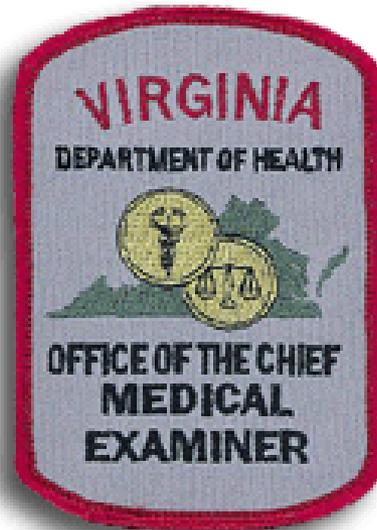


OFFICE OF THE CHIEF MEDICAL EXAMINER



Paul V. Benson, MD

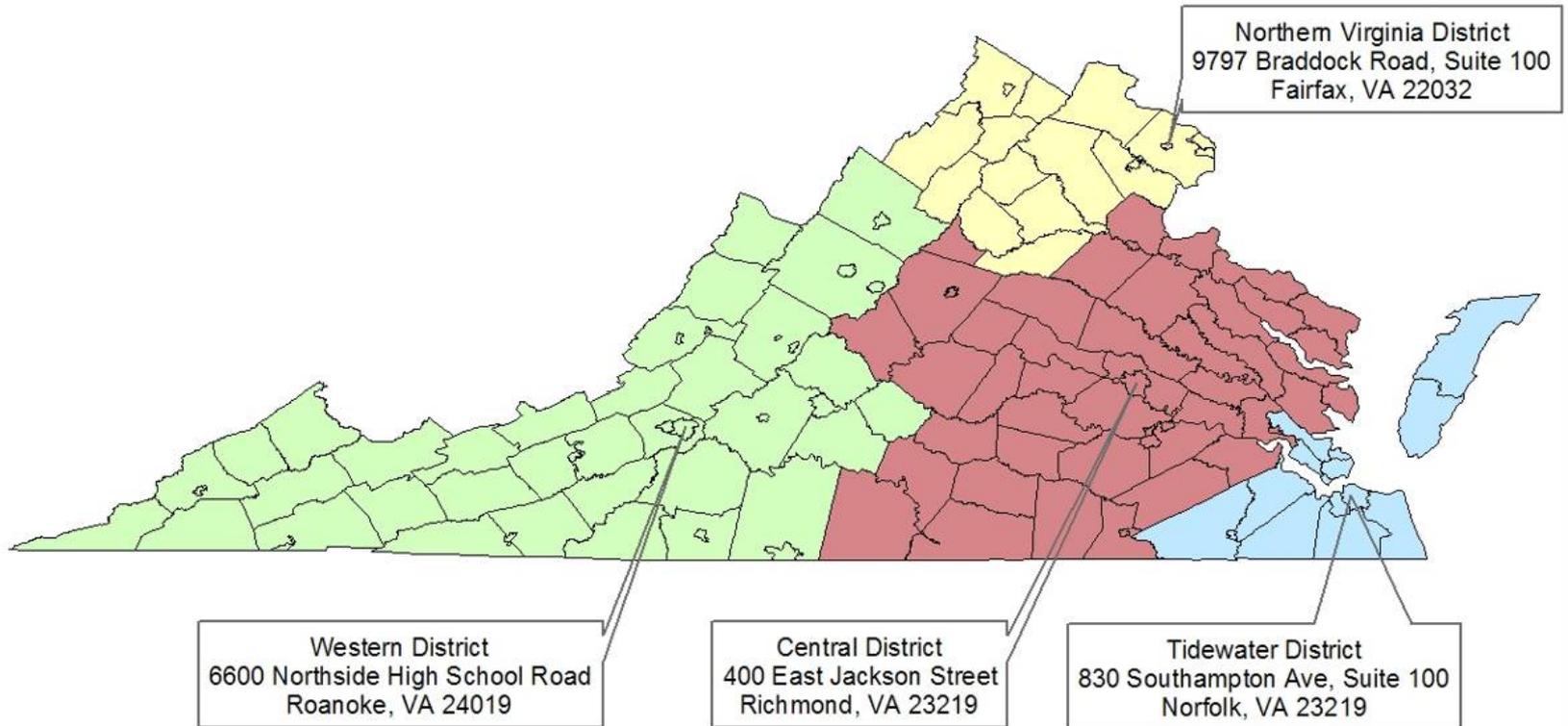
Assistant Chief Medical Examiner

Western District

Objectives

- Introduce Virginia OCME system
- Present data from Annual Report regarding prescription drug deaths.
- Review common autopsy findings in drug deaths
- Discuss ME Investigation of drug deaths
- Answer questions

Commonwealth of Virginia
Department of Health
Office of the Chief Medical Examiner





Duties

- Determine Cause and Manner of death
- Determine the time of death and injury
- Identify deceased if unknown
- Document injuries (or lack of them)
- Try to determine how injuries occurred
- Document natural disease
- Collect evidence from the body
- Assist other agencies
- Provide testimony if case goes to trial

§ 32.1-283

- trauma, injury, violence, or poisoning
- sudden deaths
- unattended by a physician;
- jail, prison, police custody
- state mental health or mental retardation facilities;
- Sudden Infant Death Syndrome;
- suspicious, unusual, or unnatural death.

Office of the Chief Medical Examiner's Annual Report, 2010

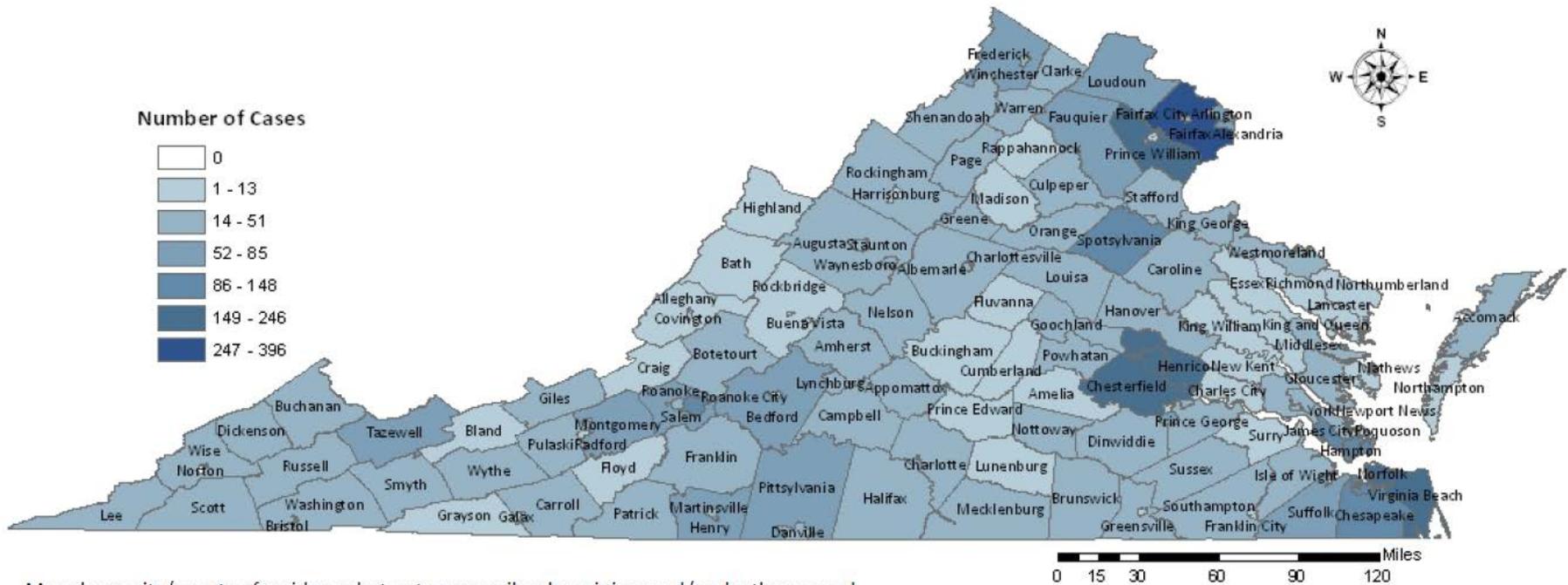


Commonwealth of Virginia
Virginia Department of Health
Office of the Chief Medical Examiner
December 2011

Table 1. Total Cases by OCME District by Manner, 2010

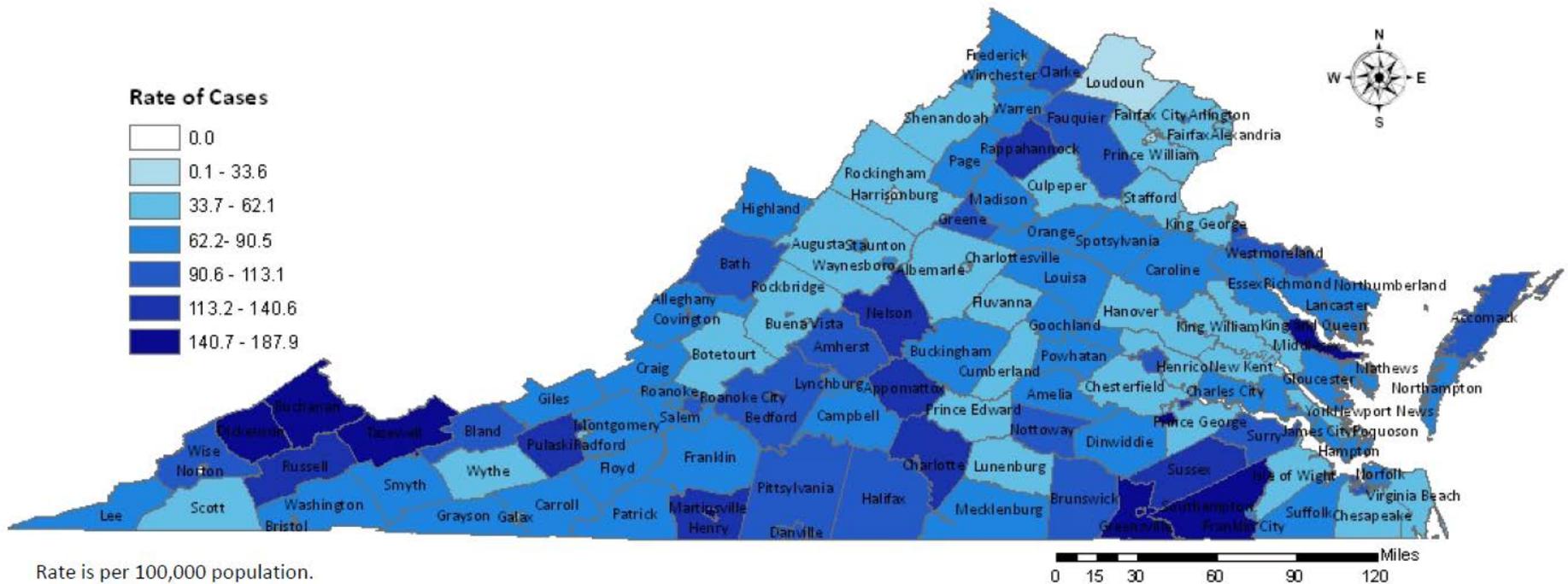
| Manner | OCME District | | | | Total |
|---------------------|----------------------|-----------------|------------------|----------------|--------------|
| | Central | Northern | Tidewater | Western | |
| Accident | 684 | 481 | 382 | 601 | 2148 |
| Homicide | 130 | 37 | 130 | 94 | 391 |
| Natural | 590 | 402 | 444 | 448 | 1884 |
| Suicide | 278 | 249 | 194 | 275 | 996 |
| Undetermined | 32 | 41 | 34 | 44 | 151 |
| Total | 1714 | 1210 | 1184 | 1462 | 5570 |

Figure 11. Total Cases by City/County of Residence, 2010



Map shows city/county of residence but not necessarily where injury and/or death occurred.
 A total of 433 cases were from non-Virginia residents or where residency was unknown.

Figure 12. Rate of Total Cases by City/County of Residence, 2010



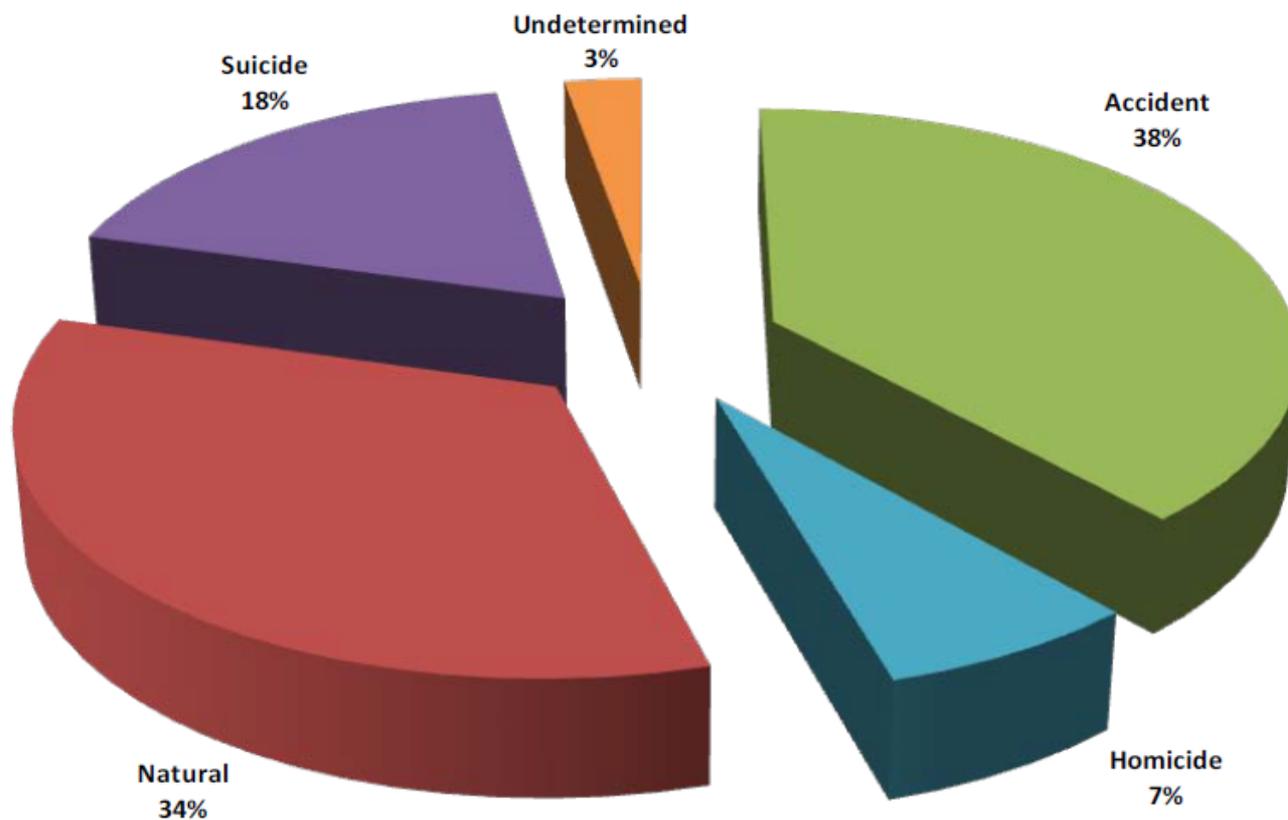
Rate is per 100,000 population.

Map shows city/county of residence but not necessarily where injury and/or death occurred.

A total of 433 cases were from non-Virginia residents or where residency was unknown.

- Accidents account for 38.6 percent of the deaths investigated by the OCME in 2010: the greatest proportion of deaths by any manner.
- Motor vehicle deaths still remained the most common cause of accidental deaths with 37.4 percent of all accidents followed by drug use with 24.1 percent

Figure 3. Total Cases by Manner, 2010



Accidental deaths by fatal agency

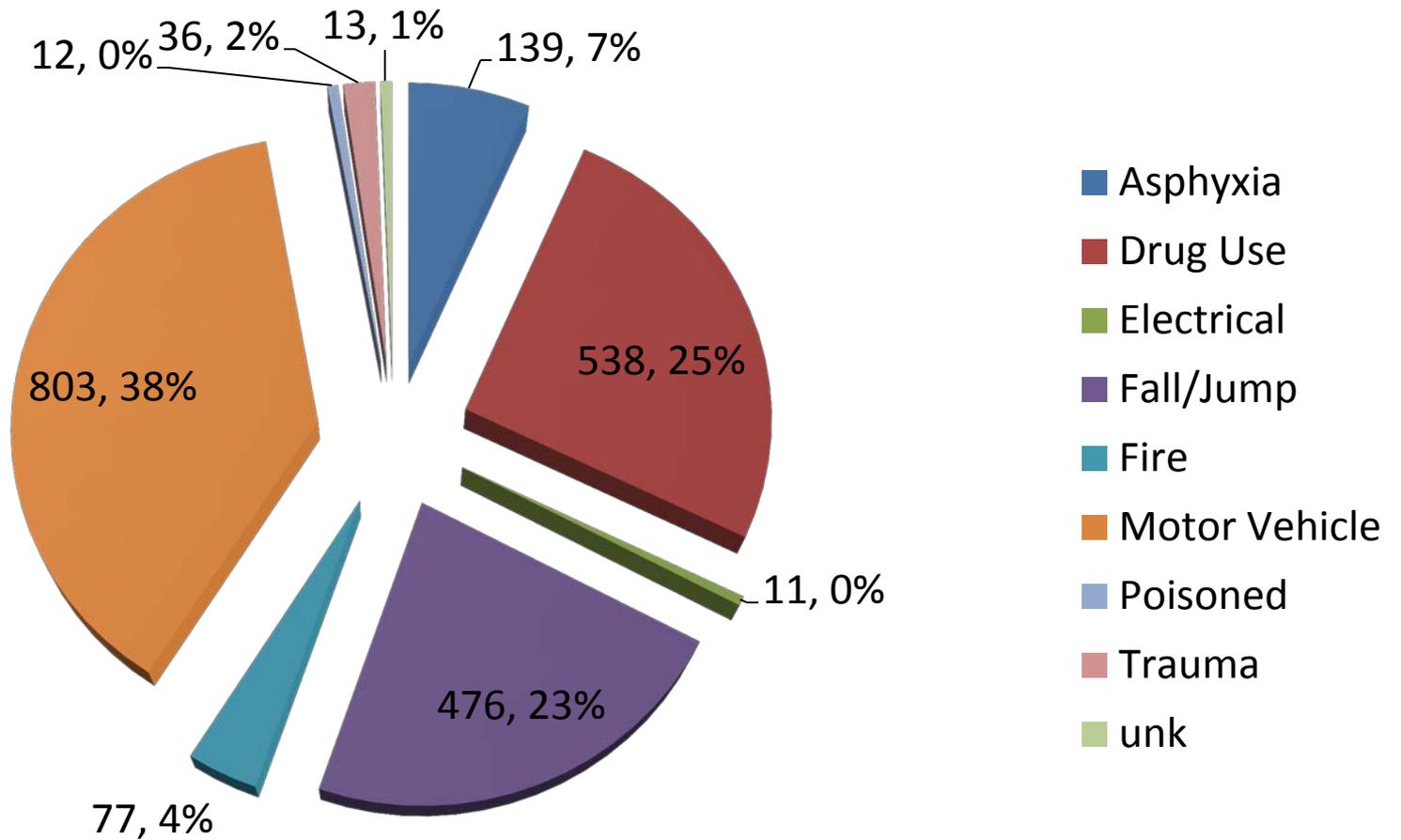
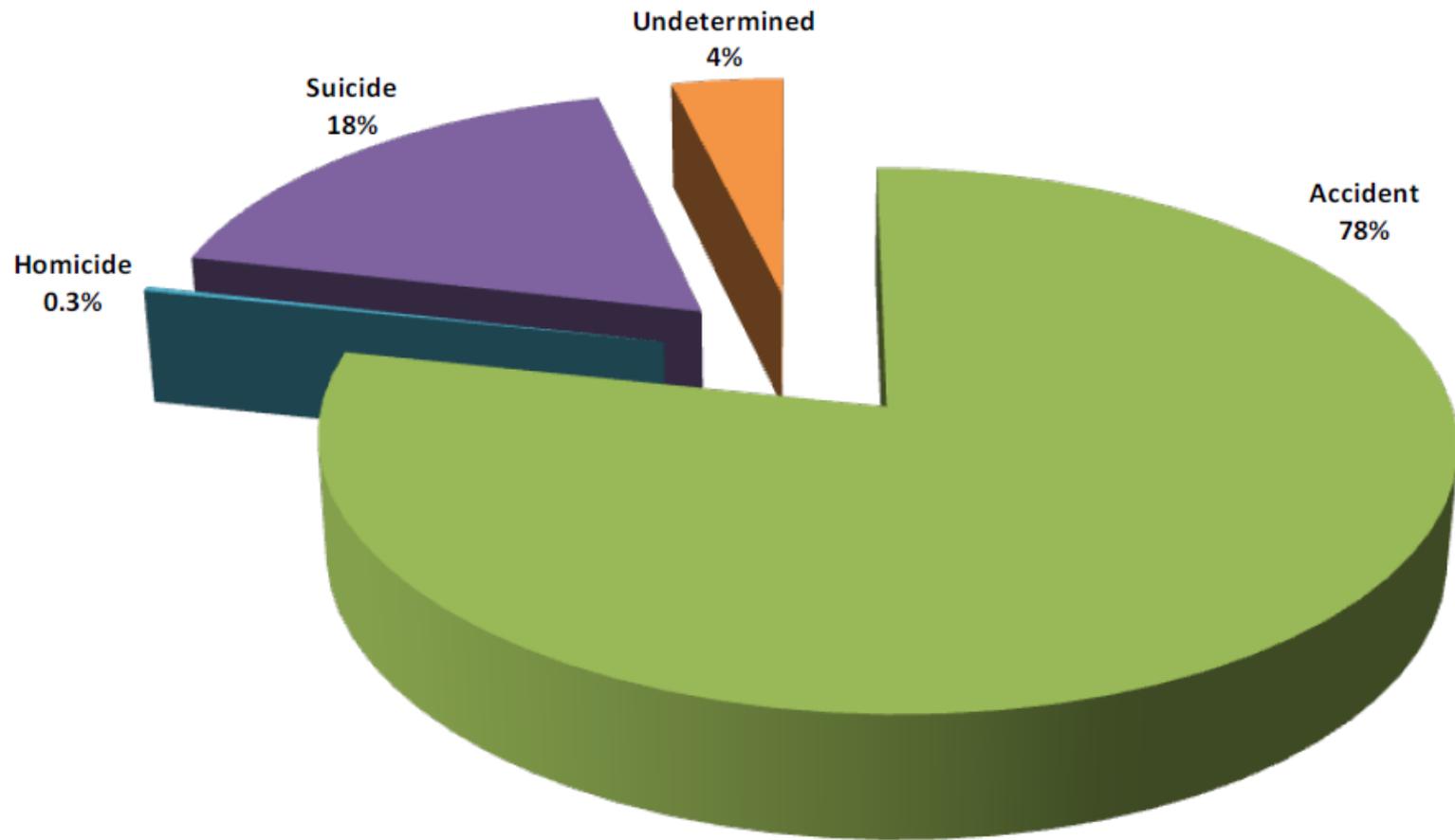


Figure 85. Drug/Poison Deaths by Manner, 2010



Trends

- Drug deaths had an overall increase of 80.2 percent since 1999.
- The overall rate of drug/poison caused deaths for Virginia residents was 8.2 per 100,000 people
- The majority of cases were accidents (78.3%), males (55.9%), whites (86.8%), and 45-54 year olds (29.9%)
- The Western OCME district handled over one-third of all drug/poison deaths

Figure 84. Total Drug/Poison Deaths & Rate by Year of Death, 1999-2010

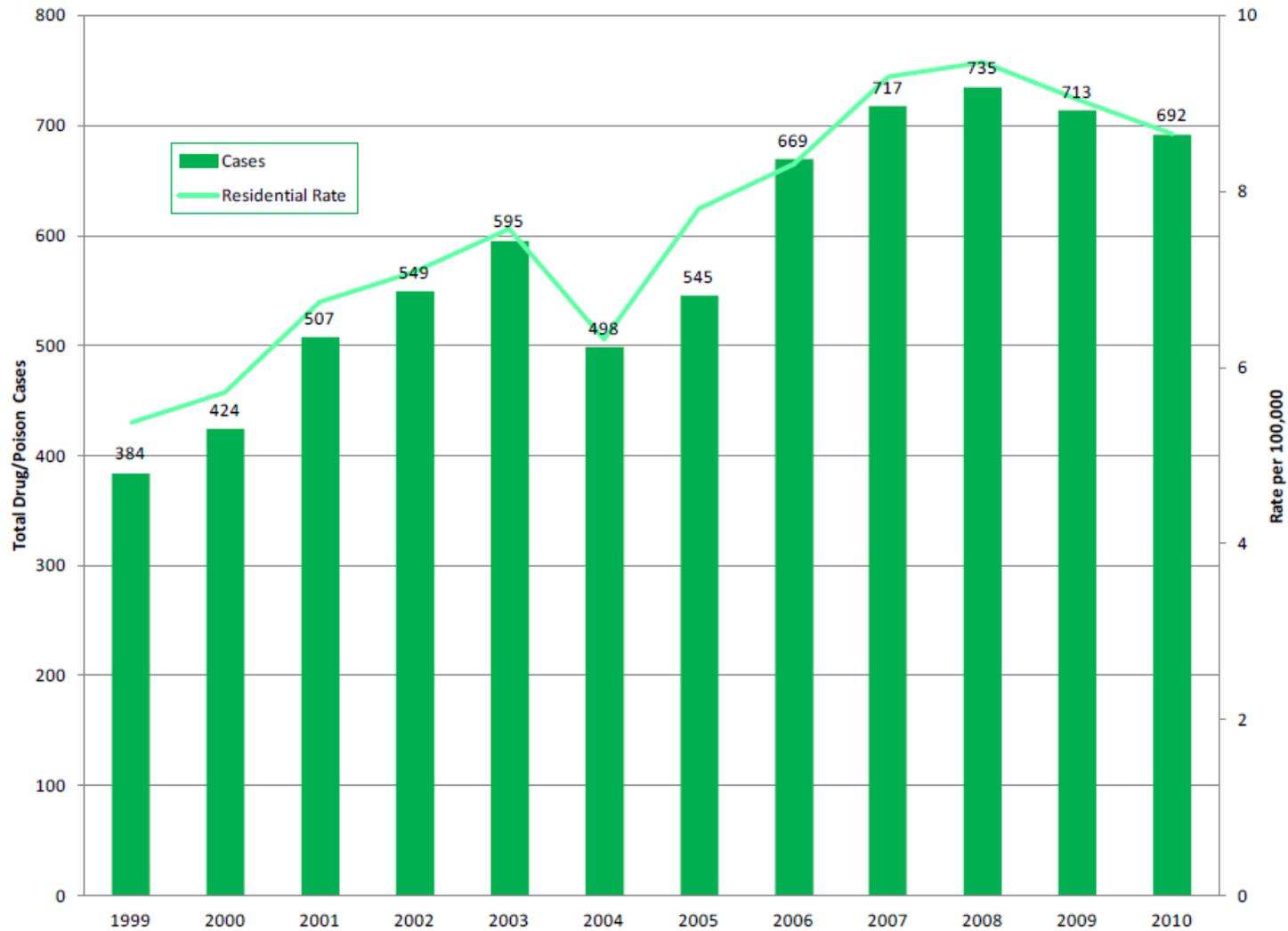
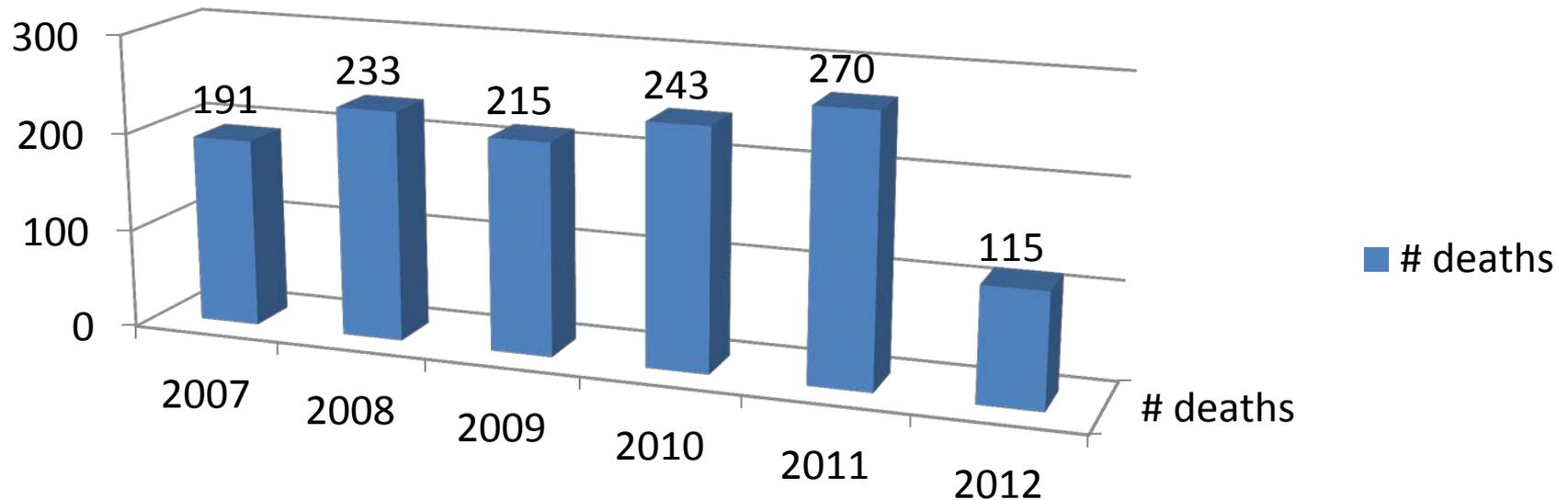


Table 38. Drug/Poison Deaths by OCME District, 2010

| OCME District | Cases | Percent |
|----------------------|--------------|----------------|
| Central | 164 | 23.7% |
| Northern | 151 | 21.8% |
| Tidewater | 121 | 17.5% |
| Western | 256 | 37.0% |
| Total | 692 | 100% |

Western District Drug Deaths since 2007 combined Rx and non-Rx

deaths



41% increase from 2007- 2011

Figure 93. Drug/Poison Deaths by City/County of Residence, 2010

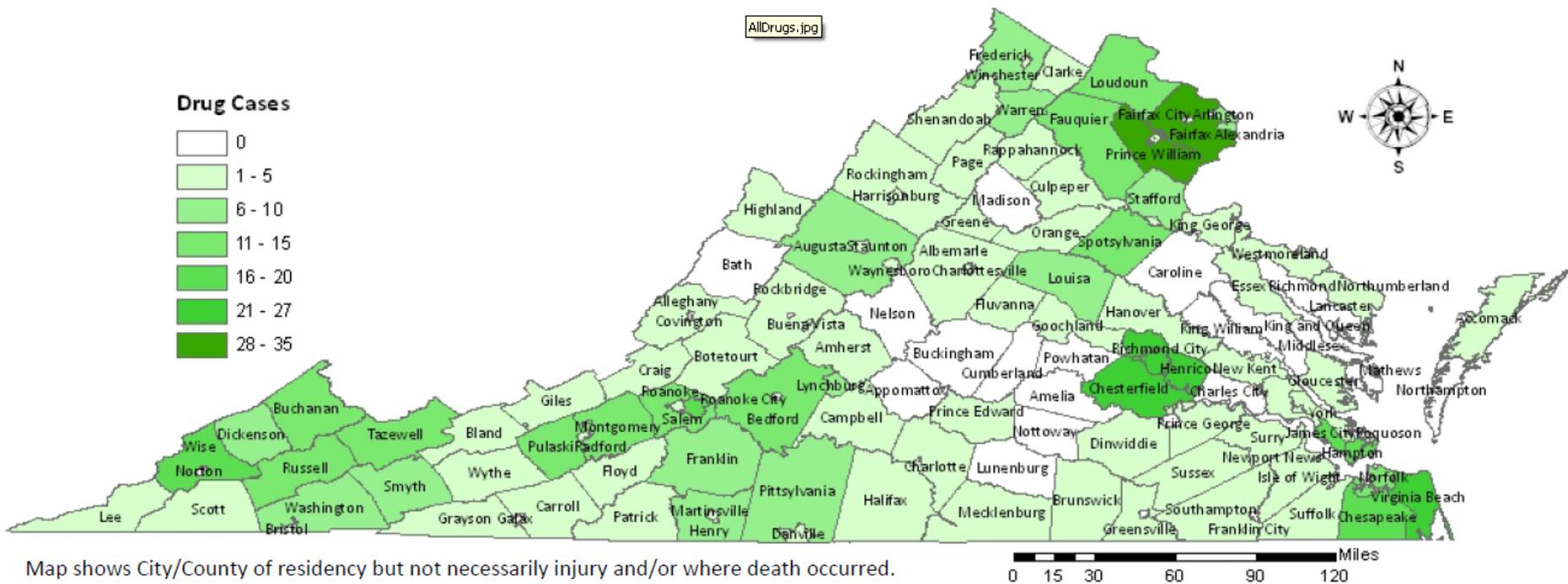
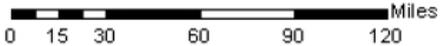
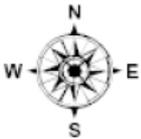
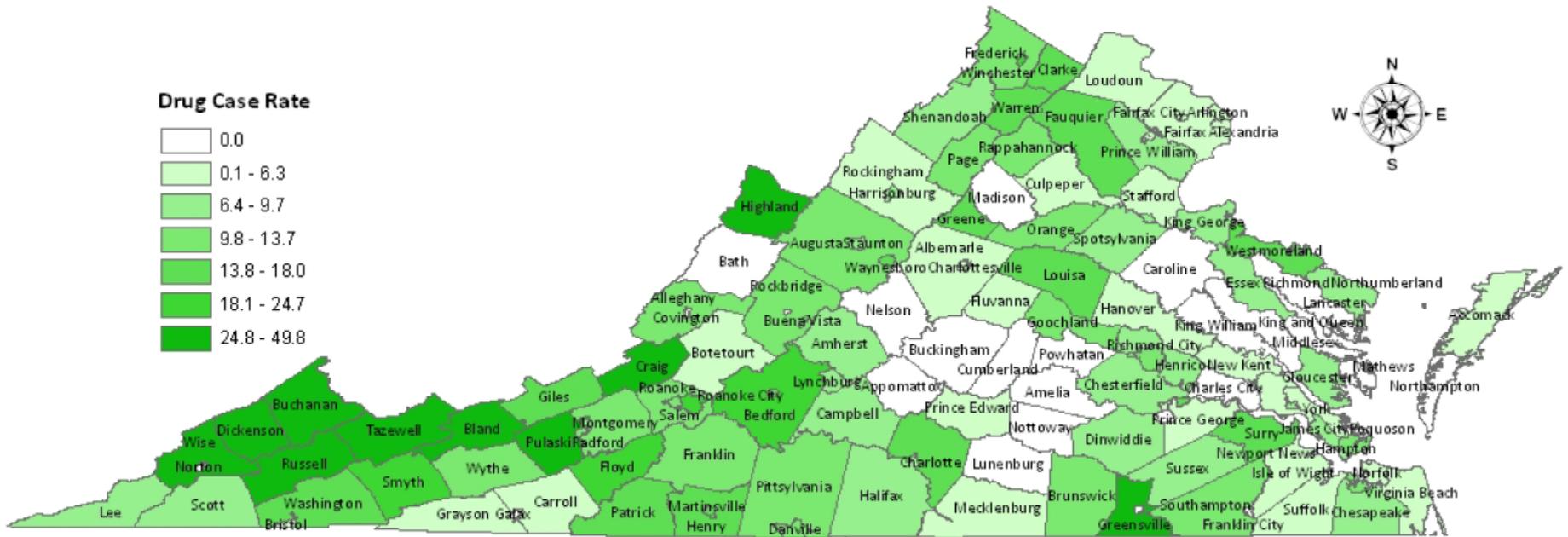
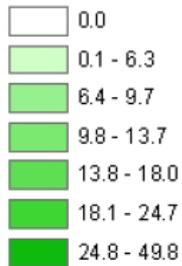


Figure 94. Drug/Poison Death Rates by City/County of Residence, 2010

Drug Case Rate



Rate is per 100,000 population.
 Map shows City/County of residency but not necessarily injury and/or where death occurred.
 A total of 36 cases were from out of state residents or residency was unknown.

Top 10 localities

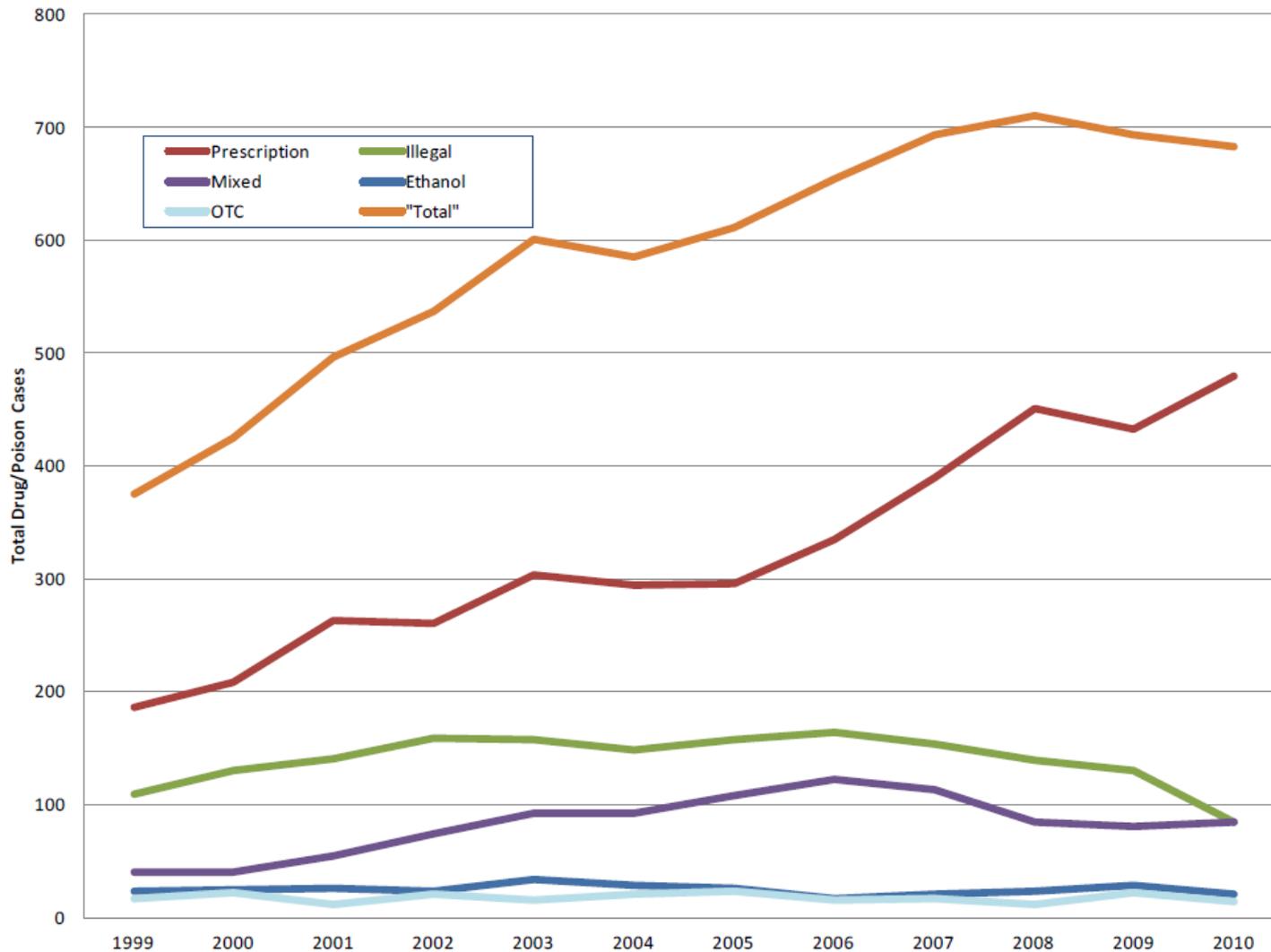
| County/City | Number of Deaths | Rate/100,000 |
|-----------------|------------------|--------------|
| Buchanan County | 12 | 49.8 |
| Russell | 13 | 45.0 |
| Dickenson | 7 | 44.0 |
| Bland | 3 | 44.0 |
| Highland | 1 | 43.1 |
| Craig | 2 | 38.5 |
| Wise | 15 | 36.2 |
| Pulaski | 11 | 31.5 |
| Smyth | 8 | 24.8 |

2010 Drug/poison deaths by locality

| County /City | Number of deaths | Rate/100,000 |
|-----------------|------------------|--------------|
| Roanoke City | 20 | 20.6 |
| Roanoke County | 12 | 13 |
| Franklin County | 7 | 12.5 |
| Botetourt | 2 | 6.0 |
| Floyd | 3 | 19.6 |
| Craig | 2 | 38.5 |
| Salem | 3 | 12.1 |
| Fairfax County | 35 | 3.2 |
| Virginia Beach | 26 | 5.9 |
| Richmond City | 21 | 10.3 |

- Which drugs?

Figure 88. Specific Type of Drug Category Deaths by Year of Death, 2010



"Total" equals the total of the 5 drug categories highlighted in this figure and does not include inhalants, ethylene glycol or NOS.

Figure 89. Drug/Poison Deaths by Drug Type by Gender, 2010

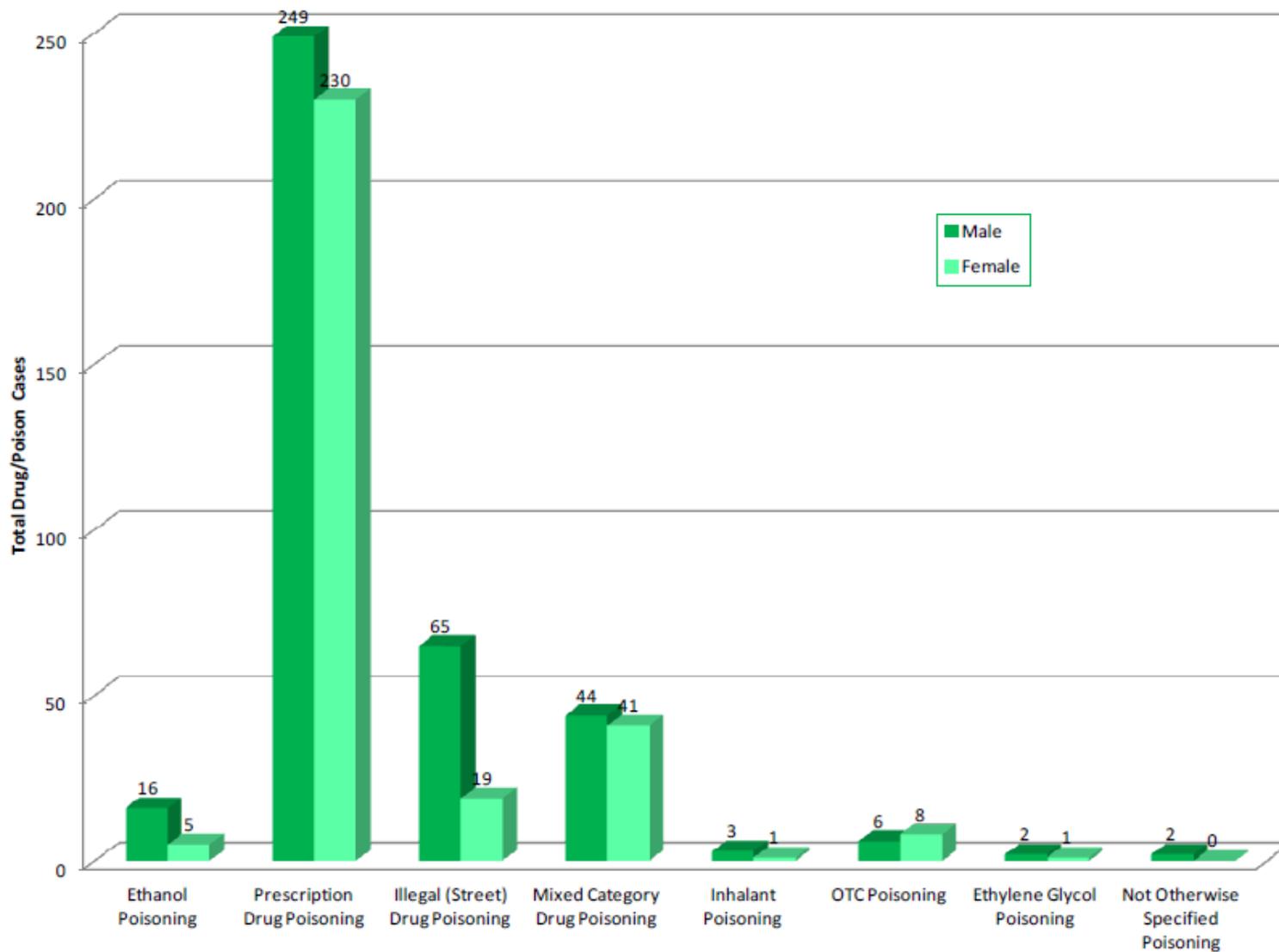
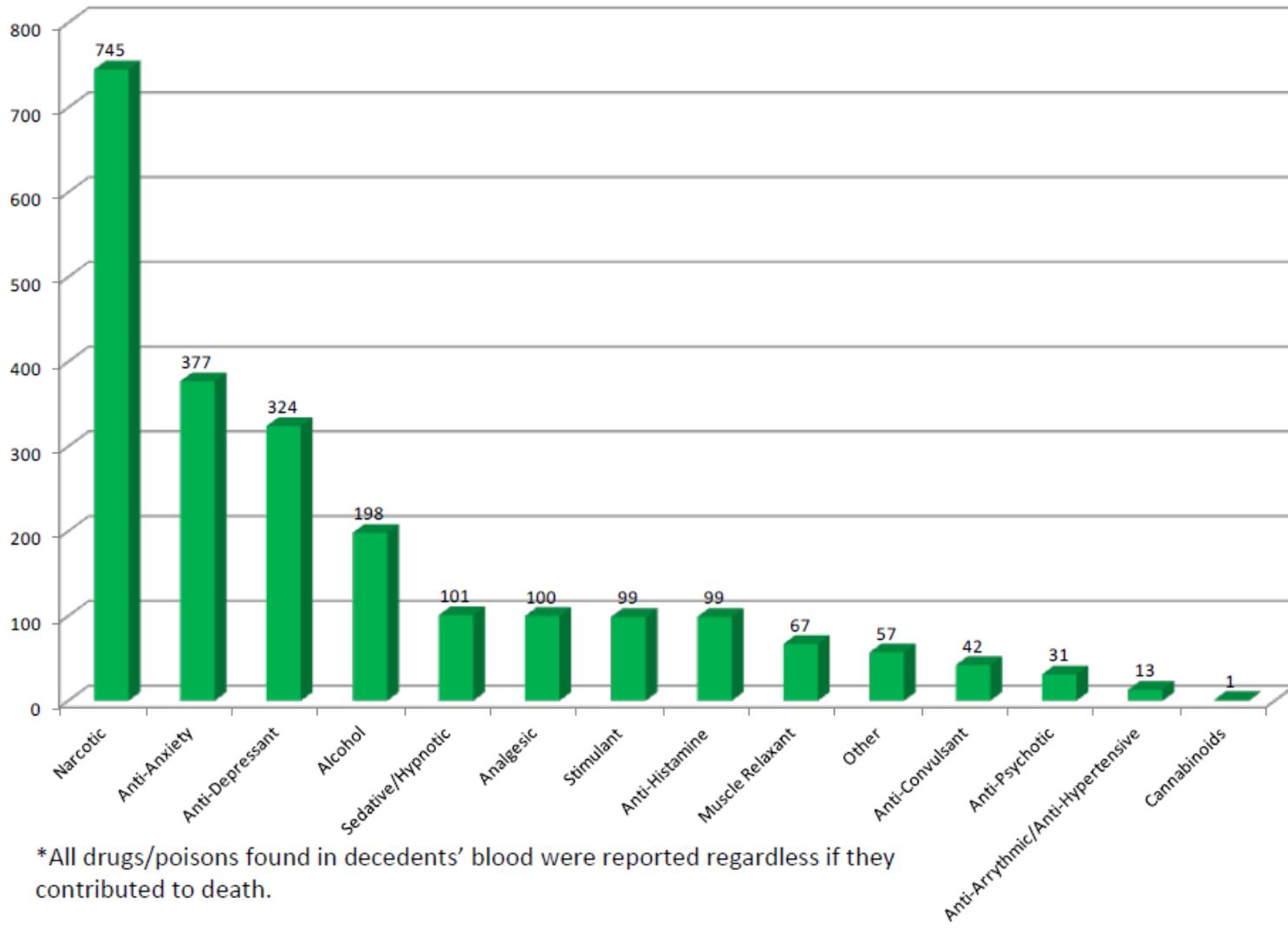


Figure 92. Classes of All Drugs/Poisons Present* in Drug/Poison Deaths, 2010



*All drugs/poisons found in decedents' blood were reported regardless if they contributed to death.

Narcotic

| | |
|---|------------|
| ACETYLMORPHINE (Heroin Metabolite) | 15 |
| CODEINE | 18 |
| FENTANYL | 62 |
| HYDROCODONE | 87 |
| HYDROMORPHONE | 22 |
| METHADONE | 130 |
| MORPHINE | 93 |
| NORPROPOXYPHENE (Propoxyphene Metabolite) | 9 |
| OXYCODONE | 148 |
| OXYMORPHONE | 44 |
| PROPOXYPHENE | 18 |
| Narcotic Total | 646 |

- Fentanyl, hydrocodone, methadone, and oxycodone (FHMO) were found to be partly or wholly responsible for 53.8 percent of drug only deaths.

- Oxycodone has exceeded methadone in the number of FHMO deaths it has caused, 154 versus 134, respectively
- The western portion of the state had 44.6% of all the FHMO cases

Figure 95. Comparison of FHMO, Prescription, & All Drug Deaths by Year of Death, 1999-2010

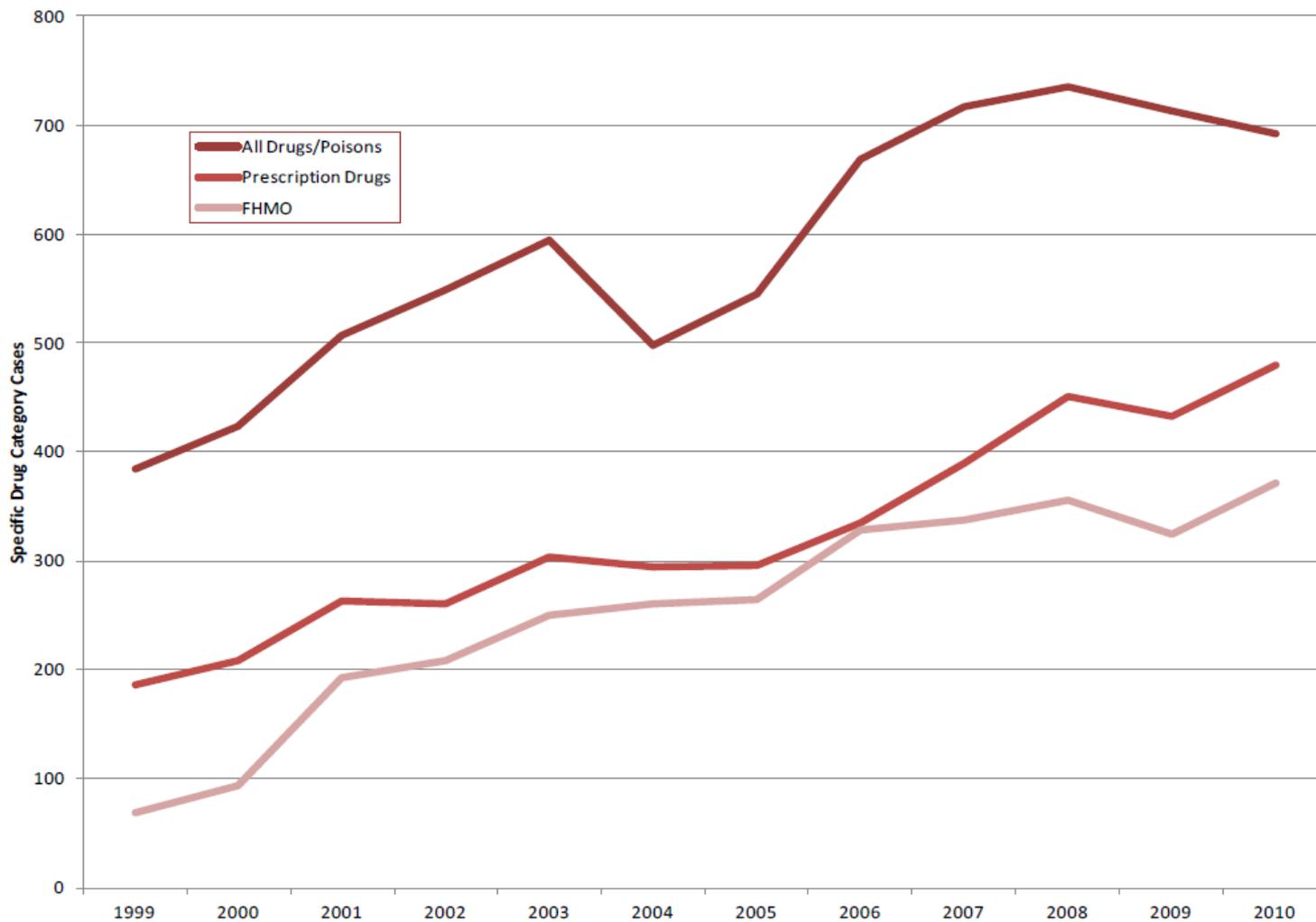
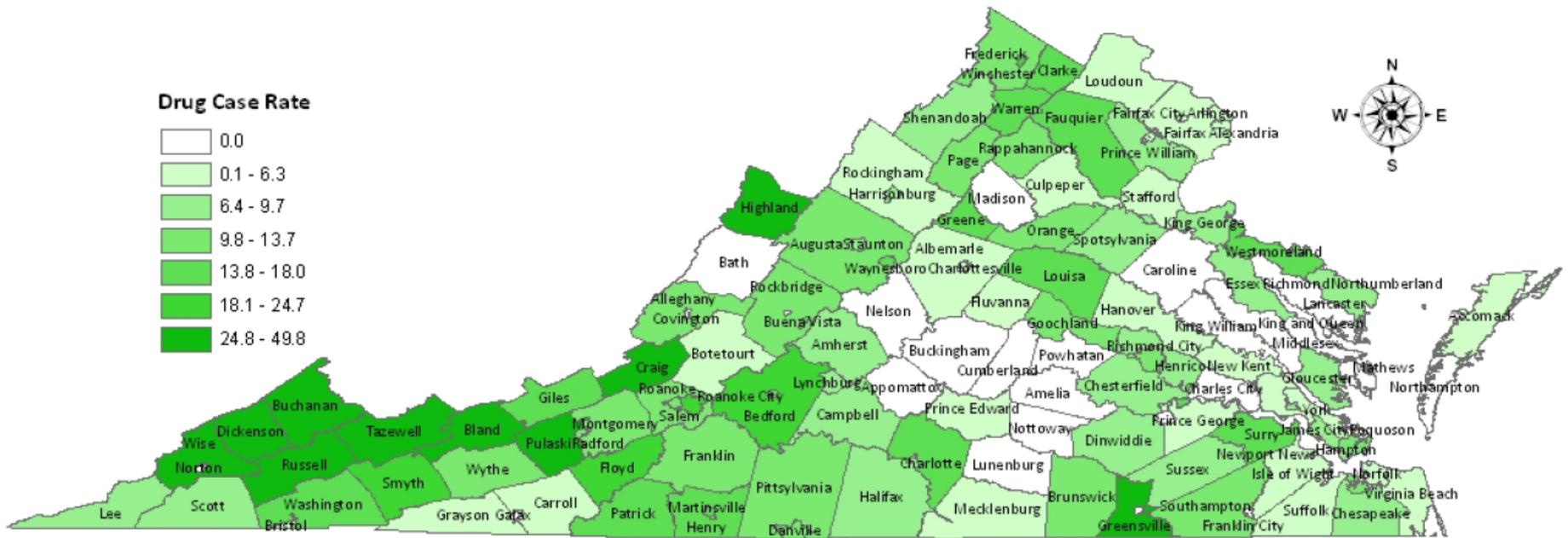
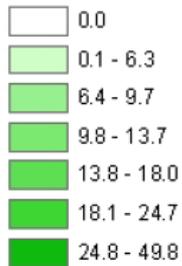


Figure 94. Drug/Poison Death Rates by City/County of Residence, 2010

Drug Case Rate

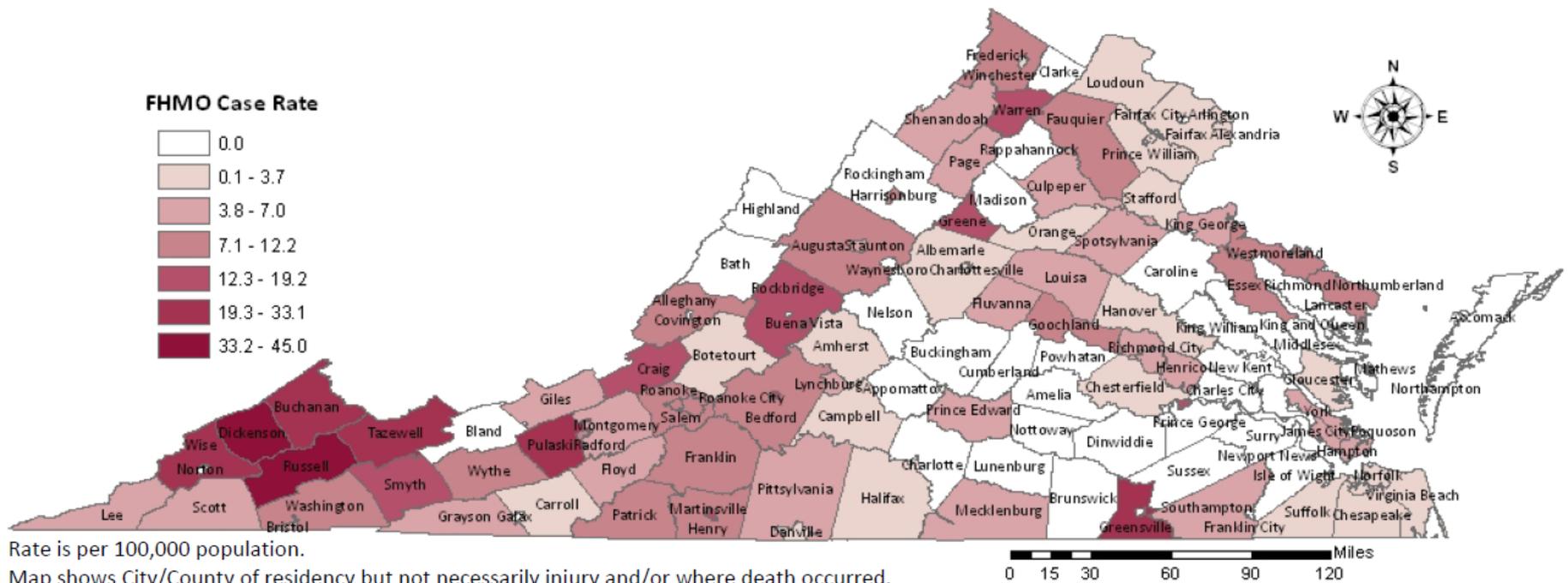


Rate is per 100,000 population.

Map shows City/County of residency but not necessarily injury and/or where death occurred.

A total of 36 cases were from out of state residents or residency was unknown.

Figure 98.FHMO Death Rates by City/County of Residence, 2010



Rate is per 100,000 population.

Map shows City/County of residency but not necessarily injury and/or where death occurred.

A total of 22 cases were from out of state residents.

Figure 97. FHMO Deaths by City/County of Residence, 2010

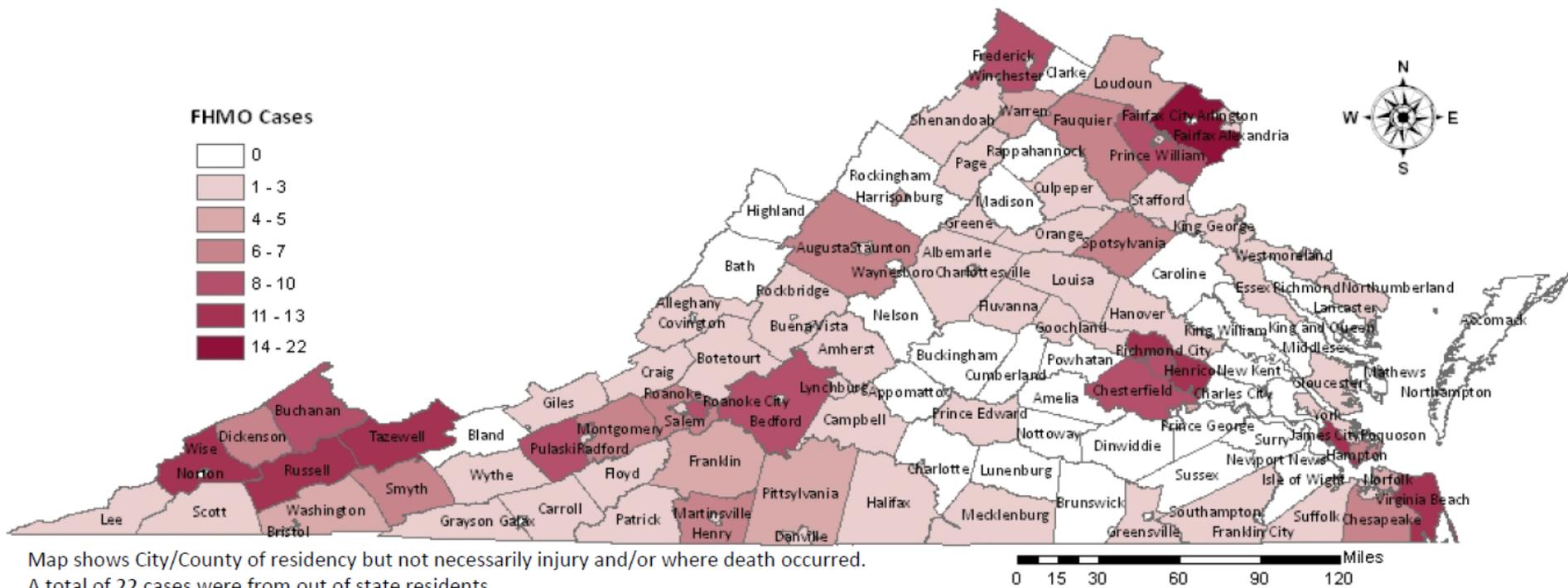
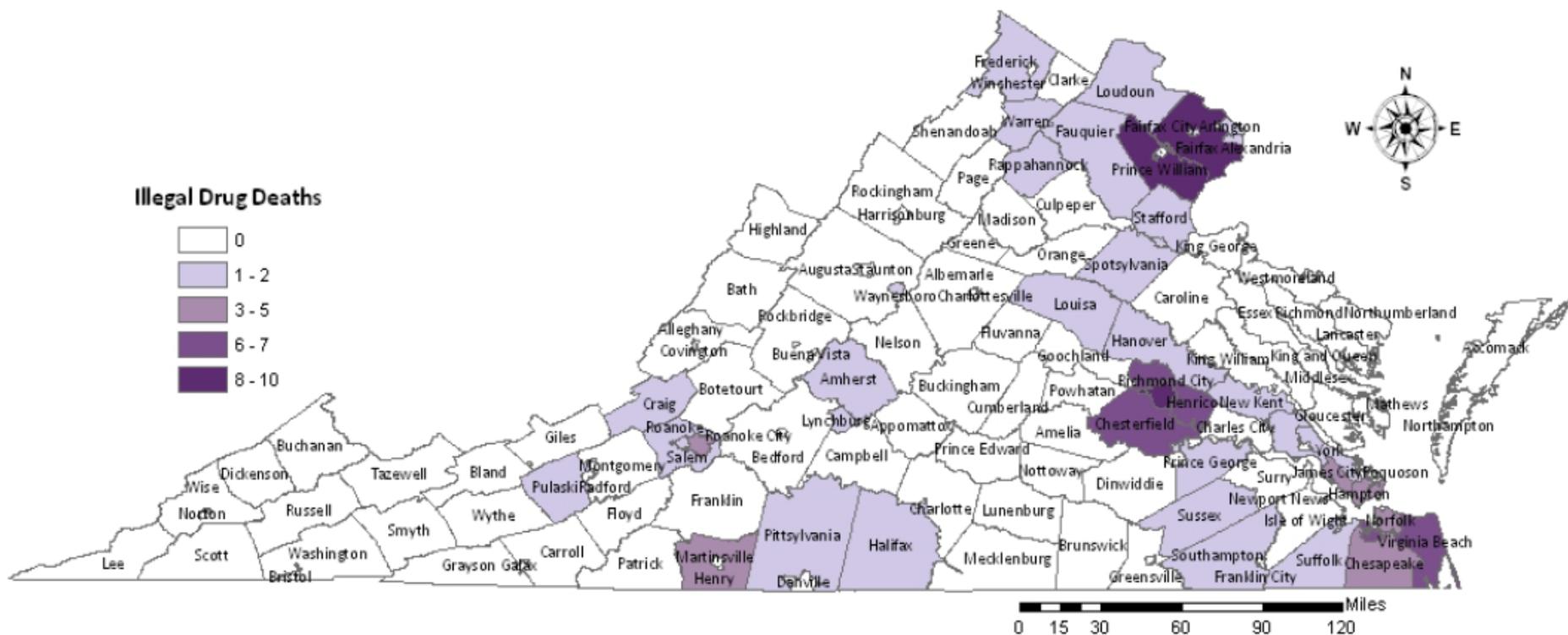


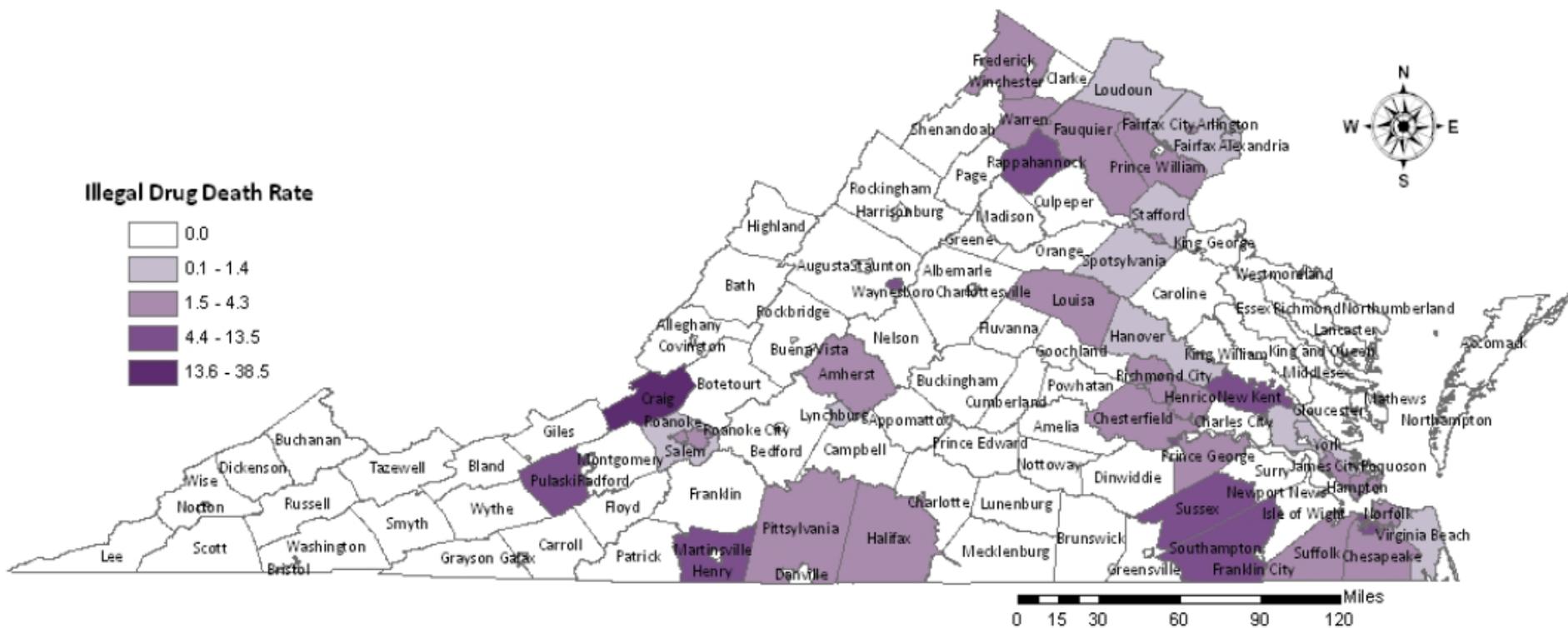
Figure 100. Cocaine & Heroin Deaths by City/County of Residence, 2010



Map shows City/County of residency but not necessarily injury and/or where death occurred.

A total of 8 cases were from out of state residents or where residency was unknown.

Figure 101. Cocaine & Heroin Death Rates by City/County of Residence, 2010



Rate is per 100,000 population.

Map shows City/County of residency but not necessarily injury and/or where death occurred.

A total of 8 cases were from out of state residents or where residency was unknown.

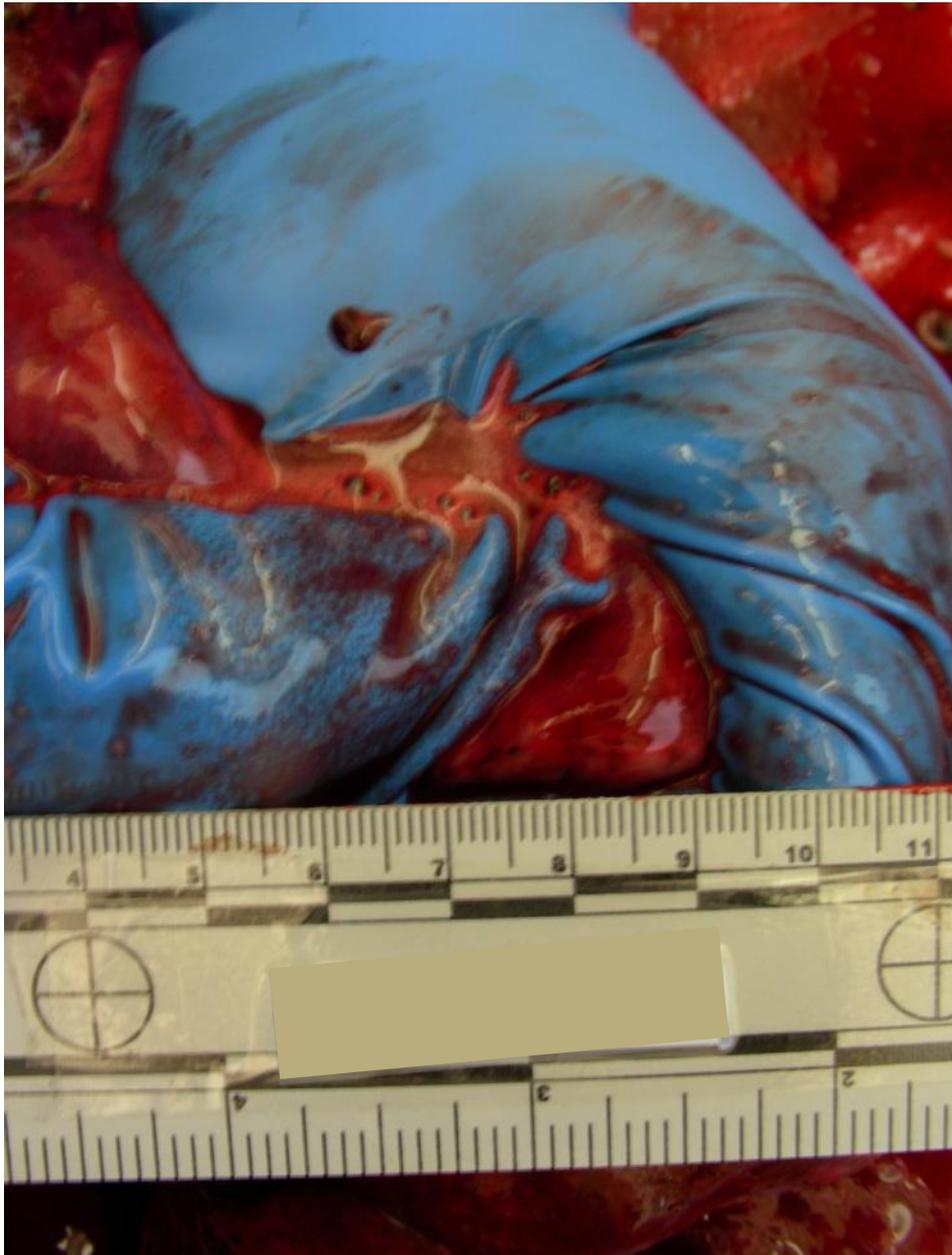
AUTOPSY FINDINGS

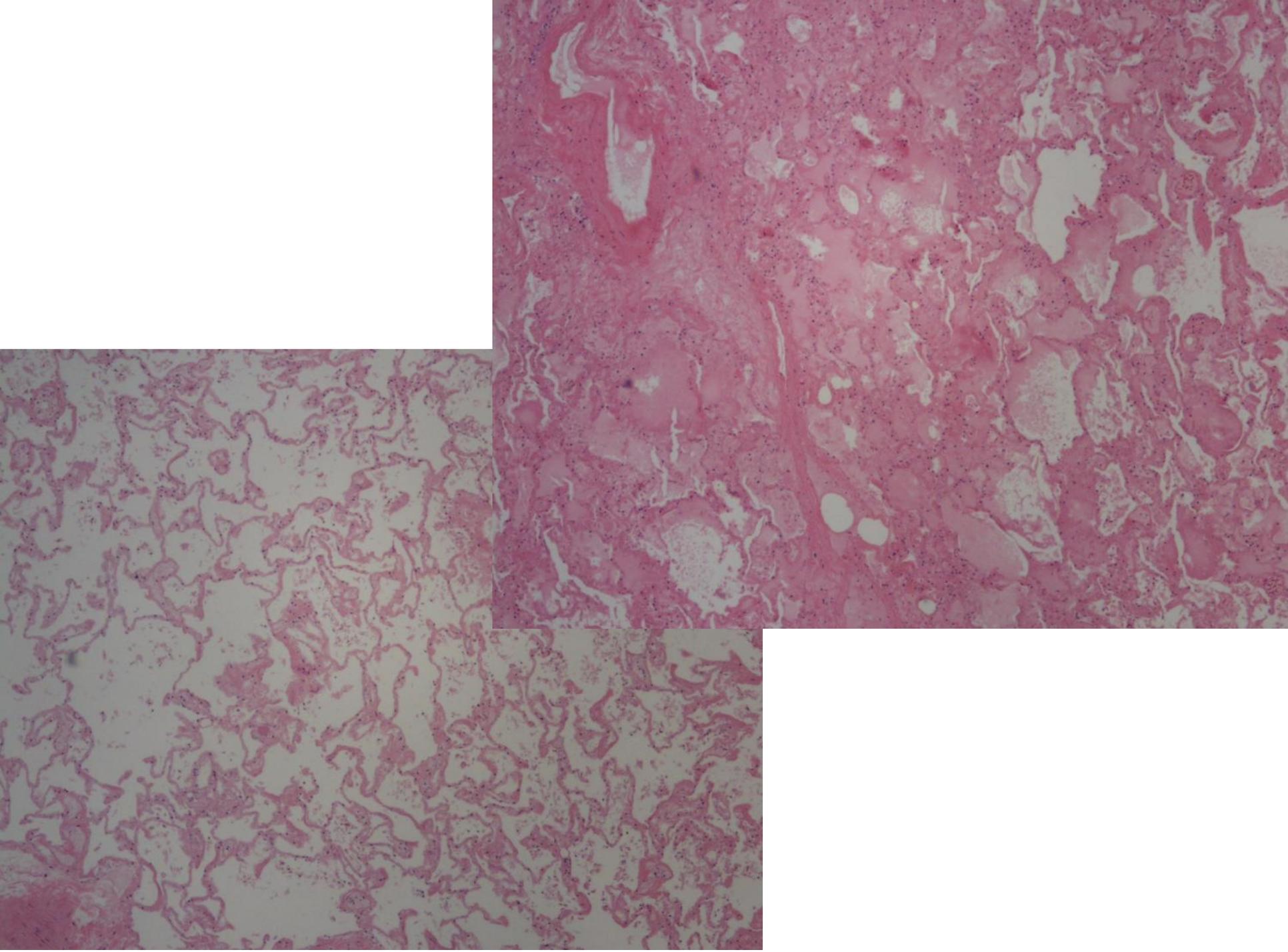


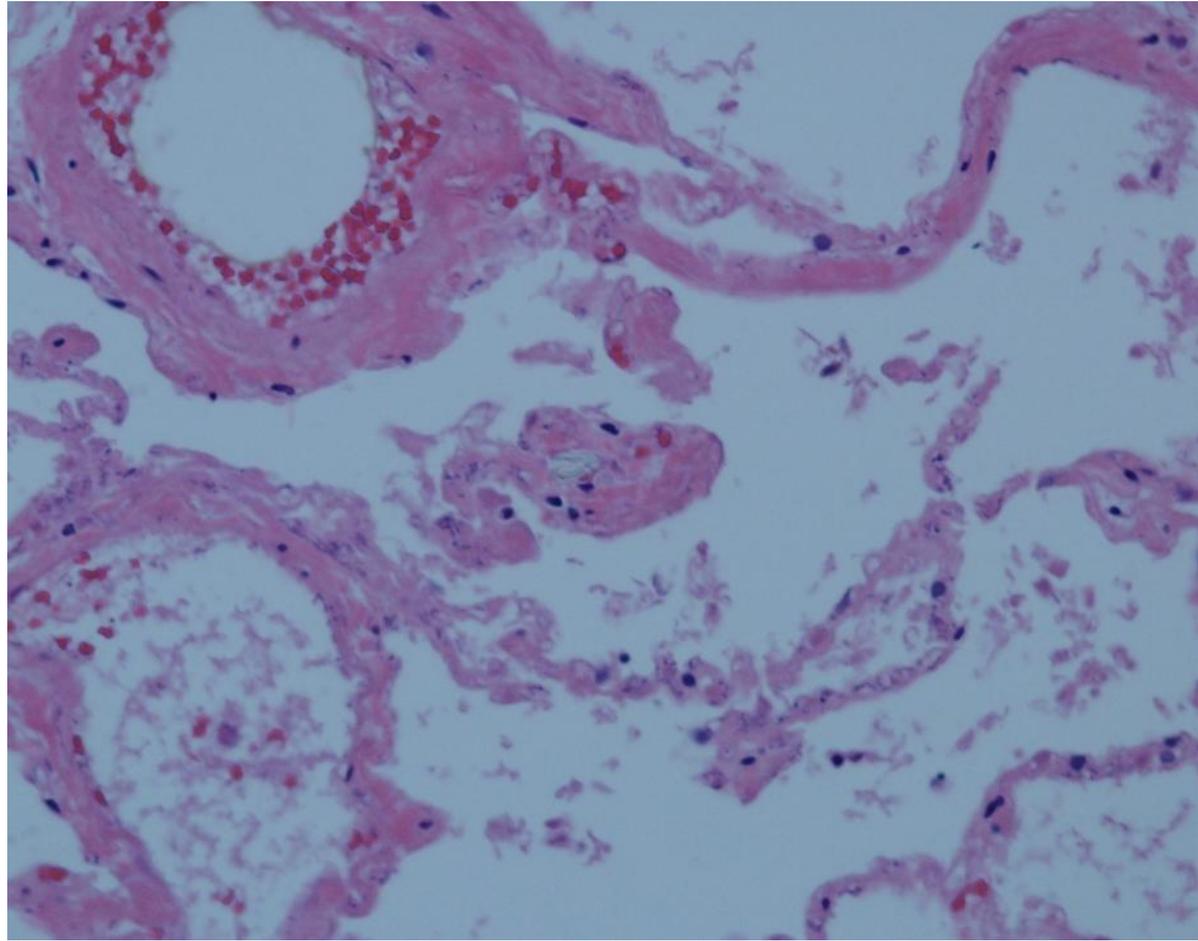


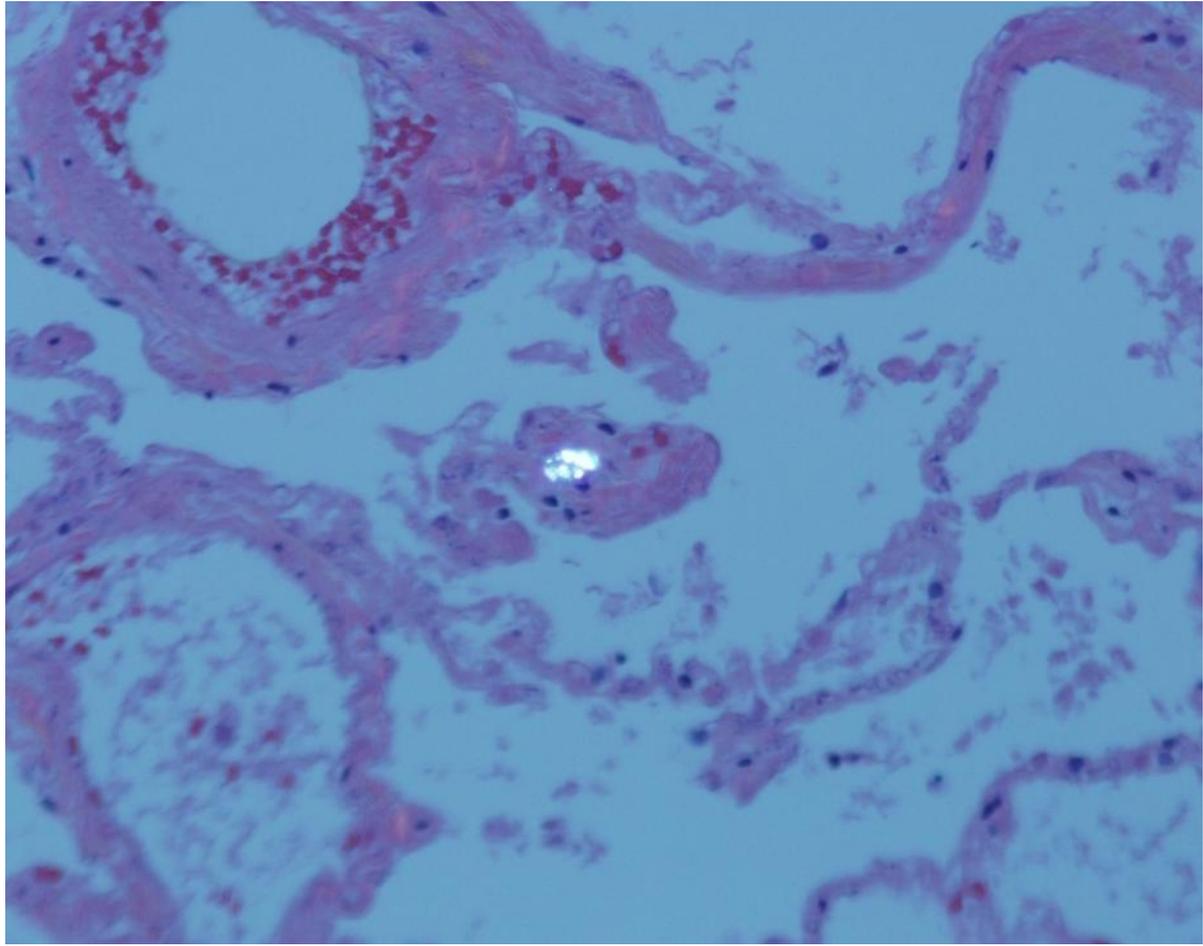












Investigation of drug deaths

- Drug deaths are usually first suspected due to a decedent's history or from a scene visit
- The scene should be extensively examined and documented by ME/investigator
 - Pill crushers/straws/mirrors
 - meds and bottles/dispensers
 - wrappers/other in trash cans
 - needles/syringes
 - Pipes/bongs/ashtrays
 - out of place medical equipment (stethoscopes)
 - spoons/lighters/foil
 - Aerosol cans/dust off/spray paint
 - Examine body for patches/injection marks/oral contents
 - Foam/gastric contents around mouth

Investigation of drug deaths

- Nothing
 - Scene has been ‘sanitized’ or ‘cleaned up’
 - Family or friends
 - Cover up suicide
 - Hide drug evidence
 - Keep drugs from being confiscated
 - “all his pills are missing/gone/stolen”
 - “just got them filled”
 - Note position of body/livor/rigor/etc
- If you have questions, call the district office

Prescription Monitoring Program

- The prescription monitoring program collects prescription data for Schedule II-IV drugs into a central database
- Designed to assist in deterring the illegitimate use of prescription drugs.
- Maintained by the Department of Health Professions
- Prescribers and dispensers may query the database to assist in determining treatment history and to rule out the possibility that a patient is "doctor shopping" or "scamming"
- A prescriber must obtain written consent from the patient before submitting an inquiry
- OCME may be provided information relevant to determination of the cause of death of a specific recipient.

- Questions?

