

A Qualitative Investigation of Characteristics Impacting Clinical Decision-Making in Integrated Behavioral Health Care

Ash M. Smith, MA Maria C. Prom, MD Lauren C. Ng, PhD[®]

Abstract

To support implementation of integrated behavioral health care (IBHC) models in local settings, providers may benefit from clinical decision-making support. The present analysis examines perspectives on patient characteristics appropriate or inappropriate for, and currently managed within, IBHC at a large medical center to inform recommendations for provider decision-making. Twentyfour participants (n = 13 primary care providers; n = 6 behavioral health providers; n = 5 administrators) in an IBHC setting were interviewed. Thematic analysis was conducted with acceptable interrater reliability ($\kappa = 0.75$). Responses indicated behavioral health symptom and patient characteristics that impact perceptions of appropriateness for management in IBHC, with high variability between providers. Many patients with characteristics identified as inappropriate for IBHC were nonetheless currently managed in IBHC. Interactions between patient ability to engage in care and provider ability to manage patient needs guided decisions to refer a patient to IBHC or specialty care. A heuristic representing this dimensional approach to clinical decision-making is presented to suggest provider decision-making guidance informed by both patient and provider ability.

Maria C. Prom, Boston Medical Center, Boston, MA, USA. laurenng@ucla.edu.

Lauren C. Ng, Department of Psychology, University of California Los Angeles, Los Angeles, CA, USA.

The Journal of Behavioral Health Services & Research, 2024. 1–27 © 2024, National Council for Mental Wellbeing. DOI 10.1007/s11414-024-09891-6

Characteristics Impacting Clinical Decision-Making in Integrated Behavioral Health Care SMITH ET AL.

Ash M. Smith, Boston Medical Center, Boston, MA, USA. laurenng@ucla.edu.

Address correspondence to Lauren C. Ng, Boston Medical Center, Boston, MA, USA. laurenng@ucla.edu. Ash M. Smith, Psychology Department, The Graduate Center, City University of New York, New York, NY, USA.

Maria C. Prom, Department of Psychiatry, Massachusetts General Hospital and Harvard Medical School, Boston, MA, USA.

Lauren C. Ng, Psychiatry Department, Boston University School of Medicine, Boston, MA, USA.

Introduction

Limited access to, and minimal engagement in, specialty behavioral health care upon referral from primary care has long been documented in the literature.^{1–5} Integrated behavioral health care (IBHC), a term that encompasses a large spectrum of mental health care models in which behavioral health providers serve patients from primary care settings,^{6,7} demonstrates improved referral, follow-up, and treatment initiation rates for behavioral health care in comparison to specialty behavioral health care,^{2,8–10} as well as high rates of engagement.¹¹ A growing body of research demonstrates the superiority of IBHC models compared to "usual" primary care, including clinical outcomes, functioning, satisfaction, treatment adherence, and quality of life.^{12–25}

Based on this evidence, IBHC has the potential to increase engagement in and effectiveness of behavioral health care across a variety of behavioral health conditions. As such, integrated models of care have been adopted widely in the USA.^{26,27} However, without the support and structure of grant funding and research protocols, IBHC models that demonstrate success in research settings may not be feasible and efficacious in real-world settings.^{28–31} While this "research-to-practice" gap^{32–34} is not unique to IBHC,³⁵ bridging the gap by adapting and specifying the IBHC model to unique settings has the potential to improve care provision and support health outcomes.²⁸

Provider clinical decision-making, primarily deciding whether a patient should be referred to integrated behavioral health or specialty care, is a particular area in which adaptation and specification may help bridge research-to-practice gaps. In research studies, providers are supported by highly structured, limited, and predetermined inclusion criteria for IBHC management, while providers in real-world settings are tasked with making clinical decisions without similar guidance.^{6,7} Primary care providers (PCPs) in real-world clinics may have insufficient training or experience assessing behavioral health conditions³⁶ to evaluate behavioral health needs³⁷ and severity in the context of IBHC programs³⁸ without additional support.

In addition, patient participants in many IBHC research studies are typically higher functioning, have less severe and complex illness, and are less demographically diverse than populations served in real-world settings.³⁹ Many studies limit inclusion to a single behavioral health condition, typically depression or anxiety disorders,⁴⁰ and tend to exclude patients experiencing acute suicidality or those with comorbid psychotic, bipolar, trauma-related, or substance use disorders.^{6,41–43} Without research protocols that automatically refer patients with diverse conditions, complex illness, or emergent needs to specialty care, providers may lack clear guidelines for deciding whether a patient is appropriate for IBHC or better served in specialty behavioral health care.

In addition, some IBHC models rely on a stepped-care approach, in which patients are first managed within IBHC for low-intensity interventions and are then referred to specialty behavioral health care for higher-intensity intervention if indicated.^{6,7}However, real-world IBHC clinics may not be equipped to manage more severe or complex behavioral health conditions at the first step of care. Rather, in many real-world care settings, some patients are managed within IBHC programs while others are directly referred to specialty care.⁴⁴ This discrepancy between traditional stepped-care approaches to clinical decision-making (e.g., referring all patients to IBHC first) and real-world practice can contribute to the lack of guidance for providers.

Without clear guidance, providers must independently determine which patients are appropriate for management in IBHC and which patients should receive a referral to specialty behavioral health care. In local IBHC clinics, there are a myriad of factors that could influence provider decisions to manage a patient in IBHC or refer to specialty behavioral health care (e.g., burden of patients, availability of behavioral health interventions, access to behavioral health providers in IBHC versus specialty care, provider confidence in assessing behavioral health needs). Thus, the present analysis examines provider perspectives on patient presentations appropriate for management in IBHC or referral to specialty behavioral health care, within a real-world IBHC setting. Specifically, the authors leveraged a phenomenological approach⁴⁵ to qualitative analysis in order to identify factors that influence provider decisions to refer a patient to IBHC or directly to specialty behavioral health care. The authors present their process and resulting decision-making model to provide an example to support clinical decision-making in local primary care settings moving toward the integration of behavioral health care.

Methods

Study Setting

Researchers interviewed providers and administrators in two adult primary care clinics housed within Boston Medical Center, a large, urban academic medical center which represents the largest source of safety-net care in the local area and surrounding communities.⁴⁶ Data previously collected by Boston Medical Center characterized the patient population. Seventy-two percent of patients were considered underserved, including low-income and elderly populations.⁴⁷ Seventy percent were people of color, and 33% were Black.⁴⁸ Thirty-two percent of patients had a primary language that was not English,⁴⁷ and about a quarter of families served experienced housing insecurity.⁴⁸ Patients often presented to care with complicated life experiences, unmet psychosocial needs, and comorbid behavioral and physical health conditions.⁴⁸

Patients served at Boston Medical Center were more demographically diverse,³⁹ and experienced higher comorbidity⁴⁰ and severity³⁹ than those typically represented in research studies, which often have stringent inclusion and exclusion criteria. Given stark differences between the patient population served in IBHC at Boston Medical Center and those described in many IBHC research studies, this qualitative investigation may elucidate characteristics that inform provider decisions to refer patients to IBHC or to specialty behavioral health care while adopting IBHC models to serve real-world patient populations.

Participants and Procedures

Researchers analyzed semi-structured interviews conducted with 24 participants (n = 13 primary care providers; n = 6 behavioral health providers; n = 5 administrators) working in IBHC at Boston Medical Center, a large urban academic medical center, over a 6-month interval in 2017.⁴⁹ The process of adopting IBHC at Boston Medical Center began in 2013-2014. As discussed by Prom et al.,⁴⁹ a lack of consistent practice in IBHC implementation limited the integration approach of the primary care clinics at Boston Medical Center. Notably, the local needs and available resources resulted in adaptation and integration of aspects from multiple different standardized IBHC models. As such, the result was a hybrid of multiple different models, including collaborative care models (CCMs) that involve collaboration between behavioral health teams and primary care physicians to provide stepped care management and coordination with specialists and community resources,⁵⁰ co-located collaborative care models that integrate behavioral health teams within primary care clinics,⁵¹ primary care behavioral health (PCBH) models that integrate behavioral health clinicians as consultants into the primary care team,⁵² and screening, brief intervention and referral to treatment (SBIRT) models that involve behavioral health assessment and brief intervention in primary care followed by specialty care referral.⁵³ Implementation of a hybrid IBHC model may provide an example of how IBHC implementation in real-world settings may differ from implementation in research settings, as the use of specific IBHC protocols may not be conducive to implementation in real-world settings with fewer resources.⁴⁹

Providers and administrators who participated in the present research worked or provided consultation within IBHC programs in either General Internal Medicine (GIM) or Family Medicine (FM) primary care clinics. Providers and administrators included primary care physicians (PCPs), behavioral health social workers (BHSWs), psychiatrists, and nurse practitioners. Administrators had dual roles as direct clinical care providers, in addition to managing clinic setting and directing care implementation. PCPs and administrators screened patients for behavioral health concerns in primary care and referred patients to IBHC through the electronic system or through a "warm hand-off" to a behavioral health social worker (BHSW) or directly to specialty behavioral health care through the electronic system. For patients referred to IBHC, BHSWs conducted one 45-min assessment and provided three to five 30-min follow-up sessions or referred to specialty behavioral health (i.e., psychiatrists and nurse practitioners with primary roles within the specialty behavioral health (i.e., psychiatry) clinic at Boston Medical Center acted as consultants for PCPs or BHSWs within GIM and FM primary care clinics.⁴⁹ Provider training in IBHC varied and depended on which supervisor completed provider on-boarding, the provider's role, and the specific clinic.⁴⁹ High provider turn-over contributed to heterogeneity in training.⁴⁹ Additional details describing the implementation of IBHC within primary care clinics at Boston Medical Center are published elsewhere.⁴⁹

Table 1 presents participants' roles, settings, and genders. Due to the small number of BHSW and psychiatrist participants, the authors describe both BHSWs and psychiatrists as behavioral health providers to protect their confidentiality. Table 1 specifies the setting of participants' primary role, such that behavioral health providers primarily based in the specialty behavioral health clinic were categorized within the specialty behavioral health setting, despite providing consultation within GIM and FM clinics. Participants were recruited by purposive sampling through email requests to all PCPs, behavioral health providers, and administrators within the FM and GIM IBHC programs. Sample size was determined in two ways, depending on role. Behavioral health provider and administrator sample size was determined by availability and agreement to participate. Informed consent was obtained from all providers and administrators who participated in the present research. A total of 41 behavioral health providers were contacted and 6 (14.6%) participated. All five (100%) administrators involved in IBHC participated. PCP sample size was determined by theoretical saturation. Ninety-two PCPs were contacted, and theoretical saturation was reached at 13 (14.1%) participants (12.9% of GIM PCPs, 18.2% of FM PCPs).

Researcher Characteristics and Reflexivity

The researchers involved in the present analysis included one doctoral student in clinical health psychology, one psychiatrist with expertise in local and global behavioral health disparities, and one clinical psychologist with expertise in translational research for evidence-based intervention dissemination. At

Table 1 Participant role, clinic setting,	Role	N (%)
and gender	Primary care provider	13 (54.2)
-	Behavioral health provider	6 (25)
	Administrator	5 (20.8)
	Clinic setting	
	General Internal Medicine	15 (62.5)
	Family Medicine	6 (25.0)
	Specialty Behavioral Health (Psychiatry)	3 (12.5)
	Gender	
	Female	17 (70.8)
	Male	7 (29.2)

the time of the study, researchers held the following titles at Boston Medical Center: research coordinator, research fellow, and assistant professor. Two of the researchers are White Americans and one is Chinese American and African American. Two of the researchers are cisgender women and one is a nonbinary trans man. Researchers are invested in health equity, social justice, and anti-racism, and apply these values to their research broadly. Researchers used O'Brien et al.'s Standards for Reporting Qualitative Research (SRQR)⁵⁴ to guide the current report.

Interviews

Trained researchers, including a clinical psychologist, psychiatry resident, and two master's in public health students, conducted interviews in-person or over the phone using a semi-structured interview guide. Interviews were audio-recorded and lasted 30 to 45 min. Researchers analyzed responses to questions about the characteristics, problems, or diagnoses that made a patient appropriate or inappropriate for IBHC, including: "Who are the patients who receive integrated care?", "What characteristics of patients make them appropriate for integrated care? What types of problems or diagnoses are appropriate for integrated care?", and "What patient characteristics, problems, or diagnoses make them inappropriate for integrated care?" The full interview guide was published elsewhere.⁴⁹

Interviewers asked participants to describe the process of how a patient is referred to, managed by, and discharged from IBHC in their setting. Additional interview questions focused on current practices, purpose, definition, impact, benefits, and challenges of IBHC as implemented in participants' clinics.⁴⁹ Administrators with dual roles responded to interview prompts from their perspective as administrators or clinical providers. The Boston Medical Center and Boston University Medical Campus Institutional Review Board approved all study procedures, and all participants gave informed consent. Researchers secured data on audio-recording devices stored in a locked office, and password-protected servers.

Thematic Analysis

Interviews were transcribed verbatim and coded using NVivo12.⁵⁵ The coding team included two bachelor-level research assistants, two masters-level students, one medical student, one psychiatry resident, and one clinical psychologist. The coding team completed thematic analysis following Braun and Clarke's⁵⁶ six-phase method. The initial codebook was developed through consensus following preliminary independent coding, with its organization primarily based on interview questions. During the coding process, the coding team met regularly to revise and adapt the codebook until no new themes emerged and theoretical saturation was reached. After the coding was completed, codes were categorized into subthemes, and subthemes were organized into minor and major overarching themes. Themes were refined and revised, and data was recoded as necessary, ultimately resulting in primary, secondary, and tertiary themes. Six of 24 interviews (25%) were double coded. Researchers examined responses within the primary theme of Patient Characteristics, including subthemes (i.e., appropriate for IBHC, inappropriate IBHC, and currently managed in IBHC) to analyze factors influencing provider decision-making more inductively. The kappa coefficient and percent agreement for the Patient Characteristics primary theme were calculated using the NVivo12⁵⁵ coding comparison and demonstrated acceptable inter-coder reliability (κ =0.75; percent agreement=96.47\%).

Results

There were three main subthemes identified within the Patient Characteristics theme data: appropriate for IBHC, inappropriate for IBHC, and currently managed in IBHC. Within each of these subthemes, participants described two main types of characteristics (Table 2): "behavioral health condition or symptom characteristics" and "patient characteristics." "Behavioral health condition or

symptom characteristics" included behavioral health condition or symptom type (e.g., psychotic disorders, depression, anxiety), case complexity, duration of care needs, chronicity or acuity, severity, provider comfort-level with managing the condition or symptom, and stability. "Patient characteristics" included likelihood of engagement, sociodemographic characteristics, and patient preference. Table 2 presents each characteristic with an exemplar participant quote and whether the primary analysis coded it as appropriate, inappropriate, or currently managed in IBHC (see Table 2). Table 3 provides a summary of participant perspectives on how each characteristic impacts referral appropriateness and decision-making in primary care clinics.

Appropriate for IBHC

Participants reported a variety of perspectives on which behavioral health condition or symptom characteristics and which patient characteristics were appropriate for IBHC (regardless of whether they were currently being managed in IBHC). Situations and conditions consistently reported as appropriate for IBHC management included grief and situational or acute symptoms of anxiety or depression or other acute distress. Obsessive compulsive, eating and feeding, adjustment, and sleep-related disorders were also mentioned as potentially appropriate for management in IBHC. Chronic or moderate/severe depression and anxiety, posttraumatic stress disorder (PTSD), substance use, and neurocognitive disorders received mixed responses (i.e., some participants described these as appropriate for management in IBHC, while others thought they were not appropriate for IBHC). In addition, some participants described psychotic and bipolar disorders as appropriate for IBHC, depending on the context, while others reported they would not be appropriate (Table 3).

The behavioral health condition or symptom characteristics and patient characteristics that influenced providers' determination of appropriateness for IBHC were interrelated. For instance, some providers and administrators reported that a patient with a more chronic, severe, or complex psychotic disorder could be considered appropriate for IBHC if their condition is stable, if the patient was unlikely to engage in specialty care, or if the provider felt comfortable managing the particular condition.

Inappropriate for IBHC

Participants reported a variety of perspectives on which condition or symptom characteristics and patient characteristics were considered inappropriate for management in IBHC (regardless of whether they were currently being managed in IBHC). Participants often considered psychotic and bipolar disorders (often described as "severe" or "serious mental illness") inappropriate for IBHC, although some thought that stable or less severe psychotic or bipolar disorders could be managed in IBHC. Participants expressed that severe or chronic depression and anxiety were potentially inappropriate for IBHC. Participants typically considered suicidality as high risk. Some participants stated that this risk could be managed in IBHC; however, most reported that after the acute risk was addressed through IBHC, these patients should follow-up in specialty care. As noted earlier, some participants described substance use disorders, PTSD, and neurocognitive disorders as inappropriate for management in IBHC, while others thought these could be appropriate (Table 3).

In addition, characteristics that influenced providers' determination of inappropriateness were interrelated. For instance, a patient with mild symptoms and a straightforward presentation may still be deemed inappropriate for IBHC if they have the resources, or a preference, to engage in specialty care. Similarly, participants described substance use as potentially inappropriate for IBHC if it was comorbid with another behavioral health condition, if the provider was not comfortable monitoring or prescribing medication management for substance use, or if the patient has limited resources. Neurodevelopmental disorders, such as autism spectrum disorder (ASD)

|--|

Secondary themes	Exemplar quote	Primary subthemes	y mes
		A ^a I ^b C ^c	
Case complexity	"So, treating basic anxiety, depression, insomnia, sort of acute stress things with short-term therapy, those are all fine. But once you get people with other comorbid illnesses or illnesses with some psychotic features or bipolar and so forth, then I don't necessarily think I should [treat in IBHC] unless there is just no availability of psychiatry, but we have a patient population with high burden with fairly serious psychiatric disease. It's not uncommon	x	×
	for people to have multiple comorbid psychiatric diagnoses." [PCP, GIM] "It's meant for patients with short- with more straightforward issues. It's meant to help manage them primarily in primary care. And it's meant for patients with more significant issues to get them more accessible mental health treatment and support the PCP while they're here." [Administrator]	×	×

Secondary themes Exemplar quote Exemplar quote Exemplar quote The probably would have read acute stressor but do sion, anxiety, substance abuse. People that have some major catastrophic event, the probably would have recovered eventual by seeing a therapist, and then get back normal. The patients who have bipolar c with it you know sort of other comorbid ably need longitudinal care in general a dinal care here [in IBHC]." [PCP, GIM] "Any patient with primary care is potentic with them or to what capacity we engage some differences. Meaning we might not provide the probable of the prior of the pri		
[, ~, ~, ~, ~, ~, ~, ~, ~, ~, ~, ~, ~, ~,	Primary subthemes	y nes
5, 5,	A ^a I ^b	ů
"Any patient with primary c with them or to what capa some differences. Meaning	"I think the people that fund that category [appropriate for IBHC] are people x that have some real acute stressor but don't have [a] long history of depression, anxiety, substance abuse. People that are going about their life and they have some major catastrophic event, they are in crisis, they see somebody, probably would have recovered eventually anyway, but probably facilitated by seeing a therapist, and then get back to their baseline, which is relatively normal. The patients who have bipolar disorder or substance abuse along with it you know sort of other comorbid illness and things, I think they probably need longitudinal care in general and [we] just don't have great longitu-dinal care here [in IBHC]." [PCP, GIM]	×
is long-term care. So those is long-term care. So those then move along to higher with schizophrenia or psyo resulting in psychiatric ho a small set of even those c ers, we end up retaining lc [Administrator]	"Any patient with primary care is potentially our patient. How long we engage with them or to what capacity we engage with them is where you might see some differences. Meaning we might not engage patients in short-term treat- ment if they have chronic mental health issues because what they really need is long-term care. So those are the patients we would briefly engage with, then move along to higher levels of care. Those patients include patients with schizophrenia or psychotic disorder, bipolar disorder, severe depression resulting in psychiatric hospitalization or suicide attempts. But then there's a small set of even those chronically mentally ill patients for various barri- ers, we end up retaining longer—they become kind of our long-term panel." [Administrator]	×

Table 2 (continued)			
Secondary themes	Exemplar quote	Primary subthemes	s
		A^{a} I^{b}	ů
Acuity versus chronicity	"I think when someone is acutely psychotic or suicidal or homicidal, like all the extremes, I think they need something way more intensive than integrated care. So, either I have them go to an acute care setting or I get them urgently into psychiatry or we use the [emergency services] team, which is for taking care of people who are in real crisis, mental health crisis." [Administrator]	x x	
	"So, anything in the moment. Also, again, the managed chronic illness. So, we x have people with bipolar disorder, people with schizophrenia, even people with personality disorders, who are aware of their symptoms, know their baseline, and just want to make sure that they have some new strategies, or some new interventions to take home and put in their bag. So, I think folks who, again, are acute in the moment, and folks who are well managed are great for integrated care." [BH provider, GIM]	×	×
Severity	"Things that I think are inappropriate—for me, like psychosis, like schizophre- nia, depending on the severity because I have a couple patients who are very functional and they're schizophrenic." [PCP, FM]	x	×
	"People with some severe mental illness I think they are not necessary going to benefit from [IBHC] as much, though I think theoretically you can have someone working with a lot of case management and a lot of connec- tion to medication and stuff like that and they might benefit from it." [PCP, FM]	x x	

Table 2 (continued)		
Secondary themes	Exemplar quote	Primary subthemes
		A ^a I ^b C ^c
Provider comfort-level with management of condition	Provider comfort-level with management of condition "I think that care was particularly challenging and had aspects that are actually requiring advanced skills and training in a specific area, interacting with a nonverbal person and their guardian so that's not a typical case. I think maybe because I feel relatively comfortable [with] a pretty broad array of psych care, that maybe I'm also not a typical case because I'm less apt to refer." [PCP, GIM]	×
	"I think generally speaking, our social workers service feel that something isn't in their scope of practice they are pretty good in referring people to those other services. I saw a guy who had concerns about his issues, vio- lence, perpetrating partner violence, anger issues, and that was something I don't think our social workers were comfortable with addressing so she made the appropriate refer to an anger management group at another location. So usually I think that our social workers are clear about what they feel comfort- able on handling and if they are not clear or comfortable, they are able to refer to an appropriate resource." [PCP, FM]	×

Secondary themes	Exemplar guote	Primary subthemes	Ś
		A ^a I ^b C ^c	ပိ
Stability	"Psychotic or probably poorly controlled bipolar [are inappropriate conditions for management in IBHC]. Someone who needs medication management. But if, for instance, they're seeing [psychiatric nurse practitioner] and she's doing the medication and they're managing and they're under control, then that's probably okay. [] Schizoaffective or schizophrenia [] or people who go in and out probably need to be under more intensive care." [PCP, GIM]	×	×
	"People who I know are going through an acutely traumatic event but are generally very stable whether it's grief or loss or you know something hap- pening in their lives where I know that short term therapy will be beneficial, and that they're sort of middle of the road in terms of their diagnoses and it's certainly we can deal with moderate depression but nothing acute, right." [Administrator]	×	

(continued)			
Secondary themes	Exemplar quote	Primary subthemes	, les
		A^{a} I^{b}	ပီ
Patient characteristics			
Patient engagement	"It's harder to know what to do with patients who've had a diagnosis of bipo- lar disease their whole life and nothing's really changed acutely, but they're just not well managed. I think those patients need to be in chronic behavioral health care, but I get them into that through the integrated behavioral health program because I think they're more likely to engage that way. Rather than me trying to send them into this black box, in [specialty BH care]. Those patients probably benefit because I think they get engaged faster, but they are not going to actively managed in that setting." [PCP, GIM]	×	
	"In terms of the characteristics of patients, any patient in whom I feel their psychiatric issue is kind of risen to the front, that they are ready to engage in care, that it is impacting, as it often does, their medical issues or their well- being, anyone that I assess in any way shape or form is ready to engage in care, I'll refer them [to IBHC]." [PCP, GIM]	×	×

Secondary themes	Exemplar quote Prin subt	Primary subthemes
	A ^a	A ^a I ^b C ^c
Sociodemographic characteristics	"I think everyone could benefit from this. The patients—I think the higher risk x patients meaning patients who have unstable housing or unstable transportation—kind of the social stressors. It is easier for them to access services here." [BH provider, FM]	
	"Refugees—we do see a lot of people that are new immigrants or refugees but the integrated behavioral health team—the traditional team—will actually send those patients to our refugee psychotherapist whose here on Thurs- day afternoons. Because they come with a lot of other complexities and issues regarding rape, torture, trauma, a lot of very important nuances of the countries they come from, what's culturally adequate etc. They are more hardwired to be able to pick up on all those things, the refugee team, than actually our regular behavioral health. So they're part of the family, but that part of the population we actually turf to the refugee team." [Administrator]	×

Table 2 (continued)		
Secondary themes	Exemplar quote P	Primary subthemes A ^a I ^b C ^c
Patient preference	"I had another patient today who I saw who I've intermittently given her x [benzodiazepines] for an anxiety condition. And I don't think that it's at all likely that she would be willing to. I mean she said, 'I won't go to Psychiatry for care.' In theory she is someone who maybe could get support from the psychiatrists in GIM. This is maybe like on the phenotypes that integrated can help if people feel the stigma to go to the psychiatrist in a psychiatry clinic." [PCP, GIM]	~
	"I have a patient who is moderately depressed. I know I am not doing her right x all the way, because I just know she needs talk therapy, but she refuses to see anybody else. She only wants to talk to me. So, I see her more frequently but it's not enough. I have been struggling to figure out how to get her to trust somebody else, but it's so entrenched in her- she has so much trauma, that she feels like she couldn't possibly share this, any of this stuff with somebody else. [] You know, it's not for everybody but it could benefit everybody." [Administrator]	~
<i>Notes. ADHD</i> attention deficit hyperactivity disorder, <i>BH</i> be care, <i>PCP</i> primary care provider ^a Appropriate for IBHC ^b Inappropriate for IBHC ^c Currently managed in IBHC	<i>Notes. ADHD</i> attention deficit hyperactivity disorder, <i>BH</i> behavioral health, <i>FM</i> family medicine, <i>GIM</i> general internal medicine, <i>IBHC</i> integrated behavioral health care, <i>PCP</i> primary care provider ^a Appropriate for IBHC ^b Inappropriate for IBHC ^c Currently managed in IBHC	avioral health

Smith et al.

Thematic analy	sis cha	Table 3 Thematic analysis characterization of patient characteristics: Summary of characteristics influencing provider decision-making	e 3 imary of characteristics influencing provid	er decision-making
	N^{a}	N ^a Appropriate for IBHC	Inappropriate for IBHC	Currently managed in IBHC
Behavioral health condition or symptom characteristics	mptoi	m characteristics		
Behavioral health condition or	22	Acute stress, adjustment disorder,	Mixed responses: ADHD, schizo-	Depression, acute stress, anxiety,
symptom type		bereavement, eating disorders,	phrenia and other psychotic	adjustment disorder, bereavement,
		UCD Wind managed	disorders, bipolar disorder,	substance use, schizophrenia and
		MIXEU IESPOIISES: UEPIESSIOII, anviety PTSD substance use	personanty unsoluers Some providers say no conditions	oulet psycholic disorders, upotal disorder
		ADHD. schizophrenia and other	are inappropriate, but some are	
		psychotic disorders, bipolar dis-	less indicated for IBHC	
		order, personality disorders		
Case complexity	20	Straightforward conditions or	Comorbid behavioral health	Mixed; more frequently managing
		presentation, limited comorbid-	conditions (including SUD,	straightforward cases, comorbid
		ity (i.e., depression, stress, anxi-	personality disorder), conditions	physical and behavioral health
		ety, insomnia, eating disorders,	with psychotic features, complex	conditions, sometimes comor-
		0CD)	PTSD, complicated patient pres-	bid SUD depending on provider
		Some comorbidity (i.e., SUD,	entation, diagnostic complexity,	comfort-level
		depending on provider comfort-	complex psychosocial needs	
		ICACI		
		Comorbid physical and behavioral health conditions		
Duration of care needs	18	Short term (i.e., acute stress, situ-	Long term (i.e., remittent depres-	Both; mainly short term, though
		ational anxiety, grief, adjustment disorder)	sion, schizophrenia and other psychotic disorders, bipolar	also a ''long-term panel''
		(disorder)	

The Journal of Behavioral Health Services & Research 2024

(continued)				
	N^{a}	Appropriate for IBHC	Inappropriate for IBHC	Currently managed in IBHC
Acuity versus chronicity	17	Acute, situational distress or symptoms (i.e., acute stress, anx- iety, grief, adjustment disorder) Chronic, stable conditions (i.e., low severity SMI)	Chronic conditions that indicate needs for long-term manage- ment (i.e., SMI) Acute crises that IBHC is not equipped to manage (i.e., active suicidality/homicidality, psy- chosis)	Both; emphasis on acute behavioral health distress, but also address- ing well-managed chronic behav- ioral health needs
Severity	14	Low severity, mild-to-moderate symptoms (i.e., depression, stress, anxiety, insomnia)	High severity (i.e., major depression, SMI, personality disorders)	Both; mild, moderate, and severe symptoms or conditions
Provider comfort-level with con- dition or symptom management	6	Comfort/training or experience in managing condition (i.e., depres- sion, anxiety, SUD)	Limited comfort/training or expe- rience in managing condition (i.e., ADHD, SMI, psychotic symptoms, SUD)	Comfort/training or experience in managing condition Mixed responses on comfort with managing various conditions (i.e., SUD)
Stability	9	Well-managed, stable condi- tions—even if chronic or indica- tive of long-term needs (i.e., well-managed SMI)	Patients who go in and out of care, need for medication management (i.e., SMI, severe personality disorders)	Stable conditions are managed in IBHC. Patients who have symp- toms that are not well managed/ stable may be triaged through IBHC, but are then referred to specialty care
Patient characteristics Patient engagement	13	Poor history of engagement in specialty care, higher likelihood of engagement in IBHC	High motivation to engage in spe- cialty behavioral health care	Patients who are more likely to engage in IBHC than specialty care

Table 3

e	(pa
able	ontinue
Ξ	ુ

	٨/a	Annonviota for IBHC	Inanumuiata for IBHC	Currently managed in IBHC
	^ 7			
Sociodemographic characteristics 6	9	Patient has sufficient resources, so they do not need additional resources or support	Patient has limited resources and Mixed; patients with significant needs extra support barriers to care and high burde Patient has sufficient resources to of psychosocial needs. patients	Mixed; patients with significant barriers to care and high burden of nsvchosocial needs, patients
		Patient has limited resources, therefore needs the support of IBHC or is unlikely to engage in specialty care	engage in specialty care	with sufficient resources who do not need additional resources or support
Patient preference	4	Patient preference for behavioral health care through primary care	Patient preference for referral to specialty care through outpatient psychiatry or community-based behavioral health care provider	Not enough information
Notes. IBHC integrated behavioral health of	ulth ci	care, PTSD posttraumatic stress disorder, OCD obsessive-compulsive disorder, SUD substance use disorder, ADHD atten-	OCD obsessive-compulsive disorder, SU	UD substance use disorder, ADHD atten-

After the substance of a substance of N = 24) mentioned the theme in their interview as the substance of N = 24) mentioned the theme in their interview

or attention-deficit hyperactivity disorder (ADHD), also received mixed responses based on case complexity or provider comfort-level.

Currently Managed in IBHC

Participants consistently reported the following conditions as being currently managed in IBHC: depression, acute stress, anxiety, adjustment disorder, bereavement, and substance use disorders. Some participants reported that psychotic and bipolar disorders were not currently managed in IBHC, although several providers mentioned a "long-term panel" of patients with chronic conditions or "serious mental illness" managed in IBHC. The characteristics that participants reported made a condition appropriate or inappropriate for IBHC were frequently inconsistent with those reported as currently being managed in IBHC, as demonstrated in Tables 2 and 3. Several participants reported that any patient with behavioral health needs could be referred to IBHC, even if only to facilitate referral to specialty care.

Discussion

There is research support for IBHC across diverse conditions including anxiety and depression,^{57–59} PTSD,⁶⁰ substance use,⁶¹ chronic pain and opioid use disorders,^{62,63} and psychotic and bipolar disorders.^{64–67} However, the current findings suggest the typical condition-based referral models within IBHC research studies may not represent the complexity of referral decision-making in primary care settings that differ from those frequently represented in IBHC research. The existing guidance that some IBHC models provide may be sufficient for settings that mirror those IBHC research studies or existing standardized IBHC models, like the primary care behavioral health (PCBH) model.^{27,68–71} However, in clinical care settings newly developing and implementing IBHC to serve diverse and complex patient populations, the findings indicate that PCPs and behavioral health clinicians would benefit from additional support in making clinical decisions about whether a patient is best served in IBHC or specialty care.

Providers in the GIM and FM clinics at Boston Medical Center had an overwhelmingly positive response to IBHC and believe that IBHC helps better serve patients.⁴⁰ However, there were notable discrepancies between the patient characteristics described as currently managed versus those described as appropriate for management in IBHC. The present analysis also elucidated the heterogeneity between providers the factors that influenced whether a patient or behavioral health condition was appropriate for management in IBHC. This suggests that IBHC providers could benefit from adaptation and specification of the IBHC model to support clinical decision-making.

Participants identified multiple behavioral health conditions or symptoms and patient characteristics that influence whether a patient is adequately managed in IBHC versus specialty care. This included condition or symptom type, case complexity, duration of care needs, chronicity or acuity, stability, severity, provider comfort-level with managing the condition or symptoms, likelihood of patient engagement, sociodemographic characteristics, and patient preference. A number of these characteristics are consistent with existing literature, both in IBHC and more broadly. For instance, previous research on collaboration between primary and specialty behavioral health care suggests that PCP decisions on whether to manage depression themselves or refer to specialty care depends on severity, complexity, and their own comfort-level with management.⁷² IBHC research also indicates that the severity of depression symptoms impacts the setting in which a patient demonstrates long-term clinical improvement.⁷³

In addition, some participants reported that IBHC would not be able to provide the necessary support to adequately serve patients struggling with substance use or limited resources. Individuals diagnosed with substance use disorders, unmarried people, and people of color demonstrate lower

engagement in IBHC compared to those not diagnosed with substance use, married people, and white people.⁷⁴ Bias, discrimination, and other structural barriers experienced by patients who use substances, are unmarried, and are not white may drive lower engagement across settings. Findings on IBHC engagement for individuals struggling with housing instability^{75,76} suggest the feasibility of IBHC for similarly minoritized populations, although more information on its effectiveness is needed.

Given IBHC's ability to increase engagement in behavioral health services,^{2,8–11} patients managing substance use or limited resources (e.g., low-income) would likely benefit from referral to IBHC over specialty care. The contradictory intersection between patient needs and provider ability to manage patients with substance use or limited resources suggests a particular need for standardization and interventions to ensure that the patients who would benefit most from IBHC are not instead referred to specialty care. Because previous training experiences and implicit biases may inhibit provider ability to assess and treat patients in IBHC, standardization of clinical decision-making and training in behavioral health assessment and interventions may support equitable and effective IBHC implementation.

There were inconsistencies in the conditions participants deemed appropriate versus inappropriate for IBHC, and in the characteristics that influenced their referral decision-making. Given the overlap between patient characteristics reported as currently managed and inappropriate for management in IBHC, these inconsistencies likely exist in real-time referral decisions. Without clear guidance about referrals appropriate and inappropriate for IBHC, referral decisions may be based on clinic-specific characteristics rather than existing empirical evidence on the referral decision that will best meet a patient's unique needs. Thus, heterogeneity in referral decision-making could explain discrepancies between positive IBHC research outcomes and inconsistent findings in real-world implementation.^{8–31} Standardization of referral decision-making may clarify which patients and what conditions are best managed in IBHC.

Furthermore, the current findings suggest that standardization of referral decision-making should be tailored to dimensional, rather than diagnostic, approaches to referral decision-making. It seems that the more confident providers are in their ability to manage patients within IBHC programs (based on skill, time, clinic resources), the more likely they are to manage them within IBHC. Provider confidence seems to relate more consistently to a provider's perceived ability to manage the complexity of the case in front of them, rather than the diagnosis. Despite the high frequency of responses related to behavioral health condition or symptom type, high variability in whether providers deemed specific conditions or symptom types appropriate or inappropriate for management in IBHC suggests that condition complexity and provider confidence in their ability to manage the condition in IBHC, given the extent of patient and setting resources.

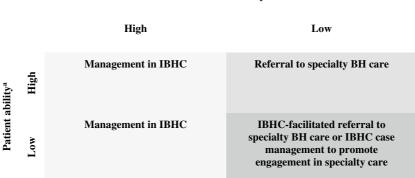
Participant responses often demonstrated how interactions between patient and provider characteristics impact referral decisions. For example, some respondents reported that patients with limited resources may be less likely to engage in specialty care and are thus indicated for IBHC, while those with sufficient resources are less indicated for IBHC because they are more likely to engage in specialty care. However, other responses indicate that patients with limited resources need more support than IBHC can provide, while those with sufficient resources may be suitably managed in IBHC.

This split in perspectives emphasizes the competing needs of patients and providers. Patients who providers may feel most confident managing within IBHC (i.e., mild/moderate depression, no comorbidity, high functioning, secure access to resources) may also be those most likely to engage in specialty behavioral health care. However, this may not be the best utilization of specialty care within settings with limited behavioral health resources. Conversely, patients whom providers are least confident they can manage in IBHC (due to acuity, crisis, multiple comorbidities, less access

to resources) may be the most in need of IBHC services because of difficulty accessing and engaging in specialty care.

Without guidance about referrals appropriate and inappropriate for IBHC, providers display heterogeneous perspectives about appropriate referrals, suggesting the need for a heuristic to inform guidance specific to local settings so that referrals to IBHC and specialty behavioral health care may best serve patient and provider needs. Based on the complex interrelationships between provider and patient needs (i.e., ability to manage or engage, respectively), Fig. 1 presents an example model heuristic that could guide standardization and implementation of interventions to support more nuanced decision-making for local, real-world settings moving toward integration of behavioral health care. In the model heuristic, the interaction between patient ability and provider ability guides provider decisions. The model heuristic represents how providers approach referral decision-making in primary care clinics at Boston Medical Center, and its dimensional approach may accommodate the unique needs of various local settings in its conceptualization of patient and provider ability. As such, the model heuristic in Fig. 1 may guide provider training and clinical pathway standardization, in which providers receive specific guidance regarding when to refer patients to IBHC or specialty behavioral health care.^{77–80}

For example, patients who demonstrate high ability to engage in care who are evaluated by a provider with limited ability to treat their behavioral health condition (e.g., due to lack of training, limited capacity or resources, lack of training in the appropriate intervention) would likely be referred to specialty care. Patients who demonstrate low ability to engage in care who are evaluated by a provider with high ability to treat them would be indicated for IBHC referral. Patient preference or other clinic specific factors could guide referral decision-making for patients with high ability to engage in care who are evaluated by a provider with high ability to engage in care who are evaluated by a provider with high ability to treat them. Finally, cases in which patients with low ability to engage in care are evaluated by a provider with limited ability to provide appropriate behavioral health care may require increased provider training or additional case coordination. Training interventions to increase provider ability to manage conditions associated



Provider ability^b

Fig. 1

Model heuristic for clinical decision-making: the interaction of patient and provider ability in determining referral to IBHC or specialty behavioral health care.

Notes. IBHC, integrated behavioral health care; BH, behavioral health. ^aPatient ability to engage based on resources, history of engagement, preference, condition, or symptom characteristics. ^bProvider ability to manage patient based on comfort-level managing condition, clinic resources, condition, or symptom characteristics

with high patient need (e.g., serious mental illness, substance use) would improve the ability of IBHC to serve patients who would benefit most.

Future Directions

To specify how condition characteristics impact a patient's ability to engage and benefit from IBHC, further research on IBHC management of diverse behavioral health conditions with varying levels of acuity and complexity is warranted, focusing on how these variables may moderate IBHC effectiveness. Moreover, future research should leverage mixed method investigation across the condition, patient, and provider characteristics presented here, in both IBHC and specialty care settings, to evaluate IBHC's effectiveness across the diversity of conditions and symptoms managed in real-world settings.

Future research should also include collaboration with providers in local IBHC settings to further develop tools for referral decision-making standardization that incorporate characteristics most relevant to provider perspectives and patient needs (e.g., Fig. 1). Findings from the present analysis also suggest that increasing provider comfort-level in addressing behavioral health needs could increase the ability of IBHC to manage patients with more challenging and complex behavioral health, if only to help patients get to, and engage in, specialty care. Thus, offering comprehensive and ongoing behavioral health training is essential for expanding the breadth of behavioral health conditions or symptoms managed in IBHC settings.

Moreover, providers and administrator interviews did not speak to the appropriateness of chronic disease and physical health management for referral to IBHC. Some models of IBHC have demonstrated effectiveness in improving indicators of health conditions, like heart disease, diabetes, and chronic pain.^{15,17–19,23} IBHC implementation at Boston Medical Center was limited by a lack of training in health psychology among both primary care and specialty behavioral health providers.⁴⁸ As more clinics implement IBHC models, there are increasing opportunities for managing chronic health conditions. Future research should focus on training needs for provision of behavioral health care for managing physical health concerns.

IBHC settings in which providers have limited training or comfort-level in managing behavioral health are best positioned to address the high patient ability-high provider ability scenario, which limits access to IBHC and could undermine its intended purpose. Thus, clinical and research efforts should focus on implementing and documenting the impact of increased provider training in IBHC across a variety of behavioral health conditions. It is also important to note that current findings highlight the paradox of stepped-care IBHC models: patients who would benefit the most from IBHC's potential to improve access and engagement are more likely referred to specialty care due to high care needs, while patients with high ability to access specialty behavioral health care may be considered a better fit for IBHC based on level of care needs. The difference in how patient and provider ability are managed in real-world implementation of IBHC versus the stepped-care model championed by some IBHC researchers further supports the need for more nuanced models in real-world and research settings. These models could encourage, for example, the integration of low-intensity interventions into specialty care and high-intensity interventions into IBHC.

Limitations

Despite the broad implications discussed above, interpretation of these findings is limited by a small sample size, participant self-selection bias, and the uneven distribution of the sample across clinics and participant roles, limiting this study's ability to compare perspectives between provider types or clinic setting. Nonetheless, sample size was partially determined through theoretical saturation, and sample distribution across roles and clinics is similar to provider and administrator distribution in the local setting.

In addition, the qualitative nature of the present analysis limits the findings to narrative perspectives, which is in line with the researchers' goal to gain a deep and broad understanding of provider referral. Although the findings include frequency of each subtheme, these should be interpreted with the knowledge that the interviews did not systematically prompt for factors that influenced referral decision-making. Moreover, the present analysis did not aim to assess whether cases were effectively managed in IBHC or in specialty care. Quantitative referral outcome measures could allow future researchers to evaluate real-time referral decision-making and outcomes and inform how standardization may support improved patient outcomes.

The use of "appropriate for IBHC" and "inappropriate for IBHC" represent another limitation. Participants likely used these categories based on the wording of interview questions which used the terms "appropriate" and "inappropriate." This language is potentially stigmatizing and may not reflect the flexible and interactive nature of referral decisions as described by participants in the present analysis. More inclusive and less rigid language would benefit future research on referral decision-making in IBHC.

Since the collection of these data and in response to researchers' analyses, several changes have been implemented within the IBHC program of study with the goal of improving the overall success of implementation. Notably, additional stepped-care model-based features have been incorporated to improve referral and engagement in specialty care when needed. In addition, like many institutions, due to COVID-19 there has been massive shifts to telehealth, which has had yet unclear impacts on both IBHC burden and referral practices. Despite limiting generalizability, these changes demonstrate the importance of continual empirical assessment of IBHC implementation to improve adaptation in real-world settings.

Implications for Behavioral Health

The current analysis aimed to capture provider and administrator perspectives on clinical decision-making in an integrated behavioral health care (IBHC) program within primary care at a large health institution to inform a model guiding patient referral to IBHC versus specialty behavioral health care. Given inconsistent responses regarding conditions and symptoms deemed appropriately, inappropriately, or currently managed in IBHC, providers and administrators would benefit from increased standardization and support in provider clinical decision-making. Diverging from findings demonstrating the broad success of IBHC to address specific conditions, a dimensional approach based on the interaction between patients' ability to engage in care and providers' ability to treat them may best fit provider clinical decision-making in low-resource settings newly implementing IBHC that serve diverse patient populations. A heuristic model that considers both provider ability to manage a condition and patient ability to engage in care may be useful in standardizing and supporting provider referral decision-making in IBHC.

Acknowledgements We would like to acknowledge the contributions of providers and administrators in Boston Medical Center's integrated behavioral health care clinic and the clinic's director Dr. Cara Fuchs and Dr. Joseph Robert for facilitating our evaluation.

Funding Research reported in this publication did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. The second author's time and contributions to the research project was funded by the National Institute of Mental Health of the National Institutes of Health under award numbers R25MH094612 and T32MH116140. The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH or HRSA.

Data Availability The data used in the current analysis are not available in order to protect the confidentiality of participants.

Declarations

Conflict of Interest The authors declare no competing interests.

Reporting Guidelines O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for reporting qualitative research: A synthesis of recommendations. Academic Medicine. 2014;89(9):1245–1251. Available from https://journals.lww.com/academicmedicine/fulltext/2014/09000/Standards_for_Reporting_Qualitative_Research_A.21. aspx. Accessed 7 August 2023.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.

References

- Fisher L, Ransom DC. Developing a strategy for managing behavioral health care within the context of primary care. Archives of Family Medicine. 1997;6(4):324–33. Available at https://doi.org/10.1001/archfami.6.4.324. Accessed 6 August 2023.
- Bartels SJ, Coakley EH, Zubritsky C, et al. Improving access to geriatric mental health services: a randomized trial comparing treatment engagement with integrated versus enhanced referral care for depression, anxiety, and at-risk alcohol use. *American Journal of Psychiatry*. 2004;161(8):1455–62. Available at https://doi.org/10.1176/appi.ajp.161.8.1455. Accessed 6 August 2023.
- Younès N, Gasquet I, Gaudebout P, et al. General Practitioners' opinions on their practice in mental health and their collaboration with mental health professionals. *BMC Primary Care*. 2005;6(18):1–7. Available at https://doi.org/10.1186/1471-2296-6-18. Accessed 6 August 2023.
- Younès N, Passerieux C, Hardy-Bayle MC, et al. Long term GP opinions and involvement after a consultation-liaison intervention for mental health problems. *BMC Primary Care.* 2008;9(41):1–5. Available at https://doi.org/10.1186/1471-2296-9-41. Accessed 6 August 2023.
- Cunningham PJ. Beyond parity: Primary care physicians' perspectives on access to mental health care. *Health Affairs*. 2009;28(1):w490-w501. Available at https://doi.org/10.1377/hlthaff.28.3.w490. Accessed 6 August 2023.
- Unützer J, Katon W, Callahan CM, et al. Collaborative care management of late-life depression in the primary care setting: a randomized controlled trial. JAMA. 2002;288(22):2836–45. Available at https://doi.org/10.1001/jama.288.22.2836. Accessed 6 August 2023.
- Institute for Clinical Systems Improvement. The DIAMOND Program: treatment for patients with depression in primary care. *icsi.org*. 2014:1–5. Available at https://www.icsi.org/wp-content/uploads/2019/02/DIAMONDWP0614.pdf. Accessed 6 August 2023.
- van Orden M, Leone S, Haffmans J, et al. Prediction of mental health services use one year after regular referral to specialized care versus referral to stepped collaborative care. *Community Mental Health Journal*. 2017;53(3):316–23. Available at https://doi.org/10. 1007/s10597-016-0046-y. Accessed 6 August 2023.
- van Eeghen C, Littenberg B, Holman MD, et al. Integrating behavioral health in primary care using lean workflow analysis: a case study. Journal of the American Board of Family Medicine. 2016;29(3):385–93. Available at https://doi.org/10.3122/jabfm.2016.03.150186. Accessed 6 August 2023.
- Kessler R. Mental health care treatment initiation when mental health services are incorporated into primary care practice. *Journal of the American Board of Family Medicine*. 2012;25(2):255–59. Available at https://doi.org/10.3122/jabfm.2012.02.100125. Accessed 6 August 2023.
- Leung LB, Escarce JJ, Yoon J, et al. High quality of care persists with shifting depression services from VA specialty to integrated primary care. *Medical Care*. 2019;57(8):654–58. Available at https://doi.org/10.1097/MLR.000000000001141. Accessed 6 August 2023.
- Archer J, Bower P, Gilbody S, et al. Collaborative care for depression and anxiety problems. *Cochrane Database of Systematic Reviews*. 2012;(10):1–229. Available at https://doi.org/10.1002/14651858.CD006525.pub2. Accessed 6 August 2023.

- Asarnow JR, Rozenman M, Wiblin J, et al. Integrated medical-behavioral care compared with usual primary care for child and adolescent behavioral health: a meta-analysis. *JAMA Pediatrics*. 2015;169(10):929–37. Available at https://doi.org/10.1001/jamapediatrics.2015. 1141. Accessed 6 August 2023.
- Chwastiak LA, Jackson SL, Russo J, et al. A collaborative care team to integrate behavioral health care and treatment of poorly-controlled type 2 diabetes in an urban safety net primary care clinic. *General Hospital Psychiatry*. 2017;44:10–15. Available at https://doi.org/10. 1016/j.genhosppsych.2016.10.005. Accessed 6 August 2023.
- Ell K, Katon W, Xie B, et al. Collaborative care management of major depression among low-income, predominantly Hispanic subjects with diabetes: a randomized controlled trial. *Diabetes Care*. 2010;33(4):706–13. Available at https://doi.org/10.2337/dc09-1711. Accessed 6 August 2023.
- Hedrick SC, Chaney EF, Felker B, et al. Effectiveness of collaborative care depression treatment in Veterans' Affairs primary care. Journal of General Internal Medicine. 2003;18(1):9–16. Available at https://doi.org/10.1046/j.1525-1497.2003.11109.x. Accessed 6 August 2023.
- Katon WJ. Epidemiology and treatment of depression in patients with chronic medical illness. *Dialogues in Clinical Neuroscience*. 2011;13(1):7–23. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3181964/. Accessed 6 August 2023.
- Katon WJ, Lin EHB, Von Korff M, et al. Collaborative care for patients with depression and chronic illnesses. *New England Journal of Medicine*. 2010;363(27):2611–20. Available at https://doi.org/10.1056/NEJMoa1003955. Accessed 6 August 2023.
- Miller BF, Brown Levey SM, Payne-Murphy JC, et al. Outlining the scope of behavioral health practice in integrated primary care: dispelling the myth of the one-trick mental health pony. *Family, Systems, and Health*. 2014;32(3):338–43. Available at https://doi.org/ 10.1037/fsh0000070. Accessed 6 August 2023.
- Sighinolfi C, Nespeca C, Menchetti M, et al. Collaborative care for depression in European countries: a systematic review and meta-analysis. *Journal of Psychosomatic Research*. 2014;77(4):247–63. Available at https://doi.org/10.1016/j.jpsychores.2014.08. 006. Accessed 6 August 2023.
- Schmit MK, Watson JC, Fernandez MA. Examining the effectiveness of integrated behavioral and primary health care treatment. Journal of Counseling and Development. 2018;96(1):3–14. Available at https://doi.org/10.1002/jcad.12173. Accessed 6 August 2023.
- Uga A, Kulkarni S, Heeramun V, et al. Evaluation of a model of integrated care for patients with chronic medical and psychiatric illness. *Psychosomatics*. 2017;58(4):437–40. Available at https://doi.org/10.1016/j.psym.2017.02.007. Accessed 6 August 2023.
- Vera M, Perez-Pedrogo C, Huertas SE, et al. Collaborative care for depressed patients with chronic medical conditions: a randomized trial in Puerto Rico. *Psychiatric Services*. 2010;61(2):144–50. Available at https://doi.org/10.1176/ps.2010.61.2.144. Accessed 6 August 2023.
- Thota AB, Sipe TA, Byard GJ, et al. Collaborative care to improve the management of depressive disorders: a community guide systematic review and meta-analysis. *American Journal of Preventative Medicine*. 2012;42(5):525–38. Available at https://doi.org/ 10.1016/j.amepre.2012.01.019. Accessed 6 August 2023.
- Woltmann E, Grogan-Kaylor A, Perron B, et al. Comparative effectiveness of collaborative chronic care models for mental health conditions across primary, specialty, and behavioral health care settings: systematic review and meta-analysis. *American Journal* of Psychiatry. 2012;169(8):790–804. Available at https://doi.org/10.1176/appi.ajp.2012.11111616. Accessed 6 August 2023.
- Kodner DL. All together now: a conceptual exploration of integrated care. *Healthcare Quarterly*. 2009;13:6–15. Available at https:// doi.org/10.12927/hcq.2009.21091. Accessed 6 August 2023.
- Hunter CL, Funderburk JS, Polaha J, et al. Primary Care Behavioral Health (PCBH) model research: current state of the science and a call to action. *Journal of Clinical Psychology in Medical Settings*. 2018;25(2):127–156. Available at https://doi.org/10.1007/ s10880-017-9512-0. Accessed 6 August 2023.
- Bauer AM, Azzone V, Goldman HH, et al. Implementation of collaborative depression management at community-based primary care clinics: an evaluation. *Psychiatric Services*. 2011;62(9):1047–53. Available at https://doi.org/10.1176/appi.ps.62.9.1047. Accessed 6 August 2023.
- Butler M, Kane RL, McAlpine D, et al. Does integrated care improve treatment for depression?: A systematic review. Journal of Ambulatory Care Management. 2011;34(2):113–25. Available at https://doi.org/10.1097/JAC.0b013e31820ef605. Accessed 6 August 2023.
- Solberg LI, Crain LA, Jaeckels N, et al. The DIAMOND initiative: implementing collaborative care for depression in 75 primary care clinics. *Implementation Science*. 2013;8(1):1–23. Available at https://doi.org/10.1186/1748-5908-8-135. Accessed 6 August 2023.
- Sunderji N, Ion A, Ghavam-Rassoul A, et al. Evaluating the implementation of integrated mental health care: a systematic review to guide the development of quality measures. *Psychiatric Services*. 2017;68(9):891–898. Available at https://doi.org/10.1176/appi.ps. 201600464. Accessed 6 August 2023.
- Bauer MS, Damschroder L, Hagerdorn H, et al. An introduction to implementation science for the non-specialist. *BMC Psychology*. 2015;3(32). Available at https://doi.org/10.1186/s40359-015-0089-9. Accessed 6 August 2023.
- Tashiro T, Mortensen L. Translational research: how social psychology can improve psychotherapy. *American Psychologist*. 2006;61(9):959–966. Available at https://doi.org/10.1037/0003-066X.61.9.959. Accessed 6 August 2023.
- Woolf SH. The meaning of translational research and why it matters. JAMA. 2008;299(2):211–213. Available at https://doi.org/10.1001/ jama.2007.26. Accessed 6 August 2023.
- Morris ZS, Wooding S, Grant J. The answer is 17 years, what is the question: understanding time lags in translational research. *Journal of Royal Society of Medicine*. 2011;104(12):510–520. Available at https://doi.org/10.1258/jrsm.2011.110180. Accessed 6 August 2023.
- Pirl WF, Beck BJ, Safren SA, et al. A descriptive study of psychiatric consultations in a community primary care center. *Primary Care Companion Journal of Clinical Psychiatry*. 2001;3(5):190–94. Available at https://doi.org/10.4088/pcc.v03n0501. Accessed 6 August 2023.
- Bluestein D, Cubic BA. Psychologists and primary care physicians: a training model for creating collaborative relationships. *Journal* of *Clinical Psychology in Medical Settings*. 2009;16(1):101–12. Available at https://doi.org/10.1007/s10880-009-9156-9. Accessed 6 August 2023.

- Auxier A, Farley T, Seifert K. Establishing an integrated care practice in a community health center. *Professional Psychology Research and Practice*. 2011;42(5):391–97. Available at https://doi.org/10.1037/a0024982. Accessed 6 August 2023.
- Kennedy-Martin T, Curtis S, Faries D, et al. A literature review on the representativeness of randomized controlled trial samples and implications for the external validity of trial results. *Trials*. 2015;16(1):1–14. Available at https://doi.org/10.1186/s13063-015-1023-4. Accessed 6 August 2023.
- Gerrity M. Evolving models of behavioral health integration: evidence update 2010–2015. New York, NY: Milbank Memorial Fund; 2016: 14–15. Available at https://www.milbank.org/publications/evolving-models-of-behavioral-health-integration-evidence-update-2010-2015/. Accessed August 12, 2020.
- Muntingh ADT, van der Feltz-Cornelis CM, van Marwijk HWJ, et al. Collaborative care for anxiety disorders in primary care: a systematic review and meta-analysis. *BMC Primary Care*. 2016;17:1–15. Available at https://doi.org/10.1186/s12875-016-0466-3. Accessed 6 August 2023.
- 42. Fortin M, Dionne J, Pinho G, et al. Randomized controlled trials: do they have external validity for patients with multiple comorbidities? *Annals of Family Medicine*. 2006;4(2):104–8. Available at https://doi.org/10.1370/afm.516. Accessed 6 August 2023.
- Smith SM, Cousins G, Clyne B, et al. Shared care across the interface between primary and specialty care in management of long term conditions. *Cochrane Database of Systematic Reviews*. 2017;2:1–123. Available at https://doi.org/10.1002/14651858.CD004910.pub3. Accessed 6 August 2023.
- Hasche LK, Lenze S, Brown T, et al. Adapting collaborative depression care for public community long-term care: using researchpractice partnerships. Administration and Policy in Mental Health Services Research. 2014;41(5):687–96. Available at https://doi.org/ 10.1007/s10488-013-0519-z. Accessed 6 August 2023.
- 45. Wertz FJ. The method of eidetic analysis for psychology. In TF Cloonan, C Thiboutot (Eds.), *The redirection of psychology: essays in honor of Amedeo P. Giorgi* (pp. 261–278). Le Cercle Interdisciplinaire de Recherches Phénoménologiques, 2010. Available at http://www.cirp.uqam.ca/CIRP/24-Wertz.pdf. Accessed 6 August 2023.
- Boston Medical Center. Boston Medical Center Health System launches Health Equity Accelerator to close disparities in healthcare. bmc.org, 2021. Available at https://www.bmc.org/node/164456. Accessed 6 August 2023.
- 47. Boston Medical Center. BMC facts. bmc.org, 2017. Available at https://www.bmc.org/sites/default/files/For_Medical_Profession als/BMC-Facts.pdf. Accessed 6 August 2023.
- 48. Boston Medical Center. The Health Equity Accelerator: the next step in our commitment to equity. bmc.org, 2022. Available at https://www.bmc.org/health-equity-accelerator/our-approach#health-equity-report. Accessed 6 August 2023.
- Prom MC, Canelos V, Fernandez PJ, et al. Implementation of integrated behavioral health care in a large medical center: benefits, challenges, and recommendations. *Journal of Behavioral Health Services Research*. 2021;48(3):346–362. Available at https://doi. org/10.1007/s11414-020-09742-0. Accessed 24 May 2024.
- Goodrich DE, Kilbourne AM, Nord KM, et al. Mental health collaborative care and its role in primary care settings. *Current Psychiatry Reports*. 2013;15(8):383. Available at https://doi.org/10.1007/s11920-013-0383-2. Accessed 29 April 2024.
- Pomerantz AS, Shiner B, Watts BV, et al. The White River model of colocated collaborative care: a platform for mental and behavioral health care in the medical home. *Family, Systems, & Health.* 2010;28(2):114–129. Available at https://doi.org/10.1037/a0020 261. Accessed 29 April 2024.
- Reiter JT, Dobmeyer AC, Hunter CL. The Primary Care Behavioral Health (PCBH) model: an overview and operational definition. Journal of Clinical Psychology in Medical Settings. 2018;25(2):109–126. Available at https://doi.org/10.1007/s10880-017-9531-x. Accessed 29 April 2024.
- Vendetti J, Gmyrek A, Damon D, et al. Screening, brief intervention and referral to treatment (SBIRT): implementation barriers, facilitators and model migration. *Addiction*. 2017;112 Suppl 2:23–33. Available at https://doi.org/10.1111/add.13652. Accessed 29 April 2024.
- O'Brien BC, Harris IB, Beckman TJ, et al. Standards for reporting qualitative research: a synthesis of recommendations. *Academic Medicine*. 2014;89(9):1245–1251. Available from https://journals.lww.com/academicmedicine/fulltext/2014/09000/Standards_for_Reporting_Qualitative_Research_A.21.aspx. Accessed 7 August 2023.
- QSR International. NVivo qualitative data analysis software, Version 12; 2018. Available at https://www.qsrinternational.com/nvivoqualitative-data-analysis-software/home. Accessed 6 August 2023.
- Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Research in Psychology. 2006;3(2):77–101. Available at https:// doi.org/10.1191/1478088706qp0630a. Accessed 6 August 2023.
- Archer J, Bower P, Gilbody S, et al. Collaborative care for depression and anxiety problems. *Cochrane Database of Systematic Reviews*. 2012;10(10):1–229. Available at https://doi.org/10.1002/14651858.CD006525.pub2. Accessed 6 August 2023.
- 58. Härter M, Watzke B, Daubmann A, et al. Guideline-based stepped and collaborative care for patients with depression in a clusterrandomised trial. *Scientific Reports*. 2018;8(9389):1–9. Available at https://doi.org/10.1038/s41598-018-27470-6.
- Roy-Byrne P, Craske M, Sullivan G, et al. Delivery of evidence-based treatment for multiple anxiety disorders in primary care: a randomised controlled trial. JAMA. 2010;303(19):1921–28. Available at https://doi.org/10.1001/jama.2010.608. Accessed 6 August 2023.
- Kaltman S, Hurtado de Mendoza A, Serrano A, et al. A mental health intervention strategy for low-income, trauma-exposed Latina immigrants in primary care: a preliminary study. *American Journal of Orthopsychiatry*. 2016;86(3):345–54. Available at https://doi. org/10.1037/ort0000157. Accessed 6 August 2023.
- Neufeld K, Kidorf M, King V, et al. Using enhanced and integrated services to improve response to standard methadone treatment: changing the clinical infrastructure of treatment networks. *Journal of Substance Abuse Treatment*. 2010;38(2):170–177. 38(2), 170–177. Available at https://doi.org/10.1016/j.jsat.2009.07.003. Accessed 6 August 2023.
- Clark MR, Stoller KB, Brooner RK. Assessment and management of chronic pain in individuals seeking treatment for opioid dependence disorder. *Canadian Journal of Psychiatry*. 2008;53(8):496–508. Available at https://doi.org/10.1177/070674370805300804. Accessed 6 August 2023.

- Speed TJ, Parekh V, Coe W, et al. Comorbid chronic pain and opioid use disorder: literature review and potential treatment innovations. International Review of Psychiatry. 2018;30(5):136–46. Available at https://doi.org/10.1080/09540261.2018.1514369. Accessed 6 August 2023.
- Kelly BJ, Perkins DA, Fuller JD, et al. Shared care in mental illness: a rapid review to inform implementation. *International Journal of Mental Health Systems*. 2011;5(31):1–12. Available at https://doi.org/10.1186/1752-4458-5-31. Accessed 6 August 2023.
- 65. Schöttle D, Schimmelmann BG, Ruppelt F, et al. Effectiveness of integrated care including therapeutic assertive community treatment in severe schizophrenia-spectrum and bipolar I disorders: four-year follow-up of the ACCESS II study. *PLoS ONE*. 2018;13(2):1–14. Available at https://doi.org/10.1371/journal.pone.0192929. Accessed 6 August 2023.
- Bauer MS, Biswas K, Kilbourne AM. Enhancing multiyear guideline concordance for bipolar disorder through collaborative care. *American Journal of Psychiatry*. 2009;166(11):1244–50. Available at https://doi.org/10.1176/appi.ajp.2009.09030342. Accessed 6 August 2023.
- Simon GE, Ludman EJ, Bauer MS, et al. Long-term effectiveness and cost of a systematic care program for bipolar disorder. Archives in General Psychiatry. 2006;63(5):500–08. Available at https://doi.org/10.1001/archpsyc.63.5.500. Accessed 6 August 2023.
- Blount AE. Integrated primary care: the future of medical and mental health collaboration. WW Norton & Company, 1998. Available at https://psycnet.apa.org/record/1998-07432-000. Accessed 6 August 2023.
- Funderburk JS, Dobmeyer AC, Hunter CL, et al. Provider practices in the primary care behavioral health (PCBH) model: an initial examination in the Veterans Health Administration and United States Air Force. *Family, Systems, and Health.* 2013;31(4):341–353. Available at https://doi.org/10.1037/a0032770. Accessed 6 August 2023.
- Reiter JT, Dobmeyer AC, Hunter CL. The Primary Care Behavioral Health (PCBH) model: an overview and operational definition. Journal of Clinical Psychology in Medical Settings. 2018;25(2):109–126. Available at https://doi.org/10.1007/s10880-017-9531-x. Accessed 6 August 2023.
- 71. Wilfong KM, Goodie JL, Curry JC, et al. The impact of brief interventions on functioning among those demonstrating anxiety, depressive, and adjustment disorder symptoms in primary care: the effectiveness of the Primary Care Behavioral Health (PCBH) model. *Journal of Clinical Psychology in Medical Settings*. 2022;29(2):318–331. Available at https://doi.org/10.1007/s10880-021-09826-9. Accessed 6 August 2023.
- Fickel JJ, Parker LE, Yano EM, et al. Primary care mental health collaboration: an example of assessing usual practice and potential barriers. *Journal of Interprofessional Care*. 2007;21(2):207–16. Available at https://doi.org/10.1080/13561820601132827. Accessed 6 August 2023.
- Katon W, Russo J, Von Korff M, et al. Long-term effects of a collaborative care intervention in persistently depressed primary care patients. *Journal of General Internal Medicine*. 2002;17(10):741–48. Available at https://doi.org/10.1046/j.1525-1497.2002.11051.x. Accessed 6 August 2023.
- Lilienthal K, Possemato K, Funderburk J, et al. Predisposing characteristics, enabling factors, and need as predictors of integrated behavioral health utilization. *Journal of Behavioral Health Services Research*. 2017;44(2):263–73. Available at https://doi.org/10.1007/ s11414-016-9496-9. Accessed 6 August 2023.
- Gilmer TP, Stefanic A, Ettner SL, et al. Effect of full-service partnerships on homelessness, use and costs of mental health services, and quality of life among adults with serious mental illness. *Archives in General Psychiatry*. 2010;67(6):645–52. Available at https:// doi.org/10.1001/archgenpsychiatry.2010.56. Accessed 6 August 2023.
- 76. Stergiopoulos V, Gozdzik A, Misir V, et al. Effectiveness of housing first with intensive case management in an ethnically diverse sample of homeless adults with mental illness: a randomized controlled trial. *PLoS ONE*. 2015;10(7):1–21. Available at https://doi.org/10.1371/journal.pone.0130281. Accessed 6 August 2023.
- Berge JM, Trump L, Trudeau S, et al. Integrated care clinic: creating enhanced clinical pathways for integrated behavioral health care in a family medicine residency clinic serving a low-income, minority population. *Family, Systems, and Health.* 2017;35(3):283–94. Available at https://doi.org/10.1037/fsh0000285. Accessed 6 August 2023.
- Mizrahi D, Goldstein D, Kiernan MC, et al. Development and consensus process for a clinical pathway for the assessment and management of chemotherapy-induced peripheral neuropathy. *Supportive Care in Cancer*. 2022;30(7):5965–5974. Available at https://doi.org/10.1007/s00520-022-07024-3. Accessed 6 August 2023.
- Rankin NM, Butow PN, Thein T, et al. Everybody wants it done but nobody wants to do it: an exploration of the barrier and enablers of critical components towards creating a clinical pathway for anxiety and depression in cancer. *BMC Health Services Research*. 2015;15:28. Available at https://doi.org/10.1186/s12913-015-0691-9. Accessed 6 August 2023.
- Sandoval BE, Bell J, Khatri P, et al. Toward a unified integration approach: uniting diverse primary care strategies under the Primary Care Behavioral Health (PCBH) model. *Journal of Clinical Psychology in Medical Settings*. 2018;25(2):187–196. Available at https:// doi.org/10.1007/s10880-017-9516-9. Accessed 6 August 2023.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.