

New Mexico Office of the Medical Investigator



*"Wherever the art of medicine is practiced there is also a love of humanity." – Hippocrates* 

NM Office of the Medical Investigator MSC07 4040 1 University of New Mexico Albuquerque, NM 87131-0001 (505) 272-3053



2009 Annual Report Office of the Medical Investigator State of New Mexico

Ross E. Zumwalt, MD Chief Medical Investigator

Kurt Nolte, MD R. Ross Reichard, MD Assistant Chief Medical Investigators

Jeff Nine, MD Clarissa Krinsky, MD Ian Paul, MD Michelle Aurelius, MD Clare Bryce, MD Karen Cline-Parhamovich, DO Medical Investigators

#### **Board of Medical Investigations**

Paul B. Roth, M.D., Dean University of New Mexico/School of Medicine VP: Health Sciences Center Associate Vice President: Associate Dean Clinical Affairs Professor: Emergency Medicine Department

Alfredo Vigil, M.D., Secretary New Mexico Department of Health

Faron Segotta, Chief New Mexico State Police

Rodney May, Chairman State of New Mexico, Board of Thanatopractice

Alvin H. Warren, Secretary State of New Mexico Indian Affairs Department

> Office of the Medical Investigator MSC 07 4040 1 University of New Mexico Albuquerque, New Mexico 87131-0001 Telephone: (505) 272-3053 Fax: (505) 925-0546 <u>http://omi.unm.edu</u>



In September 2010 the Office of the Medical Investigator moved into new facilities at the New Mexico Scientific Laboratories building at 1101 Camino de Salud in Albuquerque. The new OMI facility allows for safer completion of greater numbers of autopsies and death investigations, and is the culmination of years of planning. With all significant transitions, however, delays inevitably occur, including the completion of our 2009 annual report. We apologize for the delay in the 2009 report, and will be returning to our usual schedule for the release of future annual reports.

# Office of the Medical Investigator (OMI) 2009 Annual Report

# Table of Contents

Introduction	1
Preparation of the Annual Report	1
Overview – Office of the Medical Investigator – 2009	1
Reportable Deaths	
Statutory Duty	2
Program Summary and Highlights for 2009	4
Investigative Activity "Doe" and/or missing person cases	
Training and Education	5
Forensic Pathologist Fellowship Program	5
Certification Training	5
Death Investigation Training	5
Law Enforcement Education	5
Public Education	6
OMI Newsletter and website	6
Grief Services Program	6
Organizational Chart – Office of the Medical Investigator	7
Total Cases	8
Figure 2 – Total Cases – 2000 – 2009	8
Figure 3 – Total Cases by Race/Ethnicity – 2009	9
Figure 4 – Total Cases by Age and Gender	.10
Table 1 – Total Cases – Autopsy Status – 2009	. 11
Table 2 – Total Cases – Case Distribution – 2009	. 11
Cause and Manner of Death	12
Figure 5 – Total Cases – Manner of Death – 2009	.12
Table 3 – Total Cases – Manner of Death by Gender – 2009	.13
Table 4 – Total Cases – Manner of Death by Race/Ethnicity – 2009	.13
Table 5 – Total Cases – Manner of Death by Age/Gender – 2009	.14
Figure 6 – MAP – Deaths by County of Injury – 2009	.15

Table 6 – Total Cases – County of Injury – 2009	
Figure 7 – MAP – Deaths by County of Residence – 2009	17
Table 7 – Total Cases – County of Residence – 2009	
Cause of Death Summary	19
Overview – Manner of Death – Natural Deaths	20
Figure 8 – Natural Deaths – 2000 – 2009	
Figure 9 – Natural Deaths by Race/Ethnicity – 2009	
Figure 10 – Natural Deaths by Age and Gender – 2009	21
Natural Deaths – Summary	
Overview – Manner of Death – Accidental Deaths	22
Figure 11 – Accidental Deaths – 2000 – 2009	
Figure 12 – Accidental Deaths by Race/Ethnicity – 2009	
Figure 13 – Accidental Deaths by Age and Gender – 2009	23
Table 8 – Accidental Deaths – County of Injury – 2000 - 2009	24
Table 9 – Accidental Deaths – County of Pronouncement - 2000 – 2009	25
Accidental Deaths – Summary	
Overview – Manner of Death – Suicide Deaths	27
Figure 14 – Suicide Deaths – 2000 – 2009	27
Figure 15 – Suicide Deaths by Race/Ethnicity – 2009	
Figure 16 – Suicide Deaths by Age and Gender – 2009	
Figure 17 – Suicide Deaths by Month – 2009	
Figure 18 – Suicide Deaths by Day of the Week – 2009	
Table 10 – Suicide Deaths by County of Injury - 2000 - 2009	
Table 11 – Suicide Deaths by County of Pronouncement – 2000 - 2009	
Suicide Deaths – Summary	
Overview – Manner of Death – Homicide Deaths	32
Figure 19 – Homicide Deaths – 2000 – 2009	
Figure 20 – Homicide Deaths by Race/Ethnicity – 2009	
Figure 21 – Homicide Deaths by Age and Gender – 2009	
Table 12 – Homicide Deaths – County of Injury – 2000 - 2009	
Table 13 – Homicide Deaths – County of Pronouncement – 2000 - 2009	
Homicide Deaths – Summary	
Figure 22NM-VDRS Update	36
Overview – Manner of Death – Undetermined Deaths	
Figure 23 – Undetermined Deaths – 2000 – 2009	
Figure 24 – Undetermined Deaths by Race/Ethnicity – 2009	
Figure 25 – Undetermined Deaths by Age and Gender – 2009	
Undetermined Deaths – Summary	

Deaths of Children (19 Years of Age and Younger)	59
Figure 26 – Children Deaths – 2000 – 2009	. 39
Figure 27 – Children – Deaths by Race/Ethnicity – 2009	. 39
Figure 28 – Children – Deaths by Age and Gender – 2009	.40
Figure 29 – Children – Total Cases – Manner of Death – 2009	.40
Overview – Children – Manner of Death – Natural Deaths	41
Figure 30 – Children – Natural Deaths – 2000 – 2009	.41
Figure 31 – Children – Natural Deaths by Race/Ethnicity – 2009	.41
Figure 32 – Children – Natural Deaths by Age and Gender – 2009	.42
Overview – Children – Manner of Death – Accidental Deaths	43
Figure 33 – Children – Accidental Deaths – 2000 – 2009	.43
Figure 34 – Children – Accidental Deaths by Race/Ethnicity – 2009	
Figure 35 – Children – Accidental Deaths by Age and Gender – 2009	.44
Table 14 – Children – Accidental Deaths – Cause of Death – 2009	.44
Overview – Children – Manner of Death – Suicide Deaths	45
Figure 36 – Children – Suicide Deaths – 2000 – 2009	.45
Figure 37 – Children – Suicide Deaths by Race/Ethnicity – 2009	.45
Figure 38 – Children – Suicide Deaths by Age and Gender – 2009	.46
Figure 39 – Children – Suicide Deaths by Month – 2009	.46
Figure 40 – Children – Suicide Deaths by Day of the Week – 2009	.46
Table 15 – Children – Suicide Deaths – Cause of Death – 2009	
Suicide in Children – Summary	.47
Overview – Children – Manner of Death – Homicide Deaths	48
Figure 41 – Children – Homicide Deaths – 2000 – 2009	.48
Figure 42 – Children – Homicide Deaths by Race/Ethnicity – 2009	.48
Figure 43 – Children – Homicide Deaths by Age and Gender – 2009	. 49
Table 16 – Children – Homicide Deaths – Cause of Death – 2009	. 49
Homicide Deaths of Children – Summary	. 49
Overview – Children – Manner of Death – Undetermined Deaths	50
Deaths of Children in New Mexico – 2009 Summary	50
Overview – Children – SIDS Deaths	
Figure 44 – Children – SIDS (Natural) Deaths – 2000 – 2009	. 51
Figure 45 – Children – SIDS (Natural) Deaths by Race/Ethnicity	. 51
Figure 46 – Children – SIDS (Natural) Deaths by Age and Gender	
Overview – Ethanol Related Deaths	
Figure 47 – Ethanol Related Deaths – 2000 – 2009	
Figure 48 – Ethanol Related Deaths – Manner of Death – 2009	
Figure 49 – Ethanol Related Deaths by Race/Ethnicity – 2009	.54

Figure 50 – Ethanol Related Deaths by Age and Gender – 2009	54
Ethanol Related Deaths – Undetermined – 2009	55
Ethanol Related Deaths – Summary	55
Motor Vehicle Related Deaths (Ethanol Present in Decedent)	56
Figure 51 – Motor Vehicle Deaths – 2000 – 2009	
Figure 52 – Motor Vehicle Deaths by Race/Ethnicity – 2009	
Figure 53 – Motor Vehicle Deaths by Age and Gender – 2009	57
Table 17 – Motor Vehicle Related Deaths – Method – 2009	57
Table 18 – Motor Vehicle Related Deaths – Seat Belt Use – 2009	
Table 19 – Motor Vehicle Related Deaths – Air Bag Use – 2009	
Drug Caused Deaths	59
Figure 54 – Drug Caused Deaths – 2000 – 2009	
Figure 55 – Drug Caused Deaths by Race/Ethnicity – 2009	
Figure 56 – Drug Caused Deaths by Age and Gender – 2009	60
Drug Caused Deaths – Summary	60
Table 20 – Drug Caused Deaths – Counties of Injury and Pronouncement – 2009	61
Glossary	62

## Introduction

The Office of the Medical Investigator (OMI) investigates any death occurring in the State of New Mexico that is sudden, violent, untimely, unexpected or where a person is found dead and the cause of death is unknown. OMI performed services for a total of 5,120 deaths. A detailed breakout of the case distribution can be found in this report.

This report is presented in two sections. The first section of the report summarizes the activity of the OMI. The second presents data routinely collected by the OMI in a manner that answers questions related to mortality and public health from a medical examiner's perspective. The tables and figures included in the report are designed to be self-explanatory, and we hope you find them easy to read and understand. Definitions can be found in the Glossary and may provide assistance with the terminology encountered in the report. Readers with special interests, needs, or whose questions are not answered by this report may contact the Computer and Information Services Section of the OMI. Additionally, we encourage interested researchers to contact the Bureau of Vital Statistics for complete mortality statistics.

Comments or suggestions concerning the content, format or clarity of the report are always welcome.

#### Preparation of the Annual Report

The OMI data from which this report was compiled are maintained on a web-based database management system located at the New Mexico Scientific Laboratories in Albuquerque. OMI faculty Sarah Lathrop, DVM, PH.D and, J&J Technical Services staff Greta Freienmuth and contractor Michelle Gibson, using Microsoft Office 2000 Professional prepared this report. UNM Health Sciences Center – Digital Printing and Document Services printed and bound the final distribution copies. Electronic copies of this report may be downloaded in .PDF format from the OMI website: omi.unm.edu

### <u>Overview – Office of the Medical Investigator – 2009</u>

The Office of the Medical Investigator (OMI) was created by the New Mexico State Legislature in 1972 and became operational in 1973. Replacing the county coroner system, the OMI was tasked<sup>1</sup> with investigating all reportable deaths occurring in New Mexico, to subsequently determine the cause and manner of death in such cases, and to provide formal death certification.

<sup>&</sup>lt;sup>1</sup>NMSA Statute 24-11-1, et seq., and 7-NMAC 3.2.8

# Reportable Deaths:

Those deaths to be reported to the OMI include all deaths occurring in New Mexico as outlined below regardless of where or when the initial injuring event occurred.

- Any death that occurs suddenly and unexpectedly, that is, when the person has not been under medical care for significant, heart, lung or other disease.
- Any death suspected to be due to violence, i.e., suicidal, accidental or homicidal injury, regardless of when or where the injury occurred.
- Any death suspected to be due to alcohol intoxication or the result of exposure to toxic agents.
- Any death of a resident housed in a county or state institution, regardless of where death occurs. This refers to any ward of the state or individual placed in such a facility by legal authorization.
- Any death of a person in the custody of law enforcement officers.
- Any death of a person in a nursing home or other private institution without recent medical attendance.
- Any death that occurs unexpectedly during, in association with, or as a result of diagnostic, therapeutic, surgical or anesthetic procedures.
- Any death alleged to have been caused by an act of malpractice.
- Any death suspected to be involved with the decedent's occupation.
- Any death unattended by physician.
- Any death due to neglect.
- Any stillbirth of 20 or more weeks' gestation unattended by a physician.
- Any maternal death to include death of a pregnant woman regardless of the length of the pregnancy, and up to six weeks post delivery, even where the cause of death is unrelated to the pregnancy.
- Any death of an infant or child where the medical history has not established some preexisting medical condition.
- Any death, which is possibly, directly or indirectly, attributable to environmental exposure, not otherwise specified.
- Any death suspected to be due to infectious or contagious disease wherein the diagnosis and extent of disease at the time of death are undetermined.
- Any death occurring under suspicious circumstances.
- Any death in which there is doubt as to whether or not it is a medical investigator's case should be reported.

### **Statutory Duty:**

The OMI Policy Manual, derived from statute, requires the OMI to perform the following duties in all cases of reportable deaths:

- Receive all reports of sudden, unexpected or unexplained deaths.
- Respond to all sudden, unexpected or unexplained deaths.
- In the absence of a physician, pronounce death.
- Take custody of the body and all articles on or near the body.

- Maintain the chain of custody of the body and all articles obtained there from.
- Conduct an investigation leading to the determination of the cause and manner of death.
- Obtain toxicology samples from the body when indicated, and arrange for necessary tests upon those samples that will aid in the determination of cause and manner of death; maintain the proper chain of custody and evidence on those samples; store those samples for an appropriate period of time.
- Certify the cause and manner of death and forward written certification to designated agencies.
- Properly dispose of human remains through release to family or designated and authorized entities.
- Provide accurate identification of all human remains when possible.
- Cooperate with authorized agencies having involvement with death investigation.
- Provide professional, objective testimony in state and local courts of law.
- Define procedures that establish fees for services and material provided by the Office of the Medical Investigator.
- Define procedures to reimburse all parties providing services to the Office of the Medical Investigator.
- Establish and maintain a disaster plan outlining the role of OMI staff.
- Maintain records of each official death investigation and provide reports to official agencies.

The above duties are exclusive of deaths that occur on tribal or federal land. The OMI provides consulting services for requesting agencies such as the Bureau of Indian Affairs (BIA), Federal Bureau of Investigation (FBI), Tribal Law Enforcement or neighboring state jurisdictions.

The OMI is designated as a special program within the Department of Pathology at the University of New Mexico School of Medicine. A Board of Medical Investigations comprised of the Dean of the UNM School of Medicine, the Chief of the New Mexico State Police, the Secretary of Health and Environment Department, the Chairman of the New Mexico Thanatopractice and the Chairman of the New Mexico Indian Affairs Commission was established to oversee and develop policy. The Board appoints the Chief Medical Investigator, a physician licensed in New Mexico, trained in Pathology and Forensic Medicine, who has responsibility for operations.

The program operates out of the Central Office located in the UNM Health Sciences Center in Albuquerque, New Mexico. The Central Office directs all investigative activities statewide. Specially trained and certified Field Deputy Medical Investigators (FDMI) conduct field investigations. Every county in New Mexico has FDMI's who conduct investigations at the scene of death to collect information used to determine jurisdiction, possible cause and manner of death, and in the absence of a physician provide the pronouncement of death. The FDMI's contact the Central Office and present the results of each investigation to Central Office Deputy Medical Investigations. All autopsy services are conducted in the Central Office and are performed by forensic pathologists with the assistance of morphology services. The New Mexico State Laboratory provides the majority of toxicology services with some specialized tests sent to other laboratories. All documentation is archived by the Central Office and is available as provided for by public record statutes and regulations.

Such a strongly defined and professionally staffed system provides investigative agencies, the medical community and the citizens of New Mexico with standardized death investigation protocols and a

Office of the Medical Investigator Annual Report 2009

central repository for the information compiled during those medicolegal investigations. The centralization of these services has proven valuable in many areas of public concern including:

- Criminal investigations such as homicide or child abuse
- Protection of public health from environmental hazards and the spread of infectious disease
- Surveillance and reporting of deaths that may represent bioterrorist activities
- Medical and statistical research contributing to positive preventative measures (Seat Belt Laws)
- Expert testimony in court cases
- Proper certification of death
- Services to families of the deceased persons (Grief Services Program)

#### Program Summary for 2009

#### **Investigative Activity:**

In 2009, New Mexico had 5,120 deaths that met the criteria to become a reportable death. The OMI provided investigative services for each of these 5,120 deaths. Following these investigations, OMI retained jurisdiction of 3,685 deaths and relinquished jurisdiction of 1,214 deaths to private physicians. An additional 221 deaths were investigated as a consultation services resulting in a total caseload of 5,120 medicolegal investigations. A granular examination of the case distribution is presented in the section Overview – Total Cases – 2009 beginning on page 8.

#### "Doe" and/or missing person cases:

Each year OMI receives 150-200 "Doe" cases, where remains are initially unidentified. 98% of these cases are successfully identified through OMI's investigative efforts. In 2009 this included 124 postmortem forensic dental examinations (using dental records to identify remains).

### Training and Education

At the OMI, the activity of training and education is an integral part of day-to-day operations. The OMI is designated as a special program within the Department of Pathology at the University of New Mexico School of Medicine. The staff pathologists are faculty members with the School of Medicine and are expected to participate in training of medical students, residents and fellows, as well as conduct research activity to further advance the science of forensic medicine.

#### Forensic Pathologist Fellowship Program

The OMI Forensic Pathology Fellowship Program is considered one of the best in the country. The fellowship is a one-year, in-depth training program in the subspecialty of forensic pathology. Applicants must have completed an accredited pathology residency program. Four positions for this competitive program are available each year and are generally filled two to three years in advance.

#### Certification Training

All OMI deputy medical investigators are required to become certified to perform a death investigation. The OMI provides this training for the deputy medical investigators throughout New Mexico and in the past year, 19 individuals successfully completed the training and received certification as new Field Investigators. 73 current Field Investigators participated in training and were recertified. Upon request, OMI will provide the certification training to other medical investigators, coroners and law enforcement agencies for adaptation to the needs of their local systems. (Ex. Native American police officers).

#### Death Investigation Training

Death Investigation Training was conducted by the OMI as two training sessions in Albuquerque, in March and October. 75 representatives from the medical examiner, law enforcement and health care professions from throughout the nation participated in the training with a curriculum designed to present the most current facets of death investigations.<sup>•</sup> Participants were from Washington, DC, Montana, New Jersey, Washington, Arizona, Colorado, Texas, Oklahoma, Idaho, Ohio, Indiana, California, Alabama, Delaware, Tennessee, Illinois and of course, New Mexico. New Mexico personnel included representatives from the New Mexico Department of Public Safety, Bureau of Vital Statistics, Albuquerque Police Department, EMS Academy, and through Career Fairs for Elementary, Middle and High Schools.

#### Law Enforcement Education

Death investigation training is provided at the New Mexico State Police Academy, the New Mexico Law Enforcement Academy, the Bernalillo County Sheriff's Office Training Academy, APD Citizen's Police Academy and the Albuquerque Police Academy. In addition, specialized training is provided to individual police departments at their request.

### Public Education

OMI Staff conducts in-service training throughout the state for a wide variety of agencies. Examples of agencies include Department of Health, funeral homes, hospitals, correction facilities, the EMS training site, state search and rescue groups and professional/advanced degree classes at New Mexico Universities. OMI also provided tours and presentations to middle and high school students from throughout New Mexico in 2009, as well as Central New Mexico Community College and UNM medical and health programs.

### OMI Newsletter and website

The OMI Newsletter is published quarterly and sent to OMI field and central office staff, funeral homes and hospice and home health care. The newsletter conveys information regarding updates in legislation and/or investigation and personnel issues.

The OMI website at *http://omi.unm.edu* provides instant access to information concerning OMI, staff, operating procedures and services offered. Through the website, users can download forms needed for requesting OMI documents.

### **Grief Services Program**

The Grief Services Program (GSP) was established in 1975. Initially, the program provided crisis intervention and education to families whose child died as a result of Sudden Infant Death Syndrome (SIDS). The program has continually expanded its mission and now provides its services to all New Mexico families following the sudden and unexpected death of a family member. These services include: crisis intervention, psychotherapy, education, consultations, and referrals. Additionally, the GSP provides grief education and training throughout New Mexico for agencies such as law enforcement, emergency responders, nurses, mental health providers, teachers and other groups who request such training.

### **Donor Services**

In 2009, OMI ensured that 100% of potential organ donors and their families were allowed to give the gift of life.

OMI works closely with Donor Services to provide life-saving organs from transplantation, in New Mexico and across the country. Our thanks to the families whose loved ones became an organ or tissue donor, providing an enhanced quality of life to hundreds of transplant recipients.

# Office of the Medical Investigator Organizational Chart as of December 2009



# Total Cases

The remainder of this report will present data routinely collected by the OMI in a manner that answers questions regarding mortality and public health. The tables and charts summarize data collected on every medicolegal investigation, including consultation cases that the OMI conducted for this reporting period. The data, a subset of total mortality figures, represent findings on cases that come to the attention of forensic pathology. Readers who need complete mortality figures are encouraged to contact the State Center for Health Statistics –Bureau of Vital Records and Health Statistics, New Mexico Department of Health.







Figure 3 – Total Cases by Race/Ethnicity – 2009

\* White includes 1,600 Hispanic, \* American Indian includes 3 Hispanic, \*Unknown includes 22 Hispanic



# Figure 4 – Total Cases by Age and Gender – 2009

# Table 1 – Total Cases – Autopsy Status – 2009

	Manner of Death										
Autopsy	Natural	Accident	Suicide	Homicide	Undetermined*	Total					
Yes	593	751	285	177	95	1,901					
No	2,371	639	94	30	85	3,219					
Total	2,964	1,390	379	207	180	5,120					

\* 106 Undetermined, 5 Pending, 69 Other included in Undetermined

### Table 2 – Total Cases – Case Distribution – 2009

		Autor	DSV		
Type of Case	Manner of Death	Yes	No	Percent Autopsied	Total
Medical Investigator	Natural	525	1,110	32.11%	1,635
C	Accident	708	552	56.19%	1,260
	Suicide	276	83	76.88%	359
	Homicide	153	24	86.44%	177
	Undetermined	88	69	56.05%	157
	Subtotal	1,750	1,838	48.77%	3,588
Terminated Jurisdiction	Natural	2	1,229	0.16%	1,231
	Accident	0	77	0.0%	77
	Suicide	0	0	0.0%	0
	Homicide	0	3	0.0%	3
	Undetermined	0	0	0.0%	0
	Subtotal	2	1,309	0.15%	1,311
Reported Deaths		1,752	3,147	35.76%	4,899
Consultation Cases	Natural	66	32	67.35%	98
	Accident	43	10	81.13%	53
	Suicide	9	11	45.00%	20
	Homicide	24	3	88.89%	27
	Undetermined	7	16	30.43%	23
	Subtotal	149	72	67.42%	221
Total		1,901	3,219	37.13%	5,120

# Cause and Manner of Death



#### Figure 5 – Total Cases – Manner of Death – 2009

In 2009, OMI investigated 5,120 deaths, representing approximately 35% of the estimated total deaths in New Mexico in 2009. Of the deaths investigated by OMI in 2009:

The total number of deaths investigated represents a 1.6% decrease from the 2008 total, and an 8.1% increase since 2000.

The ratio of male to female deaths, when gender was clearly determined, was 1.73. Decedents classified as non-Hispanic white represented 55% of the total, Hispanic 32%, American Indian 8.6%, African American 2.2% and Asian 0.5%. The racial-ethnic composition of New Mexico was listed in the 2010 census as: 41% non-Hispanic white, 46% Hispanic, 9.4% American Indian, 2.1% African American and 1.5% Asian.

While natural deaths contributed the largest portion of OMI deaths investigated (57.9%), most natural deaths did not fall under the jurisdiction of the OMI. Data presented regarding natural deaths should not be interpreted as representative of all natural deaths in New Mexico.

<sup>\* 106</sup> Undetermined, 5 Pending, 69 Other included in Undetermined

Gender	Accident	Homicide	Natural	Suicide	Undetermined	Total
Female	533	50	1,129	90	48	1,850
Male	856	157	1,832	289	68	3,202
Unknown	1	0	3	0	64	68
Total	1,390	207	2,964	379	180	5,120

# Table 3 - Total Cases – Manner of Death by Gender – 2009

### Table 4 - Total Cases – Manner of Death by Race/Ethnicity – 2009

Race/Ethnicity	Accident	Homicide	Natural	Suicide	Undetermined	Total
American Indian	136	46	200	32	23	437
Asian/Pacific Islander	5	1	17	1	0	24
African American	17	10	77	4	3	111
White/Hispanic	479	90	890	97	45	1,601
White	734	58	1,766	236	44	2,838
Unknown	19	2	14	9	65	109
	1,390	207	2,964	379	180	5,120

\*American Indian includes 3 Hispanic

Gender	Age	Natural	Acci MVA*	dents Non-	Suicide	Homicide	Undetermined	Total
Female	<1	34	0	<b>MVA</b> 4	0	2	7	47
remaie	1-4	54 8		43	0	20	2	47 15
	1-4 5-9	o 4	2 3	3 2	0	0	$\frac{2}{0}$	13
	10-14	4 2	3 4	2		0	0	9 10
	10-14	2 6	4 13	2 6	1 7	0	1 0	10 34
	20-24	9	13	0 7	4	2 6	0 2	34 38
	20-24 25-34	30	21	23	4	18	7	114
	35-44	50 52	21 24	23 46	15	8	3	149
	45-54	131	24 15	40 68	10 24	8 6	8	252
	43-34 55-64	131	13	26	24 16		o 6	252 256
						6	-	
	65-74	198	10	33	4	1	4	250 204
	75-84	221	6	63	2	0	2	294
	85-94	155	6	103	1	1	1	267
	95+	27	1	24	0	0	1	53
	Unknown	58	0	0	0	0	4	62
	Subtotals	1,129	123	410	90	50	48	1,850
Male	<1	76	3	3	0	5	13	100
maie	1-4	7	8	5	0	3	0	23
	5-9	4	3	1	0	1	1	10
	10-14	3	3	2	2	2	1	13
	15-19	6	22	15	16	17	3	79
	20-24	4	35	44	40	21	4	148
	25-34	39	36	77	50	36	8	246
	35-44	94	35	101	36	32	15	313
	45-54	271	43	112	50	20	9	507
	55-64	422	33	77	51	14	8	605
	65-74	335	15	30	20	4	4	408
	75-84	313	15	50 67	16	1	- 1	408
	85-94	160	6	54	5	1	1	227
	95+	100	0	10	0	0	0	25
	Unknown	83	0	10	0	0	0	23 84
	Subtotals	<b>1,832</b>	258	<b>598</b>	289	157	<b>68</b>	<b>3,202</b>
	Subtotals	1,032	230	590	209	157	00	3,202
	<1	2	0	0	0	0	0	33
Unknown	35-44	0	0	0	0	0	1	1
	65-74	1	0	0	0	0	0	1
	75-84	0	0	1	0	0	0	1
	Unknown	0	0	0	0	0	63	32
	Subtotals	3	0	1	0	0	64	68
Total		2,964	381	1,009	379	207	180	5 120
Total		2,904	301	1,009	3/9	207	100	5,120

## Table 5 - Total Cases – Manner of Death by Age and Gender 2009 Age at Death

\* MVA = Motor Vehicle Accidents



#### Figure 6 - Deaths by County of Injury – 2009 Includes Accidents, Suicides, Homicides and Undetermined Deaths

	Manner of Death by County of Injury											
County of Injury	Accident	Homicide	Suicide	Undetermined	Tota							
Bernalillo	430	51	130	19	630							
Catron	1	0	2	1	2							
Chaves	35	10	11	5	61							
Cibola	20	2	10	0	32							
Colfax	8	1	3	0	12							
Curry	21	2	4		27							
De Baca	2	0	0	1	3							
Dona Ana	102	11	28	7	148							
Eddy	34	6	7	4	52							
Grant	20	1	10	1	32							
Guadalupe	10	0	0	1	1							
Harding	0	0	0	0	(							
Hidalgo	6	0	2	0	8							
Lea	18	6	5	2	32							
Lincoln	23	0	3	0	20							
Los Alamos	10	0	1	1	12							
Luna	15	1	3	1	20							
McKinley	65	10	14	2	91							
Mora	4	2	4	0	10							
Otero	32	8	11	1	52							
Quay	6	1	2	3	12							
Rio Arriba	50	2	8	2	62							
Roosevelt	5	1	0	0	(							
San Juan	62	7	22	10	102							
San Miguel	23	5	3	1	32							
Sandoval	77	7	17	4	105							
Santa Fe	99	8	24	1	132							
Sierra	22	1	4	3	30							
Socorro	25	2	6	0	33							
Taos	30	0	9	2	42							
Torrance	21	0	4	1	20							
Union	4	0	1	0	5							
Valencia	37	7	10	6	60							
Non-Resident/Unknown	73	55	21	101	25							
Subtotals	1,390	207	379	180	2,150							
Natural Deaths	0	0	0	0	2,964							
Total					5,120							

# Table 6 – Total Cases – County of Injury – 2009



### Figure 7 – Deaths by County of Residence All Manners of Death

	Manner of Death by County of Residence											
County of Residence	Natural	Accident	Homicide	Suicide	Undetermined	Total						
Bernalillo	967	427	61	123	29	1,607						
Catron	8	1	0	1	1	11						
Chaves	100	39	12	11	6	168						
Cibola	52	24	3	9	0	88						
Colfax	36	4	1	3	1	45						
Curry	48	24	2	4	0	78						
De Baca	15	4	0	2	0	21						
Dona Ana	157	84	11	28	9	289						
Eddy	56	32	7	10	5	110						
Grant	65	22	1	10	0	98						
Guadalupe	11	2	0	1	1	15						
Harding	1	0	0	1	0	2						
Hidalgo	9	2	0	2	0	13						
Lea	54	17	7	5	3	86						
Lincoln	36	16	0	3	0	55						
Los Alamos	17	10	1	0	2	30						
Luna	47	13	4	3	1	68						
McKinley	58	47	12	12	5	134						
Mora	13	1	2	3	0	19						
Otero	81	33	9	14	0	137						
Quay	17	4	1	1	4	27						
Rio Arriba	69	42	5	10	6	132						
Roosevelt	28	4	1	0	0	33						
San Juan	162	61	9	22	12	266						
San Miguel	77	22	5	2	4	110						
Sandoval	150	80	6	12	7	255						
Santa Fe	141	95	5	25	5	271						
Sierra	88	19	0	3	3	113						
Socorro	33	20	2	6	1	62						
Taos	45	33	0	7	2	87						
Torrance	37	15	0	6	2	60						
Union	6	4	0	2	1	13						
Valencia	127	47	9	10	6	199						
Out of State/Unknown	153	142	31	28	64	418						
Total	2,964	1,390	207	379	180	5,120						

# Table 7 – Total Cases – County of Residence – 2009

#### Summary

Five manners of death are used to classify deaths at the OMI: natural, accident, suicide, homicide and undetermined. The remainder of the annual report will present information on these specific manners of death, as well as certain categories of deaths investigated by the OMI, including deaths of children, ethanol (alcohol) related deaths, and drug involved deaths. Ten-year summaries will be followed by presentations of the current cases by race/ethnicity, and age/gender, then a breakdown by method of death and county of residence.

## Overview – Manner of Death – Natural Deaths



#### Figure 8 – Natural Deaths – 2000 – 2009

Figure 9 - Natural Deaths by Race/Ethnicity - 2009



\* White includes 890 Hispanic, \* American Indian includes 1 Hispanic



### Figure 10 - Natural Deaths by Age and Gender - 2009

# Natural Deaths - Summary

Deaths classified as a "natural" manner of death, as compared to suicides, homicides, accidents and undetermined manners of death, represent the largest number of deaths investigated by OMI. However, most natural deaths that occur in New Mexico do not fall under the jurisdiction of OMI and are therefore not represented in this report. An excellent resource for all mortality statistics in the state is the publication "New Mexico Selected Health Statistics Annual Report," published by the State Center for Health Statistics at the Bureau of Vital Records & Health Statistics, Public Health Division, Department of Health, 1105 St. Francis Dr., PO Box 26110, Santa Fe, NM 87502-6110. The most recent reports are also available online:

http://www.vitalrecordsnm.org/documents/2007\_AR\_VOL2\_05122010MLrev3.pdf

# Overview – Manner of Death – Accidental Deaths



Figure 11 - Accidental Deaths - 2000 - 2009

Figure 12 - Accidental Deaths by Race/Ethnicity-2009





Figure 13 - Accidental Deaths by Age and Gender – 2009

Bernalillo Catron Chaves Cibola Colfax	2000 285 7 30 37 16 16 16 1	<b>2001</b> 318 5 36 16 18	<b>2002</b> 359 3 29 19	<b>2003</b> 406 6 42	<b>2004</b> 403 2	<b>2005</b> 389 7	<b>2006</b> 433 2	<b>2007</b> 422 3	<b>2008</b> 477	<b>2009</b> 430
Catron Chaves Cibola Colfax	7 30 37 16 16	5 36 16 18	3 29 19	6 42	2					
Chaves Cibola Colfax	30 37 16 16	36 16 18	29 19	42		7	2	2	2	
Cibola Colfax	37 16 16	16 18	19				4	3	3	1
Colfax	16 16	18			41	37	48	30	48	35
	16			27	25	41	22	31	20	20
			12	23	9	17	9	12	18	8
Curry	1	13	13	15	15	22	20	26	16	21
De Baca	1	2	5	3	1	3	1	3	2	2
Dona Ana	52	56	55	62	80	63	77	87	72	102
Eddy	29	22	27	31	33	39	39	38	41	34
Grant	17	9	18	23	25	17	19	20	31	20
Guadalupe	8	14	17	8	16	10	18	15	18	10
Harding	1	1	2	1	0	0	0	1	0	1
Hidalgo	7	9	10	2	6	14	7	12	4	5
Lea	21	24	20	29	21	30	38	37	36	18
Lincoln	11	21	31	14	14	14	15	24	3	23
Los Alamos	6	9	6	10	6	6	5	6	4	10
Luna	15	23	18	25	22	37	33	27	15	15
McKinley	78	57	71	73	99	80	77	62	58	65
Mora	7	4	4	5	8	7	5	6	5	4
Otero	25	24	25	31	28	30	35	22	30	33
Quay	13	13	18	26	14	10	16	8	16	5
Rio Arriba	57	37	54	46	57	48	49	56	61	50
Roosevelt	6	7	9	8	7	14	7	10	9	5
San Juan	61	76	85	79	76	72	80	90	74	62
San Miguel	20	19	26	30	33	25	23	27	33	23
Sandoval	34	39	33	42	47	52	61	55	71	77
Santa Fe	84	72	89	78	75	101	96	91	102	99
Sierra	12	13	15	16	12	12	9	15	13	22
Socorro	17	27	13	18	21	22	15	19	21	25
Taos	21	38	30	26	30	27	28	36	29	30
Torrance	16	19	12	20	19	18	21	20	16	21
Union	3	16	4	3	4	7	7	4	3	4
Valencia	39	35	34	45	38	41	52	55	46	37
Out of										
State/Unknown	58	70	63	71	57	62	49	36	35	73
Totals	1,110	1,162	1,229	1,344	1,344	1,374	1,416	1,406	1,430	1,390

Table 8 - Accidental Deaths - County of Injury - 2000 - 2009

County of Pronouncement	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Bernalillo	388	415	442	505	503	476	552	512	572	549
Catron	7	4	2	6	2	7	1	3	3	0
Chaves	28	36	27	42	41	34	47	31	48	36
Cibola	27	11	20	20	14	34	12	24	20	18
Colfax	16	15	12	20	9	19	9	12	14	8
Curry	24	17	14	17	18	22	20	27	17	21
De Baca	0	1	5	3	0	2	1	3	2	2
Dona Ana	50	58	53	62	82	61	83	95	75	112
Eddy	27	24	28	30	32	39	39	37	40	34
Grant	18	14	13	24	24	19	18	19	29	19
Guadalupe	5	12	14	6	15	8	14	14	17	8
Harding	1	1	2	1	0	0	0	1	0	1
Hidalgo	7	10	9	2	6	10	7	11	5	4
Lea	21	24	20	29	21	31	40	37	35	18
Lincoln	10	19	23	12	13	13	16	21	5	18
Los Alamos	8	9	4	8	5	5	5	6	5	10
Luna	15	17	17	25	23	37	27	23	14	15
McKinley	60	50	65	73	83	69	67	60	51	58
Mora	5	2	1	4	8	4	3	5	4	1
Otero	24	20	25	30	28	30	33	20	25	33
Quay	12	10	17	24	13	10	16	11	15	4
Rio Arriba	49	30	54	40	53	39	42	52	41	43
Roosevelt	2	4	8	8	6	14	8	11	9	5
San Juan	68	90	89	78	87	79	82	99	79	67
San Miguel	17	18	24	26	26	22	22	24	31	23
Sandoval	21	21	27	24	28	40	33	30	47	58
Santa Fe	83	80	93	87	78	100	97	92	108	94
Sierra	11	13	13	14	9	11	6	11	13	20
Socorro	17	23	11	15	15	22	12	17	17	22
Taos	17	33	24	19	27	25	22	33	26	29
Torrance	13	16	9	9	12	14	17	15	14	14
Union	3	15	4	3	2	6	7	4	3	5
Valencia Out of	23	19	21	34	29	32	37	34	27	24
State/Unknown	33	31	39	44	32	40	21	12	19	17
Totals	1,110	1,162	1,229	1,344	1,344	1,374	1,416	1,406	1,430	1,390

# Table 9 - Accidental Deaths - County of Pronouncement - 2000 - 2009

# Accidental Deaths - Summary

Accidental deaths accounted for 27% of the deaths investigated by OMI in 2009, second only to natural deaths (57.9% of OMI-investigated deaths) as a manner of death. The highest number of accidental deaths was in males 45-54 years of age. Motor vehicle accidents were the most common cause of accidental deaths, with motor vehicles involved in 27.4% of all accidental deaths.

# <u>Overview – Manner of Death – Suicide Deaths</u>



Figure 14 - Suicide Deaths - 2000 - 2009

Figure 15 - Suicide Deaths by Race/Ethnicity – 2009



<sup>\*</sup> White includes 97 Hispanic





Figure 17 - Suicide Deaths by Month - 2009



Figure 18 – Suicide Deaths by Day of the Week – 2009



County of Injury	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Bernalillo	98	124	112	107	102	99	110	120	123	130
Catron	1	1	2	1	3	0	1	3	2	2
Chaves	13	14	10	17	18	8	10	11	11	11
Cibola	1	8	4	5	3	2	5	7	6	10
Colfax	4	4	6	4	7	2	4	6	3	3
Curry	4	7	3	6	5	1	6	3	3	4
De Baca	1	2	2	0	0	1	1	1	0	0
Dona Ana	30	23	27	13	26	36	24	27	35	28
Eddy	7	5	13	9	9	13	10	10	10	7
Grant	5	4	7	9	6	10	9	6	12	10
Guadalupe	0	2	1	0	0	0	2	1	4	0
Harding	0	2	0	0	1	0	0	0	0	2
Hidalgo	1	2	1	0	0	1	0	2	3	2
Lea	7	9	7	11	9	8	12	8	7	5
Lincoln	7	6	10	3	7	6	2	7	5	3
Los Alamos	0	4	0	3	3	4	4	4	2	1
Luna	4	5	11	9	7	3	6	5	5	3
McKinley	12	15	9	16	19	13	16	11	7	14
Mora	2	4	1	4	0	0	2	1	2	4
Otero	13	13	13	14	15	13	13	17	15	11
Quay	2	5	0	3	1	3	2	2	2	2
Rio Arriba	9	11	11	12	9	10	5	15	9	8
Roosevelt	4	2	2	0	3	1	4	1	4	0
San Juan	20	19	19	19	14	20	25	18	24	22
San Miguel	6	13	8	11	9	6	8	6	7	3
Sandoval	15	14	15	7	13	13	16	25	22	17
Santa Fe	26	22	26	35	30	23	23	27	37	24
Sierra	7	5	6	4	4	7	5	2	2	4
Socorro	3	7	5	4	6	3	2	7	3	6
Taos	5	6	9	5	7	20	12	13	6	9
Torrance	4	6	5	3	4	2	7	6	5	4
Union	0	0	0	0	1	2	1	1	0	1
Valencia	6	10	11	11	17	10	11	17	16	10
Out of State/Unknown	5	7	4	13	5	7	3	0	5	19
Totals	322	381	360	358	363	347	361	390	397	379

# Table 10 – Suicide Deaths by County of Injury – 2000 - 2009
County of Pronouncement	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Bernalillo	107	129	120	119	107	104	118	131	134	142
Catron	1	1	2	1	3	0	1	3	2	2
Chaves	13	14	10	16	18	8	10	11	10	11
Cibola	1	8	3	4	2	3	4	7	6	9
Colfax	4	4	6	3	7	1	4	5	2	3
Curry	4	7	3	6	5	1	6	3	3	4
De Baca	1	2	2	0	0	1	1	1	0	0
Dona Ana	29	23	27	13	26	36	23	27	34	30
Eddy	7	5	13	9	9	13	10	10	9	11
Grant	5	4	6	9	6	8	9	5	12	9
Guadalupe	0	2	1	0	0	0	2	1	4	0
Harding	0	2	0	0	1	0	0	0	0	1
Hidalgo	1	2	1	0	0	1	0	3	3	2
Lea	7	9	7	11	8	8	12	8	7	5
Lincoln	7	6	10	3	7	7	2	7	5	3
Los Alamos	0	4	0	2	3	3	4	4	2	1
Luna	3	5	10	9	7	3	6	4	5	2
McKinley	12	13	9	14	19	12	16	9	7	12
Mora	2	4	1	4	0	0	2	1	1	2
Otero	13	12	13	14	15	12	13	16	16	15
Quay	2	5	0	3	1	3	2	2	2	1
Rio Arriba	9	10	10	11	9	10	4	15	9	9
Roosevelt	4	2	2	0	3	1	4	1	4	0
San Juan	21	20	20	19	14	20	25	19	24	23
San Miguel	5	12	7	10	9	6	8	6	7	3
Sandoval	12	12	15	6	12	11	16	20	20	18
Santa Fe	24	24	26	35	30	22	23	25	38	24
Sierra	6	5	6	4	4	7	5	2	2	4
Socorro	3	6	5	4	6	3	2	7	1	5
Taos	5	6	8	5	6	20	12	12	6	8
Torrance	4	6	5	2	4	2	6	6	4	6
Union	0	0	0	0	1	2	1	1	0	2
Valencia Out of	6	10	7	9	16	9	7	16	15	9
State/Unknown	4	7	5	13	5	10	3	2	3	3
Totals	322	381	360	358	363	347	361	390	397	379

# Table 11 – Suicide Deaths by County of Pronouncement – 2000 - 2009

## Suicide Deaths - Summary

New Mexico's suicide rate is consistently higher than the national average, comprising 2.5% of all deaths in New Mexico, compared to 1.3% of all deaths in the U.S. The rate in 2007 was 19.5 per 100,000 people, compared to a rate of 10.9 per 100,000 people in the rest of the U.S. (2007 New Mexico Selected Health Statistics, State Center for Health Statistics, New Mexico Department of Health). The rate continues to be high for 2009, with an estimate of 19 per 100,000 people.

Deaths from suicide in 2009 occurred most frequently among non-Hispanic whites (62.3%) and males (76.3%). More men between the ages of 45 and 54 years (13.7% of all suicides) committed suicide than other age group by gender. More people committed suicide on Thursday (65/379, 17.2%) than any other day of the week. More suicides occurred in May than any other month (37/379, 9.8%). The fewest occurred in August (25/379, 6.6%). The total number of suicides decreased from 2008 by 4.5%.

### Overview – Manner of Death – Homicide Deaths



Figure 19 - Homicide Deaths – 2000 – 2009

Figure 20 - Homicide Deaths by Race/Ethnicity - 2009



<sup>\*</sup> White includes 90 Hispanic



Figure 21 - Homicide Deaths by Age and Gender – 2009

County of Injury	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Bernalillo	55	46	66	64	62	69	52	60	53	51
Catron	0	0	2	1	0	0	0	1	0	0
Chaves	14	6	9	6	8	15	6	9	9	10
Cibola	1	6	2	4	2	1	2	1	0	2
Colfax	0	0	2	3	0	0	2	2	0	1
Curry	2	5	5	5	11	4	4	2	4	2
De Baca	0	0	0	0	1	1	0	0	0	0
Dona Ana	11	9	9	6	9	8	6	9	11	11
Eddy	9	2	6	4	5	3	3	4	2	6
Grant	2	2	2	3	1	1	3	4	3	1
Guadalupe	0	0	0	2	0	0	0	2	0	0
Harding	0	0	0	0	1	0	0	0	0	0
Hidalgo	0	0	0	0	1	0	0	1	0	0
Lea	7	6	5	7	6	7	6	7	4	6
Lincoln	1	1	1	0	5	2	1	1	1	0
Los Alamos	0	0	0	0	1	0	0	0	1	0
Luna	2	0	5	3	4	0	1	2	3	1
McKinley	4	14	11	8	7	7	7	11	8	10
Mora	0	0	1	0	0	0	1	0	0	2
Otero	4	1	4	5	9	0	4	3	4	8
Quay	1	0	0	0	1	0	0	4	1	1
Rio Arriba	5	4	4	8	8	8	2	6	5	2
Roosevelt	0	1	1	0	2	3	0	2	1	1
San Juan	7	8	6	8	7	11	11	19	12	7
San Miguel	11	3	6	7	2	4	1	8	2	5
Sandoval	8	3	6	5	8	4	3	3	7	7
Santa Fe	12	9	6	5	6	4	9	4	9	8
Sierra	1	7	1	1	1	3	2	1	0	1
Socorro	1	2	2	3	1	1	1	1	4	2
Taos	4	0	4	7	6	2	3	2	2	0
Torrance	1	1	1	2	0	2	1	2	3	0
Union	0	0	0	2	1	0	0	0	0	0
Valencia	10	5	3	4	12	8	6	6	11	7
Out of State/Unknown	11	16	20	14	8	11	19	14	11	55
Totals	184	157	190	187	196	179	156	191	171	207

# Table 12 - Homicide Deaths – County of Injury – 2000 - 2009

County of Pronouncement	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Bernalillo	70	55	72	72	74	73	62	70	61	81
Catron	0	0	1	1	0	0	0	0	0	0
Chaves	13	4	9	6	9	14	5	9	8	10
Cibola	0	8	2	3	1	1	2	1	0	3
Colfax	0	0	2	3	0	0	2	2	0	1
Curry	2	6	6	5	11	3	3	2	3	4
De Baca	0	0	0	0	1	1	0	0	0	0
Dona Ana	11	7	7	5	6	7	6	10	9	9
Eddy	10	2	6	4	4	3	0	3	2	6
Grant	2	2	2	3	1	1	2	3	2	1
Guadalupe	0	0	0	2	0	0	0	2	0	0
Harding	0	0	0	0	1	0	0	0	0	0
Hidalgo	0	0	0	0	1	0	0	0	0	0
Lea	7	5	4	7	5	6	6	6	4	8
Lincoln	1	1	3	0	6	1	1	1	1	1
Los Alamos	0	1	0	0	1	0	0	0	1	0
Luna	2	1	6	3	2	1	2	4	4	2
McKinley	3	10	11	7	6	5	6	8	7	10
Mora	0	0	1	0	0	0	0	0	0	2
Otero	3	1	3	4	8	0	3	3	4	5
Quay	1	0	0	0	1	0	0	4	1	0
Rio Arriba	4	4	4	8	7	8	2	5	0	4
Roosevelt	0	0	0	0	2	3	0	1	5	1
San Juan	9	9	7	9	7	13	15	20	0	10
San Miguel	8	1	6	7	2	3	1	6	11	5
Sandoval	7	2	4	5	7	4	4	3	2	11
Santa Fe	12	8	5	5	7	4	9	5	7	8
Sierra	1	7	1	0	1	2	1	1	10	0
Socorro	1	2	1	2	1	1	1	1	0	2
Taos	4	0	4	7	5	2	3	2	2	1
Torrance	0	1	1	1	0	2	1	2	1	0
Union	0	0	0	1	1	0	0	0	2	0
Valencia	8	7	3	5	7	6	4	4	0	4
Out of State/Unknown	5	13	19	12	11	15	15	13	9	18
Totals	184	157	190	187	196	179	156	191	171	207

# Table 13 - Homicide Deaths – County of Pronouncement – 2000 - 2009

# Homicide Deaths – Summary

Homicides increased by 21% from 2008 to 2009. Homicide victims were most frequently male (76%) and Hispanic (44%). As with suicide rates, homicide rates in New Mexico tend to be higher than the national rate, 8.0 per 100,000 in 2007 compared to a national rate of 6.1 per 100,000 (2007 New Mexico Selected Health Statistics, State Center for Health Statistics, New Mexico Department of Health).

# New Mexico Violent Death<sup>†</sup> Reporting System (NM-VDRS) Update

New Mexico is one of 18 states currently participating in the National Violent Death Reporting System (NVDRS) in cooperation with the Centers for Disease Control and Prevention. The primary purpose of this surveillance system is to increase the understanding of circumstances that contribute to violent deaths in order to encourage the development and implementation of more effective violence prevention strategies. Violent deaths include suicides, homicides, legal intervention deaths (excluding executions), deaths of undetermined intent, unintentional firearm-related deaths, and terrorism-related deaths.

The Office of the Medical Investigator has been part of the New Mexico Violent Death Reporting System (NM-VDRS) at the New Mexico Department of Health since its inception in 2004. Data collection began on January 1, 2005, and is ongoing. NM-VDRS personnel at OMI collect information from numerous sources, including medical examiner records, police reports, death certificates, the state crime laboratory, and child fatality review records, and abstract data on all victims, suspects, circumstances, relationships, and weapons for each violent death incident. Collecting information from numerous sources allows for more certainty in the identification of deaths due to violence and improves the reliability and completeness of the information collected.

From 2005 through 2007, 1,807 violent deaths were recorded in New Mexico; of these 1,705 (94.4%) were residents of New Mexico. The state's overall violent death rate continues to be one of the highest in the nation. In 2007, the crude rate of violent death among NM residents was 31.4 per 100,000 population (n=645). The majority of all violent deaths were due to suicide (60.9%), followed by homicide (25.5%), and deaths of undetermined intent (12.1%); deaths due to legal intervention and unintentional firearm-related injuries comprised 1% or less of violent deaths in the state. The crude violent death rate for males (49.4 per 100,000) was 3.5 times higher than the female rate (14.0 per 100,000). Suicide was the leading manner of violent death across all age groups after 9 years of age (Figure 22). Suicide rates increased with age to a peak of 27.7 per 100,000 in middle-aged adults 45-54 years; then rose again among elderly adults 75 years and older (22.9 per 100,000). In contrast, the homicide rate peaked in young adults 20-24 years (16.1 per 100,000), and declined with increasing age.





Source: NM-VDRS, NMDOH, 2007; Bureau of Business and Economic Research Population Estimates

## Overview – Manner of Death – Undetermined Deaths



Figure 23 - Undetermined Deaths – 2000 – 2009

Figure 24 - Undetermined Deaths by Race/Ethnicity – 2009



\* White includes 45 Hispanic



#### Figure 25 - Undetermined Deaths by Age and Gender - 2009

\* Gender and/or Age unknown

# **Undetermined Deaths – Summary**

All possible efforts are made to determine both a manner (accident, suicide, homicide, natural) and a cause of death for all deaths investigated by OMI. In a very small percentage of cases (usually 0.4% to 0.9% each year) neither the manner nor cause of death can be determined, even with a complete autopsy, scene investigation, and laboratory testing. In other cases only skeletal or mummified remains were found, or a request for an autopsy was withdrawn.

## Deaths of Children (19 Years of Age and Younger)



Figure 26 – Children\* – Deaths – 2000 – 2009

\* 19 Years old and younger.





\* White includes 151 Hispanic



### Figure 28 – Children – Deaths by Age and Gender – 2009

\* Gender unknown

Figure 29 – Children – Total Cases - Manner of Death – 2009



## **Overview - Children - Manner of Death - Natural Deaths**



Figure 30 – Children – Natural Deaths – 2000 – 2009

Figure 31 – Children – Natural Deaths by Race/Ethnicity – 2009



\* White includes 87 Hispanic





\*Unknown Gender

## <u>Overview – Children – Manner of Death – Accidental Deaths</u>



Figure 33 - Children - Accidental Deaths - 2000 - 2009

Figure 34 – Children – Accidental Deaths by Race/Ethnicity



\* White includes 55 Hispanic



### Figure 35 – Children – Accidental Deaths by Age and Gender – 2009

### Table 14 – Children – Accidental Deaths – Cause of Death -- 2009

Cause of Death	Total Cases
Multiple injuries	41
Head and neck injuries	22
Drowning	10
Other	8
Substance Intoxication	8
Asphyxia	3
Carbon Monoxide Intoxication	3
Electrocution	2
Aspiration	1
Choking	1
Ethanol Intoxication	1
Gunshot Wound	1
Torso Injury	1
Smoke Inhalation	1
Sepsis	1
Total	104

## Overview - Children - Manner of Death - Suicide Deaths



#### Figure 36 – Children – Suicide Deaths – 2000 – 2009

Figure 37 – Children – Suicide Deaths by Race/Ethnicity – 2009



\* White includes 12 Hispanic



Figure 38 - Children - Suicide Deaths by Age and Gender - 2009

Figure 39 – Children – Suicide Deaths by Month – 2009







Cause	Total Cases
Hanging	12
Gunshot Wound	10
Substance Intoxication	1
Multiple Injuries	1
Drowning	1
Undetermined	1
Total	26

#### Table 15 – Children – Suicide Deaths – Cause of Death -- 2009

### Suicide in Children – Summary

The 10-year summaries presented in this report for childhood deaths all include ages 19 and younger. There were 26 suicides in children in 2009, compared to 36 in 2008, a 27.8% decrease. Suicide deaths were more common among young males (69%) than females (31%). Self-inflicted gunshot wounds and hanging were the most common method of suicide in children. More suicides were committed by youth during January and October when compared with other months, and Mondays and Sundays were the most common days for youth suicides.

## Overview – Children – Manner of Death – Homicide Deaths



Figure 41 – Children – Homicide Deaths – 2000 – 2009

Figure 42 – Children – Homicide Deaths by Race/Ethnicity – 2009



\* White includes 17 Hispanic



Figure 43 – Children – Homicide Deaths by Age and Gender – 2009

#### Table 16 - Children - Homicide Deaths - Cause of Death - 2009

Cause of Death	<b>Total Cases</b>
Gunshot wound	14
Head and Neck Injuries	7
Undetermined	4
Drowning	2
Stab Wound	2
Asphyxia	1
Other	1
Suffocation	1
Total	32

## Homicide Deaths of Children - Summary

As with the suicides, the total number of childhood homicides, both for this year's cases and in the 10year summaries, now includes anyone aged 19 years or younger. Childhood homicides increased by 23.1% from 2008. Murdered children tended to be male (88%), Hispanic (53%) and killed by a firearm (48%). The majority of childhood murder victims (63%) were between the ages of 15 and 19.

# Overview – Children – Manner of Death – Undetermined Deaths

During 2009, 28 people 19 years old or younger were classified as Undetermined manner of death.

## Deaths of Children in New Mexico - 2009 Summary

The 518 deaths of people aged 19 and younger represented 10.12% of all deaths investigated by the OMI in 2009. Male decedents comprised 68% of the total deaths in children. The most common manner of death among children was natural, contributing 57% of the total. Firearms played a role in 10 suicides (38.5%) and 13 homicides (48%), 44% of all unnatural deaths in children.

An excellent resource for additional information about the deaths of children in New Mexico, their circumstances, risk factors, and opportunities for prevention is the Annual Report of the New Mexico Child Fatality Review (NMCFR), published by the New Mexico Department of Health Public Health Division, Maternal and Child Health Epidemiology Program. NMCFR consists of volunteers from many state and local agencies organized into four panels: Suicide, Transportation, Broader Spectrum/Sudden Infant Death Syndrome (SIDS), and Child Abuse and Neglect. The experts on these panels review the circumstances of childhood deaths in order to identify risk factors and develop prevention strategies, and their findings are presented in their annual report

## Overview – Children – SIDS Deaths



Figure 44 – Children – SIDS (Natural) Deaths – 2000 – 2009

Figure 45 – Children – SIDS (Natural) Deaths by Race/Ethnicity – 2009



\* White includes 5 Hispanic



# Figure 46 – Children – SIDS (Natural) Deaths by Age and Gender – 2009

# **Overview – Ethanol Related Deaths**



Figure 47 – Ethanol Related Deaths – 2000 – 2009 Ethanol Present in Decedent (> 0.005%)

Figure 48 – Ethanol Related Deaths – Manner of Death -- 2009 Ethanol Present in Decedent (> 0.005%)





### Figure 49 – Ethanol Related Deaths by Race/Ethnicity – 2009 Ethanol Present in Decedent (> 0.005%)

\* White includes 289 Hispanic, \* American Indian includes 2 Hispanic





54

There were 34 Undetermined Deaths where Ethanol was present in the decedent in amounts greater than 0.005%.

# Ethanol Related Deaths – Summary – 2009

There were 803 alcohol (ethanol) related deaths investigated by OMI in 2009, 15.7% of the total and a 6.2% decrease from 2008. Alcohol was most frequently related to accidental deaths (47.7% of all alcohol-related deaths) but was found in people dying from all manners of death. Alcohol was present in 18% of all suicide fatalities and 12% of all homicide victims. The most alcohol related deaths were seen in males ranging in age from 45 to 54 years.

## Motor Vehicle Related Deaths



Figure 51 – Motor Vehicle Deaths – 2000– 2009 Ethanol Present in Decedent (> 0.005%)

Figure 52 – Motor Vehicle Deaths by Race/Ethnicity – 2009 Ethanol Present in Decedent (> 0.005%)



\* White includes 57 Hispanic, American Indian Includes 1 Hispanic

1



### Figure 53 – Motor Vehicle Deaths by Age and Gender – 2009 Ethanol Present in Decedent (> 0.005%)

### Table 17 – Motor Vehicle Related Deaths – Method 2009 Ethanol Present in Decedent

		Presence of Ethanol > 0.005%			
Circumstances	Total Cases	Yes	No	Not Tested	
Driver	216	71	106	39	
Passenger	97	20	47	30	
Pedestrian	54	23	16	15	
Occupant	23	13	7	3	
Cyclist	6	1	3	2	
Totals	396	128	179	89	

			Seat Belt Use				
	Ethanol		Belt Not	Not			
	>0.005%	Belt Used	Used	Installed	Unknown	Total	
Motor Vehicle Driver	Yes	16	41	0	5	62	
	No	45	25	0	12	82	
	Not Tested	6	6	0	14	26	
	Subtotal	67	72	0	31	170	
Motor Vehicle Passenger	Yes	0	8	1	3	13	
8	No	0	5	0	1	7	
	Not Tested	0	2	0	0	2	
	Subtotal	0	15	1	4	22	
Motor Vehicle Occupant*	Yes	4	11	1	2	18	
1	No	21	17	0	7	46	
	Not Tested	10	11	1	8	30	
	Subtotal	35	39	2	17	94	
Totals		102	126	3	52	286	

#### Table 18 – Motor Vehicle Related Deaths – Seat Belt Use Ethanol Present in Decedent

\*Occupant means the person was either the driver or a passenger, but wasn't confirmed.

### Table 19 – Motor Vehicle Related Deaths – Air Bag Use Ethanol Present in Decedent

			Air B	ag Use	Air Bag Use					
	Ethanol		Not	Not						
	>0.005%	Inflated	Inflated	Installed	Unknown	Total				
Motor Vehicle Driver	Yes	12	17	4	28	62				
	No	25	16	4	36	82				
	Not Tested	3	2	1	20	26				
	Subtotal	40	35	9	84	170				
Motor Vehicle Passenger	Yes	2	4	0	6	13				
0	No	3	0	1	3	7				
	Not Tested	0	0	0	2	2				
	Subtotal	5	4	1	11	22				
Motor Vehicle Occupant*	Yes	3	3	1	11	18				
1	No	7	10	0	29	46				
	Not Tested	5	5	2	18	30				
	Subtotal	15	18	3	58	94				
Totals		60	57	13	153	286				

\*Occupant means the person was either the driver or a passenger, but wasn't confirmed.

# Drug Caused Deaths



Figure 54 – Drug Caused Deaths – 2000 – 2009

Figure 55 – Drug Caused Deaths by Race/Ethnicity – 2009



\* White includes 188 Hispanic



### Figure 56 – Drug Caused Deaths by Age and Gender – 2009

## Drug Caused Deaths – Summary – 2009

Drug overdose deaths continue to be a problem in New Mexico, with a 6.8% decrease in drug-caused deaths in 2009 but a total of 466 drug-caused deaths. A wide variety of drugs, both illegal and prescription, contributed to the 466 drug-caused deaths, with the most commonly involved being narcotics. Many decedents had more than one drug present at the time of death. Young males were most at risk, as with other types of OMI-investigated deaths, with the most drug-caused deaths being seen in males ages 35-44 years. The OMI designation of 'drug-caused deaths' includes both intentional (suicide, homicide) and unintentional (accidental) drug overdoses. The total number may increase as additional toxicology results become available.

Additional information regarding unintentional drug overdose deaths in New Mexico is available annually in the newsletter New Mexico Epidemiology, published by the New Mexico Department of Health. An issue containing detailed information on unintentional drug overdose deaths will be available from NMDOH this fall.

County	County of Injury	County of Pronouncement
Bernalillo	212	225
Catron	0	0
Chaves	11	11
Cibola	1	1
Colfax	1	1
Curry	7	7
De Baca	0	0
Dona Ana	26	28
Eddy	8	11
Grant	9	9
Guadalupe	1	1
Harding	0	1
Hidalgo	1	1
Lea	5	5
Lincoln	4	4
Los Alamos	1	2
Luna	0	0
McKinley	8	7
Mora	0	0
Otero	15	15
Quay	5	4
Rio Arriba	21	20
Roosevelt	0	0
San Juan	21	19
San Miguel	5	5
Sandoval	25	24
Santa Fe	22	24
Sierra	7	7
Socorro	5	5
Taos	8	8
Torrance	2	3
Union	1	2
Valencia	17	16
Out of State/Unknown	17	0
Totals	466	466

Table 20 - Drug Caused Deaths - Counties of Injury and Pronouncement- 2009

l

## Glossary

Accident – The manner of death used when, in other than natural deaths, there is no evidence of intent.

Autopsy – A detailed postmortem external and internal examination of a body to determine cause of death.

**Cause of Death** – The agent of effect that results in a physiological derangement or biochemical disturbance that is incompatible with life. The results of postmortem examination, including autopsy and toxicological findings, combined with information about the medical history of the decedent serves to establish the cause of death. The cause of death can result from different circumstances and manner of death. For example, the same cause of death, drowning, can result from the accidental immersion of a child in a swimming pool or from the homicidal immersion of a child in a bathtub.

**Children** – Individuals 19 years of age or younger. (Normally this is 18 years of age or younger, but to keep with industry standard age divisions, 19 year-olds are included in our tables.)

Circumstances of Death – The situation, setting, or condition present at the time of injury or death.

County of Injury – The county where the injury leading to death occurred.

**County of Pronouncement** – The county where the decedent was pronounced dead.

**County of Residence** – The county where the decedent resided. If not a legal resident of New Mexico, the decedent is listed as "out of state." A single case may have all three county definitions applied. For example, a decedent may be a resident of Rio Arriba county and be injured in an automobile accident in San Juan county (County of Injury) where, upon transfer to a hospital in Albuquerque, be pronounced in Bernalillo county.

**Deputy Medical Investigator** – An investigator, not necessarily a physician, appointed by the *State Medical Investigator* to assist in the investigation of deaths in the *jurisdiction* of the OMI. There is at least one deputy medical investigator in each county in New Mexico.

**Dictated External** – A detailed postmortem external examination of a body.

**Drug Caused Death** – A death caused by a drug or combination of drugs. Deaths caused by *ethanol*, poisons and volatile substances are excluded.

**Ethanol** – An alcohol, which is the principal intoxicant in liquor, beer and wine. A person with an alcohol concentration in blood of 0.08 grams percent (0.08g%) is legally intoxicated in New Mexico.

**Ethanol Present** – Deaths in which toxicological tests reveal a reportable level of *ethanol* (0.005% or greater) at the time of death.

Homicide - The manner of death in which death results from the intentional harm of one person by another.

**Jurisdiction** – The extent of the Office of the Medical Investigator's authority over deaths. The OMI authority covers reportable deaths that occur in New Mexico, except for those occurring on federal reservations (American Indian and military) and in Veteran's Administration hospitals. New Mexico Statute 24-11-5NMSA 1978 and descriptions in the OMI policy manual define reportable deaths. The OMI may be invited to consult or investigate cases over which it has no jurisdiction.

**Investigation/Field Examination** – An investigation and external examination conducted at the scene to determine cause of death.

**Manner of Death** – The general category of the condition, circumstances or event, which causes the death. The categories are *natural, accident, homicide, suicide and undetermined*.

**Method of Death** – The *method of death* describes the physical means leading to a cause of death. For example, *the cause of death* in a case is *Asphyxia*, but an *accidental hanging* brought on the asphyxia and would be the *method of death*.

**Motor Vehicle Accident Related Deaths** – An accidental death involving a motor vehicle. Motor vehicles include automobiles, vans, motorcycles, trucks and all terrain vehicles. Excluded are bicycles, tricycles, aircraft and trains. The decedent is usually a driver of, a passenger in, or a pedestrian struck by a motor vehicle. The death of a bicyclist struck by a motor vehicle is considered to be a motor vehicle accident related death.

**Natural** – The *manner of death* used when solely a disease causes death. If death is hastened by an injury, the *manner of death* is not considered natural.

Non-Motor Vehicle Accident - An accidental death that does not involve a motor vehicle.

**Office of the Medical Investigator** – The state agency in New Mexico that is responsible for the investigation of sudden, violent or untimely deaths. The office of the Medical Investigator was created by legislation in 1973 to replace the county coroner system (see also, *Deputy Medical Investigator*).

**Pending** – The *cause of death* and *manner of death* are to be determined pending further investigation and/or toxicological, histological and/or neuropathological testing at the time of publication.

**State Medical Investigator** – The head of the *Office of the Medical Investigator*. The State Medical Investigator must be a licensed physician licensed in New Mexico and may appoint Assistant Medical investigators, who must be physicians and *Deputy Medical Investigators*.

**SIDS** – Sudden Infant Death Syndrome is characterized by the death of an infant less than one year of age that is unexpected by history and remains unexplained after a thorough forensic autopsy and a detailed death scene investigation.

**Undetermined** – The *manner of death* for deaths in which there is insufficient information to assign another manner.