

An Examination of Perceptions in Integrated Care Practice

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Abstract Successful integration of behavioral health and primary care services is informed by perceptions of its usefulness to the consumer. An examination of provider, staff and patient perceptions was conducted across five integrated care sites in order to describe and examine perceptions and level of satisfaction with integrated care. A quantitative study was conducted with data collected through surveys administered to 51 patients, 27 support staff, and 11 providers in integrated care settings. Survey responses revealed high levels of satisfaction with integration of primary and behavioral health services. Integrated care can be enhanced by addressing provider competency and confidence concerns through continued education, increased collaboration and utilization of diagnostic tools. This analysis provides evidence to support that successful integration increases access to mental health-care, which is instrumental in reduction of the mental

health treatment gap by scaling up services for mental and substance use disorders among individuals with chronic medical conditions.

Keywords Integrated care · Primary care · Behavioral health · Perception · Satisfaction

Introduction

Approximately one fourth of adults in the United States have some form of mental illness, and nearly half will develop at least one mental illness during their lifetime (Kessler et al. 2005). Mental illness is a significant community and public health burden, both in its own right and because the condition is associated with other chronic diseases such as Hypertension and Diabetes Mellitus; and

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their resulting morbidity and mortality (Reeves et al. 2011). Almost 20 years ago, the Institute of Medicine (IOM) declared primary care and behavioral health to be inseparable (National Research Council 1996). The 16th US Surgeon General, indicated that due to the decentralized and complex nature of mental health care, improvements must rely on partnerships between primary care providers and mental health centers to ensure coordinated treatment (Satcher and Druss 2010). The Agency for Health care Research Quality (AHRQ) (Croghan and Brown 2010) and other state and federal agencies have also advocated for integrating delivery of physical and behavioral health services as a way to improve the quality of patient care. Evidence from randomized controlled trials demonstrates that integrated care improves process of care (Katon et al. 2004) and clinical outcomes for patients with common medical and behavioral conditions (e.g., diabetes, depression, and anxiety), (Unutzer et al. 2002) including patients' overall quality of life. Furthermore, AHRQ reported on an extensive analysis of studies regarding various forms of integrated behavioral and primary health care services (Butler et al. 2008) and tried to measure improvement in client outcomes. This report concluded that in general, the integration of mental health, substance abuse, and primary care has a positive effect on client outcomes (Butler et al. 2008). Now, with the implementation of the Affordable Care Act (ACA), integration of mental health and substance use disorder services with primary care services is projected to be a focus of the healthcare delivery system. This is because the ACA requires a set of comprehensive essential health benefits, establishes "health homes" wherein states can receive Medicaid support for providing integrated health services, and encourages multidisciplinary teams. The ACA also has established the Innovation Center to look at possible new funding mechanisms to pay for integrated care which is crucial to the successful implementation of integrated care. While the ACA is expected to accelerate the movement toward integration of care (Buck 2011), little is known about the perceptions of patients, staff, and providers who are involved in both integration of behavioral health services in primary health settings, and integration of primary health services into mental health settings (reverse integration).

Successful implementation of integration of primary health services in behavioral health settings or vice versa depends on the integrated efforts of various types of staff, such as mental health/substance use disorder staff, support staff, and primary care providers (Urada et al. 2012). Patients' perceptions and level of satisfaction also, is a key factor in the successful implementation of integration. Staff members' and patients' perceptions of and satisfaction with integration of care are therefore important measures of progress towards integration. However, there are limited

studies (Levine et al. 2005; Unutzer et al. 2002) that have looked at perceptions and levels of satisfaction with integrated care services holistically, i.e. assessed patients, and considered both integration and reverse integration settings. We aimed to: (1) describe providers', staff, and patients' perceptions and level of satisfaction with integrated behavioral health services; (2) examine providers', staff, and patients' perceptions and level of satisfaction with primary and behavioral health integration, and/or reverse integration.

Methods

The Satcher Health Leadership Institute (SHLI), through a partnership with Kaiser Permanente implemented an Integrated Care Practice Change and Quality Improvement initiative (ICPCQI). Through a competitive request for proposal process, five integrated care community health centers were selected to participate in the SHLI-ICPCQI by a peer review team. By definition, integrated care involved behavioral health working within and as part of primary care. These community health centers included two behavioral health centers (reverse integrated care centers), i.e., Cobb County Community Service Board (The Circle) and McIntosh Trail Community Service Board, and three primary health centers, i.e., Saint Joseph's Mercy Care Services, Asa G. Yancey Family Practice Center, and North Fulton Service Center.

A Community of Practice (CoP) for the ICPCQI was formed by the five integrated care community health centers and the SHLI to engage in collective shared learning with a common interest and commitment to improve health outcomes of their patients with both medical and behavioral health problems using an integrated care practice model. These five community health centers shared, learned and implemented changes in their health centers to transform their practice to be more integrated. All aspects of this study were approved by the Morehouse School of Medicine Institutional Review Board.

Description of Integrated Care Practice Change and Quality Improvement Initiative

Primary Healthcare Sites- Integration

Saint Joseph's Mercy Care Services Saint Joseph's Mercy Care Services (SJMCS) is a Federally Qualified Health Center (FQHC) which provides primary health services to the homeless and underserved in metro Atlanta through a combination of fixed and mobile clinic sites. SJMCS' primary service area is comprised of Fulton and DeKalb counties which includes the city of Atlanta.

Table 1 Summary of primary care—behavioral health integration models used in the ICPCQI sites

Location	St. Joseph's Mercy Care Services	Asa G. Yancey Family Practice Center	Cobb county Community Service Board	North Fulton Health Center	McIntosh Trail Community Service Board/Hope Health Clinic
Model	Co-location	Co-location	Reverse co-location	Co-location	Collaborative care
Added quality improvement services	Group psycho-education	Computerized kiosk for mental health and substance use screening	Relaxation and wellness	Group psycho-education	Depression management for patients with congestive heart failure
Type of setting	FQHC	Community primary health	Community mental health	Community primary health	Community mental health
Provider of behavioral health care/mental health team	Psychiatrist LPC, LCSW Case manager	Psychiatrist	Psychiatrist Case manager LPC, LCSW, CPS	Psychiatrist LPC	Psychiatrist Clinical psychologist Nurse LCSW, LPC, LAPC
Provider of medical care	Nurse practitioner	Family physician Internist Nurse	Nurse practitioner	Family physician Nurse	Physician assistant Nurse practitioner
Clinical survey Instruments	Patient satisfaction Staff satisfaction Provider satisfaction	Patient satisfaction Staff satisfaction Provider satisfaction	Patient satisfaction Staff satisfaction	–	–

FQHC Federally Qualified Health Center, *LPC* Licensed Professional Counselor, *LAPC* Licensed Associate Professional Counselor, *LCSW* Licensed Clinical Social Worker, *CPS* Certified Peer Specialist

SJMCS serves approximately 11,856 homeless and underserved patients yearly. Medical services and behavioral health services were provided within the clinics by a team of primary care physicians, nurses, behavioral health clinicians, and embedded psychiatrist. Patients with medical needs who had behavioral health complaints were referred to the co-located psychiatrist or behavioral health clinician (see Table 1). In addition, the SHLI implemented the ICPCQI through a series of five eight-week group psycho-educational sessions held for patients with hypertension and depression over the 12-month grant period. The expected outcomes included: Increased mental health screening rates; increased satisfaction rate with the overall improvement project among participants; increased knowledge of integrated care among providers trained using the SHLI Integrated Care Curriculum; improved health outcomes among patients with hypertension and co-occurring depression and; increased adherence to their prescribed treatment regimen.

Asa G. Yancey Family Practice Center Asa G. Yancey Family Practice Center (AGY) serves approximately 18,000 patients per year, majority of who are underserved. AGY has a mission to improve the health of the community by providing quality, comprehensive primary and preventive

healthcare in a compassionate, culturally competent, ethical and fiscally responsible manner. As an integrated site, AGY used a co-location model of care in the delivery of medical and behavioral health services. Medical and behavioral health services were coordinated by family physicians, internists, nurses, and an on-site embedded psychiatrist (see Table 1). The psychiatrist held weekly didactic sessions on common mental health and substance use disorder topics (depression, anxiety, and bipolar disorder) with the physicians. There also were regular on-site consultations between the psychiatrist and medical providers to increase the skills of both groups. AGY obtained and implemented a computerized kiosk for the screening and assessment of all patients for Depression, Post Traumatic Stress Disorder, Bipolar Disorder, Psychosis, and Substance Abuse. The expected outcomes included: increased rate of clinic screening for targeted mental health conditions; improved quality of depression care as a result of automated symptom severity assessment; improved rates of referrals to internal and external mental health treatment; and improve health outcomes of those under treatment.

The North Fulton Health Service Center The North Fulton Health Service Center (NFHSC) provides integrated social and primary health care services to a largely

minority population. An embedded psychiatrist and behavioral health clinicians were co-located to provide care to patients referred for mental health evaluations by the primary care physician. To augment this co-location integrated care model, SHLI-ICPCQI supported the implementation of a psycho-educational group therapy program (see Table 1). Patients that presented to NFHSC with a diagnosis of Diabetes, Hypertension and/or Obesity were screened for depression using the PHQ-9 Screening Questionnaire. Those that screened positive were offered the group sessions with the psychologist and of those that consent, a referral was generated. The psychologist had 1 h long psychotherapy sessions once a week with the group for a total of 8 sessions. The expected outcomes of this initiative included: increased awareness/knowledge of Hypertension, Diabetes, Obesity and co-occurring Depression; improved patient satisfaction with integrated behavioral health care services; increased access to behavioral healthcare; increased health outcomes among those undergoing group therapy, i.e., reduced severity of depressive symptoms; maintenance of healthy blood pressures and HbA1c; and maintenance of healthy body mass indexes

Mental Health Sites- Reverse Integration

Cobb County Community Services Board-The Circle The Cobb County Community Services Board (CCSB) is a provider of public behavioral healthcare services in Cobb, Douglas, and Cherokee counties, Georgia. Cobb CCSB provides care to “hard to service” populations and the most in need relative to mental health, developmental disability, and substance abuse services. Cobb CCSB serves between 13,000 and 14,000 patients annually. A majority of these patients have Severe and Persistent Mental Illness (SPMI) such as Schizophrenia, Schizoaffective disorder, Delusional disorder, Psychosis, Bipolar disorder, Severe depression and co-morbid chronic medical disease. A reverse co-location integrated care approach (Table 1) in which a nurse practitioner is stationed in the facility to monitor physical health, and provide medical treatment to patients with serious mental illness who have medical comorbidities was used. The behavioral health team (Psychiatrist, Behavioral Health Clinicians, Case manager, Intensive Care Managers, and Certified Peer Specialists) coordinate the mental health and substance use care delivery to patients. To complement these integrated care efforts, the SHLI provided support to Cobb CCSB to specifically implement a Relaxation and Wellness program that focused on building relaxation and stress management skills to individuals with serious mental illness or a co-occurring substance

abuse disorder and one of the following cardio-metabolic disorders: Diabetes, Hypertension, or Cardiovascular disease and ensured that they were able to practice these skills as often as necessary. The project had 3-month cohorts of 20 individuals and projected to serve a total of 60 individuals over the course of the grant period. The expected outcomes included to: Increased level of satisfaction with the wellness and relaxation program; increased mental health screening rates; improved health outcomes; increased ability to implement a regular relaxation routine among participants and; increased confidence in handling stressful situations among participants

McIntosh Trail Community Service Board Spalding Health Initiative (SHI) was established to improve the health of individuals who have psychiatric disorders and significant health risks by coordinating care through community resources. McIntosh Trail Community Service Board through its SHI, addresses the needs of individuals who have SPMI and chronic medical conditions through an integrated approach, while identifying those individuals without health benefits as being a priority. The spectrum of presenting psychiatric diagnoses seen range from Schizophrenia, Bipolar disorder and Major depression, to Anxiety disorder and Post Traumatic Stress Disorder, with SPMI being more prevalent. The Hope Health Clinic is the primary care provider (PCP) for those individuals seen at McIntosh Trail CSB who meet these criteria.

The target population was those individuals who present at the emergency department with congestive heart disease and screen positive for depression. This initiative provided health homes which include primary care services, behavioral health interventions, comprehensive care management and care coordination, transitional care from inpatient to the primary care setting and follow up. The behavioral health consultant (BHC) provided a comprehensive mental health evaluation. Individualized treatment plans were developed with the individuals, the BHC, and the medical staff ensured that both the medical and behavioral health needs were included in the plan. The BHC worked with the individuals to identify barriers to success and assist the individual in developing strategies to improve their overall health. Peer groups were established with the identified individuals and each also received nutrition counseling, group support, family groups, and individual therapy and linked with other community resources. The BHC also provided follow up and tracked these individuals to address adherence with the treatment plan. The expected outcomes included: improved clinical outcomes among congestive heart failure individuals co-morbid depression; increased awareness/knowledge regarding prevalence congestive heart failure with co-occurring mental health issues and; reduction in hospitalization and readmission rates.

Procedure

A descriptive cross-sectional study design, with a convenience sampling method was used. A total of three surveys that assessed perceptions, satisfaction, and acceptability toward integrated care services among patients, support staff, and providers were administered. E-mails were sent out in July–August 2013, approximately 2 weeks apart, to members of the CoP to introduce the surveys and request for involvement in the recruiting process at respective sites.

Provider satisfaction surveys were administered at two integrated care sites. To obtain the provider satisfaction data, an embedded psychiatrist met individually with the PCPs at one integration site to briefly describe the survey objectives and obtain verbal consent for participation. The surveys were distributed in paper form to all providers during regularly scheduled PCP meetings. The providers were not given any compensation, or required to sign an informed consent for participation. In the other site, one CoP representative facilitated the distribution of the surveys to the site's providers.

To obtain patient and support staff satisfaction data, a CoP representative administered paper forms of the survey to patients and support staff at each integration site between July and October, 2013. The patients surveyed were mainly those that directly benefited from the ICPCQI initiative. The patients were recruited to participate in the study during their group psycho-educational sessions, relaxation and wellness session, or came for their follow-up visit. The support staffs were mainly those that were involved in the ICPCQI initiative. Support staff participants were recruited by an assigned CoP representative located in their site. Administration of the surveys was preceded by brief descriptions of the survey objectives and verbal consent. The surveys were anonymous and no incentives were given.

Participants

The following groups were targeted at all five ICPCQI sites, each with their own surveys: (1) Providers (Physicians, Nurse practitioners, Psychiatrists); (2) Support staff (Medical assistants, Licensed professional counselors, Administrative assistants, Front office staff, and Medical records staff); and (3) Patients.

Only three of the five sites collected survey data. There were a total of 51 patient, 27 support staff, and 11 provider respondents. A total of 330 patients received care at four ICPCQI sites. Patients were not surveyed at one site due to logistical reasons. Of the 330 patients who were eligible to participate in the patient satisfaction survey, a response rate of 15.7 % ($n = 51$) was obtained. This response rate was

lower than the rates seen in similar integrated care patient satisfaction surveys (Funderburk et al. 2012).

All providers involved in the ICPCQI were eligible to complete the provider satisfaction survey. Eleven participants did so, yielding a 78.6 % response rate. This response rate closely mirrors the rates seen in a similar provider satisfaction survey (Funderburk et al. 2012). Because of the small number of providers at our ICPCQI clinics and the need to maintain their anonymity to encourage higher response rates, demographic information was not collected from the participants.

Twenty seven support staff completed the staff satisfaction questionnaire from 3 of 5 ICPCQI sites. There were no responses from support staffs at 2 sites. It was difficult to determine the response rate among the support staff because some of the sites were in a transition phase, while some were at different levels of integration and were unsure about completing the survey.

Measures

The support staff and patient surveys were adapted from questionnaires developed by the Tides Center's Integrated Behavioral Health Project, and modified by (Urada et al. 2012). The support staff and patient questionnaires were further modified to include demographics items. Provider satisfaction tools were adapted from the Integrating Primary Care and Mental Health Services: Final Evaluation Report on the ICARE Integration Pilot Sites (Morrissey et al. 2009). The provider satisfaction survey used was not modified.

Patient Satisfaction Survey

Participants answered six demographic questions (i.e., age range, gender, ethnicity, race, education level, and insurance status), and to indicate their ICPCQI site and number of clinic visits. Patients rated their level of agreement with 9 statements related to satisfaction and comfort levels with treatment and treatment settings. These questions were on a Likert scale ranging from (1) strongly disagree to (3) neither disagree nor agree to (5) strongly agree. For those participants who completed the Likert aspect of the questionnaire, Cronbach's alpha for the nine items was 0.83.

Support Staff Survey

Participants answered two demographic questions (i.e., ethnicity and race), and were asked to indicate their ICPCQI site. The following fourteen questions assessed the perceptions and satisfaction levels with integration efforts at their site. These questions were on a Likert scale ranging from (1) strongly disagree to (3) neither disagree nor agree

to (5) strongly agree. For those participants who completed the Likert aspect of the questionnaire, Cronbach's alpha for the fourteen items was 0.84.

Provider Survey

Participants answered 34 Likert scale questions pertaining to the topics of treatment patterns, clinical algorithms/best practice, physical proximity, temporal proximity, communication, patient care, appropriate care processes, and provider satisfaction with integrated care.

Data Analysis

Data were entered into a Research Electronic Data Capture (REDCap) database and analysis was conducted using SAS 9.2 statistical software. The analysis was descriptive statistics, including frequencies, medians, standard deviations and ranges for the individual survey items. A bivariate analysis was performed for all patient survey participants to analyze and compare responses from integration versus reverse integration sites.

Results

Patients, support staff, and PCPs from three of the five ICPCQI sites participated in this study. Two (AGY and SJMCS) were primary care integration sites. Of the 51 patients who participated, the majorities (58.8 and 74.5 %) were black/African American and had no insurance respectively (see Table 2). More than 80 % of the patients had at least one clinic visit. Most (91.7 %) support staff participants were of non-Hispanic ethnicity, and predominantly minorities. Racial-ethnic, gender, and race demographic data for providers were not collected as these variables were not relevant to the study objectives.

Patient Satisfaction

A majority of the patients reported having a high level of satisfaction with the delivery of behavioral health services at their clinic site (see Table 3). All 51 (100 %) participants attempted all satisfaction items on the questionnaire. As shown in Table 3, overall, participants perceived highly that they were treated the same as other people who get care at the clinic, and were comfortable receiving mental health services at their respective sites ($M = 5.0$). The participants also noted with high agreement that they felt they were learning the skills needed to deal with their problems ($M = 5.0$), and would follow through if they were referred outside their clinic for mental health care. Although at a lower median than the other patient satisfaction items, participants responded within

a level of agreement ($M = 4.0$) when it came to preference to receive mental health services at the location where they receive medical care.

Support Staff Satisfaction

Median responses for each survey item are shown in Table 4. The listed satisfaction items are in the same order as they appeared on the survey. Overall, majority of support staff were satisfied and comfortable with the behavioral health services being offered at the clinic site. The participants reported that behavioral health services was helpful for their patients, and noted that working with people with mental health disorders, substance use disorders, and/or other psychosocial issues has a positive impact on their practice (see Table 4). In terms of access and usefulness of service, the participants indicated good satisfaction ($M = 4.18$) with their access to behavioral health staff, and highly agreed that the behavioral health staffs provide the kinds of services they want for their patients. Participants also reported valuing integrated behavioral services, and strongly indicated they would recommend that other primary care providers integrate behavioral health services into their facilities ($M = 5.0$).

Provider Satisfaction

Regarding treatment patterns, more than half (54.2 %) of the participants indicated that they managed over 40 % of their patients whom they believed had clinically relevant psychiatric diagnosis without any referrals. With regards to referrals, only 9.1 % of the participants indicated that they would refer over 40 % of their patients for help to a specialty mental health provider located outside of their office. Also, less than half (46.3 %) of the participants indicated that they would refer over 40 % of their patients for help to a co-located provider mental health provider.

In terms of utilization of clinical algorithms/best practices, the participants reported a high level (81.8 %) of use of published, evidence based diagnostic tools for depression among physicians in their practice. There was a great level of variability in the participants' responses in terms of perceptions of physician's utilization of best practices in Bipolar disorder and Anxiety diagnoses. The participants strongly agreed that majority (70 %) of physicians did not use evidence based diagnostic tools when a patient presented with ADHD/ADD symptoms.

Physical and temporal proximities to behavioral health services were assessed. Over half (54.5 %) of the participants reported using a co-location integrated care model. A majority (90 %) of the respondents noted that there was adequate space in their primary care office for integrated mental health treatment that is also used for

Table 2 Demographics of survey participants

	Patients N (%)	Support staff N (%)	Providers N (%)
ICPCQI sites			
Asa G. Yancey Family Practice Center	7 (15.6)	15 (55.6)	5 (45.5)
Saint Joseph Mercy Care Services	23 (51.1)	11 (40.7)	6 (54.5)
Cobb County Community Service Board	15 (33.3)	1 (3.7)	–
Age			
≤20	–	–	–
21–30	5 (10.0)	–	–
31–40	10 (20.0)	–	–
41–50	9 (18.0)	–	–
51–60	20 (40.0)	–	–
61–70	6 (12.0)	–	–
71≤	–	–	–
Gender			
Male	21 (41.2)	–	–
Female	30 (58.8)	–	–
Ethnicity			
Hispanic	–	2 (8.3)	–
Non-hispanic	49 (100.0)	22 (91.7)	–
Race			
White	19 (37.2)	2 (8.3)	–
American Indian/Alaska Native	1 (1.9)	3 (13.0)	–
Asian	–	–	–
Black/African American	30 (58.8)	18 (78.3)	–
Hawaiian/other Pacific Islander	1 (1.9)	–	–
Education			
Middle school	7 (14.0)	–	–
High school	26 (52.0)	–	–
College/university	15 (30.0)	–	–
Graduate school	2 (4.0)	–	–
Insurance			
No insurance	38 (74.5)	–	–
Medicaid	5 (9.8)	–	–
Medicare	5 (9.8)	–	–
Private insurance	1 (1.9)	–	–
Other	2 (3.9)	–	–
Number of clinic visits			
None	8 (16.3)	–	–
1–5	24 (48.9)	–	–
6–10	13 (26.5)	–	–
10 and above	4 (8.2)	–	–

other purposes. The participants reported that it takes weeks to months between a PCP referral and a patient's first specialty mental health visit outside of the primary care practice, which contrasts with same day to few weeks interval seen in an integrated care setting.

As shown in Table 5, there were variations in the responses among participants regarding the frequency of communication with the co-located mental health provider

in their practice (i.e., How often does the referring PCP initiate written/oral communication with the co-located mental health provider prior to a patient's first co-located mental health visit?) There was a greater level of variability in responses when it pertained to the frequency of acknowledgement of appointments kept by referred patients. Majority of participants reported that 81–100 % of the time, the co-located mental health provider clarified diagnosis and

Table 3 Patient ratings of ICQPCI acceptability and satisfaction

Questions	Median (<i>M</i>)	SD	N	Range
I am satisfied with the amount of time the staff spends with me during my visit	4.00	0.91	51	(1–5)
My beliefs about health and well-being were considered as part of the help (services) that I received	4.00	0.88	51	(1–5)
I would follow through if I were referred outside this clinic for mental health services	4.00	1.11	51	(1–5)
Any concerns I may have had regarding my mental health treatment plan were quickly taken care of	4.00	1.16	51	(1–5)
Treatment and information were provided to me in a language or way I could easily understand	4.33	0.99	51	(1–5)
I am comfortable receiving mental health services here at this clinic	5.00	1.13	51	(1–5)
I am treated the same as other people who get care at the clinic	5.00	0.78	51	(1–5)
I prefer to receive my mental health services at the location where I receive my medical care	4.00	1.22	51	(1–5)
I feel I am learning the skills I need to deal with my problems	5.00	0.95	51	(1–5)

1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = Agree, 5 = strongly agree

Table 4 Support staff ratings of ICQPCI acceptability and satisfaction

Satisfaction items	Median (<i>M</i>)	SD	N	Range
I am satisfied with the ability of the medical staff at my clinic to address the needs of patients with mental health disorders, substance use disorders, and/or other psychosocial issues	4.00	0.66	27	3–5
I am effective in addressing the needs of patients with mental health disorders, substance use disorders, and/or other psychosocial issues	4.00	0.60	26	3–5
I am comfortable being the first-line response for people with mental health disorders, substance use disorders, and/or psychosocial issues	4.00	0.93	27	1–5
I am effective working with patients with low motivation to change, e.g. patients who are NOT making needed behavioral changes, or patients who are NOT adhering to their medical treatment	4.00	0.91	27	1–5
Behavioral health services are helpful for our patients	5.00	0.57	27	3–5
Working with people with mental health disorders, substance use disorders, and/or other psychosocial issues has a positive impact on our practice	4.00	0.71	26	3–5
I am satisfied with my access to behavioral health staff	4.00	0.73	27	2–5
The behavioral health staffs provide the kinds of services I want for our patients	4.00	0.71	27	3–5
Communication between medical and behavioral health staff at my clinic is good	4.00	0.78	27	3–5
I would recommend that other primary care providers integrate behavioral health services into their facilities	5.00	0.74	27	3–5
The integrated behavioral health model increases ease of access to behavioral health services for the patients our clinics serves	4.00	0.60	27	3–5
Consultation between medical and behavioral health staff is helpful to our patients	5.00	0.69	27	3–5
Feedback supplied by behavioral health staff regarding patients is adequate	4.00	0.81	27	2–5

1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = Agree, 5 = strongly agree

recommended treatment plans for referred patients, and provided adequate responses to referral questions.

Pertaining patient care, most participants (90.9 %) noted that the co-located mental health provider very often creates individualized care plans for patients referred for behavioral health problems. Nearly two-thirds of the participants reported that there was some sharing, but mostly the mental health provider takes responsibility for implementing and following-up on the individualized care plan. The participants did not take full responsibility, or most of the responsibility

relative to implementing and follow-up of the individualized care plan created by the mental health specialist.

Overall, more than half (54.5 %) of the participants were moderately satisfied with the level of integration, and access to behavioral health services at their integrated care sites. Sixty-four percent of participants were moderately satisfied with the existing services at their sites. This survey revealed very low levels of dissatisfaction with the level of integration, existing services, and access to behavioral health services among the participants.

Table 5 Primary care provider acceptability and satisfaction ratings of ICQPCI

Satisfaction items	Frequency				
	0–20 % N (%)	21–40 % N (%)	41–60 % N (%)	61–80 % N (%)	81–100 % N (%)
Treatment patterns					
Watchfully wait without intervening?	10 (90.9)	1 (9.1)	–	–	–
Manage yourself?	2 (18.2)	3 (27.3)	3 (27.3)	1 (9.1)	2 (18.2)
Refer for help to the co-located provider?	4 (36.4)	2 (18.2)	1 (9.1)	1 (9.1)	3 (27.3)
Refer for help to a specialty mental health provider located outside of your office?	7 (63.6)	3 (27.3)	1 (9.1)	–	–
Clinical algorithms/best practices					
Depression	–	–	–	2 (18.2)	9 (81.8)
Anxiety	3 (27.3)	–	2 (18.2)	3 (27.3)	3 (27.3)
ADHD/ADD	7 (70.0)	–	–	1 (10.0)	2 (20.0)
Bipolar disorder	4 (36.4)	1 (9.1)	1 (9.1)	1 (9.1)	4 (36.4)
Substance abuse	5 (50.0)	1 (10.0)	–	1 (10.0)	3 (30.0)
Communication					
How often does the referring PCP initiate written communication (referral letter or e-mail) with the co-located mental health provider and PCP prior to a patient's first co-located mental health visit?	4 (40.0)	–	2 (20.0)	–	4 (40.0)
How often does the referring PCP initiate oral communication (phone call, face-to-face conversation) with the co-located mental health provider prior to a patient's first co-located mental health visit?	2 (20.0)	–	1 (10.0)	4 (40.0)	3 (30.0)
How often does the co-located mental health provider send the following feedback to the PCP?					
Acknowledgement of appointment kept by referred patient	1 (10.0)	1 (10.0)	2 (20.0)	4 (40.0)	2 (20.0)
Clarified diagnosis for referred patient	1 (10.0)	–	1 (10.0)	–	8 (80.0)
Recommended treatment plan for referred patient	2 (20.0)	–	–	–	8 (80.0)
Adequate response to a referral question	1 (10.0)	–	–	2 (20.0)	7 (70.0)
Patient care					
After a patient is seen by a co-located mental health provider, how often is an individualized care plan created for the patient?	–	1 (9.1)	–	1 (9.1)	9 (81.8)

The following preceding question/statements were used for treatment patterns, clinical algorithm/best practices, and patient care constructs: (1) Treatment Patterns: For those patients whom you believe to have a clinically relevant psychiatric diagnosis, what percentage do you; (2) Clinical Algorithms/Best Practices: When a patient presents with symptoms, physicians in our practice use a published, evidence-based diagnostic tool for; (3) Patient Care: question pertain to those patients for whom you refer to the co-located mental health provider

Bivariate Analysis

Of the total patient respondents, 30 were from integration sites and 15 from reverse integration sites. There were no significant demographical differences among gender, education level, or age between patients in each group site. There were statistically significant differences between patients' health insurance status and race between sites.

All the participants had comparable results between both group sites for most questions, with little to no difference in satisfaction level, except for preference on receiving mental health services at the location where medical care is received. Participants at integration sites had a higher preference for receiving mental health services at the location they receive medical care compared to participants from reverse integration sites ($P = 0.029$; Table 6).

Discussion

In this study we hypothesized positive perceptions and high acceptability with the Integrated Care Practice Change and Quality Improvement Initiative among patients, support staff, and providers. We also hypothesized that there was no difference in the perceptions/satisfaction of patients, providers and staff in integration of behavioral health into primary care settings, and reverse integration settings. To support our hypothesis, this study found that patients, support staff, and providers reported positive experiences with the overall integrated care program. It revealed that the concept of integration of care was welcomed in both primary care and mental health settings. Our findings provide further evidence that this model of care can be implemented in community health centers, Federally

Table 6 Comparison of patient perceptions of integrated care services in integration versus reverse integration settings

Variables	Integration N (%)	Reverse integration N (%)	P value
Age group (years)			
21–40	7 (50.0)	7 (50.0)	0.177
41–70	22 (73.3)	8 (26.8)	
Gender			
Male	10 (62.5)	6 (37.5)	0.746
Female	20 (69.0)	9 (31.0)	
Ethnicity			
Non-hispanic	30 (66.7)	15 (33.3)	–
Race			
White	7 (38.9)	11 (61.1)	0.003
Black/African American Native	21 (84.0)	4 (16.0)	
American Indian/Alaska Native	1 (100.0)	–	
Hawaiian/Other Pacific Islander	1 (100.0)	–	
School level attained			
Middle school	5 (83.3)	1 (16.7)	0.171
High school	12 (52.2)	11 (47.8)	
College/graduate school	12 (80.0)	3 (20.0)	
Health insurance status			
No insurance	26 (78.8)	7 (21.2)	0.006
Medicaid/medicare	4 (40.0)	6 (60.0)	
Private insurance/other	–	2 (100.0)	
Number of visits to the integrated behavioral health clinic			
None	5 (71.4)	2 (28.6)	0.733
1–5	15 (68.2)	7 (31.8)	
6–10	8 (80.0)	2 (20.0)	
10 and above	2 (50.0)	2 (50.0)	
I am satisfied with the amount of time the staff spends with me during my visit (s)			
Strongly disagree/disagree	1 (33.3)	2 (66.7)	0.558
Neither disagree nor agree	3 (75.0)	1 (25.0)	
Strongly agree/agree	26 (68.4)	12 (31.6)	
My beliefs about health and well-being were considered as part of the help (services) that I received			
Strongly disagree/disagree	1 (50.0)	1 (50.0)	0.579
Neither disagree nor agree	4 (57.1)	3 (42.9)	
Strongly agree/agree	25 (69.4)	11 (30.6)	
I would follow through if I were referred outside this clinic for mental health services			
Strongly disagree/disagree	4 (80.0)	12(0.0)	0.530
Neither disagree nor agree	2 (40.0)	3 (60.0)	
Strongly agree/agree	24 (68.6)	11(31.4)	
Any concerns I may have had regarding my mental health treatment plan were quickly taken care of			
Strongly disagree/disagree	3 (50.0)	3 (50.0)	0.688
Neither disagree nor agree	4 (66.7)	2 (33.3)	
Strongly agree/agree	23 (69.7)	10 (30.3)	
Treatment and information were provided to me in a language or way I could easily understand			
Strongly disagree/disagree	2 (66.7)	1 (33.3)	1.000
Neither disagree nor agree	2 (66.7)	1 (33.3)	
Strongly agree/agree	26 (66.7)	13 (33.3)	
I am comfortable receiving mental health services here at this clinic			
Strongly disagree/disagree	2 (50.0)	2 (50.0)	0.546
Neither disagree nor agree	5 (83.3)	1 (16.7)	
Strongly agree/agree	23 (65.7)	12 (34.3)	

Table 6 continued

Variables	Integration N (%)	Reverse integration N (%)	<i>P</i> value
I am treated the same as other people who get care at the clinic			
Strongly disagree/disagree	0 (0.0)	1 (100.0)	0.509
Neither disagree nor agree	2 (66.7)	1 (33.3)	
Strongly agree/agree	28 (68.3)	13 (31.7)	
I prefer to receive my mental health services at the location where I receive my medical care			
Strongly disagree/disagree	4 (57.1)	3 (42.9)	0.029
Neither disagree nor agree	1 (20.0)	4 (80.0)	
Strongly agree/agree	25 (75.8)	8 (24.2)	
I feel I am learning the skills I need to deal with my problems			
Strongly disagree/disagree	2 (66.7)	1 (33.3)	0.791
Neither disagree nor agree	2 (100.0)	–	
Strongly agree/agree	26 (65.0)	14 (35.0)	

P value <0.05 signify statistically significant difference in patient perceptions towards ICPCQI in integrated versus reverse integrated care settings

Qualified Health Centers, and other underserved communities.

Similar to recent research (Laderman and Mate 2014; Funderburk et al. 2010), our findings support a trend towards higher patient satisfaction and acceptability with integrated care services they received in their clinics. The providers and supporting staff also showed high levels of acceptability to integrate behavioral and primary health care into community health settings. The supporting staff expressed high levels of comfort being the first-line response for people with mental health disorders, substance use disorders, and/or psychosocial issues. This perception is consistent with previous supporting staff survey (Urada et al. 2012) where they rated their own comfort as being first-line responder of mental health and substance use issues very highly. These supporting staff expressed their satisfaction with access to behavioral health staff and perceived highly, that the integrated behavioral health model increases ease of access to behavioral health services for patients.

While we recognize the difficulties of navigating the health care system, professionals in both the physical and behavioral health fields have affirmed the benefit of having an informed companion help patients with this challenge, and Medicaid programs are exploring opportunities to use a new cadre of “navigators” to serve in this role (Nardone et al. 2014). Our results support the adapting of innovative integrated care models such as those used in the ICPCQI, by other health systems. These cost-effective innovative care models incorporate interventions like group psycho-educational therapy, automated screening kiosks, and the use of a navigator workforce (relaxation and wellness experts, licensed clinical social workers, licensed professional counselors, and certified peer specialists).

Regarding treatment patterns for patients seen in primary care settings who were believed to have clinically relevant psychiatric diagnoses, our findings revealed that

providers either managed by themselves, referred for help to the co-located provider, or to a specialty mental health provider located outside, and were less likely to wait without intervening. Our results are similar to prior studies that PCPs are particularly likely to refer patients to mental health specialists when symptoms are severe (Steele et al. 2010), and primary-care pediatricians practicing in clinics with onsite psychiatrists or other mental health specialists were more likely to request psychiatric consultation compared with those without on-site psychiatric services (Cerimele et al. 2012). However, the primary care providers in co-located settings seemed to have moderate levels of comfort relative to managing/treating psychiatric illnesses.

A previous study revealed that for the third of patients who receive BH care in the primary care sector, treatment for only 1 in 9 is evidence-based (Manderscheid and Kathol 2014). Most providers in the ICPCQI reported that they used published, evidence-based diagnostic tools when a patient presents with symptoms of depression. However, our results suggest that the providers were less likely to use evidence based clinical algorithms in diagnosing Anxiety disorder, Bipolar disorder, and Substance abuse. Further, providers were least likely to utilize evidence-based diagnostic tools in diagnosing ADHD/ADD. A previous study found that although PCPs are assuming a greater role in the management of ADHD, there continues to be a substantial gap between existing need and the capacity to provide ADHD services in the context of primary care practice (Power et al. 2008). Our results agree with the previous findings (Power et al. 2008) thus suggesting the need for additional training of primary care providers on ADHD diagnosis and increased collaboration with the co-located psychiatrist in order to close this gap.

Our findings highlight the duration of time between PCP referral and a patient’s first mental health visit with a co-located mental health provider located inside the primary

care practice versus outside of the primary care practice. It was not surprising that the interval between PCP referral and visit to the co-located mental health specialist was relatively shorter than referrals to an external mental health provider. This further reinforces the benefits of the co-located integrated care model where the psychiatrist/mental health specialist is on site at the primary-care clinic and often available for same day consultation (Cerimele et al. 2012).

Another element of the provider survey was communication between the PCP and co-located mental health provider. A majority of the PCPs noted that following a referral and prior to a patient's first co-located mental health visit, 'portions of' or 'the full' medical chart was shared. PCPs indicated that they were significantly less likely to refer a patient and 'not share' or 'share some' information on the medical chart with the co-located mental health provider. Within this study, a majority of the PCPs frequently initiated written communication (referral letter or email) or oral communication (phone call, face-to-face conversation) with the co-located mental health provider prior to a patient's first co-located mental health visit. In addition, the PCPs agreed that the co-located mental health provider frequently clarified diagnosis and recommended treatment plan for referred patients. These findings are an improvement from the findings of one integrated care satisfaction PCP/mental health provider survey (Urada et al. 2012) that noted poor communication between the PCP and mental health provider attributable to the tendency for the PCP to ask the mental health provider for information but not provide information to the mental health provider.

Although the majority of PCPs reported that they were not at all knowledgeable on individualized care plans created for patients who are referred to specialty mental health providers outside their office, the PCPs had good knowledge on the individualized care plans for patients seen by the a co-located mental health provider. In addition, PCPs noted that co-located mental health provider very often created an individualized care plan for referred patients. Similarly, when it came to taking responsibility for implementing the individualized care plan, the PCPs indicated some sharing but mostly the mental health provider takes responsibility. Pertaining to appropriateness of care, the PCPs appear to be very comfortable with managing patients with depression. Majority of PCPs reported the implementation of established screening and/or diagnosis tools, proper referral and/or treatment protocols, adequate sharing of information between providers, and appropriate follow-up for patients presenting with Depression. Despite practicing in an integrated setting with an embedded psychiatrist, PCPs felt least confident when it came to managing ADHD/ADD, which is consistent with findings from a prior study (Power et al. 2008).

Conclusion

The combination of high prevalence of co-occurring mental illness among individuals with chronic medical disease, high cost and adverse impact of uncoordinated fragmented care, with high levels of satisfaction and acceptability with this ICQPCI among patients, staffs and providers makes integration of physical and behavioral health a top priority in the health care delivery system. Given the implementation of the Affordable Care Act (ACA), and potential influx of more individuals with chronic diseases and co morbid mental illness, integrated behavioral health models offers a great platform for quality care that that improves health outcomes and reduces costs. In light of the data that indicate sub-optimal competencies and low confidence among PCPs in regard to use of evidence-based diagnostic tools/clinical algorithms and treating mental health diagnoses, efforts to increase PCP's training on these tools, and effective collaborations and partnerships between PCPs and mental health providers are needed.

The indication of high levels of satisfaction and acceptability of integration of physical health and behavioral health care especially in community settings is a proxy to the state of readiness of communities to adopt and expand integrated care. This data encourages the extension and propagation of innovative models of integrated care which incorporates navigators, behavioral health clinicians, and licensed professional counselors into rural community health centers to help address existing rural/urban associated disparities in integrated care implementation (Miller et al. 2014).

Limitations of this Study

Some limitations of this survey need to be considered. There were variations in the timing and procedures used to collect data from different groups of participants. Our response rate for the patient satisfaction survey was 15.7 %. Although lower than that found in other research using similar methodology (Shih and Fan 2009), the response rate can be attributed to the fact that one of our sites was a homeless clinic and had challenges collecting data from these transit patients. This survey used a convenient sampling methodological approach and a relatively small sample size thus making the generalizability of the findings questionable. In addition, the limited range of the scales used in the patient and supporting staff survey instruments (1–5), may contribute to variability. Furthermore, the integrated care sites served a broad range of psychiatric disorders, however, at the time of the study we did not capture in detail the number and spectrum of psychiatric

disorders presented by the patients served at these sites. This is a limitation to generalizing the findings of the study because primary care staff acceptance and satisfaction in working with patients with co-occurring medical and psychiatric disorders may be dependent on the range and severity of the mental disorders presented by the patients. These limitations should not be ignored when considering the generalizability of the study. The comparison of perceptions of the ICPCQI in the integration versus reverse integration sites considered only patients views. This exclusion was due to very small sample sizes, and few to no participant support staff and providers from the reverse integration sites. Although requests for participation were sent to all partnering ICPCQI sites, support staff and providers were not sampled at the mental health community health centers. This survey is a snap shot representation of the participants' perception of the ICQPCI and voids the ability to assess for changes in the levels of satisfaction or and acceptability of the ICQPCI. Future studies should compare pre/post survey data to determine changes in patients', providers', and support staffs' perceptions, and also compare participants in an integrated care setting versus non-integrated.

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References

- Buck, J. A. (2011). The looming expansion and transformation of public substance abuse treatment under the Affordable Care Act. *Health Affairs (Millwood)*, *30*, 1402–1410.
- Butler, M., Kane, R. L., McAlpine, D., Kathol, R. G., Fu, S. S., Hagedorn, H., & Wilt, T. J. (2008). Integration of mental health/substance abuse and primary care no. 173. AHRQ Publication No. 09-E003. Rockville, MD: Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services. Retrieved from <http://www.ahrq.gov/downloads/>.
- Crimele, J. M., Katon, W. J., Sharma, V., & Sederer, L. I. (2012). Delivering psychiatric services in primary-care setting. *Mount Sinai Journal of Medicine*, *79*, 481–489.
- Croghan, T. W., & Brown, J. D. (2010). Integrating mental health treatment into the patient-centered medical home (AHRQ Publication No. 10-0084-EF). Rockville, MD: Agency for Healthcare Research and Quality.
- Funderburk, J. S., Fielder, R. L., DeMartini, K. S., Flynn, C. A., et al. (2012). Integrating behavioral health services into a university health center: Patient and provider satisfaction. *Families, Systems, & Health*, *30*, 130–140.
- Funderburk, J. S., Sugarman, D. E., Maisto, S. A., Ouimette, P., Schohn, M., Lantinga, L., et al. (2010). The description and evaluation of the implementation of an integrated healthcare model. *Families, Systems, & Health*, *28*, 146–160.
- Katon, W. J., Von, K. M., Lin, E. H., Simon, G., Ludman, E., Russo, J., et al. (2004). The pathways study: A randomized trial of collaborative care in patients with diabetes and depression. *Archives of General Psychiatry*, *61*, 1042–1049.
- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, *62*, 593–602.
- Laderman, M., & Mate, K. (2014). Integrating behavioral health into primary care. *Healthcare Executive*, *29*, 74–77.
- Levine, S., Unutzer, J., Yip, J. Y., Hoffing, M., Leung, M., Fan, M. Y., et al. (2005). Physicians' satisfaction with a collaborative disease management program for late-life depression in primary care. *General Hospital Psychiatry*, *27*, 383–391.
- Manderscheid, R., & Kathol, R. (2014). Fostering sustainable, integrated medical and behavioral health services in medical settings. *Annals of Internal Medicine*, *160*, 61–65.
- Miller, B. F., Petterson, S., Brown Levey, S. M., Payne-Murphy, J. C., Moore, M., & Bazemore, A. (2014). Primary care, behavioral health, provider colocation, and rurality. *The Journal of the American Board of Family Medicine*, *27*, 367–374.
- Morrissey, J. P., Domino, M., Wicher, C., Kilany, M., & Gaynes, B. (2009). Integrating Primary Care and Mental Health Services: Final Evaluation Report on the ICARE Integration Pilot Sites.
- Nardone, M., Snyder, S., & Paradise, J. (2014). Integrating physical and behavioral health care: Promising medicaid models. Henry J. Kaiser Family Foundation. Retrieved from <http://kff.org/medicaid/issue-brief/integrating-physical-and-behavioral-healthcare-promising-Medicaid-models/>.
- National Research Council. (1996). *Primary care: America's health in a new era*. Washington DC: The National Academies Press.
- Power, T. J., Mautone, J. A., Manz, P. H., Frye, L., & Blum, N. J. (2008). Managing attention-deficit/hyperactivity disorder in primary care: A systematic analysis of roles and challenges. *Pediatrics*, *121*, e65–e72.
- Reeves, W. C., Strine, T. W., Pratt, L. A., Thompson, W., Ahluwalia, I., Dhingra, S. S., et al. (2011). Mental illness surveillance among adults in the United States. *MMWR Surveill Summ*, *60*(Suppl 3), 1–29.
- Satcher, D., & Druss, B. G. (2010). Bridging mental health and public health. *Preventing chronic disease*, *7*, A03.
- Shih, T. H., & Fan, X. (2009). Comparing response rates in e-mail and paper surveys: A meta-analysis. *Educational Research Review*, *4*, 26–40.
- Steele, M. M., Lochrie, A. S., & Roberts, M. C. (2010). Physician identification and management of psychosocial problems in primary care. *Journal of Clinical Psychology in Medical Settings*, *17*, 103–115.
- Unutzer, J., Katon, W., Callahan, C. M., Williams, J. W, Jr, Hunkeler, E., Harpole, L., et al. (2002). Collaborative care management of late-life depression in the primary care setting: A randomized controlled trial. *JAMA*, *288*, 2836–2845.
- Urada, D., Schaper, E., Alvarez, L., Reilly, C., Dawar, M., Field, R., et al. (2012). Perceptions of mental health and substance use disorder services integration among the workforce in primary care settings. *Journal of psychoactive drugs*, *44*, 292–298.