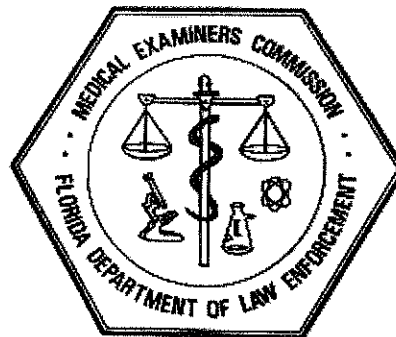

FLORIDA DEPARTMENT OF LAW ENFORCEMENT

OCTOBER 2012

Drugs Identified in Deceased Persons by Florida Medical Examiners

2011 Report



Data Collection

The Office of Vital Statistics reported more than 172,000 deaths occurred in Florida during 2011. Of these, the medical examiners reported on 9,135 drug-related deaths (whether the drug was the cause of death or was merely present) through toxicology reports submitted to the Medical Examiners Commission. In order for a death to be considered “drug-related”, at least one drug identified must be in the decedent; each identified drug is a drug occurrence. The vast majority of these 9,135 decedents (cases) had more than one drug occurrence.

The state’s medical examiners were asked to distinguish between whether the drugs were the “cause” of death or merely “present” in the body at the time of death. A drug is only indicated as the cause of death when, after examining all evidence and the autopsy and toxicology results, the medical examiner determines the drug played a causal role in the death. It is not uncommon for a decedent to have multiple drugs listed as a cause of death.

Although a medical examiner may determine a drug is present or detected in the decedent, the drug may not have played a causal role in the death. A decedent may have multiple drugs listed as present, and because decedents often have multiple drugs listed as cause and/or present, drug occurrence data found within this report should not be aggregated.

Although there were deaths involving other drugs in Florida, data was collected on the following drugs for this report:

- ✓ benzodiazepines (alprazolam, alpha-hydroxyalprazolam, clonazepam, 7-aminoclonazepam, chlordiazepoxide, desalkylflurazepam, diazepam, estazolam, flunitrazepam, flurazepam, lorazepam, midazolam, nordiazepam, oxazepam, temazepam, triazolam, alpha-hydroxytriazolam);
- ✓ cannabinoids;
- ✓ carisoprodol/meprobamate;
- ✓ cocaine;
- ✓ ethyl alcohol;
- ✓ gamma-hydroxybutyric acid (GHB);
- ✓ inhalants (chlorodifluoromethane, difluoroethane, Freon, helium, nitrous oxide, toluene);
- ✓ ketamine;
- ✓ methylated amphetamines (amphetamines, methamphetamine, MDMA, MDA, MDEA, phentermine);
- ✓ opioids (buprenorphine, codeine, fentanyl, heroin, hydrocodone, hydromorphone, meperidine, methadone, morphine, oxycodone, oxymorphone, propoxyphene, Tramadol);
- ✓ phencyclidine (PCP); and
- ✓ zolpidem.

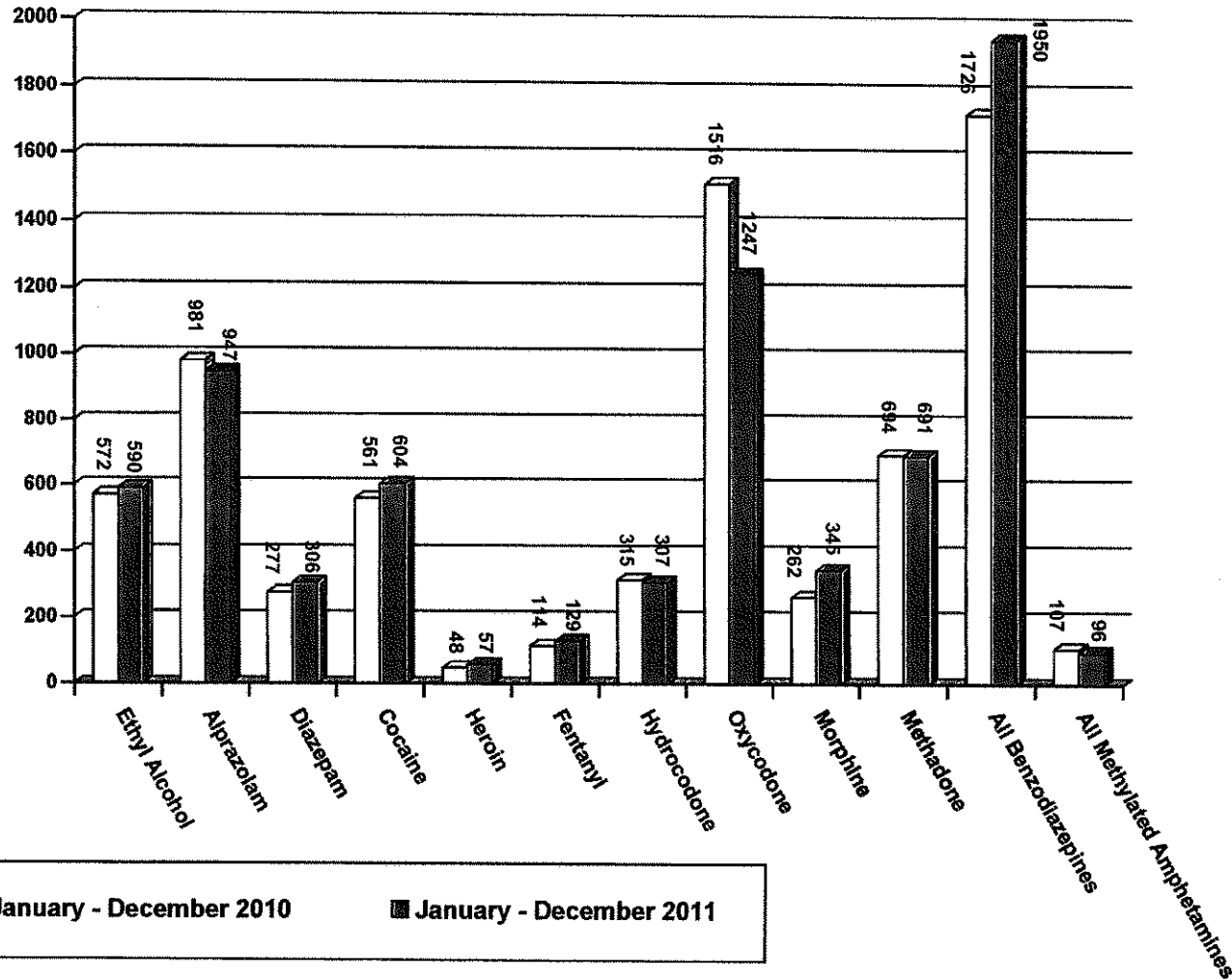
Questions regarding this report can be directed to Medical Examiners Commission Chairman Bruce A. Hyma, M.D.

Report Summary

Some general statewide trends for 2011 are listed below:

- ✓ The four most frequently occurring drugs found in decedents were ethyl alcohol (4,252), all benzodiazepines (5,947, including 1,879 alprazolam occurrences), oxycodone (2,128), and cocaine (1,444).
- ✓ The drugs that caused the most deaths were all benzodiazepines (1,950, including 947 deaths caused by alprazolam), oxycodone (1,247), methadone (691), cocaine (604), ethyl alcohol (590), morphine (345), hydrocodone (307), and diazepam (306).
- ✓ The five most harmful drugs, found in more than 50 percent of the deaths in which these drugs were found, were heroin (91.9 percent), methadone (72.4 percent), oxycodone (58.6 percent), fentanyl (54.7 percent) and alprazolam (50.4 percent). Occurrences of heroin have increased by 6.9 percent and deaths caused by heroin also increased by 18.8 percent when compared with 2010.
- ✓ While more than 50 percent of the deaths from all tracked inhalants were caused by the drug, the number of occurrences is small for each drug. The majority of inhalant deaths were caused by difluoroethane.
- ✓ The prescription drugs (benzodiazepines, carisoprodol/meprobamate, zolpidem, and all opioids excluding heroin) tracked through this report continued to be found more often than illicit drugs, both as the cause of death and present at death. Prescription drugs account for 86.5 percent of all drug occurrences in this report when ethyl alcohol is excluded.
- ✓ Occurrences of methadone increased 1.5 percent while hydrocodone declined by 8.5 percent when compared with 2010. Also, deaths caused by methadone (3 less than 2010) decreased this year. Deaths caused by hydrocodone (8 less than 2010) decreased this year.
- ✓ Oxycodone occurrences decreased by 10.7 percent and deaths caused by oxycodone decreased by 17.7 percent when compared with 2010.
- ✓ Cocaine occurrences increased by 3.0 percent, and deaths caused by cocaine increased by 7.7 percent when compared with 2010.
- ✓ Occurrences of fentanyl increased (4.0 percent), and deaths caused by fentanyl increased by 13.2 percent when compared with 2010.
- ✓ Alprazolam (Xanax), diazepam (Valium), and nordiazepam dominate the category of benzodiazepines; while occurrences of alprazolam decreased by 14.3 percent, and diazepam decreased by 1.7 percent, nordiazepam increased by 9.3 percent when compared to 2010. Alprazolam, diazepam and nordiazepam are rarely the sole cause of death, but are common as contributing to the cause of multi-drug deaths.
- ✓ 5,489 (2.8 percent less than 2010) individuals died with one or more prescription drugs in their system. The drugs were identified as both the cause of death and present in the decedent. These drugs may have also been mixed with illicit drugs and alcohol.
- ✓ 2,539 (6.37 percent less than 2010) individuals died with at least one prescription drug in their system that was identified as the cause of death. These drugs may have been mixed with other prescription drugs, illicit drugs and/or alcohol.

Comparison of Drug Caused Deaths 2010 versus 2011



Note: Due to small number of occurrences, some drugs are not included in the above chart.