

Collaboration Between Managed Care and Mental Health Agency Staff: Consumer Satisfaction, Medication Compliance, Psychosocial Improvement, and Cost Outcomes

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This quasi-experimental study evaluated consumer outcomes (i.e., consumer satisfaction, medication compliance, psychosocial improvement, and healthcare cost outcomes) among 119 participants with various mental disorders receiving comprehensive mental health treatment over an 8-month period. Pre-test and post-test outcomes were measured between two groups: those receiving care that entailed ongoing case collaboration between managed care organization and community mental health agency staff (treatment group) and those enrolled in unmanaged traditional fee-for-service Medicaid programs (control group). Results indicated that, for the control group, medication compliance worsened, and group case management and psychiatric follow-up service costs increased. For the treatment group, medication costs increased. These findings suggested that the case collaboration approach may have had an indirect and preventive benefit related to medication compliance and cost reduction. Recommendations for counselor practice, advocacy, and interprofessional mental health care are provided.

Keywords: managed care, collaboration, satisfaction, outcomes, cost-effectiveness, counseling, advocacy

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Recent studies show that the 12-month prevalence rate for any adult mental disorder in the United States is approximately 18% (Center for Behavioral Statistics and Quality [CBSQ], 2015). However, only 36% of consumers with mental disorders receive psychosocial or pharmacological treatment and only 33% of those receiving treatment (i.e., only 12% of all persons with mental disorders) obtain minimally adequate care (CBSQ, 2015). Unfortunately, prevalence rates of and resultant disabilities from mental disorders have risen over the past decade. For example, approximately 4% of all persons in the United States qualified for a severe mental illness during the prior year (CBSQ, 2015).

In addition to the individual burden of these disorders, the cost burden for communities is also rising. Over a 10-year period (from 1996 to 2006, the most recent years available), the number of Americans paying for mental health care increased 87% and mental health expenditures by communities increased 63% (National Institute of Mental Health [NIMH], 2016). Moreover, during the same period mental health expenditures have increased more rapidly than any other form of healthcare expenditure (NIMH, 2016). For example, the number of persons with expenses related to mental disorders increased dramatically from 19 million to 36 million during this period compared to only slight increases related to cancer and heart conditions (16 to 19 million and 9 to 11 million, respectively) (NIMH, 2016). Similarly, Lo Sasso, Lurie, Lee, and Lindrooth (2006) found that outpatient counseling-related mental health care has increased over time, and pharmaceutical costs have increased even more rapidly.

Given high prevalence rates of mental disorders and the public cost burdens of these conditions within the United States, quality and cost containment of mental health treatment is an important consideration for professionals and researchers. In one large-scale study, Wang, Berglund, and Kessler (2000) found that less than 54% of persons with mental illness received any form of treatment and only 14% received treatment consistent with evidence-based recommendations. The authors concluded that “an epidemic of untreated and poorly treated mental disorders exists in the United States . . .” and that “cost-effective interventions are needed to improve both access to and quality of treatment” (p. 284). As Jones, Amaddeo, Barbui, and Tansella (2007) explained using results of a meta-analysis that included 16 studies, mental health professionals, organizational managers, and governmental planners are negotiating healthcare systems with increasingly limited resources yet ever-increasing consumer demands. More research, therefore, is needed to gain a better understanding of the factors that are likely to influence mental health service utilization and costs. In their review of predictive cost studies, Jones et al. (2007) concluded that knowledge of which variables incur the greatest costs can assist in targeting appropriate resources, improving accessibility, and ensuring equity of services. These researchers found that both clinical factors (e.g., consumer symptomatology) and non-clinical factors (e.g., client demographics) are necessary consider; however, “some of the most important predictive factors of psychiatric service utilization and costs remain unknown” (p. 476).

In addition to discouraging cost-related trends involving consumers with mental disorders, persons with serious mental illness often experience significant functional

decline, early mortality (Murray & Lopez, 1996), and higher than average medical comorbidity (Kilbourne, Cornelius, Pincus, & Shad, 2004). For example, one study found that 74% of consumers with mental illness had at least one chronic physical health problem, and 50% had two or more serious health ailments (Jones et al., 2004). General medical care is therefore important for persons with mental illnesses, although studies show that consumers are often unable to access this type of care (Kilbourne et al., 2006). Improving the quality of general medical care for persons with mental illness is increasingly being recognized as a national priority (Institute of Medicine, 2005).

Importance of Continuity of Care and Case Management Coordination

One important factor shown to affect consumer mental health and physical health outcomes is continuity of care. Continuity of care is regarded as an essential feature of care for persons with mental disorders, is one way in which quality of care is assessed, and has been shown to be under managerial control (Greenberg & Rosenheck, 2003). The construct of continuity of care includes regularity of care (i.e., evenness in service use over time without gaps in care), continuity of treatment across organizational boundaries (e.g., different levels of care or treatment providers), and provider consistency within the organization (Greenberg & Rosenheck). As Johnson, Prosser, Bindman, and Szmukler (1997) explained, research in this area indicates that applying continuity of care standards may produce useful results including enhanced individual outcomes.

Chien, Steinwachs, Lehman, Fahey, and Skinner (2000) found that among consumers with severe mental illness, higher provider continuity was related to lower costs and lower likelihood of hospitalization. Adair et al. (2005) demonstrated that continuity of care was associated with better quality of life, better community functioning, lower severity of symptoms, and greater service satisfaction among consumers. However, continuity of care has not been adequately studied even with preliminary positive correlations linked to better consumer outcomes and satisfaction (Adair et al., 2003, 2005).

The quality of case management coordination is a key aspect of continuity of care, especially as it relates to individuals with severe mental illness (Bachrach, 1993). This assertion is based on the functions of case managers, which correspond to administrative support, individually tailored services, and linkages among providers. Research shows that more communication and better relationships with staff results in greater consumer satisfaction (Duggins & Shaw, 2006), and that a consumer-provider treatment alliance is crucial for successful outcomes (Berk, Berk, & Castle, 2004). Results of a collaborative consumer-provider relationship could include better psychotropic medication compliance (Kilbourne et al., 2006), less cost-related skipping of medication regimens (Wilson, Rogers, Chang, & Safran, 2005), and higher clinician ratings of quality of life outcomes (Way, Sawyer, Kahkejian, Moffitt, & Lilly, 2007).

The Current Study

The purpose of this study was to evaluate whether a case collaboration approach involving ongoing continuity of care among community mental health case managers and managed care insurance case managers improved consumer satisfaction, medication compliance, psychosocial treatment outcomes, and cost expenditures compared with self-managed fee-for-service treatment as usual. We attempted to address limitations of prior research in this area using a longitudinal pre-test, post-test experimental control group design, while addressing a diverse array of outcomes not previously investigated in one comprehensive study. Therefore, the research hypotheses were: When compared with the treatment as usual (i.e., control) group, the case collaboration (i.e., treatment) group would demonstrate greater satisfaction with care (Hypothesis 1); when compared with the treatment as usual (i.e., control) group, the case collaboration (i.e., treatment) group would demonstrate increased medication compliance (Hypothesis 2); when compared with the treatment as usual (i.e., control) group, the case collaboration (i.e., treatment) group would demonstrate lower psychosocial symptomatology (Hypothesis 3); and when compared with the treatment as usual (i.e., control) group, the case collaboration (i.e., treatment) group would demonstrate lower overall mental health and physical healthcare costs (Hypothesis 4).

Method

Participants

One hundred and nineteen consumers agreed to participate in this study for the 8-month protocol. Participants were randomly selected from a non-profit community mental health agency in a Midwestern state that provided comprehensive mental health care (i.e., individual and group counseling, individual and group case management, specialized addiction treatments, pharmacological care). Treatment group participants ($n = 54$) were enrolled in a managed Medicaid program overseen by a state-wide managed care organization; control group participants ($n = 65$) were enrolled in unmanaged traditional fee-for-service Medicaid programs.

All participants were diagnosed with a severe mental illness according to criteria from the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (DSM-IV-TR; American Psychiatric Association, 2000), such as a mood disorder or psychotic disorder. Participants were included regardless of income, physical disabilities, or prior treatment history. The only delimitations were an age above 18 years and continuous enrollment in either traditional fee-for-service Medicaid or the participating managed care organization's managed Medicaid plan throughout the trial period. Participants in the treatment group ranged in age from 34 to 69 years ($M = 54$, $SD = 9.7$); control group participants ranged in age from 37 to 66 years ($M = 49$, $SD = 6.1$). Among the treatment group participants, 50% were male and 50% were female; among the control group participants, 63% were men and 37% were women. Regarding race of treatment group

participants, 72% were African-American, 13% were White, 4% was Latin American, and 11% were “other.” Regarding race for control group participants, 48% were African-American, 43% were White, 1% was Asian American, 1% was Native American, and 7% were “other.”

Procedures

A quasi-experimental pre-test, post-test control group research design was used to answer research questions for this study. Managed care organization and mental health agency staff randomly selected participants for the study (i.e., treatment and control group participants, respectively) from lists of all consumers receiving services at the participating mental health agency. The study protocol was then explained individually to each consumer and voluntary written informed consent was obtained.

Two mental health agency staff trained as research assistants by the first and second authors then provided all participants with research packets, read questionnaire instructions to participants, and provided a private location to complete research questionnaires. Research assistants were available for questions during questionnaire completion process, after which research packets were placed in a sealed unmarked envelope by participants to ensure confidentiality. All questionnaires were completed at the participating mental health agency, and each administration averaged 20-30 minutes. Research packets included a demographic questionnaire, a self-reported consumer satisfaction questionnaire (Consumer Assessment of Healthcare Providers and Systems Health Plan Survey; CAHPS Consortium, 2008), a psychosocial symptomatology questionnaire (Ohio Mental Health Consumer Outcomes System Adult Consumer Form; Ohio Department of Mental Health, 2009), and a medication compliance questionnaire (Medical Outcomes Study Measure of Client Adherence; RAND Corporation, 1995). Medication compliance questionnaires were also completed separately for each participant by mental health agency case managers in the absence of consumers as an independent measure of treatment compliance.

Consumer satisfaction and psychosocial symptomatology questionnaires were completed by agency clientele at baseline and 4 months later. Medication compliance questionnaires were completed by agency clientele and case managers at baseline, 4 months later, and 8 months later. All consumers and mental health agency staff received a \$10 cash payment after completion of each survey packet during pre-test and post-test administrations. Throughout the study period ongoing scheduled case collaboration for all treatment group participants occurred between managed care and mental health agency case managers. No case collaboration occurred for control group participants, as these participants were not enrolled in a managed care organization insurance plan and therefore were not linked with managed care service staff. Rather, control group participants were enrolled in traditional fee-for-service Medicaid during which service needs were determined solely by consumers with consultation from mental health agency staff.

At the conclusion of the study mental and physical healthcare cost data were retrospectively obtained over an 8-month period by both managed care organization and mental health agency finance staff for all participants. The research design for this study was approved by the Institutional Review Board of a large state-supported university prior to collection of data.

Case collaboration approach. The treatment for this study was ongoing scheduled case collaboration between managed care and mental health agency case managers. The stated purposes of case collaborations were ensuring mutual understanding of consumer needs, continuity of care between service providers over time, and facilitating inter-organization communication for both client-centered care and cost containment. Case collaborations had the following two components: comprehensive face-to-face monthly meetings and individual phone consultations 4-6 times monthly. Monthly comprehensive case collaboration meetings included all managed care and mental health agency case managers jointly serving consumers participating in the treatment group. Monthly meetings ranged in length from 2 to 3 hours, during which the following topics were reviewed: resource utilization summary, including medical and psychiatric services provided during the previous month; medication and psychosocial treatment adherence; future pharmacological or psychosocial treatment needs; housing or vocational needs; hospitalizations or incarcerations during the previous month; and consumer satisfaction or concerns.

Monthly meetings also focused on evaluation and feedback regarding managed care and mental health agency staff working relationships, including timeliness of communications to each other, fostering a client-centered approach to treatment, and collaborating on which treatments are determined to be medically necessary (versus medical necessity being determined solely by managed care organization staff). Managed care organization and mental health agency case managers completed full case collaborations on each consumer in the treatment group at least twice during the study period. Ongoing phone consultations throughout the study period occurred between individual managed care and mental health agency staff, related to specific consumer's needs or issues (e.g., continuity of care after hospitalizations), and were viewed as supplemental to comprehensive monthly meetings.

Instruments

Consumer Assessment of Healthcare Providers and Systems Health Plan Survey 4.0 (CAHPS). This 39-question public domain instrument was developed by the CAHPS Consortium (2008), an organization funded and administered by the U.S. Agency for Healthcare Research and Quality. The instrument collects satisfaction-related information that cannot be gathered effectively through other means (e.g., through medical records or from physicians), and was designed to assess consumers' self-reported health status and care received in order to evaluate the client-centeredness of care, compare and report on performance, and improve quality of care over the past 6 months. Questions were adapted to assess quality of care over a 4-month period for

the purposes of this study (i.e., the words “over the past six months” were changed to “over the past four months”).

Although some questions relate to demographic information and other non-satisfaction-related information, the primary healthcare satisfaction questions assess global and composite perceptions of healthcare. Global questions assess overall services received (e.g., “Using any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your health plan?”). Composite questions relate to getting needed care (e.g., “In the last four months when you needed care right away, how often did you get care as soon as you thought you needed?”), getting care quickly (e.g., “In the last four months, was it easy to get the care, tests, or treatment you needed with your health insurance?”), how well healthcare professionals communicate (e.g., “In the last four months how often did your personal doctor spend enough time with you?”), and health plan customer service (e.g., “In the last four months how often did your health plan’s customer service give you the information or help you needed?”). Each item is scored independently by consumers using a Likert-type rating system. Composite ratings are usually scored on a 4-point scale (e.g., 1 = *never*, 2 = *sometimes*, 3 = *usually*, 4 = *always*); global questions are usually scored on a 10-point scale (e.g., 0 = *worst health plan possible*, 10 = *best health plan possible*). Higher scores indicate greater satisfaction with care. The instrument has been shown to demonstrate good psychometric properties, including good internal consistency reliability ($\alpha = .75$) and a factor analysis showing that a 5-factor model had better fit than alternative 2 and 3-factor models (Hargraves, Hays, & Cleary, 2003).

Ohio Mental Health Consumer Outcomes System Adult Consumer Form (COSACF). This 67-item self-report survey was developed by the Ohio Department of Mental Health (2009). Although some questions relate to demographic and other non-clinical information, the majority of questions gather adult consumers’ perceptions of quality of life, effects of health on functioning, medication concerns, symptom distress, and recovery/empowerment over the past 6 months. Questions were adapted to assess quality of care over a 4-month period for the purposes of this study (i.e., the words “over the past six months” were changed to “over the past four months”). Questions 1 through 12 are Quality of Life items. Questions 2 through 4 form a subscale labeled Financial Status. Questions 8, 9, 11, and 13-16 represent Safety and Health Outcomes. Questions 17-31 represent the Symptom Distress Scale. Questions 32 and 33, relate to symptom recognition and taking action when early warning signs of decompensation/relapse occur. Questions 34 through 61 represent perceptions about making decisions and empowerment.

Each item is scored independently by consumers using a Likert-type rating system. Questions are usually scored on a 5-point scale (e.g., 1 = *never*, 2 = *seldom/rarely*, 3 = *sometimes*, 4 = *often*, 5 = *always*). Some items are reverse scored to help ensure validity of responses. Responses are summed to get an overall score. The instrument has demonstrated good internal consistency ($\alpha = .98$) and discriminant validity with the Beck Depression Inventory and all but two Minnesota Multiphasic Personality Inventory

scales (Brophy, Norvell, & Kiluk, 1988). The empowerment subscale (Rogers, Chamberlin, Ellison, & Crean, 1997) demonstrates a high degree of internal consistency reliability ($\alpha = .86$). The scale has shown some degree of construct validity as scores on the making decisions subscale have been statistically significantly correlated with various quality of life, social support, and self-esteem measures (Rogers et al., 1997).

Medical Outcomes Study Measure of Client Adherence (MOSMCA). This 5-item self-report survey was developed as an open access instrument by the RAND Corporation (1995) used to assess general adherence to medical advice over the past four weeks, specifically medication compliance for this study (e.g., “I [the client named above] followed the doctor’s medication suggestions exactly”). Questions were adapted to assess medication adherence over a 4-month period for the purposes of this study (i.e., the words “over the past four weeks” were changed to “over the past four months”). Questions are scored on a 6-point scale (e.g., 1 = *none of the time*, 2 = *a little of the time*, 3 = *some of the time*, 4 = *a good bit of the time*, 5 = *most of the time*, 6 = *all of the time*). Responses are summed to get an overall score. Some items are reverse scored to help ensure validity of responses. Both consumers and mental health agency case managers each independently completed this survey. The instrument has demonstrated adequate internal consistency reliability ($\alpha = .81$) and good stability reliability (Hayes et al., 1995).

Results

In order to investigate the research questions the following four statistical hypotheses were developed: When compared with the treatment as usual (i.e., control) group, the case collaboration (i.e., treatment) group would demonstrate greater satisfaction with care (Hypothesis 1); when compared with the treatment as usual (i.e., control) group, the case collaboration (i.e., treatment) group would demonstrate increased medication compliance (Hypothesis 2); when compared with the treatment as usual (i.e., control) group, the case collaboration (i.e., treatment) group would demonstrate lower psychosocial symptomatology (Hypothesis 3); and when compared with the treatment as usual (i.e., control) group, the case collaboration (i.e., treatment) group would demonstrate lower overall mental health and physical healthcare costs (Hypothesis 4). After data were pre-screened for missing values, outliers, and statistical assumptions related to multivariate analyses (Mertler & Vannatta, 2009), descriptive statistics measuring central tendency and variability were obtained for all variables. In order to examine all aspects of consumer healthcare outcomes and costs from pre-test to post-test, 52 different statistical analyses were conducted. An alpha level of .05 was used to interpret results of statistical analyses.

Consumer satisfaction results. Four independent sample t-tests were conducted, two for each subscale of consumer satisfaction, to determine whether different aspects of consumer feedback with quality of care changed over time within the control and treatment groups (measured by the CAHPS; CAHPS Consortium, 2008). Table 1 shows pre-test, post-test consumer satisfaction results. Regarding both the control and

treatment groups results showed that client satisfaction did not significantly change from pre-test to post-test. The directional statistical hypothesis related to consumer satisfaction was not supported. Therefore, results did not show that the treatment (i.e., case collaboration) significantly enhanced client satisfaction with quality of care.

TABLE 1

Summary of Consumer Satisfaction Results

HPS Scale	N	Time 1 Mean/SD	Time 2 Mean/SD	t-value
HPS Subscale 1 Control Group	62	32.29/4.81	32.95/4.73	-.75
HPS Subscale 1 Treatment Group	54	31.24/4.33	31.76/4.73	-.59
HPS Subscale 2 Control Group	61	24.00/4.82	24.57/5.33	-.61
HPS Subscale 2 Treatment Group	58	23.74/5.26	23.66/6.19	.07

Medication compliance results. Twelve independent sample t-tests were conducted in order to determine whether medication compliance changed over different time periods within the control and treatment groups (measured by the MOSMCA; RAND Corporation, 1995). First, six different analyses were conducted to investigate consumer self-reported medication compliance. Next, six different analyses were used to investigate mental health agency staff reports of client medication compliance. Table 2 shows pre-test, post-test medication compliance results from both the consumer self-reports and agency staff reports. For the control group (i.e., clients who were not part of the case collaboration), results showed that from Time 2 to Time 3 (mid-point to post-test) consumers reported significantly poorer medication compliance. From Time 1 to Time 3 (pre-test to post-test) mental health staff reported significantly poorer client medication compliance. Regarding the treatment group (i.e., clients who were part of the case collaboration), results showed that neither consumers themselves nor mental health staff reported differences in medication compliance over time. Unlike the control group, clients who were part of the case collaboration did not show deteriorating medication compliance. The directional statistical hypothesis related to medication compliance was supported. Although results did not show that the treatment (i.e., case collaboration) directly enhanced medication compliance, medication compliance worsened over two separate time periods in the “intervention as usual” (control) group.

Psychosocial treatment outcome results. Two independent sample t-tests were conducted in order to determine whether psychosocial treatment outcomes changed from pre-test to post-test within the control and treatment groups (measured by the COSACF; Ohio Department of Mental Health, 2009). Table 3 displays psychosocial treatment outcome results. Regarding both the control and treatment groups, results showed that psychosocial outcomes did not significantly change from pre-test to post-

test. The directional statistical hypothesis related to psychosocial treatment outcomes was not supported. Therefore, results did not show that the treatment (i.e., case collaboration) significantly enhanced psychological or social functioning over time.

TABLE 2
Summary of Medication Compliance Results

MOSMCA Scale	N	Time 1 Mean/SD	Time 2 Mean/SD	Time 3 Mean/SD	t-value Time 1/2	t-value Time 2/3	t-value Time 1/3
MOSMCA Consumer Report Control Group	70	1044/4.76	11.95/4.95	10.05/4.58	-1.78	2.21*	.48
MOSMCA Consumer Report Treatment Group	57	310.40/4.80	12.16/5.12	11.02/4.72	-1.89	1.20	-.67
MOSMCA Staff Report Control Group	75	13.87/6.53	12.57/5.89	11.55/5.96	1.23	.97	2.15*
MOSMCA Staff Report Treatment Group	59	13.25/5.70	13.34/5.90	13.76/6.11	-.08	-.37	-.45

* $p < .05$

TABLE 3

Summary of Psychosocial Treatment Outcome Results

COSACF	<i>N</i>	<i>Time 1 Mean/SD</i>	<i>Time 2 Mean/SD</i>	<i>t-value</i>
Control Group	55	121.91/19.65	123.43/17.29	-.41
Treatment Group	45	120.47/19.67	123.11/17.92	-.67

Mental and physical healthcare cost results. Treatment cost-related data provided by the managed care provider included pre-test, post-test mental and physical health costs for the treatment (i.e., case collaboration) group only. Data provided by the mental health agency included pre-test, post-test mental health costs for both the control and treatment groups. In total, 34 different paired sample t-tests were conducted in order to determine whether mental and physical healthcare costs changed from pre-test to post-test (10 for managed care provider cost data, 24 for mental health agency cost data). Healthcare costs provided by the managed care organization, analyzed to evaluate differences in cost outcomes, included the following: behavioral health inpatient treatment, outpatient behavioral health treatment, medical inpatient stays, medical outpatient visits, emergency room visits, primary care physician appointments, medical specialist visits, psychopharmacological medications, mental health assessments, individual counseling sessions, group counseling sessions, individual case management, group case management, psychiatric evaluations, psychiatric follow-up appointments, addiction assessments, addiction individual counseling sessions, addiction group counseling sessions, addiction case management, and total overall healthcare costs combined. Mental health care costs provided by the agency, analyzed to evaluate differences in cost outcomes, included the following: mental health assessment, individual counseling, group counseling, individual community psychiatric supportive treatment (i.e., individual case management), group community psychiatric supportive treatment (i.e., group case management), psychiatric evaluation, psychiatric follow-up, addiction assessment, addiction individual counseling, addiction group counseling, addiction community psychiatric supportive treatment, and total overall healthcare costs. Table 4 displays statistically significant healthcare cost outcome results. The directional statistical hypothesis related to physical and mental healthcare costs was not supported.

Regarding managed care organization data, results showed that two types of costs significantly changed in the treatment group from pre-test to post-test: psychopharmacological medication costs and total costs for all forms of healthcare combined. In both cases treatment costs increased from pre-test to post-test. The primary reason total costs increased over time was because of an increase in medication costs from pre-test to

post-test (accounting for approximately 80% of the total cost change over time). Therefore, results did not show that the treatment (i.e., case collaboration) significantly reduced managed care organization costs. Regarding mental health agency data, group community psychiatric supportive treatment, psychiatric follow-up, and total overall costs combined for the control group significantly increased from pre-test to post-test. Costs for the treatment group did not significantly change for any mental health services from pre-test to post-test. Therefore, results did not show that the treatment (i.e., case collaboration) significantly reduced mental health costs. However, without the case collaboration mental health costs for two separate services, and for total mental health costs, significantly increased.

TABLE 4

Summary of Healthcare Cost Results

Group	N	Time 1 Mean/SD	t-value
Control Group CPST Group Pre-Test	65	\$417.49/\$945.60	3.53*
Control Group CPST Group Post-Test	65	\$531.97/\$1,147.80	
Control Group Psychiatric Follow-up Pre-Test	65	\$1,540.32/\$1,476.67	2.68*
Control Group Psychiatric Follow-up Post-Test	65	\$1,765.79/\$1,618.87	
Control Group Total Combined Costs Pre-Test	65	\$2,675.56/\$1,869.18	2.18*
Control Group Total Combined Costs Post-Test	65	\$2,916.21/\$2,189.12	
Treatment Group Medication Costs Pre-Test	50	\$1,556.28/\$2,015.44	-2.55*
Treatment Group Medication Costs Post-Test	50	\$4,112.17/\$4,436.94	
Treatment Group Total Combined Costs Pre-Test	50	\$5,415.63/\$7,888.45	-5.55*
Treatment Group Total Combined Costs Post-Test	50	\$8,651.29/\$11,742.74	

* $p < .05$

Discussion

The purpose of this study was to evaluate whether a case collaboration approach involving ongoing continuity of care among community mental health and managed care insurance case managers improved consumer satisfaction, medication compliance, psychosocial treatment outcomes, and cost expenditures when compared with self-managed fee-for-service treatment. Empirical findings indicated that there were no pre- and post-test differences between the treatment and control groups regarding client satisfaction or psychosocial treatment outcomes. Therefore, there was no empirical evidence to support the case collaboration approach as an effective means of enhancing consumer perceptions of quality of care, or consumer psychological or social functioning over time. However, it is important to note that there are various factors contributing to perceived consumer satisfaction and treatment outcomes among consumers

with severe mental illness including providers' degree of empathy, perceived expertise/competence (Kim, Kaplowitz, & Johnston, 2004), and the working alliance (Chinman, Rosenheck, & Lam, 2000).

Although there were no pre- and post-test medication compliance differences found in the treatment group, the control group (which did not receive ongoing case collaboration) showed significantly worse medication compliance from pre- to post-test. In addition, the control group had significantly increased group case management and psychiatric follow-up mental health costs over time. Findings of the current study are different from those reported by Chien et al. (2000) who found that higher provider continuity was linked to lower case management costs among consumers enrolled in Medicaid. Despite different outcomes in the present study, our results provide evidence supporting the case collaboration approach as an effective means of preventing higher mental health costs in certain areas. While it is difficult to determine definitively why medication compliance worsened only for the control group based on both client self-reports and staff reports, it can be assumed that worsening medication compliance resulted from lack of coordinated and collaborative care, leading to an increased need for various psychosocial interventions. This pattern may have ultimately resulted in higher case management and psychiatric follow-up costs over time for the control group.

Contrary to one of our hypotheses, medication costs increased over time for the treatment group. Jones et al. (2007) suggested that it is critical for providers to understand not only clinical, but also non-clinical variables that might have contributed to the treatment outcomes. Relatedly, a review of cost data and medical records by case managers participating in the present study showed that the collaborative approach between managed care and mental health staff may have resulted in a shift toward newer and more effective, although more costly, medications for consumers. This treatment-related decision for some clients within the case collaboration group was reportedly made to help prevent more invasive or expensive treatments (e.g., future inpatient admissions, emergency hospital visits) among consumers with the most severe symptomatology such as those with schizophrenia or bipolar disorder. That is, the treatment seemed to have a preventive function focused on continued medication compliance and best practice psychotropic methods for symptom maintenance among consumers with severe mental illnesses. Mental health consumer costs, treatment outcomes, and satisfaction are complex and multifaceted phenomena. Based on findings from previous research (e.g., Jones et al., 2007; Wang et al., 2000) and the present study, it is difficult to determine definitively whether these factors can be well-predicted by a structured mental health agency and managed care organization case collaboration approach.

Directions for Future Research

Additional research seems warranted using novel and comprehensive research designs such as that attempted in the present study. For example, cost evaluation research in the

mental health field is increasingly needed as a means of achieving more effective deployment of scarce resources. However, there remains a paucity of studies seeking to comprehensively identify predictors of mental health service utilization and costs (Jones et al., 2007). Prior researchers have echoed the complex interaction of factors described in the present study. Wilson et al. (2005) showed that medication skipping was a complex phenomenon related to drug costs, relationship with healthcare providers, and demographic characteristics (e.g., physical health, age, socioeconomic status). Medication compliance and types of medications prescribed, along with mediating factors such as satisfaction with care (e.g., therapeutic relationship factors) and consumer symptom severity, may have combined in unique ways leading to results found here. However, because we were not able to investigate all possible relationships among variables, and specific demographic factors were not included in the research design, additional research is encouraged. Future studies should continue to investigate whether and how the collaboration between managed care and mental health staff contribute to better treatment outcomes and consumer satisfaction, while simultaneously containing escalating costs, in order to provide services linked to evidence-based practices. In this regard, newer measures of continuity of care should be developed for future research designs. As Adair et al. (2003) explained, lack of evidence that continuity of care results in better consumer outcomes may be primarily attributable to the underdevelopment of measures, and measurement of continuity of care must become more sophisticated before key questions can be rigorously evaluated.

Implications for Professional Counselors

Because the results presented here indicated medication compliance-related and potential preventive functions of a collaboration between a mental health agency and a managed care organization, the primary implications for professional counselors include future macro, meso, and micro-level advocacy efforts. Advocacy on each of these levels has been a hallmark of advancing professional counseling, ultimately promoting not only counselors themselves but clients and social justice (Myers & Sweeney, 2004). Professional counselors should therefore understand and tailor advocacy-related efforts toward the most appropriate macro, meso and micro-level advocacy domains in order to help achieve effective improvements such as those described below.

Macro-level advocacy. Macro-level advocacy refers to actions focused on collaboration with others to change policies regarding society-level issues (Lewis, Ratts, Paladino, & Toporek, 2011). Macro-level advocacy often involves change in state or national legislation. Macro-level advocacy actions can further the profession by alerting the public to issues affecting counselors and clients by viewing problems contextually and removing environmental barriers (Lewis et al., 2011). In this case, increased collaboration between state and national mental health organizations and third party payors (i.e., managed care companies, state mental health boards, Medicaid oversight commissions) can promote policies aimed at more efficient and effective care. As Terrazas, Todd, Harp, and Nickel (2016) explained, professional counselors have

multiple opportunities to advocate for policy changes that can advance the profession and “congress seems to be a bit more focused on mental health issues than it has been in the past” (p. 10).

Two recent professional counselor advocacy actions included legislation allowing professional counselors to be recognized as providers within the Veterans Administration Medical Center system (American Counseling Association [ACA], 2011a), and increased federal funding mechanisms for school-based professional counseling services (ACA, 2015). Both of these initiatives could include interprofessional collaborations aimed at linking providers and payors to promote cost effective care. Professional counselors can help promote these and similar state and national initiatives by including a focus on the benefits of increasing provider and payor collaborations. Tips on how to advocate at this level are provided for professional counselors (ACA, 2011b). A new macro-level advocacy initiative for professional counselors to consider developing is legislation directly rewarding provider and payor collaborations (e.g., through financial incentives) resulting in greater client satisfaction and treatment outcomes or lower treatment costs. Regarding the present study specifically, we suggest that professional counselors advocate at the national level for increased funding of collaboration-related research by the National Institute of Mental Health and the Centers for Medicare and Medicaid Services in order to promote follow-up research in this area.

Meso-level advocacy. Meso-level advocacy, also referred to as group-level advocacy, occurs at the system’s level, wherein counselors work to address a barrier facing their community (Lewis et al., 2011). Respondents in one qualitative study (Eriksen, 1999) indicated that they engaged in meso-level advocacy by speaking with insurance company representatives and managed care organizations about how to more effectively provide and gain reimbursement for their services. Myers, Sweeney, and White (2002) pointed to studies documenting the effectiveness of engaging in advocacy related to managed care payors. This type of advocacy is directly linked to the results of the present study. Because of limited managed care company resources (e.g., personnel, best practice treatment knowledge), a need for innovative services and targeted funding has been highlighted in the literature (Jones et al., 2007). However, intentional and ongoing case collaborations with mental health agencies may not occur without meso-level advocacy. Engaging in this form of meso-level advocacy may include professional counselors providing managed care companies with education regarding what professional counselors do, evidence of interprofessional effectiveness, and the benefits of directing resources toward systemic collaborations between providers and insurance companies (Eriksen, 1997). Findings from this present study showed that there are potential benefits inherent within this type of collaboration, and results can be used to promote similar meso-level advocacy actions in other communities.

Micro-level advocacy. Micro-level advocacy occurs at the individual level of intervention, usually focused on clients or a particular problematic situation (Lewis et al., 2011). With micro-level advocacy professional counselors work collaboratively with others to develop strategies that address barriers affecting individuals in need (Lewis, Arnold, House, & Toporek, 2002). Micro-level advocacy can be seen as a direct

outgrowth of the present findings. For example, medication compliance among persons with severe mental illness is of significant concern to both clinicians and third party payors. In order to promote holistic treatment regimens, and offset higher costs associated with more expensive treatment settings (e.g., inpatient admissions), a focus on increasing outpatient medication compliance is important. Similar to Kilbourne et al. (2006), the present findings showed that when managed care organization staff collaborate with mental health agency clinicians to understand and agree upon client care, medication non-compliance was reduced. This form of continuity of care between persons directly involved in client treatment decision-making can promote better access to best practices. Continuity of care is an essential feature of holistic mental health treatment, and is usually under managerial control by third party payors and mental health administrators (Greenberg & Rosenheck, 2003). We recommend that professional counselors advocate for this type of collaboration with, and on behalf of, their clients. As Johnson et al. (1997) explained, applying this type of continuity of care throughout a mental health organization may produce cumulative long-term individual outcomes (a variable not studied here).

Conclusion

The findings from this present study indicated that for consumers who did not have access to a mental health agency and managed care collaborative approach, medication compliance worsened and group case management and psychiatric follow-up service costs increased. For consumers who did participate in ongoing case collaboration between mental health and managed care representatives, medication costs increased. These findings suggested that the case collaboration approach may have had an indirect and preventive benefit related to medication compliance and some aspects of cost reductions. Implications for professional counselors included advocacy efforts on behalf of clients, providers, and the broader mental health system. It is incumbent upon those who train aspiring professional counselors to promote client welfare, system-wide change, and ultimately the profession of counseling (Council for the Accreditation of Counseling and Related Educational Programs, 2016). By teaching counselor trainees and novice clinicians about interprofessional care and managed care organizations, advocacy efforts can be enhanced. Education and supervision of this type is considered by Myers et al. (2002) to be a “professional imperative” (p. 401). We, therefore, encourage educational use of the findings presented here, as well as additional research related to mental health provider and third party payor collaborations. A combination of advocacy efforts and new research knowledge about continuity of care can help professional counselors advance their clients’ welfare and the broader field.

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