Published in final edited form as:

J Subst Abuse Treat. 2018 March ; 86: 86–93. doi:10.1016/j.jsat.2018.01.003.

A Qualitative Assessment of Attitudes About and Preferences for Extended-Release Naltrexone, a New Pharmacotherapy to Treat Opioid Use Disorders in Ukraine

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Abstract

Numerous individual barriers, including negative attitudes toward opioid agonist therapies (OAT), have undermined HIV prevention efforts in Ukraine where the epidemic is concentrated in people who inject drugs (PWID). The recent availability of extended-release naltrexone (XR-NTX), an opioid antagonist, provides new opportunities for treatment and prevention, but little is known about patient preferences. We conducted qualitative analysis using focus groups (FG) of PWID recruited based on OAT experience: currently, previously, and never on OAT in five Ukrainian cities. FG included 199 PWID in 25 focus groups. Focus group transcripts were coded and analyzed using a modified grounded theory approach to identify common themes and domains related to attitudes about and preferences for XR-NTX, relative to other treatments. Interest in XR-NTX was supported if supervised opioid withdrawal and psychological support were assured. Other factors supporting XR-NTX included a focus on younger PWID early in their injection career and motivated for recovery. Perceptions of recovery included not receiving psychoactive medications like methadone or buprenorphine. With more information, XR-NTX could be a viable option for PWID in Ukraine, especially if concerns regarding withdrawal and psychological support are adequately addressed.

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Conflicts of interest: None for all authors except FLA

FLA Speakers bureau fee: Bristol Myers Squibb, Merck, Gilead Sciences, Practice Point Communications

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Keywords

patient preferences; addiction; medication-assisted treatment; opioid use disorders; extended-release naltrexone (Vivitrol®); Ukraine; HIV; people who inject drugs; implementation science

1. Introduction

Three evidence-based medication-assisted therapies (MAT) are available in Ukraine to treat opioid use disorders (OUDs). Among these, two are opioid agonist therapies (OAT), including maintenance treatment with buprenorphine (BMT) and methadone (MMT). BMT and MMT were introduced in Ukraine in 2004 (Bruce, Dvoryak, Sylla, & Altice, 2007) and 2008 (Lawrinson et al., 2008), respectively. Extended-release naltrexone (XR-NTX), a complete opioid antagonist, was introduced in 2009 in Ukraine to treat alcohol use disorders and its indication was expanded in 2014 to treat OUD. XR-NTX use, however, has been limited by its high cost relative to methadone or buprenorphine. Ukraine's HIV epidemic remains concentrated in people who inject drugs (PWID), primarily opioids, and their sexual partners (Kiriazova, Postnov, Perehinets, & Neduzhko, 2013; Mazhnaya et al., 2014). Expanding methadone coverage remains the most cost-effective strategy to avert new HIV infections in Ukraine. When combined with high coverage of antiretroviral therapy (ART), HIV transmission is most effectively reduced, but at a higher cost (Alistar, Owens, & Brandeau, 2011). Despite public funding of OAT (Dutta et al., 2013), numerous individual and structural factors have impeded OAT scale-up. Barriers to OAT scale-up include unclear treatment goals, dosing concerns, treatment site factors, and legal policies and regulations (Bojko et al., 2016). Principal among the barriers to OAT scale-up expressed by PWID (Bojko, Dvoriak, & Altice, 2013; Bojko et al., 2015; Bojko et al., 2016; J.M. Izenberg et al., 2013; Mazhnaya et al., 2016; Mimiaga et al., 2010) and providers (M. Polonsky et al., 2016) has been strong negative attitudes toward OAT, believing it is harmful to health, substitutes one addiction for another and it is a treatment of last resort. Despite rapid scale-up of OAT in Ukraine from 2004 to 2010, scale-up remained stagnant with only 2.7% of the 340,000 PWID receiving it (Degenhardt et al., 2014; Wolfe, Carrieri, & Shepard, 2010).

Despite its high cost, relative to methadone or buprenorphine, XR-NTX potentially overcomes many documented OAT entry barriers (Alanis-Hirsch et al., 2016; Cousins et al., 2016). For instance, XR-NTX may avoid governmental “registration” as a drug user that involves revocation of driver's license, restrictions on employment and increased police harassment (Jacob M. Izenberg et al., 2013; Kutsa et al., 2016). Conversely, it requires supervised withdrawal (detox) either in governmental hospitals or administration just before release from prison. XR-NTX does, however, provide new opportunities for treatment, including monthly rather than daily clinic visits and dual treatment of alcohol and opioid use disorders, which co-occur often in Ukraine (Azbel, Wickersham, Grishaev, Dvoryak, & Altice, 2013). Its opioid antagonist properties may avoid drowsiness or sedation drug interactions with HIV or tuberculosis medications (Altice, Kamarulzaman, Soriano, Schechter, & Friedland, 2010), and when not interrupted, prevent overdose (Volkow, Frieden, Hyde, & Cha 2014).

In the presence of low OAT coverage and scale-up, we incorporated questions regarding XR-NTX into our interview guide before conducting qualitative interviews to increase our understanding of PWID's willingness to receive XR-NTX as a “new” evidence-based MAT to treat OUD in Ukraine. The objective was to better understand patient preferences and alternative strategies for treating OUD in preparation for introducing XR-NTX after its expanded indication to treat OUD in Ukraine where MAT scale-up has been thwarted by individual, clinical and structural factors (Bojko et al., 2016). Before introducing XR-NTX, it is crucial to understand how patients may view it for both treatment and HIV prevention in the Eastern European and Central Asian (EECA) context, the only region where both HIV incidence and mortality are increasing and where the epidemic is concentrated in PWID (UNAIDS, 2016).

2. Material and Methods

2.1. Participants

Focus groups (average 8 per group and lasting 60-90 minutes) were conducted in five cities in Ukraine (Donetsk, Lviv, Odesa, Mykolaiv, Kyiv) in February-April 2013 to assess perceptions about and acceptability of XR-NTX in Ukraine. The 199 participants were 18 years of age or older and resided or worked in the focus group city. All met ICD-10 criteria for OUD and were recruited by local research assistants from OAT treatment and harm reduction sites based on their OAT experience: ‘currently’ (On OAT), ‘previously’ (Previous OAT), or ‘never’ (Never OAT) on OAT. FGs were conducted separately for each type of OAT experience; the currently on OAT group was further separated by years of treatment (i.e., less than or greater than 1 year). A mixed OAT experience group was held in Odessa but not continued in other cities due to the extreme heterogeneity of the FG. Women-only groups were conducted in each city.

2.2. Data Collection

The FG topic guide included specific questions about XR-NTX, with one moderator and one note-taker expanding the discussion based on responses to four questions:

1. If you were offered medication to treat your opioid addiction that would completely block opioids, meaning you could NEVER get high even if you shot up (the opposite of how methadone works), would that be of interest to you? (Why/Why not?)
2. If someone offered you methadone, buprenorphine or another medication that is administered every month as an intramuscular injection (a shot in your buttock monthly versus daily tablets requiring daily supervision) to help treat opioid addiction, which would you choose and why?
3. What is the most important thing you consider when choosing a treatment for opioid addiction? (Probe for dosage, frequency of administration, route of treatment administration, location of facility, stigma, co-treatment of alcohol problems, side effects, physiological feeling, ability to treat alcohol problems, cost, etc.)

4. How do you feel about receiving shots/injections? What about if the shot/injection is one time every month?

2.3. Analysis

FGs were audio-recorded, transcribed, translated and back-translated from Russian/Ukrainian to English (Brislin, 1970). Transcriptions were uploaded into MAXQDA (MAXQDA: VERBI Software – Consult – Sozialforschung GmbH, 1989-20164) and coded to identify themes. A code book was developed to minimize ambiguity in coding by four coders who were trained in qualitative methods. Codes were identified based on a priori knowledge of MAT and XR-NTX and those that emerged from review of the transcripts. Transcriptions were coded by at least two coders to assure all pertinent themes were identified. Coders met periodically to discuss and clarify coding. A specific code for XR-NTX or “Vivitrol” was used to mark phrases and sections in the transcripts when XR-NTX was discussed. Coders were instructed to use the XR-NTX code wherever knowledge, attitudes, and beliefs discussions occurred. A modified grounded theory approach (Glaser & Strauss, 1967; Strauss & Corbin, 1998) was used to understand common themes and domains.

2.4. Human Subjects

The study was approved at institutional review boards at Yale University, the Ukrainian Institute on Public Health Policy and the Gromashevskiy Institute at the National Academy of Medical Sciences.

3. Results

The characteristics of the participants, described previously (Bojko et al., 2015), were predominantly male (66%), completed high school (71%), and unemployed (80%). There were 82 (42%) current, 33 (16%) previous and 41 (21%) never on OAT participants (see Table 1).

The main themes identified by participants related to attitudes and perceptions about XR-NTX included perceptions about the “ideal” XR-NTX candidate, the need for concomitant psychological support and supervised “detox” prior to initiating treatment and fear of prolonged withdrawal symptoms after starting XR-NTX. Beliefs about treatment effectiveness of XR-NTX, which included substituting non-opioid substances and views of acceptance of the treatment, such as readiness for change and a willingness to try XR-NTX, were also predominant themes. Some stated they had received oral naltrexone and thus felt they were familiar with the medication, its side-effects and its effect on drug use. Others had heard of XR-NTX and based their perceptions on information they had received from other PWID. Although they were told that detoxification is required prior to receipt of XR-NTX, many expressed fear of prolonged opioid withdrawal if not completely detoxed. Several discussed being “addicted to injecting” and fear they would want to continue to inject despite the inability to feel the effects of opioids when using an opioid antagonist. Others discussed the belief that they would find other substitutes (e.g., alcohol or non-opioid drugs) to get high while on XR-NTX.

3.1. An “idealized” candidate for XR-NTX

Based on their understanding of XR-NTX, participants envisioned XR-NTX would work best for younger PWID with less prior experience with drugs and not already experiencing “psychological addiction” to injecting drugs, which may refer to the severity of their addiction. Andrey (Lviv, Never OAT) expressed this as:

It suits drug users who have been injecting not so long, and who have not yet developed psychological addiction. That is, his parents noticed it in time and took some measures. They put him in a clinic, put him on a drip [medication treatment], and remove the physical withdrawal. Then he gets Vivitrol it may work before a person develops a strong psychological addiction. And for people like me who have used drugs for 10-15 years, it will not suit me.

This expectation that XR-NTX is preferable for young PWID with less injecting history implies a connection to parental involvement, often seen in younger PWID. For this reason, identifying young people before they became “addicted” to getting high or transitioning to injection was a goal, especially since participants related continued injection to eventually overdose that XR-NTX might not prevent. For example, participants previously on OAT in Donetsk stated:

Volodya: Yes, of course, it's like after detox, because it does not help to get rid of withdrawal.

Pasha: I can tell that it will be suitable for a golden youth, whose parents noticed that he had been injecting. And they would take him to the doctors, where they will clean his blood [detox] and give him this special injection so it would not be necessary to control him. Though it will be necessary to control him because the son might inject himself many times and get an overdose as a result. This is the problem.

Volodya: It can be suitable for the poor kids of rich parents, like buprenorphine is.

3.2. Need for Psychological Support

Participants believed that XR-NTX would need to be combined with psychological support since the desire to continue to inject would presumably remain strong without an agonist. Their experience with daily treatment with MMT or BMT provided continuous contact and support from a doctor, nurse, or social worker. The notion of monthly injections void of daily interactions was worrisome. Hence, it is not surprising that participants expressed the need for more extensive counseling if XR-NTX is to be successful. For example, Diana (Kyiv, On OAT < 1 year) stated:

I probably could even try this treatment [XR-NTX] after a detox, but I believe that I would need psychologists to assist me, not once a week, but every day, and it would be morally easier for me. But staying home where I have nobody to support me or to ask for help, to complain to or simply share something won't work. But if they [psychologists] were helping me, I would probably try it.

Her thoughts were echoed by others from Lviv (On OAT > 1 year) who discussed similar needs for psychological rehabilitation, which they felt was preferable to receiving OAT:

Moderator: Yura, and what would be important to you if you would receive XR-NTX?

Yuri: I'd like to go through rehabilitation.

Moderator: What kind?

Yuri: Well, mental. Because after you live with drugs for so long, and then it's not so easy to quit. I use methadone until I can get rehabilitation. So anyway there should be some rehabilitation without methadone. Working with a psychologist for a while so that I spend my time with different people, socializing, so that when I get back to society, I mean...

Oleg: You've got to have serious preparation.

Yuri: Yeah. So that I don't have this urge. Wait, where should I go? Oh! I go to Oleg, maybe he gives me a half of his pill.

Others discussed the power of addiction and the need for external support, acknowledging they can't stop using drugs on their own. Participants perceived that receiving methadone itself was not rehabilitation, which was supported by Tanya from Odesa who had previously been on OAT:

I think, before starting such treatment [XR-NTX], one should work with a psychologist for pretty long, you know... I mean, the person should reach this point so that he wants to stay completely clean. If I am almost 50 and I am not off [drugs], it means... I need them. I know that I need to work with a psychologist almost every day to stay completely clean. I mean, to get off drugs. Get off everything [including OAT]... I mean, knowing that I gotta... help my daughter and my grandson, and also my second granddaughter and... for all this you really need a psychologist. For this psychologist to work with you because on my own, I'm telling you that at my age if I didn't get off drugs myself, I definitely need it [support], it's... well, every person has his own mindset, right?

3.3. Need for Detox and Fear of Withdrawal Symptoms

Participants emphasized the need for humane supervised detoxification prior to initiating XR-NTX. They were quite concerned that the XR-NTX injection would precipitate withdrawal. Andriy (Lviv, Previous OAT) said, "Well, first you've gotta get a detox, that's a must. As it starts... it accelerates the withdrawals so that it is not possible physically...and psychologically."

Lack of understanding about the opioid antagonist properties of XR-NTX caused participants to discuss the fear of withdrawal and the perception that opioid withdrawal symptoms would be prolonged, lasting all month long until the next injection was given. This concern was combined with their perception about the detox process. Others did not believe in the efficacy of any pharmacotherapy.

Oleksandr: For a drug addict, physical pains of withdrawal symptoms are the worst.

Yura: If withdrawal symptoms emerge, that's it! You're off looking for a binge.

Blockers? You will surely go looking for drugs...

Oleksandr: If a person wants to get a shot [opioid], he or she will do all it takes, you see? It's like when I was entering the [OAT] program when this desire was very strong.

Andrii: Aha, there is no effect of physical pains due to withdrawal or any other worsening of side effects.

Yura: A blocking agent, generally speaking, it's like this medication methadone that we take now, then I would not feel the withdrawal symptoms.

Sasha (Kyiv, On OAT < 1 year) reiterated this shared belief about prolonged withdrawal while on XR-NTX:

I can tell you clearly what I think and I believe everyone will support me. You should understand that the problem is not to block me, yes? And I'll be having withdrawal [symptoms] the whole month and what's the point that I would not be able to get rid of it? It turns out that I'll be having a withdrawal during the whole month, feeling awful and I would be eager to inject and I would try to inject...

3.4. Attitudes about and acceptance of XR-NTX

3.4.1. Readiness for Change—Attitudes toward the use of XR-NTX were overall positive with participants discussing the importance of being ready to change, end their opioid use and consequently willing to try XR-NTX. Their willingness to make a change to take a new medication, XR-NTX, was grounded in their perception that OAT kept an individual addicted and removing all psychoactive substances was essential to achieve full recovery. An individual's readiness for change was expressed as essential for engagement in a novel treatment that could lead to recovery. Yet, others took a hardline perspective that if peers were ready to stop using drugs, they would, should and could do it on their own without assistance from any medication. Mention of “own free will” or personal choice was evident in these discussions. For example, several participants from Kyiv (On OAT) explained their belief that stopping or using drugs was a matter of personal choice:

Dima: The only way to recover from this is to get everything out of your body.

Yulya: Yes-yes. Or, well, when Dima made up his mind to quit, he himself ... I mean, a man comes to this decision himself, and he doesn't need this back-up crutch every month. And it's not for a week, or a month, or 4 years. It's just like... here's a drug, but the man doesn't opt for it. He's got money, but he doesn't spend them on drugs. And it's a matter of time and of individual choice. Again, it's everybody's individual choice.

Dima: I've been with a hidden stash for three years and I never touch it.

Yulya: Well, again, it's when a man has reached the point when he is what he is.

Dima: It's more for youth, for those who can quit.

3.4.2. Willingness to Try XR-NTX as a “Way Out” of OAT—Deciding to stop using drugs or initiate medications to treat their addiction varied from enthusiasm for having a new

alternative to skepticism that any medication was a “crutch”. A group of participants from Lviv (On OAT >1 year), however, seemed motivated to initiate XR-NTX:

Yuri: I want to get this injection so that I'm all blocked. That's my guarantee...I want to get off all drugs [OAT], to be fully detoxed. That's what I want. If I was offered Vivitrol® (XR-NTX), I'd agree, it's probably 200%. Quit the drugs and so that I go there every two weeks or every month and get this injection to my buttocks – boom! That's kind of a guarantee ... Oleg: Yeah, it's clear, it's clear.

While OAT participants were interested in trying XR-NTX, potentially as a non-addictive alternative and to avoid daily clinic attendance, those never on OAT recognized it as a new and potentially better option. Aleksandr (Donetsk, Never OAT) discussed his perception about XR-NTX:

Well, it must be good for some people. Every person responds to treatment differently. Some need substitution programs as a way out. For others, this other program [XR-NTX] will be a way out. And for some, there's no way out.

4. Discussion

To our knowledge this is the largest qualitative study of attitudes, beliefs, and preferences for OUD and acceptance of treatment initiation with XR-NTX. Findings here, in part, complement quantitative survey findings of patients' preferences for XR-NTX, which include never having been prescribed OAT previously, newer initiates to injection and expressing profoundly negative attitudes toward OAT (Marcus et al., 2017). These findings are crucial for the EECA context where treatment of OUD in Ukraine and other EECA countries has been restricted more by moral biases and prejudices than by scientific evidence and also greatly influenced by Russia where OAT is banned (Bojko et al., 2013; Cohen, 2010; Elovich & Drucker, 2008; Galeotti, 2016; Oakford, 2016; Samet, 2011). Furthermore, the recent conflict in Ukraine is influenced by social, political, and economic interjections by the Russian Federation which have impacted OAT scale-up and HIV prevention (Kazatchkine, 2014). The EECA context is also home to the only remaining region where HIV incidence and mortality continue to increase (Joint United Nations Programme on HIV/AIDS (UNAIDS), 2016), driven mainly by PWID, making effective treatment for opioid use disorder crucial. XR-NTX is legally available in Russia where OAT is banned, but its cost and the perception that addiction is a social but not a medical problem limits its use to treat addiction (E.M. Krupitsky, Zvartau, & Woody, 2010). Addiction, which is treated by the discipline of narcology, is heavily influenced by Soviet ideology, which continues today in Russia (Galeotti, 2016; Oakford, 2016). Narcology in Russia has been unequivocally opposed to OAT, despite its evidence, leaving intact ill-informed drug policy and law enforcement strategies that operate without attention to public health and evidence-based medicine.

The lingering influence of this Soviet-style legacy of treatment for OUD was expressed by a preoccupation with the need for psychological support that must be yoked to XR-NTX treatment. Counseling provided in Ukraine, however, does not adhere to any evidence-based counseling strategy. Perhaps a patient-centered, integrated approach that combines

individual and community resources along a continuum of care, including within primary and mental health services, is needed to address addiction in Ukraine. Peer support provided by current XR-NTX patients or family support may provide reassurance and encouragement for others resistant to trying this form of MAT. Given the stated preference by many to get off all medications, recovery-oriented systems of care (SAMHSA 2010) integrated into community care may aid in prevention, early intervention, and treatment of addiction for some. Participants appeared concerned that a single monthly visit for an injection would leave them without daily supportive contact that is available at MMT/BMT programs. The stated need for daily counseling (i.e. to discuss craving and withdrawal symptoms) likely derives from decades of having only psychological counseling available to treat addiction, which become intrinsic even within current MMT/BMT programs. The data supporting more frequent behavioral counseling in patients prescribed MAT, however, is mixed as a strategy to improve retention (Timko, Schultz, Cucciare, Vittorio, & Garrison-Diehn, 2015). One prospective randomized trial found no benefit of enhanced counseling for BMT (Fiellin et al., 2006), while real-world addiction treatment outcomes in primary care settings were improved with supplemental counseling (Haddad, Zelenev, & Altice, 2013, 2015). The use of medical management counseling with XR-NTX has not been studied for OUD, but is recommended for alcohol use disorders (O'Malley, 1998).

Negative attitudes toward OAT influenced the FG participants' enthusiasm for XR-NTX, yet this must be tempered by the impression that “recovery” could not be achieved unless PWID became free from all “crutches” like OAT, which might be extended to XR-NTX. This may, in part, explain that acceptability was not higher in PWID who have profoundly negative attitudes toward OAT in Ukraine. Decades of abstinence-based treatments linked to extensive psychological counseling (Elovich & Drucker, 2008), expressed in FGs as desirable for XR-NTX initiation, is a crucial element for the goal of recovery in Ukraine. This view has pervaded the addiction treatment psyche of PWID (and many addiction treatment clinicians), and may partially explain why XR-NTX was not seen more favorably. OAT was introduced in EECA not as addiction treatment, but as HIV prevention and harm reduction. Harm reduction principles have found little place in the “recovery” literature, including in the EECA region, although a new National Academies of Sciences, Engineering and Medicine report states that OAT and recovery are not mutually exclusive (Amaro & Schwartz, 2016).

The legacy of addiction treatment in the EECA region, and the influence of Russia, may also explain why some support for XR-NTX exists. OAT uptake in the region is driven more by moral biases and prejudices than by scientific evidence (Bojko et al., 2013; Cohen, 2010; Elovich & Drucker, 2008; Galeotti, 2016; Oakford, 2016; Maxim Polonsky et al., 2016; Samet, 2011). OAT is banned in Russia, but XR-NTX is supported due to its “non-narcotic” properties, but is rarely used to treat addiction (E.M. Krupitsky et al., 2010). Hence, modest interest in XR-NTX may have evolved from the legacy of Narcology (addiction treatment), which is dominated by Russia's treatment strategies today (Galeotti, 2016; Oakford, 2016; Maxim Polonsky et al., 2015).

Participants suggest higher acceptability for XR-NTX in PWID who have never received OAT. They expressed mixed feelings about XR-NTX, in part based on their perception of

how XR-NTX works, expressing the need for psychological support and the fear of prolonged withdrawal symptoms and overdose, which is not supported by the evidence (E. Krupitsky et al., 2013; E. Krupitsky et al., 2011; E. M. Krupitsky & Blokhina, 2010). In the absence of providing accurate information about the properties of XR-NTX, patients may conflate OAT with XR-NTX and undermine a patient's interest in XR-NTX. Decisions about agreeing to pharmacological treatment for opioid use disorders are complex and sensitive to patient preferences (Uebelacker, Bailey, Herman, Anderson, & Stein, 2016). They often involve objective trade-offs between the documented benefits of treatment and risks (e.g., stigma, discrimination, convenience and adverse side effects).

In Ukraine, PWID had limited knowledge about XR-NTX, which may have influenced their interest in a new medication. To improve their ability to understand the safety and efficacy of XR-NTX, certain informed decision-making aids (Barry & Edgman-Levitan 2012; Godolphin, 2009; Weinstein, 2005; Weinstein, Clay, & Morgan, 2007) or evidenced-based narratives (Marini, 2016) could be developed that provide accurate information about the range of MAT options available for treating opioid use disorders and encourage discussions between providers and patients. Shared decision-making aids, available as on-line, written, or video materials, often encourages providers to work more collaboratively with patients to achieve successful outcomes. Education of PWID and their doctors about the properties, side-effects, and length of time the treatment and social support is needed may influence the decision to initiate and persist on XR-NTX. An open dialogue of mutual expectations would improve the doctor-patient or social worker-patient relationship and communication. Such decision aids provide cultural advances to support patient preferences and choice in health care (Department of Health, 2008; O'Connor et al., 2009).

There was considerable agreement in the FG data on which PWID might benefit from XR-NTX. Many participants perceived that there was a point of no return when a treatment like XR-NTX would no longer benefit them. This finding was supported in a prospective trial of oral NTX conducted in Russia in young opioid users which hypothesized that the medication was superior to detox plus counseling alone in younger patients because they lived with their parents and the parents had greater investment in treatment, including support for medication adherence (E. M. Krupitsky et al., 2004).

It is conceivable that in the minds of interviewed PWID, interest in XR-NTX, an opioid antagonist, was more acceptable to PWID who've never experienced OAT and consequently not tainted by knowledge or experience with other forms of treatment. Thus, their support for XR-NTX may have been low because they considered it the same as OAT. Negative and positive attitudes towards OAT may influence personal interest and acceptance of XR-NTX treatment (Uebelacker et al., 2016). In a survey of 657 opioid users in Vancouver, 52% expressed interest in XR-NTX (2015). Other studies observed higher XR-NTX acceptability among opioid and alcohol dependent persons with and without HIV in the criminal justice system (Di Paola et al., 2014; Lee et al., 2016; Lee et al., 2015; Springer, Altice, Brown, & Di Paola, 2015; Springer, Altice, Herme, & Di Paola, 2014). Willingness to initiate XR-NTX may be driven, in part, by limited or no availability of other forms of OAT in this setting.

Despite participants being told that XR-NTX would block opioid receptors, there was general agreement that PWID who are “addicted to injecting” would continue to inject despite documented efficacy supporting XR-NTX. Therefore, the desire to inject and to be “high” would outweigh the benefits of XR-NTX. Further, beliefs that being on MAT was substituting one addiction for another are common. Dispelling these myths and providing education to PWID and their families about the benefits of MAT is needed to encourage treatment of addiction as a chronic medical condition.

Any successful introduction of XR-NTX programs in Ukraine will require accurate knowledge and commitment by treating clinicians who would provide it (Fitzgerald & McCarty, 2009). Clinicians often contribute to stereotypes about MAT and influence uptake (M. Polonsky et al., 2015). Aligning patient and clinician attitudes toward MAT can markedly influence treatment entry and retention (Maxim Polonsky et al., 2015; Springer & Bruce, 2008). Overcoming patient, provider, and administrator attitudes and misperceptions toward MAT, and new medications in particular, will require a multi-pronged approach utilizing social media campaigns and social network involvement in which individuals who are successful on MAT influence and recruit peers to initiate treatment. According to the diffusion of innovation theory (Golder & Tellis, 2004; Klepper, 1996; Mahajan, Muller, & Bass, 1991), which examines market acceptability and uptake of new products like XR-NTX, the influence of early adopters, for instance those without prior OAT experience, will encourage the adoption of this novel treatment by others over time.

Recommended steps to assist in increased knowledge about XR-NTX for providers and participants in MAT programs in Ukraine and elsewhere would include: 1) accurate education about benefits and consequences of XR-NTX; 2) need for humane supervised withdrawal from opioids, perhaps with buprenorphine as an outpatient, prior to initiating XR-NTX; and 3) realtime assessment of craving and triggers that can cause relapse and addressing underlying psychosocial stressors when needed while receiving XR-NTX. As newer MAT become available, for instance buprenorphine implants that are effective over a 6-month period (Ling, Casadonte, Bigelow, & et al., 2010), patient preferences may influence treatment uptake.

5. Limitations

This qualitative study provides an initial examination of PWID preferences and perceptions about embarking on a newly-introduced MAT in Ukraine yet it is not without limitations. The method of recruitment of FG participants introduces the potential for selection bias. Moreover, although the FG participants were selected and grouped according to their OAT experience, potentially they do not represent PWID with that same OAT experience. Furthermore, it is possible that participants knew each other and were, thus, not comfortable discussing certain sensitive topics within the group or succumbed to social desirability bias. Despite the large number of FGs we conducted throughout the country, it is possible that the voices we heard do not represent all PWID in Ukraine. The large number of FG from diverse regions of Ukraine, however, may somewhat reduce this concern.

6. Conclusions

Regard for patient preferences, including the introduction of new treatments, will help expand MAT generally, and XR-NTX specifically, particularly in Ukraine where structural impediments inherent in current OAT delivery negatively influences acceptability. Addressing the expressed concerns of PWID who have or have not experienced OAT will increase the likelihood of its acceptance and retention. Accurate information and perceptions of its pharmacotherapeutic properties need to be acknowledged and addressed before XR-NTX use can be scaled up. This is especially true in the EECA region where a large percentage of PWID have co-morbid opioid and alcohol use disorders and may benefit from a single treatment for both disorders. At least in post-Soviet settings, where there is a legacy of psychosocial rehabilitation that has been engrained in the notion of recovery, such services should minimally include evidence-based counseling strategies that have documented efficacy. Increased uptake of XR-NTX in Ukraine may be more feasible with social marketing and education of PWID and providers (M. Polonsky et al., 2016) or by reducing cost. Once patients and providers fully understand the benefits and consequences of XR-NTX, it can be included among the range of treatments available for addiction in a setting where HIV prevention and treatment efforts have been thwarted by under-scaled prevention and treatment of PWID (Joint United Nations Programme on HIV/AIDS (UNAIDS), 2016).

Acknowledgments

The authors would like to thank the local research assistants for their diligent recruitment efforts and stringent data collection and the people who inject drugs in Ukraine who were willing to share their time and perceptions about a novel pharmacotherapeutic treatment for opioid use disorders.

Funding: The authors would like to acknowledge funding from the National Institute on Drug Abuse for research (R01 DA029910 and R01 DA033679) and career development (K24 DA017072 for FLA and K02 DA032322 for SAS) as well as the Global Health Equity Scholars Program funded by the Fogarty International Center and the National Institute of Allergy and Infectious Diseases (Research Training Grant R25 TW009338 for MJB) and an in-country training grant funded by the Fogarty International Center (D43TW000233) through the New York State International Training and Research Program (AM).

Institutional grant support: NIH, NIDA, NIAAA, Gilead Foundation, Merck Clinical Trials, SAMHSA, HRSA

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Highlights

- Opioid agonist therapy is available in Ukraine with limited use by people who inject drugs
- Negative attitudes toward opioid agonist therapies limit its scale-up
- Qualitative interviews among opioid users found XR-NTX to be a viable option for treatment
- Interest in XR-NTX is possible with supervised opioid withdrawal and psychological support
- XR-NTX is particularly preferable for younger PWID who have shorter injection histories

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Table 1

Characteristics of Focus Group Participants (N=199)

Characteristic	Kyiv (N=47) 23.6%		Odessa (N=35) 17.6%		Mykolaiv (N=41) 20.6%		Donetsk (N=45) 22.6%		Lviv (N=31) 15.6%		Total (N=199) 100%	
	N	%	N	%	N	%	N	%	N	%	N	%
Focus Group Type												
On OAT > 1 year	11	23	11	31	8	20	14	31	7	23	51	26
On OAT < 1 year	9	19	--	--	8	20	5	11	9	29	31	16
Never OAT	11	23	5	14	9	22	10	22	6	19	41	21
Previous OAT	9	19	7	20	8	20	7	16	2	6	33	16
Women only	7	15	5	14	8	20	9	20	7	23	36	18
Mixed	--	--	7	20	--	--	--	--	--	--	7	3
Sex (Male)	24	51	22	63	27	65	35	78	24	77	132	66
Marital Status												
Never married/single	9	19	7	20	12	29	12	27	11	35	51	26
Married/live with partner	24	51	18	51	13	32	20	44	15	48	90	45
Separated/divorced	11	23	9	25	9	22	9	20	4	13	42	21
Employed (official)	15	32	8	23	7	17	9	20	0	0	39	20
Education												
Less than high school	12	25	2	6	16	39	19	42	8	25	57	29
Completed high school	13	28	29	83	20	49	17	38	17	55	96	48
Professional technical	12	26	0	0	3	7	6	13	3	10	24	12
Completed higher education	10	21	4	11	2	5	3	7	3	10	22	11