



E86 An 11-Year Review Conducted by the West Tennessee Regional Forensic Center (WTRFC) on Deaths While in an Inpatient Rehabilitation or Counseling Center

Braden E. Taylor*, 99 Sawyer Circle, Apt 477, Memphis, TN 38103; and Erica Curry, MD, 298 Schilling Boulevard, Collierville, TN 38017

After attending this presentation, attendees will be able to recognize some of the most common causes of death seen in the inpatient rehabilitation and counseling center setting, in addition to recognizing a variety of other factors that play a role in drug- and alcohol-related deaths.

This presentation will impact the forensic science community by helping medical examiners recognize the most common causes of death seen in the inpatient rehabilitation and counseling center setting, in addition to providing information that will help rehabilitation centers in implementing programs to better manage the health problems that accompany drug and alcohol addiction.

Drug abuse in the United States continues to be a growing problem. According to the National Institute on Drug Abuse (NIDA), the total number of drug overdose deaths in the United States alone has more than doubled from 2002 to 2015, with deaths caused by heroin exhibiting a 6.2-fold increase.¹ Alcohol abuse also continues to be a widespread issue. The Substance Abuse and Mental Health Services Administration (SAMHSA) reports that an estimated 17.3 million Americans were dependent on alcohol or had problems related to their alcohol use in 2013.² With these numbers in mind, rehabilitation centers face the daunting task of managing not only their patients' addictions, but also the sequelae of those addictions. The primary purpose of this study is to present a retrospective review of deaths while in an inpatient rehabilitation or counseling center for the treatment of drug or alcohol addiction reported to the West Tennessee Regional Forensic Center (WTRFC) over a 11-year period, from 2006-2016.

There were 14 deaths of persons undergoing treatment for drug and alcohol addiction in an inpatient rehabilitation and counseling center reported to the WTRFC during this 11-year period. All individuals were either found deceased at the inpatient center where they were being treated (4/14, 28.6%) or were transported to a nearby hospital where they were pronounced deceased shortly after (10/14, 71.4%). The yearly distribution of these 14 deaths ranged from 0 deaths in 2006, 2008, and 2015, and up to 3 deaths in 2012 and 2014 (average of 1.4 deaths per year). Most of the individuals involved were male (10/14, 71.4%) and White (10/14, 71.4%). The average age was 44.5 years (age range 21-66 years). The manner of death in a majority of these cases was natural (11/14, 78.6%), while the remaining cases were classified as either an accident (2/14, 14.3%) or a suicide (1/14, 7.1%). Cardiac-related diseases, including hypertensive/atherosclerotic cardiovascular disease and cardiac arrhythmia associated with cardiomegaly, were responsible for many of these deaths (6/14, 42.9%). Other causes of death included complications of morbid obesity (2/14, 14.3%), chronic obstructive pulmonary disease (1/14, 7.1%), bronchopneumonia (1/14, 7.1%), subarachnoid hemorrhage associated with cocaine (1/14, 7.1%), methadone toxicity (1/14, 7.1%), benzodiazepine withdrawal (1/14, 7.1%), and hanging (1/14, 7.1%). Many of the decedents were being treated at their respective rehabilitation centers for polysubstance abuse (5/14, 35.7%). The remaining individuals sought treatment for either alcohol (4/14, 28.6%), cocaine (3/14, 21.4%), opioid (1/14, 7.1%), or heroin addiction (1/14, 7.1%). Among the 5 individuals being treated for polysubstance abuse, opioids were involved in 4 cases (80%), cocaine and benzodiazepines in 3 cases (60%), and alcohol in 1 case (20%). Many of these individuals also presented with mental illness, including schizophrenia (2/14, 14.3%), schizoaffective disorder (1/14, 7.1%), psychosis not otherwise specified (3/14, 21.4%), and bipolar disorder (2/14, 14.3%). Half of the 14 decedents also reported having feelings of depression upon admission to their rehabilitation center.

This retrospective study provides an initial review of drug- and alcohol-related deaths that occurred during treatment at inpatient rehabilitation or counseling centers in Shelby County, TN. These findings may help rehabilitation centers in implementing programs to better manage the health problems and natural diseases that accompany addiction and prevent similar deaths. These findings will also help medical examiners recognize the most common causes of death seen in the inpatient rehabilitation and counseling center setting.

Reference(s):

1. NIDA. *Trends & Statistics*. National Institute on Drug Abuse, 24 Apr. 2017, <https://www.drugabuse.gov/related-topics/trends-statistics>.
2. NIDA. *Nationwide Trends*. National Institute on Drug Abuse, 25 Jun. 2015, <https://www.drugabuse.gov/publications/drugfacts/nationwide-trends>.

Drug, Alcohol, Rehabilitation