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for Drugs and Drug Addiction



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Workbook Harms and Harm Reduction

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0 Summary (T0)

According to the Federal Criminal Police Office (Bundeskriminalamt, BKA), in 2014 a total of 1,032 people died as a result of the use of illicit drugs (2013: 1,002). Thus, the numbers have increased for the second consecutive year. Overdosing on heroin / morphine (including poisoning by heroin / morphine in conjunction with other substances) was recorded for 467 cases (2013: 474), thus remaining the most common cause of death (45%). In the general mortality registry, the distribution of ages in drug related deaths in the course of the last ten years continues to show that a trend towards an ever increasing proportion of older age groups has continued, albeit gradually weakening. There is still no evidence of a new trend in fatal drug-related intoxications amongst the youngest users of illegal drugs.

In 2014, 3,525 new diagnoses of HIV infections were reported to the Robert Koch Institute (RKI), which represents an increase of 7.2% from the previous year (2013: 3,288). Persons who have likely contracted their HIV infection through injecting (i.v.) drug use make up the third largest group (3.9%), after men who have sex with men (MSM) (67%) and those who contracted their HIV infection through heterosexual contact (28%).

In 2014 a total of 2,374 cases of hepatitis B were reported to the RKI (430 more than the previous year). Information on the mode of transmission is only available for 11% of cases, of these i.v. drug use was the third highest reported (12 cases).

For 2014, 5,817 cases of newly diagnosed hepatitis C were reported to the RKI. Thus the incidence was higher than the previous year and higher than the median of the previous five years. Reliable information on the mode of transmission was available in 26.7% of cases reported as per the reference definition. Of those, by far the greatest proportion (81.5%) was attributable to injecting drug use. The treatment for hepatitis C among drug users has become a growing issue in recent years through the introduction of new medicinal drugs onto the market which improve the chances of recovery whilst having a more favourable side-effect profile. Studies show time and again that under certain conditions this population can and should also be effectively treated. It remains unclear how many drug users can benefit from these new treatment options, due to the high price of the medicinal drugs and continued widespread concerns amongst doctors.

Drug consumption rooms (to date 23 inpatient as well as one mobile drug use facility) and needle exchange programmes (currently approx. 160 needle vending machines in 9 Länder as well as dispensation in numerous projects nationally) continue to play an essential role for harm reduction among injecting drug users. Various facilities and projects also try, using offers of low-threshold testing and other prevention and safer-use programmes, to raise awareness of infectious diseases among their clientele and to motivate them to engage in health promoting behaviour. Safer-use initiatives in prisons remain far behind what is possible. A new development has been observed in emergency training for naloxone use for drug users and their environment: this measure is receiving increasing attention by experts in the field, and several such projects are being planned.

Since harmful side effects of new psychoactive substances (NPS) are still mostly unknown, they are in the focus of attention of ongoing different research projects in Germany and Europe. Projects aim to systematically record harmful effects and develop effective harm reduction measures for different NPS on that basis.

1 National profile (T1)

1.1 Drug-related deaths (T1.1)

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

Data Sources

Two extensive systems for data collection on drug-related deaths exist in Germany which differ on certain aspects of the data collection. These are police data from the “Drugs Data File” and the “Statistical report on the causes of death” of the German Federal Statistical Office.

Drugs Data File (Falldatei Rauschgift, FDR)

In general, drug-related deaths are recorded by the individual State Offices of Criminal Investigation of the Laender, whilst the Federal Criminal Police Office (Bundeskriminalamt, BKA) has access to the base of data, performs data quality control and collects the figures. Data collection modalities and the basis for the assessment of drug-related deaths differ between the individual Laender. The portion of autopsied drug-related deaths as a measurement for the quality of the classification of "drug deaths" varies (in some cases considerably) between the Laender. Toxicological examinations of body fluids and tissue play an important role in establishing the cause of death, as only this can provide clarifying information on the drug status at the time of death. Autopsy reports and toxicological reports are generally written by different institutions. Since toxicological reports in particular are often only released after a long delay, they are only taken into account in the classification of drug-related deaths to a limited extent.

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

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

General mortality registry¹

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

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

Basis for comparison

The data collected by the Federal Criminal Police Office (BKA), explicitly shows long-term secondary diseases, suicides and accidents that have come to the attention of the police. It has so far only been possible to produce an approximate isolation of the registered cases of intoxication on the level of the aggregated BKA data, as desired for the purposes of comparison with the general mortality registry, due to the incomplete, disjointed categories. However, since the data year 2012, the BKA has used a new table in which the individual causes of death can be better separated and overlaps can be better identified in many cases.

Comparisons with other European countries should only be made on the basis of the general mortality registry, as this register follows largely common standards. Data from the police register is of great importance for long-term comparisons of national trends but is less suitable for European-wide comparisons due to differences in the selection criteria and reported age groups.

¹ The usage of the term "general mortality registry" is aligned with the terminology of the EMCDDA. The data reported here is from the "Statistical report on the causes of death" ("Todesursachenstatistik") of the German Federal Statistical Office (Statistisches Bundesamt, Special series 12, part 4).

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

Current data from the police register on drug-related deaths

The reliability of information on drug-related deaths strongly depends on the question as to whether autopsies and toxicological examinations have been used to validate the initial estimate of whether a drug-related death has occurred (see above). The autopsy rate of all drug-related deaths according to the Drugs Data File (FDR) of the German Federal Criminal Police Office (BKA) in the reporting year 2014 was 56.6% (BKA 2013: 59%) (personal communication, BKA 2015).

In 2014, the number of drug-related deaths increased, as in the previous year. In total in 2014, 1,032 people died as a result of using illicit drugs (2013: 1,002), which corresponds to an increase of 3%. 85% of the drug deaths were male, the average age was 38 years old. The most populous Laender, Bavaria and North Rhine-Westphalia, comprised the largest share of drug-related deaths, accounting for 24% and 18% respectively. In terms of the number of inhabitants, the city states of Berlin and Hamburg had the biggest problems in 2012 (3.7 and 3.0 drug deaths per 100,000 population respectively), the same as in the previous two years. With 5.5 drug deaths per 100,000 population, Nuremberg was once again the most affected large city in Germany, followed by Mannheim (3.8) and Cologne (3.7) (BKA & Die Drogenbeauftragte der Bundesregierung 2015; Die Drogenbeauftragte der Bundesregierung 2015). However, when interpreting these numbers, it must be taken into account that the autopsy rate of the individual Laender can vary widely making it more difficult to compare the numbers of drug-related deaths from Land to Land.

Current data from the general mortality registry

The latest figures on drug-related deaths, which are available from the general register on the causes of death of the Federal Statistical Office, are from 2013, when 1,179 people were recorded in the category drug-related deaths (259 females and 920 males). This corresponds to an increase of 9.3% against 2012 (1,079 people) (Federal Statistical Office, special calculations).

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

In the general mortality registry the increase in the number of deaths of 9.3% between 2012 and 2013 is somewhat higher than that from the BKA-Register in the same period, which recorded a 6.1% increase. In the BKA-Register the absolute numbers were approx. 10% lower than that of the standard selection from the general register on the causes of death, although the total number of "indirect" deaths such as suicide and death as a result of long-term harms were included, which up to 2012 had not been precisely defined as "direct"

overdoses. On the other hand it is likely that the general register on the causes of death does not only record acute overdoses, since in many cases the coding of the underlying illness is selected (see 1.1.2). For 2013, however, the BKA lists exactly 847 cases of overdose, which is approximately 28% fewer cases than those recorded in the general mortality registry. Accordingly an over-coverage of the mortality register versus an under-coverage in the BKA-Register should be discussed. There is evidence in favour of both mechanisms. A comparison is never precise as the reference populations are not identically defined.

1.1.2 Toxicology of drug-related deaths (T1.1.2)

Data from the police register on drug-related deaths

Overdosing on heroin/morphine (including poisoning by heroin/morphine in conjunction with other substances) was recorded for 467 cases (2013: 474), thus remaining the most common cause of death (45%). The proportion of drug-related deaths in which substitution drugs were detected, alone or in combination with other drugs, was at 22% (226 cases). Poisoning through substances other than opiates, especially through cocaine/crack and amphetamine/methamphetamine was the cause of death in 14% of cases (Table 1) (personal communication, BKA 2015).

It is possible that the figures for mixed intoxications (“polyvalent poisonings”) or specifically for the involvement of substitution substances could be underestimated in the representation of substance involvement due to a lack of precise toxicological information.

Table 1 Drug-related deaths 2014 by substance

Causes of death	% of Total (N)		Number
	2013	2014	2014
Monovalent poisonings from opioids	24.2	23.1	238
Heroin/Morphine	19.4	18.3	189
Opiate-substitution drugs	4.8	4.7	48
- of which: Methadone/Polamidone	2.0	1.6	17
- of which: buprenorphine (i.a. subutex)	0.2	0.3	3
- of which: Others	2.6	2.4	25
Polyvalent poisoning from opioids¹⁾	42.0	41.5	428
Heroin/Morphine in connection with other substances (i.c.w.o.s.)	27.9	26.9	278
Opiate-substitution drugs i.c.w.o.s.	20.7	17.2	178
- of which: methadone/polamidone i.c.w.o.s.	15.7	12.0	124
- of which: buprenorphine (i.a. subutex) i.c.w.o.s.	0.8	1.6	16
- of which: others i.c.w.o.s.	5.1	6.1	63
Monovalent poisonings from substances other than Opioids	4.9	5.5	57
Cocaine/Crack	1.6	1.4	14
Amphetamine/Methamphetamine	2.6	2.7	28
- of which: amphetamine	1.6	1.9	20
- of which: methamphetamine	1.0	0.8	8
amphetamine derivatives	0.3	0.3	3
others (with the exception of (w.e.o.) psychoactive medicinal drugs)	0.5	1.9	20
- of which: new psychoactive substances/designer drugs	0.3	1.6	16
- of the latter: synthetic cannabinoids / cathinone		0.9	9
- of the latter: Others		0.7	7
Polyvalent poisonings from substances other than Opioids¹⁾	8.7	8.3	86
Cocaine/Crack i.c.w.o.s.	3.0	2.2	23
Amphetamine/Methamphetamine i.c.w.o.s.	3.9	4.4	45
- of which: Amphetamine i.c.w.o.s.	3.2	3.4	35
- of which: Methamphetamine i.c.w.o.s.	0.8	1.0	10
Amphetamine derivatives i.c.w.o.s.	0.5	0.8	8
Others (w.e.o. psychoactive medicinal drugs) i.c.w.o.s.	1.4	2.4	25
- of which: psychoactive substances/designer drugs i.c.w.o.s.	0.2	1.3	13
- of the latter: synthetic cannabinoids / cathinone		1.1	11
- of the latter: Others		0.2	2
Psychoactive medicinal drugs, i.c.w.o.s.	2.5	1.7	18
Poisonings from psychoactive medical substances only (where applicable, in connection with alcohol)	1.6	1.3	13
Suicides	5.9	7.4	76
Suicide by way of intoxication (already included in the causes mentioned above)	3.1	3.8	39
Suicide through means other than intoxication	2.8	3.7	38
Long-term harms:	9.4	11.5	119
- of which: long-term harms in combination with intoxication consequences	2.6	4.2	43
Accidents	2.8	2.8	29
Other cases	0.5	0.3	3
Total (N)²⁾	1,002		1,032

1) On the first level of the subcategories, multiple counting is possible.

2) The total number is formed from the sum of all monovalent and polyvalent poisonings plus all suicides not caused by intoxications as well as all long-term impacts, accidents and other cases.

Personal communication BKA 2015.

Data from the general mortality registry

In 2013, the *underlying disease* (dependence, harmful use of drugs, other from the ICD group F 1x.x) was coded for 65.2% of the 1,179 deaths (2012: 70.9%); however, for these cases the information on the *acute* cause of death is lacking. Furthermore, too few cases are specifically coded with respect to acute cause of death and a multicausal code has not yet been established nationwide. Thus, despite the changes of the WHO coding rules which took effect in 2006, the national mortality register is seen as less meaningful, in light of the analysis on the substance classes which acutely led to deaths in the case of intoxication, than the BKA's (now revised) causes of death categorisation.

Only the coding of drug-induced deaths under the ICD-10 classification with the additional X/Y code for external causes allows inferences to be drawn on the substance spectrum involved in intoxications as this would allow a substance specific recording according to T-codes. In 2013, this applied to only 34.6% of registered cases. Purely opiate related deaths in this subgroup accounted for almost 42.6% of cases. In 18.4% of cases, other substance groups were mentioned, 39.0% of cases involved unspecified intoxications and in particular those with mixed consumption of different substance groups (Federal Statistical Office, special calculations). It may be assumed that opiates once more play a predominant role. The limited significance should be stressed again, however, as 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.

1.1.3 Mortality and cases of death among drug users (cohort studies) (T1.1.3)

There is no survey available on the mortality of the overall population of drug users. Nor have there been any regional cohort studies carried out recently. It is however possible to get at least closer to the question by resorting to the data that exists on drug addicts in therapy.

According to the German Statistical Report on Treatment Centres for Substance Use Disorders for 2014, for 1.8% (2013: 1.7%; 2012: 1.4%) of opioid clients, the treatment ended with the death of the client. In 2013 opioid clients accounted for 84% of all clients registered with the DSHS who had a drug problem and who died during an outpatient treatment (Braun et al. 2015). In order to eliminate the effect of the duration of the treatment, which has been extended since 2000 by an average of 10 weeks, a treatment period of 12 months is calculated and used as a basis. The resulting mortality of 1.6% per year in 2014 was slightly higher than in the two preceding years (Table 2).

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

Table 2 Mortality of opioid users in outpatient treatment

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Proportion of cases of death amongst treatment outtake (%)	1.2	1.4	1.3	1.4	1.2	1.5	1.5	1.6	1.4	1.7	1.8
Treatment duration (days)	297	305	301	314	321	336	343	354	381	400	400
Mortality p.a. (%)	1.5	1.7	1.6	1.6	1.4	1.6	1.6	1.6	1.3	1.5	1.6

Braun et al. 2015 and own calculations.

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

No additional information is available on this.

1.2 Non-fatal drug-related emergencies (T1.2)

1.2.1 Non-fatal drug-related emergencies (T1.2.1)

As an approximation of the number of drug related non-fatal emergencies, there is nationwide data available on acute intoxication and poisoning treated on an inpatient basis in hospitals (ICD-10-diagnoses) from the Statistical Report on Hospital Diagnoses, 2013 and special calculations of the German Statistical Office (Table 3). One should note that the cases of poisoning (ICD-10 T40.X) include both overdoses as well as mistaken administration or ingestion of the wrong substances. Also, a case of opioid poisoning could be caused by, for example, (accidental or intentional) overdoses of prescribed medications containing opioids and not by the use of illicit drugs. In addition, this data can only provide a statement about hospital inpatient drug-related non-fatal emergencies. Emergency cases, which are not treated or are covered elsewhere, (poison information centres, see 1.2.2, but also practice-based doctors, emergency medical treatment) are not covered here. Moreover it is not clear from the data, how seriously pronounced or dangerous the symptoms were and how long the respective treatment lasted; short term cases were also included. The data should therefore only be interpreted with caution.

A further approximation of the number of drug related emergencies can be taken from the data of the Poison Information and Emergency Poison Control Centres (Giftnotrufzentralen, GIZ). These provide information about emergencies that have not led to hospital admission (T1.2.2).

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

Table 3 Number of acute intoxication and poisoning cases, Statistical Report on Hospital Diagnoses, 2013

ICD-10-Diagnosis	Total number without fatalities	Age in years				
		<15	15 - 24	25 - 44	45 - 64	65+
Acute intoxication [acute inebriation] (F11.0 to F16.0, F18.0, F19.0)	15,656	267	4,396	7,401	6,154	770
From opioids (F11.0)	1,606	7	182	900	296	221
From cannabinoids (F12.0)	1,340	118	866	306	47	3
From sedatives/hypnotics (F13.0)	2,656	42	418	1,002	830	364
From cocaine (F14.0)	390	2	94	250	44	0
From other stimulants (F15.0)	1,354	35	635	611	69	4
From hallucinogens (F16.0)	334	5	173	136	16	4
From volatile substances (F18.0)	68	5	21	28	7	7
From multiple substance use or consumption of other psychotropic substances (F19.0)	7,908	53	2,007	4,168	4,845	167
Intoxication from narcotics (BtM) and psychodysleptics (hallucinogens) (T40.X)	1,932	98	403	538	327	566
From opium (T40.0)	88	2	3	12	20	51
From heroin (T40.1)	149	1	16	109	23	0
From other opioids (T40.2)	1,050	55	90	185	226	494
From methadone (T40.3)	106	3	11	66	25	1
From other synthetic narcotics (T40.4)	69	3	20	30	4	12
From cocaine (T40.5)	75	0	21	50	4	0
From other non-specified substances (T40.6)	45	2	13	13	11	6
From cannabis(-derivates) (T40.7)	272	30	180	54	8	0
From lysergide (LSD) (T40.8)	14	0	9	4	1	0
From other non-specified psychodysleptics (T40.9)	64	2	40	15	5	2

Statistisches Bundesamt 2015a.

From the poison information and poison control centres' data:

Data is available from six of the eight German poison information centres² on the documented enquiries on the basis of acute poisoning cases in connection with drugs (not including medication, which is recorded separately) for 2013 (personal communication Poison Control Centre of the Charité Berlin 2015; GIZ-NORD 2014; Information and Treatment Centre for Poisoning, Homburg/Saar 2015; personal communication, Information and Treatment Centre for Poisoning Homburg/Saar 2015; Information Centre Against Poisoning 2014; Toxicological Department of the 2nd Medical Clinic 2014; Poisoning Information Centre, Freiburg 2014). In total in these 6 institutions there were 3,530 cases of poisoning by illicit drugs (2013 total number of enquiries: 177,528). Out of the total number of enquiries, the proportion of drug cases is therefore low, at 2.0%. From this information, however, one cannot tell whether these are unintended consumption or overdoses during wilful drug use. Some of the poison information centres classify cases according to substance (as well as other variables such as age) in their documentation systems.

The GIZ Nord³ documented a total of 31,981 cases of suspected human poisonings in 2013 of which 1.7% (n = 536) concerned enquiries related to the main group, illicit drugs. 36 of these suspected cases were classified as severe poisoning (6.7%), 176 (32.8%) came under the medium level of severity.

Information on substance groups is available: 52.2% (n = 280) of the enquiries concerning illicit drugs were the result of a person having taken stimulants. Amongst all illicit drugs, cocaine was the reason behind 16.8% (n = 90) of the enquiries whilst amphetamine-type stimulants (ATS) accounted for 35.4% (n = 190). Of the enquiries related to ATS, 39.5% were concerning methamphetamine (n = 75), which corresponds to 14.0% of all enquiries related to illicit drugs. This represents a slight decrease against the previous year (2012: 91 enquiries, 16.6% of all enquiries related to illicit drugs). On the basis of the data of the GIZ Nord alone, however, no clear conclusion can be drawn on the popularity of crystalline methamphetamines in the northern Laender. Over half of the cases of poisoning classified by the facility as serious, could be traced back to stimulant use (n = 20). Emergency calls due to cannabinoid use were the basis of 12.7% (n = 68) of all enquiries relating to illicit drugs, opioids were the basis in 7.3% (n = 39) of cases (GIZ-Nord 2014).

1.2.3 Additional information on drug-related non-fatal emergencies (T1.2.3)

No additional information is available on this.

² <https://www.klinitox.de/3.0.html> (last accessed: 20 Aug. 2015)

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

1.3 Drug-related infectious diseases (T1.3)

1.3.1 HIV, hepatitis B and hepatitis C (1.3.1)

Sources of data

According to the German Protection Against Infection Act (Infektionsschutzgesetz, IfSG), effective as of 1 January 2001, data on infectious diseases, including HIV and viral hepatitis, are reported to the Robert Koch Institute (RKI). Respective data is published at regular intervals⁴. According to the German Regulation on Laboratory Reports and the German Protection Against Infection Act, all laboratories in Germany are obliged to report confirmed HIV-antibody tests anonymously and directly to the Robert-Koch-Institute. These laboratory findings are complemented by supplementary anonymous reports of the attending doctors. In this way, HIV reports ideally contain information on age and gender, town/city of residence, route of transmission of the infection as well as information on the stage of disease and HIV related basic laboratory parameters.

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

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

The current data is published annually by the Robert Koch Institute 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 Statistical Report on Substance Abuse Treatment in Germany has recorded data on the HBV and HCV status of patients in addition to the HIV status. Since the number of facilities which report this data is very small and only patients with test results are taken into account, this data requires cautious interpretation.

Data from other sources gives additional insight into the problems of specific, often regional, populations of drug users (e.g. consumption room users and clients of outpatient addiction support facilities) with HIV and hepatitis. Moreover, from this year the results of the 2011 (pilot) study, as well as from the 2012-2015 DRUCK study of the RKI are available, which looked at the prevalence of hepatitis B and C as well as HIV amongst injecting drug users in eight German cities. In addition, a current study on the epidemiology of the hepatitis C virus infection amongst opioid substitution clients (ECHO Study, see 3.3) by the Centre for Interdisciplinary Addiction Research (ZIS) in Hamburg will be able to contribute further

⁴ www.rki.de (last accessed: 20 Aug. 2015)

insights into the prevalence and incidence of HCV amongst opioid substituting individuals (ZIS Hamburg 2014); initial results are expected at the end of 2015 / beginning of 2016.

Current reported data

The figures presented below stem from the data on new HIV and hepatitis C diagnoses, as well as acute hepatitis B cases reported to the Robert Koch Institute in the year 2014.

Data on the incidence and prevalence of hepatitis B and C are contained in standard table 9.

HIV reporting data

A total of 3,525 HIV infections newly diagnosed in 2014 were reported to the RKI. This translates to a nationwide incidence of 4.4 cases per 100,000 population. At 7.2 cases per 100,000 population, males have a much higher incidence than females (1.6 cases).

The highest incidence of HIV-diagnoses was in the city states of Berlin (12.9 cases per 100,000 population), Hamburg (11.6) and Bremen (6.8). Other large cities have similarly high incidences as the city states.

Amongst men, the peak of new diagnoses of HIV infections is in the age group of young adults between 25 and 29 years old, for women between 30 and 39 years old (RKI 2015d).

HIV infection risks

Information about the mode of transmission is available for 80% of newly diagnosed HIV infections. For 704 reports (20%) there is either no or insufficient information or only insufficient information available regarding the risk of infection, meaning no clear classification is possible.

Of the reports with sufficient information (n = 2,821), men who have sex with men (MSM) (n = 1,904) still represented, at 67%, the largest group although their proportion fell by 4%. The second largest group - persons who contracted their HIV infection through heterosexual contact - grew both in absolute numbers and proportionately (from n=598 to n=780 corresponding to an increase from 24% to 28%). Although the absolute number of people from Germany with heterosexual risk of transmission hardly changed, the proportion fell from 28% to 24%, because the numbers from other countries, in particular sub-Saharan African, has continued to rise. The proportion of persons who probably contracted their HIV infection through injecting drug use (n=111) decreased very slightly from 4.1% to 3.9%, despite a very slight increase in the absolute numbers from 101 to 111.

Amongst persons for whom it was stated that they became infected with HIV in Germany, the proportion of persons with non-German background was 13% for MSM, 34% amongst injecting drug users and 37% for persons with a heterosexual risk of transmission (RKI 2015d).

Hepatitis B reporting data

In 2014 a total of 2,374 cases of hepatitis B were reported, 430 more than in the previous year. Of the reported cases, 755 (32%) corresponded to the reference definition⁵. As such, the proportion of cases which corresponded to the reference definition fell by 3% compared to the previous year, with an increase in the absolute number of cases. The incidence of hepatitis B cases in Germany was 0.9 cases per 100,000 population and has therefore remained constant year on year. The incidence for hepatitis B amongst men, at 1.3 new diagnoses per 100,000 population, is markedly higher than amongst women (0.6). The respective incidence rates varied among the Laender, from 0.3 illnesses per 100,000 population in Thuringia and 2.6 in Hamburg and thus showed similar deviations from the median to the years 2009 to 2013. The observed regional differences could be based on a different prevalence of risk behaviours in certain areas, or on different diagnostic or reporting behaviour of doctors (RKI 2015c).

Hepatitis B risks of infection

Reliable information was available on the mode of transmission in the case of 84 (11%) of the diseases reported as per the reference definition. Multiple mentions were reduced to the most probable mode of transmission.

Sexual transmission was the most commonly reported mode of transmission, with 46 cases (55% of illnesses with reliable information on the probable mode of transmission), followed by 19 cases (23%) in which shared accommodation with a hepatitis B virus carrier was recorded as the probable mode of transmission. Injecting drug use was the third most commonly recorded mode of transmission (12 cases, 14%) (RKI 2015c). Due to the very small number of cases and the high rate of unknown modes of transmission, these figures should be interpreted very cautiously.

Hepatitis C reporting data

For 2014, a total of 5,817 cases of newly diagnosed hepatitis C were reported⁶. This represented a nationwide incidence of 7.2 new diagnoses per 100,000 population. A comparison of the incidence rates of the individual Laender revealed a wide range of values: the respective incidence rates ranged from 3.0 new diagnoses per 100,000 population in Lower Saxony and Brandenburg to 17.4 in Berlin. Since 2003, Berlin has been the Land with the highest incidence of newly diagnosed cases. Possible causes are, in addition to more

⁵ Case definition: clinically/laboratory confirmed HBV infections.

⁶ Case definition: as it is barely possible from a laboratory diagnostic or a clinical perspective to distinguish between acute and chronic HCV infections, currently all newly diagnosed reports are recorded in the statistics. However, cases for which an earlier HCV laboratory test already exists are excluded. Thus, the overall number of recorded cases contains a considerable percentage of already chronic hepatitis C cases (in the sense of a virus replication of more than 6 months). The reference definition, which has formed the basis for figures published in the weekly epidemiological bulletin since March 2003 and is also applied retrospectively to the reported data from 2001 and 2002, is based on reported cases with first time laboratory detection of an HCV infection, irrespective of the clinical picture as the majority of new infections of hepatitis (approx. 75%) are asymptomatic. The accordingly modified reference definition means that cases will also be taken into account for which the clinical picture is not fulfilled or for which no information is available.

complete reporting and communication of new diagnoses, in some (chronic) cases for persons who have been infected for some time, in particular the above average proportion of people in metropolitan urban centres who belong to at-risk groups such as injecting drug users and MSM. Analyses for the Berlin districts revealed amongst other things a clustering of cases in the districts where correctional facilities are located and where there are therefore greater numbers of tests performed on at-risk groups than in other districts (RKI 2015d).

Hepatitis C risks of infection

Reliable information was available on the mode of transmission in the case of 1,555 (26.7%) of the new diagnoses reported as per the reference definition. Multiple mentions were reduced to the most probable mode of transmission.

Injecting drug use, which has a high probability of being causally related to the hepatitis C discovered, was reported for 81.5% (n = 1,267) of the cases with reliable information as to the mode of transmission, followed by 108 cases (6.9%) due to the receipt of blood products prior to the introduction of diagnostic testing of blood and blood products in 1991. In third place is transmission within the group of men who have sex with men (n = 87; 5.6%).

77.6% (n = 983) of the cases involving injecting drug use as the mode of transmission were men. Among all cases with reliable information on mode of transmission, 84.8% of cases for men and 71.8% of cases for women (n = 283) were most probably transmitted through injecting drug use. The fact that men more frequently use injecting drugs than women explains, amongst other things, the considerably higher incidence of first diagnosis of hepatitis C amongst men. Amongst men with "injecting drug use" as the probable mode of transmission for Hepatitis C, there is a clear peak in the age distribution in the group 30-39 year olds (427 persons, 43.4%) with a decrease towards the younger and older age groups. As such, the youngest and oldest people made up the lowest proportion (58 persons (5.9%) younger than 25, 21 persons (2.1%) older than 59). Of the reported cases stating "injecting drug use", there was the additional information "injecting use in prison" for 35 men (3.6%) and 4 women (1.4%).

Injecting drug users are by some margin the largest group of cases of newly diagnosed Hepatitis C. For this reason, the highest priority in Germany should be given to the prevention of hepatitis C specifically amongst injecting drug users. Furthermore, more attention should be drawn amongst the respective groups to the risk of sexual transmission through practices prone to cause injury or among persons who are especially vulnerable due to a previously existing co-infection (e.g. HIV) (RKI 2015d).

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

There is currently no information available on this.

1.3.3 Information on the prevalence of drug-related infectious diseases outside the routine monitoring (T1.3.3)

HIV data from outside routine monitoring

From Hamburg, data is available on the HIV prevalence among clients of outpatient addiction support facilities. In 2013, the HIV infection rate among all drug users was 2.5%, nearly at the level of the previous year (2012: 2.8%); among opiate users it was 4.6% (2012: 4.9%), which also represented only a very slight decline from the previous year. Differentiating by gender once more shows a slightly higher infection rate among women (5.0%) than men (4.5%). 4.3% of opioid dependent clients stated that they had not as yet had an HIV test (Verthein et al. 2014).

Data is now also available from the Frankfurt Consumption Room Documentation, which covers four consumption rooms in Frankfurt (Förster & Stöver 2014), on the HIV status of clients treated in 2013. 2,528 persons answered the question as to whether they had already had an HIV test (2012: 2,944 persons), of which 94.9% (n = 2,399) had already been tested. In line with recent years, a slightly higher proportion of women (at 96.5%) had themselves tested than that of men (94.6%). The test results are available for 2,351 persons (52% of all consumption room users) for the reporting year. Of those, 2.9% stated that they were HIV positive (men: 2.5%, women: 4.7%). Looking at the longer term, the proportion of HIV infected persons amongst consumption room users has fallen since 2009 and in 2013 was just below the levels from the previous two years (2012: 3.2%; 2011: 3.2%; 2010: 3.7%; 2009: 4.4%). HIV infections are 2.0% rare among new users. Among continuing users the proportion is higher, at 3.3%. Female continuing users in particular have an above average rate of HIV infection, at 5.9%. In the previous year the HIV infection rate among female continuing users was even higher (8.0%).

Also, in the Scene Study 2014, information can be found on 150 drug users in the open drug scene in Frankfurt (Werse & Egger 2015). In 2014, 6% of those stated that they were HIV positive. This value has remained almost unchanged since 2008 and remains once again markedly under the figure from the 2008 surveys.

The Statistical Report on Substance Abuse Treatment in Germany (DSHS) also records data on the HIV-infection status of the treated patients (Braun et al. 2015). The HIV status is known for 41% (n = 9019) of opioid clients; of these 4.7% are HIV positive. Among all clients with some type of illicit drug problem and whose HIV test results are known, 4% (n = 603) have an HIV infection.

If one combines the findings from Hamburg, Frankfurt am Main and from the DSHS, the resulting average HIV prevalence rate among opioid users is approximately 3 to 6%. This value represents a conservative estimate of the actual prevalence and must be viewed with caution, in light of the large number of unknown cases.

Hepatitis B and C Data from outside routine monitoring

In the DSHS, data was also collected in 2014 on the hepatitis B and hepatitis C infection status of addiction patients in outpatient treatment (Braun et al. 2015). The test results are known for 36.6% (n = 7,134) of opioid clients; the prevalence rate of Hepatitis B for that group was 6.6% (n = 474), among all tested patients with illicit drug problems, the rate is 4.7% (n = 550). Test results for hepatitis C are available for 44% of opioid clients (n = 9,837), the prevalence rate for hepatitis C amounts to 48.8% (n = 4,797, of which 574 cases are acute, and 4,223 chronic). Among all tested clients with some illicit drug problem (n = 15,754) the prevalence rate is 33.6% (n = 5,289).

According to the Hamburg Basic Documentation of the outpatient addiction system (BADO), 48.7% of opioid users were infected with hepatitis C in 2013 (2012: 50.1%; 2011: 48.8%; 2010: 44.5%; 2009: 48%), the proportion of all drug users infected with hepatitis C was 21.1%. 4.1% of opioid users had not yet been tested (Verthein et al. 2014).

In the Frankfurt Consumption Room Documentation 2013 (Förster & Stöver 2014), 52% (n = 2,303) of consumption room users provided information as to whether they had already had a hepatitis B and/or hepatitis C testing. Of those, 43.2% (995 people) tested positive for hepatitis C, 1.3% (30 people) tested positive for hepatitis B and a further 1.3% (30 people) tested positive to hepatitis B and C. 82% of the test results are from 2012 and 2013 and are therefore quite up to date. There were hardly any gender-specific differences. Similar to the situation regarding HIV and consistent with the results of recent years, older drug users were more likely to be infected with hepatitis infection than younger users. The average age of consumption room users who were not infected with a hepatitis virus was 35.9; in contrast, the average age of those who did have a hepatitis infection was 37.7. Also continuing users had a higher infection rate than new users (49% vs. 39% respectively). In the open scene in Frankfurt, the proportion of people who stated that they were infected with hepatitis C has declined (Werse & Egger 2015). Whilst in most of the previous years around two thirds of respondents have been HCV positive, in 2014 this was only 51%.

Results of the DRUCK Study

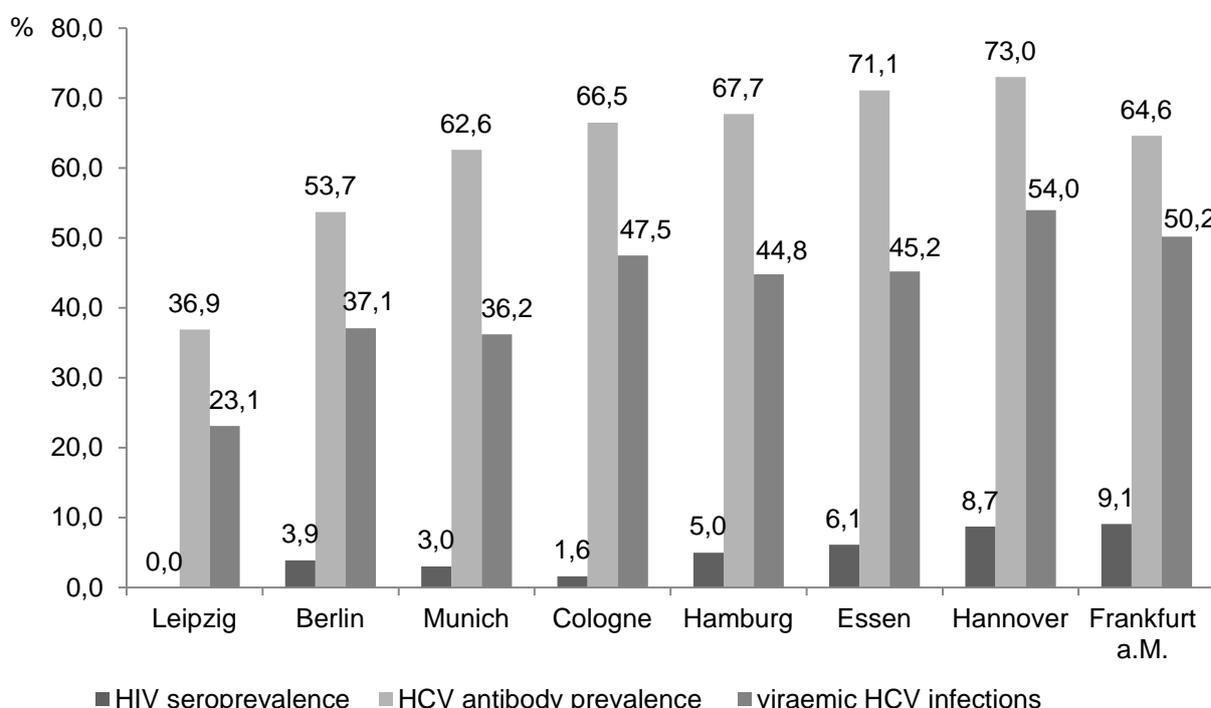
The RKI, in cooperation with the drug support facilities, carried out a study from 2011 to 2015 into HBV, HCV and HIV among injecting drug users in 8 cities in Germany (Berlin, Essen, Leipzig, Frankfurt am Main, Cologne, Hannover, Munich and Hamburg). The DRUCK study is a serosurvey and behavioural survey which collects information regarding the risk of infection and behaviours of people who currently inject drugs. In addition, serological and molecular biological markers for HBV, HCV and HIV were determined from blood samples.

Data collection was carried out in all eight cities as well as in local drug support facilities, in part in cooperation with local German Aids Service Organisations and the public health service (Öffentlichen Gesundheitsdienst, ÖGD). In the study people could take part who had injected drugs in the previous 12 months, were at least 16 years old and were users in the respective study town. In total 2,077 people from eight cities were included in the study.

Through the recruitment using the snowball system (respondent driven sampling), people could also be included in the study who were not connected to the drug support system.

The results of the DRUCK study show significant differences between the eight study cities; in the age and social structure, in the primary substances used as well as in the prevalence of the tested infections. The proportion of women among the study participants in the eight study cities was between 18 and 35%, while the proportion of participants who were not born in Germany was between 9 and 31%. The proportion of first and second generation migrants in the individual study cities also significantly varied (18 - 45%). The median age of participants was between 29 and 41 years old. A higher proportion of injecting drug users (53 - 77%) reported having been homeless at some point in their lives. 7 - 29% of participants had been homeless in the previous 12 months or had lived in a homeless shelter. 55 - 88% of participants report having undergone opioid substitution therapy in their lives, 31 - 65% reported currently to be undergoing substitution therapy.

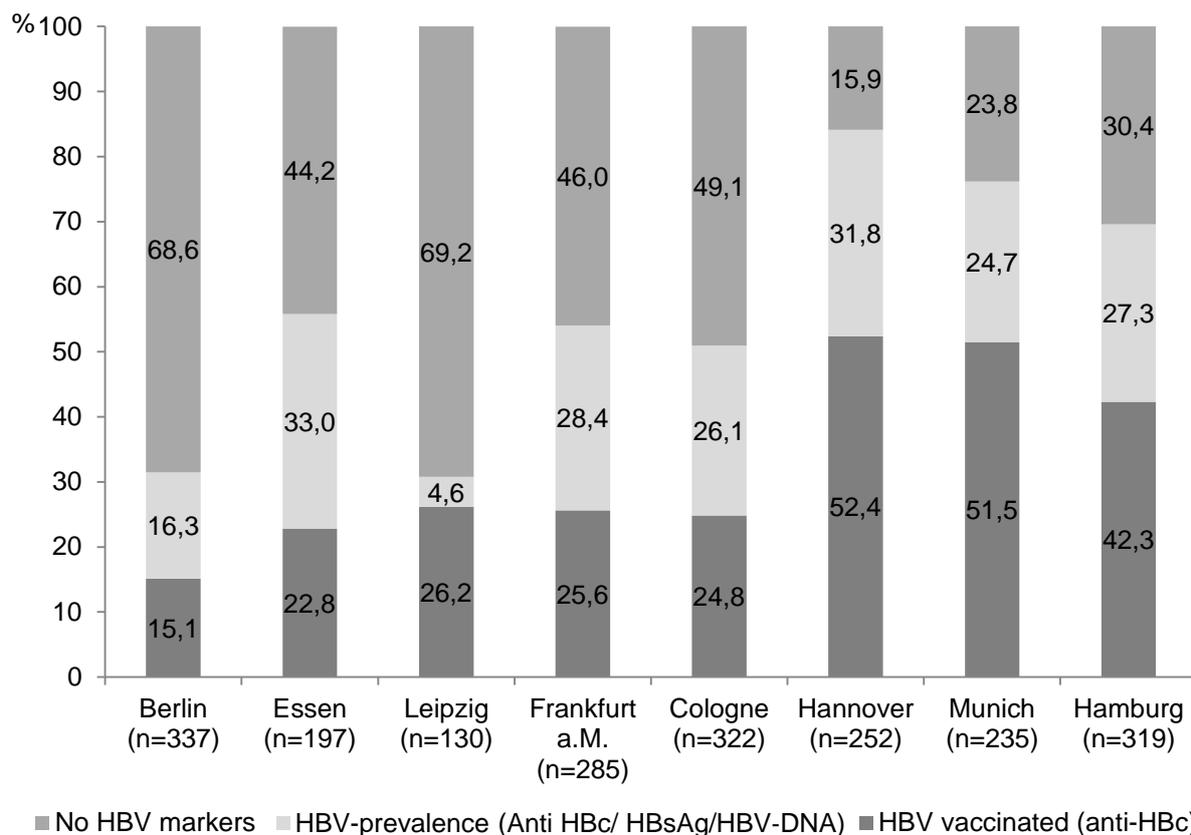
Significant differences were also shown in the prevalence of infections studied. The HIV prevalence rate among participants within the study cities fluctuated between 0 and 9% (see Fig. 1). The prevalence of hepatitis C antibodies varied in the study cities between 37 and 73%. The HCV-RNA prevalence was 23 - 54% (see Fig. 1). Thus, up to 54% of the injecting drug users who took part in the study were suffering from hepatitis C which was potentially in need of treatment, which could be transmitted to other persons.



RKI 2015b.

Figure 1

HIV seroprevalence, HCV antibody prevalence and viraemic HCV infections by study city (DRUCK study)



RKI 2015b.

Figure 2 Hepatitis B status by study city (DRUCK study)

The prevalence of hepatitis B vaccinations, measured through the detection of anti-HBc was 15 - 52% (see Fig. 2). Hepatitis B prevalence varied between cities by between 5 and 33%, whilst the proportion of active infections, following testing for HbC antigens or HBV-DNA was between 0.3 and 3% (RKI 2015b).

1.3.4 Behavioural data on drug-related infectious diseases (T1.3.4)

In the RKI DRUCK study (described above) data was obtained regarding high risk behaviour and knowledge of possibilities for the protection from infection in injecting drug use. The majority of those questioned had been using drugs for a long time, the median duration of use of participants was between 10 and 18 years. 76 - 88% of injecting drug users questioned reported having injected in the last 30 days. Whilst heroin was the most frequently consumed substance amongst participants in all 8 cities at the time of the survey (57 - 85%), there were clear differences with the use of cocaine, crack and methamphetamine (crystal meth) in the study cities.

17 - 37% of participants reported daily injecting use in the last 30 days. Among injecting drug users, 5 - 22% reported having shared syringes and/or needles with others in the last 30 days, 32 - 44% reported having shared other paraphernalia such as filters, pans or water.

Between 36 - 48% of the study participants - depending on the city - reported to have practiced at least one of these unsafe use behaviours in the last 30 days.

A higher proportion of injecting drug users (73 - 86%) reported having been imprisoned at least once in their lives, the median was 3 - 5 times. All types of imprisonment were included in the survey. 10 - 21% of all participants reported having had experience with prison, having been imprisoned in the 12 months prior to taking part in the study. On average, approximately one third of those who had been imprisoned at some point (18 - 40% depending on study city) reported having injected drugs in prison as well and thus to having exposed themselves to the risk of infection through the use of non-sterile injection paraphernalia. 3% of all injecting drug users taking part in the study who had had prison experience (a range of 0.6 - 6%) reported that their injecting drug use began in prison.

Knowledge in respect of general aspects, common modes of transmission and protection possibilities relating to a HBV, HCV and HIV infection was relatively well developed. Clear deficits in knowledge were found regarding modes of transmission of hepatitis C specifically associated with drug use, such as the sharing of filters, spoons, water and through the sharing of tubes for snorting. Even less solid was the knowledge related to hepatitis B and on prevention through vaccination as well as the knowledge of HIV post-exposure prophylaxis and the protection against a transmission of HIV through effective treatment (RKI 2015b).

In the Hamburg Basic Documentation of outpatient addiction support (BADO) in 2013, the treated opioid users were interviewed, amongst other things, about their shared use of needles. Similar to in the previous year, 5.6% stated that they had shared needles with other users within the last 30 days (2012: 5.7%); the lifetime prevalence was 31.6% (2012: 31.4%) (Verthein et al. 2014).

In the open drug scene in Frankfurt in 2014, sharing of drugs from one needle decreased once more, as it had in the preceding years; this practice was reported at only 6% of users (Werse & Egger 2015). Somewhat increased, however, is the shared use of injection utensils (15%), as well as the multiple use of hypodermic needles (20%). At 63% a majority of respondents exhibited no such risk behaviour.

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

Currently, there is no up-to-date epidemiological data available in this area.

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

No additional information is available on this.

1.4 Other drug-related harms (T1.4 and T1.4.1)

Comorbid somatic and mental disorders amongst drug users

In addition to the suffering induced by the infectious diseases described above, drug users are to a great extent affected by a series of other somatic and psychological comorbidities. Comprehensive national or representative studies on this topic are not available. In the

Statistical Report on Substance Abuse Treatment in Germany (DSHS) data is collected on comorbidity, however since data is missing for a large majority of all documented patients, no serious estimation on comorbidity can be made on the basis of the few remaining data points.

In the Hamburg Basic Documentation on outpatient addiction support 2013, however, there is information on both the physical and mental health of treated clients (Verthein et al. 2014):

The 4,528 opiate clients often consumed other substances in addition to opiates in problematic ways or had additional non-substance based addictions. On average, 4.2 additional problem areas were determined amongst opiate clients (including gambling and eating disorders, excluding tobacco). In the number of additional problem areas, there were no relevant differences between the genders, although there were differences in part in the key areas of the additional problems. The substances most commonly used in addition to opiates were cocaine (66%), cannabis (63%), alcohol (58%), crack (45%) and sedatives (44%). The proportions of male clients were mostly higher than that of the female users. This was especially the case for cannabis (67% v. 53%) and alcohol (60% v. 51%), while among sedatives and very significantly among eating disorders there was a higher proportion of women (for sedatives, 46% women and 43% men, eating disorders 14% v. 3% respectively).

24% of people in the group of opiate users were seen by the counsellors as suffering considerable or extreme negative physical health effects, in the case of a further 30%, a medium health impairment. In addition, 36% of clients were classified as considerably or extremely mentally burdened, whereby women (43%) were affected far more often than men (34%). 31% of clients reported at least one suicide attempt in the past (42% of women, 27% of men). The most commonly reported symptoms were depressive mood (21% of clients), restlessness (20%) and anxiety/phobias (17%). Excessive self-confidence (12%), lack of impulse / emotional control (10%) and aggression (7%) were mentioned somewhat less often. The psychological symptoms are a clear indication that a majority of these clients will require further psychiatric-psychotherapeutic care in future in addition to the existing addiction-specific treatment in order to stabilise themselves for the longer-term.

For the 2,367 clients in treatment with a main diagnosis of cannabis, two subgroups can be distinguished: one subgroup without alcohol problems (THC group) and one subgroup with alcohol problems (THC/ALC group), which is more heavily afflicted. In total an average of 56% of cannabis users suffered from physical health impairment, but the THC group was significantly healthier (4% with considerable or extreme health impairments, 55% without health complaints); the THC/ALC group was considerably more physically impaired (10% with considerable health impairments, only 34% without complaints). Moreover the THC/ALC group also reported sleeping disorders far more frequently (46%, THC group 35%). Psycho-emotional distress was significantly more pronounced in the group of cannabis users than physical distress; 88% were affected, 30% to a considerable or extreme extent. Women were more frequently affected than men (41% and 27% respectively) to these levels of severity - as well as among the following single illnesses. Cannabis clients suffered not just to a small extent from nervousness / restlessness (49%), depressive moods (45%), excessive self-

confidence (39%), anxiety/phobias (38%), a lack of impulse and emotional control (34%) as well as excessive aggression (30%). Psychological complaints are suffered by the THC/ALC subgroup and women more than the THC clientele and men.

Every tenth client (11%) has attempted suicide once in their life already: one in five of the supported women (21%) and every sixth person amongst the comorbid THC/ALK clientele (16%).

More recent findings on the treatment of mental disorders with simultaneous addiction problems is addressed in the Treatment workbook.

Side effects of non-medicinal cannabis use

In a recent study by Wartberg et al. (2014) 20 adolescents, who were in treatment due to cannabis use and at the time of the study had been abstinent for several weeks, were examined for possible impairments in cognitive function. Verbal learning and retention performance, visual-spatial memory performance as well as selective awareness were tested using established neuro-psychological methods as well as a questionnaire on subjectively experienced awareness deficiencies. The results show slight benefits in specific verbal learning performance among cannabis users after several weeks of abstinence. Tests found no difference between the two groups in visual-spatial memory and selective attention functions. In contrast, cannabis users reported significantly more subjective awareness deficiencies in everyday life. The authors make no final assessment on whether adolescent cannabis users actually do have more attention problems in everyday life or whether this is an exaggerated subjective perception of problems (Wartberg et al. 2014).

A current review paper on the risks of non-medicinal cannabis use by Hoch et al. (2015) lists a whole series of symptoms, which can occur depending on various different factors. In particular, high-dose, intensive cannabis use over many years as well as the start of use being in adolescence can be associated with dependence (DSM-5; ICD-10), specific withdrawal symptoms, cognitive deficits, mood disorders, psychoses, anxiety disorders and physical damage (mainly respiratory and cardiovascular diseases). The authors conclude that further research is necessary in order to clarify the causality of the connection between intensive cannabis use and possible consequences for physical and mental health.

Side effects of new psychoactive substances

In the scope of the EU project "SPICE II plus" an online survey of experienced users of NPS was carried out in 2013 and 2014. In the survey, short, medium and long term negative effects of NPS amongst n = 771 users were recorded. 666 of the users reported experience with synthetic cannabinoids, 347 reported experience with research chemicals and 225 reported experience with other legal highs such as bath salts (multiple responses possible). The most commonly reported short term negative effects were heart palpitations, circulation problems, headaches, dizziness and panic attacks. The most commonly reported medium and long term negative effects were craving and withdrawal symptoms. The highest number of negative effects was reported for synthetic cannabinoids. This also applied in respect of

severe side effects such as unconsciousness or breathing difficulties and withdrawal symptoms. Persons with more frequent consumption rates (use of one substance at least ten times) reported significantly more negative effects than occasional users (personal communication, Centre for Drug Research Frankfurt 2015).

Table 4 Negative effects of NPS

	Synthetic cannabinoids N=666	Research chemicals N=347	Other legal highs N=225
Short term negative effects			
Heart palpitations	67%	53%	48%
Headaches	44%	33%	33%
Nausea / vomiting	38%	33%	28%
Stomach aches	16 %	17%	17%
Circulation problems / low blood pressure etc.	49%	33%	31%
Muscle cramps	13%	16 %	16 %
Loss of consciousness / coma	6%	4%	3%
Panic attacks, "horror trips" etc.	36%	26%	22%
Breathing difficulties	15%	7%	9%
Medium/long-term negative effects			
Withdrawal symptoms / dependence	15%	13%	11%
Problems in school / at work	7%	7%	8%
Couple / family problems	11%	14%	9%
Permanent physical problems	5%	5%	6%
Permanent psychological problems	10%	11%	9%
Cravings	20%	26%	22%

Personal communication, Centre for Drug Research Frankfurt 2015.

1.5 Measures for harm reduction (T1.5)

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

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

- Informing and educating on the risks of overdosing,
- Providing effective treatment measures for drug users (above all Substitution, see Treatment workbook) and improving the retention rate,

- Improving the 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).

Further information on the National Strategy can be found in the Drug Policy workbook; the National Strategy is also available online⁷.

1.5.2 Organisation of harm reduction services (T1.5.2)

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

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

1.5.3 Measures for harm reduction (T1.5.3)

Prevention and treatment of drug-related infectious diseases

The EMCDDA and ECDC list seven key interventions in a joint publication on the prevention of drug-related infectious diseases (ECDC & EMCDDA 2011):

- Health promotion/provision of information and education on infectious diseases with a focus on safer use and safer sex practices
- Provision of sterile injection equipment and paraphernalia (safer-use services)
- Provision of vaccinations (hepatitis A and B, tetanus, influenza etc.)
- Provision of opportunities for testing
- Provision of effective treatment services (in particular substitution, see the Treatment workbook)
- Access to treatment for infectious diseases
- Creation of framework conditions based on the needs of the target group in the provision of the above services (e.g. outreach services, street work, low-threshold facilities, cooperation between drug counselling centres and practice based doctors etc.).

⁷ http://www.drogenbeauftragte.de/fileadmin/dateien-dba/Presse/Downloads/Nationale_Strategie_Druckfassung-Dt.pdf (Last accessed: 11 Aug. 2015)

Safer use initiatives

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

Data on needle exchange is mostly only documented in Germany by individual facilities in the respective annual reports. A nationwide compilation of the data available is not undertaken. An overview of the locations of 160 needle vending machines in 9 Laender can be found on a website provided by the German AIDS Service Organisation (DAH)⁸. Of the 160 needle vending machines listed by the Aids Service Organisation, 102 are located in North Rhine-Westphalia and 15 in Berlin, whereas 7 Laender do not even have a single needle vending machine. Thus the distribution of locations for the whole of Germany can clearly not yet be described as comprehensive. That being said, the documentation of needle vending machines in the other Laender is very incomplete, which could contribute to a distortion of the data in favour of North Rhine-Westphalia and Berlin. This does not therefore necessarily represent an exhaustive count of all needle vending machines in Germany.

The only Land in which a regular survey is conducted on a local level on the distribution of single use syringes by the DAH, is North-Rhine Westphalia. For 2014, the DAH in NRW reported that 1,764,825 needles were issued in facilities as well as 121,142 needles issued by vending machines⁹.

In Berlin in spring 2015, Fixpunkt e.V. carried out an assessment in 16 projects/facilities in Berlin as well as evaluating the quantity of paraphernalia dispensed by needle vending machines. Approx. 30% of the 922,000 needles and 521,000 syringes which were documented as having been dispensed were from vending machines and 65% were issued "loose" through various projects. In the last three years the quantity of sterile water, filters and disposal cans given out has significantly increased through the amendment of the dispensing regulations. Thus a paradigm shift was initiated away from the "needle exchange" (new material in exchange for old) towards a needs-oriented "user paraphernalia dispensing" approach. The authors find that the quantity of 200 syringe sets per i.v. drug user as recommended by the WHO was not reached in Berlin. In 2014 approximately 154 hollow needles and 87 syringes per injecting drug user were given out (based on the estimated lowest limit of 6,000 injecting users). Vending machines have a significant impact on the supply to the target group. According to the authors, mobile services could compensate for or complement lacking inpatient points of contact. They also note a high level of acceptance of innovation amongst the target group, somewhat due to the amending of the methods of

⁸ <http://www.spritzenautomaten.de/> (last accessed: 20 Aug. 2015)

⁹ http://www.saferuse-nrw.de/Saferuse-NRW/upload/pdf/abfrage_spritzen_2011-2013.pdf (last accessed: 07 Aug. 2014).

issuing filters and an expansion of the range through disposal cans (Leicht and Blättner 2015).

According to health care experts, safer-use services in prison in Germany are still lagging behind what is possible. A needle vending machine is only available in one of the 184 German prisons (Statistisches Bundesamt 2015b). In light of this fact, in 2013 the DAH has already started a campaign to improve the situation of drug users in prison (DAH 2013). As part of this, the DAH is inviting people to take part in an online campaign¹⁰, which will be used to push for the right of prisoners to good health. The initiative is supported by the Paritätische Wohlfahrtsverband (Equal Opportunities Association), the German Association of Parents and Relatives for Acceptance-Oriented Drug Work and by akzept e.V.

Information on issuing needles can be found in Standard Table 10.

Provision of drug consumption rooms

Due to the continuing very high-risk patterns of use of heroin, drug consumption rooms and low-threshold 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, hence paraphernalia brought along to the consumption rooms may not be used. The goal of this initiative is to secure the survival and stabilisation of the health of drug users, as well as offering cessation oriented support to addicts who would not otherwise be reached by the system. Based on Sec. 10a of the Narcotics Act, which defines minimum requirements for the operation of these facilities, the governments of the Laender may pass regulations specifying the criteria for licences to operate drug consumption rooms.

Currently, there are a total of 23 fixed location drug consumption rooms in six German Laender (Berlin, Hamburg, Hesse, Lower Saxony, North Rhine-Westphalia and Saarland) across 15 cities and one mobile drug consumption station in Berlin¹¹. More precise data on the utilisation and clientele of consumption rooms is at present only available for individual facilities which publish their annual reports on the internet. The data from Frankfurt is presented below by way of example:

In the four Frankfurt consumption rooms, a total of 191,729 incidences of consumption were documented in 2013, with 257,861 consumption units documented (if a user brought more than one substance with them, this was recorded as a multiple unit case). The number of consumption room users was 4,465, of which 1,052 were new users, which equates to an average of 58 incidences of use per user per year. Thus, there were 470 persons, who used the consumption rooms several times a week and therefore used the room over 100 times over the course of the year ("intensive users 100").

As in the previous years, heroin and crack predominated amongst drugs injected in the consumption rooms. 38.7% (2012: 48%) of cases, and thus the largest proportion, concerned

¹⁰ www.drogenundmensenrechte.de (last accessed: 21 Aug. 2015)

¹¹ See also www.drogenkonsumraum.net (last accessed: 20 Aug. 2015)

heroin being used on its own (without any other drugs). In second place with 37.2% (2012: 32.0%, 2011: 24%) is heroin used in combination with crack and in third place, with 22.5% (2012: 16.8%) is crack alone. While therefore the use of heroin on its own has markedly decreased, the use of heroin together with crack as well as the use of crack on its own have significantly increased. Cocaine without other drugs was consumed by 0.6% intravenously, the same as the previous year. Only 0.2% of consumption room users still use benzodiazepine intravenously (2012: almost 2%; 2011: 14%). Since November 2011, benzodiazepine, flunitrazepam (Rohypnol) were subject without exception to the German Narcotic Drugs Act, which is a likely explanation for the sharp decline in the number of consumption instances involving benzodiazepines. All other psychotropic substances are mentioned only rarely (0.4%).

The proportion of non-injecting instances of use (primarily smoking/inhaling the substance), which has been on the increase in recent years, at 4.9% remained approximately at the same level as in the previous year (2012 5.1%; 2011 and 2010 approx. 3%). The increase from 2010/11 to 2012 is due both to logistical circumstances and the installation of a ventilation system as well as the effectiveness of the nationwide project "SMOKE IT!", which aggressively promoted the inhalative consumption of heroin as an alternative route of administration (Förster & Stöver 2014).

Provision of opportunities for testing for infectious diseases

The actual number of people suffering from hepatitis in Germany is unknown, due to a deficit in the area of diagnosis, although estimates from various data sources are available (Wedemeyer 2013). For current incidences see 1.3.1 and 1.3.3. The German Liver Foundation and its partners therefore demand systematic screening for hepatitis. Above all, the recommendations for testing should be made more simple and the recording of at-risk groups such as migrants, people in prison and drug users be improved. The project, "TEST IT" (January to September 2010) of the German Aids Service Organisation (Deutschen AIDS-Hilfe, DAH), which was conducted in cooperation with the Dortmund Drug Support Facility, KICK, and scientifically supported by the Dortmund University of Applied Sciences and Arts, proved to be a success in relation to an increase in the rate of testing for HIV and is being continued in an expanded form, for example in Berlin¹² (DAH 2010). Approximately 10% of the HIV infections detected in Berlin were diagnosed in the scope of the rapid test project (aerzteblatt.de 2013a). In the course of the recently concluded DRUCK study of the RKI (2015b), study participants were offered an HIV rapid test. This offer was taken up by between 30 – 80 % of participants, depending on the study city. The authors conclude that the testing services and counselling services in drug support facilities, in particular in the form of short, targeted interventions, which are available on site and take a maximum of 10 minutes, are very well accepted by drug users.

¹² www.testit.fixpunkt-berlin.de (last accessed: 20 Aug. 2015)

Treatment of hepatitis C among drug users

The Professional Association of Gastroenterologists in Private Practice (bng) reported, on the basis of data from the German hepatitis C register, that only approximately half of patients diagnosed with hepatitis C had received adequate medical treatment in the past (aerzteblatt.de 2014). This deficit is even more serious in respect of the treatment of hepatitis C amongst drug users. Although drug users represent the largest group of persons infected with hepatitis C in Germany, they are much less widely treated than infected persons with a different risk of infection, which is partly due to a widespread negative attitude amongst doctors to drug users (Gözl 2014). For current developments in the treatment of drug users with hepatitis C see T3.3.

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

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

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

There is currently no additional information available on this topic.

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

There is currently no available information on this topic.

1.7 Quality assurance of harm reduction services (T1.7, T1.7.1)

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

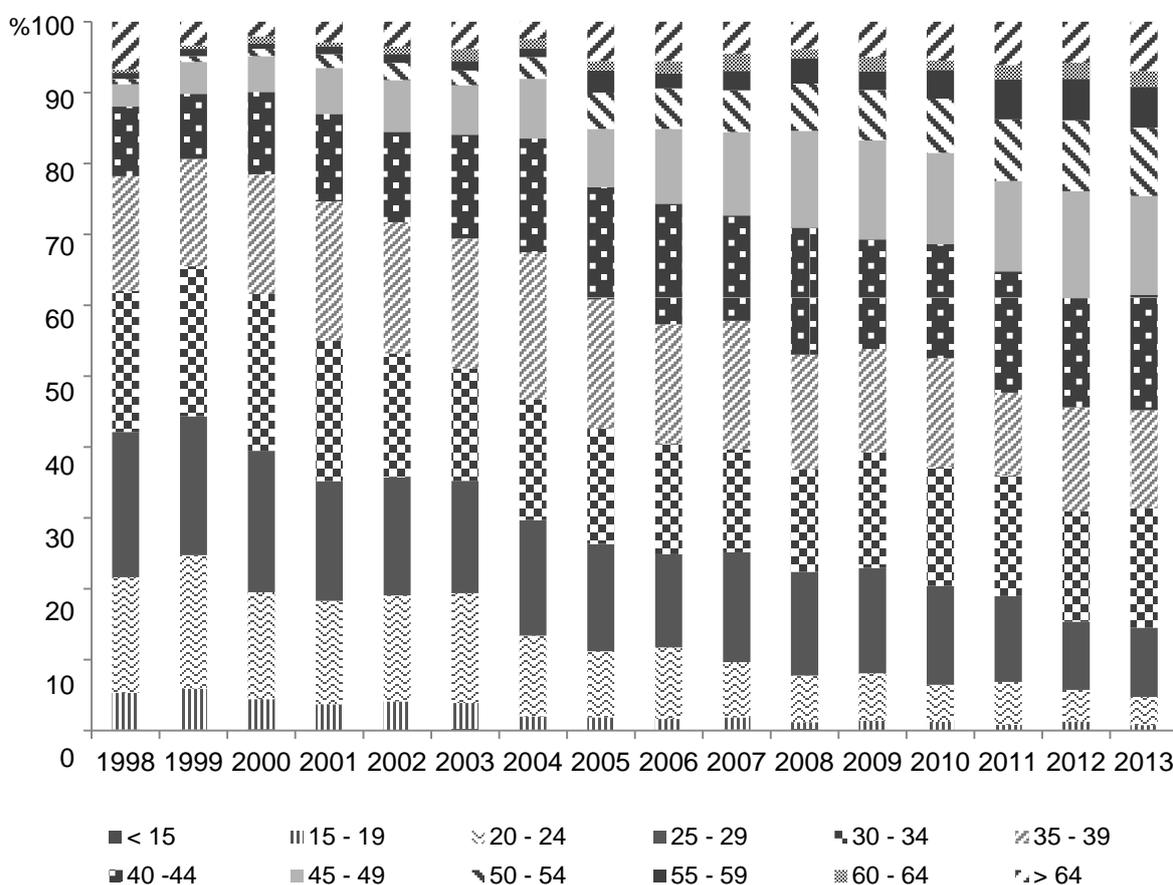
2 Trends (T2)

2.1 Short-term trends in health aspects of drug use and harm reduction services (T2.1)

2.1.1 Drug-related deaths in adults

Data from the general mortality registry

In the reporting year of 2013, the number of drug-related deaths in the general mortality registry increased by 9.3% from the previous year (2013: 1,179 persons; 2012: 1,079). Such a significant increase was last recorded in 2008, and before that in 2004. The recently consolidated trend at a lower level has thus ended. The proportion of women has fallen to 22.0%, a decrease of 1.2% from the previous year.



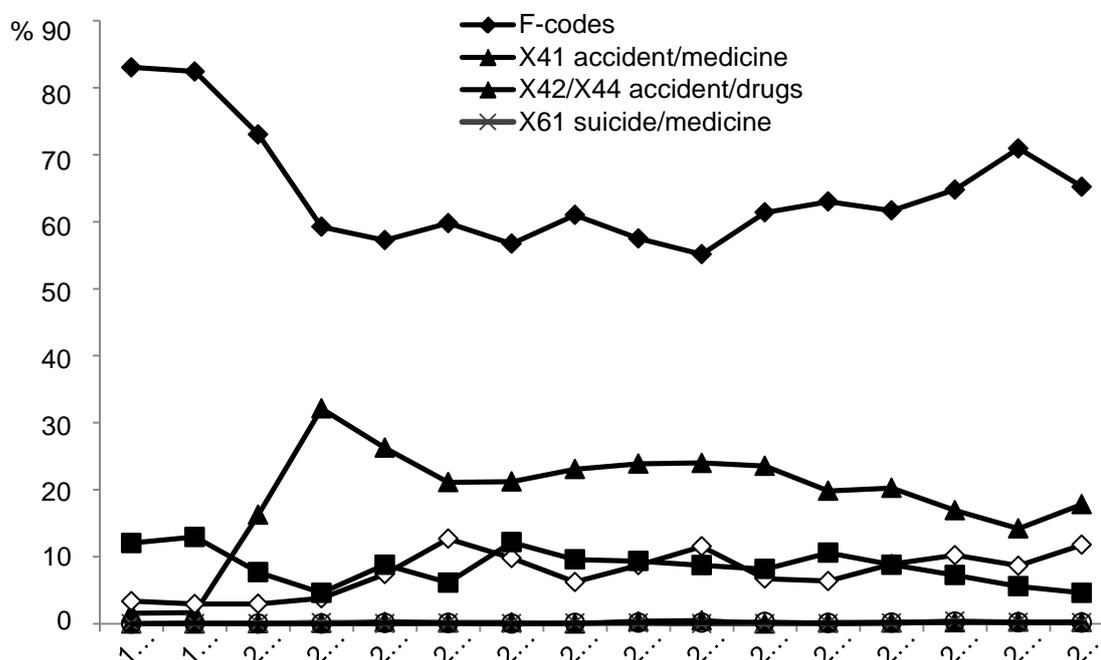
German Federal Statistical Office, special calculations.

Figure 3 Trend in drug-related deaths according to age group 1998-2013

The distribution of ages in drug-related deaths in the course of the last ten years, still shows a certain trend towards an ever increasing proportion of older age groups. The proportions of under 25 year-olds are not falling as clearly as in previous years. It should be further noted that there exists a potential over-coverage of over 60s (the proportion of which has increased

to 9.2%), as the fatalities among pain patients in particular could be included in the case of coding which is not in accordance with the guidelines. There is still no evidence of a new trend in fatal drug-related intoxications amongst the youngest users of hard drugs. In the contrary, their proportion has even decreased further. The age group of under 25 year-olds was at the lowest level, 4.7% (2012: 5.7%) since 1998 (see Fig. 3).

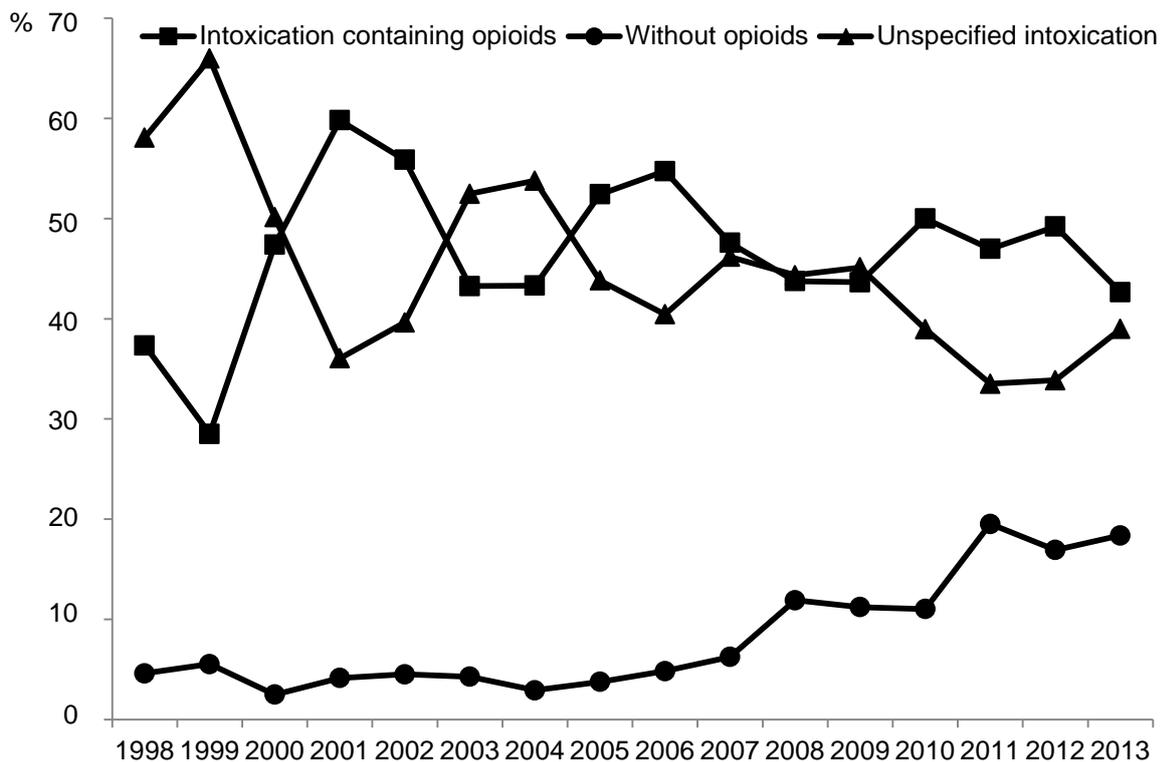
When considering the causes of death over time, there is the difficulty, that often only the underlying disease is recorded but not the acute intoxication. In the last 15 years, the percentage of recorded cases in which the acute intoxication has also been documented has always been significantly below 50% (see Fig. 4), the absolute majority of all coding being attributed to F codes.



German Federal Statistical Office, special calculations.

Figure 4 Coding trends in the causes of drug-related deaths 1998 to 2013

Statements on the substances causing death can only be made in cases where the acute intoxication has been coded. In recent years, the percentages of purely opiate related deaths and intoxications which are not specified in greater detail (this category also includes polydrug use, in which opiates may also play a significant role) have fluctuated massively, which is likely not least due to the quality of the coding. A much smaller proportion was made up of drug-related deaths without opiate involvement. Although this share is still relatively small, this proportion has significantly increased in the last 10 years. Since 2011 it has remained at approximately the same level and in 2013 was at 18.4% (see Fig. 5). The limited significance should be stressed because, amongst other things, it is not exactly known how many of these classifications are actually based on the findings of chemical-toxicological analyses on the spectrum of substances that caused the deaths.



German Federal Statistical Office, special calculations.

Figure 5 Opiate induced intoxications in drug-related deaths with ICD X/Y-coding, 1998 to 2013

2.1.2 Prevalence rates and reports of infections

New HIV diagnoses among drug users

The total number of newly diagnosed HIV infections (3,525) rose in comparison with 2013 (3,288) by 7.2%. However, the total number of HIV reports received by the RKI did not increase compared to previous years and the number of reports for which it could not be determined whether they were new diagnoses or multiple data entries, declined. The incidence of newly diagnosed HIV infections amongst men was 7,2 cases per 100,000 population, which was higher than in the previous year (6.8) and much higher than amongst women, whilst the incidence for women, of 1.6 per 100,000 population, did also increase from the previous year (1.4). The proportion of women amongst new HIV diagnoses was 19% and thus continued to increase slightly. After a 10 year decline in the proportion of women (following a peak of 25% in 2002 and a low of 15% in 2010), it has now returned to 2006 levels (19%). The proportion of persons who probably contracted their HIV infection through injecting drug use ($n = 111$) decreased slightly from 4.1% to 3.9%, despite a very slight increase in the absolute numbers from 101 to 111.

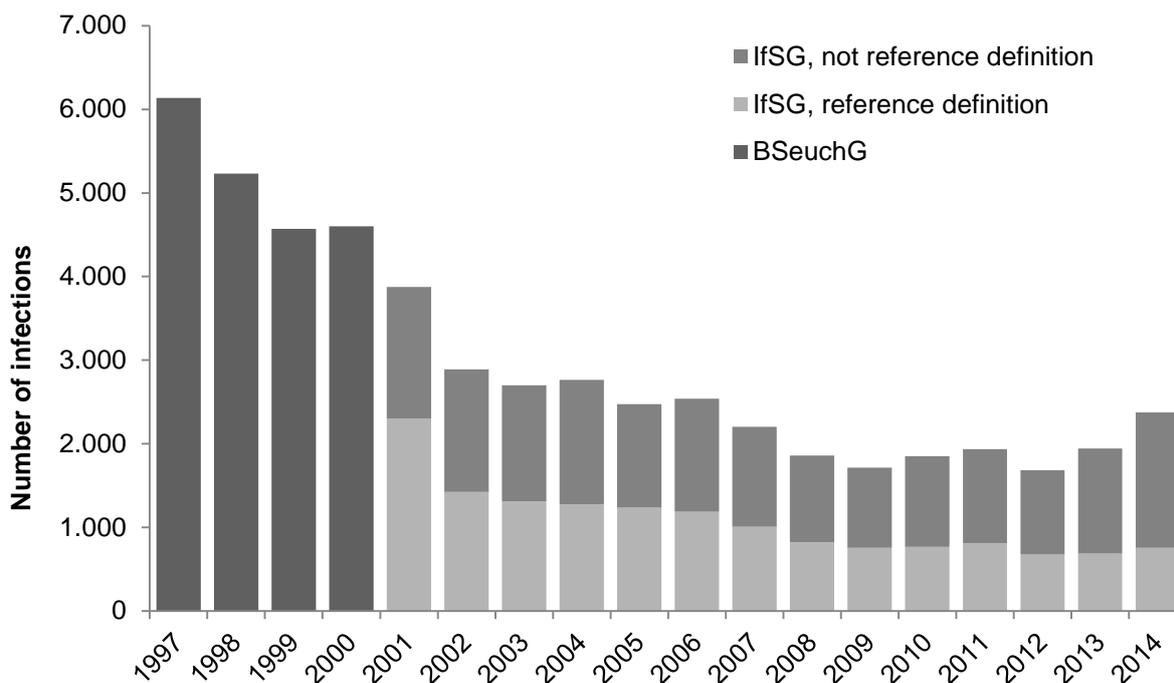
The distribution of reports by Land and by infection risk has changed slightly since 2013: In comparison to the median incidence of the 5 previous years, the incidence increased, in particular in the Laender Bavaria, Saxony, Mecklenburg-Western Pomerania and Saxony-

Anhalt. In the remaining Laender there was only a slight increase in the incidence. The particularly pronounced increase in the incidence in Berlin from 2012 to 2013 was followed by a significant reduction last year (from 15.3 to 12.9). The marked increase in incidence in Bavaria (from 3.6 to 4.7) is largely due to new diagnoses among migrants, especially from Sub-Saharan African. Of note is the development, that some of the new Laender (Saxony, Mecklenburg-Western Pomerania and Saxony-Anhalt) now have a higher incidence than some of the older Laender (Saarland, Baden-Württemberg, Schleswig-Holstein, Rheinland-Pfalz, Lower Saxony) and thus are in the middle of the incidence ranking of Laender. (RKI 2015d).

New HBV diagnoses

Due to the change in the data collection software and the new method of recording modes of transmission, data on modes of transmission can only be compared with the previous three years. Due to the very small number of cases and the high percentage of unknown modes of transmission, the numbers for transmissions of injecting drug users are not very meaningful, so an interpretation of the trends will not be undertaken here.

The incidence of hepatitis B in Germany was 0.9 cases per 100,000 population and has therefore remained constant in comparison to the previous year. The trend over time did not demonstrate any seasonality. Compared to the median of the previous years, a decrease was recorded in the incidence in 6 Laender: Mecklenburg-Western Pomerania, Rhineland-Palatinate, Saarland, Saxony, Schleswig-Holstein and Thuringia. In 4 Laender (Baden-Württemberg, Bremen, Lower Saxony and Saxony-Anhalt) the incidence in 2014 corresponded to that of the previous years and in 6 Laender (Bavaria, Berlin, Brandenburg, Hamburg, Hesse and North Rhine-Westphalia) an increase in the incidence was documented.



RKI 2015c.

Figure 6 Trend in hepatitis B reports from 1997 to 2014

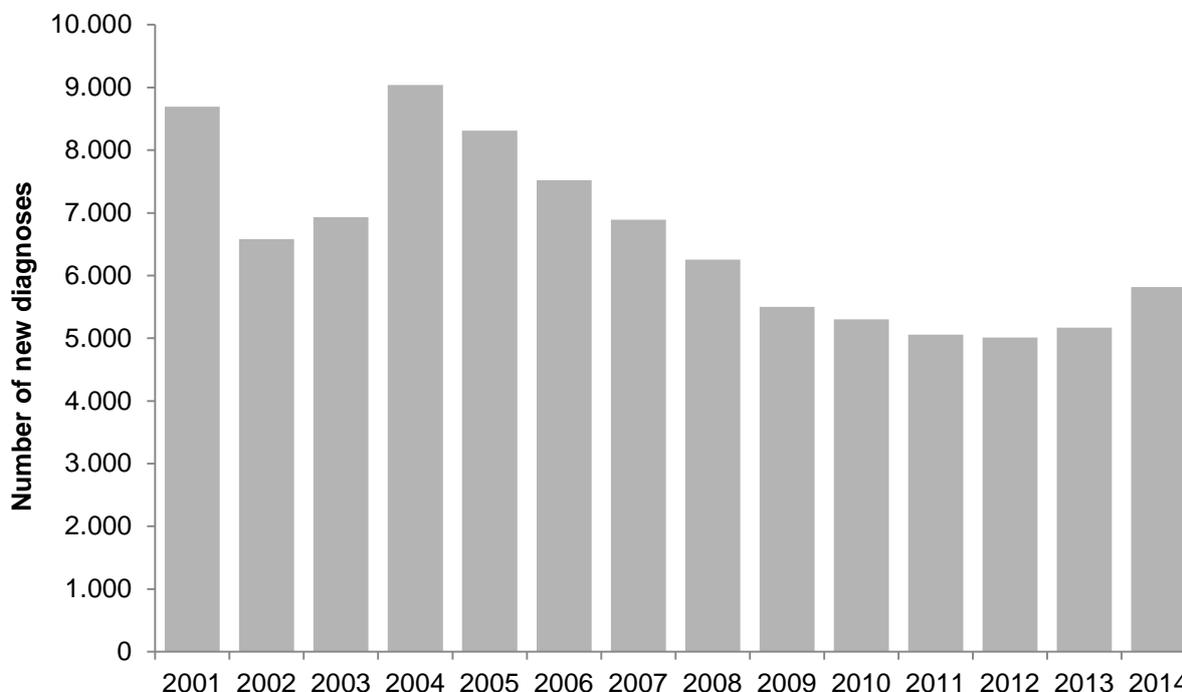
Since 2001, a decline has been observed in the transmissions of acute hepatitis B and the annual incidence, which is probably due primarily to an improved level of immunisation amongst the population through the introduction of general vaccination recommendations for nursing infants in 1995. This trend stagnated with minor fluctuations from 2009. Since 2012 the number of cases has been trending slightly upwards once more. In 2014 an increase of the incidence compared to the years 2009-2013 was recorded, in particular in the city states of Hamburg and Berlin as well as in Laender with metropolitan regions (for example Hesse and North Rhine-Westphalia). The RKI recommends consistent implementation of the vaccination recommendations for hepatitis B for all nursing infants, children and adolescents as well as for further, defined at-risk groups, in particular in the case of sexual behaviour with a high risk of infection or in the case of injecting drug use (RKI 2015c).

New HCV diagnoses.

Due to the change in the data collection software and the new method of recording modes of transmission, the data on modes of transmission are only comparable with the three previous years but not with those prior to 2011. The calculated incidence of reported new diagnoses in 2014 (5,817 cases or 7.2 new diagnoses per 100,000 population) was higher than that of 2013 (6.4) as well as the median of the years 2009 to 2013 (6.4). The trend over time did not demonstrate any seasonality.

Since 2005, there has been a downward trend nationwide in the incidence and absolute numbers of newly diagnosed hepatitis C, a trend which has slowed since 2009. Since 2011, the incidence has remained relatively stable with slight fluctuations. In 2014, the incidence of

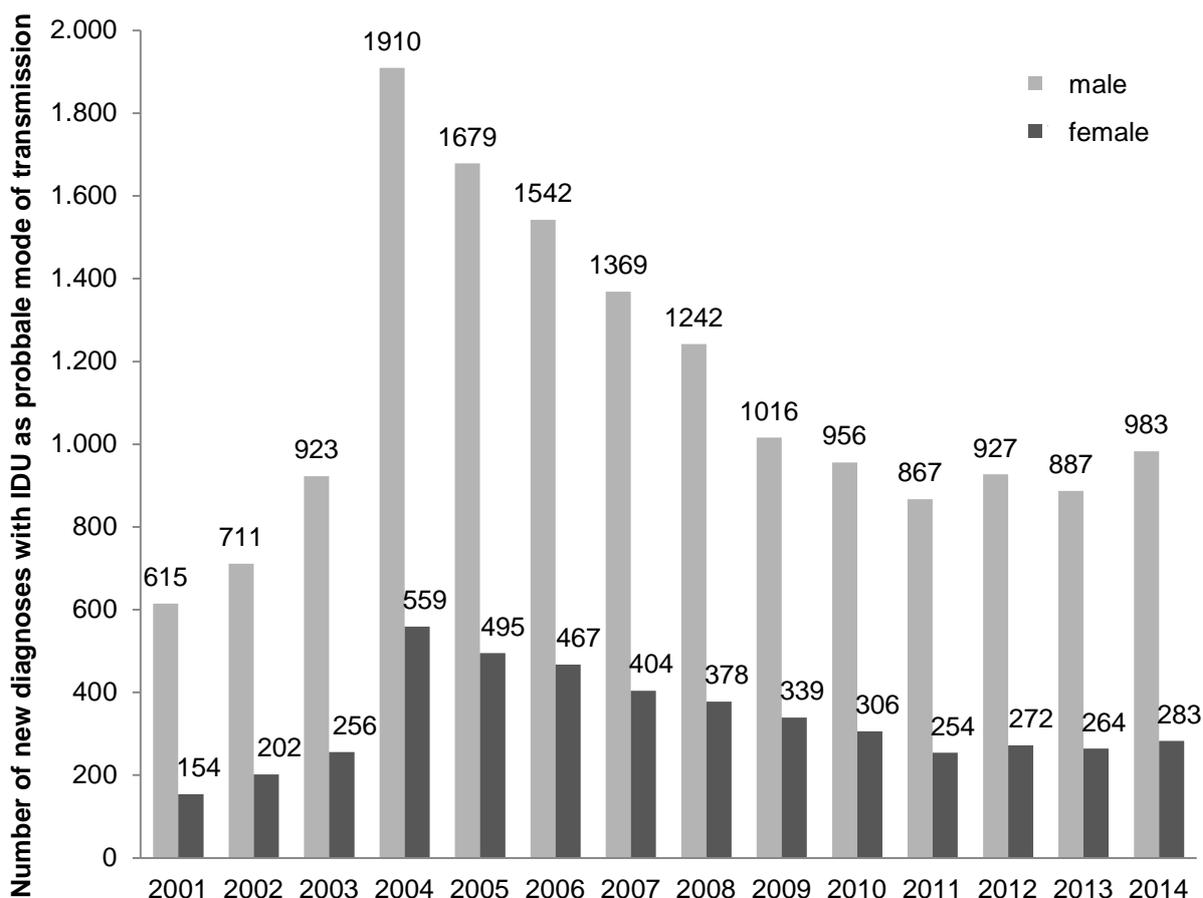
newly diagnosed cases of hepatitis C rose for the second year running. This increase can possibly be traced back to an increase in the diagnostic testing since the approval of new antiviral medicinal drugs against hepatitis C and must be monitored. As in previous years, the incidence was markedly higher among men than women.



RKI 2015a.

Figure 7 Trend in hepatitis C reports from 2001 to 2014

Injecting drug use, which has a high probability of being causally related to the hepatitis C discovered, was reported for 1,267 cases (81.5% of the cases with reliable information as to the mode of transmission). The number of cases with "injecting drug use" as the probable mode of transmission has thus increased slightly against the previous year (1,157). Between 2003 and 2004 there was a spike in recorded cases; this corresponds however not with an actual increase in the incidence in the population, but through a change in the way they are defined. From 2004 the numbers are comparable. In the last 10 years a significant drop has been recorded, from 2,469 cases in 2004 to 1,262 in 2010. A consolidation of the trend with slight fluctuations can be seen since 2010 (RKI 2015a).

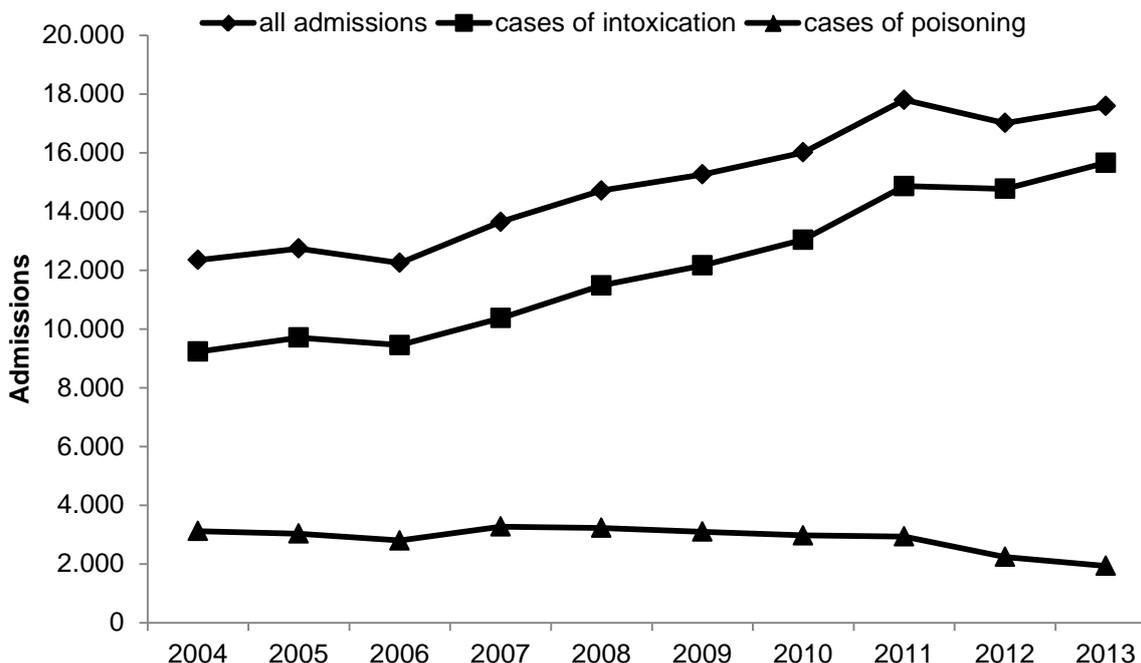


RKI 2015a.

Figure 8 Trend in newly diagnosed cases of hepatitis C with injecting drug use as the probable mode of transmission, 2001 to 2014

2.1.3 Non-fatal drug-related emergencies

The following trend is based on the nationwide data available on acute intoxication and poisoning 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 were outlined above (see 1.2.1).

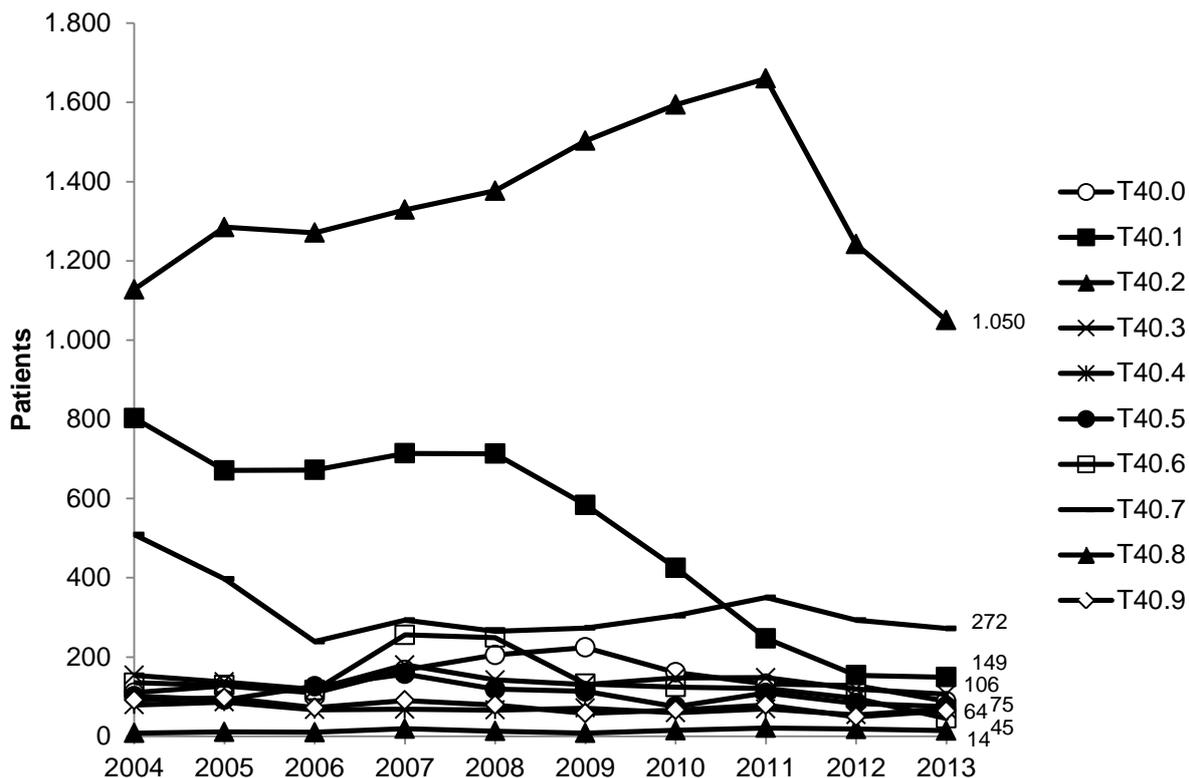


German Federal Statistical Office, special calculations.

Figure 9 Trend in drug-related non-fatal emergencies admitted to inpatient treatment, 2004 - 2013

In total a continuous increase in drug-related non-fatal emergencies admitted to inpatient treatment was recorded between 2004 and 2013, from 12,348 admissions in 2004 to 17,588 in 2013. This increase is due to the increase in the coded cases of acute intoxication. The number of cases of poisoning, which were already coded at a much lower level in 2004, has fallen even further in the last 10 years. It remains unclear whether this can be explained through coding practices or whether in fact there really was a lower number of cases of poisoning and a higher number of cases of intoxication (see Fig. 9).

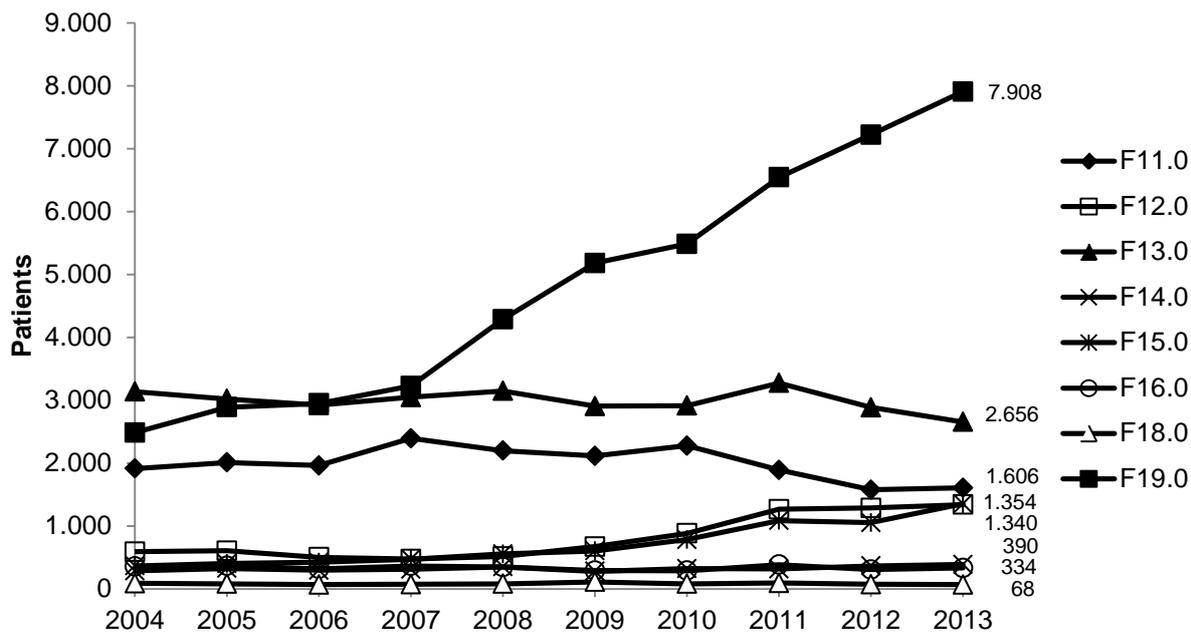
Among inpatient admissions for poisoning in the last 10 years, poisoning through "other opioids" clearly predominates within the individual diagnostic groups (T40.2) (see Fig. 10). After a significant increase between 2004 (1,128 cases) and 2011 (1,660 cases), in the last 2 years the numbers have once again significantly decreased (2013: 1,050 cases). For a long time, heroin poisoning (T40.1) has been the second most common diagnosis in this group and since 2004 has almost continuously decreased (2004: 803 cases; 2013: 194 cases). Since 2011, cannabinoid poisoning (T40.7) has been the second most commonly coded cause of hospital admission, after opioid poisoning. However, the trend towards a significant decline between 2004 and 2006 has since stabilised in recent years and at 272 cases (2013) is at a considerably lower level than opioid poisoning.



German Federal Statistical Office, special calculations.

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

In the acute intoxications group the most coded diagnosis, by some margin, is intoxication through multiple substance use or the use of other psychotropic substances (F19.0) (see Fig. 11). The number of these types of inpatient admissions cases have more than tripled between 2004 (2,475 cases) and 2013 (7,908 cases). Acute sedatives/hypnotics intoxication is the second most coded diagnosis. In recent years a slight decrease in the numbers can be seen (2004: 3,138 cases; 2013: 2,656 cases). Opioid intoxication is, following a short-term rise in the middle of the 2000s, once again below the 2004 level. The development in the number of cannabinoid intoxications, which has more than doubled from 2004 to 2013 (2004: 592 cases; 2013: 1,340 cases) as well as intoxication from stimulants (excl. cocaine), which has more than tripled (2004: 367 cases; 2013: 1,354 cases) is more critical.

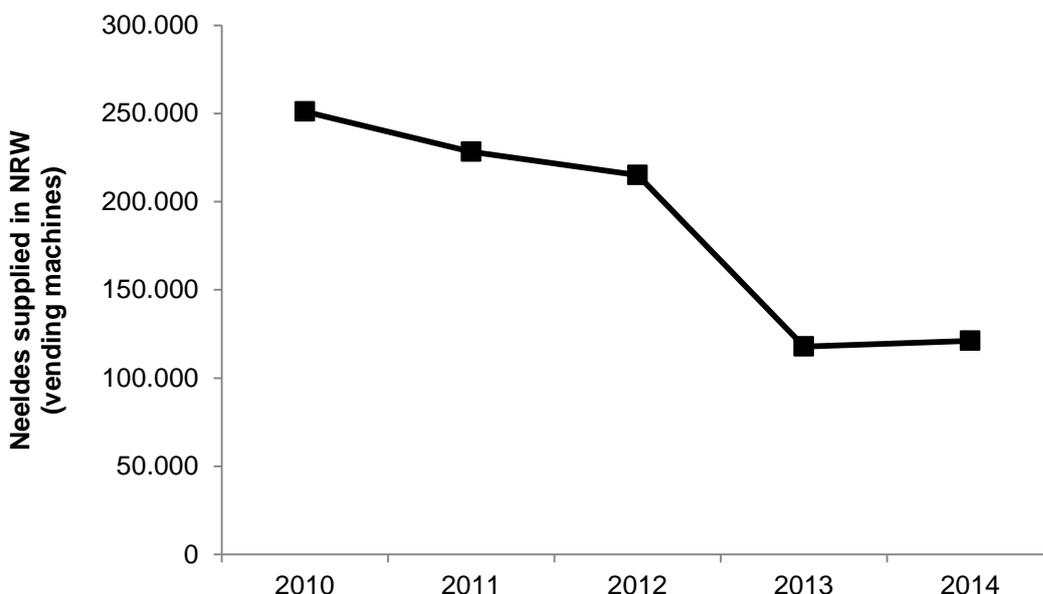


German Federal Statistical Office, special calculations.

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

2.1.4 Safer-use services for injecting drug users: Issuing needles

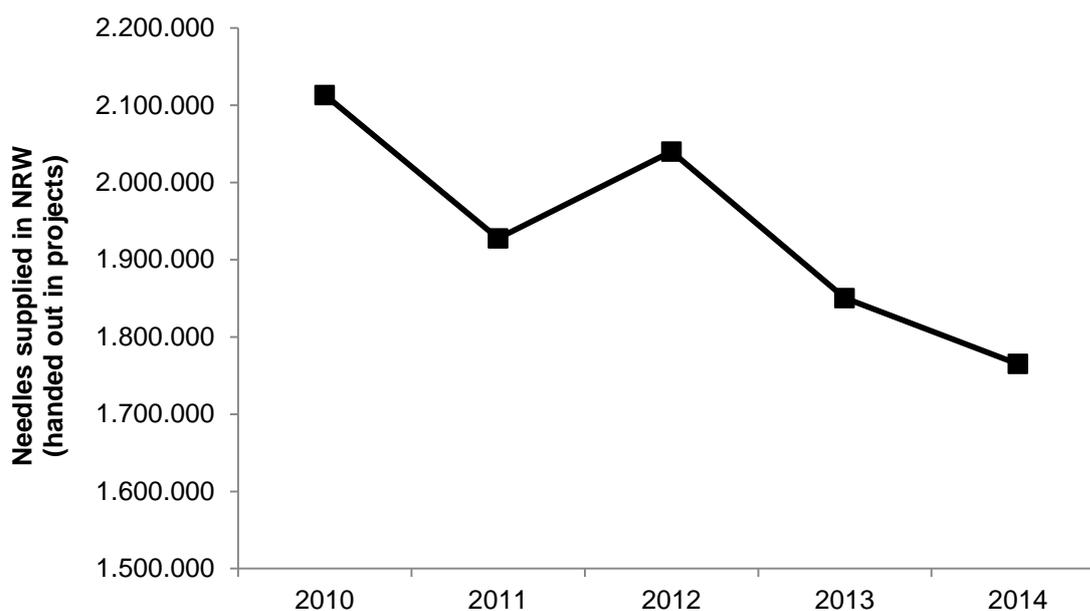
Since there is no nationwide data collected on the number of needles given out, no national trends can be reported in this area. There is only a regular survey in North Rhine-Westphalia.



Personal communication from Aidshilfe NRW e.V. 2015.

Figure 12 Trend in needles issued by vending machines in NRW, 2010 to 2014

The trend in recent years shows a distinct bend after 2012, both in needles handed out "loose" as well as needles dispensed by vending machine (see Fig. 12 and Fig. 13). This cannot be explained by a strong reduction in demand, rather by the fact that since November 2012 a dispensed pack has contained only 1 needle, 1 filter and 1 alcohol pad rather than as before 2 single use syringes and 2 hollow needles. Moreover, more Smoke-it-Sets have been given out, whilst drug consumption rooms report increased inhalative use (personal communication, Aidshilfe NRW e.V. 2015). From the NRW data no statement can be made on national trends in the dispensing of needles.



Personal communication from Aidshilfe NRW e.V. 2015.

Figure 13 Trend in dispensing of "loose" needles in NRW, 2010 - 2014

For the current situation on harm reduction measures, see Section 1.5.3, for new developments see Section 3.3.

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

2.2.1 Drug-related deaths in adults

See 2.1.1

2.2.2 Prevalence rates and reports of infections

See 2.1.2

2.2.3 Non-fatal drug-related emergencies

See 2.1.3

2.2.4 Safer-use services for injecting drug users: Issuing needles

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

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

No additional information is currently available on this.

3 New developments (T3)

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

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

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

For the current situation regarding drug-related infectious diseases see Section 1.3. With the introduction of new medicinal drugs, the chances of success of hepatitis C treatment have significantly improved also for drug users; due to the very high drug prices, however, it remains questionable as to how many patients will actually benefit from these new medications. For further information on the developments in hepatitis C treatment see Section 3.3.3

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

For national data on harm reduction measures see Section 1.5. In the following, new developments by programme will be reported, as well as regional initiatives.

3.3.1 Naloxone take-home programme

In Germany in 2014 there were 1,032 drug-related deaths. Almost two thirds of these, as in recent years, were due to mono or poly-opioid related overdoses (personal communication BKA 2015). The opiate antagonist naloxone, which for over 40 years has been successfully used in emergency medicine for opioid overdoses, can also be administered by a layperson and save lives. Therefore the WHO, EMCDDA and the German Federal Ministry of Health recommend dispensing naloxone to people who are often present when opioid users are using. This relates to opioid users themselves, but also friends and family (the Federal Government Commissioner on Narcotic Drugs 2014; EMCDDA 2015; WHO 2014).

In spite of these recommendations, dispensing naloxone to laypeople in Germany is only sporadically available. It is made more difficult by legal problems as well as a lack of financing and is not integrated into regular healthcare. There are currently two naloxone take-home programmes with two more in the planning stage, in which laypeople will be trained. Moreover NGOs are engaged in clarifying and improving the legal situation for the

naloxone programmes, in order to break down barriers to adequate treatment and enable nationwide availability in the future.

All naloxone programmes 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 and on naloxone, and specific exercises are carried out on the application of the medicine. After the training, emergency kits will be given out according to requirements which contain, in addition to the medicinal drugs, the administration paraphernalia (needles and nasal applicators) and often single-use gloves and resuscitation face shields.

The programme run by Fixpunkt e.V. in Berlin is the oldest naloxone programme in Germany, and has been running since 1998. A naloxone manual for internal use was developed back in 2012, which, in addition to the legal and medical basis, contained specific information for implementation of the project (such as standards for emergency training, interview guidelines, documentation) as well as real world examples. Training courses on drug emergencies and the administration of naloxone as a brief intervention, lasting 10 to 20 minutes, have been offered since 2015, alongside the "classic courses" lasting approximately 1 hour in a low-threshold setting (in the contact area of drug consumption rooms and the mobile prevention station which accompanies the mobile drug consumption station). The initial experiences with this type of intervention have been positive. In the first half of 2015 (as of 24 June 2015) 36 drug users were trained, of which 25 wanted to receive the drug and had it prescribed to them. Some of the participants in the training explicitly stated that they did not want to receive any emergency medication, as they were in substitution treatment themselves, felt that they were stable and wanted to keep as much distance as possible from opiate use (personal communication Fixpunkt e.V. 2015).

In Frankfurt, a naloxone project has been run by Integrativen Drogenhilfe e.V. since May 2014. The project received scientific oversight by the Institute of Addiction Research in Frankfurt. Key findings were that fewer and fewer organisations (drug support facilities, doctors etc.) were informed about the opportunities for take-home programmes. Current studies on the subject were not known and myths held regarding dispensing by laypeople persisted. In the framework of this project, a guide for the implementation of such programmes was therefore created in collaboration with various experts, which is continuously developed and is available online¹³ (personal communication Institute for Addiction Research, Frankfurt 2015).

In Cologne a further take-home programme is currently being planned, which is due to start at the end of 2015. This programme plans to offer training in both facilities run by VISION e.V. At the end of the training, participants will receive an emergency kit as well as an "attendance certificate" that confirms they have taken part in the training. The medicinal drugs can be prescribed by an external doctor on production of the certificate, as there is no on-site doctor at the project itself. A co-operating pharmacy will dispense the drug and bill the

¹³ www.akzept.org/uploads2013/NaloxonBroschuere1605.pdf (last accessed: 18 Aug. 2014)

provider directly. Nasal administration of the medicine will be recommended to participants (personal communication VISION e.V. 2015).

JES NRW e.V. is also currently developing a new concept for low-threshold information sessions on naloxone, supported by the North-Rhine Westphalia Ministry of Health, Equalities, Care and Ageing (MGEPA). An outreach approach will be adopted - similar to that in Berlin since this year - i.e. the information will be provided in very short sessions, directly in the open street drug scene. If a doctor is present, naloxone will be prescribed on site and dispensed with applicators for nasal administration and other paraphernalia in the most unbreakable packaging possible. The concept is due to be carried out and evaluated in 2016 in a practical test in three cities in North-Rhine Westphalia. At the same time the project aims to illustrate the possibilities for active self-help through the information sessions, in particular in the area of harm reduction and survival support and thus attempt to awaken users' interest to engage with JES (personal communication JES NRW e.V. 2015).

3.3.2 Target group specific education and information programmes

Some at-risk groups for drug related infectious diseases are not reached to an acceptable level by educational and informational programmes. There are therefore increased efforts to reach such at-risk groups in a more targeted manner. One example of this is the "Baobab" project which started in 2013 (currently planned to run until 2015). This project, funded by the Lower Saxony State Aids Service Organisation (Niedersächsische AIDS-Hilfe Landesverband e.V.), provides culturally sensitive HIV education and prevention as a way of reacting to the growing number of new infections amongst migrants. Baobab offers a target group-specific education service and is aimed primarily at immigrants from Sub-Saharan states (10% - 15% of all newly diagnosed HIV infections in Germany concern people from this region; 30% of these new infections occurred in Germany). The aim of the project is to overcome language barriers and cultural divides in order to ensure African communities also receive educational and prevention-based support in the area of the taboo topics of sexuality and HIV/AIDS (Kasadi 2014). For further information on the prevention measures, see the Prevention workbook.

3.3.3 New opportunities in the treatment of hepatitis C among drug users

The REITOX Report 2013 the German Monitoring Centre for Drugs and Drug Addiction (DBDD) already reported on demands from the German Liver Foundation (Deutschen Leberhilfe e.V.) and the "Hepatitis and Drug Use Alliance" (Aktionsbündnis Hepatitis und Drogengebrauch) for the implementation of a national strategy against viral hepatitis in Germany ("Aktionsbündnis Hepatitis und Drogengebrauch" et al. 2013; Pfeiffer-Gerschel et al. 2013). At the expert conference "New Treatments and Prevention Approaches" organised by the Hepatitis and Drug Use Alliance in October 2014, the action plan was further discussed and finalised (Schatz 2015).

The annual World Hepatitis Day on 28 July aims to raise awareness of viral hepatitis. This year's focus was on, as well as education on classic misconceptions about hepatitis and the

dissemination of knowledge about protection possibilities, the previously unknown hepatitis E in particular (Deutsche Leberhilfe e.V. 2015a; 2015b).

Although drug users represent the largest group of persons infected with hepatitis C in Germany, they are treated much less widely than infected persons with a different infection risk, which is partly due to a widespread negative attitude amongst doctors towards drug users (Gölz 2014). The Correlation Hepatitis C Initiative wants to remedy the situation by trying to integrate drug users both in political decision making processes as well as in the development of treatment concepts (Schatz 2014): in a partnership of over 30 European organisations, the objective is to contribute to the improvement of knowledge and capacities on a practical and political level and raise awareness of the HCV problem in relation to drug users. Specifically, the barriers in low-threshold facilities to informing clients about HCV tests and to test them are being studied. Furthermore, a database will be created in which scientific material, aimed at the specific field of hepatitis C and drug use, will be made available. A training programme on hepatitis for sufferers and peers will also be developed and conducted. In this way, drug users themselves are able to be valuable experts in the field of HCV research and prevention.

Chronic hepatitis C primarily requires treatment in persons suffering from addiction, primarily due to the high rate of mortality. Several newly-developed medicinal drugs increase the chances of recovery significantly and show a substantially improved side effect profile, such as the active ingredient sofosbuvir ("Sovaldi[®]" made by Gilead), which received marketing authorisation in Germany in 2014 and which increases the chances of recovery ("sustained virologic response" SVR) from HCV of genotype 1 in combination with ribavirin and pegylated interferon by up to 90% as well as improving the chances of recovery from HCV from genotype 2 to 6. The very high price of the new treatment remains a major point of criticism (aerzteblatt.de 2013b; Association of the Scientific Medical Associations in Germany, Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften 2013). As yet, there is no reliable data on how many drug or substitution patients receive access to this new, expensive treatment option.

Specifically in the treatment of hepatitis in clients suffering from addiction, there are particular challenges such as the coordination of doctors (addiction professionals and gastroenterologists), the treatment of comorbid diseases (often psychiatric comorbidity and somatic concomitant diseases) and the interaction between drugs, substitution drugs and medicinal drugs. Depending on the genotype of the hepatitis, good treatment results can be achieved with triple therapy. In particular, patients suffering from addiction who are in substitution treatment are at an advantage in terms of the treatment of chronic hepatitis C: their chances of recovery are comparable to patients who do not exhibit injecting drug use (Schäfer 2013). Nevertheless, the hepatitis C treatment of patients in substitution treatment is often seen as difficult by doctors although many of these difficulties can be minimised through intensive education of the patients (Reimer et al. 2013). In addition, institutions like the German Aids Service Organisation (DAH) are making efforts to improve this education, e.g. by giving infected users the possibility of learning about the interaction between their

hepatitis/HIV medication and drugs in a sort of quick online test¹⁴. Moreover, at the expert conference "Treatment and Prevention Approaches" from the Hepatitis and Drug Use Alliance in October 2014, test possibilities for drug users, treatments using new medicinal drugs as well as prevention and treatment in certain settings (prison, assisted living) were the focal points of the expert discussions (Schatz 2015).

In order to further advance the development of hepatitis treatment for drug addicts, the ECHO Study (Epidemiology of the Hepatitis C Virus Infection amongst Opioid Substitution Patients) of the Centre for Interdisciplinary Addiction Research (ZIS) is investigating, in the period November 2013 - December 2015, the situation regarding hepatitis C amongst opioid dependent clients in substitution therapy; initial results are expected at the end of 2015 / beginning of 2016. The objective of the study is to record the current HCV prevalence and incidence amongst opioid substitution patients, on the basis of a representative sample of approximately 200 outpatient substitution facilities with around 2,500 patients. In addition, influencing factors for therapy initiation and seroconversion will be described. To this end, both patient related data from regular health care and patient questionnaires will be included, in order to answer the following questions (ZIS Hamburg 2014):

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

¹⁴ www.hiv-drogen.de (last accessed: 4 Aug. 2015)

4 Additional information (T4)

4.1 Additional Sources of Information (T4.1)

There are no known additional sources of information.

4.2 Further information on drug related harms and harm reduction (T4.2)

Health harms of new psychoactive substances

The popularity of the use of new psychoactive substances (NPS) is problematic, amongst other reasons, because less is known about the possible risks of consumption. Therefore a prospective study on NPS poisoning has been running since 2013 in the Poisoning Information Centre, Freiburg (Vergiftungs-Informationen-Zentrale Freiburg). Cases of acute NPS poisoning (symptoms and history) are being examined among patients being treated in an emergency care facility. The aim of the study is to capture which undesired effects of drugs occur and lead to the use of medical emergency facilities, in order to improve treatment possibilities for this type of poisoning and to identify risk factors in the occurrence of undesired drug effects (personal communication Poisoning Information Centre, Freiburg 2015).

On a European level, the Euro-DEN project (EU-funded, running from October 2013 - September 2014) and the currently still running follow-on project, Euro-DEN Plus, are concerned with acute drug poisoning in emergency facilities. There are three main objectives of the projects: firstly to find gaps in the data collection in emergency facilities; secondly systematically to collect data on emergencies caused by conventional drugs and in particular NPS. Thirdly, guidelines have been drawn on this basis for nightlife workers on how they should deal with drug related emergencies¹⁵ (Wood et al. 2015; personal communication Toxikologische Abteilung II.Medizinische Klinik Klinikum Rechts der Isar, 2015).

¹⁵ www.emcdda.europa.eu/attachements.cfm/att_235696_EN_INT19_Euro-DEN%202015.pdf (last accessed: 14 Jul. 2015)

5 Notes and queries (T5)

5.1 Non-fatal emergency cases or fatal cases in connection with stimulants (T5.1)

A significant increase can be seen in non-fatal emergencies admitted to inpatient treatment in connection with stimulants, from the numbers in the annual Statistical Report on Hospital Diagnoses by the Federal Statistical Office. Both cocaine intoxication (F14.0) and intoxication by other stimulants (F15.0) have increased, the latter very significantly. This trend does not appear to be accompanied by an increase in drug related deaths: the BKA's annual Federal assessment reports on narcotic drugs show no trend which points to an increase in the number of deaths in connection with stimulants (see also Sections 2.1.1 and 1.1.2). It is often feared, as far as the use of stimulants is concerned, that there could be an increase in younger persons dying from drug-related causes; this theory has so far not been borne out in Germany. The 4.7% level in 2013 (2012: 5.7%) represented the lowest observed for under 25 year-olds since 1998 (see. Section 2.1.1).

6 Sources and methodology (T6)

6.1 Sources (T6.1)

The most important sources of data on drug-related deaths

- General mortality registry: statistics on causes of death produced by the German Federal Statistical Office
- Drugs Data File, federal assessment report on narcotic drugs crime by the Federal Criminal Police Office
- Statistical Report on Substance Abuse Treatment in Germany (DSHS) (mortality of drug users in treatment)

The most important sources of data on non-fatal drug-related emergencies

- Statistical Report on Hospital Diagnoses by the Federal Statistical Office
- Poison information centres¹⁶

The most important sources of data on infectious diseases

- Robert Koch Institute
- Statistical Report on Substance Abuse Treatment in Germany (DSHS)

6.2 Methodology (T6.2)

The methodology of the individually listed studies and surveys is described in detail in the respective publications (see point 7 bibliography for information on sources). The methodology of the data collection of the Robert Koch Institute and the Federal Statistical Office can be found on the Institute website and in the thematic publications.

¹⁶ www.klinitox.de/3.0.html (last accessed: 20 Aug. 2015)

7 Bibliography

- aerzteblatt.de (2013a). Aids-Hilfe fordert Erhalt des Berliner Schnelltestangebots [online]. Available at: <http://www.aerzteblatt.de/nachrichten/55313/Aids-Hilfe-fordert-Erhalt-des-Berliner-Schnelltestangebots> [last accessed: 11 Sep. 2015].
- aerzteblatt.de (2013b). Hepatitis C: Teure Heilung in Sicht [online]. Available at: <http://www.aerzteblatt.de/nachrichten/56929> [last accessed: 11 Sep. 2015].
- aerzteblatt.de (2014). Hepatitis C-Patienten oft unterversorgt [online]. Available at: <http://www.aerzteblatt.de/nachrichten/57498> [last accessed: 11 Sep. 2015].
- Aktionsbündnis "Hepatitis und Drogengebrauch", Deutsche Leberhilfe e.V. & Deutsche Leberstiftung (2013). Aktionsplan für eine nationale Strategie gegen Virushepatitis in Deutschland. Aktionsbündnis "Hepatitis und Drogengebrauch", Deutsche Leberhilfe e.V., Deutsche Leberstiftung, Berlin, Hannover.
- Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften (2013). "Compassionate Use": DGVS begrüßt Vergabe von Hepatitis C-Wirkstoff an Schwerstkranke [online]. Available at: <http://idw-online.de/de/news561911> [last accessed: 11 Sep. 2015].
- BKA (Bundeskriminalamt) (1999). Rauschgiftjahresbericht 1998. Bundesrepublik Deutschland. Bundeskriminalamt, Wiesbaden.
- BKA (Bundeskriminalamt) & Die Drogenbeauftragte der Bundesregierung (2015). Presseinformation. Pressekonferenz der Drogenbeauftragten der Bundesregierung und des Präsidenten des Bundeskriminalamtes. Zahl der Drogentoten / Rauschgiftlage 2014. BKA-Pressestelle, Wiesbaden, Berlin.
- Braun, B., Brand, H., Künzel, J. & Pfeiffer-Gerschel, T. (2015). Deutsche Suchthilfestatistik 2014. Alle Bundesländer. Tabellenband für ambulante Beratungs- und/oder Behandlungsstellen, Fachambulanzen und Institutsambulanzen (Typ 3 und 4). Bezugsgruppe: 1 Zugänge Beender ohne Einmalkontakte. IFT Institut für Therapieforschung, München.
- DAH (Deutsche AIDS-Hilfe e.V.) (2010). Projekt TEST IT. Evaluationsbericht. DAH, Dortmund/Berlin 2010.
- DAH (Deutsche AIDS-Hilfe e.V.) (2013). Saubere Spritzen für Gefangene: Deutsche AIDS-Hilfe startet Unterschriftenaktion [online]. Available at: <http://www.aidshilfe.de/aktuelles/meldungen/saubere-spritzen-fuer-gefangene-deutsche-aids-hilfe-startet-unterschriftenaktion> [last accessed: 11 Sep. 2015].
- Deutsche Leberhilfe e.V. (2015a). HEPATITIS E - die große Unbekannte. Deutsche Leberhilfe e.V., Köln.
- Deutsche Leberhilfe e.V. (2015b). Virushepatitis - wie fit sind Sie? Deutsche Leberhilfe klärt über Hepatitis-Irrtümer auf. Deutsche Leberhilfe e.V., Köln.
- Die Drogenbeauftragte der Bundesregierung (2012). Nationale Strategie zur Drogen- und Suchtpolitik, Berlin.
- Die Drogenbeauftragte der Bundesregierung (2014). Naloxonverordnung und Einsatz durch Laien. Antwort auf eine Anfrage der DGS zu Naloxonverordnung und Einsatz durch Laien, Berlin.

- Die Drogenbeauftragte der Bundesregierung (2015). Drogen- und Suchtbericht. Mai 2015. Die Drogenbeauftragte der Bundesregierung, Berlin.
- ECDC (European Centre for Disease Prevention and Control) & EMCDDA (European Monitoring Centre for Drugs and Drug Addiction) (2011). Prevention and control of infectious diseases among people who inject drugs. ECDC, Stockholm.
- EMCDDA (European Monitoring Centre for Drugs and Drug Addiction) (2015). Mortality among drug users in Europe: new and old challenges for public health. Publications Office of the European Union, Luxembourg.
- Förster, S. & Stöver, H. (2014). Auswertung der Frankfurter Konsumraumdokumentation 2013. Dokumentationszeitraum 01.01.-31.12.2013. Institut für Suchtforschung (ISFF), Frankfurt.
- GIZ-Nord (Gif tinformat ionszentrum Nord der Länder Bremen, Hamburg, Niedersachsen und Schleswig-Holstein) (2014). Jahresbericht 2013. Universitätsmedizin Göttingen - Georg-August-Universität, Göttingen.
- Gölz, J. (2014). Chronische Virusinfektionen bei Drogenabhängigen: Diagnostik und Therapie. Suchttherapie **15** (1) 16-21.
- Hoch, E., Bonnet, U., Thomasius, R., Ganzer, F., Havemann-Reinecke, U., & Preuss, U. W. (2015). Risiken bei nichtmedizinischem Gebrauch von Cannabis. Deutsches Ärzteblatt **112** (16) 271-278.
- Informations- und Behandlungszentrum für Vergiftungen Homburg/Saar (2015). Jahresbericht 2013. Universitätsklinikum des Saarlandes, Homburg/Saar.
- Informationszentrale gegen Vergiftungen (2014). Jahresbericht 2013. 46. Bericht über die Arbeit der Informationszentrale gegen Vergiftungen des Landes Nordrhein-Westfalen am Zentrum für Kinderheilkunde des Universitätsklinikums Bonn. Universitätsklinikum Bonn, Bonn.
- Kasadi, K. (2014). Baobab - Zusammensein. Aufbau eines landesweiten, transkulturellen HIV-Präventionsnetzwerks für Migrantinnen und Migranten in Niedersachsen. impulse für Gesundheitsförderung **82** 23-24.
- Leicht, A. & Blättner, N. (2015). "Paradigmenwechsel und Qualitätsentwicklung. Weg vom ‚Spritzentausch‘ - Hin zur ‚Konsumutensilienvergabe‘", in *16. Interdisziplinärer Kongress für Suchtmedizin*.
- Pfeiffer-Gerschel, T., Kipke, I., Flöter, S., Jakob, L., Hammes, D. & Raiser, P. (2011). Bericht 2011 des nationalen REITOX-Knotenpunkts an die EBDD. Deutschland. Neue Entwicklungen, Trends und Hintergrundinformationen zu Schwerpunktthemen. Drogensituation 2010/2011. Deutsche Beobachtungsstelle für Drogen und Drogensucht (DBDD), München.
- Pfeiffer-Gerschel, T., Kipke, I., Flöter, S., Jakob, L., Hammes, D. & Rummel, C. (2012). Bericht 2012 des nationalen REITOX-Knotenpunkts an die EBDD. Deutschland. Neue Entwicklungen, Trends und Hintergrundinformationen zu Schwerpunktthemen. Drogensituation 2011/2012. Deutsche Beobachtungsstelle für Drogen und Drogensucht (DBDD), München.

- Pfeiffer-Gerschel, T., Kipke, I., Flöter, S., Jakob, L., Budde, A. & Rummel, C. (2013). Bericht 2013 des nationalen REITOX-Knotenpunkts an die EBDD. Deutschland. Neue Entwicklungen und Trends. Drogensituation 2012/2013. Deutsche Beobachtungsstelle für Drogen und Drogensucht (DBDD), München.
- Reimer, J., Schmidt, C. S., Schulte, B., Gansefort, D., Gölz, J., Gerken, G., Scherbaum, N., Verthein, U., & Backmund, M. (2013). Psychoeducation Improves Hepatitis C Virus Treatment During Opioid Substitution Therapy: A Controlled, Prospective Multicenter Trial. Clinical Infectious Diseases **57** (S2) 97-104.
- RKI (Robert Koch-Institut) (2015a). Zur Situation bei wichtigen Infektionskrankheiten in Deutschland. Virushepatitis C im Jahr 2014, Epidemiologisches Bulletin Nr. 30. RKI, Berlin.
- RKI (Robert Koch-Institut) (2015b). HIV, Hepatitis B und C bei injizierenden Drogegebrauchenden in Deutschland - Ergebnisse der DRUCK-Studie des RKI, Epidemiologisches Bulletin Nr. 22. RKI, Berlin.
- RKI (Robert Koch-Institut) (2015c). Zur Situation bei wichtigen Infektionskrankheiten in Deutschland. Virushepatitis B und D im Jahr 2014, Epidemiologisches Bulletin Nr. 29. RKI, Berlin.
- RKI (Robert Koch-Institut) (2015d). Infektionsepidemiologisches Jahrbuch meldepflichtiger Krankheiten für 2014. Datenstand: 1. März 2015. Robert Koch-Institut, Berlin.
- Schäfer, B. (2013). Hepatitis C Therapie: Starten oder Warten? Welche Patienten jetzt therapiert werden sollen! Suchtmedizin in Forschung und Praxis **15** (4) 266-268.
- Schatz, E. (2014). Europäisches Netzwerk für soziale Eingliederung und Gesundheit: Die Correlation Hepatitis C Initiative. Suchttherapie **15** (1) 43-44.
- Schatz, E. (2015). Europäische Konferenz zu Hepatitis C und Drogengebrauch. Suchttherapie **16** (1) 6.
- Statistisches Bundesamt (2015a). Krankenhausdiagnosestatistik. Vollstationäre Patienten und Patientinnen der Krankenhäuser 2004-2013, Wiesbaden.
- Statistisches Bundesamt (2015b). Rechtspflege. Bestand der Gefangenen und Verwahrten in den deutschen Justizvollzugsanstalten nach ihrer Unterbringung auf Haftplätzen des geschlossenen und offenen Vollzugs jeweils zu den Stichtagen 31. März, 31. August und 30. November eines Jahres. Stichtag 30. November 2014, Wiesbaden.
- Toxikologische Abteilung der II. Medizinischen Klinik (2014). Jahresbericht 2013. Klinikum rechts der Isar, Technische Universität München, München.
- Vergiftungs-Informations-Zentrale Freiburg (2014). Jahresbericht 2013. Universitätsklinikum Freiburg, Zentrum für Kinder- und Jugendmedizin, Freiburg.
- Verthein, U., Neumann-Runde, E., Rosenkranz, M., Oechsler, H., Schütze, C. & Martens, M.-S. (2014). Suchthilfe in Hamburg. Statusbericht 2013 der Hamburger Basisdatendokumentation in der ambulanten Suchthilfe und der Eingliederungshilfe. BADO e.V., Hamburg.
- Wartberg, L., Thomsen, M., & Thomasius, R. (2014). Gedächtnis- und Aufmerksamkeitsfunktionen bei Jugendlichen mit intensivem regelmäßigem Cannabiskonsum. Zeitschrift für Neuropsychologie **25** (3) 165-176.

- Wedemeyer, H. (2013). "Es steht ein dramatischer Therapiewandel bevor!" [online]. Available at: <http://www.aerztezeitung.de/medizin/krankheiten/infektionskrankheiten/hepatitis/article/843213/welt-hepatitis-tag-steht-dramatischer-therapiewandel-bevor.html> [last accessed: 11 Sep. 2015].
- Werse, B. & Egger, D. (2015). MoSyD Szenestudie 2014. Centre for Drug Research, Goethe Universität Frankfurt am Main, Frankfurt am Main.
- WHO (World Health Organization) (2014). Community management of opioid overdose. WHO, Geneva.
- Wood, D. M., Heyerdahl, F., Yates, C. B., Dines, A. M., Giraudon, I., Hovda, K. E., & Dargan, P. I. (2015). The European Drug Emergencies Network (Euro-DEN). Clinical Toxicology **52** (4) 239-241.
- ZIS (Zentrum für interdisziplinäre Suchtforschung) Hamburg (2014). ECHO-Studie Epidemiologie der Hepatitis C-Virus Infektion bei Opioidsubstituierten [online]. Available at: <http://www.echo-studie.de/index.php?mindex=1> [last accessed: 11 Sep. 2015].

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