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Co-located Mental Health Care Services in Primary Medical Groups in Puerto Rico: Facilitators, Barriers, and Recommendations for the Future

Servicios de Colocación de Salud Mental en Grupos Médicos Primarios en Puerto Rico: Facilitadores, Barreras, y Recomendaciones para el Futuro

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ABSTRACT

There is high need for mental health services in Puerto Rico; thus, integrating mental health providers into primary care may increase access. The focus of this study was to identify facilitators, barriers, and recommendations for how to improve the co-located care model being implemented in primary medical groups across Puerto Rico. Two focus groups were conducted (one with representatives from a managed behavioral healthcare organization [n = 7] and one with co-located mental health care providers [n = 6]) to gather information on their experiences with co-located care. Thematic coding was used to analyze focus group data. Participants noted various facilitators and barriers to utilization of co-located services in Puerto Rico and gave recommendations for how to improve the model. Integration of electronic medical records, expanded insurance coverage for

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mental health services, additional training for medical providers, and implementing standardized mental health screenings might be important steps toward improving co-located care in Puerto Rico.
Keywords: co-located care, facilitators, barriers, recommendations, mental health services, Puerto Rico

RESUMEN

Hay una gran necesidad de servicios de salud mental en Puerto Rico; por lo tanto, la integración de los proveedores de salud mental en la atención primaria puede aumentar el acceso. El enfoque de este estudio fue identificar facilitadores, barreras y recomendaciones sobre cómo mejorar los servicios de colocación en los grupos médicos primarios en Puerto Rico. Se realizaron dos grupos focales (uno con representantes de un MBHO [n = 7] y otro con proveedores de salud mental colocados [n = 6]) para recopilar información sobre sus experiencias con los servicios de colocación. Se utilizó codificación temática para analizar los datos de los grupos focales. Los participantes señalaron varios facilitadores y barreras para la utilización de servicios de colocación en Puerto Rico y dieron recomendaciones sobre cómo mejorar el modelo. Integrar los récords médicos, ampliar la cobertura de seguro de salud mental, proveer más capacitación para médicos, e implementar cernimiento estandarizado de salud mental podrían ser pasos importantes para mejorar los servicios de colocación en Puerto Rico.
Palabras Claves: servicios de colocación, facilitadores, barreras, recomendaciones, salud mental, Puerto Rico

CO-LOCATED MENTAL HEALTH CARE SERVICES IN PRIMARY MEDICAL GROUPS IN PUERTO RICO: FACILITATORS, BARRIERS, AND RECOMMENDATIONS FOR THE FUTURE

In Puerto Rico, almost 20% of adults suffer from a diagnosable mental illness in any given year, with roughly 7% meeting criteria for a serious mental illness resulting in substantial impairment in functioning (Administración de Servicios de Salud Mental y Contra la Adicción [ASSMCA]; 2016). Moreover, risk for mental health problems has been greatly elevated in the aftermath of Hurricane María, which resulted in thousands of deaths, destruction of homes and property, massive power and communications outages, and limited access to basic needs for months after it made landfall in September of 2017 (Kishore et al., 2018). In January and February of 2020, while Puerto Rico was still recovering from Hurricane María, the island experienced a series of earthquakes that caused further infrastructure damage, disruption of routine, anxiety, and distress. Then, in March of 2020 the COVID-19 pandemic arrived in Puerto Rico, resulting in an island-wide lockdown, school closures, job loss, and ongoing loss of life. The compound effects of these disasters have caused unprecedented strain on the people of Puerto Rico, and have likely elevated rates of mental illness (Galea et al., 2020). Unfortunately, significant service gaps exist in Puerto Rico, with estimates suggesting 40-60% of individuals with mental health problems do not receive mental health care (ASSMCA, 2016; Kohn et al., 2018). Barriers to mental health service utilization include attitudinal barriers (e.g., stigma, thinking the problem will get better on its own; ASSMCA, 2016) as well as logistical and access barriers (e.g., cost, unsure where to go; ASSMCA, 2016).

Integrating mental health providers into primary care settings is a promising option for reducing access barriers (Bridges et al., 2017), as primary care providers are typically the first point of professional contact for those needing mental health treatment (Volpe et al., 2015). In a model of care referred to as "co-located care," mental health providers have offices located within medical clinics but keep separate records and manage their own treatment plans, independently of medical providers (consistent with Levels 3 and 4 of the SAMHSA / HRSA Levels of Integration Framework; Heath et al., 2013). In this model of care, there is typically still a formal referral process by which medical patients are directed to mental health services if needed (Heath et al., 2013).

Studies of co-located care have shown that co-location can facilitate greater access to mental health care and improve initial engagement in mental health services, compared to a traditional off-site referral process (Krahn et al., 2006). In addition, co-location of mental health providers in primary care clinics can improve physicians' knowledge, skills, and comfort in managing psychiatric disorders (Kisely et al., 2006). However, although sharing space creates opportunities for greater communication between medical and behavioral health providers, interdisciplinary care collaboration remains limited by the fact that the two types of providers keep separate records and assume individual responsibility for patient care (Heath et al., 2013). While studies of co-located care services have commonly found that co-location improves patient and provider satisfaction and the cost effectiveness of care, findings are mixed regarding

whether this model of care improves clinical outcomes (Woods et al., 2020). In summary, co-located care seems to be an important step in the process of improving access and engagement in mental health services, but further research is needed to clarify how to best implement this model of care and improve clinical outcomes.

Overview of Co-located Mental Health Care Services in Puerto Rico

In 2010, Puerto Rico's Health Insurance Administration (Administración de Seguros de Salud de Puerto Rico [ASES]) declared that to provide services covered by Medicaid, primary medical groups (PMGs) across the island had to have at least one co-located mental health professional in their practice for a minimum number of hours and days per week. In addition to making co-location a requirement, ASES also restructured the system by which service contracts were handled. Whereas before ASES had relied on managed care organizations (MCOs) to contract with managed behavioral healthcare organizations (MBHOs) as they saw fit, in 2010 ASES began to contract directly with MBHOs to improve the accessibility and uniformity of mental health services provided. With this change, MBHOs were able to begin to establish standardized protocols for assessment and treatment of mental health problems in PMGs across the island. However, in 2014 ASES returned to the former organizational structure in which MCOs contract with MBHOs of their choosing. At the time of this writing, there are four MCOs that contract with ASES to manage the Puerto Rico Government Health Plan. Three of the MCOs contract with the MBHO APS Health to facilitate provider contracts that keep PMGs compliant with the co-location services mandate. The remaining MCO does not contract with APS Health (APS Health, personal communication, February 19, 2020).

Purpose of Study

Although co-location of mental health care providers in primary care is thought to increase interdisciplinary communication and improve patients' access to mental health services, there are several systemic factors that can influence the success of this model. Given the relatively new implementation of co-located care services in Puerto Rico and the frequent policy changes that have likely influenced its execution, the authors aimed to gather information from various stakeholders on the current state of co-located care in Puerto Rico. Specifically, the purpose of this exploratory study was to identify facilitators and barriers to utilization of co-located mental health providers within PMGs across Puerto Rico from the perspective of contracted MBHO representatives (i.e., MBHO administrators and staff) and co-located mental health providers. The authors also asked participants about recommendations for how the co-location services model in Puerto Rico could be improved.

METHOD

Participants

A total of 13 participants took part in the two focus groups (seven MBHO representatives and six co-located mental health providers). The MBHO representatives ranged in age from 26 to 51 years and had been working at the MBHO for an average of 6.3 years (range 1 to 15 years). Four of the representatives identified as female and three identified as male. The co-located mental health providers ranged in age from 33 to 54 years, had been practicing mental health

care for an average of 13.8 years (range 8-25 years), and had been co-located in PMGs for an average of 4.8 years (range 0.6-11 years). Four of the mental health providers identified as female and two identified as male.

Procedure

Participants were recruited with a flyer distributed via email. Participants took part in one of two focus groups (one for MBHO representatives and one for co-located mental health providers) that were hosted at the offices of a large MBHO in San Jan, Puerto Rico. Separate focus groups for MBHO representatives and co-located mental health providers were designed to minimize any potential power dynamics and capitalize on shared experiences based on participants' role and level of experience. All study procedures were approved by the Medical University of South Carolina Institutional Review Board and all participants provided informed consent prior to participation.

Focus groups were conducted in February 2020. The first author (a bilingual Caucasian woman) and the third author (a bilingual Puerto Rican woman) co-facilitated both focus groups in Spanish. The second author (a bilingual Dominican woman) served as note taker. A semi-structured focus group guide was designed to answer the following research questions: 1) What are the facilitators and barriers to interdisciplinary communication and utilization of co-located mental health providers within PMGs across Puerto Rico? and 2) How could the co-location model in Puerto Rico be improved? Questions in both groups covered topics in the areas of: 1) benefits of co-located care; 2) difficulties with the co-located care model in Puerto Rico; 3) strategies employed to improve interdisciplinary communication and utilization of co-located mental health providers; and 4) recommendations for how the co-located care model in Puerto Rico could be improved. Focus groups lasted 80 and 90 minutes, respectively. Focus groups were audio recorded, de-identified, and transcribed verbatim. As all of the authors are bilingual in English and Spanish, the focus group transcriptions were not translated but rather were analyzed in their original language.

Data Analysis

Data were analyzed qualitatively using thematic analysis (Miles et al., 2014). ATLAS.ti 8 Mac software (Friese, 2019) was used to organize the data. First, two coders (the first and second authors) independently completed first-level coding within ATLAS.ti to identify key ideas expressed by participants and develop a comprehensive codebook. Both coders then used this codebook to independently analyze the data by assigning codes within ATLAS.ti. Next, coders met to discuss and resolve interrater discrepancies. Finally, second-level codes that synthesized first-level codes were generated to establish a preliminary thematic framework. For example, the codes "additional training for providers," "better insurance coverage," and "integration of electronic medical records" were captured by the theme "recommendations." Quotations associated with each code were organized within ATLAS.ti, and those that best captured the final themes were included in the manuscript. The first author translated the chosen quotations to English for inclusion in the manuscript, and the second author, whose native language is Spanish, back-translated the chosen quotations to ensure they were accurately translated.

RESULTS

Participants' responses to focus group questions converged into three major themes: 1) facilitators of interdisciplinary communication and utilization of co-located services; 2) barriers to interdisciplinary communication and utilization of co-located services; and 3) recommendations for how the co-location services model in Puerto Rico could be improved.

Facilitators of Interdisciplinary Communication and Utilization of Co-located Services

Focus group participants identified several factors that facilitated greater interdisciplinary communication and use of co-located mental health services. First, participants noted that when co-located mental health providers make an effort to build rapport with the primary care providers, the primary care providers are more likely to consult and refer patients to them. As one mental health provider explained,

"It helped me greatly to show them that I am there to collaborate, that I can be part of their team, that I am not competition for them, there is no rivalry… in [PMG name] one of the doctors who now refers patients to me all the time told me, 'when you started here I never noticed you or thought to refer patients to you ever', but I spent time getting close to him and consulted with him on my cases… and then he began to see that we really were working as a team and he liked that."

Another factor that participants said facilitated greater interdisciplinary communication was the use of written communication between providers. As one mental health provider explained,

"I think it is the easiest way to reach the medical provider due to the factor of time…you know he will read it and give a response… if we go by the factor of time, it's 'your time, my time,' or 'I'm not here the same day that you are' and the communication is less."

Next, participants reported that involving other members of the clinical team, such as nurses or medical assistants, can facilitate information transfer between mental health providers and primary care providers. For example, one mental health provider stated,

"There are some doctors that are only present during the afternoons, some only until midday, and the timing for me has been a bit difficult. The only thing that helps is that in some cases I can speak with the nurse."

In a similar vein, participants also reported that when nursing staff are involved in mental health screening and triage, referrals to co-located mental health providers increase. As one mental health provider stated,

"In one of the PMGs I was able to get the nurses to integrate the PHQ-9 [Patient Health Questionnaire 9] into the triage process… to the extent that the nurse integrates administering the PHQ-9 into the triage process, the probability of patients arriving to us increases."

In addition, focus group participants noted that they have tried to increase utilization of co-located mental health services by giving presentations to medical staff about what co-location services entail. As one mental health provider noted,

"I did an initiative where I visited the offices where there were lots of patients with the goal of giving talks and speaking with the doctors. I spoke with doctors, nurses, and at least one is sending me a lot of referrals now, so I am thinking of planning visits to other PMGs."

APS Health, one of the largest MBHOs in Puerto Rico, also has a team of employees dedicated to giving presentations to PMGs. As one MBHO representative explained,

"We have designed a presentation that explains the co-location services model from the theoretical perspective and the practical perspective, that defines what colocation is… who can benefit from co-located services…how to utilize them… and they go again and again [to give the presentations.]"

Similarly, participants also reported that giving information about available services to patients can increase utilization of co-location services. As one mental health provider stated,

"When you stop in the waiting room and say that you are there, they [the patients] are like, 'oh, I didn't know that you were here!' and they come and utilize the service."

Finally, participants reported that having the support of upper-level administrators at the PMGs can be very helpful for increasing utilization of co-location services. As one mental health provider explained,

"I made a little [information] packet and left it for the managers, and the managers pass the information on to the doctors and since the manager is the one who pays, he is the one who writes the check, he is the one who truly controls the corporation. You have to refer patients because… the boss is telling you that [the psychologist] gave this to them to remind you."

Barriers to Interdisciplinary Communication and Utilization of Co-located Services

Focus group participants also identified several barriers that impede utilization of co-location services. In general, their responses regarding barriers to the model included examples of systemic, procedural, and attitudinal barriers.

Systemic Barriers

Regarding systemic barriers, participants first reported that difficulties arise because co-located mental health providers are contracted by different insurance companies, which limits the patients they can see. As one MBHO representative explained,

"For example, one psychologist can only see [patients] from Triple S [insurance plan], but in the PMG where he is, the majority of patients are from MMM or Molina [insurance plans] who we do not contract with and because of that, he cannot see patients from those insurance plans… it's very difficult and complicated and not very effective, because you have a psychologist there and there are 10 patients needing to see him and he can't see any of them, because none of them are with Triple S."

A second systemic barrier of how the co-location model is implemented in Puerto Rico is that co-located mental health providers have a recommended six-session limit that at times constrains what mental health providers feel they can accomplish with their patients. As one mental health provider explained,

"In the context of therapy, sometimes the six sessions can limit us a bit."

Of note, when asked about this six-session limit in their focus group, MBHO representatives clarified that the limit is not rigidly applied, especially in cases where more visits would be beneficial. As one representative explained,

"Although the model says this, if at times a patient needs two more sessions and we aren't going to refer them elsewhere, well we let them, because it's so difficult to hook the patient that once we have them there, and they are participating, we aren't going to remove them after the sixth session if they don't want to go."

Another systemic barrier is the requirement to have a certain number of co-located mental health providers in a PMG based on the number of covered beneficiaries of the Government Health Plan served by that clinic. MBHO representatives noted that this requirement has created problems with resource allocation, as it does not take into consideration actual needs assessment data or information about service utilization in a particular PMG.

As one MBHO representative explained,

"One of the elements of the new contract with ASES includes changes to the requirements about the number of hours that psychologists are available at each PMG. So when increasing the availability of hours based on the number of covered lives that the PMG serves (which is a bit how the primary care provider assignment works) you have to assign a psychologist for a number of hours. To give an example, we have one PMG that has five psychologists – this is almost a mental health clinic in a PMG, so how do you equate the service utilization component with the availability of resources? And since it is a mandate, I cannot make it make sense if I have more or less utilization by reallocating the resource…"

In addition, participants noted that limited Medicaid funding contributes to difficulties with the co-location services model in Puerto Rico. As one MBHO representative explained, *"We cannot lose perspective either that access to these funds in Puerto Rico is very limited, what is assigned to Puerto Rico for health services through Medicaid funds is not the same as what is given to the state of New York or California… we also have some problems in terms of oversight of those funds."*

A final systemic barrier that participants mentioned was that frequent change in the federal mandates has made medical providers and PMGs hesitant to commit fully to adopting any one model or way of doing things. As one MBHO representative explained,

"The model is changing so frequently that the people who provide the services say, 'I am going to keep doing it this way because maybe two years from now they will come back and change it.'"

Procedural Barriers

Regarding procedural barriers, participants first noted that the primary care providers are often too busy to consult with co-located mental health providers or screen for mental health needs among their patients. As one mental health provider said,

"It's wonderful to be close to the doctors, but sometimes communication is not possible because as busy as I am, they are even busier. I have doctors that I work with who sometimes

pass by and I say, 'oh, he works here!' – I mean, they are so busy and maybe I have 12 patients, well, he has 40, so he's never going to come to talk with me."

Relatedly, participants reported that lack of shared electronic medical records limits co-located providers' options for communicating with medical providers about their shared patients. As one mental health provider stated,

"The reality is that the only means of communication is that [written communication] that my colleagues are referring to, and without that they do not find out what we are doing. But once these EMRs [electronic medical records] can be integrated, I think we will really be able to talk about integration. As long as the record is not integrated, integration is going to be more difficult."

Furthermore, many of the mental health providers noted that it is difficult for them to read the medical providers' handwriting when relying on written communication. As one mental health provider said,

"I look for the diagnosis because many times the handwriting is totally illegible – the little number with the diagnosis is essential for me. But sometimes I don't even understand that, and I have had to find another doctor, in one of the facilities there is a young doctor who collaborates with me a lot and I ask him, 'what code is this?' and he tells me."

A final procedural barrier that participants identified was the lack of a consistent mental health screening protocol across PMGs. As one mental health provider said,

"Another of the difficulties I have found is that… they require the PHQ-9, but not all the doctors fill it out with the same frequency; for example, there is a doctor that does it once a year, there is a doctor who does it if necessary, and there are others who were not filling it out at all… I have spoken to them, but I believe that a continued intervention is needed… to motivate the doctors in some way, I don't know whether through the medical plans or something like that, that they have to refer and they have to do the PHQ-9."

Attitudinal Barriers

Regarding attitudinal barriers, participants noted that both patients and medical providers have demonstrated stigmatizing views about mental health issues and a lack of understanding of the co-located provider's role, which can limit willingness to refer to and utilize co-located mental health providers. As one mental health provider explained,

"There really is still a lot of taboo regarding the vision of the psychologist or any mental health provider in Puerto Rico, there are still people who think 'I don't need this because I am not crazy'… and based on that, prevention and intervention is with medication with your doctor and they forget that integral part, that mental health goes hand in hand with physical health."

Similarly, an MBHO representative noted,

"We have had doctors say, 'I do not want patients with chronic mental health problems here breaking everything' and we would return and explain, 'they are your patients that we are going to see there, we aren't going to bring others.'"

Another attitudinal barrier that can limit utilization of co-located services is that patients do not always prioritize mental health appointments. As one mental health provider explained,

"That is the excuse 99.9% of the time – 'I forgot.' I have stayed in the afternoons after 5:00 to call late, I call and confirm and not many of them come, it happens a lot. The commitment that these patients have with our service is fairly low because since they are not hurting physically, they usually do not come."

Recommendations for Improvement

Focus group participants gave several recommendations for how the co-location services model in Puerto Rico could be improved. First, participants recommended integration of medical records, which would allow medical and mental health providers to chart in the same system and achieve better communication and awareness of each other's activities. As one mental health provider said,

"I believe that the ideal within the model in Puerto Rico should be the integration of the mental health record with the doctor's record… this is one more legal medical thing that should be attended to in Puerto Rico so that we can achieve this ideal because we are going to have better guarantees that the doctor sees what we are doing and vice versa."

Participants also noted that it would be ideal if co-located mental health providers could see patients with all types of insurance, rather than being limited to just one or two plans. As one mental health provider explained,

"In an ideal world I would like not to limit myself to just one, I would like to work on all the medical plans to access more patients…"

Participants also recommended adopting a standardized screening protocol wherein every patient is given a mental health screener at their initial visit and at set intervals afterward. As one mental health provider suggested,

"I also think we should administer an anxiety instrument like the GAD-7 [Generalized Anxiety Disorder 7] along with the PHQ-9 within these screenings, at least twice a year in each of the PMGs… in the PMGs in which implementation of this process has been achieved the numbers are higher."

Relatedly, some participants suggested that patients be required to attend a visit with the co-located mental health provider for a mental health needs assessment as a condition of their insurance plan. As one mental health provider said,

"It seems to me that we should have our schedule filled when we arrive in the morning because all patients who benefit from the Government Health Plan in this case should have a screening with a psychologist or a mental health provider. If we are there, we do not have to have our agenda be dependent on a referral, we should be at that same level because we are working on that same level. And if we believe that the relevance of our work is going to positively impact the treatment plan, that is, why would we not screen everyone?"

Participants also discussed the importance of having top-down support of the model from administrators at the PMGs. Some recommended hiring "champions" of co-located care into PMG administrator positions, while others recommended that co-located mental health providers work to convince the administration of the utility of the model. As one MBHO representative explained,

"The administrator that is aware that the service is integrated and understands that there is a physical and mental need and that he can maximize this resource and that the psychologist can help him manage emergency rooms and high-cost patients, uses the psychologist and makes them an ally of the faculty… I always tell [the co-located providers], 'open the door,' 'ask when the next faculty meeting is,' because there, there you have to get involved, right, telling this information, and I would think that these elements are vital, because if the administrator and the medical directors are bought into integration, they will support that the psychologist be included as part of the faculty."

Some participants noted that expanding co-located services to include other specialty providers like psychiatrists, social workers, and case managers would improve treatment access and patient outcomes. As one mental health provider stated,

"One of the PMGs has a psychologist, a social worker, and a psychiatrist who goes twice a week, so there is a complete team if the doctor needs them... when there are larger PMGs this would be very good."

Participants across disciplines also recommended additional training for medical providers and staff. As one MBHO representative explained,

"I think that in the training of doctors in medical school, they should emphasize the need [for consideration of mental health], much of what I see is that the doctors don't see [mental health] as a need, and for those patients who do need that type of care, that they go to a mental health clinic. They don't see how this is something that could help in their treatment… in an ideal world the medical schools should tell doctors, 'Look, an evaluation of the emotional components is going to help in the treatment of diabetes.'"

Another MBHO representative added,

"Apart from the training of doctors, training of non-specialized personnel, because they are the first face the patient sees and the person who receives the patient, and if they are prepared to manage that patient, the patient will be well cared for in an integrated way."

Finally, participants recommended that co-located mental health providers be assigned to PMGs based on needs assessment data, rather than solely based on the number of covered beneficiaries served by a given PMG. As one MBHO representative explained,

"I would think that the availability of the psychologist should not be a contractual requirement, but rather that it should be evaluated according to the needs of the PMG, because this could perhaps make a difference in the openness of the PMG to the model."

In sum, participants noted various facilitators and barriers to interdisciplinary communication and utilization of co-located services in Puerto Rico and gave several recommendations for how to improve the model. We elaborate on these themes below and situate them within the broader literature on integrated care.

DISCUSSION

This exploratory qualitative study aimed to identify facilitators, barriers, and recommendations for how to improve the co-located care model being implemented in PMGs across Puerto Rico from the perspective of co-located mental health providers and MBHO

representatives. First, participants reported that efforts to increase buy-in from stakeholders within the medical system, such as building rapport with physicians, giving presentations about co-located care to medical staff and patients, and securing support from upper-level medical administrators facilitated greater utilization of co-located mental health providers. These findings are consistent with research from the field of implementation science, which has shown that higher rates of adoption are seen when the implementation of an evidence-based practice is supported on multiple levels of an organization (Aarons et al., 2015). In particular, the strategy of involving PMG leadership is consistent with research showing that the engagement of leaders within an organization is especially important for practice adoption (Damschroder et al., 2009; Li et al., 2018).

Additionally, mental health providers reported that when they are unable to achieve face-to-face communication with medical providers, they rely on written communication and involvement of other members of the medical team, such as nurses and medical assistants, to facilitate interdisciplinary communication. Some of the mental health providers also described success with involving nursing staff in the process of mental health screening and triage, which led to increased referrals to co-located mental health providers. These strategies are reflective of creative problem-solving undertaken by co-located mental health providers to work around common barriers to the model, in particular scheduling and time constraints that hinder direct communication with medical providers. Of note, the strategies that these mental health providers employed to increase utilization of the co-located care services tend to align with aspects of more highly integrated collaborative care models (e.g., primary care behavioral health [PCBH]; Reiter et al., 2018).

Participants' reports of barriers that impede the success of the co-located care services model in Puerto Rico generally fell into three categories: systemic barriers, procedural barriers, and attitudinal barriers. The systemic barriers reported by participants, including the way that mental health providers are contracted by individual MCOs, the mandate requiring a certain number of co-located mental health providers to be placed in a PMG based on number of covered beneficiaries served, the limited availability of Medicaid funds, and the frequent change in federal mandates, all map onto what the field of implementation science refers to as "outer setting characteristics" (Damschroder et al., 2009). Bruns and colleagues (2019) found that outer setting characteristics including fiscal supports and governmental policies are influential in predicting adoption of evidence-based mental health practices, suggesting that the co-location services model in Puerto Rico could be improved by modifying some of these external factors. The procedural barriers that participants reported primarily centered on factors that limit interdisciplinary communication, including time constraints, scheduling difficulties, and lack of a shared electronic medical record. Participants also reported that lack of a consistent mental health screening protocol in PMGs means there is not always a standardized route by which co-located mental health providers receive referrals. As noted above, many of these barriers would be addressed by moving beyond co-located care toward a higher level of integration (Reiter et al., 2018). Finally, participants reported attitudinal barriers that limit utilization of co-located

mental health care services by medical providers and patients alike, including stigmatizing views about mental health issues, a lack of understanding of the co-located provider's role, and low commitment from patients. Many participants noted that Puerto Ricans in particular hold a strong taboo about discussing mental health issues, though stigma is also a barrier to seeking mental healthcare among patients in the mainland United States and globally (Clement et al., 2015).

Participants gave several recommendations for how the co-located care model in Puerto Rico could be improved. First, participants across disciplines recommended integration of electronic medical records, allowing medical providers and mental health providers to chart in the same system. In addition to addressing several of the barriers noted by participants (e.g., scheduling difficulties and time constraints that limit opportunities for interdisciplinary care coordination), enacting this recommendation would also move Puerto Rico closer to a higher level of integrated care, which has demonstrated superior effectiveness in treating common mental health conditions such as depression and anxiety (e.g., Blackmore et al., 2018). Relatedly, participants also recommended expanding the model to include other specialty providers like psychiatrists and case managers in the team of co-located providers. This adjustment would also move the model toward a more comprehensive iteration of team-based healthcare that could be better poised to meet patients' needs in a holistic way.

Additionally, participants recommended adopting a system wherein co-located mental health providers could see patients with all insurance types, rather than being limited to just one or two plans. Of note, it seems that Puerto Rico had a system that allowed for this in 2010, when Puerto Rico's Health Insurance Administration (ASES) contracted directly with MBHOs to place mental health providers in PMGs. Policymakers may consider a return to the previous iteration of this system to allow for greater flexibility regarding which patients co-located mental health providers are able to treat. Next, participants recommended creating a more standardized approach to mental health screening in primary care, with some even suggesting that patients be required to attend a visit with a mental health provider as a condition of their insurance plan.

Although it is likely not possible to make mental health screenings a requirement of the Government Health Plan, this recommendation highlights the importance that participants placed on screening. Indeed, practice recommendations encourage screening for mental health concerns in primary care when adequate follow-up supports are in place to treat patients who screen positively (Siu & the U.S. Preventive Services Task Force, 2016), and doing so has the potential to increase the referral stream for co-located mental health providers. Participants also highlighted the importance of having top-down support of the model from PMG administrators, and in keeping with implementation science principals (e.g., Damschroder et al., 2009), some recommended hiring "champions" of the model to actively promote the implementation process.

Another noteworthy recommendation put forth by participants was to provide additional training in the co-located care model and the interconnectedness of mental and physical health to individuals across disciplines. This recommendation is supported by the field of implementation science, which heralds training as an essential activity of the implementation process (Damschroder et al., 2009). Finally, participants recommended that a needs assessment be

conducted to determine the demand for mental health services in different PMGs across Puerto Rico, and that co-located mental health providers be assigned to PMGs in accordance with need, rather than based on the number of beneficiaries in each PMG. Enacting this recommendation would allow MBHO administrators to respond flexibly to the needs of each PMG and maximize the impact of available mental health providers, rather than being constrained by fixed federal mandates.

Limitations

The findings of this study must be considered in light of its limitations. First, although the size of our focus groups fell within the recommended range for noncommercial topics (i.e., five to eight participants; Krueger, 2014), we only ran two focus groups (due to the number of co-located mental health providers and MBHO representatives who were available to participate) and as such, we were unable to confirm that data reached saturation. Second, this study is limited by the fact that focus group participants were all employees or independent contractors of one MBHO and thus the perspectives of other agencies responsible for implementing co-located care across Puerto Rico were not captured. Relatedly, these findings do not include the perspectives of medical providers or PMG administrators, which are critical to offering a more complete understanding of the co-located care system in Puerto Rico. Despite these limitations, it is our hope that these results can inform future efforts to improve co-location care services in Puerto Rico by highlighting the experiences of stakeholders in the mental health field.

Conclusions and Future Directions

Integrating mental health providers into primary care settings has the potential to increase access to much-needed mental health services in Puerto Rico, and the co-location services model has been an important first step in the process of integration. MBHO representatives and co-located mental health providers in the present study identified several recommendations for how to improve implementation and adoption of the model moving forward. While some of these recommendations can be implemented at the clinic level (e.g., integration of medical records, standardized mental health screenings), others require change at a broader systems-level (e.g., expanded insurance coverage for mental health services). Moving forward, it will be important to elicit the perspectives of medical providers and PMG administrators on the current co-located care system, and to advocate for change at the patient, provider, clinic, and policy levels to maximize the effectiveness of integrated care services in Puerto Rico.

REFERENCES

Aarons, G. A., Ehrhart, M. G., Farahnak, L. R., & Hurlburt, M. S. (2015). Leadership and organizational change for implementation (LOCI): A randomized mixed method pilot study of a leadership and organization development intervention for evidence-based practice implementation. *Implementation Science, 10,* 1-12. https://doi.org/10.1186/s13012-014-0192-y

ASSMCA. (2016). *Need assessment study of mental health and substance use disorders and service utilization of Puerto Rico. Final Report*. University of Puerto Rico, Behavioral

Sciences Research Institute. Retrieved from http://www.assmca.pr.gov/BibliotecaVirtual/Estudios/Need%20Assessment%20Study%20of%20Mental%20Health%20and%20Substance %20of%20Puerto%20Rico%202016.pdf

Blackmore, M. A., Carleton, K. E., Ricketts, S. M., Patel, U. B., Stein, D., Mallow, A., Deluca, J. P., & Chung, H. (2018). Comparison of collaborative care and colocation treatment for patients with clinically significant depression symptoms in primary care. *Psychiatric Services, 69,* 1184–1187. https://doi.org/10.1176/appi.ps.201700569

Bridges, A. J., Villalobos, B. T., Anastasia, E. A., Dueweke, A. R., Gregus, S. J., & Cavell, T. A. (2017). Need, access, and the reach of integrated care: A typology of patients. *Families, Systems, and Health, 35,* 193-206. https://doi.org/10.1037/fsh0000268

Bruns, E. J., Parker, E. M., Hensley, S., Pullmann, M. D., Benjamin, P. H., Lyon, A. R., & Hoagwood, K. E. (2019). The role of the outer setting in implementation: Associations between state demographic, fiscal, and policy factors and use of evidence-based treatments in mental healthcare. *Implementation Science, 14,* 96. https://doi.org/10.1186/s13012-019-0944-9

Canino, G., Shrout, P. E., Rubio-Stipec, M., Bird, H. R., Bravo, M., Ramirez, R., Chavez, L., Alegria, M., Bauermeister, J. J., Hohmann, A., Ribera, J., Garcia, P., & Martinez-Taboas, A. (2004). The DSM-IV rates of child and adolescent disorders in Puerto Rico: Prevalence, correlates, service use, and the effects of impairment. *Archives of General Psychiatry, 61,* 85-93. https://doi.org/10.1001/archpsyc.61.1.85

Clement, S., Schauman, O., Graham, T., Maggioni, F., Evans-Lacko, S., Bezborodovs, N., Morgan, C., Rüsch, N., Brown, J. S. L., & Thornicroft, G. (2015). What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies. *Psychological Medicine*, *45*, 11-27. https://doi.org/10.1017/S0033291714000129

Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science, 4,* 50. https://doi.org/10.1186/1748-5908-4-50

Friese, S. (2019). *ATLAS.ti 8 User Guide and Reference*. ATLAS.ti Software Development.

Galea, S., Merchant, R. M., & Lurie, N. (2020). The mental health consequences of COVID-19 and physical distancing: The need for prevention and early intervention. *JAMA Internal Medicine*, *180*, 817-818. https://doi.org/10.1001/jamainternmed.2020.1562

Heath, B., Wise Romero, P., & Reynolds, K. (2013). *A standard framework for levels of integrated healthcare*. Washington, D.C.: SAMHSA-HRSA Center for Integrated Health Solutions.

Kisely, S., Duerden, D., Shaddick, S., & Jayabarathan, A. (2006). Collaboration between primary care and psychiatric services: Does it help family physicians? *Canadian Family Physician 52*, 876–877.

Kishore, N., Marqués, D., Mahmud, A., Kiang, M. V., Rodriguez, I., Fuller, A., Ebner, P., Sorensen, C., Racy, F., Lemery, J., Maas, L., Leaning, J., Irizarry, R. A., Balsari, S., & Buckee, C. O. (2018). Mortality in Puerto Rico after Hurricane Maria. *The New England Journal of Medicine, 379,* 162–170. https://doi.org/10.1056/NEJMsa1803972

Kohn, R., Ali, A. A., Puac-Polanco, V., Figueroa, C., López-Soto, V., Morgan, K., Saldivia, S., & Vicente, B. (2018). Mental health in the Americas: An overview of the treatment gap. *Revista Panamericana de Salud Pública*, *42*, e165. https://doi.org/10.26633/RPSP.2018.165

Krahn, D. D., Bartels, S. J., Coakley, E., Oslin, D. W., Chen, H., McIntyre, J., Chung, H., Maxwell, J., Ware, J., & Levkoff, S. E. (2006). PRISM-E: Comparison of integrated care and enhanced specialty referral models in depression outcomes. *Psychiatric Services, 57*, 946–953. https://doi.org/10.1176/ps.2006.57.7.946

Krueger, R. A. (2014). *Focus groups: A practical guide for applied research*. Sage publications.

Li, S. A., Jeffs, L., Barwick, M., & Stevens, B. (2018). Organizational contextual features that influence the implementation of evidence-based practices across healthcare settings: A systematic integrative review. *Systematic Reviews*, *7*, 1-19. https://doi.org/10.1186/s13643-018-0734-5

Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis: A methods sourcebook (3rd ed.).* Los Angeles, CA: Sage Publications, Inc.

Reiter, J. T., Dobmeyer, A. C., & Hunter, C. L. (2018). The Primary Care Behavioral Health (PCBH) model: An overview and operational definition. *Journal of Clinical Psychology in Medical Settings, 25,* 109–126. https://doi.org/10.1007/s10880-017-9531-x

Siu, A. L. & the U.S. Preventive Services Task Force (2016). Screening for depression in adults: U.S. Preventive Services Task Force recommendation statement. *JAMA, 315,* 380-387. https://doi.org/10.1001/jama.2015.18392

Volpe, U., Mihai, A., Jordanova, V., & Sartorius, N. (2015). The pathways to mental healthcare worldwide: A systematic review. *Current Opinion in Psychiatry, 28,* 299–306. https://doi.org/10.1097/YCO.0000000000000164

Woods, J. B., Greenfield, G., Majeed, A., & Hayhoe, B. (2020). Clinical effectiveness and cost effectiveness of individual mental health workers colocated within primary care practices: a systematic literature review. *BMJ Open*, *10*, e042052. http://dx.doi.org/10.1136/bmjopen-2020-042052