Government of the District of Columbia Office of the Chief Medical Examiner

ANNUAL REPORT 2010





Built 1974 – Current Location

TRANSITIONING



Under Construction 2009-2012 - Future Location



Government of the District of Columbia Vincent C. Gray, Mayor Allen Y. Lew, City Administrator Executive Office of the Mayor

Marie-Lydie Y. Pierre-Louis, MD – Chief Medical Examiner Office of the Chief Medical Examiner

DISTRICT OF COLUMBIA OFFICE OF THE CHIEF MEDICAL EXAMINER

MISSION:

The mission of the Office of the Chief Medical Examiner (OCME), for the District of Columbia, is to investigate all deaths in the District of Columbia that occur by any means of violence (injury), and those that occur without explanation or medical attention, in custody, or which pose a threat to the public health. OCME provides forensic services to government agencies, health care providers and citizens in the Washington D.C. metropolitan area to ensure that justice is served and to improve the health and safety of the public.

The Executive Leadership Team (2010)

Marie-Lydie Y. Pierre-Louis, MD Chief Medical Examiner

> Beverly A. Fields, Esq. Chief of Staff

Sharlene Williams, Esq. General Counsel

Lucas W. Zarwell, MFS Deputy Chief Toxicologist

Peggy J. Fogg Management Services Officer

Anna D. Francis, IT Specialist QA/QC Officer

> Viola Hiers Executive Assistant

PRESENTED TO:

The Executive Office of the Mayor, The Council of the District of Columbia and The Citizens of the District of Columbia



A MESSAGE FROM THE CHIEF MEDICAL EXAMINER

The Office of the Chief Medical Examiner (OCME) maintained a positive course in 2010. In fulfilling the agency's mission of death investigation, the OCME's dedicated staff offered a high level of customer service as indicated in our performance ratings. This result is commendable since difficult budgetary cuts had to be made in both operations and personnel service.

The agency's main efforts were concentrated in preparation for a move to a new facility, the Consolidated Forensic Laboratory (CFL). The agency has been in its present location since 1972 and as a result a large amount of files, materials and equipment had to be inventoried and catalogued to facilitate the transport of over forty years of office resources. In keeping with technological advances and the District's "paperless environment" efforts, the agency developed an innovative digitization project that was funded by the Coverdell Forensic Sciences Grant. Through this project, thousands of medical examiner case files, dating from 1972, are being digitized. To date, approximately 10,000 cases have been digitized and indexed; resulting in better maintenance of the integrity of aging files, ease of archival and accessibility, elimination of hard copy file storage and better security of records. To our knowledge, the DC OCME is the only facility that has embarked on such a high scale digitization of historical documents. Another significant achievement in 2010 is the establishment of a formal quality assurance and quality control program for the Forensic Toxicology Laboratory. The Forensic Toxicology Division developed a set of written Standard Operating Procedures, which enabled the Laboratory to apply for accreditation with the American Board of Forensic Toxicologists for the first time in the history of the agency. The application was submitted at the end of 2010.

The agency continued to improve its performance in many other critical areas including autopsy report completion rate, exceeding its performance target by the 3rd quarter of the calendar year. Provisional accreditation by NAME was continued, with the Inspector emphasizing remarkable improvement in the areas of staffing, equipment, continuing education, quality assurance, grant awards, and training."

Reduction in personnel forced the agency to reevaluate various work processes in an effort to streamline and improve efficiency and final work product. This reevaluation was particularly challenging within the Fatality Review Division and resulted in the inability to produce an Annual Report for two committees within the year-end mandated timeframe. However, these reports are forthcoming, and the decision to delay the reports brought to light several issues related to the compilation of statistical data for one committee which the agency will continue to address.

Despite the economic climate, which negatively impacted the budget and resulted in the reduction of personnel, 2010 was a very productive year. The data contained in this Annual Report presents the work of the agency throughout Calendar Year 2010. It is our hope that the report will be useful to all stakeholders, the District Residents and the general public. The OCME is committed to providing the best possible customer service to District residents and visitors in difficult circumstances and in accordance to D.C Code and Regulations and OCME Policies and Procedures.

Sincerely, Marie Lyptie J. Guerre - Louis, No

Dr. Marie-Lydie Y. Pierre-Louis Chief Medical Examiner



OFFICE OF THE CHIEF MEDICAL EXAMINER

2010 Annual Report

OCME- 2010 Annual Report rev. 2010

Table of Contents

INTRODUCTION

2.0 – Medical Examiner Investigations and Medical Legal Autopsies	1
Breakdown of Accepted Cases by Exam Type	2
Medical Examiner Case Investigations by Manner of Death	3
Postmortem Toxicology Summary 2010	5
2.1 - HOMICIDES Homicides by Cause of Death Homicides by Month Homicides by Race Homicides by Gender Homicides by Race/Ethnicity and Gender Homicides by Jurisdiction of Incident Toxicology Findings for Homicide Cases	7 7 8 9 10 10 10 10 12
2.2 - SUICIDES	13
Suicides by Cause of Death	13
Suicides by Month	14
Suicide by Race/Ethnicity	15
Suicides by Gender	15
Suicides by Jurisdiction of Incident	15
Suicide by Age	16
Toxicology Findings for Suicide Cases	17
2.3 - ACCIDENTS	18
Accidents by Cause of Death	18
Accidental Deaths by Race	20
Accidental Deaths by Gender	20
Accidental Deaths by Age	20
Toxicology Findings for Accident Cases	21
2.3.1 – Traffic Deaths	22
Role of the Decedent in Traffic Death	22
Traffic Deaths by Month	23
Traffic Deaths by Race	24
Traffic Deaths by Gender	24
Traffic Deaths by Age	24
Traffic Deaths by Jurisdiction of Incident	25
Toxicology Findings for Traffic Accident Cases	25
2.3.2 – Toxicology Findings for Deaths due to Drug Overdose	26
2.4 - NATURAL DEATHS	36
Natural Deaths by Cause	36
Natural Deaths by Month	38
Natural Deaths by Race	39
Natural Deaths by Age	39
Toxicology Findings for Natural Deaths	40
2.5 – UNDETERMINED DEATHS	41
Undetermined Deaths by Month	42
Undetermined Deaths by Race	43
Undetermined Deaths by Gender	43
Undetermined Deaths by Age	43

OCME- 2010 Annual Report rev. 2010

Toxicology Findings by Undetermined Deaths	44
Toxicology for Stillbirths	44
3.0 – WEIGHT DISTRIBUTION DATA	45
3.1 - BMI Calculations for OCME Decedents between the Ages of 2-19 years	51
4.0 – OTHER MAJOR ACTIVITIES	53
5.0 – BREAKDOWN OF MEDICAL EXAMINER INVESTIGATIONS	60
5.1 - Total Population & Total ME Cases by Race	61
5.2 - Total ME Cases by Race and Manner of Death	61

APPENDIXES:

Appendix A – OCME Organizational Chart (2010)
Appendix B – Agency Management
Appendix C – Program Legislation
• OCME, DC Law 13-172, codified at DC Official Code §5-1401 et seq. (2001)

Appendix D – Special Reports published in 2010

INTRODUCTION

By law (DC Code §5-1412) the Office of the Chief Medical Examiner (OCME) is required to produce an annual report. This annual report provides statistical data summarizing the results of investigations conducted by the OCME during calendar year 2010. This information is a reflection of the status of health of the District of Columbia residents, the level and types of violence to which this population is subjected too, the prevalence of drug use and its association with homicides and/or traffic accidents. The Office of the Mayor, Office of the City Administrator, Department of Health (DOH), the D.C. Office of the Attorney General, United States Attorney's Office, the Public Defender Service and other entities can use the data for research purposes and for the development of preventative and corrective policies.

The OCME investigates the following types of human death occurring in the District of Columbia: 1) violent death, whether apparently homicidal, suicidal or accidental, including deaths due to thermal, chemical, electrical or radiation injury and deaths due to criminal abortion; 2) deaths that are sudden, unexpected or unexplained; 3) deaths that occur under suspicious circumstances; 4) deaths of persons whose bodies are to be cremated, dissected or buried at sea: 5) deaths at the workplace or resulting from work activity; 6) deaths that are due to diseases that may constitute a threat to public health; 7) deaths of persons who are wards of the District government; 8) deaths related to medical or surgical intervention; 9) deaths that occur while persons are in the legal custody of the District; 10) fetal deaths related to maternal trauma or maternal drug use; 11) deaths for which the Metropolitan Police Department (MPD), or other law enforcement agency, or the United States Attorney's Office requests, or a court order investigation; and 12) dead bodies brought within the District without proper medical certification. (See Appendix C – (D.C. Law 13-172), DC Official Code $\S5-1401$ et seq. (2001)).

All deaths under the jurisdiction of the OCME, as outlined above, are investigated irrespective of the location of the primary causative incident. The Chief Medical Examiner, based on the evaluation of the circumstances surrounding the death, determines the type of investigation to be performed, i.e. autopsy or external examination. This decision is not restricted by family preference or religious beliefs. The OCME Medico Legal Investigators, Forensic Investigators and the Detectives of MPD's Natural Squad in the Homicide and Traffic Divisions provide information related to the circumstances of the deaths. The autopsy helps answer questions as to time of death, pattern and/or sequence of injuries and the effect of natural diseases versus injuries; and is also used to support or refute witness statements, or uncover completely unsuspected risk factors that may be useful to public health. The OCME works in close relationship with neighboring jurisdictions and is often called upon to provide expert testimony in these areas. Toxicological examinations assist in the determination of the cause and manner of death, and are performed on most cases autopsied depending upon the conditions of the remains. Typical examinations conducted by the laboratory provide information on the presence and amount of alcohol, volatiles, illegal drugs, and some commonly used prescription and non-prescription medications. Other expert consultations (e.g. neuropathology and cardiovascular pathology) are requested when appropriate.

The agency now has three programs: Death Investigation and Certification, Agency Management, and Fatality Review. This report will include data on the Death Investigation and Certification, and the Agency Management programs. Due to significant staffing modifications a summary review of the Fatality Review Program is not included in this year's report.

The Fatality Review Program includes the Child Fatality Review Committee (CFRC), the Developmental Disabilities Fatality Review Committee (DD FRC) and the Domestic Violence Fatality Review Board (DVFRB). These committees examine causes and circumstances associated with deaths in their respective populations, evaluate issues associated with services provided and make relevant recommendations that address systemic issues related to services that the District of Columbia provides to the constituents of these vulnerable populations. Each review committee produces an annual report that summarizes relevant findings and recommendations issued as well as government agency responses to the recommendations.

In addition to its routine caseload, the office offers temporary storage of bodies for all area hospices and local hospitals in the District of Columbia. The OCME morgue has a total capacity of 115, which can be easily exceeded. Continuous and active efforts to locate family members and bury or cremate unclaimed bodies are necessary to maintain available space. All efforts are made toward identification of the deceased before disposition. To achieve this goal, the OCME has not only trained its technical staff to fingerprint decedents, but also works cooperatively with the Mobile Crime unit of MPD and the Federal Bureau of Investigation (FBI). OCME also uses comparative radiology and/or DNA analysis as necessary to ensure identification. The OCME also procures specimens for DNA analysis on each decedent processed.

OCME is one of the few medical examiner offices in the nation that provides on-site grief counseling. This service was provided through a contractual agreement with the Wendt Center for Loss and Healing.

In preparation for possible terrorist attacks and mass disaster, OCME is developing alliances with area hospitals and with agencies in the Public Safety and Justice cluster with a goal to integrate our Mass Fatality Plan with the District's Disaster Response Plan. To practically accomplish this goal we are also participating in local and federal exercises to determine scenarios not considered, additional resources that may be necessary, and processes and authorities that must be established.

Through the years, OCME staff has and continues to be very active in social programs such as Career Day at District of Columbia public and public charter schools, the Mayor's Summer Youth Employment Program and the D.C. One Fund.

In the area of education, OCME provides academic training of medical students, pathology residents from local hospitals, and students from national and international universities enrolled in programs with scientific disciplines such as: physician assistance, forensic science, toxicology, and mortuary science programs. The OCME professional staff teaches the Forensic Pathology and Medical Investigation sections of the GWU Graduate Program in Forensic Sciences. The OCME also provided training for members of MPD and various law enforcement entities including the United States Attorney's office and the soldiers of the Marine Corps.

In 2010, the agency began a partnership with George Washington University (GW) in which the agency's senior professional staff (including the Medical Examiners, Supervisory Medicolegal Investigator and Deputy Chief Toxicologist) serve as GW faculty to teach forensic pathology, toxicology and death investigation for the GW Forensic Sciences graduate program.

2.0 – Medical Examiner Investigations and Medical Legal Autopsies

Overview of Cases Reported and Investigated

During the Calendar Year (CY) 2010, **2,954** cases were reported to and investigated by the Office of the Chief Medical Examiner (OCME). **67** of the reported cases were Storage requests only, of which 62 were approved; however one of the five declined storage cases became an OCME accepted case. **1,687** of the reported cases were "Declined Jurisdiction" by OCME; however, **23** of these Declined cases became Storage Requests, of which 20 were approved, so in total there were **90** Storage requests, of which a total of 82 were approved. **1,201** of the reported cases were "Accepted" by OCME. Of the Accepted cases **881** were autopsied. OCME also had a total of **2,383** Cremation requests submitted for approval (See section 4.0 for details).

Total Number of Cases Reported and	
Investigated by the OCME	2954
Total Number of Declined Cases	1687
Percent of Cases Reported & Investigated	57%
Total Number of Cases Accepted for Further Investigation	1201
Percent of Cases Reported & Investigated	41%
Total Number of Autopsies	
Full - 801	
Partial –62	
Completed at a Hospital – 18	881
Percent of Cases Accepted for Further Investigation	73%
Number of Seens Visits by a Medical Eveniner or Medica Lagel/Coronais Investiga	
for	103
	433
Percent of Cases Accepted for Further Investigation	41%
Total Number of Bodies Transported ¹ by OCME or by Order of the OCME:	
Transported by Pick-up Service -299	
Transported by Funeral Home -20	1.046
Transported by Office Personnel – 92/	1,246
Percent of Cases Reported & Investigated	42%
Total Number of Organ/Tissue Donation Requests:	
Number of requests OCMF approved = 188	
Number of requests OCME declined - 31	
Number of procured approved donations – 26	219
Percent of Cases Accepted for Further Investigation	18%

¹ The transport of bodies includes Storage cases, which are not included in the total number accepted cases.

Breakdown of Accepted Cases by Exam Type

Total Number of Cases Accepted and Investigated Further	1201
Total Number of Autopsies	
Full – 801	
Partial –62	
Completed at a Hospital – 18	881
Percent of Cases Accepted	73%
Number of External Examinations	286
Percent of Cases Accepted	24%
Number of Non-Human Remains *	14
Percent of Cases Accepted	.07%
Number of Medical Record Reviews *	20
Percent of Cases Accepted	2%
Number of Anatomical Specimen Disposals*	0
Percent of Cases Accepted	0%

* Definition of Unfamiliar Exam Type Classifications:

Autopsy Completed at a Hospital: During Calendar Year 2010 there were 18 cases where the autopsy was performed at a hospital. The DC Code § 5-1409 authorizes the Chief Medical Examiner to deputize any "qualified pathologist" to perform an autopsy on a decedent that is a Medical Examiner case.

Some of these cases were initially declined by the OCME and later accepted based on additional information/autopsy findings. Cases, in which the autopsy was completed at the hospital, still required review of the autopsy reports and completion of the death certificates to be done by the Medical Examiner.

- > Non-Human Remains: Cases that are commonly identified as animal remains.
- Medical Record Reviews: Cases where the body is not available for examination and the investigation and determination of cause and manner of death are based solely on the review of available medical records.
- Anatomical Specimen Disposals: Cases where surgical specimens are received in formalin or fresh from area hospitals where they were removed prior to a death and are associated with a current decedent at the OCME, or placental tissue associated with a newborn or fetus that was accepted as an OCME case.

Breakdown of Case Investigations and Autopsies by Month

Month	Case Investigations	Autopsies
		Full and Partials
January	240	76
February	230	56
March	262	79
April	231	79
May	255	84
June	237	87
July	231	73
August	221	65
September	253	83
October	261	64
November	257	60
December	276	75
Total	2,954	881

Medical Examiner Case Investigations by Manner of Death

Manner	Full Autopsy Examinations	Partial Autopsy Examinations	External Examinations	Review of Medical Records	Total
Accident	199	5	94	7	305
Homicide	135	0	0	0	135
Natural	390	57	188	13	648
Stillbirth	3	0	1	0	4
Suicide	46	0	0	0	46
Undetermined ²	46	0	3	0	49
Total	819	62	286	20	1187

Note: The above table does <u>NOT</u> include the following cases: "Non-Human Remains (14)".

 2 This number includes 6 cases that are sudden unexplained infant deaths that were classified as Sudden Infant Death Syndrome (SIDS) in the past with a Natural manner of death.

Pie Chart - Medical Examiner Cases by Manner of Death



Ten year trends for Violent Deaths in the District of Columbia



Total Number of Accidents (2001-2010)





70



Postmortem Toxicology Summary 2010

All postmortem specimens received for routine toxicological testing were analyzed for alcohols (ethanol and other volatiles) and major classes of illicit and prescription medications. Additional screens were assigned depending on intake case history and special requests made by physicians. All significant drug results were confirmed by further testing. Typical case specimens received include blood, urine, bile, vitreous, liver, brain, and gastric contents. In 2010, the laboratory received and inventoried 8,047 postmortem specimens (961 cases) yielding 1,785 reported results.

A negative case refers to the <u>absence</u> of any alcohol or detectable drug. A positive case refers to the <u>presence</u> of alcohol and/or drug(s), noting that a case can be positive for more than one substance. The alcohol and/or drugs detected don't necessarily cause or contribute to death. Drugs that are excluded from typical toxicology reports include common compounds found in routine casework such as: lidocaine, caffeine, and nicotine. These compounds are not recorded unless they contributed to the death or were detected in a significant concentration.

Total number of postmortem cases analyzed:

Description	Number of Cases	% of Cases
N =	961	
Negative	416	43.3%
Positive	545	56.7%

The most commonly detected drugs in the postmortem cases overall were:

Drug Name	Number of Cases	% of Cases
Ethanol	180	18.7%
Cocaine	89	9.3%
Morphine	87	9.1%
Marijuana metabolites	59	6.1%
Acetone	36	3.7%
Phencyclidine	30	3.1%
Methadone	29	3.0%
Diphenhydramine	25	2.6%
Nordiazepam	23	2.4%
Levamisole	22	2.3%
Diazepam	21	2.2%
Citalopram	21	2.2%
6-acetylmorphine	20	2.1%
Codeine	19	2.0%
Fentanyl	19	2.0%
Phenytoin	18	1.9%
Carboxyhemoglobin	15	1.6%
Isopropanol	01	1.5%
Oxycodone	13	1.4%
Dextromethorphan	13	1.4%
Phenobarbital	12	1.2%
Promethazine	12	1.2%
Midazolam	12	1.2%
Ethomidate	12	1.2%
Zoplidem	10	1.0%
Mirtazapine	10	1.0%
Temazepam	10	1.0%
Tramadol	10	1.0%

2.1 - HOMICIDES

The OCME investigated **135** homicides in the CY 2010. The following tables and graphs provide a distribution by cause of death, month, race, gender and age group. Death by homicidal acts is more prevalent in black males and in the age group 20-29 years. The weapon of choice is firearms. The majority of incidents occurred in June.

Homicides by Cause of Death

Cause	Number of Homicides	% of Total Homicides
Firearms	95	70%
Sharp Force	21	16%
Blunt Impact	13	10%
Other	4	3%
Asphyxia	2	1%
Total	135	100%

Pie Chart – Homicides by Cause of Death



Homicides by Month

Month	Total Homicides	% of Homicides
January	7	5%
February	7	5%
March	13	9%
April	8	6%
May	15	11%
June	17	12%
July	10	7%
August	11	8%
September	13	9%
October	12	9%
November	14	10%
December	8	6%
Total	135	100%

Graph - Homicides by Month



Homicides by Race

Race/Ethnicity	Number of Homicides	% of Homicides
Black	114	84%
White	8	6%
Hispanic	7	5%
Asian	5	4%
American Indian	1	1%
Total	135	100%

Chart – Percentage of Homicides by Race



Homicides by Gender

Gender	Number of Homicides	% of Homicides
Female	18	13%
Male	117	87%
Total	135	100%

Homicides by Race/Ethnicity and Gender

Race/Ethnicity by Gender	Number of Homicides
American Indian	1
Male only	1
Asian	3
Male only	3
Black	114
Female	14
Male	100
Hispanic	7
Male only	7
White	8
Female	4
Male	4
Other	2
Male only	2
Total	135

Homicides by Jurisdiction of Incident

Jurisdiction of Incident	Number of Homicides
DC	118
MD	9
UNKNOWN	6
VA	2
Total	135

Homicides by Age

Age	Number of Homicides	% of Homicides
Under 1	4	3%
1 to 5	1	1%
6 to 12	0	0%
13 to 15	3	2%
16 to 19	22	16%
20 to 29	44	31%
30 to 39	35	25%
40 to 49	16	11%
50 to 59	6	4%
60 to 69	2	1%
70 to 79	1	1%
80 to 89	1	1%
90 +	0	0%
Total	135	100%

Chart - Homicides by Age Group





Toxicology Findings for Homicide Cases

Of the 135 Homicide cases accepted by OCME, toxicology was performed on 134 of those cases. All cases were screened for alcohol and major drugs of abuse. Drugs were absent in 48 homicide cases. Of the remaining positive cases, 15% had more than one drug present.

Description	Number of Cases	% of Cases
N=	134	
Negative	48	35.8 %
Positive	86	46.2 %

The most commonly detected drugs in the homicide cases were:

Name of Drug	Number of Cases	% of 134 Homicide Cases
Marijuana Metabolites*	32	23.8 %
Ethanol	30	22.4 %
Phencyclidine (PCP)	11	8.2 %
Cocaine	10	7.4 %
Morphine	5	3.7 %
MDMA	3	2.2 %

*Marijuana metabolites are not confirmed in homicide cases.

2.2 - SUICIDES

The OCME investigated **46** suicides in CY 2010, which represents an 11% decrease from the number of suicides in CY 2009 (**52**). Deaths by suicidal acts were more prevalent in white males and in persons between the ages of 30-39 years. Hangings were the leading cause of death for suicides in this calendar year. The majority of incidents occurred in September.

Suicides by Cause of Death

Cause	Number of Suicides	% of Total Suicides
Hanging	14	30%
Firearms	12	26%
Intoxication	7	15%
Suffocation	6	13%
Blunt Impact Trauma	5	11%
Carbon Monoxide Poisoning	1	2%
Thermal Injury	1	2%
Total	46	100%

Note: The percentages in the "Pie Chart" are rounded up or down to nearest whole number.

Pie Chart - Suicides by Cause of Death



Suicides by Month

Month	Number of Suicides	% of Suicides
January	5	11%
February	1	2%
March	4	9%
April	4	9%
May	2	4%
June	4	9%
July	3	7%
August	3	7%
September	8	17%
October	4	9%
November	3	7%
December	5	11%
Total	46	100%

Chart- Suicides by Month



Suicide by Race/Ethnicity

Race/Ethnicity	Number of Suicides	% of Suicides
White	23	50%
Black	19	42%
Asian	2	4%
Hispanic	2	4%
Total	46	100%

Suicides by Race/Ethnicity and Gender

Race/Ethnicity by Gender	Number of Suicides
Asian	2
Female	1
Male	1
Black	19
Female	4
Male	15
Hispanic	2
Male only	2
White	23
Female	5
Male	18
Total	46

Suicides by Gender

Gender	Number of Suicides	% of Suicides
Female	10	22%
Male	36	78%
Total	46	

Suicides by Jurisdiction of Incident

Gender	Number of Suicides	% of Suicides
DC	42	91%
MD	2	4%
Unknown	1	2%
Virginia	1	2%
Total	46	100%

Suicide by Age

Age	Number of Suicides	% of Suicides
16 to 19	1	2%
20 to 29	6	13%
30 to 39	12	26%
40 to 49	9	20%
50 to 59	10	22%
60 to 69	5	11%
70 to 79	1	2%
80 to 89	0	0%
90 +	2	4%
Total	46	100%

Note: There were zero (0) suicides for persons age 1 to 15 and those 80 to 89 years.

Chart - Suicides by Age



Toxicology Findings for Suicide Cases

Toxicology analysis was performed on all 46 suicide cases. Drugs were absent in 21 cases. Of the remaining positive cases, 26% had more than one drug present.

Description	Number of Cases	% of Cases
N=	46	
Negative	21	45.6 %
Positive	25	54.4 %

The most notable detected drugs in suicide cases were:

Name of Drug	Number of Cases	% of Suicide Cases
Ethanol	12	26.1 %
Diphenhydramine	5	10.8 %
Quetiapine	3	6.5 %
Cocaine	2	4.3 %
Phencyclidine (PCP)	1	2.1 %

Toxicology results for suicides involving intentional overdose are included with table 1 in section 2.3.2. The table includes specimens, analytical methods used for confirmation, compound(s) present, and the measurable concentration.

2.3 - ACCIDENTS

OCME investigated **305** accident cases in CY 2010. Of the **305** cases investigated, **40** were related to motor vehicle accidents. **79** of the Accidental deaths were the direct result of illicit drug use. The majority of incidents occurred in April and December.

Cause	Number of Deaths	% of Total Accidents
Blunt Injury - Fall	118	39%
Blunt Injury – Traffic	40	13%
Intoxication	79	26%
Thermal	25	8%
Other	13	4%
Hypothermia	10	3%
Asphyxia	9	3%
Therapeutic Complications	8	3%
Hyperthermia	2	1%
Drowning	1	0%
Total	305	100%

Accidents by Cause of Death

Pie Chart - Accidents by Cause of Death



Accidents by Month

Month	Number of Deaths	% of Accidents
January	29	10%
February	26	9%
March	28	9%
April	31	10%
May	20	7%
June	23	8%
July	30	10%
August	22	7%
September	20	7%
October	22	7%
November	23	8%
December	31	10%
Total	305	100%

Chart - Accidents by Month of Death



Accidental Deaths by Race

Race/Ethnicity	Number of Accidents	% of Accidents
Black	176	58%
White	108	35%
Hispanic	15	5%
Asian	3	1%
Other	3	1%
Total	305	100%

Accidental Deaths by Gender

Gender	Number of Accidents	% of Accidents
Female	121	40%
Male	184	60%
Total	305	100%

Accidental Deaths by Age

Age	Number of Accidents	% of Accidents
Under 1	1	0%
1 to 5	4	1%
6 to 12	3	1%
13 to 15	2	1%
16 to 19	2	1%
20 to 29	22	7%
30 to 39	24	8%
40 to 49	39	13%
50 to 59	65	21%
60 to 69	31	10%
70 to 79	38	12%
80 to 89	48	16%
90 +	26	9%
Total	305	100%

Toxicology Findings for Accident Cases

Of the 305 Accident Deaths investigated by OCME, toxicology analysis was performed in 240 cases. Drugs were absent in 67 accident cases. Of the remaining positive cases, 35.8 % had more than one drug present.

Description	Number of Cases	% of Cases
N=	240	
Negative	67	27.9 %
Positive	173	72.1 %

The most commonly detected drugs in the accident cases were:

Name of Drug	Number	% of Accident Cases
	of Cases	
Cocaine	51	21.2 %
Ethanol	47	19.5 %
Heroin	19	7.9 %
Methadone	15	6.2 %
Codeine	11	4.5 %
Marijuana metabolites*	10	4.1 %
Dextromethorphan	8	3.3 %
Fentanyl	8	3.3 %
Citalopram	8	3.3 %

*Marijuana metabolites are confirmed depending on case history.

2.3.1 – Traffic Deaths

Of the **40** traffic related deaths certified by the OCME in Calendar Year 2010; the majority occurred in the following categories: Pedestrians, and those decedents between the ages of 20-29, which were not necessarily pedestrians only. The majority of traffic fatalities occurred in April.

Role of the Decedent in Traffic Death

Role	Traffic Deaths	% of Traffic Deaths
Pedestrian	23	58%
Driver - Motor Vehicle(8) - Motorcycle (1)	9	23%
Passenger	4	10%
Other - Metro(1)	3	8%
Bicyclist	1	3%
Total	40	100%

Pie Chart - Role of Decedent in Traffic Accident



Month	Number of Traffic Accidents	% of Traffic Accidents
January	4	10%
February	1	3%
March	2	5%
April	8	20%
May	2	5%
June	5	13%
July	3	8%
August	2	5%
September	2	5%
October	5	13%
November	1	3%
December	5	13%
Total	40	100%

Traffic Deaths by Month

Chart - Traffic Deaths by Month



Traffic Deaths by Race

Race	Number of Traffic Deaths	% of Traffic Deaths		
Black	17	43%		
White	13	33%		
Hispanic	7	18%		
Asian	2	5%		
Unknown	1	3%		
Total	40	100%		

Traffic Deaths by Gender

Gender	Number of Traffic Deaths	% of Traffic Deaths		
Female	16	40%		
Male	24	60%		
Total	40	100%		

Traffic Deaths by Age

Age	Number of Traffic Deaths	% of Traffic Deaths
1 to 5	2	5%
6 to 12	1	3%
13 to 15	2	5%
16 to 19	1	3%
20 to 29	11	28%
30 to 39	6	15%
40 to 49	3	8%
50 to 59	6	15%
60 to 69	3	8%
70 to 79	2	5%
80 to 89	2	5%
90 +	1	3%
Total	40	100%

Note:

Traffic Deaths by Jurisdiction of Incident

Jurisdiction of Incident	Number of Traffic Deaths	% of Traffic Deaths
DC	25	63%
MD	14	35%
Unknown	1	3%
Total	40	100%

Toxicology Findings for Traffic Accident Cases

Of the 40 Traffic-related deaths investigated by OCME, toxicology analysis was performed in 37 cases. Drugs were absent in 18 traffic accident cases. Of the remaining positive cases, 10.8% had more than one drug present.

Description	Number of Cases	% of Cases		
N=	37			
Negative	18	48.6 %		
Positive	19	51.4 %		

The most commonly detected drugs in the traffic accident cases were:

Name of Drug	Number of Cases	% of Traffic Cases
Ethanol	7	18.9 %
Morphine	5	13.5 %
Cocaine	3	8.1 %
Marijuana	2	5.4 %

In the 7 traffic deaths positive for ethanol, 4 (10.8%) are greater than twice the legal limit (0.16 g/100 mL) for driving under the influence in the District of Columbia. The legal limit for Blood Alcohol Concentration in the District of Columbia is 0.08% while driving.

2.3.2 – Toxicology Findings for Deaths due to Drug Overdose

There were 79 OCME cases where death was directly related to drug use, and toxicology analysis was performed in all 79 of these cases. The most prevalent drug in the population was cocaine alone or in combination with other drugs. Drugs were present in 78 of 79 overdose cases. Of the positive cases, 65.8 % had more than one drug present. In addition, of the 48 cases which were positive for alcohol, 93.7% had at least one additional drug present. 16.4% of cases were positive for both cocaine and heroin. Table 1 includes a detailed description of the toxicology in each case.

Description	Number of Cases	% of Cases		
N=	79			
Negative	13	1.3 %		
Positive	78	98.7 %		

The most commonly detected drugs in drug overdose cases were:

Contributing Drugs	Number of Cases	% of Cases
Ethanol	48	60.7 %
Cocaine	46	58.2 %
Heroin	29	36.7 %
Methadone	10	12.6 %
Fentanyl	4	5.0 %
Phencyclidine (PCP)	4	5.0 %
Oxycodone	3	3.8 %

³ This case was a delayed hospital death; however, the decedent was positive for cocaine on admission to the hospital. The hospital physician indicated cocaine intoxication as the cause of death, but when the postmortem urine specimen was tested, no drugs were detected by the OCME's tox lab.

Table 1. Summary of toxicology results for all accident and suicide cases involving intoxication. The table includes demographics by case, specimens, analytical methods used for confirmation, compound(s) present, and the measurable concentration. GC/MS = Gas Chromatograph/Mass Spectrometer, LC/MS = Liquid Chromatograph/Mass Spectrometer, HS/GC-2 = Headspace/Gas Chromatograph, LC/MS/MS = Liquid Chromatograph/Mass Spectrometer.

Case	Race	Sex	Age	Mode	Specimen	Drug	Confirm Method	Conc	entration
1	Black	F	47	Accident	Urine	6-acetylmorphine	GC/MS		detected
	Diaton			7100100111	Femoral - Blood	Benzovlecgonine	GC/MS	0.61	ma/L
					Femoral - Blood	Cocaethylene	GC/MS	0.05	ma/l
					Femoral - Blood	Cocaine	GC/MS	0.03	ma/L
					Femoral - Blood	Doxepin	GC/MS	0.18	ma/L
					Vitreous Humor	Ethanol	HS/GC-2	0.14	a/100ml
					Femoral - Blood	Ethanol	HS/GC-2	0.09	g/100mL
					Femoral - Blood	Levamisole	Not Confirmed		
					Femoral - Blood	Morphine	GC/MS	0.1	ma/L
					Femoral - Blood	Nordoxepin	GC/MS	0.08	ma/L
					Femoral - Blood	Promethazine	Not Confirmed		g ,
2	White	м	41	Accident	Urine	6-acetvlmorphine	GC/MS		detected
					Femoral - Blood	Benzoylecgonine	GC/MS		detected
					Femoral - Blood	Cocaine	GC/MS	0.31	mg/L
					Femoral - Blood	Levamisole	Not Confirmed		0
					Femoral - Blood	Morphine	GC/MS	0.15	mg/L
3	Black	М	50	Accident	Urine	6-acetylmorphine	GC/MS		detected
					Femoral - Blood	Morphine	GC/MS	0.03	mg/L
					Femoral - Blood	Phencyclidine	GC/MS	0.14	mg/L
4	Black	М	58	Accident	Bile	6-acetylmorphine	GC/MS		detected
					Clot - Blood	Benzoylecgonine	GC/MS		detected
					Femoral - Blood	Benzoylecgonine	GC/MS	0.23	mg/L
					Femoral - Blood	Morphine	GC/MS	0.05	mg/L
					Clot - Blood	Morphine	GC/MS	0.02	mg/L
5	Black	М	49	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	1.38	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.2	mg/L
6	White	F	44	Accident	Femoral - Blood	Fentanyl	GC/MS	0.07	mg/L
					Femoral - Blood	Methadone	LC/MS	0.96	mg/L
					Femoral - Blood	Promethazine	LC/MS	1.73	mg/L
7	Black	М	47	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.38	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.1	mg/L
					Femoral - Blood	Phencyclidine	GC/MS	0.22	mg/L
8	White	М	57	Accident	Liver	Benzoylecgonine	GC/MS	0.42	mg/kg
					Liver	Cocaethylene	GC/MS	0.24	mg/kg
					Bile	Ethanol	HS/GC-2	0.15	g/100mL
					Chest Cavity - Blood	Ethanol	HS/GC-2	0.11	g/100mL
					Chest Cavity - Blood	Fluoxetine	Not Confirmed		
					Chest Cavity - Blood	Trazodone	LC/MS	3.95	mg/L
9	White	М	16	Accident	Femoral - Blood	Dextromethorphan	GC/MS	0.11	mg/L
					Femoral - Blood	Fentanyl	GC/MS	0.004	mg/L
					Urine	Fentanyl	GC/MS		detected
					Femoral - Blood	ТНССООН	GC/MS		detected
10	Black	М	40	Accident	Urine	6-acetylmorphine	GC/MS		detected
					Vitreous Humor	Ethanol	HS/GC-2	0.18	g/100mL
					Femoral - Blood	Ethanol	HS/GC-2	0.14	g/100mL
					Femoral - Blood	Morphine	GC/MS	0.18	mg/L

Casa	Paca	Sox	Ago	Modo	Specimen	Drug	Confirm Mothod	Conc	ontration
11	White	M	Age		Speciment Formaral Blood	Bupropion		CONC	dotoctod
	vvnite	IVI	55	Accident	Femoral Blood	Ethanol		0.1	a/100ml
					Vitreous Humor	Ethanol	HS/GC-2	0.1	g/100mL
					Femoral - Blood	Methamphetamine	GC/MS	2.16	g/100111L
12	Black	м	58	Accident	Femoral - Blood	Methadone	GC/MS	0.37	mg/L
12	Black	101	00	/ tooldent	Femoral - Blood	Paroxetine	Not Confirmed	0.07	iiig/L
					Femoral - Blood	Promethazine		0.12	ma/l
13	Black	F	53	Accident	Femoral - Blood	Benzovlecgonine	GC/MS	0.05	ma/L
					Femoral - Blood	Ethanol	HS/GC-2	0.16	a/100mL
					Vitreous Humor	Ethanol	HS/GC-2	0.22	g/100mL
					Femoral - Blood	Norsertraline	Not Confirmed	-	<u> </u>
					Femoral - Blood	Sertraline	Not Confirmed		
14	White	М	48	Accident	Femoral - Blood	Morphine	GC/MS	0.19	mg/L
15	Black	М	49	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.24	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.03	mg/L
					Femoral - Blood	Levamisole	Not Confirmed		-
16	Black	F	56	Accident	Femoral - Blood	Benzoylecgonine	GC/MS		detected
					Femoral - Blood	Cocaine	GC/MS	0.07	mg/L
					Femoral - Blood	Levamisole	Not Confirmed		
17	White	М	55	Accident	Femoral - Blood	Citalopram	GC/MS	1.37	mg/L
					Urine	Fentanyl	GC/MS		detected
					Femoral - Blood	Oxycodone	GC/MS	0.09	mg/L
18	Black	М	54	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.9	mg/L
					Femoral - Blood	Cocaethylene	GC/MS	0.01	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.14	mg/L
					Femoral - Blood	Levamisole	Not Confirmed		
19	Black	F	50	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.03	mg/L
20	Black	F	61	Accident	Femoral - Blood	Methadone	LC/MS	2.69	mg/L
					Femoral - Blood	Promethazine	LC/MS	0.46	mg/L
21	Black	F	60	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.09	mg/L
					Femoral - Blood	Cocaethylene	GC/MS	0.02	mg/L
					Femoral - Blood	Cocaine	GC/MS		detected
					Vitreous Humor	Ethanol	HS/GC-2	0.23	g/100mL
					Femoral - Blood	Ethanol	HS/GC-2	0.17	g/100mL
22	Black	М	50	Accident	Urine	6-acetylmorphine	GC/MS		detected
					Femoral - Blood	Morphine	GC/MS	0.18	mg/L
23	Black	М	51	Accident	Urine	6-acetylmorphine	GC/MS		detected
					Femoral - Blood	Morphine	GC/MS	0.05	mg/L
					Femoral - Blood	Nortriptyline	Not Confirmed		
24	White	М	41	Accident	Urine	6-acetylmorphine	GC/MS		detected
					Femoral - Blood	Benzoylecgonine	GC/MS	0.03	mg/L
					Femoral - Blood	Ethanol	HS/GC-2	0.18	g/100mL
					Vitreous Humor	Ethanol	HS/GC-2	0.21	g/100mL
					Femoral - Blood	Morphine	GC/MS	0.2	mg/L
25	White	М	35	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.37	mg/L
					Femoral - Blood	Cocaethylene	GC/MS	0.01	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.21	mg/L
					Femoral - Blood	Ethanol	HS/GC-2	0.04	g/100mL
					Vitreous Humor	Ethanol	HS/GC-2	0.03	g/100MI
					Femoral - Blood	THCCOOH	GC/MS		detected
Case	Race	Sex	Age	Mode	Specimen	Drug	Confirm Method	Conce	entration
------	---------------	-----	-----	----------	-----------------	------------------	-------------------	-------	-----------
26	Black	М	45	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.17	mg/L
					Femoral - Blood	Phencyclidine	GC/MS	0.03	mg/L
27	White	М	48	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.12	mg/L
					Femoral - Blood	Carbamazepine	Not Confirmed		
					Femoral - Blood	Cocaethylene	GC/MS		detected
					Femoral - Blood	Cocaine	GC/MS		detected
					Femoral - Blood	Ethanol	HS/GC-2	0.06	g/100mL
					Vitreous Humor	Ethanol	HS/GC-2	0.08	g/100mL
28	Black	F	27	Accident	Vitreous Humor	Ethanol	HS/GC-2		detected
					Femoral - Blood	Ethanol	HS/GC-2	0.5	g/100mL
29	Black	М	53	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.33	mg/L
					Femoral - Blood	Cocaethylene	GC/MS	0.01	mg/L
					Femoral - Blood	Cocaine	GC/MS		detected
					Vitreous Humor	Ethanol	HS/GC-2	0.08	g/100mL
					Femoral - Blood	Ethanol	HS/GC-2	0.06	g/100mL
					Femoral - Blood	Methadone	LC/MS	0.31	mg/L
30	Black	М	49	Accident	Urine	6-acetylmorphine	GC/MS		detected
					Vitreous Humor	Ethanol	HS/GC-2	0.26	g/100mL
					Femoral - Blood	Ethanol	HS/GC-2	0.2	g/100mL
					Femoral - Blood	Morphine	GC/MS	0.09	mg/L
31	Black	F	56	Accident	Urine	6-acetylmorphine	GC/MS		detected
					Femoral - Blood	Benzoylecgonine	GC/MS	0.99	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.02	mg/L
					Femoral - Blood	Codeine	GC/MS/NPD		detected
					Femoral - Blood	Levamisole	Not Confirmed		
					Femoral - Blood	Morphine	GC/MS	0.26	mg/L
32	Black	М	57	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	1.68	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.01	mg/L
33	His- panic	М	35	Accident	Vitreous Humor	Ethanol	HS/GC-2	0.53	g/100mL
					Femoral - Blood	Ethanol	HS/GC-2	0.48	g/100mL
34	Black	М	54	Accident	Urine	6-acetylmorphine	GC/MS		detected
					Femoral - Blood	Benzoylecgonine	GC/MS	0.08	mg/L
					Vitreous Humor	Ethanol	HS/GC-2	0.1	g/100mL
					Femoral - Blood	Ethanol	HS/GC-2	0.07	g/100mL
					Femoral - Blood	Morphine	GC/MS	0.34	mg/L
35	Black	М	31	Accident	Femoral - Blood	Morphine	GC/MS	0.2	mg/L
36	Black	М	46	Accident	Urine	6-acetylmorphine	GC/MS		detected
					Femoral - Blood	Benzoylecgonine	GC/MS	0.07	mg/L
					Hospital Blood	Benzoylecgonine	GC/MS	1.3	mg/L
					Femoral - Blood	Cocaethylene	GC/MS	0.04	mg/L
					Femoral - Blood	Cocaine	GC/MS	1.6	mg/L
					Urine	Codeine	GC/MS		detected
					Femoral - Blood	Cyclobenzaprine	Not Confirmed		
					Femoral - Blood	Diazepam	GC/MS/NPD		detected
					Urine	Ethanol	HS/GC-2	0.07	g/100mL
					Urine	Hydrocodone	GC/MS		detected
					Femoral - Blood	Levamisole	Not Confirmed		
					Urine	Morphine	GC/MS		detected
					Heart - Blood	Morphine	GC/MS	0.15	mg/L

					Femoral - Blood	Nordiazepam	GC/MS/NPD		detected
					Femoral - Blood	ТНССООН	GC/MS		detected
37	Black	М	57	Accident	Femoral - Blood	Codeine	GC/MS	0.15	mg/L
					Femoral - Blood	Morphine	GC/MS	0.15	mg/L
					Femoral - Blood	Venlafaxine	GC/MS	0.61	mg/L
38	Black	М	54	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.32	mg/L
					Femoral - Blood	Methadone	LC/MS	0.89	mg/L
39	White	F	42	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.46	mg/L
					Hospital Blood	Benzoylecgonine	GC/MS	0.47	mg/L
					Femoral - Blood	Methadone	GC/MS	0.13	mg/L
					Hospital Blood	Methadone	GC/MS	0.1	mg/L
					Femoral - Blood	Morphine	GC/MS	0.07	mg/L
					Femoral - Blood	Norpropoxyphene	GC/MS	0.1	mg/L
					Femoral - Blood	Oxycodone	GC/MS	0.12	mg/L
40	Black	М	71	Accident	Other - Blood	Benzoylecgonine	GC/MS	0.1	mg/L
					Other - Blood	Cocaine	GC/MS	0.03	mg/L
41	Black	F	48	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.3	mg/L
					Femoral - Blood	Cocaine	GC/MS		detected
					Femoral - Blood	Methadone	LC/MS	0.94	mg/L
42	Black	М	37	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.42	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.06	mg/L
43	Black	М	49	Accident	Urine	6-acetylmorphine	GC/MS		detected
					Femoral - Blood	Citalopram	Not Confirmed		
					Femoral - Blood	Diphenhydramine	Not Confirmed		
					Femoral - Blood	Morphine	GC/MS	0.28	mg/L
44	Black	F	50	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.34	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.07	ng/mL
					Femoral - Blood	Morphine	GC/MS	0.15	mg/L
45	Black	М	56	Accident	Heart - Blood	Hydromorphone	GC/MS	0.21	mg/L
					Femoral - Blood	Methadone	LC/MS	0.47	mg/L
					Heart - Blood	Mirtazapine	Not Confirmed		
					Heart - Blood	Oxycodone	GC/MS	0.17	mg/L
					Heart - Blood	Promethazine	LC/MS	0.39	mg/L
46	Black	М	57	Accident	Femoral - Blood	Fentanyl	GC/MS	7.42	ng/mL
					Femoral - Blood	Methadone	LC/MS	0.5	mg/L
					Femoral - Blood	Morphine	GC/MS	0.13	mg/L
47	Black	F	45	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.44	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.32	mg/L
					Femoral - Blood	Diphenhydramine	Not Confirmed		
					Femoral - Blood	Ethanol	HS/GC-2	0.01	g/100mL
48	Black	F	60	Accident	Hemorrhage - Blood	Benzoylecgonine	GC/MS	0.08	mg/L
					Femoral - Blood	Benzoylecgonine	GC/MS	0.16	mg/L
					Femoral - Blood	Cocaine	GC/MS		detected
49	Black	F	37	Accident	Femoral - Blood	6-acetylmorphine	GC/MS		detected
					Femoral - Blood	Benzoylecgonine	GC/MS	0.07	mg/L
					Femoral - Blood	Cocaethylene	GC/MS		detected
					Femoral - Blood	Cocaine	GC/MS		detected
					Femoral - Blood	Doxepin	Not Confirmed		detected
					Vitreous Humor	Ethanol	HS/GC-2	0.14	g/100mL
					Femoral - Blood	Ethanol	HS/GC-2	0.1	g/100mL
					Femoral - Blood	Morphine	GC/MS	0.29	mg/L

50	Black	М	60	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.02	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.04	mg/L
51	Black	F	46	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.16	mg/L
					Hospital Blood	Benzoylecgonine	GC/MS	0.1	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.01	mg/L
					Femoral - Blood	Diltiazem	Not Confirmed		
52	Black	F	55	Accident		None were detected			
53	Black	М	57	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	1.18	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.17	mg/L
					Femoral - Blood	Levamisole	Not Confirmed		
54	Black	М	43	Accident	Heart - Blood	Ethanol	HS/GC-2	0.1	g/100mL
					Heart - Blood	Ethyl Chloride	GC/MS		detected
55	Black	М	54	Accident	Urine	6-acetylmorphine	GC/MS		detected
					Vitreous Humor	Ethanol	HS/GC-2	0.06	g/100mL
					Femoral - Blood	Ethanol	HS/GC-2	0.04	g/100mL
					Femoral - Blood	Morphine	GC/MS	0.13	mg/L
56	Black	М	52	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.55	mg/L
					Hospital Blood	Benzoylecgonine	GC/MS	0.38	mg/L
					Femoral - Blood	Morphine	GC/MS	0.16	mg/L
					Hospital Blood	Morphine	GC/MS		detected
57	White	М	38	Accident	Femoral - Blood	Ethanol	HS/GC-2	0.14	g/100mL
					Vitreous Humor	Ethanol	HS/GC-2	0.19	g/100mL
					Femoral - Blood	Oxycodone	GC/MS	0.15	mg/L
58	Black	F	50	Accident	Hospital Blood	Benzoylecgonine	GC/MS	0.15	mg/L
59	Black	М	38	Accident	Chest Cavity - Blood	Benzoylecgonine	GC/MS	2.03	mg/L
					Chest Cavity - Blood	Cocaine	GC/MS		detected
					Chest Cavity - Blood	Ethanol	HS/GC-2	0.11	g/100mL
					Bile	Ethanol	HS/GC-2	0.12	g/100mL
60	Black	М	54	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.34	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.1	mg/L
					Femoral - Blood	Levamisole	Not Confirmed	<u> </u>	
61	Black	М	55	Accident	Urine	6-acetylmorphine	GC/MS	<u> </u>	detected
					Femoral - Blood	Codeine	GC/MS	0.02	mg/L
					Femoral - Blood	Morphine	GC/MS	0.25	mg/L
62	Black	F	56	Accident	Femoral - Blood	Morphine	GC/MS	0.32	mg/L
63	White	М	29	Accident	Urine	6-acetylmorphine	GC/MS		detected
					Femoral - Blood	Ethanol	HS/GC-1	0.02	g/100mL
					Vitreous Humor	Ethanol	HS/GC-2	0.04	g/100mL
					Femoral - Blood	Morphine	GC/MS	0.09	mg/L
64	Black	М	41	Accident	Femoral - Blood	Ethanol	HS/GC-2	0.39	g/100mL
					Vitreous Humor	Ethanol	HS/GC-2	0.45	g/100mL
65	Black	М	26	Accident	Femoral - Blood	Ethanol	HS/GC-2	0.05	g/100mL
					Vitreous Humor	Ethanol	HS/GC-2	0.06	g/100mL
					Femoral - Blood	Phencyclidine	GC/MS	0.2	mg/L
66	Black	М	43	Accident	Vitreous Humor	Ethanol	HS/GC-2	0.23	g/100mL
					Femoral - Blood	Ethanol	HS/GC-2	0.22	g/100mL
					Femoral - Blood	Phencyclidine	GC/MS	0.03	mg/L
67	Black	М	48	Accident	Urine	6-acetylmorphine	GC/MS	 	detected
					Femoral - Blood	Benzoylecgonine	GC/MS	0.71	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.01	mg/L
					Femoral - Blood	Methadone	LC/MS	0.09	mg/L

					Femoral - Blood	Morphine	GC/MS	0.07	mg/L
68	White	М	49	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.27	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.02	mg/L
					Femoral - Blood	Doxepin	LC/MS/MS	0.19	mg/L
					Femoral - Blood	Levamisole	Not Confirmed		
					Femoral - Blood	Nordoxepin	LC/MS/MS	0.31	mg/L
69	Black	F	47	Accident	Chest Cavity - Blood	Benzoylecgonine	GC/MS	1.79	mg/L
					Chest Cavity - Blood	Cocaine	GC/MS/NPD		detected
					Bile	Ethanol	HS/GC-2	0.08	g/100mL
					Chest Cavity - Blood	Ethanol	HS/GC-2	0.08	g/100mL
					Chest Cavity - Blood	Levamisole	Not Confirmed		
70	Black	М	54	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	0.64	mg/L
					Femoral - Blood	Cocaethylene	GC/MS/NPD		detected
					Femoral - Blood	Cocaine	GC/MS	0.19	mg/L
					Femoral - Blood	Ethanol	HS/GC-2	0.24	g/100mL
					Vitreous Humor	Ethanol	HS/GC-2	0.32	g/100mL
					Femoral - Blood	Levamisole	Not Confirmed		
71	Black	М	45	Accident	Femoral - Blood	Benzoylecgonine	GC/MS	1.83	mg/L
					Femoral - Blood	Cocaine	GC/MS	0.25	mg/L
					Femoral - Blood	Levamisole	Not Confirmed		
72	Black	М	60	Accident	Femoral - Blood	Benzoylecgonine	GC/MS		detected
					Femoral - Blood	Cocaine	GC/MS	0.12	mg/L
					Femoral - Blood	Levamisole	Not Confirmed		
72	Black	M	47	Accident	Hoart Blood	alpha-			dotoctod
13	DIACK	IVI	47	Accident	Heart - Blood	Midazolam			detected
					Heart - Blood	Morphine	GC/MS	1.83	ma/l
74	Black	М	58	Accident	Femoral - Blood		S	60.1	///∟ %
74	DIACK	IVI	50	Accident		alpha-	5	00.1	70
75	White	F	30	Accident	Femoral - Blood	hydroxyalprazolam	LC/MS/MS		detected
									detected
					Femoral - Blood	Alprazolam	LC/MS/MS		
					Femoral - Blood Femoral - Blood	Alprazolam Carisoprodol	LC/MS/MS GC/MS/NPD		detected
					Femoral - Blood Femoral - Blood Liver	Alprazolam Carisoprodol Ethanol	LC/MS/MS GC/MS/NPD HS/GC-2	0.01	detected
					Femoral - Blood Femoral - Blood Liver Vitreous Humor	Alprazolam Carisoprodol Ethanol Ethanol	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2	0.01	detected
					Femoral - Blood Femoral - Blood Liver Vitreous Humor Femoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Ethanol	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 HS/GC-2	0.01	detected detected g/100mL
					Femoral - Blood Femoral - Blood Liver Vitreous Humor Femoral - Blood Femoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Ethanol Oxycodone	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 HS/GC-2 GC/MS	0.01	detected detected g/100mL mg/L
					Femoral - Blood Femoral - Blood Liver Vitreous Humor Femoral - Blood Femoral - Blood Femoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Ethanol Oxycodone Oxymorphone	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 HS/GC-2 GC/MS GC/MS	0.01 0.03 0.75 0.24	detected g/100mL mg/L mg/L
76	Black		56	Accident	Femoral - Blood Femoral - Blood Liver Vitreous Humor Femoral - Blood Femoral - Blood Femoral - Blood Hospital Blood	Alprazolam Carisoprodol Ethanol Ethanol Ethanol Oxycodone Oxymorphone Citalopram	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 HS/GC-2 GC/MS GC/MS GC/MS	0.01 0.03 0.75 0.24 0.18	detected g/100mL mg/L mg/L mg/L
76	Black	M	56	Accident	Femoral - Blood Femoral - Blood Liver Vitreous Humor Femoral - Blood Femoral - Blood Femoral - Blood Hospital Blood Femoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Oxycodone Oxymorphone Citalopram Citalopram	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 HS/GC-2 GC/MS GC/MS GC/MS	0.01 0.03 0.75 0.24 0.18	detected g/100mL mg/L mg/L mg/L
76	Black		56	Accident	Femoral - Blood Femoral - Blood Liver Vitreous Humor Femoral - Blood Femoral - Blood Femoral - Blood Hospital Blood Femoral - Blood Femoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Ethanol Oxycodone Oxymorphone Citalopram Citalopram	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 HS/GC-2 GC/MS GC/MS GC/MS GC/MS	0.01 0.03 0.75 0.24 0.18 0.6	detected g/100mL mg/L mg/L mg/L
76	Black		56	Accident	Femoral - Blood Femoral - Blood Liver Vitreous Humor Femoral - Blood Femoral - Blood Femoral - Blood Hospital Blood Femoral - Blood Femoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Ethanol Oxycodone Oxymorphone Citalopram Citalopram Citalopram Diphenhydramine	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 HS/GC-2 GC/MS GC/MS GC/MS GC/MS Not Confirmed	0.01 0.03 0.75 0.24 0.18 0.6	detected g/100mL mg/L mg/L mg/L mg/L
76	Black		56	Accident	Femoral - BloodFemoral - BloodLiverVitreous HumorFemoral - BloodFemoral - BloodFemoral - BloodHospital BloodFemoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Oxycodone Oxymorphone Citalopram Citalopram Citalopram Diphenhydramine Methadone	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 HS/GC-2 GC/MS GC/MS GC/MS GC/MS Not Confirmed LC/MS	0.01 0.03 0.75 0.24 0.18 0.6 0.09	detected g/100mL mg/L mg/L mg/L mg/L mg/L
76	Black		56	Accident	Femoral - BloodFemoral - BloodLiverVitreous HumorFemoral - BloodFemoral - BloodFemoral - BloodHospital BloodFemoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Ethanol Oxycodone Oxymorphone Citalopram Citalopram Citalopram Diphenhydramine Methadone Methadone	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 HS/GC-2 GC/MS GC/MS GC/MS GC/MS Not Confirmed LC/MS LC/MS	0.01 0.03 0.75 0.24 0.18 0.6 0.09 0.13	detected g/100mL mg/L mg/L mg/L mg/L mg/L mg/L
76	Black		56	Accident	Femoral - BloodFemoral - BloodLiverVitreous HumorFemoral - BloodFemoral - BloodFemoral - BloodHospital BloodFemoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Ethanol Oxycodone Oxymorphone Citalopram Citalopram Citalopram Diphenhydramine Methadone Methadone	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 GC/MS GC/MS GC/MS GC/MS Not Confirmed LC/MS LC/MS GC/MS	0.01 0.03 0.75 0.24 0.18 0.6 0.09 0.13 0.04	detected g/100mL mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg
76	Black	M	56	Accident	Femoral - BloodFemoral - BloodLiverVitreous HumorFemoral - BloodFemoral - BloodFemoral - BloodHospital BloodFemoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Oxycodone Oxymorphone Citalopram Citalopram Citalopram Diphenhydramine Methadone Morphine Morphine	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 GC/MS GC/MS GC/MS GC/MS Not Confirmed LC/MS LC/MS GC/MS	0.01 0.03 0.75 0.24 0.18 0.6 0.09 0.13 0.04 0.12	detected g/100mL mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg
76	Black	M	56	Accident	Femoral - BloodFemoral - BloodLiverVitreous HumorFemoral - BloodFemoral - BloodFemoral - BloodHospital BloodFemoral - BloodHospital BloodFemoral - BloodHospital BloodHospital BloodUrine	Alprazolam Carisoprodol Ethanol Ethanol Ethanol Oxycodone Oxymorphone Citalopram Citalopram Citalopram Diphenhydramine Methadone Morphine G-acetylmorphine	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 HS/GC-2 GC/MS GC/MS GC/MS GC/MS Not Confirmed LC/MS LC/MS GC/MS GC/MS GC/MS	0.01 0.03 0.75 0.24 0.18 0.6 0.09 0.13 0.04 0.12	detected g/100mL mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg
76	Black	M	56	Accident	Femoral - BloodFemoral - BloodLiverVitreous HumorFemoral - BloodFemoral - BloodFemoral - BloodHospital BloodFemoral - BloodHospital BloodFemoral - BloodHospital BloodUrineFemoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Ethanol Oxycodone Oxymorphone Citalopram Citalopram Diphenhydramine Methadone Morphine Morphine Benzoylecgonine	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 GC/MS GC/MS GC/MS GC/MS Not Confirmed LC/MS LC/MS GC/MS GC/MS GC/MS GC/MS	0.01 0.03 0.75 0.24 0.18 0.6 0.09 0.13 0.04 0.12 1.26	detected g/100mL mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg
76	Black	M F	56	Accident	Femoral - BloodFemoral - BloodLiverVitreous HumorFemoral - BloodFemoral - BloodFemoral - BloodHospital BloodFemoral - BloodHospital BloodUrineFemoral - BloodFemoral - BloodFemoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Ethanol Oxycodone Oxycodone Oxymorphone Citalopram Citalopram Diphenhydramine Methadone Morphine 6-acetylmorphine Benzoylecgonine Cocaine	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 GC/MS GC/MS GC/MS GC/MS LC/MS LC/MS GC/MS GC/MS GC/MS GC/MS GC/MS GC/MS	0.01 0.03 0.75 0.24 0.18 0.6 0.09 0.13 0.04 0.12 1.26 0.06	detected g/100mL mg/L mg/L mg/L mg/L mg/L mg/L mg/L detected mg/L mg/L
76	Black	M	56	Accident	Femoral - BloodFemoral - BloodLiverVitreous HumorFemoral - BloodFemoral - BloodFemoral - BloodHospital BloodFemoral - BloodHospital BloodUrineFemoral - BloodFemoral - BloodFemoral - BloodFemoral - BloodFemoral - BloodFemoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Ethanol Oxycodone Oxymorphone Citalopram Citalopram Citalopram Diphenhydramine Methadone Morphine 6-acetylmorphine Benzoylecgonine Cocaine Dextromethorphan	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 GC/MS GC/MS GC/MS GC/MS Not Confirmed LC/MS LC/MS GC/MS GC/MS GC/MS GC/MS GC/MS GC/MS GC/MS	0.01 0.03 0.75 0.24 0.18 0.6 0.09 0.13 0.04 0.12 1.26 0.06	detected g/100mL mg/L mg/L mg/L mg/L mg/L mg/L mg/L detected mg/L mg/L
76	Black	M	56	Accident	Femoral - BloodFemoral - BloodLiverVitreous HumorFemoral - BloodFemoral - BloodFemoral - BloodHospital BloodFemoral - BloodHospital BloodFemoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Ethanol Oxycodone Oxymorphone Citalopram Citalopram Diphenhydramine Methadone Morphine 6-acetylmorphine Benzoylecgonine Cocaine Dextromethorphan Doxylamine	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 GC/MS GC/MS GC/MS GC/MS Not Confirmed LC/MS LC/MS GC/MS GC/MS GC/MS GC/MS GC/MS GC/MS Not Confirmed Not Confirmed	0.01 0.03 0.75 0.24 0.18 0.6 0.09 0.13 0.04 0.12 1.26 0.06	detected g/100mL mg/L mg/L mg/L mg/L mg/L mg/L mg/L detected mg/L mg/L
76	Black	M	56	Accident	Femoral - BloodFemoral - BloodLiverVitreous HumorFemoral - BloodFemoral - BloodFemoral - BloodHospital BloodFemoral - Blood	Alprazolam Carisoprodol Ethanol Ethanol Ethanol Oxycodone Oxymorphone Citalopram Citalopram Diphenhydramine Methadone Morphine 6-acetylmorphine Benzoylecgonine Cocaine Dextromethorphan Doxylamine Morphine	LC/MS/MS GC/MS/NPD HS/GC-2 HS/GC-2 GC/MS GC/MS GC/MS GC/MS LC/MS LC/MS GC/MS GC/MS GC/MS GC/MS GC/MS GC/MS GC/MS GC/MS GC/MS GC/MS	0.01 0.03 0.75 0.24 0.18 0.6 0.09 0.13 0.04 0.12 1.26 0.06	detected g/100mL mg/L mg/L mg/L mg/L mg/L mg/L mg/L detected mg/L mg/L mg/L

					Femoral - Blood	Benzoylecgonine	GC/MS		detected
					Femoral - Blood	Morphine	GC/MS	0.24	mg/L
					Femoral - Blood	Levamisole	Not Confirmed		
79	Black	М	56	Accident	Femoral - Blood	Cocaine	GC/MS	0.03	mg/L
					Femoral - Blood	Benzoylecgonine	GC/MS	1.21	mg/L
80	White	F	54	Suicide	Hospital Serum	Acetaminophen	GC/MS	741.3	mg/L
					Femoral - Blood	Acetaminophen	GC/MS	666.5	mg/L
					Femoral - Blood	Diphenhydramine	GC/MS	33.14	mg/L
81	Black	F	54	Suicide	Femoral - Blood	Midazolam	Not Confirmed		
82	Black	F	36	Suicide	Urine	Ethanol	HS/GC-2	0.01	g/100mL
					Femoral - Blood	Ethanol	HS/GC-2	0.02	g/100mL
					Femoral - Blood	Quetiapine	Not Confirmed		
					Liver	Quetiapine	Not Confirmed		
83	White	М	26	Suicide	Femoral - Blood	Benzoylecgonine	GC/MS	0.39	mg/L
					Femoral - Blood	Cocaine	GC/MS		detected
					Vitreous Humor	Ethanol	HS/GC-2	0.03	g/100mL
					Femoral - Blood	Ethanol	HS/GC-2	0.04	g/100mL
					Femoral - Blood	Rocuronium	LC/MS/MS		detected
84	Asian	F	54	Suicide	Femoral - Blood	Diphenhydramine	Not Confirmed		
					Urine	Diphenhydramine	Not Confirmed		
					Femoral - Blood	Haloperidol	Not Confirmed		
					Femoral - Blood	Morphine	GC/MS	0.1	mg/L
					Urine	Quetiapine	Not Confirmed		
					Femoral - Blood	Quetiapine	Not Confirmed		
85	Black	F	44	Suicide	Femoral - Blood	Bupropion	LC/MS	0.03	mg/L
					Femoral - Blood	Lamotragine	LC/MS/MS		detected
					Femoral - Blood	Quetiapine	LC/MS	17.02	mg/L
					Femoral - Blood	Trazodone	GC/MS	7.76	mg/L
86	Black	М	66	Suicide	Femoral - Blood	Diphenhydramine	GC/MS	15.43	mg/L
					Femoral - Blood	Ethanol	HS/GC-2	0.02	g/100mL
					Vitreous Humor	Ethanol	HS/GC-2	0.05	g/100mL
87	Black	F	47	Undetermined	Heart - Blood	Alprazolam	GC/MS	0.09	mg/L
					Heart - Blood	Citalopram	GC/MS	0.12	mg/L
					Heart - Blood	Diphenhydramine	GC/MS	0.32	mg/L
					Heart - Blood	Norpropoxyphene	GC/MS	1.7	mg/L
					Heart - Blood	Propoxyphene	GC/MS	2.65	mg/L
					Chest Cavity - Blood	Trazodone	GC/MS	12.3	mg/L
					Heart - Blood	Zolpidem	LC/MS		detected
88	White	F	40	Undetermined	Femoral - Blood	Diazepam	GC/MS/NPD		detected
					Femoral - Blood	Ethanol	HS/GC-2	0.2	g/100mL
					Vitreous Humor	Ethanol	HS/GC-2	0.27	g/100mL
					Femoral - Blood	Methadone	LC/MS	2.09	mg/L
					Femoral - Blood	Nordiazepam	GC/MS/NPD		detected
					Femoral - Blood	Venlafaxine	GC/MS	1.08	mg/L
89	White	F	59	Undetermined	Femoral - Blood	Doxepin	LC/MS	3.9	mg/L
					Femoral - Blood	Nordoxepin	LC/MS	0.62	mg/L
90	Black	F	29	Undetermined		None were detected			

Accidental Drug Overdose Fatalities by Age

The majority of overdose deaths occurred in decedents between the ages of 41 and 60 years. Cocaine was the most frequently detected drug in all of these age groups, followed by morphine, ethanol then methadone. The prevalence of phencyclidine (PCP) has been included.



Age Range

Accidental Drug Overdose Fatalities by Race

The vast majority of overdose deaths occurred in black decedents, and again the most frequently detected drugs in both black and white decedents were cocaine, morphine, ethanol and methadone. The prevalence of phencyclidine (PCP) has been included



Overdose Deaths by Race

2.4 - NATURAL DEATHS

In calendar year 2010, "Cardiovascular Disease" continues to be the leading Natural cause of death in OCME cases; followed by Alcoholism. Blacks represented 73% of these deaths and those persons in the age group 50-59 years had more deaths (163) than any other age group. The majority of incidents occurred in June.

Natural Deaths by Cause

Cause	Number of Deaths	% Of Total Natural Deaths
Cardiovascular Disease	391	60%
Alcoholism	46	7%
Infectious Disease	28	4%
Therapeutic Complications	27	4%
Central Nervous System Diseases	24	4%
Diabetes	24	4%
Cancer	22	3%
Pulmonary/Respiratory Diseases	21	3%
Other	19	3%
Gastrointestinal Disease	13	2%
Complications of Pregnancy	8	1%
Obesity or Complications of Obesity	7	1%
Blood Disease/Hemopoietic System	4	1%
Complications of Drug Abuse	4	1%
Immune System Disease	4	1%
Genetic Disorder	3	0%
Infection	3	0%
Total	648	100%

Pie Chart – Natural Deaths by Cause



Note: Causes of Death that are less than 2% is not included in this chart.

A 5-year glance of "Cardiovascular Disease" in DC Medical Examiner cases



Deaths due to Cardiovascular Disease (2006-2010)

Natural Deaths by Month

Month	Number of Deaths
January	61
February	39
March	56
April	57
May	62
June	69
July	54
August	40
September	55
October	49
November	47
December	59
Total	648

Chart- Natural Deaths by Month



Natural Deaths by Race

Race	Number of	% of Natural Deaths
	Natural Deaths	
Asian	5	1%
Black	473	73%
Hispanic	24	4%
Other	6	1%
Unknown	4	1%
White	136	21%
Total	648	100%

Natural Deaths by Gender

Gender	Number of Natural Deaths	% of Natural Deaths
Female	254	39%
Male	394	61%
Total	648	100%

Natural Deaths by Age

Age	Number of Natural Deaths	% of Natural Deaths
Under 1	16	2%
1 to 5	3	0%
6 to 12	1	0%
13 to 15	2	0%
16 to 19	3	0%
20 to 29	21	3%
30 to 39	29	4%
40 to 49	77	12%
50 to 59	163	25%
60 to 69	150	23%
70 to 79	90	14%
80 to 89	81	13%
90 +	12	2%
Total	648	100%

Toxicology Findings for Natural Deaths

Of the 648 Natural Deaths investigated by OCME, toxicology analysis was performed in 493 cases. Drugs were absent in 259 natural cases.

Description	Number of Cases	% of Cases
N=	493	
Negative	259	52.5 %
Positive	234	47.4 %

The most commonly detected drugs in the natural cases were:

Name of Drug	Number of Cases	% of Natural Cases
Ethanol	57	11.5 %
Acetone	30	6.0 %
Cocaine	29	5.8 %
Morphine	21	4.2 %
Methadone	18	3.6 %
Citalopram	16	3.2 %
Diphenhydramine	14	2.8 %
Nordiazepam	12	2.4 %
Diazepam	11	2.2 %
Phencyclidine (PCP)	11	2.2 %

2.5 – UNDETERMINED DEATHS

Undetermined by Cause of Death

The OCME investigated **49** cases in which the <u>manner of death</u> was concluded to be "Undetermined," and of these **18** cases or 37% also had a <u>cause of death</u> classified as "Undetermined".

An "Undetermined" <u>manner of death</u> is a result of inconclusive evidence and/or investigatory efforts as to the circumstances of the death at the time. If additional information is discovered, the manner of death will be amended to indicate those new findings. Peak incidents occurred in September.

Remains that are Skeletonized or in a state of Advanced Decomposition

It is often very difficult to verify the Cause of Death for bodies that are markedly decomposed or skeletonized (decaying or decayed). There were a total of eight cases that was in some stage of decomposition. The breakdown is as follows: Two decedents were skeletonized, one decedent was mummified, three were in the early stage of decomposition and two were in an advanced state of decomposition. These deaths represent 44% of the cases where both Cause and Manner of death were classified as Undetermined.

Sudden Unexpected Infant Death (SUID)

Cause of Death	of Deaths	Accepted Cases
Asphyxia	2	4%
Blunt Injuries	8	16%
Drowning	1	2%
Firearms	2	4
Drug Overdose/Poisoning	6	12%
Neurologic Disorders	1	2%
Sharp force Injury	1	2%
Sudden and Unexplained	1	2%
Sudden Infant Death-SUID	6	12%
Thermal Injury	3	6%
Undetermined	18	37%
Total	49	100%

Number

% of Total

In 2010, there were 6 child deaths that were classified

with a cause of death as Sudden Unexplained Infant Death (SUID) and a Manner of Death as Undetermined. Previously these deaths were <u>all</u> classified with a Cause of Death as Sudden Infant Death Syndrome (SIDS), and with a Manner of Death as Natural. It was determined through extensive research conducted by the CDC that many of these deaths were associated with bed-sharing and/or improper bedding. Classifying all these types of deaths as "SIDS, Natural" did not reflect the reality of the circumstances surrounding the event. So, it has been decided to add the cause of death "*Sudden Unexpected Infant Death (SUID) - Associated with Bed-sharing or Soft Bedding*" or Sudden and Unexplained –as noted in the chart above - with a manner of death classified as "*Undetermined*". As with all DC OCME death determinations, this new classification is contingent on the findings of the forensic and law enforcement investigations.

Pie Chart – Undetermined by Cause of Death



Note: For the purpose of this illustration Causes of Death That were 2% or less of the total are not depicted in this chart.

Undetermined Deaths by Month

Month	Number of Deaths
January	3
February	1
March	5
April	4
May	6
June	4
July	3
August	4
September	8
October	3
November	4
December	4
Total	49

Chart - Undetermined Deaths by Month



Undetermined Deaths by Race

Race	Number of Undetermined Deaths
Asian	2
Black	27
Hispanic	3
Unknown	2
White	15
Total	49

Undetermined Deaths by Gender

Gender	Number of Undetermined Deaths
Female	21
Male	27
Unknown	1
Total	49

Undetermined Deaths by Age

	Number of
Age	Undetermined Deaths
Unknown	4
Under 1	10
1 to 5	1
6 to 12	2
13 to 15	5
16 to 19	3
20 to 29	5
30 to 39	10
40 to 49	3
50 to 59	3
60 to 69	2
70 to 79	1
80 to 89	1
90 +	2
Total	49

Toxicology Findings by Undetermined Deaths

Of the 49 Undetermined Deaths investigated by OCME, toxicology analysis was performed in 45 cases. Drugs were absent in 19 undetermined deaths. Of the positive cases, 40% had more than one drug present.

Description	Number of Cases	% of Cases
N=	45	
Negative	19	42.2 %
Positive	26	57.7 %

The most commonly detected drugs in the undetermined cases were:

Name of Drug	Number of Cases	% of Undetermined Cases
Ethanol	7	15.5 %
Morphine	5	11.1%
Zoplidem	4	8.8 %
Nordiazepam	4	8.8 %
Diazepam	2	4.4 %

Toxicology for Stillbirths

Toxicology analysis was performed in 2 of the 4 Stillbirth Deaths investigated by OCME. Both cases were negative for all drugs tested.

Description	Number of Cases	% of Cases
N=	2	
Negative	2	100.0 %
Positive	0	0 %

3.0 – WEIGHT DISTRIBUTION DATA

The data presented was gathered on decedents who were processed by the OCME between January 1, 2010 and December 31, 2010.

Transport of Decedents

This portion of the OCME decedent data was compiled to provide data on the following information: 1) the weight distribution of adult and child decedents transported to the D.C. Office of the Chief Medical Examiner (OCME); and 2) to analyze the Body Mass Index (BMI) -as described below - of the decedents who were Medical Examiner cases and the relation between BMI and Cardiovascular Diseases. Both sets of data were compiled using the Forensic Automated Case Tracking System (FACTS), which was cross-referenced with the Mortuary Case Log Book and the Medical Examiner's report – where applicable - for accuracy. There were 1,246 decedents that were transported to OCME. The breakdown of cases is as follows:

- Two (2) were Skeletal Remains no height and weight recorded
- □ Fourteen (14) were Non-Human remains no height and weight recorded
- □ Eighty-three (83) were Storage Cases, one of which was declined and became a medical examiner case. This one case is included in the total of Accepted cases below.
- □ 1,148⁴ were Accepted cases that had height and weight recorded

Although 1,246 decedents were transported, only 1,230 will be illustrated in the following graphs and charts.



Comparison of 2010 Total Cases Transported vs Total Number of Cases Exceeding 150lbs

⁴ Although there were 1,201 Accepted OCME cases, all of the accepted cases were <u>not transported</u> to the OCME, and those cases not transported fell into the following categories: Those that had an exam type of "Review Medical Records" (20); "Autopsies (at hospital)".performed at a hospital (13 out of the 18); External Exams (off-site) performed off-site (4).

Weight	Total Cases 149lbs or less	150-199	200-249	250-299	300+	Total Cases 150lbs or more	Total Cases
Number of Decedents	430	465	213	88	34	800	1230

2010 - WEIGHT DISTRIBUTIONS

2010 - Distribution of Cases Transported to OCME by Weight



Body Mass Index (BMI)

There were **1,201** accepted OCME cases of which **1,070** Adults and **43** Children for a total of **1,113**⁵ decedents qualify for the BMI assessment. In order to provide an adequate BMI study of decedents examined at the Medical Examiners office, the following criteria must be met:

- 1) The remains must have been transported to the Medical Examiner's office
- 2) The remains must be those of human origin
- 3) The decedent had to be at least 2 years old.
- 4) The remains must not be in a skeletal state

This year's study will also report on the distribution of weights with emphasis on the Body Mass Index (BMI). BMI is a mathematical formula used to determine one's ratio of body height to body weight, and which correlates strongly (in adults) with body fat content. BMI is used to assess how much a person's weight departs from what is desirable for their height. Individuals with a BMI under 18 are considered underweight; those between 18 and 24.9 are considered Normal weight; those between 25 and 29.9 are considered overweight, and those above 30 are considered obese. This report will include the number of decedents examined by the OCME this year weighing over 150 lbs and with a BMI above normal (e.g. over 25). We also compare the BMI with deaths due to Arteriosclerotic and Hypertensive Cardiovascular Diseases. As illustrated in the previous graph at least 65% of all decedents transported to the OCME weighed 150 lbs or more.

Body Mass Index (BMI) for Adults Only

As indicated above there were 1,070 adult decedents and 43 were child decedents that meet the criteria for the BMI study. Of the 1,070 of the adult decedents 86 were below the normal range (i.e. malnour-ished/underweight) as established by the Center for Disease Control, therefore no comparisons will be illustrated for these **86** cases. So as a result there are **984** adult cases where the decedents fall between a normal weight and those considered obese. Of the adult cases studied **305** were of a normal weight, but **679** cases or 69% had a Body Mass Index above normal, of which **283** were overweight (BMI 25–29.9), and **396** were obese (BMI 30 and above).



⁵ For children under 2 years old (37) there is not an established formula to determine BMI, so as a result there were 45 children that met the criteria for the study; however, the data was not available for two of these decedents; because one case was a Review of Medical Records and the other was an Autopsy that was performed at a hospital and the information was not provided in the Autopsy Report. So for the purpose of this study 43 child deaths will be represented.

BMI by Age (Adults only)

Of the **679** adult decedents with a BMI above normal (>24.9) during 2010, the age group with the highest number of deaths was 40-59 years old with **275** deaths recorded.



BMI by Age and Cardiovascular Disease

(Adults only)

In 2010, there were **380** adult decedents whose cause of death was directly attributed to complications of Arteriosclerotic and Hypertensive Cardiovascular Diseases. Of these decedents **32** were underweight; **99** were of normal weight; **99** were overweight and **150** were obese. The charts below provide a breakdown of the prevalence of cardiovascular disease by age and BMI. For the purpose of this study the **32** decedents that are classified as underweight are not included in the graphs below.





BMI by Race (Adults only)

The demographics for this population decreased slightly - for the third year in a row - between 2009 and 2010. Of the **679** decedents above the normal BMI, 68% (465) were Black/African American, 25% (167) were White; 5% (31) were Hispanic; 2% (12) were Asian; and American Indian and Other were both less than 1%. The chart below displays the BMI data by race for BMI categories Normal weight to Obese.



3.1 - BMI Calculations for OCME Decedents between the Ages of 2-19 years

How is BMI Determined for Children?

The BMI calculation for children between the ages of 2 and 19 years is calculated for each child separately using the following information.

- 1) Date of Birth
- 2) Date of Measurement
- 3) Gender
- 4) Height
- 5) Weight

Once the above information is entered for each child, it is used to calculate where the child falls in an established percentile as compared to other children in their age and gender group. More information on how BMI is determined for boys and girls between the ages 2-19 years can be found at the following CDC website:

http://www.cdc.gov/nccdphp/dnpa/bmi/childrens_BMI/about_childrens_BMI.html

BMI Statistical Data

Overall OCME had a total of 82 child decedent cases in 2010 that were accepted for further investigation. Of the 82 cases 37 were under the age of two, and cannot be considered for the BMI study, because there is not a BMI calculation available for this subset of children. There were a total of 45-child decedent's age 2 to 19 years old; however, the data was not available for two of these child decedents, because one case was a "*Review of Medical Records*" and the other was an Autopsy that was performed at a hospital and as a result neither of these child decedents were transported to the OCME. So, for the purpose of this study 43 child deaths will be represented.

FEMALES

	Underweight		Healthy		Overweight		May be Obese		Total
Age	BMI Range	No.	BMI Range	No.	BMI Range	No.	BMI Range	No.	IUtal
2-5 yrs	n/a	0	17.2	1	n/a	0	n/a	0	1
6-11 yrs	n/a	0	19.9	1	18.4	1	29.5	1	3
12-16yrs	n/a	0	17.7 - 21.6	3	25.1	1	n/a	0	4
17-19yrs	n/a	0	19.9 - 24.9	2	n/a	0	n/a	0	2
Total		0		7		2		1	10

MALES

λαο	Underwei	ght	Healthy		Overweight		May be Obese		Total
Age	BMI Range	No.	BMI Range	No.	BMI Range	No.	BMI Range	No.	
2-5 yrs	n/a	0	14.5	1	17.6	1	n/a	0	2
6-11 yrs	n/a	0	17.3	1	n/a	0	n/a	0	1
12-16 yrs	n/a	0	19.2 - 23.7	4	24.3 - 27.8	3	28.1 - 29.2	3	10
17-19 yrs	17.8	1	18.7 - 24.3	13	26.7 - 27.7	4	33.6 - 41.3	2	20
Total		1		19		8		5	33

***n**/**a**= not applicable

There was a total of 10 female youths from 2-19 years, and 70% were found to be within the healthy range. There were female decedents in <u>all</u> age categories, yet there were no underweight female decedents.



There was a total of 33 male youths from 2-19 years, and 58% were found to be within the healthy range. There were male decedents in <u>all</u> age categories, and within every weight category.



4.0 – OTHER MAJOR ACTIVITIES

All other major activities are conducted under the oversight and strict supervision of the Chief Medical Examiner and/or her designee.

Court-related Activities

A parameter not often considered in evaluating the Medical Examiners workload is time spent in pre-trial conferences, depositions and expert testimonies, which are provided in family, civil and criminal litigations. OCME includes tabulated data for expert services provided in calendar year 2010.

Type of Judicial Service	Number of Court related Activities
Pre-trial Conference	50
Court Testimony	40
Other	6
Grand Jury	1
Total	97

Court Services by Type	Number of Court related Activities
Criminal	90
Civil	6
Other	1
Total	97

Court Services by Jurisdiction	Number of Court related Activities
DC	90
Maryland	5
Virginia	2
Total	97

For calendar year 2010 the above data represents approximately **179** hours of Medical Examiner time. The Chief Medical Examiner (CME) handled **36** of these court-related activities, which represents **37%** of the total court service caseload. In general the least amount of time spent on this activity was one half hour, and the maximum recorded time spent on a court-related activity was 10 hours.

Educational Activities

The Office of the Chief Medical Examiner (OCME) continues to welcome students and residents from area universities and hospitals for their teaching requirements. In addition, the agency either hosted or was invited to lecture and/or provide presentation at the following medical institutions or major conferences:

- 1) Poster Presentation on Non-traumatic Subdural Hematoma in Adults at the American Academy of Forensic Sciences (AAFS), Seattle, Washington February 2010,
- 2) George Washington University Graduate level Forensic Pathology course (3 credits) Lecture series, for 2010 semesters that were held in the spring, summer and fall. Ongoing
- 3) 2010 National Youth Leadership Forum on Medicine Half day of lecture and tour (annually)
- 4) 2010 National Youth Leadership Forum on Law and Crime Scene Investigation Two sessions of one hour presentations (annually)
- 5) DC Medical Examiner's Office Familiarization Training for Metro Transit Police Officers, Metropolitan Police Department Cadets and Mobile Crime technicians, Public Defenders Service Interns, Assistant U.S. Attorney Interns, and Foreign Service Officers from the US Dept. of State – all held at various times throughout 2010. (Ongoing)
- 6) Partners in Education with Arlington Public Schools Annual Presentation, November 2010.
- 7) University of the District of Columbia Hosted a volunteer student from the Mortuary Science Undergraduate program in Summer 2010
- 8) SEED School, Washington DC Charter School Career Day and Workshop March 23, 2010

Peer-reviewed publications:

Differential zinc Accumulation and Expression of Human Zinc Transporter 1(hZIP1) in Prostate Glands. Methods. 2010 Aug 10 [Epub]

Identifications and Public Dispositions

The process of identification can be a complex and lengthy procedure. The preferred method of identification, whenever circumstances of the death and discovery allow, is by visualization of a Polaroid or Digital photograph. Immediate family, close friends, neighbors or colleagues provide verification for visual identifications. In all other cases, the identification process may involve fingerprinting, DNA Analysis, dental charting, or comparative studies of ante-mortem and post-mortem body and dental x-rays. Staff members of different divisions and outside consultants participate in this process including members of MPD's Natural Squad. The Washington, DC area enjoys a large number of national and international visitors. The city has many embassies and a diverse population of immigrants. Often –in these cases - the next of kin is not available for identification purposes; hence another set of procedures must be followed through official headquarters of different countries to ensure proper identification and the release of remains to appropriate family members.

The process for which unclaimed bodies are handled is called "Public Dispositions." After a 30-day waiting period and after all efforts to locate family members are exhausted the OCME makes final arrangements for these bodies through contracts with local funeral homes.

All bodies examined at the OCME are stored by the agency until families make funeral arrangements. Usually this occurs in a matter of days; however, a portion of the population remains "Unclaimed" or "Unidentified" and must be buried or cremated by the OCME, which – as stated above - is known as the District Governments Public Disposition process. Also, unclaimed remains from hospitals and hospice facilities are also by regulation to be stored and handled as a public disposition by the OCME (DC Code §5-1411). So as a result, a minimal one-time fee is charged to these facilities and the remains are kept until family members are located or until they are buried or cremated by OCME.

All Unclaimed bodies (whether Identified or Unidentified) are cremated through contracts with local funeral directors, unless there exists a concern for public health and safety that would require burial.

Those unclaimed bodies identified as United States military veterans, once verified, are transported to Quantico for burial in the National Cemetery again, through contracts with local funeral directors. It is important to note that Public Dispositions are <u>not</u> performed by Medical Examiners in neighboring jurisdictions. For instance in Maryland, bodies are released to the Anatomic Board after 3 days if they are not claimed by the Next of kin.

Public Disposition by type	Number of Unclaimed Remains	Cost Per Disposi- tion	Total Dollar Amount Per Type
Cremations - identified	97	\$590.00	\$57230.00
adults			
Cremations – infants	1	\$234.00	\$234.00
Cremations – fetal remains	5	\$105.00	\$105.00
Transport to Quantico Na-			
tional Cemetery – identified	11	\$690.00	\$7590.00
US Military Veteran			
TOTAL	114 unclaimed remains		\$57,569.00

Breakdown of Public Dispositions and the Associated Costs

Cremation Requests

Pursuant to DC Code §5-1405 the OCME must investigate and approve all Cremation requests for deaths that have occurred in the District of Columbia "regardless of where the cremation will occur". This involves review of the cause and manner of death to be sure it is an etiologically specific disease process and that the manner is natural. Should the cause of death not be appropriately documented, the certifying physician is contacted, the cause of death reviewed and the appropriately formatted cause of death is determined. If this review reveals the death is not natural, the death then falls under the jurisdiction of OCME.

Calendar Year 2010 statistics

The number of cremation requests - 2,383

The number of cremation requests that was Medical Examiner Cases – 507⁶

The number of cremation requests APPROVED upon initial request - 951.

The number of cremation requests DENIED was 875, of which 820 cases were eventually approved.

There were 26 cremation requests that were neither APPROVED nor DECLINED.

The number of cremation only requests CONVERTED to a Medical Examiner case 25

Storage Requests

The OCME provides storage of remains for nursing homes and hospices that do not have refrigerated facilities to store bodies or bodies that have not been claimed by families by 30 days following the death. Many of these storage cases then become public dispositions.

<u>Calendar Year 2010 statistics</u> The number of storage requests was - **90**

The number of storage requests was 50

The number of Storage cases that became Public Dispositions -61

The number of Storage cases that were DECLINED -8

The number of Storage cases that were APPROVED and COMPLETED -82

Toxicology Findings for Driving Under the Influence (DUI) Cases

Toxicological examinations were performed on driving-under-the-influence (DUI) cases to assist law enforcement agencies in the investigation of such cases. In 2010, the laboratory received 134 cases from the Metropolitan Police Department (MPD); 232 cases from the United States Parks Police (USPP); and 25 specimens from the United States Capitol Police (USCP). It should be noted that these toxicological exams are not conducted on Medical Examiner cases. Routine toxicological examinations for DUI cases include analysis for alcohols (ethanol and other volatiles) and major classes of illicit and prescription medications. Additional screens were assigned depending on requests made by law enforcement. Specimens received where either blood or urine, and multiple specimens could be received with each of the 391 cases. In total, the laboratory inventoried 633 DUI specimens yielding 652 reported results.

A negative case refers to the <u>absence</u> of any alcohol or detectable drug. A positive case refers to the <u>presence</u> of alcohol and/or drug(s), noting that a case can be positive for more than one substance. Drugs that are excluded from typical DUI toxicology reports include common compounds found such as caffeine and nicotine.

Total number of DUI cases analyzed:

Description	Number of Cases	% of Cases
N=	391	
Negative	19	4.9 %
Positive	372	95.1 %

The % prevalence of Ethanol, Phencyclidine, Marijuana, Cocaine, and Morphine in DUI casework submitted by all three enforcement agencies

Agency	MPD	USPP	USCP
Total Cases	134	232	25
Ethanol	68.7%	75.9%	56.0%
Phencyclidine (PCP)	35.1%	22.4%	28.0%
Marijuana Metabo-			
lite	20.9%	21.6%	24.0%
Cocaine	14.9%	10.8%	24.0%
Morphine	22.0%	1.3%	8.0%

The following two graphs represent the number of suspected DUI cases positive for drugs of abuse or in combination with ethanol. The number of cases for each drug is sorted by blood (figure #1) or urine (figure #2) alcohol concentration.



Drug and Ethanol Positive Cases vs. Ethanol Blood Concentration (g/100mL)

Drug and Ethanol Positive Cases vs. Ethanol Urine Concentrations (g/100mL)



Toxicology Findings for Drug Facilitated Sexual Assault (DFSA) Cases

Toxicological examinations were performed on drug facilitated sexual assault cases to assist law enforcement agencies in the investigation of such cases. Routine toxicological examinations for DFSA cases include analysis for alcohols (ethanol and other volatiles), major classes of illicit and prescription medications, and targeted drugs commonly used in DFSA. Additional screens were assigned depending on requests made by law enforcement. In 2010, the laboratory received 8 cases from the Metropolitan Police Department (MPD). Specimens received where either blood or urine, and multiple specimens could be received with each of the 8 cases.

A negative case refers to the <u>absence</u> of any alcohol or detectable drug. A positive case refers to the <u>presence</u> of alcohol and/or drug(s), noting that a case can be positive for more than one substance. Drugs that are excluded from typical DFSA toxicology reports include common compounds found such as caffeine and nicotine.

Total number of DFSA cases analyzed:

Description	Number of Cases	% of Cases
N=	8	
Negative	0	0 %
Positive	8	100 %

Table 2. Summary of toxicology results for all DFSA casework. The table includes demographics by case, specimens, analytical methods used for confirmation, compound(s) present, and the measurable concentration. GC/MS = Gas Chromatograph/Mass Spectrometer, LC/MS = Liquid Chromatograph/Mass Spectrometer, HS/GC-2 = Headspace/Gas Chromatograph, LC/MS/MS = Liquid Chromatograph/Mass Spectrometer/Mass Spectrometer.

Case	Sex	Age	Specimen	Drug	Confirm Method	Concentrat	ion
1	F	39	Urine	Cocaine	Cocaine		detected
			Urine	Cocaethylene	Cocaethylene		detected
			Urine	Benzoylecgonine	Benzoylecgonine		detected
			Urine	Ethanol	Ethanol	0.4	g/100mL
2	F	22	Urine Hospital	Ethanol	Ethanol	0.24	g/100mL
3	F	73	Blood	Tramadol	Tramadol	0.47	mg/L
			Urine	Tramadol	Tramadol		detected
4	F	41	Whole Blood	Benzoylecgonine	Benzoylecgonine	0.3	ng/mL
			Urine	Benzoylecgonine	Benzoylecgonine		detected
			Urine	Cocaine	Cocaine		detected
			Urine	Cocaethylene	Cocaethylene		detected
5	F	27	Urine	Zolpidem	Zolpidem		detected
6	F	20	Whole Blood	Ethanol	Ethanol	0.05	g/100mL
			Urine	Ethanol	Ethanol	0.07	g/100mL
7	F	37	Whole Blood	Cocaethylene	Cocaethylene		detected
			Whole Blood	Benzoylecgonine	Benzoylecgonine	0.14	mg/L
			Whole Blood	Citalopram	Citalopram		detected
			Whole Blood	Alprazolam	Alprazolam		detected
			Urine	Amphetamine	Amphetamine		detected
			Urine	Alprazolam	Alprazolam		detected
			Urine	THCCOOH	THCCOOH		detected
			Urine	Benzoylecgonine	Benzoylecgonine		detected
			Urine	Cocaine	Cocaine		detected
			Urine	Cocaethylene	Cocaethylene		detected
			Urine	Ethanol	Ethanol	0.14	g/100mL
			Urine	Citalopram	Citalopram		detected
			Urine	Doxylamine	Doxylamine		detected
			Urine	Oxymorphone	Oxymorphone		detected
			Urine	Oxycodone	Oxycodone		detected
8	F	24	Urine	Hydromorphone	Hydromorphone		detected
			Urine	THCCOOH	THCCOOH		detected
			Urine	Ethanol	Ethanol	0.13	g/100mL

5.0 – BREAKDOWN OF MEDICAL EXAMINER INVESTIGATIONS

The US Census reports that during 2010, the total population within the District of Columbia was 601,723⁷ inhabitants, which comprised primarily of the following race groups: White, African American, Asian, American Indian/Alaska Native, Pacific Islander/Native Hawaiian and Other. The category "Hispanic" is considered an ethnicity and NOT a race. In 2010, the OCME investigated 2,954 deaths (both human and non-human) that occurred in the District of Columbia or were wards of the District and died in another jurisdiction. 1,201 of these cases were accepted under the jurisdiction of the Medical Examiner for further investigation, of which 941 were known to be residents in the District of Columbia. The following table and charts summarize the manner of death by racial composition.

Race	2010. Census	Natural	Suicide	Homicide	Accidents	Undetermined	Total Number of ME Cases
Black (non-Hispanic)	301,053	473	19	114	176	27	809
White (non-Hispanic)	209,464	136	23	8	108	15	290
Hispanic (any single race)	50,083	24	2	7	15	3	51
Asian (non-Hispanic)	20,818	6	0	0	3	0	9
Two or more races	17,316	n/a	n/a	n/a	n/a	n/a	0
Other (non-Hispanic)	1,451	5	2	5	3	2	17
American Indian and Alaska Native (non-Hispanic)	1,322	0	0	1	0	0	1
Pacific Islander (non-Hispanic)	216	0	0	0	0	0	0
Unknown	n/a	4	0	0	0	2	6
Total Population	601,723						
Total # of ME Cases		648	46	135	305	49	1183 ⁸

2010 Manner of Death by Race with 2010 Census Data

2010 Manner of Death by Gender

Gender	Naturals	Suicide	Homicides	Accident	Undetermined	Totals	Percent
Female	254	10	18	121	21	424	36%
Male	394	36	117	184	27	758	64%
Totals	648	46	135	305	48 ⁹	1182	100%

⁷ Source: US Census Bureau at http://2010.census.gov/2010census/popmap/ipmtext.php?fl=11

⁸ The above tables do not include Stillbirths (N=4); or Non-Human remains (14).

⁹ Although there were 49 Undetermined cases, one of these cases was a bone case, in which the gender could not be determined.

5.1 - Total DC Population & Total ME Cases by Race



Note: The race categories American Indian/Alaska Native and Pacific Islander/Native Hawaiian are not represented in the above graph because they are both less than 1% of the total population in the District of Columbia. On the other hand, Hispanics are represented in this graph; although this classification is considered to be an ethnicity and NOT a race.

5.2 - Total DC OCME Cases by Race and Manner of Death





APPENDICES

OCME Organization Chart	
	A
Agency Management	B
Program Legislation	С
Special Reports 2010	D

APPENDIX A

OCME Organizational Chart
OFFICE OF THE CHIEF MEDICAL EXAMINER ORGANIZATIONAL CHART FY 2010



APPENDIX B

AGENCY MANAGEMENT

AGENCY MANAGEMENT

Administration Peformance Management

The agency's Administrative Division provides support to the work discussed within this annual report in the areas of: property/facilities management; finance and procurement; personnel; information technology; quality assurance and control; legal management; risk management; labor management; and incident management. The Administrative Division is also responsible for monitoring and ensuring efficient operations via establishment and compliance of a performance plan that includes key performance indicators – the performance component of agency management. Throughout 2010, the agency met performance deadlines, including production of the agency - statutorily-mandated - annual report; response to staff inquiries, external agency requests; and Mayoral and D.C. Council issues and needs. Key agency management highlights are included herein, as well as results on key performance indicators for the various divisions.

Quality Assurance and Control:

The agency's Quality Assurance and Control Program, implemented several years ago, was maintained throughout 2010. The purpose of the program is to ensure that professional activities of the staff are in compliance with accrediting body standards; agency policies and procedures; and District laws, regulations and policies. The agency's Quality Control Officer reviews unit workflows and makes recommendations for improvement to processes, policies and procedures; hold required qa/qc meetings; and conducts quality assurance audits of all agency statistical data in preparation of the production of the agency annual reports. The Officer keeps abreast of industry standards and requirements and is able to apply this knowledge to the program.

Grant Activity:

In 2010, the D.C. Justice Grants Administration awarded OCME its second National Institutes of Justice Coverdell Forensic Science Improvement sub-grant. The agency utilized the grant to continue its focus on improving the quality and timeliness of forensic science and medical examiner services, including services provided by the forensic toxicology laboratory and records managements units of the agency. Additional forensic toxicology staff were enrolled in a driving under the influence ("DUI") and driving under the influence of drugs ("DUID") testimony course to improve the quality and availability of DUI and DUID toxicological testimony. The grant was also used to continue implementation of a project to digitize over 30,000 agency medical examiner case records from 1972-2002. The purpose of the project is to ensure that data for these cases is readily accessible and to provide security and integrity to files that are comprised of paper documents that are fragile and have some degree of degradation or damage due to the archiving process and storage environment. Further, digitization will protect the records from loss due to natural disasters or human error. In late 2010, the project was expanded to include an upgrade of the agency's critical Forensic Automated Case Tracking System (FACTS) which monitors each medical examiner case from initiation to final disposition of the body. The upgrade is necessary in order that the historical cases that are digitized can ultimately be linked to the FACTS.

Property Management:

OCME's death investigation and certification activities occur at its core facility at 1910 Massachusetts Ave, Bldg. 27, Washington, D.C. The agency's Fatality Review Unit has also been returned from its location at the Reeves Center, on 14th St., NW, Washington, D.C., to the core facility. Throughout the year, agency staff dedicated numerous hours to the design, governance and transition process for a move to the Consolidated Forensic Laboratory (CFL), including completing an assessment of inventory and collaborating with Department Real Estate Services (DRES) on floor plans and workflow.

Risk Management:

The agency's Risk Assessment Control Committee ("RACC") met on a quarterly basis to discuss and evaluate various facility, employee and other incidents that potentially bring risk or liability to employees, the facility or the District overall. The Office of Risk Management (ORM) provides requirements for a successful agency risk assessment and control program, including: conducting quarterly meetings; submittal of quarterly cost of risk reports; developing and implementing Agency Risk Management Plans; updating the agency's Continuity of Operations Plan (COOP); providing training for the agency's updated Emergency Response Plan (ERP); and conducting quarterly emergency response drills. The agency met all requirements.

Death Investigation and Certification Management

OCME's Death Investigation and Certification Program is based on the mission of the agency to prepare reports of findings and conclusions (i.e., cause and manner of death) on any autopsy or other type of examination performed. The death investigation and certification program thrived in 2010 with: a) autopsy reporting resulting in no or minimal backlog throughout the year; b) quick decedent identification and release to next of kin or public dispositions such that the agency continued to maintain a 35% morgue emergency surge capacity; c) maintenance of an emergency body transport service; and d) implementation of advanced technology.

Key Performance Indicators¹

Measure One:

This measure requires that the agency complete 90% of autopsy reports for all postmortem examinations within 60 calendar days from the time of autopsy, based on National Association of Medical Examiner (NAME) standards. After overcoming a large backlog and hiring challenges, the OCME met NAME standards for the first time in recent years for two quarters. For those quarters, OCME completed 95% of reports within 60 calendar days, actually surpassing the NAME standard. The overall fiscal year percentage for this target was 88.74, slightly below the 90% goal.

Measure Two:

The second measure requires that 95% of positively identified bodies be ready for release within forty-eight hours. For FY2010, the agency reached an actual percentage of 95.3%, above the target. Those bodies that are not ready for release within 48 hours represent a variety of situations ranging from cases requiring further investigation or examination; cases being reported on holidays or weekends when it is difficult to reach attending physicians for information; and the need to hold cases over for examination due to a large workload or other workflow issues.

¹ The District's Agency Key Performance Indicators (KPIs) are compiled on a fiscal year basis. Thus, <u>all</u> KPI data included in this report for FY2010 covers the time period between October 1, 2009 through September 30, 2010.

Measure Three:

The third measure assesses the percent of primary contacts made within eight hours of case assignment to an investigator, of which the agency scored 91.13%, below the 95% target.

Measure Four:

In FY2010, OCME's mortuary staff arrived on scene within one hour of notification of case acceptance 92.66% of the time, exceeding the 90% target for measure five.

Forensic Toxicology Laboratory Management

The forensic toxicology laboratory, which is currently fully staffed, has made key strides in support of its efficient operations and provision of service. The staff was able to complete all standard operating procedures for the laboratory and prepare for and complete all requirements to apply for laboratory accreditation through the American Board of Forensic Toxicologists (ABFT).

Several members of the toxicology laboratory staff were also trained to provide interpretive services and expert testimony on a variety of drug and alcohol related matters and can provide such service to the Office of the Attorney General (OAG), the Public Defenders Service, and the United States Attorney's Office (USA). During 2010, the laboratory processed 415 Driving Under the Influence (DUI) cases for outside entities, including: United States Park Police (297 cases), Metropolitan Police Department (MPD) (110 cases); and U.S. Capital Police (18 cases).

Of significance, the agency has been working with the Metropolitan Police Department (MPD) on cold cases by reviewing old slides to allow for DNA analysis. This resulted in a conviction in a 1984 case and the release of a man from jail after many years of imprisonment. OCME has also established for the first time in the history of the agency, a voucher file informer pauperis in the Finance Office at the D.C. Superior Court. This provides defendants a method to access funds to pay for records and services in their defense.

Key Performance Indicators

Measure Five:

Measure five provides results of toxicology laboratory performance. The agency overwhelmingly surpassed the FY2010 KPI which required that 90% of toxicology examinations be completed within 90 calendar days of case submission (a new NAME standard adopted in September 2009). The actual percentage was 99.79%.

Fatality Review Management

During FY2010, the Fatality Review unit staffing was significantly reduced from eight to three due to a Reduction-in-Force, retirement and attrition. This reduction included loss of the Program Manager and of a Program Coordinator. Note that there has been an overall reduction of 10 staff over the past two years. While staffing has presented challenges, the agency was able to produce substantive CFRC and DDFRC annual reports. Completion of the CFRC annual report has usually lagged by a year. However, many deaths could not be included because Department of Health's Bureau of Vital Statistics did not have the data readily available by that time. As such, the CFRC decided to prolong the reporting time beginning with 2009 in order to obtain appropriate statistics and in accordance with the practice in other jurisdictions.

Key Performance Indicators

Measure Six:

This measure required the CFRC to hold 90% of child fatality reviews within six months of notification of the death. In FY2010, the CFRC completed 85.53% of multi-agency and statistical reviews of child fatalities within six months of notification of death.

Measure Seven:

This measure required the MRDD FRC to review 90% of fatalities within three months of receipt of the investigative report from DDS (formerly MRDDA). One hundred percent (100%) were reviewed during FY2010.

Other Activities:

OCME continues to provide customer service consistent with the District's mission in welcoming students and residents from area universities and hospitals. In 2010, the agency began a partnership with George Washington University (GW) in which the agency's professional staff (including the Medical Examiners, Supervisory Medicolegal Investigator and Deputy Chief Toxicologist) serve as GW faculty to teach forensic pathology, toxicology and death investigation for the GW Forensic Sciences graduate program. Agency staff also presented in-house lectures and conferences for the State Department; National Youth Leadership Forum on Medicine, and various law enforcement entities within the District and at the federal level. The agency continues to offer internship opportunities for students in forensic science and physician assistant programs throughout the nation.

APPENDIX C

PROGRAM LEGISLATION

OCME, DC Law 13-172, codified at DC Official Code §5-1401 <u>et seq.</u> (2001)

All of the DC Code for District of Columbia Government agencies can be found at: http://www.dccouncil.washington.dc.us/dcofficialcode

Follow these steps to access the DC Code for the Office of the Chief Medical Examiner:

- 1) Go to www.dccouncil.washington.dc.us/dcofficialcode
- 2) Scroll down about quarter page use your mouse to click:

View DC Official Code: click here

3) You will now be taken to a different web page with a text box that says:

Natural Language Description: Type the following phrase exactly:

DISTRICT OF COLUMBIA OFFICIAL CODE 2001 EDITION DIVISION I. GOVERNMENT OF DISTRICT. TITLE 5. POLICE, FIREFIGHTERS, AND THE OFFICE OF THE CHIEF MEDICAL EXAMINER. CHAPTER 14.

- 4) Then click the "**Search**" button.
- 5) Then click the appropriate portion of the Code. (i.e. DC ST § 5-1402)

APPENDIX D

SPECIAL REPORTS

Hypothermia Deaths
Homeless Decedents
Public Dispositions



OFFICE OF THE CHIEF MEDICAL EXAMINER REPORT ON HYPOTHERMIA DEATHS IN DC (2005- March 2010)

Overview of Hypothermia

According to Webster's II New College Dictionary (2001), Hypothermia is defined as: Abnormally low body temperature. The Center for Disease Control $(CDC)^1$ further defines this condition as, a core body temperature of 95° Fahrenheit or less. The CDC also states that Hypothermia causes nearly 700 deaths in the United States annually.

This report will provide statistical data of Hypothermia related deaths reported to the District of Columbia Office of the Chief Medical Examiner (DC OCME) from calendar year 2005 through March of 2010.

Breakdown of Hypothermia Deaths

From calendar year 2005 through March 2010 there were 34 deaths that were associated with Hypothermia. Table 1 below illustrates that of these 34 deaths, 18 had a <u>PRIMARY</u> Cause of Death certified as Hypothermia, but 16 of these deaths had a <u>CONTRIBUTING</u> Cause of Death as either "Hypothermia" or "Cold Exposure."



Year	Hypothermia Deaths (Primary Cause of Death)	Contributing "Cause of Death" Hypothermia or Cold Exposure	Total Deaths Associated with Hypothermia or Cold Exposure
2005	1	3	4
2006	4	3	7
2007	3	5	8
2008	2	1	3
2009	4	0	4
2010	4	4	8
TOTAL	18	16	34

Table 1: Breakdown of Hypothermia related Deaths by Year

¹ Reference is from the CDC website located at: <u>http://www.cdc.gov/media/pressrel/fs050224.htm</u>

Manner of Death

The "Manner of Death" provides the way in which the death occurred. In the DC OCME there are seven classifications for Manner of Death and they are: Accident, Homicide, Natural, Pending, Stillbirth, Suicide and Undetermined.

In general Hypothermia Related Deaths are Accidental, and during these years of study 85% of all Hypothermia or Hypothermia/Cold Exposure related deaths reported to the OCME were certified with the Manner of Death as "Accident". However, although there were 29 Hypothermia deaths certified as Accident, there



was also 1 Homicide in 2008 caused by Hypothermia due to Maternal neglect; 2 were Suicides in 2007 with a primary cause of death certified as drowning; and 2 were Undetermined deaths, one of which occurred in 2007 and one in 2006 – both of which were deaths caused by drowning also.

Demographic and Other Important Facts

<u>Prevalent Months of Death</u>: Over these six years there were more Hypothermia related deaths in the months of December (10) and February (8) than any other month.



Hypothermia Related Deaths by Race

<u>Gender, Age and Race</u>: During this six year time period there were eight female deaths, of which 5 or 63% had a "*Primary*" Cause of Death due to Hypothermia. Also, there were twenty-six male deaths, of which 13 or 50% had a "*Primary*" Cause of Death due to Hypothermia. Thirty-three of the 34 decedents were adults between the ages of 41 - 97 years old. One exception occurred in 2008 where the decedent was an infant.

The chart to the left titled "*Hypothermia Related Deaths by Race*", illustrates that Blacks represented 74% of all Hypothermia related deaths from 2005 – March 2010.

<u>Number of Undomiciled Decedents</u>: Of the 34 decedents that died as a result of Hypothermia/Cold Exposure, nine were confirmed to be Homeless. Table 2 illustrates by calendar year, the number of decedents that was confirmed as homeless and died due to Hypothermia/Cold Exposure as a "Primary" cause of death or as a "Contributing Condition".

Year	Undomiciled	
2005	2	
2006	1	
2007	2	
2008	0	
2009	1	
2010	3	

Table 2: Undomiciled decedents by year





OFFICE OF THE CHIEF MEDICAL EXAMINER REPORT ON HOMELESS DEATHS IN DC (2009)

Overview of the "Homeless Population"

In an effort to determine and compare the population of the Homeless in the District of Columbia with the deaths known to the Office of the Chief Medical Examiner (OCME), it was alarming to find that nationally as quoted in an article by Donovan, Neil (April, 15, 2010, Changes.org) titled: "Down for the Count: The U.S. Census Bureau's Failure to Count America's Homeless"

It is unknown nearly how many homeless people live in the United States...

The U.S. Court of Appeals decided in 1996 (<u>case link</u>) that failure to count all the homeless was not a failure to perform a constitutional duty; the Constitution does not give individuals a right to be counted or a right to a perfectly accurate census.

The US Census Bureau confirms the above information for the 2000 census, and the Census Bureau's full answer to the question of "*Does the Census Bureau produce data on the population experiencing homelessness*?" can be found at:

https://ask.census.gov/cgi-

bin/askcensus.cfg/php/enduser/std_adp.php?p_faqid=316&p_created=1078412711&p_sid=ttLWjb8k&p_accessibility=0&p_redirect=&p_srch=1 &p_lva=40&p_sp=cF9zcmNoPTEmcF9zb3J0X2J5PSZwX2dyaWRzb3J0PSZwX3Jvd19jbnQ9MjksMjkmcF9wcm9kcz0mcF9jYXRzPSZwX3B 2PSZwX2N2PSZwX3BhZ2U9MSZwX3NIYXJjaF90ZXh0PUhvbWVsZXNzIHN0YXRpc3RpY3M!&p_li=&p_topview=1

However, for 2010 the Census Bureau reports¹ that the homeless will be counted using a method called Service-Based Enumeration (SBE). This method will use sources such as "Service-based locations," which includes facilities such as emergency and transitional shelters for people experiencing homelessness, soup kitchens, regularly scheduled mobile food vans, and preidentified non-sheltered outdoor locations. This information, once collected, will be very helpful for the OCME; because then we can make statistical comparisons based on the population.

Summary of Findings for 2009 Homeless Deaths

During calendar year 2009, there were a total of twenty (20) deaths reported to the DC Office of the Chief Medical Examiner, where the decedents were confirmed to be homeless. The following page will provide a brief summary and breakdown by Manner of Death, Gender, Race, and Age.

¹Information obtain from the website: <u>https://ask.census.gov/cgi-</u>

 $[\]label{eq:binaskcensus.cfg/php/enduser/std_adp.php?p_faqid=7318&p_sid=ttLWjb8k&p_created=1218636603&p_sp=cF9zcmNoPSZwX3NvcnRfYnk9JnBfZ3JpZHNvcnQ9JnBfcm93X2NudD0mcF9wcm9kcz0mcF9jYXRzPSZwX3B2PSZwX3BhZ2U9MQ!!&p_search_text=Homeless_text=Home$

By Manner of Death



Homeless Deaths by Manner of Death

Note: The one Homicide was a Black female.

By Race and Gender

Fourteen of the decedents reported to OCME were Black/African American; three were White; one was Hispanic; one was Asian and one was Pacific Islander. Blacks represent 70% of this population.



Homeless Deaths by Race

<u>Females</u>: There is a total of six (6) female decedents, and the "Manners of Death" were as follows: three (3) were accidents, of which two (2) were drug overdoses; one (1) was a homicide; and two (2) were natural deaths. Three of the female decedents were Black/African American, two were White and one was Asian.



<u>Males</u>: There is a total of fourteen (14) male decedents, and the "Manners of Death" were as follows: five (5) were accidents, of which three (3) were drug overdoses; seven (7) were natural deaths; and two (2) are undetermined. Eleven of the male decedents were Black/African American, one was White, one was Hispanic, and one was Pacific Islander.

By Age: All decedents were between the age of 34 and 63 years old. The breakdown is as follows:

Age Group	# of Deaths	
30-39	2	
40-49	7	
50-59	10	
60 and Over	1	
Total	20	



OFFICE OF THE CHIEF MEDICAL EXAMINER REPORT ON PUBLIC DISPOSITIONS (2005 – 2009)

Overview of the "Public Disposition Process"

All bodies examined at the OCME are stored by the agency until families make funeral arrangements. Usually this occurs in a matter of days. However a portion of the population remains "Unclaimed" or "Unidentified" and has to be disposed of by the agency. In addition, the OCME provides storage of remains for nursing homes and hospices that do not have refrigerated facilities to store bodies.

Unclaimed remains from hospitals are also by regulation to be stored and disposed of by OCME (DC Code §5-1411). The process for which unclaimed bodies are handled is called "Public Dispositions." After a 30-day waiting period and after all efforts to locate family members are exhausted the OCME makes final arrangements for these bodies through contracts with local funeral homes. All Unclaimed bodies (whether Identified or Unidentified) are cremated through contracts with local funeral directors,

unless there exists a concern for public health and safety that would require burial. Those unclaimed bodies identified as United States military veterans, once verified, are transported to Quantico for burial in the National Cemetery.

It is important to note that Public Dispositions are not an established process in Medical Examiner offices in neighboring jurisdictions. For example in Maryland, bodies are released to the Anatomic Board after 3 days if they are not claimed by the Next of kin.



Calendar Year	Unclaimed Remains	Buried or Cremated as Unidentified	Number of Public Dispositions Processed
2005	61	5	153*
2006	102	3	117*
2007	149	3	155*
2008	82	1	81*
2009	97	3	88*
Totals	491	15	594

*Some of these deaths processed may have occurred in the previous year(s).

Over these 5 years 97% of the decedents were identified thanks to the exemplary efforts of our Investigations staff and the Metropolitan Police Department.

"Show me the manner in which a nation or a community cares for it's dead, and I will measure with mathematical exactness the tender sympathies of it's people, their respect for the laws of the land and their loyalty to high ideals."



William Gladstone, Prime Minister of England



Office of the Chief Medical Examiner

1910 Massachusetts Avenue, SE – Bldg 27 Washington, DC 20003 (202) 698-9000 Main (202) 698-9100 Fax

