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Issue Brief

Co-Occurring Mental and Physical Health Conditions in Wisconsin: Implications for Health Care Delivery

by Tim Connor and Anne Ziege

Wisconsin residents with mental health needs are significantly more likely than those without such needs to experience physical health risks and chronic physical diseases. As well, persons with mental and physical health challenges experience, to varying degrees, diminished quality of life. Beyond the substantial costs to affected individuals and their families, co-occurring mental and physical health conditions impose a burden at the societal level. Economic effects include the direct costs of treatment and medication as well as indirect costs such as family economic stress and loss of workplace productivity. U.S. annual costs due to lost productivity associated with depression have been estimated at $44 billion[1] while costs associated with schizophrenia reach $62.7 billion.[2]

Mental health clients in publicly-funded mental health treatment, by definition, experience greater-than-average economic hardship, and research indicates that they are at substantial risk for poor physical health and premature death. Mortality rates for clients in publicly-funded mental health treatment are 1.2 to 4.9 times higher than those for the general population, even though the actual causes of death for these clients and the general population are the same. Public mental health clients die an average of 25 years earlier than the general population.[3]

What is the extent of co-occurring mental and physical health conditions among Wisconsin's residents? Does the health care delivery system effectively address these needs? What reforms may be warranted?

The Prevalence of Mental Health Needs

The 2007 Wisconsin Behavioral Risk Factor Survey (BRFS) included new questions on mental health, providing a unique opportunity to examine the relationship between mental health and physical health among Wisconsin adults. The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing, state-based system of health surveys of adults 18 and older conducted in all 50 states, the District of Columbia and three U.S. territories. The 2007 Wisconsin BRFS results are representative of the state's non-institutionalized adult population living in households with landline telephones.

The 2007 BRFS mental health questions measure serious psychological distress (SPD) in the past 30 days using the Kessler-6 (K-6) scale.[4] The K-6 scale is a widely-used mental health screening tool for large-scale surveys attempting to identify SPD by asking about the presence of six mental health symptoms. SPD is a non-specific category of distress characterized by a DSM-IV mood or anxiety disorder and moderate functional impairment. SPD is considered to be an indicator of possible serious mental illness (SMI), a commonly

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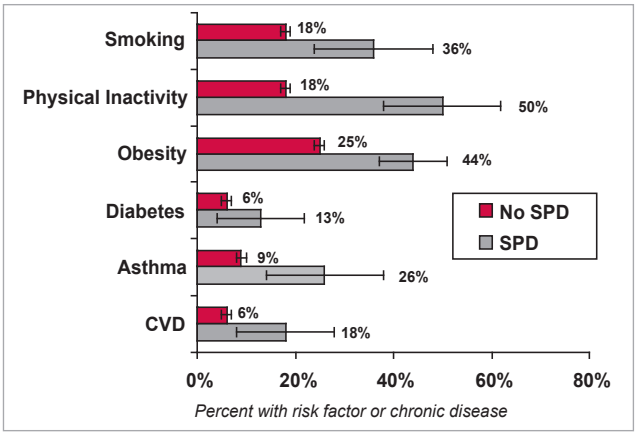
used designation of high need in the mental health field.[5] BRFS also routinely asks about the number of bad mental health days experienced in the past 30 days. Wisconsin adults with SPD average 19 bad mental health days in the past 30 days versus 3 bad mental health days among adults without SPD.

The national BRFSS reports a median SPD prevalence of 4 percent among the 37 states that used the mental health module in 2007.[6] Wisconsin's SPD prevalence is approximately 3 percent, which is comparable to the rates in Minnesota and Illinois. Other surveys have found higher rates of SPD for Wisconsin, but they use the past 12 months as a measurement period, whereas BRFS uses the past 30 days.

Co-Occurring Chronic Physical Diseases

The core BRFS asks adults about a number of health risk factors and chronic diseases. Risk factors include current smoking, physical inactivity and obesity. The prevalence rates for all three risk factors for adults with SPD are approximately twice those for adults without SPD (Figure 1). Chronic diseases reported on by BRFS respondents include asthma, diabetes, and cardiovascular disease. Cardiovascular disease includes ever having had a heart attack or stroke or a diagnosis of coronary heart disease. Analyses of the 2007 Wisconsin BRFS data indicate the prevalence for each disease is higher among adults with SPD. With the exception of diabetes, all differences between the SPD and non-SPD populations are statistically significant.

Figure 1. Prevalence of Health Risks and Chronic Diseases by SPD Status



Note: Confidence intervals for each measure are denoted by overlapping lines at the end of each bar.

As health-related factors other than mental health status may be contributing to these relationships, logistic regression was used to calculate adjusted odds ratios (AORs), holding constant possible confounding factors, such as demographic characteristics, risk behaviors and health status. Adjusted odds ratios describe a study group's odds of having a condition compared to a reference group.

The results indicate that adults with SPD are significantly more likely to have a variety of physical health problems compared to adults without SPD (Table 1). In addition, Wisconsin adults with SPD are more than twice as likely to smoke or have asthma, approximately three times as likely to be obese or physically inactive, and approximately four times as likely to have cardiovascular disease as those without SPD.

BRFS data, like most cross-sectional survey data, do not allow for causal inferences, leaving it unclear whether the SPD causes or is caused by these physical conditions. The associations identified do, however, indicate strong co-occurrence of physical and mental health conditions, which may exacerbate each other and need to be managed simultaneously.

Table 1. Adjusted Odds Ratios for Adults with SPD

	OR	95% CI
Smoking	2.4*	1.4 - 4.1
Physical Inactivity	2.9*	1.9 - 7.7
Obesity	2.9*	1.7 - 5.0
Diabetes	2.3	0.7 - 8.0
Asthma	2.6*	1.2 - 5.8
Cardiovascular Disease	4.6*	1.6 - 13.4

Reference group: No serious psychological distress (SPD);
** = statistically significant.*

The BRFS also asks respondents to estimate the number of bad physical health days they experienced in the past 30 days. Consistent with other results, adults with SPD average 13 bad physical health days in the past 30 days compared to 3 bad physical health days for adults without SPD.

The Impact of Mental Health Conditions

Co-occurring mental and physical health disorders, if left unaddressed, are likely to adversely affect daily functioning. While the relatively small number of BRFS respondents with SPD restricts the analysis of functioning for adults with co-occurring disorders, the functional status of adults with SPD alone may provide some insight, given the high rate of co-occurrence within this group.

Wisconsin adults with SPD are approximately five times as likely to be disabled and six times as likely to be unable to work as those without SPD. Reported activity limitation due to poor physical or mental health also varies by SPD status. Within a 30 day period, those with SPD experience an average of 13 days of activity limitation due to a mental or physical health problem, versus 3 days among those without SPD. Although the proportion who use special equipment – a possible indicator of restriction in daily functioning – is higher among adults with SPD than those without, the difference is not statistically significant.

Striking differences by SPD status are apparent with respect to global life satisfaction, suggesting lower overall quality of life among adults with SPD. Adults with SPD are significantly more likely than those without SPD to feel that they rarely or never get the social or emotional support they need (35% vs. 5%), to perceive their overall health to be fair or poor (46% vs. 11%), and to be generally dissatisfied with life (49% vs. 3%).

Implications for Health Care Systems

The 2007 BRFS data suggest substantial co-occurrence of mental and physical health problems. Adults with mental health conditions require the prevention and treatment of chronic physical diseases, while persons facing physical health challenges require prevention of mental health conditions. Yet, for the most part, the provision of mental health and primary care services remain separate, with little integration or even coordination between provider groups.[7,8]

The Wisconsin Department of Health Services (DHS) has launched a new initiative to address this challenge. Titled "The Integration of Physical Health, Mental Health, Substance Use, and Addiction," the initiative calls on state and local partners to work on health care integration and share information on their progress throughout the year. Nationally, the President's 2003 New Freedom Commission on Mental Health declared as one of its six primary goals in transforming America's mental health system the promotion of understanding that mental health is essential to overall health.[9] At the global level, the World Health Organization (WHO) has made the integration of mental health and primary care one of its fundamental health care recommendations.[8]

Several models of integrated health care systems exist, and each has strengths and barriers to implementation. The degree of integration achieved by the models varies based on several factors, including the physical location of providers, the integration of administrative functions, and the coordination in decision-making by providers. Four models of integrated health care[7,10] are described below:

1) Separate mental health and primary care provision

The least integrated model is one in which separate mental health and primary care agencies refer clients to each other when co-occurring needs are identified. The agencies do not co-locate staff, integrate financial systems, or integrate policies or procedures. Staff may receive training on integrated care. The providers share information about co-occurring client needs and work to coordinate care.

2) Primary care providers that co-locate with mental health services

Mental health staff from a separate agency locate within a primary care delivery site and work directly with primary care staff. Staff follow policies and procedures from their respective agencies, although some adjustments in policies are made to accommodate integrated care. Clients are likely to have mild to moderate mental health needs and typically present for a physical health problem. Depression is likely to be the most frequently identified mental health need and treatment generally takes place within the context of the client's physical health care.

3) Mental health agencies provide primary care services

Location of physical health services within mental health agencies allows service providers to treat clients with serious mental health disorders. Such clients are likely to seek help for their mental health needs at a mental health agency, and physical health needs are addressed secondarily. Programs are more likely to develop prevention and treatment specialties that target the specific physical health needs of mental health clients.

4) Unified mental health/primary care agencies

Physical and mental health services co-locate and operate as a single organization or program with multiple collaborating organizations. Providers in this model are prepared to treat clients with primary mental health needs, primary physical health needs, or co-occurring needs. The unified model may offer cost savings and service efficiencies by consolidating administrative functions. It may also promote earlier identification and treatment of co-occurring health needs.

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Issue Brief

August 2009, Vol. 9, No. 3

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Such program integration entails up-front costs, and may foster increased utilization of either primary care or mental health services. Yet some studies support the cost-effectiveness of this approach, reporting that declines in inpatient and emergency room use offset any increases in outpatient expenditures.[11,12] Such studies offer hope that integrated mental health and primary care services are not only necessary for clients, but feasible to implement within health care systems. The growing literature in this area suggests that a patient-centered service delivery model -- through integrated primary and behavioral health care -- will promote cost-effective care and improve patients' functional status.

This Issue Brief is a distillation from a larger report entitled "Linking Mental and Physical Health: Results from the Wisconsin Behavioral Risk Factor Survey." The report was produced as a joint initiative by the Wisconsin Division of Public Health and the Wisconsin Division of Mental Health and Substance Abuse Services. The report was funded by the federal Center for Mental Health Services. The full report on this issue can be viewed at http://dhs.wisconsin.gov/stats/BRFS.htm.

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