

**Senate Committee on Governmental Affairs**  
**Legal Drugs, Illegal Purposes: The Escalating Abuse of Prescription Medications**  
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**Oral Testimony**  
**Marcella H. Sorg, RN, PhD, D-ABFA**  
**Margaret Chase Smith Center for Public Policy**  
**University of Maine**

Mr. Chairman and members of the Committee, my name is Dr. Marcella Sorg. I am a medical and forensic anthropologist in the Margaret Chase Smith Center's for Public Policy at The University of Maine. I am also a faculty member in the University's School of Nursing. The Margaret Chase Smith Center's Rural Drug and Alcohol Research Program has been working very hard to focus research and public outreach attention on issues of rural drug use and abuse. We are working with several community groups across the state, with the Maine Office of Substance Abuse, and with the Office of Chief Medical Examiner. I am grateful to you for this opportunity to address your committee on the topic of drug-related mortality.

Our study of Maine Drug Related Mortality Patterns included all of the 374 drug related deaths in Maine from 1997 to 2002, most of which were caused by prescription drugs. Investigatory challenges are significant in death investigations. Because many persons have multiple prescribers and pharmacies, it is difficult for investigators to find data on all prescriptions. Further, because people frequently fail to discard unused or old medications, current prescription status may not reveal complete information on an individual's access to drugs, even in their own home. Additionally, the drugs at the scene may or may not be related to drugs found in the victim.

Our study covered five years, 1997-2002. We conducted a more detailed examination of the 2001 case files, 90 deaths in all, to learn whether or not decedents actually had prescriptions for drugs causing their deaths. Information about prescription status was available for 96% of the suicides, but for only 52% of the accidents. Of those with prescription information, 88% of suicide victims and 52% of accident victims had a documented prescription for at least one drug that was listed in the cause of death. The lack of documented prescriptions for many drugs listed in the cause of death, particularly in the accidental deaths, suggests they have been diverted from other sources.

Our examination of the 374 decedents from the five-year period demonstrated that overdose victims are likely to have other medical problems, as documented in the autopsy and by medical history. About 55% have a history of mental illness, including depression, and about 50% have a history of drug abuse. More mental illness is reported among suicides (72%) than accidents (42%). Conversely, more substance abuse is reported among accidental overdoses (73%) than suicides (16%).

Many decedents had other physical conditions, such as cardiovascular disease, lung disease, obesity, or chronic pain. This is not surprising, since the mean age of our study population is 40 years. These underlying conditions may increase vulnerability to fatal drug overdose, either due to reduced capacity (for example, of lungs or heart) or because medications prescribed for the conditions may interact dangerously with drugs of abuse.

What particular drugs are more frequently associated with these deaths? The increase in drug deaths is largely a problem with drugs frequently prescribed for pain, anxiety, and depression. These are often found in combination.

An overwhelming majority of deaths in Maine involve narcotics (opiates and opioids) prescribed for pain, including methadone, oxycodone, fentanyl, and others. Narcotics (including heroin) are mentioned as a cause of death in just over half (53%) of all drug deaths. Prescription narcotics comprise 65% of those narcotic deaths. Narcotics are among the top five drugs found in toxicology of both accidental and suicidal deaths, but the specific drugs differ. Methadone and heroin are among the top five drugs in accidental deaths, but not for suicides. Two other narcotics, oxycodone and propoxyphene, are identified among the top five drugs for suicide toxicology.

Methadone is mentioned as a cause of death (alone or in combination with other drugs) in 18% of all drug deaths, 26% of all accidental overdoses, and 33% of deaths caused by narcotics. It is found in the toxicology tests of 24% of all drug deaths. Methadone is often found with other narcotics, most frequently heroin or oxycodone.

Most people who died from methadone toxicity were not involved in methadone maintenance programs. For the year 2001, there were 14 cases in which methadone is listed on the death certificate. Of these, 21% were being treated in a methadone maintenance clinic and 21% had a prescription from a pain clinic; 58% had no documented prescription.

There are wide variations in individual tolerance for methadone. Therapeutic and fatal dose ranges can overlap. Doses that are safe in one person can be fatal in another. Individual tolerance can be reduced during substance abuse treatment or while incarcerated, for example, raising risk. The risks for diverted liquid methadone is increased because the concentrations are not usually obvious to the user.

Oxycodone is a synthetic opiate prescribed for pain. Marketed since 1995 in the long-acting form, oxyContin, this drug is taken orally and sometimes injected by abusers. Oxycodone is implicated as the cause of death on 7% of all death certificates overall over the five year study period and appears in 17% of all toxicology tests.

Drugs prescribed to reduce anxiety, benzodiazepines, for example diazepam (valium), are found in about a third (32%) of Maine drug death toxicology tests. Often considered benign, benzodiazepines nevertheless are implicated as causing 9% of the deaths in our study (11 suicides and 23 accidents), often in combination with narcotics.

Not all substances found in toxicology tests may be related to the cause of death. Nevertheless, the frequency distribution of drugs found in victims can serve as an indirect measure of the supply of drugs available through both licit and illicit sources. Among the toxicology tests of the 374 drug death victims, 71% have one or more narcotics, 32% have one or more anti-anxiety medications, and 37% have one or more antidepressants. These three drug classes are the most important in terms of risks to public health.

Any attempt to address the problem of prescription drugs and the risks they pose to the public health must be comprehensive. Clearly, electronic prescription monitoring systems are necessary. But experience with these programs nationally and internationally shows that real-time, technically advanced systems are needed to provide immediate information to prescribers and pharmacies at the point of service. Second, research is needed to develop more sensitive and sophisticated practice guidelines, particularly for medical prescribers who care for patients who have multiple prescriptions and/or multiple health care providers. Third, investigators in both medical and law enforcement settings need expanded resources to handle what has been a nearly exponential increase in case volume.

Thank you once again for the opportunity to share our research and recommendations about this emergent problem. Dr. Greenwald and I will be happy to answer any questions you might have.

Marcella H. Sorg R.N., Ph.D., D-ABFA, is a medical and board-certified forensic anthropologist. She is a research associate at the Margaret Chase Smith Center for Public Policy at the University of Maine and serves on the faculties of the School of Nursing and Department of Anthropology. Dr. Sorg's policy research focuses on public health and health policy as it relates to the forensic investigation of death and injury. She has worked for many years on issues related to rural populations, substance abuse, morbidity-mortality patterns, and injury prevention, as well as forensic anthropology, and has been the state's consulting forensic anthropologist since 1977.