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Understanding Prolonged Cessation From Heroin Use: Findings From a Community-Based Sample

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Abstract

Background—There is abundant literature describing heroin initiation, co-morbidities, and treatment. Few studies focus on cessation, examining the factors that motivate and facilitate it.

Methods—The CHANGE study utilized mixed methods to investigate heroin cessation among low-income New York City participants. This paper describes findings from qualitative interviews with 20 former and 11 current heroin users. Interviews focused on background and current activities, supports, drug history, cessation attempts, and motivators and facilitators to cessation.

Results—Participants found motivation for cessation in improved quality of life; combination of treatment, strategic avoidance of triggers, and engagement in alternative activities, including support groups, exercise, and faith-based practice. Several reported that progress toward goals served as motivators that increased confidence and facilitated cessation. Ultimatums were key motivators for some participants. Beyond that, they could not articulate factors that distinguished successful from unsuccessful cessation attempts, although data suggest that those who were successful could describe more individualized and concrete—rather than general—motivators and strategies.

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Conclusions—Our findings indicate that cessation may be facilitated by multifaceted and individualized strategies, suggesting a need for personal and comprehensive approaches to treatment.

Keywords

heroin; cessation; treatment; methadone; recovery; abstinence

INTRODUCTION

Heroin use has significant individual and community consequences. Morbidity and mortality rates for individuals who use heroin are significantly higher than for the general population (Hser et al. 2001; Muhuri & Gfroerer 2011; Scott et al. 2011; Smyth et al. 2007), due to the frequency of overdose; accidents; and blood-borne and other infections such as HIV/AIDS, viral hepatitis, tuberculosis, endocarditis, and cellulitis (Brettle 1996; Contoreggi, Rexroad, & Lange 1998; Degenhardt et al. 2011; Han, Gfroerer, & Colliver 2010; NIH 1997, 2002; Smyth, Hoffman, Fan, & Hser 2007). Continued drug use is associated with increased social dysfunction (Friedman et al. 1999; Fullilove, Lown, & Fullilove 1992), extended periods of unemployment, criminal activity, homelessness, and incarceration (NIH 1997, 2002; Robertson et al. 1994). Drug-related costs to society, which include costs related to lost productivity, crime, drug treatment, and health and social services, are estimated at hundreds of billions of dollars per year (Miller & Hendrie 2008; National Institute on Drug Abuse 2012).

The literature on abstinence in the context of drug treatment is copious. Findings from treatment studies commonly report on the chronic, relapsing nature of drug use; the benefits of opioid replacement therapy and repeated treatment exposure; the need for strategies to cope with triggers; and the need for social support, as part of treatment and/or in the community (Dennis et al. 2005; Gossop et al. 1989; Mattick et al. 2009). There is more limited research on community derived samples and cessation without treatment (Biernacki 1986; Jorquez 1984; Jorquez 1983; Laudet and White 2008; Waldorf 1983). However, findings regarding strategies to avoid triggers and the need for support to sustain cessation are consistent with the treatment literature. These studies, which tend to include more information on individual, lifestyle and community factors also describe: the need for significant social adjustments to sustain cessation (Jorquez 1984;Jorquez 1983); variability among users, the strength of their ties to a drug using network, and their processes for cessation (Biernacki 1986; Waldorf 1983); and the relationship between individual characteristics, motivations and the likelihood of sustained cessation (Biernacki 1986).

This paper, part of the mixed methods CHANGE study on heroin cessation, is aimed at describing—from the perspectives of users—predictors and processes, at the individual and community level, that promote sustained heroin abstinence. It describes findings from the qualitative component of CHANGE, which was framed by an anthropological perspective that incorporates the individual, social and environmental context in which behaviors and behavior change take place (Farmer 1999; Morsy 1996; Scheper-Hughes 1992) and a respect for study participants as interpreters of the events occurring in their lives.

METHODS

Recruitment and Eligibility

The sample for the qualitative component included former (n=20) and relapsed (n=11) heroin users from low income and minority New York City (NYC) communities. To be eligible, participants had to have had a history of heroin use (at least weekly use for a year or more). Former users had to have stopped using heroin at least one year but no more than five years prior to the interview. These parameters reflect concerns around durability of cessation and recall, as we wanted the cessation experience to be recent enough that the participant could describe it, but distant enough that it could be considered "sustained." Relapsed users had to have had one or more cessation attempts lasting at least two weeks within the last twelve months. The two week limit was set to be consistent with the period of acute withdrawal. Current and prior use was determined by self report during a screening interview and through detailed questions included within each of the qualitative interviews. Finally, the sample was limited to participants age 27 and older, so as to maximize the likelihood of recruiting chronic heroin users.

Participants in the qualitative component represent a convenience sample. They were identified and recruited through their participation in prior drug-related studies, as well as street outreach in selected lower income NYC communities.

Interview Procedures

Interviews were conducted in English and Spanish during 2008 and 2009 using semi-structured guides. Interviews focused on participant background, drug use, treatment and cessation history, relapse, social networks and support, and related topics (Table 1). All but two participants were interviewed twice (approximately two weeks apart), so as to gather greater depth and breadth of information. Each interview lasted approximately one hour and was audio recorded. English interviews were professionally transcribed. Spanish interviews were translated and summarized by bilingual project staff. Participants completed a brief survey prior to the first interview. The survey asked about basic demographics (e.g. age, gender, ethnicity, schooling); income sources and security; and drug use, treatment and cessation history. The study was approved by The New York Academy of Medicine Institutional Review Board, and each participant provided written informed consent. Participants received $25 and reimbursement for public transportation for each interview completed.

Data Management, Coding and Analysis

Transcripts (English interviews) and summary reports (Spanish interviews) were maintained in NVivo (v.8.0, QSR International), a qualitative software package. Three members of the study team developed a preliminary coding scheme, based on the interview guides and reviews of the first three transcripts. They applied the scheme to those first three interviews to assess the extent to which 1) all of the interview text clearly matched a code, 2) all codes were necessary and utilized, and 3) application of codes was clear and unambiguous. The coding scheme was finalized following this reconciliation process, including written code definitions and narrative examples. Two members of the research team coded the remaining

interviews. The coded text, along with reviews of full transcripts, was used by all team members in an iterative process to identify the major themes, common patterns, and informative examples. This process involved both individual reviews and group discussions; group discussions served as a check on individual biases. Analysis included consideration of themes pre-identified from the literature and our own prior research, as well as themes emerging from the data. Frequency of particular responses was an important, but not the only, criterion used in assessing the data collected. We were also interested in novel findings, as well as those that might inform general practice related to substance use and its treatment. We quantified responses related to major themes and present them in table form. However, qualitative methods assume some variability in administration of the interviews and purposely lack fixed response categories. Quantification is presented only as backup for our qualitative findings. Finally, we present data from respondents that were successful, as well as those that were unsuccessful in their cessation attempts. We present data from both groups in recognition of the fluidity that exists between them and to facilitate comparison.

Data from the brief survey was maintained in SAS (version 9.3; Cary, NC). Given the small sample size, analysis was limited to basic descriptive statistics.

RESULTS

Sample Characteristics

Sociodemographics—The majority of participants were male (77.4%) and Latino (64.5%). The mean age was 37.8 (SD = 5.4) (Table 2). Approximately 48% had a high school diploma or GED. Most (80.6%) reported no income from a regular job, 74.2% reported an annual legal income of ≤ $5,000, and 29% were homeless.

Descriptions provided during the interviews suggest difficult childhoods. Several participants described early learning or behavioral problems, which led to problems in school and/or with peers. Many participants experienced significant family dysfunction, with absent parents and little supervision. A large number of participants described traumatic events, including abuse by parents, step-parents and other family members. A number of participants reported childhood experience of parental death, with dramatic emotional or practical repercussions.

Drug History—Participants generally began substance use with alcohol and marijuana, then started using cocaine, heroin and other drugs. Many participants were raised in homes where drugs were readily available, giving them repeated opportunities to experiment. Timothy[1] explained that he became addicted to heroin inadvertently, from using cocaine that had been—unbeknownst to him—mixed with heroin by his aunt.

> I first started on marijuana at the age of 12. Cocaine, sniffing, at the age of 14; heroin I started at the age of 25. Okay. And drinking, the age of 9. (Timothy, former heroin user)

[1]Pseudonyms are used throughout to protect the confidentiality of participants.

The mean age at first heroin use was 23 (range:12–37), with no significant differences between former and relapsed users (Table 2). Several participants reported that they used drugs as an escape. Bill, adopted into an upper middle class home, reported general mistreatment and sexual abuse.

> Because I was looking for a way to cope. I was looking for a way to deal. You know - I was looking for a way out of that misery. (Bill, former heroin user)

Most participants, however, described their early drug experiences in more positive terms, noting, for example, significant pleasure, diminished anxiety, and an expanded social network.

Consistent with study inclusion criteria, there was an average span of 13 years between first and last heroin use for former users; relapsed users had, on average, started using heroin an average of 15 years prior to their interview. Polysubstance use was also common. All participants had used crack or cocaine at some point, with 45% reporting use in the prior 3 months (35% of former, 64% of relapsed). Close to 60% reported having used PCP and LSD. Virtually all (94%) had used marijuana (data not shown). Just over half (52%) have injected drugs, with 16% still injecting, including one former heroin user.

Cessation

Our inclusion criteria dictated that all participants had experience attempting to stop heroin use, and also dictated that last use for former users be one to five years prior to their interview. Years without use were distributed across that range, with the largest number of former users reporting approximately two years of abstinence. We did not ask participants to recall the number of times they had attempted to stop using heroin in the qualitative component, since that information was being collected with significant detail for a larger sample in the quantitative component of the CHANGE study. However, participants generally described multiple attempts, with some that were sustained over several years. Motivations, facilitators and processes for cessation are described in detail in the sections below.

Motivation for Cessation—Common motivations for heroin cessation fell into three general themes: (1) the desire for an improved quality of life; (2) the desire to do right by family and others; and (3) fear of a particular outcome, sometimes conceptualized in terms of a “quit or else” ultimatum. These feared outcomes included incarceration, job loss, HIV infection, tainted drugs, and death. Table 3 shows the number of participants that mentioned each motivator. Compared to those who successfully quit heroin, relapsed users noted fewer motivations for stopping and focused on more general (e.g. “tired” and “hitting rock bottom”) than specific concerns (e.g. the well-being a child, fear of incarceration). The financial repercussions of drug use were the most commonly indicated motivators for both groups.

Quality of Life: A number of participants felt they were inherently “better” than the people they had become. They described very poor living conditions, which they attributed to drug use. For example, Alfred, a 47 year old former heroin user had worked in construction. He

had a wife and a home. He commented: “It wasn't until I went to drugs that destroyed my life…I became homeless, I lost a marriage.” Consistent with popular perceptions regarding the impact of hitting “rock bottom,” the poverty and dysfunction attributed to drug use were among the principle motivators for abstinence, as described in the quote below.

> Oh, the reason why I stopped…I lost weight, I lost everything, I was homeless. It was a whole different kind of world out there. It was not like at the beginning - it was beautiful, it was partying, dancing, you know. Everything was fancy life, disco nights, you know, cars, friends, clothes. Now … I'm dirty. I'm skinny. I don't eat. I don't shave. I don't shower. What the fuck? What the fuck is going on with me? I hardly don't eat. I'd rather stick a fucking needle in my arm than eat. (Marcos, relapsed user)

Participants remembered more functional and productive versions of themselves—as well as the hopes and expectations family members had for them. Some noted that progress toward that better person—in school, jobs, relationships, and/or general functioning—reinforced their motivation regarding drug use cessation. Marcos, quoted above, is the son of an alcoholic. He was raised by his grandmother but felt she was unable to give him the guidance he needed. Marcos did have a period of abstinence that lasted for several months. When asked how he was able to stay off of drugs, he described the satisfaction felt in making rapid progress toward a GED. This led to increased efforts to exercise and maintain his appearance. Emily, a former user, dropped out of school in the tenth grade and had two sons before the age of twenty. She commented:

> It used to make me feel good when I used to go in front of the judge, and the judge used to tell me that I was bettering my life, that I was doing good in the program - you know? And that's what kept me motivated.

Aging made quality of life concerns more profound. Tolerance for discomfort declined, and setting a positive example for younger family members became more important. Even in the absence of dramatic dysfunction, participants explained that they were “tired” and that drug use was no longer “fun.” They lamented the money spent on drugs, as well as lost opportunities in general. Paulo, a relapsed user, is a high school graduate and veteran. He explained:

> And all the money you spend… You could have four, you could have a thousand dollars now, and I tell you, in about three hours from now, you broke. A thousand dollars—and after you spend all that money, you want more. You want more. All that money's gone and you back out there again, you know what I mean. It's crazy, right? You know you making that other guy richer, you know what I mean, putting money in his pocket.

He continued:

> You get to the point in your life that you start thinking and you, you doing like an inventory on your life, you know, and you say, Well, “I have done nothing in my life,” you know. And you get tired of the same thing every day, like the same thing, that always the same thing.

Interpersonal Connections: Loved ones, including parents, children, grandchildren and partners—were frequently mentioned motivators for heroin cessation. Emotional connections, concerns about relationships, and desires to "do right" by loved ones (even those that had passed away) were reported to be extremely important. Oscar, age 36 and HIV+ hasn't used heroin in two years. He commented:

> I got clean because I knew it was the right thing to do, and because of my health and all that. But I actually really did it because, the guy, my friend that helped me kick, that locked me in the room and all that. I have feelings for him, and I actually did it for him. (Oscar, former heroin user)

Gustav used alcohol and other drugs casually, until he lost his job due to a workplace accident. Needing money, he started to sell drugs. With a ready supply and much unstructured time, he developed a daily heroin habit, which eventually led to robbery, arrests, and significant family discord.

> One of the things that really gave me like a push when mama said, "You know how I would feel if I was to die and you still getting high, me knowing that if I die and you're still getting high you're gonna - you know - you're gonna be all strung up. Because, the only one that's always been there for you 100% has been me." So, and then she said, "I'll be the happiest woman if I die and I don't - and when I left this earth even though my son went through a lot of shit and bla, bla, bla but [he's] a good man - you know what I'm saying? He's sober, he's a better man for society, you know. If it happens to be, you know, if you got your own place, your wife, I'll be a happy woman, I'll rest in peace." So, that really like hit me. - I said, "She deserves it. If anybody does, she does" (Gustav, former heroin user)

For 15 years, Jim was a polysubstance user (heroin, cocaine, marijuana, PCP) and drug dealer. He lived in a neighborhood that was significantly impacted by drugs, and in addition to his own three children, supported many others who lost parents to drugs, HIV and/or crime.

> I get around my kids sometime, "Daddy, daddy, daddy," and I be like you know, nodding off. That's not good you know. I didn't want them to see me like that, because I don't want them to be like that in life… That month that I went through [withdrawal], laying in that bed, going through all them trials and tribulations, and I did it for my kids and I did it for my family (Jim, former heroin user)

Fear: The idea of "fear" as a motivator to cessation came up often, spanning several dimensions. It was sometimes described in terms of a specific ultimatum or a particular outcome to be avoided. Fear of the criminal justice system, was for some participants, an important motivator for abstinence. Jamal, for example, used heroin for four years, quit "cold turkey," but then went on methadone, to reduce the likelihood of relapse. He is hoping to start college in the near future:

> What made me stop that? From being hurt, having the cramps, my back being hurt and I could be walking the street and I'm going to get a fix and police just snatch me up and then I'm going through this judicial system and I'm going through there

> and I don't have a fix, then I'm miserable, I'm aching, I'm weak. Anybody could do something to me and I can't defend myself.

He continued:

> Scared of being [incarcerated] and going through the shit, excuse me, the stuff that they have people going through. I don't want to be in there talking to my family for six or twelve minutes and got to hang up and being told what to do. … And society look at you like you a piece of, like you're a speck.

Specific fears of death from HIV, tainted drugs, or other drug related causes, were other common motivators for cessation. In a number of cases, the fears arose from traumas, including overdose, they experienced or witnessed. Alfred, described in a previous section, commented:

> I was living a life of destruction. I was living a life of unmanageability. I was living a life that sooner or later, you know, it was going to be jail or institution, or I was going to die. And I made a conscious decision that I didn't want to go to jail; I didn't want to be in no institution, nor did I want to die. (Alfred, former user)

Facilitators and Processes for Cessation

Participants mentioned several facilitators of, and processes for, heroin cessation, including practical and emotional support from family and friends, drug treatment, spirituality, strategic avoidance of triggers, exercise, and quitting “cold turkey” (Table 4). Former users reported a greater number of facilitators and processes than those who relapsed; for both groups, social support was most frequently mentioned. Relapsed users focused more on avoiding triggers and were less likely to report benefits from drug treatment, as compared to those who were able to successfully abstain from drug use.

Social Support—Assistance from friends and family was critical to a number of participants. Support included the provision of information, ongoing pressure, and considerable practical assistance during periods of withdrawal. Several participants noted that the individuals that helped most were former users who knew that change was possible. For example, Oscar, described in a previous section, started using heroin while incarcerated (for a parole violation) at age twenty-seven; at the time of his interview, he hadn't used for two years. His recounting of assistance received during withdrawal was similar to descriptions provided by other participants. The friend who helped him had been addicted to heroin as well but hadn't used for 17 years.

A I actually, I really couldn't do it myself. I went to my friend's house and he specifically prepared a room for me.

Q What did he do?

A He had like a bucket with cold water, warm water and hot water with a rag. He had a bucket for me to throw up and whatever I needed to use the bathroom. He had a bathroom in the bedroom, and he locked me in there. I sweat, I cried. He put a fan there, because he had a window and he boarded the window, because he was scared I was going to climb through the window and go pick up. And I

> had a fever of 101.6. He gave me a bath. He took care of me. But the withdrawal lasted me four days. I was sick for four, it's horrible. (Oscar, former user)

Jim, described in a previous section, received support from his wife throughout his withdrawal:

> It was very, very hard. The withdrawal part, I had to handcuff myself to the bed. So that way I know I'm not going nowhere, and my wife had the key. She would feed me breakfast, lunch and dinner and I sweated, I kicked, I yelled, I screamed. I went through a lot of, a lot of drama, a lot of drama.

He continued:

> It was rough on her too `cause here I'm, you know, a lot of times I'm like yelling and going through my changes like, “Oh, okay, unhandcuff me, I want to get the fuck out of here, let me out of here, yo okay fuck it. I want to get out of here,” and she's like, “No. You told me specifically to keep your ass handcuffed and that's what I am going to do.” And even though I yelled at her, like after I calmed down, I felt good that she listened to what I said. (Jim, former user)

Treatment—Engagement with programs and services focused on drug cessation were common among study participants. A large number had been through detox at some point, and virtually all (n = 28) had enrolled in methadone programs. Eighteen participants (12 former users, 6 relapsed) were on methadone at the time of the interviews. Although it was not effective for all participants, several felt that methadone was critical in facilitating abstinence from heroin and had positive perceptions of it. Gordon has spent more than half of his life in prison. He relapsed 15 times prior to his successful cessation attempt:

> The methadone was the best program, because it gave me the opportunity to re-start my life. And in the detox program, I felt that it wasn't helpful except for the methadone they gave me. I didn't like the NA meetings; groups are not for me. So what really helped me quit was methadone (Gordon, former user).

As a general rule, former users on methadone hoped to eventually transition off of it. Dawn felt that methadone “*is number one*,” but commented: “eventually I'm going to even get off the meth, so you know … that's definitely in the cards.” She has reduced her dose from 80 to 60 mgs. and only takes it the three days per week that she goes to her program (she saves the take home doses, in case she wants to travel). Dawn's mother was on methadone until her death, which Dawn feels is a frightening prospect.

Several participants were able to stop using heroin without opioid replacement therapy. Generally, they reported that quitting “cold turkey” was relatively easy to do when young (“Of course, I'd be restless, but in a few days it passed and I was good,” Ricardo, current user), but very difficult as they aged. Assistance from friends or family was typical:

> **Q** How did you do it? Did you not have cravings? Were you not sick?
>
> **A** Yes I was sick, I was sick, but I just stayed in my house and I bought me like, 10 packs of Tylenol PM cause I understand that it's going to have me tossing and turning during the night - so I bought me Tylenol PM and I just did it.

Q Alone? Did your wife help you?

A Yeah, my wife helped me.

Q How did she help?

A She talked to me, like, “I know you can do it, stay in, stay in.” But I was agitated, like, “Come on, alright, I love you babes, just leave me in the room by myself.” And I stayed in the room tossing and turning. Every time I started getting sweaty, I jumped in the shower, and the shower made me feel good (Jamal, former user).

The acceptability and perceived impact of group counseling was variable. A number of participants were averse to sitting in groups of drug users; however, others felt such opportunities were helpful, due to connections to sponsors, exposure to people they could emulate, and exposure to those who served as reminders of the adverse consequences of addiction. Paulo, quoted in a previous section, felt that depression and isolation have led to relapse in the past. He appreciated the group experience:

> I do some groups, mainly groups. See, I do them once a week. And that does help a lot too… It keeps your mind focused, you know, gives you focus on what you want to do, what you want to accomplish (Paulo, relapsed user).

Kyle has been in a methadone program for two years but had a contrasting view of the groups.

> We have to do mandatory groups, and I did my mandatory groups and basically I don't go to groups because I don't believe in groups. Because I think that the only person that can help you is yourself (Kyle, former user).

Perceptions of individual counseling also varied, with some participants expressing significant respect and affection for their counselor, while others complained of unreliability or breaches of confidentiality.

Life Changes—Independent of how one attempted to quit heroin (i.e. treatment or not), cessation from drug use necessitated a number of sustained life changes, which were linked to perceived relapse causes, including depression, boredom, stress, and triggers. Participants described efforts and activities to keep themselves (and their mind, in particular) occupied. These activities included television; movies; school; work (if available); hobbies; socializing (with selected non-using individuals); and exercise, including *tai chi*, soccer, basketball, weight-lifting, running, and walking. The reported benefits of exercise included diversion, enjoyment, and increased discipline. A conscious avoidance of triggers—including drug-using social networks, particular environments, alcohol and other drugs, and cash—was also considered necessary and required significant strategic thinking. Tammy, a self-described “*late bloomer*,” started using drugs at age 26. She described herself as “*basically a church, God-fearin' person*” that chose the “*wrong*” friends. She had stopped using heroin for a year at one point but relapsed and is trying to stop again.

> Another thing is money is my trigger, and I'm gettin' ready to get a lot of money from SSI. So I already made a plan, I told my mother, my cousin could be the

> payee… I already stopped at Mutual Washington to set up three CD accounts [for my children and grandchildren], so they gonna have their money, and then mine's gonna go direct deposit. And then, then I'll take care of that and have money put aside for my mother for her, give some money now and for her funeral and stuff like that. So for burial expenses, funeral expenses. (Tammy, relapsed user)

Art has been on methadone for over a decade, but still uses heroin on weekends. He noted the pervasive temptations:

> And then you fight it, fight it. I remember one time I ran into the store and bought, I'm addicted to crossword puzzles, I bought me a crossword puzzle so I wouldn't have the $10 [for drugs] (Art, relapsed user)

Dina, a former user, gives her benefit card to her landlord to hold. She also asks her landlord to hold petty cash provided to her by her employer for incidental purchases and jewelry that she fears she might be tempted to pawn.

For many participants, spirituality facilitated a sense of support and necessary attitudinal and behavioral change, which may in part reflect the importance of faith in 12 Step groups. Rather than organized religious services, spiritual beliefs, prayers, and reading the Bible were considered important to participants, including close to half of those who had successfully stopped heroin use.

Dawn is married with two children, ages 16 and 28. Her parents died young from drugs and HIV, and she was raised by her grandmother. Despite being pregnant, she was her high school class valedictorian. She has been in a methadone program for eight years.

> You're a recovering addict. You're not an active addict, put it that way. You know? Because anything can trigger that monster boy, you know? I think that I have a lot of faith. Faith in whoever, whoever you want to have faith in. That be God or Allah, whoever it is, Buddha. You have to have something bigger than yourself, you know? (Dawn, former user)

Discussion

Our findings provide important user-perspective information on motivators, facilitators, and processes for prolonged heroin cessation. Our New York City sample was primarily low income, African American and Latino, with low educational attainment. They described extensive personal hardship and trauma, prior—and subsequent to—heroin initiation. Despite these difficulties, they demonstrated significant strategic capabilities, as well as inner—and interpersonal—resources, which were evident in their toleration of un-medicated withdrawal symptoms, demanding treatment regimens, and sustained cravings. They described strong motivators to overcome heroin dependence, some of which were phrased in terms of concrete outcomes to be avoided or ultimatums, as in “quit or else.” Additional research is recommended that explores these key decision points and their potential for catalyzing sustained positive change.

More generally, quality of life concerns, including financial constraints, severe dysfunction, and feeling "tired" of the drug using life were the most commonly cited motivators for cessation. Interpersonal connections, primarily to family, were also considered key. Participants expressed dismay with the devastating impact of heroin use and wanted to maintain or rebuild relationships and "do right" by family members—both financially and emotionally. A number of participants also described fear of specific outcomes as strong motivators. These included fear of incarceration, infection, overdose and death.

Although methadone was considered to be effective for approximately half of those who successfully stopped heroin use, a significant portion of the sample were able to sustain cessation without it. Most participants cited the importance of a combination of factors, including instrumental and emotional support from friends and family, spirituality, consistent avoidance of triggers, and exercise. Participants were very conscious of the significance of these factors and put great effort into maintaining their relevance over time. Several reported that noticeable progress toward personal goals served as motivators that increase confidence and facilitated sustained cessation and other behavior changes. Those who had successfully quit heroin were better able to describe their own specific motivators and facilitators, suggesting the importance of counseling and support that supports individualized solutions, reflecting personal priorities and concerns.

There are several limitations to this study. All data are self-report and drug use and cessation are difficult topics to recount due to stigma, emotion, and memory constraints (Carr 2008). In addition, some participants had significant treatment experience; and, despite our best efforts to thoughtfully probe, their interviews may have been biased by explanations and responses learned—and often repeated—in treatment settings (Holland et al. 1998). Furthermore, the sample is relatively small and, from a socioeconomic perspective, homogeneous. The extent to which findings represent larger and more diverse populations of heroin users is unknown. Heroin users with more economic resources may be able to access treatment in better environments than those available to low income populations. In addition, they may have had easier access to other treatment options, including buprenorphine. Finally, the extent to which findings are particular to heroin cessation, as compared to other drugs, is not known. Given the focus of the study, we did not collect sufficient data on cessation from other drugs to draw conclusions. It is likely that motivators would be consistent across substances (e.g., family connections and fear of legal and health consequences). However, it is clear that physical addiction and a fear of withdrawal represent huge challenges to heroin users, setting heroin cessation apart from other experiences.

Despite these limitations, these findings make a contribution to the literature on drug use. First, the focus on cessation, independent of treatment, remains uncommon and allows for a greater understanding of pathways to heroin abstinence. Second, our exploration of prolonged cessation is unusual, allowing us to go beyond the short-term fixes to processes and strategies that continued over months and years. Third, differences between former and relapsed users in the frequency of reported motivators and facilitators suggest topics for analysis in larger studies. Finally, our use of qualitative methods allows the study participants to speak for themselves and to describe their perceptions and experiences in

detail. Their reports demonstrate strong motivation, committed support systems, and the deliberate and thoughtful strategies employed in order to abstain from heroin use. Providers working in drug treatment, harm reduction, and other settings can incorporate this information into sessions to promote more personal and multifaceted approaches that might facilitate improved treatment outcomes and quality of life for individuals working to abstain from heroin use. Similarly, other users may be empowered and instructed by these successes (which often reflect multiple attempts), and may use the examples to identify motivators and processes that are most likely to be effective. This information may be most useful to those averse to treatment and/or 12-step programs—and those for whom such programs have proved ineffective—as it suggests multiple routes to cessation.

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Table 1

Interview Domains and Topic Areas

Domain	Topic Areas
Background	• Early life • Family and significant others • Living situation (neighborhood, housing, household members) • Sources and stability of income • Recreation and leisure activities
Health status/health history	• Mental and physical health status • Health service utilization • Self management
Traumatic events	• Violence • Incarceration • Deaths
Social Support	• Network composition and roles • Substance use among social network members • Perception of social norms, ideals, and pressure • Involvement with religious or other formal institutions
Drug use history	• Initiation (how, why, when) • Patterns of use (types, frequency, duration) • Self management of use • Drug use impacts (emotional, practical) • Feelings about drug use by self and others • Drug-related life experiences (self and network members)
Treatment experience	• History, including modalities and services • Access • Motivations for enrollment/participation • Barriers/facilitators of enrollment/participation • Effectiveness • Perceptions
Cessation attempts	• Frequency and duration • Motivation and/or triggering events • Strategies utilized • Facilitators and barriers • Outcomes
Maintaining abstinence	• Coping with cravings and triggers • Alternatives to use • Changes in lifestyle and social network

Domain	Topic Areas
	• Social and tangible support • Facilitators and barriers
Relapse	• Motivators • Triggers
Assessment of use vs. cessation	• Relative well-being • Ability to cope • Changes in health status • Economic stability

Table 2

Sociodemographic Characteristics and Drug Use of Participants

	Relapsed Heroin Users (n =11)		Former Heroin Users (n=20)	
	n	**%**	**n**	**%**
Gender				
Male	10	90.9	14	70.0
Female	1	9.1	5	25.0
Transgender/Transsexual	0	0.0	1	5.0
Racial/ethnic background				
Hispanic/Latino	7	63.6	13	65.0
Black	3	27.3	6	30.0
White	1	9.1	0	0.0
Mixed race/ethnicity	0	0.0	1	5.0
Age (mean, sd)	40.1	4.6	36.6	5.5
Marital status				
Single, never married	9	81.8	15	75.0
Married, living as married	1	9.1	4	20.0
Separated	1	9.1	1	5.0
Education				
Less than HS diploma	6	54.6	10	50.0
HS graduate+	5	45.5	10	50.0
Total legal income before tax (annual)				
Less than or equal to $5,000	9	81.8	14	66.7
Over $5,000	2	18.2	5	23.8
Ever been homeless (yes)	10	90.9	15	75.0
Drug use and history				
Age first used heroin (mean, sd)	24.3	8.5	22.9	6.2
Ever used cocaine or crack	11	100.0	20	100.0
Cocaine or crack in last 3 months	7	63.6	7	35.0
Ever injected	6	54.5	10	50.0
Injected in the last 3 months	4	36.4	1	5.0

Table 3

Commonly Mentioned Motivators for Cessation

	Relapsed Heroin Users (n =11)		Former Heroin Users (n=20)	
	n	%	n	%
Quality of life				
Financial implications of drug use	5	45.5	13	65.0
Desire for betterment	0	0.0	13	65.0
“Tired”	4	36.4	7	35.0
Hitting rock bottom	4	36.4	5	25.0
Interpersonal connections				
Children/grandchildren	2	18.2	8	40.0
Partners, parents and other family members	2	18.2	7	35.0
Fear				
Incarceration	2	18.2	7	35.0
Death from HIV, overdose or other	0	0.0	4	20.0

Table 4

Commonly Mentioned Facilitators/Methods for Cessation

	Relapsed Heroin Users (n =11)		Former Heroin Users (n=20)	
	n	**%**	**n**	**%**
	4	36.	10	
Social support (friends, family)		4		50.0
Drug treatment (any type)	1	9.1	10	50.0
Religion/spirituality	2	18.2	9	45.0
Avoiding triggers	3	27.3	6	30.0
Exercise	2	18.2	6	30.0
Cold turkey	0	0.0	6	30.0
Improved quality of life	1	9.1	3	15.0