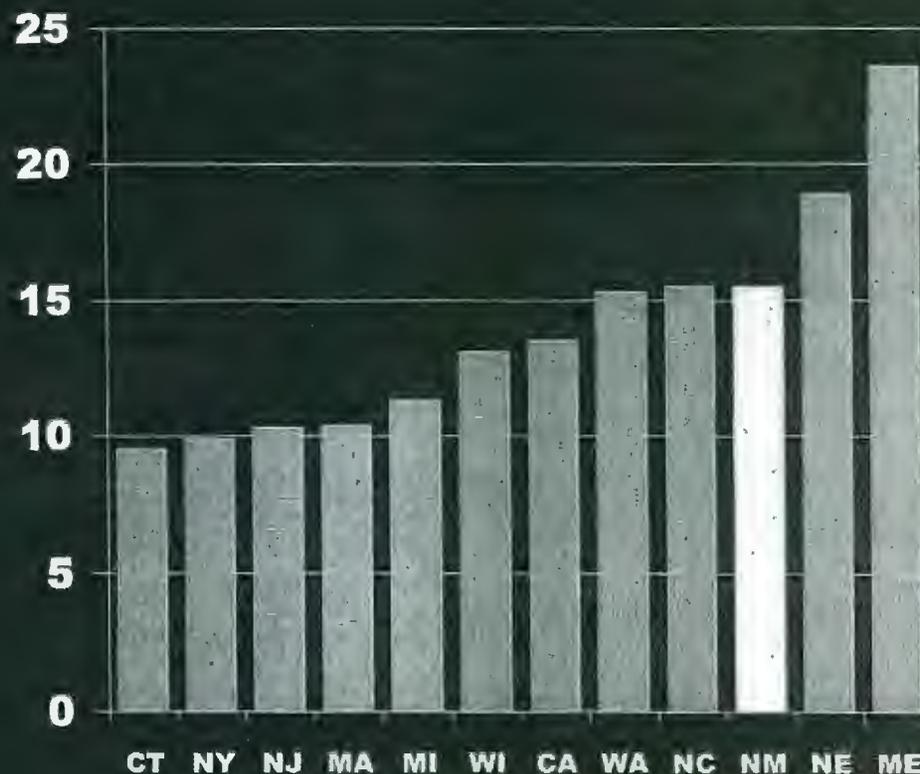


Source: CSTE Occupational Health Indicators Pilot Project

CSTE Occupational Health Indicators Pilot Project: Comparison of employment in industries at high risk for occupational injury fatality, % employed 2000

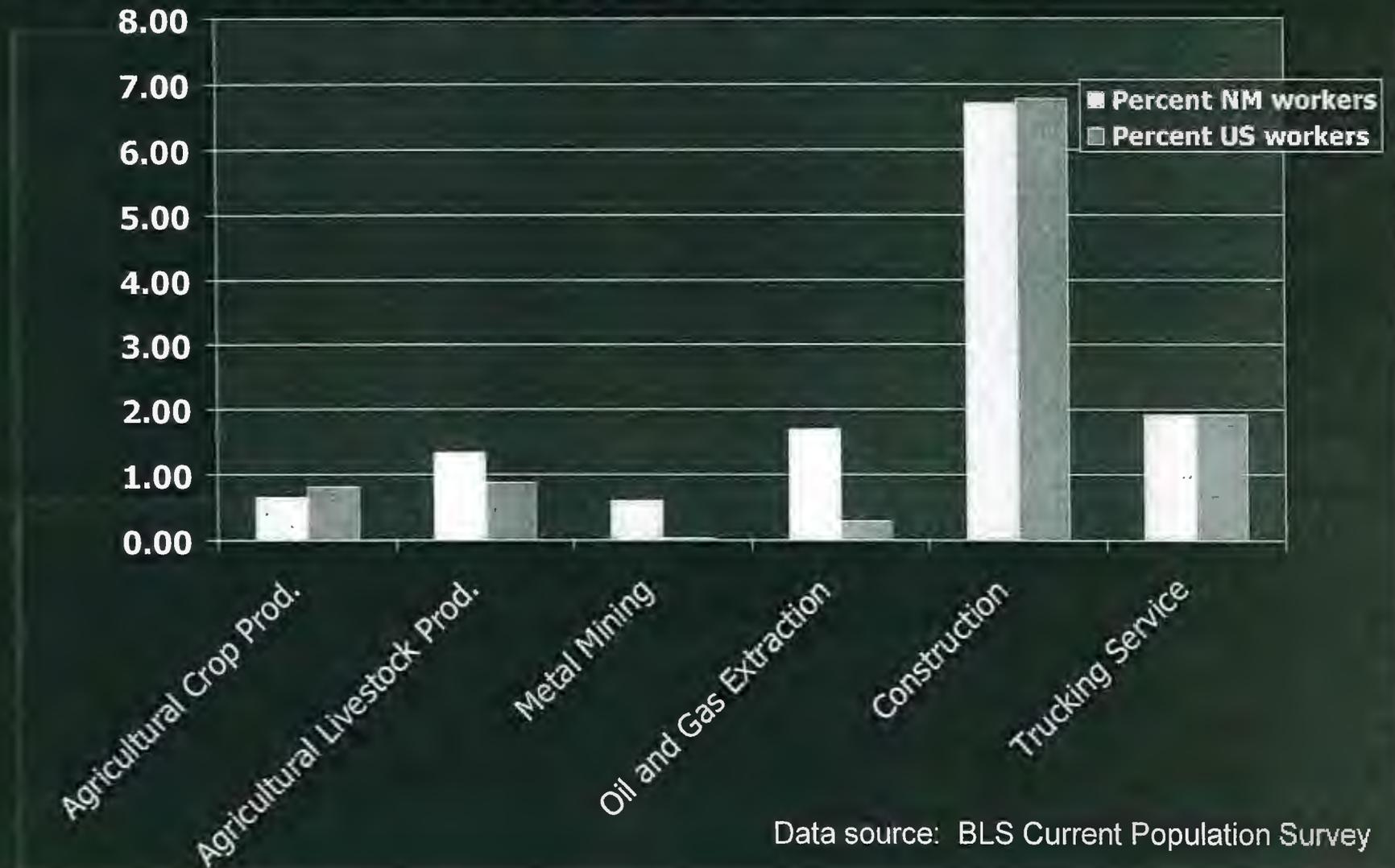
Example industries:

- Agriculture & Forestry
- Mining
- Oil and gas extraction
- Construction
- Taxicab service
- Wholesale petroleum products
- Liquor stores
- Electrical repair shops



Source: CSTE Occupational Health Indicators Pilot Project

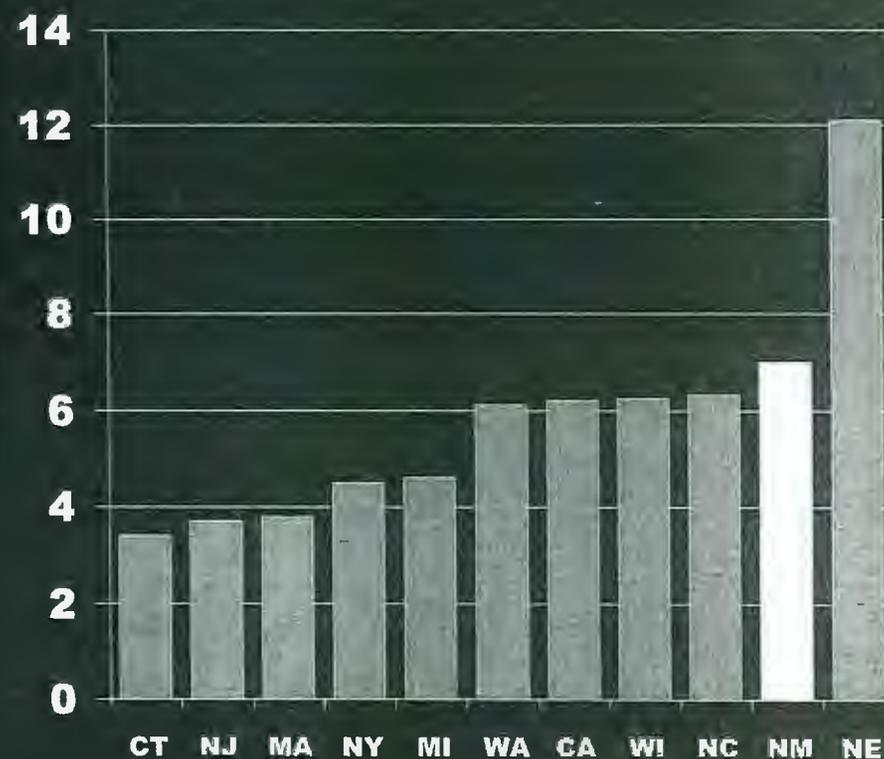
Comparison of worker percentages for select high injury fatality risk industries NM: US 2000



CSTE Occupational Health Indicators Pilot Project: Comparison of employment in occupations at high risk for occupational injury fatality, % employed, 2000

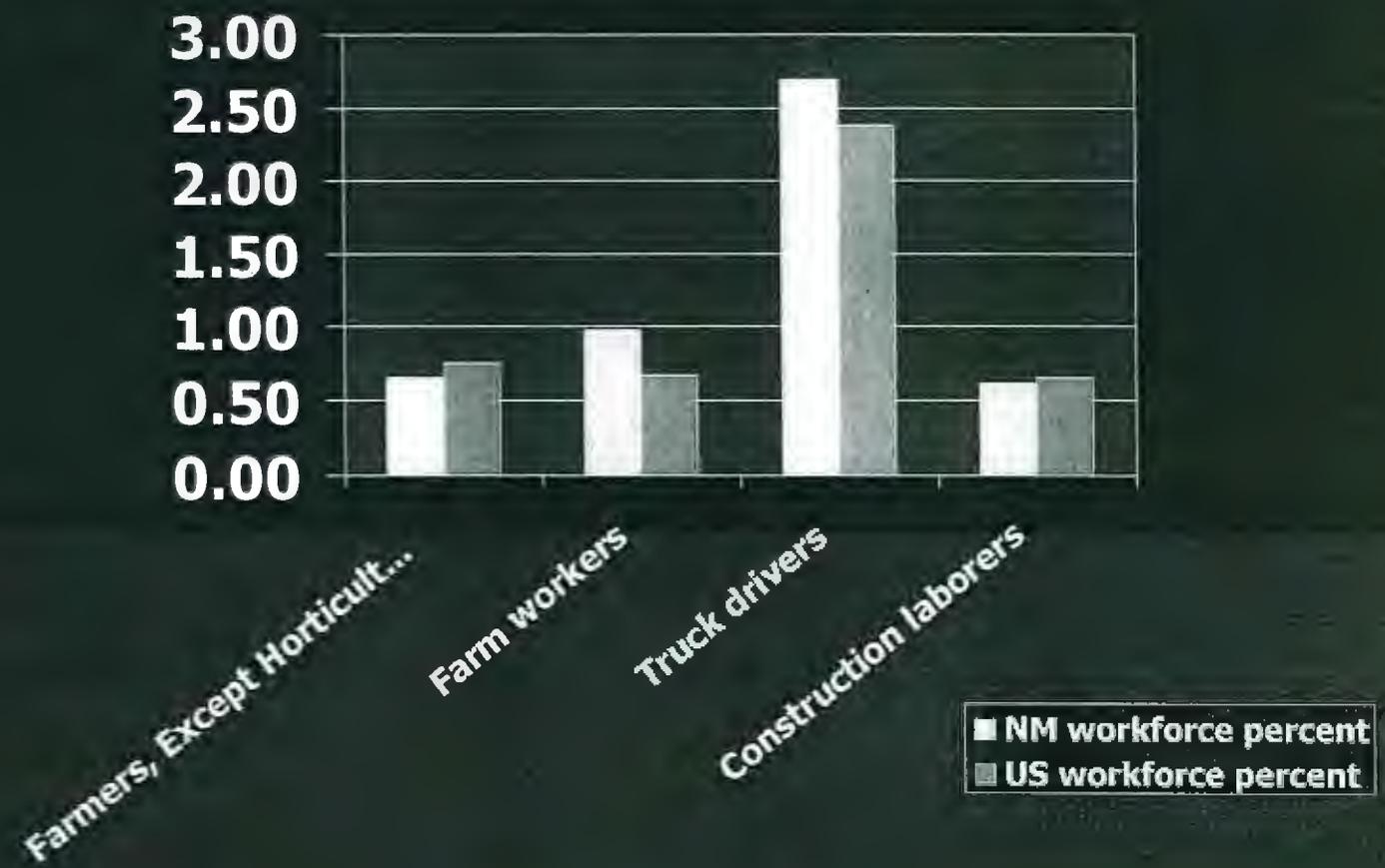
Example occupations:

- Airplane pilots and navigators
- Farmers
- Roofers
- Electrician apprentices
- Mining machine operators
- Truck drivers

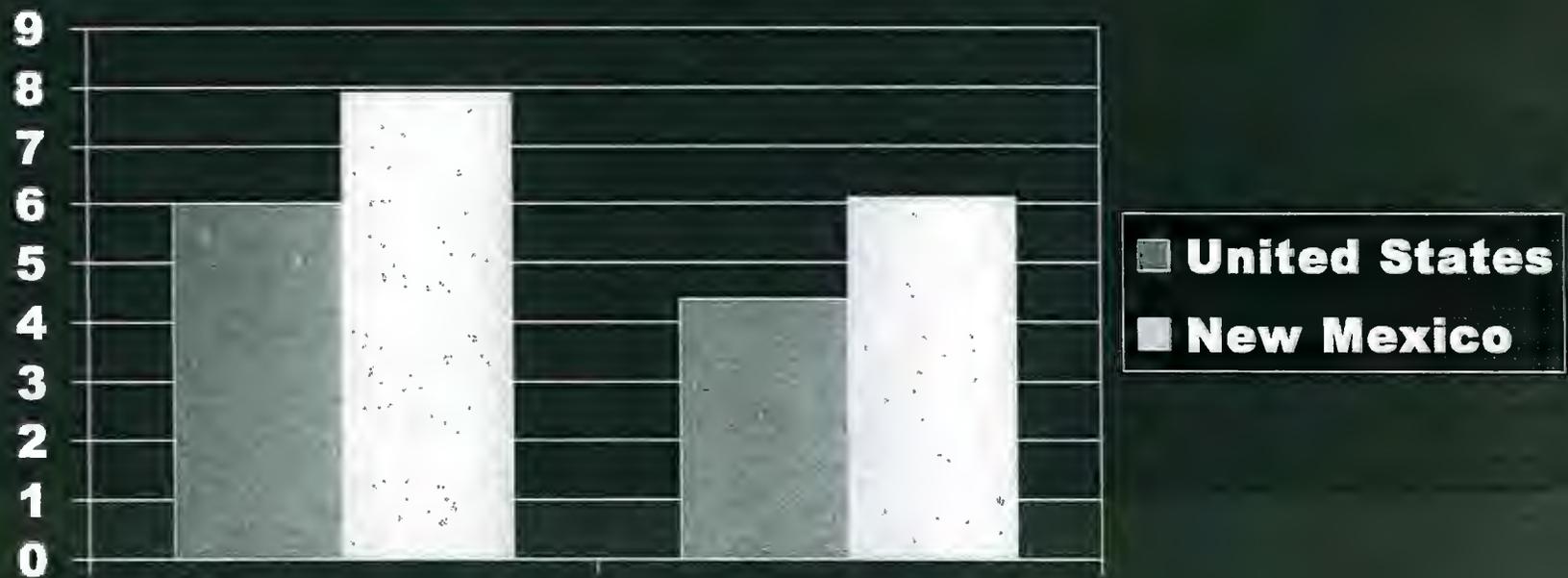


Source: CSTE Occupational Health Indicators Pilot Project

Comparison of worker percentages for selected high injury fatality risk occupations NM: US 2000



Comparison of US and NM occupational injury fatality rates 1980-91 – 1998-02

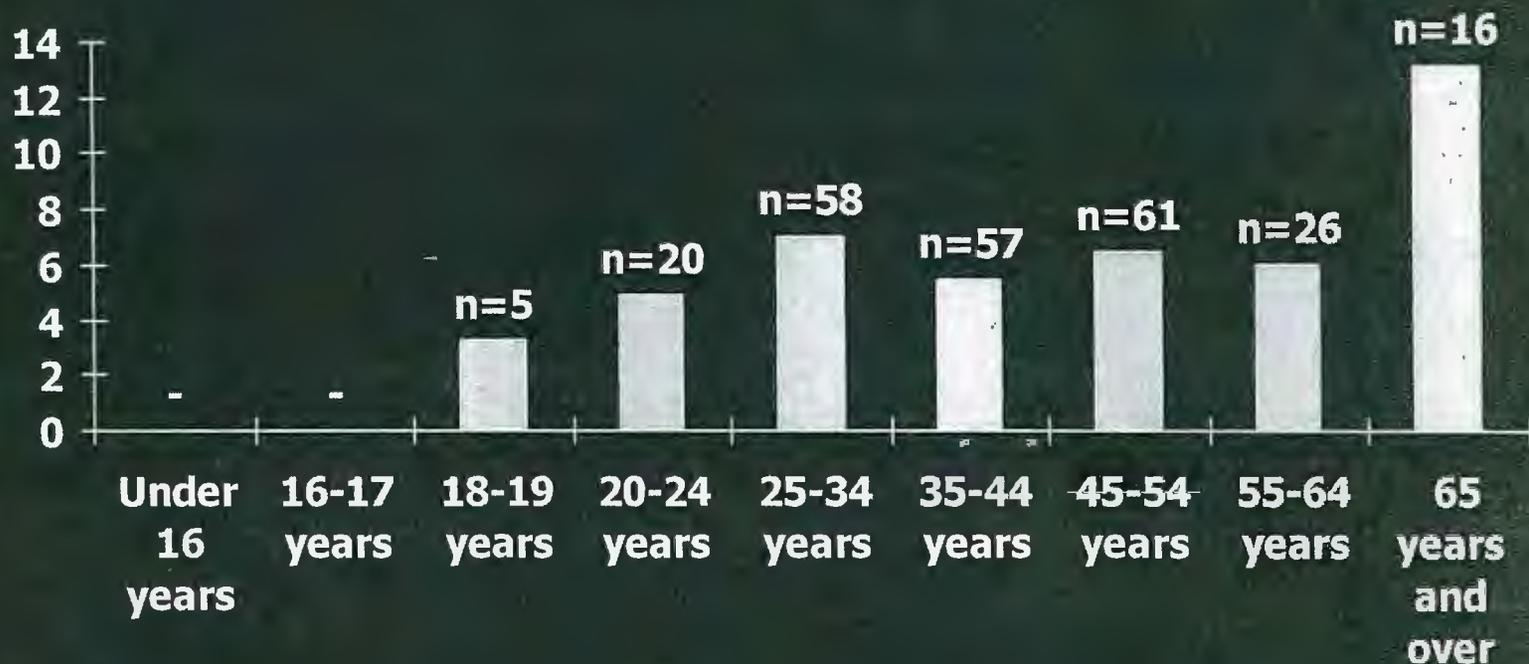


1980-1991
(Fullerton et. al)

1998-2002

Occupational injury death rates per 100,000 workers aged 16 and over

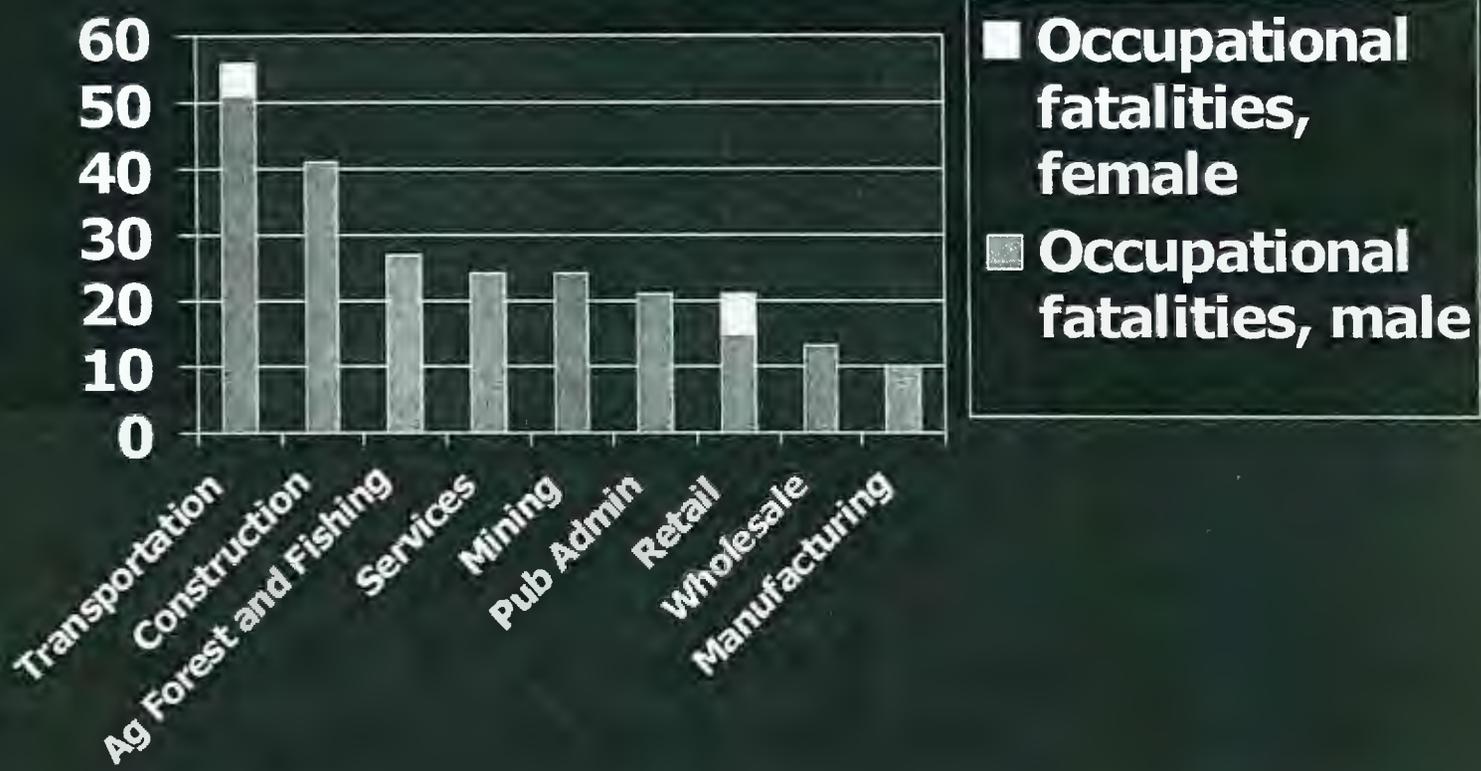
Average Annual Rate of Fatal Occupational Injuries by Age, New Mexico, 1998-2002



Source: CFOI

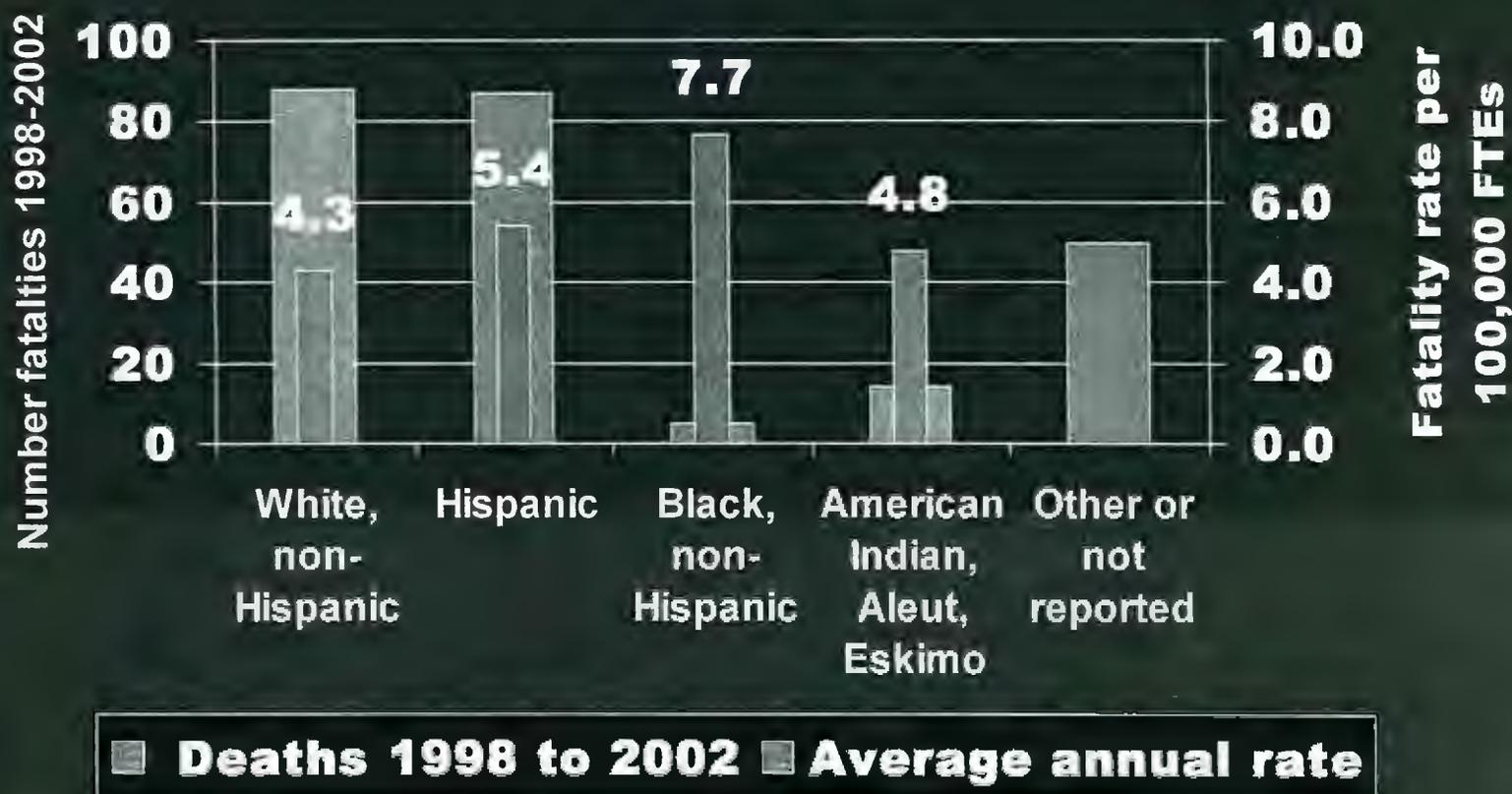
Occupational Injury Fatalities by Industry and Gender, New Mexico: 1998-2002

Female - 0.1/100,000 FTE
 Male - 10.9/100,000 FTE



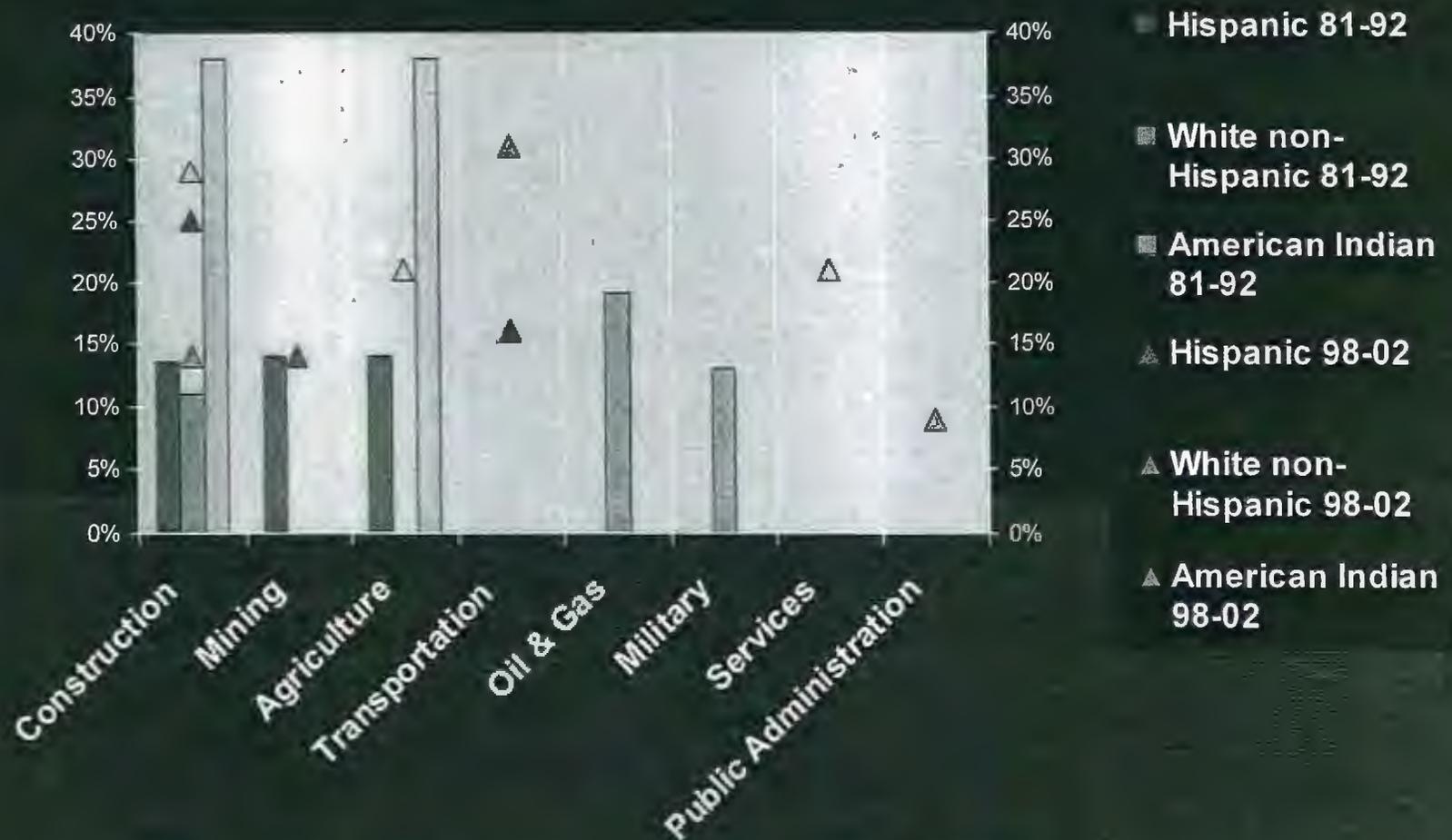
Source: CFOI

Occupational injury fatality rates by race/ethnicity, New Mexico 1998-2002



Source: CFOI

Top 3 industries for occupational fatality by ethnicity, Comparison 1981-1992* – 1998-2002†



*Source: Fullerton, L., Olson, L., Crandall, C., Sklar, D., Zumwalt. Occupational Injury Mortality in New Mexico

†Source: CFOI

Occupational injury fatalities by country of citizenship, New Mexico 1998-2002

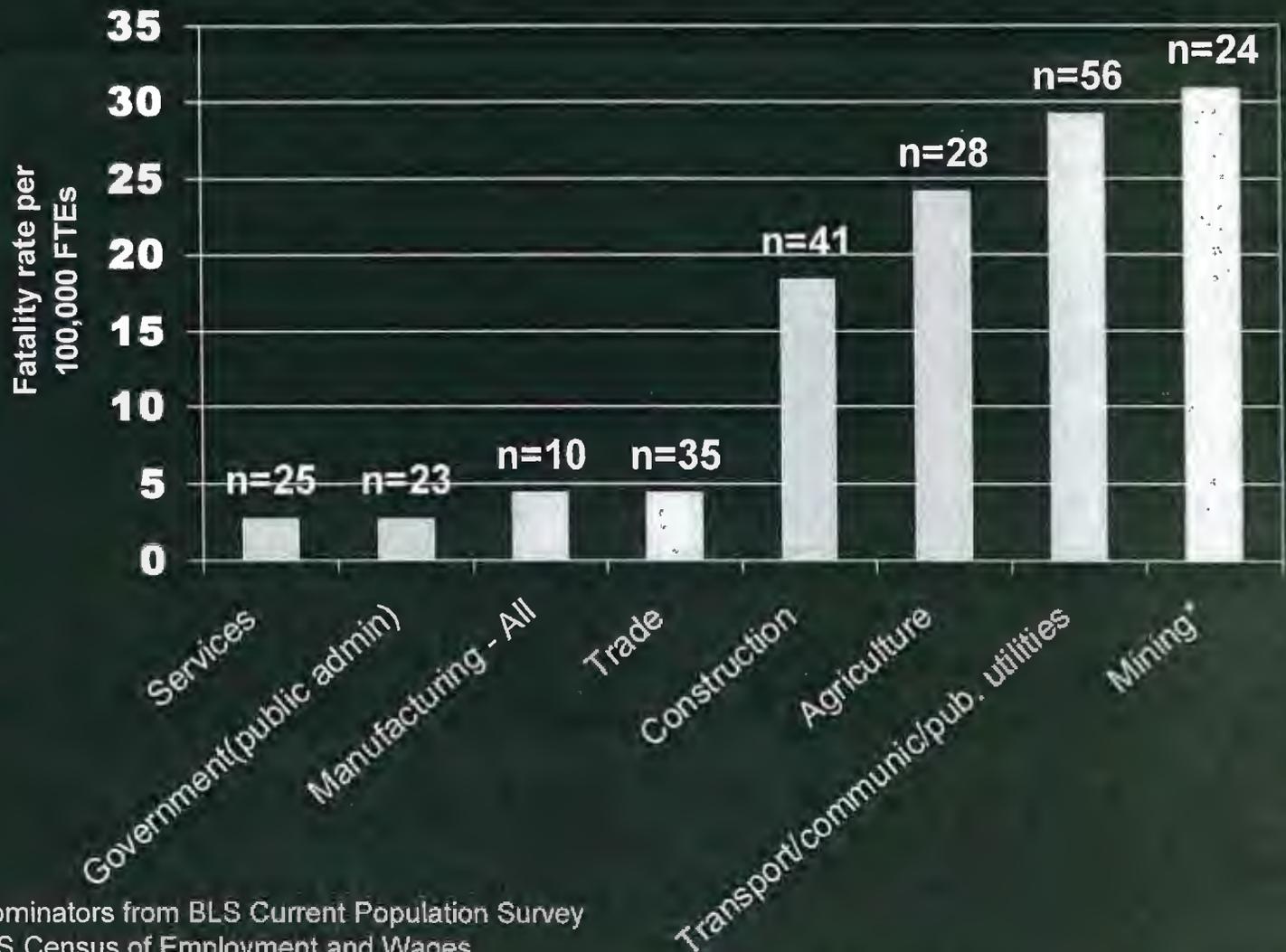
- Nine percent of worker deaths in New Mexico were in non-US citizens
- Fatality rate for non-citizens 10.3
- In 1994, 10% of occupational injury fatalities in US occurred in foreign-born workers¹.



Source: NMVRHS

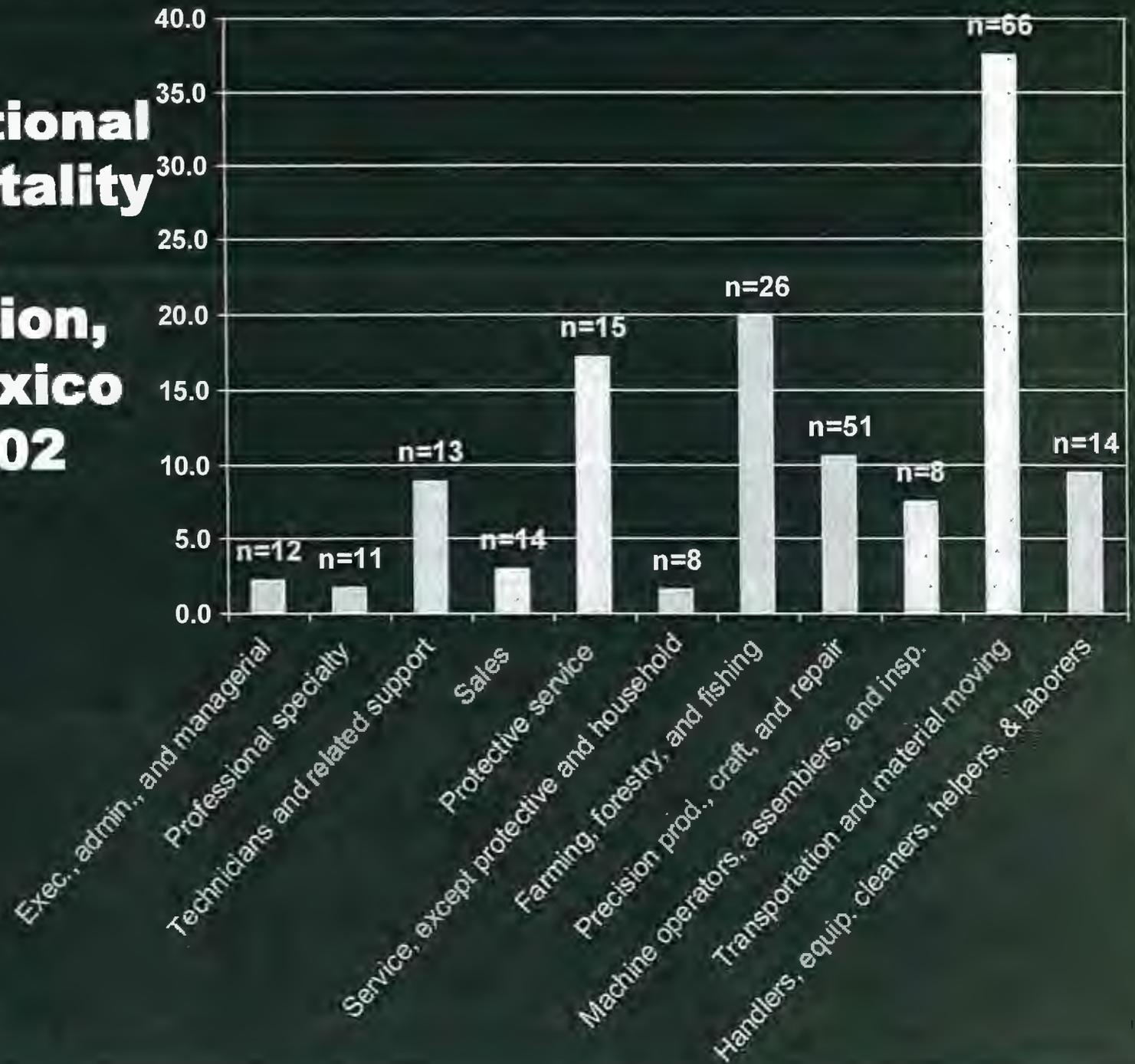
¹Windau, J. Occupational fatalities among the immigrant population. Compensation and Working Conditions, Spring, 1997

Occupational injury fatality rates by industry, New Mexico 1998-2002



Source: CFOI. All denominators from BLS Current Population Survey except mining, from BLS Census of Employment and Wages

Occupational injury fatality rates by occupation, New Mexico 1998-2002



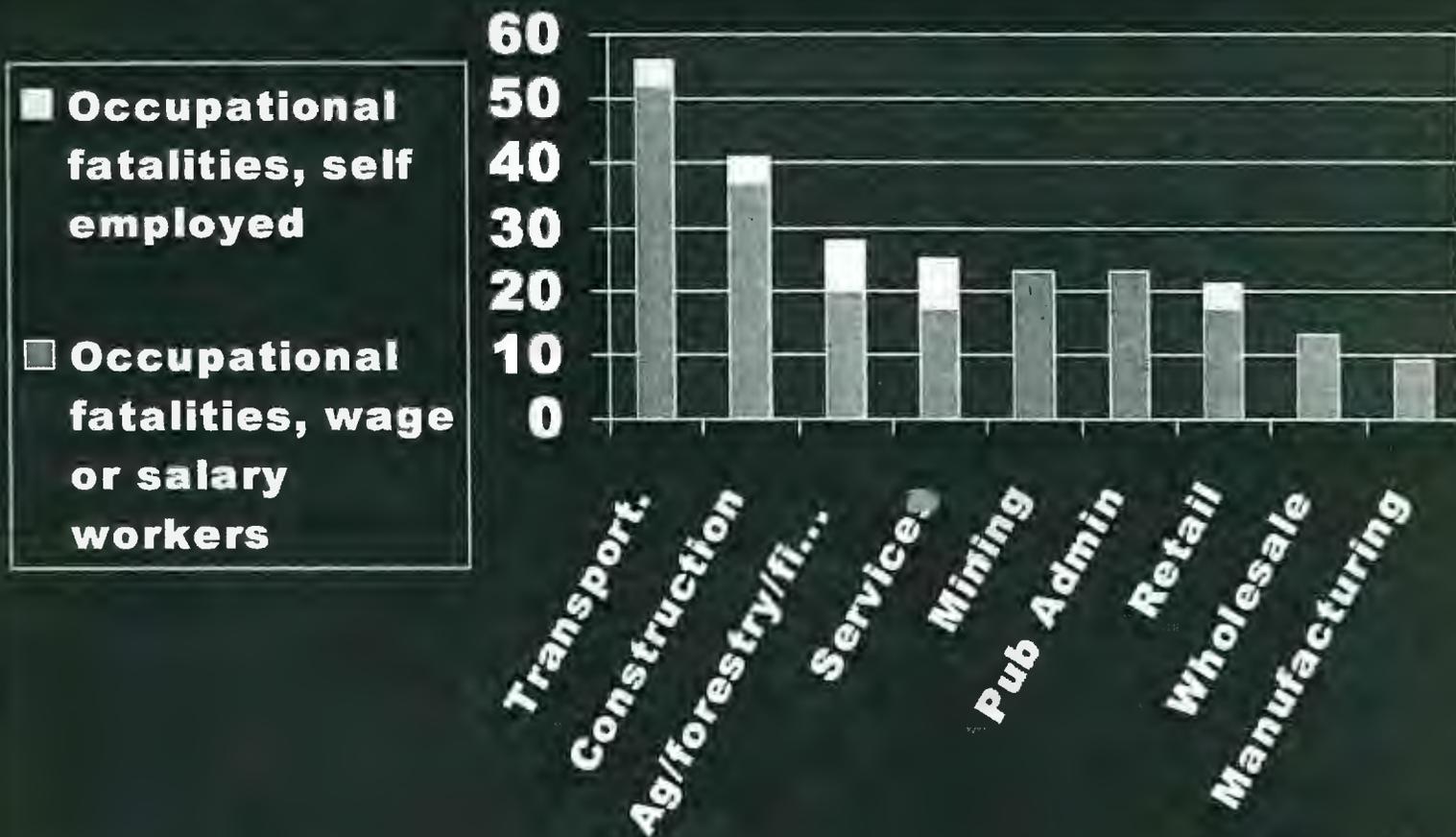
Source: CFOI

Occupational fatality rates by employment status, New Mexico, 1998 - 2002



Source: CFOI

New Mexico Occupational Injury Fatalities by Employment Status and Industry 1998-2002



Source: CFOI

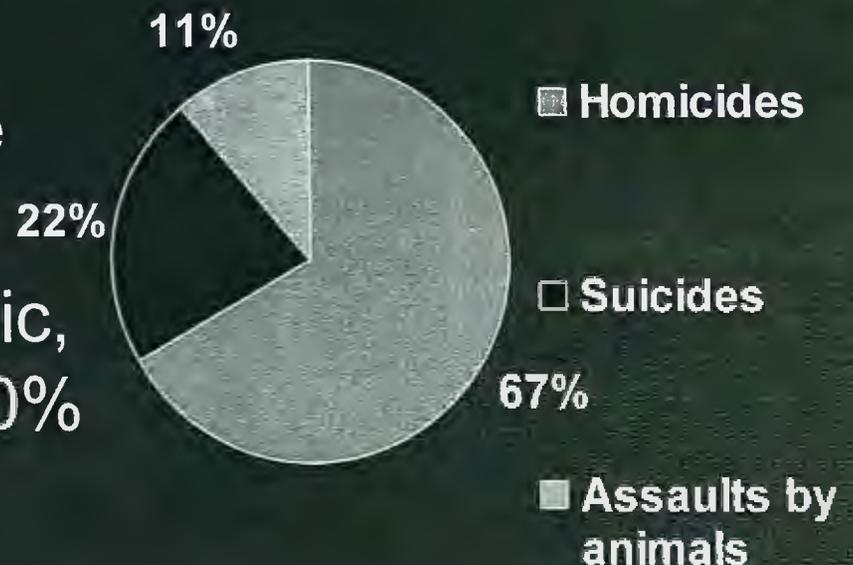
Occupationally-related deaths by cause or event: New Mexico 1998 - 2002



Source: CFOI

Occupational fatality – assaults and violent acts: New Mexico 1998-2002

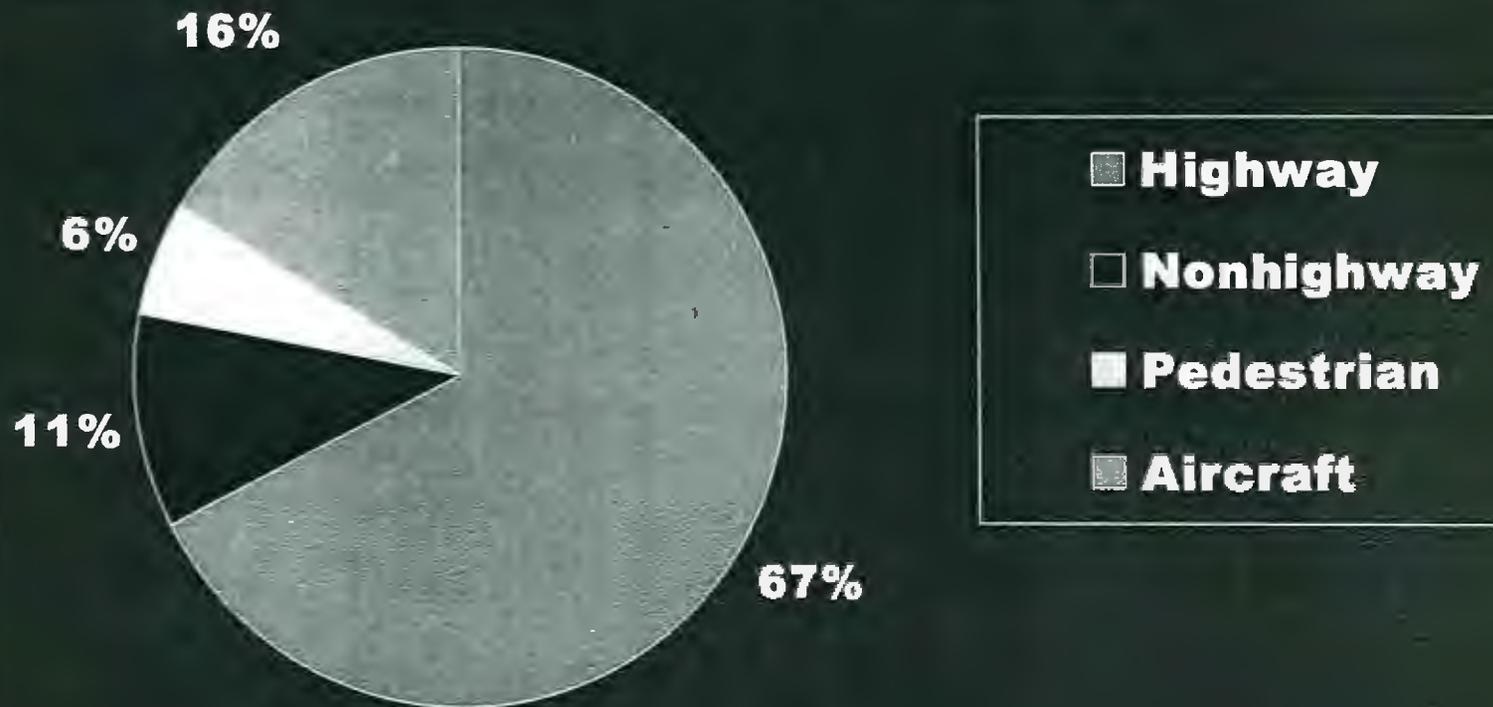
- Total 27 assaults and violent acts
- 31% of occupational fatalities in women were due to assaults
- 5% of white non-Hispanic, 15% of Hispanic, and 20% of American Indian fatalities were due to assaults.



Source: CFOI

Transportation related occupational fatalities by event or exposure, New Mexico 1998-2002

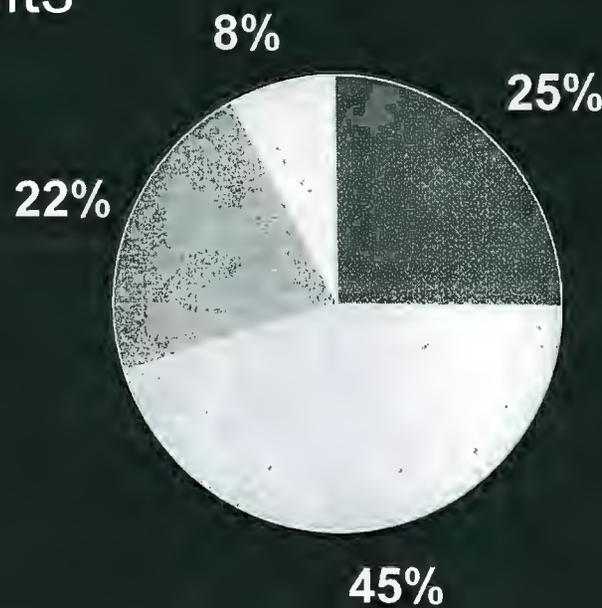
Number fatalities = 125



Source: CFOI

Occupational injury fatalities by state of residence, New Mexico, 1998-2002

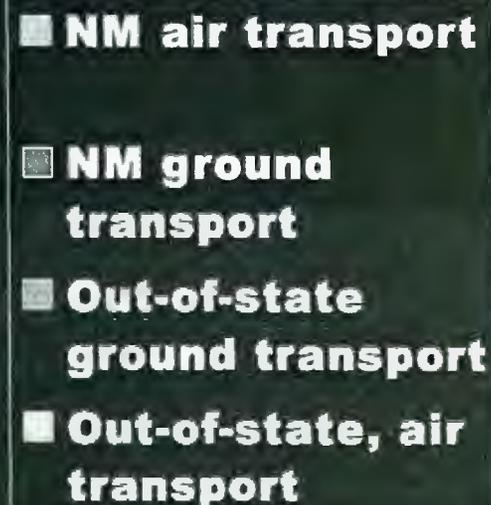
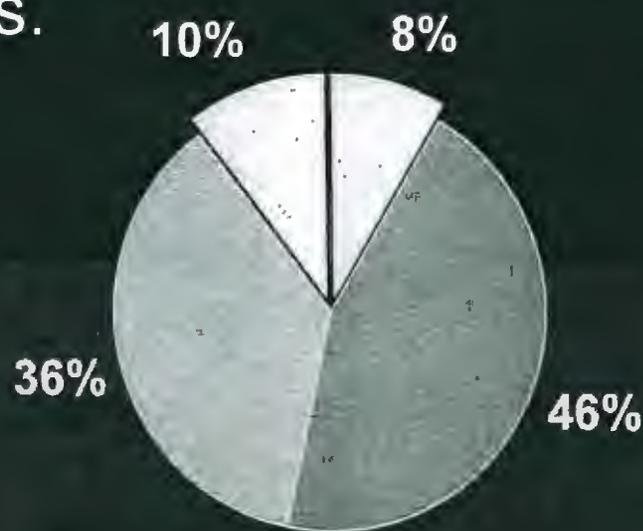
- 30% of occupational injury fatalities occurred in non-residents
- BUT...



- **NM transport**
- **NM non-transport**
- **Out-of-state transport**
- **Out-of-state non-transport**

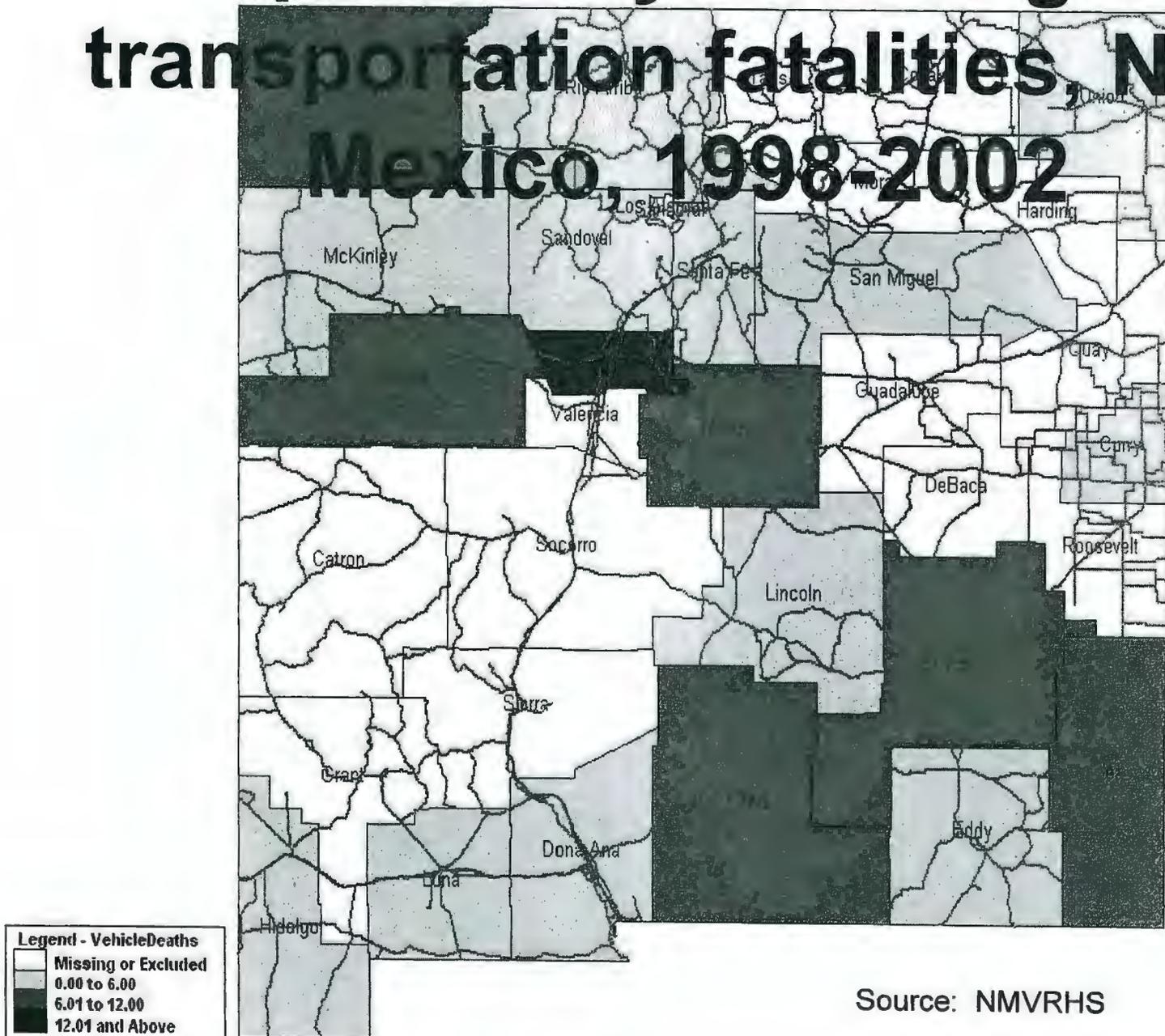
Occupational injury fatalities involving transportation, percent by residence and type of transport, New Mexico 1998-2002

- 47% of *transportation deaths* occurred in non-New Mexico residents.

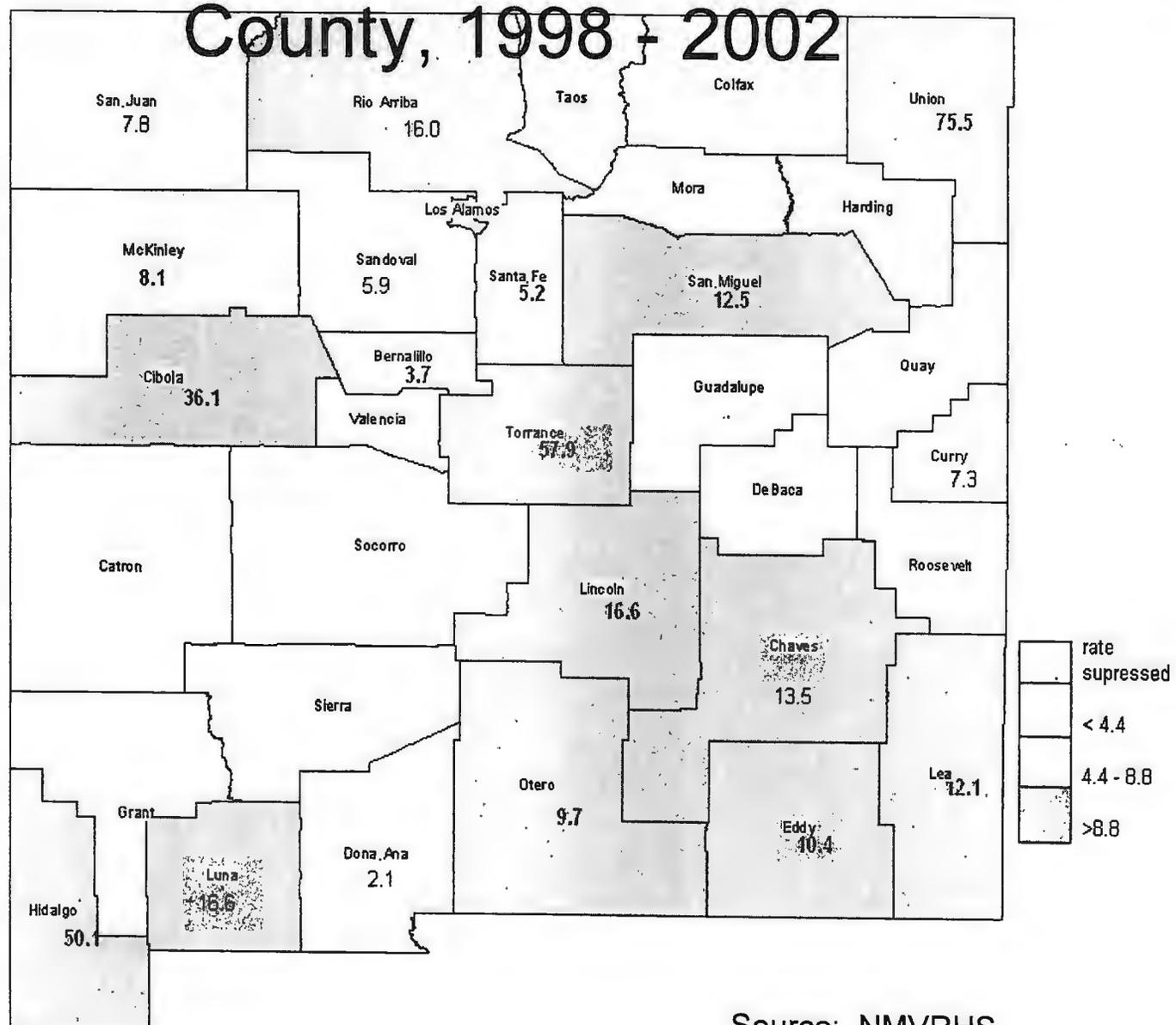


Source: NMVRHS

Occupationally-related ground transportation fatalities, New Mexico, 1998-2002

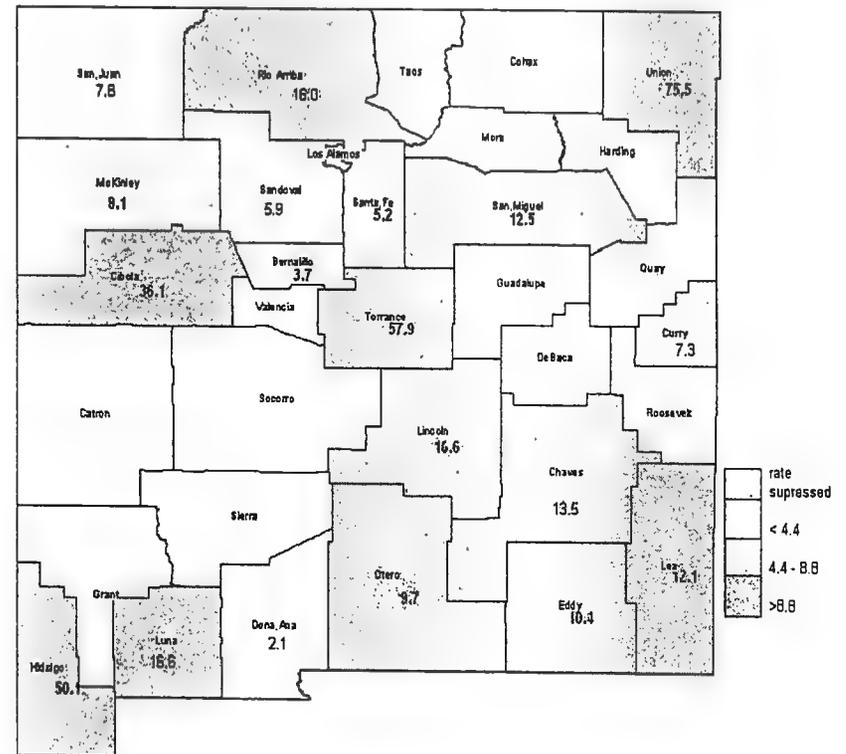
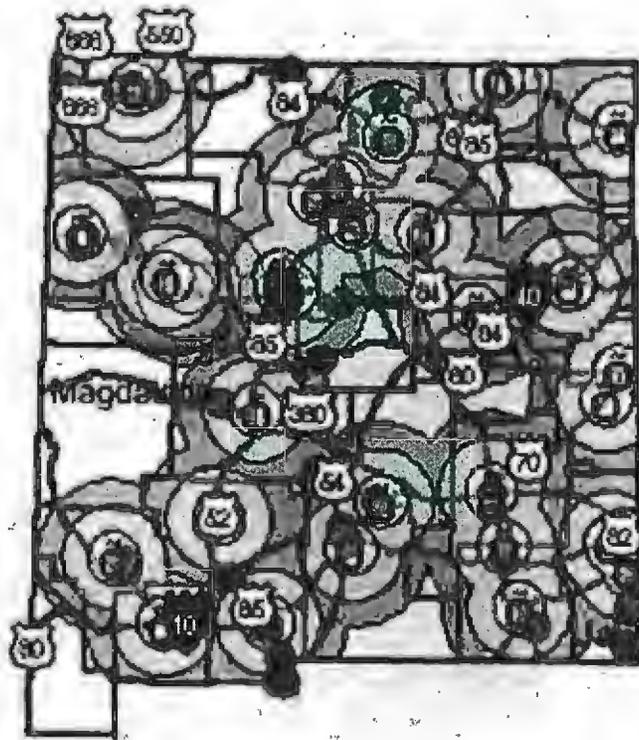


New Mexico Occupational Fatality Rates by County, 1998 - 2002



Source: NMVRHS

Comparison of hospital locations and fatality rates by county



What We Have Learned

- Males comprise the overwhelming number of fatalities BUT 31% of female fatalities are due to assaults
- Workers over age 65 have twice the rate of occupational injury fatalities of workers under 65 years of age
- Self employed have 1/3 higher rate of fatal injuries
- Hispanics, African Americans and American Indians appear to have higher rates of fatalities
- Hispanics and Native Americans make up 35% of fatalities due to assaults

What We Have Learned

- Non-US citizen workers have a higher rate of fatality than do US citizens in New Mexico
- Workers in rural counties have higher fatality rates than workers in more populated counties
- Transportation, construction, mining, and agriculture are the industries contributing the fatality rate

Next Steps

- **Distribution of brochure on NM Occupational Health Registry to all physicians, hospitals and health care centers in the state**
- **Improving accuracy of reporting by linking with IHS data and broadening data fields in the Trauma Registry**
- **Partnering with state OSHA for focus data analysis on workplace violence and silica exposure and interventions**

Next Steps

- Outreach and interventions
 - Older workers
 - Women workers
 - Workers in rural areas
 - Self-employed
 - Minorities
 - Immigrant workers