Physical Health Problems Among People With Severe Mental Illnesses: Race, Gender, and Implications for Practice

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Abstract

BACKGROUND: Individuals with severe mental illnesses experience high rates of chronic health conditions; however, the extent to which risk of chronic physical health problems varies by race and gender among these individuals is understudied. **AIMS:** This study examines variations in health problems by race and gender among individuals with severe mental illnesses. **METHOD:** Administrative data, which included blood pressure, body mass index (BMI), and glycated hemoglobin (HbA1c) values, were obtained from 603 individuals with serious mental illnesses who received integrated health and behavioral health services from a large mental health agency in the Midwest. Bivariate and multivariate statistical models were used to examine variation in physical health problems by race and gender. **RESULTS:** Compared with men, women with severe mental illnesses were more likely to have BMI levels indicating obesity or morbid obesity ($p < .001$). Compared with White participants, Black participants were less likely to have high HbA1c levels ($p < .001$) but were more likely to have high blood pressure ($p < .001$). Among race and gender groups, Black women were more likely to have high BMI ($p < .05$), Black men were more likely to have high blood pressure ($p < .001$), and White men were more likely to have high HbA1c levels ($p < .01$) when holding constant all other variables. **CONCLUSIONS:** There is evidence that types and severity of physical health problems among individuals with severe mental illnesses varies by race and gender. Replication of these results and more research is needed to ensure that health-related education and integrated health and behavioral health interventions meet the needs of individuals with serious mental illnesses.

Keywords

severe mental illnesses, physical health problems, race and gender differences

Introduction

Individuals living with severe mental illnesses are at greater risk for physical health problems, such as cardiovascular disease, HIV, and diabetes, and have life spans that can be up to 25 years shorter than the general population (Chwastiak et al., 2006; Colton & Manderscheid, 2006; Cournos & McKinnon, 1997; Daumit et al., 2002; Davidson, 2002; Dickey et al., 2002; Enger et al., 2004; Hansen et al., 2001; Joukamma et al., 2006; Lutterman et al., 2003; National Association of State Mental Health Program Directors [NASMHPD], 2006; Stoskopf et al., 2001). Between 58% and 74% of individuals with severe mental illnesses report at least one chronic health problem, such as hypertension, diabetes, or pulmonary disease (Chwastiak et al., 2006), and estimates of the rate of diabetes among individuals with schizophrenia range from 10% to 14% compared with a rate of 2.8% in the general population (Chwastiak et al., 2006; Jones et al., 2004; Miller et al., 2006; NASMHPD, 2006). In addition, high blood pressure (BP) is more prevalent among individuals with severe mental illnesses compared with

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the general population, as are rates of obesity, which are 5% to 15% higher than the rates of obesity in the general population (Janssen et al., 2015).

It is widely understood that individuals with severe mental illnesses do not access or utilize health care as frequently as the general population, and barriers to health care access include individual-, provider-, and system-level factors. Individual-level factors include low motivation to seek treatment, fear of the primary care system, impaired communication skills, and disorganized thought processes (Colton & Manderscheid, 2006; Lawrence & Kisely, 2010; NASMHPD, 2006). Provider-level factors include poor communication and fragmentation between the behavioral health and primary health care systems, socialized stigma, and primary care practitioners' comfort with and understanding of individuals with severe mental illnesses (Lawrence & Kisely, 2010; Phelan et al., 2001). System-level barriers often include the affordability of health care services, poverty, and transportation barriers to utilizing health care services (Bradford et al., 2008; Phelan et al., 2001; Syed et al., 2013).

Access to health care and disparities in physical health issues occur in the general population, and there is a wealth of evidence that racial and ethnic minorities have less access to services and lower health care service utilization (Manuel, 2018; Ryvicker & Sridharan, 2018). For example, people of color are more likely to have higher rates of high BP, cardiovascular disease, and obesity (Lackland, 2014; Petersen et al., 2019), but they are less likely to access and utilize physical health care (Substance Abuse and Mental Health Services Administration [SAMHSA], 2015). These differences also extend to people of color living with severe mental illnesses, in that they access and utilize health care services at lower rates than their White counterparts (SAMHSA, 2015).

Variations by race and gender of physical health problems among individuals with mental illnesses has been understudied, and this information is needed to inform and individualize educational initiatives and integrated care interventions. Moreover, understanding these relationships, for example, is particularly important for nurses who work on assertive community treatment teams, psychiatric nurses, and other health care providers who provide integrated health and behavioral health services, which have been widely disseminated over the past several years (Weinstein et al., 2011). This study seeks to fill important knowledge gaps regarding racial and gender differences in physical health problems among a population of individuals living with severe mental illnesses. Specifically, this study addresses the following research question: "How does risk for physical health problems (i.e., high BP, diabetes, and high body mass index [BMI]) vary by race and gender among individuals with severe mental illnesses?"

Method

Design

An observational study design and 4 years (2009 through 2012) of administrative data from a large community mental health agency in the Midwest were used to examine the physical health problems among individuals with severe mental illnesses. Data were collected as a part of a federally funded project designed to provide reverse colocated integrated health and behavioral health services to individuals with severe mental illnesses.

The study protocol was reviewed for human subjects' protection and approved by the institutional review board at the University of North Carolina at Chapel Hill. The authors report no conflicts of interest, and all authors certify responsibility for this article.

Study Setting and Participants

The study was conducted in a state-certified and nationally accredited community mental health agency which, at the time of data collection, had a multidisciplinary team of more than 300 professionals who served more than 4,000 adults with severe mental illnesses annually. The agency offered recovery-focused psychiatric care, community support, residential services, vocational services, and day programs. Integrated health and behavioral health care services included on-site primary care services and pharmacy services, which were provided concurrently with routine behavioral health care visits.

During patient visits, consumers were invited to participate in a research study evaluating the facility's integrated care project, which entailed the administration of a paper-and-pencil questionnaire about health and well-being and the collection of vital statistics and other health information. Data for participants who consented to participate in the study and completed the questionnaire were entered into a central database and collected every 6 months for as long as each consumer participated in services at the agency. A total of 603 individuals participated in the evaluation during the study period.

Measures

The data used for this study contained demographic and clinical information, as well as vital statistics and health indicators, such as BMI, BP, and glycated hemoglobin (HbA1c). Demographic variables included gender, race (White or Black), and age at time of the study (measured in years).

Each respondent was asked about his or her use of tobacco over the past 30 days and were provided the following response options: "never," "once or twice," "weekly," and "daily or almost daily." A dichotomous

variable, *habitual tobacco use*, was created to indicate habitual (i.e., weekly or daily) or nonhabitual use (i.e., never or once or twice).

Weight and height were recorded during routine encounters, and BMI was computed for each participant. The following guidelines from the Centers for Disease Control and Prevention (2020a) were used: (a) <18—underweight; (b) between 18 and 24—normal weight; (c) between 25 and 29—overweight; (d) between 30 and 39—obese; and (e) 40 or above—morbidly obese. A dichotomous variable, *high BMI*, was created to indicate participants with a BMI within the clinical standard of obesity or morbid obesity.

HbA1c levels were obtained, and the following guidelines from the Preventive Cardiovascular Nurses Association (2004) were used to evaluate risk for diabetes: (a) <5.7%—normal; (b) 5.7% to 6.4%—at risk; and (c) 6.5% or above—high risk. A dichotomous variable was created to indicate at risk or high risk for diabetes.

BP was taken and recorded during routine encounters and was coded as normal, prehypertensive, Stage 1 hypertension, Stage 2 hypertension, or hypertensive crisis according to guidelines from the American Heart Association (2012). A dichotomous variable was created to indicate high BP (i.e., Stage 1 hypertension, Stage 2 hypertension, or hypertensive crisis).

Data Analysis

Chi-square tests were conducted to examine the relationships between race and gender and physical health indicators. Next, separate logistic regression models were used to examine the differences in BMI, BP, and HbA1c by race and gender when holding constant all other covariates. Analyses were conducted using SAS 9.4 (SAS Institute, Cary, NC), and two-tailed tests with alpha set at .05 were conducted for all tests.

Results

Sample

As shown in Table 1, the sample of 603 respondents included 50.75% men ($n = 306$) and 49.25% women ($n = 297$). The sample was 56.72% Black respondents ($n = 372$), 41.63% White respondents ($n = 251$), and 70. 50% predominately single ($n = 411$) and had an average age of 48.62 years ($SD = 11.23$) at the time of data collection. Approximately two thirds (68.33%) of subjects owned or rented their own homes ($n = 406$), 15.75% lived at someone else's apartment or house ($n = 95$), and 7.79% lived in a group home ($n = 48$).

Also shown in Table 1, 36.52% ($n = 119$) of the sample reported having less than a high school diploma, and 31.57% ($n = 185$) reported having a high school diploma or equivalent. A large portion of the sample reported being unemployed due to a disability (40.80%, $n = 246$), and more than half reported receiving Supplemental Security Income (54.89%, $n = 331$). Of the total sample, 52.74% was diagnosed with schizophrenia ($n = 318$), 25.54% with bipolar disorder ($n = 154$), and 15.09% with major depression ($n = 91$).

As shown in Table 2, BMI was in the normal range for 12.19% ($n = 54$) of the sample, 16.93% ($n = 75$) were identified as overweight, 35.44% ($n = 157$) were identified as obese, and 34.31% ($n = 157$) of the sample's weight registered in the morbidly obese range. Also, 21.29% ($n = 112$) had normal BP, 44.11% ($n = 232$) were prehypertensive, 34.60% ($n = 182$) had Stage 1 hypertension, and 7.41% ($n = 39$) had Stage 2 hypertension. Also, of the sample with HbA1c levels reported ($n = 268$), 76.49% ($n = 205$) had normal HbA1c levels, 6.72% ($n = 18$) had HbA1c levels between 5.7% and 6.4%, and 16.79% ($n = 45$) had HbA1c levels greater than 6.4%.

Gender and Race Comparisons

As shown in Table 2, Black men with severe mental illnesses had higher rates of weekly or daily tobacco use (71%, $n = 127$) compared with White men (61%, $n = 73$), White women (56%, $n = 73$), and Black women (49%, $n = 78$; $\chi^2(3) = 17.03$, $p < .001$). Black men were more likely to have high BP (45%, $n = 72$) compared with Black women (43%, $n = 61$), White men (25%, $n = 26$), and White women (18%, $n = 20$; $\chi^2(3) = 30.50$, $p < .001$). Also shown in Table 2, White men were more likely to have high HbA1c values (34%, $n = 16$) compared with White women (30%, $n = 19$), Black men (20%, $n = 15$), and Black women with severe mental illnesses (12%, $n = 9$; $\chi^2(3) = 11.23$, $p < .05$). Black women were more likely to have high BMI values (82%, $n = 101$) compared with White women (79%, $n = 73$), White men (68%, $n = 59$), and Black men (55%, $n = 72$; $\chi^2(3) = 27.77$, $p < .001$).

Next, separate logistic regression models were estimated, and each dependent variable (i.e., high BP, high HbA1c, and high BMI) was regressed on all covariates (i.e., age, marital status, housing, employment, diagnosis, and smoking). Although not shown, compared with White men, Black men were less likely to have an elevated BMI ($b = -0.61$, $SE = 0.20$, $p < .01$, odds ratio [OR] = 0.63, CI = 0.33-1.19), whereas Black women were more likely to have an elevated BMI ($b = 0.48$, $SE = 0.22$, $p < .05$, OR = 1.87, CI = 0.91-3.84), when holding all variables constant. Age ($b = -0.04$, $SE = 0.01$, $p < .001$, OR = 0.96, CI = 0.94-0.98) and weekly or daily tobacco use ($b = -0.29$, $SE = 0.13$, $p < .05$, OR

Table 1. Sample Demographic and Clinical Information.

Indicator	Total sample (n = 603), % (n)	White men (n = 121), % (n)	Black men (n = 181), % (n)	White women (n = 130), % (n)	Black women (n = 161), % (n)
Gender					
Male	50.75 (306)	—	—	—	—
Female	49.25 (297)	—	—	—	—
Race					
White	41.63 (251)	—	—	—	—
Black/African American	56.72 (372)	—	—	—	—
Age (M [SD]), range 21-77	48.62 (11.23)	48.79 (11.27)	47.79 (10.93)	49.84 (11.28)	48.09 (11.54)
Marital status					
Single	70.50 (411)	76.47 (91)	82.02 (146)	49.60 (62)	69.74 (106)
Divorced/separated	24.87 (145)	21.85 (26)	16.29 (29)	41.60 (52)	23.68 (36)
Education					
Less than high school diploma	36.52 (119)	27.97 (33)	48.57 (85)	24.60 (31)	39.49 (62)
High school diploma/GED	31.57 (185)	33.90 (40)	33.14 (58)	35.71 (45)	24.84 (39)
Housing					
Own/rent own apartment or house	67.33 (406)	70.25 (85)	55.25 (100)	73.08 (95)	72.67 (117)
Someone else's apartment or house	15.75 (95)	14.88 (18)	19.34 (35)	10.77 (14)	17.39 (28)
Homeless (shelter, street/outdoors)	2.49 (15)	.83 (1)	3.87 (7)	1.54 (2)	3.11 (5)
Group home	7.96 (48)	5.79 (7)	13.81 (25)	8.46 (11)	2.48 (4)
Transitional living facility	3.15 (19)	4.96 (6)	4.42 (8)	1.54 (2)	1.86 (3)
Employment					
Full- or part-time employment	9.79 (59)	14.05 (17)	5.52 (10)	10.77 (14)	11.18 (18)
Unemployed—looking for work	25.87 (156)	27.27 (33)	32.04 (58)	15.38 (20)	26.09 (42)
Unemployed—disabled	40.80 (246)	38.84 (47)	38.12 (69)	47.69 (62)	40.37 (65)
SSI/SSDI					
SSI	54.89 (331)	51.24 (62)	59.67 (108)	50.77 (66)	57.76 (93)
SSDI	33.83 (204)	35.54 (43)	27.62 (50)	45.38 (59)	28.57 (46)
Diagnosis					
Schizophrenia	52.74 (318)	49.59 (60)	73.48 (133)	26.15 (34)	52.17 (84)
Bipolar disorder	25.54 (154)	26.45 (32)	11.05 (20)	44.62 (58)	26.09 (42)
Major depressive disorder	15.09 (91)	14.05 (17)	11.05 (20)	22.31 (29)	15.53 (25)

Note. SSI = Supplemental Security Income; SSDI = Social Security Disability Insurance.

Table 2. Physical Health Indicators by Race and Gender Groups.

Indicator	Total sample (n = 603), % (n)	White men (n = 121), % (n)	Black men (n = 181), % (n)	White women (n = 130), % (n)	Black women (n = 161), % (n)
Tobacco use past 30 days					
Never	36.98 (223)	35.54 (43)	26.52 (48)	40.77 (53)	47.20 (76)
Once or twice	2.99 (18)	3.31 (4)	2.76 (5)	3.08 (4)	3.11 (5)
Weekly	5.14 (31)	5.79 (7)	7.73 (14)	1.54 (2)	4.97 (8)
Daily or almost daily	54.23 (327)	54.55 (66)	62.43 (113)	54.62 (71)	43.48 (70)
Habitual tobacco use***	59.77 (358)	60.83 (73)	70.56 (127)	56.15 (73)	49.06 (78)
HbA1c					
Normal	76.49 (205)	65.96 (31)	80.26 (61)	69.84 (44)	88.31 (68)
At risk—5.7% to 6.4%	6.72 (18)	4.26 (2)	3.95 (3)	11.11 (7)	5.19 (4)
High risk—>6.4%	16.79 (45)	29.79 (14)	15.79 (12)	19.05 (12)	6.49 (5)
At risk or high***	23.51 (63)	34.04 (16)	19.74 (15)	30.16 (19)	11.69 (9)
Missing A1c data	55.65 (335)	61.16 (74)	58.01 (105)	51.54 (67)	52.17 (84)
BMI					
Underweight	1.13 (5)	1.15 (1)	.76 (1)	1.09 (1)	1.63 (2)
Normal	12.19 (54)	12.64 (11)	22.73 (30)	5.43 (5)	4.88 (6)
Overweight	16.93 (75)	18.39 (16)	21.97 (29)	14.13 (13)	11.38 (14)
Obese	35.44 (157)	42.53 (37)	31.82 (42)	41.30 (38)	30.08 (37)
Morbidly obese	34.31 (152)	25.29 (22)	22.73 (30)	38.04 (35)	52.03 (64)
High BMI***	69.75 (309)	67.82 (59)	54.55 (72)	79.35 (73)	82.11 (101)
Missing BMI data	26.51 (160)	28.10 (34)	27.07 (49)	29.23 (38)	23.60 (38)
Blood pressure					
Normal	21.29 (112)	21.15 (22)	16.98 (27)	28.57 (32)	21.13 (30)
Prehypertension	44.11 (232)	53.85 (56)	37.74 (60)	53.57 (60)	35.92 (51)
Hypertension Stage 1	34.60 (182)	21.15 (22)	33.96 (54)	14.29 (16)	29.58 (42)
Hypertension Stage 2	7.41 (39)	3.85 (4)	9.43 (15)	3.57 (4)	11.27 (16)
Hypertensive crisis	1.14 (6)	—	1.89 (3)	—	2.11 (3)
High blood pressure***	34.60 (182)	25.00 (26)	45.28 (72)	17.86 (20)	42.96 (61)
Missing blood pressure data	12.82 (77)	14.05 (17)	12.15 (22)	13.85 (18)	11.80 (19)

Note. HbA1c = glycated hemoglobin; BMI = body mass index.
***$p < .001$.

= 0.56, OR = 0.34-0.93) were associated with a decreased probability of having an elevated BMI, when holding all other variables constant.

Also, when holding all variables constant, compared with White men, Black women were less likely to have an elevated HbA1c ($b = -0.81$, $SE = 0.35$, $p < .05$, OR = 0.21, CI = 0.07-0.63); however, the validity of the model was questionable due to the large amount of missing data on the dependent variable.

When holding all variables constant, compared with White men, Black men were more likely to have an elevated BP ($b = 0.78$, $SE = 0.18$, $p < .001$, OR = 3.24, CI = 1.75-6.00), as were Black women ($b = 0.58$, $SE = 0.18$, $p < .05$, OR = 2.66, CI = 1.43-4.93); however, White women in the sample were less likely to have elevated BP ($b = -0.95$, $SE = 0.24$, $p < .001$, OR = 0.57, CI = 0.27-1.21), when holding all other variables constant. In addition, age ($b = 0.03$, $SE = 0.01$, $p = .01$, OR = 1.03, CI = 1.01-1.06) was associated with an increased probability of having an elevated BP, when holding all other variables constant.

Discussion

Agency data from participating consumers at a large community mental health center in one Midwest community were used to explore the physical health problems of men and women with severe mental illnesses. Our findings mirror previous research that indicates individuals with severe mental illnesses tend to have higher physical health needs (Chwastiak et al., 2006; Colton & Manderscheid, 2006; NASMHPD, 2006); however, to our knowledge, specificity of how these health problems manifest differently by race and gender is largely understudied. These findings have the potential to inform best practices for this high-risk population. Black men were more likely to experience high BP, and Black women were more likely to experience high BMI; however, White men were more

likely to have high HbA1c levels. These findings could imply a need for nuanced assessment and monitoring of the health concerns for individuals with mental illnesses. Health facilities' assessment and monitoring processes should consider both the impact of social determinants of health (Braveman & Gottlieb, 2014) and the racial and gender variation in health problems illustrated by our study (American Diabetes Association et al., 2004; Correll et al., 2015; Saravane et al., 2009).

Consistent with the extant literature, our study sample overall had higher rates of physical health concerns than the general population, which underscores the need for integrated behavioral and physical health interventions for individuals with severe mental illnesses (Chwastiak et al., 2006; Jones et al., 2004). That is, obesity rates were 70% in our sample of individuals with severe mental illnesses compared with 42% in the general population (Hales et al., 2020). Similarly, elevated HbA1c rates were 24% for our study sample, which is almost double the rate of 13% in the general population (Centers for Disease Control and Prevention, 2020b). This further affirms the need for practitioners to implement processes to monitor and address the physical health needs of their patients with severe mental illnesses.

Although integrated health and behavioral health interventions are important for all individuals living with severe mental illnesses, our findings point to important practice and research implications, including a need to tailor education efforts and interventions to address health and physical health concerns by race and gender. Educational materials about BMI can be tailored to the unique considerations for women generally but should also include culturally informed information for Black women. Targeted, culturally specific interventions to address variations in outcomes for Black consumers may include, but are not limited to, community/family/support system involvement, culturally relevant weight management information, information about medication side effects, and accessible plans designed to increase awareness and motivation to address physical health concerns (Saravane et al., 2009). Research on the effectiveness of interventions such as these is vital to implementing the most relevant, culturally competent practices to address the physical health problems of this population.

One notable issue was the extent of missing data for HbA1c values for the sample. Although the rates of high HbA1c for our sample are similar to those found in other samples of individuals with severe mental illnesses, the missing HbA1c data could speak to the difficulty in collecting these data from a population that has challenges engaging in care. Thus, difficulty adhering to national standards recommending annual HbA1c monitoring among this high-risk population is evident. Potential solutions to this challenge include on-site lab work, same-day appointments for both mental and physical health providers, and use of a peer health support person or liaison who accompany consumers to primary care appointments.

Nurses and other health professionals who work with individuals with severe mental illnesses are tasked with the difficult undertaking to promote education and programming that encourages individuals to obtain routine physical health care services. This is especially the case with nurses on assertive community treatment teams who work with the most profoundly ill among individuals with severe mental illnesses who also have significant physical health problems. Nurses on assertive community treatment teams who have informed themselves of the cultural practices and strengths of different demographic groups can be a point of contact to help bring these individuals into physical health care services.

Limitations

The results should be considered in light of a number of limitations. First, these exploratory data are from one geographically restricted sample, thus limiting the generalizability of the findings to other samples or locations. Regional differences in access to care (i.e., from proximity and transportation barriers to availability of clinic sites) and disparate health outcomes are important factors for further research (Egede et al., 2011). These data are also from a study sample who consented to participate in an evaluation of an integrated care program, representing a fraction of the total population of consumers at the study site. It is possible these findings are from the least symptomatic individuals with mental illness at the care facility, thus missing a large segment of the target population who may have more debilitating symptomology.

Second, these data are likely missing key predictors of physical health conditions (e.g., family history of health issues or substance use, exercise habits), especially socioeconomic status, which is an important social determinant of health, that could be influential in the health of the participants in the sample. Antipsychotic medications and their metabolic impact should also be considered in the examination of health status (Correll et al., 2015; De Hert et al., 2011). It will be important for future research to account for medication use and length of time on medication in examining the health outcomes of this population. The Latinx and other marginalized populations were not represented in our data; thus, our findings cannot speak to the unique needs of these individuals with severe mental illnesses. In addition, the cross-sectional nature of our study is a limitation, in that changes in health outcomes over time cannot be observed.

Nevertheless, despite these limitations, this is a large sample of consumers with severe mental illnesses from a

large community mental health center, and this study offers a unique perspective into the differences of physical health concerns by race and gender. Our findings should be replicated, and this line of research has the potential to inform interventions and health education for individuals with severe mental illnesses who have physical health problems. Future research should consider a mixed-methods or qualitative approach to obtain a deeper understanding of the specific barriers this population has in accessing physical health care. This information can then be used to further inform intervention research on specific educational programming to help reduce the disparities in health care for different racial groups and genders.

Conclusions

High-quality integrated behavioral health and physical health services must be accessible to individuals living with severe and persistent mental illnesses. Considerations and adaptations may be needed to provide the most salient information to individuals who identify within different racial and gender groups. This is important information for health care professionals who play a pivotal role in bridging the gap between physical and behavioral health services for this high-risk, high-need group.

Authors' Note

This manuscript was prepared by the coauthors in their personal capacity. The information presented here does not reflect the view of the Substance Abuse and Mental Health Services Administration.

Author Roles

Ashley D. Givens contributed to the interpretation of the data and drafted the submitted manuscript. Amy Blank Wilson contributed to the conceptual design and critically revised the manuscript. Tonya B. Van Deinse contributed to the interpretation of the data and critically revised the manuscript. Andrea Murray-Litchman contributed to the interpretation of the data and critically revised sections of the manuscript. Gary S. Cuddeback was principal investigator on the study and contributed to the conceptualization of the study and data acquisition, conducted data analysis, and drafted the manuscript. All authors gave final approval and agree to be accountable for all aspects of the work.

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Continuing Education

Disclosures: The authors and planners have no conflict of interest to disclose. Off-label medication use will not be discussed.

Target Audience: Registered nurses and advance practice registered nurses

Learning Outcomes:

Upon completion of this article, the participant will be able to

1. Identify the physical health needs of individuals with a diagnosis of a severe mental illness
2. Identify the gender and race differences in health needs of individuals with a diagnosis of a severe mental illness
3. Describe specific ways in which practice can be tailored to meet the needs of individuals with a diagnosis of a severe mental illness

Cost: There is no fee for Nursing Continuing Professional Development (NCPD) contact hours.

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