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for Drugs and Drug Addiction



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### **Workbook Harms and Harm Reduction**

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## 0 Summary (T0)

According to the Federal Criminal Police Office (Bundeskriminalamt, BKA), in 2015 a total of 1,226 people died as a result of the use of illicit drugs. As such, the numbers have increased for the third consecutive year (2014: 1,032, 2013: 1,002). In almost two thirds of all cases, mono or polydrug overdoses with opioids were the cause of death; heroin / morphine overdoses (alone or in connection with other substances) accounted for 45% of all drug-related deaths; substitution drugs (alone or in connection with other substances) accounted for 17%. Poisonings by other substances, mainly cocaine / crack and amphetamine / methamphetamine were the cause of death in 14% of cases.

In the general mortality register, the distribution of ages in drug related deaths in the course of the last ten years continues to show a trend towards an ever increasing proportion of older age groups, albeit gradually weakening. There is still no evidence of a new trend in fatal drug intoxications amongst the youngest users of illicit drugs.

In 2015 3,674 newly diagnosed HIV infections were reported to the Robert Koch Institute (RKI). The total number of newly diagnosed HIV infections has therefore increased again. Persons who have likely contracted their HIV infection through injecting (i.v.) drug use make up the third largest group (5%), after men who have sex with men (MSM) (62%) and those who contracted their HIV infection through heterosexual contact (32%).

In 2015 the case definitions for hepatitis B and C (HBV and HCV) was changed. Consequently the number of cases which fulfil the reference definition for HBV will clearly increase; in contrast, the reported number of cases will decrease for HCV (for more information on the case and reference definition see section 6.2.2). With regard to HBV, a total of 2,379 cases (63%) according to the old case definition and 1,404 cases (37%) according to the new case definition were reported to the RKI; the reference definition corresponded to 1,907 cases<sup>1</sup>. Information on mode of transmission was only available for 6.8% of these cases. Injecting drug use was the second most common mode (24% of cases with information on mode of transmission). The most common mode of transmission was sexual transmission with 52 reports (40%), of which 28 were cases of homosexual contact amongst men.

For 2015, a total of 4,887 cases of newly diagnosed HCV were reported. Thus, the calculated incidence of new diagnoses was, as expected, lower than in 2014 (7.2), and the median of the years 2009 to 2013 (6.4). For 1,170 (23.9 %) of new diagnoses information was recorded on mode of transmission. Injecting drug use, which has a high probability of being causally related to a diagnosis of hepatitis C, was reported for 892 cases (76 % of the cases with information as to the mode of transmission). The additional specification of

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<sup>1</sup> The differences in those numbers are due to the different "case" and "reference" definitions. I.e. among the cases which were recorded according to the new case definition, not only cases confirmed through clinical laboratory diagnostics but also infections proven through laboratory diagnostics, for which the clinical picture is not fulfilled or not known, fulfil the reference definition. More information can be found in section 6.2.2.

"injecting drug use in prison" was recorded for 28 (4%) males and 4 (2%) females with the indication "injecting drug use".

The treatment for hepatitis C among drug users is currently a widely discussed topic due to the introduction of new medicinal drugs onto the market which improve the chances of recovery whilst having a more favourable side-effect profile. Studies show time and again that under certain conditions this population can and should also be effectively treated. It remains unclear how many drug users can benefit from these new treatment options, due to the high price of the medicinal drugs and continued widespread concerns amongst doctors.

Drug consumption rooms (to date 23 fixed sites as well as one mobile drug use facility) and syringe provision programmes (currently approx. 167 syringe vending machines in 9 *Laender* as well as provision of loose syringes in numerous projects nationally) continue to play an essential role in harm reduction among injecting drug users. Safer-use services in prisons remain far behind what is possible, however: there is a syringe vending machine in only one of the 183 prisons in Germany.

The further development of harm reduction efforts is currently being driven forward from various places. From this year, the BIS 2030 strategy of the Federal Government will be available with the objective of substantially reducing HIV HBV, HCV and other sexually transmitted infections by 2030. The DRUCK study, which has analysed injecting drug users in eight German cities over the last few years, has published recommendations on the further development of harm reduction and the combatting of HIV, HBV and HCV among drug users; in addition, an expert group of employees from low-threshold facilities across Germany, under the umbrella of the German Aids Service Organisation e.V (Deutschen AIDS-Hilfe, DAH), are currently working on the development of national standards on user dispensing drug use paraphernalia.

In an effort to combat the high number of opioid overdoses, NGOs are increasingly providing emergency training for naloxone use by laypeople for drug users and their environment. Whilst a comprehensive provision of care nationwide is far from being a reality at the present time, there are now projects in Berlin, Frankfurt, Cologne and several other cities in North Rhine-Westphalia and now in Munich as well. Furthermore, a research project on the prescription of Naloxone before release from prison is being planned, recruiting of study participants has started in the summer of 2016.

The harmful side effects of cannabis use are currently the focus of numerous research projects. In addition, the hitherto largely unknown harmful side effects of new psychoactive substances (NPS) are also being investigated; in this respect, a case series on desoxypipradol (2-DPMP) has recently been presented.

# 1 National profile (T1)

## 1.1 Drug-related deaths (T1.1)

### 1.1.1 Drug-related deaths: Overdose deaths (T1.1.1)

In Germany there are two general, comprehensive registration systems for cases of drug related deaths, which differ from one another in various ways. These systems are the police data from the "Drugs data file" and the "Statistical report on the causes of death" from the German Federal Statistical Office. Both data collection systems are described in more detail in 6.2.1. and only briefly characterised here:

The data collected by the BKA, the so called "Drugs data file" shows long-term secondary diseases, suicides and accidents that have come to the attention of the police. Since the data year 2012, the BKA has used a new table in which the individual causes of death can be better separated and overlaps can be better identified in many cases.

The "Statistical report on the causes of death" and the general mortality register of the German Federal Statistical Office are used for comparisons with other European countries as this register largely follows the common European standards. Data from the police register is of great significance for long-term comparisons of national trends and provides important information on categories of substances connected to overdoses. However, it is less suitable for European-wide comparisons due to differences in the selection criteria and reported age groups.

Neither of the two methods used records all drug-related deaths. A certain number of relevant cases is not recognised, is unreported or wrongly assigned. However, a long-term comparison of the two registers shows very similar developments and trends that can be seen as a sort of cross-validation of the two estimation methods (although trends are not equally strong for both systems, see section 2.1.1). An empirical analysis of the question as to the extent to which the two systems record the same cases and how far the target groups overlap has not as yet been performed.

### **Current data from the police register on drug-related deaths**

The reliability of information on drug-related deaths strongly depends on the question as to whether autopsies and toxicological reports have been utilised to validate the initial estimate of whether a particular death is drug related. The autopsy rate for all drug-related deaths according to the Drugs Data File (Falldatei Rauschgift, FDR) of the BKA in the reporting year 2015 was 60.9% (2014: 56.6%) (BKA 2016).

In 2015, the number of drug-related deaths increased once more, as in previous years. In total, 1,226 people died as a result of using illicit drugs (2014: 1,032), which corresponds to an increase of approximately 19%. 84% of the drug deaths were male, the average age was 38 years old, as in the previous year. In terms of the number of inhabitants, the city states of Berlin (4.4 drug deaths per 100,000 population) and Hamburg (3.3) had the biggest problems, as in previous years. Outside of the city states, Bavaria, the *Land* with the second

largest population, was the most strongly affected; 25.6 % of all drug deaths were in Bavaria (2.5 drug deaths per 100,000 inhabitants). 14.8 % of drug deaths were in the *Land* with the largest population, North Rhine-Westphalia (1.0 drug deaths per 100,000 inhabitants). With 5.4 drug deaths per 100,000 inhabitants, Nuremberg was once again the most affected large city in Germany, followed by Munich with 4.4 and Cologne and Frankfurt with 4.1 (BKA & Die Drogenbeauftragte der Bundesregierung 2016). When interpreting these numbers, it must be taken into account that the autopsy rate of the individual *Laender* can sometimes vary widely making comparison between the *Laender* more difficult.

### **Current data from the general mortality register**

The most recent available figures on drug-related deaths, which are available from the general register on the causes of death of the Federal Statistical Office, are from 2014, when 1,195 people were recorded in the category drug-related deaths (274 females and 921 males; the proportion of females is 22.9%). This corresponds to an increase of 1.4% in the total number of drug deaths compared to 2013 (1,179 people) (Statistisches Bundesamt, special calculations).

### **Comparison of the data from the general mortality register with police data**

The general mortality register covers more cases overall than the parallel BKA register; the difference between the two in 2014 was 163 cases, or almost 16%. While both registers exhibit similar trends, the increase in deaths between 2013 and 2014 recorded in the general mortality register was, at 1.4%, somewhat lower than that in the BKA register, where the figure was 3.0% (long term trends are described in more detail in section 2.1.1). The reference population and case definition for the two registers are not identical. One problem which remains is that the exact number of overdoses in the register on the causes of death produced by the Federal Statistical Office is not stated, as it remains the situation that too few cases are specifically coded with respect to the acute cause of death and a multicausal code has not yet been established nationwide. Thus, despite the changes of the WHO coding rules which took effect in 2006, the national mortality register is seen as less meaningful in respect of the analysis of the substance classes which acutely led to deaths in the case of intoxications than the BKA's causes of death categorisation (as revised in 2012).

## **1.1.2 Toxicology of overdose deaths (T1.1.2)**

### **Data from the police register on drug-related deaths**

Overdosing on heroin/morphine (including poisoning by heroin/morphine in combination with other substances) was recorded for 554 cases (2014: 467), thus remaining the most common cause of death (45%). The proportion of drug-related deaths in which substitution drugs were detected, alone or in combination with other drugs, was at 17% (208 cases). Poisoning by substances other than opiates, especially by cocaine/crack and

amphetamine/methamphetamine was the cause of death in 14% of cases (see Table 1) (BKA 2016).

It is possible that the figures for mixed intoxications ("polydrug poisonings") in particular for the involvement of substitution substances or NPS could be underestimated in the representation of substance involvement due to a lack of precise toxicological information. The developments over the last few years in the area of drug related deaths is reported in 2.1.1..

Table 1 Drug-related deaths 2015 by substance

Causes of death	% of Total		Number
	2014	2015	2015
<b>Monovalent poisonings from opioids</b>	<b>23.1</b>	<b>21.9</b>	<b>268</b>
Heroin/Morphine	18.3	16.6	204
Opiate-substitution drugs	4.7	2.8	34
- of which: Methadone/Polamidone	1.6	2.5	31
- of which: Buprenorphine (i.a. Subutex)	0.3	0.2	3
- of which: Others	2.4	0.0	0
Opiate based medicines <sup>1</sup>		2.4	30
- of which: Fentanyl		2.3	28
<b>Polydrug poisoning from opioids<sup>1</sup></b>	<b>41.5</b>	<b>43.2</b>	<b>530</b>
Heroin/morphine in connection with other substances (i.c.w.o.s.)	26.9	28.5	350
Opiate-substitution drugs i.c.w.o.s.	17.2	14.2	174
- of which: Methadone/Polamidone i.c.w.o.s.	12.0	12.0	147
- of which: Buprenorphine (i.a. Subutex) i.c.w.o.s.	1.6	1.2	15
- of which: Others i.c.w.o.s.	6.1	1.0	12
Opiate based medicines <sup>1</sup>		6.0	74
- of which: Fentanyl		4.8	59
<b>Monovalent poisonings from substances other than Opioids</b>	<b>5.5</b>	<b>6.0</b>	<b>73</b>
Cocaine/Crack	1.4	1.2	15
Amphetamine/Methamphetamine	2.7	2.4	29
- of which: Amphetamine	1.9	1.5	18
- of which: Methamphetamine	0.8	0.9	11
Amphetamine derivatives	0.3	0.5	6
Others (w.e.o. psychoactive medical substances)	1.9	1.9	23
- of which: New psychoactive substances/designer drugs	1.6	1.5	19
- of the latter: Synthetic cannabinoids / cathinone	0.9	1.1	13
- of the latter: Others	0.7	0.5	6
<b>Polydrug poisonings from substances other than opioids<sup>2</sup></b>	<b>8.3</b>	<b>8.3</b>	<b>102</b>
Cocaine/Crack i.c.w.o.s.	2.2	2.0	25
Amphetamine/Methamphetamine i.c.w.o.s.	4.4	4.3	53
- of which: Amphetamine i.c.w.o.s.	3.4	3.8	47
- of which: Methamphetamine i.c.w.o.s.	1.0	1.1	13
Amphetamine derivatives i.c.w.o.s.	0.8	0.6	7
Others (w.e.o. psychoactive medicinal drugs) i.c.w.o.s.	2.4	2.6	32
- of which: Psychoactive substances/designer drugs i.c.w.o.s.	1.3	1.6	20
- of the latter: Synthetic cannabinoids / cathinone	1.1	1.1	13
- of the latter: Others	0.2	0.6	7
Psychoactive medicinal drugs, i.c.w.o.s.	1.7	1.5	19
<b>Poisonings from psychoactive medical substances only (where applicable, including in connection with alcohol)</b>	<b>1.3</b>	<b>1.5</b>	<b>19</b>
<b>Suicides</b>	<b>7.4</b>	<b>5.0</b>	<b>61</b>
Suicide by way of intoxication (already included in the causes mentioned above)	3.8	2.9	36
Suicide through means other than intoxication	3.7	2.0	25
<b>Long-term harms:</b>	<b>11.5</b>	<b>10.9</b>	<b>134</b>
- of which: Long-term harms in combination with intoxication consequences	4.2	4.2	51
<b>Accidents</b>	<b>2.8</b>	<b>2.3</b>	<b>28</b>
<b>Other cases</b>	<b>0.3</b>	<b>1.1</b>	<b>13</b>
<b>Total (N)<sup>3</sup></b>	<b>1,032</b>		<b>1,226</b>

<sup>1</sup> Only recorded since 2015<sup>2</sup> On the first level of the subcategories, multiple counting is possible.

3 The total number is formed from the sum of all monovalent and polydrug poisonings plus all suicides not caused by intoxications, as well as long-term harms, accidents, other cases and undetermined poisonings.

BKA 2016.

### **Data from the general mortality register**

In 2014, the *underlying disease* (dependence, harmful use of drugs, others from the ICD group F 1x.x) was coded for 67.0% of deaths (2013: 65.2%); however, for these cases the information on the *acute* cause of death is lacking. Only the coding of drug-induced deaths under the ICD-10 classification with the additional X/Y code for external causes allows inferences to be drawn on the substance spectrum involved in intoxications as this would allow a substance specific itemisation by T-code. In 2014, this applied to only 33.0% of registered cases. Purely opiate related deaths in this subgroup accounted for 45.4% of cases in 2014 (42.6% the previous year). In 22.3% of cases, other substance groups were mentioned. 32.2% of cases involved unspecified intoxications and in particular those with mixed use of different substance groups. In this respect, it may be assumed that opiates once more play the predominant role as the leading substance. The limited significance should be stressed because, amongst other things, it is not exactly known how many of these classifications are actually based on the findings of chemical-toxicological analyses on the spectrum of substances that caused the deaths. Evaluations of the trends of the coded causes of death can be found in 2.1.1.

#### **1.1.3 Mortality cohort studies (T1.1.3)**

There is no overview available on the mortality of the overall population of drug users. Nor are there currently any known regional cohort studies. It is however possible to get at least closer to the question by using the data that exists on drug addicts in treatment.

Care in outpatient addiction counselling facilities ended in death for 1.9% of opioid clients according to the Statistical Report on Substance Abuse Treatment in Germany (DSHS) for 2015 (2014: 1.8%; 2013: 1.7%; 2012: 1.4%; 2011: 1.6%). In 2015 opioid clients accounted for 82% of all clients registered in the DSHS who had an illicit drug problem and who had died during an outpatient treatment (Braun et al. 2016). In order to eliminate the effect of the duration of the treatment, which has been continuously extended in the last few years, a treatment period of 12 months is used as a basis for the calculation. The resulting mortality of 1.6% per annum is in 2015 as high as in the previous year and has been stable, with slight fluctuations, over the last ten years, (see Table 2).

However, when looking at this data, it needs to be taken into account that the counselling centres are not always informed about the death of a client so that the actual mortality – in particular of treatment dropouts - is presumably higher than the values given here. If one assumes that facilities' knowledge of clients' deaths has not changed systematically over the years, it is nevertheless possible to interpret trends in the manner presented.

Table 2 Mortality of opioid clients in outpatient treatment

(Braun et al. 2016) and own calculations.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Proportion of deaths among persons ending treatment (%)	1.4	1.3	1.4	1.2	1.5	1.5	1.6	1.4	1.7	1.8	1.9
Treatment duration (days)	305	301	314	321	336	343	354	381	400	400	421
<b>Mortality p.a. (%)</b>	<b>1.7</b>	<b>1.6</b>	<b>1.6</b>	<b>1.4</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.3</b>	<b>1.5</b>	<b>1.6</b>	<b>1.6</b>

### 1.1.4 Additional information on drug-related deaths (T1.1.4)

No additional information is available on this.

## 1.2 Drug related acute emergencies (T1.2)

### 1.2.1 Drug related acute emergencies (T1.2.1)

As an approximation of the number of drug related non-fatal emergencies, there is nationwide data available on acute intoxications (ICD-10 diagnoses F1x.0) and poisonings (ICD-10-diagnoses T40.X) treated on an inpatient basis in hospitals from the Statistical Report on Hospital Diagnoses 2014 as well as the special reports of the German Federal Statistical Office (Statistisches Bundesamt) (see Table 3). It should be noted that the cases of poisoning (ICD-10 T40.X) include both overdoses as well as mistaken administration or ingestion of the wrong substances. Also, cases of opioid poisoning could be caused by, for example, (accidental or intentional) overdoses of prescribed medications containing opioids and not by the use of illicit drugs. In addition, this data can only provide a comment on drug-related non-fatal emergencies admitted to hospital on an inpatient basis. Emergency cases, which are not treated at all or are covered in other facilities, (poison information centres, see 1.2.2, but also practice-based doctors, emergency medical treatment with no subsequent inpatient treatment) are not covered here. Moreover, it is not clear from the data, how seriously pronounced or dangerous the symptoms were. Although T-codes should be issued for severe poisonings whereas F-codes tend to be issued for less serious intoxications or inebriations, it is questionable how clear cut this coding is in practice. Moreover, it is not clear from the existing data how long the respective treatment lasted; short term cases were also included. The data should therefore only be interpreted with caution.

A further approximation of the number of drug related emergencies can be taken from the data of the Poison Information and Poison Control Centres (Giftnotrufzentrale, GIZ). These provide information about emergencies that have not led to hospital admission (see 1.2.2).

### 1.2.2 Toxicology of drug-related acute emergencies (T1.2.2)

Table 3 Number of acute intoxication and poisoning cases, Statistical Report on Hospital Diagnoses, 2014

ICD-10 Diagnosis	Total number not incl. deaths	Age in years				
		<15	15 - 24	25 - 45	45 - 65	65+
<b>Acute intoxication [acute inebriation] (F11.0 to F16.0, F18.0, F19.0)</b>	18,654	376	5,257	9,050	3,180	791
From opioids (F11.0)	1,821	11	164	1,074	365	207
From cannabinoids (F12.0)	2,089	179	1,275	556	75	4
From sedatives/hypnotics (F13.0)	2,561	29	373	971	813	375
From cocaine (F14.0)	478	0	101	326	50	1
From other stimulants (F15.0)	1,814	57	760	913	78	6
From hallucinogens (F16.0)	367	7	192	138	30	0
From volatile substances (F18.0)	73	6	17	33	12	5
From multiple substance use or use of other psychotropic substances (F19.0)	9,451	87	2,375	5,039	1,757	193
<b>Poisoning by narcotic drug (BtM) and psychodysleptics (hallucinogens) (T40.X)</b>	1,871	92	361	522	381	515
From opium (T40.0)	104	4	8	14	30	48
From heroin (T40.1)	146	0	8	108	30	0
From other opioids (T40.2)	980	50	68	163	257	442
From methadone (T40.3)	87	2	9	45	25	6
From other synthetic narcotics (T40.4)	36	0	15	13	2	6
From cocaine (T40.5)	85	0	15	63	7	0
From other non-specified narcotics (T40.6)	47	1	8	21	6	11
From cannabis(-derivatives) (T40.7)	308	33	190	69	15	1
From lysergide (LSD) (T40.8)	18	0	16	1	1	0
From other non-specified psychodysleptics (T40.9)	60	2	24	25	8	1

Statistisches Bundesamt, special calculations.

### **From the data from the Poison Information and Poison Control Centres:**

Data is available from six of the eight GIZ<sup>2</sup> on the documented enquiries on the basis of acute poisoning cases in connection with drugs (not including medication, which is recorded separately) from the year 2014 (GIZ Nord 2015; Informations- und Behandlungszentrum für Vergiftungen Homburg/Saar 2015; Informationszentrale gegen Vergiftungen 2015; Toxikologische Abteilung der II. Medizinischen Klinik 2015; Vergiftungs-Informations-Zentrale Freiburg 2015)

In these six institutions there were 3,785 cases of poisoning by illicit drugs in 2014 (total number of enquiries on the basis of suspected cases of human poisonings in 2014: 163,519). Out of the total number of enquiries, the proportion of drug cases, as in the previous few years, is therefore low, at 2.3%. From this information, however, one cannot ascertain whether these are unintended consumption or overdoses during wilful drug use. Some of the poison information centres also classify cases according to substance, as well as other variables such as age, in their documentation systems.

The GIZ Nord<sup>3</sup> documented a total of 32,870 cases of suspected human poisonings in 2014, of which 1.9% (n=618) concerned enquiries related to the main group, illicit drugs. No patients amongst those suspected cases died; 38 of the suspected cases were classified as severe poisoning (6.1%). 194 (31.9%) came under the medium level of severity. For 120 of the suspected cases (19.4%) the severity of the poisoning could not be determined.

There is information on substance groups: more than half of all enquiries related to illicit drugs were as a result of the use of stimulants. In 35.4% of all cases (n=219) enquiries were related to the use of amphetamine type stimulants (ATS); cocaine accounted for 13.9% (n=86). Of the enquiries related to ATS, 82% concerned methamphetamine, which corresponds to 13.3% of all enquiries related to illicit drugs. Thus the trend of the previous few years has continued, in that the proportion of enquiries related to methamphetamine has been falling (2012: 16.6% of all enquiries, 2013: 14.0% of all enquiries). On the basis of the data of the GIZ Nord alone, however, no clear conclusion can be drawn on the popularity of crystalline methamphetamine in the northern *Laender*. 107 (17.3%) calls were received due to cannabinoids, of which almost 40% (n=42) were related to synthetic cannabinoids. Opiates made up 9.2% (n=57) of the calls.

Of the severe poisoning cases, 12 were due to ATS, 7 to opiates, 6 to GHB ("liquid ecstasy"), 3 to cannabinoids and two to poppers. For 7 of the poisonings categorised as severe, no information could be recorded on the noxious agent.

### **1.2.3 Additional information on drug-related acute emergencies (T1.2.3)**

No additional information is available on this.

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2 <https://www.klinitox.de/3.0.html> [accessed: 29 Aug. 2016].

3 Responsible for enquiries from Bremen, Hamburg, Lower Saxony and Schleswig-Holstein.

### **1.3 Drug related infectious diseases (T1.3)**

Throughout Germany all data on infectious illnesses, which must by law be reported as per the German Protection Against Infection Act (Infektionsschutzgesetz), are reported to the Robert Koch Institute and analysed there. This therefore also includes reports of HIV and hepatitis infections. In addition, data is available from the DSHS which should, however, only be interpreted with extreme caution due to a very high rate of missing information. Data from other sources gives additional insight into the problems of specific, often regional, populations of drug users (e.g. consumption room users and clients of outpatient addiction support facilities) with HIV and hepatitis. In this context, the DRUCK study is of particular note (for a description see 6.2.1, results can be found in 1.3.3 and 3.3), which examined the prevalence of hepatitis B and C as well as HIV amongst injecting drug users in eight German cities in the years 2011 - 2015. Respondents were also asked about unsafe use behaviours and knowledge about the three infections as well as safer use (RKI 2016a). In addition, an ongoing study on the epidemiology of HCV amongst opioid substitution clients (ECHO Study) of the Centre for Interdisciplinary Addiction Research (ZIS) in Hamburg will be able to contribute further findings on the prevalence and incidence of HCV amongst opioid substituting individuals. The study protocol has already been published; results are expected at the end of 2016/ beginning of 2017 (Strada et al. 2015).

More precise information on the data sources for drug related infectious diseases can be found in sections 6.1 and 6.2.

#### **1.3.1 Main drug-related infectious diseases among drug users – HIV, HBV, HCV (1.3.1)**

The figures presented below stem from the data on new HIV and hepatitis C diagnoses, as well as acute hepatitis B cases reported to the RKI in the year 2015 (RKI 2016b).

Data on the prevalence of hepatitis B and C among injecting drug users are also contained in standard table 9.

##### **HIV reporting data**

A total of 3,674 HIV infections newly diagnosed in 2015 were reported to the RKI. This translates to a nationwide incidence of 4.5 cases per 100,000 inhabitants. The total number of newly diagnosed HIV infections has therefore increased in comparison to the previous year (3,500) by 5%. The incidence of newly diagnosed HIV infections amongst the male population was 7.4 cases per 100,000 inhabitants, which was higher than in the previous year (7.2), and much higher than the incidence amongst women at 1.8 per 100,000 population. At that level, however, the incidence did increase from the previous year (1.6). The proportion of women amongst new HIV diagnoses was 20% and has continued to increase slightly. Amongst both men and women, the age groups 25 - 29 years old and 30 - 39 years old showed the highest incidences of new HIV diagnoses, with only slight differences.

## HIV infection risks

Information on infection risk was available for 2,966 of the 3,674 reported cases (81%). In the reported cases with information, 62% were infected via homosexual contact among males, 32% via heterosexual contact and 5% via injecting drug use. 1% of reported cases concerned children who had been infected via their mothers.

## Hepatitis B reporting data

In 2015, the case definition for hepatitis B was changed. Consequently, the number of cases which fulfil the reference definition will increase considerably. For 2015, 2,379 cases (63%) according to the old case definition and 1,404 cases (37%) according to the new case definition were recorded and reported. The subsequent evaluations are based only on cases which fulfil the reference definition. This amounted to 1,907 cases (differences between the case definition and the reference definition as well as more general information on the case definition are explained under section 6.2.2). The incidence of hepatitis B in Germany was 2.4 infections per 100,000 population (2014: 0.9) and was 2.5 times higher among boys and men, at 3.4 infections per 100,000 population, than among girls and women (1.4). In the *Laender*, the incidences were between 0.5 infections per 100,000 population in Bremen and 5.7 in Bavaria.

In 585 of the total of 1,907 infections (31%) the country of infection was also recorded, whereby, when one takes in account multiple recordings, 593 indications were recorded and among the 10 countries most often reported, Germany accounted for 54% of cases reported. 7% of cases reported Afghanistan as the infection country, 5% Syria and 3% Eritrea.

## Hepatitis B infection risks

Information was available on the mode of transmission in 129 (6.8%) of the 1,907 cases reported as per the reference definition. Multiple mentions were reduced to the most probable mode of transmission. With 31 cases (corresponding to 24% of cases which gave information on the most probable mode of transmission) injecting drug use was the second most common mode of transmission reported, equal to cases of shared accommodation with a hepatitis B virus carrier. The most common mode of transmission was sexual transmission with 52 reports (40%), of which 28 were cases of homosexual contact amongst men. Cases of heterosexual contact were only recorded as the most probable mode of transmission where the individual reported a partner status as known hepatitis B positive.

Information on country of birth is only recorded in cases of asylum seekers and could only be reported as of the end of 2015, so that the proportion of newly diagnosed hepatitis B virus infections among persons from high prevalence regions is largely unknown. This group presumably represents a significant proportion of the people affected in Germany, thus there is a need here for improvement in detection, prevention and treatment of cases. It is strongly recommended that all nurslings, children and adolescents as well as further, defined at-risk groups are consistently vaccinated, in particular in the case of sexual behaviour with a high risk of infection or in the case of injecting drug use.

### **Hepatitis C reporting data**

Since 2015, following a change in the case definition (for more information on this see 6.2.2) only active HCV infections are still analysed in the RKI reporting. A decrease in the number of cases due to this change was expected.

For 2015, a total of 4,887 cases of newly diagnosed HCV were reported. This corresponded to a national incidence of 6.1 new diagnoses per 100,000 population. Thus, the calculated incidence of new diagnoses was, as expected, lower than in 2014 (7.2), and the median of the years 2009 to 2013 (6.4).

The incidence of newly diagnosed cases in the male population, at 8.2 new diagnoses per 100,000 population, was significantly higher than in the female population (3.9). As in previous years, the highest incidence was among men in the age group 30 - 39 year olds (21.4). Among women, a less pronounced highest incidence was to be found in the 30 - 39 year old group (7.6). The incidence of new diagnoses in this age group was 2.8 times higher amongst men than amongst women.

### **Hepatitis C infection risks**

For 1,170 (23.9%) of new diagnoses, information was recorded on the mode of transmission. Multiple mentions were reduced to the most probable mode of transmission.

Injecting drug use, which has a high probability of being causally related to the hepatitis C discovered, was reported for 892 cases (76% of the cases with information as to the mode of transmission). This mode of transmission accounted for 81% of the entries for men (n=675) and 62% of those for women (n=187). The additional specification of "injecting drug use in prison" was recorded for 28 (4%) of the males and 4 (2%) of the females with the indication "injecting drug use".

As in previous years, the incidence was markedly higher among men than women. The fact that men more frequently use injecting drugs than women and that this is the most commonly reported mode of transmission, explains, amongst other things, the considerably higher incidence of new diagnoses of hepatitis C amongst men.

### **1.3.2 Notifications of drug-related infectious diseases (T1.3.2)**

No current information is available here.

### **1.3.3 Prevalence data of drug-related infectious diseases outside the routine monitoring (T1.3.3)**

#### **HIV data outside the routine monitoring**

From Hamburg, data is available on the HIV prevalence among clients of 59 addiction support facilities (mostly outpatient). In 2014 data on 15,958 clients was documented, of

whom 32% had an opioid problem as their main problem. The HIV infection rate among all drug users in 2014 was, at 2.5%, at the level of the previous year (2013: 2.5%). Among opioid users it was, at 4.6%, as in the last few years, higher, but remained stable over time (2013: 4.6%). Differentiating by gender once more shows a slightly higher infection rate among women of 5.5% (men 4.3%). 8.8% of all clients and 4.4% of opioid dependent clients stated that they had not as yet had an HIV test (Martens & Neumann-Runde 2015)

Data is now also available from the Consumption Room Documentation, which covers four consumption rooms in Frankfurt (Förster & Stöver 2015) on the HIV status of the 4,515 clients<sup>4</sup> treated in 2014. 2,437 persons (54% of all clients) answered the question of whether they had already had an HIV test, of whom 94.3% had already been tested. Women and men had themselves tested approximately equally often (94.8% and 94.2%). For 1,401 persons there was a note of when their last HIV test was. 39% of these persons stated that their test was in 2014 and therefore up to date. A further 45% were in 2013. The remaining tests were even further in the past. The test results are available for around half of all consumption room users (2,238 persons). 3.0% stated they were HIV positive, of which women, at 5.3%, were markedly more often affected than men, at 2.6%. Looking at the longer term, the proportion of HIV infected persons among consumption room users fell between 2009 and 2011 and since then seems to have remained stable with slight fluctuations (2013: 2.9%, 2012: 3.2%, 2011: 3.2%; 2010: 3.7%; 2009: 4.4%). HIV infections are, at 2.0%, rarer among new users of consumption rooms than among continuing users (3.5%). Female continuing users in particular have an above average rate of HIV infection, at 7.1%.

In addition, this year an evaluation, commissioned by the Senate Administration of Health and Social Security in Berlin, of the use profile of a drug consumption room user from 2012 to 2014 was presented in Berlin (Stöver et al. 2015). 861 clients were registered in 2012, 927 in 2013 and 1,297 in 2014. Information on the self-reported infection rates for HIV and hepatitis are only available for new users for the years 2012 to 2014. Out of 1,496 a third (n=481) stated their infection status as unknown. Only 2.4% of all new users, or 3.5% of persons with a test result (n=36), stated that they had tested positive; 979 persons, thus two thirds of all new users, or 96.5% of persons tested, stated that they had tested negative.

DSHS also records data on the HIV-infection status of patients in outpatient treatment (Braun et al. 2016). In 2015 the HIV status is known for 40% (n=8,539) of opioid clients; of these 5.1% are HIV positive. Among all clients with some type of illicit drug problem and whose HIV test results are known (n=14,600), 4.0% have an HIV infection.

If one combines the findings from Hamburg, Frankfurt am Main, Berlin and from the DSHS, the resulting average HIV prevalence rate among opioid users is approximately 2.5 to 7%. Among new users of consumption rooms the value is somewhat lower; the authors of the Berlin study believe, however, that among persons who have not been tested there could be

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<sup>4</sup>The number of clients is calculated from the individually assigned "HIV codes". It is possible that some people possess multiple codes, so that the number of clients actually being treated could be somewhat lower.

a higher proportion of undiscovered infected persons. In any case, the values represent a conservative estimate of the actual prevalence and must be interpreted with caution due to the high number of untested clients.

### **Hepatitis B and C data from outside routine monitoring**

In the DSHS, data was collected in 2015 on the hepatitis B and hepatitis C infection status of addiction patients in outpatient treatment (Braun et al. 2016). These numbers must be interpreted with caution, against the background of a high estimated number of unreported cases. Test results for hepatitis B are available for 33.3% (n=6,344) of opioid clients; the prevalence rate of Hepatitis B for that group was 6.3% (n=429), among all tested patients with illicit drug problems, the rate is 4.6% (n=508). From these numbers it is clearly to see that hepatitis B is recorded almost exclusively for opioid clients. Test results for hepatitis C are available for 42% of opioid clients (n=9,186). Almost half of these test results are positive; 6.1% of those tested reported an acute infection (n=556), and 40.6% a chronic infection (n=3,728). Among all tested clients with some illicit drug problem (n=15,328) the hepatitis C prevalence rate is 31.2% (n=4,777).

According to the Hamburg Basic Documentation of the outpatient addiction system (Basisdokumentation der ambulanten Suchthilfe, BADO), in 2014, 20.6% of all clients and 48.9% of opioid users were infected with hepatitis C. Over recent years, the rate of infected opioid clients has proven relatively stable. 7.9% of all clients and 4.1% of opioid users had never had themselves tested for hepatitis C (Martens & Neumann-Runde 2015).

In the Frankfurt Consumption Room Documentation 2014 (Förster & Stöver 2015), 54% (n=2,441) of consumption room users provided information as to whether they had already had a hepatitis B and/or hepatitis C test; of these 95% had had a test. Test results are available for 2,237 persons of whom 41.6% tested positive for hepatitis C, 1.0% for hepatitis B and a further 1.5% for a comorbid hepatitis B and C. There were hardly any gender-specific differences. Similar to the situation regarding HIV and consistent with the results of recent years, older drug users were more likely to be infected with hepatitis than younger users. Similarly, continuing users had a higher infection rate than new users (46.9% vs. 37.7% respectively).

Data is available from the Berlin evaluation of drug consumption rooms for 2012 to 2014 (Stöver et al. 2015). The rates of hepatitis were only stated in respect of new users. Out of 1,493 people from 2012 to 2014, a good quarter stated that their hepatitis C status was unknown (n=400). Out of 1,093 of people tested, a third (n=353) stated that they suffered from chronic hepatitis C. 1.5% (n=16) reported an acute HCV infection. 942 of the questioned clients knew their hepatitis B status; 550 persons (36.9%) did not. Of the clients who knew their status, 3.8% (n=36) stated that they had tested positive. 14 persons reported a comorbid hepatitis B and C infection; 16 persons are comorbidly infected with hepatitis C and HIV. The authors establish a clear positive connection between injecting drug use and hepatitis C infections: of the clients who had never injected drugs only 2% had a chronic hepatitis C infection and none had an acute infection. In contrast, among those who have at

some stage in their lives injected drugs but not in the last 30 days, 0.5% suffered from an acute infection and almost 27% from a chronic infection. For clients who had also injected drugs in the last 30 days, the rates were higher still at 1.5% with acute infections and 29% with chronic infections. For hepatitis B and also HIV there is no such clear connections; the authors believe that this could be due to various reasons, but is primarily connected to the higher infectiousness of the HC virus (Stöver et al. 2015).

If one combines the data from Hamburg, Frankfurt, Berlin and from the DSHS, the resulting estimation of the prevalence of chronic hepatitis C among opioid clients is between a third and a half of all clients. As this concerns self-reported data from clients undergoing treatment and clients receiving care in low-threshold facilities, it can be assumed that this is a conservative estimate. This is further complicated by the different options for testing for a hepatitis C infection, the differences between which are likely rarely known to the clients. In addition, there is a high proportion of clients who have not been tested; against the background of a high estimated number of unreported cases these numbers must be interpreted with caution. Reliable numbers can be obtained by direct testing of clients on site. In the day to day running of low-threshold facilities there is no funding for this, therefore such services are not available. There are currently, however, up to date results from the DRUCK study (see below).

### **Data from the DRUCK study**

Up to date data on prevalence rates of HIV, HBV and HCV are currently available from the DRUCK study, which analysed 2,077 injecting drug users in eight cities in Germany between 2011 and 2014. A more detailed description of this study can be found in 6.2.3.

In the total study population 23% were female and 77% were male. Between the study cities, the proportion of females varied between 18 and 35%. The median age of participants was 38 (29 -41 in the study cities) with an age span in the overall population of 17 to 65. 78% of all participants were born in Germany. In total, 37% (18 - 45%) had a migration background (first and second generation) of whom the largest group of first generation migrants were from former Soviet Union countries (10% of the total study population).

In total, injecting drug users who had been injecting drugs, in most instances for over ten years, were contacted. Most (80%) had injected drugs in the last 30 days. Of these a third had injected daily. In the results, there were significant differences between the eight study cities. In total, however, 70% of all those analysed had at least one of the three studied infections. Depending on the city, the rate of HIV was between 0 and 9%. The HCV prevalence was between 23 and 54% (active HCV infection, potentially infectious). The HBV prevalence was between 5 and 33%. A third of those infected, corresponding to 24% of the total study population, had co-infections of two or three infections. Injecting drug users are therefore a group particularly affected by HCV and HIV, whereby there were clear regional differences in all infections which could be explained by, among other things, different patterns of use, a different age structure of the contacted city populations as well as local conditions. The HBV prevalence and the proportion of chronic infections was also

significantly higher than in the general population, although not to the extent of the other infections. A more detailed presentation of the results can be found in the Harms and Harm Reduction workbook in the REITOX Report 2015 (Pfeiffer-Gerschel et al. 2015) as well as in the final report from the DRUCK study (RKI 2016a).

### 1.3.4 Drug-related infectious diseases - behavioural data (T1.3.4)

Table 4 shows the most common type of use for various substances among patients in outpatient treatment in 2015. Injecting drug use, by far the most high risk use pattern, is still reported mainly for heroin (59.4%) followed by cocaine (16.9%), other opioids (8.7%) and other stimulants (6.4%). The prevalence of injecting use was reported as significantly lower for all other substances.

Table 4 Route of drug administration of patients in outpatient treatment in 2015 in the DSHS

Substance	Route of administration <sup>1)</sup>					Total
	Injection	Smoking	Oral	Inhalation	Other	
Heroin	59.4 %	29.3 %	1.4%	9.6 %	0.3%	13,734
Methadone	2.1%	1.1%	96.4 %	0.2 %	0.3 %	8,531
Buprenorphine	2.8 %	1.3%	90.3 %	4.8%	0.8 %	2,771
Other Opioids	8.7 %	6.9 %	79.8 %	2.2 %	2.4 %	2,672
Cocaine	16.9 %	18.4 %	1.3 %	63.1 %	0.2 %	10,759
Crack	3.8 %	89.7 %	1.6 %	4.6 %	0.4 %	826
Amphetamine	1.2 %	11.5 %	25.9 %	60.4 %	1.0 %	13,781
MDMA and similar	0.4%	3.4%	87.1%	7.3%	1.8%	5,076
Other stimulants	6.4%	14.7%	14.8%	62.2%	1.8%	4,291
LSD	0.2%	1.7%	93.9%	0.8%	3.4%	2,655

<sup>1)</sup> Multiple entries possible.

Braun et al. 2016

Behavioural data is available from the DRUCK study (for a description see 6.2.3) on risk behaviour and knowledge of risks and protection possibilities. Most participants (80%) had injected drugs in the last 30 days. A third of these had injected daily. A large proportion had experience with addiction therapy. Between 57 and 89%, depending on city, were at one time in opiate substitution treatment (OST). 31-66% were currently in OST.

The anti HBs seroprevalence as the marker of a vaccination was between 15 and 52%. Between 16 and 69% had no HBV marker and were not protected from an infection. The local setting in the study city had the greatest effect on vaccination status. These local factors require further analyses. Of those infected with HIV, 80% already knew their diagnoses. Only 55% were currently in antiretroviral therapy. Of those infected with HCV with

indications of treatment, 85% had had a positive HCV antibody test at least once and 19% had been, according to their own information, successfully treated with interferon based therapy. Not only was there a need for improvement in patient's own knowledge of their infection status, there were also clear gaps in knowledge in the area of prevention possibilities for HBV by way of a vaccination as well as for HIV transmission by way of effective therapy and post-exposure prophylaxis. In comparison to other groups in Germany, in particular the HCV but also the HIV therapy rates of the participants are unsatisfactory.

Of all the participants who had injected drugs in the last 30 days, 9% reported using syringes and needles used by others, 10% had passed on syringes/needles they had used to others, 19% had used already used filters/spoons and 21% had passed on filters/spoons they had used. 22% had shared water vessels in the last 30 days. The sharing of syringes and needles was influenced by an insufficient supply of sterile needles and syringes per instance of drug use. In contrast, the sharing of spoons, filters and water was influenced in particular by insufficient knowledge on the possibility of HCV transmission through such behaviour. People with better knowledge did not practice these behaviours as often. In total, between 46% and 52% of the participants were not sufficiently supplied with sterile needles and syringes for their instances of injecting drug use calculated in the last 30 days. A fifth of the participants did not know that HCV can be transmitted through sharing filters, spoons and water. Almost half did not know the risks of sharing snorting tubes. Significant gaps in knowledge were apparent in relation to the HBV vaccination and even greater gaps were apparent in relation to HIV post-exposure prophylaxis. Sexual activity in the previous year was noted for 83% of the women and 73% of the men. Sexual risks in the form of changing sex partners (at least 2 in the last 12 months) were taken by 30% of women and 41% of men. 3% of men reported sexual contact between men. 32% of women and 14% of men reported sex in exchange for money or drugs.

81% reported prison experience with an average total term of imprisonment of 3 years and 6 months. 30% of those who had at some point been incarcerated reported having injected drugs in prison. Imprisonment represented an independent risk factor for an HCV infection. The more often and the longer persons were imprisoned in total, the higher the likelihood of an HCV infection was.

Depending on the city the study took place in, between 1 and 46% of the participants per study city wanted to be tested for HIV in an anonymous rapid test. 30 - 80% took part in a free and voluntary brief consultation on the HIV rapid test and/or on the filling of gaps in knowledge.

### **1.3.5 Other drug-related infectious diseases (T1.3.5)**

In summer 2016, three confirmed cases of wound botulism among injecting drug users were reported in two German cities<sup>5</sup>; all had the same serotypes. One can assume a connection probably based on the fact that all three sick persons had acquired and used heroin from a contaminated batch. In previous cases of wound botulism among injecting drug users (e.g. in Germany one case in 2015, in Spring 2016 four cases in the United Kingdom) contaminated heroin was also deemed to be the most probable infection source. How the spores (a permanent form of the bacteria) managed to get into the heroin usually cannot be determined. As this could lead to further cases in Germany, there is a heightened attentiveness in all facilities which come into contact with drug users. Suspected clinical cases must be reported to the local public health authorities without delay.

### **1.3.6 Additional information on drug-related infectious diseases (T1.3.6)**

No additional information is currently available on this.

## **1.4 Other drug-related health harms (T1.4)**

### **1.4.1 Other drug-related health harms (T1.4.1)**

#### **Comorbid somatic and mental disorders amongst drug users**

In addition to the suffering induced by the infectious diseases described above, drug users are to a considerable extent affected by a series of other somatic and psychological comorbidities. Comprehensive national or representative studies on this topic are not available. In the DSHS, data is collected on comorbidities, however since data is missing for a large majority of all documented patients, no serious estimation on comorbidity can be made on the basis of the few remaining data points.

In the Hamburg Basic Documentation on outpatient addiction support 2014, however, there is information on both the physical and mental health of treated clients (Martens & Neumann-Runde 2015):

The 4,475 opiate clients often have additional substance-related and also non substance-related addictions. On average, 4.3 additional problem areas were documented amongst opiate clients (including gambling and eating disorders, excluding tobacco). In the number of additional problem areas, there were no relevant differences between the genders, although there were differences in the key areas of the additional problems. The substances most commonly used in addition to opiates were cocaine (67%), cannabis (63%), alcohol (58%),

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<sup>5</sup> This is the status as at 26 Aug. 2016. As this concerns a current development, further cases could already have been reported by the time of the publication of this workbook. Up to date information can be obtained from the DBBD or directly from the RKI.

crack (44%) and sedatives (43%). The percentages for male clients were mostly higher than those for the female clients. This was especially the case for cannabis (66% v. 53%) and alcohol (60% v. 52%), while among sedatives and especially among eating disorders there was a higher proportion of women (14% v. 3%).

25% of the people in the group of opiate users were assessed by the counsellors as suffering from considerable or extreme physical health effects. A further 32% were classified as suffering from a medium health impairment and in the case of 13% a recognised disability status was documented. In addition, 37% of clients were classified as considerably or extremely mentally impacted, whereby women (43%) were affected far more often than men (35%). 31% of the clients reported at least one suicide attempt in the past (women 42%, men 27%). 14% reported more than one (women 21%, men 12%). The most commonly reported symptoms were depressive mood (21% of clients), restlessness (19%) and anxiety/phobias (16%). Excessive self-confidence (11%), lack of impulse / emotional control (10%) and aggression (6%) were mentioned somewhat less often. The psychological symptoms are a clear indication that a majority of these clients would have to utilise further psychiatric-psychotherapeutic care in future in addition to the existing addiction-specific treatment in order to stabilise themselves in the longer term. 36% of clients take psychotropic pharmaceutical drugs prescribed by doctors, (women 40%, men 24%), of whom 23% take anti-depressants, 12% sedatives and 7% neuroleptics.

For the treatment of psychological disorders in people with simultaneously occurring dependence problems see the Treatment workbook.

### **Effects of non-medicinal cannabis use**

In a current article, Effertz and Colleagues (2016) estimate the economic costs of harmful cannabis use at €975 million per annum for an assumed number of 400,000 users with harmful use (corresponding to €2,438 per head per year). This amount is calculated from the direct costs of treatment and rehabilitation (taken from the routine data of the statutory health insurance providers and a lump sum cost for documented rehabilitation measures) as well as indirect costs such as unemployment and early retirement. The authors themselves categorise their estimate rather as an underestimate and conclude that large economic losses result from the direct medical treatment and lowered productivity of cannabis users with harmful use.

Schneider (2016) carried out a survey on the disadvantages experienced by 198 clients with a main cannabis problem in outpatient addiction support facilities. Half of those surveyed (50.5%) mentioned problems with the law. 16% mentioned several convictions. Additionally, a good half of those questioned reported problems in school or in the family (53.4% and 52.9% respectively). Around a third mentioned problems in their circles of friends, job or relationship.

Table 5 Side effects of cannabis use

<b>Symptoms</b>	<b>%</b>	<b>N</b>
Increasing forgetfulness	70.0	131
Difficulty in concentrating	61.6	115
Neglecting earlier activities	56.8	106
Listlessness	40.5	75
Sense of being watched	38.9	74
Panic/unclear fears	27.9	52
Fear of being followed	23.7	44
Visual hallucinations	17.4	33
Hearing voices	8.9	17
Other	17.6	33
None	5.8	11

Schneider 2016

Among the side effects reported by users, increasing forgetfulness, difficulty in concentrating and neglecting earlier activities dominate. They are listed in Table 5. The most commonly desired effect was sedation/relaxation (76.4%). Mentioned equally often was the motive "relief of mental disorders" at 45.3% which the authors see as an indication that cannabis use in these cases is directly employed as self-medication. 44.7% stated that they wanted to "loosen up". The using aims of "sociability" (30.6%) and "relief of physical complaints" (17.4) were the next most common.

The German Respiratory Society (Deutschen Gesellschaft für Pneumologie und Beatmungsmedizin e.V., DGP), in cooperation with several other specialist associations in their field and the fields of occupational medicine, addiction, psychiatry, paediatrics and cardiology, published a position paper on the risks of cannabis use (Kreuter et al. 2016). In that paper they called for the known health risks of cannabis, in particular for children and adolescents as well as at-risk groups, to feature more strongly in the public debate. Moreover, they call for more controlled studies to obtain reliable findings on the multitude of research questions which remain open, both on harmful side effects and the possible medicinal use of cannabis.

The Federal Ministry of Health (Bundesministerium für Gesundheit, BMG) has also currently commissioned a "Cannabis expert report" which is examining the topics of "Risks of recreational cannabis use" and the "Potential for cannabis based pharmaceuticals" (Klinik und Poliklinik für Psychiatrie und Psychotherapie, Forschungsgruppe Cannabis 2016, personal communication).

## Side effects of new psychoactive substances

The effects of NPS remain a topic of debate at a professional level. In this area, there is generally a great uncertainty about the potential risk, about which side effects could even occur and the best way to deal with these substances. A case series for desoxypipradol (2-DPMP) has recently been published including six emergency patients who were brought to hospitals and in whom the substance was detected (Müller et al. 2016). 2-DPMP is classified as a stimulant and was researched in the 1950s as a medicine but was not developed further<sup>6</sup>. It falls under Annex II of the German Narcotic Drugs Act (Betäubungsmittelgesetz, BtMG), therefore dealing/trafficking 2-DPMP is illegal; in spite of this it is repeatedly found in NPS. Its effects are seen as stronger and longer lasting than those of amphetamine and it is not detected by conventional drug tests. As 2-DPMP is often found in combination with other serotonergic drugs there is the danger of a serotonin syndrome. In addition, in the case series, several cases of rhabdomyolysis (the destruction of striated muscle cells) were observed, which could lead to kidney failure. One of the six patients was in fact taken to hospital due to kidney failure. In addition, comparably unspecific symptoms, such as agitation or restlessness and confusion, were mentioned. The authors note as particularly problematic that multiple substances were detected in all patients and due to the type of sale the users are not aware either of the dosage or of the actual ingredients in the substances, which often leads to poisonings.

## 1.5 Harm reduction interventions (T1.5)

### 1.5.1 Drug policy and main harm reduction objectives (T1.5.1)

Harm reduction measures represent one of the four levels of the National Strategy on Drug and Addiction Policy (Die Drogenbeauftragte der Bundesregierung 2012). Various targeted approaches are used in an attempt to prevent drug-related deaths:

- Informing and educating on the risks of overdosing,
- Providing effective treatment measures for drug users (above all Substitution, see Treatment workbook) and improving retention rates,
- Improving transition management after release from prison (see Prison workbook),
- Providing drug consumption rooms,
- Improving the reaction of bystanders in the case of drug emergencies (first aid training, naloxone programmes).

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<sup>6</sup> As with many NPS, what is actually "new" about the new psychoactive substances must also be discussed in this context. Nevertheless, the side effects have been badly researched and until recently the substance - as far as is known - played no role as a drug.

Further information on the National Strategy can be found in the Drug Policy workbook; the National Strategy is also available online<sup>7</sup>.

### 1.5.2 Organisation of harm reduction services (T1.5.2)

Health aspects of drug use are addressed both in the scope of specific services and treatments offered to drug users as well as within the framework of general health care. Information on the extent and type of such measures is only available for some of the specific measures, as these are provided by specialised facilities or as part of a special programme.

Data on general health care does not provide any information which can be specifically attributed to the target group of drug addicts. Therefore, other than a few isolated cases, there is no data available on the number of emergency responses due to overdoses or other life-threatening conditions caused by drug use. Nor is there any data on the treatment of other secondary diseases carried out in general practitioners surgeries or clinics.

### 1.5.3 Harm reduction services (T1.5.3)

#### Safer use initiatives

Prevention of drug-related infectious diseases in low-threshold drug support facilities consists primarily of providing information on infectious diseases and risks as well as distributing safer-use equipment. Provision of syringes and syringe exchange in low-threshold work is explicitly permitted in the BtMG and is also practised by many facilities.

Data on syringe exchange is mostly only documented in Germany by individual facilities in their respective annual reports. A nationwide compilation of the data available is not undertaken. An overview of the locations of the 167 syringe vending machines currently available in 9 *Laender* can be found on a website provided by the DAH<sup>8</sup>. Of the 167 syringe vending machines listed by the Aids Service Organisation, over 100 are located in North Rhine-Westphalia and 19 in Berlin, whereas seven *Laender* do not even have a single syringe vending machine. From this it is clear that the distribution of sites for the whole of Germany still cannot be described as nationwide. Nonetheless, it must be assumed that the documentation of the syringe vending machines in other *Laender* is incomplete which could contribute a distortion of data in favour of North Rhine-Westphalia and Berlin. Therefore one cannot really speak of an exhaustive count of all syringe vending machines in Germany.

The only *Land* which is not a city state and in which a regular survey is conducted on a local level on the distribution of single use syringes by the DAH, is North Rhine-Westphalia. For 2015, the DAH in NRW reported that 2,056,202 syringes were issued in facilities and 131,352 syringes were issued by vending machines (AIDS Hilfe NRW e.V. 2016).

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<sup>7</sup> [http://www.drogenbeauftragte.de/fileadmin/dateien-dba/Presse/Downloads/Nationale\\_Strategie\\_Druckfassung-Dt.pdf](http://www.drogenbeauftragte.de/fileadmin/dateien-dba/Presse/Downloads/Nationale_Strategie_Druckfassung-Dt.pdf) [accessed: 11 Aug. 2016].

<sup>8</sup> <http://www.spritzenautomaten.de/> [accessed: 12 Aug. 2016].

In 2015 in Berlin around 840,500 needles and 541,000 syringes were issued, of which around 564,000 needles and 342,000 syringes can be attributed to 4 contact points and 5 mobile locations. Approx. 156,000 boxes can be attributed to the 19 syringe vending machines (2014: 144,000), which corresponds to around 276,500 needles and 199,000 syringes (Fixpunkt e.V. 2016, personal communication). It is worth noting here that the standard range of syringe vending machines has ten material combinations. The vending machines are thus not designed only for "classic" opiate and cocaine users but also contain services for other at-risk user groups. Thus, at individual sites, social environment and target group specific special ranges are offered e. g.

- GHB-dosage aids ("Primo" brand syringes, as the marking paint is relatively acid resistant) since the end of 2014
- Foil packs (to make alternatives to syringes a topic of discussion and easier to access) since the end of 2014
- Slampacks<sup>9</sup> since 2016

This development towards a target group specific, needs orientated care corresponds to the current initiative on the further development of low-threshold drug support which is described in more detail under New Developments in 3.3.4.

According to health care experts, safer-use services in prison in Germany are still lagging far behind what is possible. A syringe vending machine is only available in one of the 183 German prisons (Statistisches Bundesamt 2016). In light of this fact, the DAH started a campaign in 2013 to improve the situation of drug users in prisons (DAH 2013). The initiative is supported by the Paritätische Wohlfahrtsverband (Equal Opportunities Association), the German Association of Parents and Relatives for Acceptance-Oriented Drug Work and by akzept e.V. In addition, the DAH had a UNODC handbook for the introduction and implementation of syringe exchange programs in prison translated. It has since been published (DAH 2015) and is available online at <https://www.aidshilfe.de/shop/pdf/7376> (accessed: 29 Aug. 2016).

### **Provision of drug consumption rooms**

Due to the continuing very high-risk patterns of use of heroin and other illicit drugs, drug consumption rooms and low-threshold drug support facilities are important places for affected persons to go. In the drug consumption rooms, the drugs are brought by the drug users themselves. Infection prophylaxis is an intrinsic part of the service provided. Paraphernalia which the drug users bring with them to the consumption rooms may not be used. The aim of this service is the survival and stabilisation of the health of its users. This is also true for immediate intervention in the case of overdoses. In addition, cessation orientated support can thus be offered to people with drug dependence who would otherwise

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<sup>9</sup> "Slamming" is the injecting use of various drugs (usually e.g. methamphetamine or mephedrone) at sex parties by men who have sex with men (MSM).

be unreachable. Based on Sec. 10a of the BtMG, which defines minimum requirements for such facilities, the governments of the *Laender* may pass regulations governing the issuing of licences to operate drug consumption rooms.

Currently, there are a total of 23 drug consumption rooms across 15 cities in six German *Laender* (Berlin, Hamburg, Hesse, Lower Saxony, North Rhine-Westphalia and Saarland) as well as one mobile drug consumption station in Berlin<sup>10</sup>. More precise data on the utilisation and clientele of consumption rooms is only available for individual facilities which publish their annual reports on the internet. Data from Frankfurt and Berlin is reported below:

In the four Frankfurt consumption rooms, in 2014, a total of 194,383 incidences of consumption were documented. In 2014 the number of consumption room users was 4,515, of which 977 were new users, which equates to an average of 43 incidences of use per user per year. Within those numbers there were 487 persons who used the consumption rooms several times a week and thus totalled over 100 uses of the room over the course of the year ("intensive user 100").

While the incidences of use for all four consumption rooms were counted, due to a data loss almost all more detailed information from one of the four rooms is missing. The information below is based on the completely documented incidences of use of which there were 178,469. Within these, 245,378 units of consumption were used (where a client brings more than one substance with them, every substance is counted as a separate unit of consumption).

As in previous years, the overall number of users of consumption rooms is dominated by injecting users. Drugs heroin and crack. Already in the last few years it has become apparent that the use of heroin on its own has decreased and therefore the use of heroin together with crack as well as the use of crack on its own have increased. This year, for the first time, the combination of crack and heroin was used the most often (2014: 40.3%, 2013: 37.2%) whereas in all previous years the use of heroin on its own was the most injected substance (2014: 37.0%, 2013: 38.7%) In third place, with 21.3% (2013: 22.5%), was the use of crack on its own. At 0.5%, cocaine without other drugs was injected at a similar level to the previous year. Only 0.1% of consumption room users still inject benzodiazepine (2013: 0.2%, 2012: 2%; 2011: 14%). Since November 2011, benzodiazepine flunitrazepam (Rohypnol) has been subject to the BtMG without exception, which is a likely explanation for the sharp decline in the number of consumption instances involving benzodiazepines. All other psychotropic substances are mentioned only rarely (0.9%).

The proportion of non-injecting instances of use (primarily smoking/inhaling the substance), which has been on the increase in recent years, rose again to 5.8% (2013: 4.9%, 2012: 5.1%, 2011 und 2010 approx. 3%). This increase could be interpreted as the success of a number measures which are intended to encourage the clientele to smoke instead of inject

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<sup>10</sup> See also [www.drogenkonsumraum.net](http://www.drogenkonsumraum.net) [accessed: 08 Aug. 2016].

(e.g. the changing of logistic conditions such as the installation of a ventilation system, project "SMOKE IT!") (Förster & Stöver 2015).

This year, insights on the developments in the three Berlin drug consumption rooms from 2012 to 2014 are available from the evaluation of the drug consumption rooms in Berlin (Stöver et al. 2015). The proportion of incidences of use doubled within these three years: in 2012 10,566 incidences of use were counted, in 2013 there were 13,355 and in 2014 there were as many as 21,310. An increase in numbers of clients accompanies this development: In 2012 861 different clients were registered. In 2013 it was 927 and in 2014 1,297. Finally, the average frequency of use also increased - from 12.3 incidences of use per person (2012) to 16.4 incidences of use per person (2014). Together the developments show a trend towards a greater number of incidences of use, a greater number of clients and a successful attachment to the facilities. Each of the three drug consumption rooms has its own core clientele who repeatedly revisit the service in that respective area of the city.

Of the 20,916 incidences of use in 2014, 75.4% were heroin, 15.2% were a cocktail of heroin and cocaine, and 6.2% were cocaine. Other drugs, including crack, play a more subordinate role. If one looks at the developments from 2012 to 2014, one sees that the use of cocaine has decreased in significance, whereas the use of drug cocktails has become more frequent. From 2012 to 2014, the most common form of administration was injecting use at 63% of all incidences of use. Inhaled use accounts for 36%: nasal use accounts for slightly more than 1%. For almost all incidences of inhaled use (96.4%) the drug consumed was heroin. As injecting use is particularly risky (risks of infection, abscesses, overdosing), the relatively high number of incidences of other types of use is seen, within the meaning of harm reduction, as very positive.

In addition, 200 persons were questioned in further detail about their usage behaviour; 100 were active users of the drug consumption rooms, 100 did not use or no longer used the rooms. A comparison of the patterns of use of users and non-users can be found in the more detailed evaluation (Stöver et al. 2015). The vast majority of clients also made use of one or several services of the addiction support system in addition to the drug consumption room; further services are therefore known about and are also used. The consumption room users were moreover asked which services of the drug consumption room they used. Even more common than for the issuing of consumption apparatus (84%), users stated that they visited the facilities for something to drink (93%) and equally as often for something to eat (80%). 76% of users interviewed also visited the facilities for "personal discussion". "Information or concrete support" from the staff was mentioned by 67%. 39% of those questioned sought information about the possibility of a treatment, 38% about safer use rules, 31% about safer sex rules. Furthermore, medical care plays a significant role and was mentioned by 46% of those questioned. A good quarter of users also came to do laundry or have a shower. Only one person indicated that they visited the drug consumption room solely to use drugs. It can be seen, therefore, that in addition to the service for drug use, for many drug users the facility also represents a kind of sanctuary where essential basic needs can be met.

For many of those questioned changes in behaviour due to using the drug consumption room could be ascertained. More than half of all those questioned stated that they used in public less often. 38% of those questioned found that due to contact with staff they pay more attention to their hygiene and have more time to relax. 18% of those questioned reported using less drugs since they started using the drug consumption room. 17% of drug consumption room users have already received help once before in a drug emergency in a consumption room.

In the scope of the evaluation, the drug consumption room staff were also asked about their experiences and recommendations. From those statements, and also the statements of users, the authors of the study drew up the following recommendations for a further improvement of the drug consumption rooms:

- Longer opening times
- Access also for people in substitution treatment
- Improvement of the services with greater personnel capacities and financial resources
- Rotation and intense cooperation between care workers and social workers.
- Change from mobile to fixed site consumption rooms (example "Stuttgarter Platz")
- Decentralisation or expansion of drug consumption room service
- Drug consumption room, including injecting area and smoking area by women for women
- Expansion of drug consumption room entrance requirements through anonymous use
- Encouraging a change of pattern of use from injecting to inhalative
- Introduction of drug checking models also for drug consumption rooms
- Improved and more meaningful documentation software

### **Provision of opportunities for testing for infectious diseases**

The actual number of people suffering from hepatitis in Germany is unknown, due to a deficit in the area of diagnosis, although estimates from various data sources are available (Wedemeyer 2013). For current incidences see 1.3. The German Liver Foundation and its partners therefore call for systematic screening for hepatitis. Above all, the recommendations for testing should be further simplified and the recording of at-risk groups such as migrants, people in prison and drug users be improved. The project, "TEST IT" (January to September 2010) of the DAH, which was conducted in cooperation with the Dortmund Drug Support Facility, KICK, and scientifically supported by the Dortmund University of Applied Sciences and Arts, proved to be a success in relation to an increase in the rate of testing for HIV and is

being continued, for example in Berlin<sup>11</sup> (DAH 2010). Approximately 10% of the HIV infections detected in Berlin were diagnosed in the scope of the rapid test project (aerzteblatt.de 2013). In the course of the recently concluded DRUCK study of the RKI, study participants were offered an HIV rapid test. This offer was taken up by between 30 and 80% of participants, depending on the study city. The authors conclude that the testing services and counselling services in drug support facilities, in particular in the form of short, targeted interventions, which are available on site and take a maximum of 10 minutes, are very well received by drug users (RKI 2015).

### **Treatment of hepatitis C among drug users**

The Professional Association of Gastroenterologists in Private Practice (Berufsverband Niedergelassener Gastroenterologen, bng) reported, on the basis of data from the German hepatitis C register, that only approximately half of patients diagnosed with hepatitis C had received adequate medical treatment in the past (aerzteblatt.de 2014). This deficit is even more serious in respect of the treatment of hepatitis C amongst drug users. Although drug users represent the largest group of persons infected with hepatitis C in Germany, they are much less widely treated than infected persons with a different risk of infection, which is due, amongst other things, to a widespread negative attitude amongst doctors to drug users (Gölz 2014). For current developments in the treatment of hepatitis C amongst drug users see 3.3.5.

### **Naloxone take-home programme**

The opiate antagonist naloxone, which for over 40 years has been successfully used in emergency medicine for opioid overdoses, can also be administered by a layperson and save lives. Whilst naloxone programmes cannot yet be characterised as an established element of harm reduction with wide coverage in Germany, there are several developments in this field currently taking place which are reported in 3.3.1.

### **1.5.4 Contextual information on routine harm reduction monitoring (T1.5.4)**

In Germany there is no nationwide monitoring of harm reduction measures. The Institute for Therapy Research (IFT) in Munich carried out a nationwide evaluation of syringe exchange programmes in 2011, the results of which can be found in the REITOX Reports 2011 and 2012 (Pfeiffer-Gerschel et al. 2011; Pfeiffer-Gerschel et al. 2012). For current evaluations of individual projects see 1.5.3.

### **1.5.5 Additional information on harm reduction activities (T1.5.5)**

There is currently no additional information available on this topic.

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<sup>11</sup> [www.testit.fixpunkt-berlin.de](http://www.testit.fixpunkt-berlin.de) [accessed: 26 Aug. 2016].

## **1.6 Targeted interventions for other drug-related health harms (T1.6)**

### **1.6.1 Targeted interventions for other drug-related health harms (T1.6.1)**

There is currently no available information on this topic.

## **1.7 Quality assurance of harm reduction services (T1.7)**

### **1.7.1 Quality assurance for harm reduction services (T1.7.1)**

There are currently no binding national guidelines on the quality assurance of harm reduction services. Individual projects are however always evaluated (see above). Several projects are presented in the Best Practice workbook.

## 2 Trends (T2)

### 2.1 Short term trends in drug-related harms and harm reduction services (T2.1)

#### 2.1.1 Trends in drug-related deaths in adults

The long term development of the total numbers of drug related deaths in Germany have been very similar for both registration systems in the last ten years. Between 2008 and 2012 the number of drug related deaths fell significantly in both systems; since 2012, however, the numbers have been increasing again. It is of note that the trends of the last few years fall more sharply in the police data than in the data of the general mortality register (see Figure 1). For the latter, the data for 2015 is not yet available, so it remains to be seen if a similarly sharp increase will be registered here as in the BKA data (+ 15.8% in comparison to the previous year).

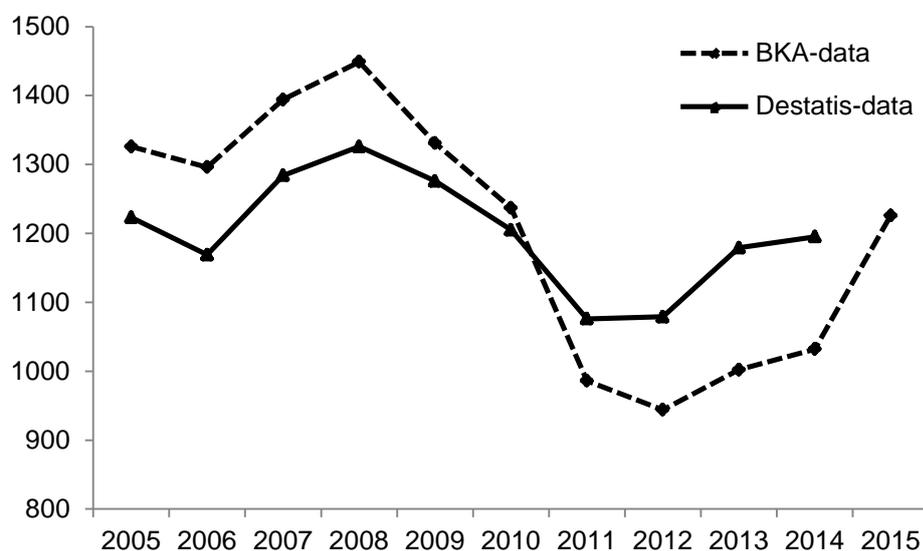
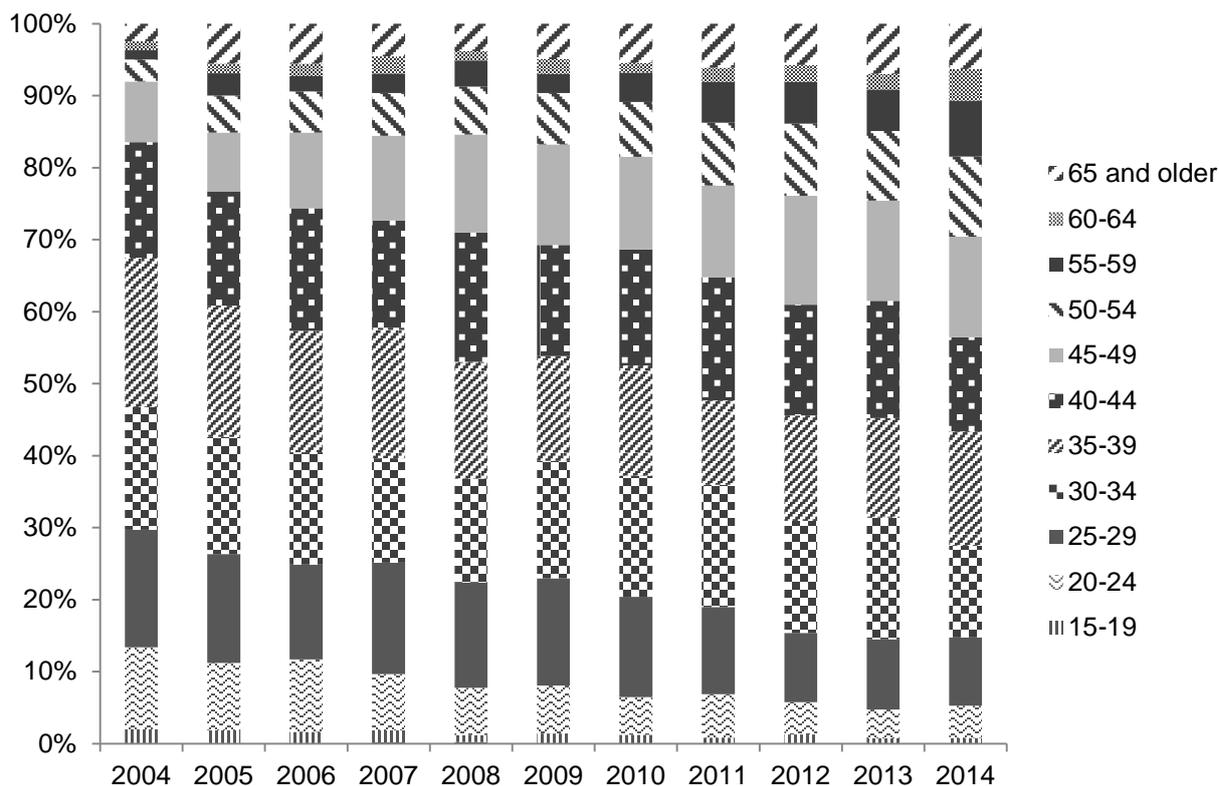


Figure 1 Trends in the number of drug related deaths: Comparison of BKA and Destatis data

Data from the general mortality register



There were no cases younger than 15 years.

Figure 2 Drug related deaths by age group DeStatis 2004-2014

In the course of the last ten years the average age of death in cases of drug related deaths has increased again however for 3 years the proportion of over 20 to 30 years olds has not fallen or has not fallen as sharply as in previous years (see Figure 2). Of note is the still significantly increasing proportion of drug related deaths where the age is over 50. This age group already made up 24.6% in 2013. In 2014 it was 29.6%. The possibility cannot be ruled out, however, that there has been a recording error in respect of deaths among pain patients treated with opioids, which could show a similar trend towards older age groups. Such cases of death might be included in the coding standard in cases of incorrect coding not in accordance with the guidelines. A look at drug related deaths in the general register on the causes of death of the German Federal Statistical Office still does not reveal any new trend of fatal drug-related intoxication amongst the youngest users of hard drugs - the age segment of under 25s exhibited in 2014, at 5.3%, only a slight increase compared to 2013 (4.7%) which was the lowest observed value since 1998.

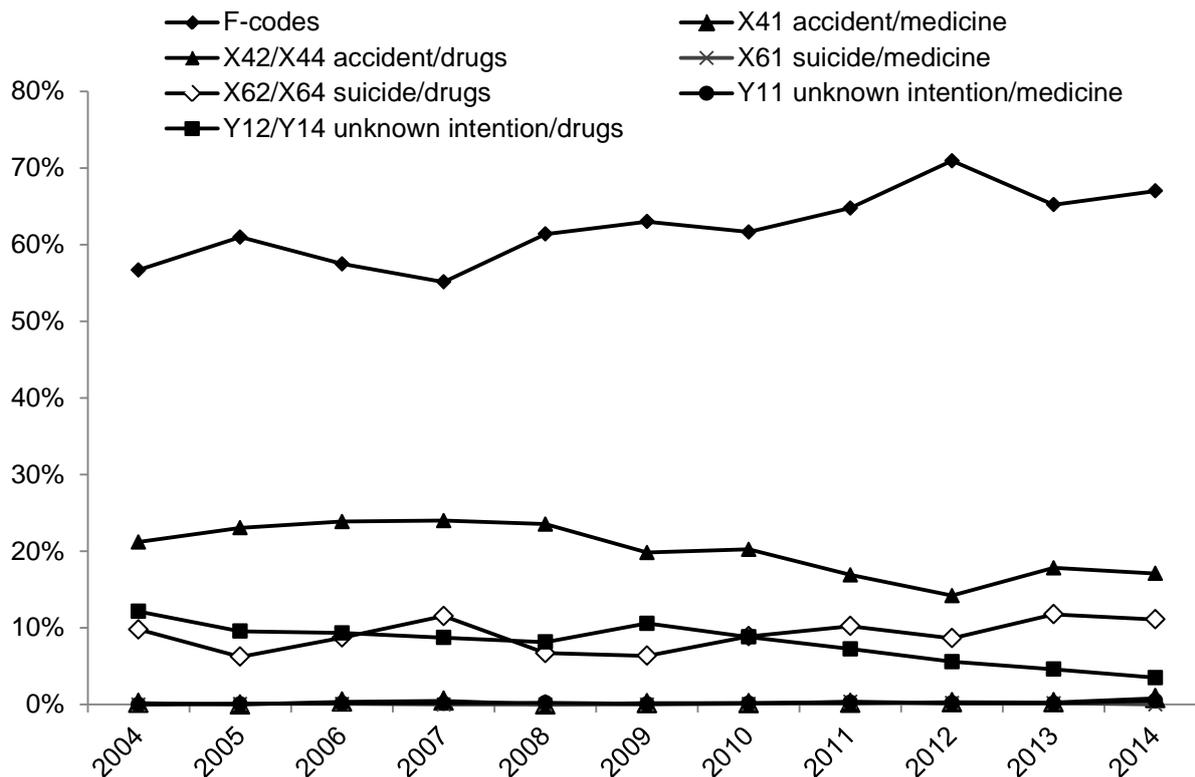


Figure 3 Trend in the DeStatis coding of the causes of drug-related deaths 2004 to 2013

Only the coding of drug-induced deaths under the ICD-10 classification with the additional X/Y code for external causes allows inferences to be drawn on the substance spectrum involved in intoxications, as this allows a substance specific breakdown by T-code. For years this has only applied to far fewer than half of coded cases. For the vast majority only the underlying illness is coded (F codes, see Figure 3). Among cases coded with X/Y codes, opiate poisonings or mixed intoxications constitute, as before, the main causes of death. Opiates will likely also play a significant role in mixed intoxications; these are often, however, not specified in greater detail so that no definite statement can be made here. It is noticeable that intoxications with no opiate involvement do still constitute a smaller proportion of cases of drug related deaths. However this proportion has been increasing for years and is now at 22.3% (see Figure 4). Overall, however, the limited informative value of the general register on the causes of death should be taken into account as it is not known exactly how many of these classifications are actually based on the findings of chemical toxicological analyses on the spectrum of substances that caused the deaths.

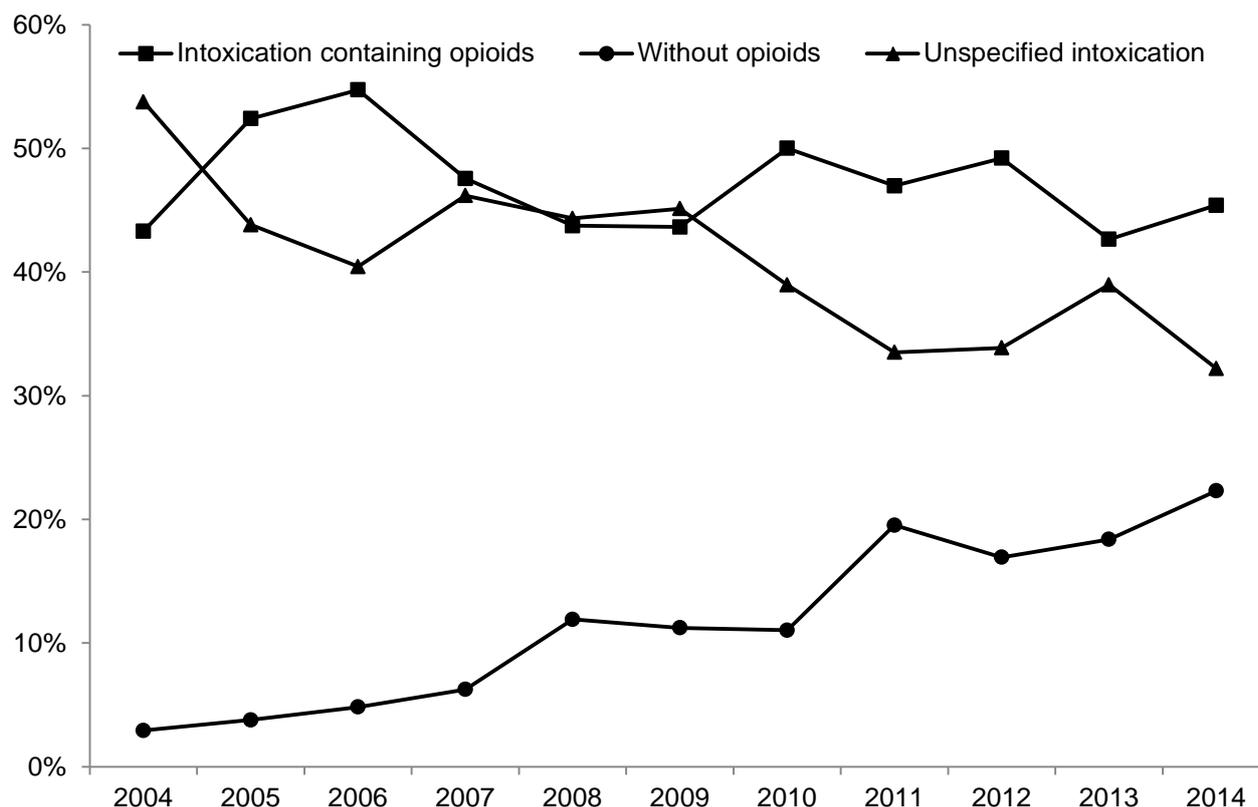
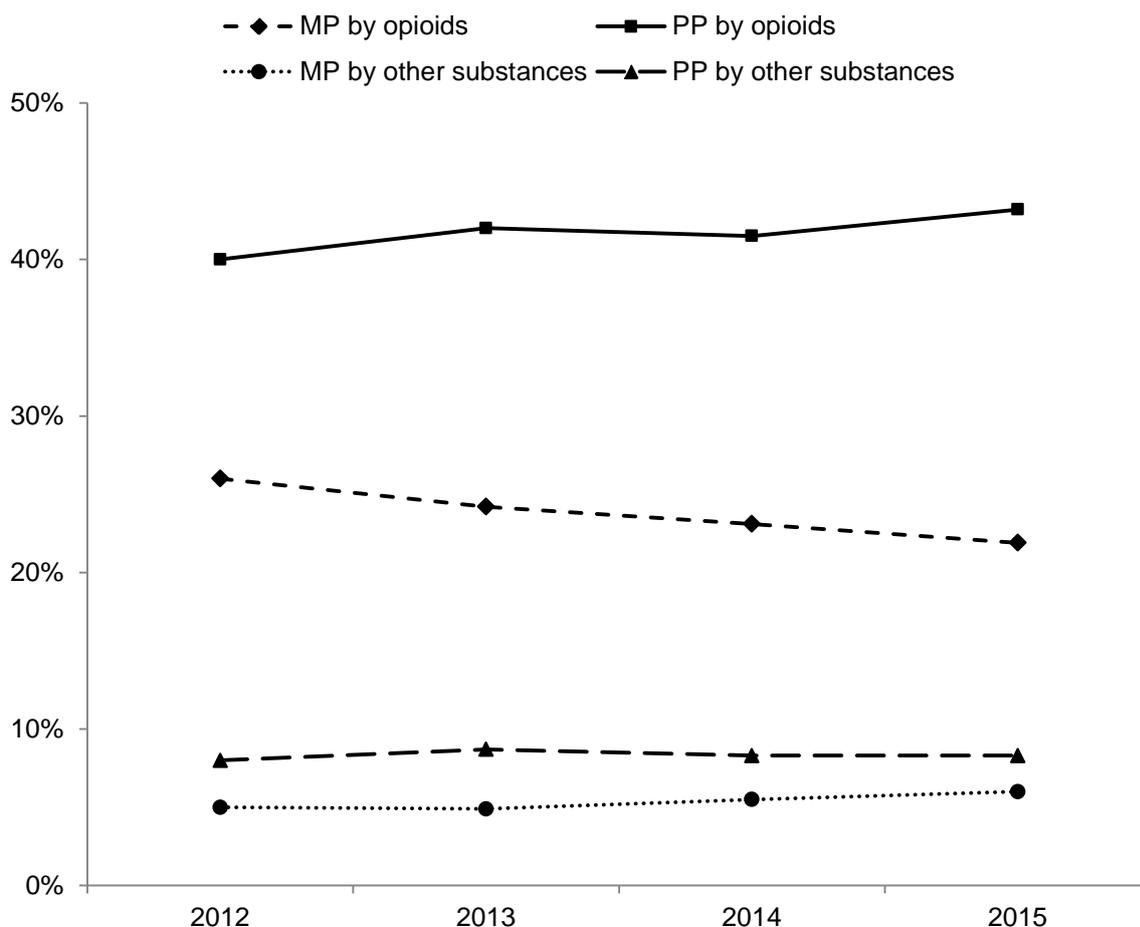


Figure 4 Opiate related intoxications in DeStatis cases of drug related deaths 2004 to 2014 (ICD X/Y coding)

### Data from the police register on drug-related deaths

As the BKA data registration was changed in 2012, trends can only be examined from this point onwards. Here also poisonings from opioids are the main causes of death. Unlike in the general mortality register, a distinction is made between monovalent and polydrug poisonings. Overall, the police data since 2012 shows a very stable trend (see Figure 5). Polydrug poisonings by opioids have increased slightly but continuously in the last four years from 40% to 43%. The proportion of monovalent opioid poisonings has, in contrast, minimally but just as continuously, fallen from 26% to 22%. Monovalent and polydrug poisonings by other substances have been stable in the last four years, at 5 - 6% and 8 - 9% respectively. Here no trend towards more frequent poisonings by these substances can be determined.



MP = monovalent poisoning, PP = polydrug poisoning

Figure 5 Causes of death BKA data 2012 – 2015

## 2.1.2 Trends in prevalence and reports of infections

### Reported new HIV diagnoses among drug users

In 2015, 3,674 HIV infections were reported to the RKI. The total number of newly diagnosed HIV infections thus rose in comparison with 2014 (3,500) by 5.0%. The number of HIV infections contracted in Germany has therefore slightly decreased, whilst the number of HIV infections probably contracted abroad has increased.

After a low point in the years 2010-2012 of new HIV diagnoses with injecting drug use as the mode of transmission (77-80 new diagnoses per year) and a previously continuous decline, the number of new HIV diagnoses with this mode of transmission has continuously increased again since 2012 (from 80 to 134 in 2015). The increase occurred predominantly in the age group 30-39 (from 32 in 2012 to 63 in 2015 - see Figure 6).

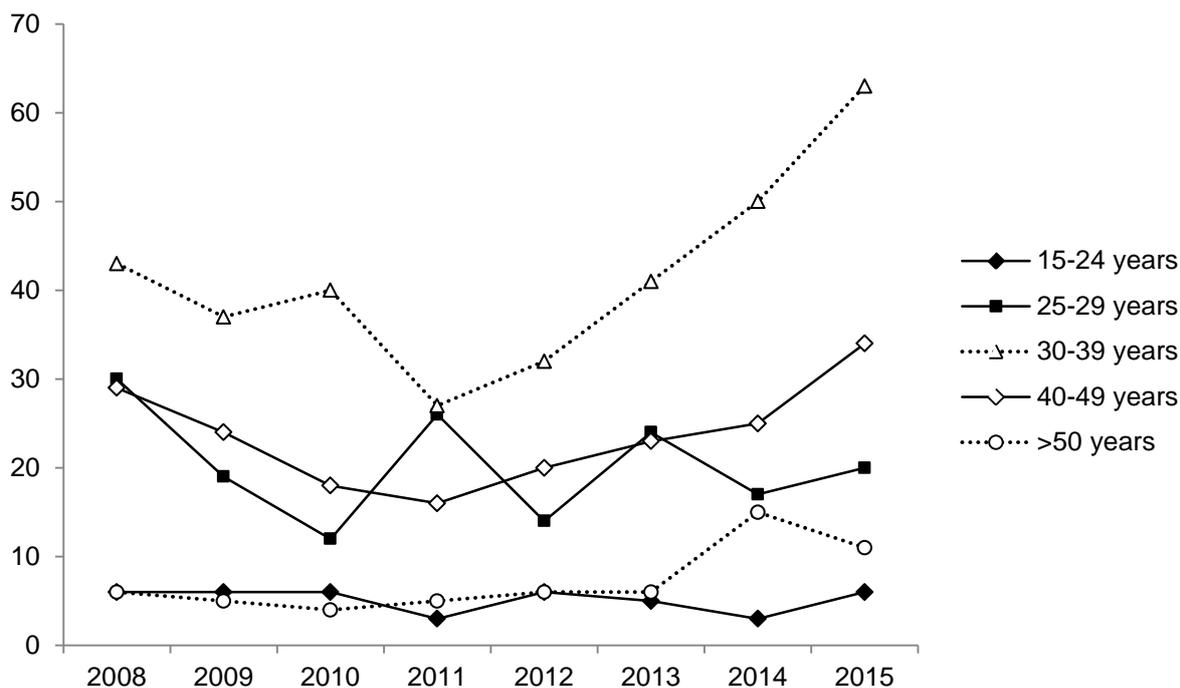


Figure 6 New HIV diagnoses due to injecting drug use by age group 2008 to 2015

If one breaks down the infections contracted through injecting drug use according to stated infection region, the number of infections contracted in Germany has increased again since 2012 (from 44 to 73), after the number had continuously declined in the preceding years. In the same time period (2012/2013) there were also small peaks in the infections contracted in Eastern and Central Europe (incidences of outbreaks in Romania/Bulgaria) (see Figure 7). At this point it cannot be determined whether the incidences of infection among drug users in Germany are fuelled by freshly imported infections, which would mean an increase in the spread of new subtypes, or whether the increase of new infections has been caused by other factors (new drugs, more frequent injections) independent of the migration situation, which would have a lesser effect on the subtype distribution. If one looks at the development according to *Land* there seem to be indications for both explanations. The numbers are so small, however, that no definite statements are possible.

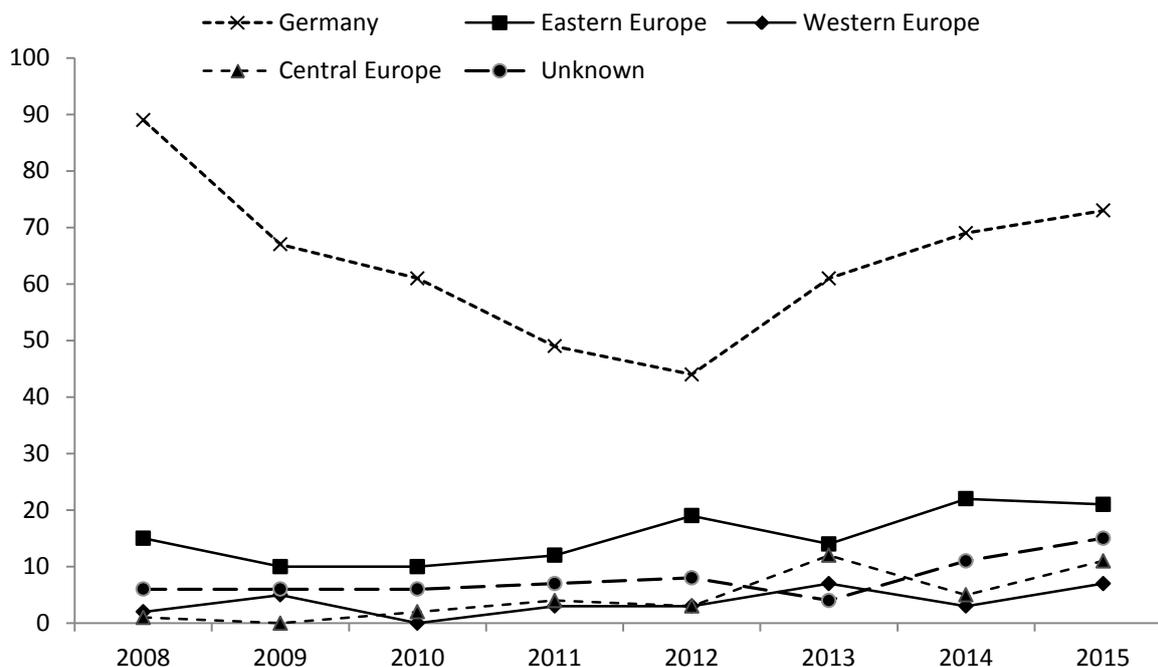


Figure 7 New HIV diagnoses among injecting drug users by infection region

### Reported new HBV diagnoses

Between 2001 and 2009 a decline has been observed in reported acute hepatitis B infections, which is probably due primarily to an improved level of immunisation through the introduction of general vaccination recommendations for nursing infants in 1995. This trend has stagnated, with minor fluctuations, since 2009.

With the amendment of the case and reference definition in 2015 (see 6.2.2) a sharp increase in the case numbers was noted. In 2015 a total of 3,783 hepatitis B infections were reported, and therefore 1,395 more cases than in the previous year. Of the reported cases, 1,907 (50%) met the reference definition, 1,152 more than in the previous year.

At the same time in *Laender* with a particularly high incidence, there was an early implementation of the new case definition. Even though an increase was anticipated, due to additional counting of infected persons with or without unclear clinical symptoms, other influences should also be considered. One cannot precisely quantify to what extent the increase can be attributed to the change in the case definition, to the increased testing of, for example, asylum seekers, who often migrate from regions with a high prevalence of hepatitis B, or to an actual increase. In the subgroup of asylum seekers in particular, double reporting should be expected, due to lack of a fixed residence for such persons. It is possible that not only acute cases but also chronic cases are leaking into the statistics as the laboratory diagnostics do not always allow for such a differentiation. As time passes time over the next few years, the ability to interpret the reported data will increase, as the comparability will be restored through uniform criteria in case and reference definitions.

Similar to previous years, the incidence among men was considerably higher than among women, with the relative peak of incidence in the young adult age group, whereby the age distribution among men in comparison to the previous year has shifted considerably towards even younger adults and adolescents. In contrast, the age distribution among women remained similar. Due to the change in the data collection software and the new method of recording modes of transmission, data on modes of transmission can only be compared with the previous 4 years. The peak of incidence and specified exposures indicate that, as in the previous year, sexual transmission represented the most significant mode of transmission. The current frequency peak among 15-19 year old male adolescents also indicates an insufficient implementation of the hepatitis B vaccination recommendation for nursing infants plus subsequent vaccination for adolescents up to 18 years old.

### **Reported new HCV diagnoses**

In 2015, the incidence of newly diagnosed cases of hepatitis C fell in comparison to the previous year. In this context, however, one must take into account that the figures for cases with indirect pathogen detection for which there was previously a mandatory reporting obligation, were no longer recorded due to the amendments to the case definition of 1 January 2015 (see also 6.2.2) and nor was the proportion of cases that have no information regarding laboratory detection.

The absolute number of cases, which were most likely transmitted by injecting drug use, fell continuously from 2004 to 2011 and has been increasing slightly or varying since then (see Figure 8). In 2015 a decrease in the case numbers for this mode of transmission as well as in the incidence of reported new diagnoses in comparison to the previous year was observed for the first time. One reason for this could be that according to the old case definition infections that had already healed were also often recorded but these do not meet the new case definition. On the other hand, it may be that drug users were indeed regularly screened for HCV antibodies, however potentially a secondary diagnosis was not supplied.

Since 2003, Berlin has been the *Land* with the highest incidence of newly diagnosed cases. Possible causes are, in addition to more complete reporting and communication of first diagnoses, in some cases for persons who have been (chronically) infected for some time, in particular the above average proportion of people in metropolitan urban centres who belong to at-risk groups such as injecting drug users and men who have sex with men. Injecting drug users are, as in previous years, by far the largest group with cases of newly diagnosed hepatitis C. For this reason, the highest priority in Germany should be given to the prevention of hepatitis C amongst drug users as well as case detection, diagnosis and treatment in this group.

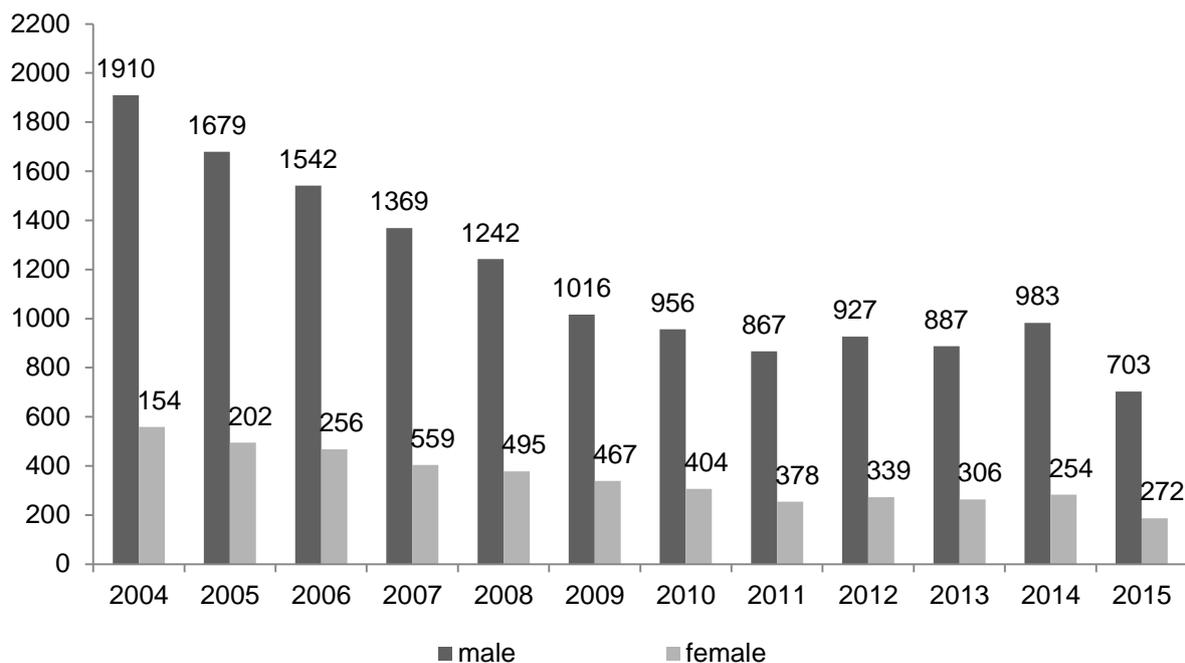
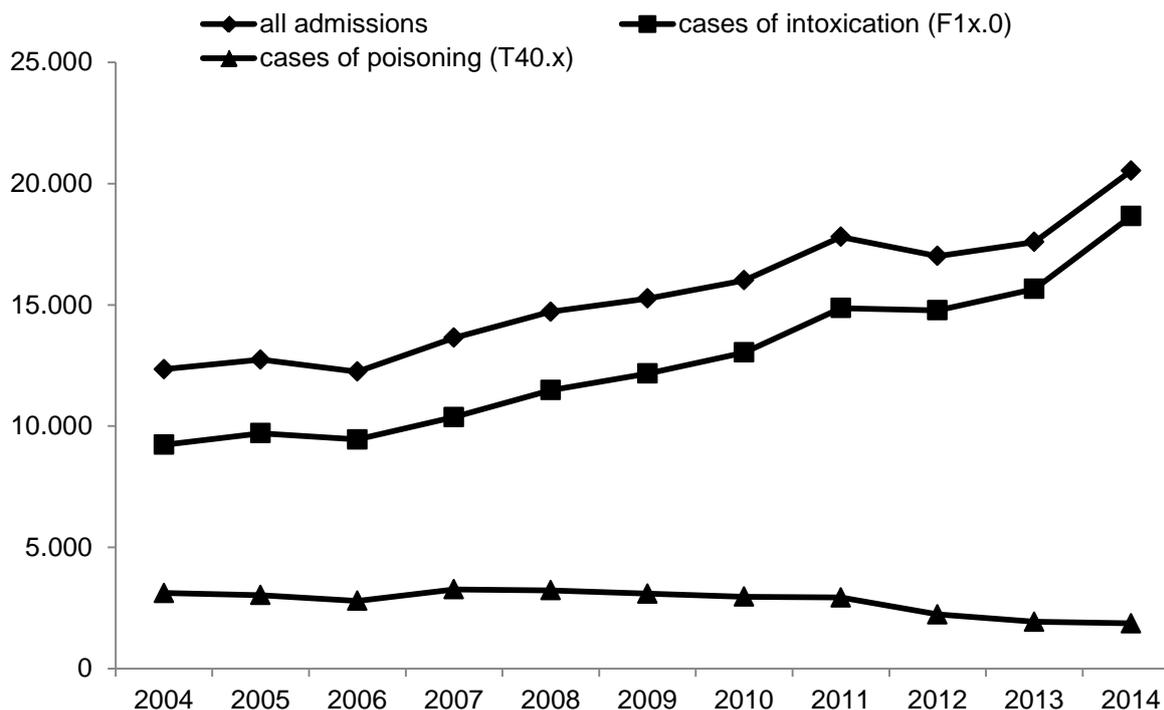


Figure 8 Number of reported cases of newly diagnosed HCV with indication of injecting drug use by gender, Germany, 2004 to 2015

### 2.1.3 Non-fatal drug-related emergencies

The following trend is based on the nationwide data available on acute intoxication and poisoning cases treated on an inpatient basis in hospitals (ICD-10 diagnoses) from the annual Statistical Report on Hospital Diagnoses of the German Federal Statistical Office (Statistisches Bundesamt, special calculations). This data should be interpreted with great caution; the limitations are explained above (see 1.2.1).

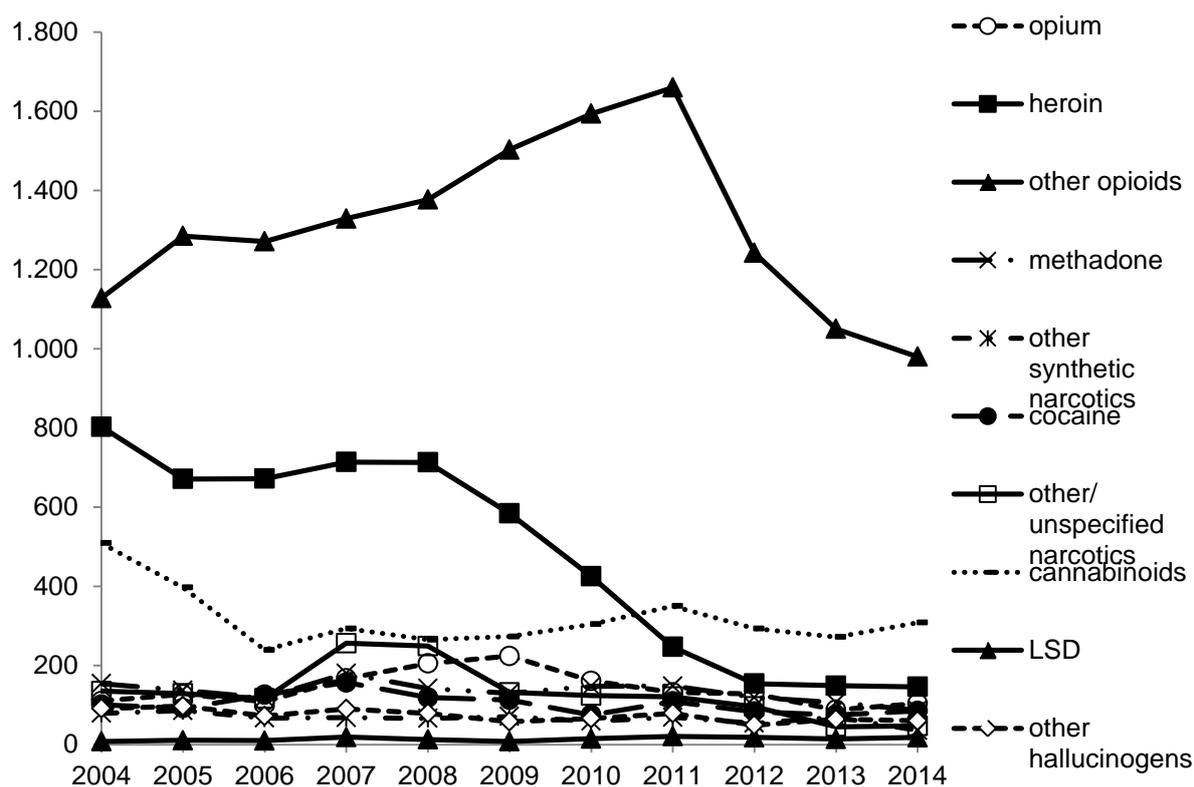


Statistisches Bundesamt, special calculations.

Figure 9 Trend in non-fatal drug-related emergencies admitted to inpatient treatment

Overall, a continuous increase in non-fatal drug-related emergencies admitted to inpatient treatment was recorded between 2004 and 2014, with the number rising from 12,348 admissions in 2004 to 20,525 in 2014. This increase is due to the increase in the coded cases of acute intoxication. The number of cases of poisoning, which were already coded at a much lower level in 2004, has continued to fall in the last 11 years. It remains unclear whether this can be explained through coding practices or whether in fact there really was a lower number of cases of poisoning and a higher number of cases of intoxication (see Figure 9).

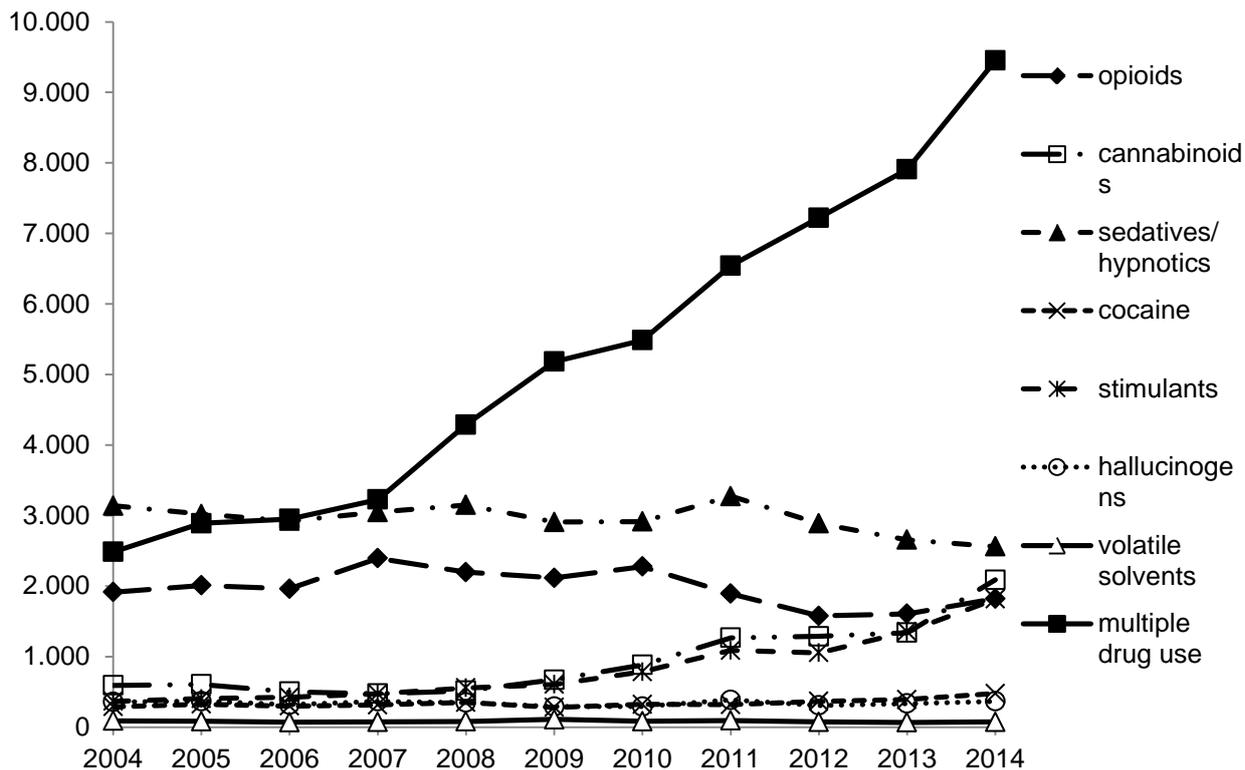
Among inpatient admissions for poisoning in the last 11 years, poisoning through "other opioids" clearly predominates within the individual diagnostic groups (T40.2) (see Figure 10). After a considerable increase between 2004 (1,128 cases) and 2011 (1,660 cases), the numbers have since considerably decreased again (2014: 980 cases). For a long time, heroin poisoning (T40.1) has been the second most common diagnosis in this group but since 2004 these have almost continuously decreased, now comprising a relatively low proportion of poisonings (2014: 146 cases). Since 2011, cannabinoid poisoning (T40.7) has been the second most commonly coded cause of hospital admission, after opioid poisoning. However, the trend has stabilised in recent years, following a considerable decline between 2004 and 2006. At 308 cases in 2014, the level is considerably lower than that of opioid poisoning. All other substances play only a subordinate role.



Statistisches Bundesamt, special calculations.

Figure 10 Trend in the coding of non-fatal drug-related emergencies admitted to inpatient treatment: poisonings (T40. x-codes)

In the acute intoxications group, the most commonly coded diagnosis, by some margin, is intoxication through multiple substance use or the use of other psychotropic substances (F19.0) (see Figure 11). The number of these types of inpatient admissions cases almost quadrupled between 2004 (2,485 cases) and 2014 (9,451 cases). Acute sedatives/hypnotics intoxication is the second most coded diagnosis. In recent years a slight decrease in the numbers can be seen overall (2004: 3,138 cases, 2014: 2,561 cases). The number of opioid intoxications is, following a brief increase in the middle of the 2000s, once again below the 2004 level, however it did rise slightly between 2013 and 2014. The development in the number of cannabinoid intoxications, which more than tripled from 2004 to 2014 (2004: 592 cases; 2014: 2,089 cases), is more critical. Between 2013 and 2014 alone there has been an increase of 56%; cannabinoids are now diagnosed more often as the cause of acute intoxications upon admission to hospitals than opioids. Intoxications through stimulants (excl. cocaine), which have increased nearly fivefold since 2004 (2004: 367 cases, 2014: 1,814) also give cause for concern and are now equally as frequently the reason for intoxications admitted to hospital on an inpatient basis, as opioids.

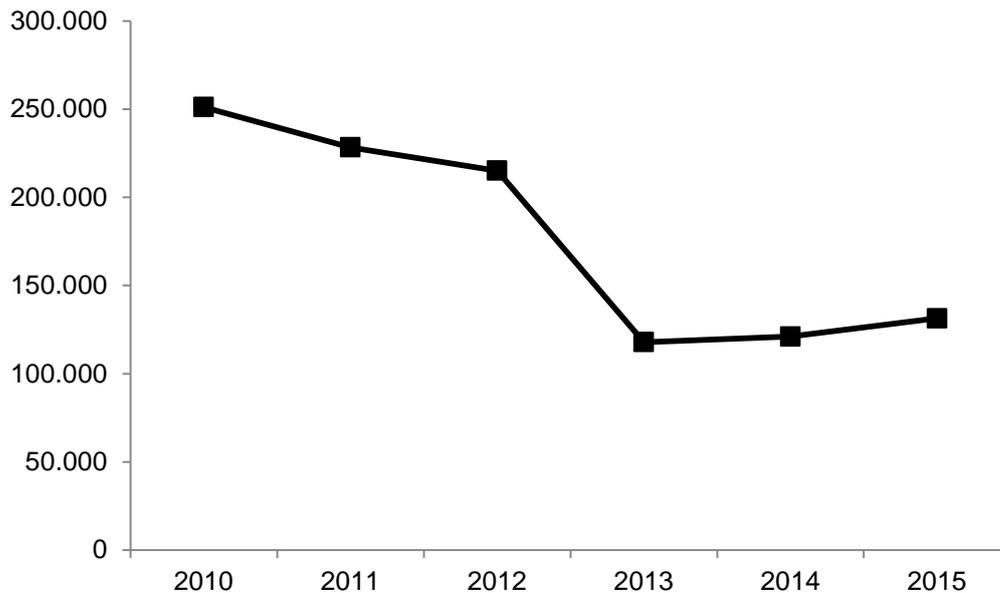


Statistisches Bundesamt, special calculations.

Figure 11 Trend in the coding of non-fatal drug-related emergencies admitted to inpatient treatment: acute intoxications (F1x.0-Codes)

**2.1.4 Safer-use services for injecting drug users: issuing syringes**

Since there is no nationwide data collected on the number of syringes given out, no national trends can be reported in this area. There is only a regular survey in North Rhine-Westphalia.

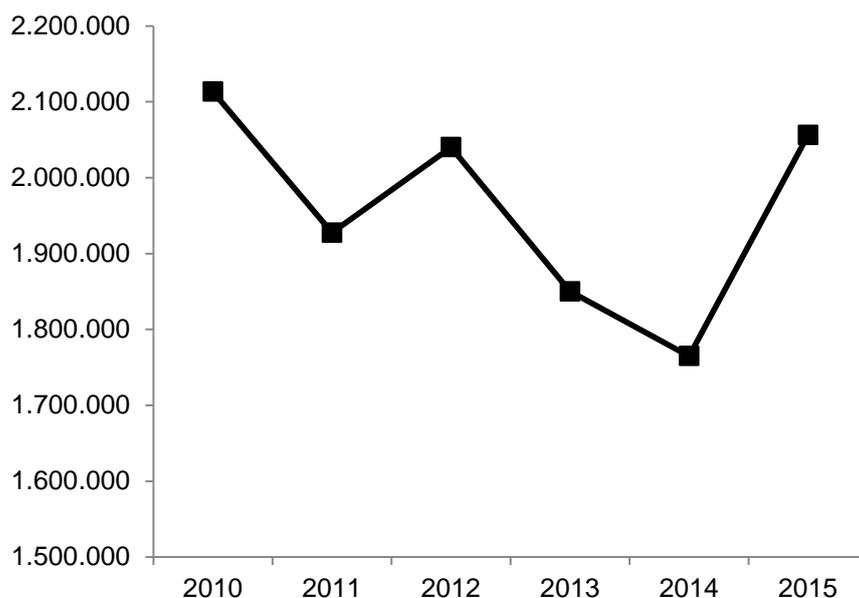


AIDS Hilfe NRW e.V. 2016

Figure 12 Trend in syringes issued by vending machines in NRW, 2010 to 2015

The trend in recent years shows a distinct decrease after 2012, both in syringes handed out in the course of projects as well as syringes dispensed by vending machine (see Figure 12 and Figure 13). This cannot be explained by a strong reduction in demand, rather by the fact that since November 2012 a dispensed pack has contained only 1 syringe, 1 hollow needle, 1 filter and 1 alcohol pad rather than 2 single use syringes and 2 hollow needles as had previously been the case. Moreover, more Smoke-it-Sets have been given out, whilst drug consumption rooms also report increased inhalative use (Aidshilfe NRW e.V. 2015, personal communication). Since this kink, a slight increase can be seen in syringes dispensed by vending machines. For syringes handed out in the course of projects there is considerably greater fluctuation. From the NRW data no conclusion can be made drawn on national trends in the dispensing of syringes.

For the current situation of services for harm reduction, see 1.5.3, for new developments see 3.3.



Aidshilfe NRW e.V. 2016

Figure 13 Trend in the issuing of syringes in projects in NRW, 2010 – 2015

## **2.2 Long term trends in drug-related harms and harm reduction services (T2.2)**

### **2.2.1 Drug-related deaths in adults**

See 2.1.1.

### **2.2.2 Prevalence rates and reports of infections**

See 2.1.2.

### **2.2.3 Non-fatal drug-related emergencies**

See 2.1.3.

### **2.2.4 Safer-use services for injecting drug users: issuing syringes**

There is currently no long-term data on safer-use services.

## **2.3 Additional information on any other drug related harms data (T2.3)**

No additional information is currently available on this.

### **3 New developments (T3)**

#### **3.1 New developments in drug-related deaths (T3.1)**

For the current situation on drug-related deaths see section 1.1.

#### **3.2 New developments in drug-related infectious diseases (T3.2)**

For the current situation regarding drug-related infectious diseases see section 1.3. With the introduction of new medicinal drugs, the chances of success of hepatitis C treatment have significantly improved also for drug users; due to the very high prices for the medical drugs, however, it remains questionable as to how many patients will actually benefit from these new medications. For further information on the developments in hepatitis C treatment see 3.3.5.

#### **3.3 New developments in harm reduction interventions (T3.3)**

##### **3.3.1 Naloxone take-home programme**

In Germany in the reporting year 2015 there were 1,226 drug-related deaths. Almost two thirds of these, as in recent years, were due to monovalent or polydrug opioid overdoses (BKA 2016). The opiate antagonist naloxone, which for over 40 years has been successfully employed in emergency medicine for opioid overdoses, can also be administered by a layperson and save lives. For this reason, the WHO, the EMCDDA and the BMG recommend dispensing naloxone to people who are often present when opioid users are using. This means opioid users themselves but also friends and family (Die Drogenbeauftragte der Bundesregierung 2014; EMCDDA 2015; WHO 2014).

In spite of these recommendations, dispensing naloxone to laypeople in Germany is only sporadically available. It is made more difficult by legal problems as well as a lack of financing and is not integrated into regular healthcare. Regardless of the difficult framework conditions currently projects which offer naloxone training for lay people are being newly implemented and existing projects are being further developed. Moreover, NGOs are making efforts to clarify and improve the legal situation for the naloxone programmes in order to break down barriers to adequate treatment and enable nationwide availability in the future. Reports on current developments are available from Berlin, Frankfurt, North Rhine-Westphalia and Munich. In addition, a research project is being planned on the issuing of naloxone before release from prison.

All naloxone programmes consist of drug emergency training, in which, for example, first aid techniques are provided, along with with information on the risks and signs of an overdose as well as on naloxone. In addition, specific exercises are carried out on the application of the medicine. After the training, emergency kits are handed out where needed which contain, in addition to the medicinal drugs, the administration utensils (syringes and nasal applicators) and often single-use gloves and resuscitation face shields.

The programme run by Fixpunkt e.V. in Berlin is the oldest naloxone programme in Germany, and has been running since 1998. A naloxone manual for internal use was developed back in 2012, which, in addition to the legal and medical basis, contained specific information for implementation of the project (such as standards for emergency training, interview guidelines, documentation) as well as real world examples. In 2015, 45 people participated in a drug emergency training session and received naloxone. In addition, there was feedback from participants in two cases where naloxone was administered; in one of the cases an emergency doctor was also called. In 2015 the drug emergency training was first offered as a brief intervention in the scene in the mobile consumption room and in a contact centre with an integrated drug consumption room. These training sessions only last approximately 15 - 20 minutes and were offered for individuals or small groups of up to a maximum of three participants at the same time. 14 people took part spontaneously in three sessions in the mobile facility. 7 people used the training as a brief intervention in the contact centre. The first impression from those implementing the project is positive: it is possible to convey the most important information in a short time. Through this low-threshold and spontaneous service, drug users who do not (cannot) take the time for an exhaustive course can also be reached (Fixpunkt e.V. 2016, personal communication).

In Frankfurt, a naloxone project was run by the Integrativen Drogenhilfe in 2014/2015. The project received scientific oversight from the Institute of Addiction Research in Frankfurt. Key findings were that it remained the case that just a few of the parties involved (drug support facilities, doctors etc.) were informed about the opportunities for take-home programmes. Furthermore, current studies on the subject were not known and the myths held regarding dispensing by laypeople persisted. In the framework of this project, a guide for the implementation of such programmes was therefore created in collaboration with various experts, which can be ordered through Akzept e.V. (Institut für Suchtforschung Frankfurt 2016, personal communication).

A further Take-Home-Programme from VISION e.V. has recently been started in Cologne. In the developments in Cologne the oft reported difficulties with the implementation of naloxone projects can be illustrated: finding a doctor who will prescribe the naloxone continuously and on a low threshold basis is just as problematic as the funding of the project, in which neither the costs of materials nor staff are permanently guaranteed. This significantly impedes the spread of the approach of dispensing naloxone to lay people. Nevertheless, the people implementing the project in Cologne keep finding solutions. As such, by August 2016 60 people had already been trained and the first reports of use had already been received back (VISION e.V 2016, personal communication).

JES NRW e.V. is also currently developing a new concept for low-threshold information sessions on naloxone, funded by the North Rhine-Westphalia Ministry of Health, Equalities, Care and Ageing (Landesministerium für Gesundheit, Emanzipation, Pflege und Alter NRW, MGEPA). That concept will follow an outreach approach - similar to that also recently adopted in Berlin - i.e. the information will be provided in very short sessions, directly in the open street drug scene. If a doctor is present, naloxone will be prescribed on site and

dispensed with applicators for nasal administration and other paraphernalia in packaging designed to protect from breakages as far as possible. The first training session in Bochum took place in August 2016. A training session in Wuppertal will follow soon. The plan is to reach approximately 40 to 50 people per training session. A manual for the training sessions was also recently created and printed. In addition to providing information and dispensing naloxone, the project aims, to illustrate the possibilities for active self-help through the information sessions, in particular in the area of harm reduction and survival support and thus attempt to awaken users' interest to engage with JES (JES NRW e.V. 2016, personal communication).

In Munich Condrobs e.V. also introduced a naloxone Take-Home-Programme this year. By July 2016, four training sessions had taken place in two different drop in centres. Another two are planned for Autumn 2016. In the future the provider wants to include even more facilities in order to make the training sessions available with as low a threshold as possible to a broad clientele. In the previous four training sessions 47 participants were reached. Of these, 39 were given the emergency kit. For future training sessions the aim is to have a smaller group size with a maximum of ten participants, as smaller training sessions have proven more effective. In Munich, similar to in Cologne, it has proven problematic acquiring doctors to prescribe naloxone. In Munich, the problem is currently being solved by two doctors, who are already retired but are still licensed, voluntarily accompanying the training sessions and issuing the prescriptions. In time, doctors providing substitution treatment will also be approached in a targeted manner (Condrobs e.V. 2016).

On a political level a hearing on the distribution of naloxone to lay people was held in the health committee of the *Land* Parliament in Bavaria; a further hearing will take place in October 2016. In this hearing, the possibility of the introduction of a pilot project will also be debated<sup>12</sup>.

In addition, the DAH is currently planning a research project on the issuing of naloxone prior to release from prison. With an intervention drug emergency training session, conducted as a pilot, and the issuing of Naloxone prior to release from prison, the project will study whether training sessions on drug emergencies are accepted by drug using prisoners and whether naloxone is used in a drug emergency situation. Naloxon programmes in prisons already exist in England and Scotland and are carried out with some success. The German pilot project will be carried out and evaluated between 2016 and 2018. Recruiting of study participants has already started (Dettmer & Knorr 2016).

### **3.3.2 The BIS 2030 strategy on the reduction of HIV, HBV and HCV**

With the decision of the German Federal Cabinet of 6 April 2016, the BIS 2030 strategy of the Federal Government is now active and is intended to substantially reduce HIV HBV, HCV and other sexually transmitted infections by 2030 (BMG & Bundesministerium für

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<sup>12</sup> The list of questions used for the hearing is available online at [https://www.bayern.landtag.de/fileadmin/Internet\\_Dokumente/Sonstiges\\_P/Anhoerung\\_Naloxon\\_Fragenkatalog.pdf](https://www.bayern.landtag.de/fileadmin/Internet_Dokumente/Sonstiges_P/Anhoerung_Naloxon_Fragenkatalog.pdf) [accessed: 26 Aug. 2016].

wirtschaftliche Zusammenarbeit und Entwicklung 2016). Injecting drug users are explicitly named as one of the specific target groups of this strategy, for whom the need orientated service will be created or expanded and integrated services are to be developed. Further aims of the strategy are to create a social climate of acceptance for different sexualities and lifestyles in order to remove stigmatisation and discrimination as well as to connect cross-sectoral organisations with one another and to further expand the knowledge base. The strategy is available online at: [http://www.bmg.bund.de/fileadmin/dateien/Publikationen/Praevention/Broschueren/BMG\\_BIS\\_2030\\_web.pdf](http://www.bmg.bund.de/fileadmin/dateien/Publikationen/Praevention/Broschueren/BMG_BIS_2030_web.pdf) (accessed: 29 Aug. 2016).

### **3.3.3 Recommendations for the further development of harm reduction measures and for combatting infections transmitted by blood and sexual activity among drug users from the DRUCK study**

From the results of the DRUCK study (description in 6.2.3, results in 1.3.3 and 1.3.4) the authors derive some very relevant recommendations for the further development of harm reduction measures in Germany (RKI 2016a).

For low-threshold drug support:

- Offers of HIV tests (e.g. HIV rapid testing) and testing for HCV (antibody test and PCR) should be implemented as a regular service.
- Testing for infectious diseases should be accompanied by qualified counselling on the meaning of the test results.
- An offer of regular training to qualify (non-medical) staff in low-threshold drug support as (test) advisors should be implemented.
- Targeted brief consultations should be implemented, in particular for gaps in knowledge on modes of transmission, especially regarding HCV, HBV vaccinations and HIV treatment and PEP.
- The needs orientated issuing of consumption apparatus (such as syringes, needles, filters, spoons, water for injecting) should be implemented nationwide.
- If possible, attempts should be made to implement HBV vaccinations or regular offers of vaccination in low-threshold facilities, in connection with advice on vaccination.
- Prevention services specifically for women, and possibly for young and new injecting drug users, should be implemented or expanded according to local conditions.

For substitution facilities and addiction support facilities:

- The regular contact with injecting drug users should be better used for HBV vaccination, accompanied by counselling on the good sense of vaccination.

- After the last booster vaccination the vaccination titres should be measured and documented as per the Standing Committee on Immunisation (Ständige Impfkommission, STIKO) recommendations.
- Persons who have been exposed to continued infection risks and require testing should be regularly tested for HIV (antibody test) and HCV (antibody test and PCR). This includes counselling on the meaning of test results.
- Everyone who tests positive for HIV and HCV should be referred to doctors specialised in infectology or hepatology and HIV specialist facilities for the assessment of therapy indications and treatment.
- Substitution patients should be informed in a targeted manner about HBV vaccination, HIV-PEP and the possibility of HCV transmission through sharing filters, spoons, water containers and snorting tubes.
- The addition medicine system should connect more strongly at a local level with low-threshold setting and infectology / HIV specialist facilities / hepatology.

For correctional institutions and facilities for youth detention and secure psychiatric units (Maßregelvollzug):

- An offer of HBV vaccination, accompanied by counselling on the significance of the vaccination, should be comprehensively implemented in these facilities.
- Confidential and voluntary testing for HCV should, as with HIV testing, be offered to all inmates, accompanied by an advisory conversation to explain the test results and treatment options.
- Inmates with an HIV or HCV infection should be provided with treatment.
- Imprisoned injecting drug users should be guaranteed access to evidence based measures for the prevention of HBV, HCV and HIV. In addition, access to a sufficiently dosed opioid substitution treatment, condoms and consumption apparatus should be improved.
- Transition management should be improved with regard to the prevention of *unsafe use*

For doctors:

- Doctors (general practitioners, gynaecologists, internists, infectologists) in general, and addiction doctors in particular, should be informed that doctors of injecting drug users represent the most important source of information on HBV, HCV and HIV.
- Doctors should be informed about the extent and nature of gaps in knowledge regarding HBV, HCV and HIV.

- Doctors should better implement the HBV indication vaccination for the groups recommended by STIKO (drug users, inmates, persons infected with HIV, persons infected with HCV).
- All doctors, including addiction doctors, doctors in rescue stations and hospital, general practitioners and family doctors who perform testing for infectious diseases amongst injecting drug users, should combine this with a detailed explanation of the test results.
- Doctors should be informed about the need for improvement of HCV and HIV treatment rates for injecting drug users. The specification of indication and performance of treatment should, for both infections, occur according to the guidelines.

For all parties involved at a local level:

- In particular women, young drug users under 25 and persons who only recently began their injecting use should be reached, in a targeted manner, for prevention measures at a local level.
- Overall it is recommended that existing structures at a local level (including drug support, addiction support, substitution facilities, infectology/hepatology) should network and collaborate better.

### **3.3.4 Development of nationwide standards on the distribution of consumption apparatus: initiatives on the further development of low-threshold drug work**

The recommendations of the DRUCK study and the BIS 2030 strategy of the BMG (see above) give a boost to the issues of a needs based distribution of sterile drug consumption apparatus.

In light of this, a group of experts, made up of employees from low-threshold facilities from all over Germany, under the roof of the DAH are currently addressing nationwide standards of consumption apparatus.

The experts agree on the following points:

- Necessity of free, needs orientated distribution
- Separation of distribution and disposal (task of the concept "exchange")
- Extended range in the distribution of drug consumption apparatus
- Qualified counselling for drug users

In the view of the experts in the field, training employees of drug support and AIDS support is of the highest priority. This should occur on the basis of a further training concept (corresponding to motivational interviewing or consumption control programmes and reduction programmes such as KISS) which could consist of, for example, basic courses and certificate courses on "qualified consumption apparatus distribution". Providers should be

proactively contacted so that good regional coverage can be achieved. The national and international strategies (BIS 2030 und WHO 90-90-90) should be made known to the AIDS and drug support facilities, in a manner appropriate to the target groups (non-medical specialists and addiction (therapy) focussed specialists) and which prompts action, so that prevention, access to diagnosis and treatment of viral hepatitis, HIV and other STIs are strengthened.

A practice manual, along the lines of the "hepatitis manual" should make standards, methods and information regarding the range of services available. The necessary range of information and intervention materials directed at the specialists in drugs and AIDS support as well as drug users, should be encompassed in a material concept. Any posters and flyers used must be designed in a culturally and scene sensitive manner and must also be available in foreign languages. In addition a "standard pictogram" is needed. Moreover, the group of experts sees a need for a mail order service for consumption apparatus in small numbers based in Germany. The prepared recommendations for nationwide standards should be presented to the broad specialist public by the beginning of 2017.

### **3.3.5 New opportunities in the treatment of hepatitis C among drug users**

Back in the REITOX Report 2013 the German Monitoring Centre for Drugs and Drug Addiction (DBDD) already reported on calls from the German Liver Foundation (Deutsche Leberstiftung) and the "Hepatitis and Drug Use Alliance" (Aktionsbündnis Hepatitis und Drogengebrauch) as well as German Liver Service Organisation (Deutsche Leberhilfe e.V.) for the implementation of a national strategy against viral hepatitis in Germany ("Aktionsbündnis Hepatitis und Drogengebrauch" et al. 2013; Pfeiffer-Gerschel et al. 2013). The BIS 2030 strategy of the Federal Government (BMG & Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung 2016) can be seen as such a strategy; a successful implementation would significantly improve the situation of injecting drug users. The annual World Hepatitis Day on 28 July aims to raise awareness of viral hepatitis. This year the focus was on the start of the WHO campaign "NOhep", which has the aim of eliminating hepatitis B and C world wide by the year 2030.

Several newly authorised medicinal drugs increase the chances of recovery from an HCV infection significantly and show a considerably improved side effect profile so that the infection, which is very widespread among drug users, is now significantly more treatable than a few years ago. However, although drug users represent the largest group of persons infected with hepatitis C in Germany, they are treated much less widely than infected persons with a different mode of transmission, which is due, amongst other things, to a widespread negative attitude amongst doctors towards drug users (Gölz 2014). The extremely high price of the new medicinal drugs is also problematic and is vehemently criticised by many therapists and the specialist public. In a current statement, for example, the German Society for Addiction Medicine (Deutsche Gesellschaft für Suchtmedizin, DGS) expressed its concern that specifically drug users are not being prescribed these expensive medicinal drugs often enough and in this context the old debate on the question of

responsibility in addiction illnesses could be revived again (Isernhagen 2015). As yet, there is no reliable data on how many drug users or substitution patients receive access to this new, expensive treatment option.

In spite of the particular challenges of treating dependent clients (coordination of various attending doctors, comorbid diseases of a psychiatric or somatic nature, interaction between drugs, substitution drugs and medicinal drugs) there are initial studies and reports which prove that specifically patients in substitution treatment can be treated with great success and few side effects and therefore there is no justifiable reason not to treat these patients (Isernhagen et al. 2016; Schäfer 2013).

The ECHO Study (Epidemiology of the Hepatitis C Virus Infection amongst Opioid Substitution Patients) of the ZIS investigated, in the period November 2013 to December 2015, the situation regarding hepatitis C amongst opioid dependent clients in substitution therapy; initial results are expected shortly. The objective of the study is to record the current HCV prevalence and incidence amongst opioid substitution patients, on the basis of a representative sample of approximately 200 outpatient substitution facilities with around 2,500 patients. In addition, influencing factors for therapy initiation and seroconversion will be described. To this end, both patient related data from regular health care and patient questionnaires will be included, in order to answer the following questions (ZIS Hamburg 2014):

- What is the current HCV status (prevalence) of opiate dependent clients in substitution treatment?
- Which influencing factors are associated with the initiation of therapy? Which factors stand in the way of the initiation of therapy?
- How high is the HCV incidence amongst opiate dependent clients in substitution treatment?
- What influencing factors are associated with a seroconversion during opioid substitution?

### **3.3.6 Target group specific services for harm reduction**

Some at-risk groups for drug related infectious diseases are not reached to an acceptable level by existing educational and informational programmes. There are therefore increased efforts to reach such at-risk groups in a more targeted manner. The focus varies significantly according to region and current problem areas; one overarching theme has, however, for years been the relative unsuitability of services for migrants. Due to the developments of the last year reaching asylum seekers in particular is currently being discussed across Germany. This is made significantly more difficult by language and cultural but also purely practical issues such as the unclear residency status and place of residence of many asylum seekers. As there are many different projects from the most different providers, an exhaustive listing of these is barely possible. As an illustration of the variety of the target groups to be reached, this year new focus points and challenges of low-threshold drug work from Fixpunkt e.V. (Berlin) are reported as examples:

- Reaching asylum seekers. Here, Fixpunkt e.V. is planning an expansion of existing harm reduction projects for asylum seekers in order to be able to explain things in a language, culture and education sensitive manner. The entire spectrum of harm reduction is possible as a topic as there is often very little knowledge and very few skills in this area (including regarding consumption techniques, hygiene and disposal). In this context information about co-infections with open tuberculosis and chronic HBV will also play a greater role in the future than previously, as there are significantly more people in this population with tuberculosis. Several specific projects can already be named in this context:
  - Health related social work and basic medical care, mostly with west African men, in Görlitzer Park<sup>13</sup>
  - The refugee specific expansion of the Fixpunkt project "Test it", which has been running since 2016 and is initially due to finish in 2016. This is a low-threshold, anonymous offer of HIV/HCV testing for refugees with a focus on drug injecting refugees and people from sub-Saharan Africa.
  - In the project "Mobilix" infection protection and other harm reduction measures are offered, with a focus on drug using refugees from Afghanistan, Iran, Iraq and Pakistan, but also from Arabic speaking regions and countries such as Maghreb and Syria.
- Community based work with people at risk from drugs and those using drugs in public spaces. In particularly affected public areas, the interface between drug education, addiction prevention, harm reduction (infection protection, health promotion) crime prevention and the reduction of use conflicts in the public space is worked on here. The topic is also gaining increasing significance due to the increase in asylum seekers who (have to) stay in public spaces due to a lack of adequate integration and bad housing conditions. According to this approach "People at risk from drugs" include not only drug users but also people who get into or are involved in drug trafficking, where this can be attributed to "poverty related economic compulsive crimes" (livelihood, funding own use). Municipal disposal concepts for consumption waste (syringes etc.) are also playing an increasing role in this respect; this includes specifically the installation of disposal bins in public spaces and the education of the population but also better coordinated action between various administrative bodies, regulatory authorities and social work.
- Reaching people who practice Slam<sup>14</sup> Important themes here are making access to adequate materials and information on infection protection and risk reducing use

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<sup>13</sup> See <http://fixpunkt-berlin.de/index.php?id=sani> [accessed: 25 Aug. 2016]; with reference to the "Integrated action plan Görlitzer Park"; published on 18 June 2016 (download from <https://www.berlin.de/ba-friedrichshain-kreuzberg/politik-und-verwaltung/aemter/strassen-und-gruenflaechenamts/artikel.489683.php>; [accessed: 25 Aug. 2016].

<sup>14</sup> "Slamming" is the injecting use of various drugs (usually e.g. methamphetamine or mephedrone) at sex parties by men who have sex with men (MSM).

techniques easier for those affected. The aim is, in cooperation with the organisations which already exist in the gay scene, to achieve a greater sensitisation and to speak about measures of harm reduction in an ideology and taboo free manner.

For the target group of men who have sex with men (MSM) a current review has found large gaps in the data. There are no reliable numbers on how many drug using MSM in need of treatment there are in Germany; most research results come from the rest of Europe (Deimel, D et al. 2016a). In a qualitative study with a relatively small number of participants (N=14) in Germany the participating MSM named very different motives for their drug use and for the most part referred to experiences with a multitude of different drugs. Eleven of them had, under the influence of drugs, experienced situations with an increased risk of HIV infection (Deimel, D. et al. 2016b).

The pilot project "Developing quality in counselling and prevention in the context of drugs and sexuality among gay men" (Qualitätsentwicklung in der Beratung und Prävention im Kontext von Drogen und Sexualität bei schwulen Männern, QUADROS), carried out in 2015 and 2016, addressed the particular need for low-threshold harm reduction in the target group MSM. The project, carried out by the DAH in cooperation with seven partner organisations in various cities, followed three main objectives: Increasing knowledge on the use of legal and illicit drugs among MSM with regard to the type of drugs consumed and their (side) effects as well as the contexts and motivations for use; Strengthening the counselling and referral skills in gay counselling, prevention projects and AIDS and drug support; and an analysis of the current care structures and the identification of omissions based on this (Dichtl et al. 2016). The results of the supply and demand mapping led to the identification of more serious supply gaps in support for drug using MSM. It was only in Cologne and Berlin that a few specific services in this area existed at all. These are, however, not yet sufficiently connected to each other to constitute an integrated service. Recommendations were drawn up as to how the localised gaps in the structure of care for drug using MSM could be filled in the future.

In addition, two 3 day training sessions were carried out with the staff of participating partner organisations, in which the basics of substance education (including effects, interactions, safer use) and knowledge on contexts and patterns of use among MSM as well as counselling skills were conveyed. With this knowledge, combined with the identification of examples of good practice and the results of the mapping, the participating institutions should be able to form their own networks and cooperations with organisations active in the field. Furthermore, they should be able to develop initial prevention, counselling or treatment approaches for their own organisation and proactively campaign for new counselling and information services in the target group of gay men.

Moreover, recommendations for the further development of future prevention and counselling for MSM in the context of drug use and sexuality were drawn up, which, for some, could be implemented in the current budget of the department for HIV/ STI prevention among MSM of the German Aids Service Organisation (but also on a regional level.) The concept development and implementation of a specific website to deal with the drug use and support

options for drug using MSM was desired. Offering and permitting expert support for the example of a guided self-help for drug using MSM (gay counselling Berlin) in the pilot regions, is also desired. A brief report and the detailed final report are available online<sup>15</sup>.

## **4 Additional information (T4)**

### **4.1 Additional sources of information (T4.1)**

There is currently no data available from additional sources of information.

### **4.2 Further aspects of drug-related harms and harm reduction (T.4.2)**

No additional information is available on the health related implications.

## **5 Notes and queries (T5)**

### **5.1 Acute emergencies or deaths related to stimulants (T5.1)**

A significant increase can be seen in acute, non-fatal emergencies admitted to inpatient treatment in connection with stimulants from the numbers in the annual Statistical Report on Hospital Diagnoses by the Federal Statistical Office. Within those numbers, intoxications due to cocaine (F14.0) have increased by approx. 200 cases in the last eleven years; intoxications due to other stimulants (F15.0) have increased more sharply by over 1,400 cases, with a particular increase in the last five years (see Figure 14). They are now as frequently the reason for intoxications admitted to inpatient treatment as opioids.

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<sup>15</sup> <https://www.bundesgesundheitsministerium.de/ministerium/ressortforschung/krankheitsvermeidung-und-bekaempfung/drogen-und-sucht/verbesserung-von-beratung-behandlung-und-therapie/quadros.html> [accessed: 25 Aug. 2016].

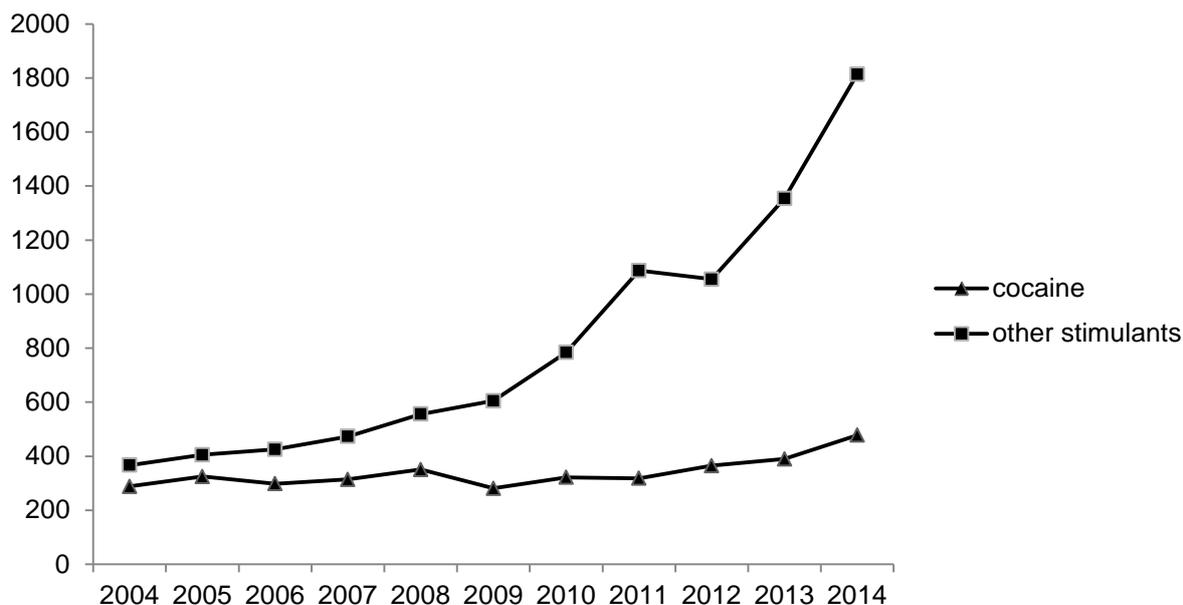


Figure 14 Trend in non-fatal drug-related emergencies admitted to inpatient treatment due to stimulant use (F14.0, F15.0)

As yet, however, no corresponding increase in drug related deaths has been found: the BKA's annual Federal Situation Report on narcotic drugs shows no clear trend which points to an increase in the number of deaths in connection with stimulants (see 2.1.1). In contrast, the data of the German Federal Statistical Office the number of poisonings not related to opiates has increased over the last few years; an increase in deaths caused by stimulants can be assumed in this respect. A problematic aspect, however, is the limited informative value of the general register on the causes of death as, amongst other reasons, it is not known exactly how many of these classifications are actually based on the findings of chemical toxicological analyses on the spectrum of substances that caused the deaths. Therefore, it cannot be concluded on the basis of this data, that the proportion of deaths caused by stimulants is increasing.

It is often feared, as far as the use of stimulants is concerned, that there could be an increase in younger persons dying from drug-related causes; this theory has so far not been borne out in Germany. The age segment of under 25s in 2014 showed, at 5.3%, the second lowest level observed since 1998; only in the previous year was the level somewhat lower (2013: 4.7%, 2012: 5.7%, see also 2.1.1).

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## 6.2 Methodology (T6.2)

### 6.2.1 Recording drug related deaths

In Germany there are two general, comprehensive registration systems for cases of drug related deaths, which differ from one another in various ways. These systems are the police data from the "Drugs data file" and the "Statistical report on the causes of death" from the German Federal Statistical Office.

#### Drugs Data File (Falldatei Rauschgift, FDR)

In general, drug-related deaths are recorded by the individual State Offices of Criminal Investigation of the *Laender*, whilst the BKA has access to this data, performs data quality control and summarises the figures. Data collection modalities and the basis for the assessment of drug-related deaths differ between the individual *Laender*. The proportion of autopsied drug-related deaths as a measurement for the quality of the classification as "drug-related death" ("Drogentote") varies (in some cases considerably) between the *Laender*. The toxicological examination of body fluids and tissue plays an important role in establishing the cause of death, as only this can provide sufficient information on the drug status at the time of death. Autopsy reports and toxicological reports are generally produced by different institutions. Since the latter in particular are often only available after a long delay, they are only taken into account in the classification of drug-related deaths to a limited extent.

In order to facilitate the recording of drug-related deaths and reduce mistakes, the following categories for drug-related fatalities were defined in a leaflet by the BKA (BKA 1999):

- drug-induced deaths caused by unintended overdose,
- death as a result of damage to health (physical decline, HIV or hepatitis C, organ weakness) caused by long term drug abuse (= "long term harm"),
- suicide out of despair over own living conditions or under the influence of withdrawal symptoms (e. g. delusions, strong physical pain depressive mood),
- fatal accidents of persons under the influence of drugs.

### **General Mortality Register<sup>16</sup>**

In Germany, a death certificate is written out for every case of death, complete with, alongside the personal data, information on the cause of death. The death certificate is passed on to the health authority and then to the *Land* Statistical Office. Aggregation and evaluation at national level is done by the German Federal Statistical Office ("general register on the causes of death") Often, this data source does not take into account the results of delayed toxicological reports in the classification of the drug-related deaths.

From the general mortality register, for the purposes of reporting to the EMCDDA, cases are selected which meet the definition of "direct causality". The goal here is to record cases of death, as sensitively as possible, which shortly follow the use of opioids, cocaine, amphetamine (derivatives), hallucinogens and cannabinoids, - i.e. in particular fatal intoxications. The selection is based on the specifications of the EMCDDA (the so-called ICD-10 Code Selection B). As a basis for the assignment to the group of drug-related deaths, the assumed underlying disorder (ICD10-Codes F11-F19) or the assumed cause of death in the case of accidents and suicides (ICD10-Codes X, T, and Y) is used respectively. This means that long-term secondary diseases, accidents not directly caused by poisoning and suicides are not be covered by this definition, although individual cases of this type presumably may indeed be included due to erroneous death certificates or coding errors. In 2006 new coding rules of the World Health Organization (WHO) entered into force. Their objective is to code, instead of the F1x.x codes, the acute cause of death where possible, namely the substances on which the intoxication was based. In Germany, the new coding has, however, not yet led to the desired increase in specificity, meaning that many F-codes still exist.

### **6.2.2 Notifications of drug-related infectious diseases:**

According to the German Protection Against Infection Act (Infektionsschutzgesetz, IfSG), which came into force on 1 January 2001, data on infectious diseases, including HIV and

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<sup>16</sup> The usage of the term "General Mortality Registry" is aligned with the terminology of the EMCDDA. The data reported here is from the "Statistical report on the causes of death" ("Todesursachenstatistik") of the German Federal Statistical Office (Special series 12, part 4).

viral hepatitis, are reported to the Robert Koch Institute (RKI). Respective data is published at regular intervals<sup>17</sup>. According to the German Regulation on Laboratory Reports and the IfSG, all laboratories in Germany are obliged to report confirmed HIV-antibody tests anonymously and directly to the RKI. These laboratory findings are completed by supplementary anonymous reports of the attending doctors. In this way, HIV reports ideally contain information on age and gender, town/city of residence, route of transmission of the infection as well as information on the stage of disease and HIV related basic laboratory parameters.

In addition, the AIDS-Case-Register collects epidemiological data on diagnosed AIDS cases in anonymised form, based on voluntarily reports by the attending doctors. Due to changes in the collection of data regarding HIV-diagnoses, it is now easier to avoid (formerly unrecognized) duplicated entries.

Since the introduction of the IfSG, data on possible modes of transmission of hepatitis B and C (HBV and HCV) has also been collected. This is done by the health authorities which investigate the case persons themselves or on the basis of data passed on by the reporting laboratories and doctors.

The current data is published by the RKI in the "Yearbook – Infection epidemiology of notifiable infectious diseases" (Infektionsepidemiologisches Jahrbuch meldepflichtiger Krankheiten) or respectively in the Epidemiological Bulletin of the RKI.

Since 2007, the DSHS in Germany has recorded data on the HBV and HCV status of patients in addition to the HIV status. Since the number of facilities which report this data is very small and only patients for whom a test results is available are taken into account, this data requires cautious interpretation.

### **Changes to the case definition of hepatitis B reports**

The case definition of the Robert Koch Institute was changed in 2015, so that now only the direct detection of the hepatitis B pathogen fulfils the criteria for a laboratory diagnostic detection. HBe antigen detection has emerged as a confirmation test for HBs antigen detection. The anti-HBc IgM antibody detection, which, according to the case definition up to 2014, was sufficient as an isolated serological marker to fulfil the laboratory diagnostic criteria of the case definition, is no longer used and is only collected as additional information. Among the cases, which were recorded according to the new case definition, not only cases confirmed through clinical laboratory diagnostics but also infections proven through laboratory diagnostics, for which the clinical picture is not fulfilled or not known, fulfil the reference definition. The described changes not only enable an alignment with the European case definition but also aim to investigate active, i.e. infectious and therefore transmissible, hepatitis B infections, regardless of the characteristics of their symptoms. With the introduction of the new reference definition, the number of published cases of hepatitis B will be much higher than in the previous few years.

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<sup>17</sup> [www.rki.de](http://www.rki.de) [accessed: 20 Aug. 2016].

## Changes to the case definition of hepatitis C reports

As it is barely possible from a laboratory diagnostic or a clinical perspective to distinguish between acute and chronic HCV infections, all newly diagnosed infections are included in the statistics of the Robert Koch Institute. Cases for which an earlier HCV laboratory test already exists are excluded. Thus, the overall number of recorded cases contains a considerable percentage of already chronic hepatitis C cases (in the sense of a virus replication of more than 6 months).

The case definition for hepatitis C was changed on 1 January 2015 in respect of the criteria for the laboratory diagnostic proof. In the assessment of the RKI, the previous case definition, according to which (confirmed) antibody detection on its own was sufficient, led to the reporting of infections, in an unknown proportion of cases, which had already spontaneously healed or been successfully treated and moreover to an unknown number of multiple reports. Only cases with a direct pathogen detection fulfil the new case definition (nucleic acid detection or HCV core antigen detection). In the reporting of the RKI only HCV infections which are active are still analysed. The current decrease in the number of cases due to this change was expected.

### 6.2.3 DRUCK study of the Robert Koch Institute

#### Background of the study:

HIV, HBC and HCV are much more widespread among injecting drug users than in the general population. The Standing Committee on Immunisation at the RKI recommends an HBV vaccination for injecting drug users as an indication vaccination. In order to record seroprevalence data for HIV, HBV and HCV and the accompanying data on knowledge, risk behaviour and prevention behaviour of injecting drug users in respect of infections, the DRUCK study, a multicentric serosurvey and behavioural survey among injecting drug users, was initiated by the RKI in 2011. The results should be included in targeted prevention recommendations on the protection of injecting drug users against HIV and hepatitis. There appears to be a higher prevalence of human T-cell lymphotropic virus (HTLV) among injecting drug users in other European countries. As there is no data on the epidemiology in respect of this in Germany the HTLV prevalence among injecting drug users was also determined.

#### Methods:

Injecting drug users, who had injected drugs in the last 12 months in the respective study city, and were at least 16 years old, were recruited via a modified snowball method (*Respondent driven sampling*) and analysed in low-threshold facilities for drug support in Berlin, Essen, Frankfurt am Main, Hamburg, Hannover, Cologne, Leipzig and Munich from 2011 to 2014. In addition to a detailed questionnaire-based interview, capillary blood samples were dripped onto filter paper and analysed anonymously with a laboratory marker for HBV, HCV, HIV and HTLV. The participants were, in addition, offered an anonymous HIV rapid test with direct onsite counselling and communication of results. Additionally, a targeted

brief consultation on the gaps in knowledge which were identified in the interview was offered as well as the option to receive the results of the laboratory testing for HCV and HIV in a subsequent medical consultation.

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