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for Drugs and Drug Addiction



Harms and Harm Reduction

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0 SUMMARY (T0)

Drug-related deaths

According to the German Federal Criminal Police Office (Bundeskriminalamt, BKA), 1,276 people died as a result of the use of illicit drugs in 2018. Thus, the level has remained unchanged from the previous year; following the previous increase over many years in the number of drug-related deaths, the trend now seems to have stabilised, albeit at a higher level than it was as recently as 2015. Opioid poisoning (monodrug or polydrug) continues to be the most frequent cause of death, accounting for a proportion of over 49.3%. This proportion has fallen in recent years, however; in contrast, the proportion of long term consequences has been rising. The latest numbers from the general mortality register are from 2016. That has recorded 1,289 people, of which 21.6% are women. After the number of cases in the general mortality register has also shown an increase, in 2016 they fell slightly for the first time (1.3% fewer cases than the previous year).

Drug-related, non-fatal emergencies

Overall, a continuous increase in non-fatal, drug-related emergencies admitted to inpatient treatment can be seen in the ten years to 2015, with the number rising from 14,714 admissions in 2008 to 23,839 in 2015 (see Figure 5). Since then, the figures have fell slightly, to 22,442 cases in 2017.

In 2017, there were 22,442 cases of drug-related intoxication and poisoning across Germany, which were admitted for treatment on an inpatient basis. The number sharply increased over a ten-year period up to 2015 and has now remained relatively stable for two years whilst slightly falling. Toxicological indications from admissions must be interpreted cautiously due to large inaccuracies in coding.

In the area of inpatient admissions for poisoning, poisoning through "other opioids" predominates, however the numbers have been falling again since 2011. The next largest group is cannabinoids (however with significantly lower total numbers). In the acute intoxications group, the most commonly coded diagnosis, by some margin, is intoxication through multiple substance use or the use of other psychotropic substances. The numbers of cases for these types of inpatient admissions have steeply increased over the past ten years and account for a large part of the total increase in all non-fatal drug-related emergencies admitted to in-patient hospital treatment in the last decade. The four categories of substance - cannabinoids (incl. synthetic cannabinoids), sedatives/hypnotics, stimulants (excl. cocaine) and opioids account for over 2,000 cases in 2017, as in previous years with similarly large proportions.

Drug-related infectious diseases

In 2018, 2,818 newly diagnosed HIV infections were reported to the Robert Koch Institute (RKI). This corresponded to a national incidence of 3.4 new diagnoses per 100,000 population. Compared to the previous year, the number of first diagnoses fell by 10.4%. While the total

number of HIV first diagnoses has fallen for the third year in a row, the number of HIV new diagnoses with the mode of transmission of injecting drug use has remained stable in the last three years, with fluctuations. Injecting drug use as the mode of infection was named in 6% of cases with information as to the risk of infection and thus remains the third biggest mode of transmission.

In 2018, a total of 4,507 cases of hepatitis B were reported, corresponding to an incidence of 5.4 infections per 100,000 population. This represents an increase from 2016 (4.4). Men are more frequently affected than women. Injecting drug use was the third most significant mode of transmission, recorded in 19% of cases with information as to the mode of infection.

5,891 cases of hepatitis C were reported in 2018, which corresponds to an incidence of 7.1 first diagnoses per 100,000 population. This represents an increase from the previous year of 23% (2017: 5.8). Men are more than twice as frequently affected as women. Injecting drug use is the most common mode of transmission by some margin, named in 80% of diagnoses with information as to the mode of transmission. 58 further infections included the further specification "injecting drug use in prison".

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 stemming 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.

Health aspects of drug use are addressed both in the scope of specific services/treatment options for drug users as well as within the general health care framework. 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. Care in prisons is clearly needing improvement (see on this point the Prison workbook).

In order to counteract opioid overdoses, emergency training is currently offered in 18 cities on the use of the emergency medicine naloxone by laypeople. The target groups are drug users and people in their environment. Availability has been significantly expanded in recent years, however it can be no means be described as comprehensive coverage.

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 six *Laender*. In 2019, one extra *Land* adopted an ordinance to enable the operation of drug consumption rooms; specific plans for the opening are currently being drawn up in one city in that *Land*. There are still no drug consumption rooms in nine *Laender*.

Syringe provision programmes currently exist in the form of 176 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 180 prisons in Germany has a syringe vending machine.

HIV self tests have become freely available to purchase since last year, which now provide an additional low-threshold test option. In addition, HIV pre-exposure prophylaxis for people with an increased risk of infection has been paid for by the statutory health insurance providers since September 2019. Therefore, this new prophylaxis option is open to those covered by statutory health insurance, irrespective of their own financial circumstances.

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 drug-related deaths, which differ from one another in various aspects. These are the police data from the "Drugs Data File" (Falldatei Rauschgift, FDR) and the "Statistical report on the causes of death" (Todesursachenstatistik) from the German Federal Statistical Office (Statistisches Bundesamt, Destatis). Both data collection systems are described in more detail in section 5.2.1 and only briefly outlined 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 have been better identified in many cases.

The "Statistical report on the causes of death" or the general mortality register (Allgemeines Sterberegister) from the German Federal Statistical Office is 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 as to 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 similar developments and trends (whereby the trends in the systems are of different degrees, see section 1.1.4), which 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 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 FDR from the BKA in the reporting year 2018 was 51.3% (2017: 59.0%). Toxicological reports were created in 44.5% of cases (BKA 2019, data delivery).

After falling slightly for the first time in five years in 2017, the number of drug-related deaths remained on the same approximate level in 2018. A total of 1,276 people died as a result of using illicit drugs, thus once again more than the number in 2015 (see Figure 1). Due to the changeover to a new police data system and the recording or collection of drug-related facts,

no more information is possible over and above the pure number of drug-related deaths and the causes of death (for example on the age and gender of those who died) for the data year 2018. In terms of the number of inhabitants, the relatively small *Land* of Saarland was - apart from the city states of Berlin, Hamburg and Bremen - the most impacted, as it was in the previous year (3.5 drug deaths per 100,000 inhabitants). This was followed, by some margin, by Bavaria and Schleswig-Holstein (each 1.8). No more detailed information is available on the impact levels of the large cities for 2018.

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 mortality register of the Federal Statistical Office, are from 2016. Data delivery is carried out significantly later than with the police data. In 2016, a total of 1,289 people were recorded in the general mortality register. Of those, 278 (i.e. 21.6%) were women and 1,011 men. 1.3% fewer cases were recorded than the previous year (N=1,306).

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

In 2016 the general mortality register recorded fewer cases than the parallel BKA register for the first time (see Figure 1). The difference for the data year 2016 amounted to 44 cases (1,333 cases in the BKA register, 1,289 cases in the general mortality register); more recent data is not available. Even though the reference populations and case definitions for the two registers are not identical, both registers do exhibit similar trends over the last ten years, which are described in more detail in section 1.1.4. One problematic factor which persists is that the exact number of overdoses in the general mortality register 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 become established nationwide. Thus, despite the changes to 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 in the BKA figures.

1.1.2 Toxicology of overdose deaths (T1.1.2)

Police data on drug-related deaths

Table 1 gives an overview on the toxicological information on drug-related deaths. Overdosing on heroin/morphine (including poisoning by heroin/morphine in conjunction with other substances) remains the most common cause of death. At 31.7% of all cases, the proportion of all poisonings remains at a similar level to the previous year (2017: 32.2%), although it is 13 percentage points lower than in 2015 (2016: 38%; 2015: 45%). The proportion of drug-related deaths in which substitution drugs were detected, alone or in combination with other drugs as

main substance, was at 16.0%, (the figure for the previous year was 17.1%). Poisoning through substances other than opiates, especially through cocaine/crack and amphetamine/methamphetamine, was the cause of death in 17.9% of cases (2017: 18.4%). The proportion of long-term harm amounts to 18.0% and, having risen continuously in recent years, is now 7 percentage points higher than three years ago (2015: 10.9%).

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 2018 by substance, police data

Causes of death	% of Total		Cases
	2017	2018	2018
Monodrug poisoning from opioids	20.8	20.4	260
Heroin/Morphine	13.0	13.7	175
Opiate-substitution drugs	2.5	3.9	50
– of which: Methadone/Polamidone	2.4	3.4	44
– of which: Buprenorphine (i.a. Subutex)	0.2	0.3	4
– of which: Other	0	0.2	2
Opioid-based medicines	3.4	2.4	30
– of which: Fentanyl	3.3	2.0	25
Synthetic opioids (i.a. fentanyl derivatives)	1.9	0.4	5
Polydrug poisonings from opioids¹	34.8	28.9	369
Heroin/morphine in connection with other substances (i.c.w.o.s.)	19.2	18.0	230
Opiate-substitution drugs i.c.w.o.s.	14.6	12.1	155
– of which: Methadone/Polamidone i.c.w.o.s.	11.6	10.4	133
– of which: Buprenorphine (i.a. Subutex) i.c.w.o.s.	1.7	0.5	7
– of which: Other i.c.w.o.s.	2.6	1.3	17
Opiate-based medicines	6.6	4.2	54
– of which: Fentanyl	5.3	2.2	28
Synthetic opioids (i.a. fentanyl derivatives) i.c.w.o.s.	1.8	0.1	1
Monodrug poisonings from substances other than opioids/opiates	7.3	9.4	120
Cocaine/Crack	3.2	3.2	41
Amphetamine/Methamphetamine	2.4	3.8	49
– of which: Amphetamine	1.8	2.9	37

– of which: Methamphetamine	0.6	0.9	12
Amphetamine derivatives	0.3	1.0	13
New Psychoactive Substances (NPS)	0.7	0.5	7
Other (not. incl. psychoactive medicinal drugs)	0.7	0.8	10
Polydrug poisonings from substances other than opioids/opiates¹	11.1	8.5	109
Cocaine/Crack i.c.w.o.s.	3.6	4.1	52
Amphetamine/Methamphetamine i.c.w.o.s.	6.3	4.0	51
– of which: Amphetamine i.c.w.o.s.	5.3	3.4	44
– of which: Methamphetamine i.c.w.o.s.	1.7	0.7	9
Amphetamine derivatives i.c.w.o.s.	1.3	1.1	14
New Psychoactive Substances (NPS) i.c.w.o.s.	1.5	0.9	12
Psychoactive medicinal drugs i.c.w.o.s.	1.9	1.6	21
Other i.c.w.o.s.	1.7	0.5	7
Other causes of death			
Other causes of death			
Intoxications from psychoactive medicinal substances only (possibly also in connection with alcohol)	1.5	2.5	32
Not specified/unknown poisonings	3.6	4.3	55
Suicides	6.7	5.6	72
– of which: Suicide by way of intoxication (already included in the causes mentioned above)	2.0	1.8	23
– of which: Suicide through means other than intoxication	4.6	3.8	49
Long-term harms	14.0	18.0	230
– of which: Long-term harms in combination with intoxication consequences	2.7	3.0	38
Accidents	1.6	2.2	28
Other cases	0.7	1.9	24
Total (N)²	1272		1276

¹ In the subcategories, multiple counting is possible.

² The total number comprises the sum of all monodrug and polydrug poisonings plus all suicides not caused by intoxications as well as all long-term harms, accidents and other cases.

Data from the general mortality register

In 2016, the underlying disease (dependence, harmful use of drugs, others from the ICD group F 1x.x) was coded for 62.6% of deaths (2015: 66.0%); however, for these cases the information on the acute cause of death is lacking. Thus, the significance of the national mortality register is further limited with respect to the substance classes which acutely led to the deaths. Only the coding of drug-induced deaths under the ICD-10 classification with the additional X/Y coding for external causes allows reliable inferences to be drawn on the substance spectrum involved in instances of intoxication, as this allows a substance specific breakdown by T-code. In 2016, this applied to only 37.4% of registered cases. Purely opioid-related deaths accounted for 48.8% of deaths in this subgroup in 2016, corresponding roughly to the same proportions as in the previous years. Other substance groups were mentioned in 15.6% of cases. 35.6% of cases involved unspecified intoxications. The latter figure may conceal further opioid intoxications. 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 mortality in the overall population of drug users, nor are there any known current regional cohort studies.

1.1.4 Trends (T1.1.4)

The long term trend in the total numbers of drug-related deaths in Germany has been similar for both registration systems between 2005 and 2016. 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 are somewhat steeper in the police data than those in the general mortality register (see Figure 1). In 2017, the numbers in the BKA data fell slightly for the first time and remained roughly at the same level for 2018; whether this stability will continue in future years remains to be seen. A slight decrease could already be seen in the general mortality register for the data year 2016. As the difference between the two registers now consists of two data years, it remains to be seen whether the trend will also stabilise in the general mortality register for 2017 and 2018.

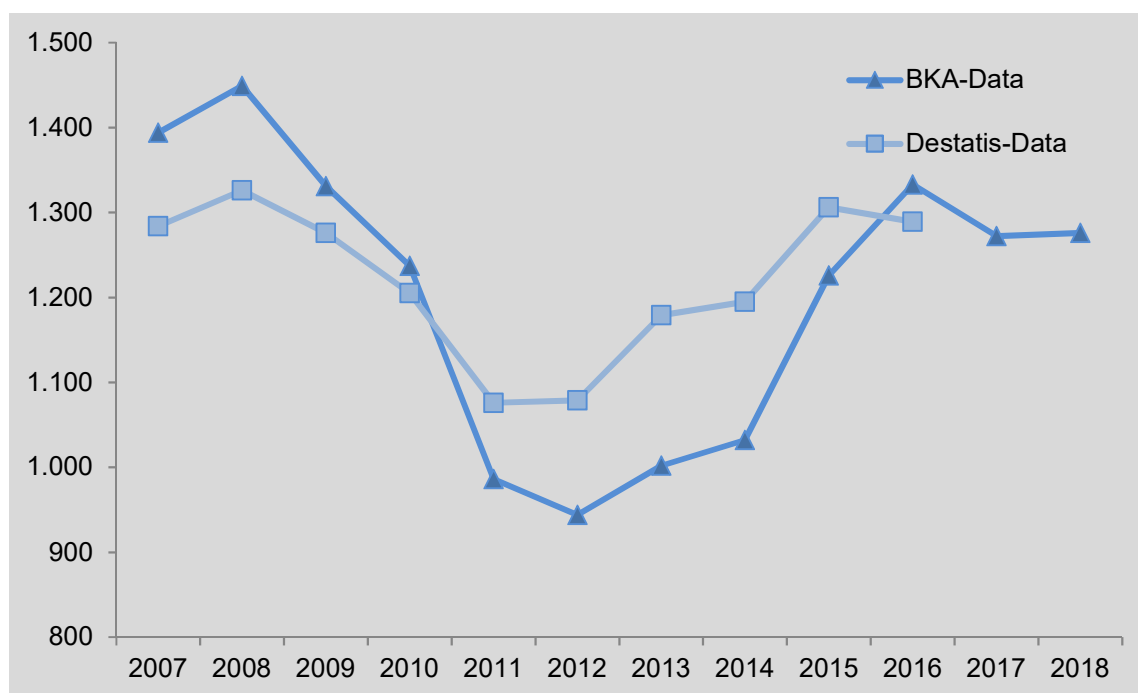


Figure 1 Trends in the number of drug-related deaths: Comparison of BKA and Destatis data, 2007 to 2018

Statistisches Bundesamt, special calculations; Federal Situation Report on narcotics criminality from the BKA, recently 2018 and BKA 2019, data delivery

Data from the general mortality register

The age distribution of drug-related deaths over the last 20 years has long shown a shift to a higher age of death. From around 2013/2014 onwards, however, no further clear age group shift has been apparent; the proportions of younger, middle-aged and older deaths have largely stabilised. The proportion of 60-year-olds and older as well as the proportion of under-25-year-olds fell in 2016 compared to 2015. Only the coding of drug-induced deaths under the ICD-10 classification with the additional X/Y code for external causes allows inferences to be drawn on the substance spectrum involved in instances of intoxication, as this allows a substance-specific breakdown by T-code. For years this has only applied to far fewer than half of the coded cases; in 2016 it was around one third (37.4%) of registered cases. For the vast majority only the underlying illness is coded (F codes, see Figure 2).

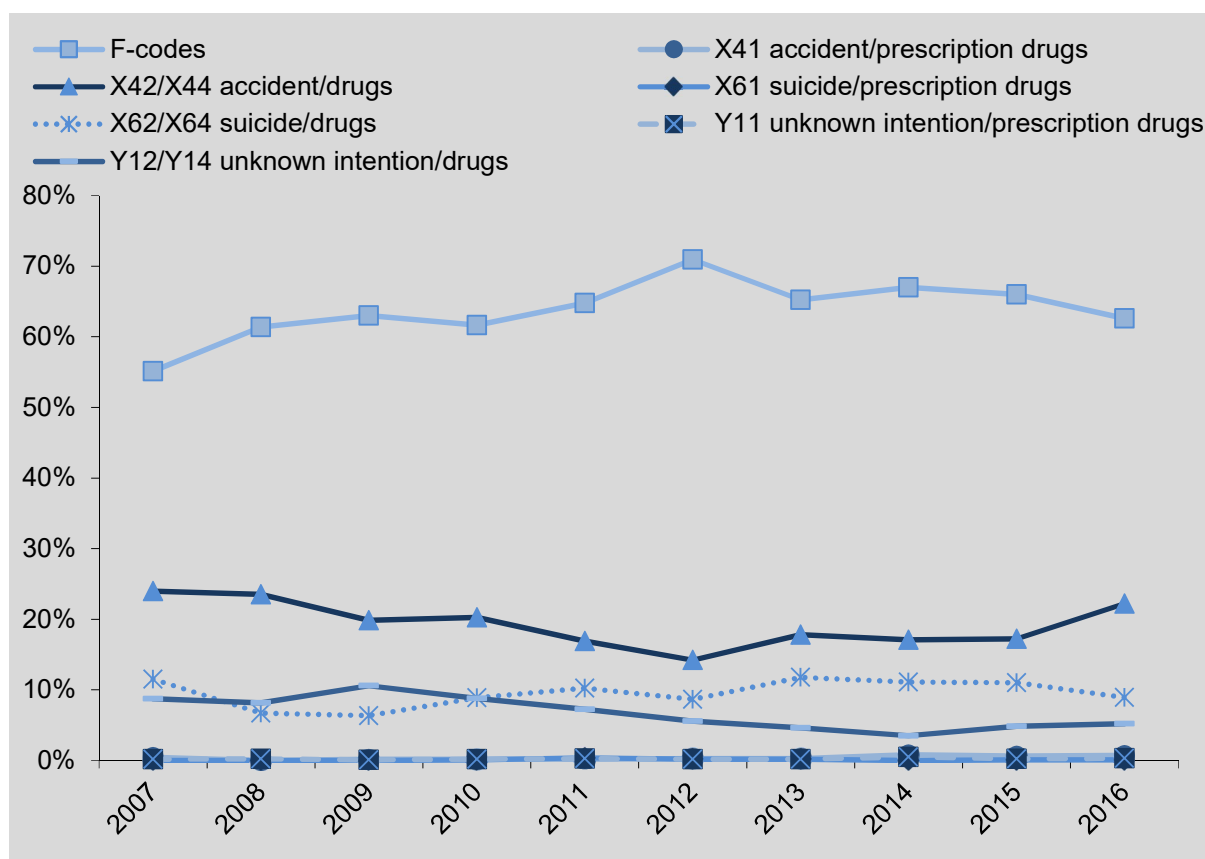


Figure 2 Trend in the Destatis coding of the causes of drug-related deaths 2007 to 2016

Statistisches Bundesamt, special calculations

Among cases coded with X/Y codes, opioid poisonings represented, at 59.8% of cases, the main cause of death, followed by mixed intoxications and non-specified intoxications (32.2%) (see Figure 3). Opioids will likely also play a significant role in mixed intoxications and non-specified intoxications; no definite conclusion can be drawn, however, due to the unspecific coding. It is noticeable that the proportion of drug-related deaths accounted for by intoxication with no opioid involvement has, whilst remaining small (8.1% of cases), increased since 2010. Overall, however, the limited informative value of the Statistical report on the causes of death should be taken into account as it is not known exactly how many of these classifications are actually based on the findings of chemical-toxicological analyses on the spectrum of substances that caused the deaths.

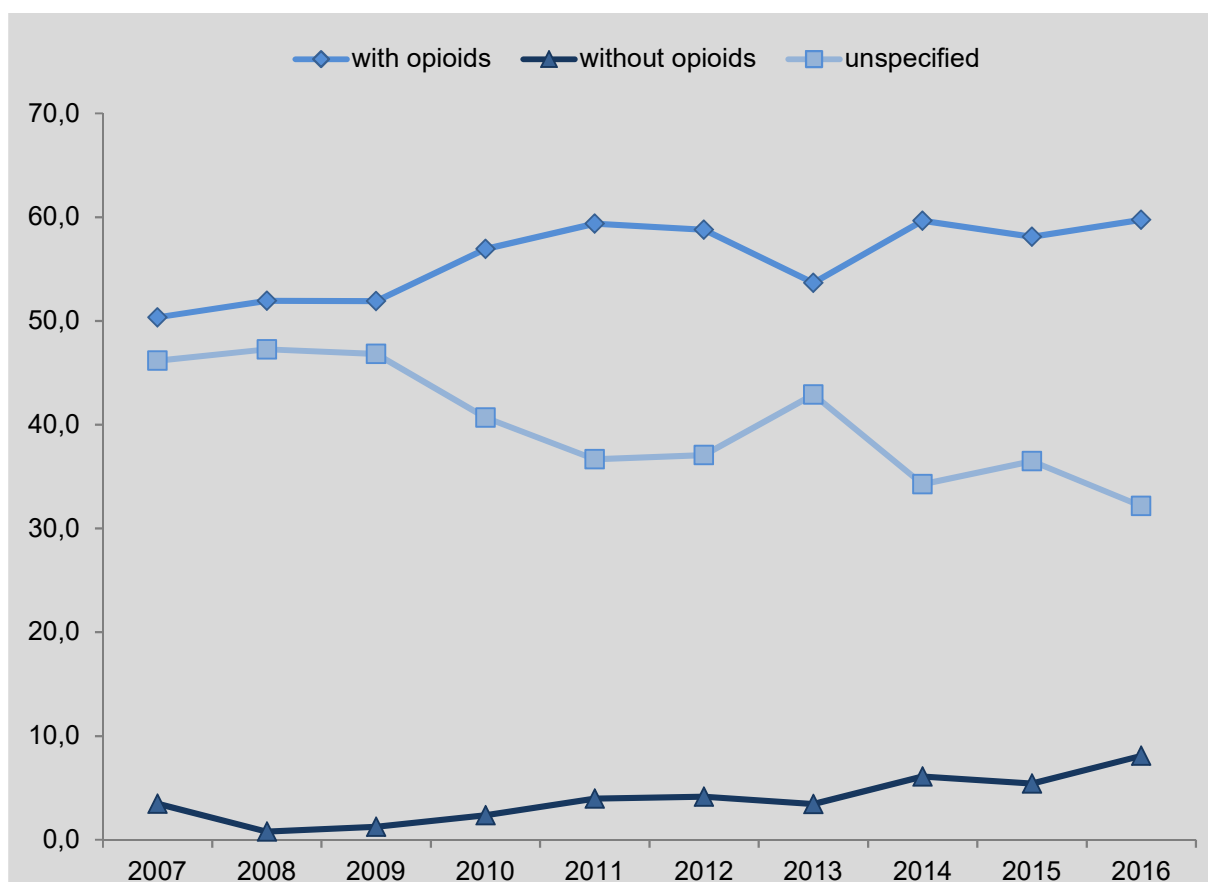


Figure 3 Proportion of opioid intoxication in drug-related deaths, 2007 to 2016

Statistisches Bundesamt, special calculations

Note: The analysis has been modified for all years compared to how it was presented in previous years. Coding for (unspecific) synthetic narcotics has now been classified as opioid-related. In addition, X44, X64 and Y14 codes (in accordance with ICD-10) in combination with particular T-codes have now been differentiated according to their opiate involvement analogously to the WHO coding rules in force since 2006. they show a higher proportion with an opioid connection, hence on the other side the relative proportion of cases without opioid involvement has fallen. The already identified trend of an increase in cases without opioid involvement has remained, although at a lower level than in the analyses produced in previous years.

Police data on drug-related deaths

As the BKA data collection was changed in 2012, comparisons to subsequent years can only be made with caution. For this reason, only trends since 2012 are described here. Poisonings from opioids are the main causes of death in that register also. Unlike in the general mortality register, a distinction is drawn between monodrug and polydrug poisonings (see Figure 4). The proportion of monodrug opioid poisonings fell continuously from 2012 to 2016, from 26.0% to 20.4%, and has remained at this level since then. Polydrug poisonings from opioids remain the most frequent cause of death, however their proportion has significantly fallen since 2014, currently sitting at 28.9%. The proportion of monodrug poisonings from substances other than opioids has somewhat increased since 2015, at a much lower level than opioids, and currently accounts for 9.4% of poisonings. The proportion of polydrug poisonings from substances other than opioids increased for a while to just over 11%, however in 2018 it fell back to the 2015 level of 8.5%. The proportion of long-term harms has significantly increased over the last two years and is now at 18%. This corresponds to the age of death, which has been increasing for years.

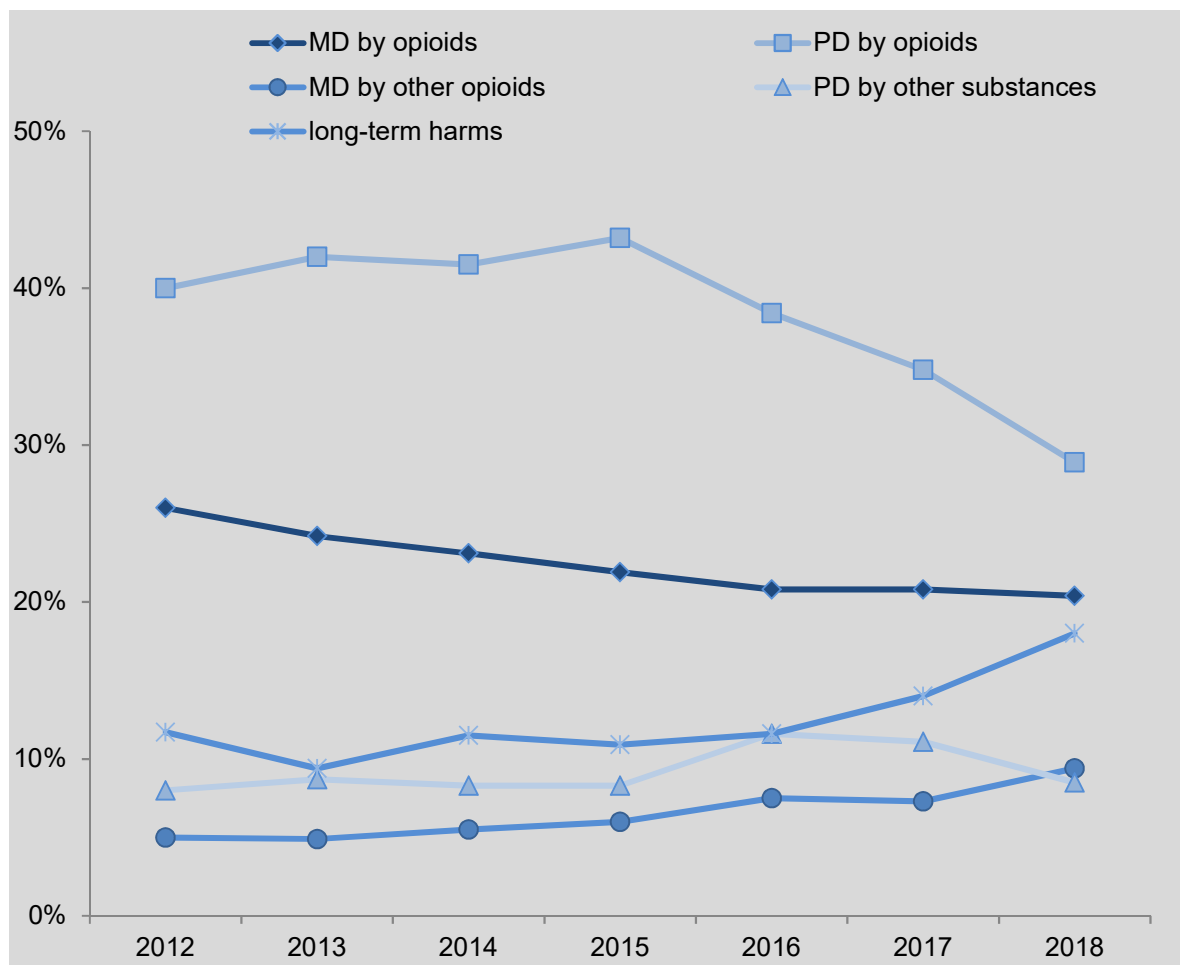


Figure 4 Causes of death, BKA data 2012 - 2018

MD = monodrug poisoning, PD = polydrug poisoning

BKA 2019, data delivery

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

There is currently no further available information on this topic.

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 2016 (Krankenhausdiagnosestatistik) as well as the special reports of the German Federal Statistical Office (see Table 2). It should be noted that the cases of poisoning (ICD-10 T40.X) can 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 practice-based doctors, emergency medical treatment with no subsequent inpatient treatment) are not covered. Further, it is not clear from the data how seriously pronounced or dangerous the symptoms were and how long the respective treatment lasted; very 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 did not lead to hospital admission and will be presented below (see section 1.2.2).

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

Table 2 Number of acute intoxication and poisoning cases, Statistical Report on Hospital Diagnoses, 2017

ICD-10 Diagnosis	Total	Age in years				
		<15	15 - 24	25 - 44	45 - 65	65+
Acute intoxication [acute inebriation] (F11.0 to F16.0, F18.0, F19.0)	20,942	466	5,711	10,225	3,730	810
from opioids (F11.0)	2,165	16	205	1,153	508	283
from cannabinoids (F12.0)	2,312	200	1,314	670	119	9
from sedatives/hypnotics (F13.0)	1,893	19	311	707	578	278
from cocaine (F14.0)	727	0	150	484	90	3
from other stimulants (F15.0)	2,064	89	824	1,023	117	11
from hallucinogens (F16.0)	387	6	223	143	13	2
from volatile substances (F18.0)	77	8	22	30	13	4
from multiple substance use or use of other psychotropic substances (F19.0)	11,317	128	2,662	6,015	2,292	220
Poisoning by narcotic drugs and psychodysleptics (hallucinogens) (T40.X)	1,500	75	306	396	276	447
from opium (T40.0)	67	1	3	12	15	36
from heroin (T40.1)	87	0	9	63	14	1
from other opioids (T40.2)	802	40	61	136	175	390
from methadone (T40.3)	89	5	8	37	31	8

from other synthetic narcotics (T40.4)	23	3	8	9	3	0
from cocaine (T40.5)	81	0	16	53	12	0
from other and non-specified narcotics (T40.6)	43	3	12	12	9	7
from cannabis (derivatives) (T40.7)	234	20	140	57	12	5
from lysergide (LSD) (T40.8)	33	0	25	7	1	0
from other and non-specified psychodysleptics (T40.9)	41	3	24	10	4	0

Statistisches Bundesamt, special calculations 2019.

From the GIZ data:

Data is available from four 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 2017 (Abteilung für klinische Toxikologie & Giftnotruf München der Klinik und Poliklinik für Innere Medizin II, 2018, Giftinformationszentrum-Nord, 2018b, Informationzentrale gegen Vergiftungen des Landes Nordrhein-Westfalen, 2018, personal communication Saarländisches Informations- und Behandlungszentrum für Vergiftungen, 2019).

In these four institutions, a total of 110,394 enquiries on the basis of suspected cases of human poisoning were registered in 2017, of which 2,033 were due to actual or suspected consumption of illicit drugs². The proportion of drug cases is 1.84% and thus again somewhat lower than previous years (2016: 2.16%). 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 in their documentation systems by substance as well as by other variables such as age.

The GIZ Nord³ documented a total of 36,563 cases of suspected human poisonings in 2017, of which 1.9% (N = 703) concerned enquiries related to the main group, illicit drugs. In one case further documentation was missing; in 220 cases (31.3%), the severity of the poisoning could not be determined. One case of death as a result of drug use was documented. 39 (5.5%) of the suspected cases were classified as severe poisoning, 232 (33.0%) came under the medium level of severity and 188 (26.7%) were classed as mild poisoning. 22 suspected cases (3.1%) were asymptomatic (Giftinformationszentrum-Nord, 2018b).

¹ <https://www.klinitox.de/3.0.html> [accessed: 3 Sep. 2019].

² For one of the institutions, there is only an approximate value for the enquiries with relation to illicit drugs, in the adolescent age group; the exact value may deviate by fewer than 10 people. Due to the large total number, however, the deviation is of no consequence.

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

Information on substance groups is available: 32.4% of the calls (n = 228) were made due to the consumption of amphetamine-type stimulants. In second place were enquiries about cocaine (derivatives), which made up 18.6% (n = 131) of the calls, of which only one case of crack was documented (other than that, only cocaine). In the previous year, enquiries about the overall group of cannabinoids were more frequent than those about cocaine. In 2018, 16.8% (n = 118) of enquiries were related to the use of cannabinoids, of which 34 were in relation to synthetic cannabinoids. After a decline in calls about synthetic cannabinoids in the previous year, this is a further significant decrease. Opioids accounted for 8.7% of cases (N = 61), of which the majority (51) concerned heroin.

Amphetamine-type stimulants were the subject of 10 of the 39 enquiries classified as severe. The one case of death reported was also in connection with amphetamine use. Cocaine was named in 12 of the severe poisoning cases, and opioids in five. Of the four severe poisonings that were due to cannabinoids, synthetic cannabinoids were responsible for one case. The proportion of synthetic cannabinoids thus significantly decreased in this area also (Giftinformationszentrum-Nord, 2018a). When interpreting the data it must be taken into account that this is an information source with a clear regional nature and is not, for example, a representative trend for the entire country.

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 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).

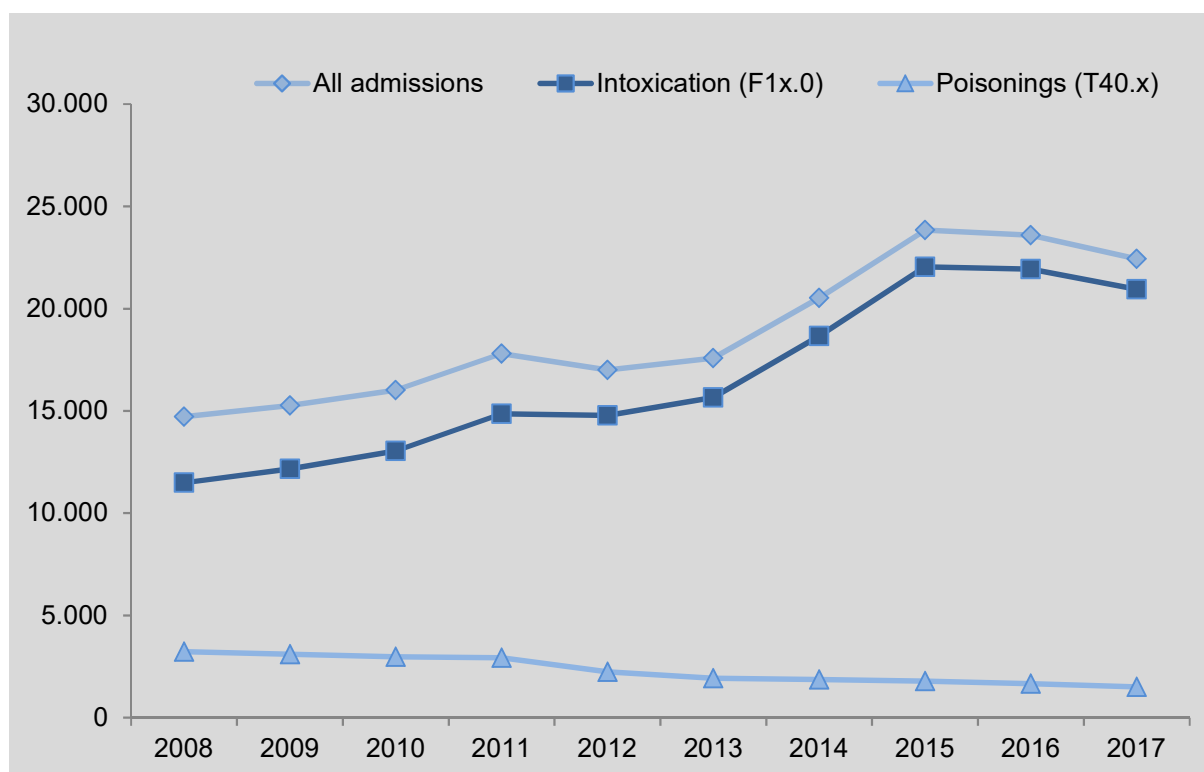


Figure 5 10-year trend in acute drug-related emergencies admitted to inpatient treatment

Statistisches Bundesamt, special calculations

Overall, a continuous increase in non-fatal drug-related emergencies admitted to inpatient treatment can be seen in the ten years to 2015, with the number rising from 14,714 admissions in 2008 to 23,839 in 2015 (see Figure 5). Since then, the figures have fallen slightly, to 22,442 cases in 2017. Whether this indicates a longer term stabilisation or a temporary deviation is currently unclear. In the coding, cases of acute intoxication (F coding) represent, by some margin, the overwhelming majority, numbering 20,942 in 2017 and also causing the overall increase of the previous years. The number of coded cases of poisoning, which were already coded at a much lower level in 2008, has fallen even further in the last 10 years, with 1,500 cases in 2017. 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 the significantly more rarely coded inpatient admissions for poisoning (T 40.x codes, see Figure 6) in the last 10 years. Following a considerable increase up to 2011 (1,660 cases), the numbers have since steeply decreased again (2016: 802 cases). Up to 2010, poisoning from heroin (T40.1) was for many years the second most common diagnosis in this group, however the number of cases has been decreasing almost constantly for over 10 years and today comprises a small proportion of poisonings (2017: 87 cases). Since 2011, cannabinoid poisoning (T40.7) has 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, with slight fluctuations, and at 234 cases in 2017, the level is

still considerably lower than that of opioid poisoning. All other substances, including other/unspecified narcotics, play only a minor role, with up to 100 reported cases.

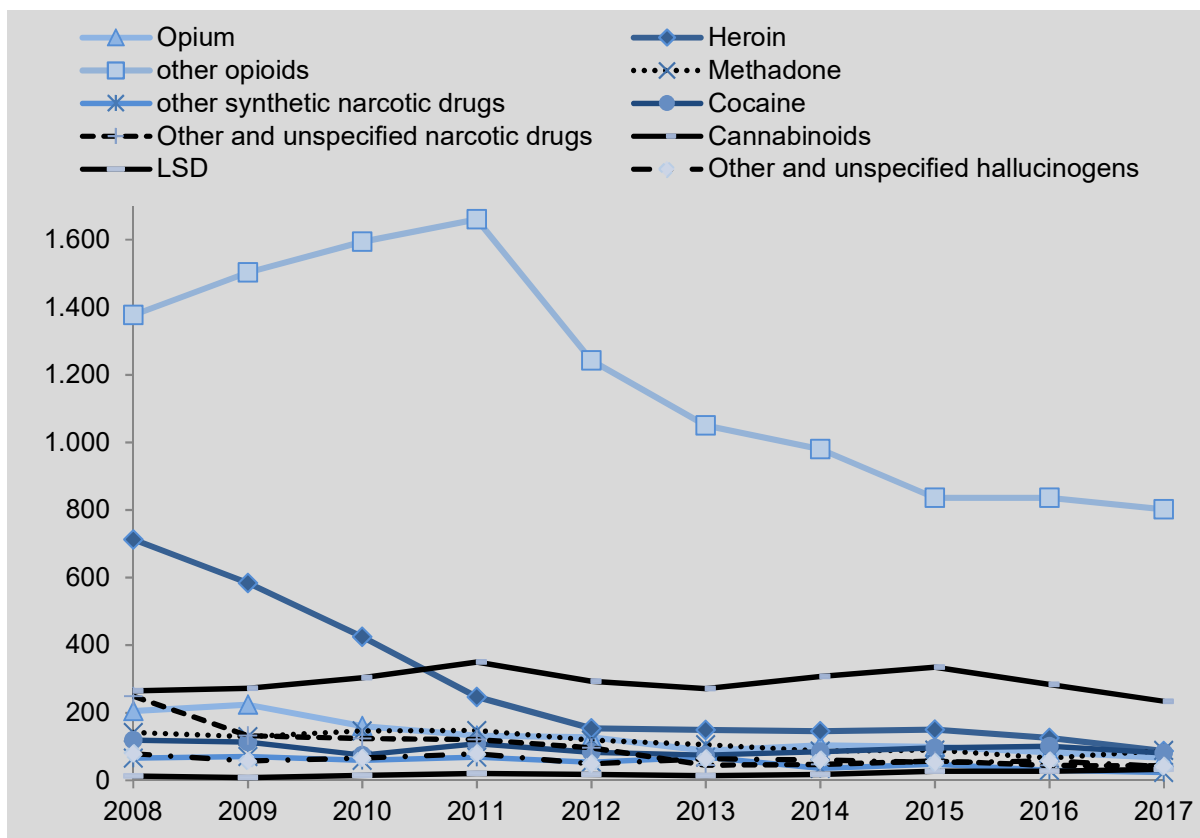


Figure 6 Trend in acute drug-related emergencies admitted to inpatient treatment: poisonings (T40.x-codes) 2008 - 2017

Statistisches Bundesamt, special calculations

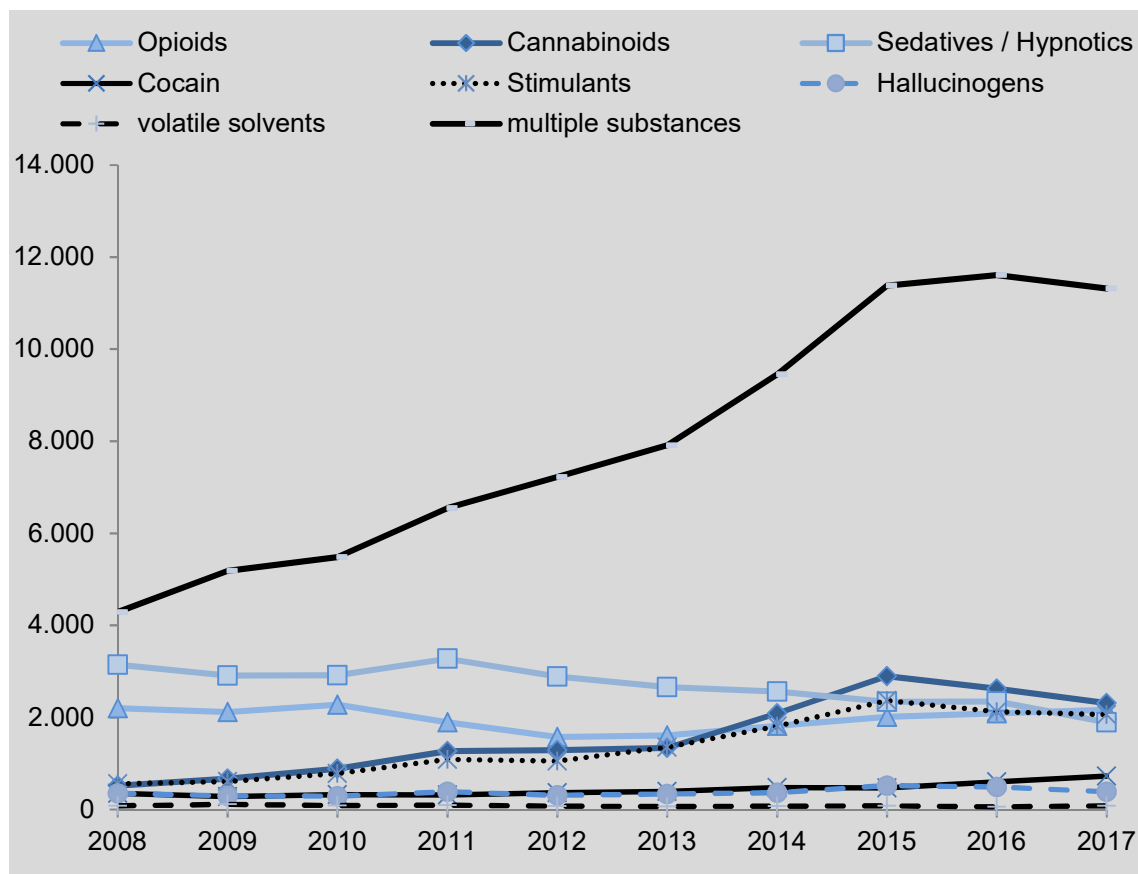


Figure 7 Trend in acute drug-related emergencies admitted to inpatient treatment: acute intoxications (F1x.0-Codes) 2008 - 2017

Statistisches Bundesamt, special calculations

In the acute intoxications group, which is significantly more frequently coded, the most common diagnosis, by some margin, is intoxication due to multiple substance use or use of other psychoactive substances (F19.0, see Figure 7). The number of cases of inpatient admission for this diagnosis steeply increased for ten years, stabilising at a high level from 2015 onwards. They account for a large part of the total increase in all non-fatal, drug-related emergencies admitted to in-patient hospital treatment up to 2015, and in 2015, at 11,317 cases, account for half of all cases. There is sadly no information available on the individual substances which have been coded under "multiple use" or "other psychotropic substances", so no precise conclusions can be made as to the use behaviour.

The four categories of substance - cannabinoids (incl. synthetic cannabinoids), sedatives / hypnotics, stimulants (excl. cocaine) and opioids - accounted for similarly large proportions of cases in 2017, as they had in previous years, at a little over 2,000 cases each. Over time, the significance of individual substance categories has however significantly changed:

For cannabinoids (including synthetic cannabinoids) as well as for stimulants (excluding cocaine), the last 10 years has seen a very sharp increase in the numbers recorded - in both cases, numbers have roughly quadrupled. Intoxication due to cannabinoids has been the second most commonly coded cause since 2015. In contrast, the number of intoxications from the substance group of sedatives/hypnotics, which previously had always been the second

most common, has fallen overall in the last ten years, with slight fluctuations. The number of intoxications from opioids has remained stable, with slight fluctuations, at around 2,000 cases per year. 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.

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, the reporting of which is mandatory under the German Protection Against Infection Act (Infektionsschutzgesetz, IfSG), is reported to the RKI and analysed there. This therefore also includes reports of HIV and hepatitis infections. In addition, data is available from the Statistical Report on Substance Abuse Treatment in Germany (Deutsche Suchthilfestatistik, DSHS), however this should only be interpreted with extreme caution due to a very high rate of missing information. Data from other sources, for example surveys in drug consumption rooms and outpatient addiction support facilities, provides additional insight into the problems of specific, often regional, populations of drug users with HIV and hepatitis. In this respect, special mention should be made of the DRUCK study, which from 2011 to 2015 analysed the prevalence 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 last two years' REITOX reports.

More precise information on the data sources for drug-related infectious diseases can be found in section 5.2.2.

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

The following numbers originate from the 2018 RKI reporting data in the infection epidemiology yearbook (Robert Koch-Institut (RKI), 2019). Any statements regarding trends refer to the year books from the corresponding data years.

HIV reporting data

In 2018, 2,818 HIV infections were reported to the RKI, which corresponded to the case criteria and could be identified as first diagnoses. This corresponded to a national incidence of 3.4 new diagnoses per 100,000 population. This represents a fall in the number of first diagnoses from the previous year (3,144) of 326 cases (10.4%); this decrease can be seen both for those that acquired their infection in Germany as well as presumably for those that acquired their infection abroad.

Information on infection risk was available for 2,286 of the 2,818 newly diagnosed cases (81%). Where more than one figure was stated, this was reduced to the most probable risk. Of the

newly diagnosed cases with information as to risk, 61% (1,394) likely involved an infection contracted via homosexual contact among males, 32% (733) via heterosexual contact and 6% (140) via injecting drug use. 1% (17) of newly diagnosed cases concerned children who had been infected via their mothers.

Of the 140 newly diagnosed cases in 2018, who had become infected by way of intravenous drug use, 55 lived in North Rhine-Westphalia and 18 in Berlin. This represents an increase from 2016 (19 and 7 people respectively) and 2017 (36 and 17 people). The increase in North Rhine-Westphalia was mainly limited to the Cologne area. The increases in Cologne and Berlin each concerned the 20 to 40-year-old age group.

While the overall number of HIV first diagnoses reported in Germany fell for the third year in a row, the number of new HIV diagnoses with injecting drug use as the mode of transmission has remained stable in the last three years, with slight fluctuations; the last ten years show a decrease up to 2011, and since then an increase, in particular among men (Figure 8).

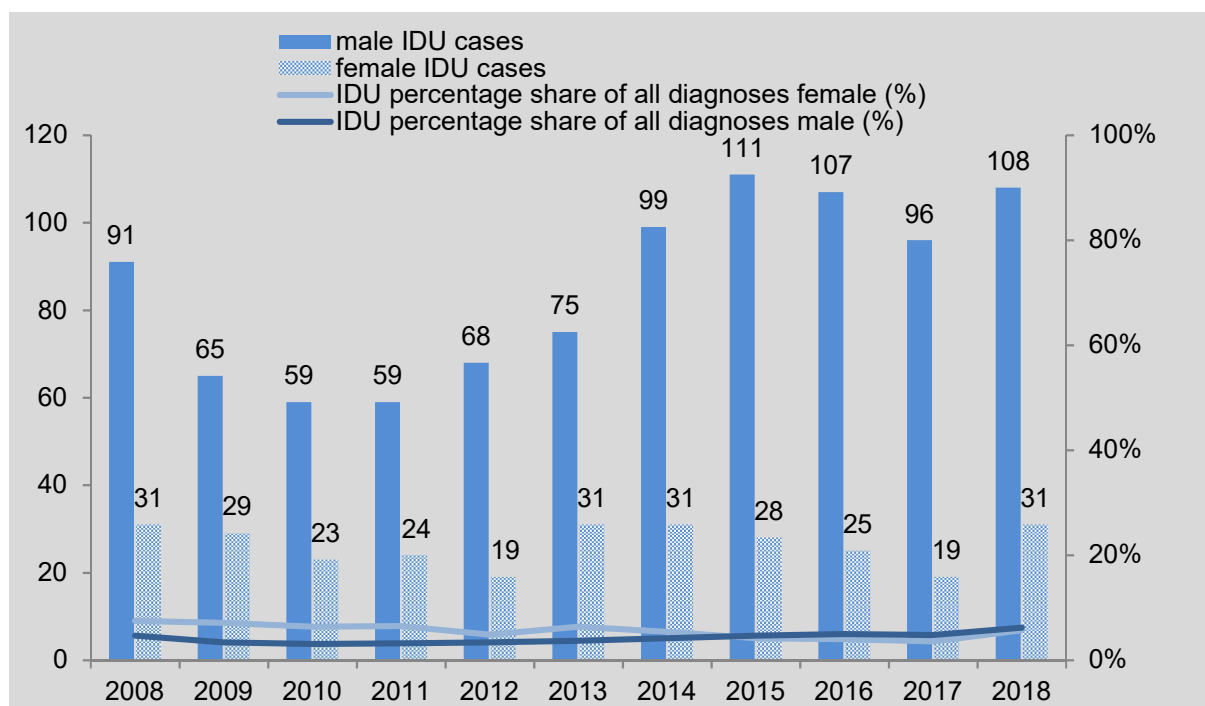


Figure 8 Trend in HIV diagnoses with mode of transmission injecting drug use for men and women

RKI infection epidemiology yearbooks, most recently RKI 2019

The situation for people who inject drugs is characterised by sporadically occurring infections which can then lead, in a number of places, to larger clusters of infections. These then play a significant role due to the relatively small number of infections overall. Following the appearance of such an infection cluster in Munich between 2015 and 2017, similar occurrences now seem to be playing a part in Cologne and possibly also in Berlin. The RKI concludes that more surveys are required in order to better understand the conditions for the occurrence of such clusters and be able to take appropriate prevention measures.

Hepatitis B reporting data

The case definitions for a verified hepatitis B diagnosis were changed in 2015, in order to ensure conformity with the European case definition and keep track of all active, i.e. infected and therefore transmittable, HBV infections, irrespective of the current symptom characteristics. The amended case definition will be described in more detail in 575.2.2. With the introduction of the new case definition, the number of published hepatitis B virus infections increased in 2015, as expected (see Figure 9). In July 2017 an amendment to the IfSG came into force, under which all incidences of laboratory diagnosed hepatitis B must be reported and thus that all active (acute or chronic) infections are captured.

For 2018 there were a total of 4,507 cases of hepatitis B reported according to the reference definition. This represents an increase on previous years (2017: 3,622, 2016: 3,466). The incidence of hepatitis B in Germany was 5.4 cases per 100,000 population (2016: 4.4). It is significantly higher among boys and men (6.7) than among girls and women (4.0). Unlike previous years, the 30 to 39-year-old age group was the most affected for both genders; in earlier years it was younger age groups.

Sufficient information on the probable mode of transmission was only provided for analysis in just 180 (4.0%) of the 4,507 reported cases. In the evaluation, in cases where several modes of transmission were given, these were reduced to the most probable. Shared accommodation with an HBV carrier was the highest mode of transmission (74 cases, 41%), followed by sexual transmission (48 cases, 27%), of which 20 cases were homosexual contact among men, and 28 cases of heterosexual contact. Injecting drug use was recorded in 35 cases (19%).

Between 2001 and 2009 a decline was observed in reported acute hepatitis B infections, which is probably due primarily to an improved level of immunisation through the introduction of general vaccination recommendations for nursing infants in 1995. This trend stagnated, with minor fluctuations, between 2009 and 2014. Since 2015 (change in the case definition), a sharp increase in the numbers of cases can be seen, as shown in Figure 9.

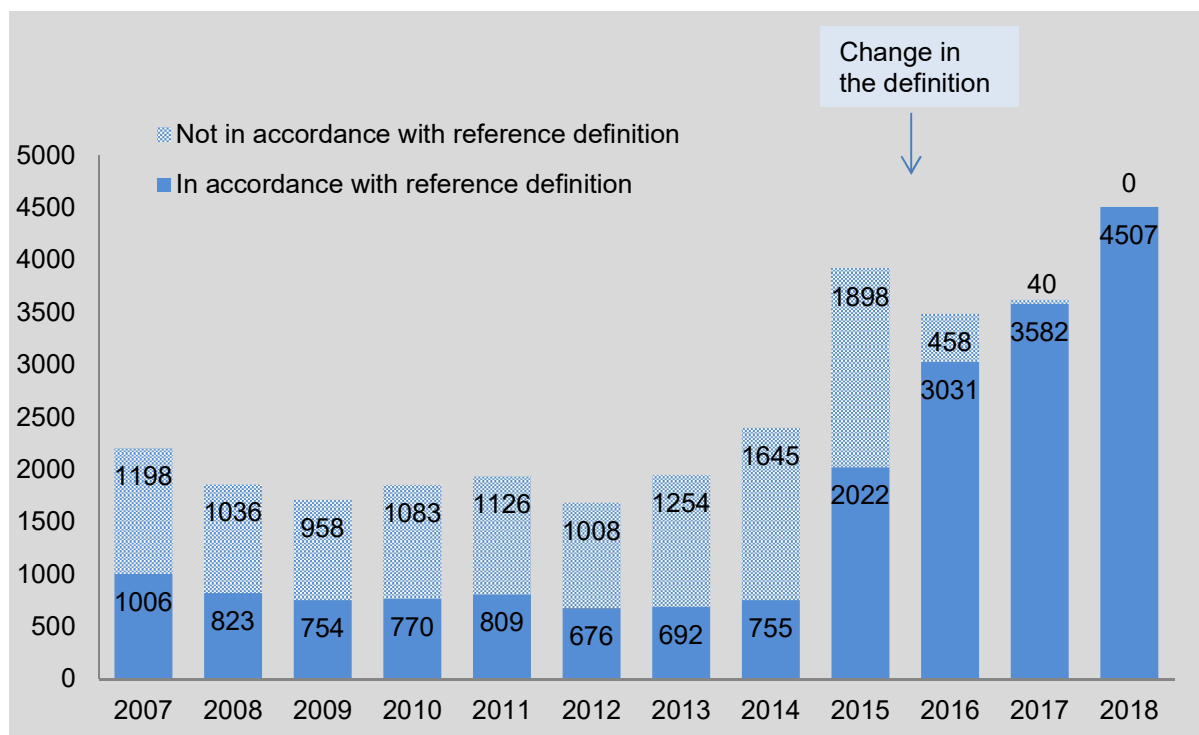


Figure 9 Trend in HBV diagnoses

RKI infection epidemiology yearbooks, most recently RKI 2019

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 for subsequent years. Increased testing of asylum seekers, particularly between 2015 and 2017, could be an explanation for the sharp increase; this conclusion is also supported by the peak frequency among 15 to 19-year-old male youths during these years. In 2018, the peak frequency shifted for both genders to the 30 to 39-year-old age group; 90% of the increase falls into category E, in which unknown chronic cases may be included. This could be an indication that the proportion of tested asylum seekers, who on average tend to be younger, is now playing a smaller role and increased numbers of infections in the general population are being recorded once more. Since July 2017, all proven diagnoses, regardless of the stage of hepatitis B virus infection, must be reported, which may also have contributed to the increase. It is not precisely quantifiable to what extent the increase can be attributed to the factors mentioned above or whether it is an actual increase. This would require further analysis. In addition, it is not possible completely to exclude double counting.

It is strongly recommended that all nurslings, children and adolescents as well as further, defined at-risk groups are consistently vaccinated. In addition to persons who exhibit sexual behaviour with a high risk of infection, this concerns primarily injecting drug users (Robert Koch-Institut (RKI), 2019).

Hepatitis C reporting data

As the majority of new hepatitis C infections are asymptomatic, the reference definition includes all cases with a first-time laboratory detection of an HCV infection, irrespective of the

clinical picture. 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); in 2018, 79% of cases in which sufficient information was available to determine the stage were chronic.

Since the case definition was changed in 2015, only cases with a direct pathogen detection, i.e. an active infection, fulfil the criteria for a laboratory diagnostic confirmation. In July 2017, the amendment to the IfSG came into force, under which all laboratory diagnostic evidence of hepatitis C must be reported, meaning that all active (acute or chronic) infections are captured. Cases for which a positive HCV laboratory test verification are already known, are excluded. A decrease in the reported numbers of cases occurred as expected in 2015 due to the change in case definitions. Through the changes to the case definition and the obligation to report, the numbers before and after 2015 can only be compared to one another to a limited extent; an interpretation of the trends should only be undertaken with great caution. For more information on the methodology see 5.2.2.

For 2018, a total of 5,891 cases of hepatitis C were reported. This represented a national incidence of 7.1 reported diagnoses per 100,000 population. Thus, the reporting incidence in comparison to the previous year increased by 23% (2017: 5.8). As in previous years, boys and men, at 9.7 infections per 100,000 population, are more than twice as frequently infected as girls and women (4.4). The age distribution has also remained stable; as in previous years, the peak incidence for both genders was in the age group 30 to 39-year-olds (men 22.0; women 7.8).

From 2005 onwards, a downward trend in the reporting incidence level and in the absolute numbers of newly diagnosed hepatitis C cases could be seen, a trend which has slowed since 2009. The case numbers increased in 2014, before falling back in 2015 - following the change to the case definition - to the level of the previous five years. Since the second half of 2017, with the IfSG amendment, the case numbers have increased once again. A growing proportion of double and multiple registrations is also conceivable in this context; due to the provisions on deleting personal data, multiple testing of one person by a public health authority cannot always be identified as such.

Figure 10 illustrates information on the most probably mode of transmission. This information is available for 1,284 infections, corresponding to 22% of all registered infections. 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 the hepatitis C discovered, was reported for 1,028 infections (80% of cases with information as to the mode of transmission). The additional specification "injecting drug use in prison" was recorded for 58 of these. Injecting drug use has for many years represented the most common mode of transmission for hepatitis C, by some margin; injecting drug users remain an extremely vulnerable group.

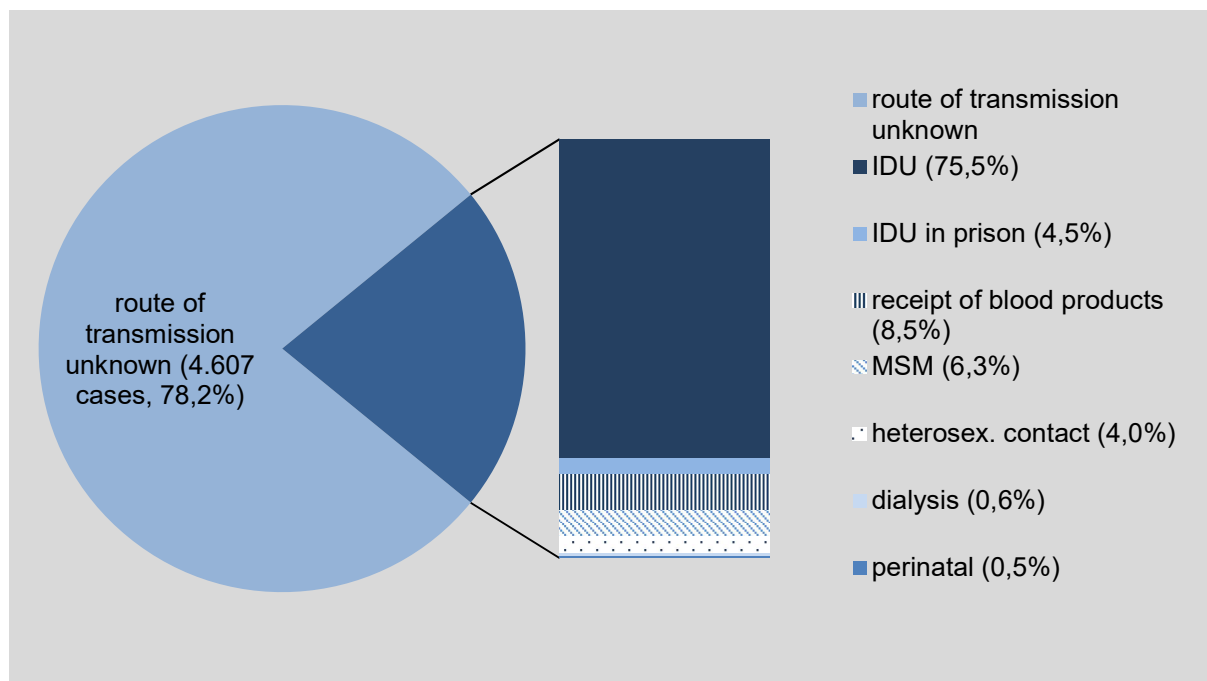


Figure 10 Modes of transmission for HCV diagnoses, 2018

RKI, 2019

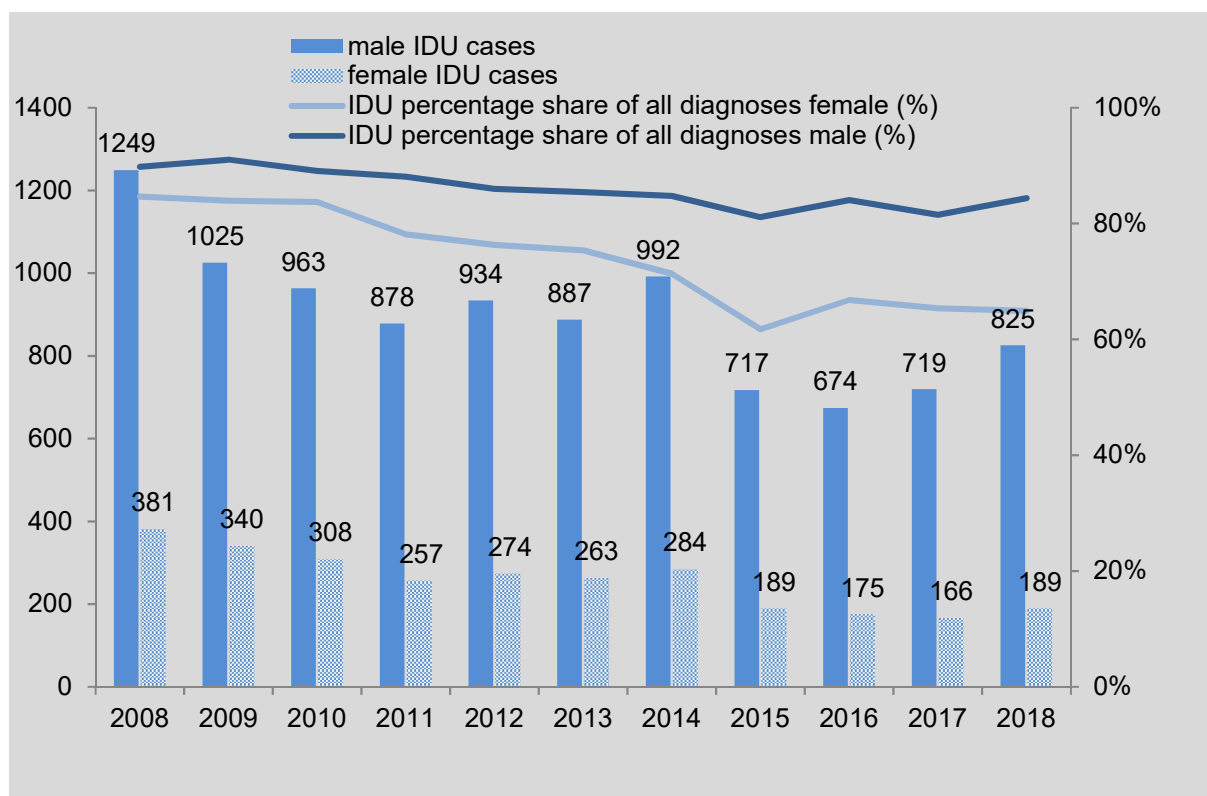


Figure 11 Trend in HCV diagnoses with mode of transmission injecting drug use for men and women

RKI infection epidemiology yearbooks, most recently RKI 2019

As in the previous years, the incidence was markedly higher among men than women (see Figure 11). The fact that men use drugs more frequently than women do and that this is the

most commonly reported mode of transmission, explains, among other things, the considerably higher incidence of new diagnoses of hepatitis C among men. Germany has committed to the WHO goal of eliminating viral hepatitis by 2030. In order to reach this goal, there is a need for further improvement in case detection, prevention and access to treatment, particularly among drug users and other groups with increased prevalence and incidence.

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

There is currently no additional data on drug-related infectious diseases.

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 results of the study were detailed in the 2015 and 2016 Harms and Harm Reduction workbooks (Dammer et al., 2016, Pfeiffer-Gerschel et al., 2015) and are only referred to here as comparative values.

HIV: Data outside the routine monitoring

Annually collected data on the HIV status of opioid users is available in the Hamburg basic documentation on outpatient addiction support (BADO, Neumann-Runde und Martens, 2018) as well as from consumption room users in Frankfurt am Main (FFM) in the Consumption Room Documentation, which covers four consumption rooms in Frankfurt (Stöver und Förster, 2018). Both documentation systems collect self reports from clients. In addition, the 2018 MoSyD scene study is also available (Werse et al., 2019). For the scene study, 150 users in the open drug scene in FFM are surveyed every two years. In the study, 9% of respondents reported that they were HIV positive. 1% reported that they had never been tested (Werse et al., 2019). As this is a mixed clientele, not necessarily in contact with the support system, this data is not compared to the BADO data, nor that of the FFM Consumption Room Documentation.

In 2017, 4,040 people in the BADO data (1,024 women and 3,014 men, 30.5% of the total number of drug users treated) were recorded as stating that they mainly had an opioid problem. The largest proportion of those however reported polytoxic drug use patterns. Of these, information on the HIV status is available for 3,320 people (868 women, 2,452 men). The somatic and psychological comorbidities are set out in more detail in section 1.4.1.

The 2017 FFM documentation relates to 4,649 consumption room users (708 women and 3,941 men). This is not a purely opioid clientele, however around 75% of the persons concerned (also) consume opioids; the use of crack is also widespread. 2,339 people (379 women, 1,960 men), i.e. roughly half of all users, provided HIV test results. The trends from both documentations together are presented in the following.

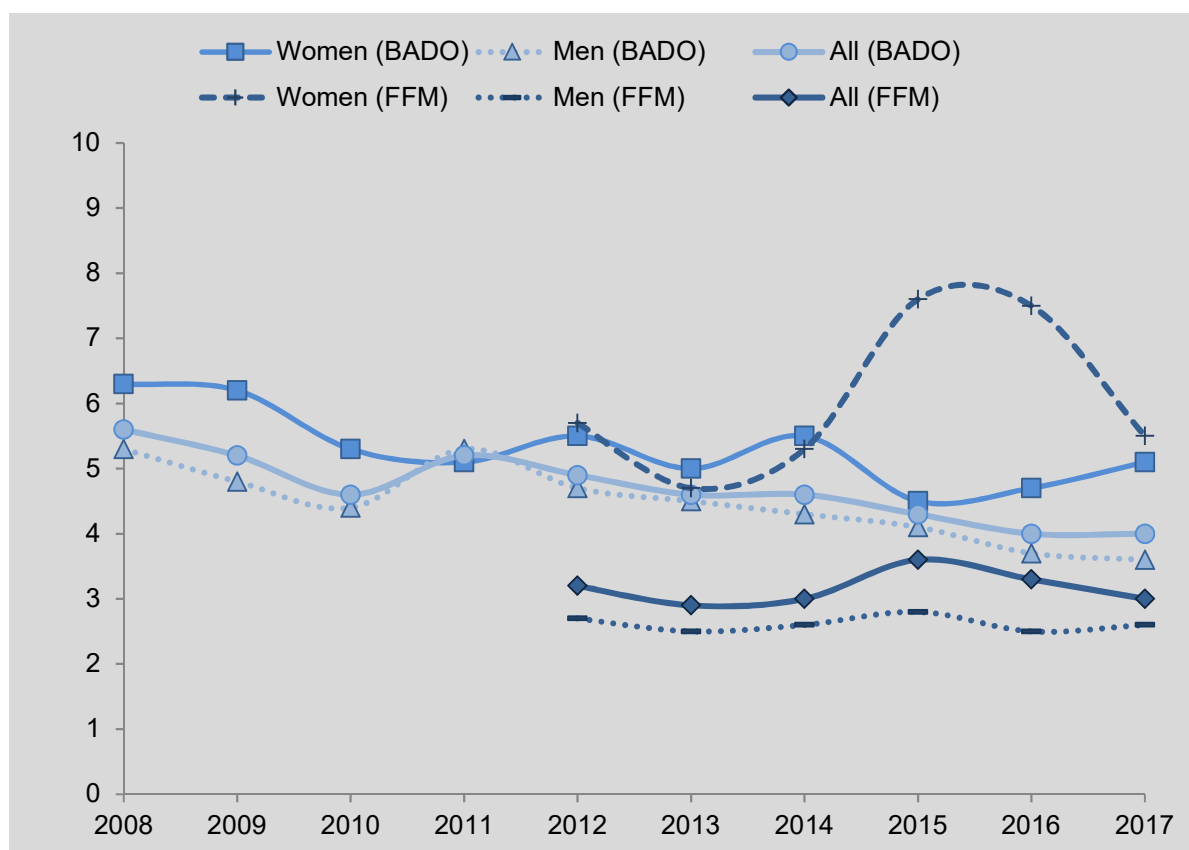


Figure 12 HIV infection rates among opioid users receiving treatment in Hamburg and FFM, 2008 – 2017 (%)

Graph based on the annually produced documentations in Hamburg and FFM (most recently Neumann-Runde and Martens, 2018, Stöver and Förster, 2018).

Data is available for FFM from 2012, from the Hamburger BADO it is possible to show a ten-year trend. As shown in Figure 12, the infection rate in Hamburg has slightly fallen over the years, with slight fluctuations, from 5.6% in 2008 to 4.0% in 2017. The FFM documentation shows, with slight fluctuations, a stable trend of between around 3% and 4% since 2012.

Comparing both cities and genders, male clients in FFM have overall somewhat lower rates than in Hamburg. Over the years, women in both documentations have had a significantly higher infection rate than men. The DRUCK study also showed higher HIV infection rates among women than men (Robert Koch-Institut (RKI), 2016).

The data should only be interpreted very cautiously. The data is provided by way of self reporting, the validity of which is influenced, among other things, by how high the test rate is and how up to date test results are. It is also conceivable that some people do not want to report a test result, for example for fear of being stigmatised or otherwise disadvantaged. In the BADO, 6.3% of the opioid-dependent clientele reported that they had not yet taken an HIV test, in FFM this figure was 9.9%. Information on the date of the test is also available from FFM: 36.8% reported having taken a test in 2017 (i.e. in the documentation year). A further 46.8% gave the test date as 2016. In the FFM documentation, HIV rates were further differentiated by persons who had used a consumption room for the first time in the reporting

year and those who had been using the consumption room for longer than one year. It shows higher HIV rates among continuing users (3.5% vs. 1.9% among new users).

If one summarises the findings from Hamburg and FFM, the resulting average HIV prevalence rate among opioid users ranges from approximately 3% to 4%, within which values for particular subgroups of around 2% (new users) to around 6% (women) were found. The values must be interpreted with caution due to the high number of untested clients. In the open drug scene, the value is significantly higher at 9%. All values overall are in the range of those collected in the DRUCK study (Robert Koch-Institut (RKI), 2016), which recorded HIV prevalence at between 0.0% and 9.1% (depending on the study city). The DRUCK study also showed that women were more frequently infected than man (7% vs. 4%).

Hepatitis C: Data outside the routine monitoring

FFM and Hamburg both have data on hepatitis C infection status (see, for the data sources, the above section on HIV data).

In the 2018 MoSyD scene study, 43% of respondents reported being infected with HCV. This rate has significantly decreased over the last ten years (2008: 65%) (Werse et al., 2019).

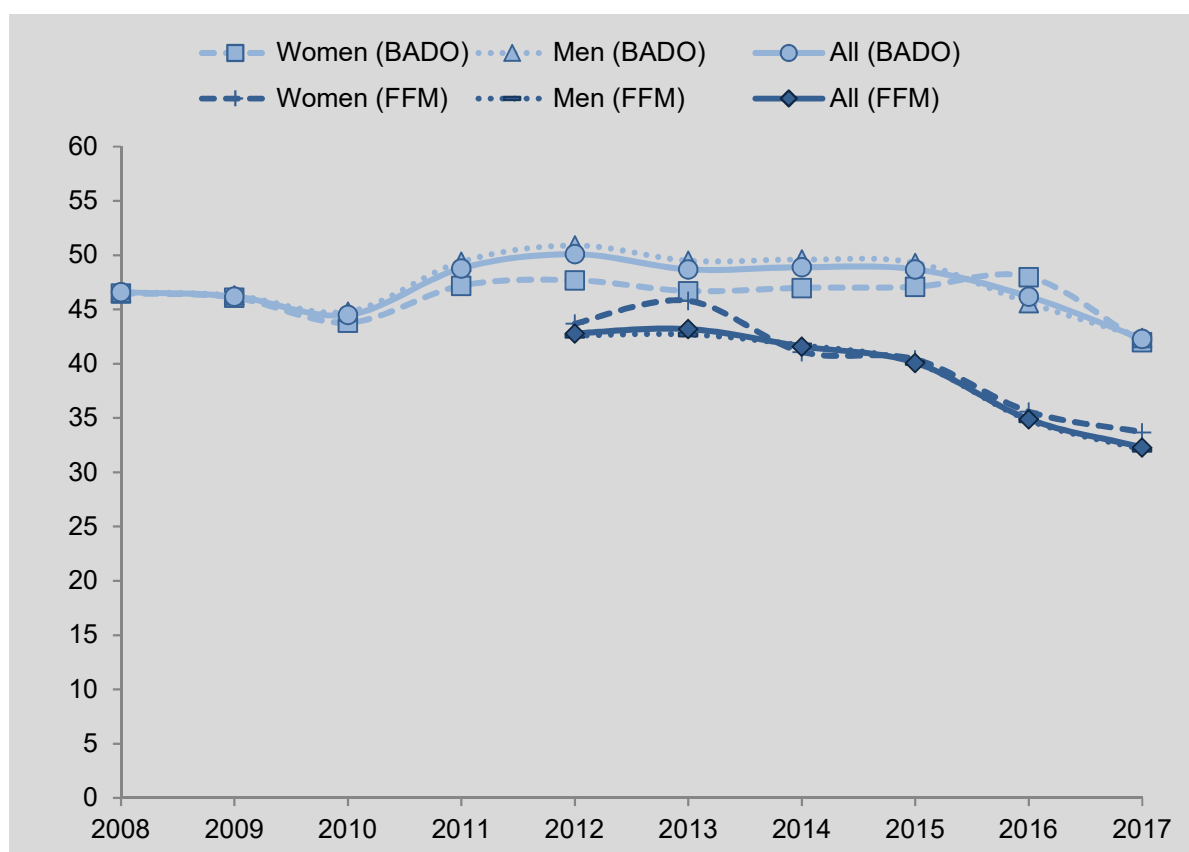


Figure 13 Hepatitis C infection rates among opioid consumers receiving treatment in Hamburg and FFM, 2008 - 2017

Graph based on the annually produced documentations in Hamburg and FFM (most recently Neumann-Runde and Martens, 2018, Stöver and Förster, 2018).

In 2017, the BADO documented information on the HCV status of 3,361 opioid users (877 women, 2,484 men). 42.3% of opioid users reported having an HCV infection. After being

stable at a very high level in recent years, the infection rate has now fallen slightly (see Figure 13). In the 2017 Frankfurt Consumption Room Documentation, 2,714 people provided information on their infection status in relation to HCV and HBV. 32.3% of those reported being infected with HCV, a further 1.4% reported an HCV and HBV co-infection. The reported rates of HCV infections have fallen overall since 2012. The infection rates in both documentation systems do not differ greatly between men and women.

In FFM, 8.3% reported never having been tested, in Hamburg that figure is 5.1%. As already noted for the HIV data, interpreting the data must only be carried out with extreme caution. Far from all clients report test results; furthermore, the validity of self reports is limited (see above). The situation regarding hepatitis C is further complicated by the different options for testing, the details of which are likely rarely known to clients.

If one summarises the HCV data from Hamburg and Frankfurt, the resulting estimate of the prevalence of hepatitis C among opioid users is between a third and a half of all those treated. The interpretation is complicated by the limited validity of the self-reports. The DRUCK study (Robert Koch-Institut (RKI), 2016) produced an overall prevalence over the eight study cities between 2012 and 2014 of 42% to 75%, for a proportion of 17.7% to 52.0% of chronically active infections and 0.9% to 5.4% of new infections. Men were on average more frequently affected than women (42% vs. 38%). Current reliable figures could be obtained within routine reporting by direct testing of clients in the 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.

Hepatitis B: Data outside the routine monitoring

The BADO contains no information on hepatitis B. The Frankfurt Consumption Room Documentation shows a low HBV infection rate of 1.1%, with a further 1.4% HBV and HCV co-infection. In the 2018 MoSyD scene study, 9% of respondents reported being infected with hepatitis B. Against this background, the data is of limited informative value due to the unclear test status and complicated hepatitis B proof.

The DRUCK study showed, at 1.4% of people with a chronic HBV infection in FFM, a similar value to the Consumption Room Documentation, however the latter established a presumed, previously resolved HBV infection⁴ for a further 27%, in the sense of lifetime prevalence. There was a relatively large hepatitis B prevalence range across all study cities, from 4.3% to 32.5%, of which men were more frequently affected than women (on average 26% vs. 22%). The rate of chronically active infections was between 0.3% and 2.5% (Robert Koch-Institut, 2016).

⁴ The authors of the DRUCK study consider in greater detail the problem of differentiating, in terms of differential diagnosis, cured HBV infections from occult infections without current viraemia. For the presentation of the results however, they have chosen the option of treating the cases as cured infections. The presentation in this report is based on that decision, see the detailed final report of the DRUCK study, pp. 80 et seqq.

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

Of all types of use, injecting drug use involves the highest probability of becoming infected with diseases. In the 2017 BADO, 54.8% of opioid users reported having injected drugs at some point in the past. 27.1% reported having shared a syringe with someone at some point and 5.9% reported having done so in the previous 30 days (2016: 60.7%, 30.3% and 5.4% respectively) (Neumann-Runde and Martens, 2018).

In the 2018 Frankfurt MoSyD scene study, 59% of heroin users and 38% of cocaine users reported injecting use. This represents a significant fall in this type of use. In 2008, 87% of heroin users and 94% of cocaine users reported injecting use (Werse et al., 2019). 14% reported using an injection needle two or three times, a further 2% reported using the same needle more than three times. These values have fluctuated in the last 10 years without a trend becoming apparent. 18% reported occasionally sharing paraphernalia for injecting use with others, 4% even reported sharing almost daily. 10% reported occasionally sharing drugs from one needle, one person reported doing this almost daily.

Detailed 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 workbooks in 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 currently be made on the basis of the few remaining data points.

Comorbid somatic and psychological disorders amongst opioid users in Hamburg

In the BADO 2017, information on both the physical and mental health of clients treated is available (Neumann-Runde und Martens, 2018) which cannot claim to be representative, however which does offer an insight into this specific, heavily impacted clientele.

The 4,040 opiate clients often exhibited additional substance-related and non substance-related addictions. On average, 4.2 additional problem areas among opiate clients were

documented (including gambling and eating disorders, not including tobacco). The substances most commonly used in addition to opiates were, as in the previous year, cocaine (67%), cannabis (62%), alcohol (57%), crack (42%) and sedatives (39%).

The estimations by the people providing the care as to the physical health effects suffered by opioid users present a stable picture of significant harm over the years: around one quarter of users (2017: 26%) each year are deemed to be suffering significant or extreme physical effects, with a further third (2017: 33%) classified as suffering from a medium level of health impairment. In 2017, a recognised disability status was documented for 11%. Data on HIV and hepatitis status can be found under section 1.3.3.

For years, the psychological harm suffered by clients has also been consistently classified as high by the persons providing the care, with women having higher values than men. In 2017, 40% of clients were classified as considerably or extremely mentally burdened (women 50%, men 36%). The rate of suicide attempts has also been consistently high for years; 32% of clients reported at least one suicide attempt in the past (women 43%, men 28%), with 15% reporting more than one attempt (women 21%, men 13%).

Ranking and frequency of documented psychological symptoms also remained stable in 2017. The most commonly reported symptoms were depressive mood (22%), nervousness/restlessness (19%) and anxiety/phobias (15%). The psychological symptoms and the estimation of the psychological impact are a clear indication that a majority of the 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. 40% of clients take medically prescribed psychotropic drugs (women 46%, men 34%). It was documented that 14% of the opioid client group never or only rarely availed themselves of necessary medical care and 31% only occasionally did so.

In the MoSyD scene study (Werse et al., 2019) almost half of respondents (45%) reported “depression” when asked about their health problems. The second most frequent issue was toothache (37%), followed by lung or bronchia problems (27%), abscesses (20%) and cardiovascular/circulatory problems (19%). Six of the fourteen people infected with HIV reported AIDS-related illnesses. Respondents reported, on average, 1.7 symptoms. 57% assess their own health as “good” or “very good”, 13% as bad, 7% as very bad. 79% have health insurance.

Effects of methamphetamine use during pregnancy on newborns

A study at the Dresden University Clinic reported data from 164 women and their newborn children between 2007 and 2016 (Dinger et al., 2018). The newborn babies were admitted as inpatients and treated straight after birth on the basis of their mothers’ drug use. Methamphetamine use in Germany is very unevenly distributed; Saxony is a *Land* with a relatively high level. Accordingly, the number of newborns in the *Land*, who were admitted on an inpatient basis due to prenatal exposure to methamphetamine, increased significantly, from under 30 cases in 2010 to over 150 cases in 2014, and remained relatively stable at this high level since then.

The study reports a rate of premature births more than four times higher than that in the general population of the *Land* (32% vs. 7.4%). Furthermore, the newborns are significantly more frequently born under-weight (24.2%) and with microcephaly (22.1%). Pathological findings and abnormalities i.a. on the central nervous system, heart and urogenital system are also described.

The study finds that the observable symptoms of newborns are significantly different from those of opioid withdrawal and are rather unspecific. In 25 to 75% of cases, tremors, irritability and difficulties feeding or weak feeding are seen. In fewer than 25% of cases the following symptoms are observed: hyperactivity, drowsiness, noticeably shrill crying, muscular hypotension, muscular hypertension, excessive sucking, sweating, tremors/myoclonus and cramps.

Among those newborns who tested positive for methamphetamine in the urine directly after being born, in 25 to 27% of cases drowsiness, weak feeding, muscular hypotension and restlessness or irritability were found. In fewer than 25% of cases, hyperexcitability, muscular hypertension, excessive sucking, noticeably shrill crying, tremors/myoclonus and cramps occurred.

The authors note that it is unclear whether these are withdrawal symptoms or the toxic effects of maternal use. The different concomitant use and use quantities could also contribute to the fact that the symptoms differ. Due to the few specific symptoms, there is a danger of the causes of the symptoms being overlooked in practice and thus that families' need for assistance is not correctly recognised. The families' significantly higher need for assistance is addressed in Dresden through the project "Mama denk an mich" (Mama, think of me), which was presented in the REITOX Report 2016 and is still running.

CaSCH-T1 – pilot project on illegal substance use during pregnancy and its consequences for mother and child

The pilot project "CaSCH-T1" (September 2018 to April 2019) had the aim of determining the frequency, consequences and treatment of women's substance use during pregnancy. Systematic literature research was carried out. This highlighted that only seven methodologically acceptable publications on the topic exist. No representative numbers on the use of illegal substances among pregnant women and mothers are available for Germany; the data originated in the main from the USA. The prevalence of illegal substance use among pregnant women is unclear and ranges from 2 to 32%. Some papers found a connection between substance use and premature births, low birth weight and an increased risk of anaemia, precipitate labour, newborns small for gestational age, admission to neonatal intensive care and reduced aortic diameter. Not all studies consistently showed these findings on the consequences of prenatal and perinatal substance use. No review papers exist on the treatment of chronic cannabis use during pregnancy.

Parallel to the research, a national, non-interventional, anonymous online survey both of pregnant women and mothers as well as of medical personnel was carried out. 1503 instead of the planned 200 questionnaires were completed by pregnant women and mothers. 13%

reported substance use during pregnancy (69% nicotine, 31% alcohol, 22% cannabis, 2% opiates, 1.5% amphetamine and 1% benzodiazepine). Only 11 of the 45 questionnaires completed by medical personnel were by doctors.

The study concludes that the publicised data on prevalence and the consequences of substance use during pregnancy is not sufficient for evidence-based statements. The authors assess the low number of doctors participating, in spite of the intensive recruitment efforts, as “alarming” in view of the identified risks posed by psychotropic substances for mother and child (Dr. Eva Hoch, Klinik und Poliklinik für Psychiatrie und Psychotherapie des Klinikums der Universität München, 2019, personal communication).

Health and social problems in connection with NPS use

In one study carried out in six European countries - including Germany - the connection between the consumption of different categories of NPS with health problems was investigated (Van Hout et al., 2017). The self reports collected from 3,023 people show that the consumption of dissociatives and synthetic cannabinoids is accompanied by the highest degree of reported side effects, although side effects were also frequently reported for other NPS. Injection, the method of use with the highest risk of negative effects by far, was more frequently associated with the consumption of herb mixtures, synthetic cannabinoids (in pure form) and dissociatives. The study distinguishes three user groups: those who mainly use at parties (“party group”), people who engage with the subject of NPS mainly in online forums (“online group”) and people from marginalised groups (“marginalised group”). The marginalised group reported significantly higher rates of acute unpleasant side effects than the online group. The difference to the party group in contrast was not significant. Medium and long-term effects, as well as social problems, were however significantly more frequently reported by the marginalised group than by the other two groups. The type of use injection was also more widespread among the marginalised users, whilst playing no role in the other groups.

Health status of long-term substitution patients

A study by Zippel-Schultz et al. (2019) examined the state of health of patients who have undergone substitution treatment for more than five years. Originally, 130 people from a total of 12 practices were included, and their substitution data and state of health recorded over a two-year period. The retention rate over the full two years amounted to 82.3%, with patients showing on average a very high adherence to therapy with no to few absences.

The reported health data related to 96 patients (33 women, 63 men) from 11 practices, for which data is available for the entire observation period. Significant health problems are revealed: 84.3% suffered from at least one further diagnosed somatic or psychological illness. 15.8% of the men and 18.2% of the women had five or more additional diagnoses.

With regards to purely physical illnesses, a significant proportion of patients were suffering from severe physically burdens with 22.8% of patients suffering from at least three somatic disorders. The most frequent single diagnosis was for hepatitis C; 37.5% suffered from one chronic HCV infection.

Over half (57.3%) of patients were suffering from at least one comorbid psychological disorder, 22.9% suffered from more than one. Within the psychological disorders, the superordinate categories of affective disorders (17.7%) and anxiety disorders (10.4%) were the most frequent.

Concomitant use of other substances was recorded mainly for cannabis, alcohol and benzodiazepine. 53% of patients consumed cannabis, among whom 21% consumed regularly (at least ten days per month during the observation period). 39% consumed alcohol at the start of the observation period, among whom 10% exhibited an alcohol-related disorder with risky consumption. Two years later 35% were still consuming alcohol; the proportion of those with risky consumption remained however at 10%. Benzodiazepine was consumed by 25%, namely by 24 people. Of those, 13 people were prescribed the medication at least once by a doctor during the study period. Cocaine was consumed by 7% of participants at least once during the study period. Heroin consumption was very rarely recorded. The drug screenings carried out confirmed the participants' self-reports. Around one quarter of patients had absolutely no, or only very low amounts of, additional consumption of legal or illegal substances. These people had fewer psychosocial problems and received lower doses of the substitution drug.

Looking at the social situation, a stable living situation was found in over 95% of cases (alone or with partner/family). 28% of people were employed in jobs subject to social insurance contributions. One of the 130 people was imprisoned within the two years. 3.1% of long-term patients finished substitution therapy in a regular manner within the two years. The authors assessed the results as a base stabilisation of patients treated. Both the problems and positive aspects of lifestyle over the two years were broadly stable. Pme subgroup is classified as very successful in terms of participation. For the majority of patients, it was concluded that the substitution treatment should not be time limited, both on the grounds of the chronic nature of the opioid dependence as well as the variety of psychological and physical comorbidities and limitations in social participation.

1.5 Harm reduction interventions (T1.5)

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

Harm reduction measures represent one of the four levels of the National Strategy on Drug and Addiction Policy (Die Drogenbeauftragte der Bundesregierung, 2012)⁵. 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, including substitution (c.f. 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.

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 seeks to reduce HIV, HBV, HCV and other sexually transmitted infections substantially by 2030 (BMG and Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung, 2016). Injecting drug users are explicitly mentioned 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 base⁶.

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. The recommendations concern low-threshold drug support, outpatient addiction support counselling and treatment facilities, substitution treatment, practice based doctors and correctional institutions. The detailed recommendations can be found in the final report of the DRUCK study (RKI, 2016).

Due to Germany's federal structure, political decisions at *Land* and municipal level also play an essential role in harm reduction interventions. For example, the possibility of opening drug consumption rooms is governed by *Land* regulations. In the spring of 2019, Baden-

⁵The strategy can also be accessed online, see http://www.drogenbeauftragte.de/fileadmin/dateien-dba/Drogenbeauftragte/2_Themen/1_Drogenpolitik/Nationale_Strategie_Druckfassung-Dt.pdf [accessed: 29 Jul. 2019].

⁶ The strategy is available online at http://www.bundesgesundheitsministerium.de/fileadmin/Dateien/Publikationen/Praevention/Broschueren/Strategie_BIS_2030_HIV_HEP_STI.pdf [accessed: 27 Aug. 2018].

Württemberg became the seventh German *Land* to adopt such a regulation; more information on the corresponding plans is provided under 3.3.3. The government of the city-state of Berlin already resolved back in 2018, to review, in the scope of a concept to reduce the associated risks of drug use, the feasibility of a drug checking project in 2018, and possibly to introduce it. The corresponding financial means were made available to this end in the 2018/19 double budget. This made Berlin the first *Land* to allow drug checking and even to fund it itself. More on the current status of the project planning can be found under 3.3.4.

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 on offer for drug users as well as within the general health care system. 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 individual 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 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 funding from the Federal Government and the *Laender*, with a proportion of own funds (for example financed through donations), as well as various hybrid forms.

The availability of harm reducing measures varies widely in Germany. Experts rate them as being much better in cities and heavily populated regions than in rural areas. This has been confirmed, in relation to the provision of consumption apparatus, according to the findings of a new survey (see 1.5.3). Provision in prisons is particularly poor (see the Prison workbook). As detailed in 1.5.1, the availability is also determined by the political circumstances in the *Land* or municipality; this is especially relevant for the provision of drug consumption rooms, which currently operate in six *Laender* and will in the near future extend to a seventh.

1.5.3 Provision of harm reduction services (T1.5.3)

Provision of opportunities for testing for infectious diseases

There is no systematic, Germany-wide screening for infectious diseases. For hepatitis, the introduction of screening for the general population and in particular for at-risk groups has long been called for by the German Liver Foundation⁷.

⁷ See https://www.deutsche-leberstiftung.de/downloads/pressearchiv/dls_presse_14_welt-hepatitis-tag_final [accessed: 12 Aug. 2019].

The testing possibilities within low-threshold facilities vary widely and are often dependent on financial circumstances; there is no national data on services, even if it can be assumed that testing is not rare at least for HIV, HBV and HCV. In principle, low-threshold testing services are certainly utilised. This was shown both in the DRUCK study and the “TEST IT” project, the results of which were set out in the last years’ workbooks.

Some low-threshold facilities cooperate with public health authorities for such testing. In the BADO and Frankfurt Consumption Room Documentation, usually around 90% of respondents state that they have been tested for these infections (see 1.3.3). However, only around one third of respondents in the Frankfurt Consumption Room Documentation state that their HIV test is up to date, hence it cannot be assumed that there is sufficient testing frequency. In the case of inpatient treatment, there is frequently the possibility to be tested for various infectious diseases. Generally, any person in Germany can be tested for HIV anonymously and free of charge through their public health authority. This service does not exist for hepatitis infections, however.

The Federal Centre for Health Education (Bundeszentrale für gesundheitliche Aufklärung, BZgA), in collaboration with the German Aids Service Organisation (Deutsche Aidshilfe, DAH) and the RKI as well as with the support of the Association of Private Health Insurers (Verband der Privaten Krankenversicherung e.V., PKV) has carried out the project “HIV? Hepatitis? I CHECK that!” in four *Laender*, to improve testing and treatment. The project was a counselling and testing service, enabling low-threshold access to free, anonymous HIV and HCV tests for drug using people⁸. The results have not yet been published and will be reported on next year. Self-tests for HIV have been freely available to purchase in Germany since September 2018; for more on this see 3.3.1.

Provision of 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 German Narcotic Drugs Act (Betäubungsmittelgesetz, BtMG) and is also practised by many facilities.

Data on the issuing of syringes is currently for the most part only documented in Germany by individual facilities in their respective annual reports. North Rhine-Westphalia (NRW) is the only *Land* which is not a city state where a regular survey is conducted on a local level on the distribution of disposable syringes by the AIDS service. The figures will be reported in section 1.5.4. The DAH provides a website⁹ containing an overview of the locations of syringe vending machines it is aware of. Issuing syringes in low-threshold and other facilities is not documented

⁸ <https://www.drogenbeauftragte.de/presse/projekte-und-schirmherrschaften/projekte-des-monats/2018/hiv-hepatitis-das-check-ich.html?L=0> [accessed: 28 Aug. 2019].

⁹ <http://www.spritzenautomaten.de> [accessed: 13 Aug. 2019].

on the website, however. According to the website, syringe vending machines are only available at all in nine *Laender*; seven *Laender* do not even have a single documented syringe vending machine. Of the 176 syringe vending machines listed by the DAH, over 100 are located in North Rhine-Westphalia (NRW) and 20 in Berlin. From this it is clear that the distribution of locations for the whole of Germany still cannot be described as comprehensive coverage by any means. Nonetheless, it must be assumed that the documentation of the syringe vending machines in the other *Laender* is incomplete, which could be a factor contributing to a distortion of data in favour of NRW and Berlin. Therefore, the current data really cannot be described as an exhaustive count of all syringe vending machines in Germany.

Record of facilities which issue consumption apparatus in Germany

In 2019, the DBDD started a project, in collaboration with the RKI and DAH, to record all low-threshold facilities dispensing safer use articles, either via syringe vending machines or directly within the projects. Dispensing via pharmacies was not recorded. In future, the intention is to capture data every two years on which locations dispense consumption apparatus. In addition, a questionnaire will ask what type of consumption apparatus is being dispensed, and how frequently. The methodology of the project is described in 5.2.3.

475 dispensing centres were researched in total, distributed across around a third of German administrative districts and independent cities. Around half of the German population lives in these areas. A striking city-country disparity was revealed that coincides with assessments expressed by experts for years: In 62.6% of independent cities (these are, overall, relatively large cities with a high number of inhabitants), in which 89.2% of people living in independent cities live, at least one syringe dispensing centre was found. In contrast, dispensing facilities could only be found in 24.1% of the administrative districts (in which 34.5% of people registered in administrative districts live). This provision represents a minimum estimate, because despite the detailed research it is possible that some dispensing centres were not found. However, the results clearly point to a very limited availability of sterile consumption apparatus in rural areas. At the time of reporting, not enough respondents had answered the questionnaire to be able to report on the quantity and type of consumption apparatus that had been dispensed. This will be reported next year.

Evaluation of the supply of consumption apparatus via vending machines for drug users in NRW

A scientific evaluation of the supply of consumption apparatus via vending machine in NRW is available (Deimel et al., 2018). That evaluation showed that vending machine supply in cities is less important and depending on the town only 1.2% to 8.3% of all syringes dispensed are distributed via vending machine. In rural areas in contrast, in which there are fewer facilities for drug users, provision via vending machines accounted for 90.3% to 100% of all dispensing. Even in NRW, however, which according to all available data sources has a very high density of syringe vending machines when compared nationally, syringe vending machines are not available in all districts. The authors conclude that precise needs-based planning and nationwide expansion is required, particularly in rural areas. The sometimes significant

expense is named as a problem, involved in the application for and operation of the vending machines for the funding entity. The authors suggest joint financing of the costs by *Land* and/or municipality, in order to be able to expand and constantly maintain the services (Deimel et al., 2018).

Safer-use services in prison

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 180 German prisons (Destatis, 2018). In light of this, the DAH started a campaign back in 2013 to improve the situation of drug users in prisons (DAH, 2013). The initiative is supported by the Association of Welfare Charities (Paritätische Wohlfahrtsverband), the German Association of Parents and Relatives for Acceptance-Oriented Drug Work (Bundesarbeitsgemeinschaft der Eltern und Angehörigen für akzeptierende Drogenarbeit) and by akzept e.V. In addition, the DAH had a handbook by the United Nations Office on Drugs and Crime (UNODC) for the introduction and implementation of syringe exchange programmes in prison translated; the publication is available online¹⁰ (DAH, 2015).

Emergency training and naloxone take-home programme

In Germany, there were 1,276 drug-related deaths in the reporting year 2018. Of these, almost half were due to monodrug or polydrug opioid overdoses (BKA 2019, data delivery). This proportion has fallen in recent years, however opioid poisoning remains the most frequent cause of death among drug-related deaths by some margin. The opioid 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. Therefore the WHO, EMCDDA and the Federal Government Commissioner on Narcotic Drugs recommend dispensing naloxone to people who are frequently present when opioids are used (Die Drogenbeauftragte der Bundesregierung, 2014; European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), 2015; World Health Organization (WHO), 2014). This means opioid users themselves, but also friends and family.

Despite these recommendations, the dispensing of naloxone to laypeople is only sporadically practised in Germany, although it is currently being significantly expanded, both through a *Land* project and by engaging individual funding bodies (see also 3.3.2). It is made more difficult by the question of financing and is not integrated into regular healthcare. NGOs are making efforts to clarify and improve the legal situation for naloxone programmes in order to break down barriers to appropriate treatment and thus enable nationwide availability in the future. At the time of reporting, programmes were known in 18 cities, which are either already running or will start in 2019. Their geographic distribution is illustrated in Figure 14. This shows a clear focus of care in the west and south of Germany.

¹⁰ <https://www.aidshilfe.de/shop/pdf/7376> [accessed: 13 Aug. 2019].



Figure 14 Naloxone projects in 2019

Condrops e.V., poster: "Save lives with naloxone! We're on board!" own modification and addition of three cities (Bielefeld, Kehl and Constance) according to information from Condrops e.V. 2019, personal communication.

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, where participants are willing and provided a prescription has been given by a doctor, the emergency kits are issued. They contain, in addition to the medicinal drugs, the administration utensils and often single-use gloves and resuscitation face shields. Two manuals on the implementation of the naloxone projects are available online¹¹. The latest developments in this area are reported in more detail in this workbook under 3.3.2.

¹¹ <http://www.akzept.org/uploads2013/NaloxonBroschuere1605.pdf> and <http://www.akzept.org/uploads1516/NaloxonJESnrw17.pdf> [accessed: 2 Sep. 2019].

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 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 BtMG, which stipulates the minimum statutory requirements for such facilities, the governments of the *Laender* may pass ordinances governing the issuing of licences to operate drug consumption rooms.

Currently, there are a total of 22 drug consumption rooms across 15 cities in six German *Laender* (Berlin, Hamburg, Hesse, Lower Saxony, North Rhine-Westphalia and Saarland) as well as two mobile drug consumption rooms in Berlin¹². In NRW and Saarland, the use of drug consumption rooms is now allowed for substituting clients; a first progress report with an overall positive evaluation is available from the Essen consumption room and was summarised in the 2017 workbook. Also, the results from a survey of drug consumption rooms carried out by mudra e.V. on services offered, patterns of use and user demographics were presented in detail in the 2017 workbook (Dammer et al., 2018).

New developments in the provision of drug consumption rooms in one other *Land* will be presented in section 3.3.3.

A regular survey on the utilisation and clientele of consumption rooms is now available for a large proportion of facilities which publish their annual reports on the internet. Data from Frankfurt am Main, NRW (10 cities) and Saarbrücken will be reported below, thus covering 12 of the 15 cities. In each case, the most recent reports available will be considered, which means in part different data years will be used. In summary, one can say that the most important substances documented in the consumption rooms are opioids (above all heroin), crack and cocaine, which are frequently consumed in combination. There is an overarching trend towards less injecting use. The most common alternative type of use is inhalation; nasal use is reported to a lesser extent.

Consumption rooms in Frankfurt am Main

In the current Frankfurt Consumption Room Documentation (Stöver und Förster, 2018), data from 2017 is reported from the four consumption rooms in the city. All four offer places for

¹² <https://www.drogenkonsumraum.net/> [accessed: 21 Aug. 2019].

injecting use, three of them also have places available for inhalation. Opening times vary; one of the consumption rooms is closed at week-ends.

In 2017, a total of 191,015 instances of use were recorded, with 240,582 substances, around 5% more instances of use than the previous year. 4,649 people used the consumption rooms, of which 84.8% were male and 15.2% female. The average age was around 39 years old and has therefore increased by six years since 2006 (33 years old). The number of users has remained stable in recent years with slight fluctuations, the number of new users amounted to 1,192 people in 2017 and 25.7% of all users.

81.5% of the documented incidences of use involved injecting use while 18.5% did not. The proportion of non-injecting instances of use has significantly increased since 2011 (3%), including an increase of 10.5% between 2015 and 2017 alone. Non-injecting instances of use are for the most part inhalative use. The authors attribute the even sharper increase in the last two years to the set up of a room for inhalative use in 2016.

In many incidences of use, more than one substance was consumed. As in previous years, heroin and crack were the dominant substances used, as well as a mixture of the two. Cocaine and other substances used account for less than 3% of the incidences of use.

In 2017, the documentation contained information on emergencies for the first time. 322 emergencies were documented, corresponding to a proportion of 0.17% of all instances of use. In 30% of the cases, assistance was provided purely by the consumption room staff, in 70% of the cases emergency doctors were called, whereby around 15% of the time hospitalisation was required. Measures frequently carried out by staff included monitoring vital functions (79.7%), artificial respiration (70.1%) and stabilising the circulatory system (48.8%). Naloxone was administered in 39.5% of cases, in 30.6% of cases oxygen was provided.

Consumption rooms in North Rhine-Westphalia

In NRW in 2018 there were drug consumption rooms in ten cities, with a total of 109 consumption places, with the number varying between three and 23, depending on city (Landesstelle Sucht NRW, 2019). 53 of these places are specifically intended for inhalation and have been expanded in recent years (2017: 39 places). 51 of these places are specifically for inhalation; six places are flexible, for inhaled or injecting use. One drug consumption room offers no inhalation places. The opening times vary between 20 and 73.5 hours per week; some consumption rooms are closed at weekends and/or public holidays.

There were a total of 271,602 instances of uses recorded in 2018. This number has increased sharply over the last six years, with slight fluctuations (2013: 191,759 instances). The proportion of instances of use by females has remained quite stable over the years, sitting at 12.5% in 2018. The average age of users has increased overall over the last four years.

Among substances consumed, opioids, cocaine and a mixture of these substances predominated. A shift has been seen in recent years among both genders to somewhat less opioid consumption and somewhat more cocaine consumption.

Inhaled use is today somewhat more frequently documented than injecting use (52% versus 44.6%). As inhaled use is less damaging to health, this development must be seen as positive. Nasal consumption is significantly rarer (around 3% for both genders), oral consumption plays no role.

There were 358 drug-related emergencies, whereby first aid was administered in all cases. The proportion of emergencies within all instances of use has thus slightly fallen once more, to 0.13% (2015: 0.19%). In seven cases, a drug-related death was prevented through immediate resuscitation measures; emergency medical treatment was required in 164 cases, resulting in the patient being transferred to hospital in 118 cases. Moreover, further support services are offered in the drug consumption rooms. Medical support was provided in 24,335 cases, for example vaccinations and wound care. Medical aid was therefore provided significantly more frequently than in 2015 (15,156 cases). The number of psychosocial interventions (e.g. counselling, crisis intervention etc.) also increased from 11,686 cases in 2011 to 15,284 in 2018. In contrast, safer use counselling was carried out less than in previous years (15,470 cases). The number of counselling sessions for known substitution clients increased however, the content of which overlaps with “general” safer use counselling, to 4,336 cases.

Referral to further support services took place in 18,573 cases in 2018; this number has remained at the level of the previous year, although before that it significantly increased (2015: 10,099 cases). 2018 was the first year where the most frequent type of referral was to social support (5,717 cases), followed by referral to drug therapy outpatient clinics (5,291), previously the most frequent type. In addition, there were referrals to drug counselling centres (2,634) and further medical support (1,738). Clients were placed directly in withdrawal treatment in 1,846 cases, and in 1,347 cases into substitution treatment (Landesstelle Sucht NRW, 2019).

Consumption room in Saarbrücken

In 2018 in Saarbrücken, 42,792 instances of use were documented (Drogenhilfezentrum der Drogenhilfe Saarbrücken gGmbH, 2019). The consumption of a mixture of heroin and cocaine accounted for the largest proportion of uses of the consumption room (43.4%), followed by opioids alone (39.6%) and cocaine and its derivatives alone (17.1%). Consumption of amphetamine and amphetamine derivatives was of minor significance. Injection is by far the predominant type of use (71.8%). Nasal and inhalative consumption are roughly equal (14.0% and 14.2%).

Measures to prepare inmates for release from prison

Within the Bavarian naloxone pilot project, naloxone training of inmates was carried out for the first time in 2019. Detailed information on this and on other measures for the reintegration of drug users and for the prevention of overdoses after release from prison can be found in this year's Prison workbook.

Treatment of hepatitis C among drug users

The new generation of HCV medicines have increased the chances of recovery from an HCV infection significantly and show a considerably improved side effect profile meaning 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 2015 and 2016. A study by Christensen et al. (2018) concluded that the efficacy of HCV treatment among patients in opioid substitution treatment, including people with current and/or previous drug use as well as people with no drug use, is comparably very high with a success rate of at least 85% for all groups.

The high price of the new drugs, which has been and still is vehemently criticised by many treatment providers and experts, has not led to the expected "explosion" in treatment costs. In 2015 (right after its introduction), the costs were €1.4bn., with around 22,000 people treated. Costs since then have fallen, mainly through the price regulation provided for in the Pharmaceutical Market Restructuring Act (Arzneimittelmarktneuordnungsgesetz, AMNOG), but also through the reduced number of people treated, and amounted to 600 million euros in 2017. The reduction in the number of people treated was explained by the Central Research Institute for SHI Healthcare (Zentralinstitut für die kassenärztliche Versorgung, ZI), by the fact that "it has been possible to permanently cure increasing numbers of patients" (Ärztezeitung, 2018). With an estimated 300,000 infected people in Germany (BMG and Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung, 2016), the falling number of people treated is hardly due to a lack of patients, however¹³.

In its latest recommendations on treatment for hepatitis C, the bng cites intermittent drug use (as an indicator for increased risk of transmission) as a reason for initiating treatment as early as possible. In addition, it specifically points out that substitution therapy is not a reason for refusing treatment, as the therapy outcomes are also very good for this group of patients and the re-infection rates to date are acceptable, even if concomitant use is present. For this group however, it is highly recommended (just as it is for gay men with an HIV co-infection) to carry out annual HCV-RNA follow-up tests, as these groups exhibit an increased risk of re-infection, according to several studies (Berufsverband niedergelassener Gastroenterologen e.V., 2017).

It is unknown how many drug users, who make up the largest group of those with HCV in Germany, have actually received new medicinal drugs and accordingly were able to benefit from the described innovations. Prior to the introduction of the new medication, there were findings showing that this group is much less widely treated than infected persons with a different risk of infection. This is due to, amongst other things, a widespread negative attitude among doctors towards drug users (Gölz, 2014). Whether this attitude has changed with the

¹³ The German Professional Association of Gastroenterologists in Private Practice (Berufsverband Niedergelassener Gastroenterologen e.V., bng) points out that the figure of 300,000 infected people could represent an overestimation (Berufsverband niedergelassener Gastroenterologen e.V., 2017). However, even if the number was halved (thus representing a very conservative estimate), this would still not mean that all or even nearly all infected persons in Germany were being treated.

introduction of the new medicines is unclear; those representing drug users' interests, however, report that the treatment of HCV, even among substituting patients, is seldom a matter of focus¹⁴. The ECHO study also recommended further expanding HCV treatment among substituting patients. The implementation of both the BIS-2030 strategy and the recommendations from the DRUCK study could significantly further improve the health status of injecting drug users.

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

Since there is no nationwide data collected on the number of syringes issued, no national trends can be reported in this area. Data from the first national survey, conducted in a collaboration between the DBDD, the RKI and the DAH, is not yet available. A regular survey is only available for North Rhine-Westphalia (AIDS Hilfe NRW e.V., 2019). No conclusions can be drawn for the whole country based on the trend from one *Land*.

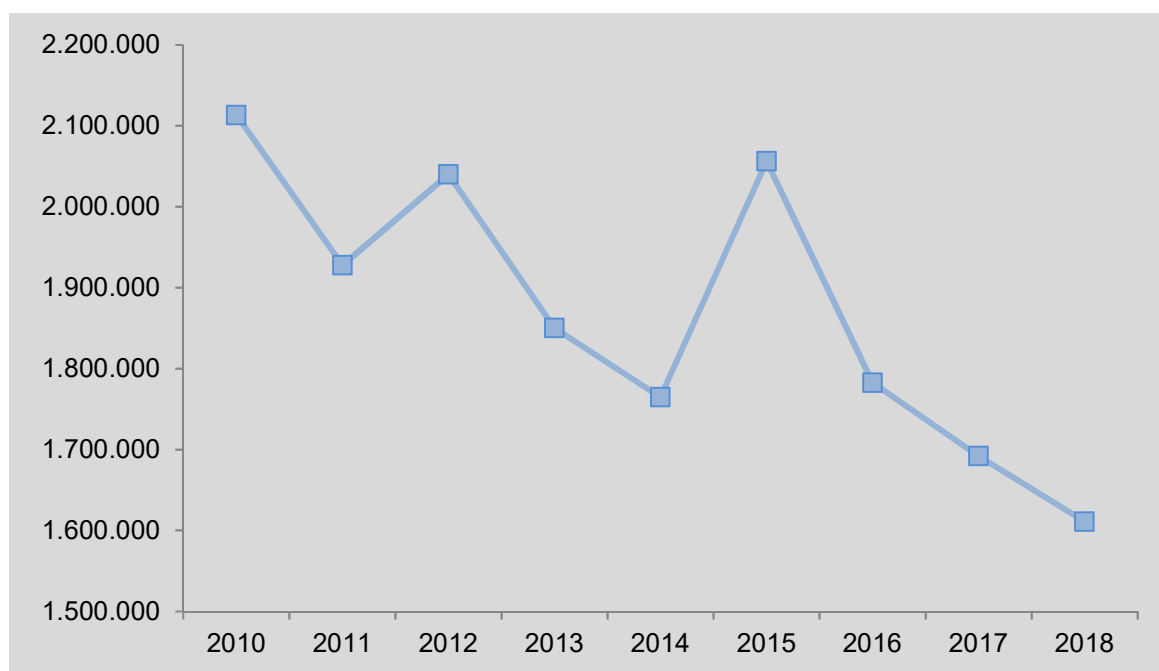


Figure 15 Trend in syringes issued in projects in NRW, 2010 - 2018

¹⁴ See <https://magazin.hiv/2017/07/25/hepatitis-c-keine-heilung-fuer-alle/> [accessed: 4 Sep. 2019].

Figure based on the annually published data collection by the NRW German Aids Service Organisation (most recently Aids Hilfe NRW e.V., 2019).

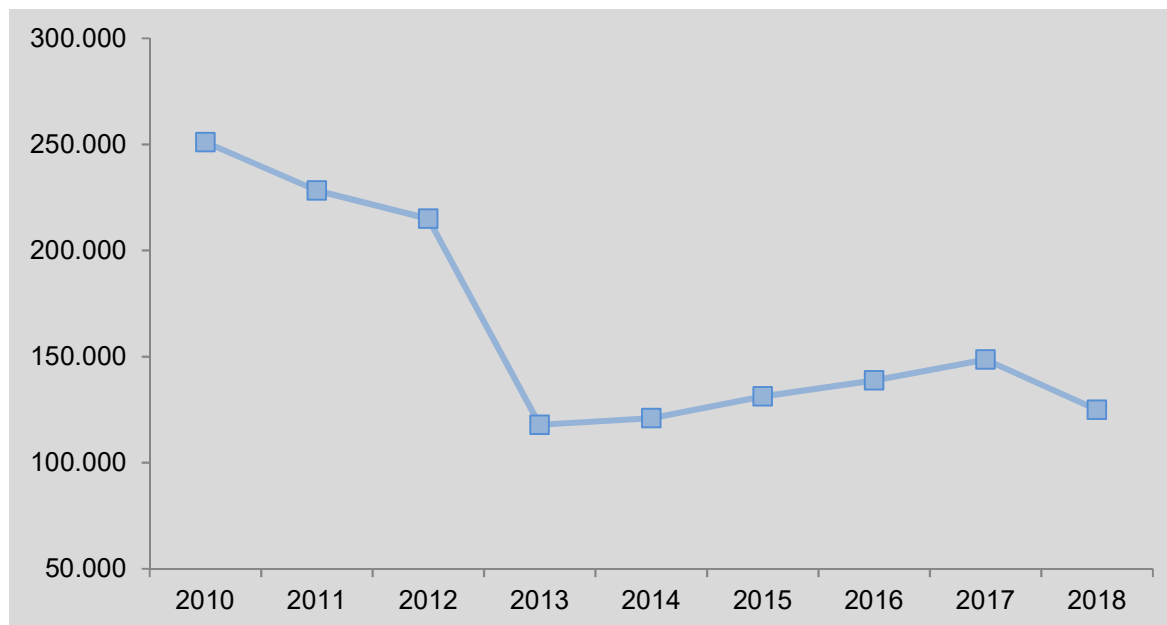


Figure 16 Trend in syringes issued by vending machines in NRW, 2010 - 2018

Figure based on the annually published data collection by the NRW German Aids Service Organisation (most recently Aids Hilfe NRW e.V., 2019).

The number of syringes dispensed in projects has fluctuated in NRW in recent years, without a clear trend emerging (see Figure 15). The number of syringes dispensed from vending machines suddenly decreased sharply from 2012 to 2013 (see Figure 16). 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; drug consumption rooms also report increased inhalative use (Aidshilfe NRW e.V. 2015, personal communication). Following this sharp decline, the number of syringes dispensed from vending machines gradually increased again, followed by a slight decline again in 2018.

General information on services for harm reduction are detailed in section 1.5.33.3

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

No additional information is available on this.

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 for harm reduction services (T1.7)

1.7.1 Quality assurance of 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. 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 TRENDS (T2)

Not relevant in this section. Included above.

3 NEW DEVELOPMENTS (T3)

3.1 New developments in drug-related deaths and acute emergencies (T3.1)

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

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

For the current situation regarding drug-related infectious diseases see section 1.3. With the introduction of new medicines, 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. New developments on prophylaxis in the area of infectious diseases is reported in section 3.3.1.

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

3.3.1 HIV prophylaxis

Pre-exposure prophylaxis (PrEP) as a reimbursable benefit

Pre-exposure prophylaxis (PrEP) is taken as a precaution by people who are not infected with HIV but have an increased risk of infection. From 1 September 2019 onwards, the statutory health insurance providers assume the costs for PrEP, provided it has been prescribed by a doctor. Previously, the medication was only available on private prescription, such that mainly wealthy people could profit from it (see the results from the "PRIDE" study, presented i.a. in last year's workbook). With the new regulation, the medication and associated regular examinations are now available to all persons covered by statutory health insurance with increased risk of infection. Only doctors who are well informed with regards to HIV and/or PrEP

treatment are permitted to prescribe it. A prescription is issued for a maximum of three months, thus regular, three-monthly visits to the doctor are ensured¹⁵.

HIV self-tests freely available to purchase

Since October 2019, HIV self-tests have been freely available to purchase in Germany. They can be sold over the internet, in pharmacies and drug stores and are for people not able to use other test services (for example in the public health department) or would like another option for diagnosis. The DAH recommends only using tests which have the EU CE test certificate symbol, are designed for home testing and also authorised for such use in Europe¹⁶.

3.3.2 Naloxone take-home programmes

General information on the current situation with regards to naloxone take-home programmes in Germany are detailed in section 1.5.3, where an overview of the geographic distribution of the projects can also be found. Overall, care in recent years has significantly improved, although it is by no means nationwide. Since September 2018, a naloxone preparation in the form of a nasal spray has come onto the market in Germany, which is used in many projects.

Evaluation of the naloxone peer information events in NRW

A scientific evaluation of the naloxone peer information events in NRW is available (Gesigora und Gerlach, 2019). Training events were carried out in six cities, which were then scientifically monitored for one year. The concept of the training sessions originates from JES e.V. and was already briefly outlined in the 2017 workbook. The training sessions consist of short events for up to 5 participants, designed to last 15 minutes and conducted by peers. After the session, naloxone is issued. Having the sessions run by peers is intended to overcome inhibitions and ensure as low a threshold for access as possible. The project was funded by the *Land* of NRW and, due to the one-year time limit, was designed as a “trigger” for participating facilities to conduct the training independently thereafter. Therefore, facility staff were trained to become trainers. Within the project time period, follow-up training was carried out in two of the six cities. Including the follow-up sessions, 158 people were trained during the project time period. 98% of participants stated that they would recommend the training; 95% stated having no concerns (any more) as to administering naloxone in the event of an emergency. 88% also wanted to explain how to use the kits to close friends and relatives.

Pilot project in the *Land* of Bavaria

The Bavarian pilot project, on behalf of the Bavarian State Ministry of Public Health and Health-Care started as planned. The intention is to train at least 450 people in the five largest cities in the *Land*. Scientific monitoring is carried out as an observational study, in which data will be collected by means of standardised questionnaires distributed to participants. Following

¹⁵ <https://www.aidshilfe.de/hiv-prep> [accessed: 2 Sep. 2019].

¹⁶ <https://www.aidshilfe.de/meldung/hiv-selbsttest-frei-verkaeufllich> [accessed: 2 Sep. 2019].

naloxone use, structured interviews will be carried out. The evaluated training materials will also be available to other projects after the conclusion of the project. Training is taking place in prisons for the first time within the scope of the pilot project (Condrobs e.V., personal communication). In that context, inmates are given training shortly before their release from prison. Such persons represent a particularly important target group, because the risk of overdosing following release is significantly increased. The people who have undergone training receive the naloxone itself on the day of release from prison.

3.3.3 Improving the supply of drug consumption rooms

In 2019, Baden-Württemberg became the seventh *Land* to allow the opportunity for drug consumption rooms to be opened. The Baden-Württemberg *Land* government adopted the required ordinance on the operation of drug consumption rooms on 26 March 2019, deriving it from already existing ordinances in other *Laender*. In 2017, the city of Karlsruhe had issued a request to the *Land* government to regulate the requirements for obtaining the corresponding permission in a legal ordinance in accordance with Sec. 10a BtMG.

Under the ordinance, drug consumption rooms in Baden-Württemberg can be opened in cities with more than 300,000 inhabitants. This means that the three cities of Karlsruhe, Stuttgart and Mannheim qualify. The validity period of the ordinance is initially limited to three years; its impact is intended to be reviewed within this time period. According to the acceptance-oriented drug policy approach to individual harm reduction, abstinence-based referral to further support is also provided for in the ordinance. The drug consumption room in Karlsruhe will be set up in the direct vicinity of an already existing contact point for drug addicts. Four consumption places are planned initially. The drug consumption room in Karlsruhe is expected to start its work in autumn 2019. The city of Mannheim had also disclosed in 2018 that it was reviewing the options for setting up a drug consumption room¹⁷.

3.3.4 Drug checking in Berlin

The term "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 EU countries as well as Switzerland, drug checking is well established in various settings and projects, and has been in some cases for 20 years (see e.g. Brunt and Niesink, 2011; Hungerbuehler et al., 2011; Suchthilfe Wien, 2017). The occasionally used concept of "qualified drug checking" or "integrated drug checking" comprises not only chemical analysis but also a risk assessment and individual counselling for drug users who bring their substances for analysis.

¹⁷ https://www.rnz.de/nachrichten/mannheim_artikel,-mannheim-stadt-prueft-drogenkonsumraum-arid,374931.html [accessed: 2 Sep. 2019].

Qualified drug checking as a debated strategy of risk and harm reduction therefore has two aims. The first is the prevention of overdoses and unwanted intoxications by warning against particular concerning substances, their ingredients or concentrations. Alongside the ever-present black market risks, this has also been relevant recently in connection with changes on the drug market such as the wider distribution of NPS and international warnings about, for example, highly potent fentanyl. At the same time, the variety of different substances and compositions of the NPS represent an immense challenge for the analysis of ingredients involved. The second component is fact-based counselling of (potential) drug users, to nudge them into reflecting on their use, to enable the learning of strategies to minimise risks and if necessary to refer the user into the drug support system. Proponents see drug checking as a further opportunity to reach users, including men who have sex with men (MSM) or users in a party setting, who otherwise often have little or no contact with drug support services.

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.

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 checking. Three independent Berlin addiction support agencies collaborated to develop a drug checking concept for Berlin. As the legal basis is very complex, a legal opinion was obtained from Prof. Dr. Nestler, Professor for Criminal Law at Cologne University. According to that opinion, the proposed drug checking concept is legal and the drug checking facility staff would not be making themselves vulnerable to criminal prosecution. This legal view was shared by the Berlin Senate Department for Internal Affairs and the Senate Department for Justice, hence a practical implementation is possible. This is currently being prepared. A fixed site analysis is proposed: users will send in samples and receive a reply within a few days along with advice on the risks of consumption. Funding for the project has been earmarked in the 2020/2021 Berlin double budget, ensuring financing for the introduction and evaluation of the project.

3.3.5 Suicide prevention in addiction

People with addiction disorders have a significantly higher risk of suicidal tendencies compared to the general population (see, for example, Bernal et al., 2007; Lonqvist, 2009). A pilot project funded by the German Federal Ministry of Health and carried out by the Centre for Interdisciplinary Addiction Research of the University of Hamburg (Zentrum für Interdisziplinäre Suchtforschung, ZIS), targeted at training professionals from different areas in the addiction support system on the topic of suicidal tendencies and enable them to network with one another. The intention is for suicide prevention for people with addiction disorders to be

substantially strengthened nationwide. The measures are conducted online¹⁸ and consist of web-based training for professionals and an online networking platform on which professionals can network with each other, collaborate on performing tasks and actively practise their skills. The project is being scientifically supported, the training sessions are being evaluated and further developed.

3.3.6 Guidance – addiction counselling for refugees

Drug users who are not yet proficient in German often have almost no access the addiction support system. In Berlin, the “Guidance” project offers low-threshold, culturally sensitive counselling with language mediation for people with a migration history and substance use, for their relatives as well as employees in refugee support. Affected persons are offered both a public weekly surgery in Arabic and Persian and other scheduled appointments in those languages. Other languages are offered on request using language mediators. In addition, outreach counselling is offered in collective accommodation.

There are also interventions for specific target groups: 10 events on early intervention were held for 16 to 25-year-old adolescents in 2018, with 10 to 20 participants at each. 10 events on early intervention and other information were held in refugee accommodation, each with an average of 10 participants aged between 25 and 55 years old. Refugee support staff training sessions were carried out 19 times in 2018, with a total of 266 people taking part. Specific counselling for women was held at least once a month, and the service was used by an average of three to ten women. The other services were almost exclusively used by men. All services were characterised by collaboration between different cooperation partners and support from language and culture mediators. Language mediation was required in 81.9% of the counselling sessions in 2018.

The most frequent main diagnosis in 2018 was once again opioid dependence (53.7%), with 4.4% using by way of injecting. 32.5% reported cannabis as the main substance, 63% alcohol and 2.2% cocaine.

The support needs of people receiving counselling are deemed to be very high, with their problems described as extremely complex, characterised by multiple psychological burdens caused by their current life situation and experiences prior to and while fleeing their situation. Issues experienced by refugees are just as diverse as among all other people seeking support in the drug emergency service, however there is a distinct focus in the area of resident status and living space.

Although the majority have valid claims for integration support, these can frequently not be exercised due to language problems. Guidance cooperates with substitution therapy practices, organising and financing language mediation, without which treatment would not be possible.

¹⁸ <https://www.suizidundsucht.net/> [accessed: 2 Sep. 2019].

Cooperations exist with two hospitals for referrals to withdrawal treatment. Despite the established network, obstacles to treatment in the addiction support system are many and various, including, as well as a lack of language and culture-specific services, a lack of links between and case reviews in participating institutions. The situation which is already bad is described by the funding agency as further accentuated for minors, who make up 15.6% of people receiving counselling and in 2018 were only able to be referred to further support or other types of youth support care in 3 cases. Despite the need for it, in 2018 not one adolescent was referred to detoxification treatment.

The fact that hospitals generally do not pay for language mediation represents, according to the report, a serious hurdle for access to the support system. In addition, there is a lack of accompanying low-threshold services. The funding agency expresses an increased need in all areas of addiction support. Referrals to medical rehabilitation are, according to the report, hardly ever possible, as the funds for the necessary language mediation is lacking. Referral to substitution treatment is only possible because Guidance is able to pay for language mediation to a certain extent. Further collective accommodation facilities have also signalled their interest in outreach services, for which financing is also lacking, however (Piest, 2019).

4 ADDITIONAL INFORMATION (T4)

4.1 Additional sources of information (T.4.1)

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

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

No additional information is currently available on the health effects.

5 SOURCES AND METHODOLOGY (T5)

5.1 Sources (T5.1)

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5.2 Methodology (T5.2)

5.2.1 Recording drug-related deaths

In Germany, there are two general, comprehensive systems for recording drug-related deaths, which differ from one another in various aspects. These are the police data from the "Drugs Data File" (Falldatei Rauschgift, FDR) and the "Statistical report on the causes of death" (Todesursachenstatistik) from the German Federal Statistical Office (Statistisches Bundesamt, Destatis).

Drugs Data File (Falldatei Rauschgift, FDR)

In general, drug-related deaths are recorded by the individual *Land* Offices of Criminal Investigation (Landeskriminalämter), whilst the Federal Criminal Police Office (Bundeskriminalamt, 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. Autopsies and toxicological reports are usually 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 errors, the following categories for drug-related fatalities were defined in a leaflet by the BKA (BKA, 1999):

- 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 one's own living conditions or under the influence of withdrawal symptoms (e.g. delusions, strong physical pain, depressive mood),
- Fatal accidents of persons under the influence of drugs.

General Mortality Register¹⁹

In Germany, a death certificate is completed for every case of death, containing, alongside the personal details, 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 undertaken by the German Federal Statistical Office ("Statistical report on the causes of death"). Often, this data source also does not take into account the results of delayed toxicological reports when classifying the drug-related deaths.

From the general mortality register, for the purposes of reporting to the EMCDDA, cases are selected which meet the definition of "direct causality". The goal here is to record cases of death which shortly follow the use of opioids, cocaine, amphetamine (derivatives), hallucinogens and cannabinoids, - i.e. in particular fatal poisonings, as sensitively as possible. The selection is based on the requirements set out by the EMCDDA (the so-called ICD-10 Code Selection B). As a basis for 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 Organisation (WHO) entered into force. The objective of the change was 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.

5.2.2 Notifications of drug-related infectious diseases

Under the IfSG, which came into force on 1 January 2001, data on infectious diseases, including on HIV and viral hepatitis, are reported to the RKI. Corresponding data is published at regular intervals²⁰. According to the German Ordinance on Laboratory Reports (Laborberichtsverordnung) and the IfSG, all laboratories in Germany are obliged to report confirmed HIV-antibody tests anonymously and directly to the RKI. These laboratory reports

¹⁹ The use of the term "General Mortality Registry" is based on 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).

²⁰ <https://www.rki.de> [accessed: 4 Sep. 2019].

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 together 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 new HIV-diagnoses, it is now easier to exclude (formerly unrecognised) duplicate 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 included data on the HBV and HCV status of patients in addition to the HIV status. Since the number of facilities which report this data is very small and only patients for whom a test result is available are taken into account, this data requires cautious interpretation. The recording of infectious diseases has been improved in the new Core Data Set.

Changes to the case definition of hepatitis B reports

The case definitions of the RKI were changed in 2015, such that now only the direct detection of the hepatitis B pathogen meets the criteria for a laboratory diagnostic detection. HBe antigen detection has been added 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 it is not only cases confirmed through clinical and laboratory diagnostics that meet the reference definition, but also infections proven through laboratory diagnostics alone, for which the clinical picture is not fulfilled or not known. The described changes not only enable an alignment with the European case definitions but also aim to investigate active, i.e. infectious and therefore transmissible, hepatitis B infections, regardless of the strength of the symptoms. Following the introduction of the new reference definition, the number of published hepatitis B cases is, as expected, higher than previous years.

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 total number of reported 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 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 as well as 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 now only analyses HCV infections which are active. This enables a better approximation of the true incidence of new diagnoses. However, it does not capture possible cases that were not supplied to further diagnostics by means of direct pathogen detection after positive antibody screening. As the treatment options in recent years have significantly improved, it can however be assumed that diagnostics in Germany is carried out completely in most cases. Currently, initial diagnoses of hepatitis C transmission are - in the absence of better data sources on the incidence rate - currently the best possible estimation of the current incidence of infection.

Under the new case definition however, current transmitted case numbers are only comparable to a certain degree to those from previous years, such that trend evaluations are only possible to a limited extent. A decrease in the reported numbers of cases occurred as expected due to the change in case definitions. The implementation of the new case definition among public health authorities is complete; all cases are now reported according to the new case definition.

5.2.3 Harm reduction interventions

Survey of consumption apparatus dispensed and dispensing facilities in Germany

Extensive research has been carried out in a collaboration between the DBDD, RKI and DAH, with the aim of capturing all facilities which dispense consumption apparatus. Of 2,158 facilities identified as potentially dispensing consumption apparatus, responses were received from 1,178 facilities (54.6%). In other words, responses were not forthcoming from 980 institutions, despite multiple attempts at contact. Out of the facilities which did respond and provide an answer to the question of whether they dispense consumption apparatus, 475 answered "yes", 703 "no".

The 475 facilities which dispense consumption apparatus received a questionnaire in which the type and number of paraphernalia were collected. These were based on the DAH recommendations on dispensing consumption apparatus. In addition, estimates were collected on budgets, the number of people supplied and on the relevance of pharmacies. At the time of reporting, an insufficient number of completed questionnaires had been provided in order to allow absolute numbers to be stated. This will be reported next year. The plan is to repeat the survey every two years and thus to be able to determine trends in supply on a long-term basis.

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