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"I didn't feel like a number": The impact of nurse care managers on the provision of buprenorphine treatment in primary care settings

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Abstract

Background and objective: To promote increased access to and retention in buprenorphine treatment for opioid use disorder, the New York City (NYC) Department of Health and Mental Hygiene (DOHMH) implemented the Buprenorphine Nurse Care Manager Initiative (BNCMI) in 2016, in which nurse care managers (NCMs) coordinate buprenorphine treatment in safety-net primary care clinics. To explore how patients experienced the care they received from NCMs, DOHMH staff conducted in-person, in-depth interviews with patients who had, or were currently receiving, buprenorphine treatment at BNCMI clinics. Participants were patients who were receiving, or had received, buprenorphine treatment through BNCMI at one of the participating safety-net primary care practices.

Methods: The study team used a thematic analytic and framework analysis approach to capture concepts related to patient experiences of care received from NCMs, and to explore differences between those who were in treatment for at least six consecutive months and those who left treatment within the first six months.

Results: Themes common to both groups were that NCMs showed care and concern for patients' overall well-being in a nonjudgmental manner. In addition, NCMs provided critical clinical and logistical support. Among out-of-treatment participants, interactions with the NCM were rarely the catalyst for disengaging with treatment. Moreover, in-treatment participants perceived the NCM as part of a larger clinical team that collectively offered support, and the care provided by NCMs was often a motivating factor for them to remain engaged in treatment.

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Declaration of competing interest
None.

Conclusion: Findings suggest that by providing emotional, clinical, and logistical support, as well as intensive engagement (e.g., frequent phone calls), the care that NCMs provide could encourage retention of patients in buprenorphine treatment.

Keywords

Buprenorphine; Primary care; Nurse care managers; Opioid use disorder

1. Introduction

The United States is in the midst of an opioid overdose public health crisis. New York City (NYC) had 1463 drug overdose deaths at a rate of 21 per 100,000 residents in 2019, 83% of which involved opioids (Nolan et al., 2020). Buprenorphine is one of the most effective medications to treat opioid use disorder (OUD), reducing mortality and drug use, and improving social well-being and functioning (SAMHSA, 2020). A partial agonist, buprenorphine results in less euphoria, analgesia, and risk of overdose than full opioid agonists and, unlike methadone, providers can prescribe it in general practice settings (Maremmani et al., 2007).

Despite these benefits, limited awareness exists of buprenorphine as a treatment for OUD. A recent survey of 1197 NYC residents found that only 22% reported knowledge of buprenorphine as a modality for OUD treatment (New York City Department of Health and Mental Hygiene (DOHMH) Bureau of Epidemiology Services, 2019). Relatedly, buprenorphine is not readily available in most safety-net settings,[1] leaving many individuals with OUD to struggle to find a treatment provider. Multiple barriers are associated with the expansion of buprenorphine in general practice settings, including lack of experience providing OUD treatment, limited provider time to manage and coordinate care for patients with OUD, lack of funding for nursing support (e.g., administer urine toxicology, counseling, etc.), insufficient office space, and cumbersome regulations (DeFlavio et al., 2015).

Additionally, in NYC, among those who filled at least one buprenorphine prescription in 2019 (N = 16,383), the median duration of filled prescriptions was six months, and just over a third (37%) filled prescriptions for only one to three months (New York State Department of Health Bureau of Narcotics Enforcement, 2020). This short duration is particularly concerning given that studies have found buprenorphine treatment to be associated with a reduced risk of overdose (Morgan et al., 2019), and uninterrupted buprenorphine treatment for 12 months to be associated with lower risk of all-cause hospitalizations and emergency department (ED) visits compared with treatment episodes of three to five months (Lo-Ciganic et al., 2016). Prior research on patients' perspectives of buprenorphine treatment in outpatient settings suggests that patients attribute reasons for treatment cessation predominantly to conflicts with providers, involuntary discharge, and the perceived inflexibility of the program (e.g., provider was too strict, discharged for missing too many days or positive urines, etc.), while facilitators for continuing treatment included

[1]Safety-net settings are defined as clinics whose population served are at least 35% Medicaid or Medicare beneficiaries or un- or under-insured)

collaborative or team-based care, and support and encouragement from staff (Gryczynski et al., 2014; Teruya et al., 2014).

To promote expanded access to buprenorphine and encourage treatment retention, NYC's Department of Health and Mental Hygiene (DOHMH) developed the Buprenorphine Nurse Care Manager Initiative (BNCMI). Adapted from the Massachusetts Model of Office Based Opioid Treatment (LaBelle et al., 2016), BNCMI funds a registered nurse as a nurse care manager (NCM) to support a team-based approach to buprenorphine treatment in safety-net primary care clinics. As part of the initiative, NCMs and new buprenorphine prescribers receive education and technical assistance to care for buprenorphine patients. A key component of BNCMI is the NCM's facilitation of patient screening, appointment coordination, pharmacy and medication navigation, and the provision of care management and advocacy to enhance treatment engagement and retention.

While research has established that team-based care improves the management of a variety of chronic diseases (e.g., depression and diabetes) (Katon et al., 2010), the utilization of this model for OUD in primary care is relatively new. Available research suggests that a team-based approach facilitated by NCMs is a successful treatment modality (Alford et al., 2011; Weinstein et al., 2017). In addition, the existing body of literature indicates that health care workers often have negative attitudes towards people who use drugs (PWUD) (Van Boekel et al., 2013). This study aims to add to the extant literature by exploring, qualitatively, how patients experienced the care they received from NCMs while engaged in buprenorphine treatment in safety-net primary care settings. NYC DOHMH conducted the study as part of a process evaluation of BNCMI.

2. Material and methods

2.1. Study setting

In New York City, BNCMI has been implemented in 27 clinics within 14 safety-net primary care agencies citywide, with at least one clinic in each county (or borough) (Kaplan-Dobbs et al., 2020). Funding provides for one NCM at each agency and the NCMs are often assigned to more than one clinic within the agency. Additionally, each clinic has at least four waivered prescribers, including nurse practitioners (NPs), physician assistants (PAs), or physicians. Patients enrolled in treatment at any BNCMI clinic were eligible to take part in the process evaluation.

2.2. Procedures

The NCM informed patients receiving buprenorphine treatment as part of BNCMI about the study (typically during the first visit), and interested patients provided written consent for DOHMH research staff to contact them about their treatment experience. Each month, potential participants were identified via a status report generated by the agency's NCM indicating patients' date of intake and the dates of any subsequent appointments. Based on these monthly reports, the research team contacted patients who had left treatment within six months of intake to participate as an out-of-treatment participant, and the research team contacted patients who had remained in treatment for six months for an interview as an

in-treatment participant. The study team conducted sampling in this purposeful manner to capture those who had been in treatment for fewer than six months and those who had stayed in treatment for six months or more. We aimed to recruit approximately 30 participants in each group, or until the study reached saturation.

The team conducted interviews between August 2017 and October 2019, administered them in English, and they predominantly took place in public venues (e.g., fast food restaurants or coffee shops) or at the participants' homes. At the conclusion of the interview, the interviewer gave participants a $30 gift card to a ubiquitous drug store franchise as compensation for their time. The NYC DOHMH Institutional Review Board reviewed all procedures. DOHMH research staff conducted data collection and analysis independent of the BNCMI implementation team. To protect anonymity, all reported names are pseudonyms.

2.3. Qualitative data collection

The interview domains for in-treatment participants focused on reasons for initiating buprenorphine treatment at a BNCMI site, patients' experiences while in treatment (e.g., administrative barriers, wait times, starting the medication, etc.), likes and dislikes of buprenorphine, relationships with the NCM and the prescriber, and reasons for continuing treatment. Domains for interviews with out-of-treatment participants included many of the same topics but focused on reasons for discontinuing buprenorphine treatment at BNCMI sites. The study also collected basic demographic data at the beginning of the interview. The study team audio-recorded and professionally transcribed all interviews for analysis.

2.4. Analysis

The study team calculated descriptive statistics for the sample using SPSS (IBM SPSS Statistics for Windows, 2017), which included demographic data (e.g., race, gender, educational attainment, housing status, etc.), the BNCMI clinic where the patient received care, and length of time in treatment. The research staff entered transcripts into Dedoose (Dedoose Version 8.0.35, 2018) for data management and coding. Research staff developed the code book, incorporating both a priori (based on study goals) and emergent codes, for qualitative data analysis and entered it into Dedoose.

The study used a thematic analytic approach, and framework analysis in particular, to capture relevant themes and concepts related to the ways in which the NCM impacted care, and to explore differences between in-treatment and out-of-treatment participants (Braun & Clarke, 2006; Guest et al., 2011). Methodological rigor was enhanced by maintaining an audit trail documenting analytic decisions and emerging themes, applying analytic memos when coding, and periodic debriefing with other members of the research team (Wolf, 2003). The study also ensured analytic rigor by double coding transcripts. More specifically, two members of the research team independently coded 40% ($n = 20$) of transcripts and they subsequently reconciled them to establish coding reliability. The proportion of transcripts that were double coded in this study is higher than is typically found in other studies, which ensures the trustworthiness of the data (O'Connor & Joffe, 2020).

3. Results

3.1. Sample description

The study staff conducted in-depth interviews with a total of 50 participants from eight of the 14 BNCMI agencies. The study considered thirty-one of the 50 to be in-treatment participants and the remaining 19 were considered out-of-treatment. The total sample of 50 participants was predominantly male (84.0%; $n = 27$) with a mean age of 47.4 years (range 21– 69). Almost half (46.0%; $n = 23$) identified as Latinx, a quarter (24.0%; $n = 12$) as White, and 14.0% ($n = 7$) as Black. Table 1 provides details of demographic and treatment data by in-treatment and out-of-treatment participants.

3.2. Both in-treatment and out-of-treatment participants reported the NCM showed care and concern for patients' well-being

Participants from both groups largely reported that NCMs showed care and concern for their well-being, which the NCMs demonstrated in a variety of ways. Notably, participants felt that NCMs engaged them in a nonjudgmental and nonstigmatizing manner, even when they had difficulty adhering to treatment. For example, a few participants commented on how, rather than taking punitive action, the NCM had supported them in identifying and working through triggers that had resulted in their continued drug use. Other participants also felt that the NCM was interested not only in clinical outcomes, but in facets of their lives that might influence their recovery (e.g., relationships, life goals, etc.). An in-treatment participant, Robby, expressed how his interactions with the NCM made him feel that she was genuinely invested in his treatment and was going above and beyond to support him.

> [NCM] spoke to me well. I didn't feel like a number. […] I felt human. They were nice. They were courteous, mannerable. You know? Social. It wasn't like we talked, and I felt distant. I didn't feel like [NCM] was just doing that for her job. I felt like she had a genuine care.
>
> Robby, In-treatment

Further, Wendy, an out-of-treatment participant who left after a return to drug use but had reengaged with BNCMI by the time she was interviewed, recalled how welcoming the NCM had been when she returned to the clinic.

> But I always told [NCM], "Oh, I'm so glad you took me back!". And no seriously. And you not harsh cause some places it could be, yeah. She welcomed me with open arms, so that's cool.
>
> Wendy, Out-of-treatment, Time in treatment (tx): 1mo

A factor in Wendy's decision to reengage in treatment was the continued outreach from the NCM at her clinic, despite being considered lost to care. These additional attempts at contact conveyed to Wendy that the NCM had an interest in her well-being beyond the clinical setting and left the door open for her to return when she was ready. Wendy's case is also an example of how even remote engagement was an essential part of the NCM's work and contributed to patient care (even though such interactions may not represent billable encounters).

While NCMs typically provided this type of thoughtful engagement to their patients, occasions occurred when they were not as attentive, which impacted the relationship that they had with their patients. For example, Fey, an out-of-treatment participant, recalled how she had felt when the NCM did not follow-up with her as promised.

> INTERVIEWER: […] It seemed like you were already gravitating towards methadone when you had first went there, but is there anything that might have helped you to stay in treatment?
>
> FEY: Maybe if [NCM] would have called like [NCM] said [they] was going to do. Cuz, I remember that night, thinking to myself, I did not like that [NCM] told me [they] was going to call and then [they] didn't. That made me…it was discouraging.
>
> Fey, Out-of-treatment, Time in tx: 1 week

3.3. Participants in both groups described the critical clinical support that NCMs provided

Many participants reported that NCMs also provided critical clinical support to address medication-related issues, educate patients about precipitated withdrawal, and provide overdose response training and naloxone. Participants, both in- and out-of-treatment, noted that clinical support was offered most intensively at the start of treatment when patients must be in moderate opioid withdrawal prior to taking buprenorphine, which can be a particularly challenging time as many experience symptoms of opioid withdrawal. NCMs assisted participants in determining when they were in sufficient withdrawal to begin buprenorphine treatment and worked with them to find the appropriate dose.

For example, an in-treatment participant, Roy, described how the NCM at his clinic had ensured that he understood buprenorphine's mechanism of action along with what to expect during the induction period. Roy highlighted how regular contact initiated by the NCM during this process had given him the opportunity to ask questions, an important element in helping him feel comfortable, especially given that this was his first time in buprenorphine treatment.

> INTERVIEWER: Before you started, how did she explain the process to you?
>
> ROY: Well, she went into detail. She did. She was very clear. She said any questions that I had, and this and that– but, I mean, at first you don't have much questions, because you don't know what you're going through. But then afterwards she called me a couple of times asking me how I was feeling, if I needed to see the doctor, or if I needed to take more.
>
> Roy, In-treatment

Similarly, Isaac, an out-of-treatment participant who had never previously taken buprenorphine, was dubious about whether he could get through the induction phase but persevered after the encouragement he received from the NCM. Although he ultimately left care because of unaddressed mental health issues, he appreciated the NCM's proactive outreach.

> ISAAC: I called [NCM] and I told [them] – that like maybe it wasn't for me and [NCM] was like "No, don't think like that. Maybe if you need some additional medication, take two from now on".
>
> INTERVIEWER: And, so was [NCM] calling you through this process too or were you just calling [NCM]?
>
> ISAAC: No, [NCM] was calling – [NCM] called me a lot.
>
> Isaac, Out-of-treatment, Time in tx: 1mo

Despite the NCMs' overall positive effect on clinical care, a few instances occurred in which participants did not agree with the proposed clinical recommendations. For example, Pepe, an out-of-treatment participant, was frustrated by the fact that the NCM suggested the prescriber increase his dosage of buprenorphine each time he had a positive opioid urine toxicology.

> Well, [NCM is] good. She's good, you know. She, she's good, you know. I just – the point is that she just has to sometimes be a little more considerate that sometimes because I was giving them dirty urine and they wanted to keep up my dose and all that. You know, sometimes it's not that. It's just the situation you going through in your mind thing. You know, it doesn't mean that you need to go to rehab or go to inpatient. You got to gradually take your time and give it time for it to work. […] Like, you know, every time like she wanted up, up, up my dose. No, no, man. I didn't, I didn't want that. I didn't want that, you know. Didn't want that.
>
> Pepe, Out-of-treatment, Time in tx: 1.5 mo

Pepe did not directly confront the NCM about his concerns, but instead left buprenorphine treatment and switched to methadone, which he was prescribed at the time of interview. A lack of collaboration between patients and the NCM also highlighted the importance of communication. For example, Richard, an in-treatment participant with an anxiety disorder, initially was told that he could not be co-prescribed buprenorphine and benzodiazepines.[2] However, after talking it through with the NCM and the buprenorphine prescriber, they collectively worked out a treatment plan that addressed both his OUD and his anxiety. While Richard did not fault the NCM for these challenges, the lack of understanding about his condition had almost forced him to seek treatment elsewhere.

> You can only cry and be late to your appointment by an hour because you can't fucking walk out your door, and like, have panic attacks in the waiting room and have to have them seat you in a room by yourself so you're not around noise. That shit can only happen so many times before I feel like somebody is going to finally realize that this kid is not faking and do something about it. And there was – the couple of times where I got to the point where I was like, "If you're not going to help me with this, I'm going to find someone that's going to because this shit is not working".
>
> Richard, In-treatment

[2]Clinical guidance typically recommends avoiding co-prescribing substances which are central nervous system (CNS) depressants (e.g., buprenorphine and benzodiazepines) as it can increase risk of an overdose.

3.4. Participants in both groups reported that NCMs provided critical logistical support

The logistical support that NCMs provided was also cited by many participants as a facilitator to their treatment. Such support included working to resolve prior authorizations requested by some insurance companies, an often tedious and time-intensive activity, which, if not dealt with promptly, could result in a delay in receiving medication. The following out-of-treatment participant, Leroy, recounted how the NCM was instrumental in working with his insurance to ensure that he received buprenorphine in a timely fashion.

> LEROY: What happened was […], at the time they put the prescription in, my Medicaid had health insurance attached to it. And, I guess the state doesn't allow that health insurance to provide that without verification. And, the verification takes a couple of days, you know what I'm saying? And, then I had to wait over the weekend. So, [NCM] was like, "No, we gotta get this medicine to him now." and, "They say your health insurance covers the pills". So, they issued me the pills. […]
>
> INTERVIEWER: So, what role did [NCM] play in kind of helping you resolve that?
>
> LEROY: She called the pharmacy…called everywhere to get me up off that.
>
> Leroy, Out-of-treatment, Time in tx: 4 mo

Subsequently, some NCMs worked with pharmacies to troubleshoot issues related to medication access and several participants described how their NCM had helped them to find a pharmacy that dispensed buprenorphine when it was not carried by their regular pharmacy. Additionally, NCMs advocated for their patients when barriers to dispensing arose. In one such case, a pharmacist was unwilling to fill a participant's prescription because it was written for an amount that necessitated only half a packet of medication be dispensed.[3] However, after the NCM intervened to explain the rationale for the prescription, the pharmacist agreed to fill it and the patient received the correct dose.

Participants also appreciated the flexibility afforded to them by having direct contact with the NCM. This flexibility included the ease of scheduling appointments as well as the NCMs' willingness to accommodate patients if they were running late or needed to be seen urgently. The following in-treatment participant, Danny, recalled how the NCM was instrumental in resolving scheduling issues that arose and had advocated on his behalf with other clinic staff.

> INTERVIEWER: And what makes you feel like [NCM] has been contributing to your care?
>
> DANNY: Well, I mean, you know, like I said, like she – even when they screw up scheduling or whatever, she always makes sure that I get seen, you know. She doesn't leave me hanging.
>
> Danny, In-treatment

[3]Opening a packet to dispense only half the medication is a practice some pharmacists are reluctant to engage in for fear of not being able to dispense the remaining medication, and therefore lose income.

However, on a couple of occasions, participants spoke of limits to the support that NCMs provided, which in some cases had contributed to them leaving care. For example, having an NCM assigned to more than one clinic within an agency reduced their availability, and at one clinic, the NCM was only available in person one day per week. Harold, an out-of-treatment participant, explained how he had found the restrictive schedule difficult to navigate. Thus, rather than being a source of logistical support, in this case, the NCM's schedule was a barrier that stymied Harold's retention in treatment.

> INTERVIEWER: And what was the reason you stopped going?
>
> HAROLD: The reason I stopped going was number one it was, it was a little complicated as far as, you know, [NCM] was there only Mondays. And at the time I was working.
>
> INTERVIEWER: Yeah, because she goes to the [other] site too.
>
> HAROLD: Right. And at the time I was working also, so it was a little difficult for me to get there every Monday at the same time.
>
> Harold, Out-of-treatment, Time in tx: three weeks

3.5. In-treatment participants reported that the care that NCMs provided was a motivating factor for them to stay in treatment, while among out-of-treatment participants, interactions with the NCM were rarely the catalyst for treatment attrition

Many in-treatment participants described their relationship with the NCM as a motivating factor in their retention in treatment. By communicating with patients in a nonstigmatizing way, NCMs helped to minimize the shame participants associated with their substance use, and instead gave them confidence that they could effectively manage their OUD. An added benefit described by in-treatment participants was that they were able to directly contact the NCM if they were struggling or had additional treatment questions. The following in-treatment participant, Carrie, recalled how her decision to remain in treatment had, in part, been influenced by the NCMs belief that she was "worthy".

> And what makes her good at her job is because she cares. When you find a person that cares about what they're doing, then they do it well. And no one benefits more than her patients […] And I'll continue to keep trying. And if I never get it straight, that will not take away from what I've learned and gained from her.
>
> Carrie, In-treatment

Of note is the enhanced connection described by a few participants who were cared for by an NCM with lived experience of substance use. Knowing their provider had a personal understanding of the issues that they were facing lent further credibility to the guidance and information they received and further encouraged their retention in treatment. The following in-treatment participant, Pete, described how his relationship with his NCM had extended beyond that which is typical between a clinician and patient and cemented his resolve to continue taking buprenorphine.

> …. not only is [NCM] a nurse that works here and someone who I know but I also know [NCM] in a personal world now with being in recovery and making NA

> meetings and stuff like that. So [NCM]'s become more of a, not just a nurse to me but sort of be like a friend to me, a [n older sibling] so to speak, and [NCM]'s part of my life. [NCM]'s part of my recovery process now.
>
> Pete, In-treatment

Conversely, one of the key findings of this study was that for most out-of-treatment participants, the reported reason for leaving treatment was unrelated to the care that they received from the NCM. Participants in this group provided a variety of explanations for why they had discontinued buprenorphine, including the effects of the medication (e.g., did not sufficiently manage cravings or chronic pain, resulted in an upset stomach, etc.), insurance lapses, or life circumstances (e.g., temporary relocation, inability to keep frequent appointments, etc.). For example, George, an out-of-treatment participant, left care despite the support he received from the NCM who accompanied him to pick up his medicine and supported him through the induction phase.

> Well, I was hoping that [buprenorphine] was going to take care of the urge. And, you know, I wouldn't want to get high. […] That's why I like the methadone. The methadone makes me just relax. I'm not on edge. It takes care of the sickness. You know, methadone is way better for me. That's my opinion.
>
> George, Out-of-treatment, Time in tx: 3 weeks

For some out-of-treatment participants, their perception of buprenorphine as being "addictive" played a role in their discontinuing treatment. Despite evidence that long-term use of buprenorphine leads to better outcomes, these individuals conceptualized buprenorphine as "just another drug" and expressed their intention to "wean" themselves off as soon as they could. An example of this is Mark, an out-of-treatment participant who remained in treatment for one month. Mark previously had been on methadone but had found the daily clinic visits very restrictive and overall held stigmatizing views of medications for opioid use disorder (MOUD). While he acknowledged the contrasting flexibility of receiving buprenorphine in a primary care setting, he wanted to be free of all obligation to MOUD and subsequently left treatment.

> MARK:[…] After I got the [buprenorphine], I was like, "Okay, I'm not going to do this too long".
>
> INTERVIEWER: And why is that?
>
> MARK: For the simple reason – I don't want to be dependent on no drugs. Whether it's heroin, whether it's [buprenorphine], whether it's pills… So, I just didn't want to be, how you say, a slave or, or something holding me down where I can't go to work, where I can't go to the park or the beach or something. I got to go to the program first.
>
> Mark, Out-of-treatment, Time in tx: 1 mo

3.6. In-treatment participants perceived the NCM as part of a larger clinical team that collectively provided their care

Particularly within the in-treatment group, participants reported also having a supportive relationship with their prescriber and commented on the benefit of having a team-based approach to their care. For example, Bradley, an in-treatment participant, recalled how his willingness to stay in treatment had been impacted not only by the NCM, but also by other clinic staff.

> At first, I was in a rush to get off the [buprenorphine], but I know I'm not ready for it. My doctor, [NCM] and everybody there they knew I wasn't ready. I thought I was. I kept saying "Oh I'm ready to go down now". […] They told me just to think about it first. They encouraged me to get off it, but not because my brain was saying you can handle it. Take my time.
>
> Bradley, In-treatment

Similarly, Roman described his intake appointment during which he engaged with multiple providers (e.g., prescriber, social worker, etc.), all of whom contributed to his care in unique ways. Not only was Roman successfully started on medication, but staff also took the time to educate him about buprenorphine and its effects and provided him with overdose prevention training and naloxone.

> Everybody I seen there from the first moment that I stepped in, […] I saw [NCM] first, she did all the paperwork on me. She asked me all the questions 100%, and then I saw another doctor come in. That's who did the physical on me the same day, and then I saw a social worker, and then another doctor […]. So that's when they gave me the [naloxone] kit, they all explained what, why, because it's a new clinic and my first time there. So, they explained, they broke everything down for me, and then everything worked out. Everything worked out perfect. I couldn't ask for a better. It's like I happened to be at the right place at the right time.
>
> Roman, In-treatment

While participants did not typically characterize follow-up visits for buprenorphine as having such intense engagement with clinical staff, in-treatment participants continued to seek and receive support and encouragement from other health care professionals at the clinic, particularly their prescribers. This support was especially helpful in situations where the NCM was assigned to work at multiple clinics and ensured that, even if the NCM was not available for every appointment, their patients' needs largely could be met.

An important aspect to the success of this coordinated care was that patients had positive relationships with all members of the team providing their care. Tension or disagreement between patients and even one team member, particularly one who was critical to the success of their treatment (e.g., the prescriber), occasionally resulted in patients leaving care or being discharged. For example, an out-of-treatment participant, Charles, indicated that he had a good relationship with the NCM but reported ultimately being discharged and referred to detox by his prescriber after a positive urine toxicology.

> INTERVIEWER: And was [NCM] the one you were having challenges with?

CHARLES: No. The challenges came with a gentleman, with a male…

INTERVIEWER: [Your] prescriber? Was he was prescribing the medication?

CHARLES: Well, yes, matter of fact his name was [PRESCIBER]. I gave them a dirty urine and he chose to just to just take me off it without even giving me chance.

INTERVIEWER: […] Right. And that was your first time?

CHARLES: Yes, and he chose to take me off of my medication. And I ended up in the streets using again. And that made no sense to me.

Charles, Out-of-treatment, Time in tx: 4.5 mo

4. Discussion

Our study explored the experience and perceptions of people with OUD who enrolled in a buprenorphine treatment program located within safety-net primary care agencies in NYC. BNCMI was designed to increase access and retention in buprenorphine treatment. We compared the two groups to better understand factors that were associated with remaining in treatment and those associated with leaving treatment.

Findings suggest that participants in both groups benefited from their interactions with the NCM, and that this was true even for patients with only a short period of engagement. While there were myriad reasons cited for both remaining in or leaving buprenorphine treatment, the care that NCMs provided was not a determining factor for those who left. Conversely, for patients who remained in treatment, their relationship with the NCM was often a motivating factor.

A plethora of studies have identified negative consequences associated with drug-related stigma. Not only do people with OUD experience stigma due to their drug use, they are often exposed to stigma associated with MOUD despite data that show that methadone and buprenorphine are the gold standard of treatment. Unfortunately, it is not uncommon for people with OUD to internalize the negative feelings associated with stigma. Our findings show that the out-of-treatment group was no exception, as reflected in the language that some participants used to describe buprenorphine (e.g., “handcuffs” and “trading one drug for another”), which echoes vernacular used previously to describe methadone (Stancliff et al., 2002). In an effort to address negative perceptions of buprenorphine, NYC DOHMH implemented the “Living Proof” public health campaign (New York City Department of Health and Mental Hygiene, 2017) aimed at promoting methadone and buprenorphine to treat OUD. Further work is needed, however, to encourage people with OUD to seek treatment in primary care settings. In addition, while patients seeking buprenorphine treatment through BNCMI were not required to come to the clinic on a daily basis as is typical with methadone treatment, they were still required to come routinely for office visits, and participate in urine toxicology testing, which may prove to be too high of a threshold for some individuals. To increase treatment uptake and encourage patient engagement, programs must maximize their flexibility.

In addition to the internal stigma associated with drug use and treatment among PWUD, negative feelings about PWUD are not uncommon among medical professionals. The nonstigmatizing manner in which NCMs engaged patients is particularly notable given that prior research has shown that PWUD face frequent discrimination from health care providers, which often results in disengagement from care (Muncan et al., 2020). Prior experiences of stigma also lead to what Earnshaw and Chaudoir (2009) refer to as anticipated stigma or an expectation of future discrimination or prejudice that subsequently deters those who are discriminated against (e.g., PWUD) from seeking care. Our study suggests that creating a nonstigmatizing and respectful environment not only increases the likelihood of retention in treatment but may encourage patients who leave treatment to return when they are ready.

While MOUD-related stigma remained a challenge for this initiative, the initiative also had notable successes. For example, in-treatment participants spoke of the collective staff effort to manage different aspects of their care. The potential benefit of a team-based approach, as implemented in BNCMI, has been supported by recent research suggesting that time-intensive logistical issues were one of many impediments that physicians faced when prescribing buprenorphine in some outpatient settings (Andraka-Christou & Capone, 2018; Haffajee et al., 2018). In our study, participants reported that the NCM provided crucial logistical support to overcome barriers that most often arose at the outset of treatment (e.g., managing issues such as prior authorizations required by medical insurers). This support is particularly critical given that research has also shown that approximately 60% of patients who had an intake appointment for buprenorphine treatment did not begin taking the medication for similar reasons (Simon et al., 2017).

However, since NYC implemented BNCMI, legislation has been enacted that prohibits both private insurance companies and Medicaid from requiring prior authorization for preferred formulations of MOUD, including buprenorphine (New York State Senate, 2020). This legislation could potentially allow for more timely access to buprenorphine in all settings, including primary care, and would eliminate one of the more common barriers that most often arises at the outset of treatment. Other states should follow suit in relaxing regulations to life-saving treatments for OUD as a means of addressing the historic levels of opioid overdoses.

Another success of the initiative was the setting in which BNCMI was implemented. Research has shown that co-location of primary health care and substance use treatment services improves patients' physical and mental health (Madras et al., 2009), as well as decrease hospitalization rates, inpatient days, and emergency department utilization (Parthasarathy et al., 2003; Weisner et al., 2001). Similarly, by situating BNCMI in primary care settings, NCM patient engagement has the potential to lead to better overall health outcomes by retaining patients in treatment for OUD for longer periods during which other health needs can be addressed. Additionally, BNCMI differs from a more typical primary care model, in that NCMs had the capacity to reach out to patients between clinic visits. These additional contacts were not only an effective way to remind patients about their appointments but also signaled that NCMs were invested in their patients' well-being

beyond the clinical setting. Future research should assess the benefits of such integrated models aside from those directly related to buprenorphine treatment.

4.1. Limitations

While the current study has several strengths (e.g., perspective of both in-treatment and out-of-treatment participants), it also has some notable limitations. First, it proved to be challenging to recruit out-of-treatment participants. Many participants had nonworking phone numbers, and the alternate contacts listed often did not know how to reach the patient or also had numbers that were defunct. In addition, as these participants were no longer in treatment, the research team could not depend on connecting with them in-person at the time of their appointment. Second, not all 14 BNCMI agencies began the initiative at the same time and the participation rate in the evaluation among participants was not equal across all agencies. As such, the study data represent patients from only eight out of the 14 BNCMI agencies, and interviews were not evenly distributed across agencies. However, findings from agencies with fewer participants were largely congruent with findings from those with greater representation. Last, self-selection bias may have occurred in that patients who chose to participate in the interview may have had more favorable opinions of the model and their treatment than those who chose not to participate.

5. Conclusion

BNCMI facilitates buprenorphine treatment in primary care settings by providing a dedicated staff member to coordinate care. NCMs treated patients in a nonstigmatizing way that helped to build rapport and supported retention in treatment for some participants. Incorporating substance use treatment into primary care settings increases access, destigmatizes treatment, and enables patients' access to a range of care that may improve overall health outcomes. NCMs can provide critical support to PWUD in a time-intensive manner, which can then facilitate meaningful relationships between the nurses and patients they care for. The experiences of the patients engaged in BNCMI demonstrate the value of expanding and supporting such initiatives in other jurisdictions to increase recruitment and retention in treatment for OUD in the midst of historic rates of opioid-related overdoses.

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References

Alford DP, LaBelle CT, Kretsch N, Bergeron A, Winter M, Botticelli M, & Samet JH (2011). Collaborative care of opioid-addicted patients in primary care using buprenorphine: Five-year experience. Archives of Internal Medicine, 171(5), 425–431. 10.1001/archinternmed.2010.541 [PubMed: 21403039]

Andraka-Christou B, & Capone MJ (2018). A qualitative study comparing physician-reported barriers to treating addiction using buprenorphine and extended-release naltrexone in US office-based practices. International Journal of Drug Policy, 54, 9–17. 10.1016/j.drugpo.2017.11.021 [PubMed: 29324253]

Braun V, & Clarke V (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. 10.1191/1478088706qp063oa

Dedoose Version 8.0.35. (2018). SocioCultural Research Consultants. LLC. www.dedoose.com.

DeFlavio J, Rolin SA, Nordstrom BR, & Kazal LA Jr. (2015). Analysis of barriers to adoption of buprenorphine maintenance therapy by family physicians. Rural and Remote Health, 15(1), 3019–3029. https://www.rrh.org.au/journal/article/3019. [PubMed: 25651434]

Earnshaw V, & Chaudoir S (2009). From conceptualizing to measuring HIV stigma: A review of HIV stigma mechanism measures. AIDS and Behavior, 13(6), 1160–1177. 10.1007/s10461-009-9593-3 [PubMed: 19636699]

Gryczynski J, Mitchell SG, Jaffe JH, O'Grady KE, Olsen YK, & Schwartz RP (2014). Leaving buprenorphine treatment: Patients' reasons for cessation of care. Journal of Substance Abuse Treatment, 46(3), 356–361. 10.1016/j.jsat.2013.10.004 [PubMed: 24238714]

Guest G, MacQueen K, & Namey E (2011). Applied thematic analysis. Sage Publications Inc.

Haffajee RL, Bohnert AS, & Lagisetty PA (2018). Policy pathways to address provider workforce barriers to buprenorphine treatment. American Journal of Preventive Medicine, 54(6), S230–S242. 10.1016/j.amepre.2017.12.022 [PubMed: 29779547]

IBM SPSS Statistics for Windows. (2017). IBM Corp. Released 2017 (25.0). IBM Corp.

Kaplan-Dobbs M, Kattan J, Tuazon E, Jimenez C, Saleh S, & Kunins H (2020). Increasing access to buprenorphine in safety-net primary care clinics: the New York City buprenorphine nurse care manager initiative. American Journal of Public Health, 111, 215–218. 10.2105/AJPH.2020.306000 [PubMed: 33351661]

Katon W, Lin EH, Von Korff M, Ciechanowski P, Ludman E, Young B, & McGregor M (2010). Integrating depression and chronic disease care among patients with diabetes and/or coronary heart disease: The design of the TEAMcare study. Contemporary Clinical Trials, 31(4), 312–322. 10.1016/j.cct.2010.03.009 [PubMed: 20350619]

LaBelle CT, Han SC, Bergeron A, & Samet JH (2016). Office-based opioid treatment with buprenorphine (OBOT-B): Statewide implementation of the Massachusetts collaborative care model in community health centers. Journal of Substance Abuse Treatment, 60, 6–13. 10.1016/j.jsat.2015.06.010 [PubMed: 26233698]

Lo-Ciganic WH, Gellad WF, Gordon AJ, Cochran G, Zemaitis MA, Cathers T, & Donohue JM (2016). Association between trajectories of buprenorphine treatment and emergency department and in-patient utilization. Addiction, 111(5), 892–902. 10.1111/add.13270 [PubMed: 26662858]

Madras BK, Compton WM, Avula D, Stegbauer T, Stein JB, & Clark HW (2009). Screening, brief interventions, referral to treatment (SBIRT) for illicit drug and alcohol use at multiple healthcare sites: Comparison at intake and 6 months later. Drug and Alcohol Dependence, 99(1–3), 280–295. 10.1016/j.drugalcdep.2008.08.003 [PubMed: 18929451]

Maremmani I, Pani PP, Pacini M, & Perugi G (2007). Substance use and quality of life over 12 months among buprenorphine maintenance-treated and methadone maintenance-treated heroin-addicted patients. Journal of Substance Abuse Treatment, 33(1), 91–98. 10.1016/j.jsat.2006.11.009 [PubMed: 17588494]

Morgan J, Schackman B, Weinstein Z, Walley A, & Linas B (2019). Overdose following initiation of naltrexone and buprenorphine medication treatment for opioid use disorder in a United States commercially insured cohort. Drug and Alcohol Dependence, 200, 34–39. [PubMed: 31082666]

Muncan B, Walters SM, Ezell J, & Ompad DC (2020). "They look at us like junkies": Influences of drug use stigma on the healthcare engagement of people who inject drugs in New York City. Harm Reduction Journal, 17(1), 1–9. 10.1186/s12954-020-00399-8 [PubMed: 31906957]

New York City Department of Health and Mental Hygiene. (2017). Health department expands public education about the opioid overdose epidemic; launches "living proof" campaign featuring New Yorkers recovering from opioid addiction. https://www1.nyc.gov/site/doh/about/press/pr2017/pr091-17.page.

New York City Department of Health and Mental Hygiene (DOHMH) Bureau of Epidemiology Services. (2019). New York City Health opinion poll 1, April 16 to May 13. https://www1.nyc.gov/assets/doh/downloads/pdf/epi/health-opinion-poll-topline-report-hop1.pdf.

New York State Department of Health Bureau of Narcotics Enforcement. (2020). Prescription monitoring program (retrieved from New York City Department of Health and Mental Hygiene, Bureau of Alcohol and Drug Use Prevention Care and Treatment).

Nolan M, Tuazon E, & Paone D (2020). Unintentional drug poisoning (overdose) deaths in New York City in 2019 (Epi data brief (122)).

O'Connor C, & Joffe H (2020). Intercoder reliability in qualitative research: Debates and practical guidelines. International Journal of Qualitative Methods, 19, 1–13.

Parthasarathy S, Mertens J, Moore C, & Weisner C (2003). Utilization and cost impact of integrating substance abuse treatment and primary care. Medical Care, 41 (3), 357–367. https://www.jstor.org/stable/3767845. [PubMed: 12618639]

SAMHSA. (2020). Buprenorphine. Medication-assisted treatment. https://www.samhsa.gov/medication-assisted-treatment/medications-counseling-related-conditions/buprenorphine.

Senate NYS (2020). Prior authorization eliminated for substance use disorder medications in new state budget. https://www.nysenate.gov/newsroom/press-releases/pete-harckham/prior-authorization-eliminated-substance-use-disorder.

Simon CB, Tsui JI, Merrill JO, Adwell A, Tamru E, & Klein JW (2017). Linking patients with buprenorphine treatment in primary care: Predictors of engagement. Drug and Alcohol Dependence, 181, 58–62. 10.1016/j.drugalcdep.2017.09.017 [PubMed: 29035705]

Stancliff S, Myers JE, Steiner S, & Drucker E (2002). Beliefs about methadone in an inner-city methadone clinic. Journal of Urban Health, 79(4), 571–578. [PubMed: 12468676]

Teruya C, Schwartz RP, Mitchell SG, Hasson AL, Thomas C, Buoncristiani SH, & Jacobs P (2014). Patient perspectives on buprenorphine/naloxone: A qualitative study of retention during the starting treatment with agonist replacement therapies (START) study. Journal of Psychoactive Drugs, 46(5), 412–426. 10.1080/02791072.2014.921743 [PubMed: 25364994]

Van Boekel LC, Brouwers EP, Van Weeghel J, & Garretsen HF (2013). Stigma among health professionals towards patients with substance use disorders and its consequences for healthcare delivery: Systematic review. Drug and Alcohol Dependence, 131(1–2), 23–35. 10.1016/j.drugalcdep.2013.02.018 [PubMed: 23490450]

Weinstein ZM, Kim HW, Cheng DM, Quinn E, Hui D, Labelle CT, & Samet JH (2017). Long-term retention in office based opioid treatment with buprenorphine. Journal of Substance Abuse Treatment, 74, 65–70. 10.1016/j.jsat.2016.12.010 [PubMed: 28132702]

Weisner C, Mertens J, Parthasarathy S, Moore C, & Lu Y (2001). Integrating primary medical care with addiction treatment: A randomized controlled trial. JAMA, 286(14), 1715–1723. [PubMed: 11594896]

Wolf ZR (2003). Exploring the audit trail for qualitative investigations. Nurse Educator, 28(4), 175–178. [PubMed: 12878896]

Table 1

Patient descriptive data.

Variable	In treatment	Out of treatment	Total
Sample size	***N* = 31**	***N* = 19**	***N* = 50**
	% (n)	**% (n)**	**% (n)**
Gender			
Male	87.1 (27)	78.9 (15)	84.0 (42)
Female	12.9 (4)	21.1 (4)	16.0 (8)
Age (years)			
Mean, standard deviation	48.1, 10.5	46.4, 12.6	47.4, 11.2
Median, range	52.0, 24–65	49, 21–69	49.5,21–69
Race (% Yes)			
Black	12.9 (4)	15.8 (3)	14.0 (7)
White (Non-Hisp/Latinx)	22.6 (7)	26.3 (5)	24.0 (12)
Hisp/Latinx (Unspecified)	32.3 (10)	47.4 (9)	38.0 (19)
Hisp/Latinx (White)	9.7 (3)	5.3 (1)	8.0 (4)
Asian	3.2 (1)	0.0 (0)	2.0 (1)
Multiracial	19.4 (6)	5.3 (1)	14.0 (7)
Education			
Did not complete HS	35.5 (11)	21.1 (4)	30.0 (15)
HS	9.7 (3)	5.3 (1)	8.0 (4)
GED	19.4 (6)	10.5 (2)	16.0 (8)
AS	6.5 (2)	10.5 (2)	8.0 (4)
Some college	16.1 (5)	26.3 (5)	20.0 (10)
BA/BS	6.5 (2)	21.1 (4)	12.0 (6)
Trade school	6.5 (2)	5.3 (1)	6.0 (3)
Have a place to stay every night (% Yes)	96.8 (30)	94.7 (18)	96.0 (48)
Housing type			
Family home	9.7 (3)	26.3 (5)	18.0 (9)
Own home	51.6 (16)	31.6 (6)	44.0 (22)
Shelter	16.1 (5)	31.6 (6)	22.0 (11)
Friend’s home	6.5 (2)	5.3 (1)	8.0 (4)
Other	12.9 (4)	0.0 (0)	8.0 (4)
Referral source			
Participant was existing patient	12.9 (4)	10.5 (2)	12.0 (6)
Medical provider	22.6 (7)	15.8 (3)	20.0 (10)
Fam/friend/acquaintance	32.3 (10)	47.4 (9)	36.0 (18)
Online	12.9 (4)	10.5 (2)	12.0 (6)
Service provider	12.9 (4)	10.5 (2)	12.0 (6)
Other	6.5 (2)	5.3 (1)	6.0 (3)
Site			
Site 1	12.9 (4)	5.3 (1)	10.0 (5)

Variable	In treatment	Out of treatment	Total
Sample size	***N* = 31**	***N* = 19**	***N* = 50**
	% (n)	**% (n)**	**% (n)**
Site 2	0.0 (0)	5.3 (1)	2.0 (1)
Site 3	25.8 (8)	42.1 (8)	32.0 (16)
Site 4	3.2 (1)	10.5 (2)	6.0 (3)
Site 5	3.2 (1)	5.3 (1)	4.0 (2)
Site 6	19.4 (6)	15.8 (3)	18.0 (9)
Site 7	12.9 (4)	10.5 (2)	12.0 (6)
Site 8	22.6 (7)	0.0 (0)	14.0 (7)
Site 9	0.0 (0)	5.3 (1)	2.0 (1)
Time in Tx (in months) @ time of interview			
Mean, standard deviation	7.3, 2.4	1.8, 1.6	5.2, 3.5
Median, range	6.0, 6–16	1.0, 0–5	6.0, 0–16