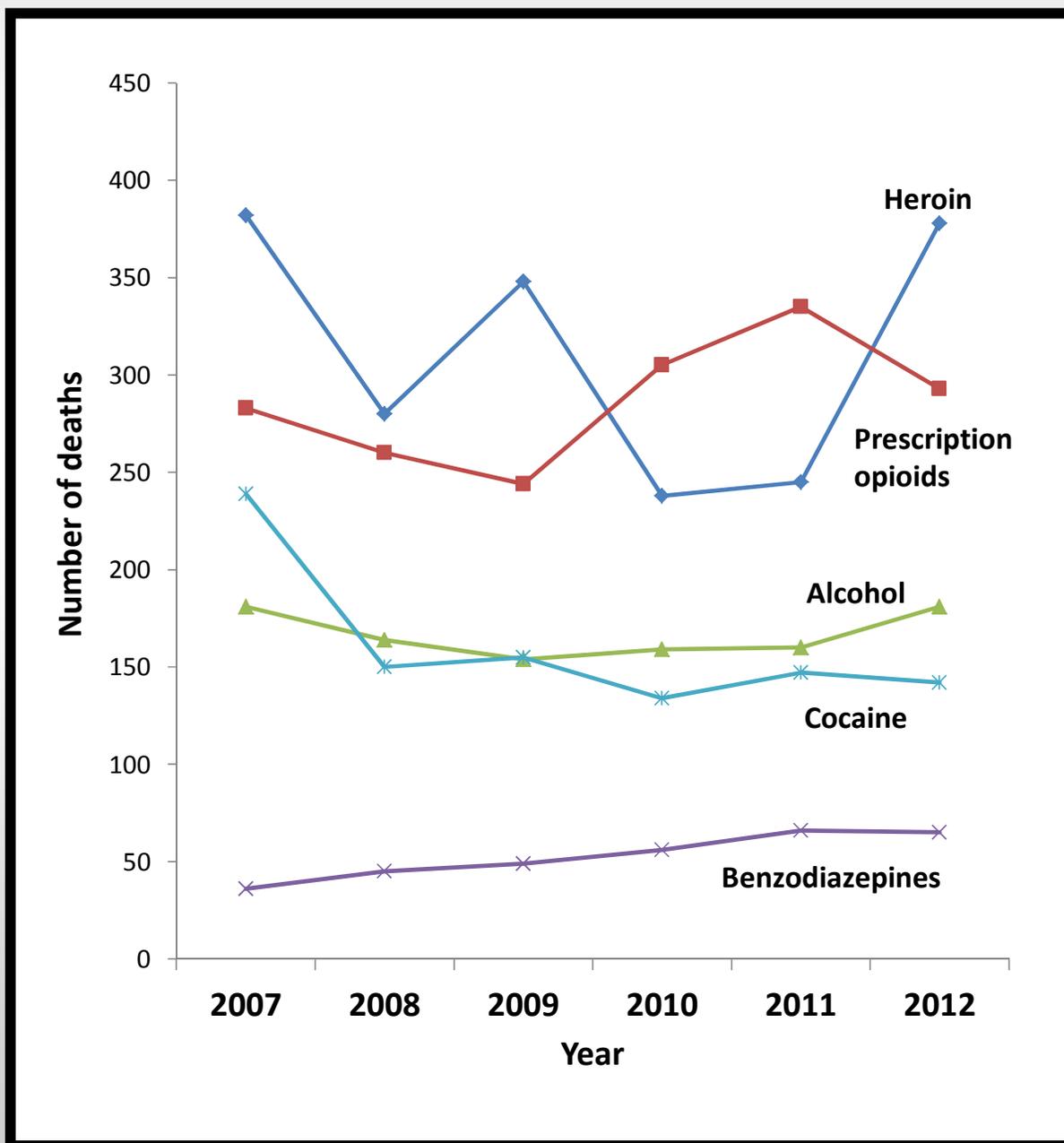




# Drug and Alcohol Intoxication Deaths in Maryland, 2007-2012



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## SUMMARY OF MAJOR CHANGES—2011 TO 2012

### Total alcohol and drug intoxication deaths

- A total of 761 alcohol and drug intoxication deaths occurred in Maryland in 2012, a 15% increase over the number of deaths that occurred in 2011. A 54% increase in the number of heroin-related deaths was responsible for the overall increase.
- The largest increase in the overall number of intoxication deaths between 2011 and 2012 occurred among individuals over the age of 55. The number of deaths in this age group increased from 91 to 127, a 40% rise.
- The number of deaths among white individuals increased from 498 in 2011 to 562 in 2012, a 13% rise. Among black individuals, the number of deaths increased from 131 to 175, a 34% rise. Deaths increased by 17% among males and 10% among females.
- The total number of deaths increased by 20% in Central and Southern Maryland, and remained stable in Western Maryland and on the Eastern Shore. The largest increases occurred in Baltimore City and Prince George's County, where the number of deaths increased by nearly 30%.

### Opioid-related deaths

- The number of **heroin**-related deaths increased by 54% between 2011 and 2012, while the number of **prescription opioid**-related deaths fell by 12%. There were 245 **heroin-related** deaths in 2011 and 378 in 2012. These figures were 335 and 293, respectively, for **prescription opioid**-related deaths.
- The number of **heroin**-related deaths increased among all demographic groups and in all regions of the State between 2011 and 2012. The number of deaths increased by 55% among whites (from 176 to 273) and by 56% among blacks (from 62 to 97).
- The largest decline in **prescription opioid**-related deaths between 2011 and 2012 occurred among individuals under 25 years of age. Despite the overall decline in the number of deaths, prescription opioid-related deaths increased by 46% among persons ages 55 years and above.
- The total number of **prescription opioid**-related deaths fell among all race/ethnicity groups, among both males and females, and within all regions of the State.
- The decline in the number of prescription opioid-related deaths was mainly the result of a 17% fall in the number of **oxycodone**-related deaths.

### Alcohol-related deaths

- The number of **alcohol**-related deaths increased by 13% between 2011 and 2012.
- **Alcohol-related** deaths fell among individuals below the age of 45, but rose among older individuals.
- The number of **alcohol-related** deaths increased by 62% among blacks, but remained stable among whites and Hispanics.

### Benzodiazepine-related deaths

- The number of **benzodiazepine**-related deaths among white individuals, which had been increasing steadily since 2007, remained stable between 2011 and 2012.

# **METHODS**

## **Introduction**

The purpose of this report is to describe trends in unintentional drug intoxication deaths occurring in Maryland during the period 2007-2012. Trends are examined by age at time of death, race/ethnicity, gender, place of death and substances related to death.

The methodology for reporting on drug-related intoxication deaths in Maryland was developed by the Vital Statistics Administration (VSA) of the Maryland Department of Health and Mental Hygiene (DHMH) with assistance from the DHMH Alcohol and Drug Abuse Administration, the Office of the Chief Medical Examiner (OCME) and the Maryland Poison Control Center. Assistance was also provided by authors of a 2008 Baltimore City Health Department report on intoxication deaths.<sup>1</sup>

## **Sources of data**

Data for intoxication deaths occurring in Maryland were obtained from OCME. Maryland law requires OCME to investigate all deaths occurring in the State that result from violence, suicide, casualty, or take place in a suspicious, unexpected or unusual manner. In these instances, information compiled during an investigation is used to determine the cause or causes of death. Depending on the circumstances, an investigation may involve a combination of scene examination, witness reports, review of medical and police reports, autopsy, and toxicological analysis of autopsy specimens. Toxicological analysis is routinely performed when there is suspicion that a death was the result of drug or alcohol intoxication.

Information on race/ethnicity was missing for a small number of records provided by OCME and was obtained from death certificate data files maintained by VSA. County of residence was also obtained from death certificate records since the data appeared to be more accurate than the data available to OCME at the time of their investigation. Information for Maryland resident deaths occurring in other jurisdictions was obtained from death certificate data received by VSA through an interjurisdictional exchange agreement.

## **Identification of drug-related intoxication deaths**

For the purpose of this report, a drug-related intoxication death was considered to be a death that was the result of recent ingestion or exposure to alcohol or another type of drug, including heroin, cocaine, phencyclidine (PCP), prescription opioids, benzodiazepines, methamphetamines and other prescribed and unprescribed drugs. Records were selected for inclusion if the manner of death was classified as either accidental (e.g., unintentional) or of undetermined intent. Manner of death is classified as undetermined if the medical examiner does not have sufficient evidence to definitively determine whether a death was natural, accidental, or the result of suicide or homicide.

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<sup>1</sup> Office of Epidemiology and Planning, Baltimore City Health Department. Intoxication Deaths Associated with Drugs of Abuse or Alcohol. Baltimore City, Maryland: Baltimore City Health Department. January 2007.

The Office of the Chief Medical Examiner provided all records to VSA for which the text of the cause of death included one or more of the following terms: poisoning, intoxication, toxicity, inhalation, ingestion, overdose, exposure, chemical, or use. All records were then reviewed by VSA and any records that were not drug-related intoxication deaths, such as deaths due to smoke inhalation, carbon monoxide intoxication, cold exposure, and chronic use of alcohol or other drugs, were excluded. Records indicating that the manner of death was natural, suicide, or homicide were also excluded.

There are several reasons for the small differences in counts of intoxication deaths in this report and earlier Departmental reports. First, the terms listed above that were used by OCME to identify possible intoxication deaths represent an expansion of terms used in the past to identify these deaths. This resulted in the identification of records that had not been included in earlier reports. Second, since it can take OCME 90 days or longer to determine the cause of death in complicated cases, a small number of deaths may not have been included in previous reports because the fact that they were intoxication-related was not known until long after death occurred. Finally, prior reports may have included a small number of cases that were initially thought to be intoxication-related, but after thorough review of all findings were determined to have resulted from other causes.

Since the current methodology will be used in future Departmental reports, the data included in this report should serve as a baseline for comparison with future data. However, counts may change slightly over time as updated OCME data become available.

**Analyses**

Trends in the total number of drug intoxication deaths occurring in Maryland during the years 2007-2012 were analyzed by age group, race/ethnicity, gender, and place of occurrence of death. Number of deaths by place of occurrence was computed by jurisdiction and by region, categorized as follows:

<b>Western Area</b>	<b>Central Area</b>	<b>Southern Area</b>	<b>Eastern Shore Area</b>
Garrett County Allegany County Washington County Frederick County Montgomery County	Baltimore City Baltimore County Anne Arundel County Carroll County Howard County Harford County	Calvert County Charles County St. Mary's County Prince George's County	Cecil County Kent County Queen Anne's County Caroline County Talbot County Dorchester County Wicomico County Somerset County Worcester County

Trends were also examined for deaths related to the following substances:

1. Opioid-related
  - a. Total

- b. Heroin-related
- c. Prescription-related
  - i. Total
  - ii. Oxycodone-related
  - iii. Methadone-related
  - iv. Fentanyl-related
  - v. Tramadol-related
- 2. Alcohol-related
- 3. Cocaine-related
- 4. Benzodiazepine-related

Counts of the number of total deaths and deaths related to classes of substances or specific substances are shown in Tables 1 and 2. Trends are presented in Figures 1 through 43. Since an intoxication death may involve more than one substance, counts of deaths related to specific substances do not sum to the total number of deaths.

### **Identification of total opioid-related deaths**

Opioids include heroin, an illicit drug, and prescription drugs such as oxycodone, hydrocodone, hydromorphone, methadone, fentanyl, tramadol and codeine. An opioid was considered to be associated with a death if a specific opioid drug was indicated in the cause of death. If the cause of death did not identify a specific drug (e.g., the cause of death indicated “narcotic overdose”), OCME toxicology results were reviewed to determine whether the presence of any opioid drug was detected. If so, the cause of death was considered to be opioid-related, regardless of the level of the drug.

### **Identification of heroin-related deaths**

Cause of death information, toxicology results, and scene investigation reports were reviewed to identify deaths that were heroin-related. These deaths were classified as either “confirmed” or “suspected.” A death was considered to be a confirmed heroin-related death if:

1. “Heroin” was mentioned in the cause of death; or
2. The toxicology screen showed a positive result for 6-monacetylmorphine; or
3. The toxicology screen showed positive results for both morphine and quinine; or
4. The death was identified as heroin-related through scene investigation.

Since heroin is rapidly metabolized into morphine, deaths that did not meet the criteria above, but were associated with morphine through either cause of death information or toxicological results, were considered to be heroin-related. Since it is likely, but not certain, that these deaths are heroin-related, they were labeled ‘suspected’ heroin deaths. The number of heroin deaths presented in this report includes both confirmed and suspected deaths.

### **Identification of prescription opioid-related deaths**

Prescription opioid-related deaths are defined as deaths that involve one or more prescription opioids, as identified through cause of death information when a specific drug was

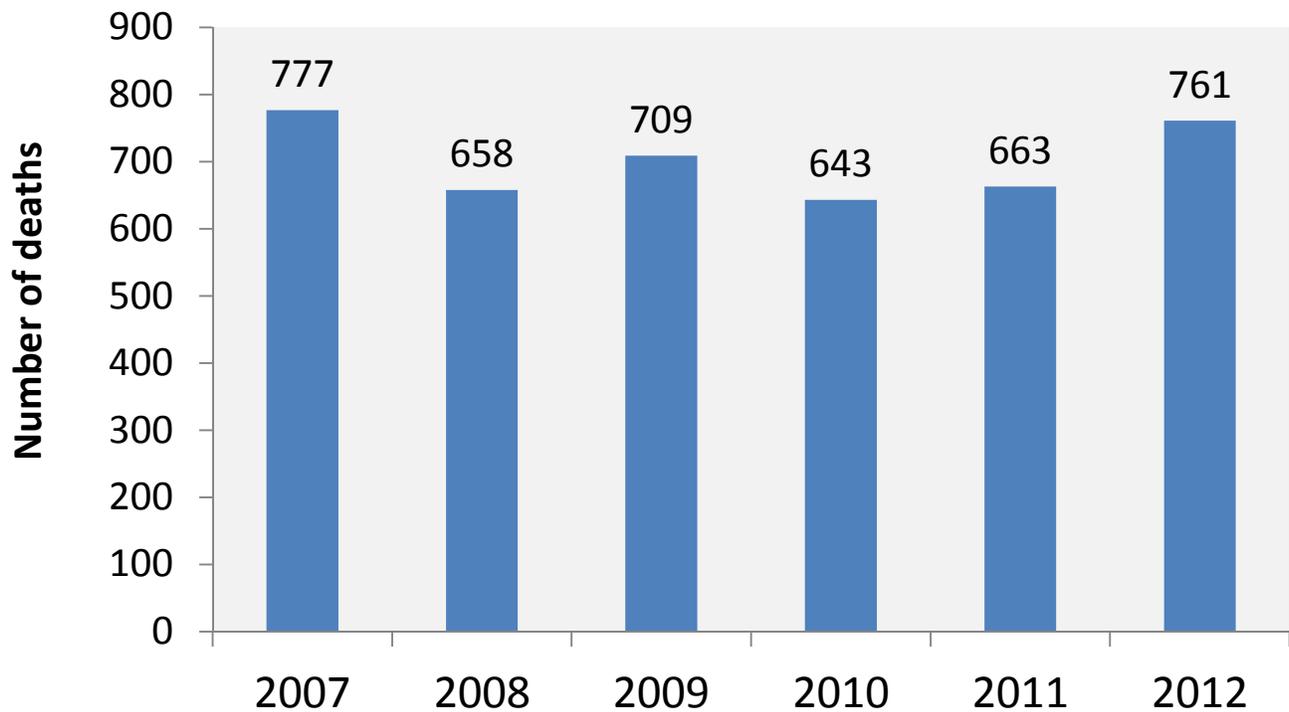
indicated, and through toxicology results when the cause of death was nonspecific. Counts of prescription opioid-related deaths shown in this report include deaths that may have involved both a prescription opioid and heroin, but not deaths that resulted due to heroin alone. Since a death may be associated with both heroin and one or more prescription opioids, the sum of the number of prescription opioid deaths and the number of heroin deaths is greater than the overall number of opioid-related deaths.

### **Identification of total benzodiazepine-related deaths**

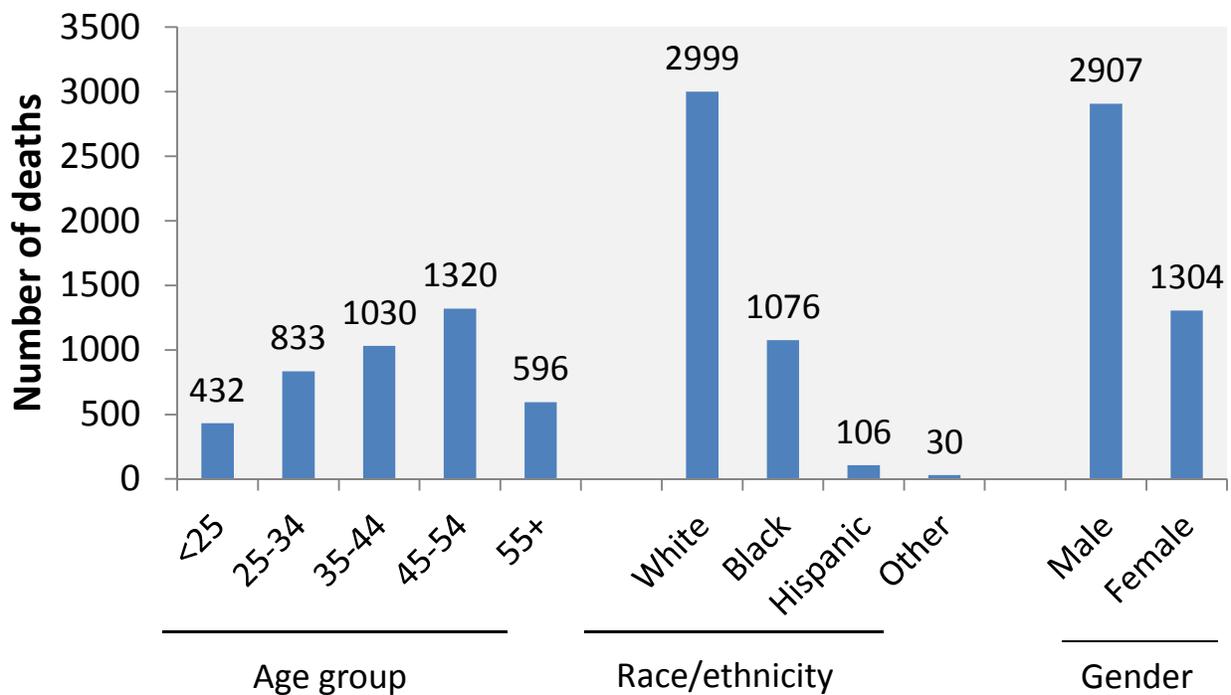
Benzodiazepines are a class of depressants that include drugs such as alprazolam, clonazepam, diazepam and multiple related drugs. The category of benzodiazepine-related drugs in this report includes both benzodiazepines and related drugs, such as zolpidem, which have similar sedative effects.

# **TOTAL INTOXICATION DEATHS**

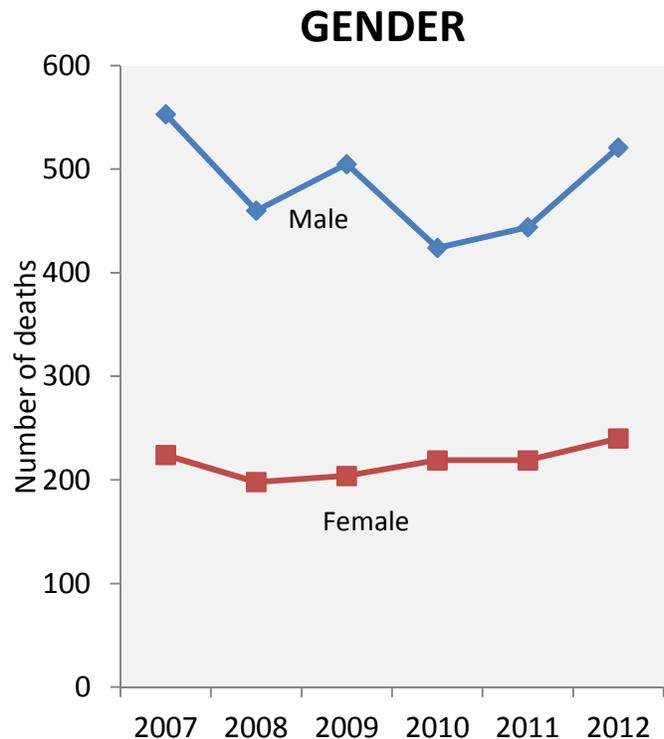
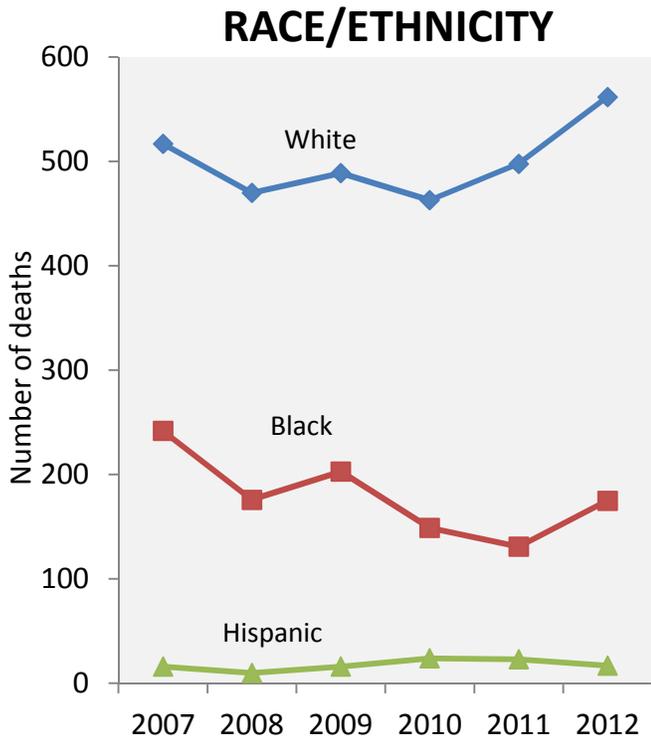
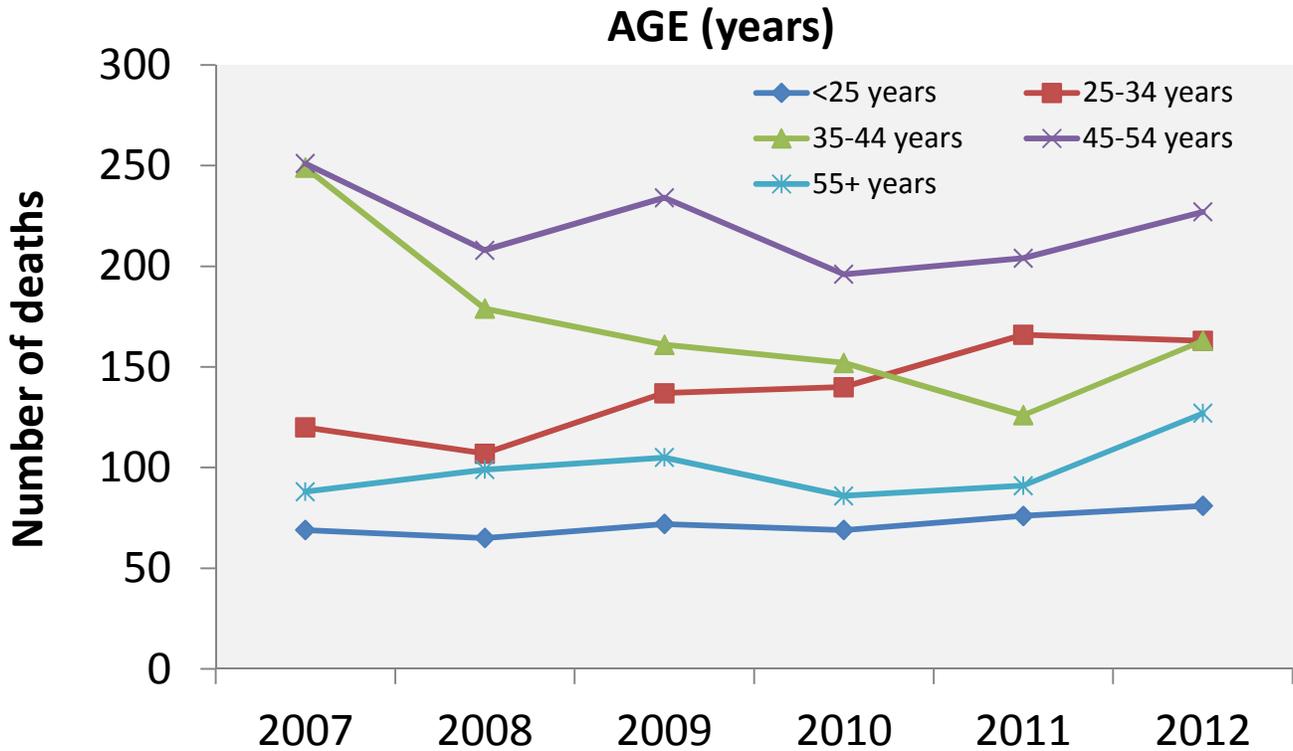
**Figure 1. Total Number of Drug Intoxication Deaths Occurring in Maryland, 2007-2012.**



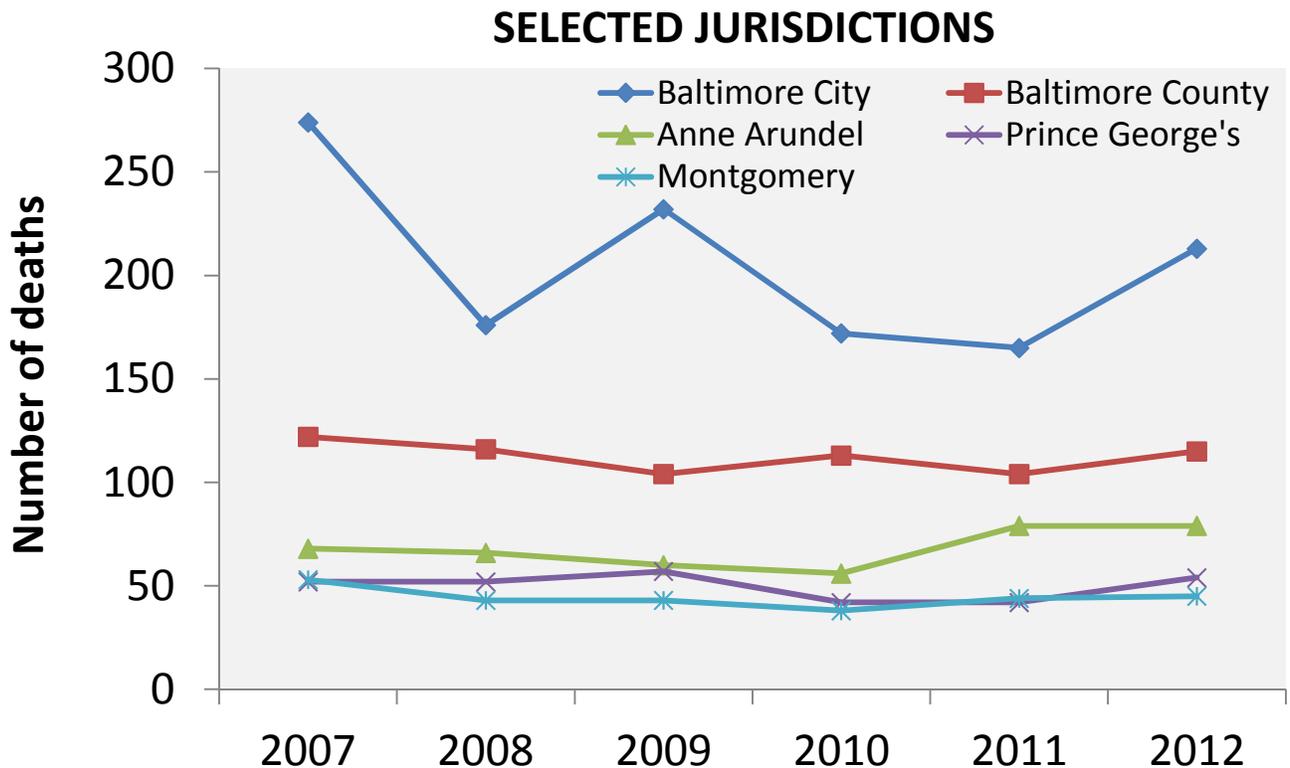
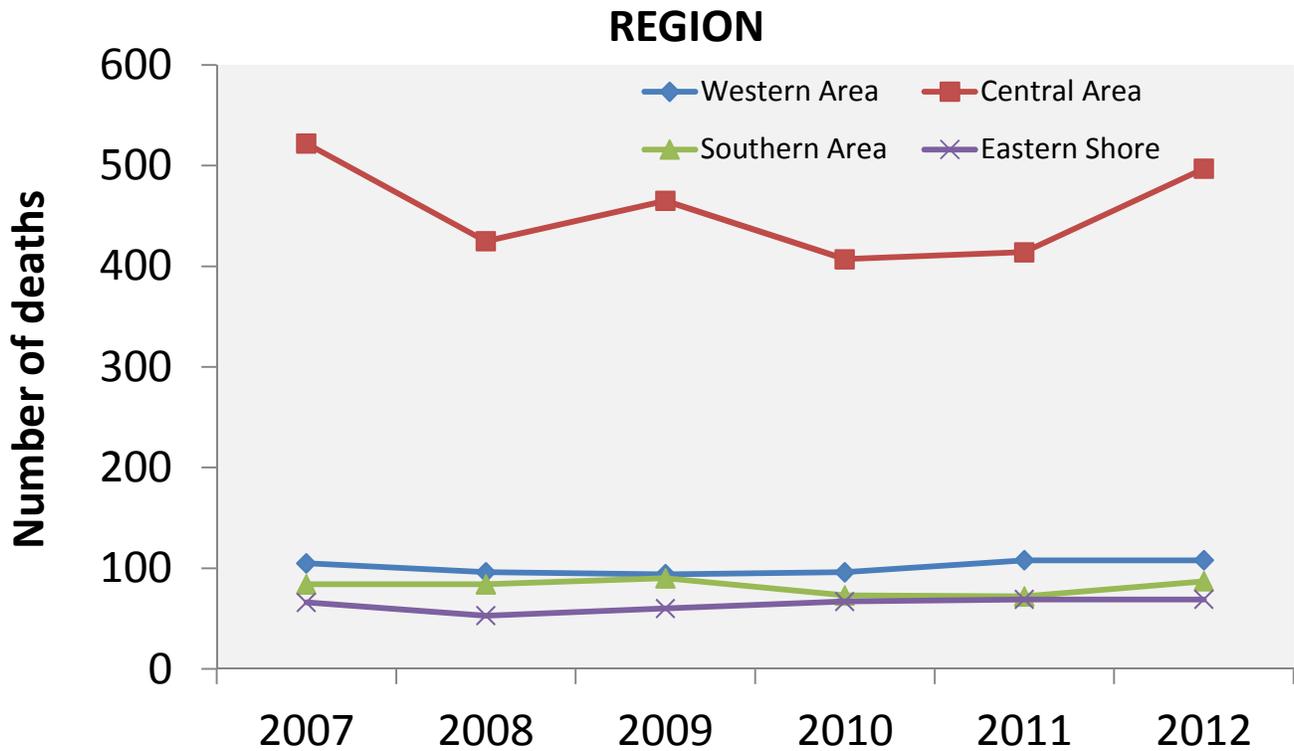
**Figure 2. Total Number of Intoxication Deaths Occurring in Maryland by Age, Race/Ethnicity and Gender, 2007-2012.**



**Figure 3. Total Number of Drug Intoxication Deaths Occurring in Maryland by Age Group, Race/Ethnicity and Gender, 2007-2012.**

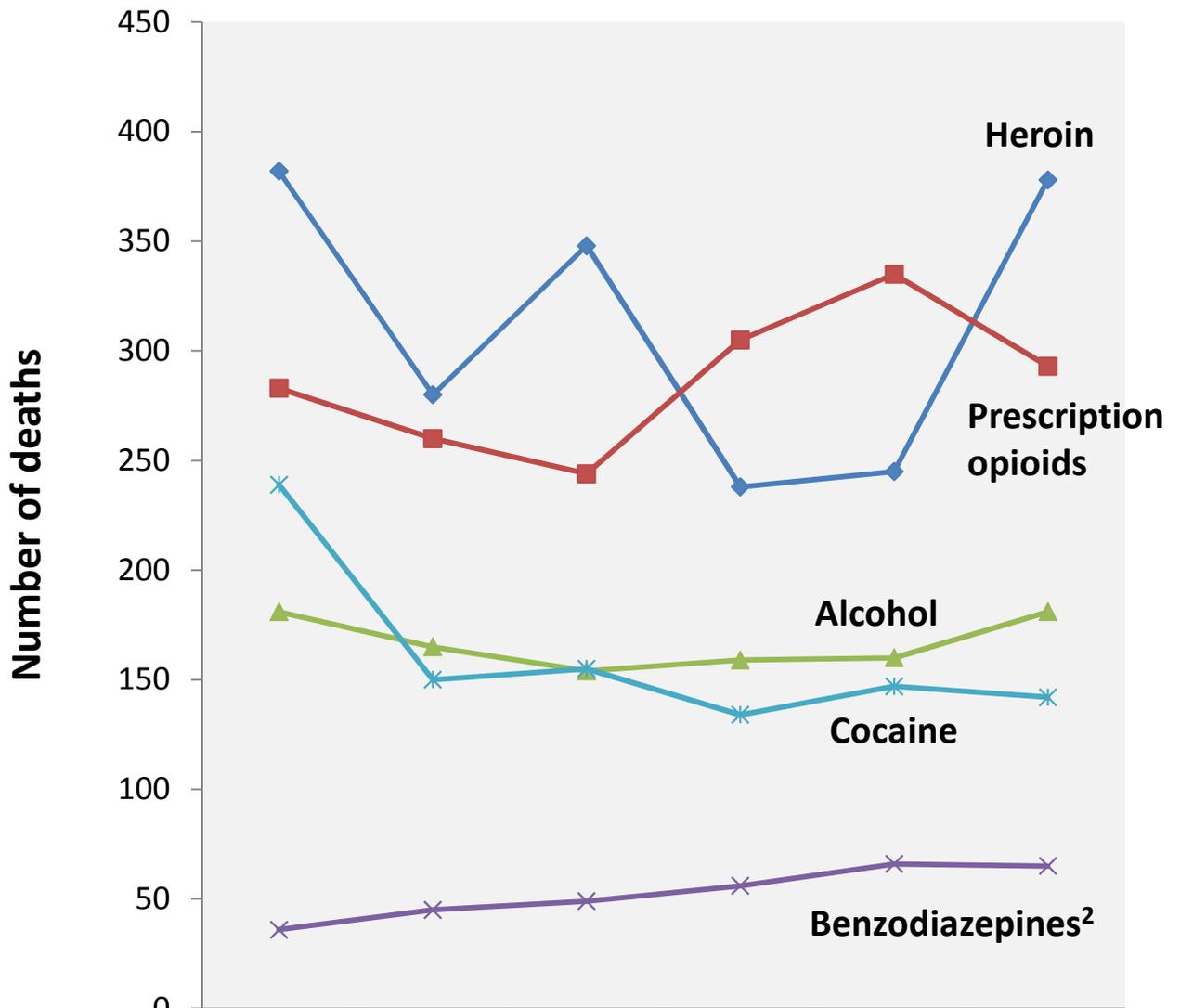


**Figure 4. Total Number of Drug Intoxication Deaths by Place of Occurrence, Maryland, 2007-2012.**



**DRUG INTOXICATION  
DEATHS BY SUBSTANCE**

**Figure 5. Total Number of Drug Intoxication Deaths by Selected Substances<sup>1</sup>, Maryland, 2007-2012.**



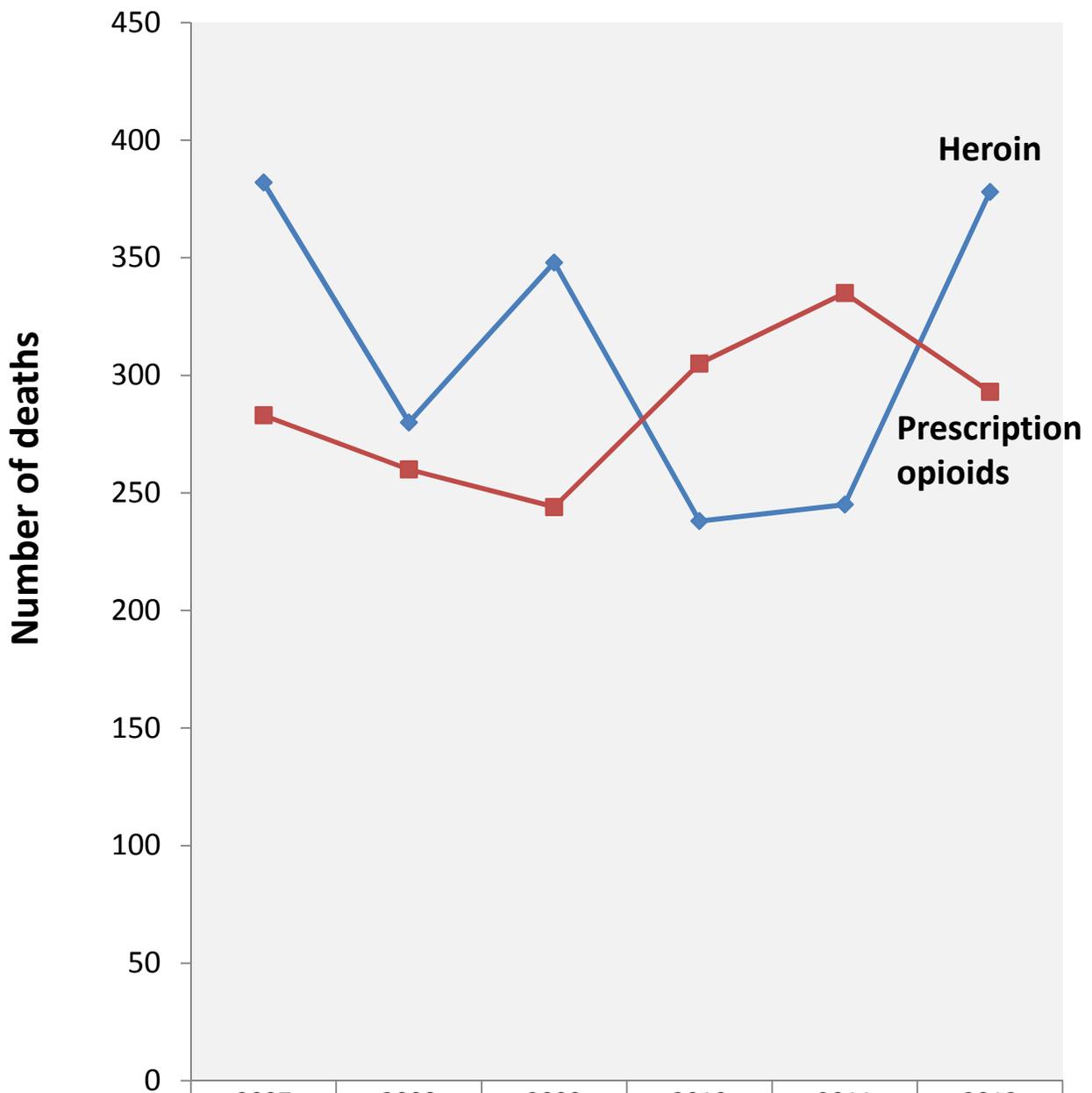
	2007	2008	2009	2010	2011	2012
Heroin	382	280	348	238	245	378
Prescription opioids	283	260	244	305	335	293
Alcohol	181	165	154	159	160	181
Benzodiazepines <sup>2</sup>	36	45	49	56	66	65
Cocaine	239	150	155	134	147	142

<sup>1</sup>Since an intoxication death may involve more than one substance, counts of deaths related to specific substances do not sum to the total number of deaths.

<sup>2</sup>Includes deaths caused by benzodiazepines and related drugs with similar sedative effects.

# **OPIOID-RELATED DEATHS**

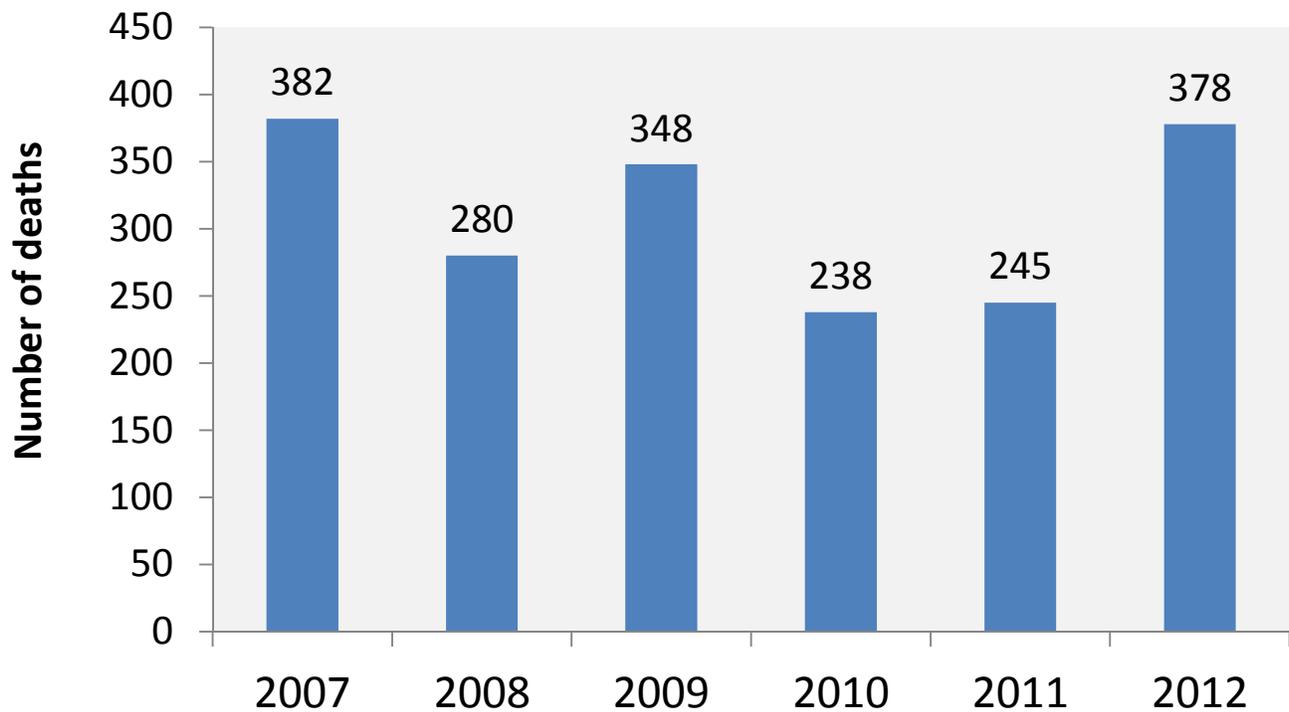
**Figure 6. Number of Opioid-Related Deaths Occurring in Maryland by Substance, 2007-2012.**



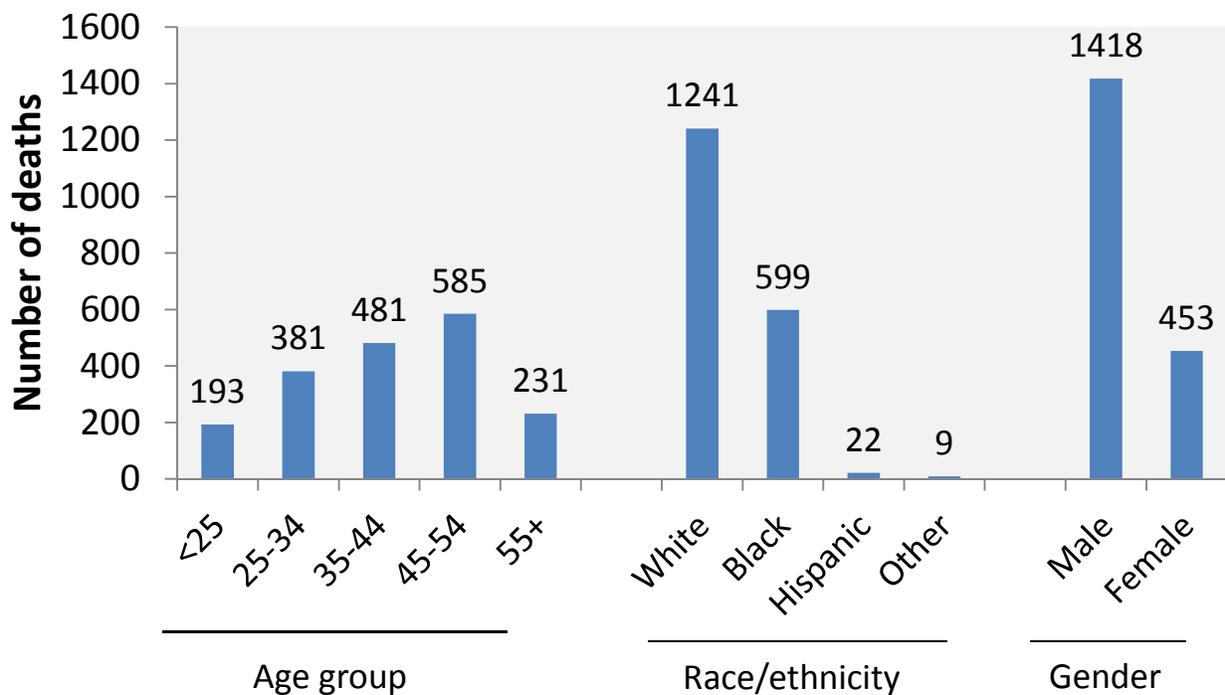
	2007	2008	2009	2010	2011	2012
Heroin	382	280	348	238	245	378
Prescription opioids	283	260	244	305	335	293

# **HEROIN-RELATED DEATHS**

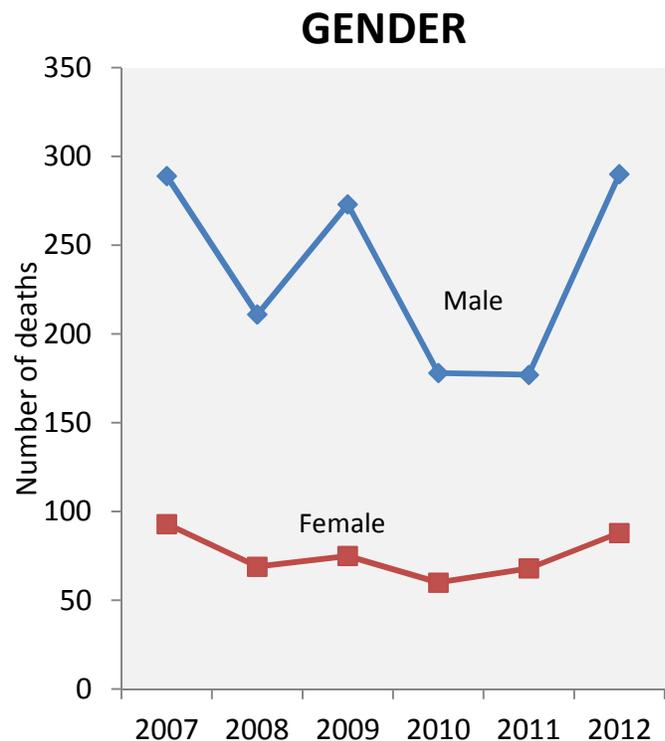
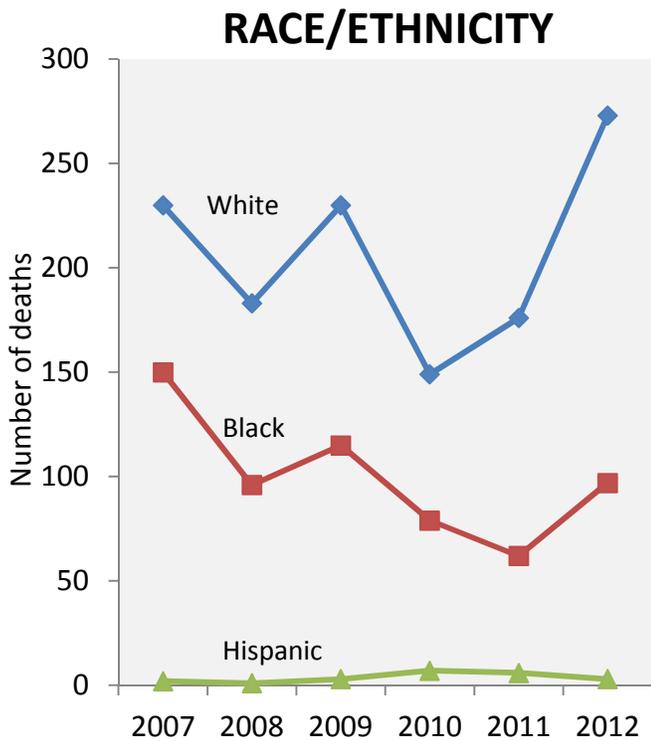
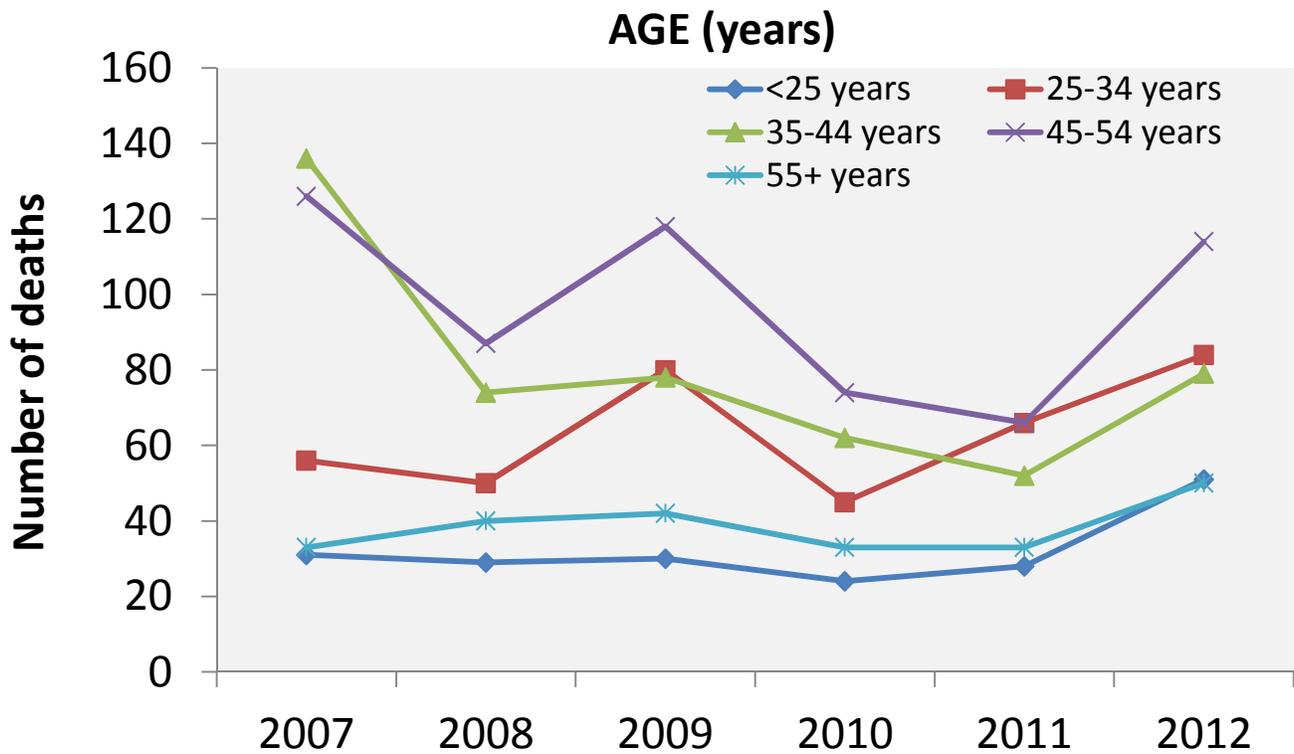
**Figure 7. Number of Heroin-Related Deaths Occurring in Maryland, 2007-2012.**



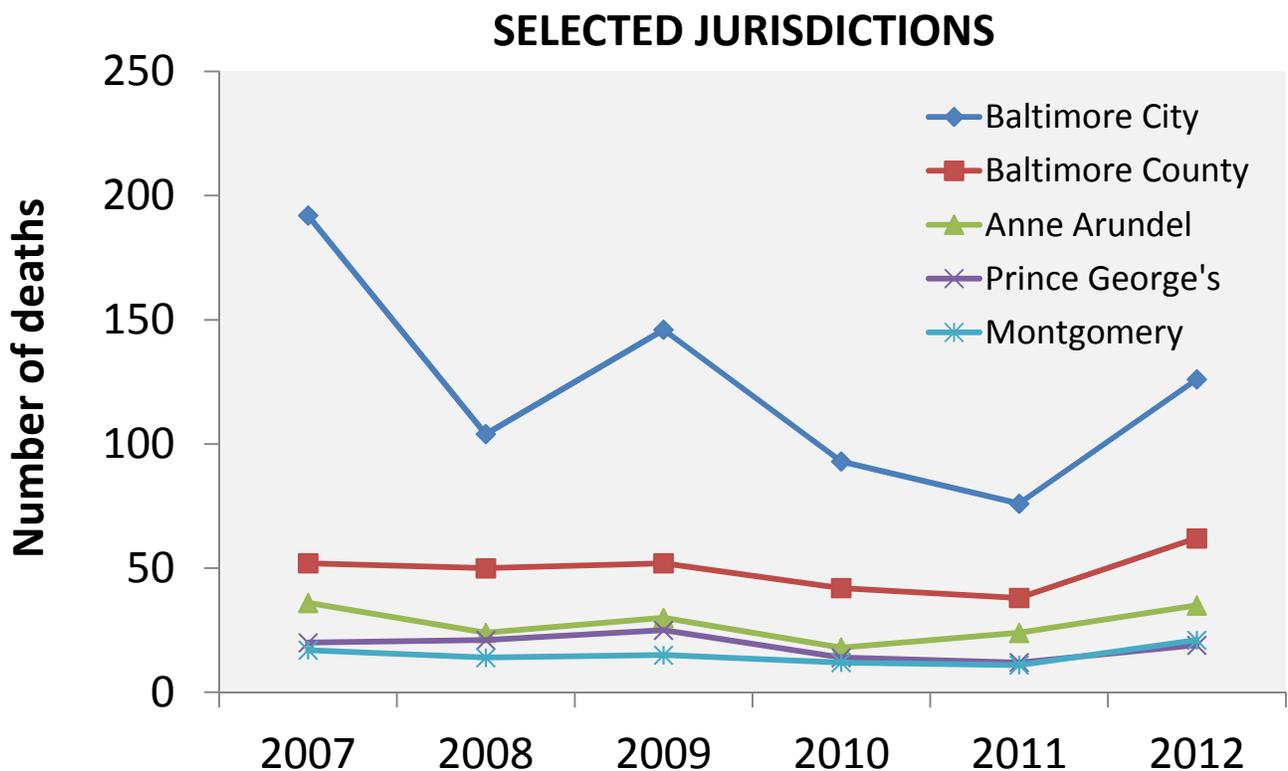
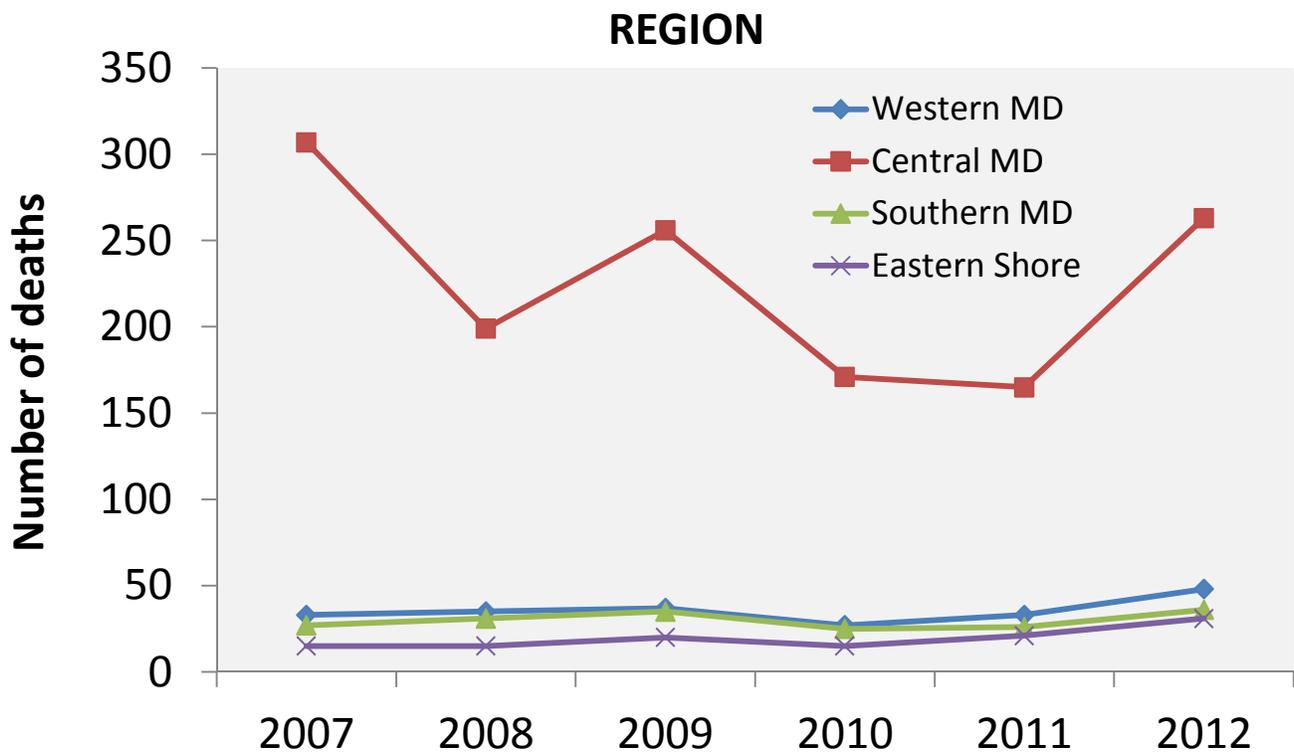
**Figure 8. Number of Heroin-Related Deaths Occurring in Maryland by Age, Race/Ethnicity and Gender, 2007-2012.**



**Figure 9. Number of Heroin-Related Deaths Occurring in Maryland by Age Group, Race/Ethnicity and Gender, 2007-2012.**

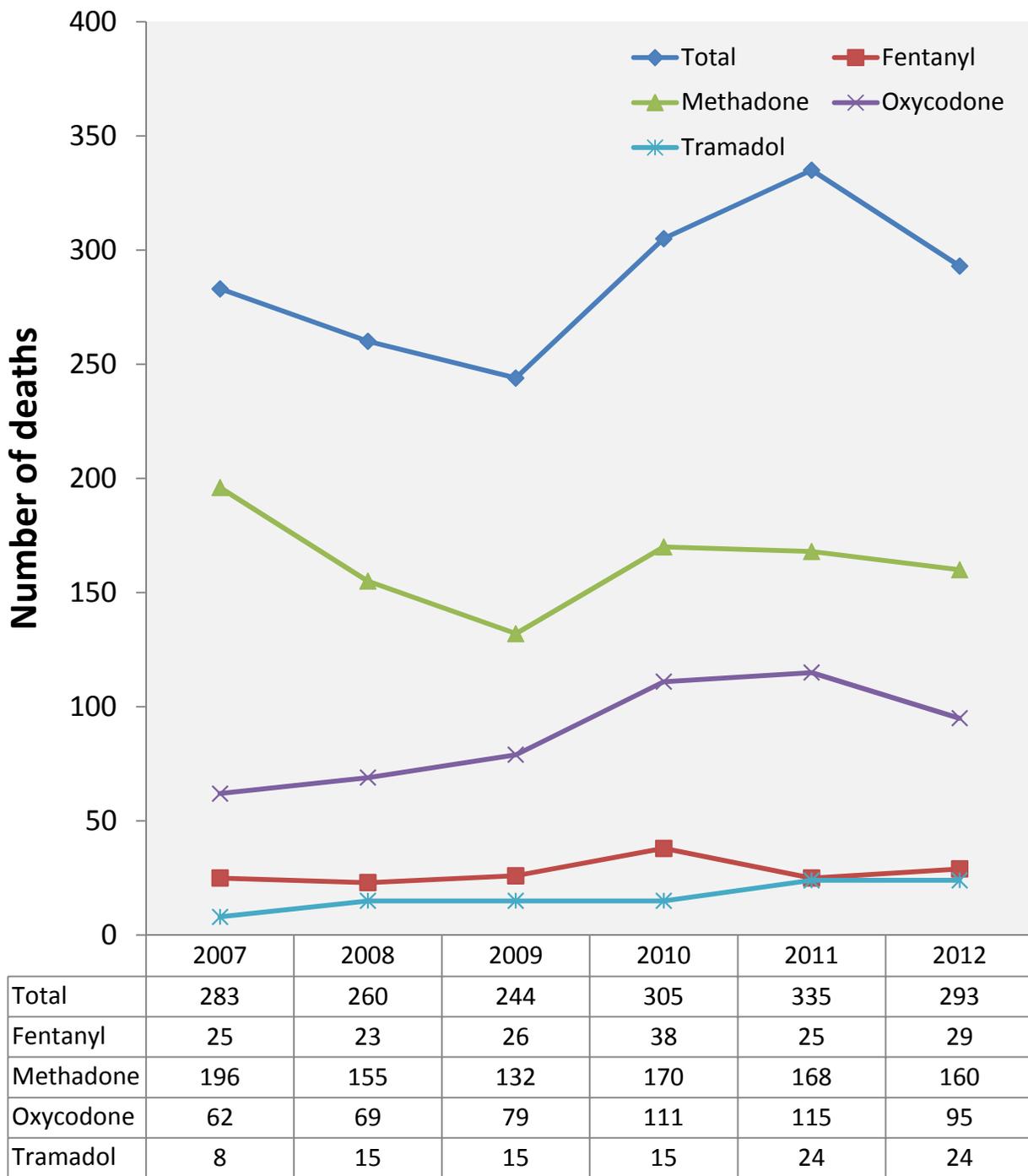


**Figure 10. Number of Heroin-Related Deaths by Place of Occurrence, Maryland, 2007-2012.**

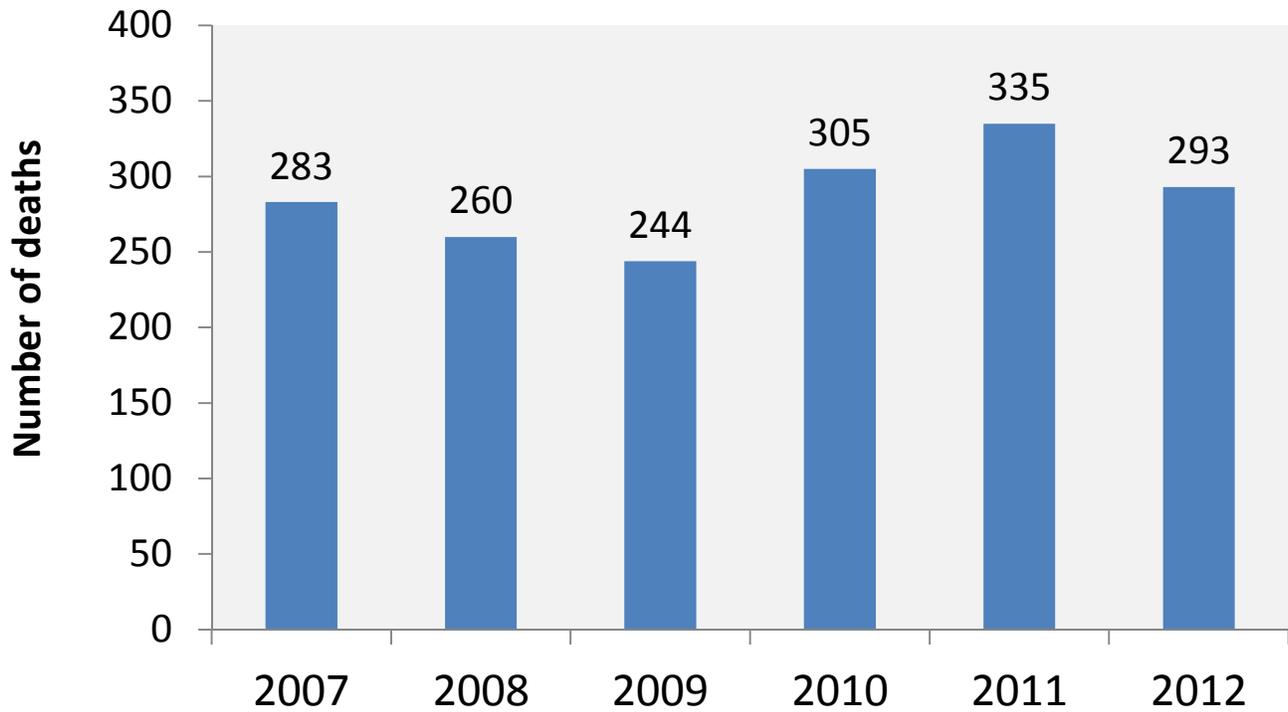


# **PRESCRIPTION OPIOID- RELATED DEATHS**

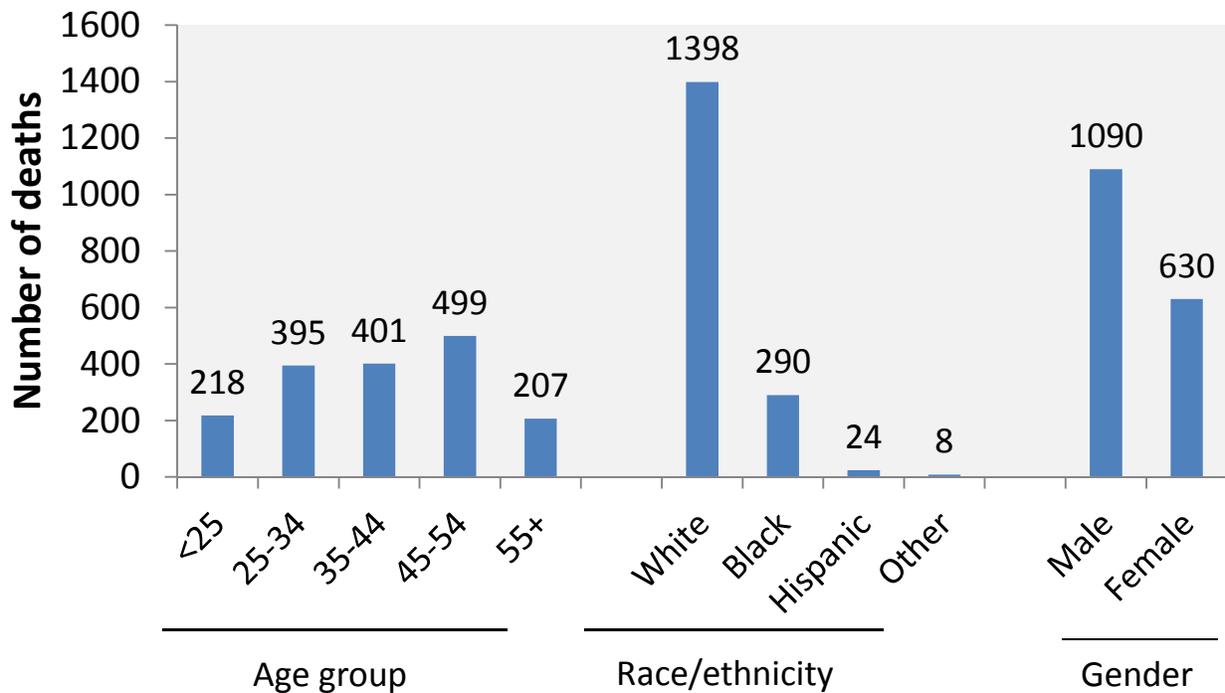
## Figure 11. Number of Deaths Occurring in Maryland by Selected Prescription Opioids, 2007-2012.



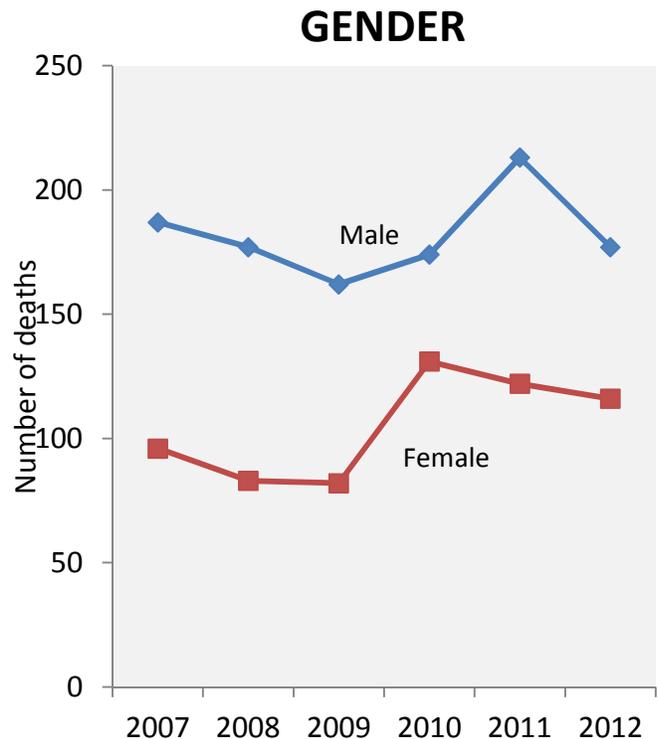
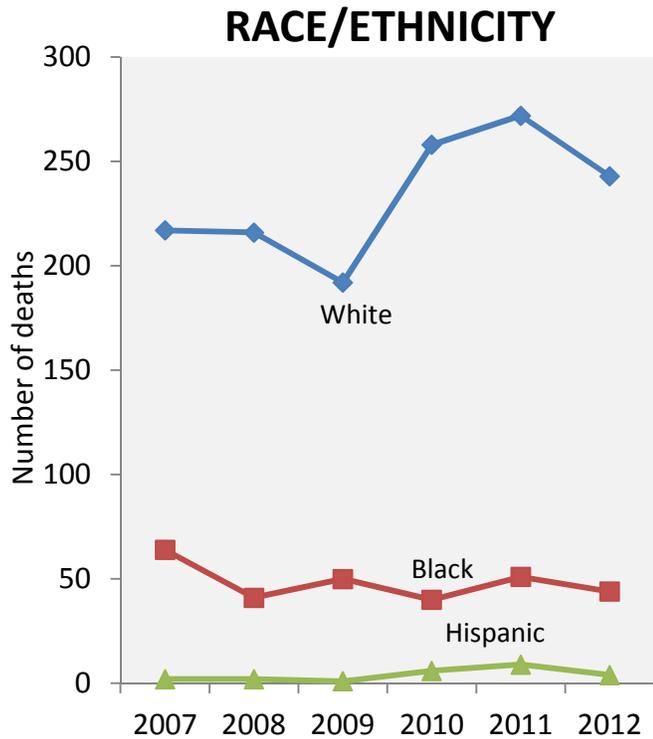
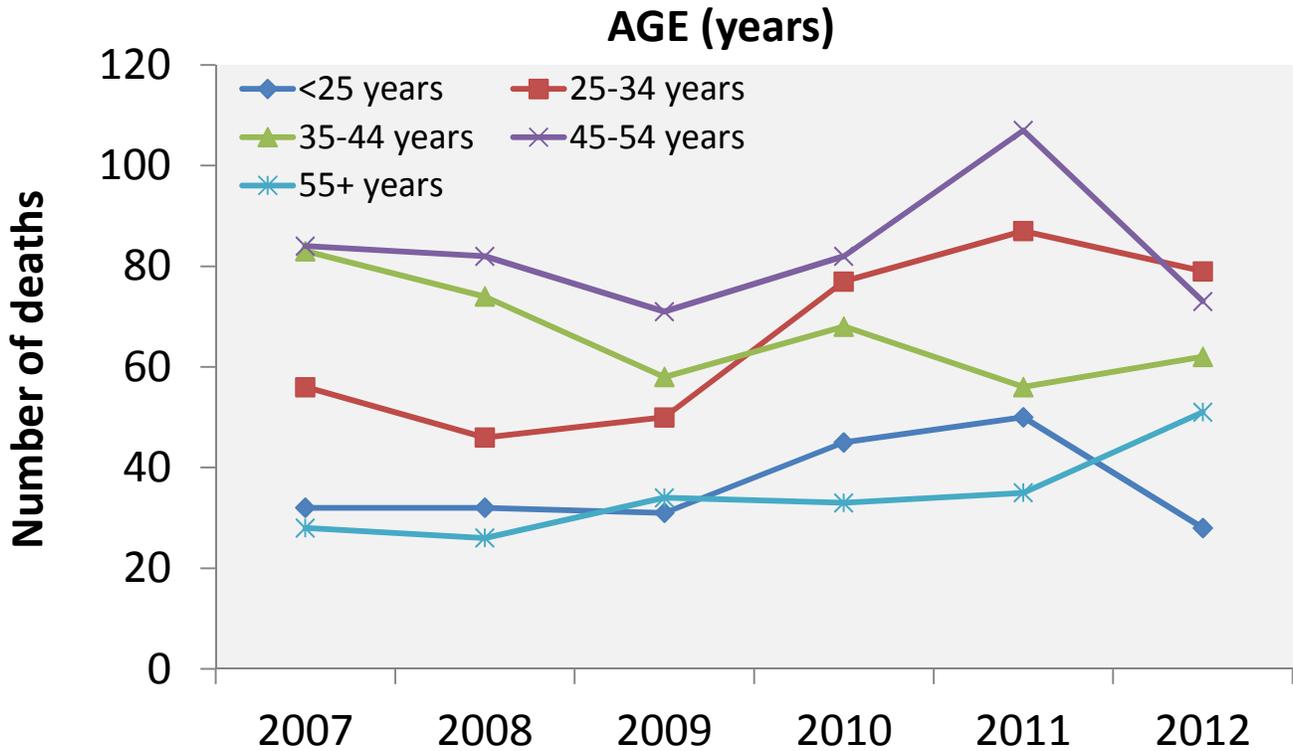
**Figure 12. Number of Prescription Opioid-Related Deaths Occurring in Maryland, 2007-2012.**



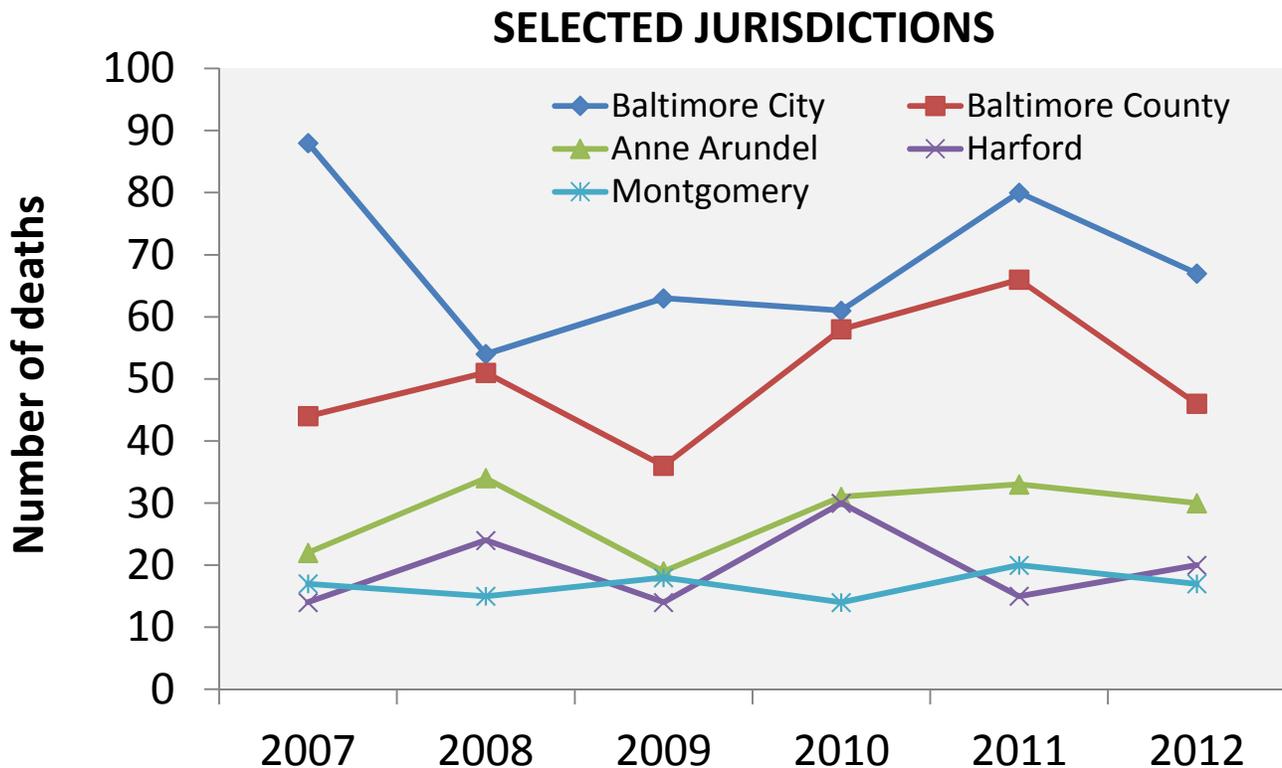
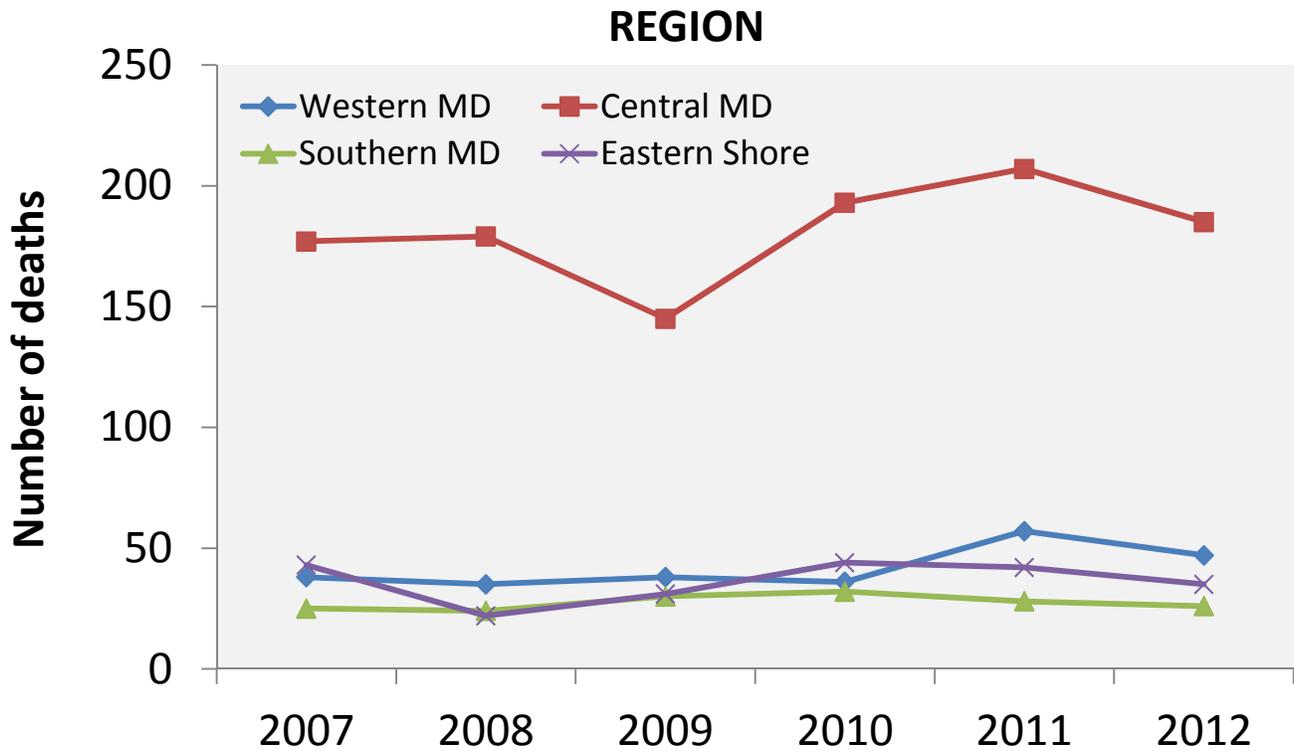
**Figure 13. Number of Prescription Opioid-Related Deaths Occurring in Maryland by Age, Race/Ethnicity and Gender, 2007-2012.**



**Figure 14. Number of Prescription Opioid-Related Deaths Occurring in Maryland by Age Group, Race/Ethnicity and Gender, 2007-2012.**

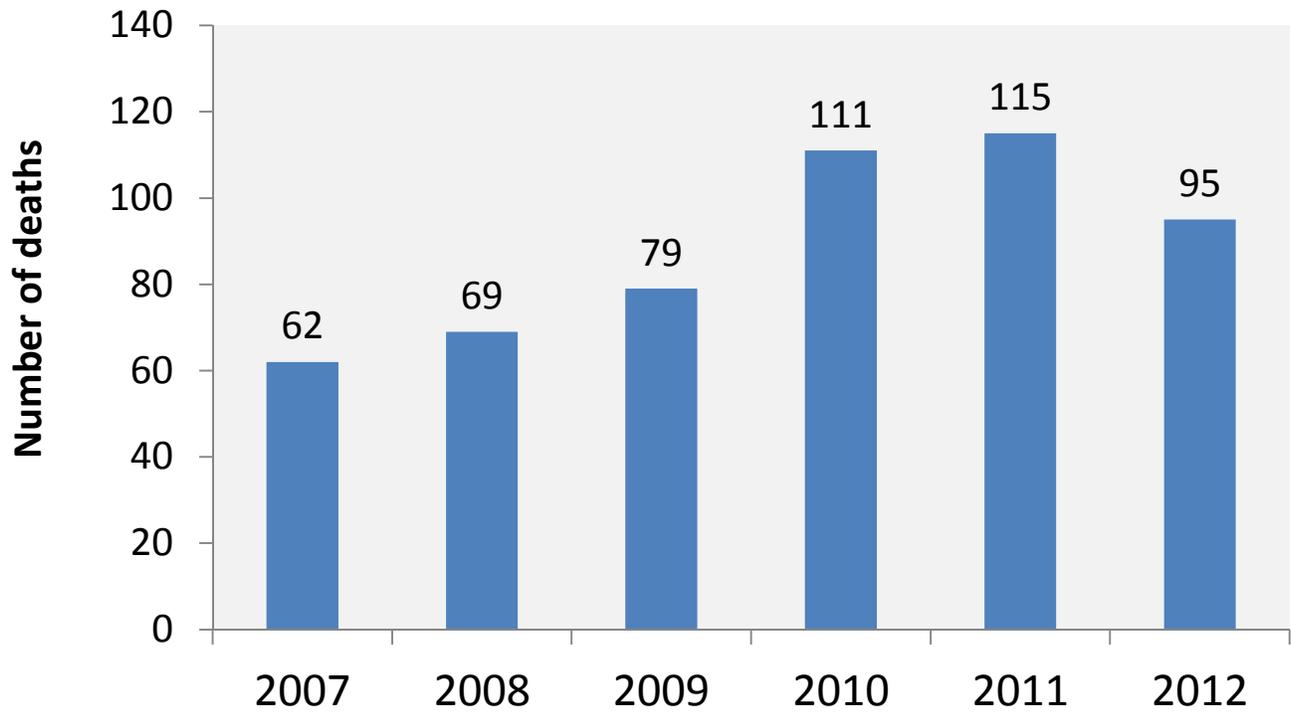


**Figure 15. Number of Prescription Opioid-Related Deaths by Place of Occurrence, Maryland, 2007-2012.**

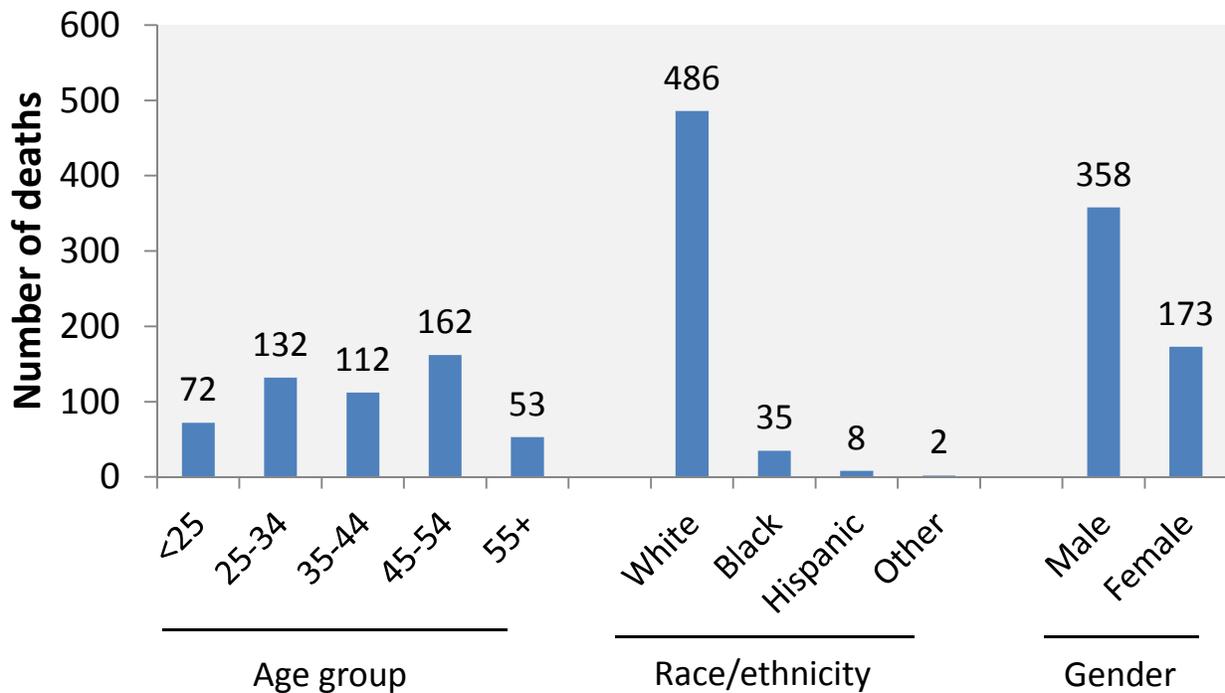


# **OXYCODONE-RELATED DEATHS**

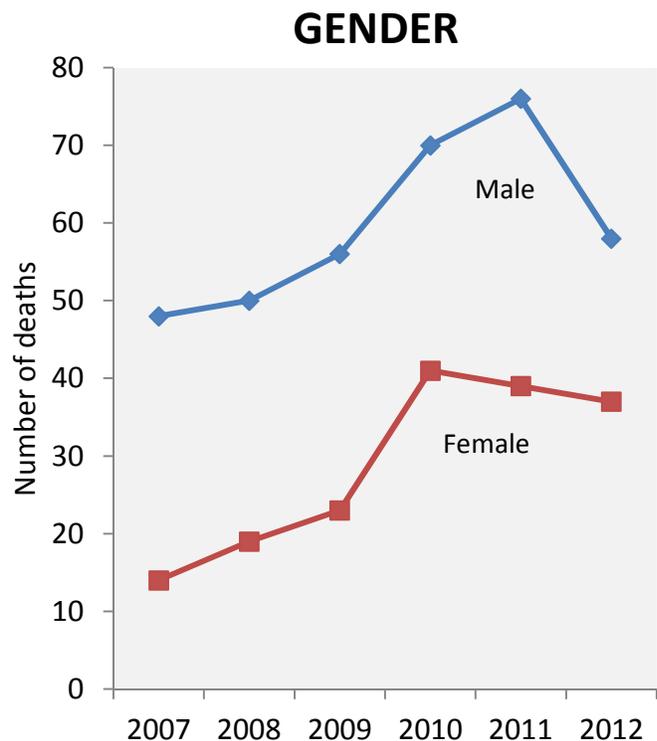
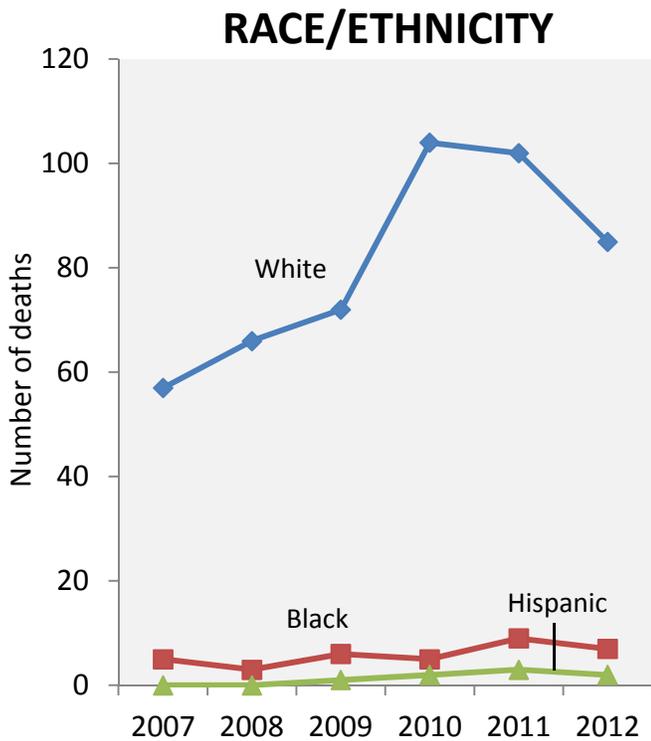
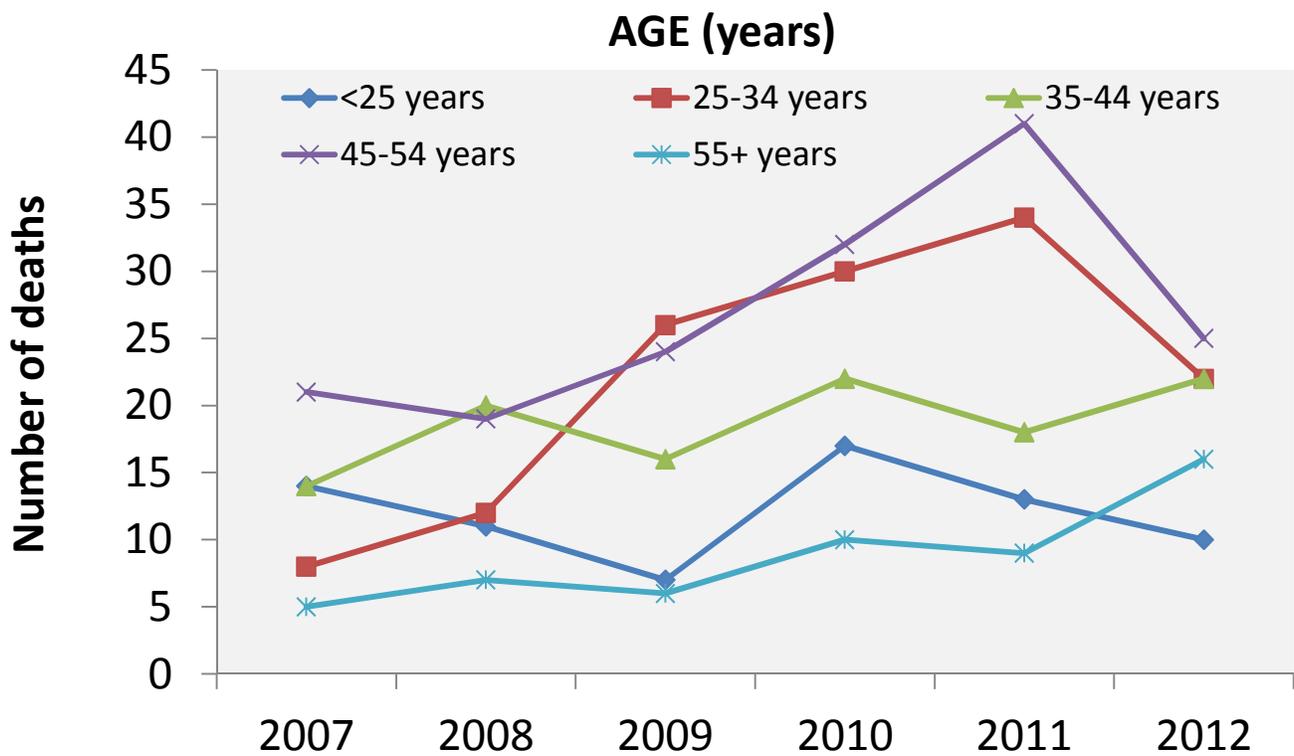
**Figure 16. Number of Oxycodone-Related Deaths Occurring in Maryland, 2007-2012.**



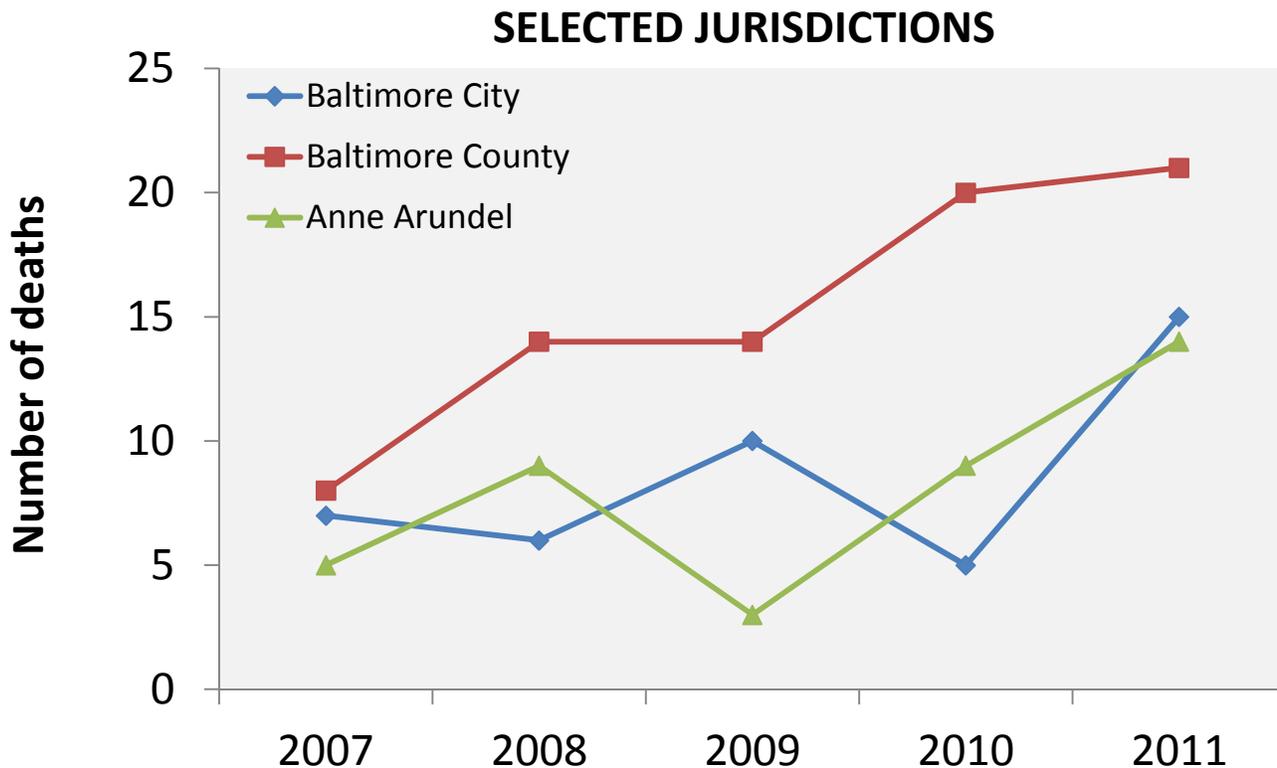
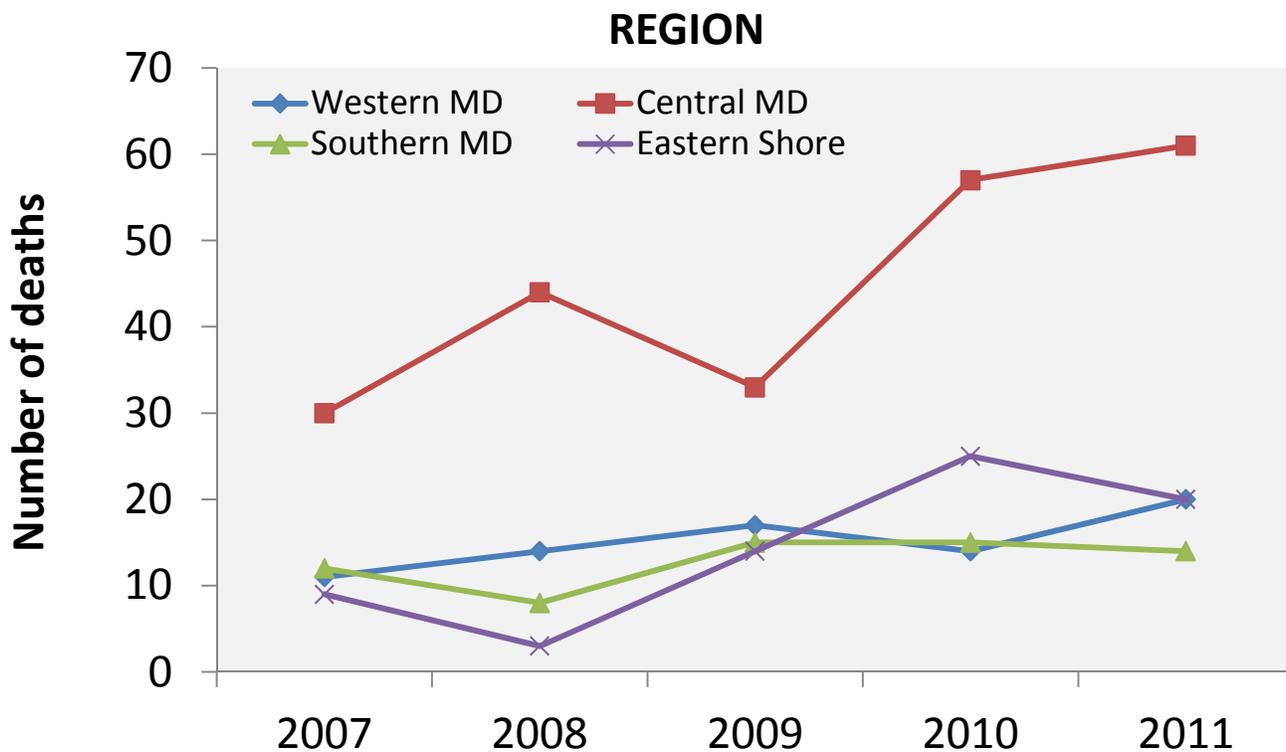
**Figure 17. Number of Oxycodone-Related Deaths Occurring in Maryland by Age, Race/Ethnicity and Gender, 2007-2012.**



**Figure 18. Number of Oxycodone-Related Deaths Occurring in Maryland by Age Group, Race/Ethnicity and Gender, 2007-2012.**

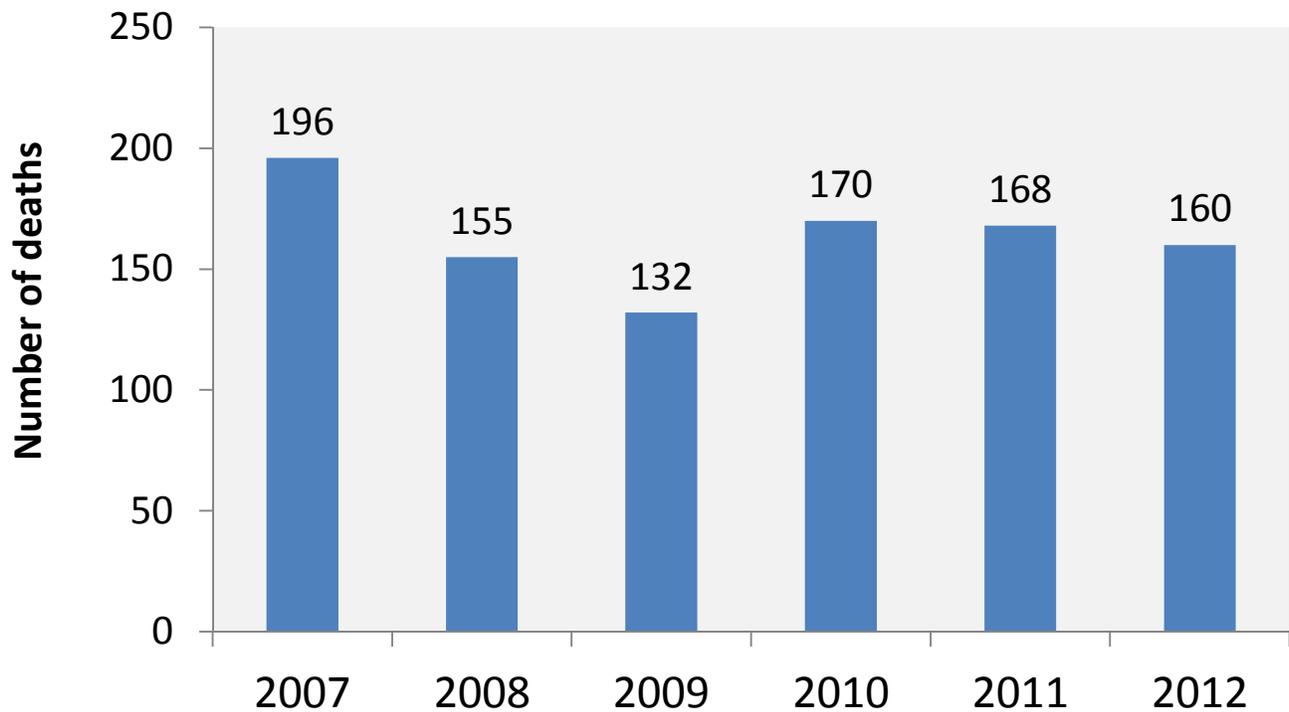


**Figure 19. Number of Oxycodone-Related Deaths Occurring in Maryland by Place of Occurrence, 2007-2012.**

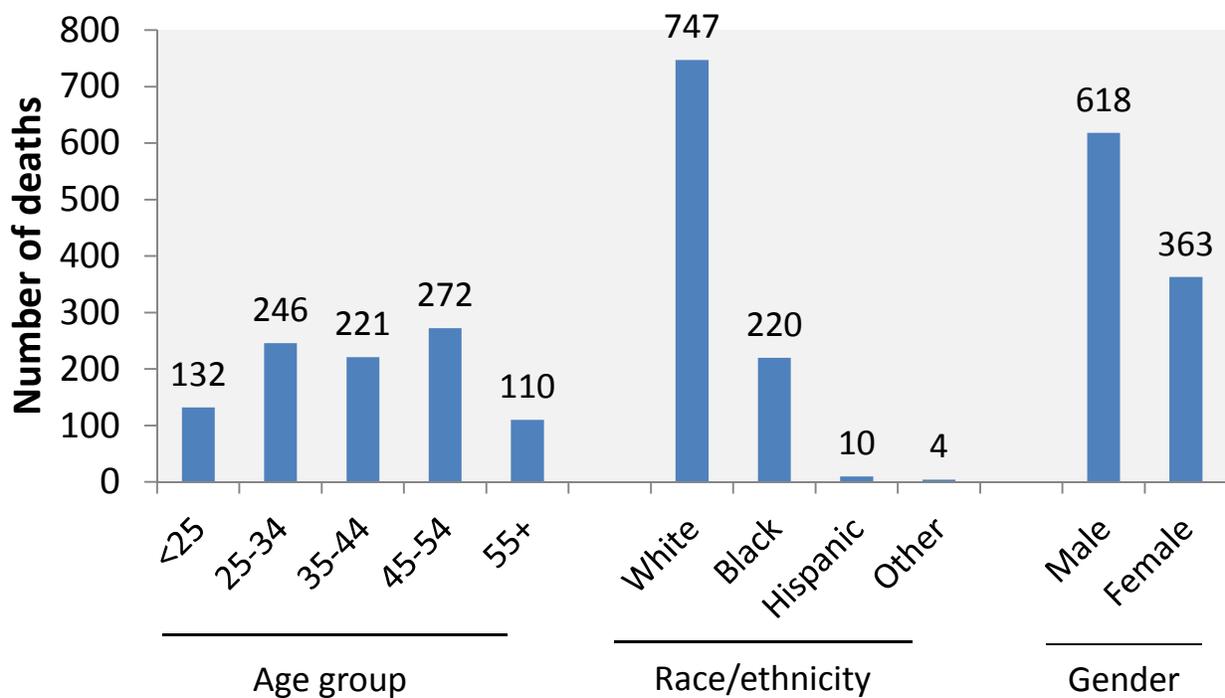


# **METHADONE-RELATED DEATHS**

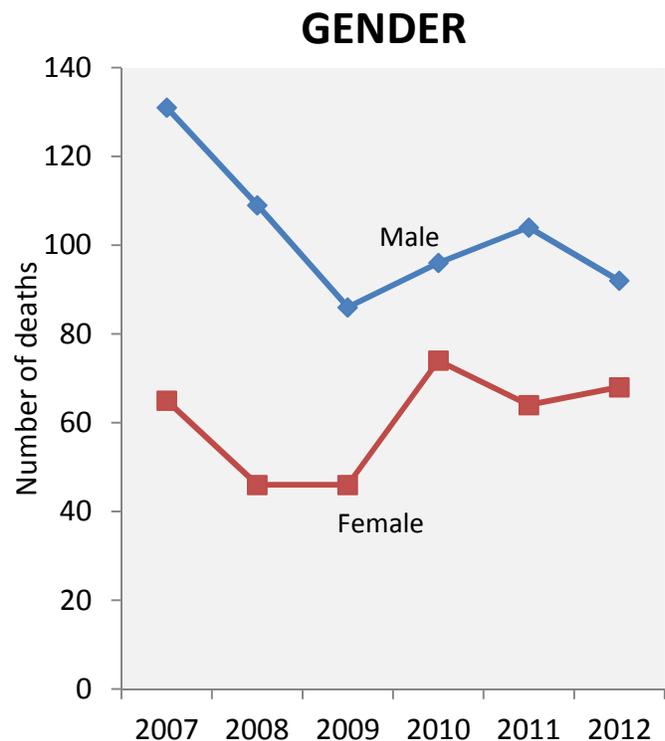
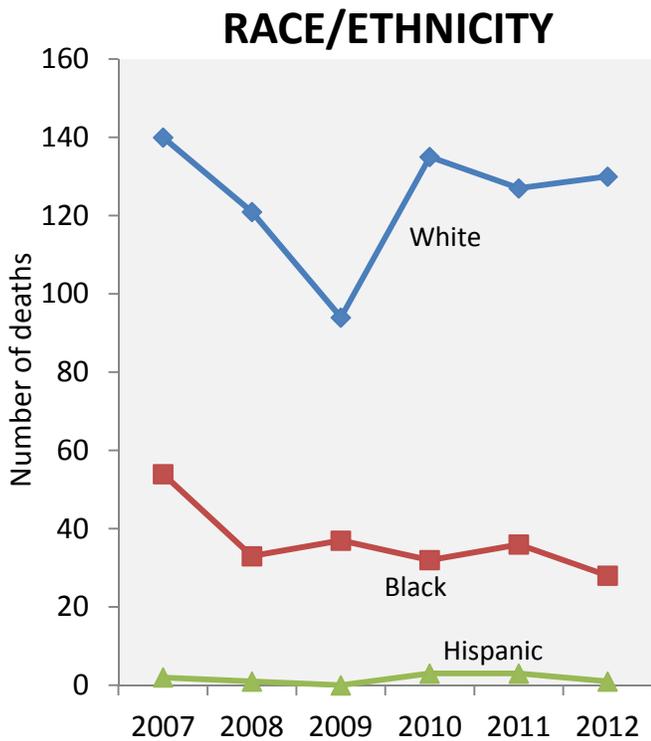
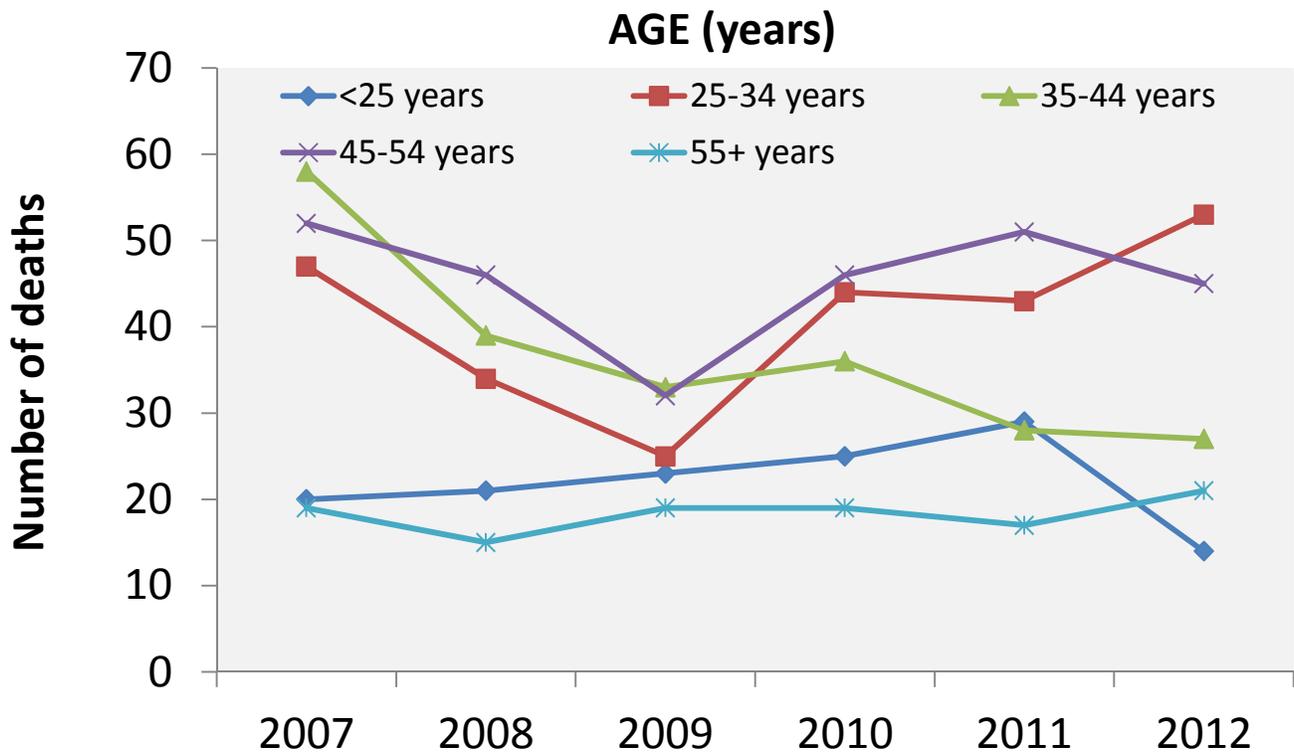
**Figure 20. Number of Methadone-Related Deaths Occurring in Maryland, 2007-2012.**



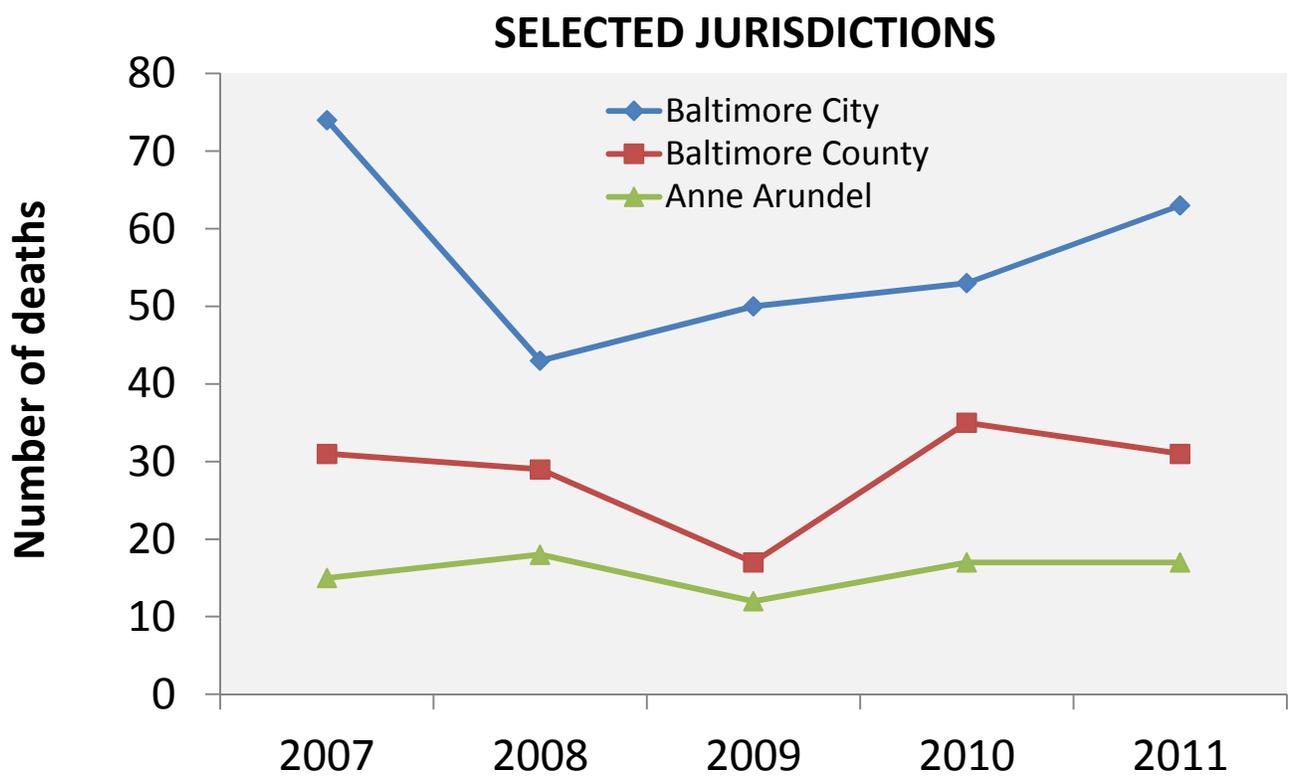
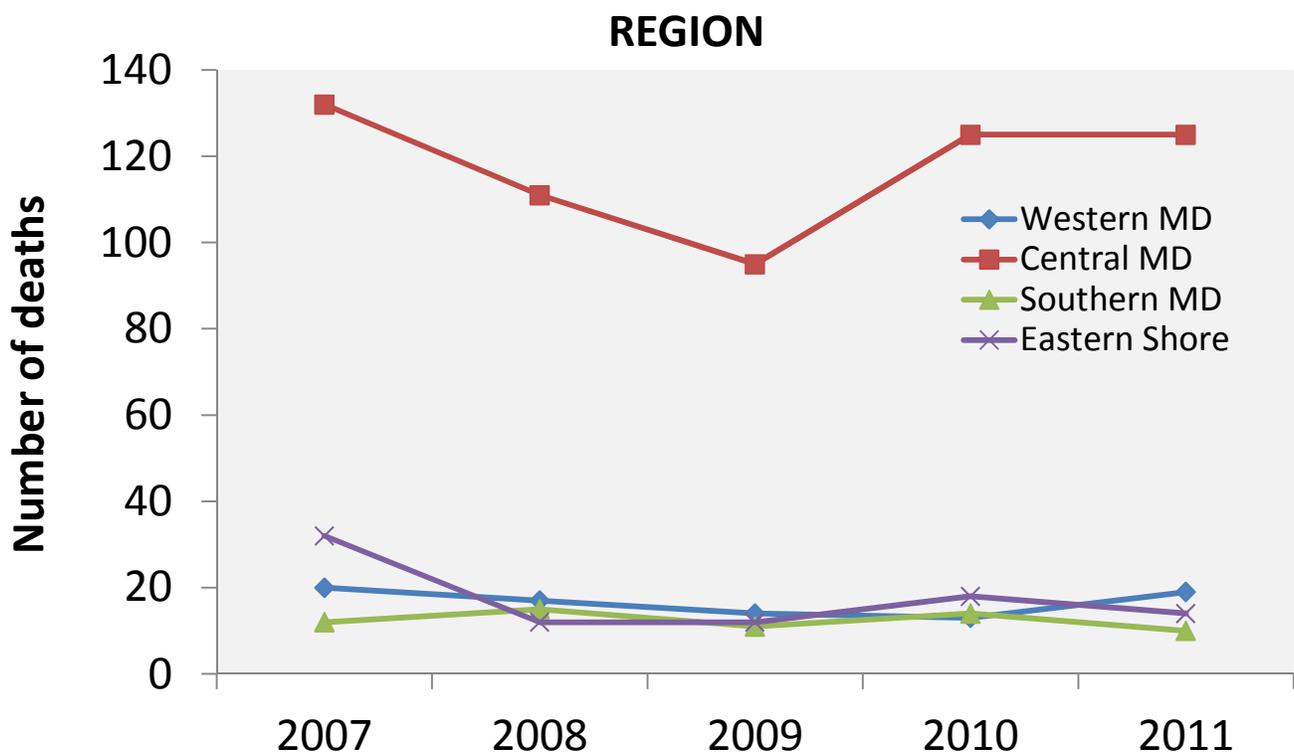
**Figure 21. Number of Methadone-Related Deaths Occurring in Maryland by Age, Race/Ethnicity and Gender, 2007-2012.**



**Figure 22. Number of Methadone-Related Deaths Occurring in Maryland by Age Group, Race/Ethnicity and Gender, 2007-2012.**

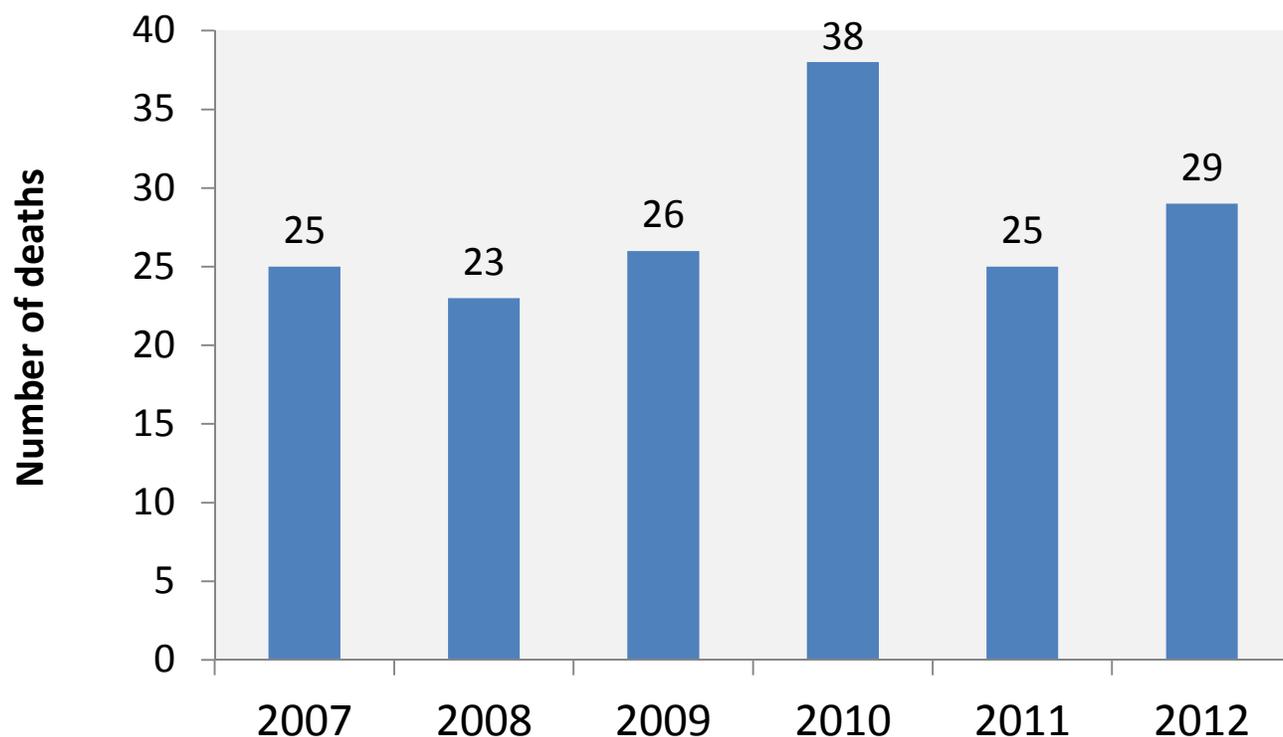


**Figure 23. Number of Methadone-Related Deaths Occurring in Maryland by Place of Occurrence, 2007-2012.**

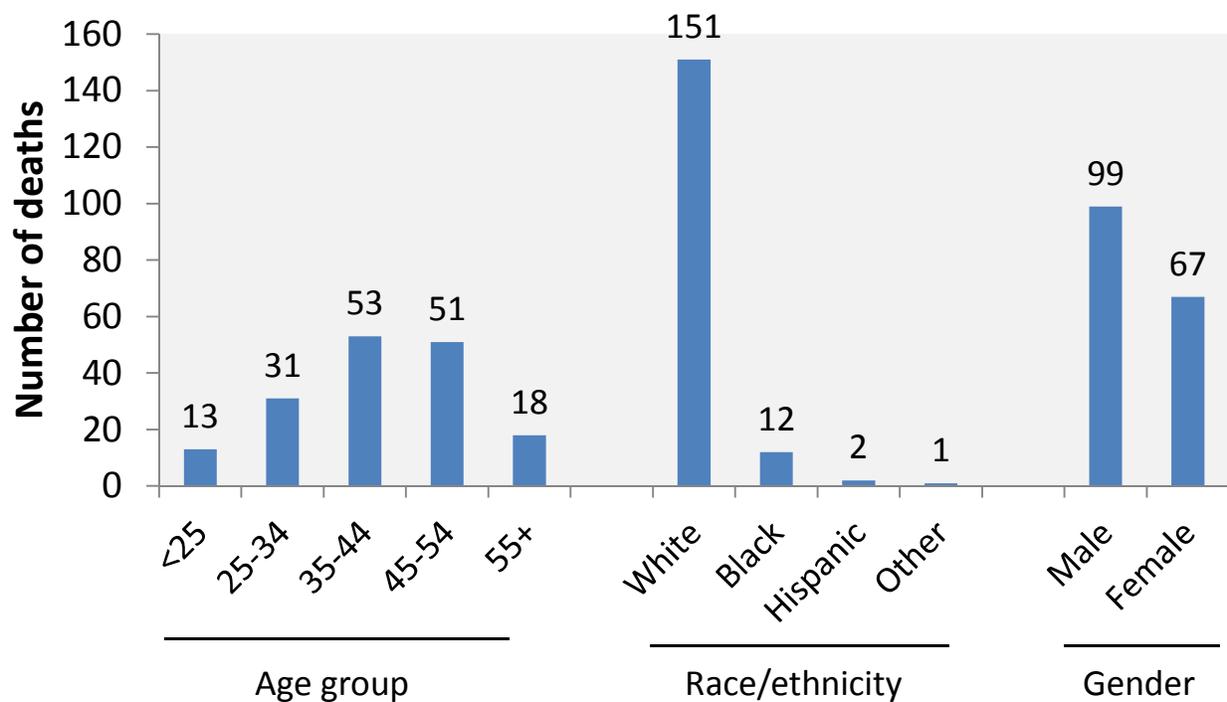


# **FENTANYL-RELATED DEATHS**

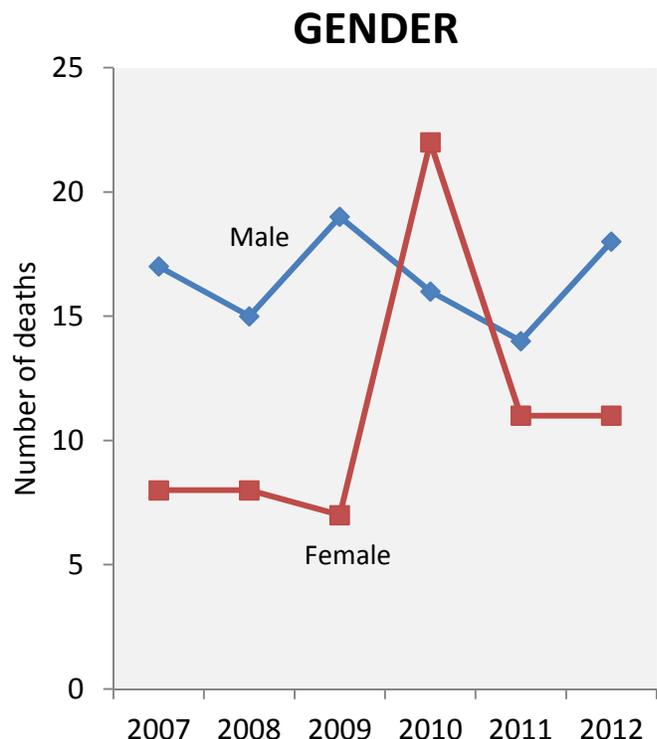
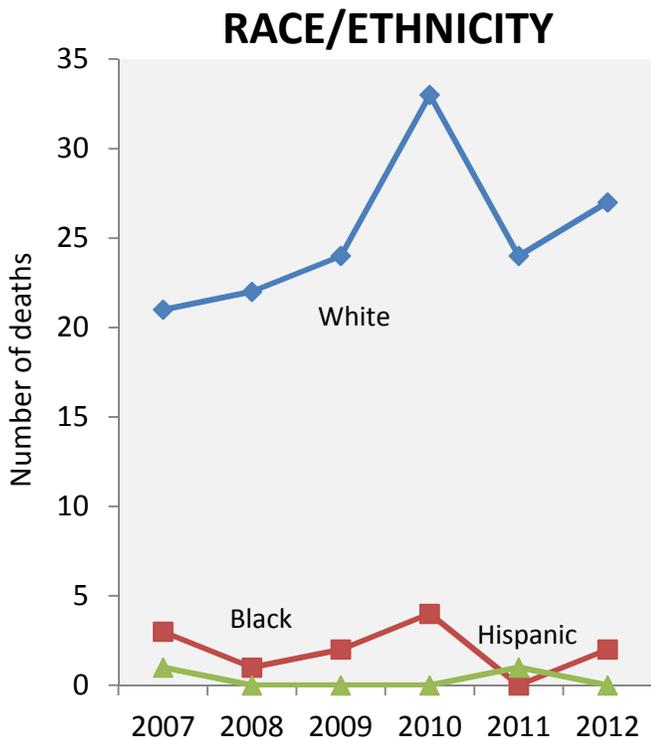
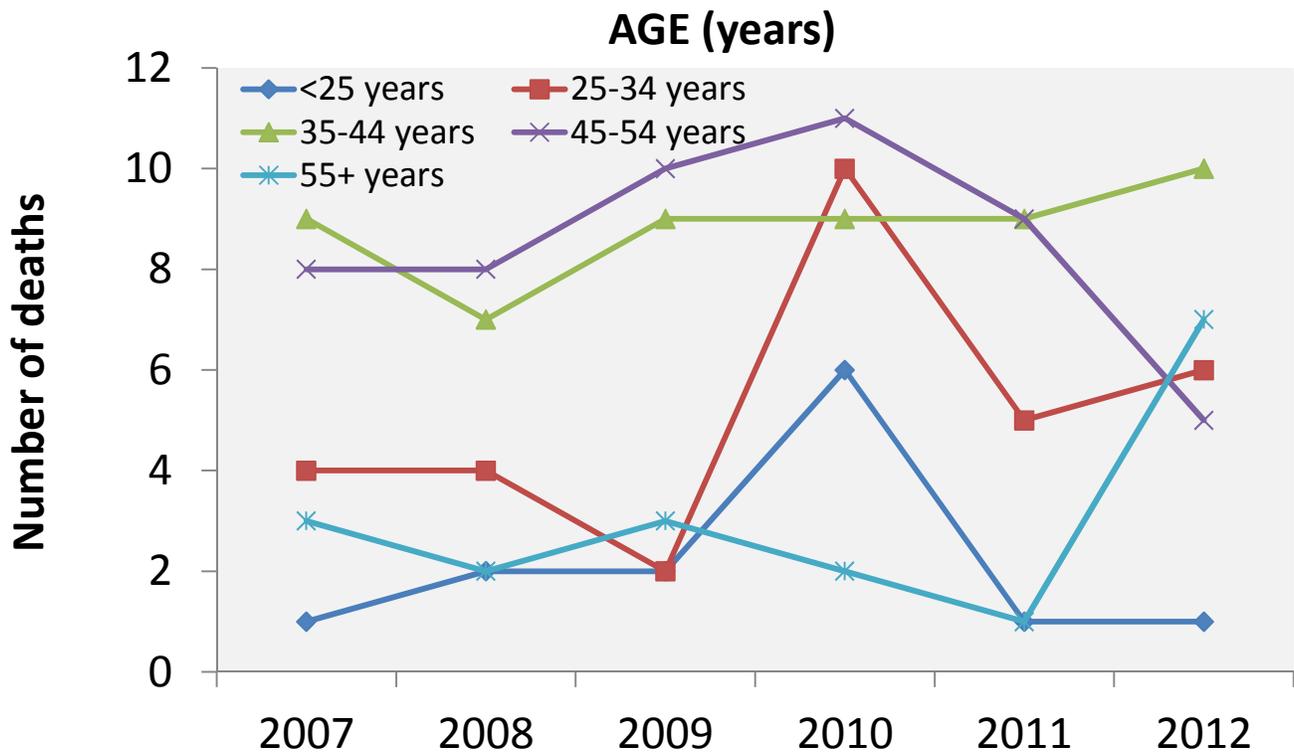
**Figure 24. Number of Fentanyl-Related Deaths Occurring in Maryland, 2007-2012.**



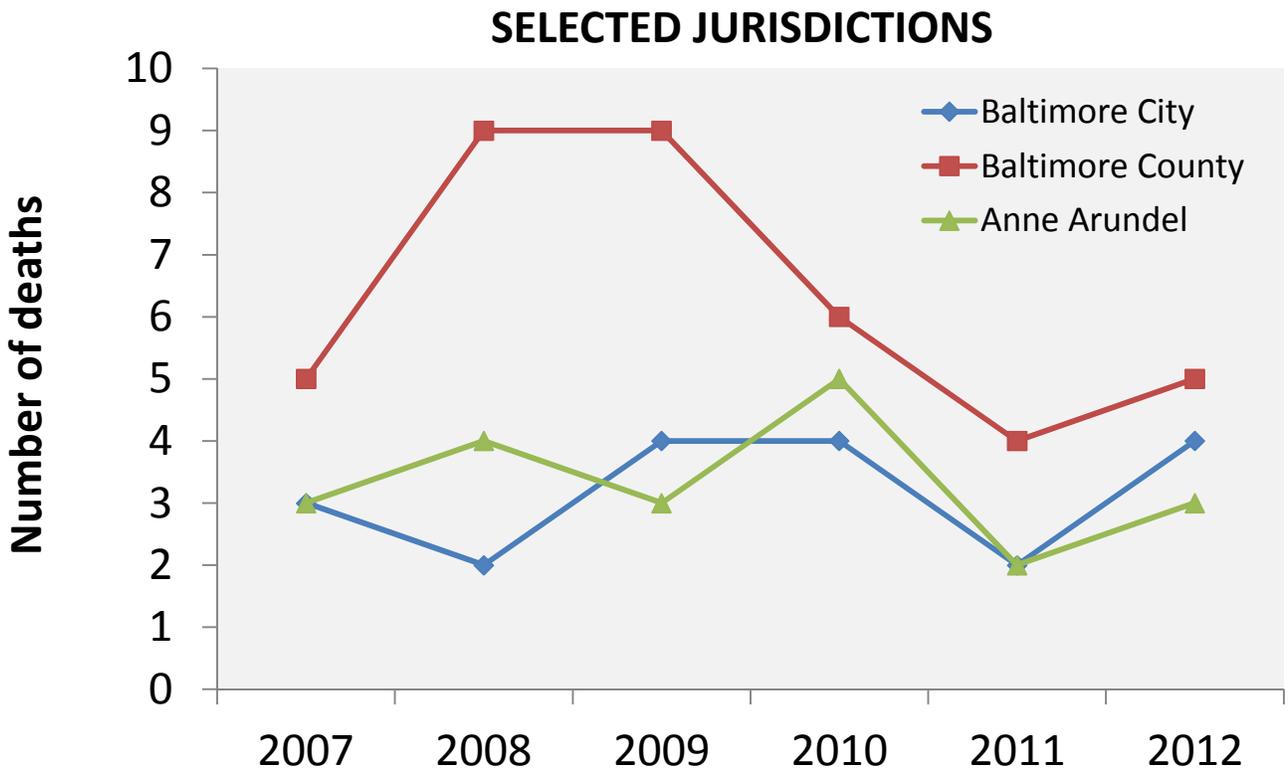
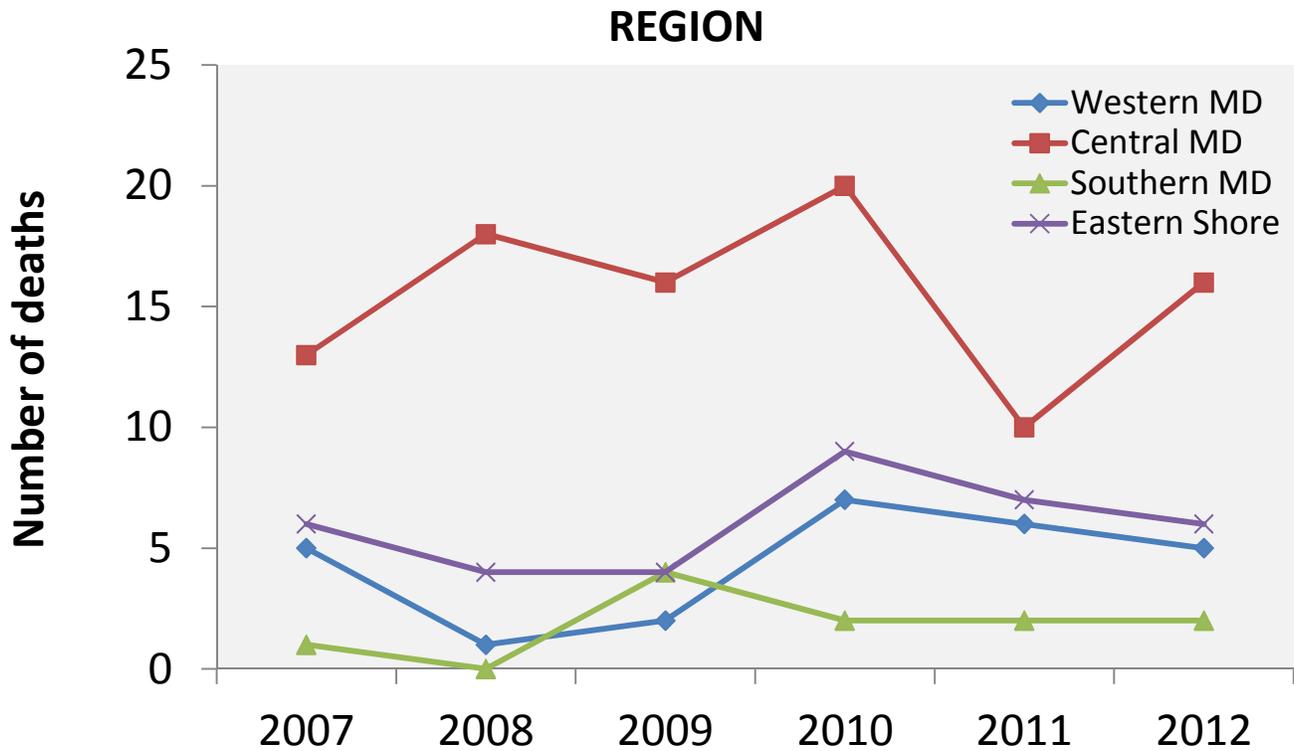
**Figure 25. Number of Fentanyl-Related Deaths Occurring in Maryland by Age, Race/Ethnicity and Gender, 2007-2012.**



**Figure 26. Number of Fentanyl-Related Deaths Occurring in Maryland by Age Group, Race/Ethnicity and Gender, 2007-2012.**

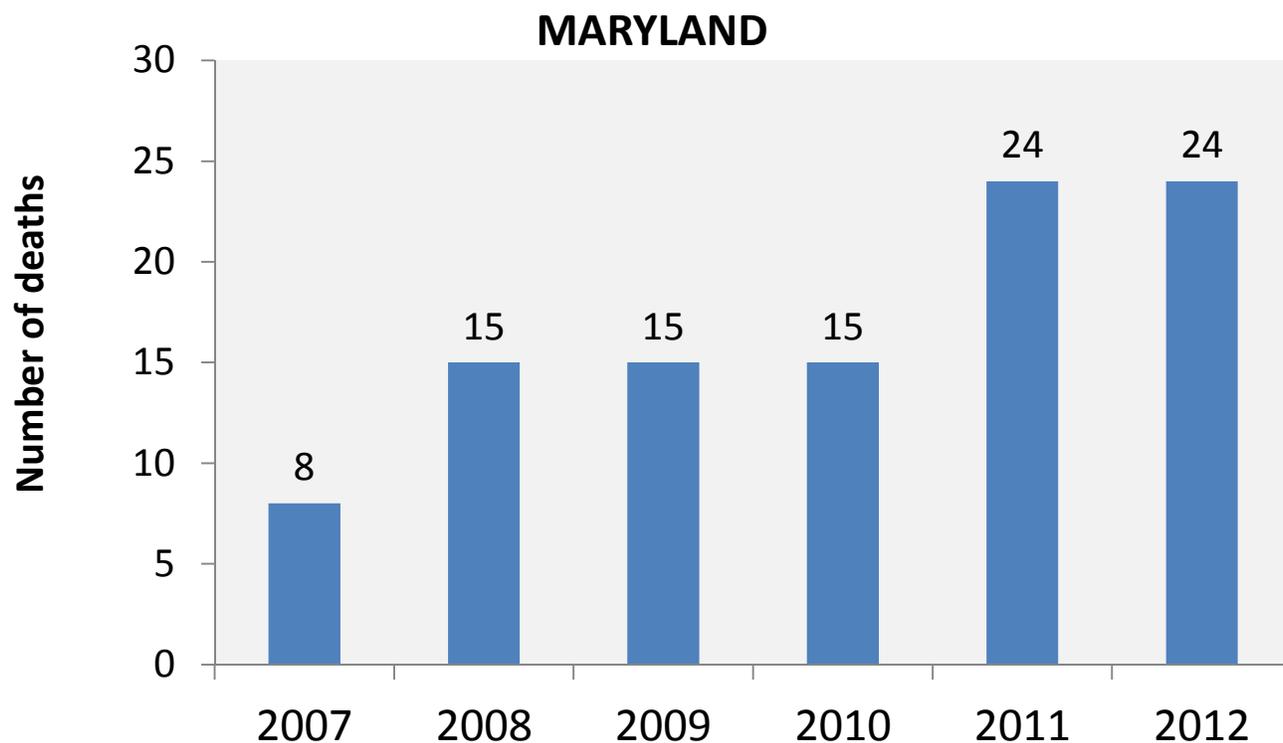


**Figure 27. Number of Fentanyl-Related Deaths by Place of Occurrence, Maryland, 2007-2012.**

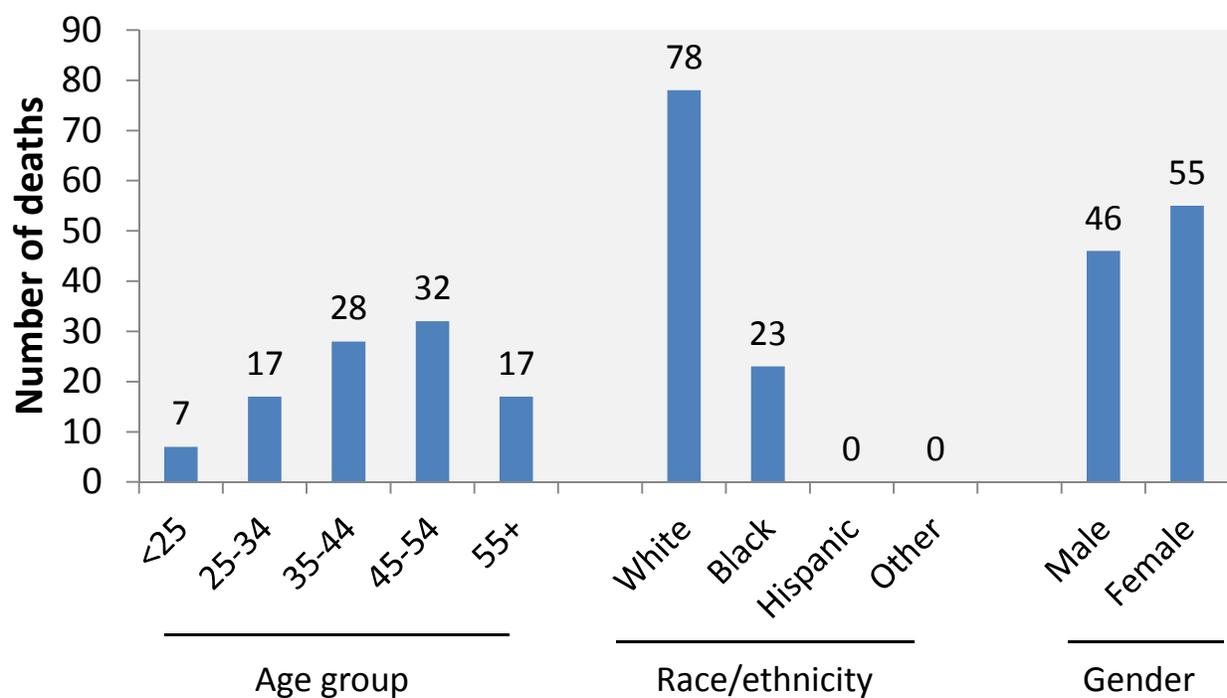


# **TRAMADOL-RELATED DEATHS**

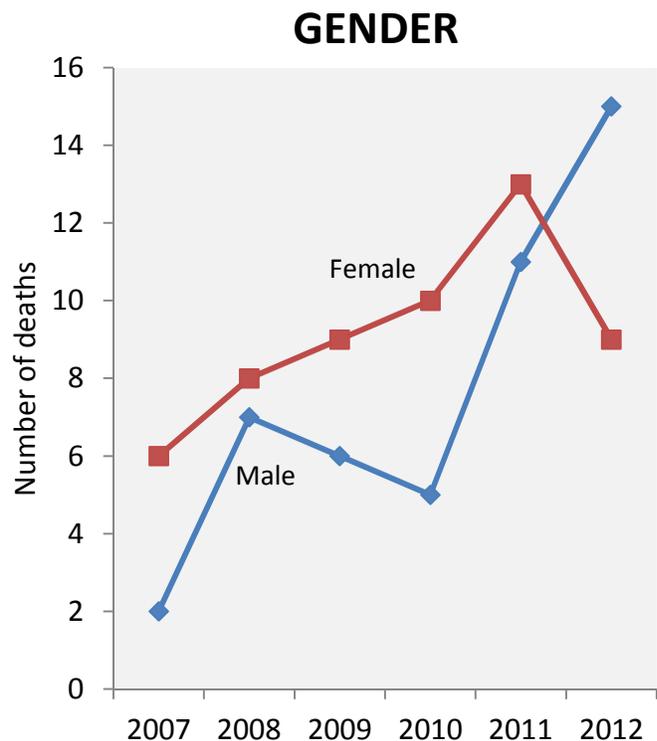
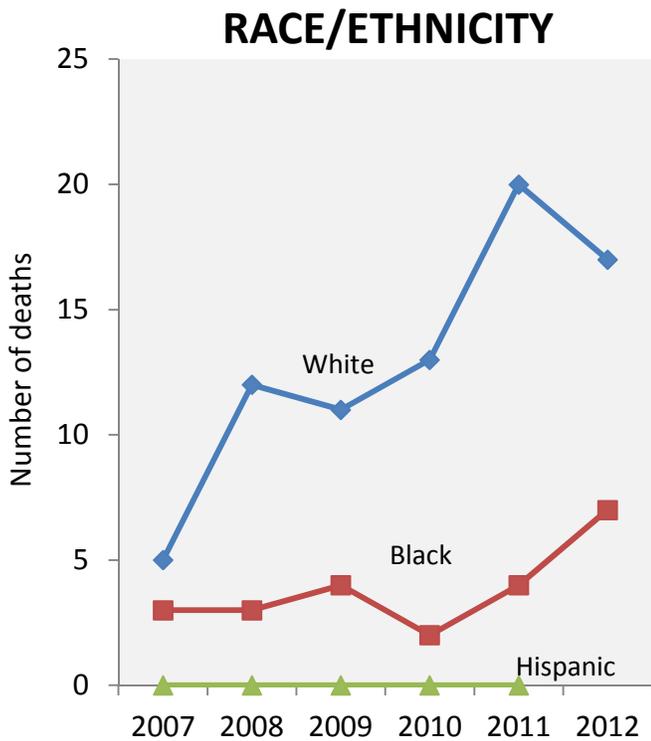
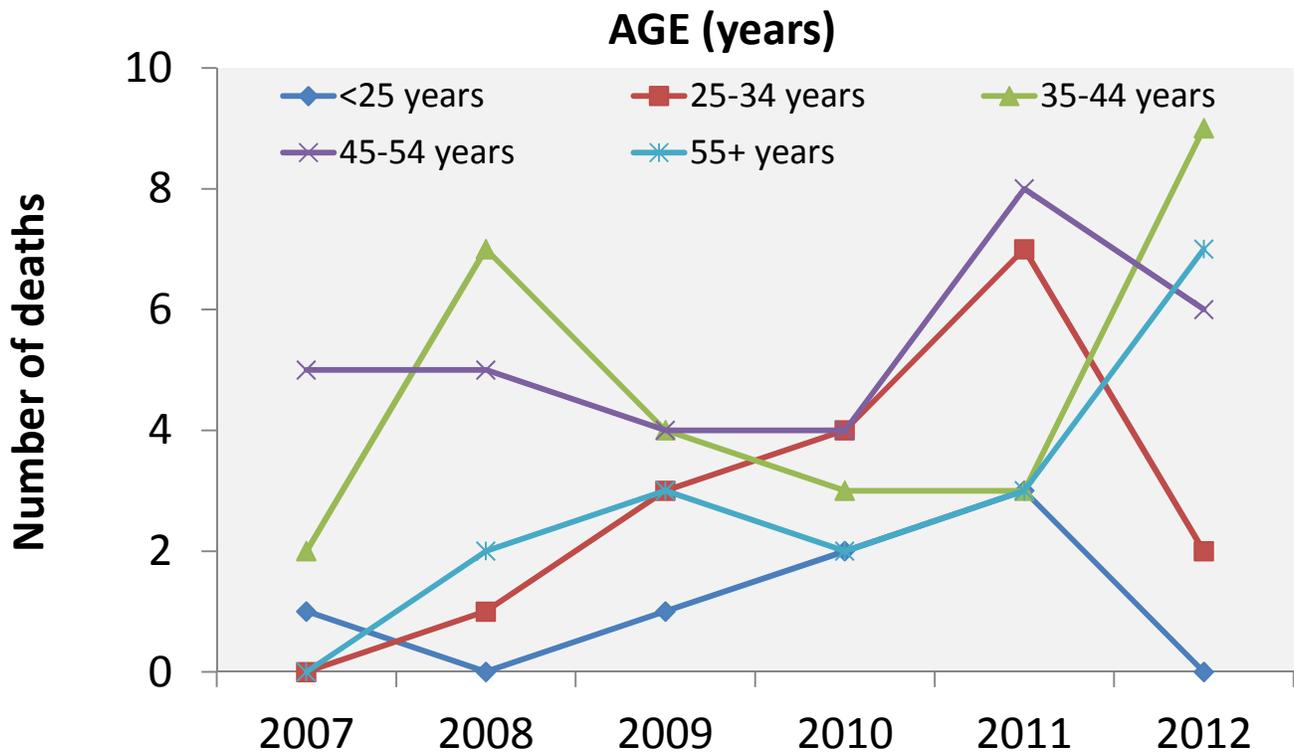
**Figure 28. Number of Tramadol-Related Deaths Occurring in Maryland, 2007-2012.**



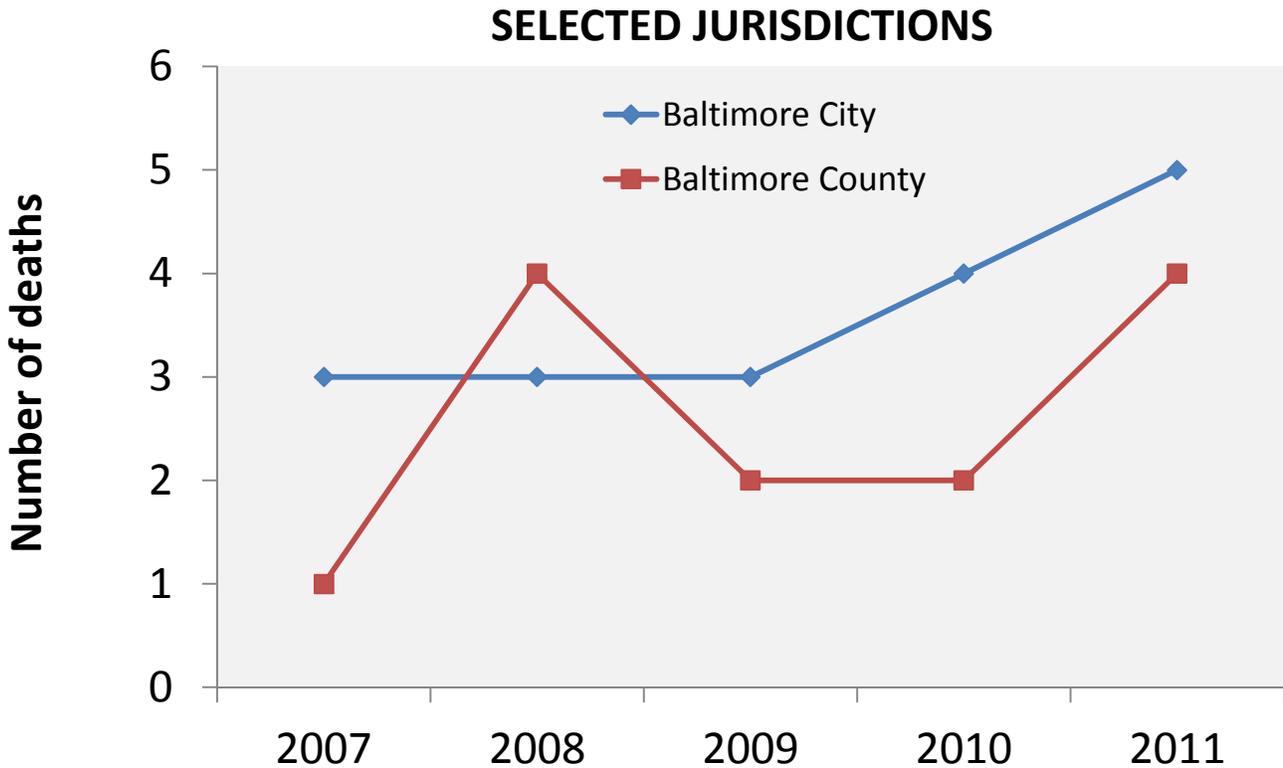
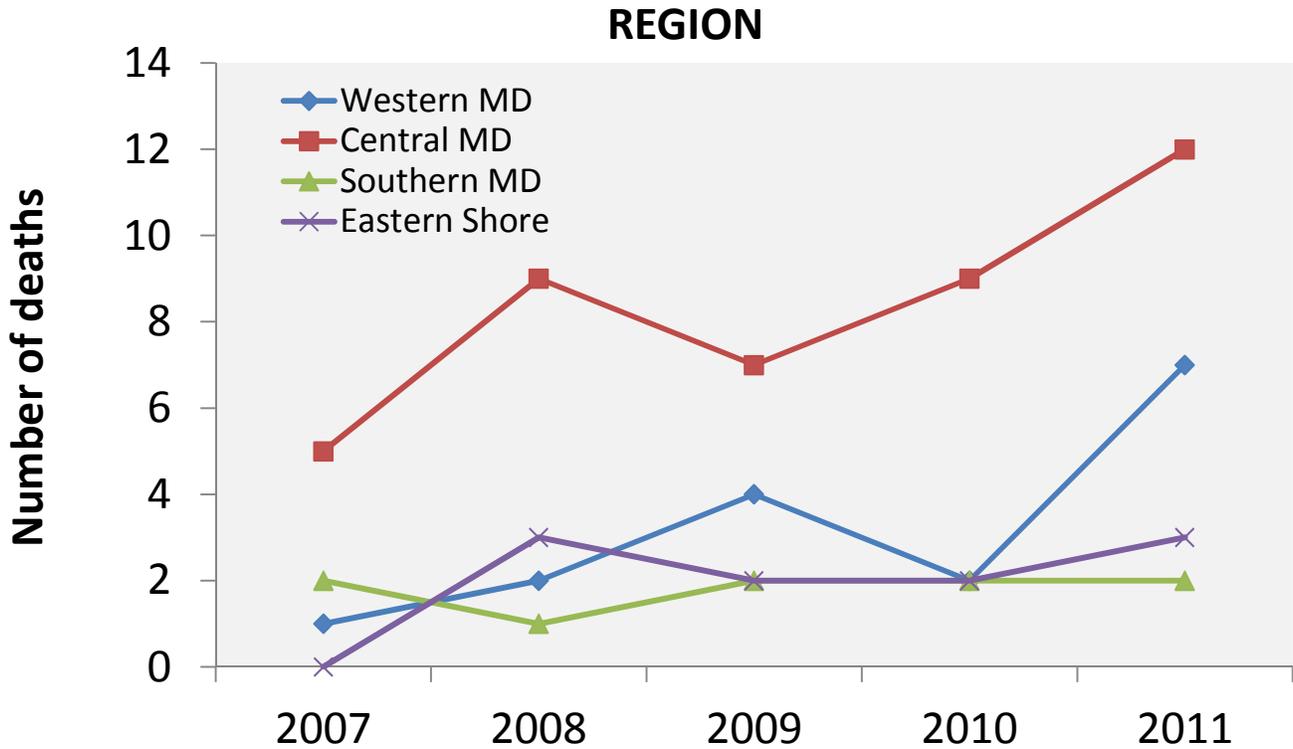
**Figure 29. Number of Tramadol-Related Deaths Occurring in Maryland by Age, Race/Ethnicity and Gender, 2007-2012.**



**Figure 30. Number of Tramadol-Related Deaths Occurring in Maryland by Age Group, Race/Ethnicity and Gender, 2007-2012.**

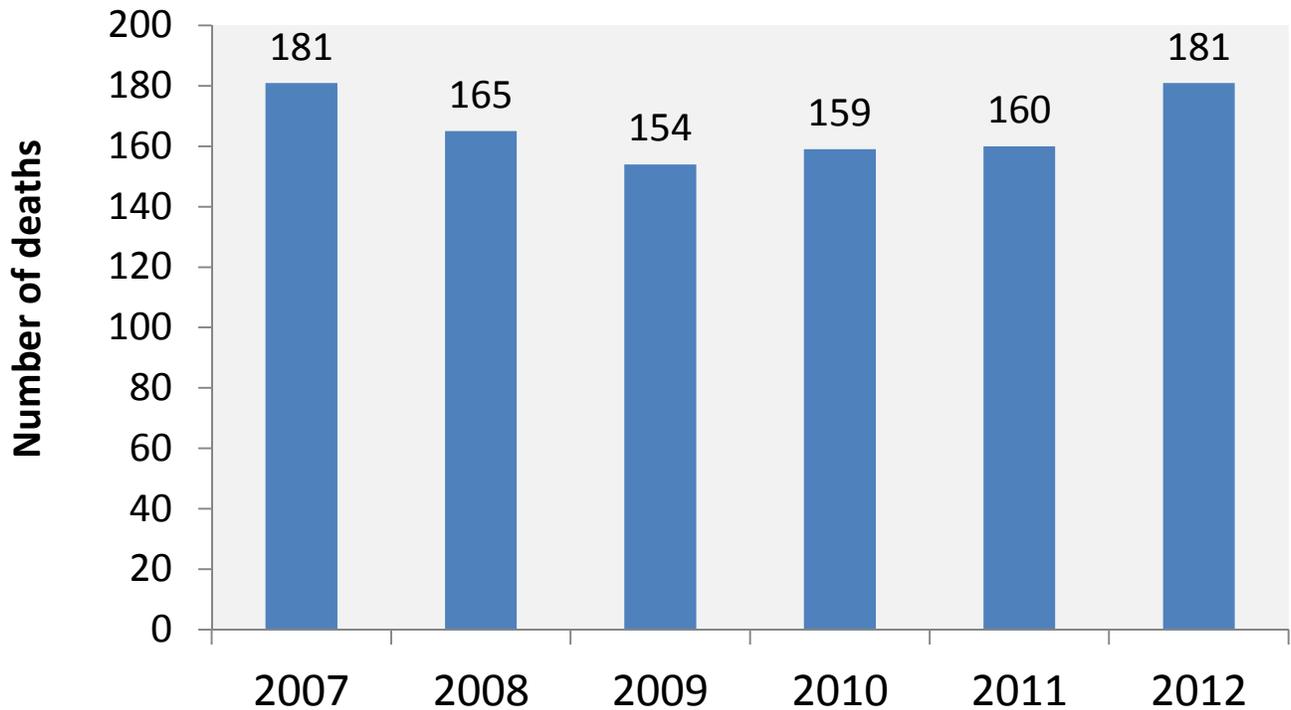


**Figure 31. Number of Tramadol-Related Deaths by Place of Occurrence, Maryland, 2007-2012.**

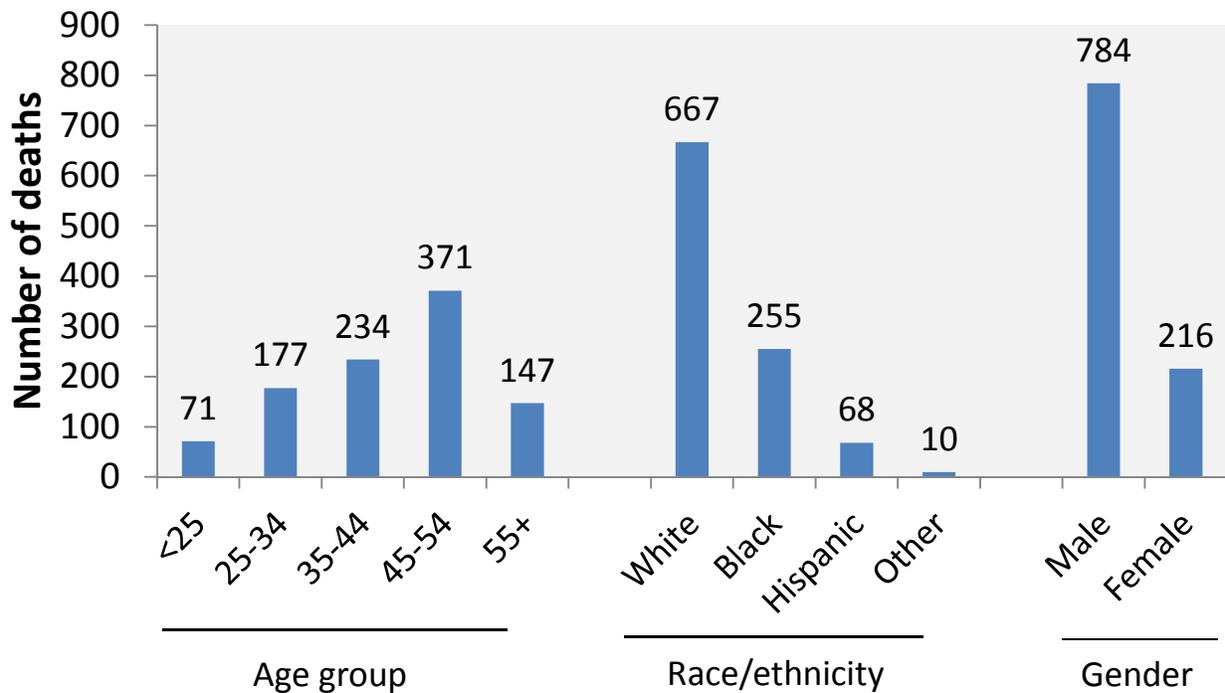


# **ALCOHOL-RELATED DEATHS**

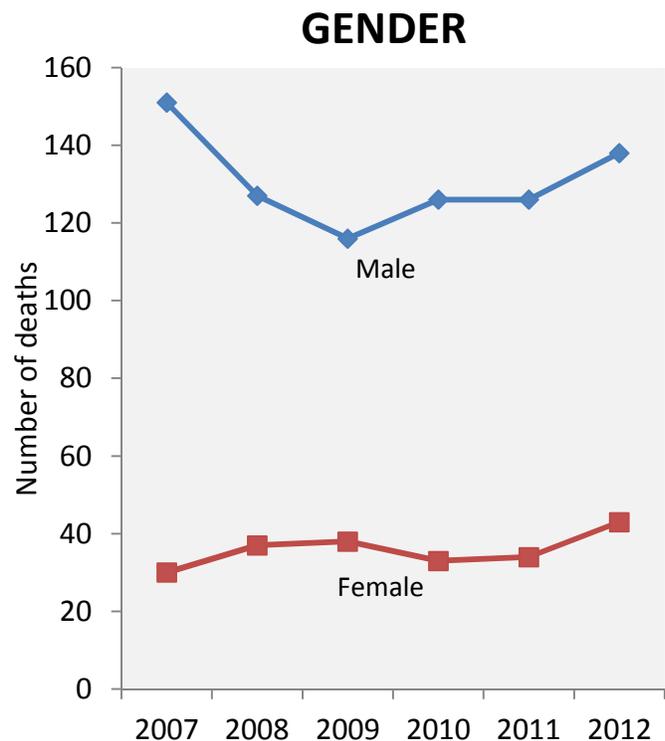
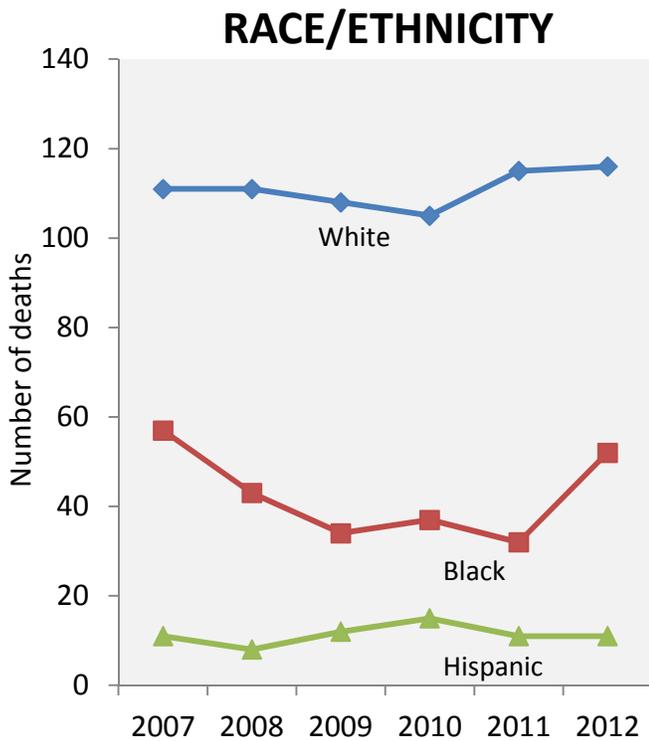
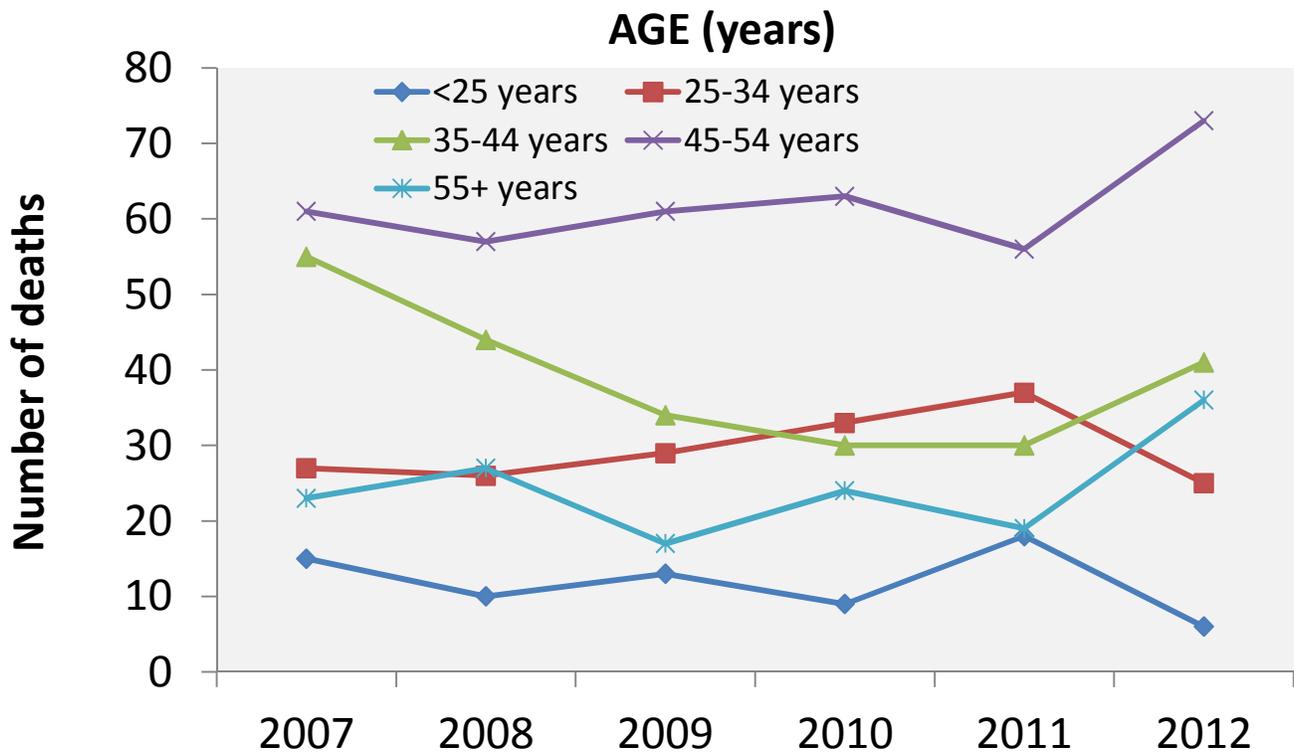
**Figure 32. Number of Alcohol-Related Deaths Occurring in Maryland, 2007-2012.**



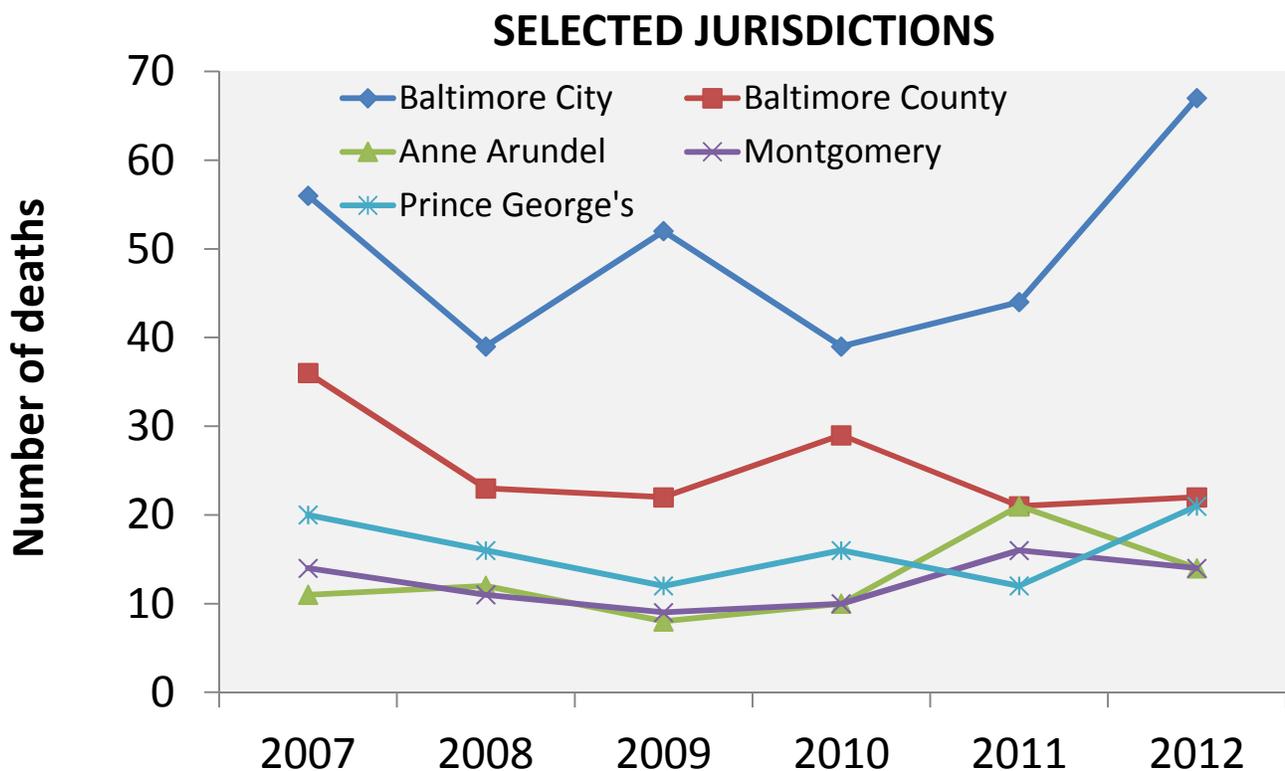
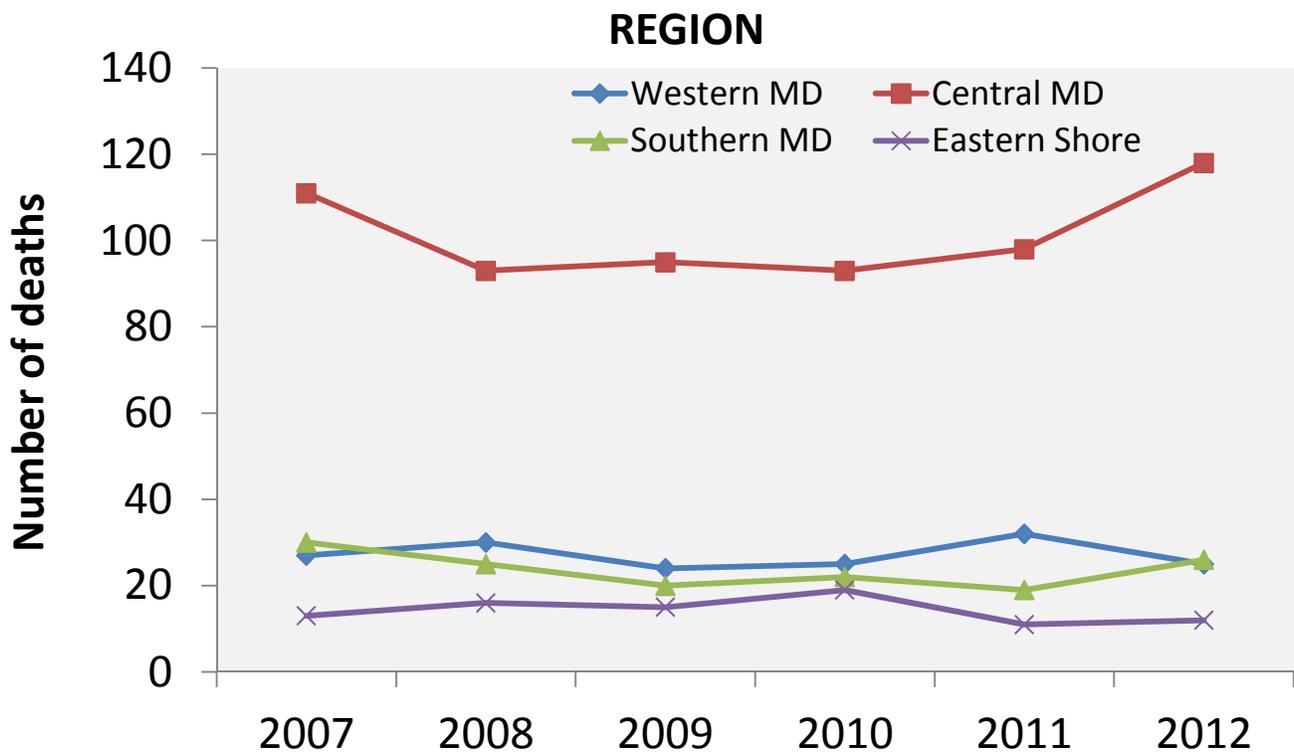
**Figure 33. Number of Alcohol-Related Deaths Occurring in Maryland by Age, Race/Ethnicity and Gender, 2007-2012.**



**Figure 34. Number of Alcohol-Related Deaths Occurring in Maryland by Age Group, Race/Ethnicity and Gender, 2007-2012.**

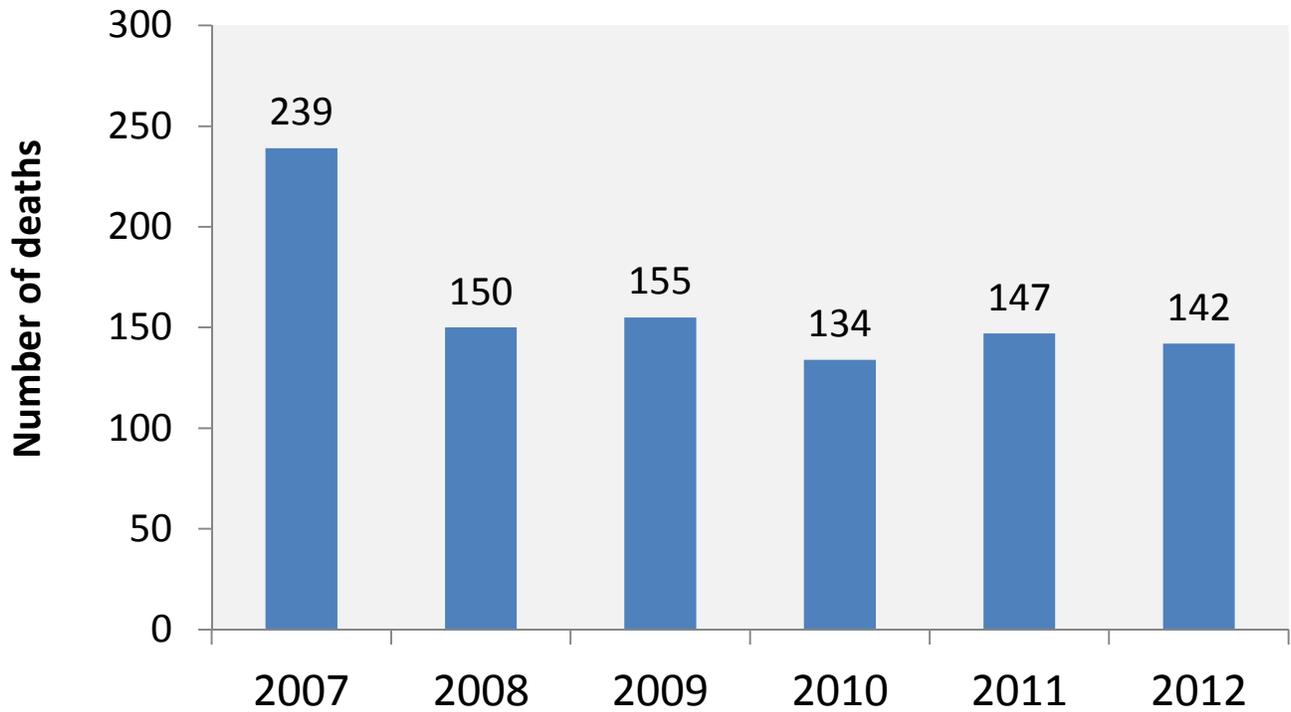


**Figure 35. Number of Alcohol-Related Deaths by Place of Occurrence, Maryland, 2007-2012.**

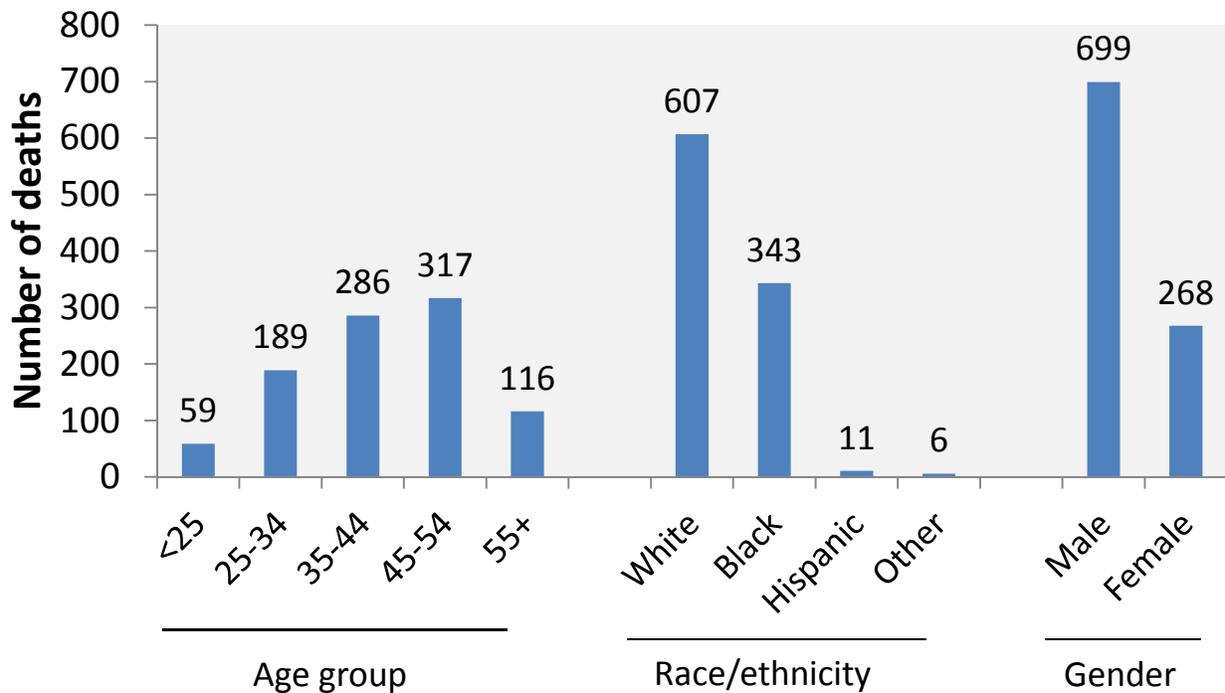


# **COCAINE-RELATED DEATHS**

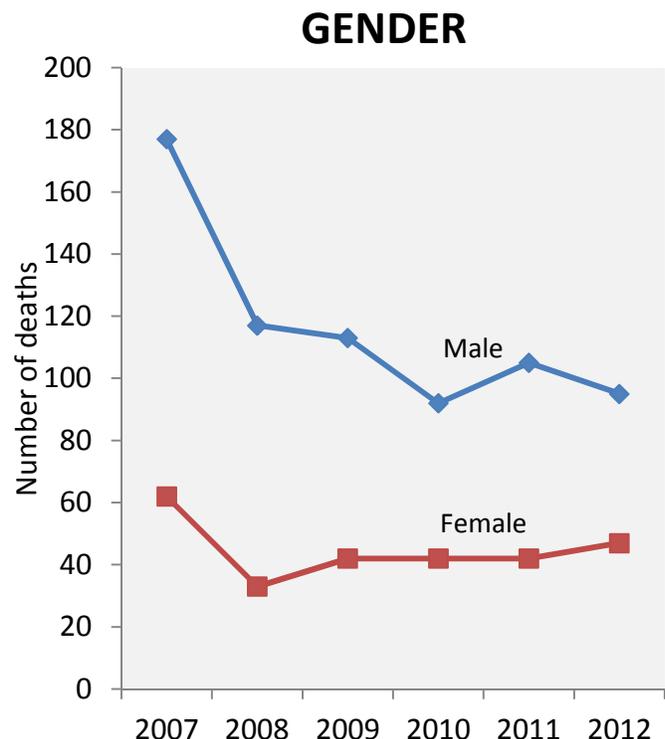
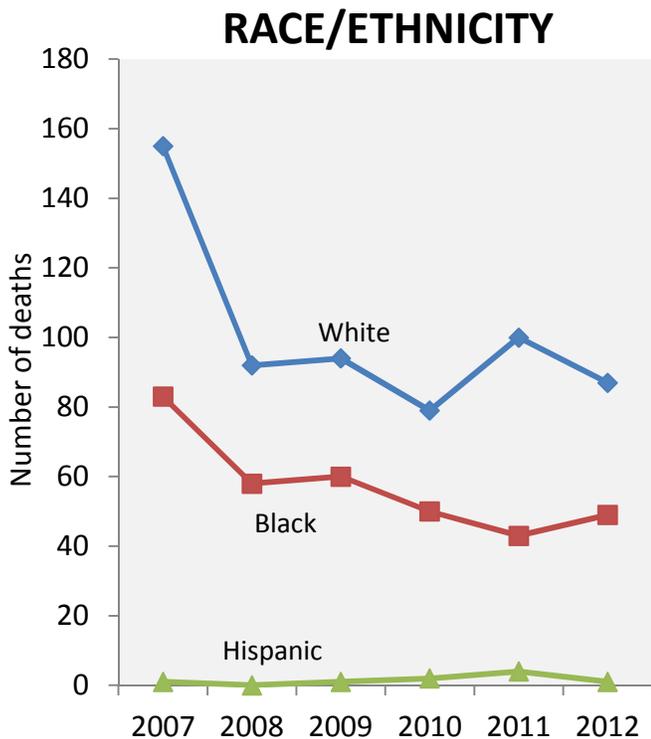
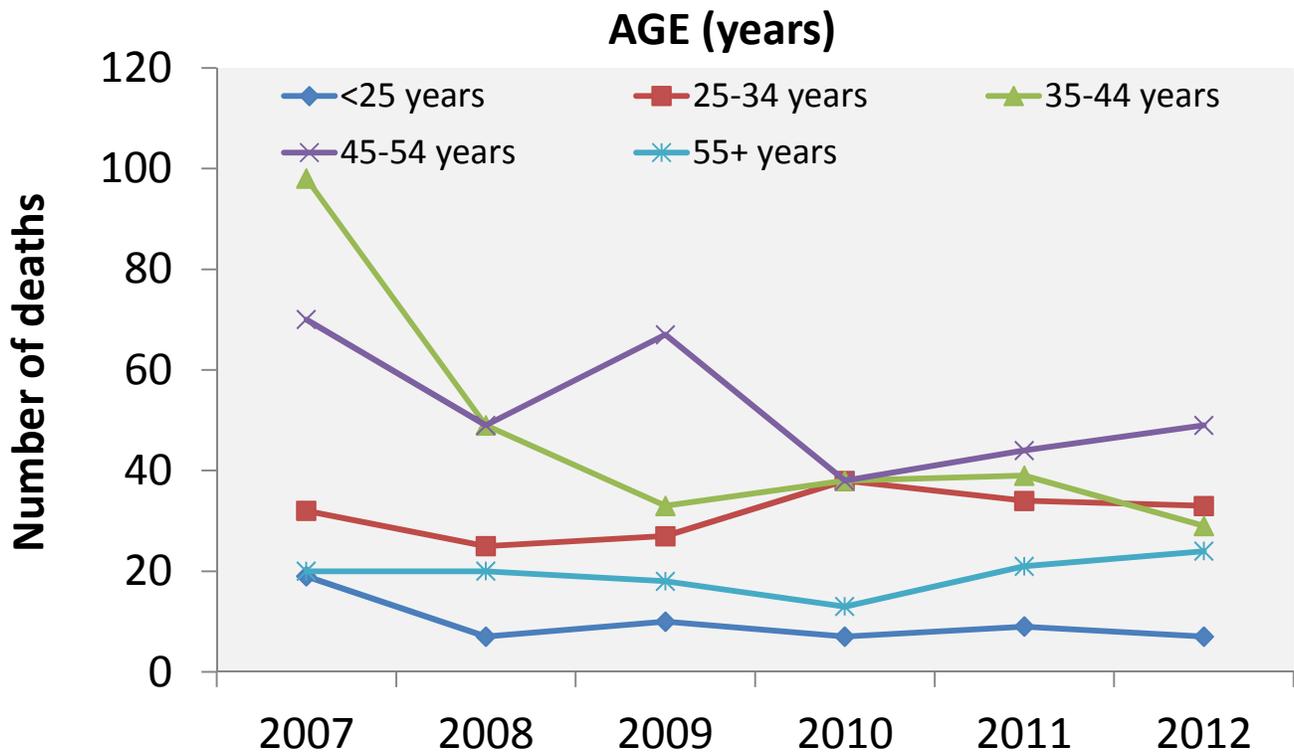
**Figure 36. Number of Cocaine-Related Deaths Occurring in Maryland, 2007-2012.**



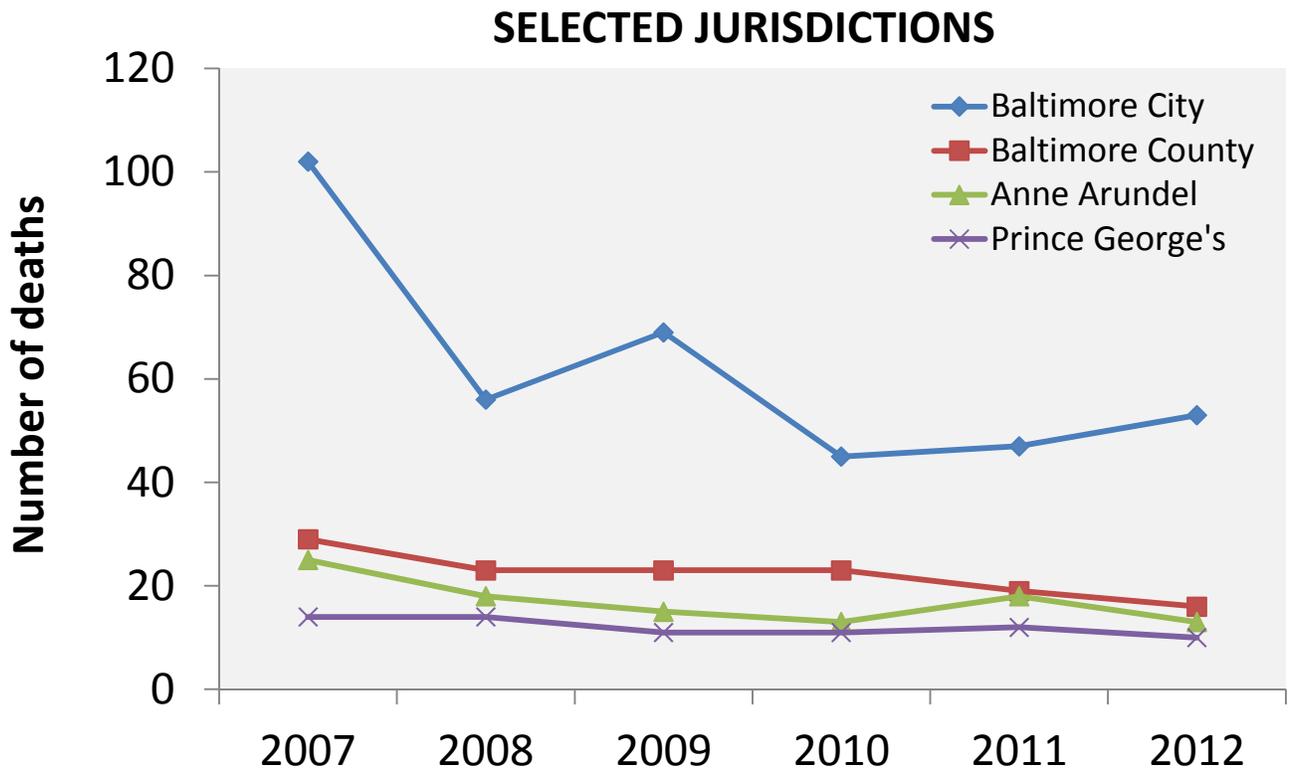
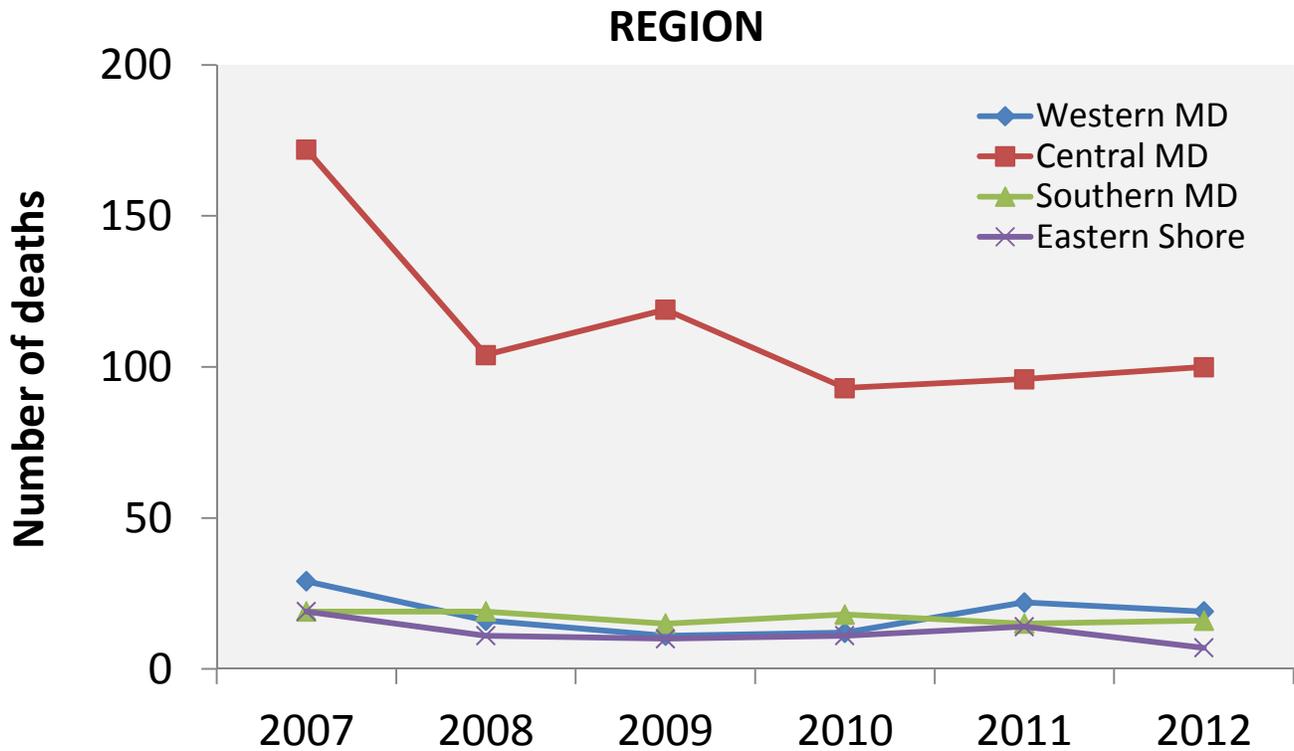
**Figure 37. Number of Cocaine-Related Deaths Occurring in Maryland by Age, Race/Ethnicity and Gender, 2007-2012.**



**Figure 38. Number of Cocaine-Related Deaths Occurring in Maryland by Age Group, Race/Ethnicity and Gender, 2007-2012.**

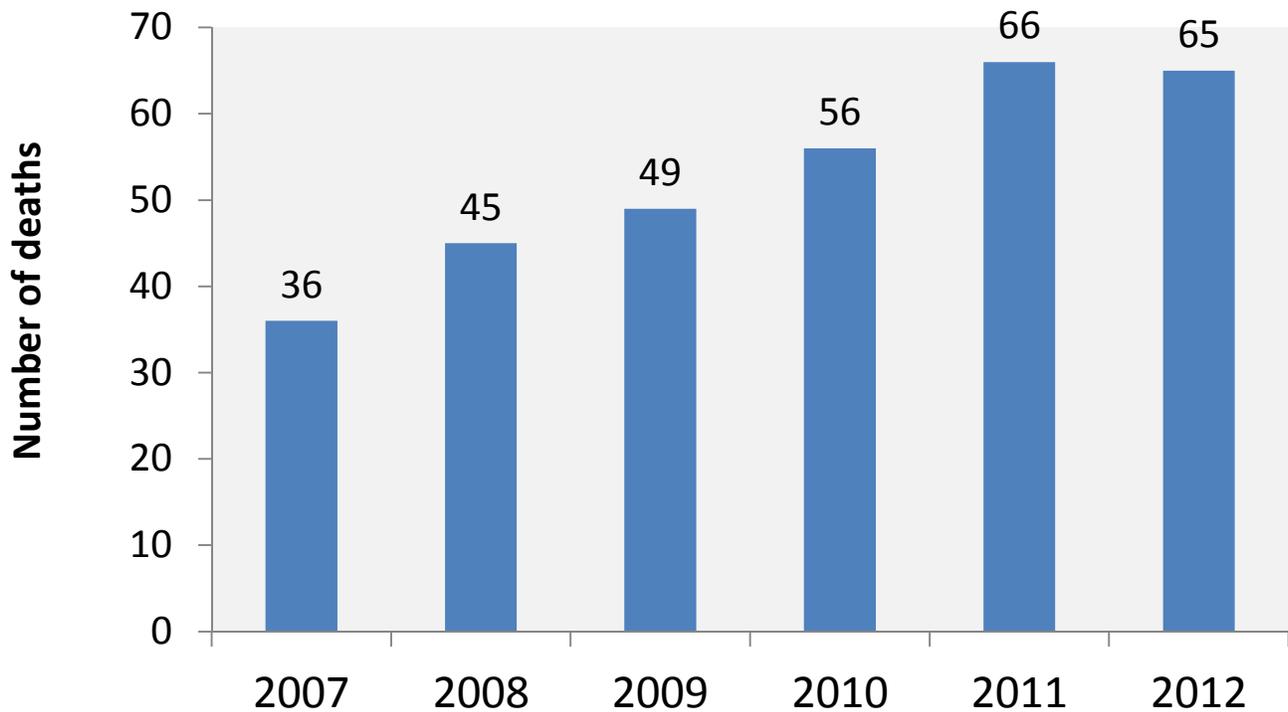


**Figure 39. Number of Cocaine-Related Deaths by Place of Occurrence, Maryland, 2007-2012.**

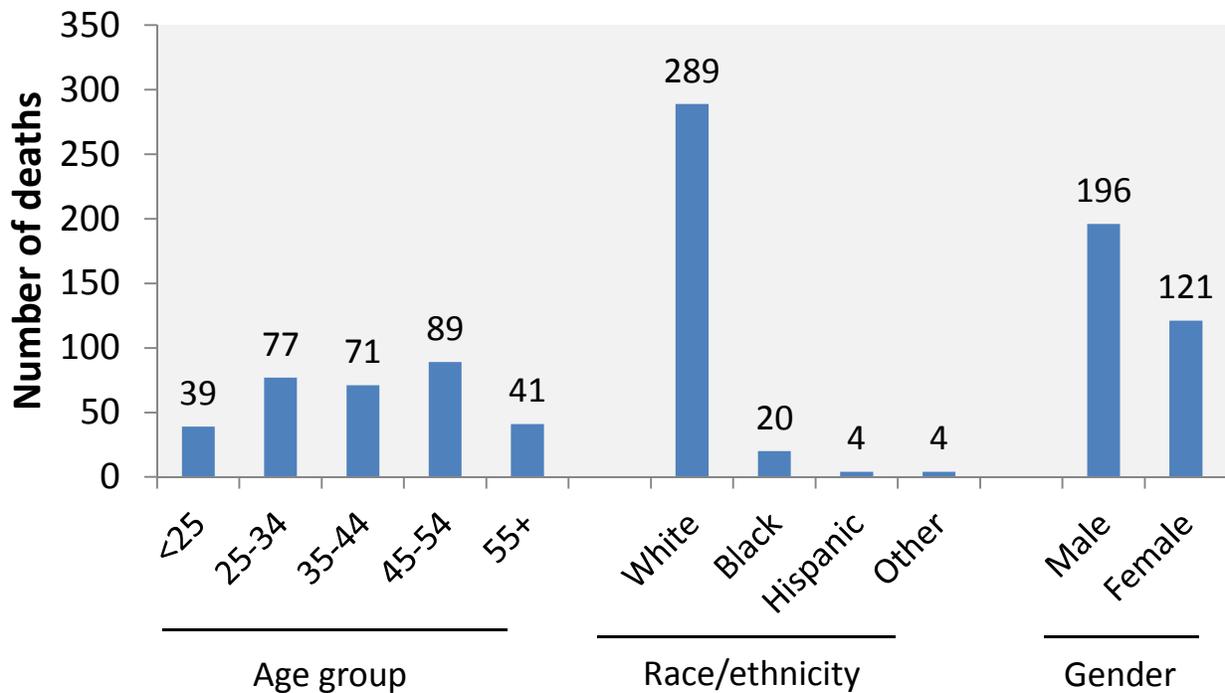


# **BENZODIAZEPINE- RELATED DEATHS**

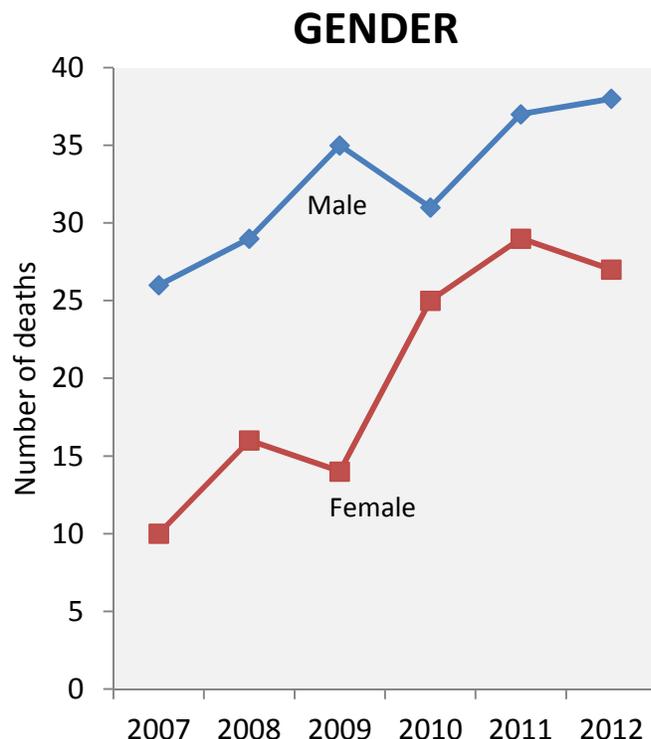
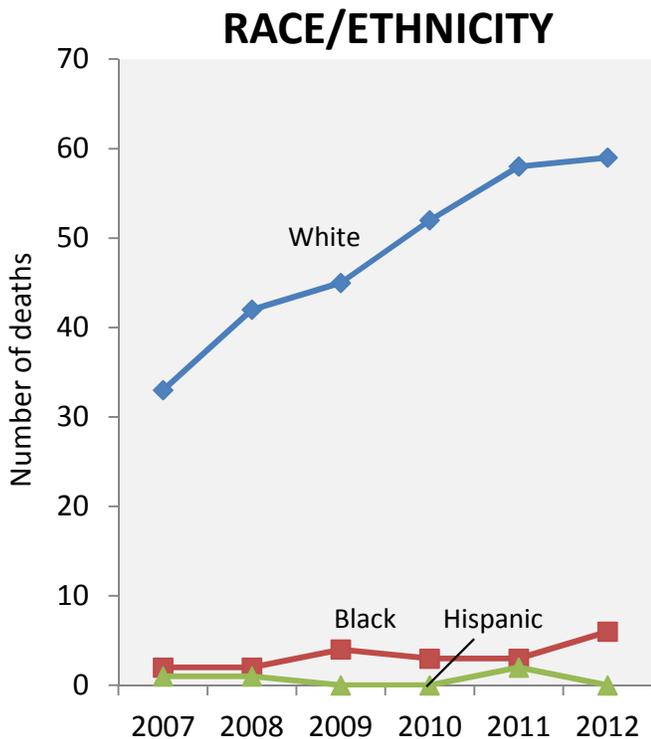
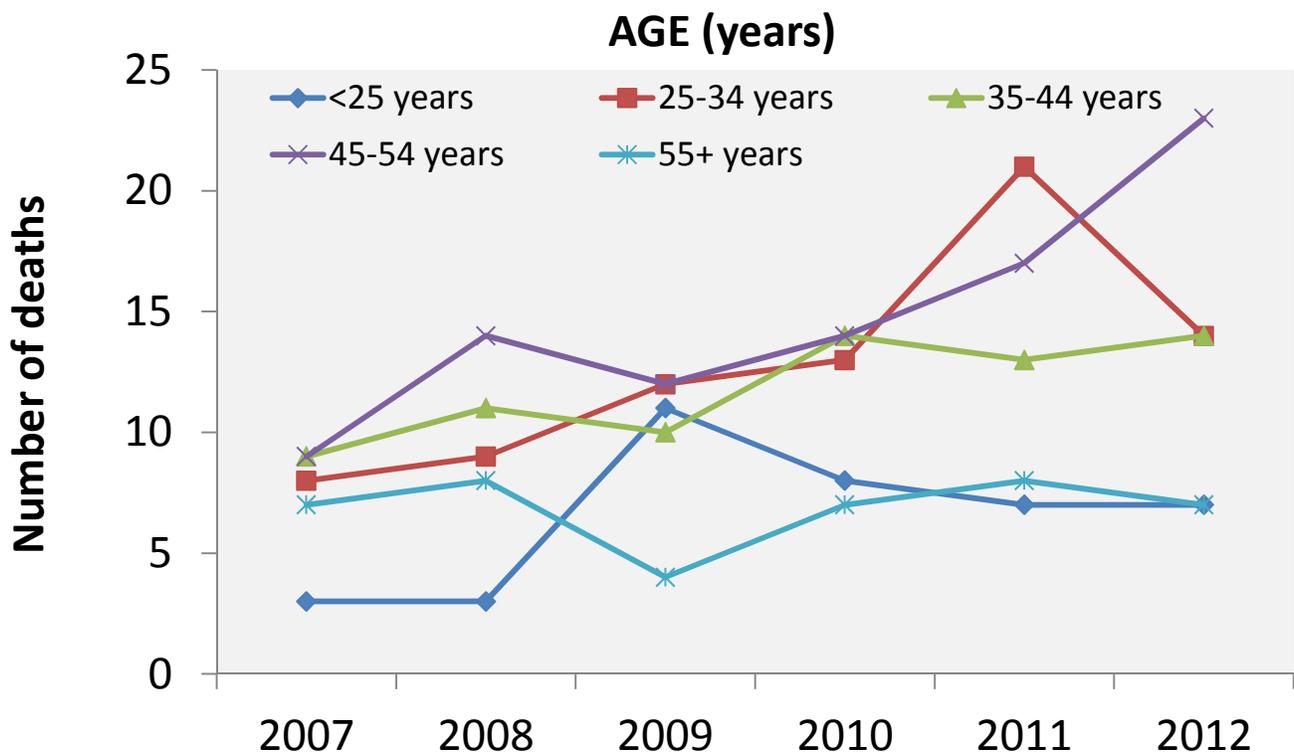
**Figure 40. Number of Benzodiazepine-Related Deaths Occurring in Maryland, 2007-2012.**



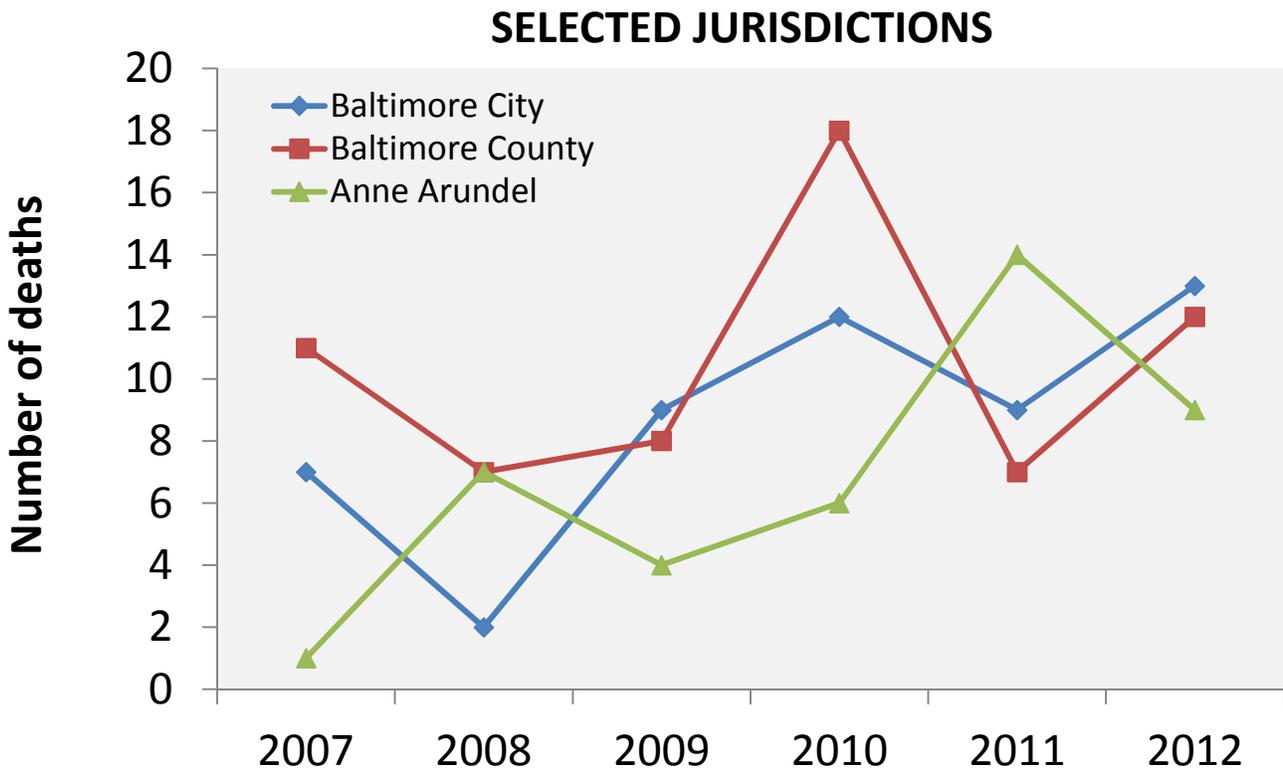
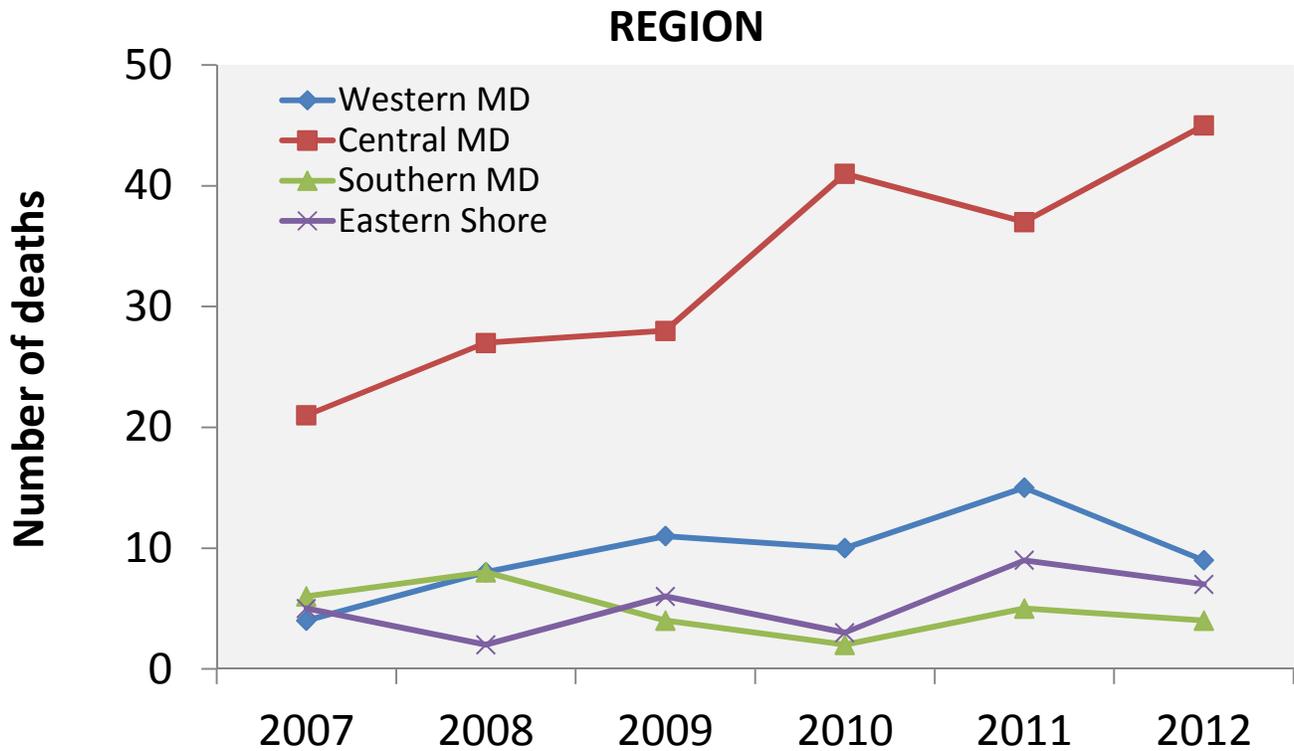
**Figure 41. Number of Benzodiazepine-Related Deaths Occurring in Maryland by Age, Race/Ethnicity and Gender, 2007-2012.**



**Figure 42. Number of Benzodiazepine-Related Deaths Occurring in Maryland by Age Group, Race/Ethnicity and Gender, 2007-2012.**



**Figure 43. Number of Benzodiazepine-Related Deaths by Place of Occurrence, Maryland, 2007-2012.**



# **TABLES**

**TABLE 1. TOTAL NUMBER OF INTOXICATION DEATHS BY COUNTY OF OCCURRENCE, 2007-2012.**

TOTAL INTOXICATION DEATHS

REGION AND POLITICAL SUBDIVISION	2007	2008	2009	2010	2011	2012
MARYLAND .....	777	658	709	643	663	761
WESTERN AREA .....	105	96	94	96	108	107
GARRETT .....	1	3	2	3	2	0
ALLEGANY .....	13	9	9	15	12	13
WASHINGTON .....	16	26	17	20	21	24
FREDERICK .....	22	15	23	20	29	25
MONTGOMERY .....	53	43	43	38	44	45
CENTRAL AREA .....	522	425	465	407	414	498
BALTIMORE CITY .....	274	176	232	172	165	213
BALTIMORE COUNTY .....	122	116	104	113	104	115
ANNE ARUNDEL .....	68	66	60	56	79	79
CARROLL .....	12	16	21	14	8	29
HOWARD .....	16	18	16	9	20	23
HARFORD .....	30	33	32	43	38	39
SOUTHERN AREA .....	84	84	90	73	72	88
CALVERT .....	13	7	13	6	12	11
CHARLES .....	13	16	11	13	10	12
ST. MARY'S .....	6	9	9	12	8	11
PRINCE GEORGE'S .....	52	52	57	42	42	54
EASTERN SHORE AREA .....	66	53	60	67	69	68
CECIL .....	24	9	24	24	28	23
KENT .....	3	4	2	5	2	0
QUEEN ANNE'S .....	4	5	3	4	5	2
CAROLINE .....	1	4	2	2	11	4
TALBOT .....	5	4	3	3	1	5
DORCHESTER .....	3	5	2	6	2	4
WICOMICO .....	9	11	12	12	11	21
SOMERSET .....	6	3	4	1	3	2
WORCESTER .....	11	8	8	10	6	7

**TABLE 2. INTOXICATION DEATHS BY SUBSTANCE AND COUNTY OF OCCURRENCE, 2007-2012.**

TOTAL OPIOID-RELATED DEATHS

REGION AND POLITICAL SUBDIVISION	2007	2008	2009	2010	2011	2012
MARYLAND .....	597	499	552	498	522	619
WESTERN AREA .....	66	64	69	62	80	85
GARRETT .....	0	2	2	1	1	0
ALLEGANY .....	11	7	6	11	8	10
WASHINGTON .....	11	21	13	13	16	19
FREDERICK .....	12	7	18	12	27	23
MONTGOMERY .....	32	27	30	25	28	33
CENTRAL AREA .....	431	349	371	333	336	419
BALTIMORE CITY .....	245	146	194	139	140	178
BALTIMORE COUNTY .....	87	91	81	93	91	101
ANNE ARUNDEL .....	52	55	43	44	53	65
CARROLL .....	10	14	15	11	7	27
HOWARD .....	14	13	11	8	17	16
HARFORD .....	23	30	27	38	28	32
SOUTHERN AREA .....	49	51	64	49	49	58
CALVERT .....	11	5	10	4	10	10
CHARLES .....	8	9	10	9	9	11
ST. MARY'S .....	3	7	7	10	6	8
PRINCE GEORGE'S .....	27	30	37	26	24	29
EASTERN SHORE AREA .....	51	35	48	54	57	57
CECIL .....	22	8	21	21	24	21
KENT .....	2	4	2	3	1	0
QUEEN ANNE'S .....	4	2	2	4	4	2
CAROLINE .....	0	2	1	2	8	4
TALBOT .....	3	3	2	2	1	3
DORCHESTER .....	2	3	1	6	2	4
WICOMICO .....	6	6	10	9	10	17
SOMERSET .....	5	3	2	1	3	1
WORCESTER .....	7	4	7	6	4	5

**TABLE 2. INTOXICATION DEATHS BY SUBSTANCE AND COUNTY OF OCCURRENCE, 2007-2012. — Continued**

HEROIN-RELATED DEATHS

REGION AND POLITICAL SUBDIVISION	2007	2008	2009	2010	2011	2012
MARYLAND .....	382	280	348	238	245	378
WESTERN AREA .....	33	35	37	27	33	47
GARRETT .....	0	0	0	0	1	0
ALLEGANY .....	3	4	2	3	3	6
WASHINGTON .....	5	13	11	6	8	10
FREDERICK .....	8	4	9	6	10	10
MONTGOMERY .....	17	14	15	12	11	21
CENTRAL AREA .....	307	199	256	171	165	264
BALTIMORE CITY .....	192	104	146	93	76	126
BALTIMORE COUNTY .....	52	50	52	42	38	62
ANNE ARUNDEL .....	36	24	30	18	24	35
CARROLL .....	8	5	7	3	2	13
HOWARD .....	8	8	7	3	10	12
HARFORD .....	11	8	14	12	15	16
SOUTHERN AREA .....	27	31	35	25	26	37
CALVERT .....	4	3	7	1	5	6
CHARLES .....	2	5	3	6	5	5
ST. MARY'S .....	1	2	0	4	4	7
PRINCE GEORGE'S .....	20	21	25	14	12	19
EASTERN SHORE AREA .....	15	15	20	15	21	30
CECIL .....	8	4	12	4	8	10
KENT .....	1	1	0	0	1	0
QUEEN ANNE'S .....	0	1	2	2	2	2
CAROLINE .....	0	0	0	0	3	2
TALBOT .....	1	2	0	0	1	2
DORCHESTER .....	1	2	0	2	1	3
WICOMICO .....	1	3	3	5	3	9
SOMERSET .....	2	1	1	0	1	1
WORCESTER .....	1	1	2	2	1	1

**TABLE 2. INTOXICATION DEATHS BY SUBSTANCE AND COUNTY OF OCCURRENCE, 2007-2012. — Continued**

PRESCRIPTION OPIOID-RELATED DEATHS

REGION AND POLITICAL SUBDIVISION	2007	2008	2009	2010	2011	2012
MARYLAND .....	283	260	244	305	335	293
WESTERN AREA .....	38	35	38	36	57	47
GARRETT .....	0	2	2	1	1	0
ALLEGANY .....	8	5	6	8	5	5
WASHINGTON .....	7	10	3	7	11	9
FREDERICK .....	6	3	9	6	20	16
MONTGOMERY .....	17	15	18	14	20	17
CENTRAL AREA .....	177	179	145	193	207	185
BALTIMORE CITY .....	88	54	63	61	80	67
BALTIMORE COUNTY .....	44	51	36	58	66	46
ANNE ARUNDEL .....	22	34	19	31	33	30
CARROLL .....	3	10	9	8	5	17
HOWARD .....	6	6	4	5	8	5
HARFORD .....	14	24	14	30	15	20
SOUTHERN AREA .....	25	24	30	32	29	26
CALVERT .....	8	2	3	3	7	5
CHARLES .....	6	6	7	4	4	6
ST. MARY'S .....	3	5	7	9	3	4
PRINCE GEORGE'S .....	8	11	13	16	15	11
EASTERN SHORE AREA .....	43	22	31	44	42	35
CECIL .....	18	5	10	20	20	17
KENT .....	2	3	2	3	1	0
QUEEN ANNE'S .....	4	1	1	2	2	0
CAROLINE .....	0	2	1	2	5	1
TALBOT .....	2	1	2	2	0	1
DORCHESTER .....	2	1	1	4	1	2
WICOMICO .....	5	3	8	6	7	9
SOMERSET .....	4	3	1	1	3	1
WORCESTER .....	6	3	5	4	3	4

**TABLE 2. INTOXICATION DEATHS BY SUBSTANCE AND COUNTY OF OCCURRENCE, 2007-2012. — Continued**

OXYCODONE-RELATED DEATHS

REGION AND POLITICAL SUBDIVISION	2007	2008	2009	2010	2011	2012
MARYLAND .....	62	69	79	111	115	95
WESTERN AREA .....	11	14	17	14	20	21
GARRETT .....	0	1	0	0	0	0
ALLEGANY .....	3	0	1	2	0	2
WASHINGTON .....	0	4	2	2	5	2
FREDERICK .....	1	2	5	3	6	9
MONTGOMERY .....	7	7	9	7	9	8
CENTRAL AREA .....	30	44	33	57	61	49
BALTIMORE CITY .....	7	6	10	5	15	14
BALTIMORE COUNTY .....	8	14	14	20	21	12
ANNE ARUNDEL .....	5	9	3	9	14	10
CARROLL .....	2	3	3	5	3	6
HOWARD .....	3	2	0	4	1	2
HARFORD .....	5	10	3	14	7	5
SOUTHERN AREA .....	12	8	15	15	14	11
CALVERT .....	3	1	2	2	4	4
CHARLES .....	5	3	4	2	3	2
ST. MARY'S .....	1	2	5	3	2	2
PRINCE GEORGE'S .....	3	2	4	8	5	3
EASTERN SHORE AREA .....	9	3	14	25	20	14
CECIL .....	3	0	3	13	9	4
KENT .....	0	0	1	2	0	0
QUEEN ANNE'S .....	1	0	1	1	1	0
CAROLINE .....	0	0	1	1	0	0
TALBOT .....	0	0	0	1	0	1
DORCHESTER .....	1	0	0	2	1	1
WICOMICO .....	1	1	4	2	5	5
SOMERSET .....	0	0	1	1	2	1
WORCESTER .....	3	2	3	2	2	2

**TABLE 2. INTOXICATION DEATHS BY SUBSTANCE AND COUNTY OF OCCURRENCE, 2007-2012. — Continued**

METHADONE-RELATED DEATHS

REGION AND POLITICAL SUBDIVISION	2007	2008	2009	2010	2011	2012
MARYLAND .....	196	155	132	170	168	160
WESTERN AREA .....	20	17	14	13	19	21
GARRETT .....	0	0	1	1	0	0
ALLEGANY .....	2	4	2	3	4	1
WASHINGTON .....	6	4	0	3	5	4
FREDERICK .....	6	1	4	1	4	9
MONTGOMERY .....	6	8	7	5	6	7
CENTRAL AREA .....	132	111	95	125	125	114
BALTIMORE CITY .....	74	43	50	53	63	47
BALTIMORE COUNTY .....	31	29	17	35	31	28
ANNE ARUNDEL .....	15	18	12	17	17	14
CARROLL .....	1	6	4	2	2	12
HOWARD .....	2	1	4	1	5	1
HARFORD .....	9	14	8	17	7	12
SOUTHERN AREA .....	12	15	11	14	10	10
CALVERT .....	5	0	1	1	2	2
CHARLES .....	2	4	2	1	0	1
ST. MARY'S .....	2	3	3	5	1	1
PRINCE GEORGE'S .....	3	8	5	7	7	6
EASTERN SHORE AREA .....	32	12	12	18	14	15
CECIL .....	15	2	6	9	9	9
KENT .....	2	2	1	2	1	0
QUEEN ANNE'S .....	2	1	1	1	1	0
CAROLINE .....	0	0	0	1	1	1
TALBOT .....	2	0	2	1	0	1
DORCHESTER .....	1	1	0	0	0	1
WICOMICO .....	3	2	1	3	1	1
SOMERSET .....	3	2	0	0	1	0
WORCESTER .....	4	2	1	1	0	2

**TABLE 2. INTOXICATION DEATHS BY SUBSTANCE AND COUNTY OF OCCURRENCE, 2007-2012. — Continued**

FENTANYL-RELATED DEATHS

REGION AND POLITICAL SUBDIVISION	2007	2008	2009	2010	2011	2012
MARYLAND .....	25	23	26	38	25	29
WESTERN AREA .....	5	1	2	7	6	5
GARRETT .....	0	1	0	0	1	0
ALLEGANY .....	3	0	1	2	1	1
WASHINGTON .....	0	0	0	2	1	1
FREDERICK .....	0	0	0	2	3	1
MONTGOMERY .....	2	0	1	1	0	2
CENTRAL AREA .....	13	18	16	20	10	16
BALTIMORE CITY .....	3	2	4	4	2	4
BALTIMORE COUNTY .....	5	9	9	6	4	5
ANNE ARUNDEL .....	3	4	3	5	2	3
CARROLL .....	0	2	0	2	0	1
HOWARD .....	1	0	0	0	0	2
HARFORD .....	1	1	0	3	2	1
SOUTHERN AREA .....	1	0	4	2	2	2
CALVERT .....	0	0	1	0	1	0
CHARLES .....	0	0	0	0	0	1
ST. MARY'S .....	0	0	1	1	1	0
PRINCE GEORGE'S .....	1	0	2	1	0	1
EASTERN SHORE AREA .....	6	4	4	9	7	6
CECIL .....	2	1	0	2	2	0
KENT .....	0	0	0	0	0	0
QUEEN ANNE'S .....	1	0	0	0	0	0
CAROLINE .....	0	0	0	1	4	0
TALBOT .....	1	1	0	1	0	1
DORCHESTER .....	0	0	0	2	0	0
WICOMICO .....	1	1	3	1	1	4
SOMERSET .....	1	1	0	1	0	0
WORCESTER .....	0	0	1	1	0	1

**TABLE 2. INTOXICATION DEATHS BY SUBSTANCE AND COUNTY OF OCCURRENCE, 2007-2012. — Continued**

TRAMADOL-RELATED DEATHS

REGION AND POLITICAL SUBDIVISION	2007	2008	2009	2010	2011	2012
MARYLAND .....	8	15	15	15	24	24
WESTERN AREA .....	1	2	4	2	7	2
GARRETT .....	0	1	1	0	0	0
ALLEGANY .....	1	1	0	1	0	1
WASHINGTON .....	0	0	0	1	4	1
FREDERICK .....	0	0	1	0	1	0
MONTGOMERY .....	0	0	2	0	2	0
CENTRAL AREA .....	5	9	7	9	12	18
BALTIMORE CITY .....	3	3	3	4	5	8
BALTIMORE COUNTY .....	1	4	2	2	4	6
ANNE ARUNDEL .....	0	0	0	2	2	2
CARROLL .....	0	0	1	0	0	1
HOWARD .....	1	2	0	0	1	0
HARFORD .....	0	0	1	1	0	1
SOUTHERN AREA .....	2	1	2	2	2	1
CALVERT .....	1	1	0	0	1	0
CHARLES .....	0	0	1	0	0	0
ST. MARY'S .....	0	0	0	1	0	0
PRINCE GEORGE'S .....	1	0	1	1	1	1
EASTERN SHORE AREA .....	0	3	2	2	3	3
CECIL .....	0	1	0	0	1	1
KENT .....	0	1	0	0	0	0
QUEEN ANNE'S .....	0	0	0	0	0	0
CAROLINE .....	0	1	0	1	1	0
TALBOT .....	0	0	0	0	0	0
DORCHESTER .....	0	0	0	1	0	1
WICOMICO .....	0	0	2	0	0	1
SOMERSET .....	0	0	0	0	1	0
WORCESTER .....	0	0	0	0	0	0

**TABLE 2. INTOXICATION DEATHS BY SUBSTANCE AND COUNTY OF OCCURRENCE, 2007-2012. — Continued**

ALCOHOL-RELATED DEATHS

REGION AND POLITICAL SUBDIVISION	2007	2008	2009	2010	2011	2012
MARYLAND .....	181	165	154	159	160	181
WESTERN AREA .....	27	31	24	25	32	25
GARRETT .....	1	2	1	1	1	0
ALLEGANY .....	5	0	3	4	2	3
WASHINGTON .....	3	10	3	5	4	3
FREDERICK .....	4	7	8	5	9	5
MONTGOMERY .....	14	12	9	10	16	14
CENTRAL AREA .....	111	93	95	93	98	118
BALTIMORE CITY .....	56	39	52	39	44	67
BALTIMORE COUNTY .....	36	23	22	29	21	22
ANNE ARUNDEL .....	11	12	8	10	21	14
CARROLL .....	3	4	4	3	4	4
HOWARD .....	2	6	5	3	4	5
HARFORD .....	3	9	4	9	4	6
SOUTHERN AREA .....	30	25	20	22	19	27
CALVERT .....	3	3	4	0	2	1
CHARLES .....	5	5	1	4	3	2
ST. MARY'S .....	2	1	3	2	2	3
PRINCE GEORGE'S .....	20	16	12	16	12	21
EASTERN SHORE AREA .....	13	16	15	19	11	11
CECIL .....	5	4	7	6	3	5
KENT .....	0	0	0	1	0	0
QUEEN ANNE'S .....	1	2	0	1	3	0
CAROLINE .....	1	0	1	0	1	0
TALBOT .....	0	3	0	0	0	2
DORCHESTER .....	2	0	0	1	0	1
WICOMICO .....	1	5	3	4	2	2
SOMERSET .....	0	0	1	0	1	1
WORCESTER .....	3	2	3	6	1	0

**TABLE 2. INTOXICATION DEATHS BY SUBSTANCE AND COUNTY OF OCCURRENCE, 2007-2012. — Continued**

COCAINE-RELATED DEATHS

REGION AND POLITICAL SUBDIVISION	2007	2008	2009	2010	2011	2012
MARYLAND .....	239	150	155	134	147	142
WESTERN AREA .....	29	16	11	12	22	19
GARRETT .....	0	0	0	1	0	0
ALLEGANY .....	2	1	1	1	0	2
WASHINGTON .....	3	1	0	3	3	4
FREDERICK .....	4	2	3	3	7	2
MONTGOMERY .....	20	12	7	4	12	11
CENTRAL AREA .....	172	104	119	93	96	100
BALTIMORE CITY .....	102	56	69	45	47	53
BALTIMORE COUNTY .....	29	23	23	23	19	16
ANNE ARUNDEL .....	25	18	15	13	18	13
CARROLL .....	2	2	3	6	3	7
HOWARD .....	6	1	4	1	5	6
HARFORD .....	8	4	5	5	4	5
SOUTHERN AREA .....	19	19	15	18	15	16
CALVERT .....	1	1	1	3	2	3
CHARLES .....	3	3	2	2	1	1
ST. MARY'S .....	1	1	1	2	0	2
PRINCE GEORGE'S .....	14	14	11	11	12	10
EASTERN SHORE AREA .....	19	11	10	11	14	7
CECIL .....	5	3	4	3	7	1
KENT .....	1	2	0	1	0	0
QUEEN ANNE'S .....	3	0	1	0	1	0
CAROLINE .....	0	0	1	0	1	1
TALBOT .....	4	0	1	0	0	0
DORCHESTER .....	0	1	0	1	1	1
WICOMICO .....	2	4	2	3	3	4
SOMERSET .....	1	0	1	1	0	0
WORCESTER .....	3	1	0	2	1	0

**TABLE 2. INTOXICATION DEATHS BY SUBSTANCE AND COUNTY OF OCCURRENCE, 2007-2012. — Continued**

BENZODIAZEPINE-RELATED DEATHS

REGION AND POLITICAL SUBDIVISION	2007	2008	2009	2010	2011	2012
MARYLAND .....	36	45	49	56	66	65
WESTERN AREA .....	4	8	11	10	15	9
GARRETT .....	0	0	1	0	0	0
ALLEGANY .....	1	0	1	3	1	0
WASHINGTON .....	1	2	2	2	4	3
FREDERICK .....	1	1	3	1	4	2
MONTGOMERY .....	1	5	4	4	6	4
CENTRAL AREA .....	21	27	28	41	37	45
BALTIMORE CITY .....	7	2	9	12	9	13
BALTIMORE COUNTY .....	11	7	8	18	7	12
ANNE ARUNDEL .....	1	7	4	6	14	9
CARROLL .....	0	4	3	2	0	1
HOWARD .....	1	2	2	1	4	2
HARFORD .....	1	5	2	2	3	8
SOUTHERN AREA .....	6	8	4	2	5	4
CALVERT .....	1	1	1	1	1	1
CHARLES .....	1	3	1	0	0	1
ST. MARY'S .....	1	0	0	1	1	0
PRINCE GEORGE'S .....	3	4	2	0	3	2
EASTERN SHORE AREA .....	5	2	6	3	9	7
CECIL .....	4	0	2	2	6	6
KENT .....	0	0	0	0	0	0
QUEEN ANNE'S .....	0	0	0	1	1	0
CAROLINE .....	0	0	0	0	0	0
TALBOT .....	0	1	0	0	0	0
DORCHESTER .....	0	0	1	0	0	0
WICOMICO .....	0	0	0	0	1	0
SOMERSET .....	1	0	1	0	0	1
WORCESTER .....	0	1	2	0	1	0