**Table S1.** Details of sites participating in CEASE

|  |  |  |
| --- | --- | --- |
| **Clinic** | **Location** | **Type of service/s** |
| **Primary care** | | |
| Blue Mountains Sexual Health | Sydney, NSW | Sexual health clinic |
| Brisbane Sexual Health Clinic | Brisbane, Qld | Sexual health clinic |
| Dr Doong’s Surgery | Sydney, NSW | General practice |
| East Sydney Doctors | Sydney, NSW | General practice |
| Holdsworth House | Sydney, NSW | General practice |
| Kirketon Road Centre | Sydney, NSW | Community health clinic |
| Nepean Sexual Health | Sydney, NSW | Sexual health clinic |
| Northside Clinic | Melbourne, Vic | General practice |
| Sydney Sexual Health Centre | Sydney, NSW | Sexual health clinic |
| Taylor Square Private Clinic | Sydney, NSW | General practice, sexual health clinic |
| The Albion Centre | Sydney, NSW | Sexual health clinic |
| Western Sydney Sexual Health | Sydney, NSW | Sexual health clinic |
| **Tertiary care** | | |
| St Vincent’s Hospital | Sydney, NSW | Specialist liver clinic |
| Royal Adelaide Hospital | Adelaide, SA | Specialist liver clinic |

**Table S2.** Comparing enrolment demographic and clinical characteristics between those who had behavioural data at both enrolment and follow-up and those who only had behavioural data at enrolment in CEASE

|  |  |  |  |
| --- | --- | --- | --- |
| **Demographic and clinical characteristics** | **Both ENR and FU questionnaires**  **N= 272** | | **Only ENR questionnaire**  **N= 121** |
| Age, median (IQR) | 50 (44, 55) | 47 (38, 53) | |
| Gender, n (%) |  |  | |
| Male | 260 (96) | 113 (93) | |
| Female | 9 (3) | 6 (5) | |
| Transgender | 2 (1) | 2 (2) | |
| Not specified | 1 (0) | 0 | |
| Sexual identity, n (%) |  |  | |
| Heterosexual | 42 (16) | 19 (16) | |
| Bisexual | 17 (6) | 10 (8) | |
| Gay/lesbian | 212 (78) | 92 (76) | |
| Prefer not to answer | 1 (0) | 0 | |
| Gay and bisexual men, n (%) | 226 (83) | 100 (83) | |
| Born in Australia, n (%) | 192 (71) | 66 (55) | |
| Aboriginal and Torres Strait Islander, n (%) | 7 (2) | 6 (5) | |
| Main source of income, n (%) |  |  | |
| Full or part-time employment | 97 (36) | 57 (47) | |
| On pension | 135 (49) | 40 (33) | |
| Other 1 | 40 (15) | 24 (20) | |
| Completed higher education, n (%) 2 | 143 (53) | 64 (53) | |
| Stable housing, n (%) | 248 (91) | 107 (88) | |
| CD4 count (106/L), median (IQR) | 590 (404, 799) | 608 (515, 877) | |
| HIV viral load below limit of detection, n (%) | 233 (86) | 105 (87) | |
| On combination antiretroviral therapy, n (%) | 256 (94) | 113 (93) | |
| Mode of HCV acquisition – clinician assigned, n (%) |  |  | |
| Injecting drug use | 146 (54) | 66 (55) | |
| Sexual exposure | 88 (32) | 38 (31) | |
| Other | 14 (5) | 5 (4) | |
| Unknown | 24 (9) | 12 (10) | |
| HCV RNA detected at enrolment, n (%) | 199 (73) | 86 (71) | |
| Genotype 3 |  |  | |
| Genotype 1 | 130 (65) | 48 (56) | |
| Genotype 2 | 7 (4) | 2 (2) | |
| Genotype 3 | 48 (24) | 24 (28) | |
| Genotype 4 | 2 (1) | 4 (5) | |
| Mixed infection | 0 | 1 (1) | |
| Missing | 12 (6) | 7 (8) | |
| HCV treatment experienced, n (%) | 83 (31) | 39 (32) | |
| Cirrhosis, n (%) | 38 (14) | 12 (10) | |
| Hepatitis B surface antigen positive, n (%) | 10 (4) | 5 (4) | |
| Hepatitis B core antibody positive, n (%) | 84 (31) | 33 (27) | |
| Hepatitis B surface antibody positive, n (%) | 142 (52) | 62 (51) | |

1. Other included no income, temporary benefit, student allowance, dependent on others, retirement fund etc.
2. Completed higher technical/TAFE/college/university degree
3. Among those with detectable HCV RNA at enrolment

**Table S3.** Types of drug use by route of administration among CEASE participants with available behavioural data at enrolment and follow-up

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| *Drug use types* | **Enrolment** | | | **Follow-up** | | |
| **Overall**  **N= 272** | **GBM**  **N= 226** | **Others\***  **N= 46** | **Overall**  **N= 272** | **GBM**  **N= 226** | **Others\***  **N= 46** |
| *Injecting drug use* |  |  |  |  |  |  |
| **Heroin** |  |  |  |  |  |  |
| Ever | 93 (34) | 61 (27) | 32 (70) | 95 (35) | 67 (30) | 28 (61) |
| Current | 17 (6) | 11 (5) | 6 (13) | 19 (7) | 12 (5) | 7 (15) |
| **Cocaine** |  |  |  |  |  |  |
| Ever | 68 (25) | 48 (21) | 20 (43) | 84 (31) | 68 (30) | 16 (35) |
| Current | 2 (1) | 2 (1) | 0 | 5 (2) | 5 (2) | 0 |
| **(Meth)amphetamine** |  |  |  |  |  |  |
| Ever | 179 (66) | 151 (67) | 28 (61) | 197 (72) | 172 (76) | 25 (54) |
| Current | 75 (28) | 70 (31) | 5 (11) | 88 (32) | 83 (37) | 5 (11) |
| **Other opiates** |  |  |  |  |  |  |
| Ever | 44 (16) | 29 (13) | 15 (33) | 51 (19) | 38 (17) | 13 (28) |
| Current | 4 (1) | 4 (2) | 0 | 9 (3) | 8 (3) | 1 (2) |
| **Benzodiazepines** |  |  |  |  |  |  |
| Ever | 24 (9) | 15 (7) | 9 (20) | 23 (8) | 16 (7) | 7 (15) |
| Current | 1 (0) | 1 (0) | 0 | 3 (1) | 3 (1) | 0 |
| *Non-injecting drug use* |  |  |  |  |  |  |
| **Heroin** |  |  |  |  |  |  |
| Ever | 42 (16) | 29 (13) | 13 (28) | 56 (21) | 38 (17) | 18 (39) |
| Current | 1 (0) | 1 (0) | 0 | 3 (1) | 1 (0) | 2 (4) |
| **Cocaine** |  |  |  |  |  |  |
| Ever | 137 (50) | 123 (54) | 14 (31) | 150 (55) | 133 (59) | 17 (37) |
| Current | 13 (5) | 13 (6) | 0 | 20 (7) | 20 (9) | 0 |
| **(Meth)amphetamine** |  |  |  |  |  |  |
| Ever | 162 (60) | 144 (64) | 18 (39) | 179 (66) | 162 (72) | 17 (37) |
| Current | 49 (18) | 46 (20) | 3 (7) | 64 (24) | 64 (28) | 0 |
| **Other opiates** |  |  |  |  |  |  |
| Ever | 46 (17) | 36 (16) | 10 (22) | 70 (26) | 61 (27) | 9 (20) |
| Current | 10 (4) | 9 (4) | 1 (2) | 16 (6) | 16 (7) | 0 |
| **Benzodiazepines** |  |  |  |  |  |  |
| Ever | 56 (21) | 42 (18) | 14 (31) | 64 (24) | 52 (23) | 12 (26) |
| Current | 25 (9) | 20 (9) | 5 (11) | 29 (11) | 25 (11) | 4 (9) |
| **Marijuana** |  |  |  |  |  |  |
| Ever | 193 (71) | 159 (70) | 34 (74) | 216 (79) | 181 (80) | 35 (76) |
| Current | 108 (40) | 93 (41) | 15 (33) | 123 (45) | 108 (48) | 15 (33) |

\* Others: women and heterosexual men

**Table S4.** Patterns of drug and alcohol use among CEASE participants with less than 2 years between enrolment and follow-up and available behavioural data at both time points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Drug use characteristics** | **Enrolment** | | **Follow-up** | |
| **Overall**  **N= 120** | **GBM**  **N= 94** | **Overall**  **N= 120** | **GBM**  **N= 94** |
| **Injecting drug use, n (%)** |  |  |  |  |
| Ever | 97 (81) | 78 (83) | 101 (84) | 82 (87) |
| In the last 6 months | 43 (36) | 34 (36) | 50 (42) | 42 (45) |
| In the last month | 28 (23) | 21 (22) | 36 (30) | 30 (32) |
| **Non-injecting drug use, n (%) 1** |  |  |  |  |
| Ever | 82 (68) | 67 (71) | 92 (77) | 77 (82) |
| In the last 6 months | 32 (27) | 25 (27) | 33 (27) | 31 (33) |
| *In those who reported ever IDU* | ***N=97*** | ***N=78*** | ***N=101*** | ***N=82*** |
| **Age at first injecting** |  |  |  |  |
| Median (IQR) | 25 (19, 35) | 28 (20, 40) | 25 (18, 35) | 28 (20, 39) |
| *In those who reported IDU in the last month* | ***N=28*** | ***N=21*** | ***N=36*** | ***N=30*** |
| **Drug injected most in last month, n (%)** |  |  |  |  |
| Heroin | 8 (28) | 5 (24) | 8 (22) | 6 (20) |
| (Meth)Amphetamine | 17 (61) | 14 (67) | 24 (67) | 20 (67) |
| Other opiates | 0 | 0 | 0 | 0 |
| Prefer not to answer/missing | 3 (11) | 2 (9) | 4 (11) | 4 (13) |
| **Drug injection frequency in last month, n (%)** |  |  |  |  |
| Daily or more | 0 | 0 | 7 (19) | 4 (13) |
| 2-6 days per week | 10 (36) | 7 (33) | 7 (19) | 6 (20) |
| Less than weekly | 16 (57) | 13 (62) | 17 (48) | 15 (50) |
| Unknown/Missing/Prefer not to answer | 2 (7) | 1 (5) | 5 (14) | 5 (17) |
| **Drug injection behaviour in last month, n (%)** |  |  |  |  |
| Use of an unsterile needle/syringe | 6 (21) | 4 (19) | 5 (14) | 4 (13) |
| Receptive sharing of ancillary injecting equipment | 3 (11) | 2 (9) | 7 (19) | 6 (20) |
|  |  |  |  |  |
| **Hazardous alcohol consumption, n (%)** |  |  |  |  |
| No | 72 (60) | 50 (53) | 77 (64) | 57 (61) |
| Yes | 40 (33) | 36 (38) | 39 (33) | 35 (37) |
| Unknown/Missing/Prefer not to answer | 8 (7) | 8 (9) | 4 (3) | 2 (2) |

**Table S5.** Sexual behaviour and attitudes at among CEASE GBM with less than 2 years between enrolment and follow-up and available behavioural data at both time points

|  |  |  |
| --- | --- | --- |
| **Sexual behaviour characteristics** | **Enrolment** | **Follow-up** |
| **N= 94** | **N= 94** |
| Regular male partner | 32 (34) | 34 (36) |
| Casual male partner(s) in the last 6 months | 48 (51) | 49 (52) |
| Condom-less anal intercourse with casual male partner(s) | 37 (39) | 44 (47) |
| Group sex in the last 6 months | 24 (25) | 19 (20) |
| In those with regular male partner |  |  |
| **HIV status of regular male partner** |  |  |
| Known | 29 (91) | 32 (94) |
| HIV positive | 15 (47) | 18 (53) |
| **HCV status of regular male partner** |  |  |
| Known | 28 (88) | 27 (79) |
| HCV positive | 5 (16) | 2 (6) |
| In those with casual male partner(s) |  |  |
| **Number of casual male partner(s) in last 6 months** |  |  |
| 1 | 4 (8) | 5 (10) |
| 2-5 | 20 (42) | 18 (37) |
| 6-10 | 11 (23) | 11 (22) |
| >10 | 13 (27) | 15 (31) |
| **Venue or site at which casual male partner(s) were met** |  |  |
| Internet | 29 (60) | 35 (71) |
| Mobile app eg. Grindr | 29 (60) | 33 (67) |
| Gay bar | 6 (12) | 8 (16) |
| Dance party | 4 (8) | 4 (8) |
| Gym | 3 (6) | 5 (10) |
| Beat | 10 (21) | 11 (22) |
| Gay sauna | 17 (35) | 21 (43) |
| Other sex on premises venue | 15 (31) | 17 (35) |
| Sex workers | 4 (8) | 7 (14) |
| Private sex party | 12 (25) | 12 (24) |
| In other Australian cities | 8 (17) | 12 (24) |
| Elsewhere in Australia | 8 (17) | 10 (20) |
| Overseas | 5 (10) | 9 (18) |
| **Disclose HCV status with casual male partner(s)** |  |  |
| Always | 11 (23) | 12 (24) |
| Sometimes | 14 (29) | 18 (37) |
| Never | 21 (44) | 19 (39) |
| Missing | 2 (4) | 0 |
| **Disclose HIV status with casual male partner(s)** |  |  |
| Always | 25 (52) | 28 (57) |
| Sometimes | 16 (33) | 17 (35) |
| Never | 6 (13) | 4 (8) |
| Missing | 1 (2) | 0 |

**Table S6.** Knowledge and attitudes regarding HCV acquisition and re-infection at enrolment among CEASE participants with available behavioural data at enrolment and follow-up

|  |  |  |  |
| --- | --- | --- | --- |
| Knowledge and attitudes regarding HCV acquisition and re-infection | | **Overall**  **N=272 (%)** | **GBM**  **N= 226 (%)** |
| **Behaviours associated with HCV infection risk** | **Correct response** |
| Sharing needles | **Yes** | 239 (88) | 198 (88) |
| Sharing other injecting equipment | **Yes** | 206 (76) | 171 (76) |
| Sharing drug snorting equipment | **Yes** | 88 (32) | 79 (35) |
| Having a sexually transmitted infection | **Yes** | 149 (55) | 124 (55) |
| Body piercing and tattoos | **Yes** | 176 (65) | 148 (65) |
| Needle-stick injuries | **Yes** | 193 (71) | 162 (72) |
| Sharing personal-care items such as razors and toothbrushes | **Yes** | 169 (62) | 142 (63) |
| Condom-less anal intercourse (bottom) | **Yes** | 197 (72) | 171 (76) |
| Fisting | **Yes** | 130 (48) | 119 (53) |
| Bleeding during sex | **Yes** | 203 (75) | 175 (77) |
| Sex toys | **Yes** | 123 (45) | 116 (51) |
| Sex with multiple partners | **Yes** | 149 (55) | 125 (55) |
| Group sex | **Yes** | 150 (55) | 124 (55) |
| **Participants knowledge regarding HCV reinfection** |  |  |  |
| Is reinfection possible? | **Yes** | 187 (69) | 157 (69) |
| **Self-reported likelihood of HCV reinfection** | |  |  |
| No/low (0-3) | | 198 (73) | 159 (70) |
| Medium (4-7) | | 42 (15) | 40 (18) |
| High (8-10) | | 16 (6) | 13 (6) |
| Missing | | 16 (6) | 14 (6) |

**Table S7. HCV reinfection incidence among people living with HIV across different studies**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Author, year | Study name (if any) | Population | Location and  study design | Treatment Regimens | Number of subjects | Number of reinfections | Reinfection incidence  per 100 py (95% CI) |
| Berenguer, J., et al., 2019 | Madrid Coinfection Registry (Madrid-CoRe) | HIV/HCV-coinfected individuals | Madrid, Spain  prospective | DAAs | 2359  PWID: 1459 (62%)  MSM: 177 (7%) | 17 patients (12 MSM, 5 PWID) | Overall: 0.48 (0.30-0.77)  MSM: 5.93 (3.37-10.44)  PWID: 0.21 (0.09-0.52) |
| Huang et al. 2019 | \_ | HIV‐positive  patients with recent HCV infection (90.4% MSM) | Taiwan  Retrospective | peg‐IFN/RBV (54.2%) and DAAs (45.8%) | 128 | 18 | 8.2 (5.2, 13.1) |
| Pradat, P., et al., 2018 | French Dat’AIDS cohort | People living with HIV | France  Retrospective | - | 3406 | 73 reinfections (MSM: 51) | 2.52–2.90 from 2012 to 2016 |
| Young, J., et al., 2017 | Canadian Co-infection Cohort | Co-infected (MSM and IDU) | Canada  Prospective | 51 patients with interferon-free regimens | 257 | 18 patients (5 were low or high risk MSM) | Overall: 3.1  High frequency IDU: 5.8  High-risk sexual MSM: 2.6  Low frequency IDU: 2.2  Low risk MSM: 1.6 |
| Pineda, J.A., et al., 2015 | \_ | HIV-positive (100%)  Lifetime PWID (86%) | Spain  Prospective | Peg-IFN+RBV (88%)  Peg-IFN+RBV+DAA (13%) | 84 | 4 (3 PWID and 1 MSM) | 1.21 (0.3, 3.09) |
| Marco., et al., 2013 | \_ | Inmates with chronic hepatitis C | Catalonia, Spain  retrospective | Peg-IFN+RBV | 119 who achieved SVR (18 HIV infected) | 9 (3 HIV coinfected) | Overall: 5.27  HIV-infected: 13.41  Those reporting active IDU: 33 |
| Grebely J., et al., 2012 | ATAHC | HIV-infected and uninfected participants with recent HCV infection | Australia  Prospective | PEG-IFN | 88 (with treatment-induced virological suppression) and 67 (with SVR) | 3 cases among HIV-positive individuals | HIV-infected individuals: 7.1 |
| Ingiliz., et al., 2019 | GECCO | Everyone treated for HCV  - 21.7 % HIV coinfected  - 11.0% MSM | Germany  Retrospective | DAAs | 2298 | 48 Overall, 38 in HIV-coinfected | MSM (36 out of 38 were HIV positive):  9.02 (6.48-12.26) |
| Salazar-Vizcaya, L., et al., 2018 | Swiss HIV Cohort Study (SHCS) | HIV positive MSM and PWID | Switzerland  Prospective | DAA-based therapy vs treatment with pegylated interferon/ribavirin | The whole cohort has been 5267 MSM and  1805 PWID but no info on numbers at risk of reinfection | 17 MSM and 28 PWID | MSM: 0 (0–242.3) in 2012 to 9.5 (0.2–53.1) in 2016  PWID: decreased 3-fold from 13 (2.7–38.0) to 4.7 (0.6–16.8) |
| Ingiliz., et al., 2017 | \_ | HIV-infected MSM | Western Europe (8 centres in 4 countries including Austria, France, Germany, and the UK)  Retrospective | pegylated interferon  ±ribavirin | 552 | 143 | 7.3 (6.2, 8.6) |
| Martinello, M., et al., 2017 | ATAHC I, ATAHC II, DARE-C I and DARE-C II | People with recent HCV infection (<18 months)  HIV-positive MSM (53%)  Recent PWID (49%) | Australia  Prospective | ATAHC I: Peg-IFN+/-RBV  ATAHC II: Peg-IFN+RBV  DARE-C I: Peg-IFN, RBV and telaprevir  DARE-C II: Sofosbuvir+ RBV | 120 | 10 | Overall: 7.4 (4.0, 13.8)  HIV coinfected MSM: 10.3 (4.9, 21.7) |
| Martin., et al., 2013 | \_ | HIV-positive MSM with sexually acquired HCV | London, UK  Retrospective | - | 191  114 (successfully treated for their primary infection) | 44 | Overall: 7.8  Among those successfully treated: 9.6 (6.6, 14.1) |
| Lambers., et al., 2011 | \_ | HIV-infected MSM with a sexually transmitted acute HCV infection | Amsterdam  Retrospective + a small subset of prospective (MOSAIC study) | Peg-IFN+RBV | 51 | 11 | 15.2 (8.0, 26.5) |

**Table S8.** Comparing patterns of drug and alcohol use between those who had behavioural data at both enrolment and follow-up and those who only had behavioural data at enrolment in CEASE

|  |  |  |
| --- | --- | --- |
| **Drug use characteristics** | **Both ENR and FU questionnaires**  **N= 272** | **Only ENR (no FU) questionnaire**  **N= 121** |
| **Injecting drug use, n (%)** |  |  |
| Ever | 227 (83) | 96 (79) |
| In the last 6 months | 95 (35) | 51 (42) |
| In the last month | 69 (25) | 31 (26) |
| **Non-injecting drug use, n (%) 1** |  |  |
| Ever | 203 (75) | 87 (72) |
| In the last 6 months | 81 (30) | 39 (32) |
| *In those who reported ever IDU* | ***N=227*** | N=96 |
| **Age at first injecting** |  |  |
| Median (IQR) | 25 (19, 33) | 28 (18, 41) |
| *In those who reported IDU in the last month* | ***N=69*** | N=31 |
| **Drug injected most in last month, n (%)** |  |  |
| Heroin | 13 (19) | 4 (13) |
| (Meth)Amphetamine | 49 (71) | 25 (81) |
| Other opiates | 1 (1) | 0 |
| Prefer not to answer/missing | 6 (9) | 2 (6) |
| **Drug injection frequency in last month, n (%)** |  |  |
| Daily or more | 7 (10) | 8 (26) |
| 2-6 days per week | 15 (22) | 3 (10) |
| Less than weekly | 41 (59) | 19 (61) |
| Unknown/Missing/Prefer not to answer | 6 (9) | 1 (3) |
| **Drug injection behaviour in last month, n (%)** |  |  |
| Use of an unsterile needle/syringe | 11 (16) | 4 (13) |
| Receptive sharing of ancillary injecting equipment | 13 (19) | 10 (32) |
|  |  |  |
| **Hazardous alcohol consumption, n (%)** |  |  |
| No | 150 (55) | 70 (58) |
| Yes | 103 (38) | 41 (34) |
| Unknown/Missing/Prefer not to answer | 19 (7) | 10 (8) |

**Table S9.** Comparing Sexual behaviour characteristics between those who had behavioural data at both enrolment and follow-up and those who only had behavioural data at enrolment in CEASE

|  |  |  |
| --- | --- | --- |
| **Sexual behaviour characteristics** | **Both ENR and FU questionnaires**  **N= 226** | **Only ENR (no FU) questionnaire**  **N= 100** |
| Regular male partner | 78 (34) | 37 (37) |
| Casual male partner(s) in the last 6 months | 129 (57) | 66 (66) |
| Condom-less anal intercourse with casual male partner(s) | 108 (48) | 64 (64) |
| Group sex in the last 6 months | 65 (29) | 43 (43) |
| In those with regular male partner | ***N= 78*** | ***N= 37*** |
| **HIV status of regular male partner** |  |  |
| Known | 70 (90) | 34 (92) |
| HIV positive | 45 (58) | 25 (68) |
| **HCV status of regular male partner** |  |  |
| Known | 62 (80) | 29 (78) |
| HCV positive | 12 (15) | 4 (11) |
| In those with casual male partner(s) | ***N= 129*** | ***N= 66*** |
| **Number of casual male partner(s) in last 6 months** |  |  |
| 1 | 12 (9) | 2 (3) |
| 2-5 | 44 (34) | 27 (41) |
| 6-10 | 28 (22) | 19 (29) |
| >10 | 45 (35) | 18 (27) |
| **Venue or site at which casual male partner(s) were met** |  |  |
| Internet | 77 (60) | 39 (59) |
| Mobile app eg. Grindr | 71 (55) | 44 (67) |
| Gay bar | 21 (16) | 19 (29) |
| Dance party | 19 (15) | 12 (18) |
| Gym | 7 (5) | 9 (14) |
| Beat | 32 (25) | 21 (32) |
| Gay sauna | 46 (36) | 32 (48) |
| Other sex on premises venue | 49 (38) | 27 (41) |
| Sex workers | 10 (8) | 3 (4) |
| Private sex party | 38 (29) | 25 (38) |
| In other Australian cities | 27 (21) | 18 (27) |
| Elsewhere in Australia | 19 (15) | 14 (21) |
| Overseas | 22 (17) | 12 (18) |
| **Disclose HCV status with casual male partner(s)** |  |  |
| Always | 27 (21) | 17 (26) |
| Sometimes | 36 (28) | 21 (32) |
| Never | 62 (48) | 26 (39) |
| Missing | 4 (3) | 2 (3) |
| **Disclose HIV status with casual male partner(s)** |  |  |
| Always | 61 (47) | 44 (67) |
| Sometimes | 49 (38) | 15 (23) |
| Never | 16 (13) | 7 (10) |
| Missing | 3 (2) | 0 |

Enrolment (2014-2017)

HIV-positive and HCV-antibody positive, n=402 (335 GBM)

(Completed comprehensive questionnaire at enrolment, n=393 [326 GBM])

Did not return for their follow-up visit (although remain in the cohort), n= 63

Died, n=10

Lost to follow up, n=21

Transfer to non-study site, n=7

Withdrawal from study, n=15

**Selected Study Sample**

Those who attended both study timepoints and completed the behavioural questionnaires at both Enrolment and Follow-up

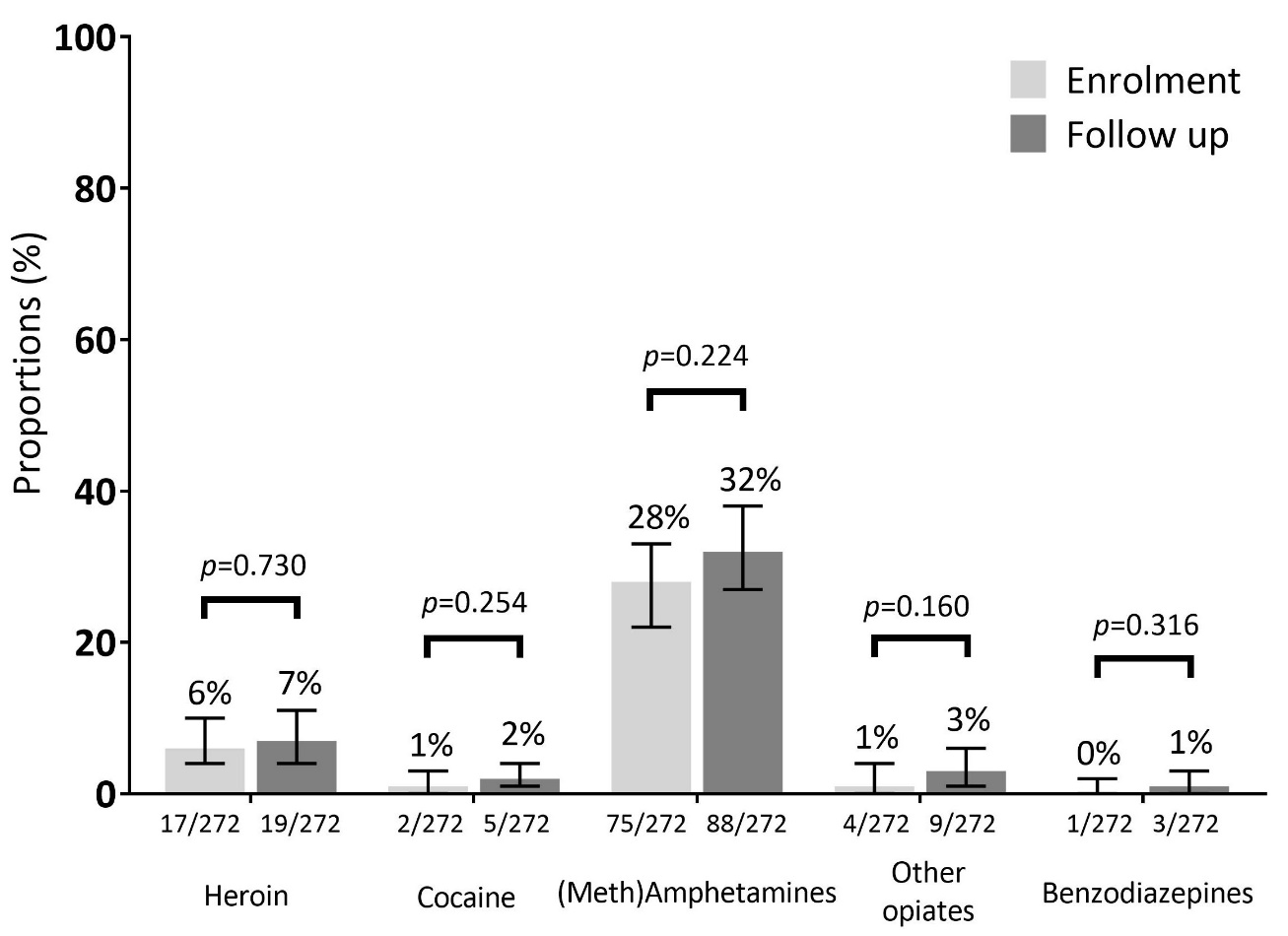
**n= 272 (226 GBM)**

Follow-up (2017-2018)

Returned and completed study visit, n= 286 (238 GBM)

(Completed behavioural questionnaire at follow up, n= 279 [233 GBM])

**Figure S1.** CEASE participant disposition and the selected sample for the study



**Figure S2.** Injecting drug types at CEASE enrolment and follow-up