Improving Attendance at Medication Management Appointments: A Patient-Centered, Quality Improvement Initiative

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Abstract

Background: Mental health providers in all types of clinical settings experience the phenomena of patients who do not attend their intake appointments. These missed appointments, or no-shows, can have a significant effect on the clinic in terms of loss of revenue, on the patient themselves from a gap in treatment, and on those patients who are waiting for an intake appointment to occur. *Methods*: The Model for Improvement, Plan-Do-Study-Act (PDSA), was utilized for this quality improvement initiative. Additionally, the Health Belief Model was used as a foundational concept to determine why patients might not attend their appointments. This model explains why a person is more likely to engage in a positive health behavior if they believe that taking action will either prevent illness or lessen the negative effects of it, and that the benefits of acting outweigh the costs. *Intervention*: An educational pamphlet was created, approved by the clinic, and distributed to patients prior to their medication management intake appointment. The project was interrupted by the emergence of COVID-19 and was suspended indefinitely as it neared the end of the first PDSA cycle. *Conclusion*: This project demonstrated that a combined approach to the problem of appointment no-shows could be effective. When an educational pamphlet, prompting a pretreatment discussion between the patient and their referring provider, is combined with an appointment reminder call, patients are more likely to attend their appointments, both intake and follow up.

Keywords: mental health, medication management, appointment no-show, appointment non-attendance.

Introduction

Problem Description

Polk County Behavioral Health (PCBH) is a community mental health clinic located in Salem and Dallas, Oregon, that provides services for those with severe and persistent mental illness, substance abuse and addiction. The clinic offers outpatient therapy and skills training services in addition to psychiatric medication management. This community mental health clinic utilizes psychiatric mental health nurse practitioners (PMHNPs) as prescribers. Each intake appointment is 60-90 minutes long and follow-up appointments are 30 minutes long. The clinic provides instructions to all new patients that if they are unable to attend their appointment (intake or follow up) they are to contact the clinic at least 24 hours in advance in order to give the schedulers time to fill the empty appointment space. Despite these instructions, those who work in the medication management department have found that a significant percentage of patients do not attend their intake appointment without calling or rescheduling.

In a survey of these psychiatric prescribers, a popular hypothesis for the high rate of 'no-shows' is that the patients do not understand why they are being referred for this service. These providers also felt that some patients did not know what to expect from medication management or had a negative experience in the past. Further adding to the frustration of providers, it can take several weeks for a new patient to be seen, therefore, when a patient does not show up for their intake, they are preventing another patient in need from receiving treatment. The impact of these 'no-shows' is significant at Polk County not just on the clinic itself in terms of revenue lost, but on the patient that is in need of services, and the patient who is waiting to establish care. There is the additional problem of patients not attending their follow up appointments. At PCBH in 2019 there were 536 no-shows to follow up appointments between all the psychiatric prescribers.

These missed appointments are cause for frustration for these providers as they are being underutilized. However, despite having chronic nonattenders, the policy of this clinic is that patients cannot be dismissed for nonattendance. The only “recourse” the providers have is that they cannot refill prescription medication to patients without seeing them at least every three months, if they are stable, as a safety measure.

Available Knowledge

Premature disengagement from treatment is a pervasive problem throughout every type of mental health setting. Early disengagement frequency increases in those with serious mental illness (SMI) and even more so in those with a concurrent substance use disorder (Shim, Compton, Zhang, Roberts, Rust & Druss, 2017). The term *premature discontinuation* or *disengagement from treatment* refers to a unilateral decision on the patient’s part to cease participating in mental health care before the course of treatment is complete (Swift & Greenberg, 2012). Non-attendance of appointments is a waste of severely limited resources. Identifying and understanding variables that contribute to disengagement can help community mental health clinics and care teams to provide support to those who are at the highest likelihood of dropping out. Between 18-67% of patients fail to attend their intake appointment or follow up after hospitalization and 16.5% of patients with serious mental illness drop out of treatment prematurely (Kreyenbuhl, Nossel, & Dixon, 2009). The variables identified as barriers to treatment in the literature included, but were not limited to; lack of connection with the provider, lack of provider consistency, the client’s feeling that treatment was not helping, feeling that they did not need treatment, starting to feel better, difficulty getting to appointments, and medication side effects (Smith, Easter, Pollock, Pope, & Wisdom, 2013).

The literature reviewed described several ways in which to address the problem of premature treatment discontinuation or appointment non-attendance. First, Kreyenbuhl, Nossel, and Dixon (2009) suggest that the provider adopt a patient-centered approach to care by collaborating with their patients around treatment and goals of care. Becker et al. (2019) posited that the involvement of family might be helpful. In their discussion of a systematic review of literature on improving intake appointment attendance, Schauman, Aschan, Arias, Beards, and Clement (2013) found that an orientation letter/statement in combination with a reminder letter had the biggest effect on intake appointment no-shows. The authors also reviewed studies that looked at the effect of telephone reminder calls and determined that there was no significant improvement when utilized as the sole measure to increase attendance. However, when "multiple, empirically derived intervention strategies" were employed, attendance improvement measures tended to be more effective (Lefforge, Donohue, & Strada, 2007, p. 18). Lefforge, Donohue, and Strada (2007) determined that the combination of telephone reminder calls and letters were the most effective when they were both utilized and included pertinent information about the patient's upcoming appointment. The information these authors found to be most helpful to patients included what patients can expect from treatment, an explanation of the treatment they would be receiving and a brief discussion about the problem that brought them to schedule an appointment in the first place. Taking the concept of a letter of treatment explanation a step further, an intervention that has the possibility to yield the best results would be an in-person pretreatment education program. This program can be delivered in a group setting that includes information about expectations for treatment, information about medication, and presentation of available resources. Furthermore, a pretreatment education program can be

adapted to a paper format so that a patient who would have to endure hardship by attending an in-person session can also receive this important information.

The article “The Effect of Pretreatment Educational Group Programme on Mental Health Treatment Outcomes” (Koksivik, Linaker, Gråwe, Bjørngaard, & Lara-Cabrera, 2018) reviewed outcomes following the implementation of a pretreatment education program for prospective, mentally ill patients in Norway. This program was delivered in a group setting, in a community mental health clinic, for patients who had not received any mental health treatment. The content that was delivered included what the patient could expect from treatment and why they might need it, information about the initial assessment, the duration of appointments and overall treatment, the overall goals of treatment, as well as the patient’s rights and responsibilities. The results from this trial found that those patients who opted not to participate in the pretreatment education group were 74% more likely, compared to those who did participate, to discontinue treatment prematurely.

Interventions such as pretreatment education, ensuring patients follow up with the same provider at every appointment, telephone calls, and orientation/reminder letters should work to prevent patient disengagement, however, there are numerous barriers that are faced when reforming a system or practice. Making system-wide changes can be challenging despite having strong evidence to support it. This task can be made more challenging by the lack of resources, both financial and in person-power. In the review of the literature, there was no discussion regarding the cost of implementing the changes discussed. Cost was alluded to throughout the literature; however, there was not one article that directly addressed the cost of implementing an intervention. If one was wanting to make a change at a certain clinical location, understanding

the potential costs would be important as it could impact buy-in from other members of the practice.

The ability to provide prospective patients with information about what they can expect from mental health treatment and providing a forum in which they can ask questions has the potential to demonstrate to the patient that they are an important part of the treatment process. Just as someone requiring chemotherapy or an organ transplant receives pre-treatment education, those with a mental illness should be provided with an opportunity to learn about what they are about to take on. Whether this occurs during a patient's first psychiatric hospitalization or in an outpatient clinic prior to their intake appointment, an education program has the potential to begin the process of incorporating the patient into the treatment team, give the patient a sense of autonomy, and provide a setting for patients to ask any questions they might have.

Rationale

Two frameworks were utilized in the implementation of this quality improvement project. First, and perhaps most importantly, The Model for Improvement, which was used in order to gain the maximum amount of buy-in from those who will be the most affected by the project. Buy-in from key participants is important in that it can facilitate change implementation and continued integration into practice (Kaplan, Provost, Froehle, & Margolis, 2012). Second, the Health Belief Model was applied as it relates to the patient's motivation to change.

The Model for Improvement has been shown to enable change within a health system through a well-organized process. The process of Plan-Do-Study-Act (PDSA) allows change to be adopted gradually and methodically (Provost, Lloyd, & Murray, n.d.). In this instance, at Polk County Behavioral Health (PCBH), there is a significant no-show rate for patients who are being referred for medication management. It was hypothesized by one staff nurse practitioner that

many patients do not know what medication management means or why they need it. Through several PDSA cycles, it would be possible to identify an intervention that is worth both the time and effort of the staff involved. The other component of this problem was approached from the patient's perspective, attempting to understanding the reasons patients feel that the benefits of medication management do not outweigh the effort of attending their appointments.

This paper posits that those who prematurely discontinue treatment have decided that the costs of participating in treatment (i.e. they believe they are not benefitting from therapy, or they have had undesirable side effects from medication, or attending appointments is too challenging) outweigh the potential benefits. The constructs of the Health Belief Model (HBM) were useful in understanding and potentially remedying premature discontinuation of treatment. These constructs serve to predict whether or not a person will take the action necessary to prevent or treat an illness (Skinner, Tiro, & Champion, 2015). These authors state that a person is more likely to engage in a positive health behavior if they believe that taking action will either prevent illness or lessen the negative effects of it and that the benefits of acting outweigh the costs.

Since the HBM constructs are so intuitive, tailoring intervention to the individual patient can be simple (Skinner, Tiro, & Champion, 2015). These authors maintain that a healthcare provider can assess a patient's "HBM-related perceptions" by asking "what makes you want to/not want to do [X health behavior]?" From this point, the health care provider can address any patient-specific problems and encourage a change in behavior. This model can be utilized to aid treatment for any patient – from the high income and health literate to the underserved with low health literacy. It is the responsibility of the health care provider to educate the patient (and ensure understanding) so that they are able to accurately weigh the costs and benefits of treatment and come to an informed decision.

While this model appears simple to apply, what has not been addressed, however, is how mental illness impacts its application. The literature discusses the HBM in the context of a patient that is capable of rational thinking and basic critical thinking. Although patients with serious and persistent mental illness may challenge the constructs of this model, the model itself is adaptable and a skilled health care provider should be able to apply it to this population of patients.

As is demonstrated in the literature, appointment non-attendance is a problem that is prevalent throughout all outpatient mental health venues, one that does not appear to have a clear solution. Although there is notable improvement in attendance with appointment reminders, reminders alone do not eliminate appointment no-shows altogether. When a person chooses not to pursue treatment for a condition, they are deciding, consciously or subconsciously, that the benefits of treatment do not outweigh the potential "risks." The assumed risks, accurate or otherwise, are the target of this proposed intervention. If the patient can be educated such that they have all the information, especially the understanding of how they can participate and have a say in their plan of care, they are then able to make an informed decision about attending their appointment(s) or not. With this in mind, the intervention proposed is a pretreatment education program, one that addresses common misconceptions about mental health care and medication. Ideally, this education would be completed in-person, but could also be delivered via telephone or a handout/pamphlet.

Specific Aim

By the first of May 2020, the number of "no-shows" (patients who fail to attend their intake appointment without notifying Polk County Behavioral Health that they would not attend) will decrease by 50%. Patients who are referred for medication management by another

discipline within Polk County Behavioral Health will report an understanding of why they are being referred and what they can expect from psychopharmacologic treatment.

Methods

Context

The intervention was implemented at the Polk County Behavioral Health (PCBH) clinics in West Salem and Dallas. The patients selected for this intervention included all adult patients, 18 years and older, who had been referred for medication management with a PMHNP. These future patients had been referred by a provider within and outside of PCBH. The only limitation on the number of patients involved in this project was the number of new patient appointments that were available. Inclusion criteria included the following: patient is 18-years or older, they have been referred for medication management at PCBH, must be literate or have a caregiver who is literate, and have a means by which they can be contacted – preferably a working phone.

Intervention

Prior to considering what type of intervention to implement at PCBH, a meeting was held involving key participants. The “core team” involved in this quality improvement initiative included the manager for the medication management department and one of the department’s PMHNPs. This meeting was to ascertain what areas they thought would benefit from a quality improvement project. Understanding that selecting a project topic that was important to those involved would improve the ease of implementation, promote involvement from within PCBH, and increase the likelihood that the intervention would remain in place once the project was complete. The areas of need that were identified during this meeting were inter-provider communication and medication management intake appointment attendance. While discussing

potential interventions for each issue, it was decided that the intake appointment attendance would be the best problem to address.

The goal for this quality improvement project was to improve medication management intake appointment attendance. The proposed intervention was founded in The Health Belief Model constructs, that people make health care decisions for themselves based on the information they have, be it accurate or inaccurate. With this information, a patient determines if the benefits of seeking treatment or care outweigh the drawbacks. Keeping this model in mind, the proposed intervention was designed to provide prospective patients accurate information with which to make an educated decision about attending their intake appointment. This intervention was centered around providing these prospective patients with education about medication management, the types of appointments they would attend, the frequency and duration of these appointments, what to expect from medication, what to expect from their medication management provider, and what would be expected of them as the patient. The first intervention that was proposed was to hold two 30-minute education sessions each month, and patients who were scheduled for intake appointments would attend one session prior to their intake appointment. During these sessions, all of the information listed above would be presented. Participants would also receive this information in printed form, and time would be made for any questions the participants may have. Furthermore, this would be an opportunity to provide important information about local community resources such as food assistance programs, medical transportation, housing resources, etc. Although enthusiastic about the spirit of this intervention, the clinic management felt that since patients were having difficulty attending their intake appointments, it was unlikely that they would attend an educational session.

In order to keep the idea of providing patients with pre-treatment education, it was necessary to find a different method for delivery, therefore a pamphlet (See appendix A) was developed. This pamphlet included all of the information that would have been presented during an education session, including the available community resources. Once the pamphlet was developed, it was reviewed and approved by the core team. After the content was approved, the pamphlet was assessed by the OHSU Writing Center to ensure that the information was presented at a third-grade literacy level or lower. Once the design, content, and literacy level were finalized, the pamphlet was brought to the PCBH leadership by the manager of the medication management group for approval. This document and its contents were approved without any necessary edits.

The content of the pamphlet was customized to Polk County Behavioral Health. It included information about what medication management is, how psychiatric medication works, what the benefits of medication are, how to prepare for an intake appointment, what can be expected during intake and follow up appointments – how long the appointments are and how frequently follow up appointments are scheduled, how a patient can get the most out of their treatment, the medication refill and cancellation policy, and finally, how to contact the clinic. The reverse side of the pamphlet lists all of the local community resources in addition to emergency/crisis contact information. Once the pamphlet was approved, the first Plan-Do-Study-Act (PDSA) cycle of this quality improvement project began.

The process for the first PDSA cycle began with communication between the core team working on this project and members of the PCBH medication management team. This first cycle required the assistance of one of the Office Specialists – the person who schedules referred patients for intake appointments with the medication management PMHNPs. Every Friday, the

Office Specialist would compile and email a list of patients who had been scheduled for an intake appointment that week. Then, those who were 18 years-old and older were selected, their addresses obtained from the electronic medical record, written on a sticky note, the sticky note attached to a pamphlet, and the pamphlets given to another Office Specialist to be placed in envelopes and mailed. The process for getting the pamphlet mailed was tedious, however, this was an item that would be addressed and improved for the second PDSA cycle. In order to ensure the pamphlets arrived and to assess the quality and understandability of the pamphlet, each patient who was selected as a participant was contacted by phone at least one week after the pamphlet was mailed. The phone call would also serve as an appointment reminder and provide the participant with an opportunity to ask any questions they may have. It is important to note that this would be an additional phone call, separate from the standing appointment reminder call made by the PCBH office specialists.

To accurately compare the information derived from the follow up phone calls, a script of six questions was created and approved (See appendix B). Initially, the plan was that the patients would be contacted by phone, from a PCBH clinic phone, at least one week following the date their pamphlet was mailed (to ensure the pamphlet would arrive), but no sooner than two weeks prior to their intake appointment. If the patient did not answer their phone, a voicemail would be left stating the reason for the call, providing information about their upcoming appointment, and advising them that they may receive another call. This message would be worded such that no private mental health information was disclosed. A voicemail message would be left only after the first attempt to contact, a total of three attempts would be made to contact the patient. As the plan for the follow-up phone call was discussed, it was decided by the members of the core team who work at PCBH that leaving a voicemail message had the potential for increasing the volume

of calls to the Office Specialists, which they did not have the bandwidth to absorb. In order to respect the limitations of those who are working outside their usual job responsibilities to assist with this project, it was decided that when the participants were contacted, no voicemail message would be left. Therefore, the procedure for contacting patients via telephone would be; contact the patient, if they did not answer the phone, another attempt would be made later in the day, if the patient did not answer on the second attempt, contact would be attempted one more time. If the participant did not answer the call after the third attempt they would then be excluded from the project. If the patient did answer the phone call, the caller would go through the script in Appendix A from start to finish, documenting the answers to each question.

Once the entirety of the first PDSA cycle was planned and approved by all members of the core team, it was ready to be implemented. As a group, it was decided that the first cycle would last four weeks with a plan to discuss possible changes at week three so that the second cycle could begin as soon as the first cycle concluded.

Study of the Intervention

To measure the effectiveness of the educational pamphlet for patients seeking psychiatric medication management at PCBH, the afore mentioned six-question questionnaire was administered. The survey included direct questions about the understandability of the pamphlet, possible barriers to appointment attendance, and offered the participant the opportunity to ask any other questions they may have about medication management. Due to the emergence of SARS-CoV-2 (COVID-19) as a pandemic, it was not possible to collect enough data to identify if the intervention directly impacted medication management appointment attendance.

Measures

In order to determine if the pretreatment education pamphlet was an effective, understandable tool, a standardized six-question questionnaire was utilized. Standardization is important to any change initiative as it ensures that the change is implemented consistently with every patient, producing high-quality data (Silver et al., 2016). When developing and evaluating the questionnaire, validity and reliability of the measure had to be considered. To determine validity, the measure had to demonstrate that the questions being asked evaluated the item being tested (Leung, 2015). In this case, did the questionnaire accurately measure the understandability of the pamphlet? The two questions that did this directly were: Was there any information in that handout that didn't make sense? Yes/No (If yes, what?), and Do you have any questions about the pamphlet that I can answer? It can be safely said that these questions do directly measure the effectivity of the pamphlet and, therefore, demonstrate measure validity.

The other characteristic of the questionnaire as an appropriate measure of evaluating the effectiveness of the pamphlet is reliability. With qualitative data collection, the measures used should be consistent, meaning that the processes used and the results gathered can be reproduced (Leung, 2015). The measure used to evaluate the intervention are clear and direct, any other person could use the questionnaire and gather data that would provide an accurate evaluation of the intervention. Therefore, this measure was reliable.

Analysis

Due to the impact of COVID-19, there was not enough data collected to determine whether or not this intervention made a statistically significant difference in medication management intake appointment attendance. Furthermore, due to reprioritization of responsibilities, all necessary pre-intervention data was not available at the time of writing.

However, a small amount of qualitative data was collected, and although not statistically significant, demonstrated that the pamphlet was understandable and effective for those who received and read it. This author was solely responsible for selecting the patients that would receive a pamphlet, making follow up phone calls, and collecting and documenting participant responses. Additionally, the electronic medical record used by PCBH, Credible, was utilized to gather data about appointment attendance, reschedules, cancellations, or no-call/no-shows. Having one person responsible for these components ensured the consistency and accuracy of the data collected.

A total of eleven participants were included in PDSA cycle 1. All eleven were contacted by this author. Of those eleven, three participants did not answer their phone after three attempts and two participants had not received the pamphlet at the time of the phone call. It is important to note that, for those patients who had not received their pamphlet by the time of their phone call, the intention was to contact them the next week, however, this landed on the week that the project was suspended due to COVID-19. Therefore, a total of five participants were excluded from the data set. The table below outlines the qualitative data that was collected from the six phone calls and each participant's response to the six questions.

Table 1

	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6
Pt 1	Yes	Yes	No	No	Yes	No
Pt 2	Yes	No	N/A	No	No	No
Pt 3	Yes	Yes	No	No	No	No
Pt 4	Yes	Yes	No	No	Yes	No
Pt 5*	Yes	No	Has been seen before	No	Yes	No
Pt 6	Yes	Yes	No	No	Yes	No

*Pt 5 had not read the pamphlet because they had been seen at PCBH for medication management in the past

Telephone Questionnaire:
1. Did you receive the medication management handout that was mailed/given to you? Yes/No
2. Did you have an opportunity to read it? Yes/No (If no, why not).

3. Was there any information in that handout that didn't make sense? Yes/No (If yes, what)
4. Do you have any questions that I can answer? Yes/No (If yes, what questions)
5. Does your appointment date/time work for you? Yes/No (If no, transfer to scheduling)
6. And, is there anything that might prevent you from getting to your appointment? Yes/No (If yes, what)

Of the eleven patients who were mailed pamphlets, 10 had never been seen by a PCBH medication management PMHNP. Nine participants attended their intake appointment, or rescheduled their appointment at least 24-hours in advance and then attended their rescheduled appointment. Two of the 11 participants did not attend their intake appointment, nor did they call to cancel their appointments 24-hours prior. Of those two patients who were "no-call/no-show" to their intake appointments, one had their appointment scheduled on March 24th, when there was still a lot of confusion around the safety of accessing health care due to COVID-19 and it is possible that this was the reason the patient did not attend. If this project had continued, COVID-19 would have presented as a significant confounding factor in data collection.

Ethical Considerations

Since this project works with those who suffer from mental illness are a population who is considered to be vulnerable, ethical considerations must be made to ensure that their rights to accessing health care, privacy, and respect are maintained. This means that any information gathered was protected in accordance with HIPPA regulations. Two ways in which this project emphasizes inclusion of as many patients as possible and makes accommodations for those who are particularly vulnerable is by, first, ensuring that the pamphlet that is delivered to the participants is written at a third-grade reading level or lower, and second, one of the questions posed in the telephone questionnaire was "what obstacles would prevent you from attending your appointment on [date & time]?" This question would create an opportunity to offer to connect the participant with clinic resources. Additionally, these community resources would be featured on the pamphlet so that all patients have access.

Results

Results

As the planning phase for PDSA cycle 2 began, the world was impacted by the COVID-19 pandemic. In order to best protect and maintain the health and wellbeing of the patients and health care providers at PCBH, clinical experiences/rotations and projects were suspended indefinitely. Due to the significant shift in PCBH's priorities, the core group working on this quality improvement project was not able to complete an evaluation of the first PDSA cycle. Despite not being able to do an evaluation of cycle 1 as a group, there were some obvious areas that could be improved had a second PDSA cycle been initiated.

Without knowing if this quality improvement initiative would be continued after PCBH clinic functions return to its new normal, some improvements could be made to the processes in PDSA 1. The area in particular that needed to be streamlined was the delivery of the pamphlet to the participant. In order to simplify this process, the responsibility of providing the patient with the pamphlet could be shifted to the referring provider. Within PCBH, patients are seen by social work, skills trainers, and/or therapists prior to being seen for medication management. It is a provider from one of those three groups that places the referral for medication management with a PMHNP. The plan had been for the manager of the medication management department to bring this idea to the next managers meeting and ask for support from these three groups. Once approval was given by management, the new process would be presented to the next staff meeting that involved social work, skills training, therapy, and the medication management team. Again, importance would be placed on the acceptance of feedback, ensuring all those involved have a voice, especially because, ultimately, they would continue with the intervention once the project was complete. Referring providers would be asked to email this author with any feedback

about the project and its process. Having the referring providers deliver the pamphlet to the patient would create a unique educational opportunity. The provider would review the pamphlet with the patient and answer any basic questions the patient may have about medication management, turning standardized education into individualized education. This is important because patient-centered education can lead to improved understanding, which results in improved participation in care, and therefore, improved patient outcomes (Flanders, 2018). If the pamphlet is placed directly into the patient's hands, the possibility that the pamphlet (when mailed) is overlooked, lost, or ignored would be eliminated. Furthermore, the referring provider could advise the participant that they would be receiving a follow up phone call asking them about the pamphlet, providing them with another chance to ask any questions they may have. The person who is tasked with contacting the participants would be notified by the referring provider that they referred a participant for medication management and that the participant had been given a pamphlet. The caller would then note the date of the intake appointment and contact the patient no sooner than two weeks prior to their appointment. The only aspect that would need to be evaluated and addressed, if necessary, would be how to improve the process by which those participants who are referred from providers outside PCBH would receive a pamphlet.

Ultimately, all patients being referred to a PCBH medication management PMHNP would receive a pamphlet. The patients who are referred by a provider within PCBH would be given a pamphlet by their referring provider and those patients being referred by a provider outside of PCBH would receive their pamphlet in the mail as a component of their new patient intake paperwork. The hope is that through several PDSA cycles the educational pamphlet would hold up as an understandable and effective method of providing patients with the knowledge necessary to inform their decision to attend all of their scheduled appointments and participate in

treatment. With a proven method of delivering pretreatment education, a follow up telephone call would not be necessary and could be eliminated from the process altogether. Three measures were utilized throughout this project to ensure that the change resulting from this project was beneficial to both the patients and to those PCBH employees who were involved.

In order to assess whether or not the quality improvement intervention was leading to positive changes, outcome, process, and balancing measures were identified. To make sure that the intervention was not adversely impacting the clinic and those who were participating in the project, the outcome measure for this intervention was the number of intake appointment no-shows. A decrease in the number or percentage of no-shows would demonstrate the effectiveness of the intervention. The process measure used for this initiative was the percentage of new patients that received a medication management pamphlet from their referring provider, a high percentage would indicate that the new system was working. Finally, the balancing measures that demonstrate that this new system was not having a negative impact on other areas of PCBH, was that the referring providers felt that time spent reviewing the pamphlet with the patient upon referral was time well spent. Together, these three measures helped guide the project and ensure that it was effective while having a net positive effect on the clinic.

Discussion

Summary

Although still in the beginning stages, the data that was gathered from those participants who were involved in this quality improvement initiative appeared to demonstrate that the intervention studied, the implementation of a pretreatment education pamphlet, was an effective method of delivering information. As discussed, however, COVID-19 had a significant, detrimental effect on this project and no final conclusions could be drawn from the data gathered.

Even though the project was impacted, there were several foundational characteristics of this project that would have made this a strong project should it have continued as anticipated. The essential factor was the team involved was invested in the project and were supportive of the changes being made. The inclusive approach to designing and planning ensured that everyone involved had a say in every component, leading to buy-in. From the very first meeting where those who work at PCBH decided which area of their program needed improvement, to an agreement on what the intervention would look like, to how each step of the process would occur, each member of the team remained invested throughout. The Model for Improvement was used as a foundation to set the stage for change within a health care setting and the tenants of this model proved to be extremely effective in garnering buy-in and support throughout the clinic leading to its success.

Interpretation

The intervention put into place at PCBH was fairly simple. A brochure designed to deliver important education regarding psychopharmacological management to prospective patients followed by a short phone call. This intervention was necessary because the medication management providers at PCBH experienced many intake appointment no-shows. In order to combat misinformation about medication management and demonstrate to patients that the providers they will see care about their input into the treatment plan, a pamphlet was created and distributed. Ultimately, this information/education would provide the patients with what they needed in order to make the decision to attend their appointments. This simple intervention appeared to be effective from the little data that was gathered and was also relatively low in cost.

The costs associated with this intervention were fairly limited both financially and in amount of work hours. Financially, the cost of this project included the price of the printed

pamphlet, one-page front and back and, in the first PDSA cycle, the cost of mailing the pamphlets to each participant. The mailing cost should decrease with the implementation of the second PDSA cycle as the only participants to receive their pamphlets by mail would be those who were referred to the medication management team by a provider outside of Polk County Behavioral Health. An initial investment of work hours was made by many of those involved; however, the plan was that ultimately, this initiative would be self-sustaining, not requiring any additional work to continue. Unfortunately, it is unlikely that, at the stage the project is in, the work will be continued.

Limitations

As described throughout this paper, the major limitation on the success of this quality improvement initiative was the COVID-19 pandemic. Since the pandemic occurred just as the project was completing its first cycle, not enough time had elapsed for limitations to present themselves. One limitation that may have been a problem was the involvement of other specialties, such as the licensed therapists, skills trainers, and social workers. In a clinic where all resources are limited and the burden of work high, it may be difficult to ask those who do not directly benefit from a change to make the time to add another responsibility. In order to overcome this possible limitation, during the next interdisciplinary staff meeting, the project would be introduced, participation requested, a description of what their responsibilities would be given, and feedback/input would be solicited. The best way to approach this limitation would be with an open mind and the flexibility to concede that the original plan may not be the best or most effective (Fink, 2016).

Conclusion

Many lessons were learned throughout the process of developing and implementing a quality improvement project. Encouraging participation and feedback from those who were participating in the project was the most important lesson learned. The more input sought and given, the more invested each member of the project group became. Despite the level of interest in this quality improvement project, the project was not fully integrated into the work patterns of those at PCBH before it was suspended, and realistically, it is unlikely that this project would be continued once clinic functioning returns to its new "normal." There was no opportunity to complete the groundwork necessary to prove the sustainability and effectiveness. This project required substantial legwork in order to get the components of the intervention in place. The foundation of this project was nearly complete when COVID-19 appeared. This event removed the possibility of normalizing the processes implemented during the PDSA cycles and therefore increased the likelihood that the efforts of this project would not be continued.

Interestingly, the advent of COVID-19 brought rapid changes in the way health care is delivered as a whole. This health crisis had necessitated the increased utilization of telemedicine resources which has the potential to have a positive impact on appointment attendance rates. Some missed appointments may be due to anxiety about leaving the house, or depression that leaves a person with little to no energy to attend their appointment, for example. Offering online appointments may help bridge the gap for patients with serious mental illness. As hypothesized earlier in this paper, a multi-pronged approach to addressing appointment non-attendance has the potential to decrease its occurrence. If a patient receives an educational pamphlet from their referring provider, has an option to attend an appointment online, and receives an appointment reminder phone call, the likelihood that a patient will attend their appointment increases.

COVID-19 may have, inadvertently, forced the implementation of the best intervention for missed appointments, however, it will take time to evaluate how effective an intervention it is.

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Appendix A

Pamphlet Telephone Call Questionnaire Script

Hello, my name is Helen, I am calling to speak to [participant]. I am a mental health nurse practitioner at Polk County Behavioral Health. I would like to talk to you briefly and ask you a few questions about a pamphlet that was mailed to you from PCBH. Is now a good time to talk?

1. Did you receive the medication management handout that was mailed/given to you? Yes/No
2. Did you have an opportunity to read it? Yes/No (If no, why not).
3. Was there any information in that handout that didn't make sense? Yes/No (If yes, what)
4. Do you have any questions about the pamphlet that I can answer? Yes/No (If yes, what questions)
5. Does your appointment date/time work for you? Yes/No (If no, transfer to scheduling)
6. And, is there anything that might prevent you from getting to your appointment? Yes/No (If yes, what)

Appendix B: Medication Management Pre-Treatment Education Pamphlet

Community Resources

Dallas Community Resource Center: 182 SW Academy St. Suite 220, Dallas, OR 97338

- Phone: (503) 623-9664
- Emergency Financial Assistance, Access to Basic Needs, Housing, Seasonal Assistance

Polk County Family & Community Outreach:

- https://www.co.polk.or.us/fco
- Phone: (503) 623-9664

Marion County Food Share: 1660 Salem Industrial Dr. NE, Salem, OR 97301

- Phone: (503) 581-3855

Community Food Bank of Salem: OR 820 Jefferson St. NE, Salem, OR 97301

Willamette Valley Food Assistance Program: 888 SE Monmouth Cutoff Rd., Dallas, OR 97338

LogistiCare: Medical transportation for OHP members:

- Phone: 1-844-544-1397

Emergency Contact Information

If you feel like you are having a mental health crisis, please call:

Weekdays (except holidays)
8am - 5pm:
(503) 623-9289

After-hours Crisis Hotline:
(503) 581-5535 *or* 1 (800) 560-5535

National Suicide Prevention Lifeline
Available 24 hours per day, 7 days per week:
1 (800) 273-8255

To contact your mental health care provider in:

Dallas: (503) 623-9289
West Salem: (503) 585-3012

Behavioral Health

Medication

Management

182 SW Academy St.
Dallas, Oregon 97338
(503) 623-9289 ■ Fax (503) 831-1726

1520 Plaza St. NW
Salem, Oregon 97304
(503) 585-3012 ■ Fax (503) 585-0128

1310 Main Street East
Monmouth, Oregon 97361
(503) 400-3550 ■ Fax (503) 837-0095

What is Medication Management?

You have been referred to a specially trained nurse practitioner by one of your care providers. This means that they think that medication might help you manage some of the mental health symptoms you are living with.

How Does Medication Work?

Medication that helps people with mental illness works on the chemicals in the brain. When there is too much of the chemicals or too little, it can cause mental health symptoms. Some medications work right away and others can take up to six weeks to work. Your nurse practitioner will talk to you about what to expect.

The Benefits of Medication

Medication can help a person be less effected by their mental health symptoms. Taking your medication as it is prescribed and telling your nurse practitioner if it is not working or you don't like how it makes you feel, will be the best way to make sure you are getting the most out of it. If you do not like the medication, there are usually other medications or different doses to be tried.

Everyone reacts to medication differently and some people have side effects to the medication that they are started on. Sometimes side effects are not noticeable, and sometimes they can make you feel worse, not better. If you are having side effects, tell your nurse practitioner and they can work with you to decrease these effects. If you feel like you need to stop your medication, tell your nurse practitioner before you do.

How to Prepare for Your Appointment

Please bring a list of all of the medications you are taking right now and any medications that you have taken in the past. If you have any questions, write them down and bring them with you.

What to Expect at Appointments

Your first appointment is called a psychiatric evaluation and will last 90 minutes. The nurse practitioner will ask you questions about your mental and physical health history and about any mental health symptoms you have right now. These questions will help your nurse practitioner decide if medication would be helpful for you.

All of your follow up appointments will last 30 minutes. During these appointments, your nurse practitioner will check in with you to see how your medication is working. It will be important for you to tell the nurse practitioner if you are having any side effects that you don't like. The nurse practitioner will decide how often you need to come back. You will be seen every 2 to 6 weeks.

How to Get the Most Out of Treatment

Keep going to therapy! Studies show that combining medication with therapy is more effective than medication or therapy by themselves.

Make sure you come to all of your appointments and arrive 10 minutes early to get checked in. These follow up appointments are important because we want to make sure your medication is working and that you are not having negative side effects.

If you need to cancel or reschedule your appointment please call at least 24 hours before your appointment. Please note that if you do not show up for your intake appointment, you may need to get a new referral from your therapist. It is important that you understand that if you miss follow up appointments it will be difficult for your nurse practitioner to refill your medication.

How to Reach Us

Call the clinic if you need to reschedule your appointment or if you need to talk to the medical support staff about your medication. For medication refills, please call your pharmacy.

182 SW Academy St.
Dallas, Oregon 97338
(503) 623-9289 ▪ Fax (503) 831-1726

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