BACKGROUND: The Southern Nevada Health District (SNHD) observed a higher drug and alcohol-induced mortality burden among Clark County (Nevada) residents than their national counterparts, with age-adjusted death rates at 20.7 and 9.2 per 100,000 person-years in 2010-2012, versus comparable national rates of 13.6 and 7.7 per 100,000, respectively. The drug and alcohol-induced death rates among residents also increased by 34% and 10% during 2001-03 and 2010-12, respectively.

The excessive mortality risks among residents from drug overdoses and alcohol use or abuse underline the burden of mental illness which often occurs in conjunction with substance dependence. Indeed, evidence suggests a reciprocal influence with regards to substance use/dependence and depression, one of the most prevalent mental health problems. As well, residents with mental health disorders are at higher risk for comorbid physical conditions and experience significant barriers managing illnesses and receiving medical care. SNHD evaluated whether depression among residents with chronic disease was associated with risk behaviors and alcohol use or abuse.

Figure 1. Age-Adjusted Drug and Alcohol-Induced Deaths by Gender

METHODS: Data from the 2011-12 Behavioral Risk Factor Surveillance System was used to assess 1) prevalence of co-occurring depression and chronic disease among residents 2) determine associations between risk behaviors, personal characteristics and substance abuse among residents with co-occurring depression and chronic disease disorders. Multiple logistic regression was conducted to compare health risk behaviors for adults with co-occurring depression and chronic disease disorders to those reporting chronic conditions except for depression, adjusting for age, gender, race/ethnicity, education, income, employment, marital status, obesity, and activity limitations due to health problems.

RESULTS: The adult prevalence of depression among Nevadans—over 70% of which dwell in Clark County—does not stand out as being exceedingly high (16.3% in 2012) when compared with the national median (17.6%). Nonetheless, the high rate of substance dependence or abuse among adults in the state of Nevada (the fifth highest in the nation at 10.3%, compared to a national rate of 8.5% in 2011-12) underscores the necessity to identify and monitor coping behaviors and comorbidities, and the importance of addressing these aspects of mental health.

Around 11% of county adults reported co-occurring chronic disease and depressive experiences in 2011-2012, and of these with one or more chronic health conditions, over 20% were affected by depression. Non-Hispanic white and Hispanic adults had greater odds of reporting chronic conditions with co-occurring depression than the general adult population, after adjustment for socio-demographic and health variables. Higher smoking and binge drinking rates were observed among adults with co-occurring depression and chronic disease disorders. Adjusting for potentially confounding variables weakened the relationship between binge drinking and depression, but the level of smoking and chronic health conditions remained significantly elevated among those with depression. County adults with depressive disorders were 1.7 times (95% CI: 1.3-2.2) as likely as those not affected by depression to be current smokers, and 2.1 times (95% CI: 1.6-2.8) as likely to report the presence of one or more chronic conditions. Further, among those affected by chronic health conditions, co-occurring depression conferred an elevated AOR for smoking at 1.6 (95% CI: 1.2-2.1).

CONCLUSIONS: A better understanding of coexistent behavioral and physical health problems contributing to substance abuse, as well as the integration of behavioral and primary health, are crucial for reducing the mortality/morbidity burden attributable to mental illness.