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for Drugs and Drug Addiction

Drug use and its consequences in the Western Balkans 2006–14

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Contents

Foreword

The Western Balkan countries face a wide range of drug-related problems. Although considerable efforts are being made to address these problems by the countries concerned, working with the European Union (EU) and individual Member States, unfortunately the region is still often associated with the 'Balkan route' used by organised crime groups to smuggle illicit drugs (mainly heroin) from Central Asia to the EU. This restrictive representation does not do justice to the progress made in recent years in addressing the local, and highly complex, drug situation.

This review is the first of its kind for the region and is the result of many years of close collaboration between Western Balkan countries and the EMCDDA on collecting and analysing drug-related information to communicate the results to national and European audiences. It builds upon the country situation summaries and national reports provided by the correspondents and working groups in the countries concerned as part of the EMCDDA's Instrument of Pre-Accession Assistance (IPA) project, along with data collection exercises implemented by the countries with either national or international support.

As a first window onto the drug situation in the Western Balkans, and given that drug monitoring is still in its infancy in many of the countries concerned, we have chosen to focus our report on a limited number of issues. The aim is to build on these issues, through dialogues with decision-makers and our partners in the countries, in order to establish a permanent flow of information at national level. This flow will help sustain decision-making and the evaluation and updating of national strategies, and will also help identify needs and opportunities to further deploy both national drug information systems and drug observatories in the countries, in line with EU standards and best practice.

The EMCDDA started its technical cooperation with the Western Balkans many years ago, initially on an ad hoc basis within EC-funded projects since 1995, and in a more structured and official manner since 2006 (cooperation with Croatia) and 2007 (first regional project). This cooperation was possible as a result of funding made available through the Phare Programme, Community Assistance for Reconstruction, Development and Stabilisation (CARDS) funds and the IPA, under which several consecutive projects have been developed.

It is my ambition that the EMCDDA will continue to support the countries of the region in their endeavours. Our ultimate aim is to help to build a more accurate picture of the drug situation and responses to it in the Western Balkans, and to provide information and analysis that represent an added value for the countries involved as they tackle drug-related issues, as well as for our European and national stakeholders. This can be achieved only through a permanent dialogue with our partners on the objectives of our cooperation, and a pragmatic approach serving the purpose of their preparation for EU accession.

Wolfgang Götz
Director

Summary

This report focuses on Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Kosovo (*), Montenegro and Serbia — all current candidate and potential candidate countries to the European Union (EU) in the Western Balkans. This is a region that has been characterised by considerable political and social transition since the early 1990s, including armed conflicts, intraregional migration and the displacement of large populations. Such situations can generate conditions conducive to a 'risk environment' for illicit drug use, particularly problem drug use, and related health and social consequences.

Over the last 10–15 years, cooperation with the EU has developed at bilateral and regional levels, with the support of specific EU programmes such as Community Assistance for Reconstruction, Development and Stabilisation (CARDS) between 2000 and 2006 and the Instrument for Pre-Accession Assistance (IPA) from 2006 until today.

As part of this process, closer cooperation and coordination have progressively been achieved in the area of drugs, and substantial progress has been made in recent years on the definition of national drug strategies and the setting up of national drug coordination mechanisms, including the establishment of national drug information systems and focal points.

This report draws on those achievements and, in particular, on the data gathered and analysed in the national reports of Western Balkan countries to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). It aims to provide a regional overview of the dynamics of illicit drug use and associated health and social consequences.

We supplemented the information available in the national reports with an electronic literature search of published data regarding the prevalence of drug use, especially injecting drug use, the extent of drug-related health harms, especially human immunodeficiency virus (HIV) and hepatitis C, and the estimated coverage of interventions developed in response.

The findings synthesised here thus provide a first *indication* of the regional situation in 2013–14, and should not be considered conclusive or stable, as new studies and data collection tools are continually being implemented.

General population studies serve as a tool to determine drug use at population level. The most recent study from Serbia indicates that about 8 % of people aged between 18 and 64 years have used an illicit drug in the past. General population surveys have recently been conducted in Albania and Kosovo also, and a pilot survey was conducted in 2014 in Montenegro; however, the data from these surveys were not yet available at the time of drafting this report.

In all the countries, there are survey estimates of the prevalence of drug use among younger populations. There are no marked differences across Western Balkan countries in lifetime prevalence of drug use among school students aged 15–16 years, with all estimates of lifetime illicit drug use falling between 4 % and 8 %, which is 2.5 times lower than the European average. The drug most commonly used is cannabis, with between 2 % and 8 % of those surveyed reporting lifetime cannabis use — figures that are considerably lower than the 17 % European average. There is evidence of greater use of sedatives without prescription among young women than among their male counterparts. There are few published examples of surveys targeting young people outside school environments.

All the countries in the Western Balkans, with the exception of Kosovo, have produced empirical studies estimating the size of populations who inject drugs. While there is much variation between the estimates generated from different studies and for countries with different population sizes, upper national estimates have suggested that there are 3 500 people who inject drugs (PWID) in Kosovo, more than 8 000 PWID in Albania, around 10 000 in the former Yugoslav Republic of Macedonia, around 12 000 in Bosnia and Herzegovina, and more than 30 000 in Serbia. In terms of estimated rates per 1 000 of population, they range from 1.8 to 5.0. In the EU, 12 countries have recent estimates of the prevalence of injecting drug use, ranging from less than 1 to approximately 6 cases per 1 000 of population aged 15–64 (EMCDDA, 2014).

In this report, we examine the prevalence of drug-related infectious diseases, such as HIV and the hepatitis C virus (HCV), which may be transmitted through sharing injection equipment; there is also a risk of sexual transmission both within the population of PWID and from current or former injectors to their sexual partners and clients. In this respect, most indicators suggest that less than 20 % of PWID in the region report needle or syringe sharing in the past month, although there are exceptions. Furthermore, the prevalence of HIV in the Western Balkans remains low relative to that in Europe as a whole. While a quarter of cumulative HIV cases in the region are linked to injecting drug use, this is the case for less than 5 % of new cases since 2006. Drawing on bio-behavioural survey data, HIV prevalence among PWID is estimated at less than 1 % in most study sites in Albania, Bosnia and Herzegovina, Kosovo and Montenegro, with some cities being exceptions. Such exceptions have been found, for instance, in Bosnia and Herzegovina (Sarajevo, where the rate was 2.7 % in 2012) and in Serbia (Belgrade, 4.7 %, 2008; and

(*) All references to Kosovo in this report and its annex should be understood to be without prejudice to positions on status, and in line with UNSCR 1244 and the International Court of Justice Opinion on the Kosovo declaration of independence.

Nis, 4.5 %, 2012). Estimates for Belgrade suggest a reduction in HIV prevalence over time, although trends are unclear and inconsistent in Nis.

In contrast to the situation with HIV, there is clear evidence of significant epidemics of hepatitis C among PWID in the region, with HCV prevalence rates ranging from 12 % to 77.4 % in samples of PWID in different studies across the region. From a larger perspective, an estimated 0.5 % of the total estimated number of PWID with HCV in Europe are from the Western Balkans (with no estimates as yet imputed from the former Yugoslav Republic of Macedonia). While in general in the region needle and syringe sharing levels are similar to those observed in wider Europe, in some locations there are indications of high levels of syringe sharing among PWID. This is cause for concern, especially given the lower than optimal coverage of harm-reduction interventions. The extent of hepatitis C among PWID, which is an indicator of needle and syringe sharing, indicates no room for complacency and suggests that scaling up interventions designed to maintain risk reduction from viral infections is desirable.

Drug-related death is a negative facet of drug use that is particularly important when examining injecting drug use. In this respect, we conclude that the available data on drug-related deaths in the region are weak and should be treated with caution.

The key objective of monitoring is to complement and support evidence-based interventions. In this report, we examine harm-reduction interventions, such as provision of clean needles and syringes, and treatment options available in the Western Balkans, as well as availability of testing for HIV among PWID. The last is likely to be a cost-effective measure, offering the benefit of potential risk reduction and being a prerequisite for treating infectious diseases among PWID.

All countries in the region provide needle and syringe exchange programmes (NSP), but there is significant variation in coverage estimates for provision of clean needles and syringes. Taking into account the fact that opioid use prevails among injecting drug users, all countries have made opioid substitution treatment (OST) available in both the public sector and in prisons. Availability of OST services in the public sector is variable: there are between three and six facilities in Albania, Bosnia and Herzegovina, Kosovo and Montenegro, 14 in the former Yugoslav Republic of Macedonia and 29 in Serbia. Estimates of the proportion of PWID in receipt of OST suggest coverage ranging from 2 % to 18 %. Survey estimates generally suggest that approximately half of PWID report having been tested for HIV in the previous year in Albania, the former Yugoslav Republic of Macedonia, and Kosovo, with smaller proportions in Montenegro and Serbia.

In conclusion, this summary report provides a complex picture of the patterns and consequences of illicit drug use in the Western Balkan region:

- The prevalence of drug use in the general population seems to be comparable with the situation in the EU. Cannabis is the drug most frequently reported as used, although at a level below the EU average.
- Estimated population sizes of PWID vary in the region but are significant, as reflected by the prevalence of drug-related hepatitis C infections.
- There has been a substantial effort to develop treatment options and NSPs in the region, but the coverage of these programmes remains generally too low to guarantee a significant and sustainable impact on the situation.
- The long-term financing of such programmes by the state remains a challenge and should be made a higher priority.
- Investment in monitoring of the drug situation and responses to it is still at a preliminary stage, and needs to be consolidated. This would contribute to providing decision-makers with the evidence required to identify needs and priorities for interventions and for adapting those interventions to the local context.
- The emergence and development of national drug strategies in line with the EU Drug Strategy and Action Plans, as part of the region's approximation to the EU, represent significant progress that highlights the need to build consensus between the main stakeholders, and the importance of securing adequate human and financial resources in the long term.

Introduction

This report provides an overview of the dynamics of illicit drug use and associated health and social consequences in the region of the Western Balkans. It draws primarily on key indicator data from national reports to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), the European School Survey Project on Alcohol and Other Drugs (ESPAD) and the European Centre for Disease Prevention and Control (ECDC), supplemented by published research reports. The focus of the report is illicit drug use (thereby excluding data pertaining to tobacco or alcohol use), primarily problem drug use, demand rather than supply reduction, and consequences in relation to health. This regional summary report can be read in conjunction with country profiles available from the EMCDDA (EMCDDA, 2013a) and alongside the national reports on which this summary primarily draws (Institute of Public Health of Albania, 2013; Ministry of Security of Bosnia and Herzegovina, 2014; Ministry of Health of the former Yugoslav Republic of Macedonia, 2014; Ministry of Internal Affairs of Kosovo, 2013; Institute of Public Health of Serbia, 2014).

The Balkans is a geographical region of south-eastern Europe (Figure 1), named for the Balkan Mountains that stretch from the east of Bulgaria to the far east of Serbia. Our focus is the Western Balkans, a region that is primarily politically defined and comprises those Balkan states yet to become members of the European Union (EU): Albania; Bosnia and Herzegovina; the former Yugoslav Republic of Macedonia, Kosovo, Montenegro and Serbia.

FIGURE 1

Map of the region, including the main towns covered by this report

The region has experienced considerable political and social transition since 1990 and the break-up of the Socialist Federal Republic of Yugoslavia, and as a result of the evolution of the situation in Albania from the late 1980s, moving towards free elections and free market economies. This transitional period has been marked in particular by a shift towards independence for most of the countries, and has included political reconstruction, armed conflicts, intraregional migration and the displacement of large populations, through a process that is not yet fully consolidated.

Such rapid and major transition, and the additional challenges that the region has experienced since then, can generate structural conditions conducive to a 'risk environment' for illicit drug use and for the responses to it, particularly with regard to problem drug use and related health and social consequences, as has been well documented in Eastern Europe (Rhodes et al., 1999; Rhodes and Simic, 2005; Jolley et al., 2012).

Since the adoption of 'The Thessaloniki Agenda for the Western Balkans: Moving towards European integration' by the EU Member States in June 2003 (Council of the European Union, 2003), a clear perspective has been achieved on a closer relationship between the EU and the countries of the region and on the long-term objective of future accession to the EU.

As far as the drug problem is concerned, while approximation to the EU has brought new challenges for those countries that have been awarded the status of candidate country, related to the transposition of the EU *acquis* into their national legislation, especially in the area of justice and home affairs, it has also created new opportunities for cooperation and for discussing approaches to tackling illicit drugs.

As a result of this closer relationship, all the countries have adopted new national drug strategies, which are similar in their articulation of drug policy as a balanced approach, tackling drug supply alongside demand reduction, and with a recent increase in emphasis (to varying extents) on harm reduction. As this report will address also drug-related infectious diseases, we would like to acknowledge that in all the countries there is also evidence of a formalised HIV intervention strategy, usually with an emphasis on PWID.

The development of formalised and/or evaluated national drug strategies is relatively recent in the region: since 2004 in Albania, since 2006 in the former Yugoslav Republic of Macedonia, 2008 in Kosovo and Montenegro, and 2009 in Bosnia and Herzegovina and Serbia. These strategies have been supported by stronger national drug coordination mechanisms.

Some countries have already made further progress in this field, as they have evaluated and/or revised their national strategies and have adopted or are in the process of adopting new strategies in 2014–15. All the strategies are broadly in line with the European Drug Strategy and Action Plans, although to variable extents; further progress remains necessary in some countries in relation to the earmarking of funds for the implementation of the strategy.

Furthermore, the definition of more evidence-based national strategies has opened the way for the establishment of national drug monitoring networks and drug observatories, which is still in a preliminary phase in most countries. The combination of the multiple requirements that are associated with preparation for accession to the EU with the variable situation of drug use and drug trafficking in the countries and the limited resources available frequently results in competing priorities that may have a negative impact on the sustainability of such institutions and on their capacity development.

From the socioeconomic perspective, the region is characterised by upper-middle-income economies, with the exception of lower-middle-income Kosovo (World Bank, 2015). Table 1A in the Annex summarises key contextual country-level indicators. The statistical data indicate high rates of unemployment — especially in Kosovo at 35 % and in the former Yugoslav Republic of Macedonia, Bosnia and Herzegovina, and Serbia at more than 25 % — relative to the European average of around 10 %. Gross domestic product (GDP) per capita (a measure of purchasing power) is roughly a third of the European average. Estimated health expenditure as a proportion of GDP ranges from 6 % in Albania to 10.5 % in Serbia. Most Western Balkan countries have a population of between 2 million and 4 million, with the exception of Serbia, at roughly 7 million, and Montenegro, at around 625 000. In the region, the population is generally younger than in the EU Member States, with Kosovo having the youngest population. In 2012, under-15s represented a share of between 14.4 % (Serbia) and 28.0 % (Kosovo) of the population, whereas over-65s accounted for only 6.7 % (Kosovo) and 17.3 % (Serbia). Estimated life expectancy at birth is between 74 and 77 years across the region, and lower than the EU average (European Commission, 2013).

The geographical location of the Western Balkans is linked to one of the most established international illicit drug distribution routes, especially for heroin, but also for cocaine and cannabis (Figure 2) (UNODC, 2014; EMCDDA and Europol, 2013). The 'Balkan route' links Afghanistan to the large markets of Russia and Western Europe. The Balkan route connects south-eastern Europe to Western European drug markets, with heroin in transit from Afghanistan via Iran (often via Pakistan), Turkey, Greece and Bulgaria. Trafficking of heroin via the Western Balkans into Western Europe occurs on two main axes: west through Albania towards Italy, and north

FIGURE 2
Drug transit via the 'Balkan route', including focus on south-eastern Europe

Source: adapted from *The Illicit Drug Trade through South-Eastern Europe*, United Nations Office on Drugs and Crime, 2014.

towards Austria (Figure 2). The United Nations Office on Drugs and Crime (UNODC) estimates the annual market value of the Balkan route at least USD 20 billion (UNODC, 2014). A northern route, estimated to have a value of around USD 13 billion per year, runs mainly through Tajikistan and Kyrgyzstan (or Uzbekistan or Turkmenistan) to Kazakhstan and Russia.

Methods and approach

Definitions and scope

For the purposes of this summary report, the Western Balkans comprises: Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Kosovo, Montenegro and Serbia. Our focus in this report is illicit drug use, demand and related harms, thereby excluding indicators relating to tobacco and alcohol use.

Literature and data sources

We summarise our primary sources of literature and data below. In all cases, we sought feedback from national experts to maximise our coverage of relevant published and 'grey' literature. This summary report focuses on the period since 2006.

National drug situation

Our primary data source is EMCDDA national reports (Institute of Public Health of Albania, 2013; Ministry of Security of Bosnia and Herzegovina, 2014; Ministry of Health of the former Yugoslav Republic of Macedonia, 2014; Ministry of Internal Affairs of Kosovo, 2013; Institute of Public Health of Serbia, 2014), concentrating primarily on the most recent reporting years (2013 and 2014). These are reports on the national drug use situation, summarising key nationally collated indicators in relation to drug use patterns and consequences, prepared by EMCDDA national correspondents with guidance from the EMCDDA and in collaboration with competent national ministries and/or national institutes of public health.

Young people's drug use

We synthesise key comparative published data from ESPAD, concentrating on the latest survey year (2011), regarding indicators of lifetime illicit drug use (Hibell et al., 2012; Hibell and Guttormsson, 2013).

Problem drug use and drug treatment demand

These data indicators are drawn from national reports (Institute of Public Health of Albania, 2013; Ministry of Security of Bosnia and Herzegovina, 2014; Ministry of Health of the former Yugoslav Republic of Macedonia, 2014; Ministry of Internal Affairs of Kosovo, 2013; Institute of Public Health of Serbia, 2014).

Injecting drug use population size estimation

Data on the number of PWID (usually aged 15–64 years) in a country were obtained from national estimates as summarised in national reports to the EMCDDA (Institute of Public Health of Albania, 2013; Ministry of Security of Bosnia and Herzegovina, 2014; Ministry of Health of the former Yugoslav Republic of Macedonia, 2014; Ministry of Internal Affairs of Kosovo, 2013; Institute of Public Health of Serbia, 2014) and to the Reference Group to the United Nations on HIV and Injecting Drug Use (Mathers et al., 2008), as well as from independently disseminated studies. An estimated rate of prevalence of PWID in a country was obtained by dividing the nationally estimated PWID population by the total population (usually aged 15–64) in the same estimate year and expressed as a rate per 1 000 individuals.

HIV case reports

We summarise public health surveillance data relating to reported HIV cases attributed to injecting drug use, focusing on the period 2006–2012, drawing on surveillance data collated by the ECDC (ECDC and WHO Regional Office for Europe, 2013).

Biological and behavioural studies

We summarise the findings of directly assessed HIV prevalence among PWID from targeted studies among PWID since 2006, drawing on a recently conducted systematic review of published scientific journal articles and grey literature (Jolley et al., 2012), alongside respondent-driven sampling (RDS) bio-behavioural surveys and national reports (Institute of Public Health of Albania, 2013; Ministry of Security of Bosnia and Herzegovina, 2014; Ministry of Health of the former Yugoslav Republic of Macedonia, 2014; Ministry of Internal Affairs of Kosovo, 2013; Institute of Public Health of Serbia, 2014). In our summary of HIV prevalence estimates, we do not include studies using self-reported HIV results or surveys with sample sizes smaller than 50 or studies in which the sampled population was unclear or insufficiently described.

Drug-related death and overdose

Information on these indicators are drawn from national reports (Institute of Public Health of Albania, 2013; Ministry of Security of Bosnia and Herzegovina, 2014; Ministry of Health of the former Yugoslav Republic of Macedonia, 2014; Ministry of Internal Affairs of Kosovo, 2013; Institute of Public Health of Serbia, 2014).

Intervention responses and coverage

To summarise the extent and nature of intervention responses across the region, as well as population reach ('coverage') in relation to drug treatment (including OST) and harm-reduction interventions (primarily NSP), we draw on regional data recently synthesised by the EMCDDA (Hedrich et al., 2014), alongside data collated by the Reference Group to the United Nations on HIV and Injecting Drug Use and in related systematic reviews (Mathers et al., 2010).

Data limitations

The data indicators synthesised here are of variable reliability and quality, and are often not collated systematically or in a comparable manner across the region. Surveillance systems — for instance for capturing drug treatment demand, drug-related deaths or viral infections associated with drug injecting — are in their infancy in some countries. Such indicators are thus subject to potential overestimation or underestimation, especially in the early years of surveillance implementation.

Prevalence point estimates should not be interpreted without careful consideration of their confidence intervals (CIs). The CIs around many of the point estimates available are large, and thus the estimates lack precision. Particular caution should be exercised where point estimates are provided without CIs having been included. Some of the point estimates included in this summary report were calculated expeditiously for the purpose of providing an approximate indication of the situation. Furthermore, changes in national- or local-level diagnostic, coding and registration practices are not accounted for in this report. Interpretation of temporal trends in these data, both within and between studies, must also be approached with caution.

When considering mortality data specifically, the cause of death is notoriously subject to misreporting even in high-resource countries. The stigma surrounding injecting drug use and reluctance on the part of medical personnel to carry out invasive, or even superficial, post-mortem procedures on individuals at high risk of hepatitis C virus (HCV) infection may result in significant underreporting of drug-related deaths. A combination of weak legislative, regulatory and surveillance networks addressing drug-related deaths, limited toxicology expertise or capacity, poor diagnostics and limited coordination and information exchange among official agencies is frequently observed with regard to data generation in this field.

Finally, the data synthesised in this report were drawn from multiple sources, and were on occasion reported differently between sources. We considered two approaches to this problem: first, concentrating on the data most recently reported; and, second, concentrating on the data in the larger, more comprehensive, and seemingly most robust study. We gave priority to this second approach. For example, in instances where national reports reported different case surveillance data from those collated and published in recent World Health Organization (WHO) or international agency surveillance reports, we tended towards the international reports, partly to enable standardised comparison between country estimates where possible.

Taken together, the data presented here provide an *indication* of the regional situation with regard to illicit and problem drug use and its consequences, and should not be considered conclusive.

Patterns of drug use

Drug use in the general population

At the time of drafting this report, there were limited comparable data assessing estimates of lifetime prevalence of illicit drug use in the general population across the Western Balkans. This is why the EMCDDA, together with its partner countries, took the initiative in 2013–14 and financed new general population surveys estimating patterns of drug use. As a result of this, surveys have recently been completed in Albania, Kosovo and Serbia, with a pilot survey undertaken in Montenegro. The findings of these surveys, with the exception of that carried out in Serbia, were not available at the time of writing.

Serbia is the only Western Balkan country to have implemented several general population estimates of drug use, in 2006 among a sample of 10 690 15–59 year olds (Strategic Marketing, 2006), and in 2014 among a sample of 5 385 18–64 year olds (Kilibarda et al., 2014). Approximately 1 in 10 people (10.9 %) reported use of an illicit drug use in their lifetime when surveyed in 2006. The lifetime prevalence of cannabis use was around 10 times that of use of other illicit drugs, at 10.7 % compared with ecstasy at 1.9 % and cocaine at 1.3 %. The same survey estimated the prevalence of cannabis use in the previous year and previous month at 3.4 % and 1.9 % respectively. In 2014, a lower estimate of 8.0 % lifetime drug use prevalence was found. In both the 2006 and the 2014 surveys, lifetime drug use was roughly twice as prevalent among males, with, for instance, 26.2 % of males aged 15–34 compared with 13.6 % of females ever having used illicit drugs in 2006, and 10.8 % of males aged 18–64 compared with 5.2 % of females in 2014. The lifetime prevalence of cannabis use in 2014 was again lower than that estimated in 2006, at 7.7 % of the population. In 2014, less than 1 % reported ever having used ecstasy (and 1.2 % among those aged 18–34 years). Although the standard questions on substance use were similar in both studies, comparability between the 2006 survey and the 2014 general population survey (the first such survey conducted in Serbia in line with EMCDDA methodology) is limited as a result of methodological differences (for instance, sampling, sample sizes, age groups, methods of data collection). For this reason, one cannot conclude from these surveys alone that there has been an overall trend towards a reduction in drug use prevalence in the country. Analysis of cross-indicators would

be necessary to validate this hypothesis, as well as a more in-depth analysis of the history of drug use in the country (we refer readers to the Serbian national report for 2014 for further information (Institute of Public Health of Serbia, 2014).

Drug use among young people

In all countries, there are survey estimates of the prevalence of drug use among younger population groups. One reliable comparable indicator of drug use prevalence among young people is available from the multicountry ESPAD survey among school students of 15–16 years (those born in 1995) (Hibell et al., 2009; Hibell et al., 2012; Hibell and Guttormsson, 2013). Table 1 summarises findings regarding lifetime illicit drug use from this ongoing survey. These data suggest no marked differences in the lifetime prevalence of drug use at 16 years between the Western Balkan countries in 2011, with all estimates hovering between 4 % and 8 %, approximately 2.5 times lower than the estimated European average. A marked outlier to these estimates was that generated in one of the entities of Bosnia and Herzegovina ([1]) in the previous survey round of 2008. The study yielded an estimated 18 % lifetime prevalence in the Federation of Bosnia and Herzegovina.

As elsewhere in Europe and globally, cannabis is the primary drug of use, with between 2 % (Kosovo) and 8 %

TABLE 1

Lifetime use of illicit drugs at 15–16 years

		Lifetime prevalence (%)		
		Males	Females	Total
Europe (36 countries)*[a]		21	15	18
Albania[a]		15	3	8
Bosnia and Herzegovina	Federation of Bosnia and Herzegovina[c]	24	13	18
	Republika Srpska[a]	8	3	6
The former Yugoslav Republic of Macedonia[b]		10	7	8
Kosovo[c]		7	2	4
Montenegro[a]		11	4	7
Serbia[a]		11	5	8

* Albania, Belgium (Flanders), Bosnia and Herzegovina (Republic of Srpska), Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, the Faroe Islands, Finland, France, Germany (five Bundesländer), Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Malta, Moldova, Monaco, Montenegro, Norway, Poland, Portugal, Romania, Russia (Moscow), Serbia, Slovakia, Slovenia, Sweden, Ukraine and the United Kingdom.

[a] Hibell et al., 2012.

[b] Hibell et al., 2009.

[c] Hibell and Guttormsson, 2013.

(1) Bosnia and Herzegovina is divided into two entities: Republika Srpska and the Federation of Bosnia and Herzegovina. The Brčko District, in the north of the country, was created in 2000 out of land from both entities. It officially belongs to both but is governed by neither and functions under a decentralised system of local government.

(the Federation of Bosnia and Herzegovina) reporting lifetime use in the latest estimates available. Again, these estimates are considerably lower than the 17 % European average for lifetime cannabis use at 16 years, with the estimates in Kosovo (2 %) and Albania (4 %) being among the lowest in Europe. Of note is higher estimated lifetime prevalence in 2011 of non-prescribed sedative or tranquilliser use in the region relative to other drugs — as high as 8 % in Albania, 7 % in Serbia, 5 % in Montenegro and 4 % in Kosovo, and at least comparable with the 6 % European average.

ESPAD survey data are limited to those aged between 15 and 16 years and school recruits. Surveys among young people of broader age ranges and recruited from multiple settings may sometimes suggest higher levels of drug use and experimentation, although there is scant evidence of surveys of young people conducted outside school settings. In Serbia, for instance, lifetime drug use prevalence was in 2014 estimated at 12.8 % among those aged between 18–34 years, which is much higher than the figure for those aged 15–16 years, and roughly 1.5 times more than general population estimates overall (8 %) (Institute of Public Health of Serbia, 2014). Table 2A in the Annex shows selected surveys (other than ESPAD) assessing drug use prevalence among young people in the region. In some countries, these surveys generate repeated measures data. In Albania, for instance, the 2005 and 2009 editions of the Youth Risky Behaviour Survey among 3 878 and 2 725 young people aged between 15 and 19 years suggest marginal increases in the lifetime use of cannabis (5.4 % to 7.4 %) and cocaine (1.6 % to 3.2 %) (Institute of Public Health of Albania, 2006, 2009). A rapid assessment among 1 302 community- and prison-recruited vulnerable young people aged between 15 and 24 years in Kosovo indicated a lifetime prevalence of cannabis use of 3.8 %, although it also pointed to 2.6 % using illegally obtained prescription drugs, including opioid-based preparations (WHO, 2009). A survey of 392 vulnerable children and young people aged between 12 and 20 years and recruited in care institutions in Bosnia and Herzegovina estimated that 5 % had used cannabis ([2]). The lifetime cannabis prevalence estimates generated by these last two studies among vulnerable young people recruited outside of school settings thus appear consistent with those generated through school-recruited samples. A 2013 school survey of 1 536 young people aged 15 years in the former Yugoslav Republic of Macedonia estimated cannabis use at almost half the prevalence estimated by ESPAD in 2011, at 4 % of boys and 2 % of girls (Kostarova-Unkovska and Georgievska-Nanevska, 2013).

There is an emerging pattern across surveys of drug use among young people in the region which indicates higher levels of use among males than females. In Albania, for

(2) UNICEF (2008), 'Survey of looked after children and young people' (unpublished report).

example, roughly seven times as many boys as girls aged between 15 and 19 years report ever having used cannabis (15.6 % compared with 1.8 %), and five times as many report ecstasy use (8.5 % compared with 1.7 %), while almost all reported use of heroin and cocaine is among boys (Institute of Public Health of Albania, 2009). Such gender differences are evident in the lifetime use of illicit drugs among 15- and 16-year-old school children (Table 1), with at least twice as many boys as girls ever having used cannabis. The exception to this trend is lifetime use of sedatives without prescription — a greater ratio of girls than boys report lifetime use at 16 years — and inhalant use, where there tends to be little or no gender difference (Hibell et al., 2012; Hibell and Guttormsson, 2013).

Other patterned variations include greater reported use among young people in capital cities and metropolitan centres relative to those in less urbanised areas or rural areas and rising prevalence with increasing age. In Albania, for instance, drug use among young people aged between 15 and 19 years is higher in the capital, Tirana, than elsewhere for cannabis (10.4 % compared with 7.5 %), ecstasy (6.6 % compared with 4.5 %), heroin (3.5 % compared with 1.9 %) and cocaine (4.6 % compared with 3.2 %) (Institute of Public Health of Albania, 2009). There are some growing indications of recreational drug use connected with nightlife and leisure scenes in country capitals and main cities, for instance reports of the use of 'legal highs' in Belgrade and Novi Sad, Serbia (Institute of Public Health of Serbia, 2014).

The lifetime prevalence of illicit drug use in the general population in the Western Balkan region appears to be lower than the European average; however, in keeping with the situation in European countries generally, such use primarily involves cannabis, with greater proportions of young men than young women reporting experience of cannabis use.

The ESPAD survey of 2011 repeated a previous survey carried out in 2008. Figure 3 summarises evidence of trends in lifetime cannabis use between these survey periods, suggesting an increase in prevalence in Montenegro, no marked change in the former Yugoslav Republic of Macedonia or Serbia, and a decrease in Bosnia and Herzegovina (Republika Srpska).

Problem and injecting drug use

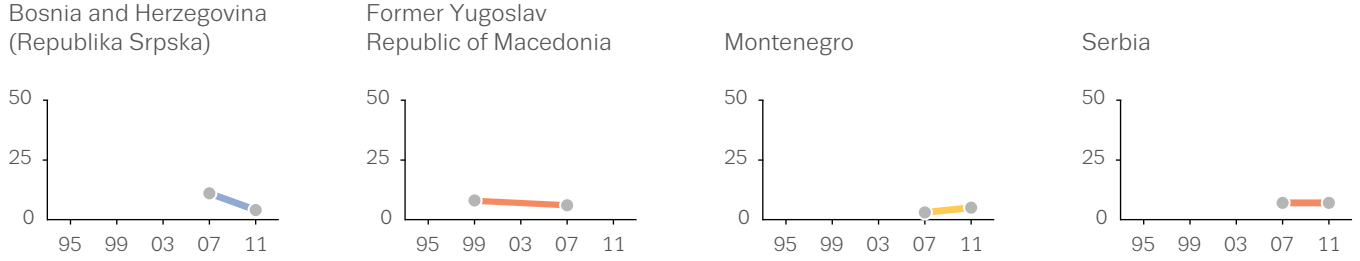
Greater efforts have been made in all the Western Balkan countries to generate empirical estimates of the prevalence of injecting drug use in the population than to quantify other forms of 'problem drug use', which is defined by the EMCDDA as injecting drug use and/or long-term or regular use of opiates, cocaine and/or amphetamines (EMCDDA, 2004). We identified no published empirical estimates of the size of problem non-injecting drug user populations in Western Balkan countries.

Prevalence of drug injecting

Before looking at specific estimates, it is worth mentioning that different tools and methodologies have been used over time, not only between countries but also at country level. This creates a situation — partly linked to the availability of funds and support from national and international donors — in which there may be divergent ranges of estimates available for a given country. This in turn has a direct impact on the estimation of the coverage of treatment and harm-reduction services. It is therefore important to consider the figures presented carefully and to bear in mind that they are indicative

FIGURE 3

Trends in lifetime use of marijuana or hashish at 16 years, by country, between 1999 and 2011



Source: EMCDDA–ESPAD (2012), 'Summary of the 2011 ESPAD report', EMCDDA, Lisbon. Available at: http://www.emcdda.europa.eu/publications/joint-publications/2011-espad

Note: changes below four percentage points between previous data collections are not recognised as real changes. Decreases are marked in blue, increases in yellow, unchanged situations in orange.

in nature. Further investment in national monitoring systems over time will help to produce increasingly reliable and useful estimates.

Most countries in the region have produced empirically based estimates of the size of the injecting drug user population, either at city level or local level (Table 3A in the Annex). Of these, those that are arrived at using capture–recapture (CRC) methods are often the most reliable. In Albania, a CRC exercise conducted in 2011, and drawing on 2007 police arrest and national toxicology data, estimated 6 050 PWID (95 % CI 4 816 to 7 284), while a second CRC exercise drawing on 2010 police arrest and methadone maintenance treatment (MMT) data estimated 3 961 PWID (95 % CI 2 560 to 5 362). A third CRC exercise, combining hospital and MMT data, estimated 8 648 PWID (95 % CI 6 353 to 10 942). Multiplier estimates drawing on 2008 RDS survey data among PWID and those recorded as in receipt of either MMT or harm-reduction services generated estimates of 1 141 (+/– 574) and 2 100 (+/– 293) respectively (Institute of Public Health of Albania, 2013).

In the former Yugoslav Republic of Macedonia, a mixed method approach incorporating CRC, multipliers using RDS survey data, a census of drug-using areas and Delphi method consultations was used (Ministry of Health of the former Yugoslav Republic of Macedonia, 2011). Expert assessments generated a national estimate of 3 600 PWID, but with wide-ranging and overlapping lower (2 300–5 000) and higher (2 000–6 000) estimates among the experts surveyed. Multiplier estimates derived from RDS survey data (n = 400) in combination with records of contact with non-governmental organisations (NGOs) and MMT services, as well as police records, produced an averaged national estimate of 2 705 PWID (95 % CI 2 149 to 4 095). A four-city CRC exercise (not including Skopje, the capital) yielded an estimate of 594 PWID (95 % CI 541 to 647) overall, with the highest estimates in the cities of Kumanovo and Strumica, although these are likely underestimates given the recruitment challenges of the recaptured sample (Kuzmanovska et al., 2010). A study in five cities in 2010, which drew on multiple methods, including expert opinion, CRC and multipliers, generated a national estimate of 10 200 PWID in the former Yugoslav Republic of Macedonia, or 0.5 % of the general population (Kuzmanovska et al., 2010). The population of Skopje represents approximately 25 % of the national population, and thus national prevalence was broadly estimated as four times higher than the estimate generated for Skopje.

In Bosnia and Herzegovina, separate multiplier estimates have been generated using 2009 RDS survey data for the cities of Sarajevo, Banja Luka and Zenica, and extrapolated nationally (both for the Federation of Bosnia and Herzegovina and the Republic of Sprska), producing an estimate of 7 500 PWID, or roughly 2.0 per 1 000 head of population aged 15–64 years. A national extrapolation exercise in 2012 suggested 12 500 PWID, or 3.3 per 1 000 head of population (Ministry of Security of Bosnia and Herzegovina, 2014).

In 2007 in Serbia, 18 000 PWID were estimated using multiplier methods in combination with RDS survey data and HIV testing records from Belgrade extrapolated nationally (Institute of Public Health of Serbia, 2014). Given that the primary treatment for substance use in Serbia is detoxification, the most accurate estimates of the PWID population may be derived from the detoxification multiplier. Based on this method, estimates were generated in 2009 of 13 040 for Belgrade, 1 640 for Vojvodina (Novi Sad only) and 2 967 for the rest of Serbia (Nis only). From these, a median estimate within the national minimum and maximum was selected to give a national estimate of 30 383 PWID aged between 15 and 59 years, with a range of 12 682 to 48 083, which indicates that, in the Western Balkans, by far the greatest absolute number of PWID reside in Serbia. This estimate suggests that 0.7 % of the population aged 15–59 have injected a drug. A more recent study to estimate the size of the PWID population in Serbia was completed in 2014. While these findings were unavailable at the time of writing, preliminary analyses suggest a considerably smaller number, closer to the 2007 estimate.

Most countries in the Western Balkans have produced empirical studies to estimate the size of populations who inject drugs, with data suggesting that the former Yugoslav Republic of Macedonia and Serbia may have the highest rates. However, given the variety of methodologies used, those estimates should be further developed to make them more reliable for comparison purposes.

The available data suggest that the countries with the highest prevalence of injecting drug use in the national population are the former Yugoslav Republic of Macedonia and Serbia; however, given the variety of methodologies used, those estimates should be further developed to make them more reliable for comparison purposes. Other data sources, such as surveys of young people and school students, suggest that less than 1 % have experimented with injecting drug use, with some indication of slightly higher experimentation in Albania (Table 1 and Table 2A in the Annex).

Health consequences linked to drug injecting

HIV and hepatitis C infections

The prevalence of HIV in the Western Balkan region is low relative to that in Europe as a whole (Jolley et al., 2012; ECDC and WHO Regional Office for Europe, 2013). Of registered cases of HIV to 2012 since reporting began among the countries studied in this report (3 847), 25 % (953) emanate from Serbia (Table 2). Of cumulative HIV cases reported to the end of 2012 in Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Montenegro and Serbia (3 847), around a quarter — 981 (25 %) — have been linked to drug injecting, almost all (97 %) in Serbia. However, it should be noted that most of these HIV cases linked to injecting drug use were registered prior to 2006; only 4.5 % (64 out of 1 408) of HIV cases reported since 2006 in these countries are linked to injecting drug use. This might suggest that the outbreak of the HIV epidemic among PWID in Serbia peaked before 2006 and that the situation seems to be better controlled now.

Data relating to HCV case reports are limited in the region, and therefore need to be interpreted with caution. In Serbia, which is one of the countries that reports on HCV infection, available data suggest that those aged between 30 and 39 years have the highest rate of notifications, rising from 13.38 per 100 000 in 2009 to 19.23 per 100 000 by 2012 (Institute of Public Health of Serbia, 2014). If this information regarding this age group were confirmed by further research and analysis of cross-indicators, this might suggest that Serbia had an ageing population of heroin users and that the peak of the heroin epidemic was over.

With regional HCV case reporting currently unsystematic and unpublished, and in the absence of reliable data regarding transmissions associated with drug injecting, it is difficult to assess the extent and distribution of HCV epidemics. The European pattern more generally indicates that the large majority (> 90 %) of recent and ongoing transmissions are linked with drug injecting (Nelson et al., 2011), and there is no reason to doubt that a similar pattern exists in the Western Balkans. Combining simple estimates of national general population size with HCV prevalence estimates among blood donors and other general population groups, the total number of HCV cases in the region could be estimated at around 294 000 (Hope et al., 2014). This represents around 1.5 % of the estimated total number of people with HCV in Europe. Although this percentage is low, the number of cases is still significant, and the potential burden on public health and national care systems should not be underestimated.

A quarter of all reported HIV cases in the region to date emanate from Serbia, where the largest populations of people who inject drugs in the region reside, and where HIV prevalence estimates among people who inject drugs are greatest (at nearly 5 %). While a quarter of cumulative HIV cases in the region are linked to injecting drug use, this is the case for less than 5 % of new cases since 2006. Further documentation of the situation and analysis of cross-indicators would be required to validate the hypotheses of a decreasing trend and of an ageing population of heroin users in Serbia.

HIV and hepatitis C prevalence

Table 4A in the Annex summarises respondent-driven samples of estimated HIV and HCV seroprevalence among PWID. None of these estimates since 2006 are published in peer reviewed scientific journals (the one recent exception is an estimate generated in 2005 in Serbia and Montenegro) (Judd et al., 2009). As with case surveillance data in general, relative to Europe as a whole, the Western Balkan countries appear to have low (< 1 %) HIV prevalence among PWID, with the exception of Serbia, which can be categorised as having low to medium (1 %–< 5 %) HIV prevalence among PWID (Jolley et

TABLE 2

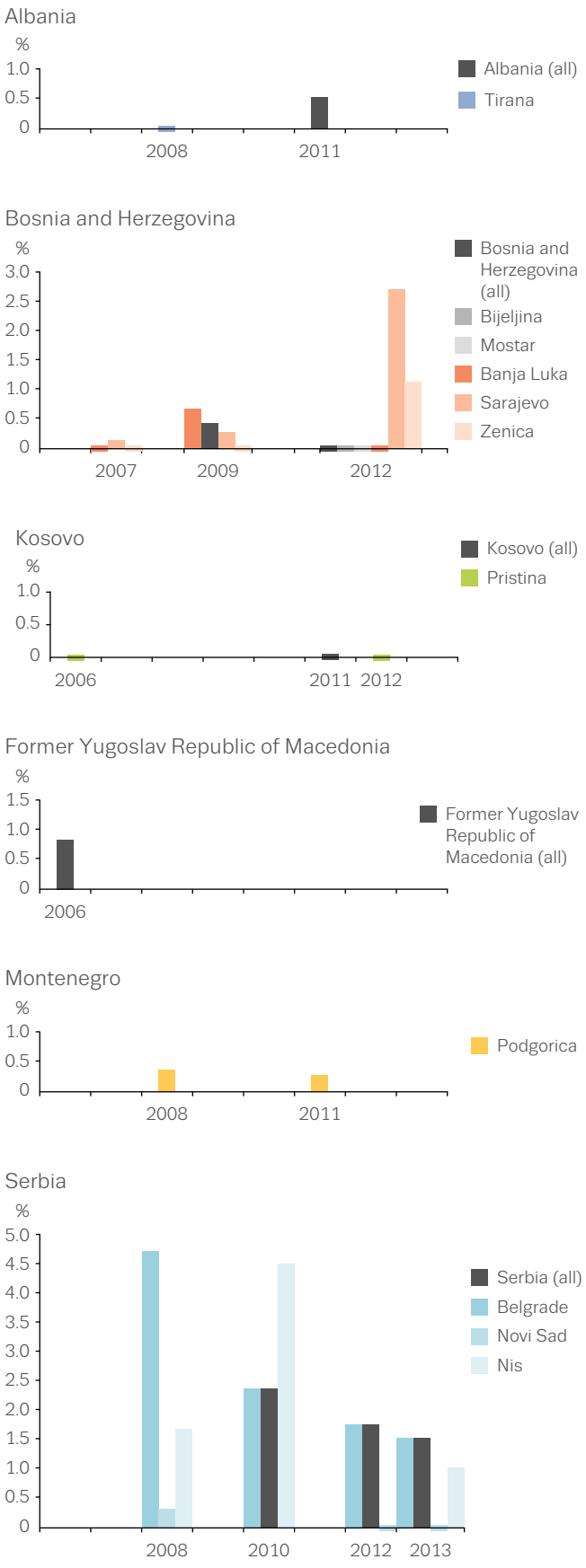
Trends in HIV cases associated with drug injecting as a proportion of incident HIV infections by year of diagnosis, 2006–12[a]

	2006	2007	2008	2009	2010	2011	2012	Cumulative (since reporting began)
Albania	0/32	0/44	0/54	1/62	0/44	0/75	0/81	1/577
Bosnia and Herzegovina	1/11	0/4	0/9	0/6	0/7	0/27	0/25	21/223
The former Yugoslav Republic of Macedonia	1/8	0/5	0/4	0/6	0/5	0/1	0/14	2/55
Montenegro	1/5	0/11	0/11	0/14	0/15	0/9	1/13	4/142
Serbia	8/88	12/91	10/118	9/131	6/148	9/127	5/125	953/2850

[a] No data reported for Kosovo
Source: ECDC and WHO, Regional Office for Europe, 2013.

FIGURE 4

HIV prevalence over time among people who inject drugs, 2006–13



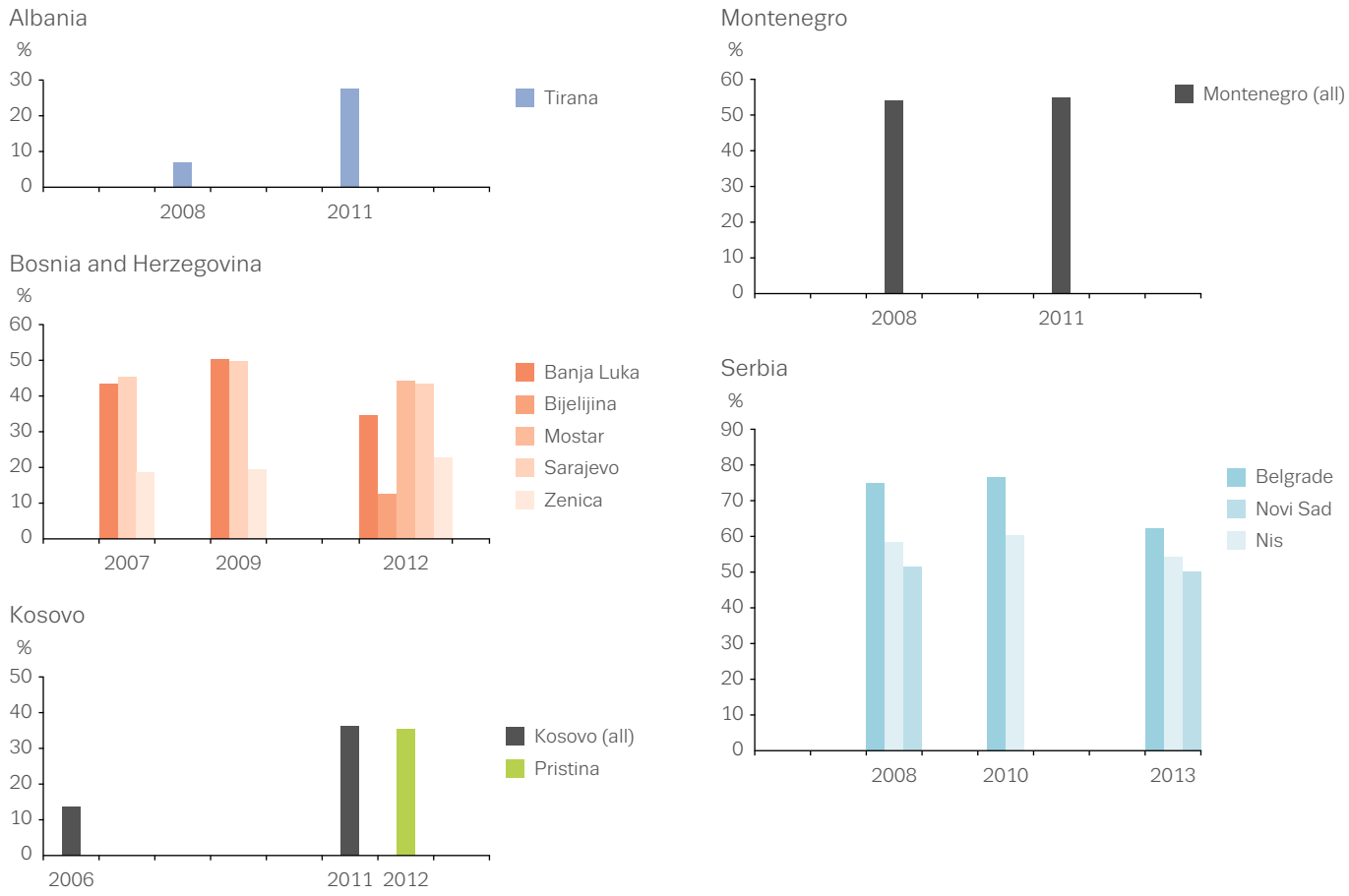
al., 2012). In Albania, Bosnia and Herzegovina, Kosovo and Montenegro, HIV prevalence estimates are less than 1 % or zero. Only in Sarajevo (Bosnia and Herzegovina) and in Belgrade and Nis (Serbia) have HIV prevalence estimates been higher. Estimates in Serbia suggest that HIV prevalence in Belgrade is falling, from 4.7 % in 2008 to 2.4 % in 2010, 1.7 % in 2012 and 1.5 % in 2013; however, there is an unclear trend in Nis, with 1.6 % prevalence in 2008 rising to 4.5 % by 2012 and falling back to 1.0 % in 2013. In Novi Sad, prevalence is less than 1 % (0.3 % in 2008, 0 % in 2012 and 2013) (Figure 4). Estimates derived from treated populations in Serbia suggest HIV prevalence of 2.9 % in 2011 (Institute of Public Health of Serbia, 2014). Some estimates in the former Yugoslav Republic of Macedonia suggest zero HIV prevalence in 2010, but 80 % HCV prevalence (Ministry of Health of Macedonia, 2014). One of the few published studies on the region, from Serbia and Montenegro in 2005, found 3 % HIV prevalence in Belgrade (n = 433) and 0 % in Podgorica (n = 328) (Judd et al., 2009).

There is clear evidence of significant epidemics of hepatitis C among people who inject drugs in the region, as well as a clear need to improve hepatitis C case surveillance and reporting, including evidencing the extent of transmissions associated with injecting drug use.

In contrast to the situation with HIV, there is evidence of a substantial epidemic of HCV infection among PWID in the region, with estimated HCV prevalence at 40 % or higher in most studies and settings (Figure 5), but wide variations in the estimated prevalence rates within countries are indicated. The 2013 study on Serbia indicates estimated HCV prevalence between 50 % and 61 % among PWID. The latest HCV prevalence estimate among PWID in Podgorica (Montenegro) was 55 %, while in Bosnia and Herzegovina the estimated HCV prevalence rates among PWID ranged between 12 % and 43 % depending on location. The most recent estimates for Tirana, Albania, suggest 29 % prevalence. No such published estimates could be identified in the former Yugoslav Republic of Macedonia. A published estimate derived from RDS surveys among PWID in 2005 found 63 % HCV prevalence in Belgrade (n = 433) and 22 % in Podgorica (n = 328) (Judd et al., 2009). While there have been a number of studies completed in the region in the last few years, recent reviews of the global epidemiology of HCV infection among PWID (Nelson et al., 2011; Khayriyyah et al., 2013) identify a lack of data from the Western Balkans published in peer-reviewed scientific journals.

FIGURE 5

Hepatitis C virus prevalence over time among people who inject drugs, 2006–13



Addressing the burden of viral hepatitis in the Balkan and Mediterranean regions will require national commitments in the form of strategic plans, financial and human resources, normative guidance and technical support from regional agencies and research (Hatzakis et al., 2013).

Recent estimates of the numbers of PWID with HCV are as follows: 800 in Montenegro, 1 300 in Albania, 2 100 in Bosnia and Herzegovina, and 9 400 in Serbia (Hope et al, 2014). Particular caution should be taken in the interpretation of these figures, as they are based on studies which employ different study designs and which may consequently vary in terms of robustness. It is also important to acknowledge that the number of people with HCV in a population is a function of both the estimated number of PWID and the estimated prevalence of HCV. There are currently no estimates available for the former Yugoslav Republic of Macedonia. These data are shown in Table 3. An estimated 0.5 % (13 600 out of 2 711 000) of the total estimated number of PWID with HCV in Europe emanate from the Western Balkans (with no estimates imputed from the former Yugoslav Republic of Macedonia, given the absence of estimates of HCV prevalence among PWID).

TABLE 3

Estimated number of people who inject drugs who are infected with the hepatitis C virus

	Population > 14 years (2008)	Estimated PWID	PWID prevalence (%)	Imputed from median prevalence	Estimated national HCV prevalence (%)	Estimated PWID with HCV	Estimated PWID with chronic HCV
Albania	2 389 000			10 000	13	1 300	900
Bosnia and Herzegovina	3 170 000	5 500	0.17		38	2 100	1 500
Montenegro	498 000			2 000	38	800	600
Serbia	8 068 000	18 000	0.22		52	9 400	6 900

Source: Hope et al., 2014.

Risk practices linked to viral infections

Sharing of needles and syringes is a key risk behaviour for transmission of blood-borne infectious diseases among PWID; that is why needle and syringe sharing patterns among PWID have become one of the main behavioural indicators acting as an early warning sign for potential increased HIV risk and helping to identify subgroups at higher risk of infection. Promoting injecting behaviour which excludes sharing injecting paraphernalia is one of the principal tasks of the NSPs. Therefore, this indicator provides a measure for evaluating the impact of these programmes. All RDS surveys in the region have reported estimated proportions of PWID who had shared needles and syringes in the previous month (Table 5A in the Annex). Most estimates for the region are lower than 20 %, which is not dissimilar to European estimates generally (Jolley et al., 2012), with the exception of Kosovo, where 56 % of PWID reported sharing injection equipment in the previous month (13 % on their last injection). While the proportion of those sharing is relatively high in Kosovo, and of epidemiological concern, the pool of sharers may remain relatively small. Despite the presence of RDS bio-behavioural surveys of viral infections in the region, we identified no evidence of published statistical or multivariate analyses investigating the combination of risk factors linked to the odds of HIV or HCV transmissions among PWID, or of syringe sharing practices. Qualitative studies investigating the social context of HCV risk point to high levels of uncertainty among PWID regarding HCV transmission and effects, as well as regarding the prevention and treatment of HCV, although these studies are now more than five years old (Rhodes et al., 2008).

In most countries less than 20 % of people who inject drugs share their injecting equipment, which is not dissimilar to European estimates generally. However, there are indications of high levels of syringe sharing among people who inject drugs in some locations, even twice that often reported in Europe more generally. This remains a cause for concern, and should be taken into consideration when planning harm-reduction interventions in the region. The recent outbreaks of HIV infection in Greece and in Romania in 2012–13, where the previous situation was relatively comparable to that prevailing in the Western Balkans suggests that there is a need to increase the availability of harm reduction interventions in the region in order to prevent a surge of similar outbreaks in the future.

Overdose and drug-related death

A drug-related death is defined as one that occurs shortly after the use of one or more drugs and can be accidental, intentional, a homicide or of undetermined cause. In Europe, the substances most commonly implicated in reported drug-related deaths are opioids, used alone or in combination with other psychoactive substances. Across the Western Balkans, data on drug-related deaths are incomplete, or of questionable reliability, probably underestimating the numbers of such deaths; for some countries, these data are 'virtually non-existent' according to national reports (Institute of Public Health of Albania, 2013; Ministry of Internal Affairs of Kosovo, 2013) (Table 6A in the Annex).

As in other regions of the world, the development of this indicator faces many challenges which are linked to a combination of weak legislative, regulatory and surveillance networks, limited toxicology expertise or capacity, poor diagnostics and limited coordination and information exchange among official agencies. In some jurisdictions, post-mortems, even in cases of sudden and unexpected deaths, can be carried out only at the request of the next of kin of the deceased (as is the case in Albania).

For these reasons, data on this indicator are not necessarily comparable and should be interpreted with caution.

Drug treatment and harm reduction

Demand for and availability of drug treatment

The situation regarding the availability of specialised treatment for drug users is variable within the region; there is a combination of state programmes and services provided by NGOs, frequently with the support of international donors and regional networks.

Specialist drug treatment services, both in- and outpatient, are largely linked to psychiatric hospitals, and, except in Serbia, little or no drug treatment is provided via general practice. Availability of specialist drug treatment — detoxification or rehabilitation — is particularly limited in Albania and Kosovo, where there is a single, state-supported specialist drug treatment centre, supplemented by NGO services. In Albania, there are two NGO services: one provides residential rehabilitation with a capacity of 20 beds (and treated 77 people in 2012); the other has provided methadone maintenance since 2005 via day-care centres in Tirana (to 741 persons between 2005 and 2012) (Institute of Public Health of Albania, 2013). In Kosovo, there is one NGO, based in Pristina, which provides outpatient services (in 2011 to 95

new clients) (Ministry of Internal Affairs of Kosovo, 2013). This is a common regional picture, with drug treatment provided via selected state, usually hospital-based, specialist services and supplemented by community-based NGO provision. At the same time, the introduction or scaling up of OST is one of the most notable achievements documented in the Western Balkans in the past 10 years. In 2012, Kosovo became the last country in the region to introduce OST, with the financial support of the Global Fund to Fight AIDS, Tuberculosis and Malaria (Table 4).

Limited data on treatment are available for the region; those that are available are not yet fully comparable and national coverage remains partial in most of the countries.

Table 7A in the Annex summarises national data on all treatment demand (ATD) and first treatment demand (FTD), as reported via state specialist in- and outpatient services, where available, between 2006 and 2010 (Institute of Public Health of Albania, 2013; Ministry of Security of Bosnia and Herzegovina, 2014; Ministry of Internal Affairs of Kosovo, 2013; Institute of Public Health of Serbia, 2014). Available data suggest that around a quarter of ATD is from new clients (FTD). In Albania, the number of individuals seeking treatment has steadily decreased from 767 people in 2006 and more than 800 in 2007 and 2008 to 454 people by 2012, although the number of overall treatment visits has remained relatively constant at around 2 000 each year (Institute of Public Health of Albania, 2013). The proportion of FTD cases has fluctuated, being highest in 2009 (34 % of ATD cases), 2011 (25 %) and 2010 (22 %), and lowest in 2008 (5 %). The proportions of FTD in Kosovo and Bosnia and Herzegovina, as far as data exist, are not dissimilar, and range between 20 % and 25 %. Given that Table 7A in the Annex includes only treatment demands captured by state specialist services, it is likely to be an underestimate of all treatment requests made. There is a general lack of efficient data linkage between state and non-government treatment services, which limits the available data on treatment demand.

In Bosnia and Herzegovina, a cumulative estimate suggests 1 371 clients in treatment in 2012, but this is likely to be an underestimate and there are no published indicators of the proportion of FTD over time (Ministry of Security of Bosnia and Herzegovina, 2014). In the former Yugoslav Republic of Macedonia, data submitted from all public treatment facilities, private treatment facilities and prisons across 10 cities yielded an estimated 1 671 overall clients receiving MMT and 186 receiving buprenorphine treatment in 2012 (Ministry of Health of the former Yugoslav Republic of Macedonia, 2014). In Serbia, outpatient new diagnoses in primary care related to non-alcohol substance use increased from 8 300 in 2009 to 9 300 in 2012, and in secondary and tertiary care from 1 667 to 2 471 (Institute of Public Health of Serbia, 2014).

The data available on the extent of drug treatment demand over time are extremely variable, and suggest that data linkage between state and non-government drug treatment services is still missing or insufficient.

As far as the data indicate, the majority of overall treatment demand in the region is related to use of heroin and other opioids, with around half of those in treatment having a history of injecting drug use, and almost all of these being men. In Bosnia and Herzegovina, for instance, 89 % of those in treatment for whom primary drug of use was known (1 003) reported heroin use, with injecting being the most common route of administration, while in Kosovo 89 % of new treatment clients and 71 % of all treatment clients reported heroin use, with over a third of those in treatment overall being injectors. In Albania, however, while 71 % of treatment demands related to heroin use in 2006, this proportion had decreased annually to 28.6 % by 2012, with polydrug use increasing. Until 2012, just under half (45 %) of those in treatment in Albania had a history of injecting; in 2012, the figure fell to 32 %. There appears to be little variation in the age range of those in treatment in the region, generally clustering between 26 and 29 years.

TABLE 4
Availability of demand- and harm-reduction interventions, 2010–13

	No of NSP	Syringes distributed*	Drug treatment centres	OST centres	Year OST introduced	OST clients
Albania	5	36 800	1	6	2005	473[2]
Bosnia and Herzegovina	31	71 951	4	6	1989	1 168[4]
The former Yugoslav Republic of Macedonia	16	318 485	2	14	1992	1 857[3]
Kosovo	3	19 900	1	5	2012	93[1]
Montenegro	18	24 822	7	3	2005	94[1]
Serbia	5	143 864	4	29	~1982	2 460[4]

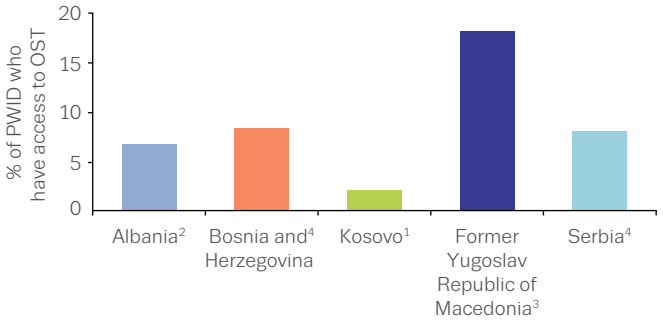
* Figures are for 2011 for all countries except Serbia, where figures are for 2012.
[1] 2010; [2] 2011; [3] 2012; [4] 2013.

Availability and coverage of drug treatment

As shown in Table 4, the availability of OST services ranges from between three and six such facilities in Albania, Bosnia and Herzegovina, Kosovo and Montenegro to 14 in the former Yugoslav Republic of Macedonia and 29 in Serbia (Institute of Public Health of Serbia, 2014; Hedrich et al., 2014). Only in Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia and Serbia do client numbers reach more than 1 000 (with Kosovo and Montenegro each providing OST to < 100 persons). All centres provide methadone, with buprenorphine also provided in Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia and Serbia. EMCDDA estimates of the proportion of PWID in receipt of OST relative to the estimated size of national PWID populations suggest coverage rates ranging between 2 % and 18 % across the countries (Figure 6). While it is accepted that there is variability across countries, this compares with an average coverage of OST in the EU of around 50 %. OST is available via general practitioners only in Serbia; it is made available in prisons in all countries in the region (although to very small numbers).

FIGURE 6

Estimated opioid substitution treatment coverage (%)



[1] 2010; [2] 2011; [3] 2012; [4] 2013.

Additional coverage estimates of those ever having received or currently receiving drug treatment are derived from RDS survey estimates (Table 5A in the Annex). These are variable, including within countries across cities; for instance, from 25 % (Bijeljina) to 74 % (Sarajevo) of PWID in Bosnia and Herzegovina have experienced drug treatment. Where repeated surveys have occurred, trends may suggest increased coverage. In Albania, for instance, whereas 36 % reported ever having experienced drug treatment and 11 % were currently receiving drug treatment in 2008, 64 % reported drug treatment experience and 28 % current treatment in 2011. Half of PWID surveyed in 2011 had previous or current experience of methadone treatment (in contrast to the 7 % current treatment coverage estimated by the total number of clients relative to the total number of PWID nationally). Such survey estimates are only as representative of PWID as their methods of recruitment allow, and may tend towards over-representing those with previous or current contact with services. In Serbia, however, of 58 % of PWID in Belgrade who reported trying to reduce their drug use in the previous 12 months, only 10.9 % reported contact with a detoxification programme in the previous 12 months, and none reported having received OST during that period (Institute of Public Health of Serbia, 2014).

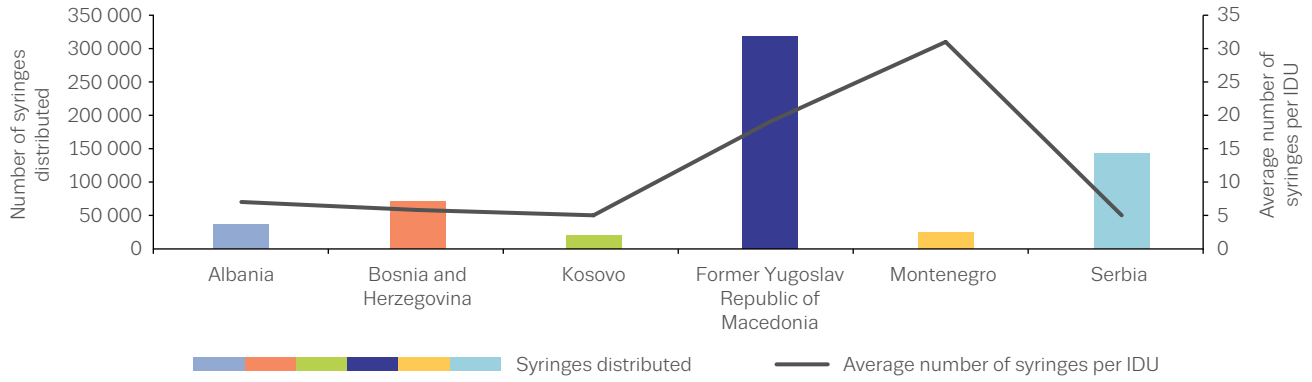
There is an emerging network of harm-reduction services in the region. Non-government and community organisations have played a leading and fundamental role in developing HIV prevention services for people who inject drugs. There is a clear need, however, to scale up the provision of OST and access to syringe exchange programmes, especially beyond capital and larger cities. With evidence of ongoing epidemics of hepatitis C, it is also important to strengthen community responses to HCV prevention and treatment, given its potential impact on public health and on national care systems.

Availability and coverage of needle and syringe exchanges

All the Western Balkan countries provide NSPs, although the number of available programmes and the number of needles and syringes distributed through these programmes is variable among the countries. For example, in Albania, Kosovo and Serbia, availability of NSPs is limited to five or less, while in Bosnia and Herzegovina more than 30 programmes provide clean needles and syringes (Table 4) (Hedrich et al., 2014). More syringes are distributed in the former Yugoslav Republic of Macedonia (more than 300 000) than in the rest of region together. Figure 7 represents NSP coverage as a function of the estimated number of syringes distributed in 2011 or 2012 relative to the estimated size of the injecting drug user population nationally. This shows that on average fewer than 10 syringes are distributed per individual PWID per year in Albania, Bosnia and Herzegovina, Kosovo and Serbia, and only in Montenegro (at 19 syringes per PWID per year) and the former Yugoslav Republic of Macedonia (at 31) is coverage higher. The latest NSP data in Serbia, however, suggest slightly higher coverage at 16 needles or syringes per PWID per year (Republic HIV/AIDS and TB Commission, 2014). Given that community surveys indicate that the large majority of PWID in the region inject at least daily, this suggests major issues with coverage and with the efficiency and efficacy of the measures, and can be considered to be below what is generally considered optimal to prevent emergent HIV epidemics (Degenhardt et al., 2010).

FIGURE 7

Estimated coverage of sterile injecting equipment via needle and syringe exchange programmes



Note: Figures are for 2011 for all countries except Serbia, where figures are for 2012.

NSP coverage estimates derived from community surveys of PWID can suggest higher levels — for instance, 50 % of surveyed PWID in Tirana (Albania) and 40 % in Sarajevo (Bosnia and Herzegovina) — as well as relatively low levels of syringe sharing — for instance, 12 % in the previous month in Sarajevo and less than 20 % in Belgrade (16.8 % in 2013 and 15.3 % in 2012) (Table 5A in the Annex). Low estimated NSP coverage in combination with low levels of syringe sharing may be indicative of pharmacy-based access to sterile injecting equipment.

Although progress is noticeable in the development of harm-reduction and treatment interventions for people who inject drugs, coverage remains insufficient. Only the former Yugoslav Republic of Macedonia has an estimated coverage of more than 18 % of people who inject drugs receiving opioid substitution treatment. Only in the former Yugoslav Republic of Macedonia and in Montenegro are more than 10 needles/syringes distributed per person who injects drugs per year. Despite those valuable efforts, it is important to stress that overall the results in the region are far below the threshold that would ensure a sustainable impact of the needles and syringes programmes on the situation.

Availability and coverage of HIV and HCV testing

Data generated from RDS surveys of PWID indicate variable access to HIV testing services in the region, as well as within countries (Table 5A in the Annex). Higher proportions of PWID reported having been tested for HIV in the previous year in Kosovo (50 %), Albania (45 %) and the former Yugoslav Republic of Macedonia (44 %) than in Serbia (19.3 % in 2013, Belgrade) or Bosnia and Herzegovina (36 %, Sarajevo; 19 %, Zenica; 13 %, Banja Luka). Increasing access to testing and reducing the proportions of undiagnosed viral infections are a critical components of combination intervention. There is an absence of available regional data summarising the extent and distribution of HCV testing among PWID.

Conclusions

This report provides a complex picture of the patterns and consequences of illicit drug use in the Western Balkan region: where available, data on the prevalence of drug use in the general population indicate a situation comparable to that in the EU, with cannabis being the most frequently reported drug of use, although at a level that is below the EU average; injecting drug use remains significant, as reflected by the prevalence of drug-related hepatitis C infections.

With regard to responses and interventions, there have been substantial efforts to develop treatment options and NSPs in the region, but the coverage of those programmes remains generally too low to guarantee a significant and sustainable impact on the situation. International partners, such as UN programmes, funds and specialised agencies, the Global Fund to Fight AIDS, Malaria and Tuberculosis, the EU funding programmes, and also regional networks of professionals, such as the South Eastern European and Adriatic Addiction Treatment Network, have supported the process. In addition to making significant financial investments, these organisations have served as platforms for exchanging best practices and fostering debates on the implementation and scaling up of evidence-based interventions. The long-term sustainability of the programmes developed by the states remains a challenge and should be made a higher priority.

Investment in monitoring the drug situation and responses to it also needs to be consolidated. This would contribute to providing decision-makers with the evidence required to

identify needs and priorities for interventions and for adapting those interventions to the local context.

The emergence and development of national drug strategies in line with the EU Drug Strategy and Action Plans, as part of the region's approximation to the EU, represent significant progress in the right direction; some countries have even started to evaluate their strategies in order to design new ones. At the same time, the process of drawing up new and more comprehensive strategies makes even clearer the need to build consensus between the main stakeholders, and the importance of securing adequate human and financial resources in the long term.

Patterns of drug use

Situation

The lifetime prevalence of illicit drug use in the Western Balkan region appears to be lower than the European average; however, in keeping with the situation in European countries generally, such use primarily involves cannabis, with greater proportions of young men than young women reporting experience of cannabis use. There is evidence of greater use of sedatives without prescription among young women than among their male counterparts.

Perspectives for monitoring

The bulk of reliable data indicators concerning patterns of illicit drug use in the general population in the region emanate from surveys of school pupils carried out by ESPAD (Hibell et al., 2011; Hibell and Guttormsson, 2013). There are few instances of general population surveys, and few published examples of surveys targeting younger people outside school environments. There is a need for surveys of illicit drug use, and especially problematic forms of use, among young people outside of school environments and beyond school age. This is important to detect diffusion patterns where initiation and experimentation are most likely, as well as in in heterogenous samples and recruitment sites. An important consideration is how young people's social networks, and not only school environments, may shape patterns of drug use, especially with the growing use of Internet.

Patterns of problem drug use

Situation

The numbers of PWID in the region vary from 3 500 in Kosovo, 8 000 in Albania, around 10 000 in the former Yugoslav Republic of Macedonia and around 12 000 in Bosnia and Herzegovina to more than 30 000 in Serbia.

In terms of estimated rates per 1 000 of population, they range between 1.8 and 5.0 (in the EU, 12 countries have recent estimates of the prevalence of injecting drug use, ranging from less than 1 to approximately 6 cases per 1 000 of population aged 15–64 (EMCDDA, 2014)).

Those results suggest that there are different histories and patterns of drug use in the region, with Serbia having clearly the biggest number of PWID and having addressed the problem by developing services and numbers of facilities for treatment and harm-reduction interventions over the previous 10 years.

Perspectives for monitoring

Most countries in the Western Balkans have produced empirical studies to estimate prevalence of drug injecting. The methodological reliability of prevalence estimation studies is variable, and in some instances estimates are based on consensus studies of expert or stakeholder opinion rather than CRC or multiplier studies. National estimates also tend to be derived as an extrapolation of multiple city-based estimates that may be quite divergent or context-specific. The variable availability of data and lack of published prevalence estimation studies in the region make assessing the veracity of different estimates difficult.

Recently, the EMCDDA changed the operational definition of 'problem drug use' to encourage the monitoring of indicators relating to 'high-risk' use, which is measured as the use of psychoactive substances (excluding alcohol, tobacco and caffeine) by high-risk pattern (e.g. intensively) and/or by high-risk routes of administration in the last 12 months (EMCDDA, 2013b). The proposed monitoring methods could support researchers in the Western Balkans in estimating the extent and nature of problem drug use beyond injecting drug use.

Patterns of harm linked to problem drug use

Situation

The prevalence of HIV in the Western Balkans is low relative to that in Europe as a whole. A quarter of all reported HIV cases in the Western Balkan region to date emanate from Serbia, where the largest populations of PWID in the region reside, and where HIV prevalence estimates among PWID are greatest. While a quarter of cumulative HIV cases in the region are linked to injecting drug use, this is the case for less than 5 % of new cases since 2006.

There is clear evidence, from the results of bio-behavioural surveillance studies among PWID, of significant epidemics of hepatitis C among PWID in the region. Further enhancement of hepatitis C case surveillance and reporting could help to better evidence the extent of transmissions associated with injecting drug use. National data indicating the extent of new and cumulative hepatitis C cases are poorly monitored in some cases.

While in general in the region needle and syringe sharing levels are similar to those observed in wider Europe, in some locations there are indications of high levels of syringe sharing among PWID. This is cause for concern, especially given the lower than optimal coverage of harm-reduction interventions. The extent of hepatitis C among PWID, which is an indicator of needle and syringe sharing among PWID, indicates no room for complacency and suggests that scaling up interventions designed to maintain risk reduction from viral infections is desirable.

Perspectives for monitoring

Further investments should be made in exploring, through multivariate analyses, the complexity of risk factors associated with the adverse health consequences of injecting, to advise on the most appropriate interventions.

While there are multiple and often repeated bio-behavioural surveys and other second-generation surveillance studies among PWID, these appear to be of variable quality, and are largely unpublished. The sampling, recruitment and analysis methods of such studies are often unclear. Such studies are of practical use for informing local intervention development and policy; however, there is a need for a systematic and regionally coordinated approach to implementing targeted second-generation surveillance studies among key populations, an approach involving repeated comparable measures every 2–3 years, multiple recruitment sites, adequate sample sizes, the use of appropriate sampling methods (including well-documented RDS methods) and multivariate analyses. Establishing mechanisms for repeated measures of HIV and viral hepatitis prevalence, drug-related deaths and overdoses, related risks and service use is especially important.

Patterns of drug treatment and harm reduction

Situation

Progress has been made in the treatment offered over the last 10 years in the region through two different and not always well-coordinated channels: state services and NGOs.

However, the coverage remains insufficient overall in most of the Western Balkan countries, which now face a double challenge:

- to structure and organise into a single national system services that have been created through different processes and institutional cultures and that were sometimes more in competition than seeking complementarity; and
- to ensure the continuity and sustainability of services that were established with the support of international donors and that have to be integrated into the budget of the responsible line ministries in a general context of scarcity of resources and competing needs and priorities.

While drug treatment mainly targets opioid users, targeted treatment services for ethnic minorities, women and children are rare. There also appears to be definite scope for the diversification of drug treatment options, especially outside capital cities. The introduction and scaling up of OST in the public health and prison settings is the most visible, or best documented, achievement in increasing the availability of evidence-based treatment methods.

There is an emerging network of harm-reduction services in the region. Non-government and community organisations have played a fundamental role in developing HIV prevention services for PWID. The scaling up of harm-reduction interventions should build on, and strengthen, this capacity, as community agencies provide a fundamental conduit to state-provided services as well as an alternative means of service provision where state services remain inaccessible to hidden key populations.

At the same time, the overall coverage of harm-reduction and drug treatment interventions among PWID remains low, and is far below European norms (Hedrich et al., 2013; ECDC and EMCDDA, 2011). The needles and syringes distributed in the region cover only a small minority of injections. There remains a clear need to scale up the provision of OST and access to

NSPs, especially beyond capital and larger cities. Given the high prevalence of HCV infection among PWID documented across the region, sufficient attention should be given also to addressing the treatment needs of this population.

Perspectives for monitoring

The data available on the extent of drug treatment demand over time remains extremely variable, indicating a need to further consolidate implementation of data collection on treated populations, and in particular on treatment demand indicators.

There is greater scope for using future and ongoing bio-behavioural surveys as mechanisms for monitoring and assessing the reach, coverage and impact of harm-reduction and other treatment interventions, as part of third-generation surveillance approaches. There is also scope for modelling studies to estimate targets for optimum coverage and the cost and policy implications of meeting these targets.

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Abbreviations

ATD	all treatment demand
CI	confidence interval
CRC	capture–recapture
ECDC	European Centre for Disease Prevention and Control
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
ESPAD	European School Survey Project on Alcohol and Other Drugs
EU	European Union
FTD	first treatment demand
GDP	gross domestic product
HCV	hepatitis C virus
HIV	human immunodeficiency virus
IPA	Instrument for Pre Accession Assistance
MMT	methadone maintenance treatment
NGO	non-governmental organisation
NSP	needle and syringe exchange programme
OST	opioid substitution treatment
Phare	Programme of Community aid to the Countries of Central and Eastern Europe
PWID	people who inject drugs
RDS	respondent-driven sampling
Reitox	European information network on drugs and drug addiction
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization

Annex: national data tables

TABLE 1A

Key contextual country-level indicators

	European Union (28 states)	Albania	Bosnia and Herzegovina	Kosovo	Former Yugoslav Republic of Macedonia	Montenegro	Serbia
Population[a]	507 416 607[5]	2 895 947[5]	3 830 911[5]	1 798 645[3]	2 065 769[5]	624 335[5]	7 146 759[5]
GDP per capita in PPS[a]	100[4]	30[4]	29[4]	n.a	35[4]	42[4]	36[4]
Health expenditure (% of GDP)[b]	—	6.0[3]	9.9[3]	n.a	7.1[3]	7.6[3]	10.5[3]
Unemployment (% of labour force)	10.2[5]	13.4[2]	28.0[3]	35.1[3]	28.2[2]	10.7[1]	25.5[3]
Prison population (per 100 000)[e]	—	173.7[3]	72.7[3] Federation of Bosnia and Herzegovina 74.3[2] Republika Srpska	n.a	123.5[3]	197.8[3]	153.4[3]

[1] 2008; [2] 2011; [3] 2012; [4] 2013; [5] 2014.
n.a: not available
PPS: Purchasing Power Standards

Sources:
[a] European Commission (2014).
[b] WHO (2014), 'Countries' information, accessed 20 September 2014 from http://www.who.int/countries/en/
[c] EMCDDA (2013).
[d] See www.stat.gov.mk/OblastOpsto.aspx?id=14
[e] Council of Europe (2014).

TABLE 2A

Selected surveys of cannabis and other drug use among young people

	Date	Drug	Age in years	Sample	Setting	Prevalence
Albania	2009[a]	Cannabis	15–18	3 878	School	7.4 %
	2009[a]	Ecstasy	15–18	3 878	School	4.2 %
	2009[a]	Heroin	15–18	3 878	School	1.2 %
	2009[a]	Cocaine	15–18	3 878	School	3.2 %
	2005[b]	Cannabis	14–18	Youth Risky Behaviour Survey (YRBS)	School	5.4 %
	2005[b]	Ecstasy	14–18	Youth Risky Behaviour Survey (YRBS)	School	4.0 %
	2005[b]	Heroin	14–18	Youth Risky Behaviour Survey (YRBS)	School	1.4 %
	2005[b]	Cocaine	14–18	Youth Risky Behaviour Survey (YRBS)	School	1.6 %
	2004[c]	Cannabis	14–19	UNDOC ARQ		5.5 %
	2004[c]	Opioids	14–19	UNDOC ARQ		1.8 %
	2004[c]	Cocaine	14–19	UNDOC ARQ		1.4 %
	2004[c]	Amphetamines	14–19	UNDOC ARQ		4.9 %
	2004[c]	Ecstasy	14–19	UNDOC ARQ		4.9 %
	2004[c]	Heroin	14–19	UNDOC ARQ		1.8 %
Kosovo	2009[d]	Cannabis	15–19 and 20–24	1 302 surveys (746 15–19 year olds, 556 20–24 year olds; 652 male, 650 female)	Urban/rural youth between the ages of 15 and 24	3.8 %
	2009[d]	Heroin	15–19 and 20–24	1 302 surveys (746 15–19 year olds, 556 20–24 year olds; 652 male, 650 female)	Urban/rural youth between the ages of 15 and 24	0.4 %
	2009[d]	Ecstasy	15–19 and 20–24	1 302 surveys (746 15–19 year olds, 556 20–24 year olds; 652 male, 650 female)	Urban/rural youth between the ages of 15 and 24	0.6 %
	2009[d]	Amphetamine	15–19 and 20–24	1 302 surveys (746 15–19 year olds, 556 20–24 year olds; 652 male, 650 female)	Urban/rural youth between the ages of 15 and 24	0.4 % (males only)
	2009[d]	Cocaine/crack	15–19 and 20–24	1 302 surveys (746 15–19 year olds, 556 20–24 year olds; 652 male, 650 female)	Urban/rural youth between the ages of 15 and 24	0.2 %
The former Yugoslav Republic of Macedonia	2013[e]	Cannabis	15	1 536 15 year olds 814 boys (641 Macedonian-speaking, 173 Albanian-speaking) and 722 girls (579 Macedonian-speaking, 143 Albanian-speaking)	120 primary schools and secondary schools (i.e. high schools), both rural and urban	4 % (Macedonian-speaking boys), 2 % (Macedonian-speaking girls), 3 % (Albanian-speaking boys), 0 % (Albanian-speaking girls). 3 % of boys reported using marijuana in the previous 30 days and 1 % of girls reported using marijuana in the previous 30 days
	2008[f]	Any drug	Most students were between 12 and 16	2 114 (52.4 % boys and 47.6 % girls)	30 schools: grades 7 and 8 (elementary school) and 1st and 2nd year (secondary school)	3.0 % overall (3.9 % boys and 2.0 % girls). 1.8 % of the subsample of those students aged 13–15 reported using drugs one or more times. None of the students reported drug use before the age of 14

Sources:
[a] Institute of Public Health of Albania (2009).
[b] Institute of Public Health of Albania (2006).
[c] UNODC (2014).
[d] WHO, UNICEF, UNFPA (2009).
[e] Kostarova-Unkovska and Georgievska-Nanevska (2013).
[f] Tozija et al. (2008).

TABLE 3A

Estimated sizes of injecting drug user populations

	Estimate	Population (%)	95% CI	Date	Method	Data source
Albania	6 050	0.20	4 816 to 7 284	2007	Indirect prevalence estimation (capture–recapture)	Police arrest/toxicology reports
	1 141	0.04	567 to 1 715	2008	Indirect prevalence estimation (multiplier)	RDS survey (*n* = 200)/MMT contact (10.4 %)
	8 648	0.29	6 353 to 10 942	2008	Indirect prevalence estimation (capture–recapture)	Hospital and MMT
	2 559	0.07	1 641 to 2 659	2008	Indirect prevalence estimation (multiplier)	RDS survey (*n* = 200)/harm reduction contact (27.9 %)
	3 961	0.14	2 560 to 5 362	2010	Indirect prevalence estimation (capture–recapture)	Police arrest/MMT
	4 750	0.16	4 500 to 5 500	2013	Expert judgement with known method of estimation (expert consensus)	Expert assessment
Bosnia and Herzegovina	7 500	0.20		2009[b]	Indirect prevalence estimation (multiplier)	RDS survey
	12 500*	0.33[+]	9 500 to 15 500	2012[a]	Indirect prevalence estimation (multiplier)	Expert assessment
Kosovo	3 500	0.18		2001[c]	Expert judgement with known method of estimation (rapid assessment)	
	1 500**[d]			2009	Expert judgement with known method of estimation (rapid assessment)	Survey (*n* = 1302)
Former Yugoslav Republic of Macedonia	3 600	0.18	3 200 to 4 000	2009	Expert judgement with known method of estimation (expert consensus)	
	2 705	0.13	2 149 to 4 095	2009	Indirect prevalence estimation (multiplier)	RDS survey (*n* = 400)/NGO, methadone, police
	10 200	0.50	7 450 to 14 150	2010[e]	Estimate with methodology unknown (expert consensus)	
Montenegro	950***[f]		675 to 1 455	2005–06	Indirect prevalence estimation (capture–recapture) — crude	
	660***[f]		520 to 909	2005–06	Indirect prevalence estimation (capture-recapture) — adjusted	
Serbia	18 000	0.24	12 500 to 25 000	2008	Indirect prevalence estimation (multiplier)	Proportion of people who inject drugs who reported HIV testing at the Special Hospital for Dependence Diseases in Belgrade
	30 383****	0.7	12 682 to 48 073	2009	Indirect prevalence estimation (multiplier) and national population survey	The proportion of IDUs who reported being in detoxification treatment in the previous year

* Banja Luka, Bihać, Bijelina, Brčko, Mostar, Sarajevo, Tuzla, and Zenica; ** Pristina only; *** Podgorica only; **** Estimate for the IDU population of 15–59 year olds, and based on estimates for Belgrade, Novi Sad and Nis only.

[+] Using the population for all of Bosnia and Herzegovina.

MMT: methadone maintenance treatment.

Sources:

[a] Ministry of Security of Bosnia and Herzegovina (2014).

[b] UNICEF and Bosnia and Herzegovina (2010).

[c] WHO and UNICEF (2001).

[d] WHO, UNICEF, UNFPA (2009).

[e] Kuzmanovska et al. (2010).

[f] Simic, M., Strahinja, R., Mugoša, B., Rhodes, T. and Hickman, M. 'Review of the estimates of the size of the injecting drug use population in Podgorica (Montenegro)', unpublished report.

TABLE 4A

Respondent-driven sample surveys of HIV and HCV prevalence among people who inject drugs

	Date	Sample	Setting	% HIV (95 % CI)	% HCV (95 % CI)
Albania	2005[a]	225	Tirana	0 %	**17.6 % (11 to 25.7)**
	2008[b]	200	Tirana	0 %	7.6 %
	2011[c]	200	Tirana	0.5 %	**28.8 % (20.5 to 37.2)**
Bosnia and Herzegovina	2007[d]	260	Sarajevo	**0.1 % (0.1 to 0.4)**	**46.2 % (37.8 to 54.0)**
	2007[d]	260	Banja Luka	**0 % (0.0 to 0.1)**	**43.4 % (35.8 to 51.5)**
	2007[d]	260	Zenica	0 %	**18.9 % (12.9 to 27.4)**
	2009[e]	261	Sarajevo	**0.3 % (0 to 0.4)**	**49.7 % (40.9 to 58.2)**
	2009[e]	260	Banja Luka	**0.6 % (0 to 1.4)**	**50.6 % (42.8 to 59)**
	2009[e]	260	Zenica	0 %	**19.5 % (12.3 to 27.2)**
	2012[f]	200	Sarajevo	**2.7 % (0.0 to 4.5)**	**43.4 % (34.6 to 53.9)**
	2012[f]	260	Banja Luka	0 %	**34.9 % (27.0 to 45.1)**
	2012[f]	207 (HIV) and 209 (HCV)	Zenica	**1.1 % (0.0 to 3.6)**	**22.5 % (12.2 to 33.4)**
	2012[f]	200	Mostar	0 %	**43.4 % (32.8 to 53.7)**
	2012[f]	129	Bijeljina	0 %	**12.0 % (6.2 to 18.5)**
Kosovo	2006[g]	199	Pristina/Prizren	0 %	**12.5 % (8.0 to 17.7)**
	2011[h]	205		0 %	37.4 %
	2012[i]	152	Pristina	0 %	36.5 %
Montenegro	2008[j]	322	Podgorica	0.4 %	53.6 %
	2011[k]	350	Podgorica	0.3 %	55.0 %
Serbia	2008[l]	316	Belgrade	**4.7 % (2.6 to 7.5)**	**74.8 % (70.0 to 79.6)**
	2008[l]	310	Nis	**1.6 % (0.2 to 3.0)**	**58.4 % (52.9 to 63.9)**
	2008[l]	312	Novi Sad	**0.3 % (0.3 to 1.0)**	**51.6 % (46.0 to 57.2)**
	2010[m]	371	Belgrade	**2.4 % (0.0 to 4.0)**	**77.4 % (73.1 to 81.6)**
	2010[m]	200	Nis	**4.5 % (1.6 to 7.4)**	**60.5 % (53.7 to 67.3)**
	2012[n]	300	Belgrade	**1.7 % (0.2 to 3.1)**	
	2013[n]	399	Belgrade	**1.5 % (0.3 to 2.7)**	**61.4 % (56.6 to 66.2)**
	2013[o]	295	Novi Sad	**0 % (0.0 to 0.0)**	**50.2 % (44.4 to 55.9)**
	2013[o]	300	Nis	**1.0 % (0.1 to 2.1)**	**54.7 % (49.0 to 60.3)**

Note: Results in blue are population-adjusted estimates (bootstrapped).

Sources:
[a] Family Health International (2006).
[b] Institute of Public Health of Albania (2008).
[c] Institute of Public Health of Albania (2011).
[d] UNICEF (2007).
[e] UNICEF and Bosnia and Herzegovina (2010).
[f] Baćak and Dominković (2012).
[g] Family Health International (2007).
[h] The Global Fund to Fight AIDS, Tuberculosis and Malaria Program in Kosovo (2011).
[i] Unpublished data from NGO Labyrinth (2012).
[j] Baćak et al. (2013).
[k] Montenegro Ministry of Health (2013).
[l] Institute of Public Health of Serbia 'Dr Milan Jovovic Batut' (2008).
[m] Institute of Public Health of Serbia 'Dr Milan Jovovic Batut' (2010).
[n] Institute of Public Health of Serbia 'Dr Milan Jovovic Batut' (2012).
[o] Institute of Public Health of Serbia 'Dr Milan Jovovic Batut' (2013).

TABLE 5A

Injecting drug use in the region

	Sample (*n*)	Age at first injection in years (mean; median)	Shared equipment at last injection (%)	Shared equipment in the previous month (%)	Ever in treatment (%)	Tested for HIV (past year, %)	Tested for HIV (ever, %)	Ever in prison (%)	Ever treated with methadone (%)
Albania*	124	15.53; 16		19		45.4 (ever)		30.7[f]	39.3 (MMT)[f] 31.1 (Detox)[f]
Bosnia and Herzegovina[b]									
Sarajevo	200	16.11; 15	7.5	11.7	73.5	35.5	64.7	64	
Zenica	209	16.48; 16	9.6	12.7	58.7	19.1	58.1	48.3	
Mostar	200	16.1; 15	7.0	27.3	39.4	16.0	55.3	35.4	
Bijeljina	130	16.4; 16	13.1	18.0	24.8	6.1	36.9	34.9	
Banja Luka	260	16.0; 15,5	7.4	14.1	65.9	13.4	22.0	38.2	
Kosovo[e]**	200	22.0 (mean)	13.0	55.8	39	50	44.2		
Former Yugoslav Republic of Macedonia[d]			72.3 (used sterile equipment at last injection)			43.73			
Serbia[c] **Belgrade**	399	21 (median)	83.2 (used sterile equipment at last injection)	16.8	16.5 (previous 12 months, Belgrade)	19.3	63.4	28 (previous 12 months)	2.9[g] (previous 12 months)

Note: These values are unadjusted.

* Data are for Tirana only.
** Data are for Pristina, Prizren and Urosevac only.

[a] Institute of Public Health of Albania (2008).
[b] UNICEF (2007).
[c] Institute of Public Health of Serbia 'Dr Milan Jovovic Batut' (2014).
[d] Ministry of Health of the former Yugoslav Republic of Macedonia (2010).
[e] Family Health International (2007).
[f] Family Health International (2006).
[g] The proportion of PWID reporting methadone treatment in the previous 12 months may be an underestimate given that the survey recruited those who had injected in the previous month, which is an exclusion criterion for methadone maintenance treatment.

TABLE 6A

Reported drug-related deaths, 2006–12

	2006	2007	2008	2009	2010	2011	2012
Albania[a]			4	4	2	2	2
Bosnia and Herzegovina[b]				11			5
Kosovo[c]	3*	1*	5	5	15	17	
Former Yugoslav Republic of Macedonia[d]	8	19	10	16	14	14	18
Montenegro[e]	4	7	5	10			
Serbia[f]			117	119	75	39	50

* The Statistical Office of Kosovo reported a high level of non-codified deaths in 2006 and 2007 (> 30 % of deaths in 2006 and 2007 are uncoded).

Sources:
[a] Forensic Medicine Institute Registry.
[b] Medical Faculty, University of Sarajevo.
[c] Labyrinth (NGO).
[d] Institute of Forensic Medicine, Criminology and Medical Deontology at the Medical Faculty in Skopje; the Institute of Forensic Medicine, Bitola; and the Institute of Forensic Medicine, Tetovo; and Ministry of Health, 2014.
[e] Forensic Medical Department of the Clinical Centre of Montenegro in Podgorica.
[f] National Office for Statistics, Serbia.

TABLE 7A

First treatment demand (FTD) and all treatment demand (ATD) for state specialist services, 2006–12

		2006	2007	2008	2009	2010	2011	2012
Albania	FTD		108	41	269	147	114	154
	ATD	767	856	862	789	671	460	454
	FTD as a proportion of ATD		12.6 %	4.8 %	34.1 %	21.9 %	24.8 %	33.9 %
Kosovo	FTD					36	42	
	ATD	151	165	172	198	186	169	
	FTD as a proportion of ATD					19.4 %	24.9 %	
Bosnia and Herzegovina	FTD				364	362		
	ATD				1 455	1 544		
	FTD as a proportion of ATD				25.0 %	23.45 %		
Montenegro	FTD	526	603	526	548			
	ATD							
	FTD as a proportion of ATD							

Note: All countries reported treatment demand/uptake but not all reported treatment demand in terms of unique contacts (i.e. individuals) and total contacts (i.e. treatment episodes). In addition, treatment (for reporting purposes) was defined differently across regions, e.g. in Albania treatment demand does not include demand for methadone maintenance treatment.

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The European Monitoring Centre for Drugs and Drug Addiction is the hub of drug-related information in Europe. Its mission is to provide the European Union and its Member States with 'factual, objective, reliable and comparable information' on drugs and drug addiction and their consequences. Established in 1993, it opened its doors in Lisbon in 1995, and is one of the European Union's decentralised agencies. The Centre offers policymakers the evidence base they need for drawing up drug laws and strategies. It also helps professionals and researchers pinpoint best practice and new areas for analysis.

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- *National reports* on the drug situation (2013 data) available for the six countries covered by this report. Available at: emcdda.europa.eupublications/national-reports
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- *Prevention of infectious diseases among people who inject drugs in some Western Balkan countries*, 2015.
- *Drug law offences in the Western Balkan region: from definition to monitoring*, 2015.

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