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Conflict and illicit drug markets in Ukraine

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Abstract

This article explores illicit drug markets in Ukraine and whether they have been impacted by Russia's February 2022 invasion. It uses quantitative data from national law enforcement agencies and forensic services to analyse trends in drug-related seizures and arrests. This information is used as a proxy for market size and product change and is triangulated with qualitative information from expert interviews ($N = 47$) in the strategically important *oblast* (province) of Kharkiv on the eastern border with Russia. Kharkiv is employed as a single, 'thick' case study appropriate to a conflict situation in which 'the boundaries between phenomenon and context are not clearly evident'. The findings point to conditions of war reconfiguring transcontinental cocaine and heroin trafficking away from Ukraine, the substitution of plant-based, imported drugs with domestically manufactured synthetics, and new user cultures and cohorts in Ukrainian drug markets, including military personnel. HIV treatment provision has shown resilience and conflict conditions have triggered national debate on drug policy reform. These changes have implications for crime, policing and public health in Ukraine.

Keywords

HIV, illicit drugs, opiates, Russian invasion, Ukraine conflict

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Introduction

In the context of a global illicit trade valued at an annual estimated $650 billion (Kar and Spanjers, 2017), violent conflict is associated with an increase in the volume of illicit drugs cultivated, manufactured and trafficked within and through territories impacted by war and insurgency (Andreas, 2019; Cornell, 2005). Drug-related revenues provide belligerent actors or the state with the resources to pay fighters, purchase weapons, sustain combat and pacify local communities (Kan, 2009). This income can be extracted through violent theft and predation (taxes, protection money), agreement with drug trade actors operating in the area, or direct initiation or takeover of drug crop cultivation, drug manufacture and/or trafficking routes (Mustafa, 2015; Reitano, 2020).

The opportunity of drug revenues is influenced by the position of the conflict-affected territory in the global drug trade. For example, cocaine, opium poppy and cannabis cultivation in source countries of the Global South are associated with protracted violent conflict, including in Peru, Colombia, Afghanistan and Myanmar (Felbab-Brown, 2005; Mansfield, 2016; Meehan and Dan, 2023). In 'trampoline states' that bounce drugs along global supply chains, trafficking organisations can be advantaged by the chaos and impunity of war, and the chance to negotiate new transit routes with conflict actors seeking to profit from the trade. Conversely, conditions may be deemed too unpredictable, violent and costly to maintain cross-border transit. Where the value of the drug trade to conflict actors is low, for example, offset by external military assistance or finances from other commodities (diamonds, oil), the opportunities for rent-seeking, racketeering and supply chain initiation or takeover by the state are minimised. This can result in a reconfiguring of drug transit routes away from theatres of violent conflict. The war in the former Yugoslavia (1991–1996) is an example of this re-routing dynamic (Hajdinjak, 2002; UNODC, 2022a: 4).

This article analyses the impact of Russia's 2022 military invasion on the illicit drug trade in Ukraine. The first section discusses drug supply and demand from the period of the Soviet Union to independence in 1991 and into the pre-invasion period. The historical review is informed by the limited social science and medical literatures on psychoactive substance use in the Soviet Union. Discussion of contemporary national drug market trends in the build-up to the 2022 invasion draws on open-source databases, including the Expert Service of the Ministry of Internal Affairs of Ukraine, the Office of the Prosecutor General of Ukraine, and Ukrainian government agencies such as the Centre for Mental Health and Drug and Alcohol Monitoring in the Ministry of Health. The second section discusses drug trade trends in the case study province of Kharkiv in the 18-month period after the Russian invasion. The observations and experiences of police and forensic science experts elaborate the quantitative analysis of drug market changes. The conclusion considers the contribution of the Ukraine experience to the scholarship on drugs and conflict and highlights six core findings, policy implications and future research agendas.

Ukraine's illicit drug markets in historical context

The soviet period

In the first decades after World War II, preventing public access to dangerous mind-and mood-altering substances was a global governance priority for Western countries and the

new UN organisation founded in 1945 (Bewley-Taylor, 2002). The 1961 UN Single Convention on Narcotic Drugs obliged state parties to criminalise the cultivation of coca, opium poppy and cannabis and the manufacture and distribution of derivative drugs such as cocaine and the opiates heroin and morphine. Medical prescription and scientific research were the only circumstances in which production, supply and consumption activities were permitted, and only then within a tightly enforced system of national authorisations (Bewley-Taylor and Jelsma, 2011).

The Soviet Union, including Ukraine as one of the 15 Soviet Socialist Republics, rebuffed energetic US efforts to build an international drug criminalisation regime administered by dedicated UN and drug treaty bodies (Bewley-Taylor, 2002; Lande, 1962; McAllister, 2002). Soviet authorities were reluctant to gather or share information, despite early ratification (1964) of the 1961 UN Single Convention by Soviet countries. Substance misuse was viewed as a problem specific to Western capitalist societies and conditions of exploitation and alienation that it was claimed did not exist under Soviet communism (Kramer, 1991; Latypov, 2011). The size of the illicit drug trade in the Soviet Union was tiny compared to the West. The 'Iron Curtain' that descended during the Cold War insulated Soviet states from corridors of cocaine, heroin and cannabis trafficking that connected US and European consumer markets with supply from former imperial territories in South America, South Asia and North Africa (Gootenberg, 2001; McCoy, 2003).

Despite authoritarian surveillance, historical traditions of cultivating and consuming cannabis and opiates continued (Kramer, 1990; Miller, 2015). This included cultural ceremonies, their use in cooking, for purposes of sustenance, relaxation, and socialisation, and for pain relief. S*hirka* was a crude, homemade opiate preparation of poppy straw acelytated with chemicals used in varnishes and cleaning materials such as acetone and acetic anhydride (Carroll, 2019: 38; Dumchev et al., 2021; EMCDDA, 2014; Lee, 1992). There was also wild-growing cannabis.

Illicit substances brought problems of dependence. As in Western countries this was concentrated among individuals who developed addiction following prescription of opiate medication (Blackwell, 1988; Courtwright, 1982, 2001). Diverted, traded and stolen prescriptions and state pharmaceutical supplies were the source of illicit opiates for those maintaining a habit but wanting to avoid being officially registered as a drug user (*narkomany*) and forced into compulsory abstinence-based 'treatment' programmes (Gilinskiy and Zobnev, 1998). Supply networks provided access to other depressant, stimulant and anti-psychotic medications such as Chlorpromazine (Thorazine), approved for use in Soviet psychiatry in 1955 (Neuhauser et al., 1990; Zajicek, 2019). State censorship hid the persistence of drug cultures. Research and reporting in medical journals were discouraged. Diagnostic systems obscured drug-specific problems by merging drug- and alcohol-related illness in the broad clinical category of *narkomany* (Gilinsky and Zobnev, 1998; Kramer, 1990). In 1971, the Soviet Ministry of Health reported that 51,000 *narkoman* were in abstinence-based treatment programmes for drug-related disorders. This was a doubling of numbers from 1965, when the figure of 23,714 was reported (Marshall, 2014: 5).

Lack of epidemiological surveillance prevented the tracking of escalating opiate use (poppy straw and morphine) in the 1980s (Carroll, 2019; Miller, 2015). In 1984, 7549

individuals were registered as opiate addicts. This rose to 19,227 people within the 4-year period to 1988, a figure that is thought to be a massive underestimation of use rates (Neuhuaser et al., 1990: 35). Increased drug use and problematic use has been linked to factors generic to the capitalist West and communist East, including youth anomie and counter-culturalism, delinquency and criminality, self-medication and unaddressed treatment need. Large numbers of young men were exposed to cannabis and heroin through military service in the cultivation regions of Central Asia and Afghanistan or following morphine medication for combat injuries (Alexiev, 1988; Lee and MacDonald, 1993; Rhodes et al., 1999). The resin extracted from cannabis plants (hashish, *anasha*) and smuggled from Central Asia was an alternative source of relief.

Post-Independence Ukraine: Zero tolerance and drug trade growth

In December 1991, 92% of voters in Ukraine backed independence from the Soviet Union. Foglesong and Solomon (2001: 5) highlight that independence 'was brought about neither by revolution nor by the overthrow of the ruling elite'. Instead, 'nationalists made a deal with political and economic officials (the nomenklatura) in Kyiv'. Under this accord, 'The nationalists promised not to try removing the government from power… if the government in Kyiv would break with the Soviet Union… This made future political and economic change extremely difficult'. Paralysing institutional conflict followed between one sector of elite and public opinion that continued to support close economic and cultural ties with Moscow, and nationalist and national democrats that wanted to pivot West (Kubicek, 2000: 273). The drug trade formed part of a large shadow economy valued at 60% of 1996 GDP, which swelled in the absence of transparent economic reform and in a context of hyperinflation and soaring unemployment (Sutela, 2012). Open borders and opaque banking and financial systems created favourable conditions for the expansion of drug supply, trafficking and related activities such as money laundering (Booth et al., 2003). Access to 'Western' drugs such as cocaine and the nightlife drug Ecstasy (3,4-Methylenedioxymethamphetamine, MDMA) forged a hybrid of new and traditional drug cultures, a situation that stretched already poorly resourced and inappropriate treatment services.

Ukraine became a 'significant conduit' for increased volumes of heroin from Southwest Asia (Afghanistan and Pakistan) entering Black Sea ports such as Odesa and transiting Turkey and the 'Balkan route' to European markets: 'Porous borders, understaffed and underfunded counter-narcotics entities and the rise of organized crime syndicates have enabled traffickers to utilize Ukraine as a viable transit point' (Layne et al., 2002: 1). The traffic provided users in Ukraine with regular access to foreign heroin, a better-quality product than poppy straw or crushed morphine tablets (Grund et al., 2013). Cannabis markets continued to expand, with *anasha* trafficked alongside Afghan heroin by criminal organisations operating in the five Central Asian countries (Lezhentsev, 2020; Zabransky et al., 2014). Fertiliser and energy subsidies to the agricultural sector and access to private land and industrial facilities following privatisation processes positioned entrepreneurs in Ukraine to profitably increase supply of poppy straw and cannabis (Amosov, 2019; Layne et al., 2002: 5).

Cocaine from South America was not widely available in Ukraine until the 2010s, when Odesa was identified as an entry and transit point for the drug into Europe and

Russia (Kyiv Post, 2010). This followed three major seizures by Ukrainian authorities. Couriers flying cocaine into large cities such as Kyiv maintained nascent domestic markets and trafficking networks (EMCDDA, 2020: 31). Further interceptions at Odesa were reported in 2019 and 2020. In 2021, 120 kg was intercepted, reportedly the property of the Italian 'Ndrangheta (EMCDDA, 2022a). Consumption of cocaine within Ukraine remained low in comparison to poppy straw opiates, cannabis and synthetic drugs, a factor of cocaine's high cost and limited accessibility.

To address Ukraine's vulnerabilities to drug trade penetration, authorities closely aligned legal frameworks with the UN drug treaties. A comprehensive, 'zero tolerance' drug criminalisation regime was in place by the mid-1990s. This continued to be toughened in the 2000s, with resolutions and laws passed by the government and parliament (*Verkhovna Rada*) that increased sentencing for cannabis-related offences and reduced drug possession thresholds, leading to serious supply rather than low-level possession charges for those caught with small amounts of illicit drugs. The strategy aimed to snuff out illicit markets by intercepting drug consignments and deter drug law offending by punishing violators (Kiriazova and Dvoriak, 2015). In this law enforcement-led approach, the Ministry of Interior of Ukraine (MVD) supported by the State Security Service (SBU), State Customs Service and Border Guards had primary responsibility for drug policy implementation. A specialised Drug Enforcement Department (DED) was established in 1993 in line with UN drug treaty obligations. This was located in the MVD, working alongside the Department for Combating Organized Crime and liaising with country counterparts. The DED focused on domestic drug matters. International aspects such as transit and trafficking were within the portfolio of SBU responsibilities. Anti-drug strategy cohered with the priorities of Ukraine's trade and security partners such as the US, UK and European Union (Trach, 2016; Turner, 2010; Wolczuk, 2003).

The deterrent effect of policing and punishment-based responses to Ukraine's drug challenges was limited. There were over 90,000 registered drug users at the start of the 2000s, of which nearly 70,000 were opiate users (Layne et al., 2002: 5). Other 'unintended negative consequences' of criminalisation (UNODC, 2008) included a doubling of the prison population. Trafficking-related crimes increased from six cases in 1971 to over 58,000 in 2002 as drug possession was prosecuted as a supply crime and drug users were more robustly policed (World Prison Brief). Policing that prioritised simple possession-related offences and which targeted easily identifiable communities of addicts deepened the vulnerability of users to police violence, abuse and blackmail (Booth et al., 2003, 2013a; Mimiaga et al., 2010). Incarceration without access to drug treatment and other facilities created cycles of relapse and recidivism and conditions for the spread of HIV/AIDS (Boyko et al., 2013; Csete et al., 2016).

Dynamic synthetic markets

A further problem with assimilating the Western law enforcement approach was the neglect of the market for 'man-made' synthetic drugs. This was an international problem. The UN drug control treaties, and the USA as the principal architects of the international criminalisation regime (Nadelmann, 1990), were preoccupied with preventing intoxicating plants cultivated in the Global South being refined and consumed in the

Global North. National drug strategies, international counternarcotics cooperation agreements and UN monitoring systems focused on plant-based substances such as cocaine, opiates and cannabis. By contrast, controls on synthetic drugs – typically pharmaceutical substances discarded from medical research or discontinued from prescription because of harm potential – were lax (DeGrandpre, 2006; Herzberg, 2010; McAllister, 2002). This includes drugs such as amphetamine-type substances (amphetamine and methamphetamine), Ecstasy (MDMA), the hallucinogenic LSD (Lysergic acid diethylamide) , anti-anxiety and anti-depression medications, and synthetic opioids: 'a class of molecules designed to relieve pain, mimicking natural opiates extracted from poppy' for example morphine, codeine, buprenorphine, tramadol and fentanyl (Salle et al., 2019).

Mirroring the experience of Western countries in the 1980s, Ecstasy tablets imported from the Netherlands were popularised in Ukraine by users in new urban nightlife dance scenes. As with other 'new' synthetic powders and pills such as amphetamine, Ecstasy was idealised as a non-habit forming, 'safe' drug. This user culture was distinct from the stigma, overdose and disease risk associated with heroin (Carnwath and Smith, 2003; Saunders and Walder, 1993). The popularisation of 'clean' stimulants contrasted with the real risks of dependence associated with substances such as amphetamine, for which treatment availability was poor (Vanden et al., 2012). Synthetics were also vulnerable to adulteration common in all unregulated drug markets.

In the 2000s, the types of available synthetic drugs increased dramatically due to imported and domestically manufactured novel psychoactive substances (NPS) (Grund et al., 2013). NPS is an umbrella term for a diversity of chemicals, precursors and plants that fall on the outside of the UN drug treaty and scheduling system. The pace of synthetic NPS innovation has been staggering, with 541 distinct 'legal highs' reported to UN drug control bodies (UNODC, 2021: 1, 19). Chemical NPS include structural derivatives that are distinguished from the controlled, plant-based drugs such as cannabis by minute molecular tweaks, and 'mimetics' that are chemically different from plant-based drugs and controlled synthetics such as amphetamine, but which claim to mimic the effects of their use. This includes synthetic cathinones (marketed as alternatives to cocaine or amphetamine). In Ukraine, the market for cheap NPS was initially dominated by synthetic cannabinoids (Booth, 2013; Papaseit et al., 2018; UNODC, 2017). The second half of the 2000s saw 'a rapid shift' to stimulants (cathinones) such as mephedrone and MDPV (methylenedioxy pyrovalerone, 'monkey dust') in the market of 'recreational' users on nightlife scenes (Scatturo, 2023b; UNODC, 2022b: 4, 101). Other substances that were manufactured, sold and consumed in illicit drug markets included methadone, which was diverted from opiate substitution programmes, and 'street drugs' - synthetic copies of methadone, opioids and other prescription drug types. The cheap cost of NPS made them popular among homeless and prison populations that lacked access to clean injecting equipment (Booth, 2013; Lezhentsev, 2020). The number of clandestine synthetic drug laboratories dismantled by law enforcement increased from 17 in 2019 to 79 in 2020 (UNODC, 2022b: 6).

HIV crisis and drug policy change

Unsafe injecting practices and the sharing of needles drove an epidemic of HIV infection worldwide in the 1990s (Stimson, 1993). This was first experienced in Ukraine in the port

cities of Odesa and Mykolaiv. HIV: 'spread through Ukrainian social networks like wildfire, and rates of infection grew thirty-four-fold between 1995 and 1999' (Carroll, 2019: 30). Injecting drug users represented 80% of all known HIV cases in Ukraine in 1998 (Dehne et al., 1999). In the National Report on the Follow-up to the UNGASS Declaration of Commitment on HIV/AIDS, the Ministry of Health of Ukraine acknowledged: 'the most severe AIDS epidemic in Europe, with an estimated adult prevalence of 1.5%, or over 344,000 people aged 15–49 living with HIV'. This figure included 4175 children with HIV infection: 'the majority of who were born to HIV infected mothers' (Ministry of Health of Ukraine, 2006: 9). Over half of injecting drug users had Hepatitis C. Tuberculosis killed half of those living with HIV (Harm Reduction International, 2018; UNAIDS, 2018).

Paralleling countries such as Portugal and Switzerland that also experienced HIV epidemics linked to injecting drug use (Csete, 2010; Moury and Escada, 2023), Ukraine's HIV crisis forced a recalibration of policy and official attitudes. There was a move away from 'zero tolerance' policing and brutal Soviet era-type abstinence programmes. The Ministry of Health and non-governmental organisations were recognised as key partners in drug control efforts, required to deliver urgently needed prevention, treatment and drug use harm reduction services to those injecting drugs, and antiretroviral therapy (ART) and other medications for those living with HIV and other blood born disease. The 2013–2020 'Strategy of the State Policy Regarding Drugs (Narcotics)' was a landmark document. It reoriented the state's management of illicit markets to better balance efforts to suppress the drug trade with protection of the health rights of people who use drugs. It emphasised rights-based and scientific approaches in treatment services; access to opioid substitution therapies and other forms of harm reduction services; and the importance of tackling discrimination by police and clinicians against people who use drugs (Schoenberger, 2022). Institutional changes and state funding followed. In 2014, the Ministry of Health assumed increased responsibility for oversight and coordination of drug policy.

By 2022, and before the Russian invasion, the state budget financed methadone and buprenorphine for 17,200 people. Opiate substitution therapies (OST) reduce injecting behaviours and risks of overdose and disease transmission. Access to OST services can reintroduce structure and contact into the life of the dependent user (Degenhardt et al., 2019; Kiriazova et al., 2015: 22; Nikitin et al., 2023; World Health Organisation, 2020). OST and ART for people with HIV/AIDS were available at 174 operational sites, and needle and syringe exchange programmes at 1667 sites. Additional services include provision of condoms and counselling. Naloxone (administered for opiate reversal) was available without prescription. In 2021, methadone maintenance therapy was rolled out in Ukraine's prisons (Ponticiello et al., 2023). The public health steer in Ukraine contrasted with Russia, which declared a 'total war' on the country's estimated 8 million regular drug users and 3 million injecting drug users in 2011, including strict enforcement of a ban on harm reduction in the 1997 federal drug law (Galeotti, 2017; Osborn, 2011). After Russia's annexation of Crimea in 2014 access to methadone and harm reduction services for 8000 people in Crimea living with HIV was suspended. The UN Secretary General's Special Envoy for HIV/AIDS

in Eastern Europe and Central Asia said the move would: 'bring unnecessary suffering to the people of Crimea' (Kazatchkine, 2014).

In Ukraine, policing reoriented away from minor cannabis possession offences to a focus on large-scale supply interdiction and cannabis eradication operations. This contributed to the increase in reported seizures of cocaine (over 400 kg) and hauls of heroin (UNODC, 2022b: 8). Around 1.8 million cannabis plants were destroyed in 2019 (UNODC, 2021). A downside of supply interruption was that it shifted young and technologically competent consumers to European and Russian cryptomarkets such as Hydra, which had estimated revenues of $1.7 billion in 2020 (Georgoulias et al., 2021: 2; Ovcharenko et al., 2020). Cryptomarkets provided anonymised, online digital drug purchase options, circumventing the shortages created by law enforcement seizures and delivering directly to the consumer through the postal system or pre-arranged dead drops (Groshkova et al., 2018). Eradication operations failed to suppress the cultivation and use of poppy and cannabis (Dumchev et al., 2021; UNODC, 2022b). Individual home cannabis cultivation using imported, high-quality Dutch seeds, and large-scale cultivation for domestic supply and export to neighbouring countries were reported. This included cultivation in greenhouses: 'equipped with a system of drip irrigation, lighting and heating that made it possible to harvest up to three times a year' (Scatturo, 2023a: 4).

The drug trade developed a strong presence in Ukraine after independence. A diversity of products was available with hybrid markets disaggregated by socio-economic status: high-end imported drugs such as heroin, Ecstasy and cocaine for the nouveau rich and new urban middle class, cheap and adulterated locally manufactured psychoactives for the rural and urban poor (Grund et al., 2013). Analysing national seizure data for 2021 in Figure 1 (National Report, 2022: 51) as a proxy for illicit drug prevalence, cannabis was the most widely used substance, representing 70% of all drug seizures, and the largest share of drug seizures by weight in completed criminal proceedings (64%). The opiates poppy straw and heroin represented 15.5% and 8.2% of 2021 seizures (2% and 22% by weight, respectively). Cocaine accounted for just 2% of seizures (5% of seizures by weight). A variety of 'other substances' including NPS, tramadol and methadone accounted for 3.3% of law enforcement interceptions (6% by weight). The amount of amphetamine seized was low at 1% of all controlled substances (National Report, 2022: 51).

Context of study

Martial law, curfew and a national mobilisation were declared in Ukraine 2 days after the Russian invasion of February 2022. Controls over borders and the movement of people and goods were tightened. By June 2022, Russian forces occupied 20% of Ukraine's territory. Air and artillery attacks on energy facilities, railway lines, roads, airfields and ports weakened transport and communications and impeded movement within Ukraine and across its borders. The destruction of property, livelihoods and infrastructure contributed to a humanitarian crisis. UN agencies estimated that 17.7 million people needed assistance. A further 5.6 million of the pre-war population of 44 million people were internally

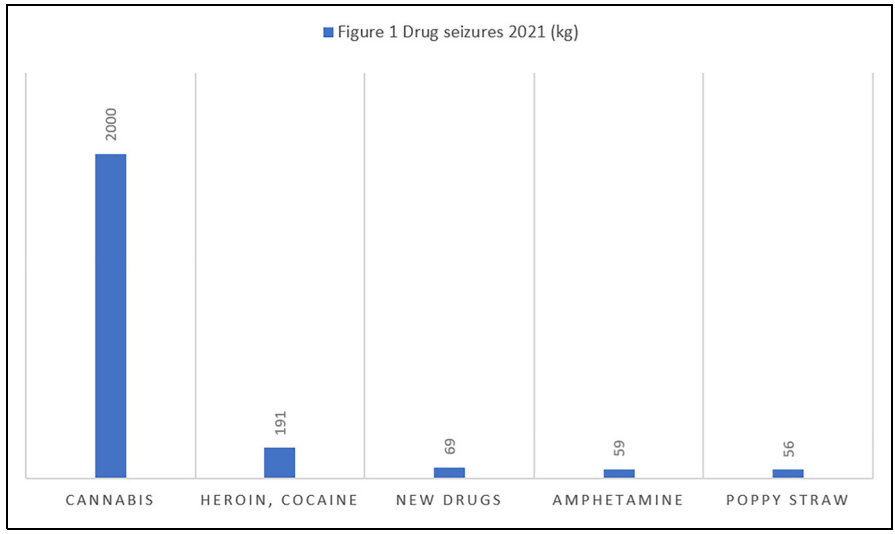

Figure 1. Drug seizures 2021 (kg).
Source: Website of the Office of the Prosecutor General of Ukraine.

displaced. More than 8.13 million people fled Ukraine (UN Office for the Coordination of Humanitarian Affairs [OCHA], 2022; UNODC, 2022b).

A report by Physicians for Human Rights on the 1-year anniversary of the Russian invasion catalogued over 700 attacks that damaged or destroyed medical facilities such as hospitals, clinics, pharmacies and ambulances and injured medics and health workers (de Vos et al., 2023). These were concentrated in Kyiv and areas to the east and south of it, such as Kharkiv, Donetsk and Mariupol. Supplies of basic and essential medicines, medical equipment and OST and ART provision were destroyed or stolen. Treatment programmes were disrupted. Pharmacies and facilities were closed or destroyed. Russia's military assault had the effect of: 'setting back 15 years of development gains and increasing poverty, with an additional 7.1 million Ukrainians now living in poverty' (Shalal, 2022). Ukrainian president Volodymyr Zelenskiy estimated $55 billion was required to cover public spending commitments for the following year, and $17 billion for rebuilding critical infrastructure (Radio Free Europe, 2022). The quality of life for citizens of Ukraine deteriorated significantly. Incomes decreased, access to qualified medical care, education and social services collapsed, and the social burden of trauma, disruption, grief, injury and loss was heavy. The following section explores the impact of these conditions on illicit drug markets in Ukraine.

Data and methods

To assess the impact of the first 18 months of war with Russia on illicit drug markets in Ukraine, the following section draws on national-level, open-source quantitative information on drug seizures, seized substance content and drug law offences prosecuted

(Key data sources are the (open access) website of the Office of the Prosecutor General of Ukraine. Statistics from the Expert Service of the Ministry of Internal Affairs are not published as open source and were made available to the authors as employees of the institution). Analysis of this information is supplemented with province-specific qualitative information gathered in Kharkiv. The case study is used as: 'an empirical inquiry which investigates a phenomenon in its real-life context' (Yin, 2009: 18). Kharkiv borders Russia to the east of Ukraine and the province has been a site of cross-border heroin traffic into Russia. The single case approach is intended to support future province-specific longitudinal assessment of trends in this strategically important *oblast* and comparative analysis across Ukraine (Goodrick, 2020). Data was gathered through semi-structured interviews with operatives (responsible for interdiction activities, $N = 16$) and investigators (pursue and prosecute cases, $N = 11$) from the Drug Crime Department of the Main Directorate of the National Police in Kharkiv region ($N = 27$), and experts from the Kharkiv Scientific Research Forensic Centre of the Ministry of Internal Affairs of Ukraine ($N = 20$). In Ukraine, forensic examination of seized substances is routine in criminal proceedings and performed exclusively by state forensic institutions. Access to interview subjects in a period of major conflict-related sensitivity to information sharing was facilitated by professional police and forensic services networks in Kharkiv. These enabled snowball sampling. Interviews were anonymised and sought to capture the insights, observations and experience of police and forensic experts in the period since the Russian invasion. They were conducted, and data was stored in line with institutional ethical requirements. The qualitative information was transcribed, inductively analysed in an open coding process that explored common themes, terms and drug-type references (Palys and Atchison, 2014) and translated into English. The focused coding process refined the broad categories of consensus and concern raised by interview respondents and triangulated this information with the quantitative, national-level data. Six key findings emerged.

Findings

Increase in drug-related offences

As discussed in the previous section, arrests for minor drug-related possession offences decreased in the period before the 2022 invasion. In the 4 years before the invasion of Russia (2018–2021), the share of drug-related crimes in the overall crime structure of Ukraine increased, but as demonstrated in Figure 2, this was due to a fall in the reporting of other, non-drug-related crimes. Both trends reversed following Russia's military incursion.

In the reporting period for 2022 and incorporating the Russian armed aggression, figures for all reported crimes increased, including drug-related. Trafficking and supply-related offences nearly doubled in the first 6 months of 2023, and low level cannabis possession returned as a focus of law enforcement and prosecutions (Figure 3) (Office of the Prosecutor General of Ukraine).

A shift in enforcement priorities (and opportunities) may account for the reversal of declining pre-war possession offences. A refocusing of policing on low-level supply is

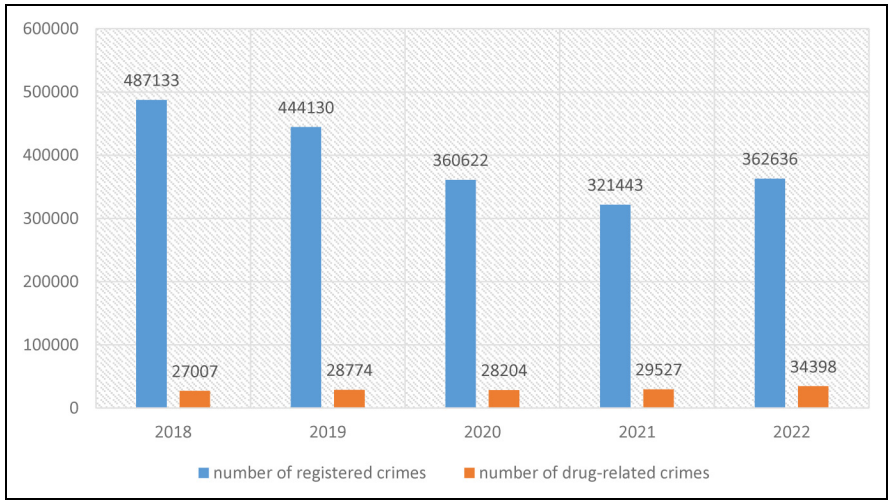

Figure 2. Share of drug-related crime in the crime structure of Ukraine 2018–2022 (color version available online).
Source: Office of the Prosecutor General of Ukraine.

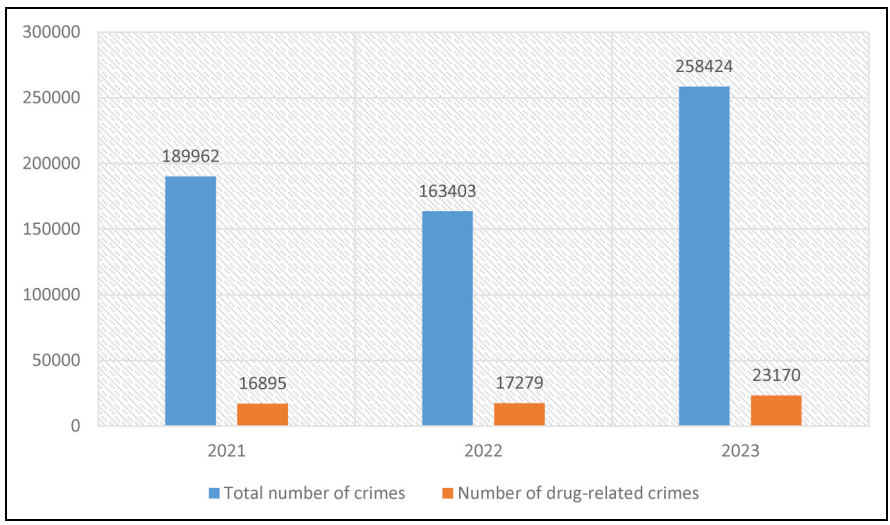

Figure 3. Share of drug-related crimes in the crime structure of Ukraine for 6 months of 2021, 2022 and 2023 (color version available online).
Source: Office of the Prosecutor General of Ukraine.

linked to other post-invasion drug market trends, principally the sharp decline in imported substances being trafficked through Ukraine. Another post-invasion factor that may account for the increase in drug-related arrests is the increased visibility of drug

market transactions. War has severely disrupted cryptomarket postal services, and population displacement and outmigration have ruptured traditional peer-based drug supply networks. This has forced people who purchase illicit drugs into more visible street markets where they are vulnerable to police or military stop and search in wartime conditions of curfew and checkpoints (EMCDDA, 2022b: 9).

Resilient cannabis markets

A second finding is that cannabis remains popular and has an expanding market of users. For 2022 and the first half of 2023, only the figures for completed criminal proceedings are currently available (Office of the Prosecutor General of Ukraine). These show that in conditions of violent conflict, cannabis has continued to be the drug most seized by law enforcement, increasing year on year by about 5% and totalling 2100 kg in 2022 (Figure 4). As in 2021 and 2020, cannabis was the most common drug investigated in the war-time period by the Expert Service of the Ministry of Internal Affairs of Ukraine. Interviews in Kharkiv among police and forensic experts confirmed a perceived increase in the prevalence of cannabis. Interviewees identified trends of home cannabis cultivation using imported seeds, and significant levels of military possession and use of cannabis. Interviewee R01 outlined that: 'during the war, the supply of cannabis seized from the military increased significantly'.

Drug imports and traffic declining

The availability of imported heroin, cocaine and Chinese-manufactured NPS is decreasing according to national-level quantitative data (Website of the Office of the Prosecutor General of Ukraine; Expert Service of the Ministry of Internal Affairs). Cocaine and

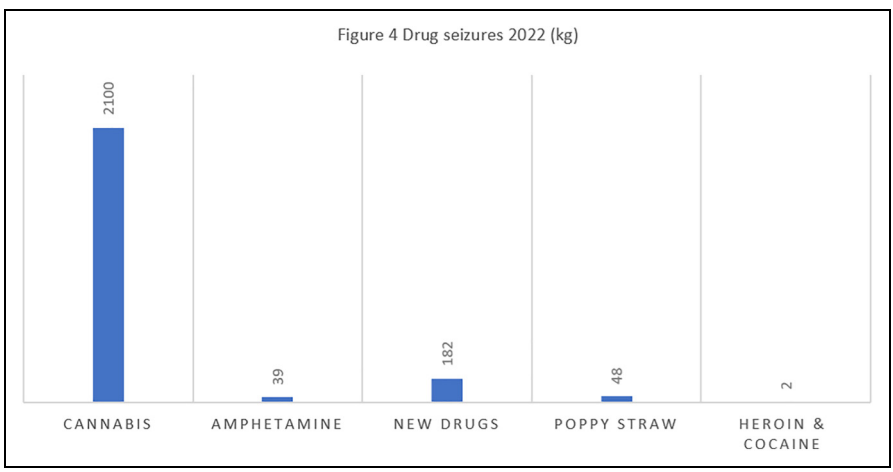

Figure 4. Drug seizures 2022 (kg).
Source: Website of the Office of the Prosecutor General of Ukraine.

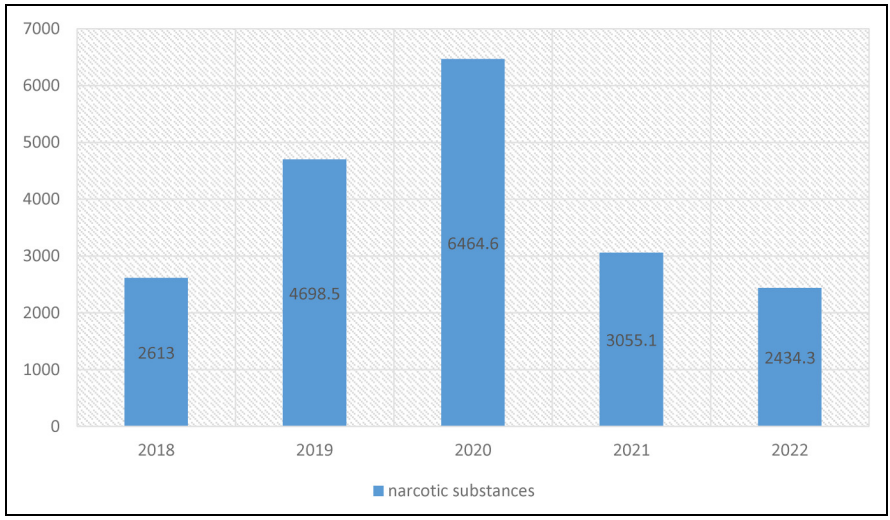

Figure 5. Seizure of all controlled (narcotic) substances (kg).
Source: Website of the Office of the Prosecutor General of Ukraine.

heroin represented a reduced volume of total drug seizures, a decline from the record hauls in 2020 and 2019 (Figure 5). Key informant interviews in Kharkiv revealed that 'With the outbreak of the war, heroin trafficking to Russia via Ukraine practically stopped. Cocaine, as one of the most expensive drugs, has almost disappeared from the market in the frontline regions' (R18). An officer in the Drug Crime Department (DCD) elaborated that: 'Heroin used to be transported to Russia through our region, there is no methadone there and there is a high demand for heroin. Now the border is closed, so heroin has disappeared' (R16). Another DCD interviewee addressed the previous importance of Kharkiv in international trafficking networks, and the impact of border closures and war: 'Heroin used to be transported from Pakistan and Afghanistan to Russia via Kharkiv, and cocaine was transported to Russia via Western Ukraine, but now the transit is blocked, and this is another reason for the decrease in the amount of such drugs' (R20). A forensic expert responsible for testing seizures set out that: 'Before the war, heroin was quite rare, and during the war, our laboratory does not receive heroin at all' (R07). A chief forensic expert set out simply that: 'I did not receive heroin and cocaine at all during the war' (R10).

These trends may indicate a purposeful rerouting of heroin and cocaine supply chains, away from Ukrainian transit corridors, and the strategic decision by crime groups to avoid unnecessary risks to consignments. Moreover, local markets for imported drugs have changed. One police interviewee observed that in Kharkiv: 'a lot of young people have left for safer regions. Nightclubs and discos are mostly closed, so the prevalence of Ecstasy has decreased' (R24). Another observed that: 'Cocaine is more expensive here than in Europe …, and now the elites have mostly left, so there is less cocaine' (R20).

Increase in synthetic supply

A fourth finding supported by the quantitative and qualitative data is that the manufacture and supply of synthetic stimulant drugs has increased since the Russian invasion. This includes amphetamine, methamphetamine and the synthetic cathinones α-PVP (α-Pyrrolidinopentiophenone) and mephedrone (4-methylmethcathinone). According to national data, the total volume of all psychotropic (synthetic) substances seized has been on an upward trajectory since 2019 (Figure 6). NPS and other 'new drugs' as a share of total synthetic seizures increased more than 2.6 times (from 69 kg to 182 kg) (Report of the National Police of Ukraine, 2022: 11).

Expert interviews converged on the prevalence in Kharkiv of a range of cheaply produced, low-quality, 'dirty' methamphetamine and α-PVP products, known locally as *vint* and *rakka*, respectively. A forensic science expert set out that: 'During the war, there is more and more synthetics, every second examination is PVP' (R11). Another interviewee detailed that: 'Seizures of such drugs as PVP are increasing. It is one of the cheapest drugs' (R23) while a chief forensic expert surmised: 'Before the war, we received a wide range of synthetic cannabinoids. Now this assortment has sharply decreased, apparently because there are no imports from China' (R08). Amphetamine powder sent for testing: 'often comes in wet. This all indicates low quality and production in small home laboratories' (R08). Interviews with police officials in Kharkiv saw reiteration of the view that local manufacturing facilities at artisanal scale were in operation: 'It should be understood that most of the so-called 'drug labs' are just kitchens in apartments, sheds, garages with primitive equipment' (R30). All forensic and police experts emphasised that synthetics seized in Kharkiv were of inferior quality, crudely synthesised using whatever chemical precursors were available, and that these substances are

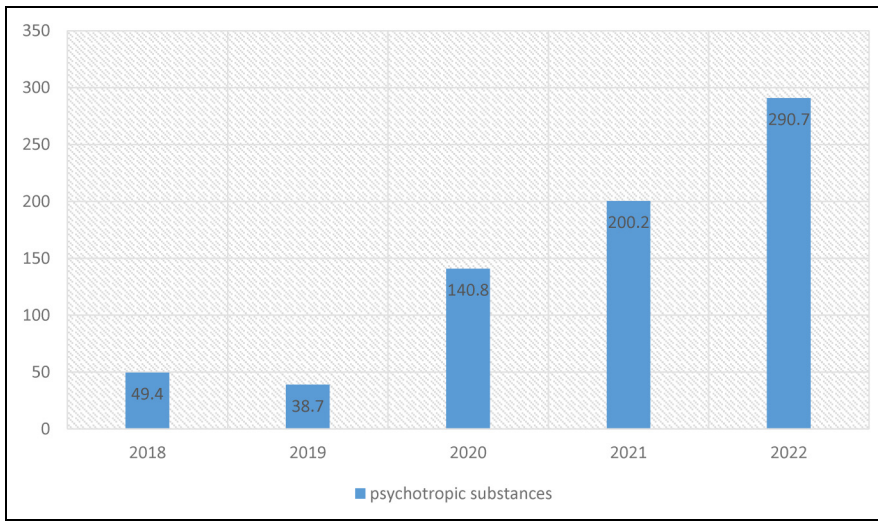

Figure 6. Seizure of psychotropic substances (kg).
Source: Office of the Prosecutor General of Ukraine.

frequently mixed with different drug types. For example, cheap pharmacy analgesics (paracetamol, Tosha) are noted to be increasingly used to cut amphetamine.

Increased seizures of methadone and tramadol have been reported since the Russian invasion and boosting the national figure for volumes of psychotropic substances seized. In Kharkiv, expert interviews detailed a complex of illicit methadone supply, including high-grade pharmaceutical methadone in the form of substitution therapy pills, and 'street' methadone tablets commonly mixed or administered with the sedative dimedrol or the anaesthetic drug lidocaine to enhance potency and effects (R01, R06, R10, R11, R12). Some interviewees suggested that (mostly private) medical institutions and doctors were abusing changes to opiate substitution prescribing that were introduced after the Russian invasion. This allowed people in treatment to receive 30 days worth of methadone medication. This was intended to reduce the risks entailed in securing daily prescriptions amid medical shortages, pharmacy closures and military attacks (Harm Reduction International, 2022: 80). Police experts in Kharkiv commonly detailed cases of methadone theft and resale. Pharmaceutical methadone was seen as more widely available than 'street methadone' that was previously distributed by Roma groups that had moved to safer regions or abroad (R19).

Forensic services under pressure

A fifth takeaway from the qualitative research is that forensic services face major capacity constraints as a result of the challenges of identifying new synthetic drug types and the hefty volumes of cannabis requiring pre-trial examination. The number of forensic drug tests ordered by investigators has increased significantly (Figure 7) (Expert

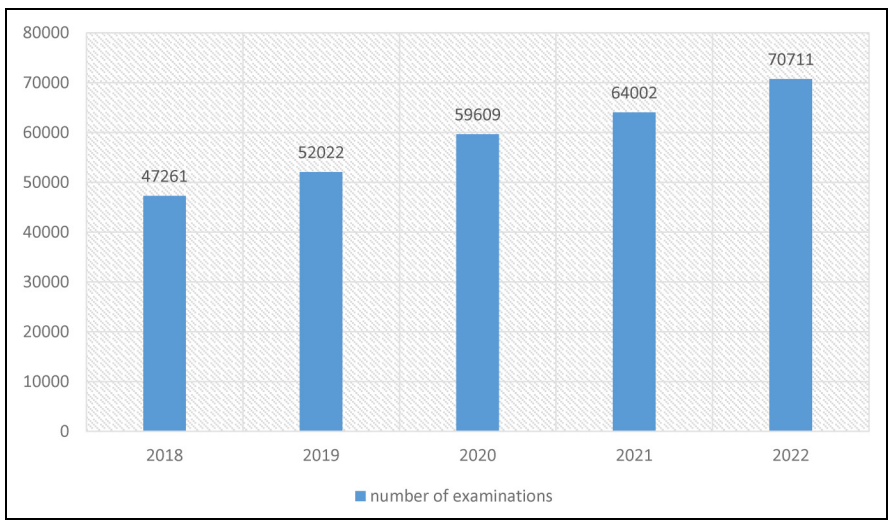

Figure 7. Expert forensic assessment requests.
Source: Expert Service of the Ministry of Internal Affairs.

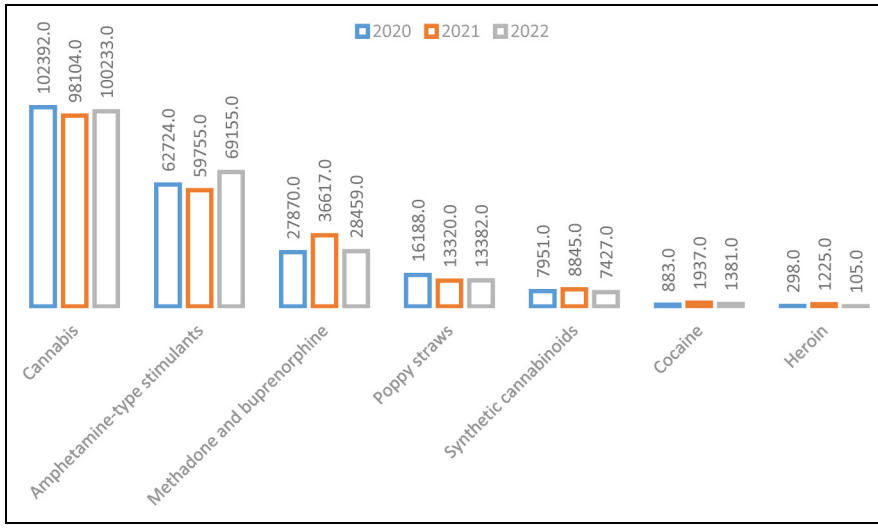

Figure 8. Most common drugs investigated by the Expert Service of the Ministry of Internal Affairs of Ukraine.
Source: Expert forensic assessment requests 2018–2022. Expert Service of the Ministry of Internal Affairs.

Service of the Ministry of Internal Affairs). Synthetic drugs including opiates, amphetamines and NPS represent the second largest category of drug type sent for forensic examination after cannabis (Figure 8). Experts in Kharkiv commonly highlighted challenges in reporting and early warning systems. The speed of change in manufacturing processes and in the types of chemicals and precursors used in local synthetic and street drug production means that some identified substances are not legally defined as 'narcotic' under national laws that are struggling to keep up with the pace of synthetic drug market change. This is a worldwide problem. A related challenge highlighted by forensic staff is a lack of uniformity across state and regional agencies in the classification and recording of NPS drug types.

Changes in drug use

A final commonly cited expert observation is that the military are a significant constituency of drug demand, within a wider social landscape of increased reliance on illicit drugs and illicit market supply (Morozova et al., 2023; Ukraine State Bureau of Investigation, 2022). The correlation between drug use and military combat is well documented and in contexts including the USA (Robins et al., 1974; Kuzmarov, 2007), South Somalia (Odenwald et al., 2007), Iran (Habibi et al., 2017), and as discussed earlier, the former Soviet Union. The Observatory of Illicit Markets and the Conflict in Ukraine reported (January 2024) a high prevalence of drug use in the Ukrainian military. This was explained as a factor of 'active or former drug users who are drafted into the army without proper medical screening and continue to find ways to support their addiction' (Global Initiative Against Transnational Organized Crime [GI-TOC], 2024); the

availability of cannabis and synthetics; and crime group profiteering and the ease of smuggling substances to the front line.

According to a forensic services expert in our sample, 'We are seeing a lot of PVP and amphetamine seized together for examination, a lot of stimulants are seized from the military' (R04). Another outlined that 'I have noticed more arrivals of stimulants seized from the military, primarily PVP and amphetamine, and a lot of cannabis' (R13). A police expert observed that 'Now we seize a lot of substances from the military during checkpoints. Most often it is cannabis, salts, and amphetamine' (R21). Another officer commented, 'There is a great need for painkillers among the military. We often seize potent medicines, and they explain this by the need to use them after injuries and contusions' (R28). Another interviewee outlined that 'When we find marijuana in the possession of military personnel, they explain it as an urgent need to relax from stress and nervous tension' (R29). Psychoactive substance use fulfils many functions. It provides relief from the mental and physical pain of trauma, dislocation and war-inflicted injury. This applies to civilians as well as the military.

Concluding observations

Early data indicates that transnational trafficking networks, domestic drug markets and HIV prevention and treatment efforts in Ukraine were significantly impacted by the Russian invasion (Vasylyeva et al., 2018). In the first 18 months of war, the availability of imported drugs such as heroin, cocaine and synthetic cannabinoids contracted sharply. This would indicate that illicit drug trafficking through Ukraine was not encouraged by criminal organisations or exploited by state parties to the conflict. Factors that may have initially insulated Ukraine include the apparent decision of large domestic crime group leaders to leave the country. Criminal elites connected to the pre-war nationalist and pro-Russian oligarchies relocated to destinations in Eastern Europe, the Gulf states and Latin America (Global Initiative Against Transnational Organized Crime [GI-TOC], 2023; Sydoruk, 2024). The institutional coherence of the Ukrainian armed forces and the heavy 'eyes on' virtual presence of the US and NATO countries was another buffer against the exploitation of drug revenues, for example, by private armies. The physical insecurity of ports, borders and transit routes was another protective factor, impeding the smooth running of transnational trafficking operations and the import of precursor chemicals.

Like the case of Yugoslavia, Ukraine demonstrates that the international drug trade adapts quickly to the chaos of war and disorder along supply chains. The insulation of Ukraine is additionally a factor of viable alternative routes to lucrative European cocaine and heroin markets, for example, through Black Sea ports in Bulgaria and Romania and overland through Turkey. Russia's invasion has displaced not curtailed regional drug trafficking, opening new corridors into Europe during a glut in global cocaine supply and accelerated efforts to offload products into Europe (UNODC, 2023).

Displacement impacts and drug market innovation as outcomes of Russia's military invasion are also evident in Ukraine. Domestic demand has been sustained and is increasing among some cohorts such as military personnel. This is despite intensified policing of possession offences and it has implications for treatment services and risks of overdose, disease

spread and drug related fatalities. Conflict has galvanised an increase in domestic drug manufacture, substitution of imported drugs for locally produced alternatives and profiteering from stolen or diverted pharmaceutical supplies. This will not be sustainable. Shortages of inputs such as fertiliser for cultivation and chemical precursors for drug manufacture are reported to be emerging and driving up the cost of drugs (Scatturo, 2023b). Protracted conflict risks sucking drug imports into Ukraine from neighbouring Bulgaria, Romania and Poland, and it will create major opportunities for new transnational crime forms that are replacing Ukraine's oligarchic mafia groups. The joint Ukrainian–Russian crime group Khimprom that previously had a large presence in the Hydra cryptomarket 'appears positioned to straddle Russian and Ukrainian underworlds and target new customers, including soldiers and other users in Ukraine who are looking for a cheap, powerful alternative to other synthetic drugs' (Scaturro, 2023a). The leader of Khimprom is reported to reside in Mexico, from where the organisation has been restructured as a franchise linking sellers to consumers in Ukraine through social media apps (Sydoruk, 2024).

In a bleak post-invasion scenario of new drug-related health risks, overburdened enforcement officers, under-resourced forensic staff and unmet treatment need, there were two positive takeaways. Firstly, NGOs were resilient in supporting continuity of HIV and opiate treatment services through the Public Health Center of the Ministry of Health of Ukraine. At the end of 2023, 121,820 people were receiving ART medications. Pre-war reforms that introduced harm reduction services and gave the Health Ministry a lead role in treatment and prevention strategy translated into an effective crisis response. Secondly, possibilities for drug policy reform and evidence-led treatment interventions were improved by conflict conditions. In December 2023, the Verkhovna Rada approved a medical cannabis legalisation bill on its second reading. Cannabis has been a long-running preoccupation of Ukrainian law enforcement and the country's criminal justice system. The move is another example of Ukraine's drug policy learning from abroad – over 70 jurisdictions have introduced legally regulated medical cannabis and recreational cannabis markets (Eastwood et al., 2016). Proponents of the measure expect it will enable a refocusing of law enforcement activities to more serious crime and more dangerous drugs, while making medical cannabis available to an estimated 6 million Ukrainians, including cancer patients, civilians with post-traumatic stress disorder and wounded soldiers (Reuters, 2023). The potential for war to catalyse drug policy change was also evident in national debates on access to psychedelic therapies in the treatment of chronic mental health and post-traumatic stress disorders, estimated to impact nearly 25 million people in Ukraine in 2023. In February 2024, a parliamentary commission responsible for military personnel and veteran care established a working group to explore MDMA-assisted therapy (Busby, 2024).

Illicit drug revenues have not been a factor in the resourcing or persistence of war in Ukraine, but in a short period of time, military conflict has reshaped local drug markets, with implications for regional neighbours, policing priorities and public health. Violent conflicts and illicit drug markets are both dynamic and susceptible to rapid flux and change. As such, this situation will evolve. The data collection has provided a baseline for longitudinal analysis of drug market shifts in Ukraine and Kharkiv and for comparative assessment with trends in other provinces. A future research direction would be to incorporate the views and experience of people who use drugs to develop a more holistic

picture of market developments and understand the impact of law enforcement activities on patterns of supply and consumption.

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