



# The Cost Effectiveness of Embedding a Behavioral Health Clinician into an Existing Primary Care Practice to Facilitate the Integration of Care: A Prospective, Case–Control Program Evaluation

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Published online: 30 April 2018

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## Abstract

This project evaluated the cost effectiveness of integrating behavioral health services into a primary care practice using a prospective, case–control design. New Directions Behavioral Health collaborated with a large Kansas City primary care practice to integrate a licensed psychologist (i.e., behavioral health clinician) into the practice. Patient claims data were examined 21 months prior to and 14 months after the psychologist began providing full-time behavioral health services within the practice. Claims data from patients with Blue Cross Blue Shield of Kansas City insurance (BCBSKC) who had at least one encounter with the psychologist ( $N=239$ ) were compared to control patients (BCBSKC fully insured patients at large) to calculate cost savings. The results demonstrated that integrating behavioral health services into the practice was associated with \$860.16 per member per year savings or 10.8% savings in costs for BCBSKC patients. Integrating behavioral health services into primary care may lead to reductions in health care costs.

**Keywords** Integrated care · Behavioral health · Cost effectiveness · Primary care

## Introduction

There is a growing movement occurring across the United States wherein behavioral health services are integrated clinically, operationally, and financially into primary care (Martin, White, Hodgson, Lamson, & Irons, 2014; Miller, Gilchrist, Ross, Wong, & Green, 2016; Peek, 2008). This integration movement is occurring in response to the ever-increasing complexity and fragmentation of the health care system (Stange & Ferrer, 2009) and the ever growing need to have behavioral health needs met (Pettersen, Miller, Payne-Murphy, & Phillips Jr, 2014).

The combination of mental health, substance use, and health behavior change treatment needs, hereafter referred to as behavioral health, has led individuals to begin to look for

care in settings other than specialty mental health (Kessler et al., 2005; Petterson et al., 2014). People need new ways to access behavioral health care and the solution consistently points towards primary care, the largest platform of health care delivery in the country (Martin et al., 2014; Green, Fryer Jr, Yawn, Lanier, & Dovey, 2001).

Integrating behavioral health into the primary care platform presents an ideal setting for the detection and treatment of behavioral health conditions. Primary care practices are more apt to identify behavioral health conditions with the utilization of standardized screeners (Reiss-Brennan et al., 2016) and consultations with a behavioral health clinician (Cohen et al., 2015). Furthermore, by utilizing a team approach, patients demonstrate improvements in mental health outcomes (Balasubramaniam et al., 2017; Bower, Knowles, Coventry, & Rowland, 2011) as well as demonstrate reductions in acute care utilization (Reiss-Brennan et al., 2016). Additionally, multiple studies have demonstrated significant reduction in health care costs associated with integrating behavioral health into primary care (Archer et al., 2012; Reiss-Brennan et al., 2016). Finally, patients and physicians alike are satisfied with this model of care (Ede et al., 2015). Patients are satisfied with the “one-stop” shop format of receiving services, and physicians are satisfied as

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they are able to treat the medical conditions without being overwhelmed by behavioral concerns.

Despite decades of literature indicating the positive impact of integrated care, scaling integration remains a challenge (Kathol, deGruy, & Rollman, 2014; Miller, 2015). A large part of the challenge is the perceived cost of such an endeavor, as well as a culture and history that has kept behavioral health in its own silo (deGruy, 1996). In addition, financing behavioral health services in primary care has proven to be a challenge due to how mental health services have been set up as a separate benefit with a segregated payment structure (Kathol, Butler, McAlpine, & Kane, 2010).

The value-add of behavioral health services in the primary care space is clear despite the challenges of financing integrated models (Kathol et al., 2014; Melek, Norris, & Paulus, 2015). More real-world examples of how integration improves clinical quality and decreases overall health care costs are needed (Melek et al., 2015). In response to the movement of the larger health care field, many behavioral health organizations are also beginning to look at alternative business models for financing their services, including those delivered in non-specialty behavioral health settings. The intent of this paper was to describe one such example of a behavioral health organization that integrated services into a primary care practice in a Midwestern metropolitan area. The primary objective of this program evaluation was to examine the cost effectiveness of implementing this model of care using a prospective, case–control design. The secondary objective was to assess the feasibility and preliminary effectiveness of integrating behavioral health services of care within an existing primary care practice.

## Methods

### The Integrated Practice

New Directions Behavioral Health (NDBH) is a Kansas City-based managed behavioral health and employee assistance organization. NDBH fully embedded a behavioral health clinician/psychologist into a primary care practice to determine the cost effectiveness and preliminary feasibility and effectiveness of this model. The clinic chosen for this pilot program was composed of 12 physicians and 3 nurse practitioners. It is one of the highest volume single-location practices within a corporate-owned group of practices in the Kansas City region. This practice was chosen for integration in part because of their level three Patient Centered Medical Home (PCMH) certification and commitment to improving patient care. Additionally, this practice was open to and willing to accept a psychologist as part of the care team and to change their practice workflow to better support this new model of care.

### Behavioral Health Services

The behavioral health clinician, who was integrated into the primary care practice, was a licensed psychologist. She provided a range of services as part of the primary care team consistent with the Primary Care Behavioral Health Model of integrated care (Collins, Levis Hewson, Munger, & Wake, 2010; Robinson & Reiter, 2015). These services included brief focused therapy (i.e., 30-min visits, typically 3–5 sessions) for behavioral health concerns, co-consultation visits (i.e., patient visits conducted in tandem with the medical provider), warm hand-offs (i.e., brief point-of-care patient contact facilitated by the medical provider), and support by email and phone for patients. The behavioral health clinician also facilitated referrals to community mental health providers for patients with behavioral health needs that could not be addressed utilizing a brief model of care. For this pilot program, the behavioral health clinician's time was supported by NDBH and she did not bill for services. This allowed for behavioral health services to be offered at no cost to patients; thereby, making behavioral health services available to patients regardless of health insurance or ability to pay.

Prior to the behavioral health clinician starting in the practice, workflows were analyzed and restructured to best facilitate a team approach to care. It was decided that patients would be treated within the medical exam rooms for co-consults and warm hand-offs, with requests for the behavioral health clinician channeled through intra-office instant messaging. Medical providers were trained in the importance introducing the behavioral health clinician to the patient in a validating manner before leaving the room in warm hand-offs. Such an introduction is thought to improve acceptance of behavioral health interventions within a traditional medical setting for patients unaccustomed to the integrated care model. Warm hand-offs were planned as 15- to 20-minute focused interventions. Thirty minute individual appointments (i.e., brief psychotherapy) with the behavioral health clinician could be scheduled when patient follow-up was needed beyond the exam-room visit. Standardized behavioral health screeners were incorporated into the new workflows in order to systematically identify and treat the behavioral health conditions. A one-page form was created containing the Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), and the first two questions of the CAGE, a brief questionnaire designed to screen for potential alcohol problems. The medical assistants gave this form to patients prior to behavioral health encounters. The behavioral health clinician was given an office in a central location to allow the medical providers to either contact her electronically or in-person to assist with a

patient. All information about the patient visit, including the behavioral health clinician's documentation, was captured in the electronic medical record so a cohesive visit summary could be provided.

In order to promote integration and utilization of the behavioral health clinician's services, a physician champion was selected from within the primary care practice. The physician champion modeled the new way of providing care and encouraged other medical providers to participate. The physician champion was selected based on her prior experience with and commitment to integrating behavioral health services into primary care. The physician champion and the behavioral health clinician suggested appropriate scenarios for utilization of the behavioral health services at provider meetings and in one-to-one hallway consultations with providers in the practice. This encouragement and informal education helped providers to learn how best to utilize the services provided by the behavioral health clinician.

The Colorado Multiple Institutional Review Board (COMIRB) evaluated this project and determined that it did not meet the definition of research involving human subjects; therefore, review and approval by COMIRB was not required for this program evaluation or for publication of results.

## Cost Effectiveness

### Long-Term Savings

Long-term saving associated with the integration of care in the primary care practice was calculated using a prospective, case–control design. The goal of this analysis was to determine if patients' overall health care costs were less after introduction of integrated care into the primary care practice when compared to patients receiving non-integrated care. This cost analysis was conducted by Milliman, an actuarial firm with expertise in integration actuarial analysis. The cost analysis was conducted utilizing claims data from Blue Cross Blue Shield of Kansas City (BCBSKC), the primary insurer of patients in the primary care practice.

Claims data from patients with BCBSKC insurance, who had a least one encounter with the behavioral health clinician in the practice and had claims data pre- and post-practice integration, were analyzed. The pre-integration period included the 21 months immediately prior to integration (1/1/13–10/14/14). The post-integration period included the 14 months (10/15/14–12/31/15) following the initiation of the integrated behavioral health services. Total patient cost of care was calculated by totaling cost from all types of care (i.e., inpatient, outpatient, and professional behavioral and medical services, and pharmacy). Costs from the BCBSKC primary care patients from the newly integrated practice were then compared to a control group of all fully insured BCBSKC members. The

control group was analyzed in the same pre- and post-time periods to determine costs for both periods. The increase in pre- to post-period costs among the control patients was used to establish an "expected" percentage increase in costs for the BCBSKC patient in the integrated primary care practice. This "expected" percentage increase was applied to the baseline costs for the BCBSKC patients in the integrated practice to calculate "expected" costs for the post-period. The actual cost of care for the BCBSKC integrated primary care patients from the post-period was subtracted from the "expected" cost to determine cost savings. The long-term cost savings were calculated for the 14-month post-integration period because the authors only had access to 14 months of claims data; however, all other outcomes (i.e., short-term savings and feasibility) were assessed during the 18-month post-integration period.

### Short-Term Cost Savings

The short-term savings were calculated differently than the long-term savings, without a control group, based on avoidance of high cost care. The practice tracked hospital avoidances via emergency room (ER) diversions for all patients in the practice, not just BCBSKC patients, to illustrate cost avoidances during the first 18 months of implementing an integrated model of care. Hospital avoidances via ER diversions were identified collaboratively by the behavioral health clinician and the practice's primary provider involved in each episode. Each diversion incident involved multiple visits with the primary provider and/or behavioral health clinician to stabilize the high acuity psychological symptoms (e.g., suicidal ideation, mania, psychosis, or severe anxiety) that would have typically led to an ER or hospital referral had the team not intervened with the new integrated approach to care. All raters possessed considerable experience in assessing the risk of suicidal ideation and mania, anxiety or psychosis. Before a diversion was recorded, the behavioral health clinician and the primary provider had to both agree that without the team approach, they would each have referred to either the ER or a psychiatric hospital. The total cost avoided based on these diversions was calculated using the following approach: total number of diversions multiplied by average length of stay at the practice's affiliated medical center for psychiatry (i.e., 6.14 days; American Hospital Directory, 2015) multiplied by average inpatient cost per day at a Kansas for-profit hospital (i.e., \$1854; The Henry J. Kaiser Family Foundation, 2015). The cost of the avoided ER visits themselves was not included in the cost calculation, but rather simply the cost of the diverted hospitalization.

## Feasibility

Feasibility of implementing integrated behavioral health services into the primary care practice was assessed in two ways. The first approach was to track utilization of the behavioral health services provided by the behavioral health clinician. The second measure was to assess patient and medical provider satisfaction with the behavioral health services.

## Service Utilization

Behavioral health service utilization was assessed via multiple methods. The first was a tally of the total number of unique patients seen by the behavioral health clinician. The second was total number of patient encounters. Encounters included any interaction the behavioral health clinician had with a patient in the practice. This could be in-person or by phone. The third method of assessing behavioral health care delivery was the number of hand-offs conducted in the practice. The behavioral health clinician had the option to classify the type of hand-off as a co-consult, warm hand-off, or telephone/email hand-off.

## Satisfaction

After 18 months of integrated care implementation, the medical providers and patients in the practice were surveyed to assess their level of satisfaction with the services provided by the behavioral health clinician. During a 2-week time period, a revised form of the PHQ-9/GAD/CAGE screener was given to patients, who had at least one encounter with the behavioral health clinician during. This screener included one question to assess the value of the behavioral

health clinician's services and a free-form space for comments. Similarly, all medical providers were provided a four-question survey, which reflected whether they believed the health of the patient population improved, as well as their level of satisfaction with the integration of the service in the practice. Free-form comments were also allowed in the provider survey. All satisfaction questions are included in Table 1.

## Preliminary Effectiveness

Preliminary effectiveness of integrated care was assessed by changes in patient outcomes for 18 months after the start of the pilot project. Clinical outcomes measures were collected on patients, who had at least two encounters with the behavioral health clinician. Information collected included low-density lipoprotein (LDL) values, hemoglobin A1c (HbA1c) values, body mass index (BMI), PHQ-9 scores, and GAD-7 scores. CAGE questions were also administered to patients but only used for screening purposes and not analyzed for this program evaluation. This information was collected prior to or at the start of treatment with the behavioral health clinician and at the end of a treatment episode to assess for change in various clinical outcomes. Paired *t* tests were conducted to determine if the changes in clinical measures from the start to end of the treatment episode were statistically significant.

Rather than being a pre-determined duration or number of visits, a treatment "episode" was defined as a period of clinic care during which time a patient received additional support to address a specific behavioral health or medical concern from the integrated team (i.e., the medical provider and behavioral health clinician) or the behavioral health clinician. The majority of patients were seen in tandem with

**Table 1** Satisfaction survey results 18-month post-integrated care initiation

Provider satisfaction questions N=13	Agree/ likely/sat- isfied	Somewhat agree/ likely/satisfied	Neutral	Somewhat disagree/ unlikely/dissatisfied	Disagree/ unlikely/ dissatisfied
The overall fit of the behavioral health provider with the team has been positive	100%	0%	0%	0%	0%
The clinical performance of the behavioral health provider has had a positive impact on the clinic's patient population	100%	0%	0%	0%	0%
As a medical provider, how likely are you to utilize the behavioral health provider in collaborative care when you see a patient with mental/behavioral health needs?	100%	0%	0%	0%	0%
Overall, how satisfied are you with having a behavioral health provider integrated into the practice?	100%	0%	0%	0%	0%
Patient satisfaction questions N=29	Agree	Somewhat agree	Neutral	Somewhat disagree	Disagree
The services the Behavioral Health Consultant provides are valuable in helping me	93%	7%	0%	0%	0%

the primary care provider, either by warm hand-off or co-consultation; therefore, the length of a patient's treatment episode was often determined based on his/her appointments with the primary care provider. An episode began at the first visit that involved the behavioral health clinician and ended once the primary care provider decreased the patient's visit frequency to 6 months, or allowed the patient to return as needed. If the patient was primarily being treated by the behavioral health clinician, the treatment episode began at the first encounter with the behavioral health clinician and ended when the presenting behavioral health condition improved (e.g., as evidenced by improved PHQ-9 or GAD-7 scores or improved mental health symptoms). A follow-up PHQ-9 and GAD-7 screener was collected at the end of the treatment episode. In the case of medical outcome measures, these were periodically monitored and re-entered as the blood work was ordered by the medical provider. The treatment episode was longer for patients consulting the behavioral health clinicians for weight management. Weight management patients typically had individual appointments with the behavioral health clinician and the treatment episode ended when goal weight was attained.

BMI outcomes were divided into two categories—"BMI 30+" and "Weight Loss Group." BMI was recorded for every face-to-face encounter with the behavioral health clinician, so those whose weight fell in the obese range (i.e., BMI > 30), were able to be tracked even though weight management was not necessarily a focus of their treatment. These patients comprised the "BMI 30+ Group." In the "Weight Loss Group," any patients, regardless of weight range, whose primary goal was to work on weight loss, were categorized into this group and their BMI tracked over time. These patients were seen in 30-min sessions of

pre-determined content, once monthly. The number of visits varied between patients.

## Results

The primary care practice chosen for this evaluation project was located in an urban neighborhood of the Kansas City metropolitan area and was responsible for serving approximately 30,000 unique patients annually prior to the implementation of integrated care. The medical providers in the practice had an estimated annual clinic volume of 42,000.

### Cost Effectiveness

#### Long-Term Savings

An actuarial firm calculated the long-term savings associated with the integration of care, based on patients' claims pre- and post-integration. A total of 239 BCBSKC members were analyzed who had at least one encounter with the behavioral health clinician and had claims data pre- and post-integrated care implementation. Table 2 presents the total cost of claims by service type for these patients pre- and post-integrated care implementation. Cost per member per month (PMPM) is calculated by dividing the cost by the member months for each period. Members could have had fewer months of insured coverage than the referenced study periods. When cost of care for BCBSKC patients within the practice was compared to projected costs (i.e., "expected costs" based on costs of BCBSKC members at large), significant cost avoidance was found. The results demonstrated an \$860.16 per member per year (PMPY) savings or an overall

**Table 2** Cost savings associated with integrated care implementation

Service type	Pre-period 1/1/2013–10/14/2014		Post-period 10/15/2014–12/31/2015		Expected costs (BCBSKC cost trends)		Savings (expected cost – actual costs)		
	Total Cost	PMPM	Total cost	PMPM	Total cost	PMPM	Total cost	PMPM	Percent
<b>Inpatient</b>									
Medical	\$258,888	\$74.56	\$282,834	\$91.41	\$271,837	\$87.86	–\$10,997	–\$3.55	–4.0
Behavioral	\$3,248	\$0.94	\$15,883	\$5.13	\$3410	\$1.10	–\$12,472	–\$4.03	–365.7
<b>Outpatient</b>									
Medical	\$798,693	\$230.04	\$708,650	\$229.04	\$838,640	\$271.05	\$129,990	\$42.01	15.5
Behavioral	\$10,704	\$3.08	\$43,345	\$14.01	\$11,240	\$3.63	–\$32,105	–\$10.38	–285.6
<b>Professional</b>									
Medical	\$548,341	\$157.93	\$477,992	\$154.49	\$575,767	\$186.09	\$97,775	\$31.60	17.0
Behavioral	\$36,331	\$10.46	\$85,760	\$27.72	\$38,149	\$12.33	–\$47,611	–\$15.39	–124.8
Prescription drug <sup>a</sup>	\$293,311	\$84.48	\$210,796	\$68.13	\$307,981	\$99.54	\$97,186	\$31.41	31.6
<b>Total</b>	<b>\$1,949,517</b>	<b>\$561.50</b>	<b>\$1,825,259</b>	<b>\$589.94</b>	<b>\$2,047,023</b>	<b>\$661.61</b>	<b>\$221,764</b>	<b>\$71.68</b>	<b>10.8</b>

<sup>a</sup>Only paid costs were available and used for prescription drug analysis (i.e., cost after payments that patients are responsible for, such as co-pays, are deducted from the total cost)

10.8% savings in costs. Areas of cost savings included outpatient medical expenses, professional medical expenses, and prescription drug cost. Outpatient medical costs refer to all outpatient facility costs, while professional medical costs refer to both primary care and specialty professional (non-behavioral) costs. Areas of cost increase were inpatient and outpatient behavioral health costs and inpatient medical costs.

### Short-Term Cost

The short-term savings were based on the number of hospitalization diversions likely attributable to initiation of the integrated model of care within the primary care clinic. The clinic reported a total of 23 diversions in the 18-month post-integration evaluation period, equating to approximately \$261,821.88 in savings.

### Feasibility

Integrating behavioral health services into an existing primary care practice was feasible, as demonstrated by utilization of the services and patient and provider satisfaction.

### Service Utilization

During the 18-month evaluation period, the behavioral health clinician saw approximately 1027 unique patients with 1770 encounters in the practice across all 15 of the practice's medical providers. The percentage of hand-offs from the providers to the behavioral health clinician were predominantly warm hand-offs, at 43% of the hand-offs. The psychologist was involved in approximately 3% of the total encounters in the practice.

### Satisfaction

Overall, providers and patients were satisfied with the behavioral health services offered in the practice. Thirteen out of 15 (86.7%) of the practice's medical providers completed the satisfaction survey. All of the provider respondents gave the highest satisfaction scores in response to questions about

the behavioral health clinician, such as fit with the team and impact on patients (Table 1). Free-form comments included on the satisfaction survey by providers reinforced the quantitative survey results. Below are three quotes extracted from the provider survey responses:

- Having a behavioral health specialist has increased my patients' willingness to comply with medical and mental health recommendations and follow-up appointments.
- Nearly all of the changes in medical practice that have happened during the last 10 years have impacted physicians negatively. This is a practice intervention that has impacted us positively, and is truly the single one with that distinction. We were almost immediately aware of [the behavioral health clinician]'s clinical skills but a more subtle (and potentially more powerful) outcome has also been realized in the past few months. [The behavioral health clinician]'s daily work constitutes a large-scale intervention at the practice level, improving the health of the practice in measurable ways related to provider satisfaction.
- She saves me time so I can see more patients. She collaboratively gets patients to 'buy-in' with their care, improves compliance with diet, activity, and medications. She keeps me happy and satisfied by not getting overwhelmed by getting behind in my schedule due to patient mental health issues.

Likewise, patients who completed the satisfaction survey ( $N=29$ ; Table 1) also reported high satisfaction with the behavioral health services. All of the patient responders affirmed (i.e., "somewhat agree" or "agree") that the behavioral health services were valuable and helpful.

### Preliminary Effectiveness

Patients seen by the behavioral health clinician on average experienced improvement in clinical outcomes (Table 3). Outcomes data were available for 346 patients, who had at least two encounters with the behavioral health provider. On average, these particular patients demonstrated decreases in LDL, HbA1C, BMI, PHQ-9, and GAD-7 scores. Paired  $t$

**Table 3** Clinical outcomes for patients seen by the behavioral health clinician

	LDL ( $N=30$ )	HbA1c ( $N=40$ )	BMI 30+ ( $N=208$ )	Weight Loss Group <sup>a</sup> ( $N=90$ )	PHQ-9 ( $N=99$ )	GAD-7 ( $N=63$ )
Mean start (SD)	124.7 (75.2) mg/dL	7.7 (2.0)%	40.06 (7.98) kg/m <sup>2</sup>	40.05 (8.47) kg/m <sup>2</sup>	13.7 (5.6)	14.1 (4.7)
Mean end (SD)	101.7 (45.6) mg/dL	6.6 (1.0)%	39.23 (8.07) kg/m <sup>2</sup>	38.07 (8.43) kg/m <sup>2</sup>	7.5 (4.6)	7.7 (5.5)
Mean change	-18.4%	-14.3%	-2.07%	-4.9%	-45.1%	-45.2%
Avg. visits	4.97	4.18	3.49	4.4	4.02	3.38

<sup>a</sup>Indicates patient who had at least one encounter with the behavioral health clinician and whose primary treatment goal was weight loss

tests comparing pre- to post-intervention means found that these decreases were all statistically significant at the  $p < .05$  level. The changes in these values suggest better management of cholesterol and diabetes, decreases in weight, and decreases in symptoms of depression, and anxiety for patients who completed at least two visits with the behavioral health clinician.

## Discussion

NDBH, a managed behavioral health and employee assistance organization, collaborated with a large Kansas City primary care practice to integrate behavioral health services into their practice. 14 months of evaluating the implementation of behavioral health into the primary care practice demonstrated significant cost savings for BCBSKC patients in the practice when compared to all fully insured BCB-SKC patients. Additionally, patients and providers utilized the newly available behavioral health services and were highly satisfied with these services. Patients, who had at least two encounters with the behavioral health clinician and had available follow-up data, demonstrated improvements in multiple behavioral health and general health domains. The work conducted by NDBH and the primary care practice demonstrates that integrating primary care and behavioral health is not only feasible but may also lead to significant reductions in the cost of care within a relatively short amount of time. The pilot lends support to the importance of integration in achieving the Triple Aim: improved population health and patient experience while controlling costs (Berwick, Nolan, & Whittington, 2008).

Reductions in cost of care were demonstrated in the medical arena by addressing co-morbid behavioral and medical conditions. Prior literature has shown that patients with co-morbid chronic medical and mental health concerns accrue greater health costs when compared to similar patients without co-morbid mental health concerns (Melek et al., 2015). Integration of behavioral health services into primary care is thought to generate downstream medical savings by improving management of co-morbid chronic disease and behavioral health concerns (Reiss-Brennan et al., 2016), which is consistent with the improvements in clinical outcomes observed in this pilot program. Improved disease management may lead to a reduction in pharmacy costs and to more efficient use of outpatient medical visits, as seen by the cost savings findings. The behavioral health clinician in this pilot program did not bill for services; however, other studies have also reported cost savings when behavioral health clinicians billed for their services (Archer et al., 2012; Reiss-Brennan et al., 2016).

The impact of integration challenges historic relationships and the roles of behavioral health organizations and

medical care organizations. The results of integrating primary care and behavioral health directly benefit health plan payers, members, and providers alike. For primary care practices that are considering integrating behavioral health services into their practice to improve patient care, these findings should be both promising and motivating. For patients, this approach to care reduces fragmentation and provides a better approach for addressing behavioral health needs in a supportive and timely manner, while leading to improvements in health outcomes and reducing avoidable ER visits and hospitalizations. For health plan payers, this approach to care may reduce health care costs while providing better care to patients. Overall, the value of integration is substantial and pervasive for health plan payers, integration partners, and members, and integration enables organizations to work together to impact health care costs and provide quality collaborative care.

There are important limitations to the findings from this program evaluation. Given the non-experimental design of this evaluation project, direct causal claims between integration of care and cost and clinical outcomes may not be made. Throughout this article, inferences about causality were drawn; however, alternative explanations may be possible. Unaccounted for changes within the practice may have contributed to the observed outcomes. Patient satisfaction data were not randomly collected, but collected for those patients completing a treatment episode during a 2-week period in order to minimize interference with the routine surveys of patients. This 2-week period may not have adequately captured the range of patients' satisfaction with behavioral health services; more dissatisfaction may have been captured if the survey period were extended. Follow-up clinical data were only available for a subset of patients (i.e., patients who attended follow-up visits as scheduled); therefore, the clinical data are not representative of all patients with behavioral health encounters. It is possible that patients, who did not improve, did not attend their follow-up visits and were therefore not represented in the clinical outcomes. Short-term savings were calculated utilizing a methodology that was based on providers' perceptions, which likely introduced bias into determining number of hospital diversions; therefore, the approach used may potentially represent an over-estimate of cost savings. Future research should utilize a standardized method for tracking ER/hospital diversions from primary care that is less subjective, perhaps based on acuity and presenting complaint. The cost savings are based upon a small sample group of BCBSKC members due to the inclusion criteria that patients have claims data during both the pre- and post-integration periods. BCBSKC was the primary payer in the practice; however, these patients only represented a portion of those patients within the clinic receiving integrated behavioral health services. It

is possible that patients with different insurance providers may have had different cost outcomes than those seen in the BCBSKC population. Additionally, information on patient demographics and medical severity was not available from the BCBSKC claims data; therefore, differences in demographics and health status between the two groups may have also contributed to the observed cost outcomes. However, patients referred to the behavioral health clinician were often struggling to manage co-morbid mental health/medical conditions. Therefore, it is likely that BCBSKC patients seen by the behavioral health clinician had poorer mental and physical health than the general BCBSKC population. Baseline PHQ-9, GAD, BMI, A1C, and LDL scores from the pilot practice would support this assertion. Additionally, cost savings have been calculated without the cost or billing income of the behavioral health provider included in order to provide the service to all patients in the practice without the necessity of meeting co-pays or deductibles. Further study of the business model best suited to finance integrated care is of central importance to the success of this national initiative. Payment models that move from fee for service towards more global, capitated payments promote collaboration and the inclusion of behavioral health as a part of the primary care team (Miller et al., 2017).

Increasing the penetration of an embedded psychologist would also be ideal, and may be accomplished with protocol-driven referrals for such conditions as newly diagnosed Type II diabetics. Utilizing data generated by a primary care practice could identify a target group of patients and increase the number of referrals beyond those generated from the clinical judgment of the primary care providers as they work their daily schedules.

As seen through this analysis, the impact of behavioral health integration in primary care may be substantial both clinically and financially. This preliminary evaluation demonstrates that behavioral health may have far reaching positive influence from medical providers and patients at the practice level to population health and overall health care costs. One cannot limit the benefits of integration to a single benefit but rather must consider the totality of the value when analyzing the effects of integration. Additionally, because the impact of integration is so pervasive, this form of patient care should be viewed as an exemplary model for affecting positive and fundamental change in the health care system.

The results of this project contribute to the rich body of integrated behavioral health and primary care research. The findings may be encouraging to primary care practices and behavioral health organizations who are considering integrating care. Additionally, these results contribute compelling information and fuel to the ever-increasing

demand within health care to defragment mental health and medical care.

**Funding** This project was internally funded by the New Directions Behavioral Health organization.

## Compliance with Ethical Standards

**Conflict of Interest** Betsy Klein is an employee of New Directions Behavioral Health, which funded the behavioral health services and funded the behavioral health services and analyses for this project. Katherine Ferro is an employee of New Directions Behavioral Health. Debra McQueeney is an employee of New Directions Behavioral Health. Rebecca Gernon, Benjamin Miller, and Kaile Ross declare that they have no conflicts of interest.

**Ethical Approval** This project was conducted as a program evaluation. This project was evaluated by the institutional review board and was determined to not qualify as research and therefore was exempted from requiring review and approval.

**Human and Animal Rights** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

**Informed Consent** This program evaluation project was evaluated by the institutional review board and determined to be exempt and not requiring informed consent; therefore, informed consent was not obtained from the patients whose data in this program evaluation.

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