NACCHO
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2020 Model Practices

Applicant Information

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Size

Select a size: *

- ☐ Small (0-50,000)
- ☐ Medium (50,000-499,999)
- ☑ Large (500,000+)

Application Information

Local Health Department/Organization Name: *

Baltimore City Health Department

Title of Practice: *

Healthcare on the Spot: Integrated Mobile Treatment

Submitter Name: *

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Submitter Title: *

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Practice Categories

Model and Promising Practices are stored in an online searchable database. Applications may align with more than one practice category. Please select the most relevant category that applies most to your practice: : *

- [x] Access to Care
- [ ] Advocacy and Policy Making
- [ ] Animal Control
- [ ] Coalitions and Partnerships
- [ ] Communications/Public Relations
- [ ] Community Involvement
- [ ] Cultural Competence
- [ ] Emergency Preparedness
- [ ] Environmental Health
- [ ] Food Safety
- [ ] Global Climate Change
- [ ] Health Equity
- [ ] HIV/STI
- [ ] Immunization
- [ ] Infectious Disease
- [ ] Information Technology
- [ ] Injury and Violence Prevention
- [ ] Marketing and Promotion
- [ ] Maternal-Child and Adolescent Health
- [ ] Organizational Practices
- [ ] Other
- [ ] Primary Care
- [ ] Quality Improvement
- [ ] Research and Evaluation
- [ ] Tobacco
- [ ] Vector Control
- [ ] Water Quality
- [ ] Workforce

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- [ ] Access to Care
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Overview: Provide a brief summary of the practice in this section (750 Word Maximum)

Your summary must address all the questions below:

- Brief description of LHD- location, demographics of population served in your community.
- Describe public health issue.
- Goals and objectives of the proposed practice.
- How was the practice implemented/activities.
- Results/Outcomes (list process milestones and intended/actual outcomes and impacts.
- Were all of the objectives met?
- What specific factors led to the success of this practice?
- Public Health impact of practice.
- Website for your program, or LHD.

Please use this portion to respond to the questions in the overview section. : *

Baltimore City has a population of 600,000 people; almost a quarter of its residents live in poverty and nine percent live without health insurance (US Census). Approximately one in 10 people have a dependence on drugs or alcohol, and approximately 20,000 people use heroin (BCHD, 2017). Baltimore City has the ninth highest overdose rate of any jurisdiction in the US, with 814 opioid-related overdose deaths in 2018 (MDH, 2018). In addition to overdose risk, people who use drugs (PWUD) have other specific health concerns including high risk for acquiring HIV, hepatitis C (HCV). In 2017, approximately nine percent of new HIV diagnoses in the US were attributed to injection drug use (CDC, 2017; Wejnert et al., 2016). PWUD have an estimated HCV prevalence of 50–80% compared to a prevalence of 1.1% in the general US population (Deghenardt et al., 2017; Denniston et al., 2014; Nelson et al., 2011; Sulkowski & Thomas, 2005). Despite these prevalent and costly health issues, PWUD continue to experience barriers to medical and behavioral health services.

In response to service gaps, BCHD's Sexual Health and Wellness Clinics launched a mobile clinic called Healthcare on the Spot (The Spot) in 2018. The Spot co-locates with BCHD's Syringe Exchange Program (SEP) to offer free, accessible, integrated healthcare services in areas with high rates of overdose. The mission of The Spot is to bring evidence-based, PWUD-centered clinical services to communities in Baltimore affected by drug use.

The objectives of The Spot are:

- To engage and retain PWUD in buprenorphine treatment
- To engage PWUD in HCV testing and treatment
- To identify people living with HIV who are out of treatment and engage them in care
- To provide HIV prevention services through pre-exposure prophylaxis (PrEP) to high-risk individuals
- To screen for and treat sexually transmitted diseases (STDs) for all patients accessing services
- To provide additional services relevant to PWUD including naloxone distribution, wound care, vaccination, and case management services

The Spot has rapidly expanded to include five locations of service, each visited one day per week. From September 4th, 2018 to September 3rd, 2019 we served 424 unique patients over 1,935 visits. The following is breakdown of the services delivered:

- Buprenorphine:
    - 315 people (74.3%) had opioid use disorder and were prescribed buprenorphine
    - 40% of patients were retained in buprenorphine treatment for one month and 17% for three months
- Hepatitis C services:
    - 323 people were tested for HCV; 80 had a positive antibody test
    - 126 (30% of all patients) were newly diagnosed or previously known to have HCV
    - 11 were prescribed treatment; eight started treatment (two denied by insurance, one referred out for specialty care); and three so far have been cured
- HIV services:
    - 320 people were tested for HIV; five had a positive HIV test, of which three were new diagnoses
    - 27 (6% of all patients) people living with HIV received services
    - Seven people with HIV were not engaged in HIV care (including the three newly diagnosed patients). Two of these patients were started on antiretroviral medication and engaged in care, one was linked to care at another clinic, and four declined care or were lost to follow up after the first visit.
    - 11 people were started on PrEP for HIV prevention
- Additional services:
    - 20 people received wound care services
    - 264 were screened for STDs (gonorrhea, chlamydia, and/or syphilis)
    - 153 received naloxone

We were able to meet our objectives for the first year. Uptake of buprenorphine services far exceeded expectations, though treatment engagement and retention in HIV and HCV care among a high-risk and transient population, remain challenging.

Two primary factors have led to the success of our practice. First, we meet people where they are. By bringing services to communities, we are able to engage people who have been marginally engaged in the healthcare system. Second, our service delivery model accommodates people who live a transient and unpredictable reality by creating an accepting space for PWUD to receive care with dignity and respect.

Implementing and evaluating PWUD-centered models of care is critical as the overdose epidemic continues to be a local and national public health crisis. Adapting to the needs of the community is fundamental to the mission of BCHD. The Spot offers a novel model for accessible, low-threshold, life-saving buprenorphine treatment with integrated health services. Designing services specifically to meet the needs of PWUD will help move towards national 2030 elimination goals for HIV and HCV, as well as reduce opioid-related overdose.

Website:https://health.baltimorecity.gov/

Responsiveness and Innovation

A Model Practice must be responsive to a particular local public health problem or concern. An innovative practice must be -

1. new to the field of public health (and not just new to your health department) OR
2. a creative use of an existing tool or practice, including but not limited to use of an Advanced Practice Centers (APC) development tool, The Guide to Community Preventive Services, Healthy People 2020 (HP 2020), Mobilizing for Action through Planning and Partnerships (MAPP), Protocol for Assessing Community Excellence in Environmental Health (PACE EH). Examples of an inventive use of an existing tool or practice are: tailoring to meet the needs of a specific population, adapting from a different discipline, or improving the content.

Please state the Responsiveness and Innovation of your practice : *

The Baltimore City Health Department (BCHD) is the oldest, continuously-operating health department in the United States, formed in 1793. Baltimore City has a population of 600,000 people, with almost a quarter of its residents living in poverty and nine percent of people live without health insurance (US Census). Approximately one in 10 people have a dependence on drugs or alcohol, and approximately 20,000 people use heroin (BCHD, 2017). Baltimore City has the ninth highest overdose rate of any county in the US, with 814 opioid-related overdose deaths in 2018 (MDH, 2018). In addition to overdose risk, people who use drugs (PWUD) have other specific health concerns including high risk for acquiring HIV, hepatitis C (HCV), and skin and soft tissue infections. In 2017, approximately nine percent of new HIV diagnoses in the US were attributed to injection drug use (CDC, 2017; Wejnert et al., 2016). PWUD have an estimated HCV prevalence of 50–80% compared to a prevalence of 1.1% in the general US population (Deghenardt et al., 2017; Denniston et al., 2014; Nelson et al., 2011; Sulkowski & Thomas, 2005). Despite these prevalent and costly health issues, PWUD continue to experience barriers to medical and behavioral health services.

Models of care that reduce barriers to treatment are key to addressing service gaps. The evidence base for low threshold buprenorphine, hepatitis C treatment for PWUD, co-location of services, and mobile clinical services is strong.

Low Threshold Buprenorphine Treatment

Medication assisted treatment (MAT) is the most effective treatment for opioid use disorder, and buprenorphine has favorable safety and tolerability compared to methadone (Connery, 2015). Compared to more restrictive treatment programs, low threshold buprenorphine programs have been shown increase patient engagement in treatment (Bhatraju et al., 2017; Payne et al., 2019; Kourounis et al., 2016). Low threshold programs are easily accessible, flexible, and remove barriers by offering individualized treatment plans, home medication induction and administration, less frequent visits, do not require adjuvant psychological treatment, and allow for relapses (Kourounis et al., 2016). Low threshold buprenorphine can be provided in primary care clinics, but has also been shown to be successful through a mobile clinic model, with or without other co-located services (Krawczyk et al., 2019; Gibson et al., 2017). One mobile medical clinic operating in New Haven since 1993 provides a wide range of integrated medical and behavioral services including buprenorphine, and has shown high rates of utilization by people looking to engage in buprenorphine treatment (Gibson et al., 2017). There is a mobile buprenorphine program in Baltimore, operating since 2017, which serves a largely justice-involved, unemployed, and unstably housed population that may not have accessed care elsewhere, and has shown a high level of engagement (Krawczyk et al., 2019).

Hepatitis C Treatment

Chronic hepatitis C (HCV) causes liver damage that can lead to cirrhosis and liver cancer, and an estimated 40,000-80,000 people in Maryland have chronic HCV. Medications for HCV are highly effective, easily tolerated, and require only eight to12 weeks of treatment, with cure rates above 95%. Guidelines recommend treating everyone with chronic HCV, and the World Health Organization has called for elimination of HCV by 2030. Yet, only an estimated 52% of individuals in the United States are aware of their diagnosis, and only 37% have been treated and cured (Chhatwal et al., 2019).

Minority and medically underserved communities are disproportionately impacted by HCV infection and have lower rates of HCV treatment (Bourgi et al., 2016; Lier et al., 2019; Cope et al., 2016; Tohme et al., 2013). Until recently, Maryland Medicaid required a period of sobriety before approving HCV treatment for PWUD (Liao & Fischer, 2017). Despite a change in this policy, insurance companies continue to delay and deny HCV treatment for PWUD. Numerous studies have shown that PWUD can have excellent HCV cure rates that are comparable to the general population (Gayam et al., 2019; Bielen et al., 2017; Cachay et al., 2015; Caven et al., 2019; Sylvestre et al., 2005; Hajarizadeh et al., 2018; Latham et al., 2019; Ho et al., 2015; Macias et al., 2019). Still, some providers do not recommend treatment for PWUD who are actively using (Asher et al., 2016; Grebley et al., 2007). Stigma related to illicit opioid use also contributes to PWUD not discussing potential risk behaviors, which may reduce the likelihood of testing and diagnosis (Dion et al., 2019).

These same barriers have been documented in Baltimore City. Falade and colleagues (2019) reported that most PWUD had been diagnosed with HCV over five years prior and only 20% had received treatment. In this same study, 85% of PWUD reported that they would be more likely to access HCV treatment if it was co-located in their outpatient drug treatment program. Improved access to HCV treatment co-located with other services has been shown to reduce barriers to treatment (Zhou et al., 2016).

Healthcare on The Spot

Mobile healthcare reduces geographic, structural, and social barriers to accessing care, and is particularly beneficial for engaging people who are seeking care for stigmatizing conditions (Gibson et al., 2017). The Spot provides evidence-based medical treatment and social services in a PWUD-centered delivery model that reduces stigmatization, promotes individual dignity, and engages patients where they are. By co-locating with syringe exchange services and targeting communities most affected by overdose, The Spot attempts to meet the needs of Baltimore residents most affected by drug use.

LHD and Community Collaboration

The LHD should have a role in the practice's development and/or implementation. Additionally, the practice should demonstrate broadbased involvement and participation of community partners (e.g., government, local residents, business, healthcare, and academia). If the practice is internal to the LHD, it should demonstrate cooperation and participation within the agency (i.e., other LHD staff) and other outside entities, if relevant. An effective implementation strategy includes outlined, actionable steps that are taken to complete the goals and objectives and put the practice into action within the community.

- Goal(s) and objectives of practice
- What did you do to achieve the goals and objectives?
    - Steps taken to implement the program
- Any criteria for who was selected to receive the practice (if applicable)?
- What was the timeframe for the practice were other stakeholders involved?
- What was their role in the planning and implementation process?
    - What does the LHD do to foster collaboration with community stakeholders? Describe the relationship(s) and how it furthers the practice goal(s)
- Any start up or in-kind costs and funding services associated with this practice? Please provide actual data, if possible. Otherwise, provide an estimate of start-up costs/ budget breakdown.

Enter the LHD and Community Collaboration related to your practice : *

In response to service gaps for PWUD in the city, BCHD's Sexual Health and Wellness Clinics launched a mobile clinic called Healthcare on the Spot (The Spot). The Spot co-locates with BCHD's syringe exchange program and offers free, easily accessible, integrated healthcare services across Baltimore City at locations with high rates of overdose. The mission of The Spot is to bring evidence-based, empathetic clinical services to communities in Baltimore affected by drug use.

Objectives of The Spot are:

- To engage and retain PWUD in buprenorphine treatment
- To engage PWUD in HCV testing and treatment, regardless of readiness to engage in drug treatment
- To identify people living with HIV who are out of treatment and engage them in care
- To provide HIV prevention services through pre-exposure prophlyaxis (PrEP) to high-risk individuals
- To screen for and treat sexually transmitted infections for all patients accessing services
- To provide additional services relevant to PWUD including naloxone distribution, wound care, vaccination, and case management services

Planning and Collaboration

BCHD operates two Sexual Health and Wellness Clinics (formerly called STD Clinics) in east and west Baltimore that provide walk-in services for sexually transmitted infections, continuity HIV care, pre-exposure prophylaxis (PrEP), and hepatitis C treatment.

The vision for The Spot started in early 2017 with the donation of a previously used mobile clinic to the Clinical Chief of the BCHD Sexual Health and Wellness Clinics, who is also a faculty member at Johns Hopkins University (JHU) Infectious Diseases Department. BCHD and JHU partners began to consider all of the opportunities for utilization of this vehicle to expand existing clinical services, as well as developing new ones. The medical directors at the Sexual Health Clinics were simultaneously trying to re-launch a wound care program with SEP. Over the next several months, leadership from both the Sexual Health and Wellness Clinics and SEP discussed needed services for SEP clients. In addition to our standard clinical services, wound care and buprenorphine treatment were identified as high-priority services for SEP clients. Co-location of mobile clinical services with SEP vans seemed the most efficient way to offer warm hand-off referrals for services and ensure people could engage in care when they are ready.

Practice implementation was truly a collaborative effort among internal and external LHD partners. Leading up to our practice roll-out in September 2018, clinic leadership including a Clinical Chief, Medical Director, and nurse practitioner spent several months developing clinical protocols and designing work-flows for a completely new service delivery model. The Spot team solicited input internally from the SEP team, the Sexual Health and Wellness clinic staff, and BCHD outreach teams. The SEP team was particularly informative for their years of experience in providing services to PWUD, working within and engaging communities, and providing a mobile van-based service.

We collaborated with a number of different organizations to build The Spot's clinical services. While we have years of experience providing HIV, HCV, and STD care, we needed additional guidance on how to build a wound care and buprenorphine service, as well as how to provide care on a mobile unit. We engaged with providers from the prior wound care service on SEP to inform clinical protocols, and received additional clinical training in wound care from Wound Ostomy and Continence (WOCN) nurses at Johns Hopkins Bayview Hospital. We engaged as part of a buprenorphine hub-and-spokes model to expand buprenorphine treatment in Baltimore, and became a community "spoke". We are grateful to have had the opportunity to collaborate with experts in addiction medicine to guide clinical protocols, discuss specific cases, and refer patients who need a higher level of care. We also met with other organizations who offered mobile clinical services at Health Care for The Homeless, Johns Hopkins Bayview OBGYN practice, and Behavioral Health Leadership Institute, which led to pearls about how to manage patient flow in a community setting.

Community engagement has taken place both formally and informally. At each new location, Spot staff have canvassed the neighborhood to identify and reach out to religious centers, businesses, pharmacies, and key community members in the immediate vicinity. At each location, we attempt to partner with one or more pharmacies in order to make sure our patients' medication needs are met. Through these partnerships, we have been able to cover medication costs and co-pays at certain pharmacies, ensure that buprenorphine is in stock, and remove barriers such as need for a photo ID to obtain medication. At certain locations, nearby churches are aware of and promote our services. At one location, a local gas station allows us to park in their parking lot to provide services. We have also initiated a consumer advisory group in order to get feedback from Spot clients on service delivery.

Lastly, the Clinical Chief worked with other Johns Hopkins faculty to develop a robust evaluation plan for The Spot, which was awarded funding from the National Institutes of Health. Planning for Spot implementation has also been coordinated with this research team.

Implementation

Our leadership team decided on a year-long roll out plan, that would add new sites quarterly, starting out in southwest Baltimore in September 2018. Over the next year we opened five additional sites that cover four zip codes in Baltimore, all of which have high rates of opioid-related fatal overdose. We have grown our team to include two community health workers, who also perform phlebotomy and rapid testing and drive the mobile clinic; two case managers that provide social service connection including health insurance navigation, referral support for primary, specialty, and mental health care, and even provide transportation and patient accompaniment; and five providers who spend at least one session per week providing clinical care. We purchased and outfitted a second vehicle to have in rotation. Each vehicle has two exam rooms, a waiting room, a restroom, a phlebotomy/testing area, and an area for registration. We now offer mobile services five days per week.

The following outlines The Spot's operation:

- Community health worker (CHW) picks up vehicle and drives to the site for the day, arriving by 7:00am.
- Patients are able to sign in as soon as vehicle arrives. They are given a number and are seen on a first-come, first-served basis. Each day two to three new patients are accepted for buprenorphine initiation. We see approximately18-25 follow-up visits per day. Depending in the location, we turn away four to six people interested in buprenorphine treatment per day. Those people are always encouraged to try another of our locations throughout the week, and we try to prioritize them if they do show. We also provide those not seen with information about other drug treatment centers within close proximity that take same-day walk-ins, as well as provide the opportunity to receive STD testing services and nalaxone training. Occasionally patients present for testing only or other issues, and we try to always accept these patients, regardless of our capacity for the day.
- All patients are welcome, regardless of insurance or citizenship status. The Spot does not currently bill for services, and we can cover the cost of laboratory work and medication for a limited time. Most patients have insurance or are eligible. Our case manager works with patients to navigate them through the state Medicaid insurers.
- One team member drives to our Sexual Health and Wellness clinic to pick up supplies to then transport to the truck every morning. We do not keep any testing supplies on the truck over-night. We also do not keep any patient information, medication or prescriptions on board over-night. Most everything used during the session is brought on to the mobile clinic daily.
- We hold a team huddle at 8:45am to discuss issues for returning patients. Providers start seeing patients at 9:00am.
- The case manager registers patients in the electronic medical record and allows up to three patients on board at a time to wait to be seen. All other patients wait outside for their number to be called.
- New patients are seen first by the CHW for testing – rapid HIV and HCV, serum for syphilis, and urine for gonorrhea/chlamydia as well as urine toxicology and pregnancy tests for women of child bearing age.
- After testing, new patients meet with the case manager to discuss any psychosocial, insurance, or other issues. The case manager verifies insurance information, provides naloxone training and distribution if needed, reviews the buprenorphine treatment contract, and looks the patient up in the online Prescription Drug Monitoring Program (PDMP) to verify they have not received buprenorphine or other controlled substances recently.
- After meeting with case management, new patients meet with a provider for a substance use and medical history, counseling on services, and discussion of buprenorphine home induction. The provider writes the prescription for a one week supply of buprenorphine, and the patient is expected to return weekly thereafter. Patients are given phone numbers to call the team with any issues. Full cost or co-pay of medication can be vouchered through grant money at participating pharmacies.
- Follow up patients are seen weekly until progress is made in reducing or eliminating opioid use, and then visits are spaced out up to 4 week intervals. At each follow up visit, urine toxicology is performed, PDMP is verified, and patients are counseled about other issues such HCV treatment, PrEP, or repeat STI testing. Case management follows up with patients who need help with insurance, housing, or other issues.
- Patients with chronic HCV are offered treatment on the mobile clinic, regardless of enrollment status in the buprenorphine program. Lab work is obtained, and results are discussed the following week with the provider, where a HCV history and physical is performed, and a prescription for HCV treatment is written, if appropriate. In the case additional testing is needed, the case manager will arrange it. As needed, a staff member from the clinics brings a portable Fibroscan, which is used to aid in staging of liver fibrosis, to perform on patients on The Spot. Once a prescription is written, the case manager submits paperwork to the pharmacy to obtain prior authorization from insurance. Once medication is approved, it is delivered to the clinic and brought to the patient on The Spot. Monthly labs are performed while on treatment, and 12 weeks after treatment to ensure cure.
- Patients with HIV in need of treatment are offered same-day medication initiation if eligible, and can obtain continuity care on The Spot, in our clinics, or at another clinic of their choice.
- Patients interested in PrEP can obtain a prescription the same day if eligible, and have periodic lab work for monitoring.
- Patients presenting specifically for wound care are offered testing and other service, but may also engage for only for acute or chronic wound management.
- Patients are discharged from the buprenorphine program if they have evidence of methadone use as this may be an indication of enrollment in a methadone program, and for a pattern of negative buprenorphine on toxicology screens, as this is an indication of diversion or inappropriate use. Any patient who is discharged is referred to another treatment program that can provide closer monitoring of medication administration. Additionally, any patient who is discharged who has additional medical needs such as HIV or HCV treatment or PrEP are encouraged to continue to follow up with us. Patients are welcomed back into the buprenorphine program after approximately one-month post-discharge to re-start, if eligible.

- Charting is completed through a combination of electronic medical record accessed through a remote network access on laptops and paper charts. Paper charts were initiated during a period when computers were not available due to a ransomware attack, and have been continued due to ease of use.
- On a typical day, 20-25 patients are seen by two providers from 9:00-1:00.
- After closing for the day, the team has a post-session huddle to verify labs have been collected, labeled, and ordered correctly, and to discuss issues with individual patients.
- After the session, staff return supplies to the clinic including protected health information, testing supplies and medication, and anything else that is temperature sensitive. The CHW returns the vehicle to the parking lot.
- During non-clinical time, the CHWs are in charge of keeping the vehicles up-to-date on maintenance and repairs, fuel, stocking supplies, and cleaning. The case managers spend their time providing follow up on patient care, including following up with patients who have missed appointments, submitting for authorization for HCV treatment, recording urine toxicology results, follow up on other lab results, and recording information in paper charts.

Cost

We were able to start this project due to a donation of a mobile clinical van from a program at Johns Hopkins. A second mobile clinic was purchased for approximately $220,000 with grant money. We receive grant money through multiple sources to maintain operations, which total to an estimated $650,000 per year.

Evaluation

Evaluation assesses the value of the practice and the potential worth it has to other LHDs and the populations they serve. It is also an effective means to assess the credibility of the practice. Evaluation helps public health practice maintain standards and improve practice. Two types of evaluation are process and outcome. Process evaluation assesses the effectiveness of the steps taken to achieve the desired practice outcomes. Outcome evaluation summarizes the results of the practice efforts. Results may be long-term, such as an improvement in health status, or short-term, such as an improvement in knowledge/awareness, a policy change, an increase in numbers reached, etc. Results may be quantitative (empirical data such as percentages or numerical counts) and/or qualitative (e.g., focus group results, in-depth interviews, or anecdotal evidence).

- What did you find out? To what extent were your objectives achieved? Please re-state your objectives.
- Did you evaluate your practice?
    - List any primary data sources, who collected the data, and how? (if applicable)
    - List any secondary data sources used. (if applicable)
    - List performance measures used. Include process and outcome measures as appropriate.
    - Describe how results were analyzed.
    - Were any modifications made to the practice as a result of the data findings?

Please enter the evaluation results of your practice : *

The objectives of The Spot are:

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- To engage PWUD in HCV testing and treatment
- To identify people living with HIV who are out of treatment and engage them in care
- To provide HIV prevention services through pre-exposure prophylaxis (PrEP) to high-risk individuals
- To screen for and treat sexually transmitted infections (STIs) for all patients accessing services
- To provide additional services relevant to PWUD including naloxone distribution, wound care, vaccination, and case management services

Evaluation of The Spot is ongoing and multi-faceted. First, the clinical team is utilizing data extracted from our electronic medical record to analyze process and clinical metrics including patients served, retention in care, and movement of patients through the HIV and HCV treatment continuums. One significant limitation is that Baltimore City government had a ransomware attack that disabled our computer systems from May to September 2019. Though patients were seen throughout this time, data have not been completely back-filled for these months. Specifically, STD testing (gonorrhea, chlamydia, and syphilis) data from that period has yet to be added, which explains the lower percentage of patients receiving those specific tests. Initial data from this process describing the first year of service is shown below.

Second, the Clinical Chief is implementing a rigorously designed NIH-funded evaluation of The Spot, which includes surveying and interviewing hundreds of people in the communities in which The Spot operates. The data collection for this is underway and results will be available in the coming year.

The Spot has rapidly expanded to include five locations of service, each visited one day per week. From September 4th, 2018 to September 3rd, 2019 we served 424 unique patients over 1,935 visits. The population served was primarily male (61%), black/African

American (75%), and over the age of 40 (67%). The following is breakdown of the services delivered:

- Buprenorphine:
  - 315 people (74.3%) had opioid use disorder and were prescribed buprenorphine
  - 40% of patients were retained in buprenorphine treatment for 1 month and 17% for 3 months
- Hepatitis C services:
  - 323 people were tested for HCV; 80 had a positive antibody test
  - 126 (30% of all patients) were newly diagnosed or previously known to have HCV
  - 11 were prescribed treatment; eight started treatment (two denied by insurance, one referred out for specialty care); and three so far have been cured
- HIV services:
  - 320 people were tested for HIV; five had a positive HIV test, of which three were new diagnoses
  - 27 (6% of all patients) people living with HIV received services
  - Seven people with HIV were not engaged in HIV care (including the three newly diagnosed patients). Two of these patients were started on antiretroviral medication and engaged in care, one was linked to care at another clinic, and four declined care or were lost to follow up after the first visit.
  - 11 people were started on PrEP for HIV prevention
- Additional services:
  - 20 people received wound care services
  - 264 were screened for sexually transmitted infections (gonorrhea, chlamydia, and/or syphilis)
  - 153 received naloxone

Case Studies

Mr. R is a 41 year-old man who first came to The Spot in November 2018 for buprenorphine treatment after years of polysubstance use. He tested positive for HIV, though it was not a new diagnosis, and he had never been on HIV treatment before. Initial lab work showed him to have advanced AIDS with a CD4 count of 3. He also disclosed that he had a history of bipolar disease and was not on treatment, and he was homeless. His affect was withdrawn and he was difficult to engage in conversation. He was started on buprenorphine and HIV medication and returned for weekly visits. Our case manager helped him get into a housing program and he started seeing a psychiatrist and was placed on medication for his bipolar disease. Within two months, his HIV viral load was undetectable and he continued to make progress towards reduced drug use. In late January 2019, he was incarcerated, and The Spot team confirmed with the corrections medical team that he was on the correct medications. He was released after nine months of incarceration, and on the day of release, he was walking up the street from the jail and found The Spot van and re-engaged in care. Though he is now in a methadone program instead of our buprenorphine program, he continues to come to The Spot for his HIV care and other medical and social needs. His HIV continues to be well-controlled, he has gained weight, and his demeanor is quite different than when we first met him. We have helped with covering the cost of medication, obtaining a new pair of shoes, and ensuring he remains in his housing program and other needed services.

Mr. M is a 33 year-old man who had been using heroin intravenously since 2009, after a dirt bike accident left him with chronic bilateral shoulder pain for which he was prescribed opioid pain medication. He started using heroin when his doctors stopped his pain medication without a plan for his pain or his physical dependence. The first time the patient came to The Spot he tested positive for the Hepatitis C antibody, which was a complete surprise to him as he has not ever shared injection drug use equipment. On further bloodwork, he was found to have spontaneously cleared Hepatitis C and therefore does not require treatment. Since starting on the program a few months ago, he has been arrested twice for an outstanding warrant that he was told should have been cleared. This winter after being jailed in Baltimore County for over a week, the patient was released on a cold Wednesday morning. He was in severe withdrawal as he was not given any medications for opioid withdrawal while in jail. He remembered where The Spot locates on Wednesdays and decided to walk three hours in the cold, from Baltimore County to the van. When he arrived, he shared that he knew if he could just make it to The Spot van, he knew the team would help him feel better.

Discussion

Uptake of buprenorphine on The Spot was much higher than anticipated. Our initial projection was to serve 25 people for buprenorphine in the first year, but we ended up serving more than 300 and routinely turn people away for this service. Given the amount of opioid use in the city, it is not surprising that so many people are attempting to access care. Despite the demand for accessing buprenorphine services, retention in care past the first few weeks has remained challenging. However, our retention rate is similar to another mobile buprenorphine program in Baltimore (Krawczyk et al., 2019), and is likely representative of people's readiness to engage in care. Recovery does not happen overnight, and the clinical complexity and transiency of our patient population made it impossible to compare our metrics with brick and mortar drug treatment centers. We believe patients feel comfortable accessing our services because there are few barriers, it is available in their neighborhood, treatment can be started same-day, and we attempt to accommodate patients' sometimes chaotic lives. Given the numbers we have seen, we believe there is a need for expanding low threshold models of buprenorphine treatment.

Our success at engaging people in HCV treatment has been limited, especially when compared to our HCV treatment program at the Sexual Health Clinics, where almost 50% of people with HCV were prescribed treatment. One major difference is that most people who

enter our care for HCV at the Sexual Health Clinics specifically want HCV treatment, so their level of engagement is higher. On The Spot, most people access our services for buprenorphine, and HCV is a secondary issue for them. Many already know they have HCV, but are not yet prioritizing treatment. The most important reason we fail to fully evaluate people for HCV treatment is attrition from buprenorphine services. Approximately 40% of patients are retained in the buprenorphine program over the first month; the vast majority of patients are lost to follow up or discharged due to suspected misuse of the medication or needing a higher level of care. Additionally, many people have difficult venous access and inability to get blood or refusal by the patient to have blood drawn means HCV treatment evaluation cannot be completed. We have continued to make small adjustments to our processes for HCV and hope to continue to engage people to achieve cure. Several more patients have started treatment since compilation the data presented here.

Though we have a lower prevalence of HIV than HCV, we have been able to engage a few patients with HIV who were not otherwise in care. One patient who was homeless with untreated bipolar disorder was found to be out of care for HIV, was started on treatment and achieved HIV viral load suppression within two months, and then re-engaged with us after a nine-month incarceration. Despite no longer receiving buprenorphine with us, he continues to return for HIV care, pointing to the acceptability of our services. We were surprised at how many patients accessed our services for buprenorphine while being actively engaged in HIV care elsewhere, pointing to the need for more co-location of services. Uptake of HIV prevention with PrEP has been low, which is likely multi-factorial.

Increasing access to integrated medical services and drug treatment through low threshold, community-based models of care can be an effective tool of health departments as communities struggle with the effects of drug use. Our first year of data shows this model is feasible with high rates of engagement of individuals seeking care for stigmatizing conditions. Further evaluation is needed to show theorized additional benefits such as reduced overdose rates and increased engagement in primary care and other health services.

Sustainability

Sustainability is determined by the availability of adequate resources. In addition, the practice should be designed so that the stakeholders are invested in its maintenance and to ensure it is sustained after initial development (NACCHO acknowledges that fiscal challenges may limit the feasibility of a practice's continuation.)

- Lessons learned in relation to practice.
- Lessons learned in relation to partner collaboration. (if applicable)
- Did you do a cost/benefit analysis? If so, describe.
- Is there sufficient stakeholder commitment to sustain the practice?
    - Describe sustainability plans.

Please enter the sustainability of your practice : *

The Spot has been a labor of love with contributions from many internal and external partners, who have shown a high level of commitment to ensuring we are able to provide the highest quality of care. The patient experience provided by our service depends on seamless communication and collaboration with our community partners. For example, internally we work with our SEP in order to co-locate our services, allowing for bi-directional referrals for patients for HCV, wound care, or testing services. Externally, we participate in a buprenorphine collaborative comprised of drug treatment centers, and primary care clinics that has expanded access to drug treatment in Baltimore City. We have also established relationships with multiple pharmacies to cover medication and copay costs for patients who do not have insurance or cannot afford their copay. We work with community based organizations that provide peer advocacy and street outreach in neighborhoods where we serve, in order to engage people who are most in need of treatment. Continued development of partnerships will only strengthen our program as we pilot new initiatives and plan expansion. We are in the planning phase of partnering with outpatient drug treatment program and drop-in centers to offer expanded HCV treatment services for PWUD.

Financial sustainability is feasible, though not without some uncertainty. Currently, BCHD does not bill for clinical services, though we are working towards transitioning to a billing model that will take an additional 1-2 years to implement. However, given the structure of behavioral health services in Maryland, many services delivered on The Spot are not billable under Medicaid. BCHD is also exploring contracting with a pharmacy to obtain 340b revenue for high-cost prescriptions such at HCV and HIV medications. Services provided on The Spot are currently supported by grant funds, some of which will likely continue or expand in future years. We do not yet have the data for a cost-benefit analysis, but this is planned as a part of the NIH evaluation of the project.

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Additional Information

How did you hear about the Model Practices Program:: *

- ☐ I am a previous Model Practices applicant
- ☐ At a NACCHO conference
- ☑ Colleague in my LHD
- ☐ Colleague from another public health agency
- ☐ E-Mail from NACCHO
- ☐ NACCHO Publication (Connect, Exchange, Public Health Dispatch)
- ☐ NACCHO Website

Have you applied for Model Practices before?: *

- ☑ No, this is my first time applying.
- ☐ Yes, I have applied in the past.

If you answered yes to the question above, please let us know the year and award type. :