

# Enhanced surveillance of blood borne viruses in drug users in Wales

## Annual report 2015

Public Health Wales assesses trends in the rates of blood borne viral hepatitis and HIV in drug users living in Wales using data collected voluntarily from clients of substance misuse services (SMS) in Wales undergoing diagnostic testing.

### KEY POINTS

- The prevalence of hepatitis C, hepatitis B, and HIV amongst clients of SMS undergoing diagnostic testing in 2015 was 16% (95%CI 13-19; n=150/943), 1.0% (95%CI 0.5-2.0; n=9/866), and 0% (one sided 97.5%CI 0.0-0.4; n=0/877) respectively.
- Evidence suggests that the incidence of hepatitis C is not increasing amongst people who inject drugs (PWID) living in Wales, after peaking in 2014. Changes in the prevalence of blood borne viruses in younger injectors and new initiates are a marker for recent transmission. Amongst clients of substance misuse services aged under 25 years who reported injecting drugs, the percentage positive for hepatitis C decreased to 14% (95%CI 5-30; n=6/44) in 2015, after a three year increase peaking in 2014 with a 20% (95%CI 9-37; n=9/46) positivity rate. (Figure1, Table 2b). Amongst clients who reported a history of injecting drugs for 2 years or less and who were tested for hepatitis C, the percentage positive was 11% (95%CI 5-19; n=11/104) in 2015, after peaking at 17% (95%CI 10-27; n=17/102) in 2014. These results should be interpreted with caution due to small numbers.
- Whilst data from this surveillance scheme are useful in monitoring trends, the data should be interpreted with caution as numbers of people tested are small; and participation in the scheme varies greatly across health boards, and across years within individual health boards. Participation from Cwm Taf has increased greatly in 2015, which may affect trends.
- Hepatitis B prevalence amongst SMS clients is low but the observed rate in 2015 was higher than in recent years. 1.0% (95%CI 0.5-2.0; n=9/866) of clients who were tested for HBV surface antigen in 2015 were positive, compared to 0.3% (95%CI 0.0-1.1; n=2/680) in 2014, and 0.5% (95%CI 0.1-1.4; n=3/638) and 0.4% (95%CI 0.0-2.2; n=1/253) in 2013 and 2012, respectively (Table 2b).
- HIV prevalence amongst SMS clients remains low.

### Reporting to the scheme

A total of 4737 completed forms were received by Public Health Wales for attendances between 2011 and 2015. These forms corresponded to 4646 individuals seen by substance misuse services in Wales (Table1). For 2015, 991 surveillance forms were received for 973 individuals. Participation in the scheme varies greatly across health boards, and across years within individual health boards. Participation from Cwm Taf has increased greatly in 2015, which may affect trends.

## Positivity rates

Of the 973 clients of SMS undergoing diagnostic testing in 2015 and reported to the scheme, 943 were tested for hepatitis C antibody, 866 were tested for HBV surface antigen, and 877 were tested for HIV antibody (Table 2). The prevalence of hepatitis C, hepatitis B, and HIV amongst them was 16% (95%CI 13-19; n=150/943), 1.0% (95%CI 0.5-2.0; n=9/866), and 0% (one sided 97.5%CI 0.0-0.4; n=0/877) respectively.

The overall hepatitis C positivity rate in 2015 was 16% (150/943). Whilst 4% (12/307) of the never-injectors tested were positive, the positivity rate amongst those who reported a history of injecting drugs was 22% (137/612) (Table 2).

The hepatitis C positivity rate amongst 2015 clients reporting injecting who reported having been prescribed opiate substitution therapy (OST) in the previous 12 months was similar to those who had not been prescribed OST in the previous 12 months; 24% (103/435) and 20% (34/166) respectively. Amongst all respondents HCV prevalence was 20% (108/545) in those who had been prescribed OST and 11% (41/381) in those who had not, and 6% where this information was unknown (1/17).

Trends in younger clients, and those with a shorter injecting history, may reflect trends in recently acquired infection (incidence) (Figure 1, Table 2b). Amongst the clients aged under 25 years who reported injecting drugs and who were tested for hepatitis C, the percentage positive decreased to 14% (95%CI 5-30; n=6/44) in 2015, after a three year increase peaking in 2014 with a 20% (95%CI 9-37; n=9/46) positivity rate. Similarly, amongst the clients who reported a history of injecting drugs for 2 years or less and who were tested for hepatitis C, the percentage positive was 11% (95%CI 5-19; n=11/104) in 2015, after peaking at 17% (95%CI 10-27; n=17/102) in 2014. These results should be interpreted with caution due to small numbers.

Amongst the clients who were tested for hepatitis C and who reported injecting steroids in the last 12 months, 30% (18/60) were positive in 2011, and 8% (5/59) in 2012, after which it increased year by year to 18% (7/38) in 2015. Most clients who reported injecting steroids also reported injecting other drugs. Results should be taken with caution due to small numbers.

In mid-2014 a new version of the questionnaire was introduced which collected data on the use of mephedrone. The hepatitis C positivity rate amongst those who reported injecting mephedrone was stable at 27% in both 2014 (13/48) and 2015 (27/101). The hepatitis C positivity rate according to mephedrone use in 2014-15 was 27% in users (40/149), 21% in non users (109/526), and 21% in those for whom this information was not known (17/80).

Recording of the HBV surface antigen test, which indicates current infection, has been available since 2012. In 2015, 1.0% (95%CI 0.5-2.0; n=9/866) of SMS clients who were tested for HBV surface antigen were positive (Table 2), up from 0.3% (95%CI 0.0-1.1; n=2/680) in 2014, and 0.5% (95%CI 0.1-1.4; n=3/638) and 0.4% (95%CI 0.0-2.2; n=1/253) in 2013 and 2012, respectively (Table 2b). The positivity rate in 2015 was highest in Betsi Cadwaladr University Health Board, at 4% (4/102).

In 2015, none of the 877 SMS clients tested for HIV antibody had a positive result. In previous years, only 2 individuals have tested positive for HIV, one in 2012 and one in 2013. The 2013 case was previously known to be HIV positive.

## Drug history

Of the 973 individuals seen in 2015 there were 947 individuals for whom injecting history was known, 67% (n=630) of these reported having ever injected drugs. Clients who reported having ever injected drugs were most frequently men, born in the UK, and had a median age of 36 years. Where recorded, 23% (142/618) reported being homeless in the previous year, 52% (317/612) reported having previously spent time in prison, and 18% (109/608) reported injecting drugs for 2 years or less (Table 3). Forty-two percent (253/608) reported injecting drugs for more than 10 years.

Regarding drugs reported as being used in the previous year by clients seen in 2015 who reported ever injecting drugs (n=630), 70% reported injecting heroin, 13% crack cocaine, 10% crack and heroin combined, 6% steroids or image enhancing drugs, and 32% amphetamines, percentages similar to those in 2014. Clients reporting injecting mephedrone decreased from 26% (49/187) in 2014 to 18% (103/587) in 2015 (Table 4). However, results should be interpreted with caution due to small numbers.

Between 2012 and 2015, the percentage of those who had injected crack in the previous year decreased from 32% to 13%. Similarly, the percentage of those injecting crack and heroin combined decreased from 26% to 10% (Table 4b).

The percentage of clients who reported ever injecting drugs reporting injecting steroids was 8% (60/746) in 2011, 11% (59/530) in 2012, 11% (75/685) in 2013, 6% (34/589) in 2014 and 6% (38/630) in 2015. Most clients who reported injecting steroids also reported injecting other drugs (see Table 5). In 2015, 66% of these clients reported injecting other drugs (61% reported heroin, 53% amphetamines, 40% mephedrone, 26% crack cocaine, and 18% crack and heroin combined).

The median age of clients who reported ever injecting drugs in 2015 was 36, up from 35 in the previous 2 years, 34 in 2012, and 35 in 2011. In 2015, the median age according to drugs used in the previous year was: 36 for crack and crack and heroin combined, 35 for heroin, 34 for amphetamines and steroids, and 33 for mephedrone.

Where recorded (n=954), in 2015, 59% of all clients reported that they had been prescribed opiate substitution therapy in the previous 12 months (Table 4).

## RESULTS

**Table 1: Number of individuals for whom a form was submitted by year and LHB of the service\***

Service HB	2011	2012	2013	2014	2015	Total	Clients with a form in 2015 per 100,000 population
Abertawe Bro Morgannwg	23	2	0	0	0	25	0.0
Aneurin Bevan	383	333	330	264	307	1617	52.9
Betsi Cadwaladr	457	265	325	265	116	1428	16.7
Cardiff & Vale	59	26	51	93	116	345	24.1
Cwm Taf	4	31	59	3	277	374	93.6
Hywel Dda	86	90	213	251	142	782	37.0
Powys	12	8	20	20	15	75	11.3
<b>Wales</b>	<b>1024</b>	<b>755</b>	<b>998</b>	<b>896</b>	<b>973</b>	<b>4646</b>	<b>31.5</b>

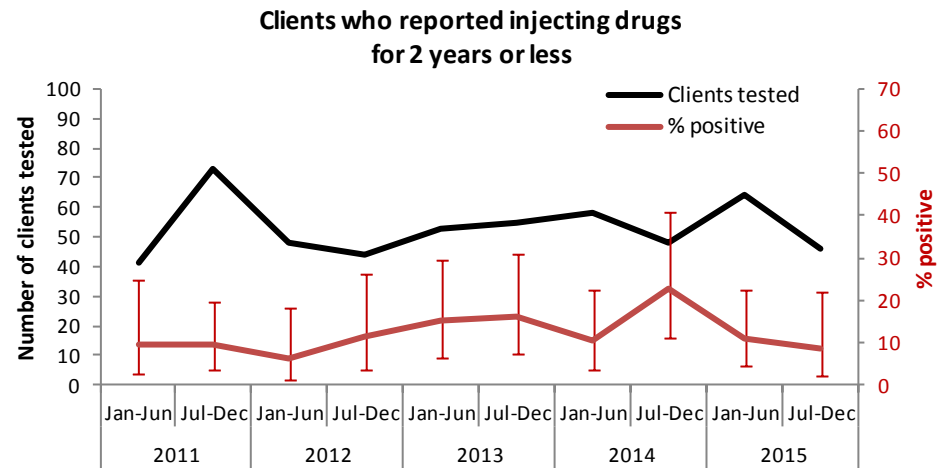
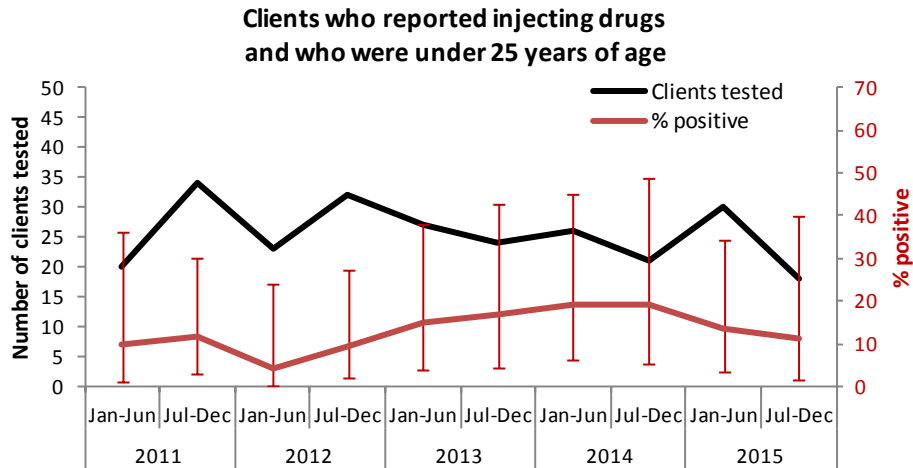
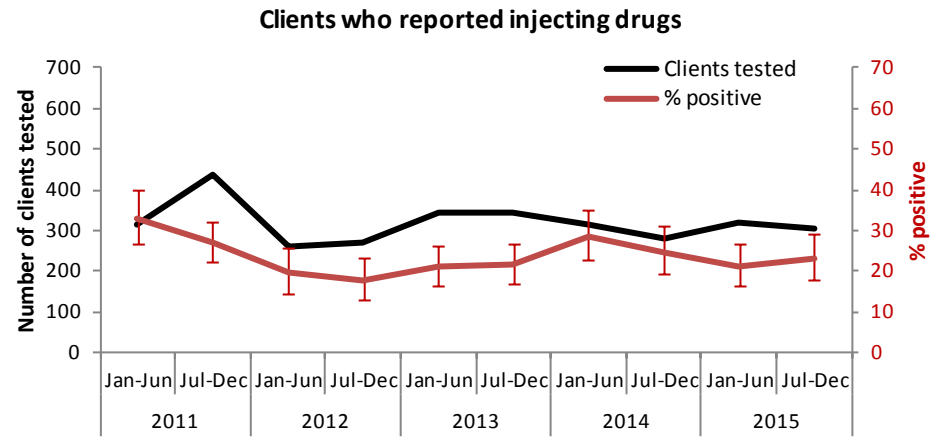
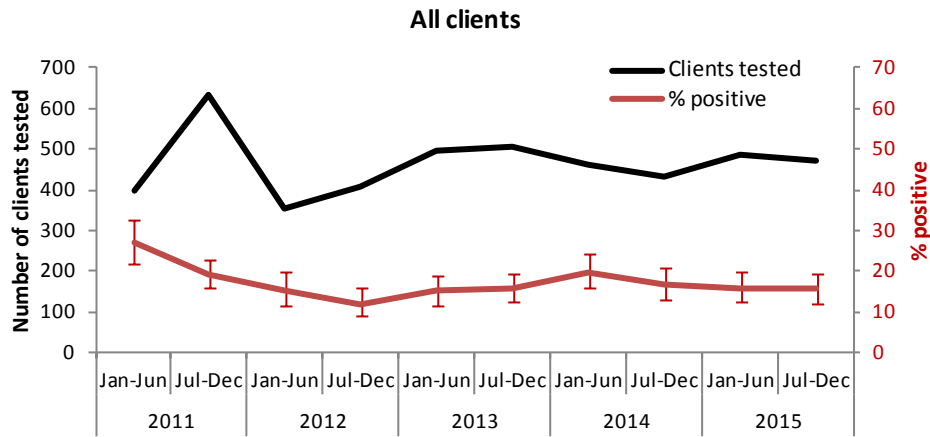
\*As at 12/04/2016

Notes:

- i) 11 forms were excluded due to clients declining to participate, 13 due to missing date of attendance, and a further 95 forms were excluded which did not report tests results for any BBV and was therefore unknown whether any test had actually been performed. The number of forms is expected to increase as further forms are received, especially for 2015.
- ii) Population estimates for mid-2014 obtained from StatsWales

**Figure 1: Number of individuals for whom a form was submitted and tested for hepatitis C, by 6 month period, and the percentage of which were positive, 2011-2015\*.**

Error bars represent 95% CI (Poisson, exact)



\*As at 12/04/2016

Notes:

- i) Numbers may change as new forms are received
- ii) If an individual was known to have been tested more than once during a 6 month period, only the last form within that period was considered. If an individual was known to have been tested in different periods, it contributed to the counts of all the periods when they were tested
- iv) Not all individuals were tested for hepatitis C. Percentages are based on the number of clients tested in each period.

**Table 2: Percentage of individuals for whom a form was submitted and tested who were positive for a BBV, 2015\***

Service HB	Number of clients	HCV Ab				HIV Ab	HBV sAg‡
		All clients (n= 943)	Clients who inject drugs (n= 612)	Clients who inject drugs, aged <25yrs (n=44)	Clients injecting for ≤2yrs (n=104)	All clients (n= 877)	All clients (n=866)
Abertawe Bro Morgannwg	<10	-	-	-	-	-	-
Aneurin Bevan	307	12%	15%	6%	3%	0%	0%
Betsi Cadwaladr	116	25%	33%	33%	10%	0%	4%
Cardiff & Vale	116	30%	36%	14%	21%	0%	1%
Cwm Taf	277	15%	26%	29%	16%	0%	1%
Hywel Dda	142	9%	13%	10%	11%	0%	0%
Powys	15	13%	20%	-	-	0%	0%
<b>Wales</b>	<b>973</b>	<b>16%</b>	<b>22%</b>	<b>14%</b>	<b>11%</b>	<b>0%</b>	<b>1%</b>

\*As at 12/04/2016

‡ Recording of the HBV surface antigen test has been available since 2012, and it indicates whether or not an individual is currently infected with HBV

Notes:

- i) Numbers may change as new forms are received
- ii) If an individual was known to have been tested more than once during 2015, only the last form within 2015 was considered.
- iii) Amongst the clients seen in 2015, 26 were of unknown injecting history, 317 reported never injecting drugs, and 630 reported ever injecting drugs
- iv) Not all individuals were tested for all infections. Percentages are based on the number of clients tested, indicated in each column.
- v) Some cells have been suppressed due to small numbers (-)

**Table 2b: Percentage of individuals for whom a form was submitted and tested who were positive for a BBV, 2011-2015\***

Year	Number of clients	HCV Ab				HIV Ab	HBV sAg‡
		All clients (n= 4589)	Clients who inject drugs (n= 3144)	Clients who inject drugs, aged <25yrs (n=246)	Clients injecting for ≤2yrs (n=515)	All clients (n= 4403)	All clients (n=2439)
2011	1,024	22%	29%	11%	10%	0.0%	-
2012	755	14%	19%	8%	9%	0.1%	0.4%
2013	998	15%	22%	16%	16%	0.1%	0.5%
2014	896	18%	27%	20%	17%	0.0%	0.3%
2015	973	16%	22%	14%	11%	0.0%	1.0%
<b>Total</b>	<b>4,646</b>	<b>17%</b>	<b>24%</b>	<b>13%</b>	<b>12%</b>	<b>0.0%</b>	<b>0.6%</b>

\*As at 12/04/2016

‡ Recording of the HBV surface antigen test has been available since 2012, and it indicates whether or not an individual is currently infected with HBV

Notes:

- i) Numbers may change as new forms are received
- ii) If an individual was known to have been tested more than once in a given year, only the last form within that year was considered.
- iii) Amongst the 4646 clients seen between 2011- 2015, 149 were of unknown injecting history, 1317 reported never injecting drugs, and 3180 reported ever injecting drugs
- iv) Not all individuals were tested for all infections. Percentages are based on the number of clients tested, indicated in each column.

**Table 3: Characteristics of individuals for whom a form was submitted who reported ever injecting drugs, 2015\***

Service HB	All clients		Clients who reported injecting drugs					
	Number	Number	% male (n=626)	Median age (range) (n=584)	% born in UK (n=626)	% homeless in previous year (n=618)	% been in prison previously (n=612)	% injecting for ≤2yrs (n=608)
Abertawe Bro Morgannwg	<10	<10	-	-	-	-	-	-
Aneurin Bevan	307	228	80%	34 (21-60)	97%	22%	58%	17%
Betsi Cadwaladr	116	88	81%	39 (20-54)	97%	22%	52%	12%
Cardiff & Vale	116	89	67%	36 (18-60)	94%	46%	62%	24%
Cwm Taf	277	128	76%	36 (22-60)	99%	10%	39%	18%
Hywel Dda	142	87	72%	35 (18-55)	98%	22%	46%	22%
Powys	15	10	60%	32 (25-43)	100%	20%	44%	10%
<b>Wales</b>	<b>973</b>	<b>630</b>	<b>76%</b>	<b>36 (18-60)</b>	<b>97%</b>	<b>23%</b>	<b>52%</b>	<b>18%</b>

\*As at 12/04/2016

Notes:

- Numbers may change as new forms are received
- If an individual was known to have been tested more than once during 2015, only the last form within 2015 was considered.
- Amongst the clients seen in 2015, 26 were of unknown injecting history, 317 reported never injecting drugs, and 630 reported ever injecting drugs
- The percentages provided are based on the number of clients for whom the variable of interest was reported, indicated in each column.
- Some cells have been suppressed due to small numbers (-)

**Table 4: Percentage of individuals for whom a form was submitted who reported opiate substitution therapy (OST) within the last 12 months, the percentage reporting ever injecting drugs and, of those who injected drugs, the percentage of clients who reported using each kind of drug within the last 12 months, 2015\***

Service HB	All clients			Clients who reported injecting drugs						
	Number clients	% receiving OST (n=954)	% injecting drugs (n=947)	Number clients	% heroin (n=630)	% crack cocaine (n=630)	% crack and heroin combined (n=630)	% steroids (n=630)	% amphetamines (n=630)	% Mephedrone‡ (n=587)
Abertawe Bro Morgannwg	<10	-	-	-	-	-	-	-	-	-
Aneurin Bevan	307	80%	78%	228	77%	14%	9%	10%	32%	25%
Betsi Cadwaladr	116	69%	78%	88	69%	31%	28%	3%	26%	1%
Cardiff & Vale	116	64%	78%	89	81%	13%	12%	1%	28%	18%
Cwm Taf	277	41%	47%	128	59%	4%	2%	2%	39%	5%
Hywel Dda	142	36%	62%	87	59%	6%	6%	8%	38%	33%
Powys	15	47%	71%	10	40%	20%	10%	10%	0%	0%
<b>Wales</b>	<b>973</b>	<b>59%</b>	<b>67%</b>	<b>630</b>	<b>70%</b>	<b>13%</b>	<b>10%</b>	<b>6%</b>	<b>32%</b>	<b>18%</b>

\*As at 12/04/2016

‡ Mephedrone data has been collected since mid-2014 through a new version of the questionnaire, used for 587 clients in 2015

Notes:

- Numbers may change as new forms are received
- If an individual was known to have been tested more than once during 2015, only the last form within 2015 was considered.
- Amongst the clients seen in 2015, 26 were of unknown injecting history, 317 reported never injecting drugs, and 630 reported ever injecting drugs
- The percentage of clients receiving OST and the percentage of clients injecting drugs are based on the number of clients for whom the variable of interest was reported, indicated in each column. The percentage of clients who reported using each kind of drug is based on the number of clients queried.
- Some cells have been suppressed due to small numbers (-)

**Table 4b: Percentage of individuals for whom a form was submitted who reported opiate substitution therapy (OST) within the last 12 months, the percentage reporting ever injecting drugs and, of those who injected drugs, the percentage of clients who reported using each kind of drug within the last 12 months, 2011-2015\***

Year	All clients			Clients who reported injecting drugs						
	Number clients	% receiving OST (n=4550)	% injecting drugs (n=4497)	Number clients	% heroin (n=3180)	% crack cocaine (n=3180)	% crack and heroin combined (n=3180)	% steroids (n=3180)	% amphetamines (n=3180)	% Mephedrone‡ (n=774)
2011	1,024	74%	75%	746	67%	22%	20%	8%	28%	-
2012	755	66%	72%	530	74%	32%	26%	11%	39%	-
2013	998	65%	72%	685	68%	21%	18%	11%	35%	-
2014	896	58%	67%	589	68%	15%	10%	6%	34%	26%
2015	973	59%	67%	630	70%	13%	10%	6%	32%	18%
<b>Total</b>	<b>4646</b>	<b>65%</b>	<b>71%</b>	<b>3180</b>	<b>69%</b>	<b>20%</b>	<b>17%</b>	<b>8%</b>	<b>33%</b>	<b>20%</b>

\*As at 12/04/2016

‡ Mephedrone data has been collected since mid-2014 through a new version of the questionnaire, for 774 clients.

Notes:

- i) Numbers may change as new forms are received
- ii) If an individual was known to have been tested more than once in a given year, only the last form within that year was considered.
- iii) Amongst the 4646 clients seen between 2011- 2015, 149 were of unknown injecting history, 1317 reported never injecting drugs, and 3180 reported ever injecting drugs
- iv) The percentage of clients receiving OST and the percentage of clients injecting drugs are based on the number of clients for whom the variable of interest was reported, indicated in each column. The percentage of clients who reported using each kind of drug is based on the number of clients queried.

**Table 5: Percentage of individuals injecting steroids who report injecting other drugs within the last 12 months, 2011-2015\***

Year	Clients injecting steroids	Percentage of clients injecting steroids who report injecting other drugs					
		Any	Heroin	Crack cocaine	Crack and heroin combined	Amphetamines	Mephedrone‡
2011	60	82%	80%	45%	40%	52%	-
2012	59	83%	80%	58%	53%	64%	-
2013	75	79%	75%	37%	31%	44%	-
2014	34	59%	53%	15%	12%	38%	25%
2015	38	66%	61%	26%	18%	53%	40%
<b>Total</b>	<b>266</b>	<b>76%</b>	<b>72%</b>	<b>39%</b>	<b>33%</b>	<b>51%</b>	<b>37%</b>

\*As at 12/04/2016

‡ Mephedrone data has been collected since mid-2014 through a new version of the questionnaire, for 774 clients, 43 of which reported injecting steroids (8 in 2014 and 35 in 2015).

Notes:

- i) Numbers may change as new forms are received
- ii) If an individual was known to have been tested more than once in a given year, only the last form within that year was considered.
- iii) Amongst the 4646 clients seen between 2011- 2015, 149 were of unknown injecting history, 1317 reported never injecting drugs, and 3180 reported ever injecting drugs, of which 266 reported injecting steroids.

## **Notes on methods**

Data presented in this report are for clients seen by substance misuse services between 2011 and 2015. Data are included only for those clients for whom a surveillance form was completed and sent to Public Health Wales.

Eleven forms were excluded due to clients declining to participate, 13 due to missing date of attendance, and a further 95 forms were excluded which did not report tests results for any BBV and it was therefore unknown whether any test had actually been performed. The number of forms is expected to increase as further forms are received, especially for 2015.

Data on sample type has been received since the introduction of a new form in 2012. Still, the sample type was unknown for 74% of forms in 2012, 47% in 2013, 17% in 2014, and 14% in 2015. The percentage of forms known to be from DBS samples was 22% in 2012, 44% in 2013, 72% in 2014, and 56% in 2015. The percentage of forms from venepuncture samples was 4%, 9%, 11%, and 30% in 2012, 2013, 2014, and 2015 respectively. The jump in venepuncture samples in 2015 is due to new reporting from sites in Cwm Taff. Clients can be tested more than once and so there may be more than one form for a single client, linked through a unique number. If an individual was known to have been tested more than once during a time period, only the last form within that time period was considered. If an individual was known to have been tested in different periods, they contributed to the counts within all the periods they were tested. It is possible that forms corresponding to the same individual are not linked due to individuals accessing several points of care.

**Report prepared by Public Health Wales Health Protection Service**

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Data based on forms received as at 12<sup>th</sup> April 2016