

# Factors associated with entry into healthcare pathways for hepatitis C among people who inject psychoactive drugs in the United Kingdom (UK).

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## INTRODUCTION

Globally 130-150 million people are estimated to have the hepatitis C virus (HCV); around 10% of these are people who inject drugs (PWID) [1]. Most will develop chronic infection with a risk of cirrhosis and liver cancer.

In high income countries PWID are the group most affected by hepatitis C, and in the United Kingdom (UK) around 90% of hepatitis C cases are believed to have been acquired as a result of injecting drug use [2].

The development of very effective antiviral drugs means that diagnosis and entry into a care pathway is increasingly important to reducing hepatitis C related illness and death. The treatment of hepatitis C among PWID could also reduce transmission (i.e. treatment for prevention)[3], particularly if delivered alongside other interventions that reduce risk, such as, needles and syringe programmes and opiate substitution therapy.

Factors associated with hepatitis C care pathway uptake – that is having seen a specialist doctor/nurse and being given medication perceived as being related to their hepatitis C - are explored in a national sample of PWID.

## METHODS

PWID throughout the UK (except Scotland) have been recruited into an annual voluntary unlinked-anonymous survey since 1990 [4]. Participants in this multi-site survey currently provide dried-blood spot samples and complete a short behavioural questionnaire.

Participants are asked about the uptake of diagnostic testing for hepatitis C and those reporting a positive test result have, since 2013, been asked if they had:-

**'seen a specialist nurse or doctor about their hepatitis C'**

Those who reported that they had, were asked if they had ever been given:-

**'medicine for their hepatitis C'.**

Answers to these question were used to assess entry into healthcare pathways for hepatitis C.

Participants from the 2013 and 2014 surveys who had injected during the preceding year were included in the analyses (those participants in 2014 who reported taking part in 2013 were excluded). Bivariate associations between markers of care pathway entry and demographic and drug use characteristic were first assessed ( $\chi^2$  test). Those with significant associations were then explored using multivariable logistic regression. Analyses were undertaken using SPSS.

## RESULTS

During 2013-2014, there were 3,980 first participations by people who had injected drugs during the preceding year.

Of these, 2,038 (51%) were HCV antibody positive:-

- their median age was 38 years (at time of participation);
- one quarter (25%) were women;
- around one in 15 (7%) had been born outside of the UK;
- 80% reported that they had ever been imprisoned;
- 20% had been homeless during the preceding year; &
- 91% had injected heroin during the preceding year, 55% crack-cocaine, & 29% amphetamine.

Of the participants with antibodies to HCV, 44% (903) were aware that they had been infected hepatitis C.

Among those who reported being aware that they had been infected with hepatitis C, 62% (562) reported that they had seen a specialist nurse or doctor about their hepatitis C; that is 28% of all those antibodies to HCV (Figure 1).

Of those who were aware that they had been infected with hepatitis C, there was no differences in proportion who reported seeing a specialist nurse or doctor about their hepatitis C by gender or age (though not significant, those younger were more likely to report having seen a nurse or doctor). In the multivariable analysis a number of factors were associated with having seen a doctor or nurse about their hepatitis C, see the Table.

Of those who were aware that they had been infected with hepatitis C and who reported that they had seen a specialist nurse or doctor about their hepatitis C, 27% (151) reported that they had been given 'medicine for hepatitis C' (Figure 2). This is about one in 14 (7%) of all of those with antibodies to hepatitis C (i.e. both those aware & unaware), and 17% of all of those who were aware that they had been infected with hepatitis C.

Of those aware that they had been infected with hepatitis C and who reported that they had seen a specialist nurse or doctor about their hepatitis C, there was no difference in the proportion who reported being given 'medicine for their hepatitis C' by gender or age. In the multivariable analysis, two factors were associated with being given 'medicine for their hepatitis C' among those who had seen a doctor or nurse, see Figure 3.

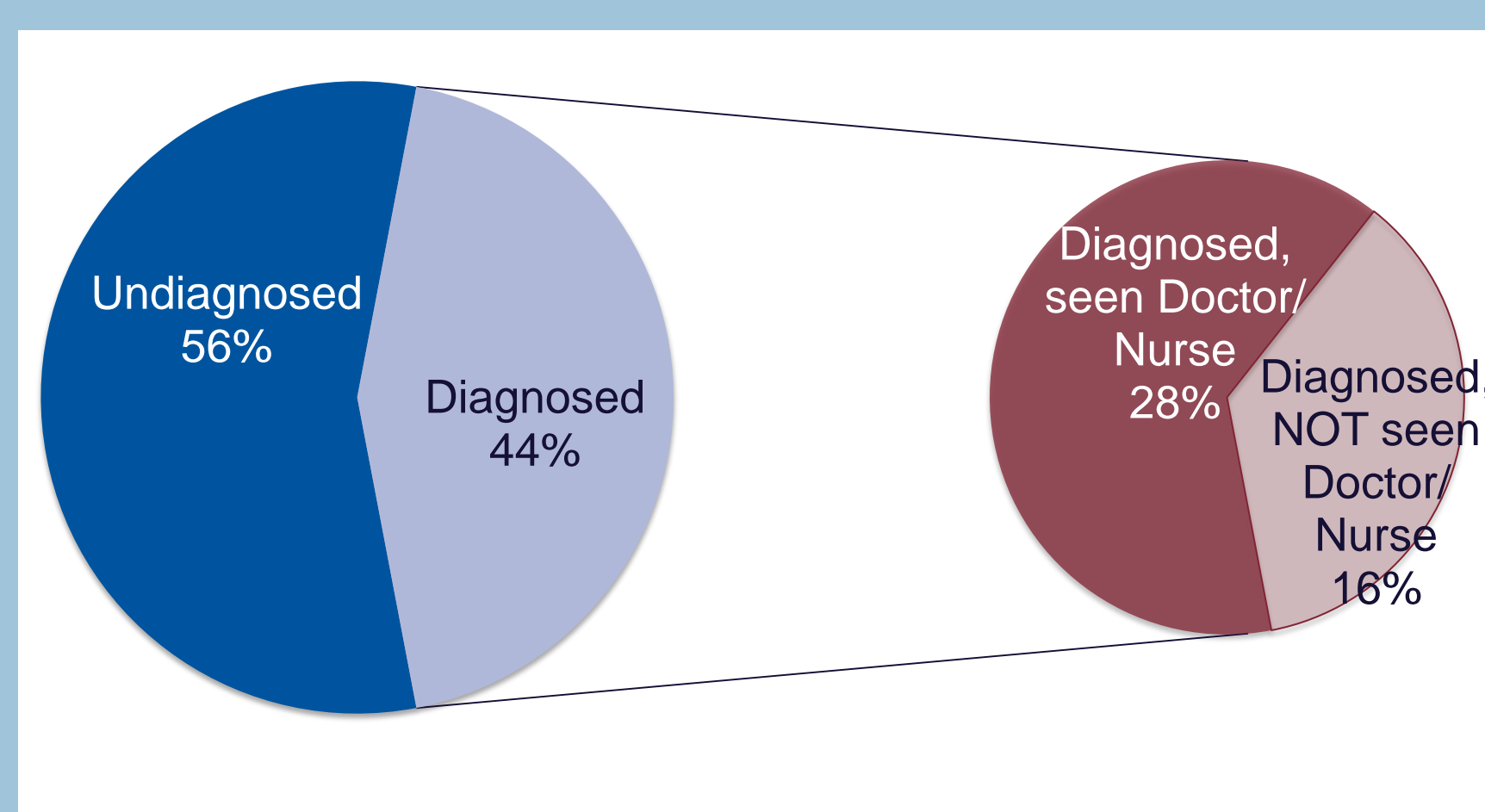


Figure 1. Proportion reporting seeing a specialist doctor or nurse about their hepatitis C

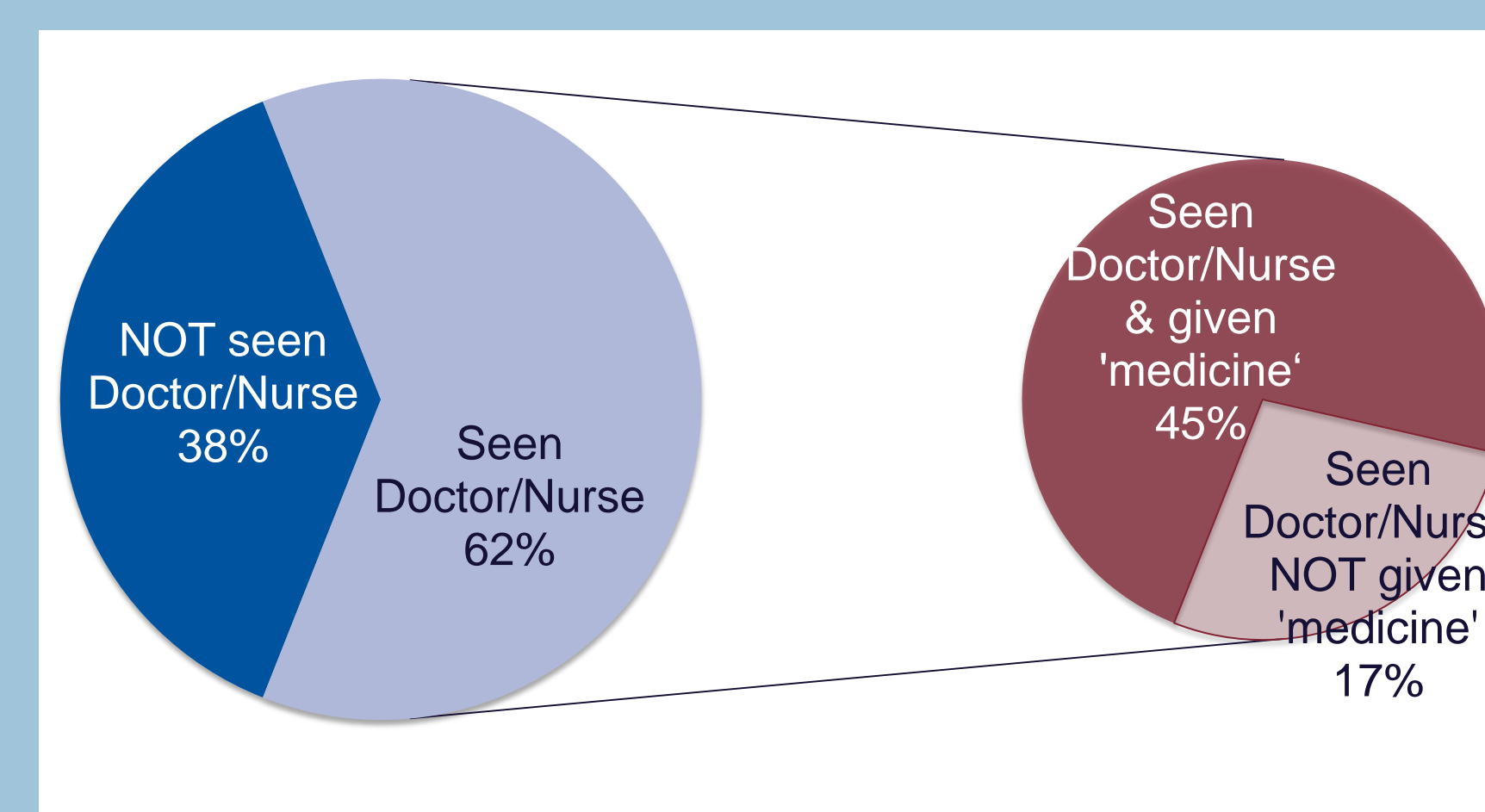


Figure 2: Proportion reporting getting 'medicine for their hepatitis C' among those who had seen a doctor or nurse.

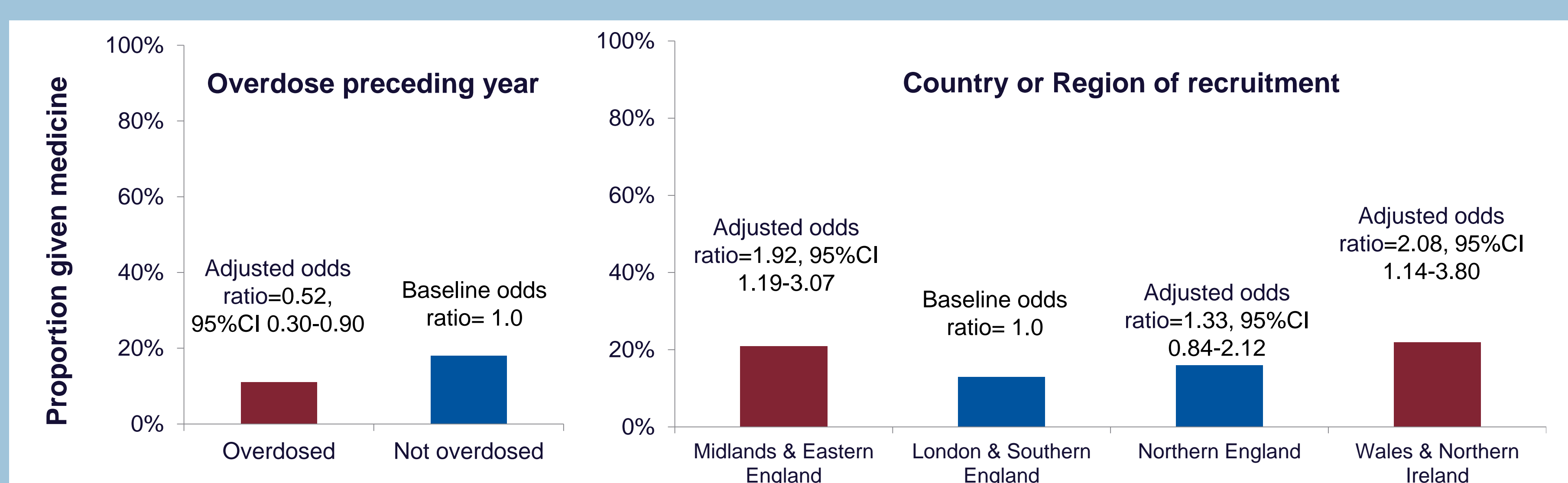


Figure 3: Factors associated with reporting being given 'medicine for their hepatitis C' among those who had seen a doctor or nurse about their hepatitis C.

| Factors remaining in multivariable analysis                   | Seen specialist Doctor or Nurse |         | Adjusted odds ratio, with 95% Confidence Interval |
|---|---------------------------------|---------|---|
|   | Yes                             | Total   |   |
| Born in the UK?   | No                              | 75% 16  | 63 1.86 1.02-3.39                                 |
|   | Yes                             | 61% 325 | 840 1.00  |
| Received money, goods or drugs in exchange for sex?*          | No/NR                           | 63% 308 | 841 1.00  |
|   | Yes                             | 47% 33  | 62 0.50 0.29-0.85                                 |
| Used a primary care (family doctor / GP) service?*            | No/NR                           | 57% 128 | 298 1.00  |
|   | Yes                             | 65% 213 | 605 1.42 1.06-1.89                                |
| Injected with a needle/syringe already used by someone else?* | No                              | 61% 289 | 737 1.00  |
|   | Yes                             | 69% 52  | 166 1.64 1.13-2.38                                |
| Injected cocaine powder?*                                     | No                              | 64% 275 | 762 1.00  |
|   | Yes                             | 53% 66  | 141 0.67 0.46-0.99                                |
| Injected crack-cocaine?*                                      | No                              | 69% 110 | 355 1.00  |
|   | Yes                             | 58% 231 | 548 0.66 0.49-0.89                                |

\* During preceding 12 months  
NR = Not Reported.

Table: Factors associated with reporting seeing a specialist doctor or nurse about their hepatitis C.

## LIMITATIONS

- The proportion diagnosed, and proportion of these receiving hepatitis C care, may be different among those PWID not in contact with specialist services for people using drugs.
- The data on being given 'medicine for their hepatitis C' should be treated with caution.
  - This is unlikely to be a good indicator of the uptake of treatments for hepatitis C, such as directly acting antivirals.
  - It will more probably reflect the participants perceptions of the extent to which the care that they have received was related to their hepatitis C status.

## CONCLUSIONS

- Many hepatitis C infections among PWID remain undiagnosed
- However, many of those who have been diagnosed have accessed specialist healthcare workers.
- Those with greatest drug use & sexual risks (as indicated by crack injection, overdosing, & transactional sex) may be less likely to have accessed hepatitis C related healthcare.
- Targeted interventions (such as point-of-care testing in drug services) are needed to improve the uptake of hepatitis C testing.
- Care pathways for, and the follow-up of, those testing positive both need to be improved.

## ACKNOWLEDGEMENTS

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## REFERENCES

1. WHO. Fact sheet No 164. Hepatitis C. Updated July 2015 <http://www.who.int/mediacentre/factsheets/fs164/en/>
2. Hepatitis C in the UK: 2015 report. Public Health England, July 2015. <https://www.gov.uk/government/publications/hepatitis-c-in-the-uk>
3. Martin NK, et al. The hepatitis C virus epidemics in key populations (including people who inject drugs, prisoners and MSM): the use of direct-acting antivirals as treatment for prevention. *Curr Opin HIV AIDS*. 2015 Sep;10(5):374-80.
4. Hope VD, et al. Two decades of successes and failures in controlling the transmission of HIV through injecting drug use in England and Wales, 1990 to 2011. *Eurosurveillance* 2014;19(14). pii: 20762.