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Harms and Harm Reduction

Esther Dammer, Loretta Schulte & Tim Pfeiffer-Gerschel
IFT Institute for Therapy Research

Gabriele Bartsch, German Centre for Addiction Issues

Maria Friedrich, Federal Centre for Health Education

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0 Summary (T0)

Drug-related deaths

According to the German Federal Criminal Police Office (Bundeskriminalamt, BKA), in 2016 a total of 1,333 people died as a result of the use of illicit drugs. The general mortality register (Allgemeines Sterberegister) only shows data up to 2015; that register has recorded 1,306 deaths. The numbers have been increasing steadily in both registers since 2012. The BKA data shows that mono or polydrug overdoses with opioids were still the cause of death in almost 60% of all cases. The number of poisonings not caused by opioids is increasing in both registers of deaths however.

The age of death in drug-related cases in the last ten years has markedly increased, however the trend has stabilised for the last four years or thereabouts. There is still no evidence of a new trend in fatal drug intoxications amongst the youngest users.

Drug-related, non-fatal emergencies

In 2015, there were 23,839 cases of intoxication and poisoning nationwide, which were treated on an inpatient basis in hospitals. In the last ten years, the number of admissions has markedly increased (2006: 12,249 admissions). This rising trend has been even sharper since 2013. Toxicological indications from admissions must be interpreted cautiously due to large inaccuracies in coding. As far as poisonings are concerned, poisoning by "other opioids" represents, by some margin, the overwhelming majority of cases, followed by poisoning by cannabinoids. Among acute intoxications, "multiple substance use" is overwhelmingly coded as the reason. Beyond that, a trend towards an increasing significance of cannabinoids and stimulants is apparent, whereas sedatives/hypnotics are, in contrast, losing significance.

Drug-related infectious diseases

In 2016, 3,419 newly diagnosed HIV infections were reported to the Robert Koch Institute (RKI). Persons who are assumed to have contracted their HIV infection through injecting (i.v.) drug use make up, at 127 persons, the third largest group as has been the case in recent years (5% of all new infections where information was recorded on the mode of transmission). Of these 127 persons, 38 lived in Bavaria. The lowest figures for new HIV diagnoses where injecting drug use was the mode of transmission were recorded in the years 2010-2012 (77-80 new diagnoses per year) following a period of continuously declining numbers. Since 2012, HIV-diagnoses associated with this mode of transmission have been rising again (from 80 to 127 in 2016), in particular in the age group 30-39 years old.

In 2016 3,466 cases of hepatitis B (HBV) were recorded and reported. Information on the mode of transmission was only stated in 119 cases, with injecting drug use representing the third most commonly stated mode of transmission, with 25 cases.

For 2016, a total of 4,368 cases of newly diagnosed hepatitis C (HCV) were reported. Following a decrease in numbers of cases from 2005 onwards, the trend then stabilised in

2011. From 2015, the numbers of cases begin to fall once again. However, this decrease can at least partly be attributed to the amended definition from 2015 and is thus almost impossible to interpret. Of the 1,047 new diagnoses with evaluable information as to probable mode of transmission, injecting drug use accounted for the largest proportion by some margin, with 834 cases. The proportion has remained stable over the last 5 years, at around 80%. The more detailed specification of "injecting drug use in prison" was recorded in 2015 for 51 of the males (6.5%) and 7 of the females (2.7%) who had the information "injecting drug use". Since drug users make up the largest proportion of those infected with HCV in Germany by some margin, the highest priority should continue to be afforded to prevention of hepatitis C in this group, as well as case detection, diagnosis and treatment.

Harm reduction interventions

Measures for harm reduction constitute one of the four levels of the National Strategy on Drug and Addiction Policy. Since 2016, the BIS 2030 strategy of the German Federal Government has also been available, which has the objective of substantially reducing HIV, hepatitis B and C as well as other sexually transmitted infections by 2030. Injecting drug users are explicitly named as one of the specific target groups of this strategy.

Additionally, recommendations on the basis of the DRUCK study demonstrate ways in which infectious diseases can be combatted among drug users. The evaluation of the Berlin drug consumption rooms has also revealed suggestions as to how the provision of such rooms might be improved.

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. There is no uniform financing. The costs of most facilities are borne by the municipalities, however there is also some financing from the Federal Government and the *Laender*. The availability of harm reduction measures varies greatly in Germany. Overall, it is better in cities and heavily populated regions than in rural areas. Provision in prisons is particularly poor.

In order to counteract opioid overdoses, emergency training is offered in several cities on the use of the emergency medicine naloxone by laypeople. The target groups are drug users and people in their environment. The availability to date is very limited; currently there are programmes in Berlin, several cities in North Rhine-Westphalia and Munich. A pilot project on providing inmates with naloxone prior to release from prison has to date not been able to be started as planned. In Bavaria, a pilot project for two cities was approved, which was to run until the end of 2017.

Drug consumption rooms continue to play a crucial role in harm reduction among injecting drug users. To date, 22 fixed sites and two mobile drug use facilities are available across 6 *Laender*. In 10 *Laender*, there are no drug consumption rooms. In North Rhine-Westphalia (NRW) drug consumption rooms have been opened for the first time also for substituting clients; the reported experiences garnered from the first year have been largely positive.

Syringe provision programmes currently exist in the form of around 171 syringe vending machines in 9 *Laender*, as well as the provision of loose syringes in numerous projects nationally. Safer-use services in prisons continue to lag far behind what is possible, however: only one of the 183 prisons in Germany has a syringe vending machine.

The chances of curing hepatitis C among drug users have significantly improved due to the introduction of new medicines onto the market which improve the chances of recovery whilst having a more favourable side-effect profile. The question remains, however, as to how many drug users can actually benefit from these new treatment options in view of the high price of the medicines involved and continued widespread concerns amongst doctors.

At a political level, discussions have intensified over drug checking, however it has not yet been systematically implemented. In the area of prevention and harm reduction, measures for refugees are currently being afforded great significance. A nationwide project funded by the German Federal Ministry of Health (Bundesministerium für Gesundheit, BMG) and the German Aids Service Organisation (Deutsche Aidshilfe, DAH) intends to develop reasonable and effective measures for this target group. Measures for the special requirements of the growing group of older drug users are also being implemented, for example a first long term accommodation for this group. The work with families affected by addiction is also being focussed on. In Dresden, for example, there is a service specifically for young parents suffering from addiction.

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 systems for recording cases of drug-related deaths, which differ from one another in various aspects. These are the police data from the "Drugs data file" (Falldatei Rauschgift) and the "Statistical report on the causes of death" (Todesursachenstatistik) from the German Federal Statistical Office. Both data collection systems are described in more detail in section 4.2.1 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 differentiated and overlaps can be better identified in many cases.

The "Statistical report on the causes of death", the general mortality register of the German Federal Statistical Office are used for comparisons with other European countries as this register largely follows 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 involved in overdoses. However, it is less suitable for Europe-wide comparisons due to differences in selection criteria and reported age groups.

Neither of the two methods used records all drug-related deaths. In each method, a certain number of relevant cases is not recognised, is unreported or is wrongly assigned. However, a long-term comparison of the two registers reveals very similar developments and trends (whereby the trends in the systems are of somewhat different strengths, see section 1.1.4), that can be seen as a sort of cross-validation of the two estimation methods. 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 police data on drug-related deaths

The reliability of information on drug-related deaths strongly depends on 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 in the Drugs Data File of the BKA in the reporting year 2016 was 57.7% (2015: 60.9%) (BKA 2017, data delivery).

In 2016, the number of drug-related deaths increased for the fourth time in a row. In total, 1,333 people died as a result of using illicit drugs (2015: 1,226), which corresponds to an increase of approximately 8.7%. 84% of the drug deaths were male and the average age was 38, as in the previous year. In terms of the number of inhabitants the relatively small Saarland had - apart from the city states of Berlin, Hamburg and Bremen - the largest number of problems (2.7 drug deaths per 100,000 inhabitants), followed by Bavaria, the *Land*

with the second largest population (2.5 drug deaths per 100,000 inhabitants; 24% of all drug deaths in Germany). 15% of drug deaths were in the *Land* with the largest population, North Rhine-Westphalia (1.1 drug deaths per 100,000 inhabitants). The city state of Berlin was the most affected major city in 2016, with a respective figure of 4.7, followed by Hamburg and Munich (4.2 each), and Cologne and Nuremberg (3.9 each) (BKA 2017, data delivery). When interpreting these numbers, it must be taken into account that the autopsy rate of the individual *Laender* can sometimes vary widely making comparisons between *Laender* more difficult.

Current data from the general mortality register

The most recent figures on drug-related deaths, available from the General Register on the causes of death of the Federal Statistical Office, are from 2015. A total of 1,306 people were recorded in the category drug-related deaths (287 females and 1,019 males; the proportion of females being 22%). This corresponds to a significant increase of 9.3% in the total number of drug deaths compared to 2014 (1,195 people) (Statistisches Bundesamt, special calculations).

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

In 2015, the general mortality register included more cases overall than the parallel BKA register; the difference between the two in the data year 2015 was 80 cases. Both registers do, however, exhibit similar trends (which are described in more detail in section 1.1.4), even though the reference populations and case definitions for the two registers are not identical. One problematic factor which persists 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 become established nationwide. Thus, despite the changes of the WHO coding rules which took effect in 2006, the national mortality register is still 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 categorisation of the causes of death (as revised in 2012) in the BKA figures.

1.1.2 Toxicology of overdose deaths (T1.1.2)

Police data on drug-related deaths

Overdosing on heroin/morphine (including poisoning by heroin/morphine in conjunction with other substances) was recorded for 511 cases (2015: 554), thus remaining the most common cause of death (38%). The proportion of drug-related deaths in which substitution drugs were detected, alone or in combination with other drugs, was at 17% (231 cases). Poisoning by substances other than opiates, especially by cocaine/crack and amphetamine/methamphetamine was the cause of death in 19% of cases (see Table 1) (BKA 2017, data delivery).

It is possible that the numbers of mixed intoxications ("polydrug poisonings") could be underestimated in the representation of substance involvement due to a lack of precise toxicological information.

Table 1 Drug-related deaths 2016 by substance

Causes of death	% of Total		Number
	2015	2016	2016
Monodrug poisoning from opioids	21.9	20.8	277
Heroin/Morphine	16.6	14.4	192
Opiate-substitution drugs	2.8	3.2	42
- of which: Methadone/Polamidone	2.5	2.8	37
- of which: Buprenorphine (i.a. Subutex)	0.2	0.3	4
- of which: Other	0.0	0.1	1
Opiate-based medicines	2.4	2.9	39
- of which: Fentanyl	2.3	2.6	35
Synthetic opioids (i.a. fentanyl derivatives) ¹	n/a	0.3	4
Polydrug poisonings from opioids²	43.2	38.4	512
Heroin/morphine in connection with other substances (i.c.w.o.s.)	28.5	23.9	319
Opiate-substitution drugs i.c.w.o.s.	14.2	14.2	189
- of which: Methadone/Polamidone i.c.w.o.s.	12.0	11.2	149
- of which: Buprenorphine (i.a. Subutex) i.c.w.o.s.	1.2	1.6	21
- of which: Other i.c.w.o.s.	1.0	2.0	27
Opiate-based medicines	6.0	5.9	79
- of which: Fentanyl	4.8	4.5	60
Synthetic opioids (i.a. fentanyl derivatives) i.c.w.o.s. ¹	n/a	1.4	18
Monodrug poisonings from substances other than opioids/opiates	6.0	7.5	100
Cocaine/Crack	1.2	2.4	32
Amphetamine/Methamphetamine	2.4	2.0	27
- of which: Amphetamine	1.5	1.6	21
- of which: Methamphetamine	0.9	0.5	6
Amphetamine derivatives	0.5	0.2	2
New Psychoactive Substances (NPS)	1.5	2.6	35
Other (w.e.o. psychoactive medicinal drugs)	0.3	0.3	4
Polydrug poisonings from substances other than opioids/opiates¹	8.3	11.6	154
Cocaine/Crack i.c.w.o.s.	2.0	2.9	39
Amphetamine/Methamphetamine i.c.w.o.s.	4.3	5.7	76
- of which: Amphetamine i.c.w.o.s.	3.8	5.1	68
- of which: Methamphetamine i.c.w.o.s.	1.1	1.5	20
Amphetamine derivatives i.c.w.o.s.	0.6	1.2	16
New Psychoactive Substances (NPS) i.c.w.o.s.	1.6	3.1	41
Psychoactive medicinal drugs, i.c.w.o.s.	1.5	2.6	34
Other i.c.w.o.s.	1.0	1.7	23
Poisonings from psychoactive medicinal drugs only (where applicable, also i.c.w. alcohol)	1.5	1.4	18
Not specified/unknown poisonings	n/a	2.6	34
Suicides	5.0	6.5	86
Suicide by way of intoxication (already included in the causes mentioned above)	2.9	3.2	43
Suicide through means other than intoxication	2.0	3.2	43
Long-term harms:	10.9	11.6	154
- of which: Long-term harms in combination with intoxication consequences	4.2	5.7	76
Accidents	2.3	2.5	33
Other cases	1.1	0.6	8
Total (N)³	1226		1333

¹Not yet recorded for 2015. ²In the subcategories, multiple counting is possible.

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

BKA 2017, data delivery.

Data from the general mortality register

In 2015, the *underlying disease* (dependence, harmful use of drugs, others from the ICD group F 1x.x) was coded for 66.0% of deaths (2014: 67.0%). However, for these cases the information on the *acute* cause of death is lacking. Only the coding of drug-related 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 2015, this applied to only 34.0% of registered cases. Purely opiate related deaths in this subgroup accounted for 46.6% of cases in 2015 (previous year: 45.4%). In 21.2% of cases, other substance groups were mentioned. 32.2% of cases involved intoxications without more detailed specification 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. However, the limited meaningfulness 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 trends in the coded causes of death can be found in section 1.1.4.

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 any known current regional cohort studies. It is, however, possible to gain some insight into the issue by using the data that exists on drug addicts in treatment.

Care in outpatient addiction counselling facilities ended in death for 2.3% of opioid clients according to the Statistical Report on Substance Abuse Treatment in Germany (Deutsche Suchthilfestatistik, DSHS) for 2016. In 2016, opioid clients accounted for 87% of all clients with an illicit drug problem registered in the DSHS who died during outpatient treatment (Braun et al. 2017). In order to eliminate the effect of the duration of the treatment, which has been continuously grown in the last few years, a treatment period of 12 months is used as the basis for the calculation. The resulting mortality of 1.8% per annum in 2016 is only marginally higher than in previous years and has been stable, with slight fluctuations, over the last ten years, (see Table 2).

Table 2 Mortality of opioid users treated on an outpatient basis, 2007 - 2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Proportion of deaths among persons ending treatment (%)	1.4%	1.2%	1.5%	1.5%	1.6%	1.4%	1.7%	1.8%	1.9%	2.3%
Treatment duration (days)	314	321	336	343	354	381	400	400	421	456
Mortality p.a. (%)	1.6%	1.4%	1.6%	1.6%	1.6%	1.3%	1.5%	1.6%	1.6%	1.8%

(Braun et al. 2017)

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, hence the actual mortality level – in particular of treatment dropouts - is presumably higher than the values stated here. If one assumes that facilities' knowledge of clients' deaths has not changed systematically over the years, it is nevertheless possible to interpret the described trends in the manner presented.

1.1.4 Trends (T1.1.4)

The long term trend in the total numbers of drug-related deaths in Germany has 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 noticeable that the trends of the last few years are somewhat stronger in the police data than in the data of the general mortality register (see Figure 1). For example, a sharp increase is recorded in both registers from 2014 to 2015; in the BKA data this increase was 18.8%, in the DeStatis data 9.3%.

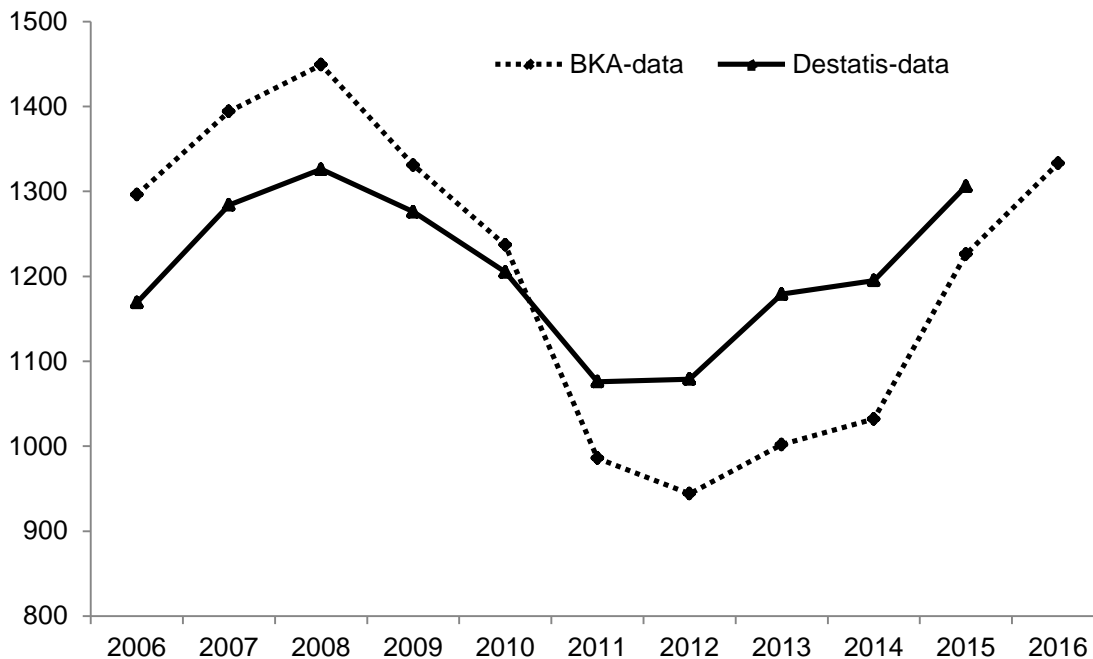
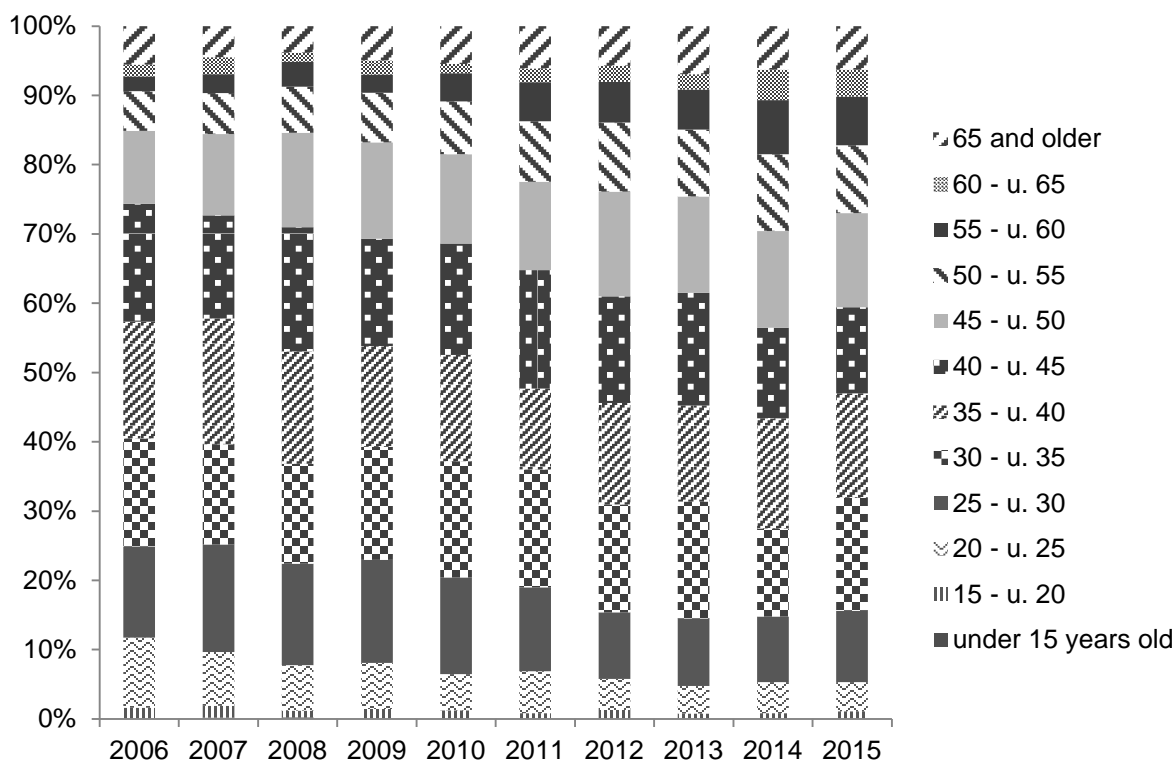


Figure 1 Trends in the number of drug-related deaths: Comparison of BKA and Destatis data 2006 to 2016

Data from the general mortality register



Note: The proportion of under-15s is so small (2015: 1 person, 2014: 0 persons), that they are not visible in the graphic.

Figure 2 Drug-related deaths by age group DeStatis 2006-2015

Over the course of the last ten years, the average age of death in cases of drug-related deaths has increased again, however for four years the proportion of over 20 to 30-year-olds has stopped falling and is currently at approx. 14% (see Note: The proportion of under-15s is so small (2015: 1 person, 2014: 0 persons), that they are not visible in the graphic).

Figure 2). The proportion of drug-related deaths where the age of death is over 50 seems, following a long-term continuous increase, to have stabilised and in 2015 was at 27.0%. 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 for drug-related deaths in cases of incorrect coding not in accordance with the guidelines. There is still no indication in the General Register on the causes of death of the German Federal Statistical Office of a new trend of fatal drug-related intoxications amongst the youngest users of hard drugs - the proportion accounted for by the age segment of under 25s remained stable at 5.3% (2014: 5.3%). This value is only marginally higher than the 2013 value (4.7%), which was the lowest observed value since 1998.

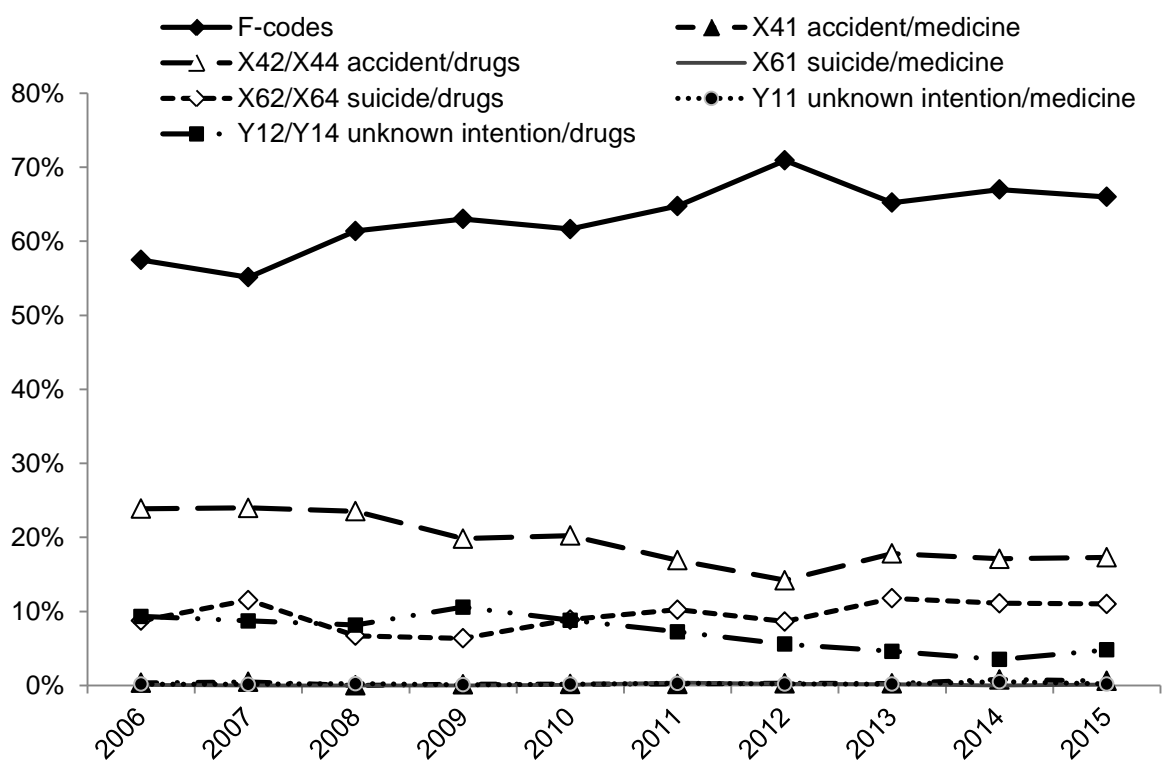


Figure 3 Trend in the DeStatis coding of the causes of drug-related deaths 2006 to 2015

Only the coding of drug-related 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. For years, this has only applied to far less 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 still constitute the main causes of death (see Figure 4). Opiates will likely also play a significant role in mixed intoxications; these are often, however, not specified in greater detail, so no definite statement can be made on this point. 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 markedly increasing since 2010. This development seems to have begun to stagnate in 2015 (21.2% of all cases; 2014: 22.3%). Overall, however, the limited informative value of the General Register on the causes of death should be taken into account 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.

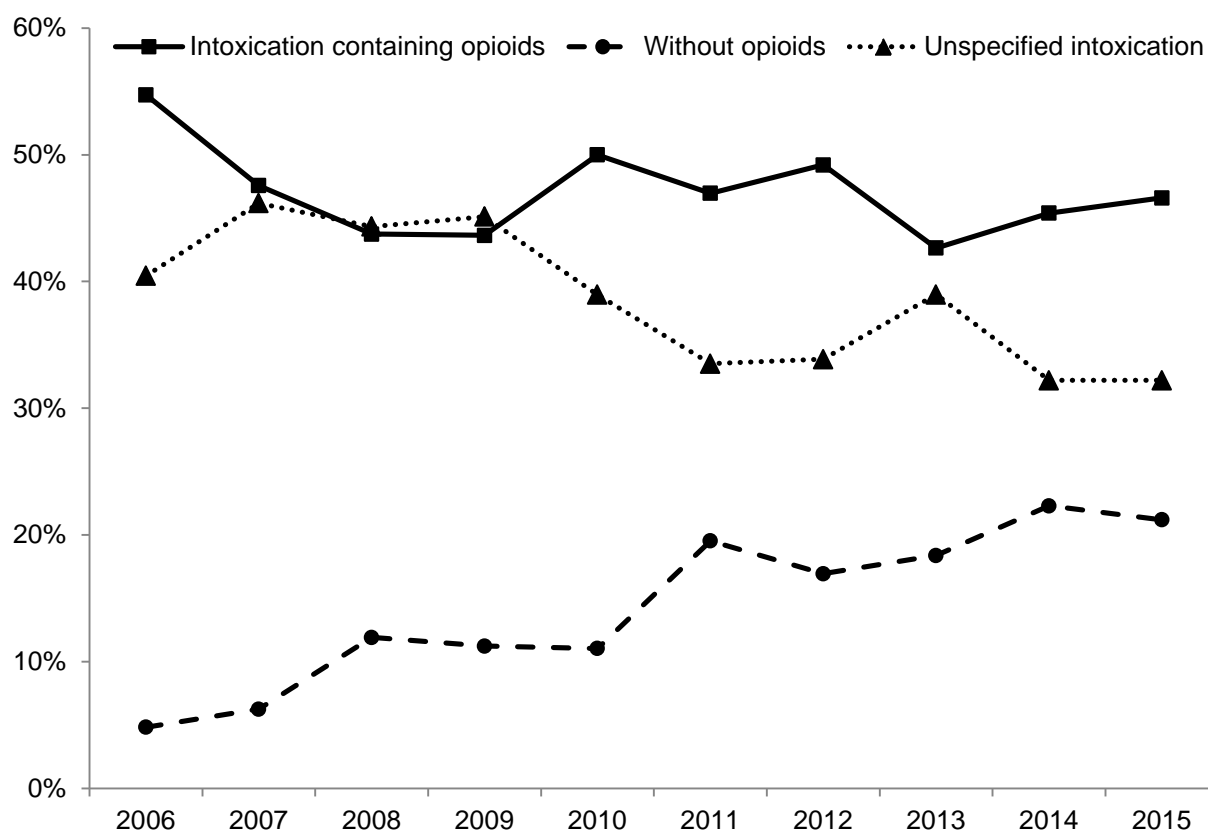
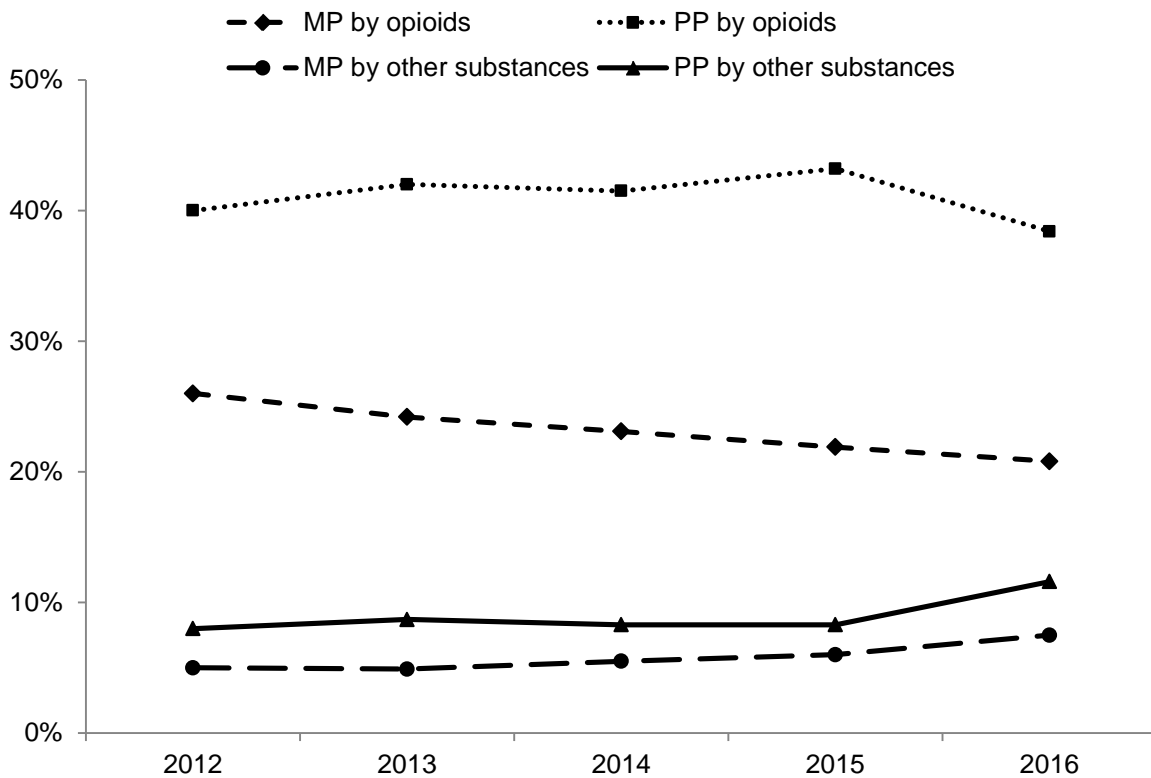


Figure 4 Opiate-related intoxications in DeStatis drug-related deaths 2006 to 2015 (ICD X/Y coding)

Police data on drug-related deaths

As the data recording system of the BKA was changed in 2012, trends can only be examined from this point onwards. Poisonings from opioids are the main causes of death in that register also. Unlike in the general mortality register, a distinction is made between monodrug and polydrug poisonings. The proportion of monodrug opioid poisonings has fallen continuously since 2012, from 26.0% to 20.8%. Polydrug opioid poisonings are the most common cause of death, however at 38.4% it represents a smaller proportion than in previous years. Monodrug as well as polydrug poisonings from other substances have

remained stable between 2012 and 2015 at 5-6% and 8-9% respectively; for the current reporting year, these values have increased for the first time to 7.5% and 11.6% respectively. It remains to be seen whether this is the beginning of a trend or a temporary fluctuation.



MD = monodrug poisoning, PD = polydrug poisoning

Figure 5 Causes of death BKA data 2012 - 2016

1.1.5 Additional information on drug-related deaths (T1.1.5)

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 (Krankenhausdiagnosestatistik) 2015 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. Moreover, cases of opioid poisoning, for example, could be caused by (accidental or intentional) overdoses of prescribed medications containing opioids and not by the consumption of illicit drugs. In addition, this data only allows conclusions to be drawn in respect of drug-related, non-fatal emergencies admitted to hospital on an inpatient basis. Emergency cases, which are not treated at all or are treated by other facilities, (poison information centres, see section 1.2.2, but also by practice-based doctors, emergency medical treatment with no subsequent inpatient treatment) are not covered here. Further, it is not clear from the data how seriously pronounced or dangerous the symptoms were and how long the respective treatment lasted; short term cases are 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 (Giftinformationszentrale, Giftnotrufzentrale, GIZ). That data provides information about emergencies that have not led to hospital admission (see section 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, 2015

ICD-10 Diagnosis	Total number not incl. deaths	Age in years				
		<15	15 - 24	25 - 45	45 - 65	65+
Acute intoxication [acute inebriation] (F11.0 to F16.0, F18.0, F19.0)	22,047	568	6,634	10,677	3,377	791
from opioids (F11.0)	2,009	16	178	1,157	407	251
from cannabinoids (F12.0)	2,895	227	1,722	811	128	7
from sedatives/hypnotics (F13.0)	2,336	22	374	920	709	311
from cocaine (F14.0)	466	2	89	313	61	1
from other stimulants (F15.0)	2,366	75	1,020	1,152	103	16
from hallucinogens (F16.0)	519	20	284	179	35	1
from volatile substances (F18.0)	76	8	18	34	10	6
from multiple substance use or use of other psychotropic substances (F19.0)	11,380	198	2,949	6,111	1,924	198
Poisoning by narcotic drug (BtM) and psychodysleptics (hallucinogens) (T40.X)	1,792	78	371	552	332	459
from opium (T40.0)	99	4	5	16	21	53
from heroin (T40.1)	150	1	10	116	23	0
from other opioids (T40.2)	836	36	58	151	205	386
from methadone (T40.3)	90	4	6	45	30	5
from other synthetic narcotics (T40.4)	48	1	19	15	8	5
from cocaine (T40.5)	96	0	16	70	10	0
from other and non-specified narcotics (T40.6)	58	0	11	23	16	8
from cannabis (derivatives) (T40.7)	335	31	203	87	12	2
from lysergide (LSD) (T40.8)	27	0	21	6	0	0
from other and non-specified psychodysleptics (T40.9)	53	1	22	23	7	0

Statistisches Bundesamt, special calculations.

From the data of the Poison Information and Poison Control Centres:

Data is available from five of the eight GIZ¹ on the documented enquiries on the basis of acute poisoning cases in connection with drugs (not including medicinal drugs, which are recorded separately) from 2015 (GIZ NRW, GIZ Nord, GIZ Berlin, GIZ Saarland, GIZ München).

In these five institutions, a total of 146,469 enquiries on the basis of suspected cases of human poisoning were registered in 2015, of which 3,282 were due to actual or suspected consumption of illicit drugs. The proportion of drug cases is thus small, as in previous years, at 2.24% (Abteilung für klinische Toxikologie & Giftnotruf München der Klinik und Poliklinik für Innere Medizin II 2015; Giftinformationszentrum Nord der Länder Bremen, Hamburg, Niedersachsen und Schleswig-Holstein (GIZ-Nord) 2016; Informations- und Behandlungszentrum für Vergiftungen Homburg/Saar 2016; Informationszentrale gegen Vergiftungen des Landes Nordrhein-Westfalen 2015). From this information, however, one cannot ascertain whether the overdoses were as a result of unintended consumption or wilful drug use. Some of the poison information centres also classify cases by substance, as well as by other variables such as age, in their documentation systems.

The GIZ Nord² documented a total of 33,189 cases of suspected human poisonings in 2015, of which 2.4% (N = 796) concerned enquiries related to the main group, illicit drugs. This year, one death has been reported, 106 of the suspected cases were classified as severe poisoning (13.3%), 284 (35.7%) as medium level of severity, and 176 (22.1%) as low level. 40 of the suspected cases (5.0%) were asymptomatic, in 187 suspected cases (23.5%) the severity of the poisoning could not be determined.

Information on substance groups is available: 26.8% of the calls (N = 213) were received due to the consumption of amphetamine type substances. 20.1% (N = 160) were related to the use of cannabinoids, of which the most frequent reason for calling, accounting for almost two thirds of enquiries, was in relation to synthetic cannabinoids (N = 101). This represents a marked increase in comparison to the previous year. Cocaine accounted for 12.1% of calls (N = 96), opioids 6.3% (N = 50), of which the largest proportion of cases was heroin (44).

Of the 106 severe poisoning cases, 44 were due to non-classified hallucinogens, 17 due to cannabinoids (of which 13 were due to synthetic cannabinoids), 10 due to cocaine, 9 to ATS and 6 to heroin. The call, in which the case of death was recorded, related to synthetic cannabinoids.

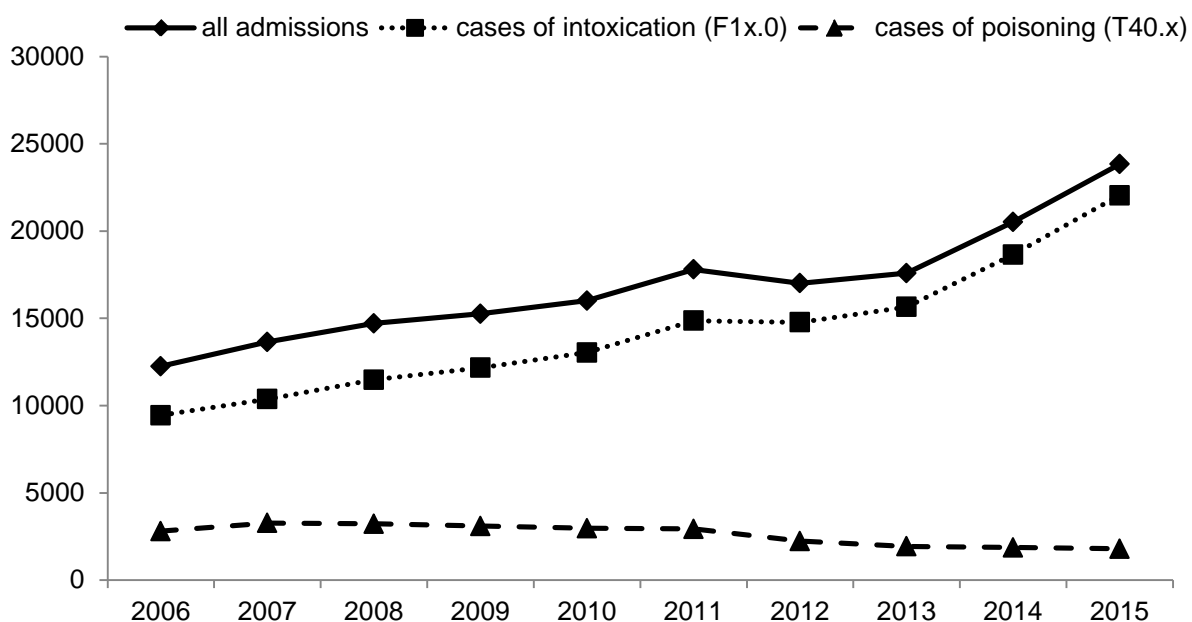
1.2.3 Trends (T1.2.3)

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

1 <https://www.klinitox.de/3.0.html> [accessed: 31 July 2017].

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

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 section 1.2.1).



Statistisches Bundesamt, special calculations.

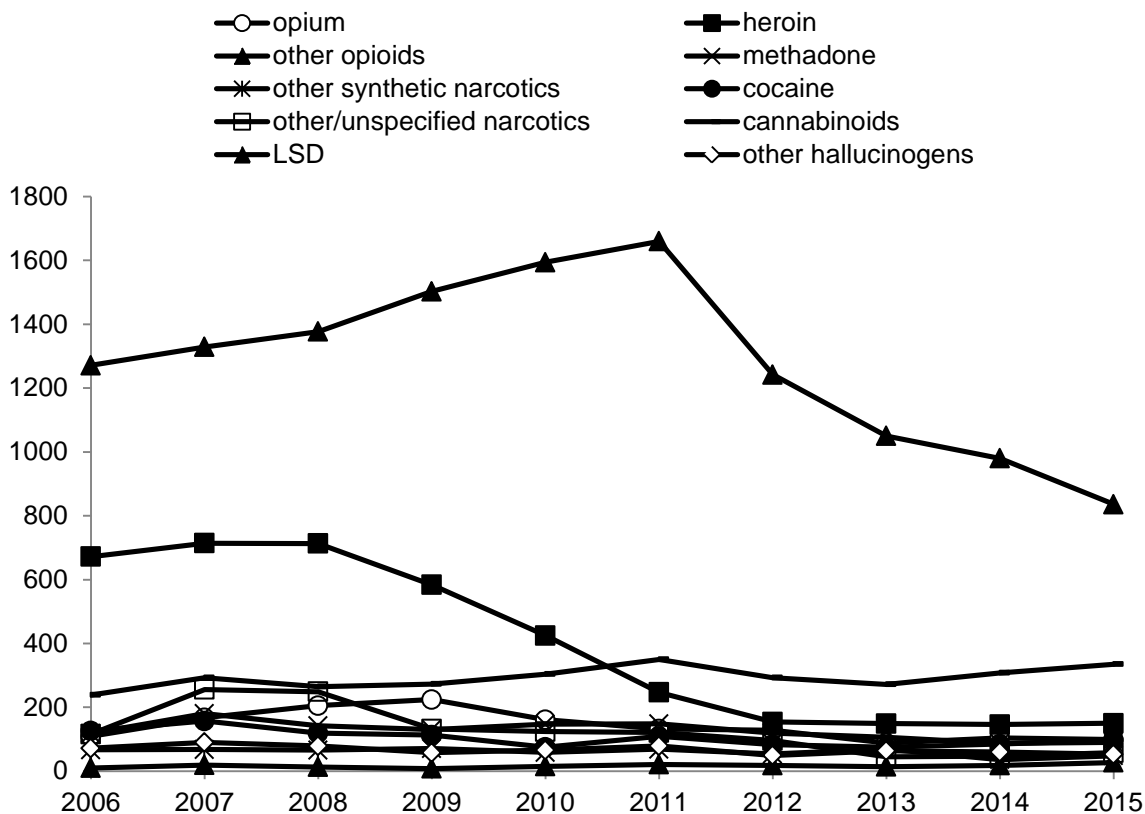
Figure 6 Trend in acute drug-related emergencies admitted to inpatient treatment 2006 - 2015

Overall, a continuous increase in non-fatal drug-related emergencies admitted to inpatient treatment can be seen over the last ten years, with the number rising from 12,249 admissions in 2006 to 23,839 in 2015 (see Figure 6), increasing even more steeply since 2013. 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 2006, has fallen even further in the last 10 years. It remains unclear whether this can be explained through coding practices or whether in fact there really were fewer cases of poisoning and more cases of intoxication recorded.

If poisoning and intoxication are considered separately, poisoning through "other opioids" (T40.2) clearly predominates among inpatient admissions for poisoning (T 40.x codes, see Statistisches Bundesamt, special calculations.

Figure 7) in the last 10 years. After a considerable increase up to 2011 (1,660 cases), the numbers have since considerably decreased again (2015: 836 cases). For a long time, poisoning from heroin (T40.1) was the second most common diagnosis in this group, however the number of cases has been decreasing almost at a constant rate for over 10 years and today comprises a relatively small proportion of poisonings (2015: 150 cases). Since 2011, cannabinoid poisoning (T40.7) has then been the second most commonly coded cause of hospital admission, after poisoning by other opioids. However, the trend has

stabilised in the last ten years and at 335 cases in 2015, the level is considerably lower than that of opioid poisoning. All other substances, including the other/narcotics not described in detail, play only a minor role with less than 100 reported cases.



Statistisches Bundesamt, special calculations.

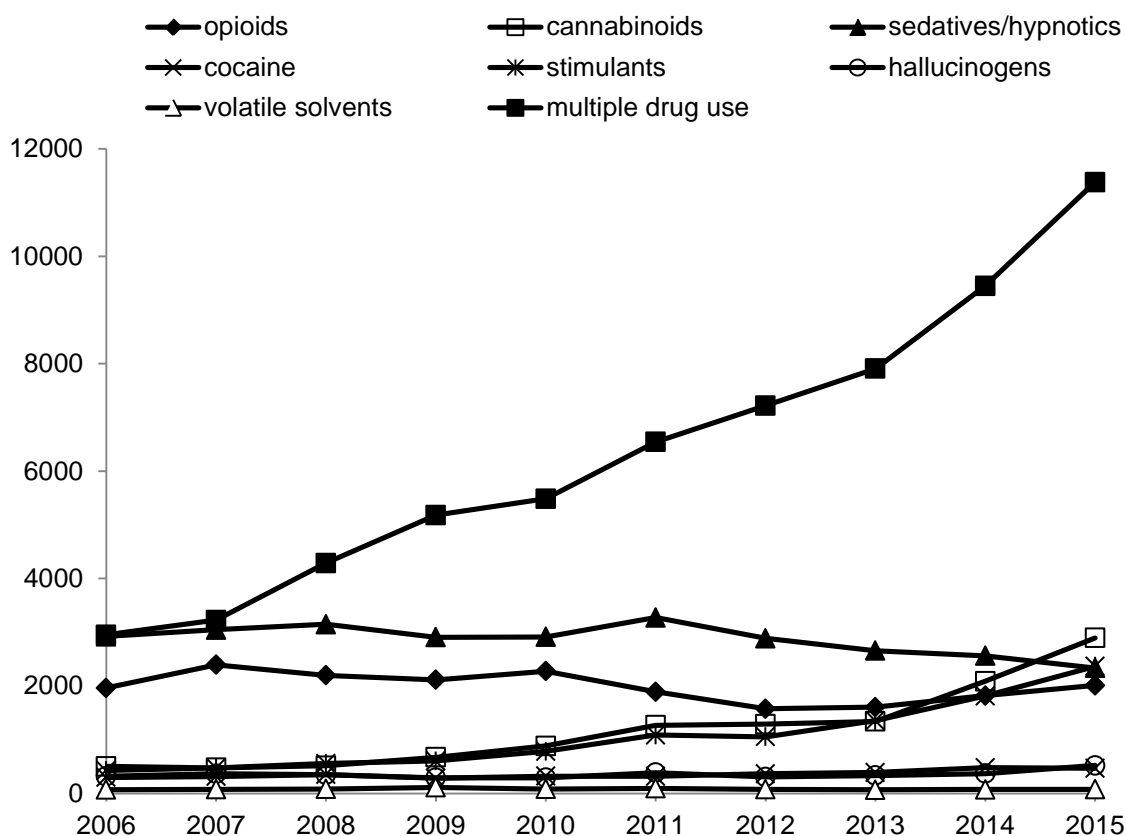
Figure 7 Trend in acute drug-related emergencies admitted to inpatient treatment: poisonings (T40. x-codes)

In the acute intoxications group, the most commonly coded diagnosis, by some margin, is acute intoxication due to multiple drug use and use of other psychoactive substances (F19.0) (see Statistisches Bundesamt, special calculations.

Figure 8). The number of inpatient admissions for this diagnosis has almost quadrupled in the last ten years (2006: 2,951 cases; 2015: 11,380 cases) and accounts for a large part of the total increase in all drug-related emergencies admitted to in-patient hospital treatment in the last ten years. More precise information on the individual substances which have been coded under "multiple use" or "other psychotropic substances" is not available.

In 2015 intoxication due to cannabinoids (including synthetic cannabinoids) was coded as the second most common cause for the first time. In the last ten years, the numbers recorded for this type of poisoning have increased more than five-fold (502 cases in 2016, 2,895 cases in 2015). Intoxication due to stimulants (excluding cocaine) has also been coded more than five times more frequently than ten years earlier, with 2,336 cases in 2015. It was thus coded for the first time as frequently as the substance group sedatives/hypnotics, which until last year

had always been the second most frequently coded, although it has slightly decreased in the last ten years (2006: 2,923 cases; 2015: 2,336 cases). Intoxication due to opioids has fluctuated over the last ten years by around 2,000 cases per year; no clear trend can be discerned here. Overall, in the area of acute intoxications, a trend towards multiple substance use and an increasing significance of cannabinoids and stimulants is apparent, whereas sedatives/hypnotics in comparison are rather losing significance.



Statistisches Bundesamt, special calculations.

Figure 8 Trend in non-fatal drug-related emergencies admitted to inpatient treatment: acute intoxications (F1x.0-Codes)

1.2.4 Additional information on drug-related acute emergencies (T1.2.4)

No additional information is available on this.

1.3 Drug-related infectious diseases (T1.3)

Throughout Germany, all data on infectious illnesses, which must be reported as per the German Protection Against Infection Act (Infektionsschutzgesetz, IfSG), are reported to the RKI 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

provides 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 respect, special mention should be made of the DRUCK study, which from 2011 to 2015 analysed the distribution of hepatitis B and hepatitis C as well as HIV, unsafe-use behaviours, knowledge about the infections as well as safer use practices among injecting drug users in eight German cities, the results of which were reported in detail in the reports of the last two years.

More precise information on the data sources for drug-related infectious diseases can be found in section 4.2.2.

1.3.1 Main drug-related infectious diseases among drug users – HIV, HBV, HCV (T1.3.1)

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 2016 (RKI 2017).

HIV reporting data

3,419 HIV infections were reported to the RKI as newly diagnosed in 2016. This corresponds to a national incidence of 4.2 cases per 100,000 inhabitants and thus represents a decrease of 7.6% on the previous year (3,699); this applies for infections contracted both in Germany and abroad. In contrast, the number of infections for which the country of infection could not be determined (712; 2015: 488) increased.

Information on infection risk was available for 2,738 of the 3,419 newly diagnosed cases (80%). Where multiple risks were stated, these were reduced to the most probable risk. Of the newly diagnosed cases with information as to risk, 63% (1,725) likely involved an infection contracted via homosexual contact among males, 32% (865) via heterosexual contact and 5% (127) via injecting drug use. 1% (21) of newly diagnosed cases concerned children who had been infected via their mothers. Only three of these children were born to HIV-infected mothers in Germany.

The lowest figures for new HIV diagnoses where injecting drug use was the mode of transmission were recorded in the years 2010 to 2012 (77-80 new diagnoses per year) following a period of continuously declining numbers. Since 2012, HIV-diagnoses associated with this mode of transmission have been rising again (from 80 to 127 in 2016). The increase occurred predominantly in the age group 30-39 (from 32 in 2012 to 60 in 2016 - see Figure 9).

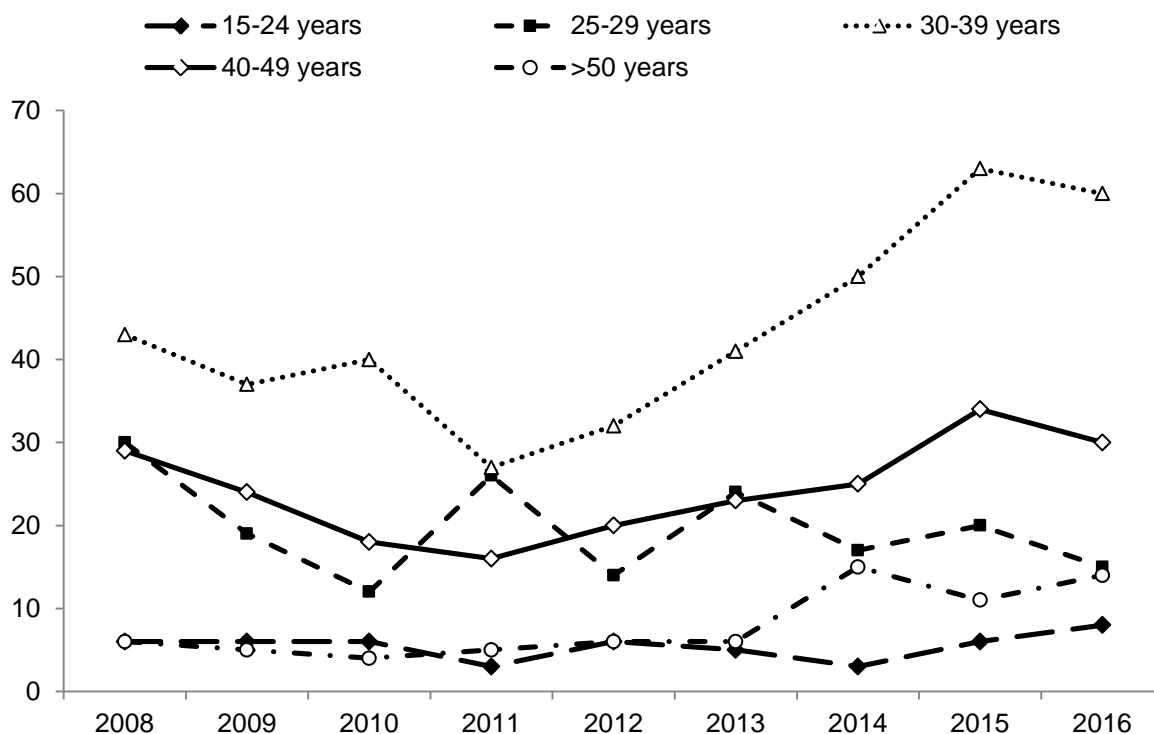


Figure 9 New HIV diagnoses due to injecting drug use by age group 2008 to 2016

Of the 127 newly diagnosed cases in 2016, which infection by way of intravenous drug use, 38 lived in Bavaria. In 2014, this number was 8; in 2015 it was then already 18. The majority of those diagnosed were of German background and had been infected in Germany. The increase affected all age groups, the most highly represented group was the 30 to 39-year-olds. The highest number of diagnoses were made in Munich, however an increase was also recorded in locations with fewer than 100,000 inhabitants.

Hepatitis B reporting data

The case definition was changed from 2015 onwards, whereby it is now not only cases where both the clinical picture and the laboratory diagnosis are submitted that are deemed to fulfil the definition, but also infections proven through laboratory diagnostics for which the clinical picture is not fulfilled or is unknown. The criteria for a laboratory diagnosed detection are now only still met by the direct detection of the hepatitis B virus; the old laboratory diagnosed criterion no longer applies. The changes will be more precisely described in section 4.2.2. The 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 severity of the symptoms. Upon introduction of the new case definition, the number of published hepatitis B infections increased.

For 2016, 629 cases (18%) according to the old case definition and 2,837 cases (82%) according to the new case definition were recorded and reported. The proportion of cases confirmed by clinical laboratory diagnosis among all reported cases remained broadly

unchanged from the previous year at 20%; for the rest of the cases, the clinical picture was unknown or not completely fulfilled, the infection was however proven through laboratory diagnosis.

The total of 3,466 transmitted hepatitis B infections represents a decrease of 407 cases from the previous year. Of the reported cases, 3,006 (87%) corresponded to the reference definition. The subsequent evaluations are based only on cases which fulfil the reference definition. The incidence of hepatitis B in Germany was 3.7 infections per 100,000 population (2015: 2.4). The number of cases remained largely constant over the year. The incidence for hepatitis B among boys and men, at 4.9 infections per 100,000 population, was twice as high as among girls and women (2.4). Among women, the age group of 25 to 29-year-olds was the most affected (6.4). In contrast, the highest level among men was in the age group of 15 to 19-year-olds (13.5).

In just 119 (4.0%) of the reported cases was there sufficient information on the probable mode of transmission for the evaluation. In the evaluation, where several modes of transmission were given, these were reduced to the most probable. Sexual transmission was recorded most frequently (42 cases, 35%), of which 16 were cases of homosexual contact among men. Shared accommodation with a hepatitis B carrier was the second highest mode of transmission at 31 cases (26%), followed by injecting drug use (25 cases, 21%).

Between 2001 and 2009, a decline in reported hepatitis B infections was observed, which can presumably be attributed primarily to improved immunisation protection following the introduction of general vaccination recommendations for nursing infants in 1995. This trend stagnated, with minor fluctuations, between 2009 and 2014. 2015 saw a sharp increase in the number of cases recorded. This increase can be explained in part by the expansion of the reference definition to cases with no, with unclear and with unknown symptoms, however other influencing factors should also be considered. The increase in cases for which laboratory diagnosed proof exists but for which the clinical picture is unknown, could indicate increased testing. Specifically in *Laender* with especially high incidence rates or sharp increases such as Saxony and Bavaria, increased testing of asylum seekers who migrate from regions with a high prevalence of hepatitis B should be taken into account. The frequency peak among 15 to 19-year-old male adolescents could be a further indication that a part of the increase in hepatitis B cases can be attributed to the increased testing of asylum seekers. 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, or to an actual increase. This would require further analysis. A further factor is possible double reporting as the absence of a fixed residence for asylum seekers could make the attribution of test results more difficult. No assessment can be made as to whether cases are only acute cases, as the laboratory diagnostics do not always allow such a differentiation to be made. Thus, the situation might be that the recording of chronic cases increases the figures obtained, also in view of the limited research possibilities. As time passes over the next few years, the ability to interpret the reported data will increase, as 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 peak of incidence in both cases in the young adult age group, whereby the age distribution among men has shifted, as in the previous year, towards even younger adults and adolescents. In contrast, the age distribution among women remained similar. The peak of incidence and specified exposures indicate that, as in the previous year, sexual transmission represented the most significant mode of transmission.

Information on country of birth is only recorded in cases of asylum seekers and could only be reported from the end of 2015. This group presumably represents a considerable proportion of the people affected in Germany, hence 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 (RKI 2017).

Hepatitis C reporting data

As it is barely possible, either in laboratory diagnostics or clinically, to distinguish between acute and chronic HCV infections and the majority of new infections of hepatitis C (approx. 75%) are asymptomatic, all newly diagnosed infections are recorded. Thus, the overall number of cases contains a considerable percentage of already chronic hepatitis C cases (in the sense of a viral replication of more than 6 months).

The case definition was altered in 2015, and since then only cases with a direct pathogen detection fulfil the criteria for a laboratory diagnostic confirmation, therefore only active hepatitis C infections are factored in. The implementation of the new case definition among public health authorities is still ongoing; in 2016, 21% of all cases were still recorded according to the old case definition (in 2015 it was 70%). A decrease in the number of recorded cases due to this change was expected. For more information on the methodology see section 4.2.2.

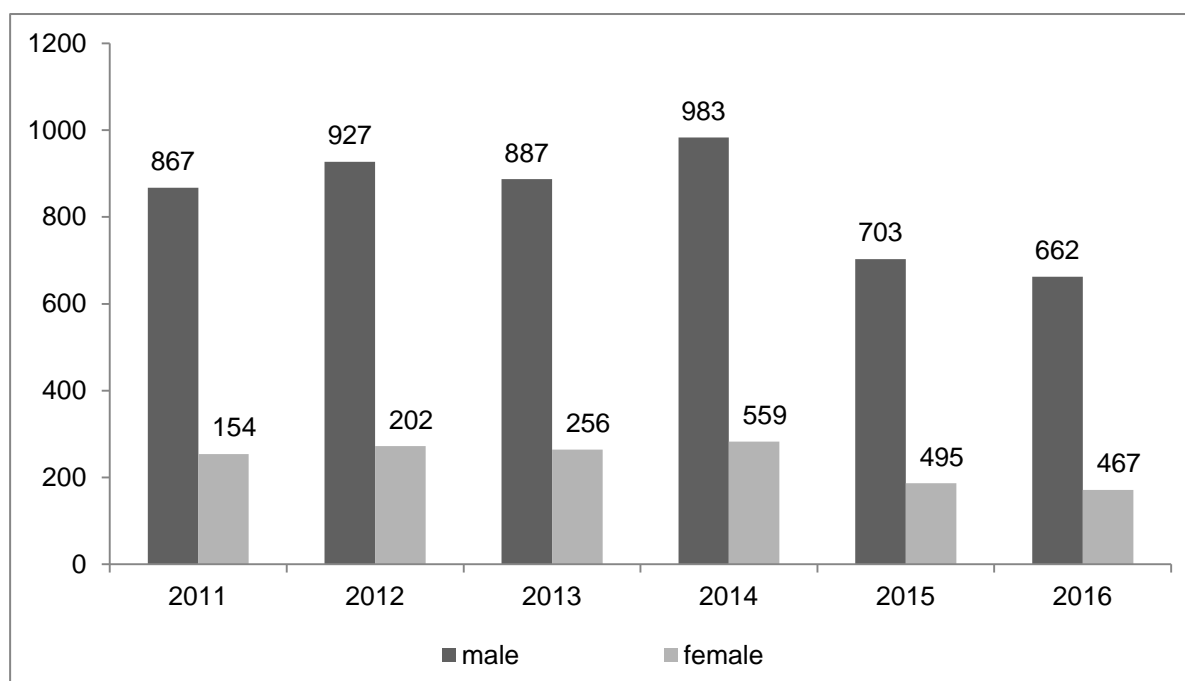
For 2016, a total of 4,368 cases of newly diagnosed hepatitis C were reported. This represented a national incidence of 5.3 new diagnoses per 100,000 population. As such, the incidence was 15% lower than in 2015 (6.0).

Since 2005, there has been a downward trend in the incidence level and in the absolute numbers of newly diagnosed hepatitis C cases, a trend which then slowed after 2009. From 2011 onwards, the incidence has remained relatively stable with slight fluctuations. After an increase in newly diagnosed cases in 2014, the incidence dropped again in 2015 to the level of the five previous years and has now dropped once again. The further decrease in this reporting year is at least in part due to the wider application of the new case definition.

The incidence of newly diagnosed cases of hepatitis C in the male population (7.2/100,000 population) is more than twice as high as that in the female population (3.4). As in previous years, the peak incidence was among men in the age group of 30 to 39-year-olds (18.2). The

incidence was the highest in this age group for women also, however at 5.9 it amounted to only one third of the incidence rate for men in this age group.

Evaluable indications as to the probable mode of transmission were made in 1,047 (24%) of the newly diagnosed cases. Where several modes of transmission were mentioned, these were reduced to the most probable. Injecting drug use, which has a high probability of being causally related to any hepatitis C discovered, was reported for 834 cases (80% of the cases with information as to the mode of transmission) (2015: 76%, n=892). This mode of transmission accounted for 84% of the entries for men (n=662) and 66% of those for women (n=171). The more detailed specification of "injecting drug use in prison" was recorded for 51 of the males (6.5%) and 7 of the females (2.7%) for whom "injecting drug use" was recorded. As the evaluation procedure for the mode of transmission was changed in 2011, information on the mode of transmission should only be compared from this date forward. Injecting drug use was given as the most probable mode of transmission for 70% of the evaluable newly diagnosed cases in 2011; since 2012 the value has remained around 80%, with some fluctuation. The numbers of cases are illustrated in Figure10; they fluctuate according to the development of the total volume of HCV reporting data.



As the reporting process was altered in 2011, information on the mode of transmission should only be compared from this date forward.

Figure10 Number of reported cases of newly diagnosed HCV with indication of injecting drug use by gender, Germany, 2011 to 2016

The second most common risk is the receipt of blood products prior to the introduction of diagnostic testing of blood and blood products in 1991 (n=90; 8.6% of all cases with reliable information as to the mode of transmission). In 63 of the cases among men, the transmission through sexual contact with men was recorded as the probable mode of transmission, of which 20 cases were with a known HCV-positive partner and 43 cases with a partner of

unknown infection status. Heterosexual contact with an HCV-positive partner was recorded in 40 cases (3.8%).

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. Among injecting drug users, the number newly diagnosed cases reported has actually fallen in comparison to the two previous years. One reason for this could be that according to the old case definition infections that had already been cured were often recorded as well whereas they do not meet the new case definition. It is also possible that drug users were indeed regularly screened for HCV antibodies, however potentially a secondary diagnosis was not carried out in addition. Injecting drug users however continue to represent, by some margin, the largest group of newly diagnosed hepatitis C cases. For this reason, the highest priority should continue to be afforded to prevention of hepatitis C amongst drug users, as well as to case detection, diagnosis and treatment.

Information on the probable mode of transmission was only available in just under a quarter of reported cases. This information usually came from attending doctors or the affected parties themselves. One can assume that socially stigmatised behaviour, such as injecting drug use and sexual contact between men, is under-recorded. The incidence of reported newly diagnosed cases through sexual contact between men has fallen slightly compared to the previous year. Information on co-infections is not collected in routine reporting, however one can assume that there is a sexual transmission of hepatitis C in particular where there is an underlying HIV infection.

Information on the probable country of infection can serve as an approximation for the estimate of new hepatitis C diagnoses among persons from countries with a higher hepatitis C prevalence, however there is a considerable limitation in the ability to interpret reported hepatitis C cases, in that for hepatitis C no information on the migration status or country of origin can be reported, except in the case of asylum seekers.**** The proportion of newly diagnosed hepatitis C cases among persons from regions with a high prevalence is, however, unknown. One can assume that this group accounts for a larger proportion of those infected with hepatitis C in Germany and that there is a need for improvement in case detection, prevention and treatment (RKI 2017).

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

No information is currently available on this.

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

The DRUCK study, which examined 2,077 injecting drug users in eight major cities in Germany between 2011 and 2014, has produced data on prevalence rates of HIV, HBV and HCV. The findings of the study are detailed in the Harms and Harm Reduction workbook in the REITOX Reports of 2015 and 2016 (Dammer et al. 2016; Pfeiffer-Gerschel et al. 2015) and only referred to here as comparative values.

HIV: Data outside the routine monitoring

In the Hamburg Basic Documentation on outpatient addiction support (Basisdokumentation der ambulanten Suchthilfe, BADO), data is available on the prevalence of HIV among clients from 59 addiction support facilities. In 2015, data for 15,558 clients was documented. Of those, 1,514 were relatives of drug users. 33% of respondents reported a major opioid problem (n=4,456), the largest proportion, however, had polytoxic drug use patterns. The comorbidities are set out in more detail in section 1.4.1.

The HIV infection rate among all drug users in 2015 was, at 2.4%, around the same level as the previous year (2013: 2.5%). Among opioid users it was, at 4.3%, as in the last few years, higher, but stable over time (2014: 4.6%). Differentiated by gender, no notable difference is apparent this year between women (4.5%) and men (4.1%); in recent years there has always been a slightly higher infection rate among women (2014: 5.5%). 7.1% of all clients and 4.1% of opioid dependent clients stated that they had not as yet had an HIV test. The test rates among male opioid users is markedly higher than among female users (non-tested men: 2.4%, non-tested women: 8.5%) (Martens & Neumann-Runde 2015).

Data is now also available from the Consumption Room Documentation, which covers four consumption rooms in Frankfurt (Stöver & Förster 2016) on the HIV status of the 4,503 clients³ treated in 2015. 1,932 persons (43% of all clients) answered the question of whether they had already had an HIV test. Of these, 92.7% had already been tested. Women and men had themselves tested approximately equally often. For 1,165 persons there was a note of when their last HIV test was. 41.2% of those persons stated that their test was in 2015 and therefore up to date. A further 43.4% were in 2014. The remaining tests were even further in the past. 39% of all consumption room users (1,739 persons) provided their test results. 3.6% stated they were HIV positive, whereby women, at 7.6%, were, as in previous years, affected markedly more often than men, at 2.8%. In the longer term, no clear trend can be ascertained for HIV infections. It has fluctuated since 2009 between 4.4% and 2.9%. Furthermore, inaccuracies in the survey system must be assumed (not all clients are surveyed; for some, the testing was further in the past), hence any interpretation should only be made with great caution. For years, HIV infections have been rarer among new users of consumption rooms than among continuing users (2015: 2.3% of new users, 4.2% of

³The number of clients is calculated from the individually assigned "HIV codes". It is possible that some people possess multiple codes, hence the number of clients actually being treated could be somewhat lower.

continuing users); in particular female continuing users have a higher than average HIV infection rate (2015: 9.2%).

The DSHS also records data on the HIV-infection status of patients in outpatient treatment (Braun et al. 2017). In 2016, the HIV status of 39% (n=8,101) of opioid clients is known; of these 4.7% are HIV positive. Women are more affected than men (6.5% v. 4.1%). Among all clients with some type of illicit drug problem and whose HIV test results are known (n=14,283), 3.9% have an HIV infection. This value drops to 2.9% if opioid users are removed from the calculation.

If one summarises the findings from Hamburg, Frankfurt am Main and from the DSHS, the resulting average HIV prevalence rate among opioid users is approximately 2.5% to 7.5%. The value among new users of consumption rooms is somewhat lower. Women are more affected than men. The values must be interpreted with caution due to the high number of untested clients. However, the values do correspond quite closely to the values collected in the DRUCK study (RKI 2016), which established an HIV prevalence between 0% and 9% (depending on study city) and also revealed that women were more frequently infected than men (7% v. 4%).

Hepatitis B and C: Data outside the routine monitoring

According to the BADO, in 2015, 21.1% of all clients and 48.7% of opioid users in Hamburg were infected with hepatitis C. In recent years, the rate of infected opioid users has proven stable at a very high level. 7.1% of all clients and 4.0% of opioid users had never had themselves tested for hepatitis C, whereby the proportion of men who had been tested was, as with HIV, markedly better than that of women (non-tested men: 2.4%, non-tested women: 8.1%) (Martens & Neumann-Runde 2015). Data on hepatitis B is not collected in the BADO.

In the Frankfurt Consumption Room Documentation 2015, 43% (n=1,944) of consumption room users provided information as to whether they had already had an HBV and/or HCV test; of these 95% had had a test. Test results are available for 1,761 persons (39% of all consumption room users); of those, 40.1% tested positive for hepatitis C, 1.1% for hepatitis B and a further 1.1% 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 HCV than younger users. Also, continuing users showed a higher infection rate than new users (43.0% v. 33.8%). The authors note that the infection rate exhibits a decreasing trend: in 2004 66% of clients were affected with one or both hepatitis infections. However they also refer here to recording-related inaccuracies, as not all consumption room users are surveyed by some distance (Stöver & Förster 2016).

In the DSHS, data is collected on the HBV and HCV infection status of addiction patients in outpatient treatment (Braun et al. 2017). These numbers must be interpreted with caution in light of a high estimated number of unreported cases. Test results for hepatitis B are available for 34.5% (n=6,257) of opioid clients; the prevalence rate of HBV for that group was 5.6% (n=349). Among all patients with illicit drug problems, there are 11,048 test results

available, of these 3.9% were positive. Excluding opioid clients, the prevalence rate is significantly lower at 1.7%. Test results for HCV are available for 42.3% of opioid clients (n=8,824). 44.5% of these test results are positive; 5.4% of those tested reported an acute infection (n=474), and 39.1% a chronic infection (n=3,454). Among all tested clients with some illicit drug problem (n=15,188), the chronic hepatitis C prevalence rate is 25.3% and for acute hepatitis C is 3.5%. Looking at the figures excluding opioid clients, the prevalence rates are considerably lower, at 0.8% for acute hepatitis C and 6.2% for chronic hepatitis C.

An overall look at the data from Frankfurt and the DSHS shows a very low prevalence estimate for hepatitis B of between 1% and 6%. However, this is of very limited meaningfulness due to the extremely high number of unknown cases and the low number of cases. If one compares it to the data collected in the DRUCK study, a considerable underestimation seems to be present: a prevalence rate of around 25% was recorded here (between 5% and 33% depending on the study city) (RKI 2016).

If one combines the data from Hamburg, Frankfurt, and the DSHS, the resulting estimate of the prevalence of chronic hepatitis C among opioid clients is between a third and a half of all clients. Data on acute hepatitis C is only recorded in the DSHS; the rate here was 5.4%. 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. 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. This is further complicated by the different options for testing for an HCV infection, the differences between which are likely rarely known to the clients. In fact, the methodologically significantly sounder DRUCK study records, overall, a somewhat higher prevalence among injecting drug users: an average HCV prevalence of 66% (42% to 75% depending on study city) and a prevalence of potentially infectious hepatitis C of 44% (23% to 54% depending on study city) (RKI 2016).

More reliable numbers could also be obtained through routine reporting, by direct testing of clients in the normal facilities they attend. In the day to day running of low-threshold facilities, there is no funding for this however, therefore such services are not available.

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 2016. Injecting drug use, by far the most high risk type of use, is still reported mainly for heroin (58.1%) followed by cocaine (14.4%). For other opioids, other stimulants, crack and buprenorphine, values of between 4% and 7% were recorded. 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 2016 in the DSHS

Substance	Route of administration ¹⁾					Total All clients entering treatment
	Injection	Smoking	Oral	Inhalation	Other	
Heroin	58.1%	30.5%	1.0%	10.0%	0.4%	12,612
Methadone	2.1%	0.8%	96.6%	0.2%	0.4%	7,778
Buprenorphine	4.0%	1.0%	88.6%	5.6%	0.8%	2,767
Other Opioids	6.8%	5.2%	82.5%	2.5%	3.0%	2,807
Cocaine	14.4%	17.9%	1.3%	66.2%	0.2%	11,137
Crack	5.2%	88.6%	2.4%	3.6%	0.2%	806
Amphetamine	1.4%	10.7%	26.2%	60.7%	1.0%	14,030
MDMA and similar	0.6%	2.6%	88.9%	6.4%	1.5%	5,318
Other stimulants	5.8%	15.3%	13.9%	63.7%	1.3%	4,595
LSD	0.3%	1.9%	93.4%	1.1%	3.3%	2,631

¹⁾ Multiple entries possible.

(Braun et al. 2016)

In the BADO in 2015, 63.0% of opioid users reported having injected drugs in the past and 31.9% reported having shared a syringe with someone. 5.2% reported having shared syringes within the last 30 days (Martens & Neumann-Runde 2015).

Detailed behavioural data is available from the DRUCK study on risk behaviour and knowledge of risks and protection possibilities for injecting drug users, which was presented in detail in the Harms and Harm Reduction workbook in both 2015 and 2016.

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

There is currently no information available on other drug-related infectious diseases.

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)

In addition to the suffering caused 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 estimate of comorbidity can be made on the basis of the few remaining data points.

Comorbid somatic and mental disorders amongst drug users in Hamburg

In the BADO 2015, information on both the physical and mental health of clients treated is available (Martens & Neumann-Runde 2015) which cannot claim to be representative, however it does offer an insight into this specific, heavily impacted clientele.

The 4,456 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 where the additional problems were focussed. The substances most commonly used in addition to opiates were, as in the previous year, cocaine (67%), cannabis (63%), alcohol (59%), crack (44%) and sedatives (43%). The percentages for males treated were mostly somewhat higher than those for females, in particular for cannabis (66% v. 55%) and cocaine (68% v. 63%). In contrast, for eating disorders proportionately more women were affected (14% v. 3%).

25% of the people in the group of opiate users were assessed by those treating them as suffering from considerable or extreme physical health effects. A further 31% were classified as suffering from a medium health impairment and in the case of 10% a recognised disability status was documented. Data on the HIV and hepatitis status can be found under section 1.3.3.

In addition, 38% of clients were classified as considerably or extremely mentally burdened, whereby women (49%) were affected far more often than men (34%). 31% of clients reported at least one suicide attempt in the past (women 41%, men 28%), with 15% reporting more than one (women 21%, men 12%). The most commonly reported symptoms were depressive mood (21% of clients), restlessness (20%) and anxiety/phobias (16%). Excessive self-confidence (11%), lack of impulse/emotional control (9%) 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 34%), whereby 22% take anti-depressants, 12% sedatives and 7% neuroleptics. It was documented that 13% of the opioid group availed themselves never or only rarely sought necessary medical care and 30% only occasionally.

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

Effects of cannabis use

In light of the still high prevalence rates of recreational cannabis use (see Drugs workbook), the high proportion of cannabis related disorders in drug treatment (see Treatment workbook) as well as the "Cannabis as Medicine" Act which came into force a year ago (see Legal Framework workbook), the effects of cannabis use continues to be discussed in the German media, politics and among experts. The large addiction medicine professional organisations have to this end published statements (a list of which can be found in the Drug Policy workbook from last year (Pfeiffer-Gerschel et al. 2016)); one focus of the debate is on the risks for children and adolescents.

In Germany, there is currently new training on the topic of "cannabis induced disorders" for doctors (Soyka et al. 2017), which summarises the knowledge on problems resulting from cannabis. According to the authors, the main harms of cannabis use impact the psyche, whereas the somatic problems resulting from long term use are limited; chronic cannabis use leads to specific, but overall relatively few health impairments, with the exception of cardiovascular symptoms and bronchitis. Two important effects are a weakening of the immune system and spermiogenesis. The assessment of any physical effects is made more difficult due to the fact that in many cases tobacco is consumed simultaneously. Psychologically, the authors report a slight loss of cognitive ability; there are indications that in the case of use in adolescence, the loss is irreversible. As far as other mental disorders are concerned, the authors refer to a relationship with bipolar disorders and, less clearly, with unipolar depression. The risk of suicidal thoughts or behaviours can also be connected to cannabis use, however it must be assumed that a complex interrelationship exists that certainly cannot be explained by cannabis use alone. There is also an increased occurrence of anxiety disorders in connection with cannabis use. The question of causality or of mutual influence between psychological symptoms and cannabis use has, however, not been sufficiently clarified; many of those affected also self-medicate with cannabis in order to relieve unpleasant physical or psychological symptoms. The authors conclude that further research is therefore necessary.

The BMG has currently commissioned an expert report on cannabis entitled "Cannabis: Potential and Risks (CaPRis)", the findings of which are expected soon (Klinik und Poliklinik für Psychiatrie und Psychotherapie, Forschungsgruppe Cannabis 2016, personal communication).

Sexual dysfunction among substituting patients

66 male opioid dependent patients in substitution treatment were asked about their sexual dysfunction. 30 (45.5%) were taking methadone, 36 (54.5%) levomethadone. In respect of the self-assessment of sexual dysfunction, patients who reported dysfunction (N=40, 71.4%) had a significantly higher dose, regardless of the substitution drug. Erectile dysfunction occurred significantly more often with methadone. The authors conclude that levomethadone could be preferable to methadone. Where sexual dysfunction arises, it may be helpful to switch substances or reduce the dosage level (Gutwinski et al. 2016).

1.5 Harm reduction services (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 deaths caused by drug use:

- 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).

More detailed information on the National Strategy can be found in the Drug Policy workbook. The information is also available online⁴.

Since the decision of the German Federal Cabinet of 6 April 2016, the BIS 2030 strategy of the Federal Government has also been active which intends to substantially reduce HIV HBV, HCV and other sexually transmitted infections by 2030 (BMG & Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung 2016). Injecting drug users are explicitly named as one of the specific target groups of this strategy, for whom needs-orientated services will be created or expanded and integrated services will 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 online⁵.

Recommendations for the further development of harm reduction in Germany on the basis of the DRUCK study also indicate ways in which infectious diseases and other drug-related damage to health can be combated. As far as concerns of low-threshold drug support are concerned, the important factors are improvement of testing and vaccination services as well as counselling services in relation to testing and gaps in knowledge regarding safer use, and a comprehensive broadening of the needs-based dispensing of consumption apparatus. Testing, vaccination and treatment of hepatitis and HIV as well as cooperation with HIV/hepatitis specialist facilities and low-threshold drug support should also be strengthened

⁴ http://www.drogenbeauftragte.de/fileadmin/dateien-dba/Drogenbeauftragte/2_Themen/1_Drogenpolitik/Nationale_Strategie_Druckfassung-Dt.pdf [accessed: 3 Aug. 2017].

⁵ http://www.bundesgesundheitsministerium.de/fileadmin/Dateien/Publikationen/Praevention/Broschueren/Strategie_BIS_2030_HIV_HEP_STI.pdf [accessed: 3 Aug. 2017].

in both substitution and addiction support facilities. All doctors who come into contact with addiction disorders and addiction doctors especially should be aware that they represent the most important source of information on health correlates for drug users. Accordingly, they should know the most important gaps in drug users' knowledge and be in a position to inform and advise on hepatitis and HIV. The vaccination recommendation of the Standing Committee on Immunisation (Ständige Impfkommision, STIKO) should be better implemented; the determination of indications and provision of treatment for HCV and HIV should be carried out according to the guidelines. For correctional institutions, the offer of HBV vaccination including counselling is recommended, as well as the opportunity for confidential and voluntary HCV and HIV testing. Detainees with HIV and/or HCV must be treated. Evidence-based measures for the prevention of infectious diseases or other measures for harm reduction should be significantly expanded; this includes access to consumption apparatus and condoms as well as to opioid substitution therapy and better transition management for the release from prison. In addition, all those involved are advised specifically to talk to women about prevention measures, as well as to people who have just recently started injecting drugs. The structures at a local level should integrate and collaborate more, in order to provide improved care. The detailed recommendations can be found in the final report of the DRUCK study (RKI 2016).

Recommendations have also been made, on the basis of an evaluation of the Berlin drug consumption rooms from 2012 to 2014, on the improvement of drug consumption room services. As well as opening the rooms to persons receiving substitution treatment (as has recently taken place in NRW, see section 2.3.3), these recommendations also include other aspects of availability: longer opening times, the expansion of the services to other locations and the opportunity to use the rooms anonymously. A further recommendation was to strengthen the personell and financial resources and to intensify the cooperation between care workers and social workers. A drug consumption room by women for women is also encouraged, as well as the introduction of "Druck-Checking" and the promotion of inhaled instead of injecting use (Stöver et al. 2015).

1.5.2 Organisation and funding 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. 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. The costs are generally borne by the public health insurance providers, however this information is not collected or published separately.

Information on the extent and type of specific services for drug users is only available for some of the measures, as these are provided by specialised facilities or as part of special programmes. There is no uniform financing. The costs of most facilities are borne by the municipalities, however there is also some financing from the Federal Government and the *Laender*.

The availability of harm reducing measures varies widely in Germany. Overall, it is better in cities and heavily populated regions than in rural areas. Provision in prisons is particularly poor (see the Prison workbook). Due to Germany's federal structure, the legal situation regarding harm reducing measures is not exactly the same in all *Laender*, which has an impact in particular on the provision of drug consumption rooms, which are currently only available in six *Laender*.

1.5.3 Harm reduction services (T1.5.3)

Emergency training and naloxone take-home programme

In Germany, there were 1,333 drug-related deaths in the reporting year 2016. Of these, approx. 60% were due to monodrug or polydrug opioid overdoses (BKA 2017, data delivery). This proportion is somewhat smaller than in previous years, however it is still clear that opioid poisoning continues to represent the most frequent cause of death. The opiate antagonist naloxone, which has been successfully employed in emergency medicine in the case of opioid overdoses for over 40 years, 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 opioids are being used. This means opioid users themselves but also friends and family (die Drogenbeauftragte der Bundesregierung 2014; European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) 2015; World Health Organization (WHO) 2014).

Despite these recommendations, the dispensing of naloxone to laypeople is only sporadically available in Germany. It is made more difficult by a lack of financing and it is not integrated into regular healthcare. Regardless of the difficult framework conditions, a few projects offering naloxone training for lay people do exist. Already existing projects will be further developed and in recent years several new projects have been implemented. Moreover, NGOs are making efforts to clarify and improve the legal situation for naloxone programmes in order to break down barriers to adequate treatment and enable nationwide availability in the future. Currently, there are naloxone projects in Berlin, in several cities in NRW and in Munich. A pilot project on the dispensing of naloxone prior to release from prison could not be started as planned because the Berlin *Land* health office had not yet implemented the necessary preliminary checking (Deutsche Aidshilfe e.V. 2017, personal communication).

There are currently two manuals available online on the implementation of drug emergency training and naloxone dispensing to lay people. All naloxone programmes in Germany consist of drug emergency training, in which, for example, first aid techniques are provided,

along with information on the risks and signs of an overdose as well as on naloxone. In addition, specific exercises are carried out on the administration of the medicine. After the training, emergency kits which contain, in addition to the medicinal drugs, the administration utensils and often single-use gloves and resuscitation face shields are handed out to the participants if they wish to receive them. More detailed information on the projects was presented in the Harms and Harm Reduction workbook in the REITOX Report 2016 (Dammer et al. 2016). The new developments are explained in this workbook in section 2.3.2.⁶

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 also applies in respect of the immediate intervention in the case of overdoses. In addition, cessation orientated support can be offered to people with drug dependence who could not be reached otherwise. On the basis of Sec. 10a of the BtMG, which defines minimum statutory 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 22 drug consumption rooms in six German *Laender* (Berlin, Hamburg, Hesse, Lower Saxony, North Rhine-Westphalia and Saarland) across 15 cities as well as two mobile drug consumption stations in Berlin⁷.

A survey carried out by *mudra e.V.* was responded to by 13 of the 23 drug consumption rooms contacted, in five *Laender*. No data is available for Lower Saxony. These 13 drug consumption rooms were all situated relatively centrally in their respective city and were (to differing degrees) integrated within the wider drug support system. All had a connection to at least one drop in centre. In many cases, other types of support were also available, such as a drug counselling centre (provided by 6 consumption rooms), assisted living (5), outpatient substitution (4), an emergency shelter (3), outpatient drug therapy (3) as well as outreach work (1) and daybeds (1). The size of consumption rooms varies between five and 18 places; opening times vary between four and 15 hours daily. The access requirement for all consumption rooms is that no first time or occasional use occurs. In 11 rooms, it is a requirement that users are at least 18 years old. Anonymous use is possible in four consumption rooms; in contrast, personal data must be provided in nine consumption rooms.

Heroin, cocaine, speed and mixtures of these are used in all consumption rooms. In some consumption rooms, crack, benzodiazepine, crystal meth and substitute drugs are also

⁶ <http://www.akzept.org/uploads2013/NaloxonBroschuere1605.pdf> and <http://www.akzept.org/uploads1516/NaloxonJESnrw17.pdf> [accessed: 3 Aug. 2017].

⁷ See also www.drogenkonsumraum.net [accessed: 1 Aug. 2017].

consumed. The survey documented a total of 409,722 incidences of use up to the end of 2015. These uses led to a total of 582 overdoses, which corresponds to a proportion of 0.14%. The emergency rate did not exceed 0.5% in any of the consumption rooms. There was one death recorded between the opening of the drug consumption rooms and the end of 2015. 85% of users are male, the majority is over 36 years old and none is younger than 18.

Medical, psychosocial and social pedagogical counselling on safer use and infections risks were the most common counselling services offered, however personal problems and dealing with authorities also featured. Most commonly, users are referred to or encouraged to attend drop-in centres, counselling centres and detoxification units.

The most commonly mentioned positive impact of drug consumption rooms are the prevention of an open drug scene and use in public, including the accompanying hazards and dangers for the general public. Emergency assistance and the consequent drop in mortality as well as the preventive healthcare aspects of safer use were also mentioned. The cooperation with and support through the regulatory authorities was also positively rated. Negative aspects mentioned were neighbours being unsettled by people who were denied entry to the drug consumption room or conflicts with immediate neighbours e.g. regarding noise, barking dogs and the formation of scenes in some areas (mudra e.V. 2017).

More precise data on the utilisation and clientele of consumption rooms is also available for individual facilities which publish their annual reports on the internet. Data from Frankfurt am Main and NRW is reported below:

Frankfurt am Main

In the four Frankfurt consumption rooms, a total of 181,522 incidences of use were documented in 2015, of which however, due to work on the building, approx. 4,000 were not documented. In 2015, the number of consumption room users was 4,503, of which 928 were new users, which equates to an average of 40 incidences of use per user per year. Within those numbers, there were 471 persons who used the consumption rooms several times a week and thus accumulated over 100 uses of the room over the course of the year; 7 users accumulated over 1,000 uses.

The information below is based only on the completely documented uses, of which there were 177,522. In many incidences of use, more than one substance was consumed. 91.7% of documented use were injecting drug use. As in previous years, the use of heroin and crack predominated among injecting users. In 2014 the combination of heroin and crack was, for the first time, the most frequently injected (40.3%), this mixed use was somewhat less frequently documented in 2015 (37.2%) with the sole use of heroin in 2015 being, as in almost all previous years the most commonly recorded, at 18.6%. In third place, with 21.3% (2014: 21.3%; 2013: 22.5%) is the sole use of crack, which has decreased somewhat in recent years. At 0.5%, cocaine without other drugs was injected at the same level as the

previous year. There are hardly any cases of injecting use of benzodiazepines documented any more. It was stated for 11% of uses in 2011, however since 2011 benzodiazepine flunitrazepam (rohypnol) has fallen under the German Narcotic Drugs Act without exception, and this number has fallen rapidly (2015: 0.0%, 2014: 0.1%, 2013: 0.2%, 2012: 2%; 2011: 14%). All other psychotropic substances are mentioned only rarely (1.3%). 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 7.9% (2014: 5.8%, 2013: 4.9%, 2012: 5.1%, 2011 und 2010 approx. 3%). This increase is dependent, however, on the methodology of the survey: it is only since 2015 that a smoking room ("Elbestraße") has been included in the total data, where previously it had been reported separately. If this data is excluded, as was the case in previous years, the proportion of non-injecting use for 2015 is only 4.4% and thus lower than 2014 (Stöver & Förster 2016).

North Rhine-Westphalia

In NRW in 2015, there were drug consumption rooms in ten cities with a total of 96 places (between three and 18, depending on city). 39 of these places are specifically for inhalation; one drug consumption room offers no places for inhalation. There were a total of 184,959 instances of uses recorded. Opioid use accounted for 83% of these, cocaine 12% and 5% for a mix of both substances. Amphetamine use was documented in 0.1% of instances. Injecting and inhaling use were documented at around the same levels (49.1% v. 48.6%). Nasal use was documented for only 2.3% of uses; oral use, at 0.01%, is of almost no significance.

There were 597 drug-related emergencies, within which first aid was administered in 326 cases. In eight cases, drug-induced death was prevented through immediate artificial resuscitation; emergency treatment was required in 146 cases. Moreover, further support services are offered in the drug consumption rooms. Medical aid was provided in 15,156 cases and 11,686 cases received psychosocial counselling. The person concerned was passed on to secondary support in 10,099 cases, most commonly into social support (3,940 cases), counselling (2,369) as well as cases of further medical attention (1,522). Clients were placed in withdrawal treatment in 1,315 cases, and in 953 cases into substitution treatment (Landesstelle Sucht NRW 2016).

Measures for the preparation of release from prison

A pilot project on the issuing of naloxone before release from prison could not be started as planned, because the Berlin *Land* health office had not yet implemented the necessary preliminary checking (Deutsche Aidshilfe e.V. 2017, personal communication). Further information on the measures for the reintegration of drug users after their release from prison and prevention of overdoses can be found in the Prison workbook.

Dispensing syringes and other safer use equipment

Prevention of drug-related infectious diseases in low-threshold drug support facilities consists primarily of providing information on infectious diseases and risks of infection as well as

issuing safer-use equipment. Provision of syringes and syringe exchange in low-threshold work is explicitly permitted under the BtMG and is also practised by many facilities.

Data on the issuing of syringes is mostly only documented in Germany by individual facilities in their respective annual reports. A nationwide compilation of the data available is not undertaken. The DAH provides a website containing an overview of the locations of syringe vending machines it is aware of. According to the website, syringe vending machines are available in nine *Laender*; seven *Laender* do not even have a single syringe vending machine listed. Of the 171 syringe vending machines listed by the DAH, over 100 are located in North Rhine-Westphalia and 19 in Berlin. From this it is clear that the distribution of locations for the whole of Germany cannot be described as nationwide by any means. Nonetheless, it must be assumed that the documentation of the syringe vending machines in other *Laender* is incomplete, which could contribute to a distortion of data in favour of NRW and Berlin. Therefore one cannot really speak of an exhaustive record of all syringe vending machines in Germany.⁸

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 disposable syringes by the AIDS service, is NRW. For 2016, the NRW AIDS Service (AIDS-Hilfe NRW) reported that 1,782,626 syringes were issued in facilities and 138,765 syringes were issued from vending machines (AIDS Hilfe NRW e.V. 2017).

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 181 German prisons (Statistisches Bundesamt 2017). In light of this, 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 programmes in prison translated and published. It has since been published (DAH 2015) and is available online⁹.

Provision of opportunities for testing for infectious diseases

The actual number of people suffering from hepatitis in Germany remains unknown, due to a deficit in the area of diagnostics, although estimates are available from various data (Wedemeyer 2013). For current incidences see section 1.3. A systematic, Germany-wide screening for hepatitis C does not exist, however the German Liver Foundation and its partners have been calling for one for a long time. Above all, the recommendations for testing should be simplified and the recording of at-risk groups such as migrants, prison inmates and drug users should be improved. Detailed recommendations exist from the DRUCK study for an expansion of testing (see section 1.5.1). The offer of a rapid test in the scope of the DRUCK study was taken up by between 30-80% of participants, depending on

⁸ <http://www.spritzenautomaten.de/> [accessed: 1 Aug. 2017].

⁹ <https://www.aidshilfe.de/shop/pdf/7376> [accessed: 11 Aug. 2017].

study city. The authors conclude that the testing 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). The older 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, also proved to be a success in relation to an increase in the rate of testing for HIV and is being continued, for example in Berlin¹⁰ (DAH 2010). Approximately 10% of the HIV infections detected in Berlin were diagnosed in the scope of the rapid test project (aerzteblatt.de 2013).

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. This is due to, amongst other things, a widespread negative attitude towards drug users among doctors (Gölz 2014).

Several newly authorised medicinal drugs now 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 more treatable than a few years ago. These new developments were reported in detail in the respective workbooks of the last two years. In spite of the particular challenges related to the treatment of clients suffering from dependency (the coordination of different attending doctors, comorbid diseases of a psychiatric or somatic nature, interactions between drugs, substitution drugs and medicinal drugs), there are 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 extremely high price of the new medicinal drugs remains problematic and is vehemently criticised by many treatment providers and the specialist public. In a statement, for example, the German Society for Addiction Medicine (Deutsche Gesellschaft für Suchtmedizin, DGS) expressed its concern that specifically drug users were not being prescribed these expensive medicinal drugs often enough and that in this context the old debate on the question of culpability in addiction diseases could once again be revived (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.

¹⁰ www.testit.fixpunkt-berlin.de [accessed: 26 Aug. 2016].

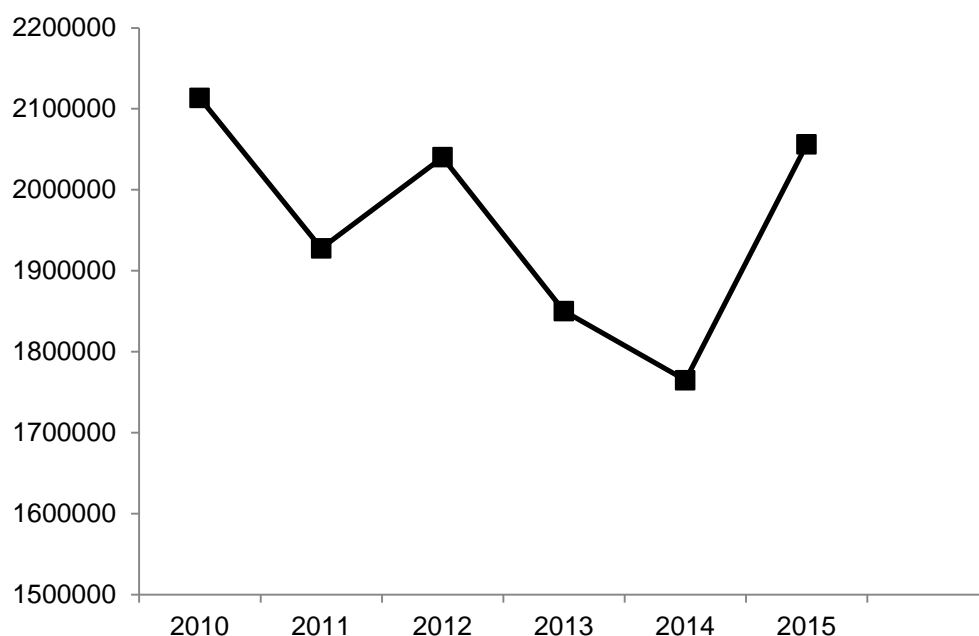
The implementation of both the BIS-2030 strategy and the recommendations from the DRUCK study (see section 1.5.1) could significantly further improve the health status of injecting drug users.

The annual World Hepatitis Day on 28 July aims to raise awareness of viral hepatitis. This year, the motto was "Hepatitis eliminieren" ("eliminate hepatitis"), in line with the WHO "NOhep", which has the aim of eliminating hepatitis B and C worldwide by the year 2030.

1.5.4 Harm reduction services: availability, access and trends (T1.5.4)

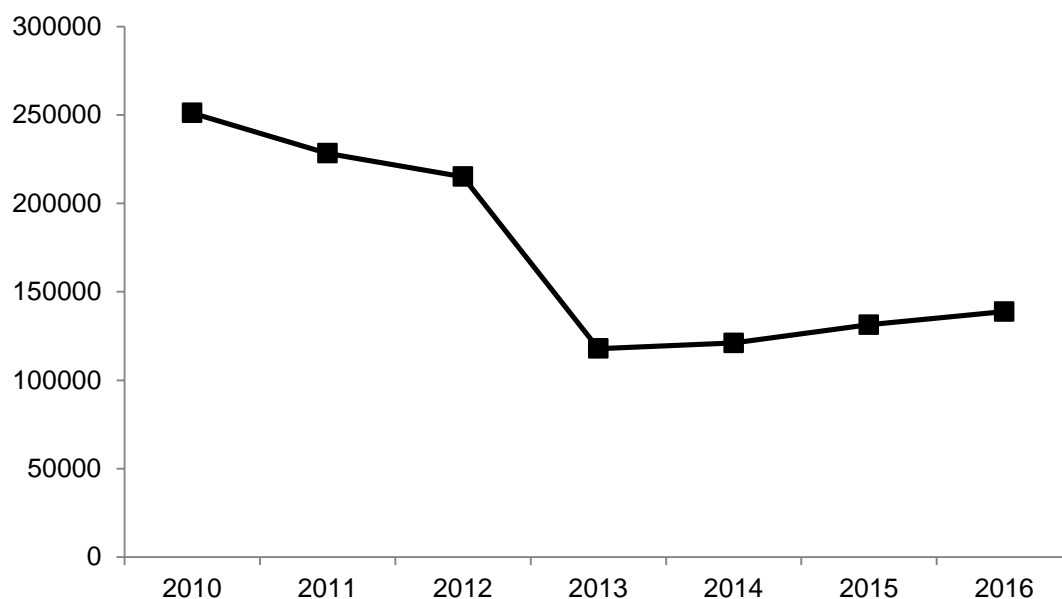
Trends in syringe distribution

Since there is no nationwide data collected on the number of syringes issued, no national trends can be reported in this area. There is only a regular survey in NRW.



(AIDS Hilfe NRW e.V. 2017)

Figure 11 Trend in syringes issued in projects in NRW, 2010 - 2016



(AIDS Hilfe NRW e.V. 2017)

Figure 12 Trend in syringes issued by vending machines in NRW, 2010 to 2016

The trend in recent years shows a distinct kink after 2012, both in syringes issued in the course of projects as well as syringes dispensed from vending machines (see Figure 11 and Figure 12). This cannot be explained by a strong reduction in demand, however, rather by the fact that since November 2012 a dispensed pack has contained only one syringe, one hollow needle, one filter and one alcohol pad rather than two disposable syringes and two hollow needles as had previously been the case. Moreover, more Smoke-it-Sets have been handed out, whilst drug consumption rooms 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 issued in the course of projects there is considerably greater fluctuation.

For Munich, data is available from three drop-in centres run by Condrops e.V. (see Figure 13). From an overall perspective, the number of syringes dispensed has markedly increased in the last five years (2012: 48,370, 2016: 85,200). The number of hollow needles of various lengths which have been dispensed is also significantly higher than five years previously (2012: 58,220, 2016: 101,700). At a lower level, the number of sterile filters dispensed has also seen a marked increase (2012: 12,000, 2016: 22,150); the number of NaCl solutions dispensed has almost tripled (2012: 7,600, 2016: 22,150).

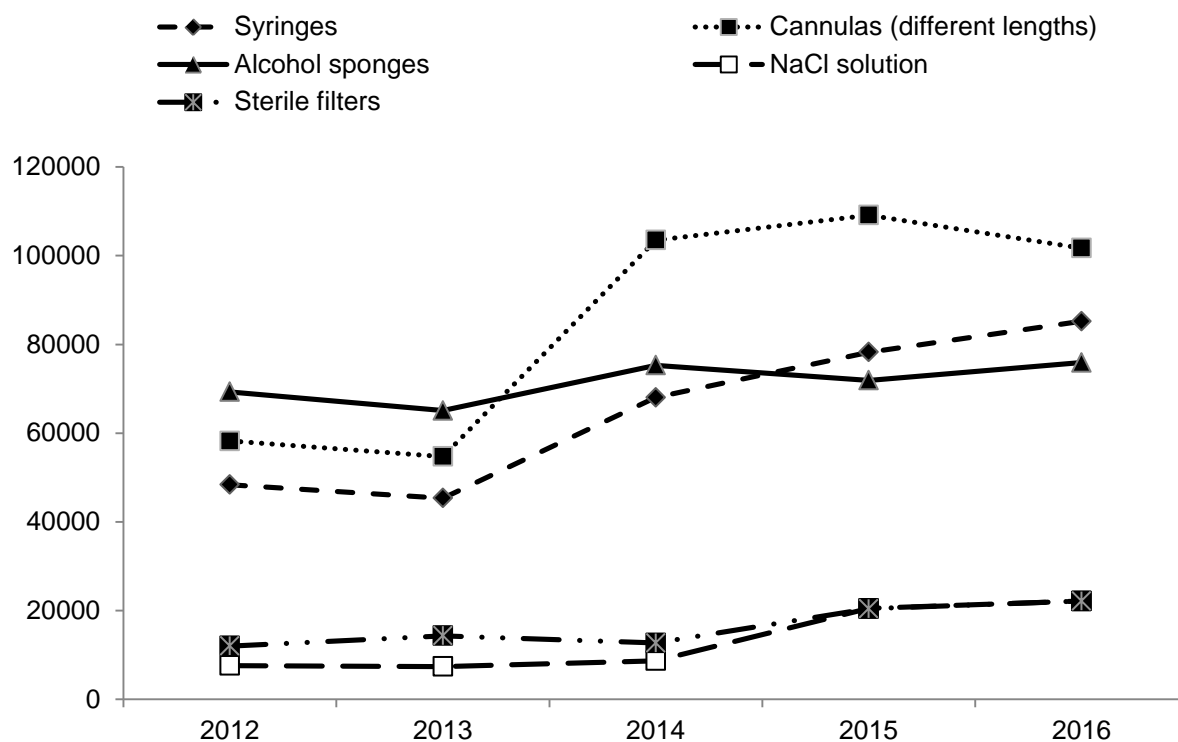


Figure 13 Trend in the issuing of consumption apparatus in Munich, 2012 to 2016

Looking at the syringes dispensed according to size (1ml, 2ml, 5ml and 10ml), it can be seen that the significant increase comes from both of the small syringe sizes (see Figure 14). The responsible organisation, Condrops e.V., explains this massive increase, as well as the increase in the numbers of NaCl solutions and filters dispensed, with the significant rise in the injecting use of NPS, in particular the use of so-called bath salts. The organisation has observed, since around 2013, a change in use behaviour of those injecting "classic" drugs towards more injecting use of NPS. According to clients' reports, the period of effectiveness from injected NPS is very short. There are, for example, reports of users who had between 10 and 30 uses per day, which requires a high number of syringes to be used. The organisation connects the decline in demand for 5ml and 10ml syringes with a lower use of fentanyl patches. According to reports from the scene it has become more difficult to obtain fentanyl patches; several clients report that their doctors have now stopped prescribing fentanyl (Condrops e.V. 2017, personal communication).

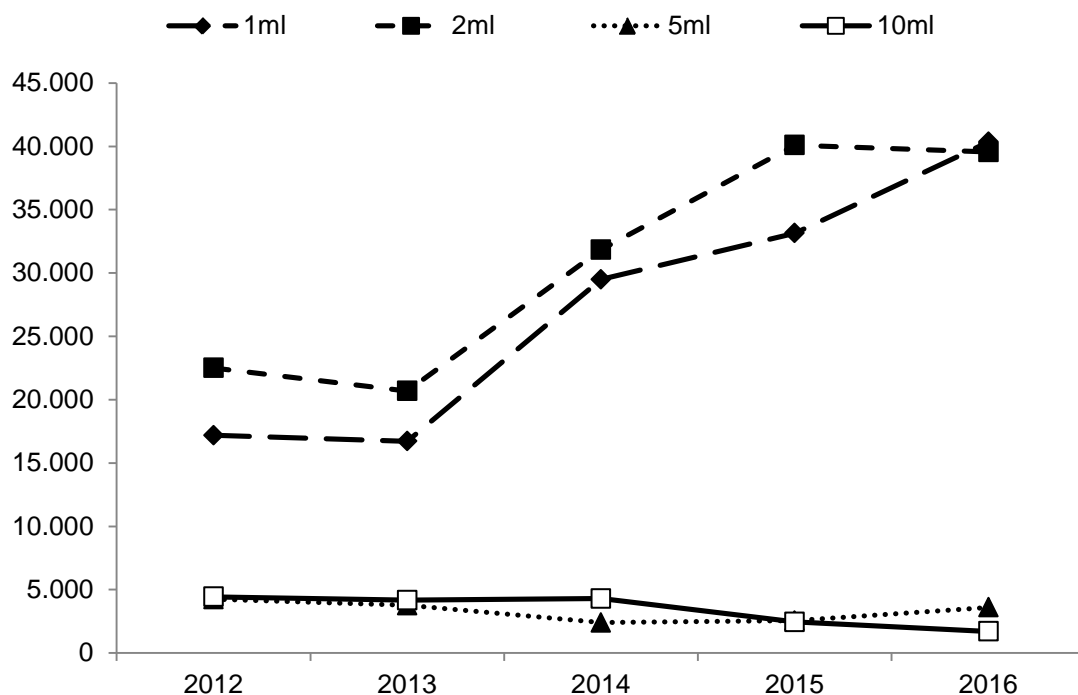


Figure 14 Trend in the dispensing of different syringe sizes in Munich, 2012 to 2016

No conclusion can be drawn from the data for NRW and Munich regarding national trends in the issuing of consumption apparatus or the use preferences of users.

General information on services for harm reduction are detailed under section 1.5.3, new developments under section 2.3.

1.5.5 Contextual information on routine harm reduction monitoring (T1.5.5)

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 section 1.5.3.

1.5.6 Additional information on harm reduction activities (T1.5.6)

There is currently no additional information available on this topic.

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.

1.7.2 Additional information on any other drug-related harms data (T1.7.2)

No additional information is currently available on this.

2 New developments (T3)

2.1 New developments in drug-related deaths (T3.1)

The current situation and trends in the area of drug-related deaths are presented in section 1.1, the current situation and trends in the area of drug-related non-fatal emergencies can be found in section 1.2. No new findings are available.

2.2 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; the current situation is reported in section 1.5.3.

2.3 New developments in harm reduction interventions (T3.3)

2.3.1 Drug checking

"Drug checking" is understood to be the chemical analysis of psychotropic substances dealt on the black market and the feedback of the results to (potential) users. Fixed site and mobile analysis laboratories can, depending on the procedure used, quantitatively and qualitatively detect up to several thousand different substances. In several European countries as well as Switzerland, drug checking is well established in various settings and projects, in some cases for 20 years (c.f. e.g. Brunt & Niesink 2011; Hungerbuehler et al. 2011; Suchthilfe Wien 2017). "Qualified drug checking" consists of a risk assessment and individual counselling of drug users who have brought their substances for analysis.

Qualified drug checking as discussed as a strategy for risk and harm reduction consists of two components. The first is the prevention of overdoses and unwanted intoxications by warning of particular alarming substances or their ingredients. Alongside the ever-present black market risks, this has been relevant recently particularly in connection with changes on the drug market such as the wider distribution of NPS and international warnings about highly potent fentanyl. At the same time, the wide range of substances and compositions of substances found in NPS is a substantial challenge for chemical analysis. The second component is fact-based counselling of (potential) drug users, to provoke a reflection on their use, enable the learning of strategies to minimise risks and if necessary to refer the user into the drug support system. Supporters argue that drug checking could thereby also represent an additional opportunity to reach problem users at an earlier point, i.a. among men who have sex with men or in the party setting, who often only seek drug support very late.

In Germany there are to date no qualified drug checking services. At a political level, the subject has, for a few years now, been more frequently discussed and has in part become quite controversial. In Schleswig-Holstein (2012), Lower Saxony (2013) and Thuringia (2014), drug checking was explicitly included in the coalition agreements, however it has as

yet not been implemented. Drug checking has been intensively discussed in several other *Laender* also. In Hesse, the introduction of drug checking has been planned for a long time. Moreover, the project www.legal-high-inhaltsstoffe.de already provides substance analyses and publishes the results, however it is not able to offer any personal communication of risks.

In Berlin, a comprehensive reinforcement of the measures on harm reduction in the coalition contract were adopted on the formation of the 2016 coalition, which, among other things, contained an expansion of outreach work in the party scene including the introduction of drug checking¹¹.

2.3.2 Naloxone take-home programme (T3.3.2)

General information on the status of naloxone take home programmes in Germany is detailed in section 1.5.3. More detailed information on the individual projects was presented in the Harms and Harm Reduction workbook in the REITOX Report 2016 (Dammer et al. 2016).

The programme run by Fixpunkt e.V. in Berlin is the oldest naloxone programme in Germany and has been running since 1998. The resources available for the project fluctuate considerably. In 2016, 15 drug users were trained in the administration of naloxone. Three naloxone uses were documented, in each of which an acquaintance was helped. All uses were successful. In two cases, an emergency doctor was consulted, in one case this did not take place because of fear of the police. In 2017 increased capacity should be available for emergency training (Fixpunkt e.V. 2017, personal communication).

In Frankfurt, a naloxone project was run by the Integrativen Drogenhilfe in 2014/15, which is currently no longer financed and accordingly is no longer being run. The guidelines on the implementation of naloxone projects, which have arisen from the project, are available online¹².

Through the naloxone take home programme, started in Cologne in 2016 by VISION e.V., 55 drug users were able to be trained in a total of 10 group training sessions as well as one training session in a low-threshold setting. Six successful naloxone uses were reported back to the organisers (VISION e.V. 2017, personal communication) and the project is continuing.

The concept for low-threshold information sessions about naloxone, developed by JES NRW e.V. and tested since 2016, are also continuing. In 2016, sessions took place in Bochum and Wuppertal. The drug consumption room in Bochum is now continuing the issuing of naloxone independently. In 2017, training sessions are due to take place in the cities of Aachen, Dortmund and Duesseldorf. Around 80 people in total have been trained with this low-threshold approach to date. Several participants were quite sceptical about the programme;

¹¹ Available at <https://www.berlin.de/rbmskzl/regierender-buergermeister/senat/koalitionsvereinbarung/> [accessed: 11 Aug. 2017].

¹² <http://www.akzept.org/uploads2013/NaloxonBroschuere1605.pdf> [accessed: 10 Aug. 2017]

the experiences were overall, however, for the most part positive (JES NRW e.V. 2017, personal communication).

In Munich, Condrobs e.V. has been delivering naloxone training since 2016. Up to the middle of 2017, ten training sessions with a total of 114 participants had been carried out, of whom 85 were drug users. Additionally, those working in addiction support as well as family members also participated. A total of 68 naloxone emergency kits were distributed; to date four successful uses have been reported back to the organisation responsible.

After the first project year, the organisation responsible for the project recorded the following results:

- A good group size is around eight to twelve participants.
- The explanation of emergency calls should be given by peers, as many participants are afraid that the police could also attend an emergency call and trust in their peers' statements is higher.
- At the beginning of the training, time should be planned in, in order to discuss concerns and possible negative experiences with naloxone in detail with the individual participants.
- It is essential that naloxone administration is practised in advance so that the necessary hand movements can be performed quickly and with certainty in an emergency (Condrobs e.V. 2017, personal communication).

On a political level, the Bavarian Landtag (*Land* Parliament) decided in May 2017 to implement a naloxone take home pilot project, at least in the cities of Nuremberg and Munich, which is due to start at the end of 2017/beginning of 2018.

The pilot and research project planned by the DAH on the issuing of naloxone before release from prison could not be started as planned, because the Berlin health office had not yet implemented the necessary preliminary checking (personal communication Deutsche Aidshilfe e.V. 2017).

2.3.3 Access for persons receiving substitution treatment to drug consumption rooms in NRW (T3.3.3)

Since January 2016 substituting clients in NRW have also been allowed to use illicit drugs that they had brought with them to drug consumption rooms. NRW has ten of the 22 German drug consumption rooms, so this new regulation, even though it has only been implemented in one *Land*, affects almost half the total number of drug consumption rooms. A first progress report is available from the Essen consumption room (Fechner 2017). The instances of use by substituting persons accounted for 39.4% of the total consumption instances of use, whilst at the same time there has been hardly any increase in the total number of uses. The author

therefore assumes that substituting persons were already using the consumption room even before the law was changed. It is not possible for consumption rooms to check this.

Fechner sees an overall positive in the change in law. For substituting people, they now have the same opportunity as other users, to use sterile conditions and to have help in case of emergency. Additionally, upon accepting a substituting person to the consumption room for the first time, a conversation always takes place on the risk of using illicit substances at the same time as using substituting substances. At the same time, the former ban on using drug consumption rooms has not stopped patients open to concomitant use using illicit drugs, so there is no apparent disadvantage from the change. Legal certainty now prevails for the employees in the drug consumption room, as they had previously been obliged to exclude substituting patients from using the room, however there was no way for them to actually check the status of users of the room to that end. Furthermore, reasons for concomitant use can now be openly discussed and thus possible positive changes brought about. Additionally, the chance now exists for improved networking between the drug consumption rooms and substituting doctors, as this connection is now no longer officially forbidden. Thus, the possibilities which existed in the past for doctors to treat and/or impose sanctions for concomitant use remains as to that end it is irrelevant where the use actually takes place (Fechner 2017).

2.3.4 Measures for aging drug users (T3.3.4)

Harm reduction measures can be considered a success, by the fact that drug users today are living considerably longer than in the past. In light of this development, the care for elderly drug dependent people has become a relevant subject. To date, however, there is little information in Germany on the specific needs of this clientele and hardly any services for older people which are specifically tailored to the needs of drug users.

Kammerer and colleagues (2016) have presented a needs-based analysis of the life and care situation of older alcohol and opioid dependent people in Berlin, including some proposals for improvement. They established that while older drug users' living situations and drug careers vary considerably, overall it can be said that they have very little financial resources and are frequently in debt. Completing the relevant applications during the pension process is often very difficult for them; due to their debts, they often lost their homes and find it difficult to find new long term accommodation. Additionally, older drug users only rarely have a stable social network and often wish to have more contact with family members again, in particular with children. Thus, stable, long term contact persons are important for both financial advice and practical help with everyday life, but also as a reliable, constant relationship in their lives. Older drug users also often have a number of severe physical conditions which often require treatment and greatly impair their everyday lives, including, for example, their mobility. After an inpatient treatment there is thus often a high need for care. In addition, there are often psychological conditions which also need to be treated.

The authors point to a multitude of interface problems between addiction support and elderly care as well as the medicinal care system. Additionally, there are large gaps in care in the

area of assisted living for older dependent persons, specifically those who also have dual diagnoses. Low-threshold participation services which also serve to provide daily structuring and social connection, are also practically non-existent. A further problem is that people who have only become addicts later in life are not able to access the support system. Long term substitution patients are, on the other hand, well connected and better able to use the available support.

Recommendations for care include more flexibility of the providable care services as well as an improved exchange, amongst care professionals, as to methods and knowledge on the subject of addiction. In medicinal primary care, family doctors should be more sensitised so that they can recognise the signs of an addiction disorder and refer patients accordingly. The implementation of the already existing S3 guidelines on "screening, diagnosis and treatment of alcohol related disorders" and the development of treatment pathways can thereby help to avoid misplacing those suffering from addiction in nursing homes or homeless support and pass them to the most appropriate service for them. As far as the issue of networking is concerned, awareness of the availability of the specific services for older addicts should be improved among social care facilities. Elderly, addiction and homeless support should be better coordinated. In addition, training on the subject of addiction should be offered within elderly care; on the other side further training on the subject of addiction in old age should be provided within addiction care. A sensitisation of people outside of these direct support systems, who are in contact with those who potentially are in need of support (e.g. management and employees of senior citizens' centres), can also help. The authors note, however, that while a more targeted placement is possible with improved coordination and training, the small number of such services often already have long waiting lists. These gaps in care must urgently be filled.

Accommodation for aging chronic drug dependent persons in NRW

There has been a specialised hostel in NRW since 2015 for drug users over 40 years old. The project named "DaWo" (Dauerwohneinrichtung stationäres Wohnen für alternde chronische Drogenabhängige, long-term living for inpatient accommodation for older chronic drug addicts) has 14 places. The agency LÜSA has been providing low-threshold inpatient accommodation since 1997 for chronic drug dependent persons with multiple severe conditions¹³.

¹³ <http://www.luesa.de/?site=altwerden> [accessed: 22 Aug. 2017]

2.3.5 Target group specific services for harm reduction (T3.3.5)

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 developments in recent years, in particular reaching asylum seekers is currently being discussed across Germany, however reaching "party users" and other groups is also still described as problematic. As there are many different projects from the widest variety of organisations, an exhaustive listing of these is not possible. As an illustration of the variety of target groups to be reached, several projects and developments will also be presented this year by way of example:

Services for asylum seekers

Reaching asylum seekers is made considerably more difficult on language and cultural grounds but also due to purely practical issues such as the unclear residency status and place of residence of many refugees. Further information on the challenges of treating refugees can be found in the Treatment workbook.

With a duration of two and a half years, a nationwide project, funded by the BMG and DAH, named PaSuMi (Diversityorientierte und partizipative Entwicklung der Suchtprävention und Suchthilfe für und mit Migrantinnen, Diversity oriented and participative development of addiction prevention and addiction support for and with migrants) started in 2017 with the aim of developing and making available reasonable and effective addiction prevention measures for people with a migration background. Within the process, culture, migration and situation specific knowledge of people in a community based participative approach will feed into the project from the start. Also, the collaboration of different agencies is promoted, in order to offer addiction prevention and harm reduction services in addiction prevention and addiction support for refugees.

In many cities, there are already addiction support services for refugees or existing services are being modified to meet their special requirements. In Hamburg there is to this end a budget to fund interpreters, in order to overcome language barriers, as well as training on the subject of substance use for employees in initial reception facilities and an increase in staff in a counselling centre, in particular to reach asylum seeking unaccompanied refugee minors. Additionally, a lesson has been developed on addiction prevention in schools for classes with asylum seeking pupils. The Suchttherapietage (Congress on Addiction Therapies) in June 2017 took place with the focal point of "migration specific aspects of addictive behaviour". The specialist unit SUCHT.HAMBURG (ADDICTION.HAMBURG) has collated information online on counselling and treatment options for asylum seeking people with addiction problems in Hamburg¹⁴ (written minor request to the Senate 2017).

¹⁴ <http://www.sucht-hamburg.de/hilfe/suchthilfe-und-migration>

Services in Berlin's party setting

In 2014/15 the BEST training programme was developed for staff of clubs, discos, festivals and other event formats or locations, in order to improve their health care competence in the area of substance use. On behalf of the BMG, Fixpunkt e.V. carried out, in the second half of 2016, the "BEST Transfer" project, supported by LiveKomm. The programme has been updated, extended to seven modules, and a website¹⁵ has been created. In the scope of the "BEST Transfer" project, 11 training sessions were carried out with 201 participants at 6 locations. At present, this is being delivered with eight partner projects from within acceptance-oriented party drug work and health promotion, which form the "BEST Network" (Fixpunkt e.V. 2017, personal communication). Developments in the area of drug checking are also relevant for the party setting, which are detailed in section 2.3.1.

Support for drug using young parents in Dresden

In the greater metropolitan area of Dresden, the initiative "Mama, denk an mich" (Mummy, think of me") was started in March 2016, aimed at drug using young parents, in particular mothers, with the objective of helping them to stop their drug use before or shortly after the birth of their child, and to improve the chances of being able to look after the newborn baby within the family. The core principle is the interdisciplinary collaboration between gynaecological and obstetric clinics, for child and youth medicine as well as psychiatry and psychotherapy. Of the 45 mothers and fathers who have so far enrolled in the project, 32 have used crystal meth. Use by pregnant mothers is often associated with premature births and other complications for the mother and child. The collaboration of clinics should also help the newborn receive the best medical care. Of the 45 parents who have enrolled, 26 chose therapy, two thirds of which finished the course and were referred on to counselling facilities. This had a positive effect on the proportion of newborns who were able to go home with their parents after being born: in 2015 it was only 37% but in 2016 it was already at 53% (Universitätsklinikum Carl Gustav Carus 2017).

Community oriented social work in public spaces

Public spaces (streets, town centres, parks) as meeting points for people dealing and using illicit and also legal drugs in problematic ways has been under increasing in the spotlight of public and media attention (in Berlin in particular: Kottbusser Tor, Görlitzer Park, Kleiner Tiergarten, Leopoldplatz). In public spaces, social and health problems are mixed with problems such as homelessness, poverty and destitution, lack of prospects among other things, through a lack of opportunities to social integration and participation for migrants and refugees with addiction and psychiatrically relevant disorders with various forms of crime and threats through religious and political radicalisation. At the same time, the usage pressure on public spaces is increasing through the influx of people into cities, the privatisation of public areas, the development of waste ground and gentrification.

¹⁵ www.best-clubbing.de [accessed: 22 Aug. 2017]

The low-threshold drug and addiction support system in Germany is of particular importance to this nationwide development and situation, due to its specific expertise in the environment-related functioning within the realisation of appropriate responses and types of outreach social work in public spaces. In this context, the Berlin organisation Fixpunkt e.V. has, since 2016/2017, strengthened its projects on outreach community related social work on behalf of several Berlin districts (municipalities), carried out in public spaces. The main focus is social work with addicts and other people with drug problems (including those involved in drug trafficking through pure need). With interdisciplinary teams (social work, medicine / healthcare, cultural and language mediation, conflict mediation) and strategic cooperation with authorities (health, public order, police) are integrated action concepts developed and implemented. These aim at creating a balanced relationship between the areas of activity of regulation, security, social, maintenance of green areas and city development as well as culture. It is becoming increasingly clear in the current situation that creating alternatives to spending time in public spaces is a necessity for the participants and those responsible, including contact points in which the consumption of drugs and alcohol which users bring with them is also permitted (Fixpunkt e.V. 2017, personal communication).

3 Additional information (T4)

3.1 Additional sources of information (T.4.1)

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

3.2 Further information on drug-related harms and harm reduction (T.4.2)

No additional information is currently available on the health effects.

4 Sources and methodology (T5)

4.1 Sources (T5.1)

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4.2 Methodology (T5.2)

4.2.1 Recording drug-related deaths (T5.2.1)

In Germany, there are two general, comprehensive systems for recording cases of drug-related deaths, which differ from one another in various aspects. These 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 the base of 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 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 Register¹⁶

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 ("Statistical report 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.

¹⁶ 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" of the German Federal Statistical Office (Special series 12, part 4).

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 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 had an effect in respect of the desired increase in specificity, meaning that many F-codes still exist.

4.2.2 Notifications of drug-related infectious diseases:

According to the IfSG, which came into force on 1 January 2001, data on infectious diseases, including on HIV and viral hepatitis, are reported to the Robert Koch Institute, RKI. Respective data is published at regular intervals¹⁷. According to the German Ordinance 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 reports are completed by supplementary anonymous reports from 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 the 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 exclude (formerly unrecognised) duplicated entries.

Since the introduction of the IfSG, data on possible modes of transmission of 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

¹⁷ www.rki.de [accessed: 20 Aug. 2016].

very small and only patients for whom a test result is available are taken into account, this data requires cautious interpretation. The new core data set was collected for the first time this year, in which the recording of infectious diseases was improved. The first data will be available in 2018.

Changes to the case definition of hepatitis B reports

The case definition of the RKI 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, now not only cases confirmed through clinical and laboratory diagnostics but also infections established through laboratory diagnostics alone, 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 strength of the symptoms. The number of published hepatitis B cases is, as expected, higher than previous years, with the introduction of the new reference definition.

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 RKI. 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 estimation 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 been spontaneously cured 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). Therefore, the reporting of the RKI, only analyses HCV infections which are active. A decrease in the current number of cases due to this change was expected.

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