

# New Mexico Epidemiology

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## Effects of Chronic Medical Conditions And Serious Psychological Distress on Health and Access to Care

Individuals with serious mental illness (SMI) have higher mortality rates than the general population and tend to die earlier than persons without a major mental illness, losing about 25-30 years of normal life span. Although suicide is an important cause of mortality in this population, most of the increased morbidity and mortality associated with mental illness is due to preventable medical conditions. For example, cardiovascular disease mortality among adults with SMI is 2 to 3 times that of the general population. People with SMI are more likely to smoke cigarettes, have poor dietary habits, and lead a more sedentary life - risk factors that contribute substantially to the excess morbidity seen in this population.<sup>1</sup>

This report describes the prevalence of co-morbid chronic medical conditions among New Mexico adults with serious psychological distress (SPD). The K6 scale of nonspecific psychological distress was developed to obtain population-based estimates of the prevalence of mental illness and to describe characteristics of adults with mental disorders. The six items are used to assess the likelihood of an individual having a mental health problem that is serious enough to cause moderate to serious impairment in his or her ability to function in work, home, relationship, and social roles. Estimates of SPD may include both individuals who meet the official definition of SMI in federal legislation and others who may not meet these strict criteria.<sup>2</sup> Since psychological distress can frequently complicate the health status and care of persons with chronic medical conditions, the impact of SPD on health-related quality of life, access to care, and health risk behaviors will be highlighted.

### Methods

Data were obtained from the 2007 NM BRFSS, a random-digit-dialed telephone survey of NM adults 18 years and older living in households with a landline telephone. It is conducted annually by the NM Department of Health in collaboration with the CDC. The K6

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questions were included in a Mental Illness and Stigma module that was added to the core BRFSS questionnaire. Respondents were asked how often during the past 30 days they felt "nervous," "hopeless," "restless or fidgety," "depressed," "worthless" and that "everything was an effort." Each response category was given a score of 0 (none of the time) to 4 (all of the time); scores were summed across the 6 items, resulting in a possible total score of 0-24. A cut-off score of 13 points or more was used to define SPD, which was calculated for approximately 90% of survey respondents. The analysis excluded adults with "don't know," "refused," and true missing values for one or more of the K6 questions (n=634).

Data were analyzed in Stata v9.2 using complex survey commands. Prevalence estimates and 95% confidence intervals were weighted to the 2007 U.S. Census population estimates for NM by sex, age, and region. First, the prevalence of SPD among persons with selected characteristics is described using crude prevalence rates. Then, rates of selected chronic conditions among persons with and without SPD by gender are compared. These prevalence estimates were age-adjusted to the 2000 U.S. standard census distribution to eliminate the effect of any differences in the age distributions by population groups. Finally, logistic regression was used to calculate age-adjusted odds ratios (AORs) and to determine whether having one or more chronic conditions was an independent risk factor for SPD.

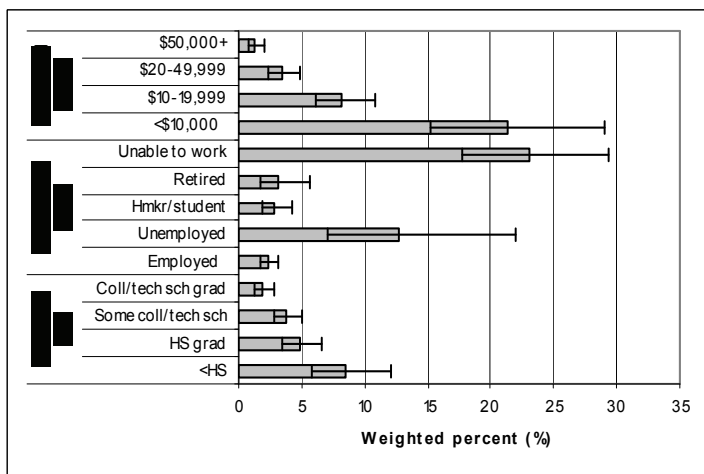
### Results

The crude prevalence of SPD in the population was 4.1%, representing approximately 53,093 adults with a mental health problem that limited their usual daily activities. The rates of SPD were similar among fe-

males (4.2%) and males (3.9%). There were no significant differences in the frequency of SPD by age group and race/ethnicity. Adults between the ages of 25 to 64 years had rates of SPD ranging from 4.3-5.1%; the highest rate was among adults 35-44 years. The prevalence of SPD among Hispanic adults was 5.2% compared to 3.5% among White non-Hispanics and 3.6% among American Indians.

The frequency of SPD was inversely related to household income; SPD rates increased significantly in every category as household income decreased (Figure 1). Twenty-one percent of adults with annual household incomes <\$10,000 had SPD compared to only 1% of adults with household incomes of \$50,000 or more. SPD rates were higher among adults who were unable to work (23.1%) or unemployed (12.7%) than among employed (2.3%) or retired (3.2%) adults. Higher rates of SPD were also associated with having less than a high school education (8.4%) compared to having some higher education (3.7%) or a college/technical school degree (1.9%).

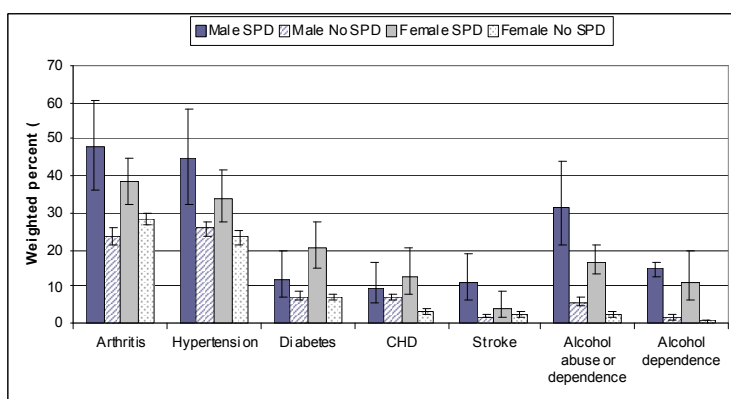
**Figure 1. Crude prevalence of SPD by select socio-demographic characteristics, NM, 2007**



Chronic medical conditions were more common among adults with psychological distress. Adults with SPD had significantly higher rates of health care provider diagnoses of arthritis (42.9%), hypertension (39.3), diabetes (15.9%), coronary heart disease (myocardial infarction and/or angina/coronary heart disease) (11.4%), and stroke (7.5%). In addition, adults with SPD were more likely to screen positive for alcohol abuse or dependence (23.6%) and alcohol dependence (11.2%) compared to adults without psychological distress.

Diagnoses of arthritis and hypertension were more common among both males and females with SPD than without SPD (Figure 2). Females with SPD were more likely to have been diagnosed with diabetes and coronary heart disease (CHD) than females without SPD; males with SPD were more likely to have been diagnosed with a stroke compared to males without SPD. Males with SPD had the highest rates of screening positive for alcohol abuse or dependence (31.7%). Both males and females with SPD screened positive for alcohol use disorders more frequently than same sex adults without SPD.

**Figure 2. Age-adjusted prevalence of diagnosed chronic conditions and risk for alcohol abuse and or dependence\* by SPD status and sex, NM, 2007**



\*Defined by positive scores on the ADAM Screener for alcohol abuse and/or dependence

Among 5,972 respondents in the general adult population, 245 had SPD, an age-adjusted prevalence of 4.1% (95% CI: 3.4-5.0). Among 3,133 adults who reported one or more diagnosed chronic conditions (including arthritis, hypertension, diabetes, CHD, or stroke), 170 or 5.9% had SPD (95% CI: 4.4-7.9). After controlling for socio-demographic characteristics (sex, age group, race/ethnicity, education level, marital status, employment status, and household income), adults with one or more diagnosed medical conditions were twice as likely as adults without any of these conditions to have SPD (AOR 2.2, 95% CI: 1.4-3.5).

Adults with both psychological distress and a chronic condition(s) reported similar levels of health care insurance coverage, having a personal doctor or health care provider, and visiting a doctor for a routine check-up in the past year as adults with only a chronic condition(s) (data not shown). Although adults with SPD and a chronic condition(s) were much more likely to be

receiving treatment for mental health conditions or emotional problems than adults with chronic conditions alone, they were also more likely to forego needed medical care because of cost (31.7%) than adults with a chronic condition(s) and no SPD (20.6%) (Table).

Self-reported health status was worse for adults with both conditions compared to adults with only a chronic condition(s). Whereas 23.7% of adults with a chronic condition(s) reported fair or poor general health, 67.4% of adults with both SPD and a chronic condition(s) rated their health as fair or poor (Table). Adults with psychological distress and a chronic condition(s) were more likely to report that both their physical health and mental health were not good for 14 days or more days during the preceding month compared to adults with chronic condition(s) alone (46.6% vs. 16.9% and 69.4% vs. 11.7%) (Table). The prevalence of disability was also higher among adults with both SPD and a chronic condition(s) (81.7%) than among adults with only a chronic condition(s) (32.5%) (Table). On average, adults with SPD and a chronic condition reported that a mental health condition or emotional problem kept them from doing their work or other usual activities for 13 of the preceding 30 days, compared to less than one day of activity limitations reported by adults with a chronic condition(s).

Modifiable health risk behaviors were more prevalent among adults with psychological distress and chronic disease. Adults with both SPD and a chronic condition (s) reported higher rates of current smoking (29.9%) than adults with a chronic condition alone (22.9%) (Table). Adults with both conditions were more likely to be physically inactive (59.5%) than adults with only a chronic condition(s) (24.9%) (Table 1); they were also less likely to report that they engaged in recommended levels of moderate to vigorous physical activity (22.1%) compared to adults with a chronic condition alone (48.2%) (data not shown). Although there were no significant differences in binge drinking and chronic heavy drinking by SPD status, adults with both psychological distress and a chronic condition(s) were more likely to screen positive for alcohol abuse or dependence (11.0%) than adults with diagnosed chronic conditions (4.1%) (Table).

## Discussion

National population-based studies have described the increased prevalence of chronic conditions among adults with SPD. According to the National Health Interview Survey, U.S. adults with SPD were at least twice as likely to have been diagnosed with heart disease (14.2%), diabetes (13.0%), arthritis (40.4%), or stroke (7.7%) than persons without SPD.<sup>3</sup> Results from the 2007 BRFSS in 37 states or territories have shown higher rates of SPD among adults 35 years and older who have a history of cardiovascular disease compared to respondents without a history of CHD or stroke.<sup>4</sup>

The findings in this report are consistent with previous studies, and indicate that SPD occurs twice as often among NM adults with one or more of several chronic conditions. The presence of psychological distress in combination with having a chronic condition(s) has a negative impact not only on health status and health-related quality of life, but also on access to health care. This finding supports previous research that persons with SMI are less likely than those without mental illness to seek care.<sup>5</sup> High rates of risk factors for cardiovascular disease, lack of emotional and social support, lower socio-economic status, and substance use are all factors that contribute to higher mortality rates in people with serious mental illness. Chronically ill NM adults with psychological distress reported many similar factors that could contribute to higher morbidity and mortality. Awareness of these factors by both primary care and mental health services providers could improve the management of physical health and preventive care and lead to improved health outcomes in this population.

## References

1. Morden NE, Mistler LA, Weeks WB, Bartels SJ. Health care for patients with serious mental illness: Family medicine's role. March-April 2009. *Journal of the American Board of Family Medicine*, 22:187-195.
2. Aldworth J, Chromy JR, Foster M, Heller D, Novak S. (2005). 2004 National Survey on Drug Use and Health Serious Psychological Distress Report. Research Triangle Park, NC. Retrieved from <http://www.oas.samhsa.gov/nsduh/2k4MRB/2k4spd.pdf>.
3. Pratt LA, Dey AN, Cohen AJ. Characteristics of adults with serious psychological distress as measured by the K6 scale: United States, 2001-4. Advance data from vital and health statistics; no 382. Hyattsville, MD: National Center for Health Statistics, 2007.
4. Fan AZ, Strine TW, Jiles R, Berry JT, Mokdad AH. Psychological distress, use of rehabilitation services, and disability status among noninstitutionalized US adults aged 35 years and older, who have cardiovascular conditions, 2007. *2009. Int J Public Health*, 54: S1-S6.
5. Colton CR, Manderscheid RW. Congruencies in increased mortality rates, years of potential life lost, and causes of death among public mental health clients in eight states. April 2006. *Preventing Chronic Disease*, 3:1-14.

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**Table. Health care access, health status, quality of life, and health risks among adults with one or more diagnosed medical conditions‡ by SPD status, New Mexico, 2007**

Characteristic	Adults with one or more diagnosed medical conditions						Age-adjusted odds ratio	95% CI Lower	95% CI Upper
	With SPD (n=170)			Without SPD (n=2,963)					
	Weighted percent (%)	95% CI Lower	95% CI Upper	Weighted percent (%)	95% CI Lower	95% CI Upper			
<b>Health care access</b>									
Past year needed to see a doctor, but could not because of cost	31.7	22.2	43.0	20.6	17.2	24.5	2.9	1.8	4.8
Currently receiving treatment for mental health condition or emotional problem	62.3	51.6	71.9	12.0	10.1	14.3	9.3	5.9	14.5
<b>Health status and quality of life</b>									
General health status									
Fair or poor health	67.4	55.7	77.3	23.7	20.5	27.2	5.3	3.3	8.3
Good, very good, or excellent health	32.6	22.7	44.3	76.3	72.8	79.5	ref		
Physical health not good for 14 or more days*	46.6	36.5	57.0	16.9	14.0	20.2	6.4	4.1	10.1
Mental health not good for 14 or more days*	69.4	58.3	78.7	11.7	8.9	15.1	18.5	11.7	29.3
Disability¶	81.7	71.6	88.8	32.5	28.8	36.5	9.2	5.4	15.6
Life satisfaction: dissatisfied or very dissatisfied	54.2	42.2	65.7	5.3	3.2	8.8	20.6	12.3	34.7
Low levels of social and emotional support	74.7	62.6	83.9	23.9	20.3	27.9	8.5	5.1	14.0
<b>Health risk</b>									
Current smoker	29.9	19.6	42.6	22.9	19.4	26.8	1.7	1.0	2.8
High cholesterol	40.1	31.2	49.8	38.1	34.4	42.1	1.5	1.0	2.3
Physical inactivity*	59.5	47.4	70.5	24.9	21.5	28.6	3.6	2.3	5.6
Body Mass Index of 30 or more (obese)	45.0	33.4	57.1	35.7	31.7	39.8	1.1	0.7	1.8
Alcohol abuse or dependence†	11.0	5.0	22.3	4.1	2.8	6.1	3.6	1.7	7.8

§ All estimates are age-adjusted to the 2000 U.S. standard population.

‡ Lifetime health professional diagnosis of one or more of the following chronic conditions: arthritis, coronary heart disease, stroke, hypertension, and diabetes.

Abbreviations: CI = confidence interval; ref = reference value.

\* During the preceding 30 days.

¶ Disability: any limitation in any activities because of physical, mental, or emotional problems, or any health problem that requires the use of special equipment.

† Score of 2 or more on the ADAM Screener to identify individuals at risk for alcohol use problems.