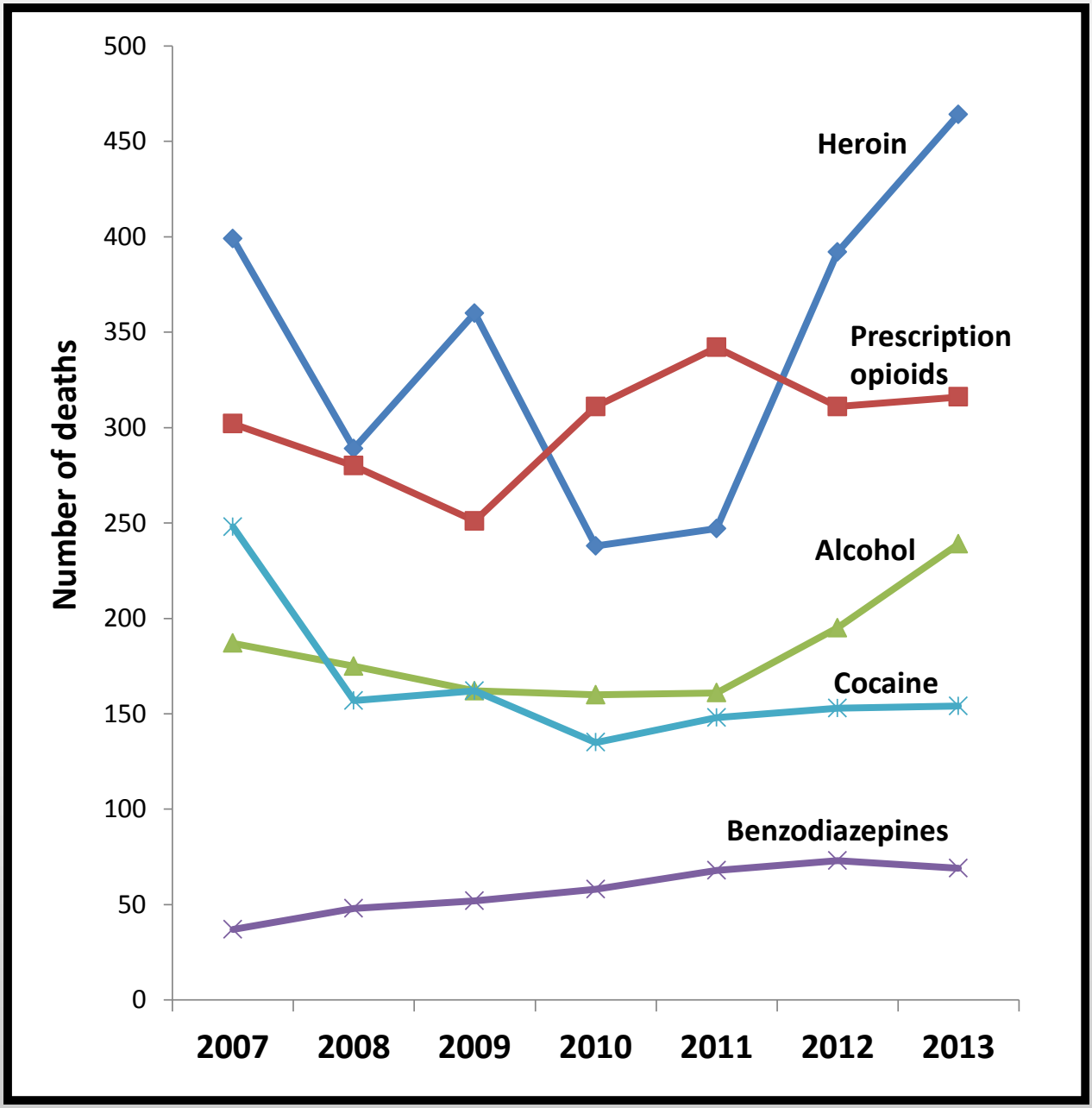
APPENDIX I

Maryland Department of Health and Mental Hygiene
Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – Joshua M. Sharfstein, Secretary

June, 2014

Drug and Alcohol-Related Intoxication Deaths in Maryland, 2013



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SUMMARY OF MAJOR CHANGES—2012 TO 2013

[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.]

Total alcohol and drug intoxication deaths

- A total of 858 drug and alcohol-related intoxication deaths occurred in Maryland in 2013, a 7% increase over the number of deaths in 2012. Increases in the number of heroin, fentanyl, and alcohol-related deaths contributed to the overall increase.
- The largest increase in the overall number of intoxication deaths by age group occurred among individuals between 25 and 34 years of age. The number of deaths in this group increased from 169 to 216, a 28% rise.
- The number of deaths increased by 17% among African Americans and 4% among Whites.
- Deaths increased by 7% among men and 9% among women.
- The number of deaths fell by 10% in Southern Maryland, but increased in all other regions of the State. The largest increase occurred in Western Maryland, where the number of deaths rose by 20% as a result of a 42% increase in deaths occurring in Frederick County.

Opioid-related deaths

- There was an 18% increase in the number of **heroin**-related deaths between 2012 and 2013, and an 88% increase since 2011. There were 464 deaths in 2013, compared with 392 in 2012 and 247 in 2011.
- The largest increase in number of **heroin**-related deaths between 2012 and 2013 occurred among African Americans. **Heroin** deaths in this group increased from 100 to 131, a 31% increase, while heroin deaths among Whites increased 285 to 321, a 13% increase.
- Two age groups showed large increases in **heroin** deaths between 2012 and 2013—individuals ages 25-34 years, with a 50% increase in the number of deaths, and individuals ages 55 years of age and older, with a 40% increase.
- The number of **heroin**-related deaths increased in the Western, Central, and Eastern Shore regions of the State, and remained unchanged in the Southern region. **Heroin** deaths doubled in Frederick County, rising from 10 in 2012 to 21 in 2013.
- Twenty-seven percent of **heroin**-related deaths occurred in combination with **alcohol**, and 20% in combination with **cocaine**.
- The overall number of **prescription opioid**-related deaths remained stable between 2012 and 2013. However, deaths increased by 37% among African Americans (from 46 to 63) and fell by 4% among Whites (from 258 to 247). Deaths increased by 11% among women and fell by 5% among men.
- The number of **oxycodone**-related deaths, which have been falling since 2011, fell by 13% between 2012 and 2013 as a result of a substantial decline in deaths

among White men. **Methadone**-related deaths followed a similar pattern, declining substantially between 2012 and 2013 among White individuals.

- The overall number of **fentanyl**-related deaths doubled between 2012 and 2013, increasing from 29 in 2012 to 58 in 2013.
- There was nearly a four-fold increase in the number of **fentanyl**-related deaths among individuals below the age of 35, and a seven-fold increase in the number of African American deaths between 2012 and 2013. Deaths among men more than doubled.
- The reason for the increase in fentanyl deaths in 2013 was a sudden wave late in the year of overdoses involving **nonpharmaceutical fentanyl,** that is, nonprescription **fentanyl** produced in clandestine laboratories and mixed with, or substituted for, heroin or other illicit substances. Similar increases were reported in a number of other states throughout the country. **Fentanyl** is many times more potent than heroin, and greatly increases the risk of an overdose death.
- Half of the 58 **fentanyl**-related deaths occurring in 2013 appeared to have been related to **nonpharmaceutical fentanyl**. These deaths occurred among all age groups, both racial groups, both genders, and in all regions of the State.

Cocaine-related deaths

- The number of **cocaine**-related deaths remained stable between 2012 and 2013, with counts of 153 and 154, respectively, during the two-year period.
- Nearly 60% of **cocaine**-related deaths occurred in combination with **heroin**, and 25% in combination with **prescription opioids**.

Benzodiazepine-related deaths

- The number of **benzodiazepine**-related deaths, which had been rising steadily since 2007, fell by 6% between 2012 and 2013.
- Nearly three-quarters of all **benzodiazepine**-related deaths occurred in combination with **prescription opioids**.

Alcohol-related deaths

- The number of **alcohol**-related deaths increased by 23% between 2012 and 2013, and by 48% since 2011. There were 239 alcohol-related deaths in 2013, compared with 195 in 2012 and 161 in 2011.
- Deaths increased between 2012 and 2013 among Whites and African Americans, men and women, and individuals of all age groups 25 years of age and above.
- The number of **alcohol**-related deaths increased in all regions of the State except the Southern area.
- More than half of all **alcohol**-related deaths occurred in combination with **heroin**, and 26% in combination with **prescription opioids**.

METHODS

Introduction

The purpose of this report is to describe trends in unintentional drug intoxication deaths occurring in Maryland during the period 2012-2013. Trends are examined by age at time of death, race/ethnicity, gender, place of death and substances related to death.

This report was prepared using drug and alcohol intoxication data housed in a registry developed and maintained by the Vital Statistics Administration (VSA) of the Maryland Department of Health and Mental Hygiene (DHMH). The methodology for reporting on drug-related intoxication deaths in Maryland was developed by VSA 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.[1]

Sources of data

Nearly all data on 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.

A small number of additional intoxication deaths that occurred among U.S. military personnel were investigated by federal investigators rather than by OCME. Information on these cases was obtained through death certificate data maintained by VSA.

Information on place of death and race/ethnicity was missing for a small number of records provided by OCME and was obtained through death certificate data. Death certificate data were also used to update demographic information on records that were amended after the records were filed.

Identification of drug-related intoxication deaths

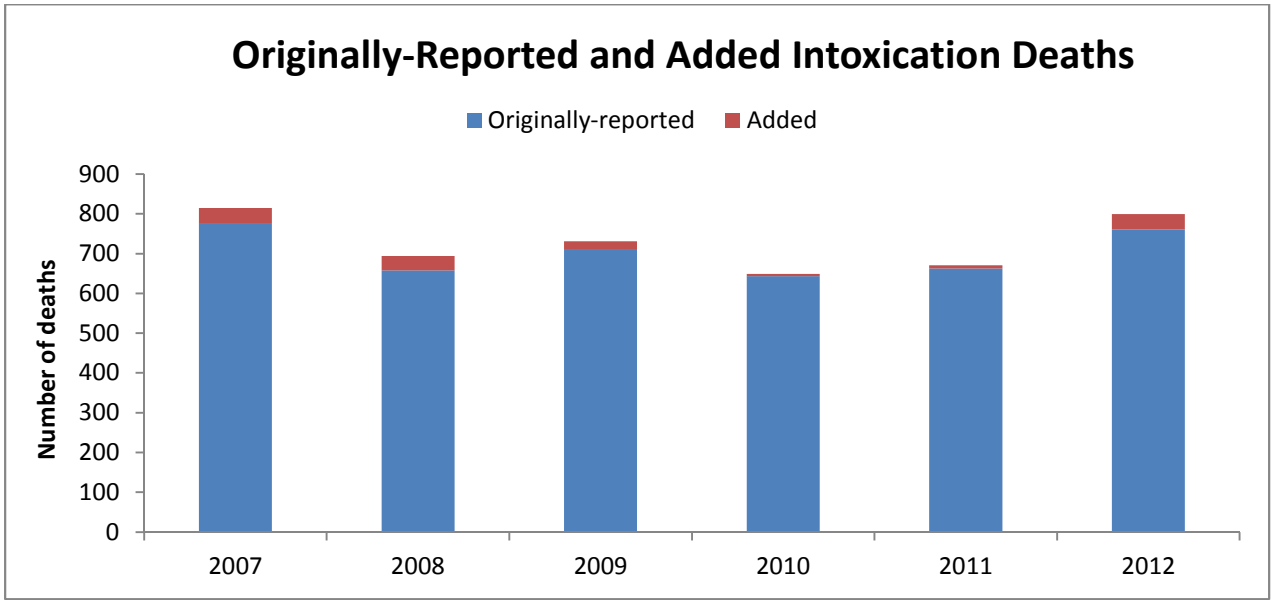
For the purpose of this report, an intoxication death was defined as a death that was the result of recent ingestion or exposure to alcohol or another type of drug, including

[1] 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.

heroin, cocaine, phencyclidine (PCP), prescription opioids, benzodiazepines, methamphetamines and other prescribed and unprescribed drugs. Deaths 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. In the case of intoxication deaths, a substantial proportion of records with an "undetermined" manner of death are likely to be unintentional.

All records obtained from OCME were 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 not included in the registry. Records indicating that the manner of death was natural, suicide, or homicide were also not included.

Prior to 2013, OCME 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. The VSA is continually updating the intoxication registry to ensure that the data are as complete and accurate as possible and, as a part of this effort, recently identified that these terms failed to identify a small number of intoxication deaths. The list was therefore expanded to also include records with causes of death that included the terms "combined effects," "combined toxic effects," or "effects." All 2007-2012 records were reexamined, and the registry was updated to include all records identified through the expanded list. In addition, certain records that initially had a "pending" cause of death and had not been included previously were added to the registry. When the additional records were added the overall number of deaths for the period 2007-2012 increased by 3.5%, ranging from a low of 0.9% in 2010 when 6 records were added to a high of 5.0% in 2012 when 38 records were added.



Since the updated methodology will be used in future reports, the data contained in this report should serve as a baseline for comparison with future data. Additional, minor changes could occur to published data as updated information becomes available. Reasons that these changes could be necessary include the following: (1) A death is determined to be intoxication-related long after death occurred; (2) A death initially thought to be an unintentional intoxication death is determined to have resulted from other causes; or (3) Updated demographic information becomes available.

Analyses

Changes in the number of drug and alcohol-related intoxication deaths occurring in Maryland during the years 2012-2013 were analyzed by age group, race/ethnicity, gender, place of occurrence of death, and substances related to the death. Changes were examined for deaths related to the following substances:

1. Opioids
    a. Heroin
    b. Prescription
        i. Total
        ii. Oxycodone
        iii. Methadone
    c. Fentanyl
2. Cocaine
3. Benzodiazepine
4. Alcohol

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.

The number of deaths by place of occurrence was computed by jurisdiction and by region, categorized as follows:

Western Area	Central Area	Southern Area	Eastern Shore Area
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

Data showing overall trends for 2007-2013 and detailed information on changes between 2012 and 2013 are shown in Figures 1 through 47. Counts of the number of total deaths and deaths related to classes of substances or specific substances are shown in

Tables 1 through 9. Data on intoxication deaths related to a combination of substances are shown in Table 10.

Opioid-related deaths

Opioids include heroin, an illicit drug, and prescription opioid drugs such as oxycodone, hydrocodone, hydromorphone, methadone, fentanyl, tramadol and codeine. Fentanyl is available in both prescription and illicit forms. 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 Intoxication"), 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.

Heroin-related deaths

Since heroin is rapidly metabolized into morphine, the records of many deaths that are likely to be heroin-related do not list "heroin" as a cause of death, and therefore cannot be identified using only information listed in the cause of death. Therefore, a combination of information contained in the cause of death field, toxicology results, and scene investigation notes is used to identify heroin-related deaths. A death was considered to be heroin-related 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 cause of death was nonspecific and the scene investigation notes indicated that heroin was likely to have been involved in the death; or
5. The death was associated with morphine through either cause of death information or toxicology results, unless information contained in the investigative report did not support this assumption.

Prescription opioid-related deaths

Prescription opioid-related deaths were 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. Prescription opioids include buprenorphine, codeine, fentanyl, hydrocodone, hydromorphone, meperidine, methadone, morphine, oxycodone, pentazocine, propoxyphene, and tramadol.

Identification of fentanyl-related deaths

Pharmaceutical (prescribed) fentanyl is an opioid analgesic approved for patient use to manage severe or chronic pain. A nonpharmaceutical form of fentanyl is produced illicitly in clandestine laboratories and mixed with (or substituted for) heroin or other illicit

drugs. In this report, a death was considered to be a nonpharmaceutical fentanyl-related death if: (1) OCME determined that fentanyl caused or contributed to the death; and (2) there was no evidence that a pharmaceutical form of fentanyl was involved.

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, 2007-2013.

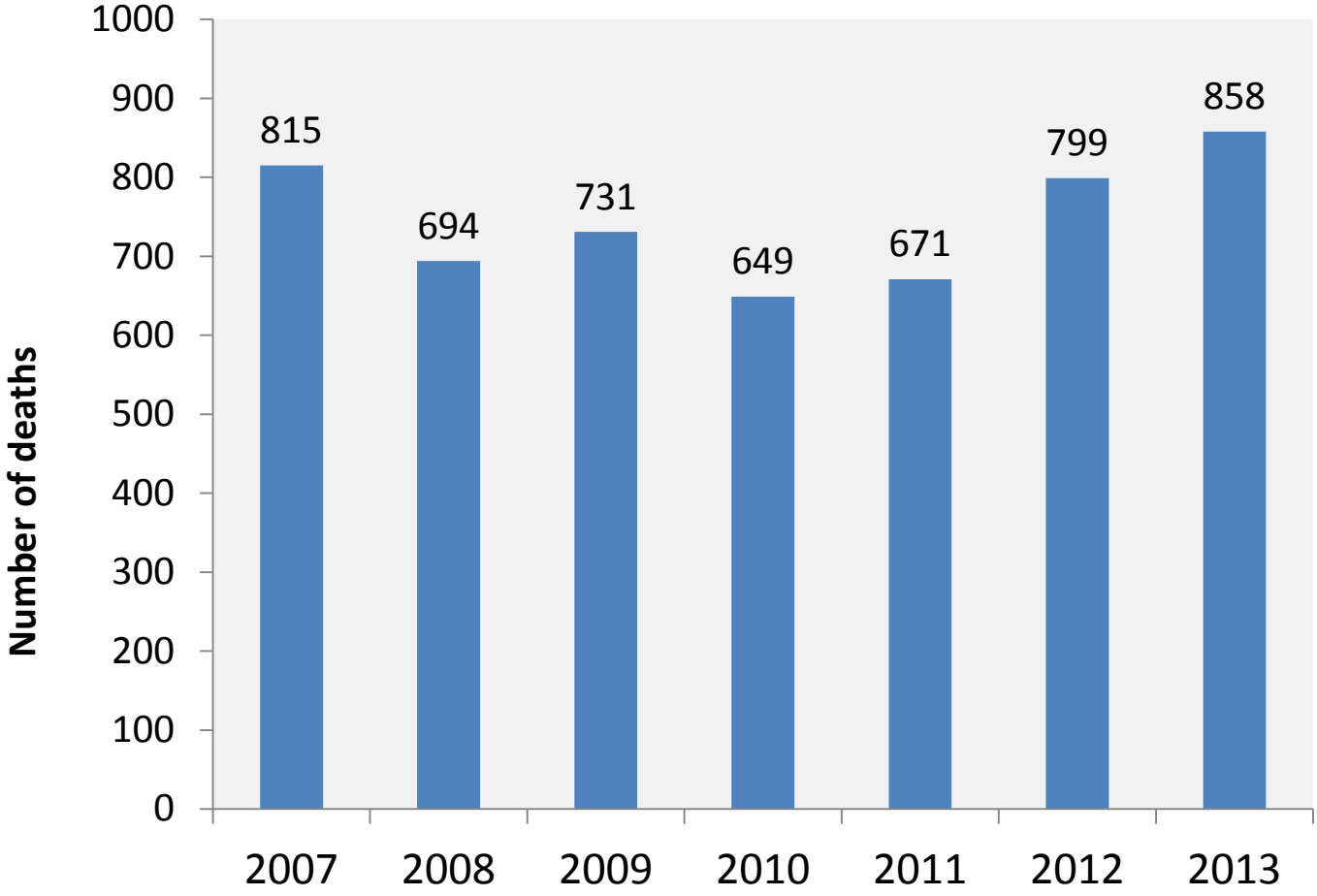
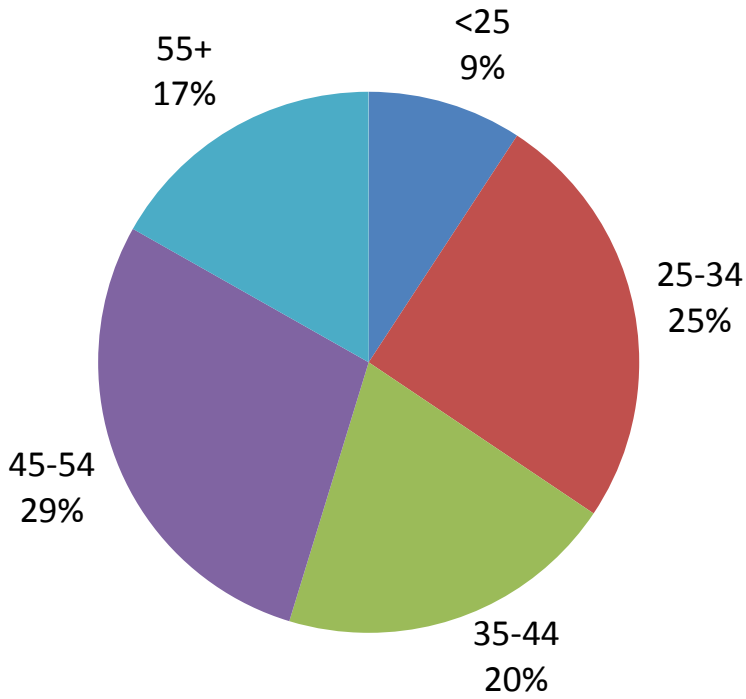
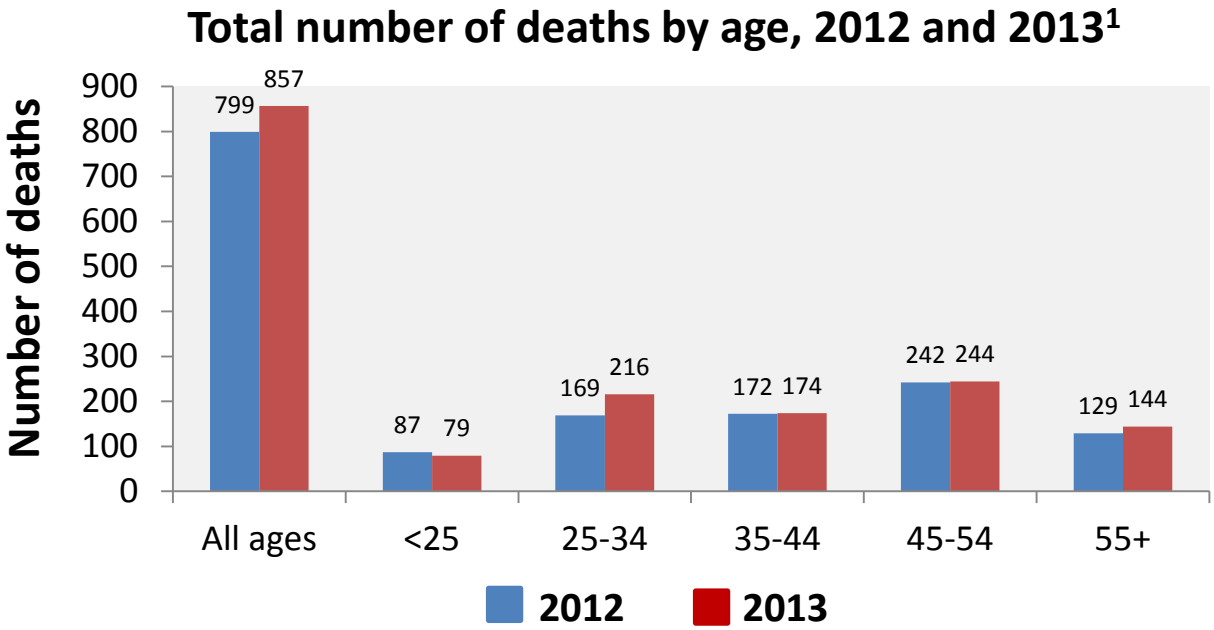


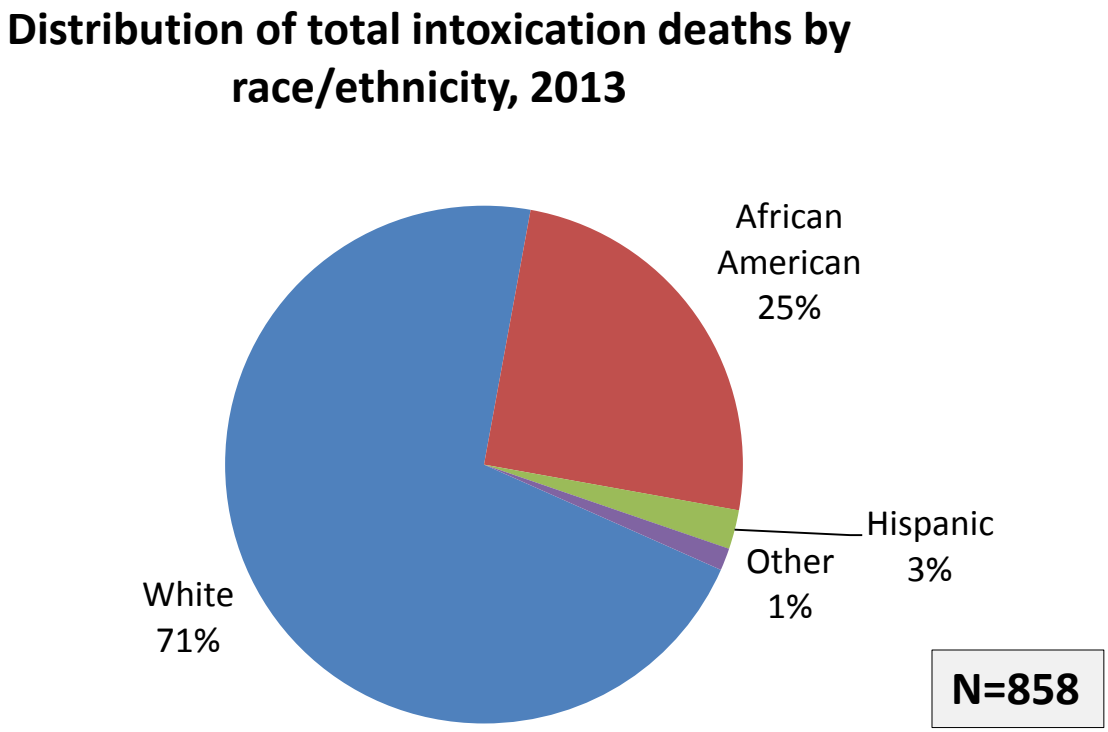
Figure 2. Drug and Alcohol-Related Intoxication Deaths Occurring in Maryland by Age.





[1]Excludes one decedent of unknown age.

Figure 3. Drug and Alcohol-Related Intoxication Deaths Occurring in Maryland by Race/Ethnicity.



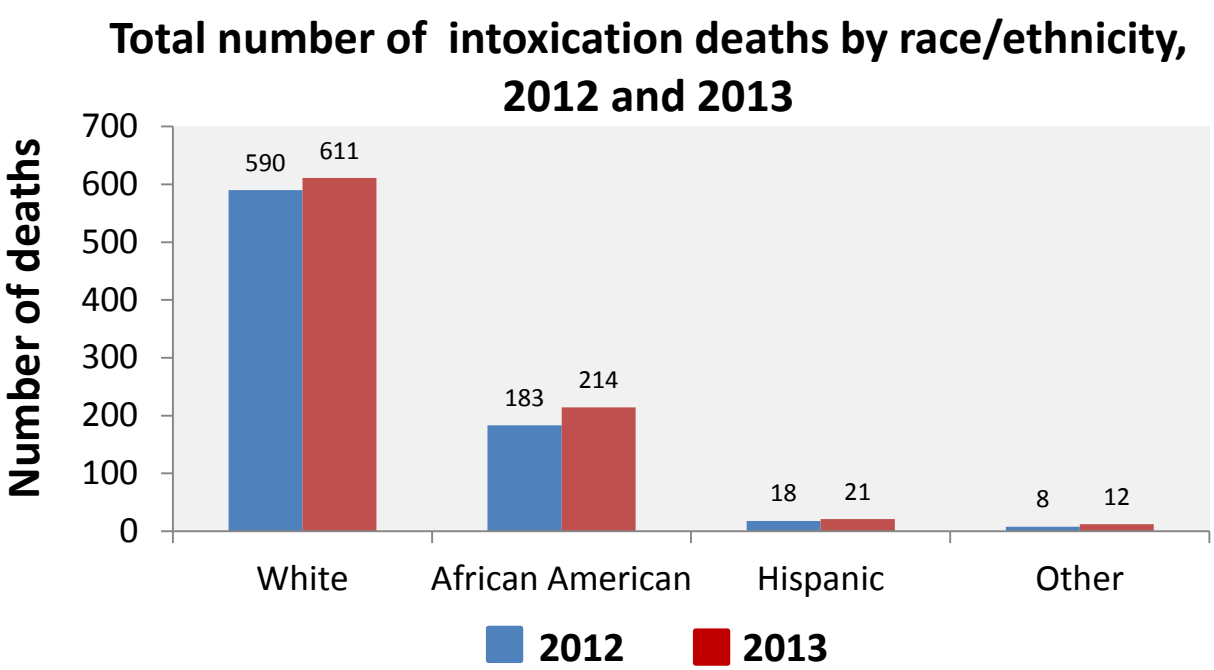
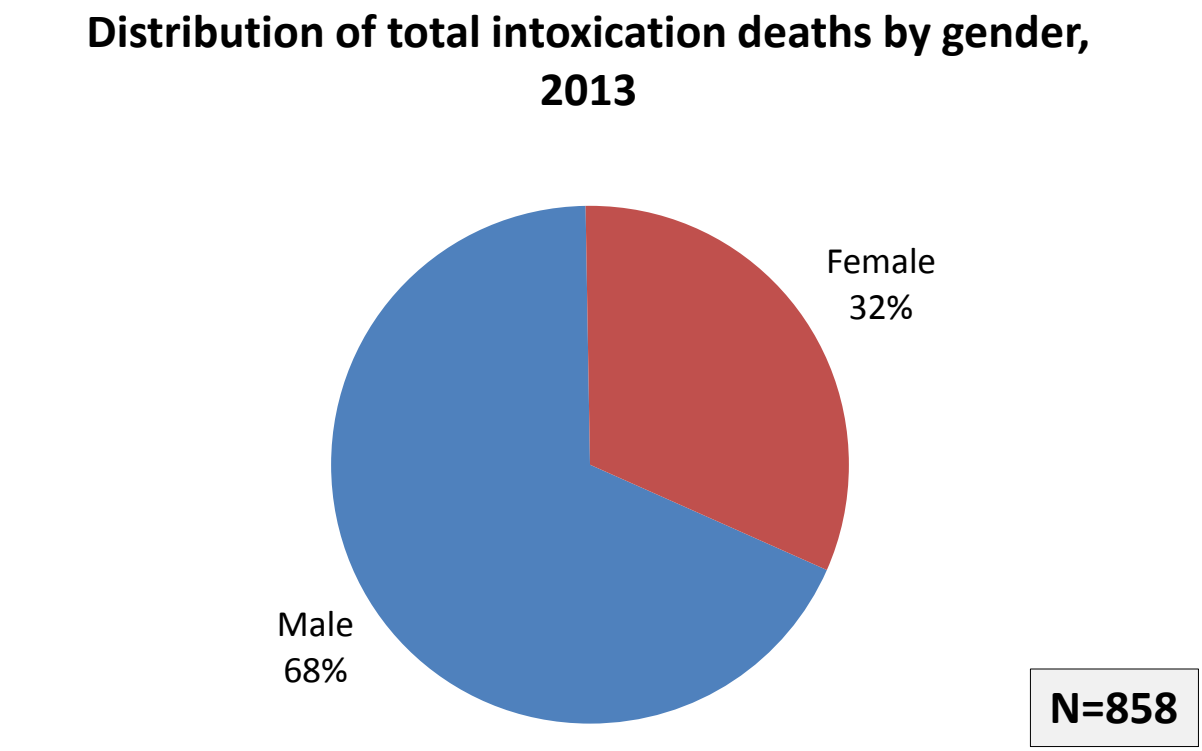


Figure 4. Drug and Alcohol-Related Intoxication Deaths Occurring in Maryland by Gender.



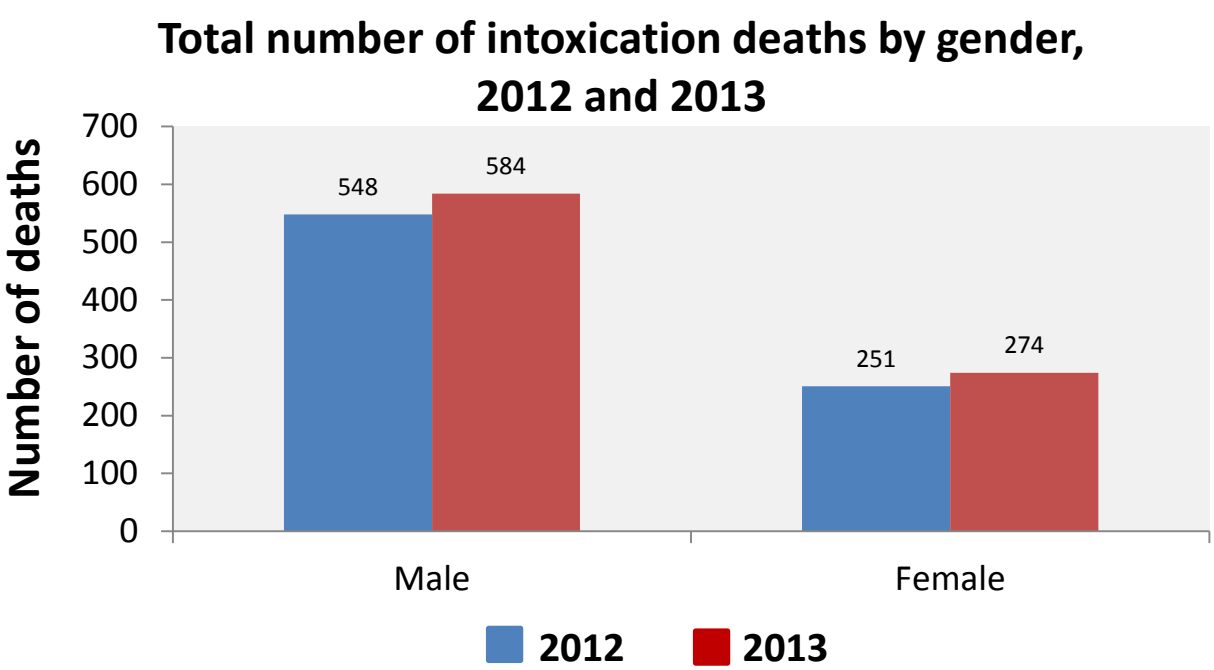
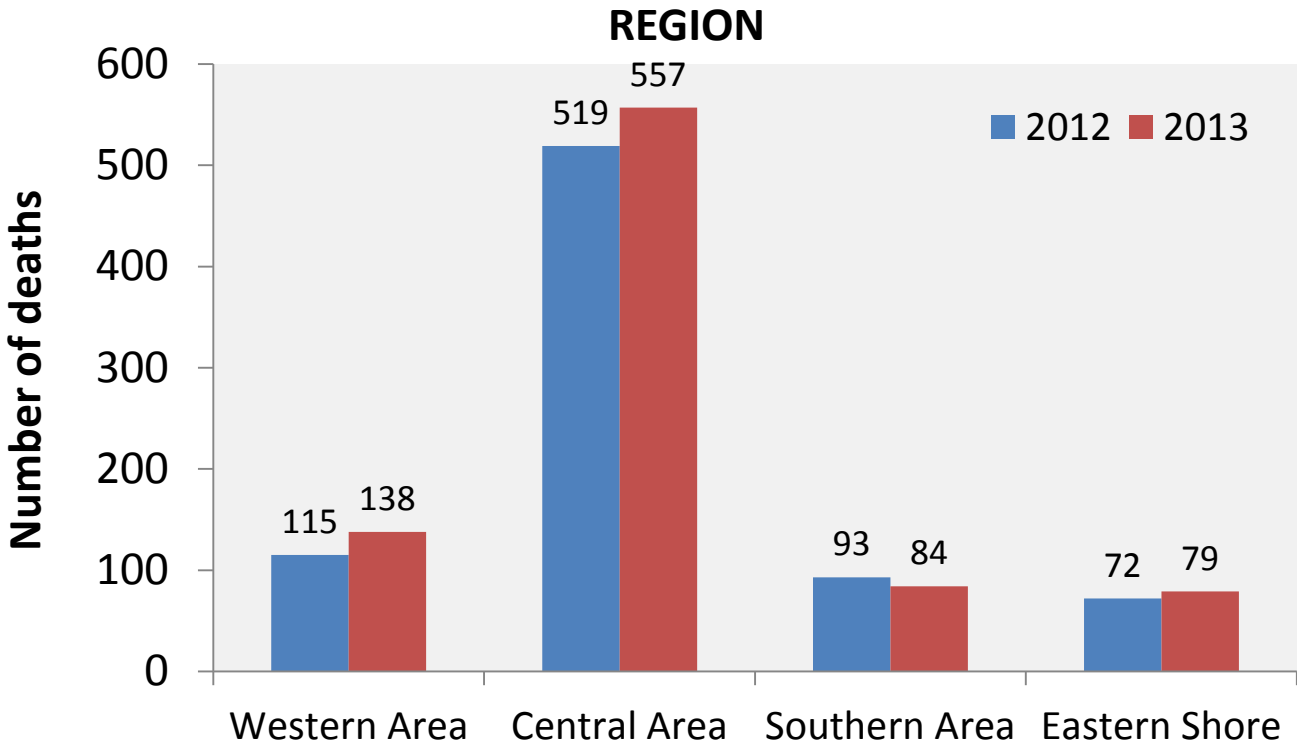
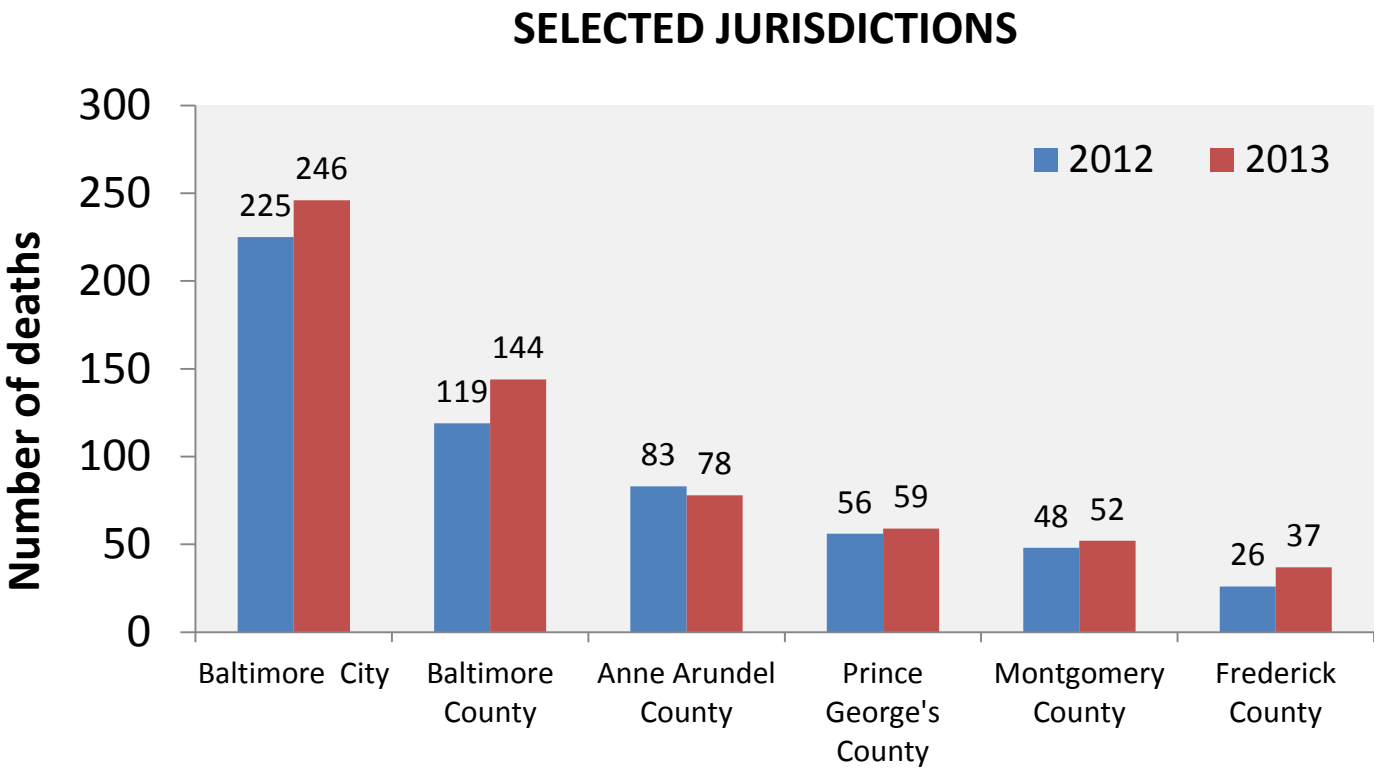


Figure 5. Drug and Alcohol-Related Intoxication Deaths by Place of Occurrence, Maryland





OPIOID-RELATED DEATHS

TOTAL HEROIN-RELATED DEATHS

Figure 6. Total Number of Heroin-Related Intoxication Deaths Occurring in Maryland, 2007-2013.

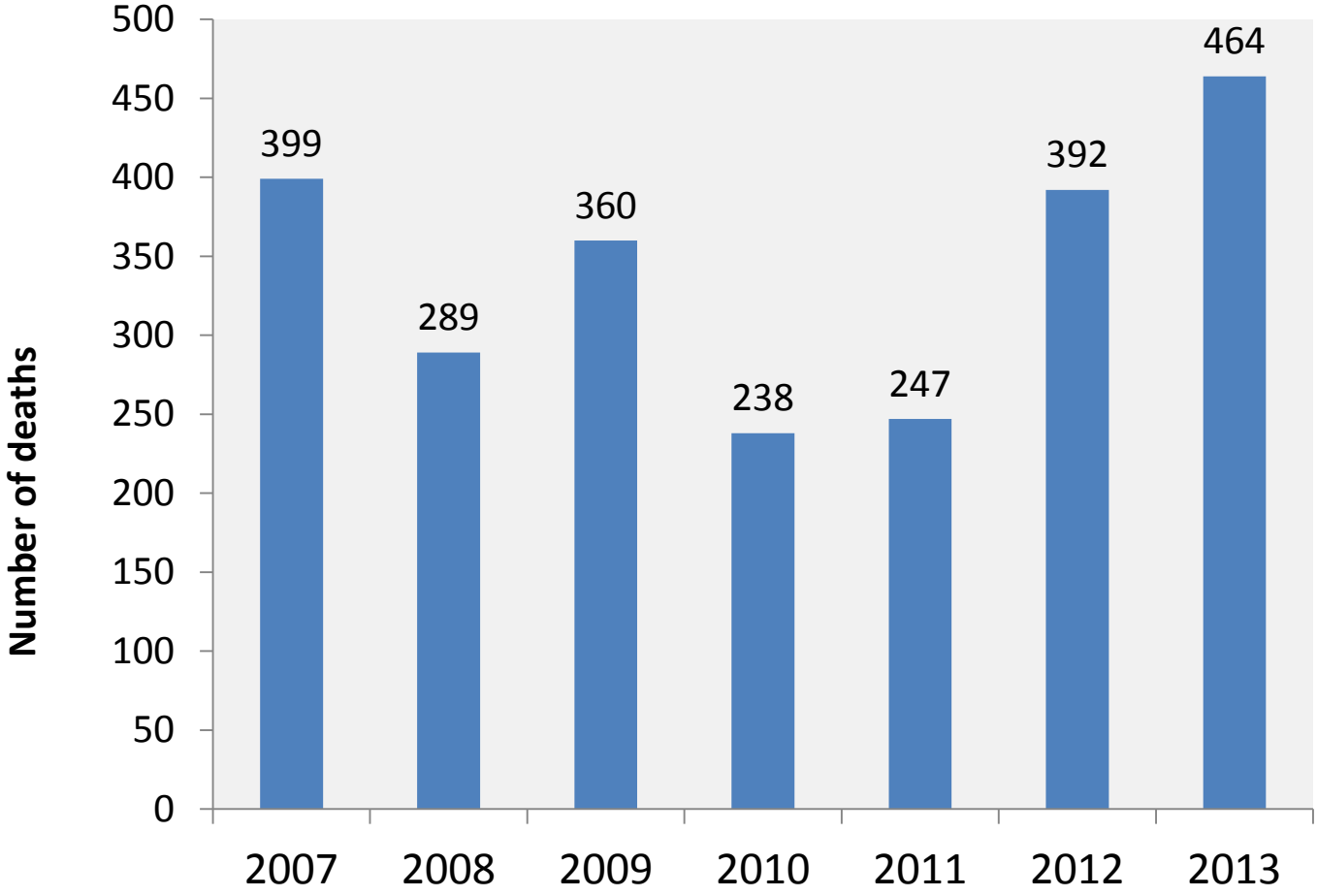
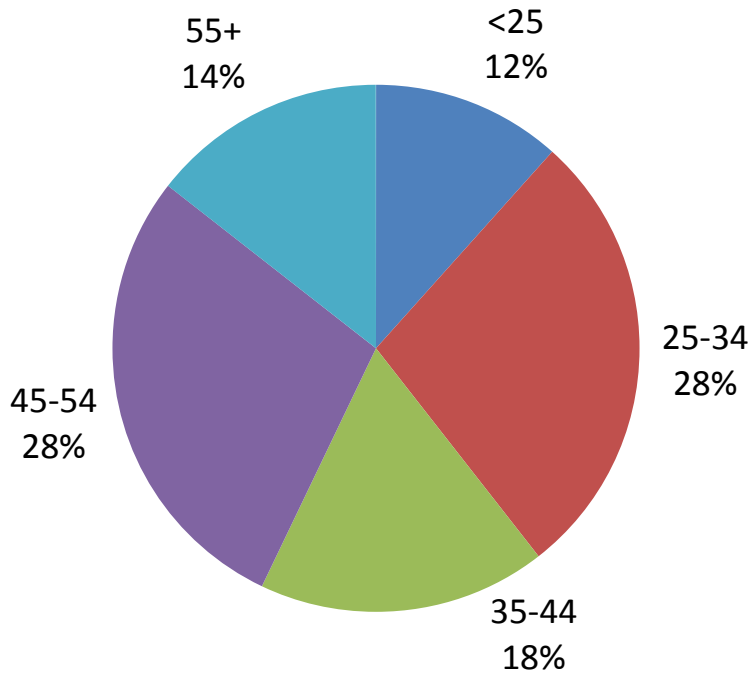


Figure 7. Heroin-Related Intoxication Deaths Occurring in Maryland by Age.



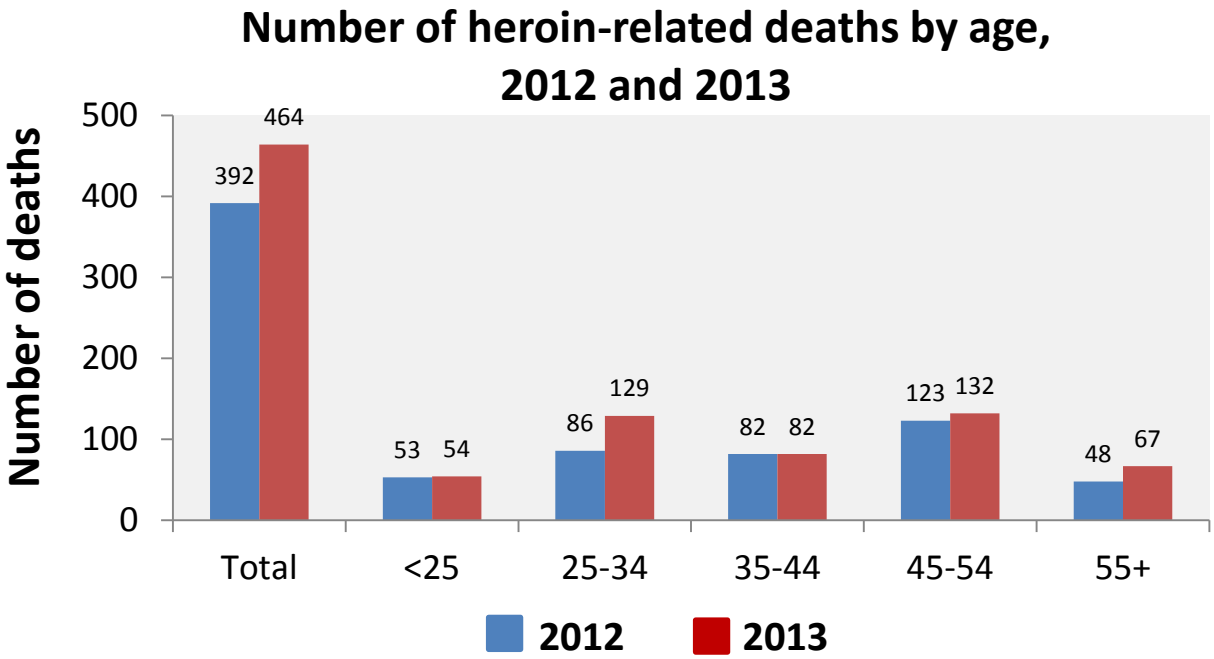
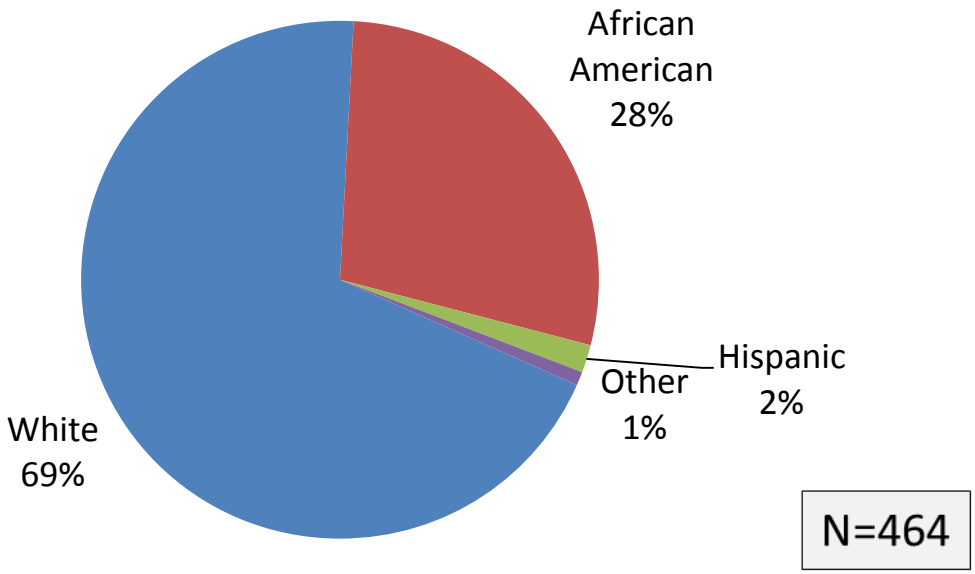


Figure 8. Heroin-Related Intoxication Deaths Occurring in Maryland by Race/Ethnicity.



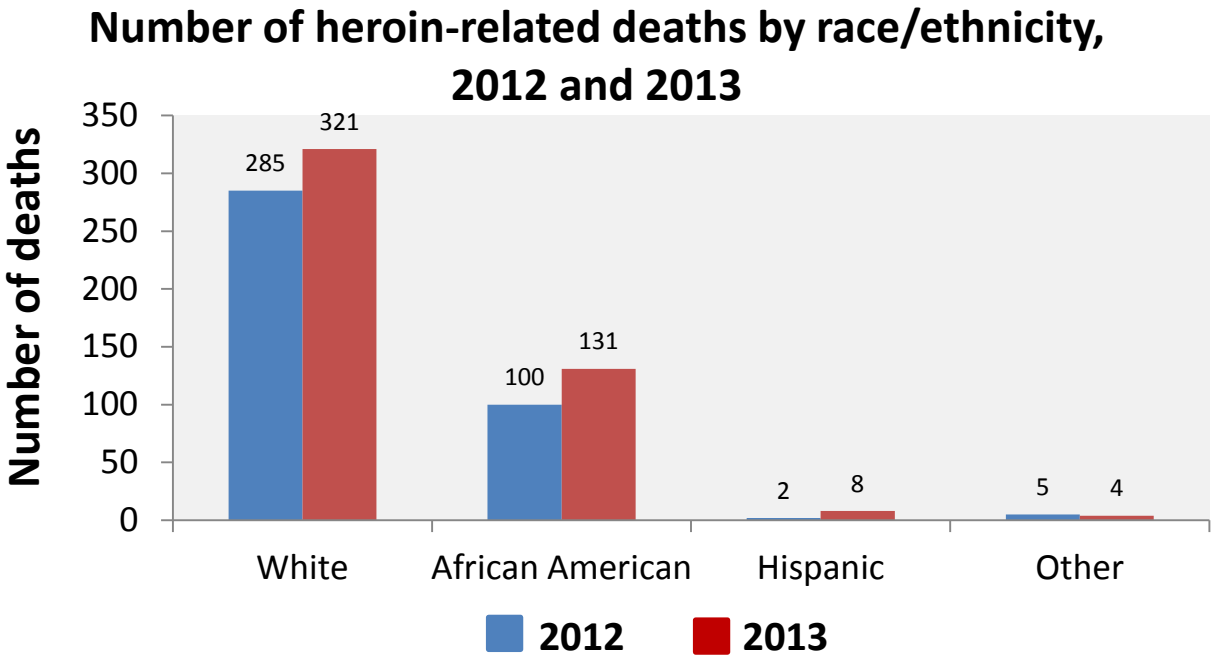
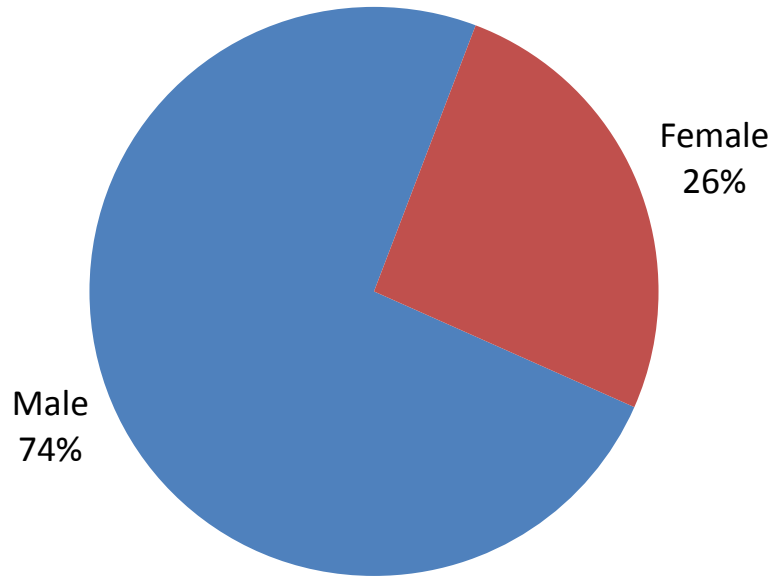


Figure 9. Heroin-Related Intoxication Deaths Occurring in Maryland by Gender.



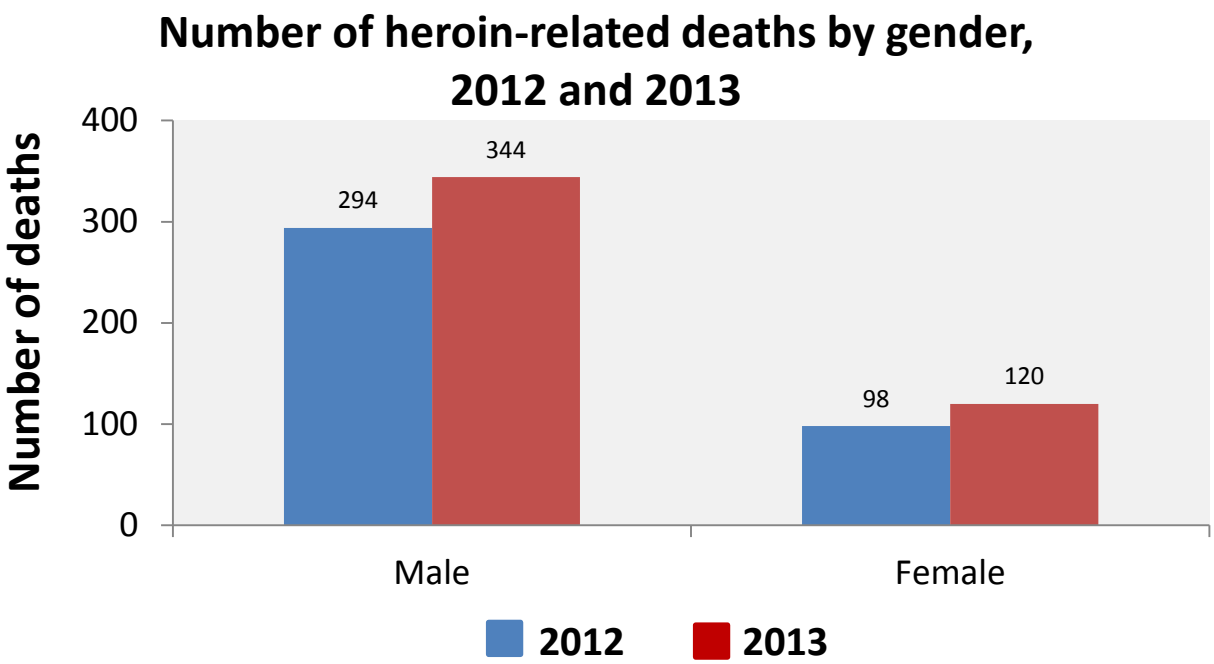
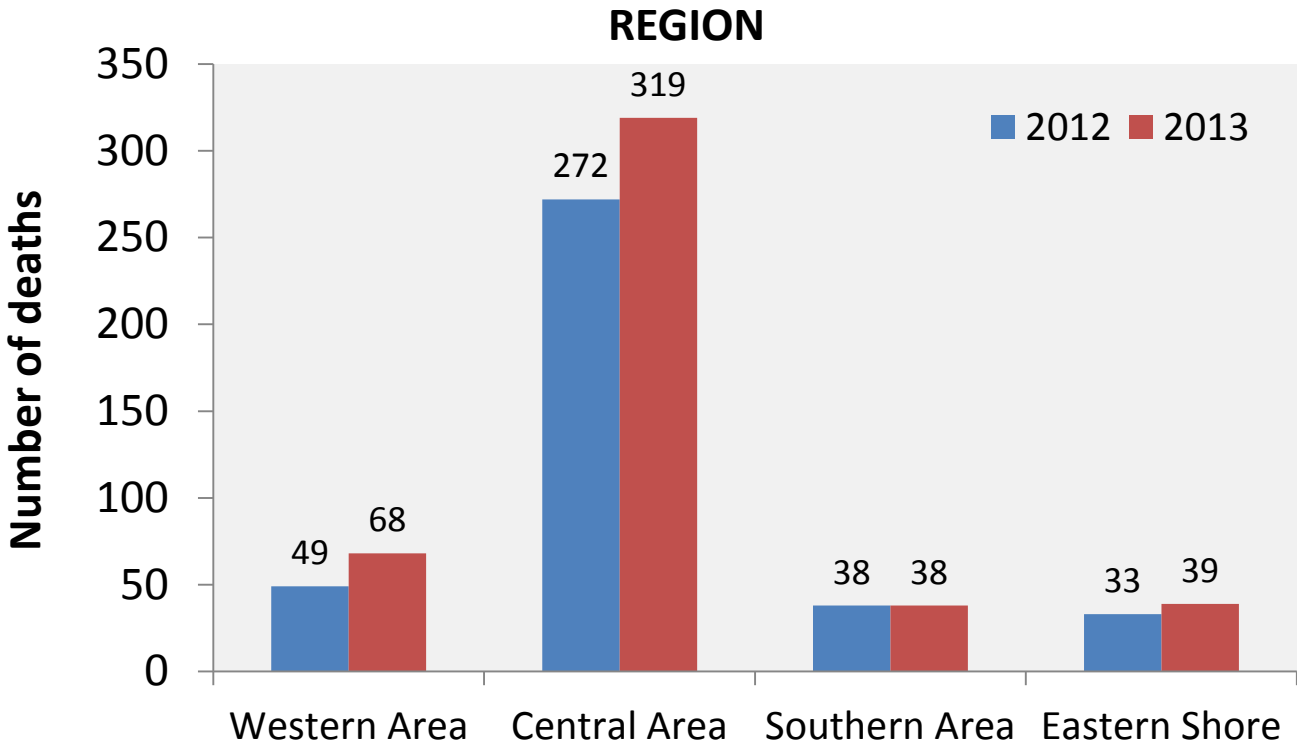
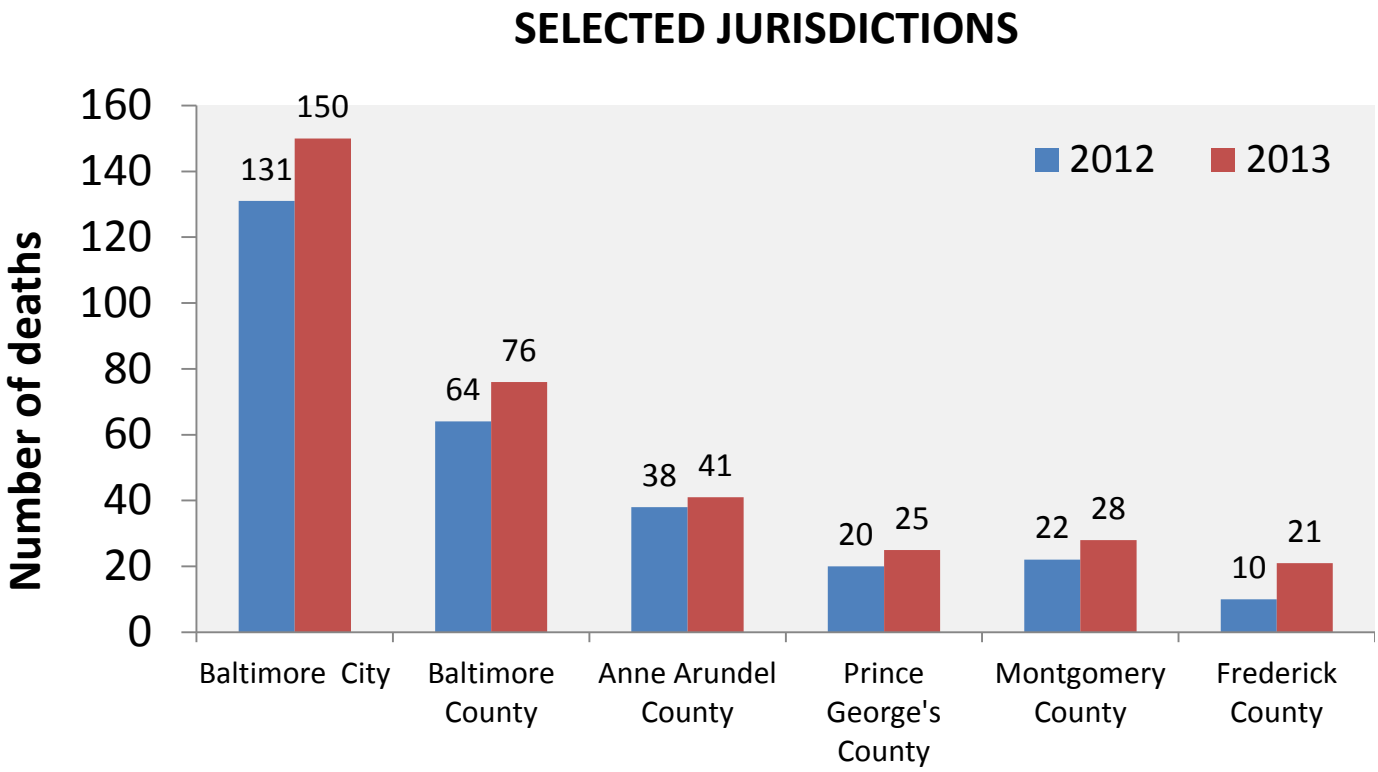


Figure 10. Heroin-Related Intoxication Deaths by Place of Occurrence, Maryland.





TOTAL PRESCRIPTION OPIOID-RELATED DEATHS

Figure 11. Total Number of Prescription Opioid-Related Intoxication Deaths Occurring in Maryland, 2007-2013.

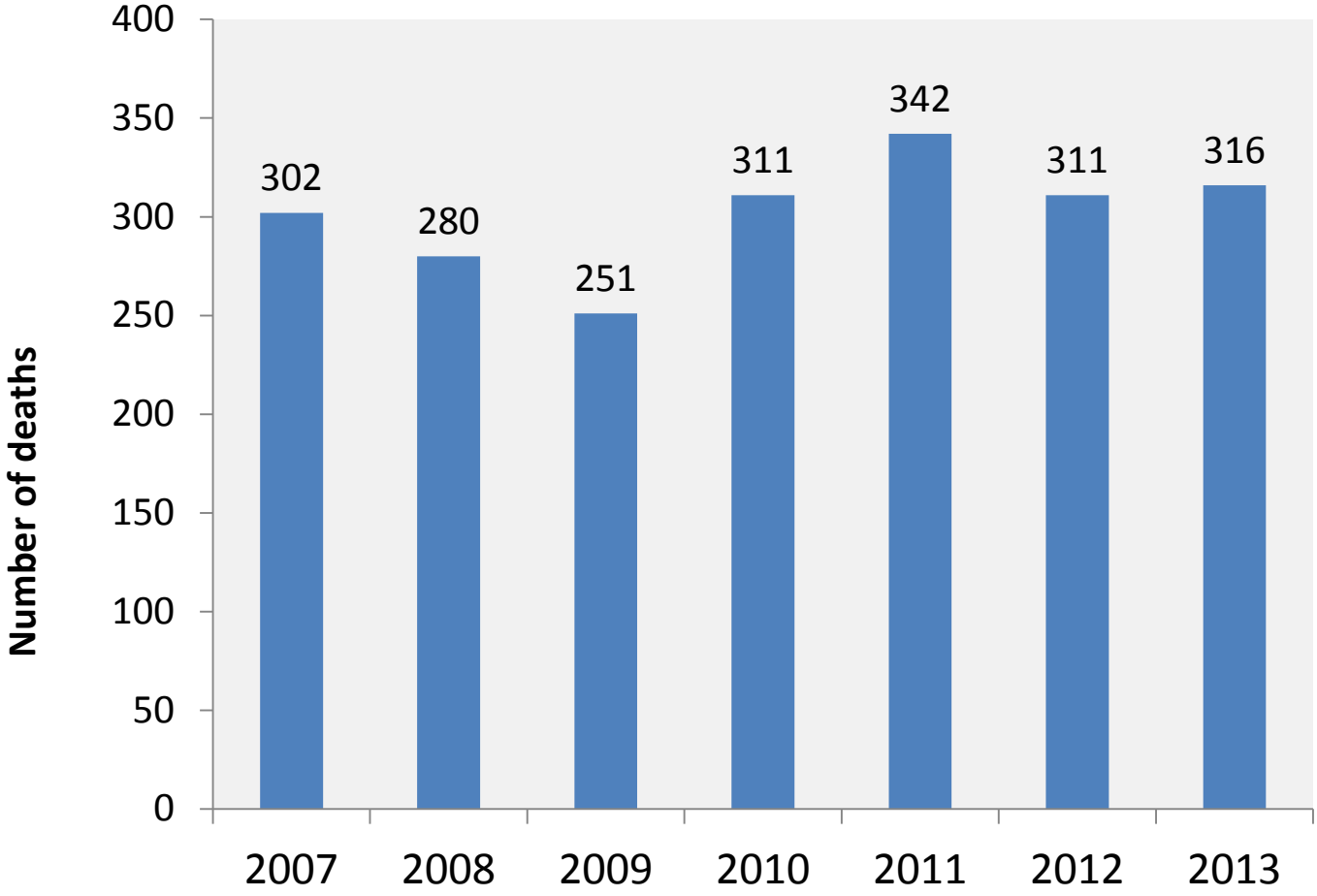
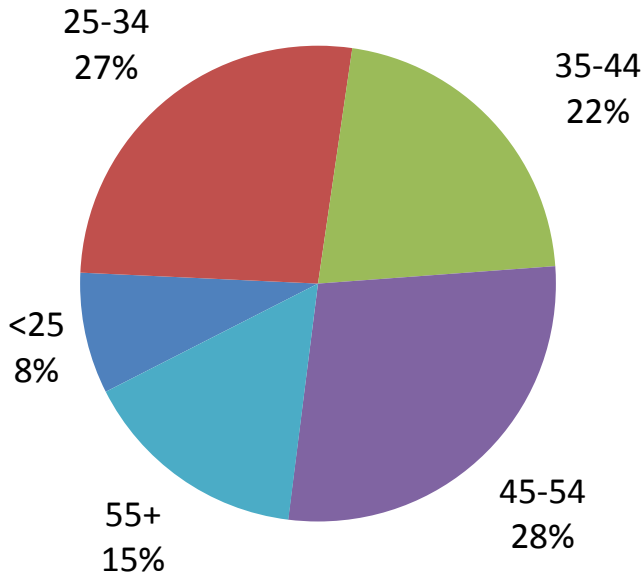


Figure 12. Prescription Opioid-Related Intoxication Deaths Occurring in Maryland by Age.



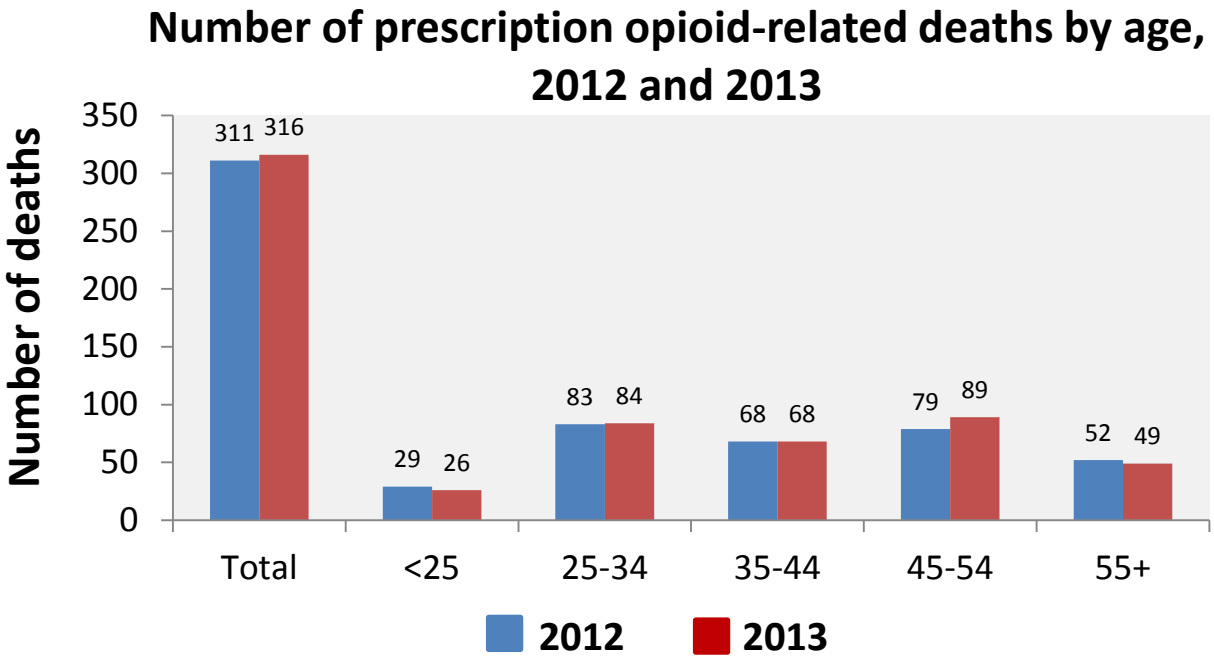
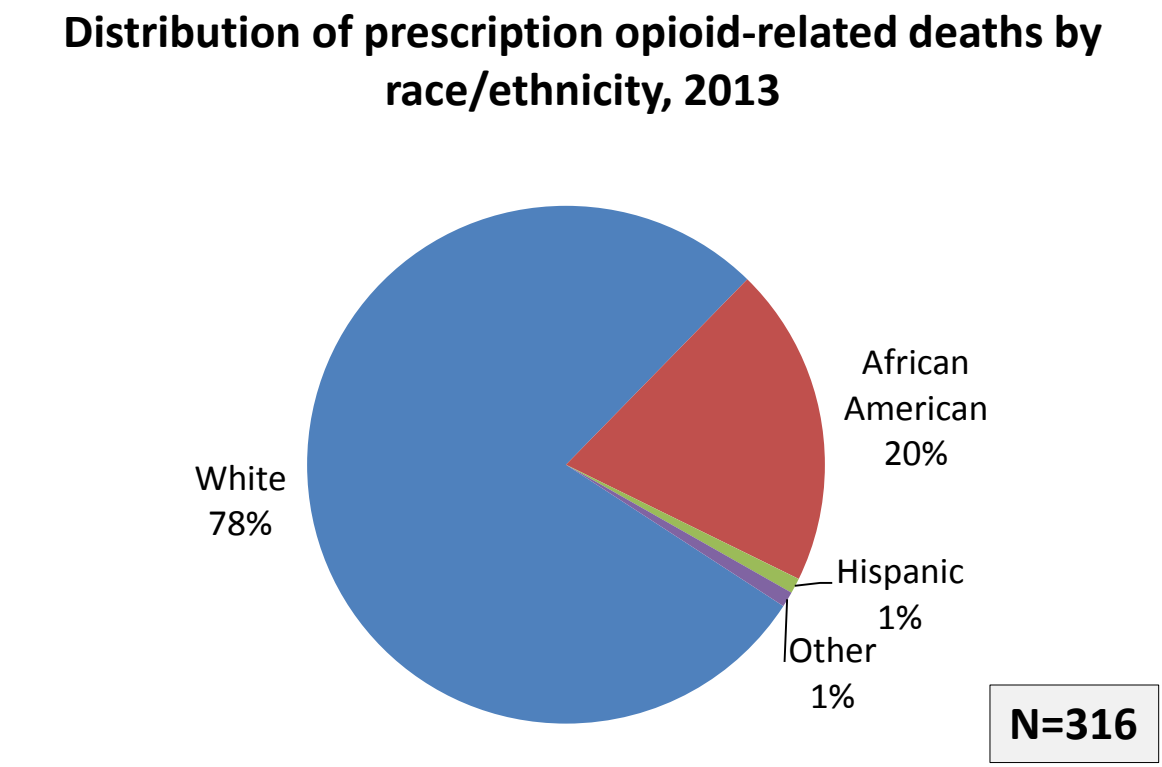


Figure 13. Prescription Opioid-Related Intoxication Deaths Occurring in Maryland by Race/Ethnicity.



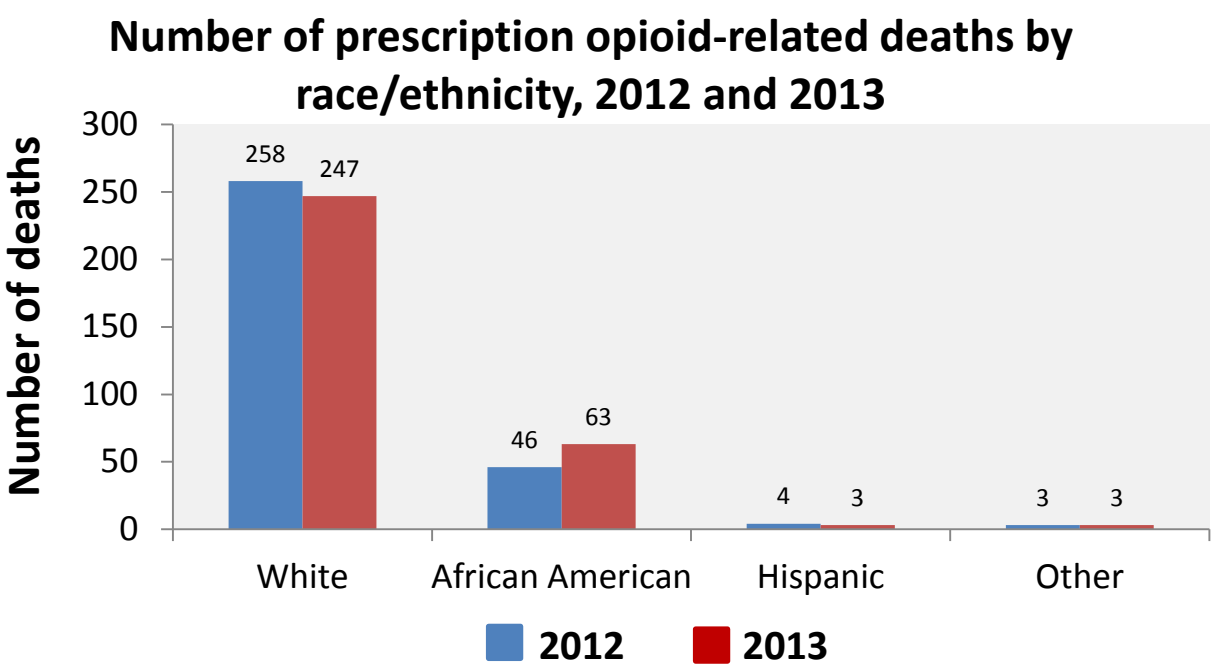
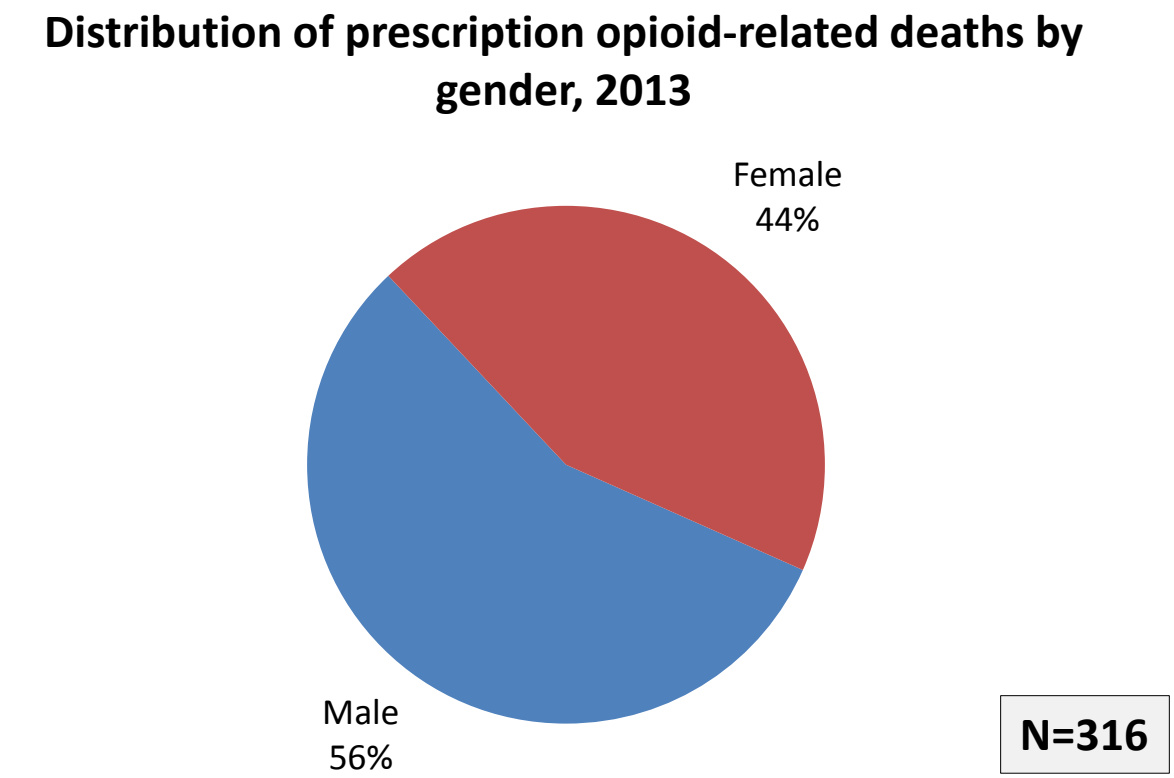


Figure 14. Prescription Opioid-Related Intoxication Deaths Occurring in Maryland by Gender.



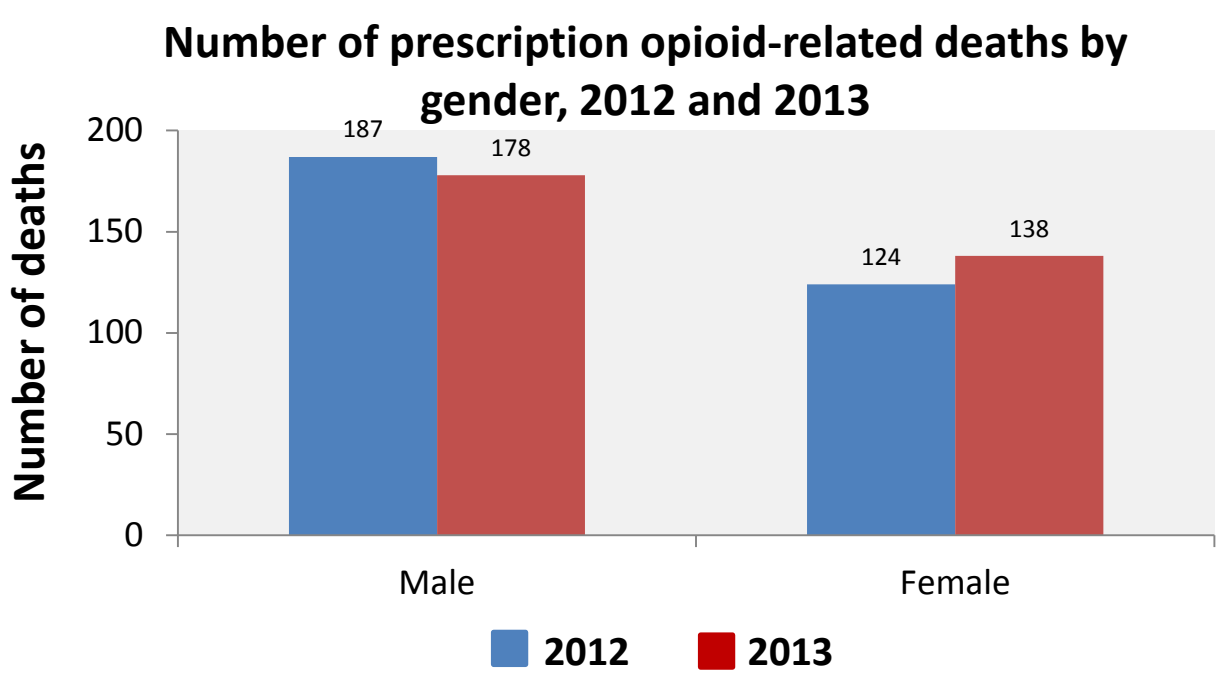
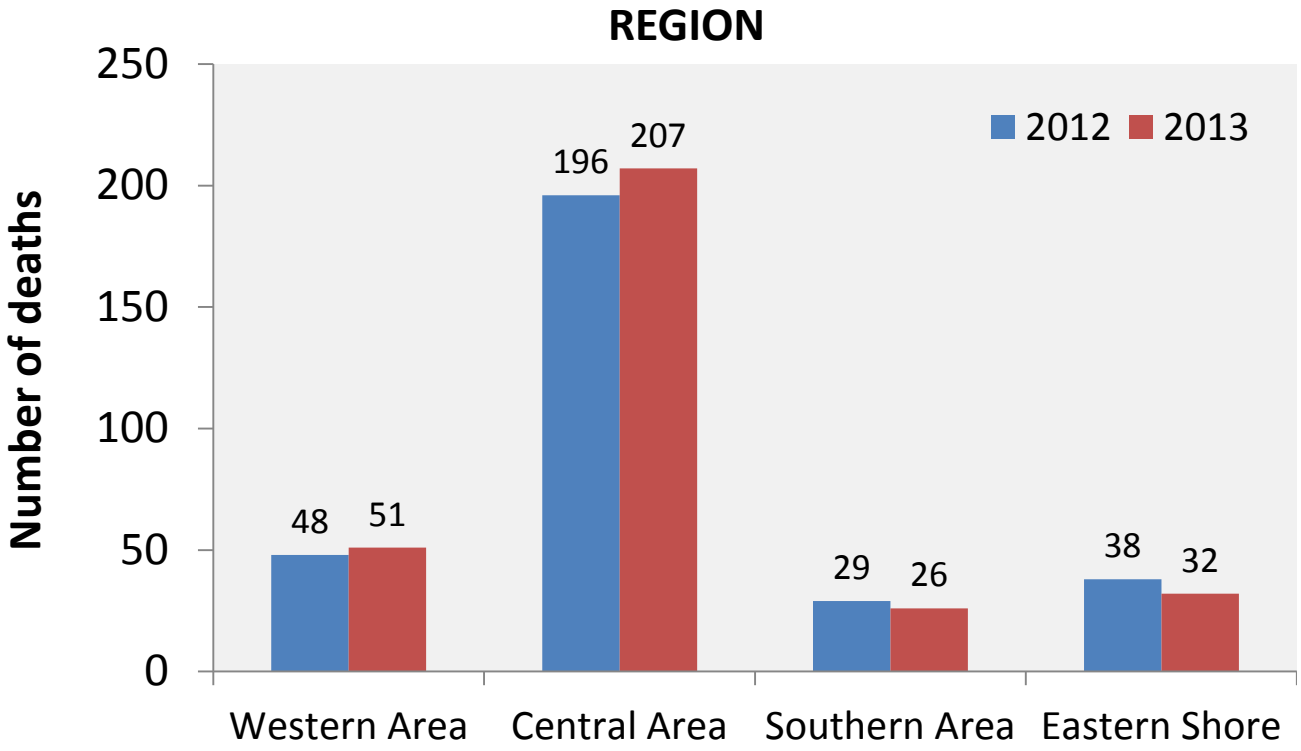
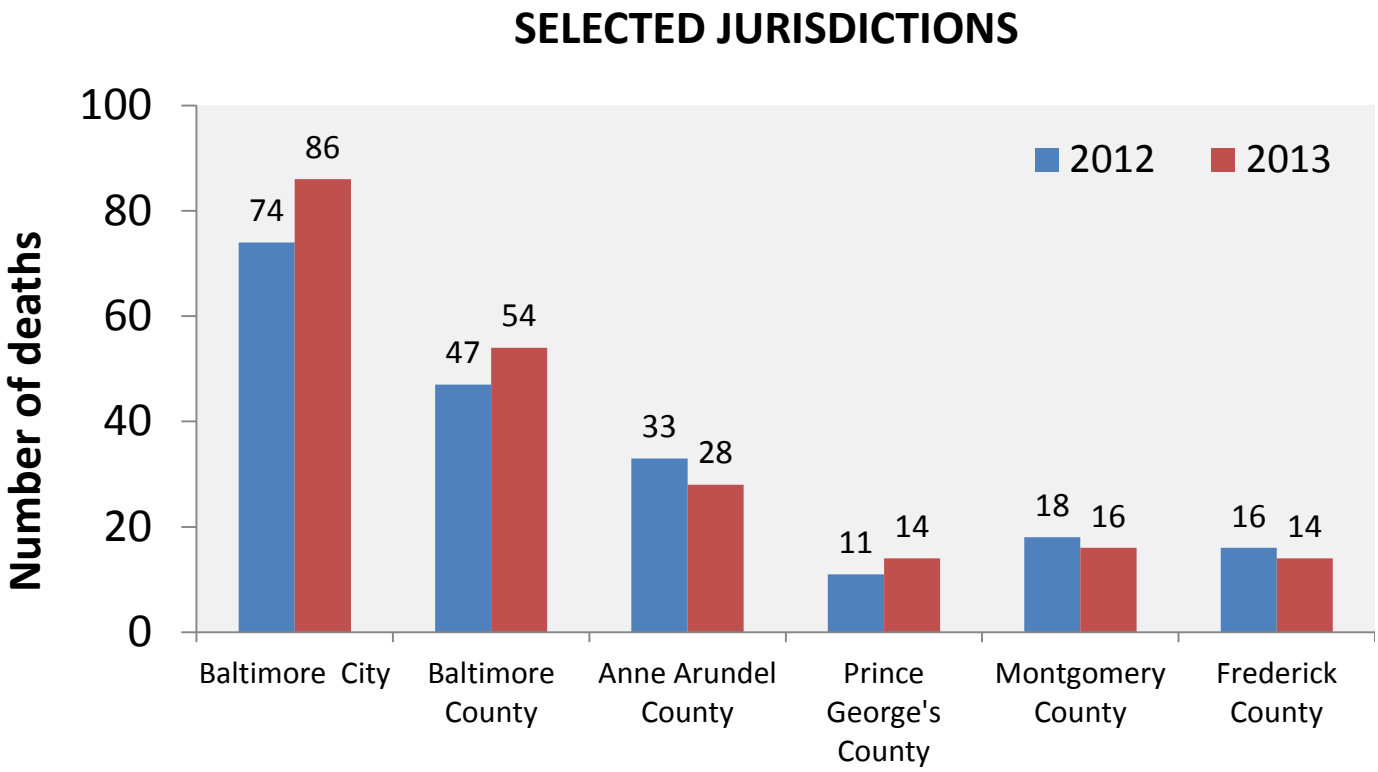


Figure 15. Prescription Opioid-Related Intoxication Deaths by Place of Occurrence, Maryland.





TOTAL OXYCODONE-RELATED DEATHS

Figure 16. Total Number of Oxycodone-Related Intoxication Deaths Occurring in Maryland, 2007-2013.

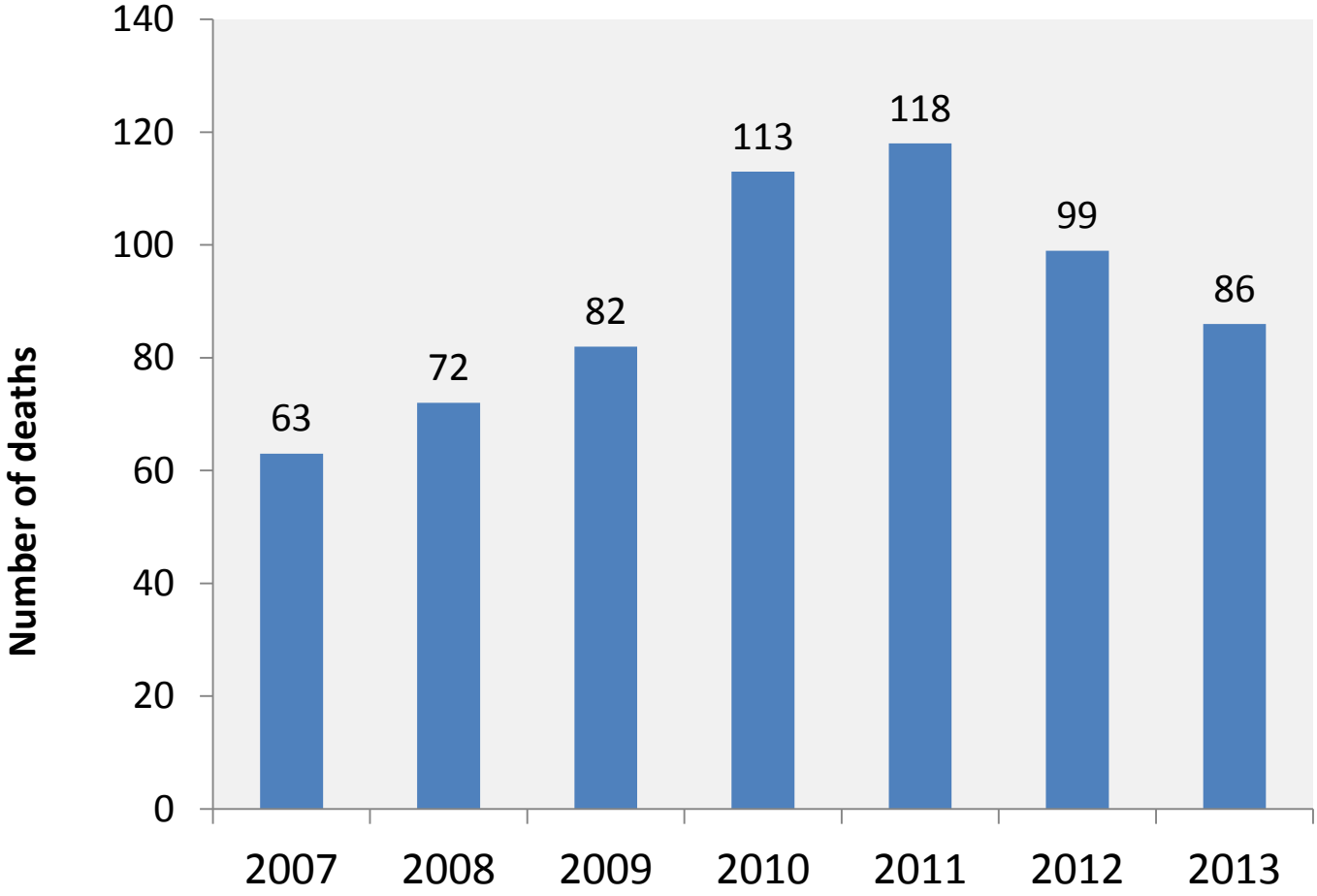
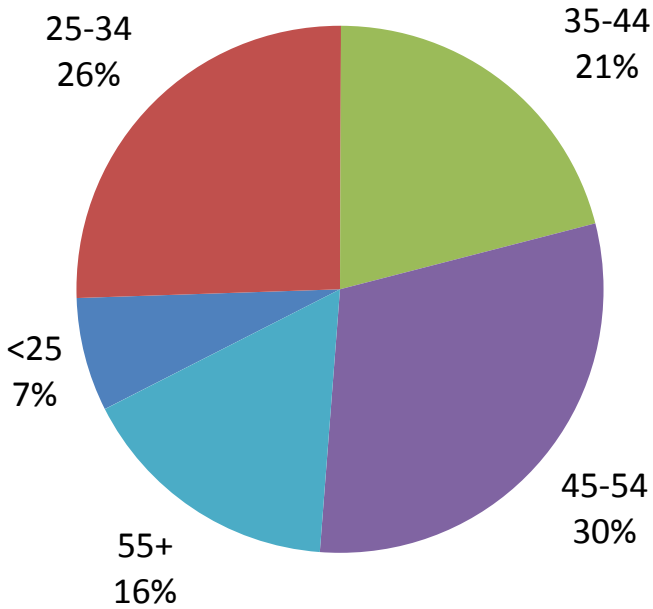


Figure 17. Oxycodone-Related Intoxication Deaths Occurring in Maryland by Age.

Distribution of oxycodone-related deaths by age, 2013



N=86

Number of oxycodone-related deaths by age, 2012 and 2013

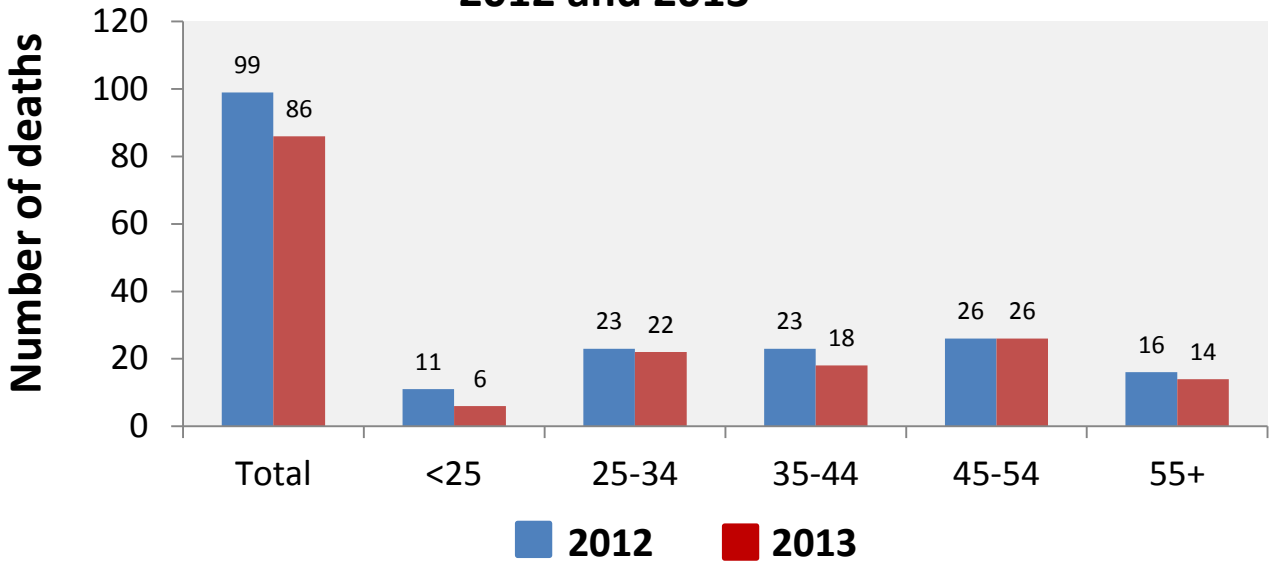
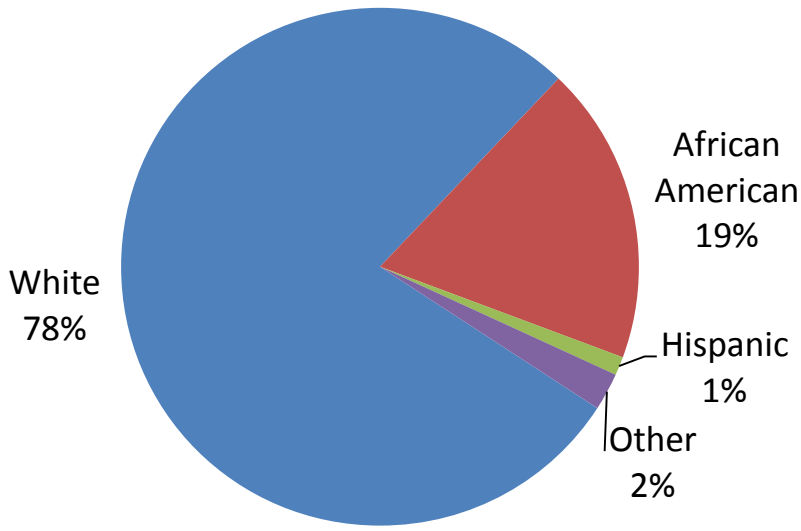


Figure 18. Oxycodone-Related Intoxication Deaths Occurring in Maryland by Race/Ethnicity.



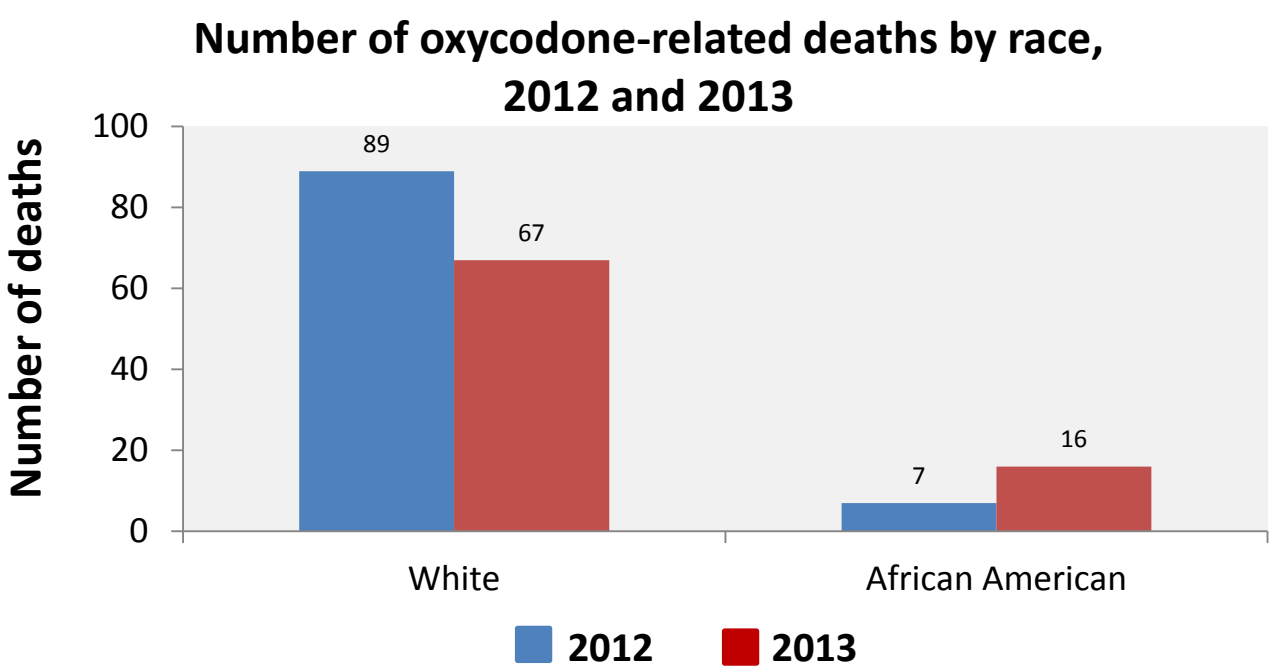
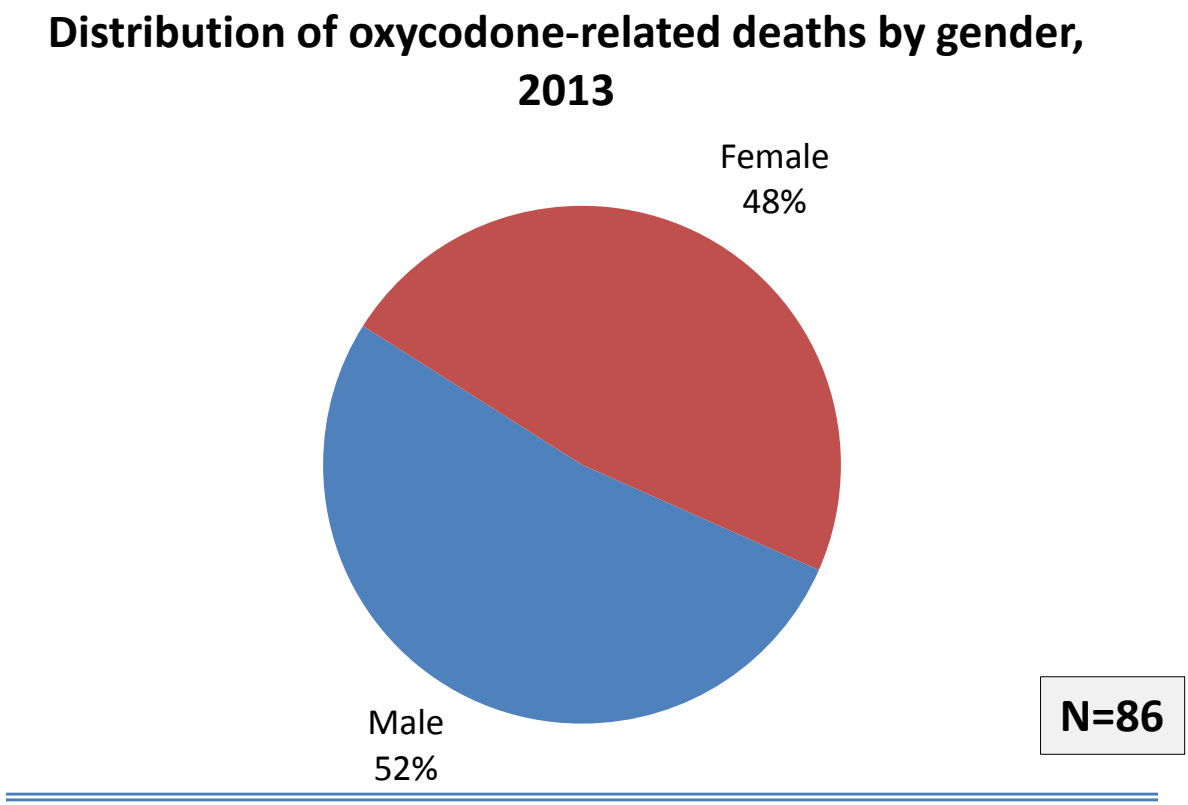


Figure 19. Oxycodone-Related Intoxication Deaths Occurring in Maryland by Gender.



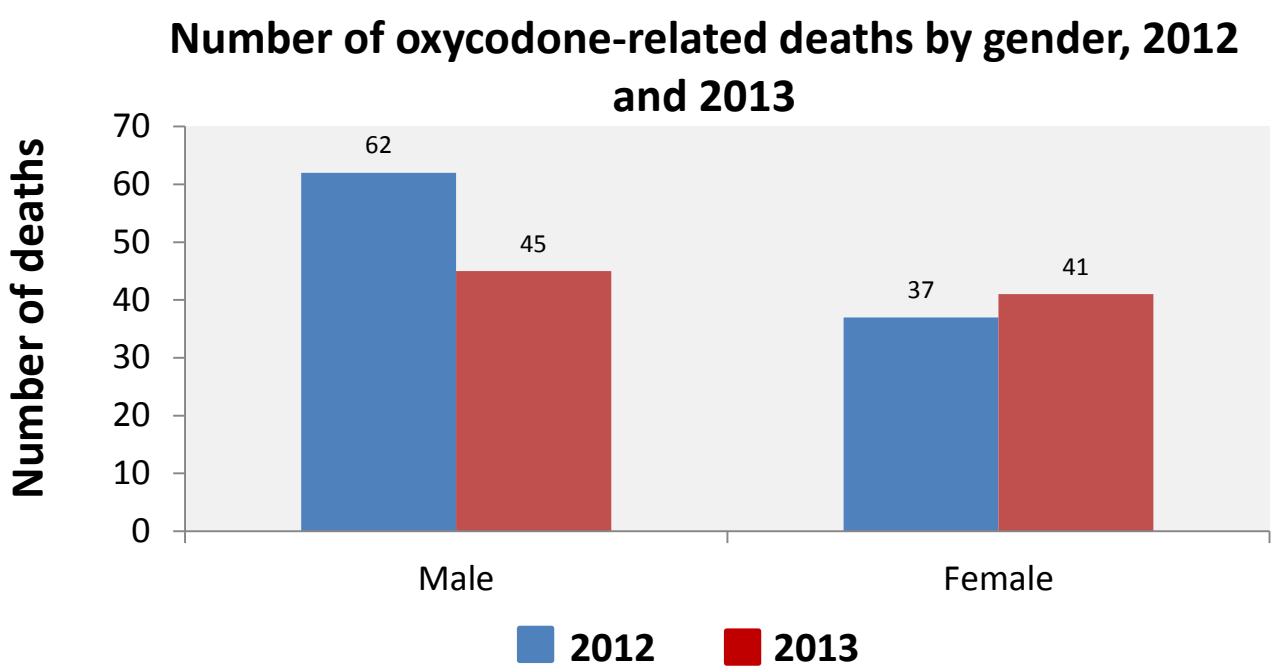
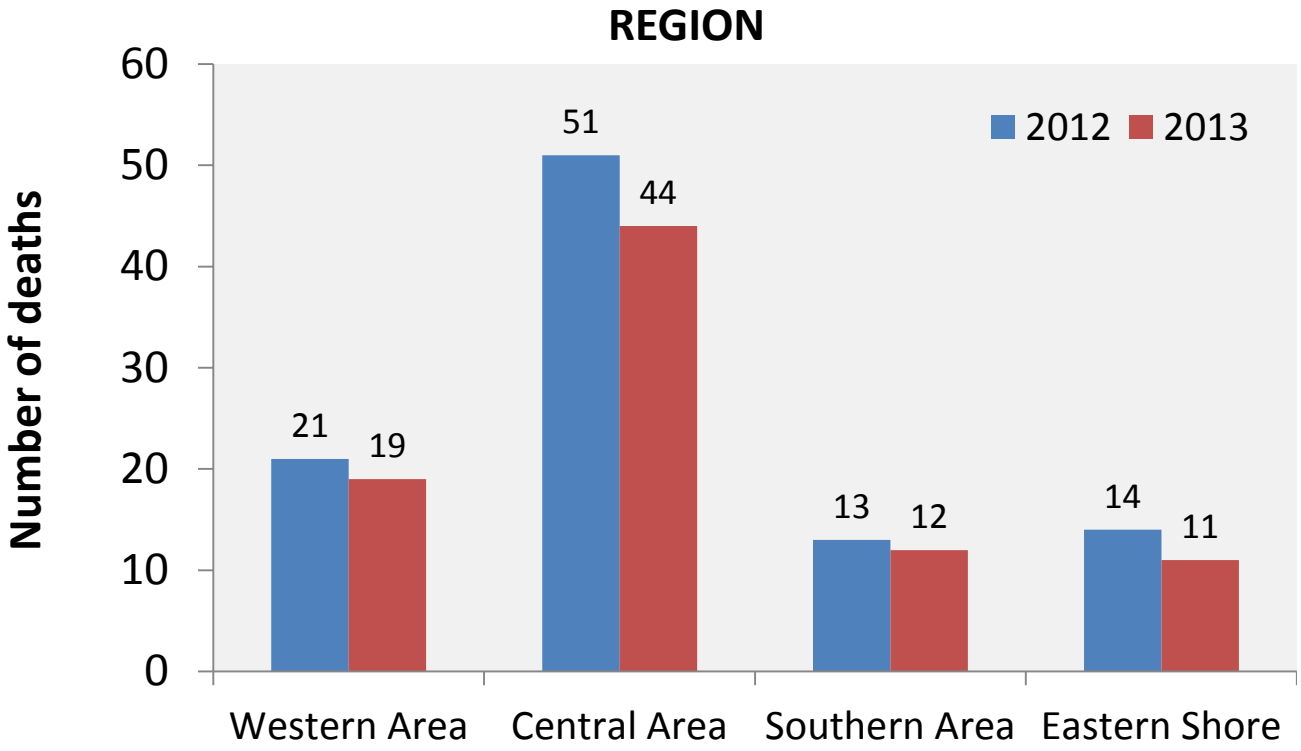
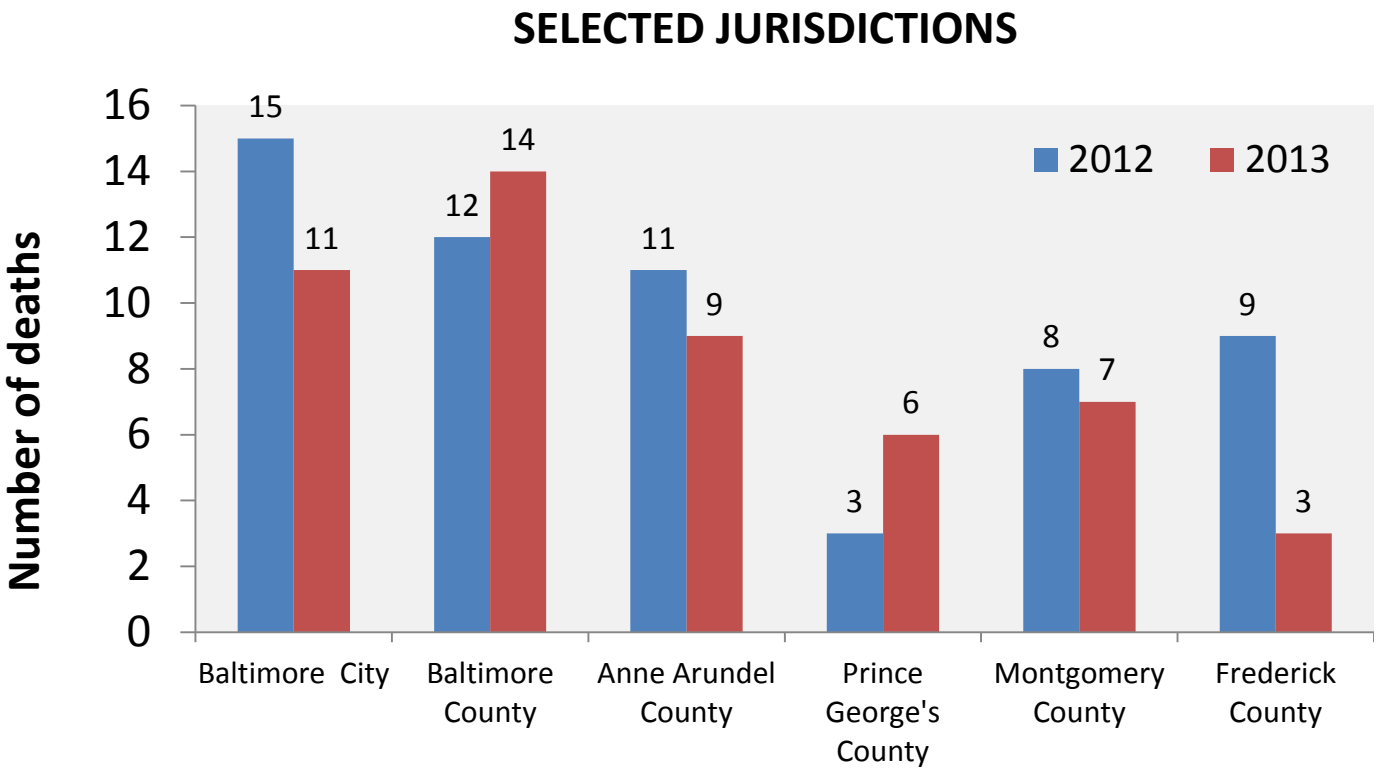


Figure 20. Oxycodone-Related Intoxication Deaths by Place of Occurrence, Maryland.





TOTAL METHADONE-RELATED DEATHS

Figure 21. Total Number of Methadone-Related Intoxication Deaths Occurring in Maryland, 2007-2013.

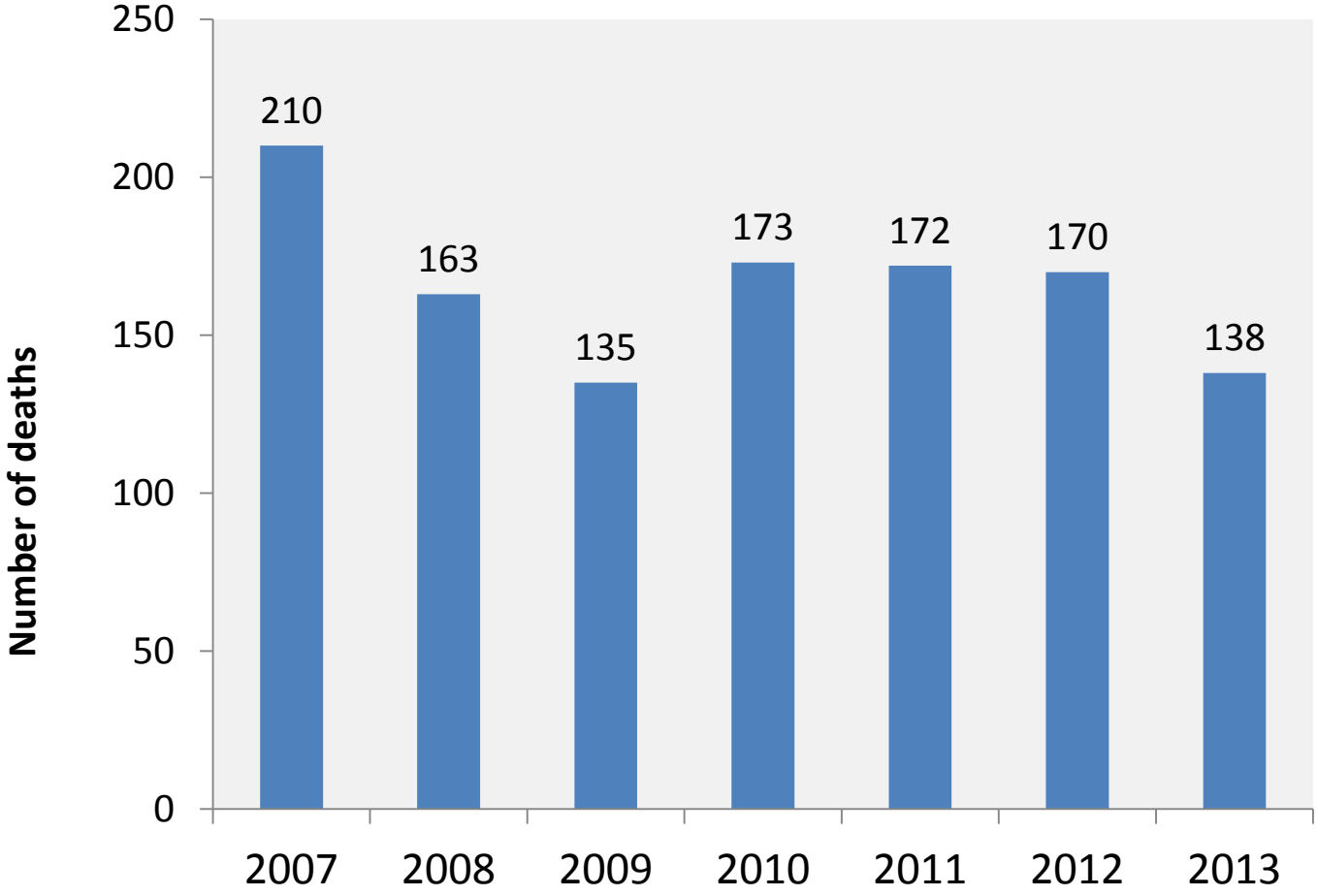
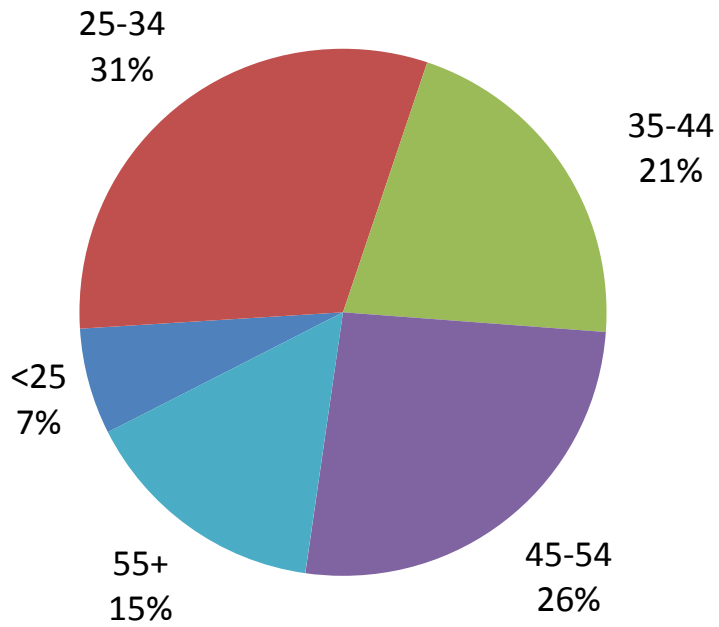


Figure 22. Methadone-Related Intoxication Deaths Occurring in Maryland by Age.



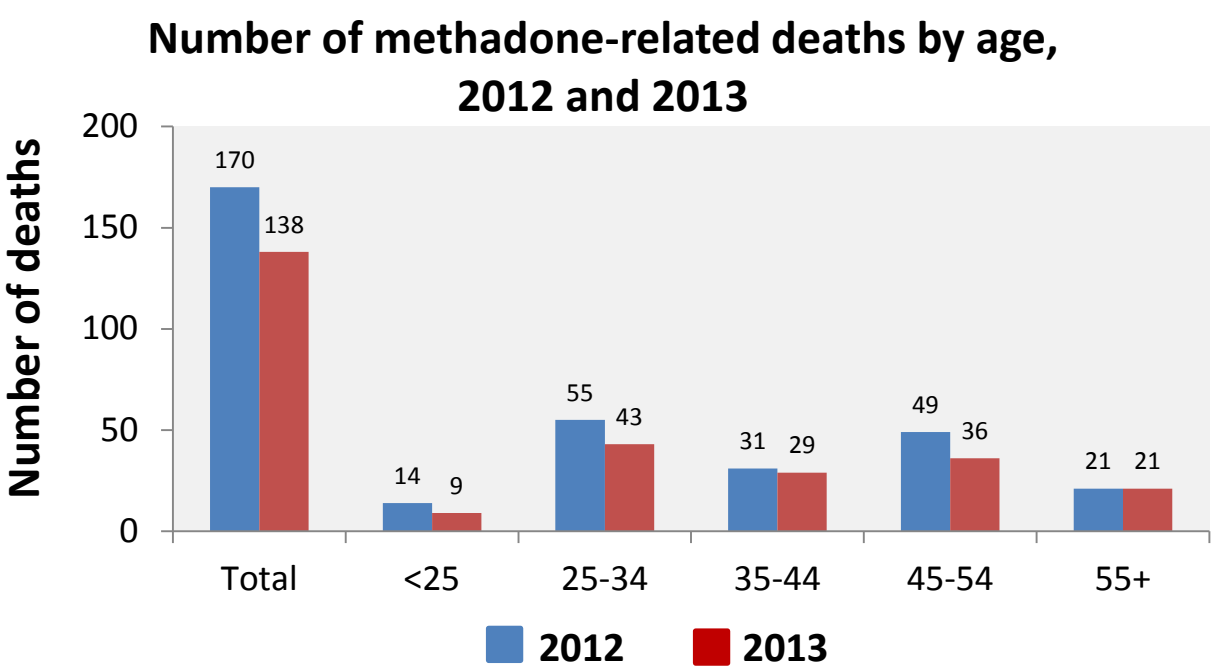
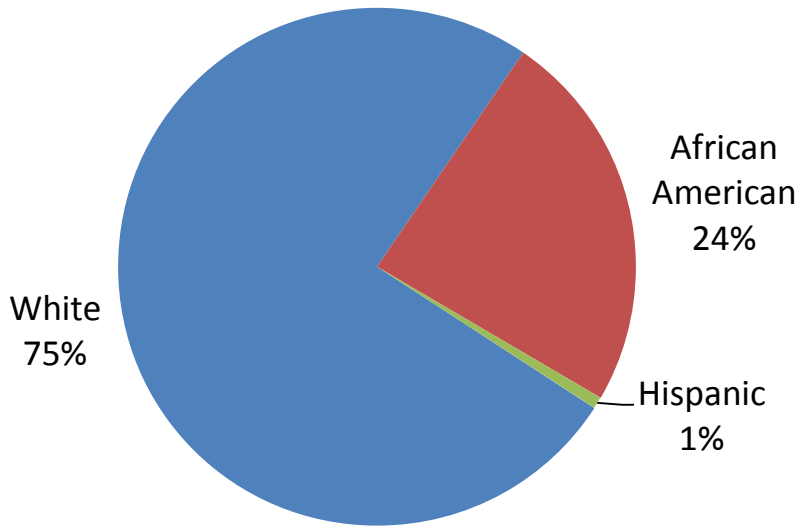


Figure 23. Methadone-Related Intoxication Deaths Occurring in Maryland by Race/Ethnicity.



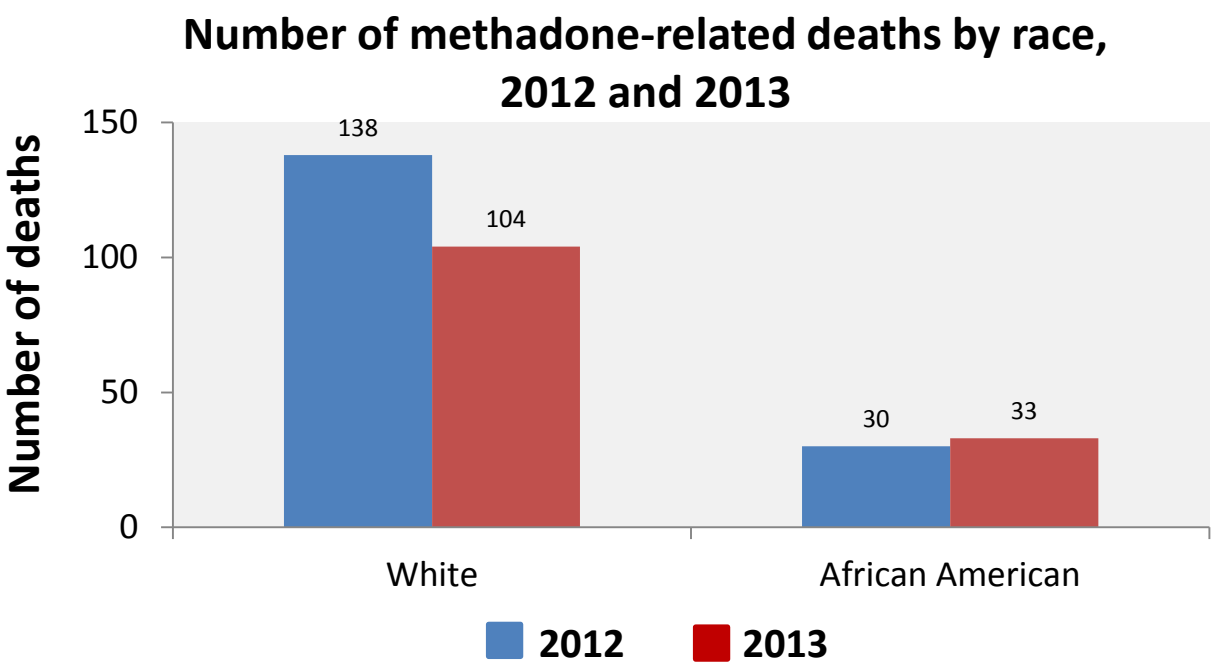
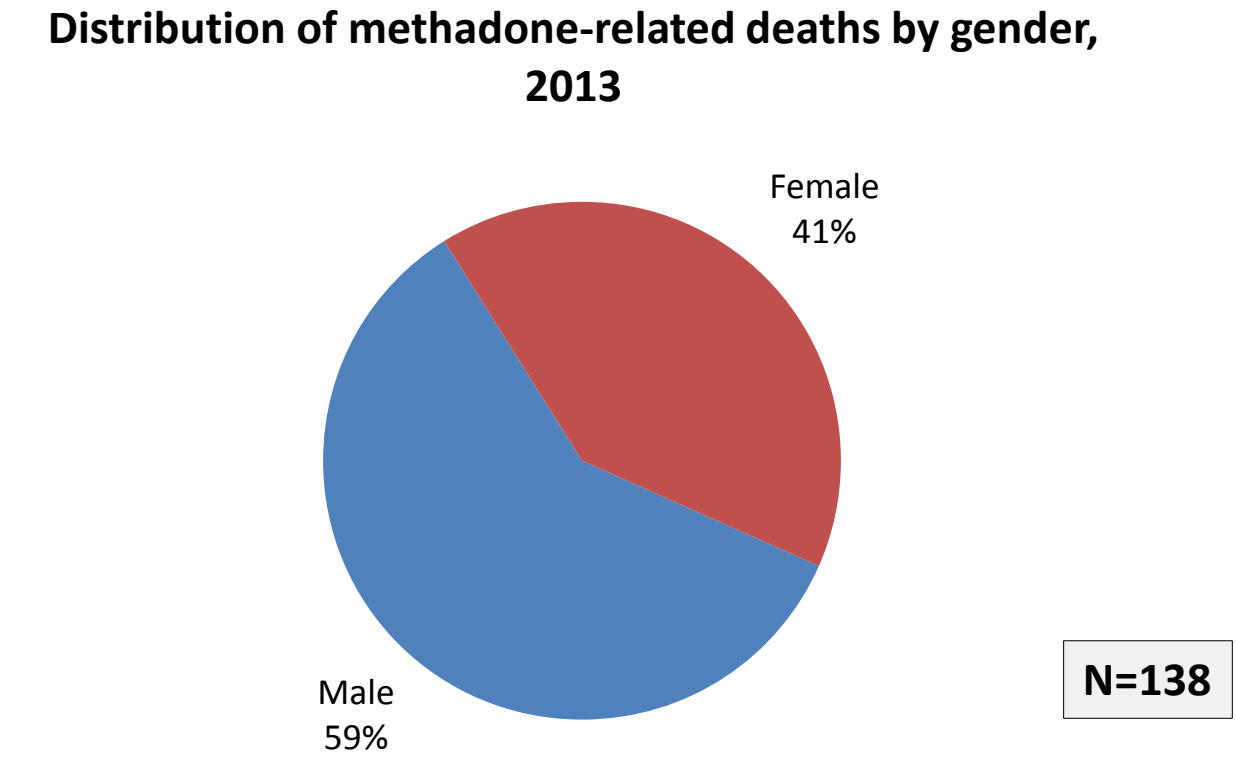


Figure 24. Methadone-Related Intoxication Deaths Occurring in Maryland by Gender.



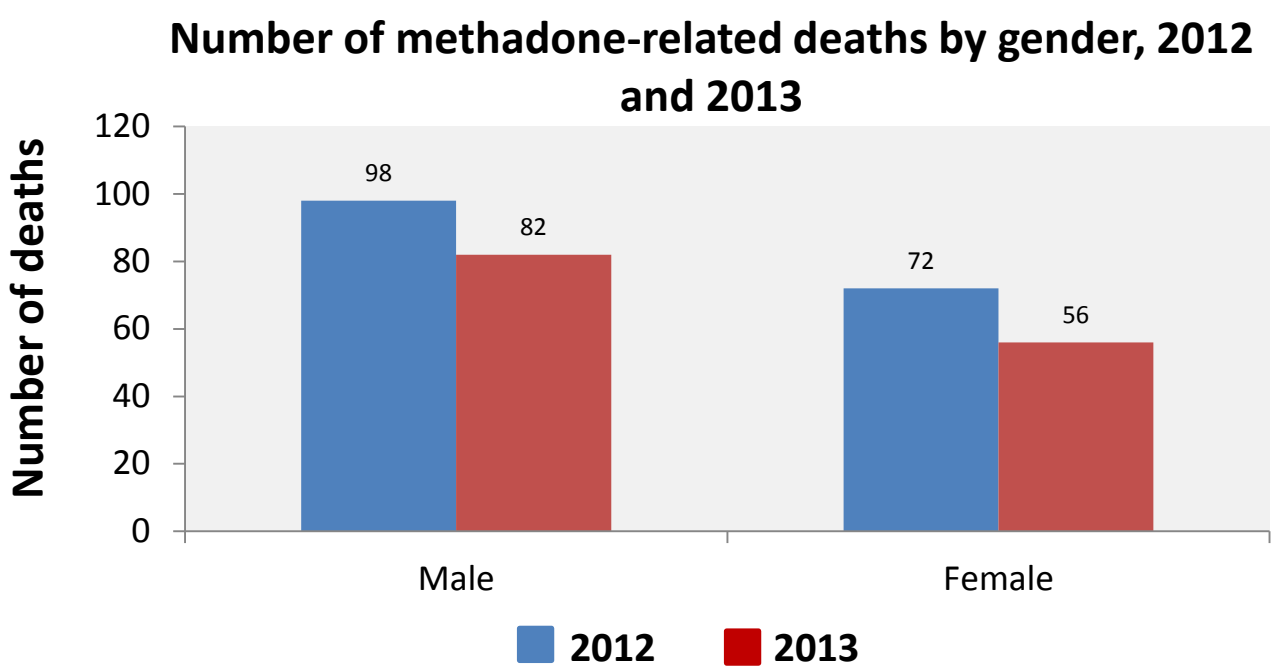
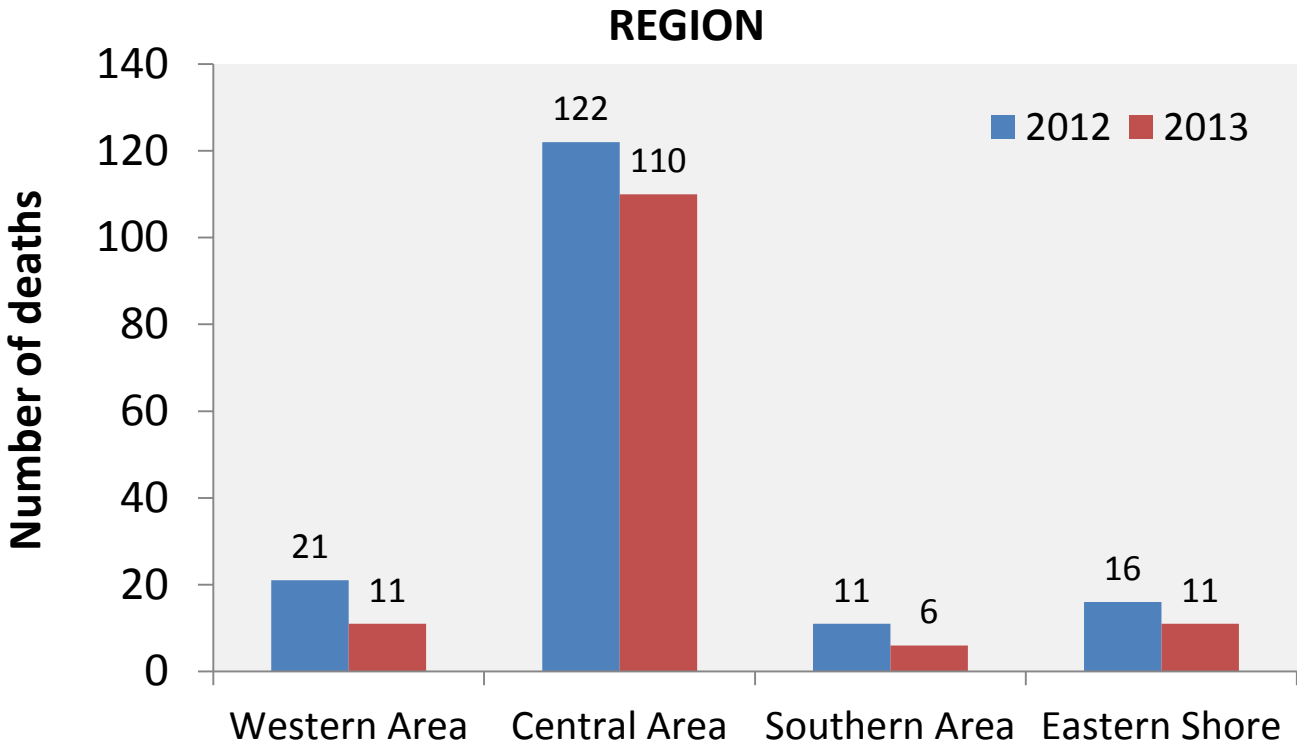
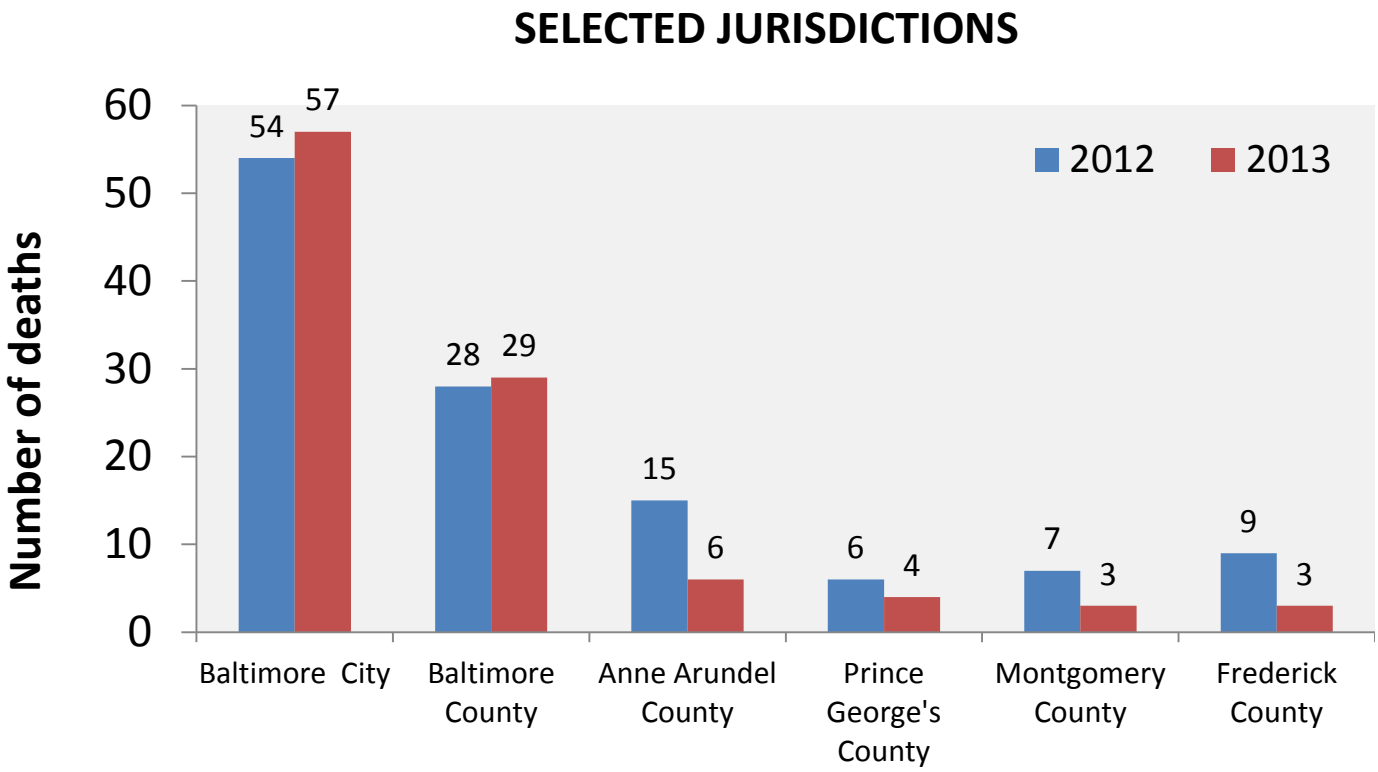


Figure 25. Methadone-Related Intoxication Deaths by Place of Occurrence, Maryland.





TOTAL FENTANYL-RELATED DEATHS

Figure 26. Total Number of Fentanyl-Related Intoxication Deaths Occurring in Maryland, 2007-2013.

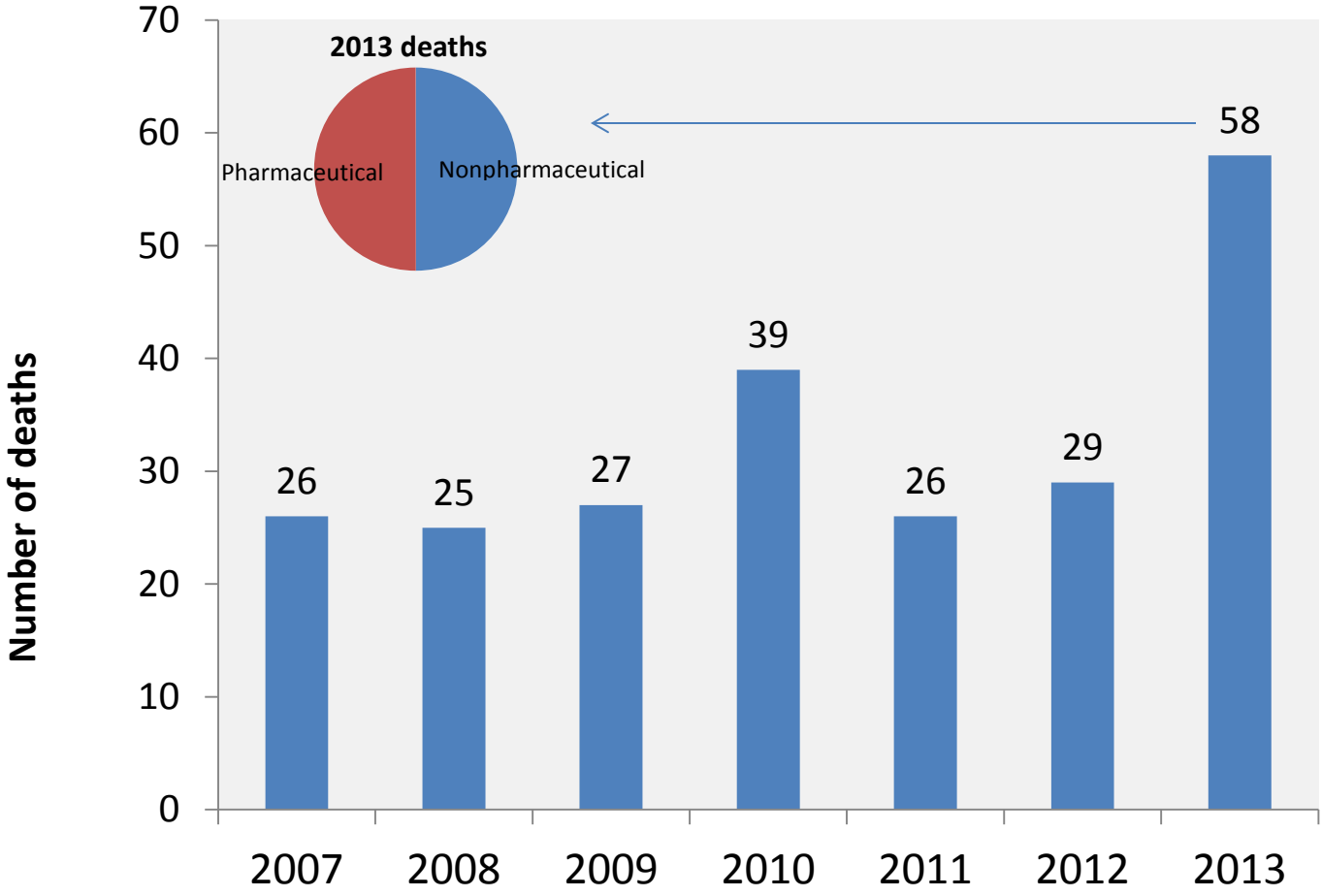
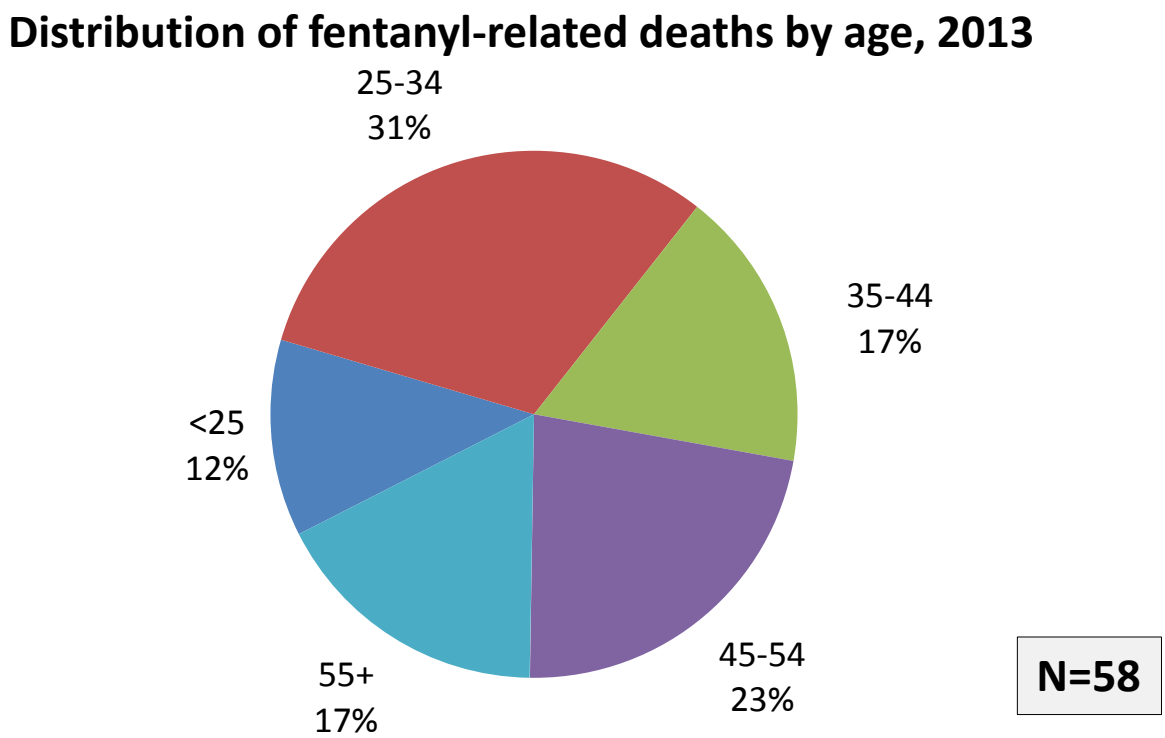


Figure 27. Number of Fentanyl-Related Deaths Occurring in Maryland by Age.



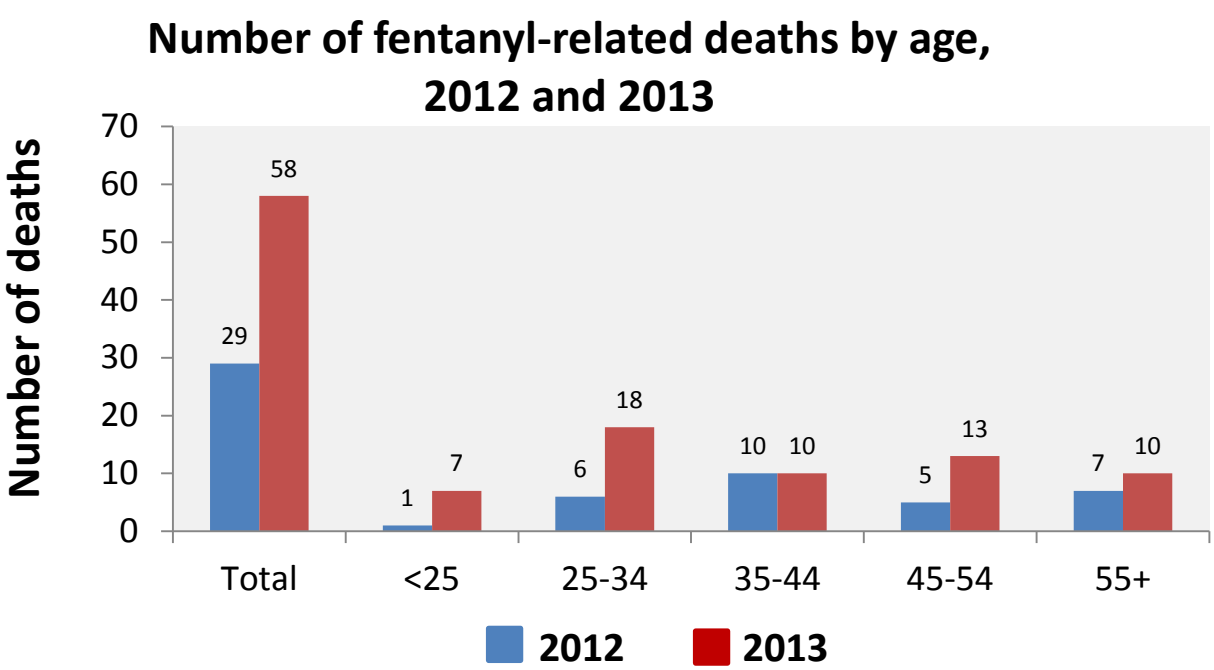
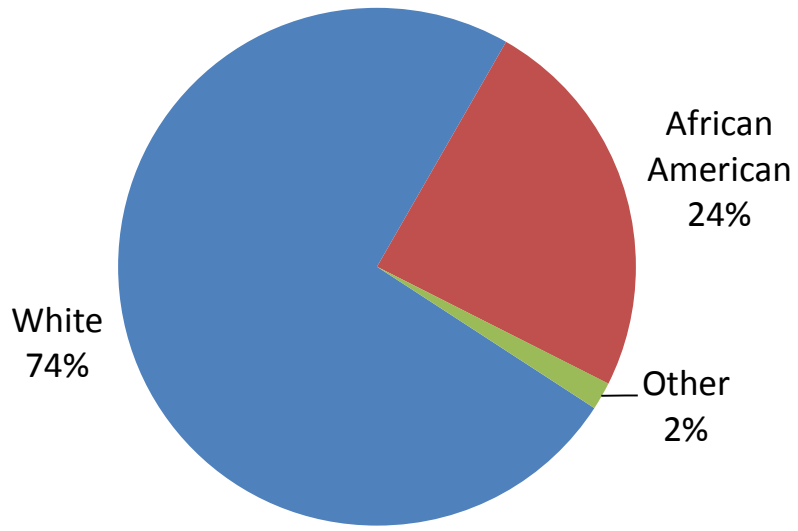


Figure 28. Number of Fentanyl-Related Deaths Occurring in Maryland by Race/Ethnicity.



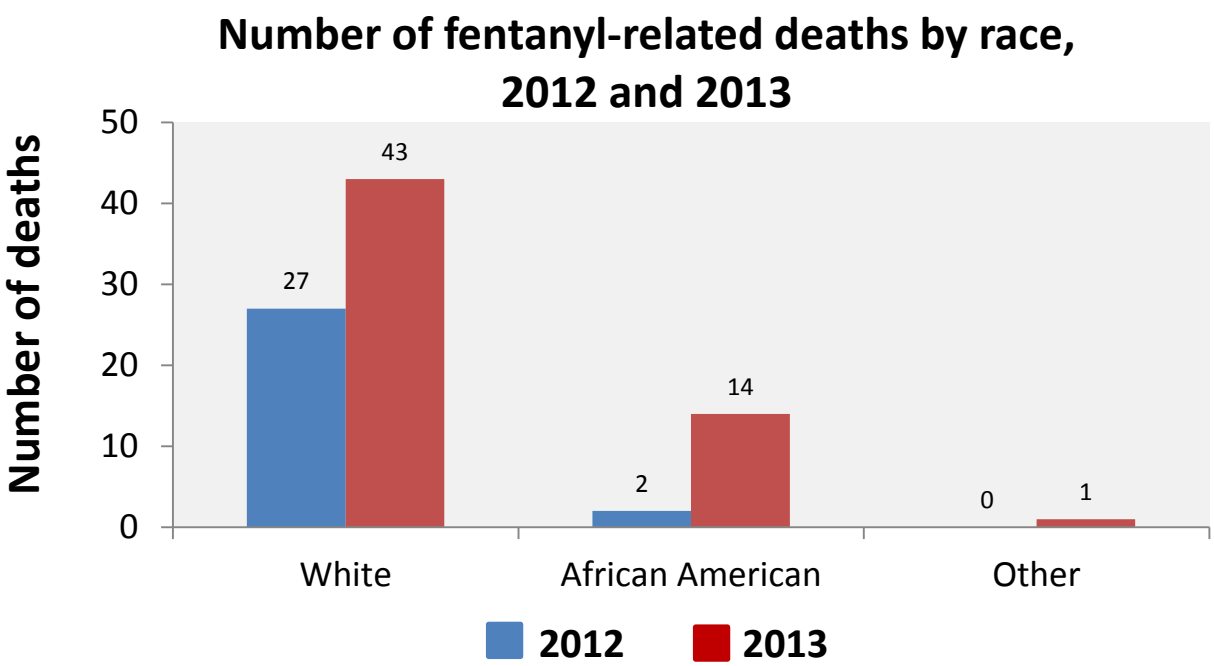
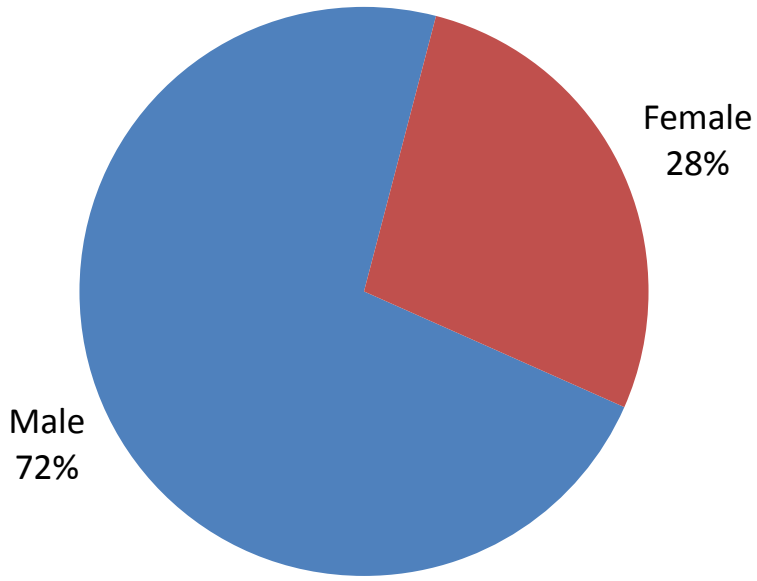


Figure 29. Number of Fentanyl-Related Deaths Occurring in Maryland by Gender.



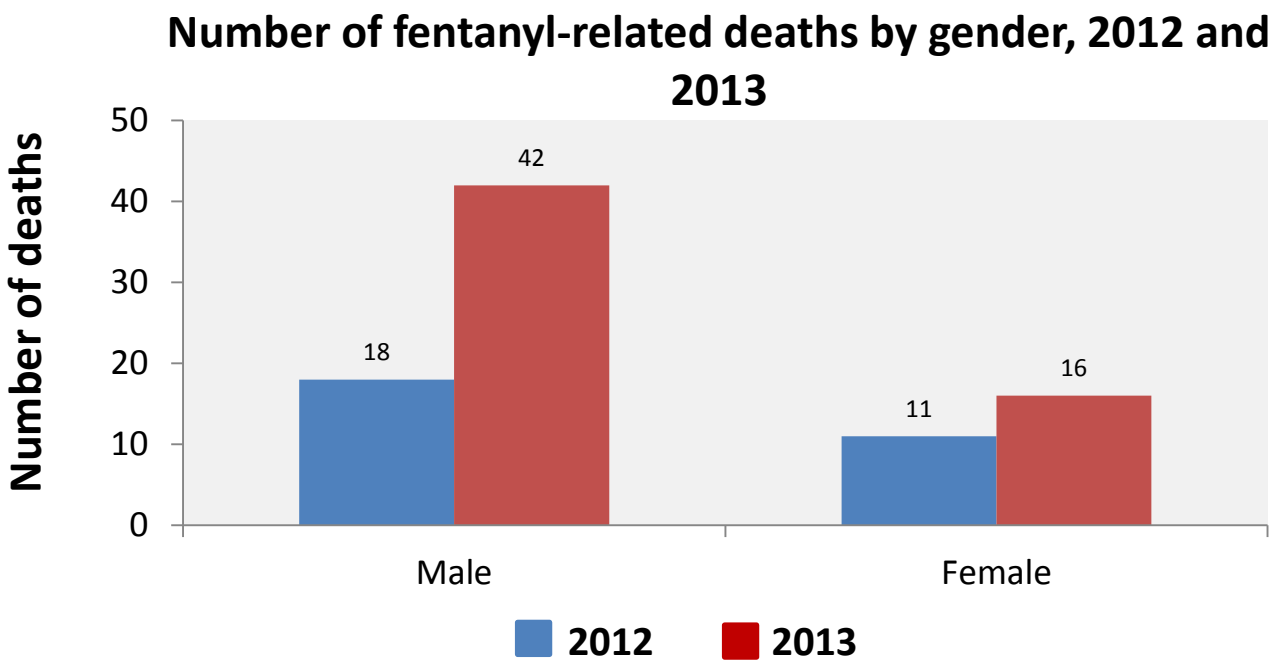
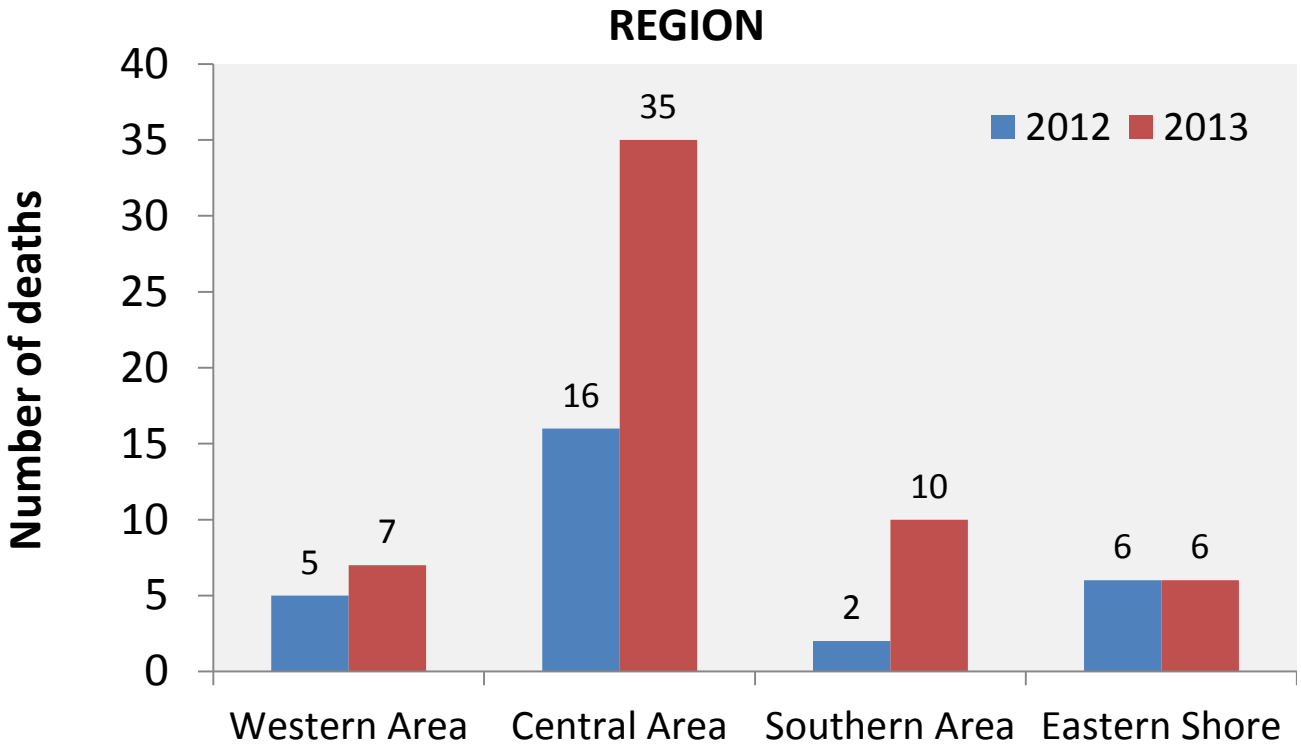


Figure 30. Fentanyl-Related Intoxication Deaths by Place of Occurrence, Maryland.



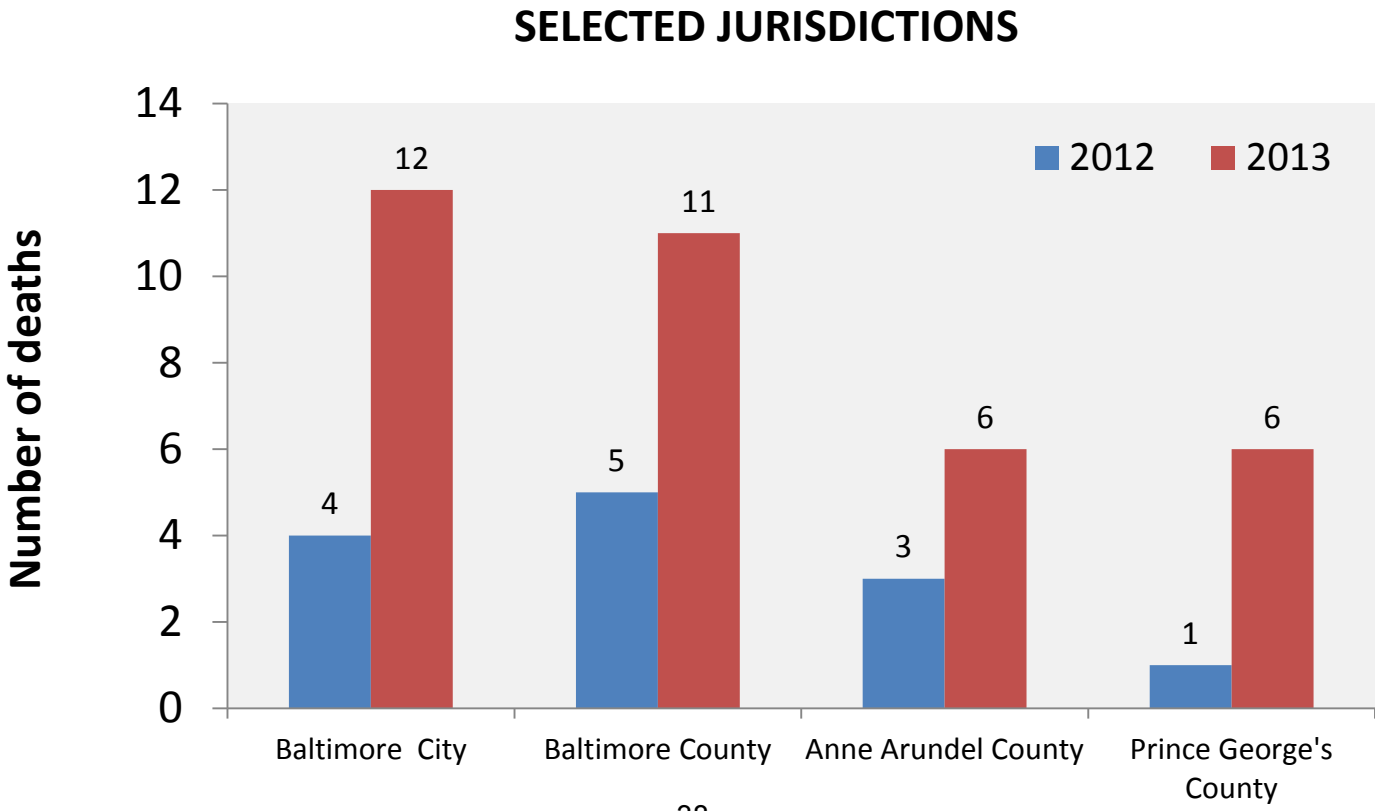
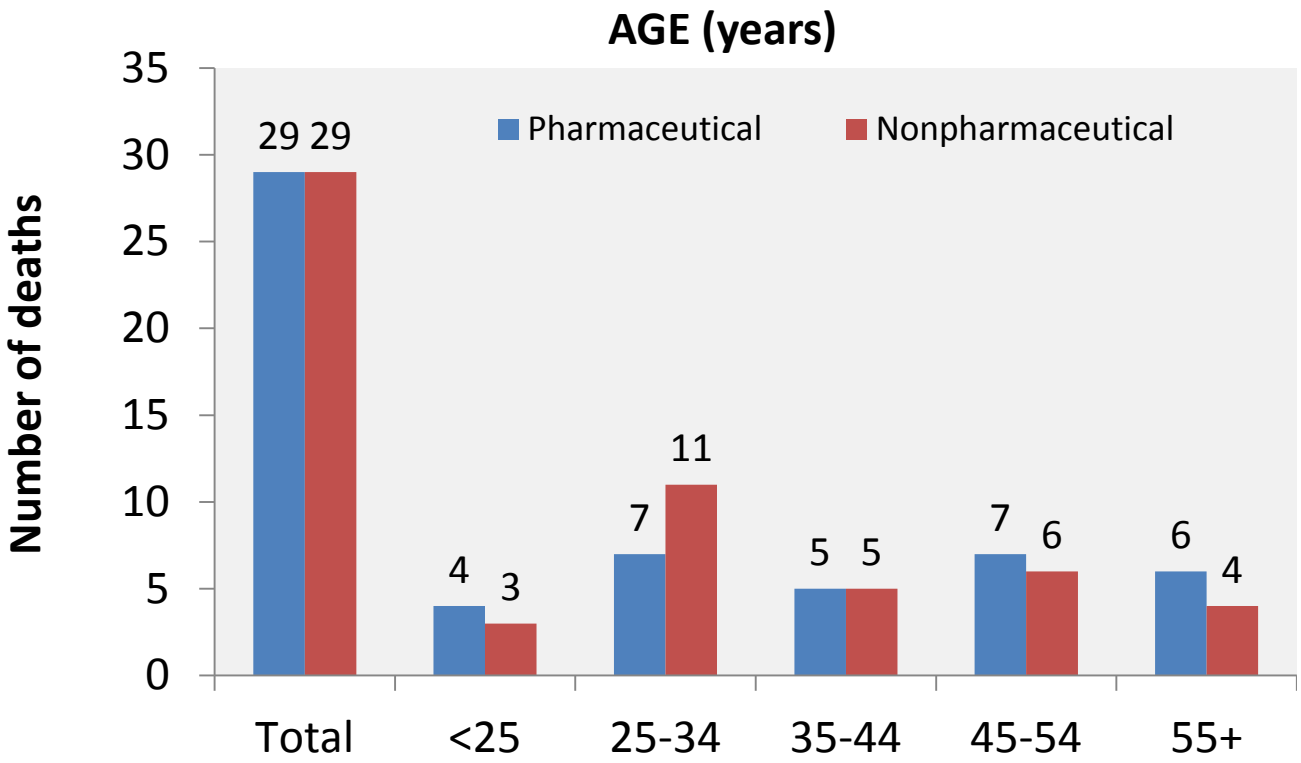
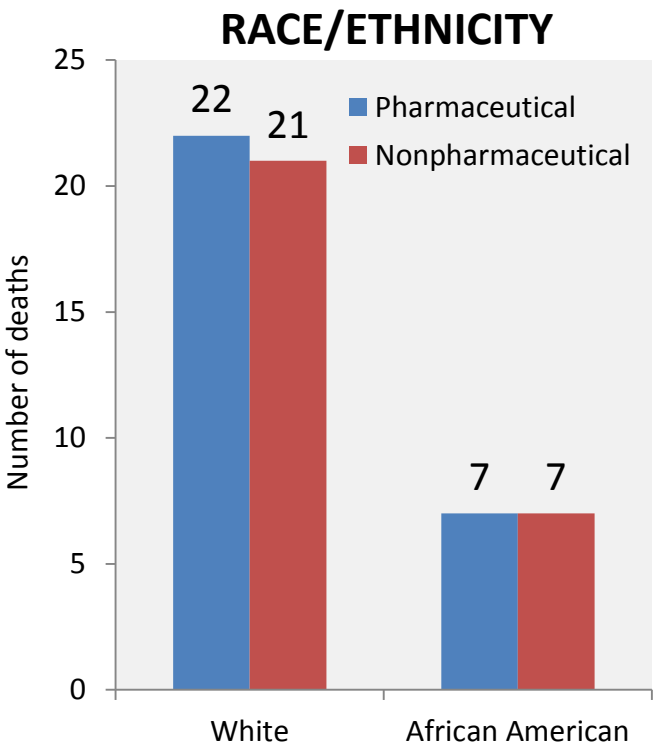


Figure 31. Number of Fentanyl-Related Deaths Occurring in Maryland by Age Group, Race/Ethnicity, Gender, and Type of Fentanyl, 2013.





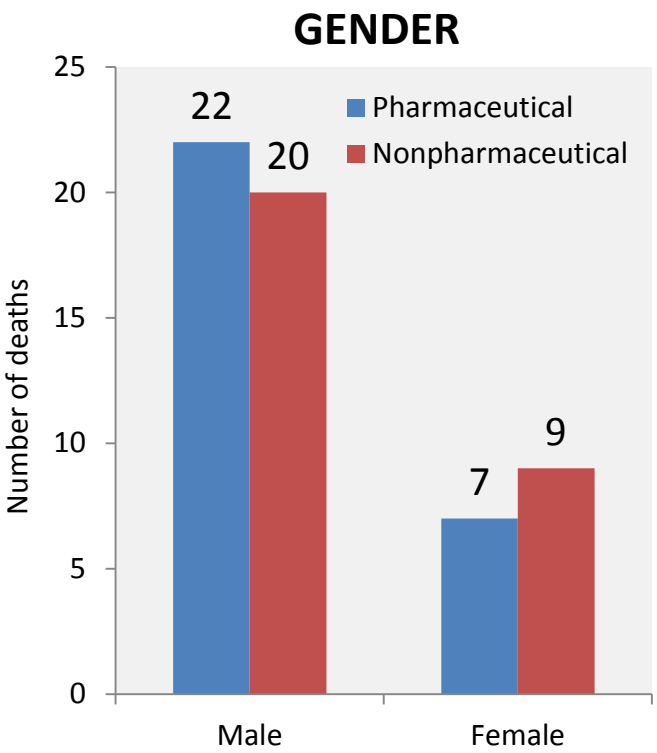
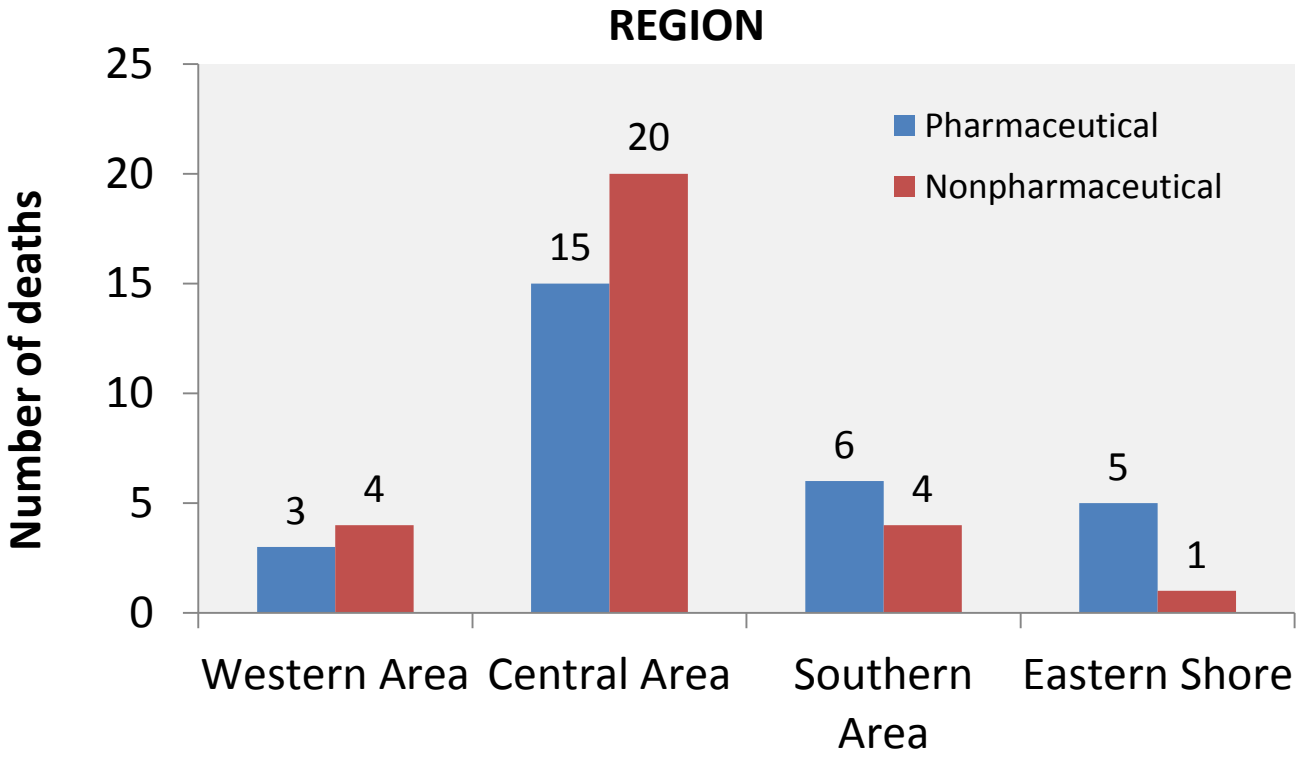
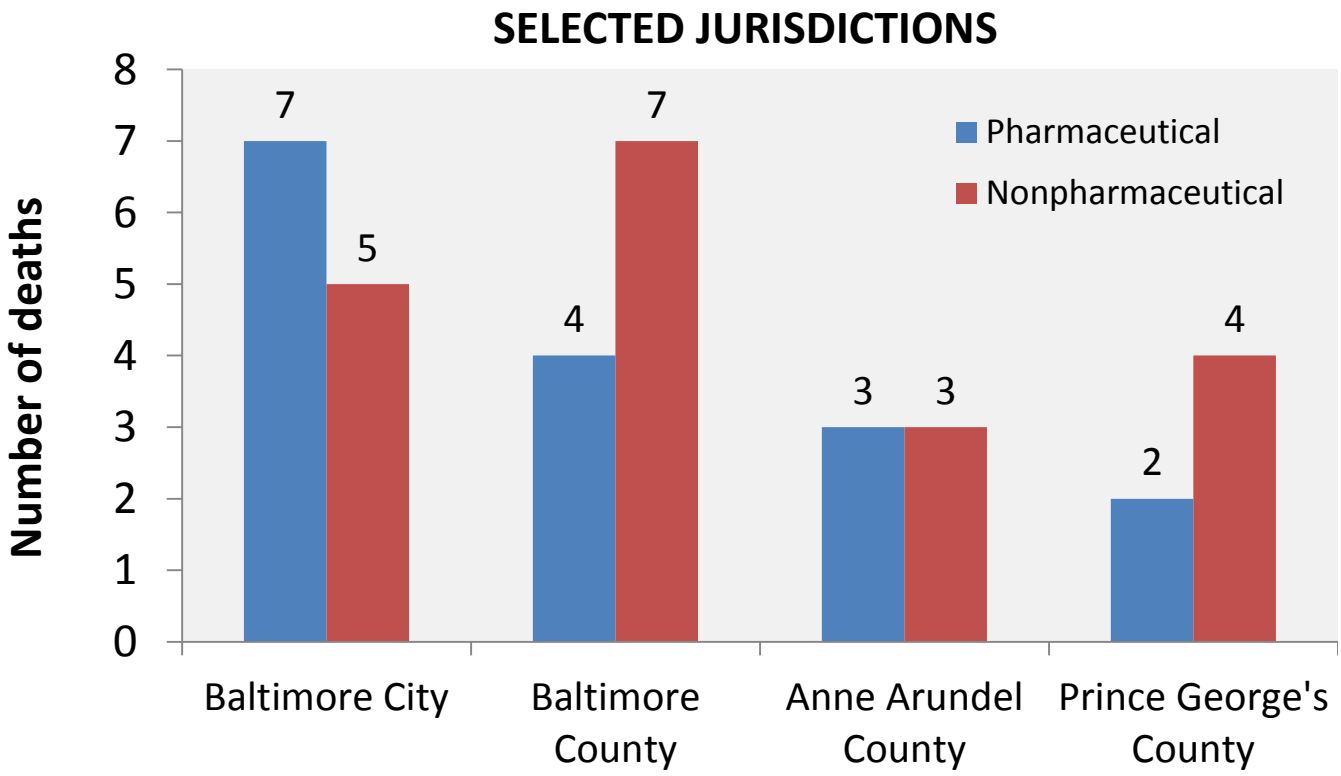


Figure 32. Number of Fentanyl-Related Deaths by Place of Occurrence and Type, Maryland, 2013.





TOTAL COCAINE-RELATED DEATHS

Figure 33. Total Number of Cocaine-Related Intoxication Deaths Occurring in Maryland, 2007-2013.

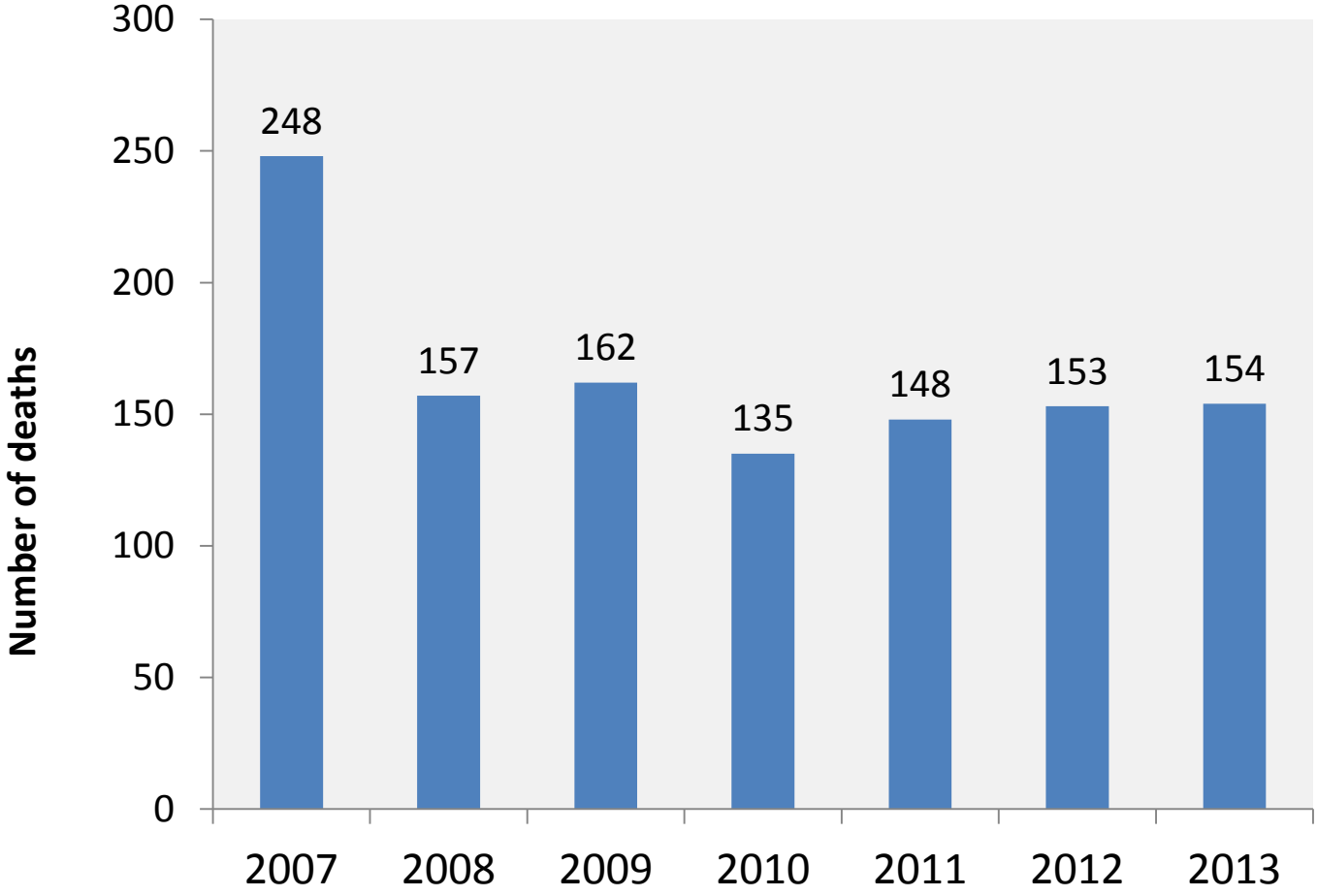
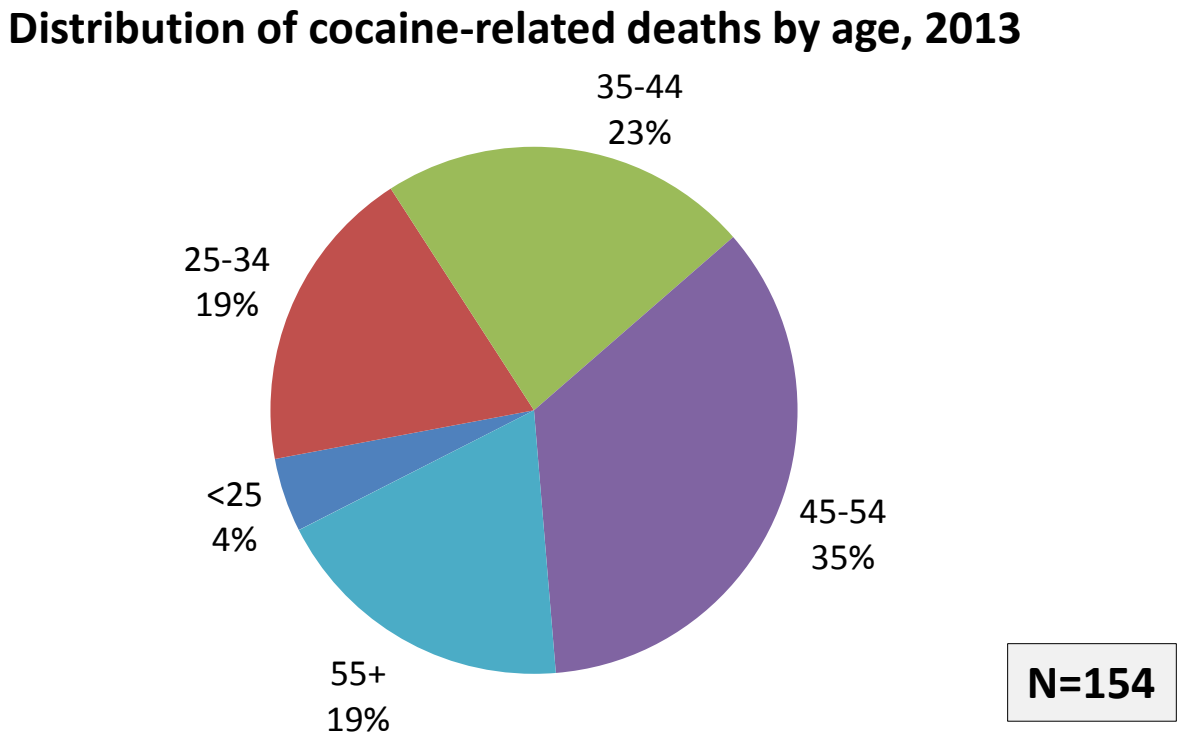


Figure 34. Cocaine-Related Intoxication Deaths Occurring in Maryland by Age.



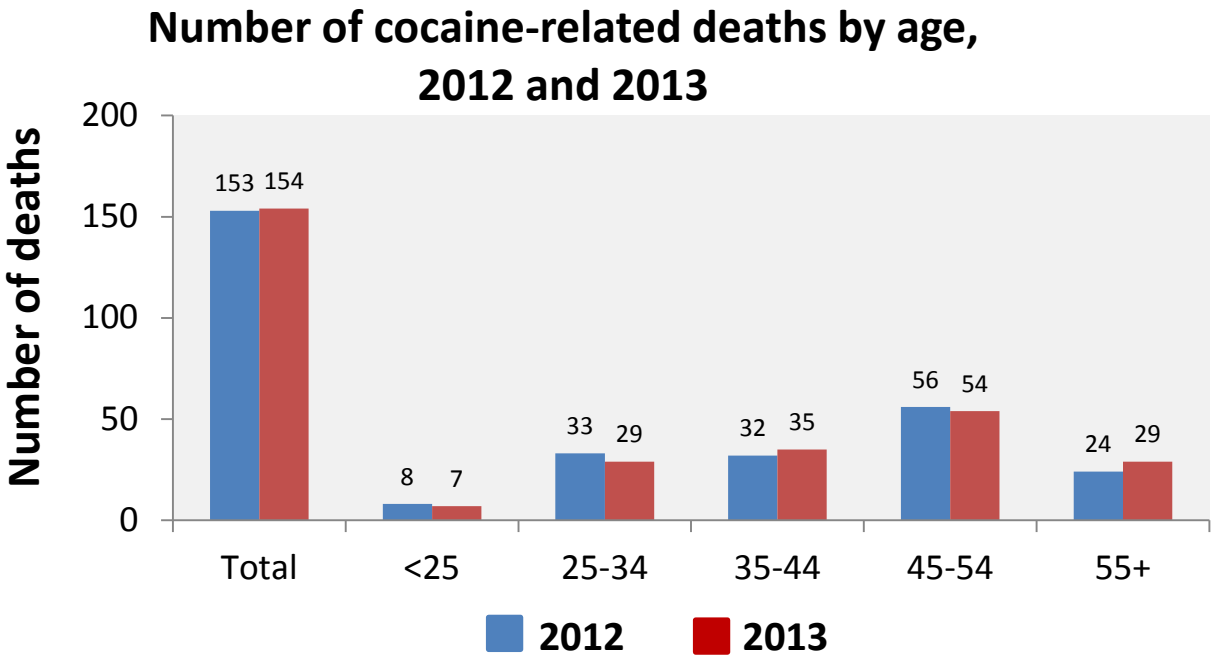
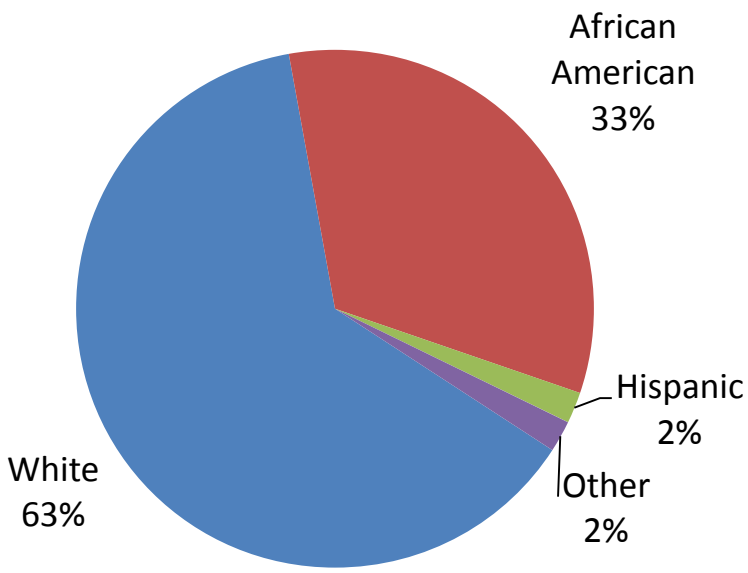


Figure 35. Cocaine-Related Intoxication Deaths Occurring in Maryland by Race/Ethnicity.



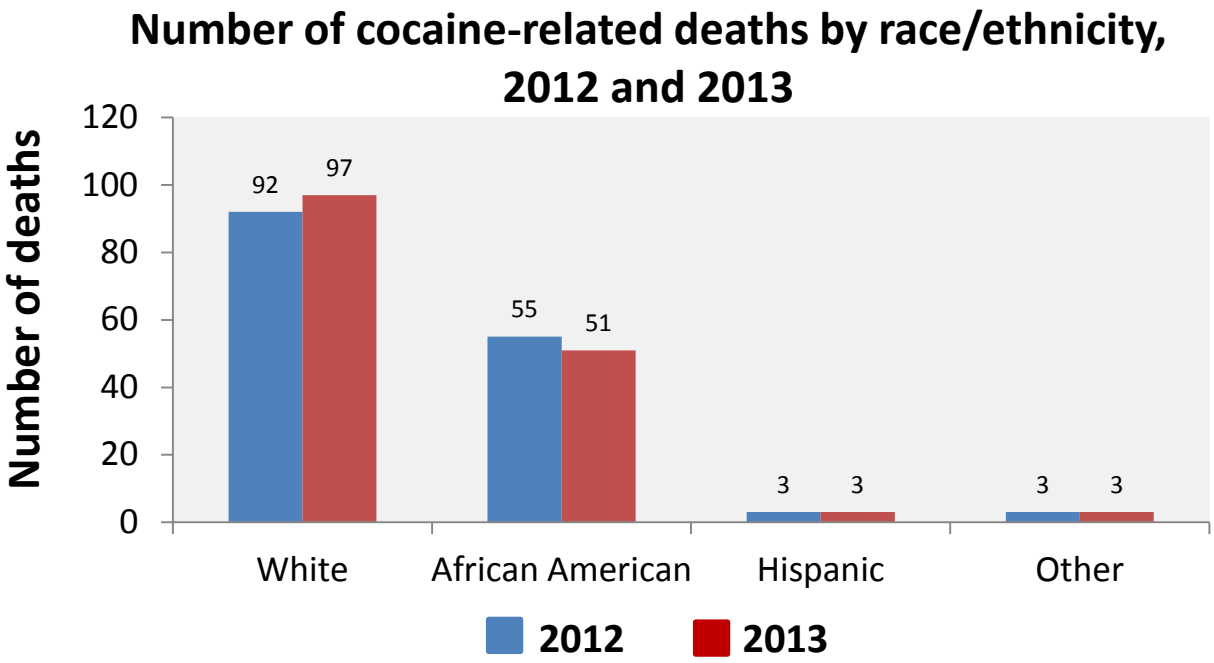
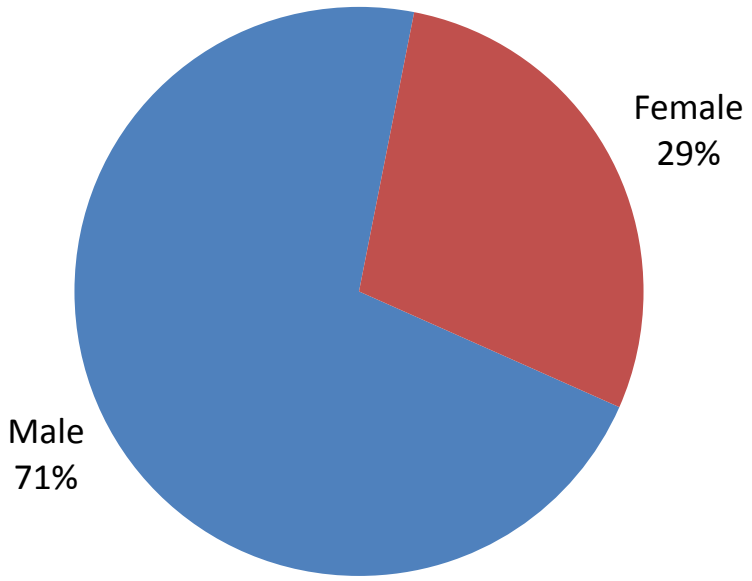


Figure 36. Cocaine-Related Intoxication Deaths Occurring in Maryland by Gender.



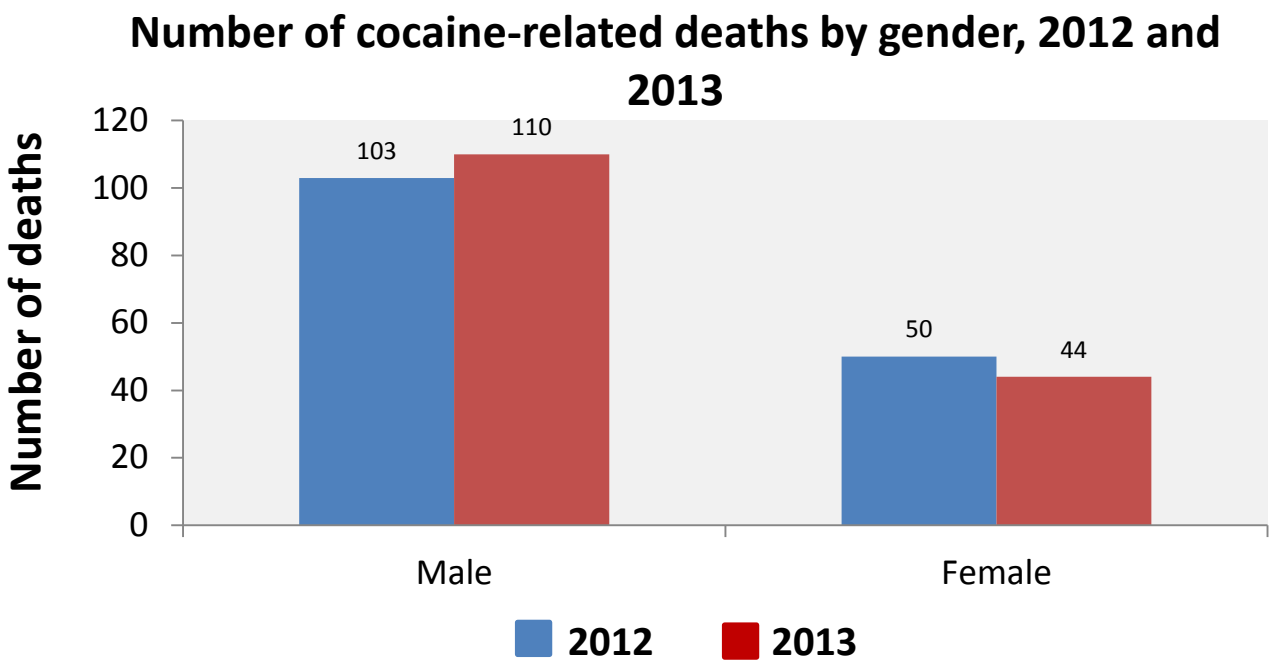
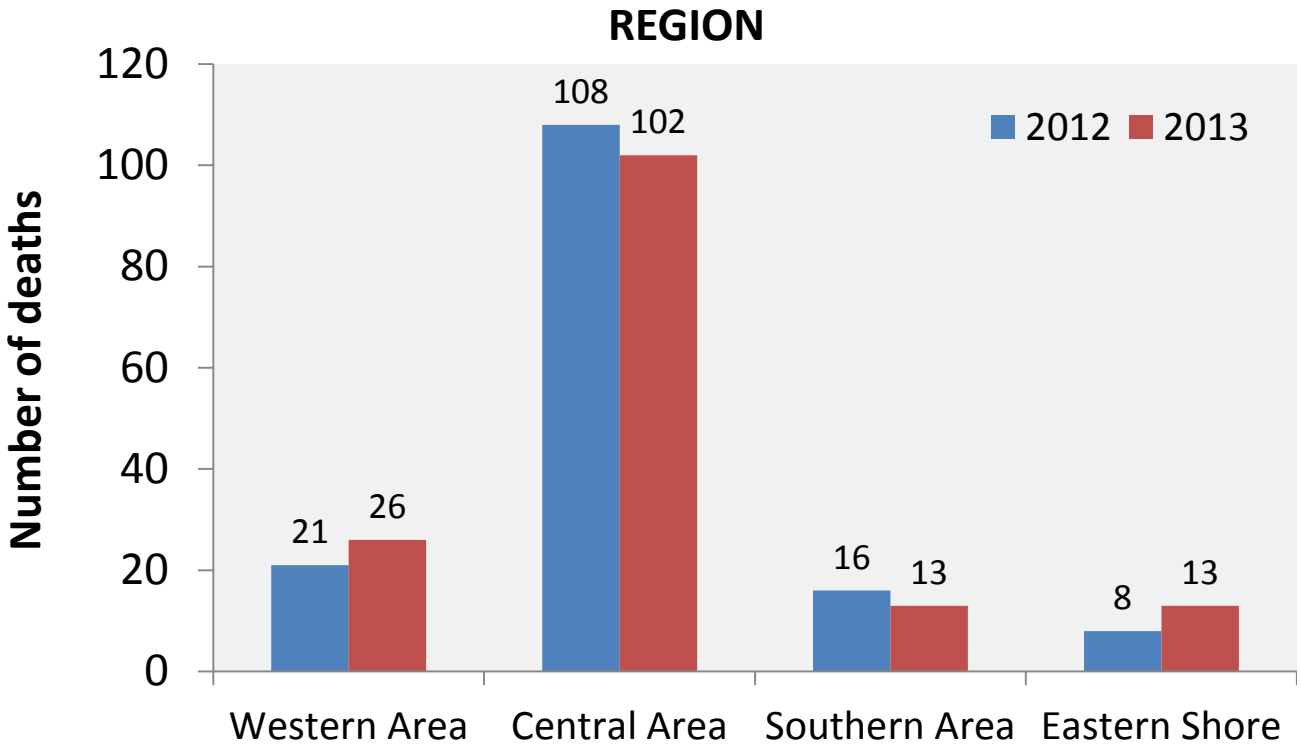
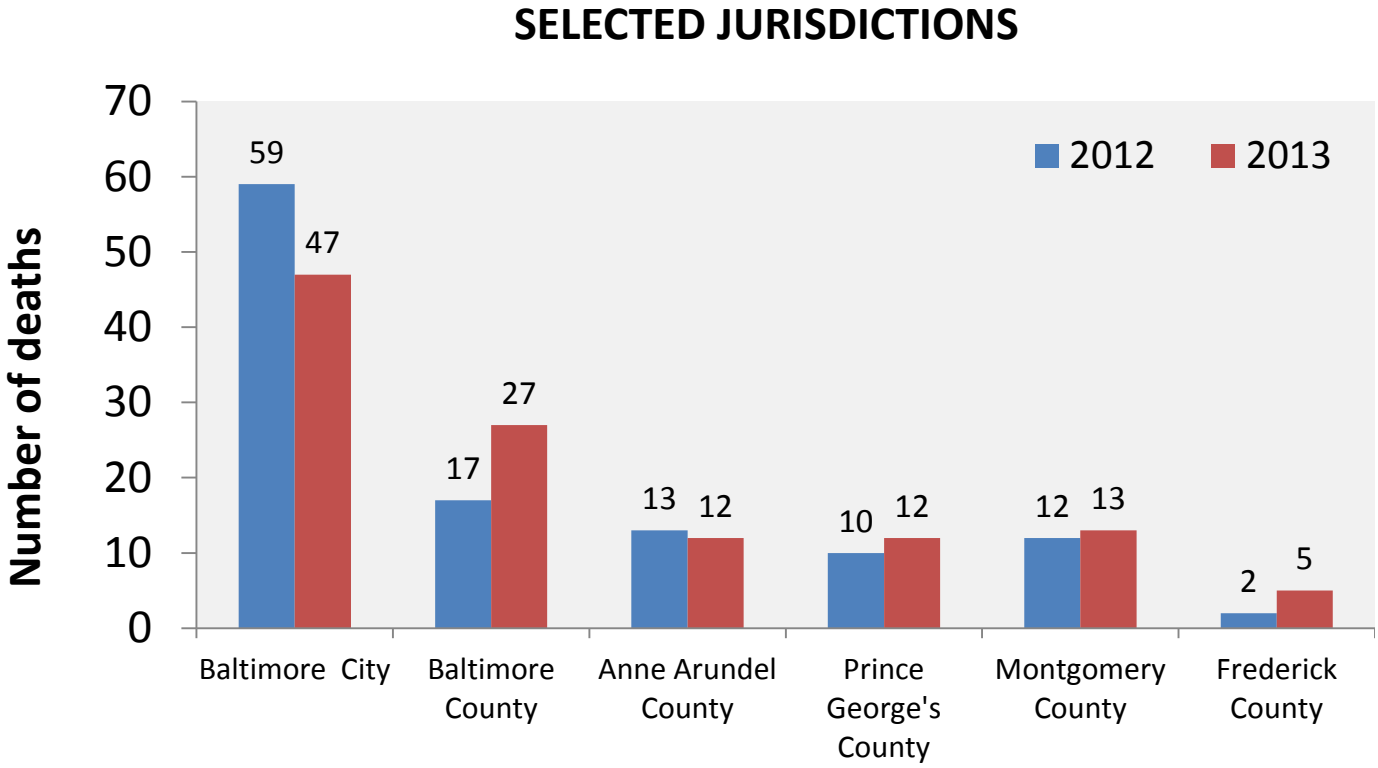


Figure 37. Cocaine-Related Intoxication Deaths by Place of Occurrence, Maryland.





TOTAL BENZODIAZEPINE-RELATED DEATHS

Figure 38. Total Number of Benzodiazepine-Related Intoxication Deaths Occurring in Maryland, 2007-2013.

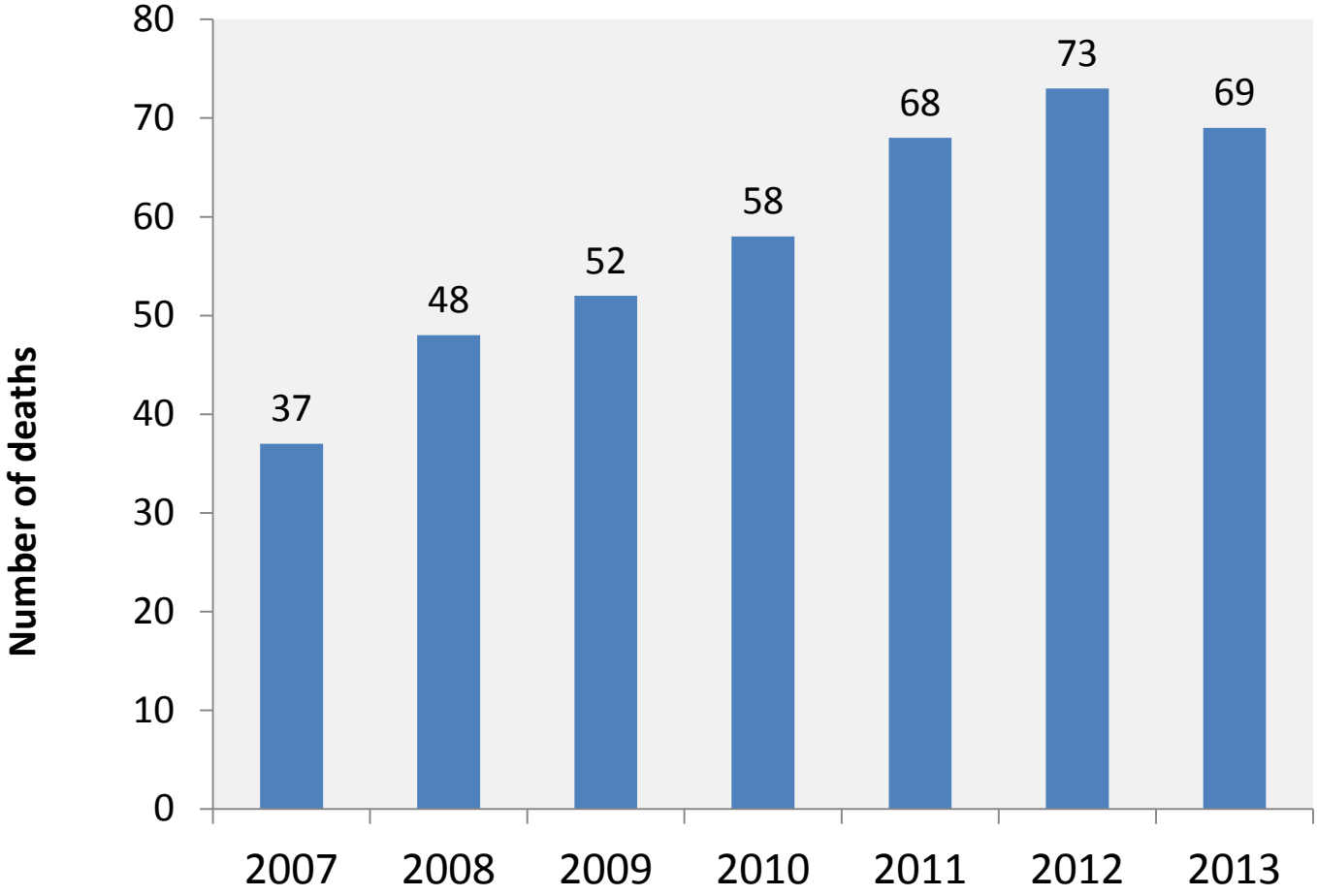
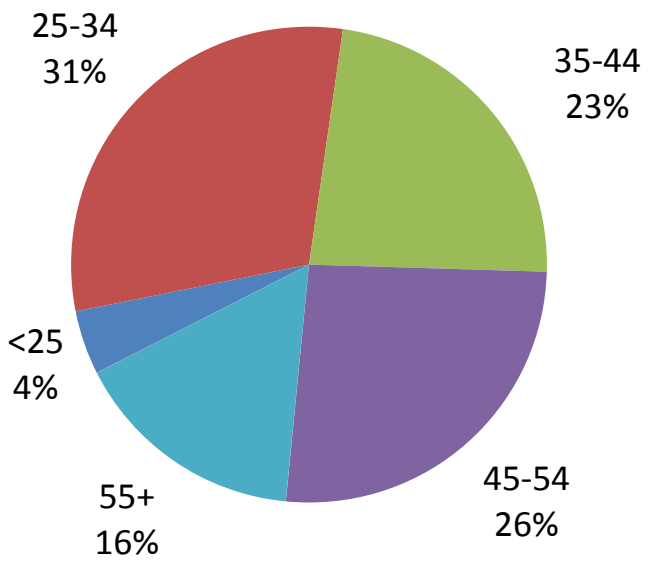


Figure 39. Benzodiazepine-Related Intoxication Deaths Occurring in Maryland by Age.



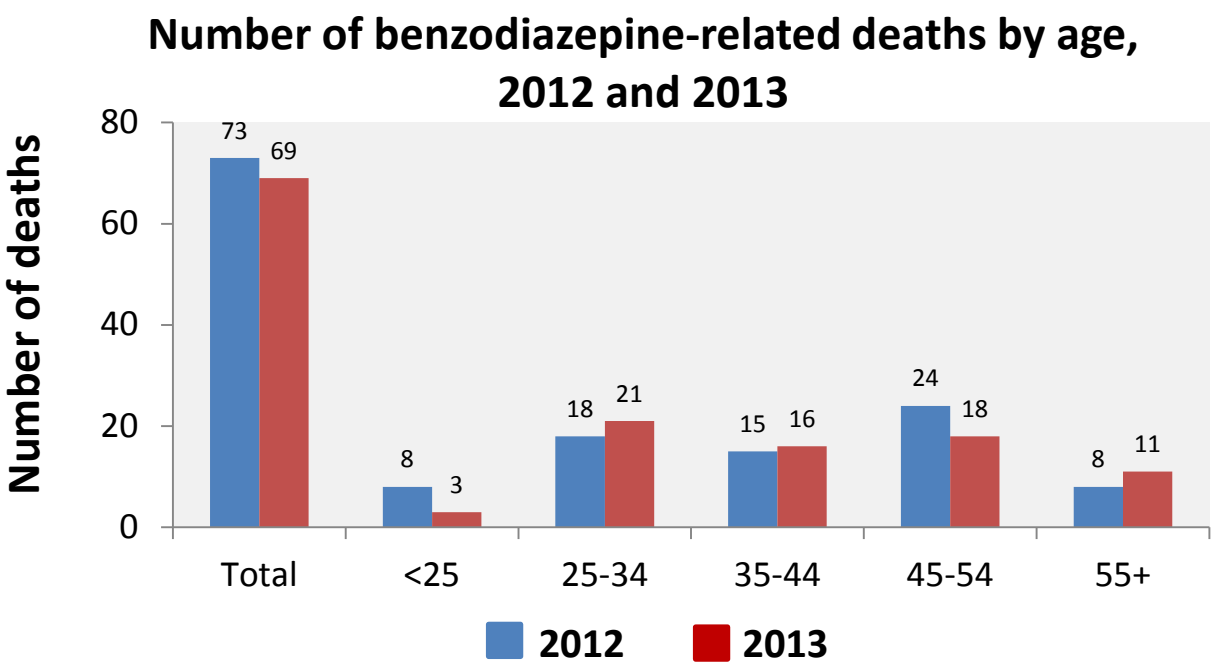
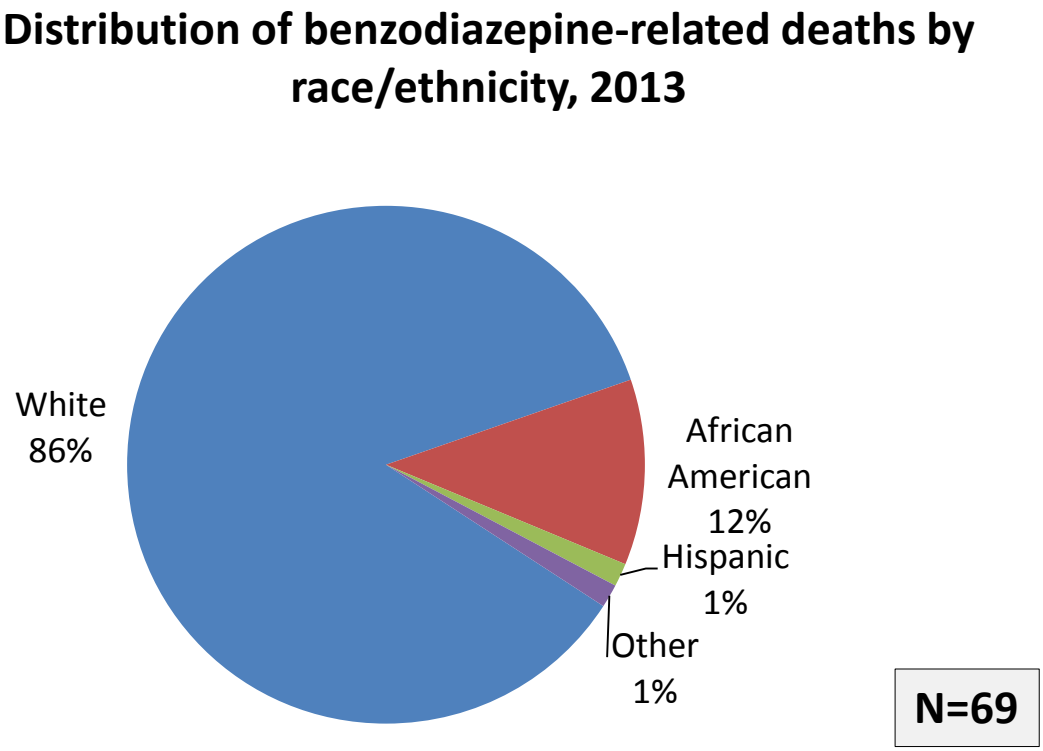


Figure 40. Benzodiazepine-Related Intoxication Deaths Occurring in Maryland by Race/Ethnicity.



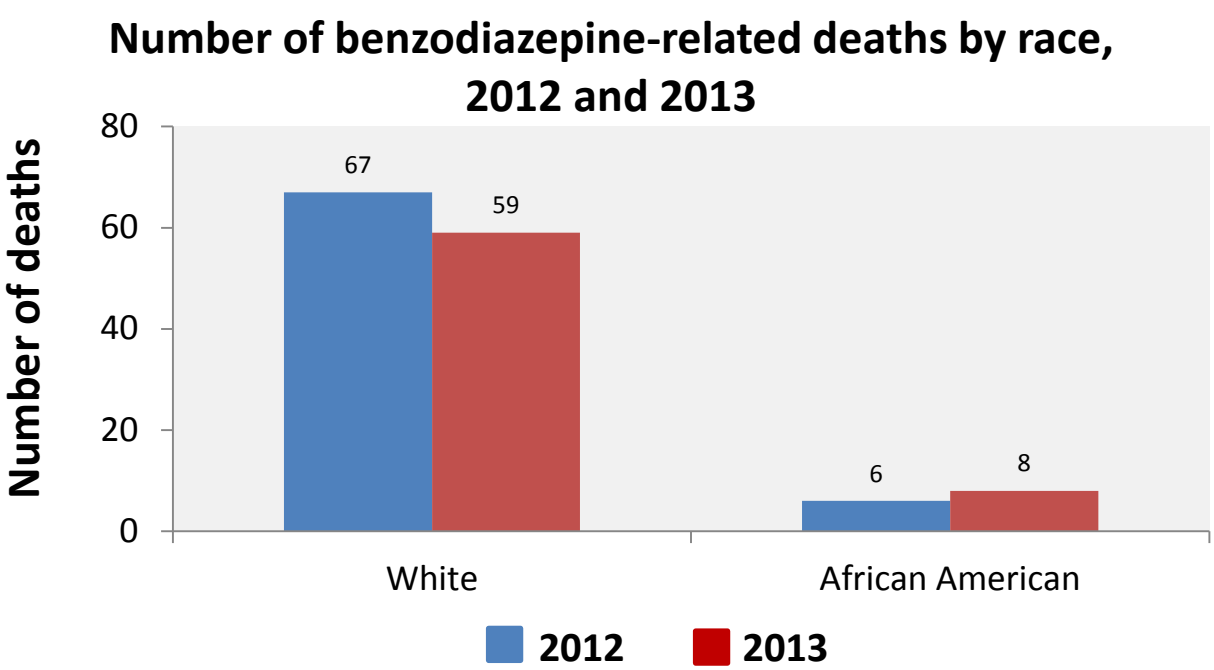


Figure 41. Benzodiazepine-Related Intoxication Deaths Occurring in Maryland by Gender.

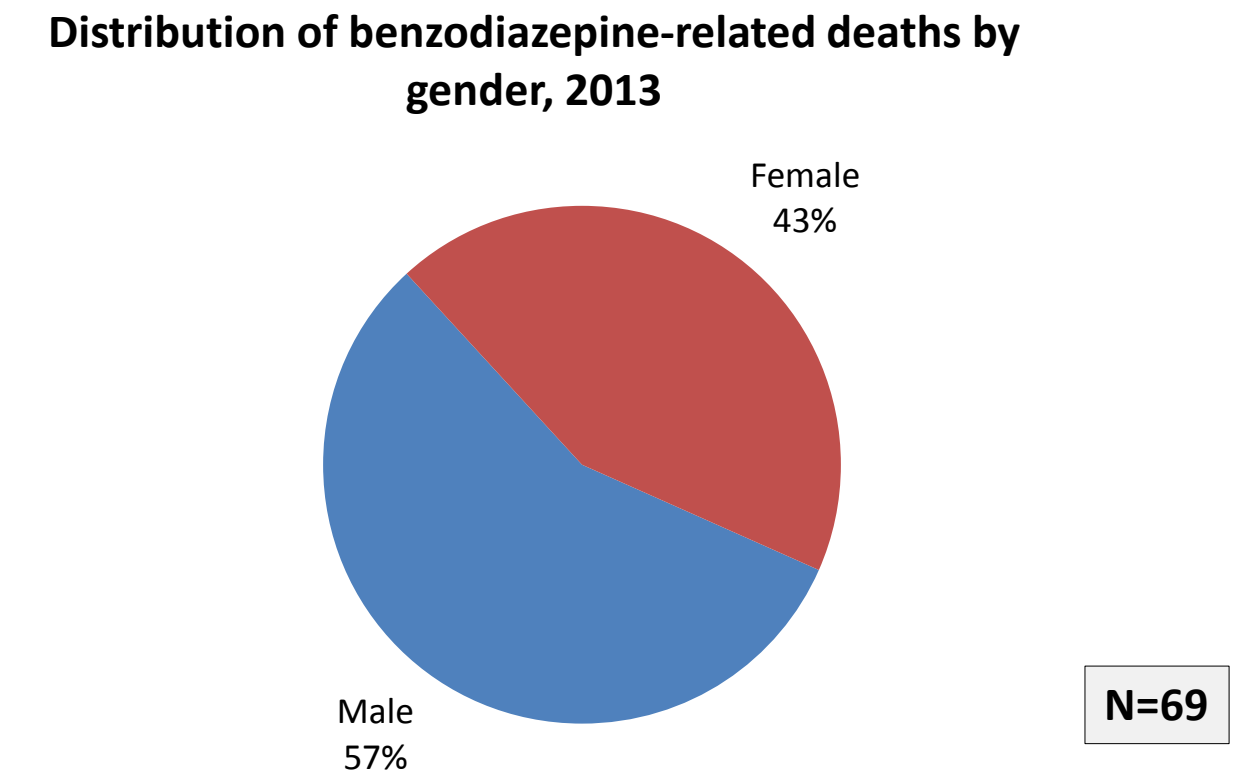
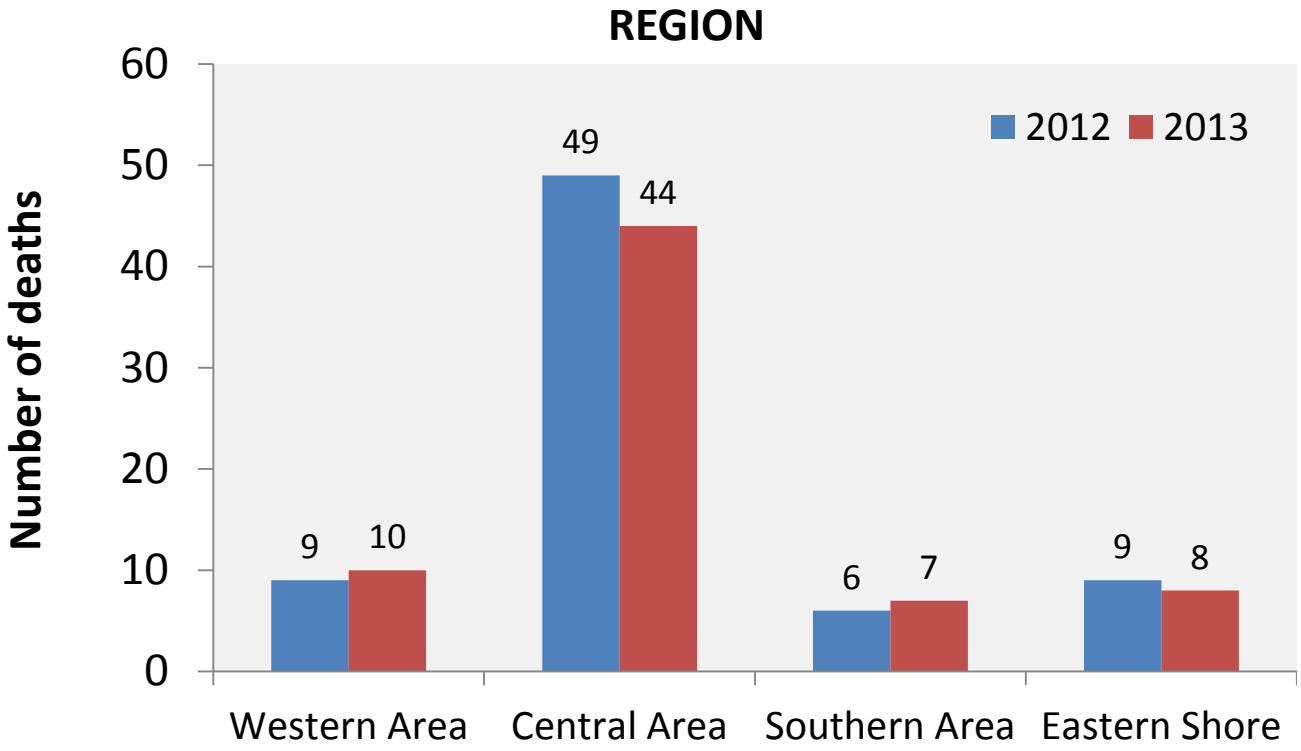
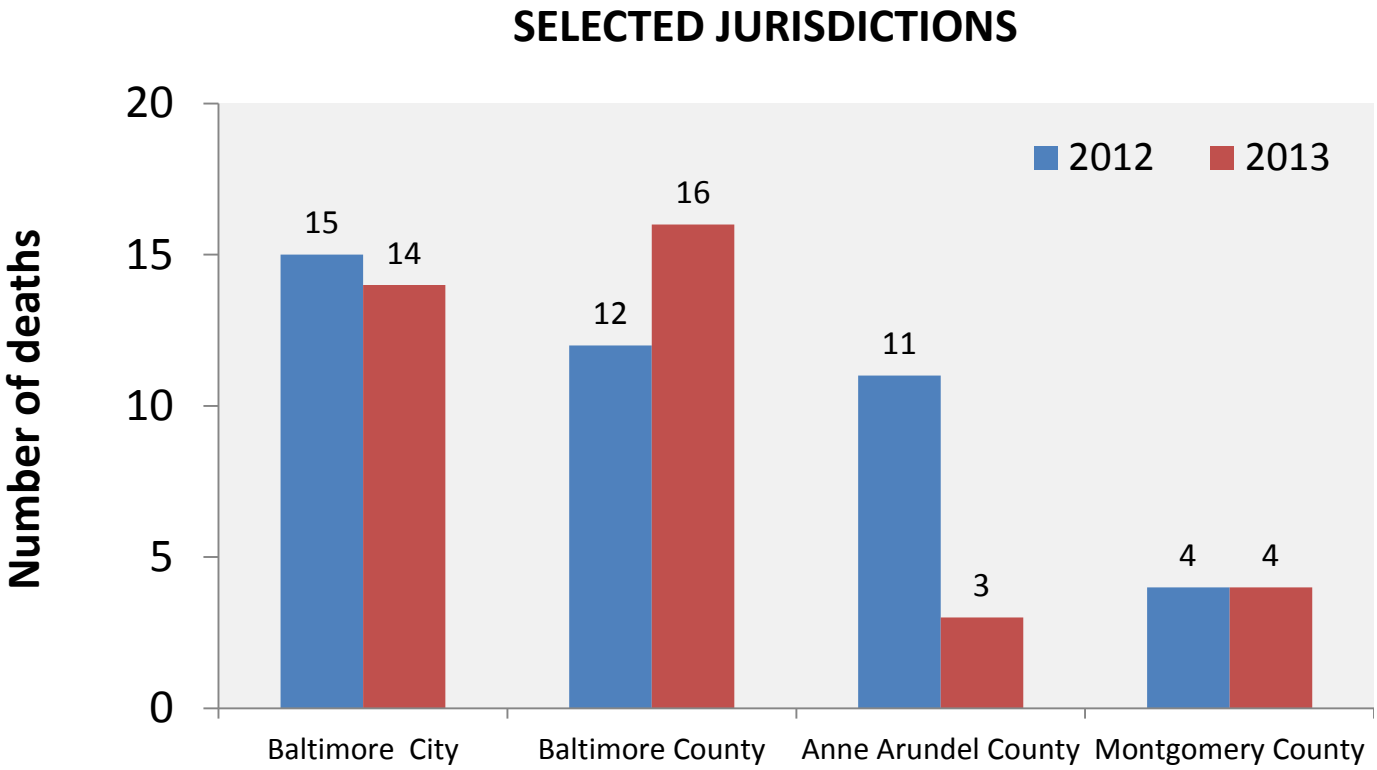


Figure 42. Benzodiazepine-Related Intoxication Deaths by Place of Occurrence, Maryland.





TOTAL ALCOHOL-RELATED DEATHS

Figure 43. Total Number of Alcohol-Related Intoxication Deaths Occurring in Maryland, 2007-2013.

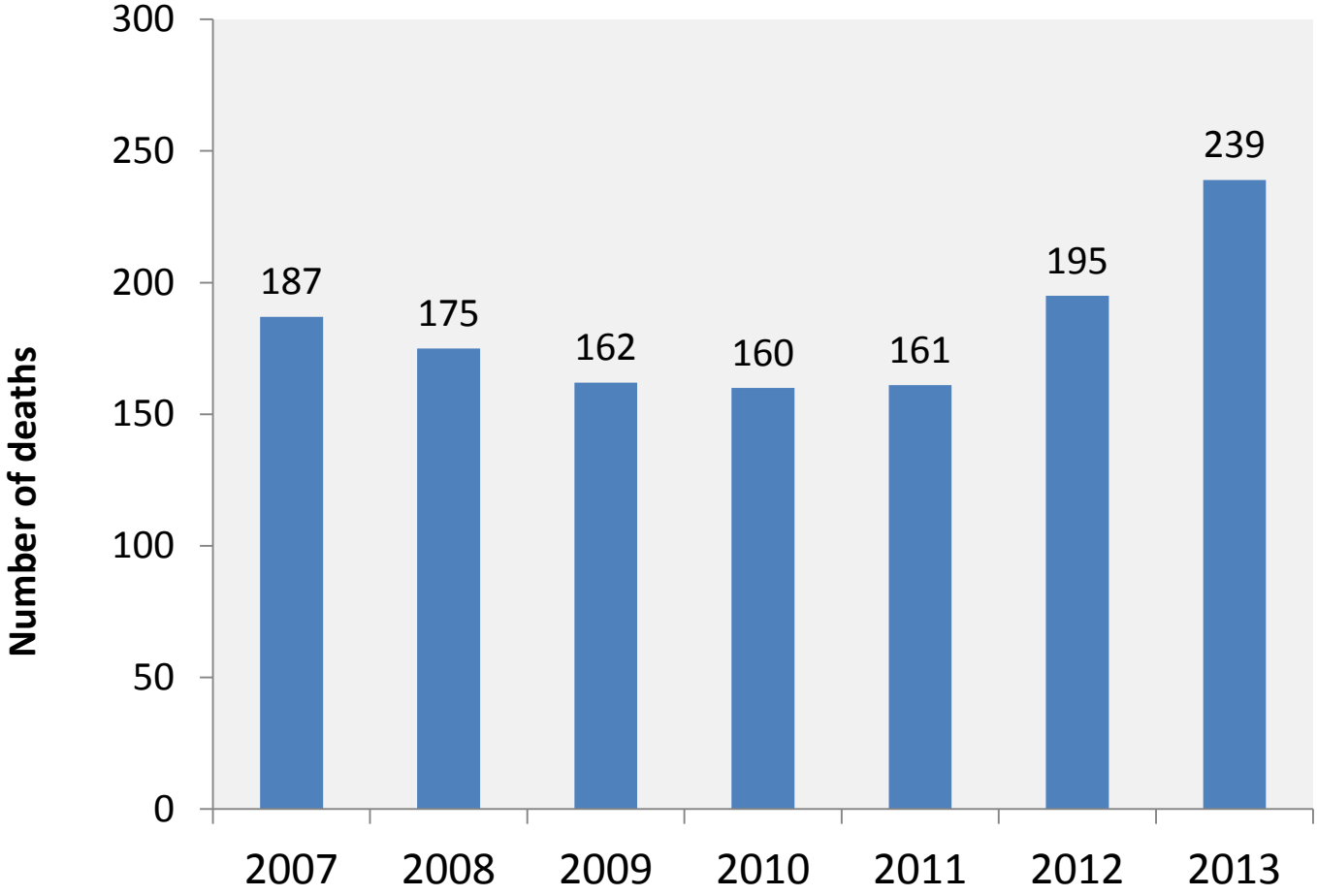
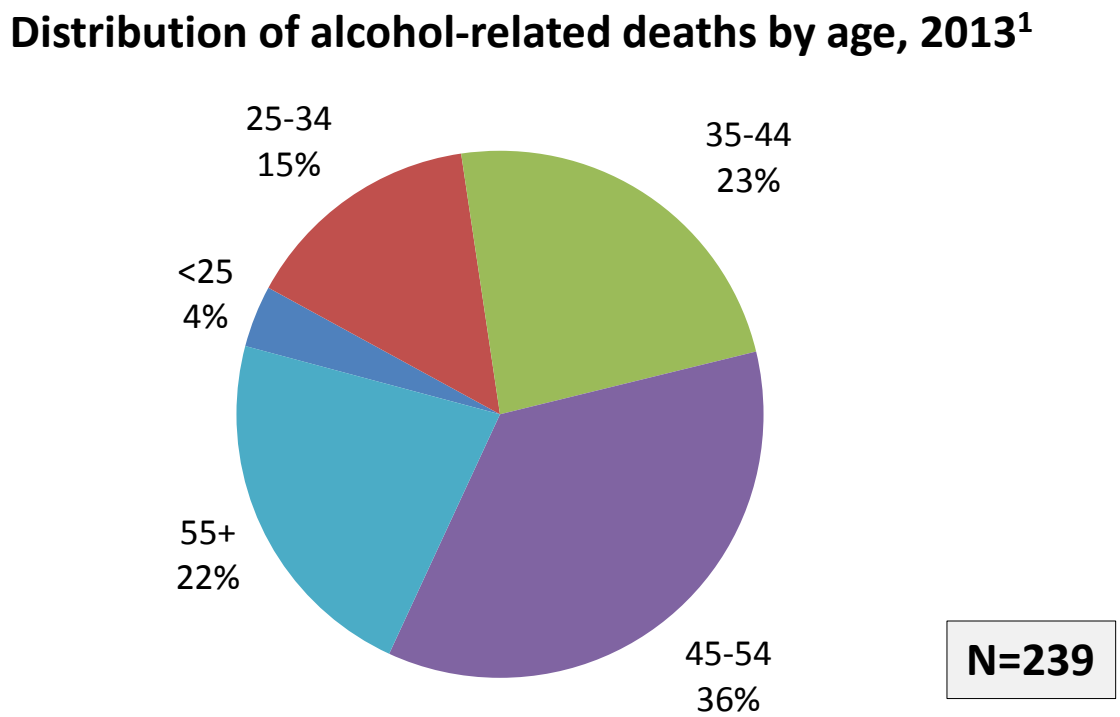
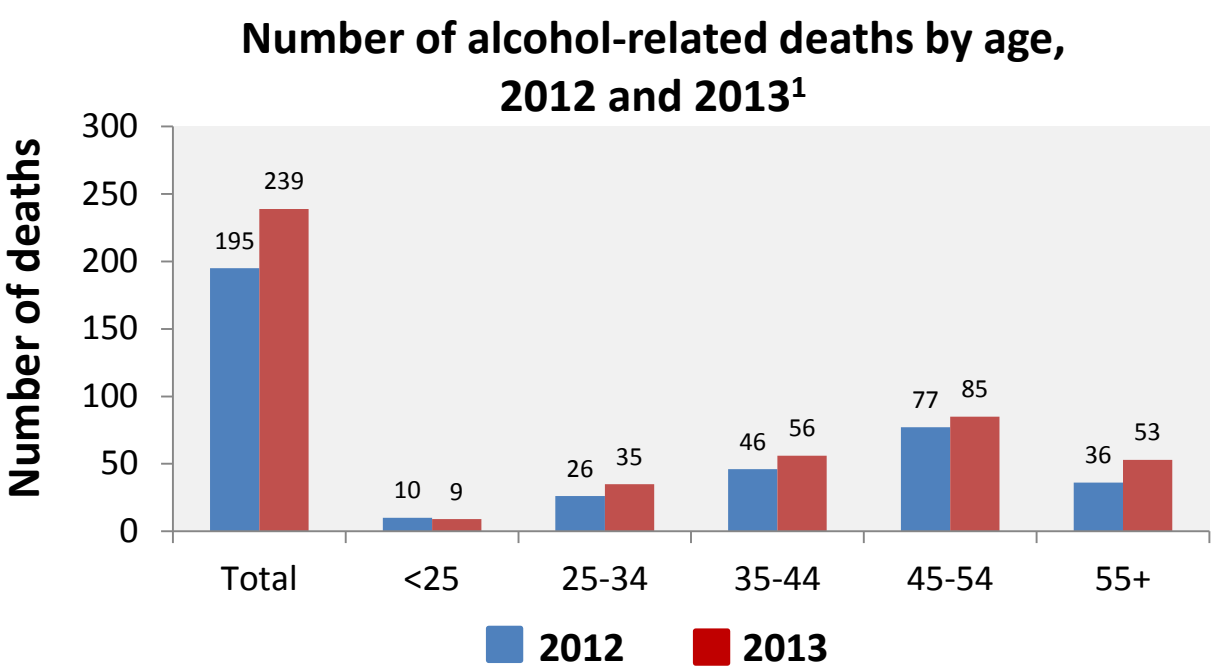


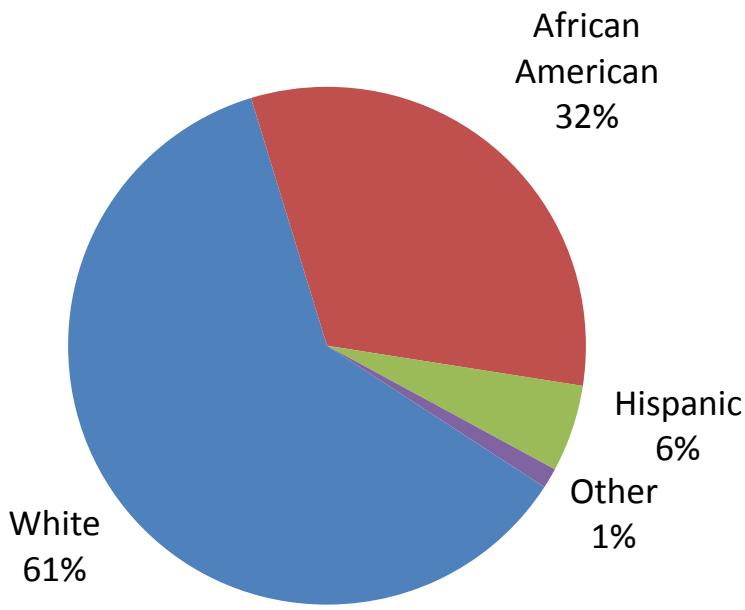
Figure 44. Alcohol-Related Intoxication Deaths Occurring in Maryland by Age.





[1]Excludes one decedent of unknown age.

Figure 45. Alcohol-Related Intoxication Deaths Occurring in Maryland by Race/Ethnicity.



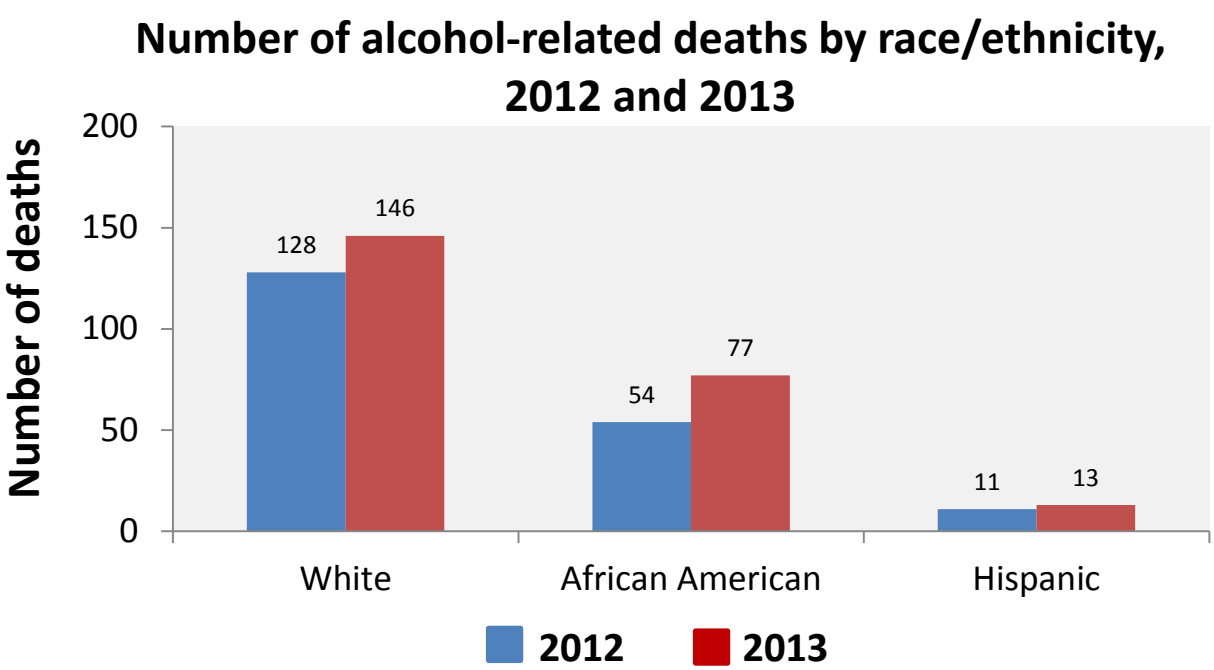
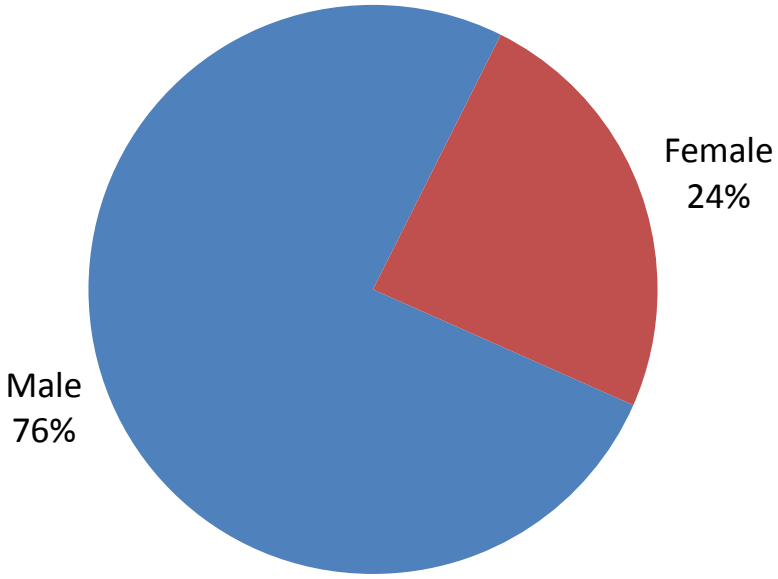


Figure 46. Alcohol-Related Intoxication Deaths Occurring in Maryland by Gender.

Distribution of alcohol-related deaths by gender, 2013



N=239

Number of alcohol-related deaths by gender, 2012 and 2013

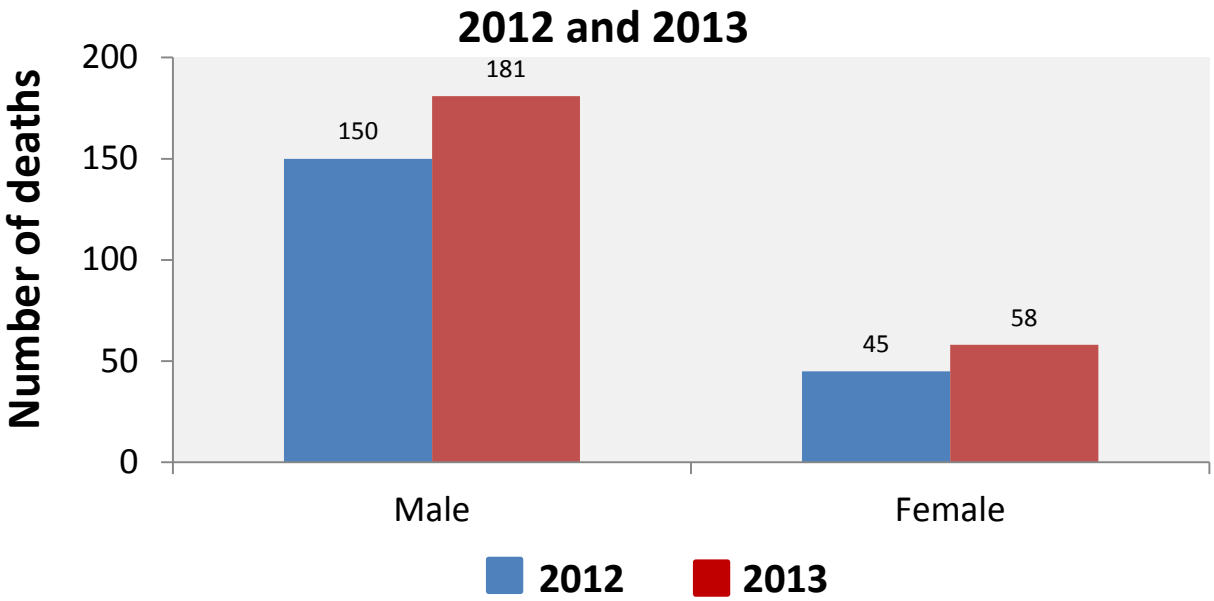
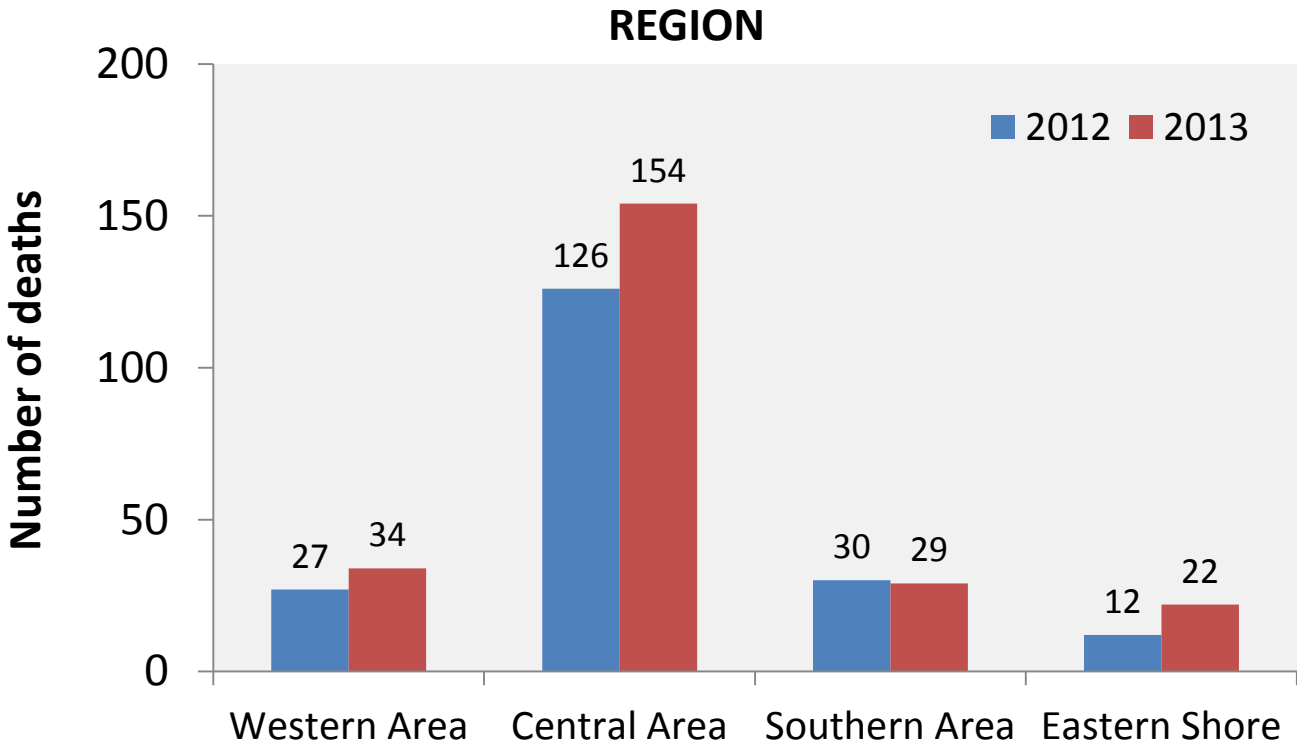
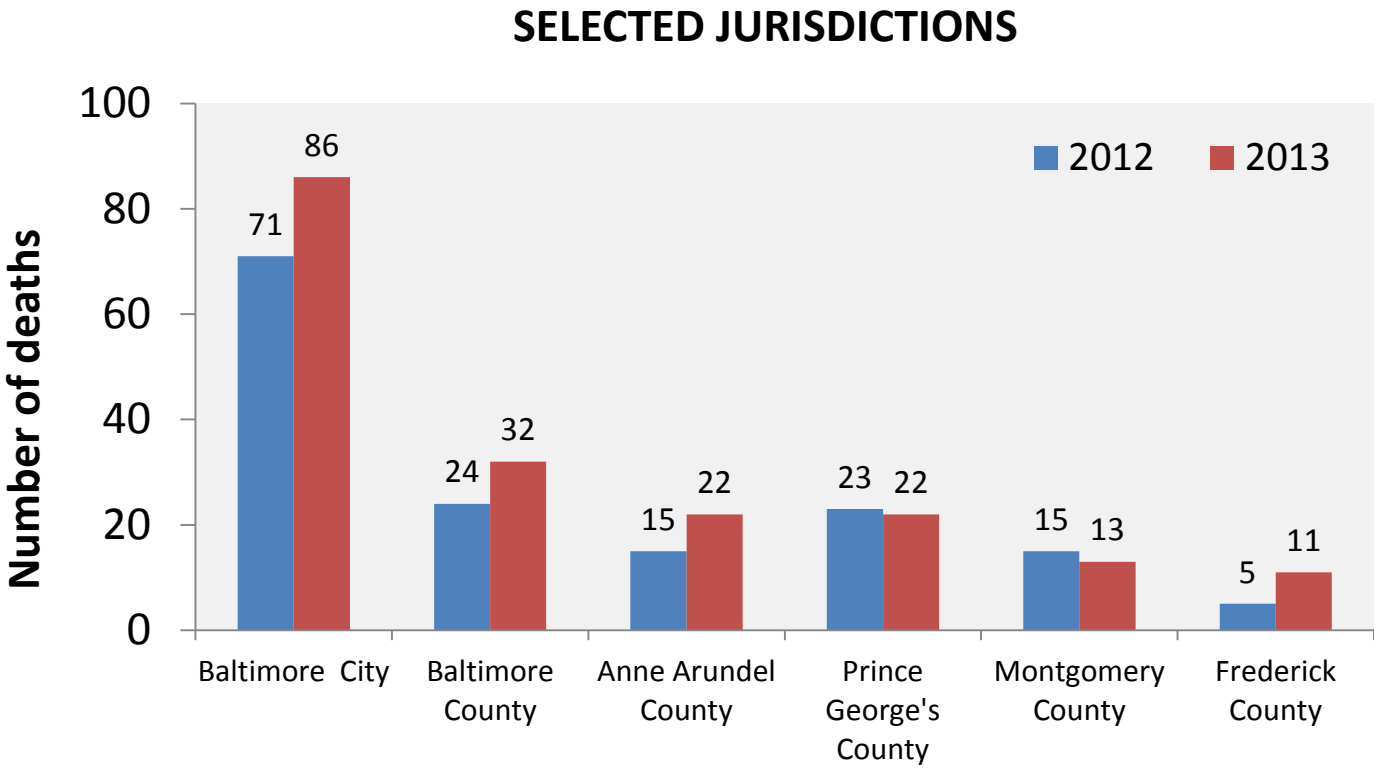


Figure 47. Alcohol-Related Intoxication Deaths by Place of Occurrence, Maryland.





TABLES

TABLE 1. TOTAL NUMBER OF DRUG AND ALCOHOL-RELATED INTOXICATION DEATHS BY PLACE OF OCCURRENCE, 2007-2013.[1,2]

REGION AND POLITICAL SUBDIVISION	TOTAL INTOXICATION DEATHS							
	2007	2008	2009	2010	2011	2012	2013	TOTAL
MARYLAND	819	694	731	649	671	799	858	5,221
WESTERN AREA	111	99	97	96	109	115	138	765
GARRETT	1	3	3	3	2	0	6	18
ALLEGANY	14	9	9	15	12	14	15	88
WASHINGTON	16	26	18	20	21	27	28	156
FREDERICK	24	15	23	20	30	26	37	175
MONTGOMERY	56	46	44	38	44	48	52	328
CENTRAL AREA	553	443	479	411	420	519	557	3,382
BALTIMORE CITY	289	184	239	172	167	225	246	1,522
BALTIMORE COUNTY	132	118	106	115	107	119	144	841
ANNE ARUNDEL	71	70	63	56	79	83	78	500
CARROLL	14	17	22	15	8	29	24	129
HOWARD	16	19	16	10	21	24	29	135
HARFORD	31	35	33	43	38	39	36	255
SOUTHERN AREA	86	94	93	74	73	93	84	597
CALVERT	14	9	14	6	12	12	6	73
CHARLES	13	16	11	13	11	13	9	86
ST. MARY'S	6	11	9	12	8	12	10	68
PRINCE GEORGE'S	53	58	59	43	42	56	59	370
EASTERN SHORE AREA	69	58	62	68	69	72	79	477
CECIL	25	10	24	24	28	25	26	162
KENT	3	4	2	5	2	0	4	20
QUEEN ANNE'S	4	5	4	4	5	2	8	32
CAROLINE	1	4	2	2	11	4	2	26
TALBOT	5	4	3	3	1	5	7	28
DORCHESTER	4	5	2	6	2	5	5	29
WICOMICO	9	13	12	13	11	21	17	96
SOMERSET	6	3	4	1	3	3	4	24
WORCESTER	12	10	9	10	6	7	6	60

[1] Includes deaths that were the result of recent ingestion or exposure to alcohol or another type of drug, including heroin, cocaine, prescription opioids, benzodiazepines, and other prescribed and unprescribed drugs.
[2] Includes only deaths for which the manner of death was classified as accidental or undetermined.

TABLE 2. NUMBER OF HEROIN-RELATED INTOXICATION DEATHS BY PLACE OF OCCURRENCE, 2007-2013.[1,2]

REGION AND POLITICAL SUBDIVISION	HEROIN-RELATED DEATHS							
	2007	2008	2009	2010	2011	2012	2013	TOTAL
MARYLAND	402	289	360	238	247	392	464	2,392
WESTERN AREA	33	35	39	27	34	49	68	285
GARRETT	0	0	1	0	1	0	2	4
ALLEGANY	3	4	2	3	3	6	3	24
WASHINGTON	5	13	11	6	8	11	14	68
FREDERICK	8	4	9	6	11	10	21	69
MONTGOMERY	17	14	16	12	11	22	28	120
CENTRAL AREA	326	203	264	171	165	272	319	1,720
BALTIMORE CITY	202	107	151	93	76	131	150	910
BALTIMORE COUNTY	57	51	53	42	38	64	76	381
ANNE ARUNDEL	38	24	31	18	24	38	41	214
CARROLL	9	5	7	3	2	13	14	53
HOWARD	8	8	7	3	10	12	16	64
HARFORD	12	8	15	12	15	14	22	98
SOUTHERN AREA	28	35	36	25	27	38	38	227
CALVERT	5	3	7	1	5	6	2	29
CHARLES	2	5	3	6	6	5	5	32
ST. MARY'S	1	3	0	4	4	7	6	25
PRINCE GEORGE'S	20	24	26	14	12	20	25	141
EASTERN SHORE AREA	15	16	21	15	21	33	39	160
CECIL	8	4	12	4	8	11	11	58
KENT	1	1	0	0	1	0	0	3
QUEEN ANNE'S	0	1	3	2	2	2	5	15
CAROLINE	0	0	0	0	3	3	2	8
TALBOT	1	2	0	0	1	2	2	8
DORCHESTER	1	2	0	2	1	3	3	12
WICOMICO	1	3	3	5	3	9	11	35
SOMERSET	2	1	1	0	1	2	1	8
WORCESTER	1	2	2	2	1	1	4	13

1 Includes deaths confirmed or suspected to be related to recent heroin use.
2 Includes only deaths for which the manner of death was classified as accidental or undetermined.

TABLE 3. NUMBER OF PRESCRIPTION OPIOID-RELATED INTOXICATION DEATHS BY PLACE OF OCCURRENCE, 2007-2013.[1,2]

REGION AND POLITICAL SUBDIVISION	PRESCRIPTION OPIOID-RELATED DEATHS							
	2007	2008	2009	2010	2011	2012	2013	TOTAL
MARYLAND	302	280	251	311	342	311	316	2,113
WESTERN AREA	42	38	40	36	58	48	51	313
GARRETT	0	2	2	1	1	0	2	8
ALLEGANY	9	5	6	8	5	5	8	46
WASHINGTON	7	10	4	7	11	9	11	59
FREDERICK	6	4	9	6	21	16	14	76
MONTGOMERY	20	17	19	14	20	18	16	124
CENTRAL AREA	190	189	148	197	212	196	207	1,339
BALTIMORE CITY	95	60	63	61	82	74	86	521
BALTIMORE COUNTY	48	51	37	60	68	47	54	365
ANNE ARUNDEL	22	36	20	31	33	33	28	203
CARROLL	4	11	10	9	5	17	12	68
HOWARD	6	6	4	6	9	5	13	49
HARFORD	15	25	14	30	15	20	14	133
SOUTHERN AREA	25	28	31	33	30	29	26	202
CALVERT	8	3	4	3	7	6	3	34
CHARLES	6	6	7	4	5	7	5	40
ST. MARY'S	3	7	7	9	3	5	4	38
PRINCE GEORGE'S	8	12	13	17	15	11	14	90
EASTERN SHORE AREA	45	25	32	45	42	38	32	259
CECIL	19	6	10	20	20	18	12	105
KENT	2	3	2	3	1	0	4	15
QUEEN ANNE'S	4	1	1	2	2	0	3	13
CAROLINE	0	2	1	2	5	1	0	11
TALBOT	2	1	2	2	0	1	4	12
DORCHESTER	2	1	1	4	1	3	3	15
WICOMICO	5	4	8	7	7	9	4	44
SOMERSET	4	3	1	1	3	2	2	16
WORCESTER	7	4	6	4	3	4	0	28

1 Includes deaths that were related to recent ingestion of one or more prescription opioids.
2 Includes only deaths for which the manner of death was classified as accidental or undetermined.

TABLE 4. NUMBER OF OXYCODONE-RELATED INTOXICATION DEATHS BY PLACE OF OCCURRENCE, 2007-2013.[1,2]

REGION AND POLITICAL SUBDIVISION	OXYCODONE-RELATED DEATHS							
	2007	2008	2009	2010	2011	2012	2013	TOTAL
MARYLAND	63	72	82	113	118	99	86	633
WESTERN AREA	11	15	19	14	20	21	19	119
GARRETT	0	1	0	0	0	0	1	2
ALLEGANY	3	0	1	2	0	2	3	11
WASHINGTON	0	4	3	2	5	2	5	21
FREDERICK	1	2	5	3	6	9	3	29
MONTGOMERY	7	8	10	7	9	8	7	56
CENTRAL AREA	31	44	34	59	63	51	44	326
BALTIMORE CITY	7	6	10	5	15	15	11	69
BALTIMORE COUNTY	8	14	14	21	22	12	14	105
ANNE ARUNDEL	5	9	4	9	14	11	9	61
CARROLL	2	3	3	6	3	6	3	26
HOWARD	3	2	0	4	2	2	4	17
HARFORD	6	10	3	14	7	5	3	48
SOUTHERN AREA	12	9	15	15	15	13	12	91
CALVERT	3	1	2	2	4	5	3	20
CHARLES	5	3	4	2	4	3	1	22
ST. MARY'S	1	3	5	3	2	2	2	18
PRINCE GEORGE'S	3	2	4	8	5	3	6	31
EASTERN SHORE AREA	9	4	14	25	20	14	11	97
CECIL	3	0	3	13	9	4	6	38
KENT	0	0	1	2	0	0	1	4
QUEEN ANNE'S	1	0	1	1	1	0	1	5
CAROLINE	0	0	1	1	0	0	0	2
TALBOT	0	0	0	1	0	1	1	3
DORCHESTER	1	0	0	2	1	1	0	5
WICOMICO	1	2	4	2	5	5	1	20
SOMERSET	0	0	1	1	2	1	1	6
WORCESTER	3	2	3	2	2	2	0	14

1 Includes deaths that were related to recent ingestion of oxycodone.
2 Includes only deaths for which the manner of death was classified as accidental or undetermined.

TABLE 5. NUMBER OF METHADONE-RELATED INTOXICATION DEATHS BY PLACE OF OCCURRENCE, 2007-2013.[1,2]

REGION AND POLITICAL SUBDIVISION	METHADONE-RELATED DEATHS							
	2007	2008	2009	2010	2011	2012	2013	TOTAL
MARYLAND	210	163	135	173	172	170	138	1,161
WESTERN AREA	23	17	14	13	20	21	11	119
GARRETT	0	0	1	1	0	0	1	3
ALLEGANY	3	4	2	3	4	1	1	18
WASHINGTON	6	4	0	3	5	4	3	25
FREDERICK	6	1	4	1	5	9	3	29
MONTGOMERY	8	8	7	5	6	7	3	44
CENTRAL AREA	141	118	97	128	128	122	110	844
BALTIMORE CITY	80	47	50	53	65	54	57	406
BALTIMORE COUNTY	34	29	18	37	32	28	29	207
ANNE ARUNDEL	15	19	13	17	17	15	6	102
CARROLL	1	7	4	2	2	12	7	35
HOWARD	2	1	4	2	5	1	5	20
HARFORD	9	15	8	17	7	12	6	74
SOUTHERN AREA	12	15	12	14	10	11	6	80
CALVERT	5	0	2	1	2	2	0	12
CHARLES	2	4	2	1	0	1	1	11
ST. MARY'S	2	3	3	5	1	2	1	17
PRINCE GEORGE'S	3	8	5	7	7	6	4	40
EASTERN SHORE AREA	34	13	12	18	14	16	11	118
CECIL	16	3	6	9	9	10	4	57
KENT	2	2	1	2	1	0	2	10
QUEEN ANNE'S	2	1	1	1	1	0	1	7
CAROLINE	0	0	0	1	1	1	0	3
TALBOT	2	0	2	1	0	1	2	8
DORCHESTER	1	1	0	0	0	1	0	3
WICOMICO	3	2	1	3	1	1	2	13
SOMERSET	3	2	0	0	1	0	0	6
WORCESTER	5	2	1	1	0	2	0	11

1 Includes deaths that were related to recent ingestion of methadone.
2 Includes only deaths for which the manner of death was classified as accidental or undetermined.

TABLE 6. NUMBER OF FENTANYL-RELATED INTOXICATION DEATHS BY PLACE OF OCCURRENCE, 2007-2013.[1,2]

REGION AND POLITICAL SUBDIVISION	FENTANYL-RELATED DEATHS							
	2007	2008	2009	2010	2011	2012	2013	TOTAL
MARYLAND	26	25	27	39	26	29	58	230
WESTERN AREA	5	1	2	7	6	5	7	33
GARRETT	0	1	0	0	1	0	0	2
ALLEGANY	3	0	1	2	1	1	1	9
WASHINGTON	0	0	0	2	1	1	4	8
FREDERICK	0	0	0	2	3	1	2	8
MONTGOMERY	2	0	1	1	0	2	0	6
CENTRAL AREA	14	19	16	20	10	16	35	130
BALTIMORE CITY	3	2	4	4	2	4	12	31
BALTIMORE COUNTY	6	9	9	6	4	5	11	50
ANNE ARUNDEL	3	5	3	5	2	3	6	27
CARROLL	0	2	0	2	0	1	2	7
HOWARD	1	0	0	0	0	2	3	6
HARFORD	1	1	0	3	2	1	1	9
SOUTHERN AREA	1	1	4	3	3	2	10	24
CALVERT	0	1	1	0	1	0	0	3
CHARLES	0	0	0	0	1	1	3	5
ST. MARY'S	0	0	1	1	1	0	1	4
PRINCE GEORGE'S	1	0	2	2	0	1	6	12
EASTERN SHORE AREA	6	4	5	9	7	6	6	43
CECIL	2	1	0	2	2	0	0	7
KENT	0	0	0	0	0	0	0	0
QUEEN ANNE'S	1	0	0	0	0	0	1	2
CAROLINE	0	0	0	1	4	0	0	5
TALBOT	1	1	0	1	0	1	0	4
DORCHESTER	0	0	0	2	0	0	2	4
WICOMICO	1	1	3	1	1	4	1	12
SOMERSET	1	1	0	1	0	0	2	5
WORCESTER	0	0	2	1	0	1	0	4

1 Includes deaths that were related to recent ingestion or exposure to fentanyl.
2 Includes only deaths for which the manner of death was classified as accidental or undetermined.

TABLE 7. NUMBER OF COCAINE-RELATED INTOXICATION DEATHS BY PLACE OF OCCURRENCE, 2007-2013.[1,2]

REGION AND POLITICAL SUBDIVISION	COCAINE-RELATED DEATHS							
	2007	2008	2009	2010	2011	2012	2013	TOTAL
MARYLAND	250	157	162	135	148	153	154	1,159
WESTERN AREA	29	16	11	12	22	21	26	137
GARRETT	0	0	0	1	0	0	0	1
ALLEGANY	2	1	1	1	0	2	2	9
WASHINGTON	3	1	0	3	3	5	6	21
FREDERICK	4	2	3	3	7	2	5	26
MONTGOMERY	20	12	7	4	12	12	13	80
CENTRAL AREA	180	108	124	93	97	108	102	812
BALTIMORE CITY	107	57	72	45	48	59	47	435
BALTIMORE COUNTY	31	25	25	23	19	17	27	167
ANNE ARUNDEL	26	18	15	13	18	13	12	115
CARROLL	2	2	3	6	3	7	7	30
HOWARD	6	1	4	1	5	7	5	29
HARFORD	8	5	5	5	4	5	4	36
SOUTHERN AREA	20	20	15	19	15	16	13	118
CALVERT	1	2	1	3	2	3	0	12
CHARLES	3	3	2	2	1	1	0	12
ST. MARY'S	1	1	1	2	0	2	1	8
PRINCE GEORGE'S	15	14	11	12	12	10	12	86
EASTERN SHORE AREA	21	13	12	11	14	8	13	92
CECIL	5	3	4	3	7	2	5	29
KENT	1	2	0	1	0	0	0	4
QUEEN ANNE'S	3	0	2	0	1	0	0	6
CAROLINE	0	0	1	0	1	1	0	3
TALBOT	4	0	1	0	0	0	3	8
DORCHESTER	1	1	0	1	1	1	1	6
WICOMICO	2	5	2	3	3	4	3	22
SOMERSET	1	0	1	1	0	0	0	3
WORCESTER	4	2	1	2	1	0	1	11

1 Includes deaths that were related to recent use of cocaine.
2 Includes only deaths for which the manner of death was classified as accidental or undetermined.

TABLE 8. NUMBER OF BENZODIAZEPINE-RELATED INTOXICATION DEATHS BY COUNTY OF OCCURRENCE, 2007-2013.[1,2]

REGION AND POLITICAL SUBDIVISION	BENZODIAZEPINE-RELATED DEATHS							
	2007	2008	2009	2010	2011	2012	2013	TOTAL
MARYLAND	37	48	52	58	68	73	69	405
WESTERN AREA	4	8	11	10	15	9	10	67
GARRETT	0	0	1	0	0	0	1	2
ALLEGANY	1	0	1	3	1	0	1	7
WASHINGTON	1	2	2	2	4	3	2	16
FREDERICK	1	1	3	1	4	2	2	14
MONTGOMERY	1	5	4	4	6	4	4	28
CENTRAL AREA	22	29	29	43	39	49	44	255
BALTIMORE CITY	7	2	10	12	9	15	14	69
BALTIMORE COUNTY	12	7	8	18	9	12	16	82
ANNE ARUNDEL	1	8	4	6	14	11	3	47
CARROLL	0	4	3	3	0	1	3	14
HOWARD	1	2	2	2	4	2	5	18
HARFORD	1	6	2	2	3	8	3	25
SOUTHERN AREA	6	9	4	2	5	6	7	39
CALVERT	1	1	1	1	1	1	1	7
CHARLES	1	3	1	0	0	2	1	8
ST. MARY'S	1	1	0	1	1	1	2	7
PRINCE GEORGE'S	3	4	2	0	3	2	3	17
EASTERN SHORE AREA	5	2	8	3	9	9	8	44
CECIL	4	0	3	2	6	7	3	25
KENT	0	0	0	0	0	0	0	0
QUEEN ANNE'S	0	0	0	1	1	0	0	2
CAROLINE	0	0	0	0	0	0	0	0
TALBOT	0	1	0	0	0	0	3	4
DORCHESTER	0	0	1	0	0	1	1	3
WICOMICO	0	0	0	0	1	0	0	1
SOMERSET	1	0	1	0	0	1	1	4
WORCESTER	0	1	3	0	1	0	0	5

1 Includes deaths that were related to recent ingestion of benzodiazepine.
2 Includes only deaths for which the manner of death was classified as accidental or undetermined.

TABLE 9. NUMBER OF ALCOHOL-RELATED INTOXICATION DEATHS BY PLACE OF OCCURRENCE, 2007-2013.[1,2]

REGION AND POLITICAL SUBDIVISION	ALCOHOL-RELATED DEATHS							
	2007	2008	2009	2010	2011	2012	2013	TOTAL
MARYLAND	187	175	162	160	161	195	239	1,279
WESTERN AREA	29	34	25	25	32	27	34	206
GARRETT	1	2	1	1	1	0	2	8
ALLEGANY	5	0	3	4	2	4	2	20
WASHINGTON	3	10	4	5	4	3	6	35
FREDERICK	5	7	8	5	9	5	11	50
MONTGOMERY	15	15	9	10	16	15	13	93
CENTRAL AREA	114	96	100	94	99	126	154	783
BALTIMORE CITY	56	41	54	39	44	71	86	391
BALTIMORE COUNTY	38	23	22	29	22	24	32	190
ANNE ARUNDEL	12	12	9	10	21	15	22	101
CARROLL	3	4	5	4	4	4	4	28
HOWARD	2	7	5	3	4	6	6	33
HARFORD	3	9	5	9	4	6	4	40
SOUTHERN AREA	31	27	21	22	19	30	29	179
CALVERT	3	3	4	0	2	2	1	15
CHARLES	5	5	1	4	3	2	4	24
ST. MARY'S	2	1	3	2	2	3	2	15
PRINCE GEORGE'S	21	18	13	16	12	23	22	125
EASTERN SHORE AREA	13	18	16	19	11	12	22	111
CECIL	5	4	7	6	3	6	9	40
KENT	0	0	0	1	0	0	1	2
QUEEN ANNE'S	1	2	0	1	3	0	1	8
CAROLINE	1	0	1	0	1	0	1	4
TALBOT	0	3	0	0	0	2	2	7
DORCHESTER	2	0	0	1	0	1	0	4
WICOMICO	1	6	3	4	2	2	6	24
SOMERSET	0	0	1	0	1	1	1	4
WORCESTER	3	3	4	6	1	0	1	18

1 Includes deaths that were related to recent ingestion of alcohol.
2 Includes only deaths for which the manner of death was classified as accidental or undetermined.

Table 10. Combinations of Substances Related to Unintentional Drug and Alcohol Intoxication Deaths, Maryland, 2012 and 2013.

	2012		2013		Percent change
	Number	Percent	Number	Percent	2012-2013
Heroin	**392**		**464**		
With prescription opioids	55	14.0	57	12.3	-12.4
With methadone	27	6.9	31	6.7	-3.0
With oxycodone	18	4.6	15	3.2	-29.6
With fentanyl	2	0.5	2	0.4	-
With fentanyl (nonprescription)	0	-	22	4.7	-
With cocaine	79	20.2	91	19.6	-2.7
With benzodiazepines	16	4.1	11	2.4	-41.9
With alcohol	94	24.0	127	27.4	14.1
Cocaine	**153**		**154**		
With heroin	79	51.6	91	59.1	14.4
With Rx opioids	46	30.1	39	25.3	-15.8
With methadone	30	19.6	16	10.4	-47.0
With oxycodone	14	9.2	8	5.2	-43.2
With fentanyl	3	2.0	2	1.3	-
With fentanyl (nonprescription)	0	-	6	3.9	-
With benzodiazepines	2	1.3	8	5.2	-
With alcohol	22	14.4	28	18.2	26.4
Rx opioids	**311**		**316**		
With heroin	55	17.7	57	18.0	2.0
With fentanyl (nonprescription)	0	-	4	-	-
With cocaine	46	14.8	39	12.3	-16.6
With benzodiazepines	54	17.4	50	15.8	-8.9
With alcohol	44	14.1	62	19.6	38.7
Benzodiazepines	**73**		**69**		
With heroin	16	21.9	11	15.9	-27.3
With Rx opioids	54	74.0	50	72.5	-2.0
With methadone	25	34.2	15	21.7	-36.5
With oxycodone	24	32.9	24	34.8	5.8
With fentanyl	5	6.8	4	-	-
With fentanyl (nonprescription)	0	-	3	-	-
With cocaine	2	2.7	8	11.6	-
With alcohol	14	19.2	14	20.3	5.8
Fentanyl	**29**		**58**		
Prescription	**29**		**29**		
With heroin	2	6.9	2	-	-
With methadone	3	10.3	1	-	-
With oxycodone	10	34.5	3	-	-
With cocaine	3	10.3	2	-	-
With benzodiazepines	5	17.2	4	-	-
With alcohol	1	3.4	9	31.0	-
Nonprescription	**0**		**29**		
With heroin	0	-	22	75.9	-
With methadone	0	-	2	-	-
With oxycodone	0	-	3	-	-
With cocaine	0	-	6	20.7	-
With benzodiazepines	0	-	3	-	-
With alcohol	0	-	8	27.6	-
Alcohol	**195**		**239**		
With heroin	94	48.2	127	53.1	10.2
With Rx opioids	44	22.6	62	25.9	15.0
With methadone	24	12.3	21	8.8	-28.6
With oxycodone	13	6.7	20	8.4	25.5
With fentanyl	1	0.5	9	3.8	-
With fentanyl (nonprescription)	0	-	8	3.3	-
With cocaine	22	11.3	28	11.7	3.8
With benzodiazepines	14	7.2	14	5.9	-18.4

- Precentages are not calculated for counts <5.