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Preventive Counseling for Chronic Disease: Missed Opportunities in a Community Mental Health Center

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Abstract

Background—The tremendous burden of cardiovascular risk among persons with serious mental illness underscores a critical need for prevention. Counseling by primary care clinicians increases patient smoking cessation, physical activity, and the consumption of fruits and vegetables. The extent to which community mental health clinicians counsel about cardiovascular risk factors has not been reported.

Methods—This cross-sectional study examines the rates of counseling about cardiovascular risk factors by mental health providers at an urban community mental health center ($N = 154$). Logistic regression analyses identified clinician characteristics associated with counseling more than 50% of clients about diet, exercise, and smoking.

Results—72% of clinical staff members responded to the survey, for a sample of 154 mental health clinicians. 26.6% of the clinicians counseled more than half of their clients annually about all three cardiovascular (CVD) risk factors. Logistic regression showed that mental health providers who counseled clients about CVD risk factors were less likely to be obese, and were more likely to have received formal training about how to counsel clients about CVD risk.

Discussion—This is the first study to examine the routine clinical practice of community mental health clinicians in addressing CVD risk at an urban community mental health center. Both training mental health clinicians about CVD risk and also support for improving clinician health status may improve the preventive care provided to clients at community mental health centers.

Background

The problem of excess mortality among adults with serious mental illnesses (such as schizophrenia and bipolar disorder) is a top priority for the national mental health policy agenda. A 2006 study reported that public mental health sector clients across 8 states died on average 25 years earlier than the general population (1); and more than 60% of these premature deaths are due to cardiovascular disease (2). In fact, adults with schizophrenia and

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other serious mental illnesses have markedly elevated risks of all cardiovascular risk factors, including obesity, hypertension, hyperlipidemia, type 2 diabetes, and tobacco dependence (3). Moreover, in public sector samples, the presence of a co-occurring chronic mental illness has been found to be a risk factor for poor quality of care for diabetes and other cardiovascular risk factors. Analyses of baseline data from CATIE, an NIH-funded multicenter schizophrenia pharmacotherapy trial, revealed that 88% of participants with elevated fasting lipid levels were not receiving lipid-lowering medications, and 62% of participants with hypertension were not receiving antihypertensive medications (4). Further, second generation antipsychotic medications (SGA), the first-line treatment of schizophrenia and bipolar disorder, have been associated with significant weight gain, dyslipidemia, and new onset diabetes (5), exacerbating the cardiovascular risk disparities.

The tremendous burden of cardiovascular risk among adults with serious mental illness underscores a critical need for prevention. Expert consensus guidelines developed jointly by the American Diabetes Association and the American Psychiatric Association in 2004 provide specific recommendations for cardiovascular risk monitoring of clients treated with SGA (6), and are now the standard of care. However, initial studies reported disappointingly low rates of routine metabolic screening of clients receiving SGA treatment (7–8). Moreover, the first study of long-term metabolic monitoring of clients with schizophrenia treated with SGAs demonstrated that only 75% of them receive glucose monitoring and 53% receive lipid monitoring – well short of the 100% goal (9).

Active involvement by community mental health clinicians in cardiovascular risk management represents a powerful strategy for a population-based approach to prevent diabetes and cardiovascular disease among persons with serious mental illness. Cochrane reviews support the efficacy of primary care clinician counseling to increase smoking cessation (10–11), the consumption of fruits and vegetables (12), and physical activity (13). Consistent with this evidence, the Agency for Healthcare Research and Quality (AHRQ) has recommended the routine delivery of preventive care by primary health care providers, incorporating risk assessment and brief advice about behavioral risk (14–15). However, the extent to which mental health providers at community mental health centers provide specific counseling about CVD risk factors has not, to our knowledge, previously been reported.

This study reports the findings of a cross-sectional clinical staff survey conducted at an urban community mental health center in Connecticut. This is the first study to describe the counseling practices of mental health clinicians with respect to health behaviors and cardiovascular risk factors (smoking, poor nutrition, and sedentary lifestyle). The specific aims of this study were to 1) determine the prevalence of counseling by community mental health center clinicians about the cardiovascular risk factors of smoking, poor nutrition and sedentary lifestyle ; and 2) to identify correlates associated with the provision of this preventive counseling. Understanding mental health clinician characteristics that are associated with the provision of counseling about CVD risk factors could identify targets for interventions to increase counseling about CVD risk by mental health clinicians. We hypothesized that mental health clinicians who had received training about how to counsel clients about cardiovascular risk factors would be more likely to counsel their clientele. Second, we hypothesized that physically healthier mental health clinicians would be more likely to counsel clients about cardiovascular risk.

Methods

Setting and sample

The study sample included mental health clinicians at an urban community mental health center which provides comprehensive psychiatric and substance abuse services to

approximately 2400 uninsured and low-income residents in New Haven, Connecticut. Thirty percent of CMHC clients have a primary diagnosis of schizophrenia or other psychotic disorder; 56% of clients receive treatment with a second generation antipsychotic medication.

In April 2011, all ($N = 555$) clinical and non-clinical CMHC staff members were emailed a survey through Survey Monkey (Surveymonkey.com, LLC; Palo Alto, CA). The survey was part of a larger community health initiative in New Haven called Community Interventions in Health (CIH). CIH aimed to decrease the prevalence of three risk factors (smoking, poor nutrition, and sedentary lifestyle) associated with the chronic diseases that account for 50% of worldwide and 70% of domestic mortality. Through CIH, surveys were conducted in neighborhoods, public schools and community health centers (16).

CMHC staff members who provide clinical care ($N=215$) were asked to complete an additional clinical care survey. The current study reports the results of this clinical survey. Participating clinicians received a \$10 gift card for completion of the survey. The study was approved by the Human Subjects Committee at Yale University.

Survey Measures

The survey included questions about demographics, individual health status, and health behaviors. The clinical care survey included additional questions about clinical training and experience, and current clinical practice.

Personal Health

Health status: A single question, “How would you rate your overall health” (17) allowed participants to rate their health, in a 5-point Likert scale, as excellent, very good, good, fair or poor. For purposes of the logistic regression analysis, this variable was dichotomized as 0 = excellent, very good, and good, and 1 = fair and poor health.

Obesity: Body Mass Index (BMI) was calculated from participant self-report data of height and weight. Using the BMI categories adopted by the National Heart Lung and Blood Institute and the World Health Organization (18–19), BMI levels were categorized as normal weight (BMI 18.5–24.9 kg/m²), overweight (BMI 25.0–29.9 kg/m²), obese (BMI > 30.0). A dichotomized variable, where 0 = not obese and 1 = obese was used in the regression analysis.

Chronic Medical Illness: Participants were asked whether they had been diagnosed by a physician and received treatment for eight medical conditions: hypertension, diabetes, hyperlipidemia, heart attack, stroke, asthma, emphysema, and cancer (20).

Health Behaviors: These questions were derived from the larger Community in Health adult survey (16).

Smoking: Participants were asked about their smoking history. Current smoking was dichotomized as any smoking (daily, weekly, or less than weekly) versus not smoking at all.

Diet: Participants were asked about their consumption of fruits and vegetables (in terms of number of days per week and number of servings per day). Responses were dichotomized into those who met the 2010 USDA / HHS Guidelines for 2.5 cups of fruits and vegetables per day (21) and those who did not meet this criterion. Participants were also asked about weekly fast food and sugar-sweetened beverage consumption.

Exercise: Questions about physical activity were based on the short International Physical Activity Questionnaire (22). For the purposes of analyses, participants were categorized according to whether they had the recommended amount of regular physical activity, based on guidelines from the American College of Sports Medicine and the American Heart Association (23). In order to meet these guidelines, participants would have to report: a) at least 30 minutes of moderate-intensity exercise at least 5 days per week, and/or b) at least 20 minutes of vigorous-intensity exercise at least 3 days per week.

Demographics: Demographic questions included age, gender, race and ethnicity, marital status, and highest level of education.

Clinical Care—The 215 CMHC staff members who provide clinical services were asked to complete the additional clinical care survey.

Primary Outcome: Percentage of Clients Counseled about CVD risk: Mental health clinicians were asked about their clinical practice related to three cardiovascular risk factors (smoking, poor nutrition, and sedentary lifestyle). Each of the three risk factors was addressed in a separate question: “For how many of your clients do you provide specific counseling or recommendations about...”. Response categories included “none”; less than 25%, 25–49%, 50–74%, >75%, and “I am not the person on my team who provides this counseling”. Participant responses were dichotomized to compare those clinicians who counseled fewer than 50% of clients with those who counseled 50% or more of their clients. Participants who reported “I am not the person in my team counsels about this” were included in the group who counseled less than 50% of clients.

Clinical training and experience: Mental health clinicians were asked several questions about their training and experience, including their clinical degree (e.g., registered nurse, psychiatrist, psychologist, clinical social worker or master’s level counselor, and other mental health workers). Respondents were also asked about the amount of time that had passed since they finished their clinical training (i.e., still in training, < 1 year, 1–5 years, 6–10 years, and > than 10 years).

A separate question asked clinicians whether they had received previous training specifically about how to counsel patients about cardiovascular risk factors (smoking, poor nutrition and sedentary lifestyle). Previous formal training was used in the regression analyses as a dichotomized variable with values of 1 and 0 for yes and no respectively.

Current Clinical Practice: Mental health clinicians were asked about their clinical workload or average number of clients seen weekly (i.e., 1–9, 10–25, 26–50, and >50 clients).

Barriers to counseling about health behaviors: Clinicians were also asked about the major barriers to performing more cardiovascular risk monitoring of clients, including client-level barriers (clients do not have adequate resources to change health behaviors; clients are not motivated to change behaviors; clients have too many problems that need to be addressed); and provider-level barriers (I do not have enough time to address these issues; I do not have enough training to address these issues; I feel uncomfortable providing advice because I do not have a healthy lifestyle).

Statistical analyses

The specific aims of this study were to 1) determine the prevalence of counseling by community mental health center clinicians about the cardiovascular risk factors of smoking,

poor nutrition and sedentary lifestyle; and 2) to identify correlates associated with the provision of this preventive counseling. First, bivariate analyses were conducted to identify those demographic (i.e., age, gender, and race/ethnicity), health status (i.e., self-reported health and obesity), health behavior (i.e., smoking, weekly consumption of fruits and vegetables, and weekly exercise) and clinical training and experience (i.e., number of years since graduation) characteristics that were associated with counseling most clients at least annually. Next, a logistic regression model was estimated to determine which of these significant covariates were associated with counseling clients about CVD risk when holding all other covariates constant. All analyses were conducted in SPSS 19 (IBM SPSS Statistics, 2010).

Results

One hundred fifty-four of the 215 CMHC clinical staff members completed the clinical care survey, for a response rate of 71.6%. As shown in Table 1, the 154 CMHC clinicians who completed the survey were predominantly female. The mean age of the sample was 47.1 years. Current smoking was reported by 8.4%. Sixty percent of the sample reported that their health was very good or excellent. More than half of the participants were overweight or obese (mean BMI was 26.6 kg/m² for both male and female clinicians). Compared to the general New Haven population, CMHC clinicians reported a much lower rate of current smoking, similar rates of cardiovascular disease and hypertension, and higher rates of diabetes and hyperlipidemia (24). As shown in Table 2, 20.3% of participants were psychiatrists and 16.3% were nurses. Sixty nine percent had a master's degree or higher level of education. More than half of the participants were more than 10 years out of training; and more than a third had worked at the community mental health center for more than 10 years. Most participants reported seeing, on average, 10–25 patients per week. Thirty one percent of the sample reported previous formal training about smoking cessation, 39% about nutrition, and 36% about physical activity.

Participants were asked about their current clinical practice related to cardiovascular risk monitoring. A third of participants reported that they counseled more than half of their clients about smoking (at least annually), 54.5% counseled more than half of their clients about nutrition, and 60.1% counseled about recommended levels of physical activity. As shown in Figure 1, most clinicians who counseled clients about cardiovascular risk addressed more than one risk factor. Almost twenty-seven percent of participants reported that they counseled clients about all three of these cardiovascular risk factors (Figure 1).

ANOVAs were conducted to identify those demographic, health status, health behavior, and clinical experience characteristics that were associated with counseling most clients at least annually. The following covariates were significantly associated with counseling more than half of clients: female gender, more than 10 years since training, receipt of formal training about CVD risk counseling, and a normal (non-obese) BMI. These significant covariates were entered into a logistic regression along with race and age as control variables. 110 of the 154 participants had complete data and were included in the regression results. Clinicians with incomplete data who were excluded did not differ from participants included in the regression model with respect to age, race, gender or type of clinical degree. However, clinicians who did not respond to the questions were more likely to be obese than subjects who were included in the regression analyses ($F = 4.76, p = .04$). Results of the logistic regression analysis demonstrated that mental health clinicians who counseled more than half of their clients about any of the three cardiovascular risk factors were more likely to be female and more likely to have a healthy weight. Clinicians who counseled about CVD risk also had more than 10 years of clinical experience and were more likely to have received formal training about how to counsel clients about CVD risk (Table 3).

To provide some insight into these counseling behavior findings, we evaluated the distribution of reported barriers to counseling about cardiovascular risk (not shown). The most commonly reported barriers were the clinicians' perception that their clients did not think that health behavior changes were important for decreasing cardiovascular risk, or were not motivated to change these health behaviors (reported by 34.5%). Another 27.6% of participants indicated that the major barrier for them was that their clients lacked adequate resources to accomplish the behavior changes necessary to decrease cardiovascular risk. Eighteen percent of clinicians indicated that clients have too many problems that need to be addressed, suggesting that the competing demands of these complex clients do interfere with providing more specific counseling. Only 6% and 4% of clinicians reported that lack of provider time and training respectively was the major barrier to doing more cardiovascular risk monitoring.

Discussion

There is an urgent need to develop practical and sustainable approaches to improving cardiovascular outcomes among clients with serious mental illness. Over the past five years, several interventions have been developed to target obesity among community mental health center clients (25–27). However, incorporating cardiovascular risk management into routine mental health practice might be a more feasible and sustainable approach than the widespread dissemination of time- and resource-intensive interventions. Several previous reports have suggested low rates of routine screening of CVD risk factors by community mental health providers (7–9). But, to our knowledge, this is the first study to examine the routine clinical practice of community mental health clinicians in counseling clients about CVD risk at an urban community mental health center.

The findings of this study suggest that the majority of mental health clinicians do not provide specific counseling to their clients about cardiovascular risk behaviors, as only 26.6% of clinicians at an urban community mental health center reported that they counsel (at least one-half of) their clients at least annually about all three risk factors: smoking, poor nutrition, and sedentary lifestyle. The counseling rates in this study are lower than what has been reported in studies of primary care. In primary care settings, about 40% of patients who are obese report receiving physician advice for weight loss; that prevalence rises to more than 60% among patients with diabetes (28). The low rates of counseling for CVD risk factors among adults with severe mental illness, as found in our study, may represent an important missed opportunity for primary and secondary prevention among a very high-risk population. This is particularly true given that there is substantial evidence that patients--especially those who are already obese or already have diabetes--will change behavior after physician counseling (29–31).

Our findings point to important opportunities for interventions to increase the rates of counseling about cardiovascular risk at community mental health centers. Results suggest that mental health clinicians who counsel their clientele about cardiovascular risk factors are more likely to have received specific formal training about how to counsel clients about their risk. This suggests that training mental health clinicians may increase rates of counseling and, potentially, reduce risks for CVD among adults with mental illness. Further, almost half of the clinicians in this survey reported that additional training in nutrition counseling (47.4%) or counseling about physical activity (48.1%) would be important or very important for them in their current clinical work (data not shown). Most clinicians in this study perceived that low client awareness and motivation to make needed behavior change were significant barriers to providing counseling. Therefore, clinician training might focus on how to overcome these surmountable obstacles (32–33).

Our study also found that the obese mental health clinicians were much less likely to counsel clients about CVD risk factors. This suggests that healthier clinicians are more likely to explicitly support healthy behaviors in clients, a finding which has been previously demonstrated (34–36). Thus, promoting clinician wellness may be a very wise investment for community mental health centers that would benefit both clinicians and clients. We also found that women clinicians were more likely than men to counsel patients about these health behavior risk factors, consistent with previous studies (37). Several studies have suggested that nutrition and weight-related issues are important to female physicians in both their personal and professional lives, and these two spheres influence each other (37–38).

Our study had several limitations. First, rates of counseling were based on clinician self-report, rather than chart documentation or client report. As clinicians might be inclined to overestimate their rates of counseling, this might have resulted in a higher rate than is actually occurring. Moreover, the finding that obese clinicians are much less likely to counsel clients about CVD risk may have been biased, as obese clinicians were less likely to answer the question about counseling (and not be included in the final regression model). If the obese clinicians who did not answer the question do provide counseling, the regression model would represent an over-estimate of the impact of clinician obesity on their CVD risk factor counseling behavior. Second, health behaviors were also based on self-report, and have a similar potential for over-estimation by respondents. Third, the findings from this one urban community mental health center may not be generalizable to other settings. This study assessed care at one urban mental health center in a medium sized city in the Northeast, which may not be representative of rural or larger urban community mental health centers. Also, the sample included a large percentage of psychiatrists, which may not be representative of the mental health providers at many community mental health centers. One might expect that psychiatrists, given their medical training, would be more likely to counsel patients about medical risk factors. We did not find this to be the case in this study sample, however.

Healthcare for clients with serious mental illness cannot be improved without addressing problems of access and fragmentation in the broader health system, particularly in safety net settings where most adults with serious mental illness receive medical care. The specific roles and accountability for the multiple clinical providers and the best strategies for care coordination for these clinically complex clients have yet to be defined. But because clients with serious mental illness are mostly--and sometimes only--in regular contact with their mental health clinicians, these providers must take responsibility for monitoring for cardiovascular risk until better systems can ensure regular access to general medical services.

This is the first study to examine the routine clinical practice of community mental health clinicians in addressing CVD risk at an urban community mental health center. These findings suggest that both training for mental health clinicians about CVD risk and also support for improving clinician health status may improve the preventive care provided at community mental health centers.

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Figure 1.
Proportion of Clinicians who Counsel More than 50% of Clients Annually for Each Cardiovascular Risk factor and Combinations of Factors

Table 1Sample Demographic Characteristics ($N = 154$),

Characteristic	% or mean (M) & standard deviation (SD)
Age (mean)	47.1 (10.8)
Gender (% female)	69.0%
<i>Race/ Ethnicity:</i>	
% white	66.0%
% African American	13.6%
% Hispanic	12.2%
Other	8.2%
<i>Marital status:</i>	
% married or living with partner	57.9%
% divorced	24.8%
% single, never married	15.9%
<i>Highest education obtained:</i>	
HS or GED	4.1%
AA	6.2%
BA or BS	19.9%
Master's	40.4%
MD, DO, or PhD	29.5%
<i>Self-rating of overall health:</i>	
Excellent	16.9%
Very Good	43.5%
Good	31.2%
Fair	7.8%
Poor	0.6%
<i>Health Behaviors</i>	
Current smoker at least weekly	8.5%
Overweight or obese (BMI > 25)	29.7%
Obese (BMI >30)	23.4%
Meets ACSM physical activity recommendations	27.9%
Meets USDA recommendation for fruit and vegetable intake	22.7%
Number of days per week eat fast food (M , SD)	0.8 (1.1)
Number of days per week have sugar-sweetened beverage (M , SD)	0.8 (1.7)
<i>Ever told they have:</i>	
Heart disease or heart attack	5.8%
Hypertension	29.2%
High cholesterol	29.9%
Diabetes	11.0%

Table 2

Clinical Training and Experience (N=154)

Characteristic	%
<i>Clinical training:</i>	
Psychiatrist	20.3%
Nurse (RN or APRN)	16.3%
Psychologist	9.2%
Social worker or master's level counselor	31.4%
Case manager or other mental health worker (substance abuse counselor, rehabilitation counselor)	22.9%
<i>How long since finished training:</i>	
Still in training	14.5%
< 1 year	4.6%
1–5 years	7.2%
6–10 years	19.7%
More than 10 years	53.9%
<i>How long worked at CMHC:</i>	
< 1 year	11.0%
1–5 years	38.3%
6–10 years	11.7%
> 10 years	39.0%
<i>Number of clients seen in average week</i>	
1–9	37.3%
10–25	52.0%
26–50	8.7%
>50	2.0%
<i>Ever received formal training about counseling clients in:</i>	
Nutrition	42.9%
Recommended levels of exercise or physical activity	38.2%
Smoking cessation	34.3%
All three risk factors (i.e., nutrition, physical activity, smoking)	

Table 3

Logistic Regression Predicting Counseling of 50% or More of Clients for any of the Three Cardiovascular Risk factors ($N = 110$)

Covariate		<i>Odds Ratio</i>	<i>95% CI</i>
Age	-0.04	0.96	0.91, 1.01
Female gender	1.62^{**}	5.05	1.92, 13.27
Non-white race	0.64	1.90	0.66, 5.42
Obese (BMI > 30 kg/m²)	-1.54^{**}	0.21	0.07, 0.64
Time since training (> 10 years)	.92[*]	2.31	1.18, 4.76
Received formal training for counseling about all three risk factors	1.02[*]	2.77	1.05, 7.28

^{*}
 $p < .05$;

^{**}
 $p < .01$;

^{***}
 $p < .001$