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Two models of integrating buprenorphine treatment and medical staff within formerly “drug-free” outpatient programs

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Abstract

“Drug-free” outpatient programs deliver treatment to the largest number of patients of all treatment modalities in the US, providing a significant opportunity to expand access to medication treatments for substance use disorders. This analysis examined staff perceptions of organizational dynamics associated with the delivery of buprenorphine maintenance within three formerly “drug-free” outpatient treatment programs. Semi-structured interviews (N=15) were conducted with counseling and medical staff, and respondents were predominantly African American (n=11) and female (n=12). Themes and concepts related to medical staff integration emerged through an inductive and iterative coding process using Atlas.ti qualitative analysis software. Two treatment clinics incorporated buprenorphine maintenance into their programs using a co-located model of care. Their staff generally reported greater intra-organizational discord regarding the best ways to combine medication and counseling compared to the clinic using an integrated model of care. Co-located program staff reported less communication between medical and clinical staff, which contributed to some uncertainty about proper dosing and concerns about the potential for medication diversion. Clinics that shift from “drug-free” to incorporating buprenorphine maintenance should consider which model of care they wish to adapt and how to train staff and structure staff communication.

Keywords

buprenorphine; outpatient treatment; treatment staff; team care model; integration

There have been few reports on outcomes of patients treated with buprenorphine in formerly “drug-free” outpatient drug treatment programs (Mitchell et al. 2013), and less than 20

percent of specialty addiction treatment centers report the use of buprenorphine (Knudsen et al. 2009). Furthermore, little is reported on staff views of integrating buprenorphine into these settings (Rieckmann et al. 2007, Rieckmann et al. 2011).

Blending medical and behavioral health staff to provide team-based health care can be accomplished under a spectrum of integration (Lardieri, Lasky, and Raney 2014, SAMHSA 2013), ranging from minimal coordination to fully integrated service provision (Blount 2003, Edwards, Garcia, and Smith 2007, Koyanagi 2004, Lopez et al. 2008). Minimal coordination is marked by limited communication and understanding of provider roles (SAMHSA 2013), whereas full integration entails consistent communication through meeting, and overlapping and blurring of roles and cultures (SAMHSA 2013).

This framework can be used to understand the different service delivery models of buprenorphine maintenance treatment. The minimal coordination model could be reflected as a treatment program referral to a community physician, or through the co-location of (but minimal dialogue between) physicians and counselors. In contrast, in an integrated model, the physician attends team meetings and is in regular communication with counselors. Within these models, physicians, nurses, and counselors have their own job responsibilities, personalities, training backgrounds, and personal views on addiction and its treatment with medications, all of which influence interactions between staff and patients.

The present report provides a window on medical and counseling staff experiences and views of working together to provide buprenorphine maintenance within three formerly “drug-free” outpatient programs in Baltimore, Maryland. Because two of the clinics appeared to use a co-located model and one of the clinics used an integrated model, the staff views not only reflect personal opinions, but also highlight issues with staffing, treatment coordination, and communication under different models of service integration.

METHODS

Setting and Sites

In Baltimore, starting in 2006, the city’s substance abuse authority launched the Baltimore Buprenorphine Initiative (BBI) to integrate buprenorphine treatment into many of its “drug-free” outpatient programs. As part of this initiative, it developed structured guidelines on treatment for buprenorphine patients in these settings including: counseling requirements, dose induction, medication administration, and transfer criteria to receive continuing treatment in primary care settings (Murphy, Oros, and Dorsey 2014).

With the city’s initiative underway, two of the programs supported at least one prescribing physician on a part-time basis, while the other incorporated buprenorphine into the list of psychiatric medications that their full-time physician was prescribing. One of the clinics was part of and co-located with a mental health outpatient program, one was part of and co-located within a community health center, and the third was part of an integrated behavioral health outpatient program. The clinics were situated in different areas of the City and varied in size. Based on treatment admission records from the city substance abuse authority, the two co-located clinics had 210 and 443 treatment admissions during the 18-month study

period, while the integrated clinic had 94 admissions. All three clinics provided intensive outpatient and standard outpatient treatment to their buprenorphine patients. These programs were representative of the clinics participating in the BBI to the extent that they were all non-profit, formerly “drug-free” outpatient programs funded by the City’s substance abuse authority, and served low-income, uninsured, or Medicaid populations. They were included in the present study because they participated in a separate study of counseling services.

Participants

A total of 15 staff (five from each of the three clinics) participated in individual semi-structured interviews between May and June, 2010. Participants from each clinic included: the clinic director, a clinical supervisor, a counselor, a nurse, and the clinic physician. All but three of the participants were female. All staff participants who were approached to complete a qualitative interview accepted. Purposive sampling was used to select staff in order to represent a diverse sample of clinic roles, but all were experienced in providing services at their respective clinics. In instances where multiple staff members occupied a particular clinic role, the most experienced staff member was sampled, whenever possible.

Interviews

The semi-structured interview guide consisted of several topic areas designed to probe respondents’ knowledge, attitudes, and practices surrounding buprenorphine treatment. All interviews covered these topic areas and follow-up questions were asked in order to elicit greater detail. The interview guide explored anticipated themes related to buprenorphine treatment and counseling, such as intake, dosing, and medication management issues and level of counseling service intensity. Similarities and differences between buprenorphine and methadone service delivery were also probed based on previous research (Reisinger et al. 2009).

The 15 interviews were conducted in-person by one of the co-authors (SGM), an experienced qualitative researcher. Since all staff interviews were conducted by the same interviewer, thematic saturation was continually considered during data collection and the semi-structured nature of the interview guide allowed the interviewer to incorporate probes if new information was discovered as data collection was occurring. Interviews ranged in length from 45 to 90 minutes. Participants were not paid for their time, as all interviews took place during normal clinic business hours.

Analysis

Semi-structured interviews were digitally recorded, professionally transcribed, and analyzed using an iterative and inductive coding approach with Atlas.ti qualitative analysis software (Muhr and Friesen 2000). Two experienced qualitative researchers used this coding process, in which themes and concepts embedded within the data were identified, categorized, and revised, to discover the experiences of staff and develop an understanding of organizational dynamics when these programs integrate medical staff who provide buprenorphine treatment. The research team, as a group, discussed findings and coding schemes throughout the analysis process to strengthen reliability and rigor. When uncertainties emerged during the process of generating conclusions from conceptual and thematic areas, discussions

between the coders and conferring with a third investigator helped to reach consensus. Triangulation techniques were also used to support results and conclusions generated from the qualitative data, drawing on investigators' experience with each clinic and treatment admissions data from the programs where available. The parent study was reviewed and approved by the Institutional Review Board (IRB) of the Friends Research Institute, and the Sheppard Pratt IRB (parent organization of one of the study sites) for the protection of human subjects.

RESULTS

In order to extend buprenorphine use from detoxification to longer-term maintenance treatment, all three programs needed to revise their treatment protocols and hire or increase their physician and/or nursing time. Two of the clinics used a model in which the medical staff were co-located with counselors, had limited access to patients, and had minimal involvement with treatment planning. These clinics employed part-time medical staff for a limited number of hours, with physicians who functioned largely in a prescriber role, rather than as full members of the treatment team.

The second program model included a full-time physician who was a fully integrated member of the treatment team prior to the launch of buprenorphine maintenance, because this physician had been treating patients with mental disorders at the program. This program used their mental health model to integrate medical and counseling services for buprenorphine treatment, allowing feedback from both staffs to support overall treatment plan development. This integrated team model was an extension of the pre-existing model of providing mental health treatment at the program.

MODEL 1: Co-located

Medical Staff Role in Treatment—Increasing demand for buprenorphine treatment, coupled with a limited part-time status, left physicians in the co-located programs, by their own accord, with little time to meet with patients. One of these physicians was at the program twice weekly and did not feel that he had sufficient time to get to know the patients.

I see them for their first day for induction and we have a protocol so I just see them once and I interview them and we give them a COWS [Clinical Opiate Withdrawal Scale] questionnaire and I sign the [name of protocol] and the nurses just see them for the next month or two after that, and I usually don't see them again until they're ready for phase II where they're ready for a one month prescription, which is usually two or three months later." (Physician 1).

A physician in one of the co-located programs articulated his belief that counseling, not the medication, was the treatment.

I think the combination works but I think people get sober with just counseling and they aren't using medication. So that says to me the counseling is the treatment.
(Physician 2)

Dosing and Diversion—Having little contact with patients, and apparently limited knowledge about proper buprenorphine dosing, these two physicians faced “uncertainties” about dose adjustment. As patients came back and discussed symptoms and cravings, one physician reported not knowing how to determine the patients’ dose, and often relied on a standardized formula for determining the proper dose.

Am I to listen, do I believe the person that’s been having cravings? ... And if we keep on escalating doses just based upon “I’m having cravings” then you’re getting to thirty-two milligrams a day and maybe you’re getting to sixty-four milligrams I have no clue. But at one point you got to say, “Gee, we’re not going any further despite the fact that you’re having cravings.” (Physician 2)

The physicians often compensated for their uncertainties by setting their own, self-imposed dosing limitations, with fewer allowances for individualized dosing. The doctor from the second program insisted that he could “give them as much as eight milligrams and they’re usually doing fine.” The other co-located physician noted his medication limit was generally sixteen milligrams, and for anything beyond, he stated that he would rather emphasize counseling and group meetings than provide higher doses.

At an effective dose, buprenorphine therapy is thought to block or blunt the effects of exogenous opioids (Bickel et al. 1988). The physicians did not mention that they could use questions regarding whether euphoria was blocked or blunted, whether urine positive buprenorphine tests might indicate that the patient was indeed taking their buprenorphine, and that if there were concerns about the latter, the physician could return the patient to directly administered dosing five days a week. This physician considered uncertainty about dosing as an inevitable element of treating drug-using populations.

Physician uncertainties about dosing were complicated by fears of diversion that put pressure on both the larger treatment program and physicians operating within them to control potential diversion as much as possible. The physician from the first co-located program mentioned to the interviewer that he did “not feel comfortable going above twenty milligrams, solely for diversion reasons.” While these two physicians mentioned understanding that diverted buprenorphine could be used by out-of-treatment people in the community to control withdrawal symptoms rather than for euphoric effects, they did not want their own patients to be the source of the diverted medication.

The combination of physician uncertainty, fear of division surrounding prescribing buprenorphine in outpatient clinic settings, and some counselors’ beliefs that patients should not take buprenorphine for an extended period of time contributed to doubt among some counselors of the role buprenorphine in recovery. With little contact between medical and counseling staff, the role of buprenorphine in reducing or curtailing opioid use was unable to be emphasized. Counselors often misunderstood how adequate dosing levels could impact the continued use or potential relapse of a patient, and the medical staff often misunderstand how psychosocial issues may contribute to the patient’s desire to increase their dose. When asked directly about how counselors’ attitudes had developed and changed since the adoption of buprenorphine maintenance in the clinic and interactions with buprenorphine patients had increased, the clinical director at one of the co-located programs responded,

It depends on the counselor. Some counselors, I think the counselors do recognize there are some benefit to it. I think there are a few counselors here who have been in recovery for a long time, got their recovery in a different way and don't put a lot of credence in the medication. (Clinical Director 1).

Although this clinical director went on to mention that staff attitudes were often divergent and fluctuated when new programs are introduced, misinformation regarding the role of buprenorphine in the clinic had been particularly difficult to overcome, in light of counselors' established beliefs about addiction and recovery. The clinical director drew a specific comparison to incorporating mental health medications into treatment plans, but the following counselor felt that buprenorphine was markedly different – a tool rather than a necessity.

I don't make it all about the medication. I make it more about behavioral therapy like, what behaviors need to be changed what are their goals? ... I explain to them that the medication is not a cure-all, it's just a tool and the real focus is on their therapy, their counseling, and the behavior modifications that have to occur. And pretty much, I just go from there because it's different for each client. You know sometimes they come in and they think, "Hey, if I can just get this medication and begin to feel better all will be well." But that's not, you know, really the case, it's not going to fix their family issues and financial issues. So I try to focus a little less on the medication and more on them and what their needs are. (Counselor 1).

In the co-located clinics, when patients had questions or concerns regarding their medication, the counselors were often unequipped to provide answers because pharmacology was outside of their knowledge base. Even those counselors that supported buprenorphine treatment believed that some patients would "cry" until nurses and doctors increased their dose – often, they believed, for the purpose of diversion or misuse.

Yeah, oh yeah, they'll come in the door, weekend come, Monday come. "How you do over the weekend?" (Imitating client) "Oh, not so good I think I need a higher dose." I said, "Why you think you need a higher dose? You have to give yourself a chance." ... I tell them to give the medication a chance. ... But a lot of them --I had so many clients that came here and said it's a miracle drug. They say, "Oh my gosh, it works, it works, it works!" Now you have that group that'll give it a chance and run with it, and you have some that they cry, cry, cry, cry, cry until the nurse do an evaluation and see where they at, until once they see the doctor. (Counselor 2).

As a clinical director noted, these fears surrounding misuse and diversion partly stem from a sharp increase in the number of patients at the co-located clinics that were on buprenorphine maintenance and with poly-drug use that did not necessarily respond to treatment. While buprenorphine is designed as a medication for opioid use disorder, the medication is not an effective treatment for cocaine or other non-opioid drugs. Nevertheless, counselors wondered why some of their patients did not achieve total abstinence from non-opioid drugs. Ironically, even though the counseling itself (not the medication) was the focus of treatment for the non-opioid drugs, some staff took the lack of total abstinence to mean the medication was of limited effectiveness.

Treatment Team Integration—Physicians described insufficient communication and teamwork with other program staff who knew the patients' histories and current treatment progress. These physicians reported that there were few opportunities to discuss with other staff how to assess dosage or how to deal with potential diversion. This pattern of limited communication, and subsequent disagreement in the role of buprenorphine in the organization, led to conflicting messages to patients.

I've talked to some of the counselors before, you know some of the counselors are recovering addicts who are not taking any medicine and I know that they will, they'll periodically tell patients, you know, well what do you think about the medicine do you think that you want to come down on the medicine? It's so much completely opposite of what I tell them. So, I kind of say, what I say partly to kind of immunize them from what the counselor might be saying. (Physician 1).

Although this physician supported the centrality of counseling compared to the medication in early recovery, he was also skeptical of how counselors were discussing the medication with patients, and the influence counselors were having on medical decisions. A nurse at the same program lent support to this view when asked directly about what they felt would benefit bridging the gap between the medical and counseling staff:

A lot more coordination. It gets, the other stuff's medical. I told you about the medical part piece and I'd like that piece to be a little more coordinated... And I know that we, I know the counselors go to a lot of training; I know they do. I just don't get a sense of... this [pharmacotherapy] being incorporated into any of the programs. (Nurse 2).

The limited staff communication also complicated the issue of dosing and diversion. The physician from the first co-located program felt diversion was not inherently problematic, given the limited availability of treatment slots, despite treatment expansion efforts. His attitude about diversion, as well as his reported difficulty reading potential signs of diversion, diminished his credibility among some of the other staff in the program. In an effort to control potential diversion, nursing staff reported sometimes subverting the physician's treatment decisions, even going as far as tearing up prescriptions.

I mean we've literally said, you know a patient will see the doctor and the nurse will look at the prescription and say, "You're not getting this. "Doctor, you need to write this for such and such amount." Because somebody did it [diversion] and somebody told somebody else that they could too and it just kind of gets around, well I need to try it. And I've seen [the nurse] tear up a prescription, really, and the patient say, "Alright." (Program Manager 1).

Counselors supported discharging patients when diversion was suspected, sometimes without the physician's knowledge. In these instances, the physicians experienced frustration because the patients were discharged without their consent, but counselors did not believe that the physicians knew the patient's circumstances well enough to make an informed judgment.

And that's when we said you [the doctor] can't be the final word... 'Cause we had a situation that occurred not too long ago and it was like that he was upset because

we had discharged a patient.... and each time she came for a refill, some diversion tactic had taken place, something had happened. And he'd say, "Well ok." And we're not going to discharge her at that point we're still working with her.... So the fourth time, it's like, she does not need them. That is the end of it. And he was upset with us. And he said well, you know, he felt that he should have been the one to decide. And I said, "Doctor, you're here, you have been with her, we've been with this woman seven months. No. So we're finished. This is the end of it."

(Clinical Director 1)

MODEL 2: Integrated

Medical Staff Role in Treatment—The physician in the integrated program was a full-time psychiatrist treating mental disorders and serving as the Medical Director. This doctor was considered by all staff interviewed to be an integral member of the organization. This physician oversaw both the substance abuse and mental health services the clinic provided, and was also involved in the clinic's adoption of buprenorphine maintenance. In contrast to the physicians in the co-located programs, the medical staff in this program reported a great deal of patient contact, beginning in the induction phase and continuing through the patient's maintenance. Unlike co-located programs, that held patients at a lower induction dose (between 4–6 milligrams) over the course of one to two weeks, medical staff in the integrated program conducted dosing assessments on a daily basis during the first week of induction, and targeted for patients to achieve a "comfortable" dose within a couple of days.

We pretty much do a COWS [withdrawal assessment] almost daily during the first week. And then during the second week we just kind of do it as needed if they still are complaining. But usually by Friday... they're usually feeling pretty comfortable. And I think the majority of our patients are on sixteen milligrams.

(Nurse 3).

Also in contrast to the co-located programs, the physician working in the integrated clinic talked at length about the ability of the organization to develop individualized treatment plans, dosing schedules, and services for their patients. While the co-located physicians cited time constraints as a primary reason for standardizing patient dosing and services, the physician in the third clinic reported an "open ended" approach to treatment plan development that often included services for addiction treatment, medication, mental health, and dual diagnosis. This tailored approach based on individualized need, even extended to aftercare:

Yeah, I think we kind of leave that open ended for them. I mean, because since we provide both addiction and mental health services we do have some patients that will just, if they are dual disordered will stay and get mental health services after they complete their addictions treatment and will continue the Suboxone that way. So we're not even always referring them to a primary care provider who will sometimes keep them. (Physician 3).

The physician in the integrated program prided his organization on maintaining their comprehensive orientation to treatment through collaboration between addictions, mental

health, and medical staffs, including direct interactions between medical and behavioral staff, allowing for an open exchange of patient information and for physician and counselor views and attitudes to influence one another.

When the clinical director was asked about the importance and centrality of expanding medical staff time with patients, the director mentioned a full time Physician's Assistant who, until her position was cut due to funding, was integral in bridging the gap between medical and counseling staffs. The nurse was also actively involved in leading three support groups for patients taking medications as part of their treatment plan. Although her position was also cut due to funding constraints, the program was still committed to maintaining the same level of staff collaboration, even without this position in place.

Dosing and Diversion—Medical and counseling staff at the integrated clinic also appeared more secure regarding buprenorphine dosing, schedules, and diversion. According to the clinical supervisor, because of the highly focused induction process the patients achieved their target dose quickly. In addition, the effort made by medical and non-medical staff to share their knowledge about individual patients made it easier to deal with the possibility of diversion. Unlike in the co-located programs, where the suspicion of diversion created a schism between medical and behavioral health personnel, supervisors in this program consciously tried to avoid the gap through frequent communication.

So on an ongoing basis here, I do clinical supervision individually once every other week... And then the whole point of that is so that everybody is aware what's going on with the client... So what K--- may hear in one group may not be what M--- heard in another group... when J coming in for a daily observed medication, "Oh I don't have my pills because they got stolen"... But in M---'s group she told M--- that she sold them because she needed money. So we get different stories to different staff members and that comes up in team. And you have an opportunity to not let them split staff. So we've really got to coordinate it as a team. (Clinical Supervisor 3).

Staff in the integrated program appeared more relaxed about the potential for buprenorphine diversion to occur compared to the co-located programs. While staff at all levels implemented policy changes and rules to discourage diversion, including periodic pill counts and recalls, patients caught diverting their medication were not immediately discharged. These patients were allowed to remain in the program for two months without the buprenorphine, and were given another chance on the medication after that period.

Treatment Team Integration—In the third treatment program, there was a high degree of communication with patients, collaborations among medical and non-medical staff, and flexibility in individual treatment planning and service provision. According to a clinical supervisor, the overall treatment program was "very" well-coordinated. In addition to weekly treatment team meetings, this supervisor was often able to meet regularly with physicians to address emergent questions surrounding individual cases, and regarded having physicians and psychiatrists on-site as a notable advantage for the program.

This orientation was echoed by the physician who compared this program with other outpatient drug programs in Baltimore that provided buprenorphine.

... what I've seen across the three programs, is very much a counseling program with sort of, the medical staff is sort of secondary to it, although if you ask the patients they'd probably say that medicine is primary. But it's very, it's very interesting how there's very, sort of, a minimal medical staff present despite the fact that medication's a very central component to it. (Physician 3).

Every member of the integrated treatment team that was interviewed mentioned working together to share their knowledge about individual patients and collaborating on problem-solving activities. The nurse from this program specifically mentioned her collaborations with counselors, and commented that they were often "on the same page."

I basically let them know that the counselors and I work together very closely... We try to work as a team so... if they ask me well, you know, something about groups or outside meetings or something that they need to do outside of medication, I'm on the phone with the counselor or we walk around to the counselor's office so that we're all on the same page... So we try to meet once a week and go over all the patients that are receiving Suboxone and the issues that we may have. (Nurse 3).

DISCUSSION

This study examined staff experiences surrounding integrating buprenorphine within three formerly "drug-free" outpatient drug treatment programs in Baltimore. There are a variety of possible models to utilize medications for patients in these programs. Two such models were represented here, co-location and integration.

From an organizational perspective, counseling and medical staff in the program in which the physician was an active part of the treatment team reported fewer disagreements about the role of the medication in treatment, dosing levels, and concerns about diversion among staff members. This integrated clinic prioritized regular meetings that were attended by both medical and counseling staffs, which appeared to facilitate greater communication among all staff members, as well as greater team cohesion and a shared treatment framework.

Some of the discord may have been related to a relative lack of training for both counseling and medical staff about the pharmacology and effectiveness of buprenorphine, as well as practical approaches to monitoring patients. Although physicians who wish to prescribe buprenorphine must either have a specialty in addiction medicine or addiction psychiatry or have taken an 8 hour continuing education course about addiction and buprenorphine, there is no analogous requirement for counselors delivering behavioral services for buprenorphine patients. Different levels of training, education, and experience among staff could contribute to some of the differences between integrated and co-located sites identified here, irrespective of the organizational model of co-located or integrated services.

Greater provider training, increased prevalence of patients with opioid use disorder, and less program emphasis on the 12-step model are all associated with greater acceptance and perceived effectiveness of buprenorphine among staff (Rieckmann et al. 2011). With an

increase in opioid use disorder in the US (Meyer et al. 2014, Substance Abuse and Mental Health Administration (SAMHSA) 2013), treatment systems should be prepared for an influx of patients. Developing provider trainings that are relevant to different types of clinic staff (e.g., counseling, nursing, and physicians) that include effective ways to integrate medications into traditionally “drug-free” treatment may help to improve staff attitudes and support for adopting buprenorphine. Additionally, physician peer support is available from the Physicians Clinical Support System supported by the Center of Substance Abuse Treatment through the American Academy of Addiction Psychiatry, and may be a beneficial resource for physicians who are less experienced with buprenorphine.

Study limitations include the use of only three treatment centers. Second, the study was conducted in only one city (Baltimore, Maryland), which limits the generalizability of these findings, especially considering Baltimore’s buprenorphine initiative was generally more structured than that of many other localities. Third, the integrated treatment site had recently participated in a NIATx change team initiative focused on expediting intake and induction times for new buprenorphine patients (Gitlow et al. 1989, Gustafson and Hundt 1995), which may have helped the organization to bridge cultural and clinical differences prior to this study. Fourth, background information about staff members’ training, education, and experience were not available for this analysis.

Whether these two contrasting models produced different patient outcomes is not known and is a limitation of the present study. Indeed, whether patient outcomes differ between buprenorphine treatment provided through these type of clinics (regardless of whether co-located or integrated) compared to primary care offices without the counseling and nursing structure in the drug programs is not known.

The increased availability of pharmacotherapy for opioid use disorder has created an opportunity to introduce effective treatments to formerly “drug-free” outpatient programs. Team-based approaches being used in primary care settings offer models of integration that have the potential to translate into more specialty care settings, like previously “drug-free” treatment centers. Future research can build from these results and offer short- and long-term patient outcome data to support the effectiveness of various models and gradients of team-based integration in substance abuse treatment. In addition to patient-level outcome data, future research should collect organizational and staff-level quantitative data to compare implementation issues across models of team-based integration. Issues related to previous buprenorphine experience, knowledge, and training among staff; time and patient contact; other staff contact; how integration models affect dosing, take home, and prescribing practices; and provision of other services, such as mental health and medical care, would be particularly informative.

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