

# The introduction of hepatitis C avidity and HBsAg testing into the Unlinked Anonymous Monitoring Survey of PWID in the UK.



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# UAM Survey of PWID



- The UAM Survey started in England & Wales in 1990 in response to the UK HIV epidemic ( + Northern Ireland since 2002).
- Uses the Voluntary Unlinked & Anonymous method.
- Recruits PWID through sentinel collaborating drug services (e.g. needle and syringe programmes; maintenance & prescribing services, etc.).
- Collaborating services in approx. 65 areas each year.
- Participants (current & former injectors) provide a biological sample and self-complete a brief questionnaire.
- Survey aims to:
  - measure the prevalence of viral hepatitis and HIV in PWID.
  - monitor changes in related behaviours.

# Biological Sample



- From its start in 1990, the survey has collected 'Oral Fluid' samples.
- These are self-collected by the participants using the Salivette™ from 1990 to 1997, and the OraSure™ from 1998 onwards. Allowed introduced of anti-HCV testing into the survey in 1998.
- Dried blood spot sample collection piloted in 2009. Switchover to DBS samples was phased over two years: 2010 & 2011.

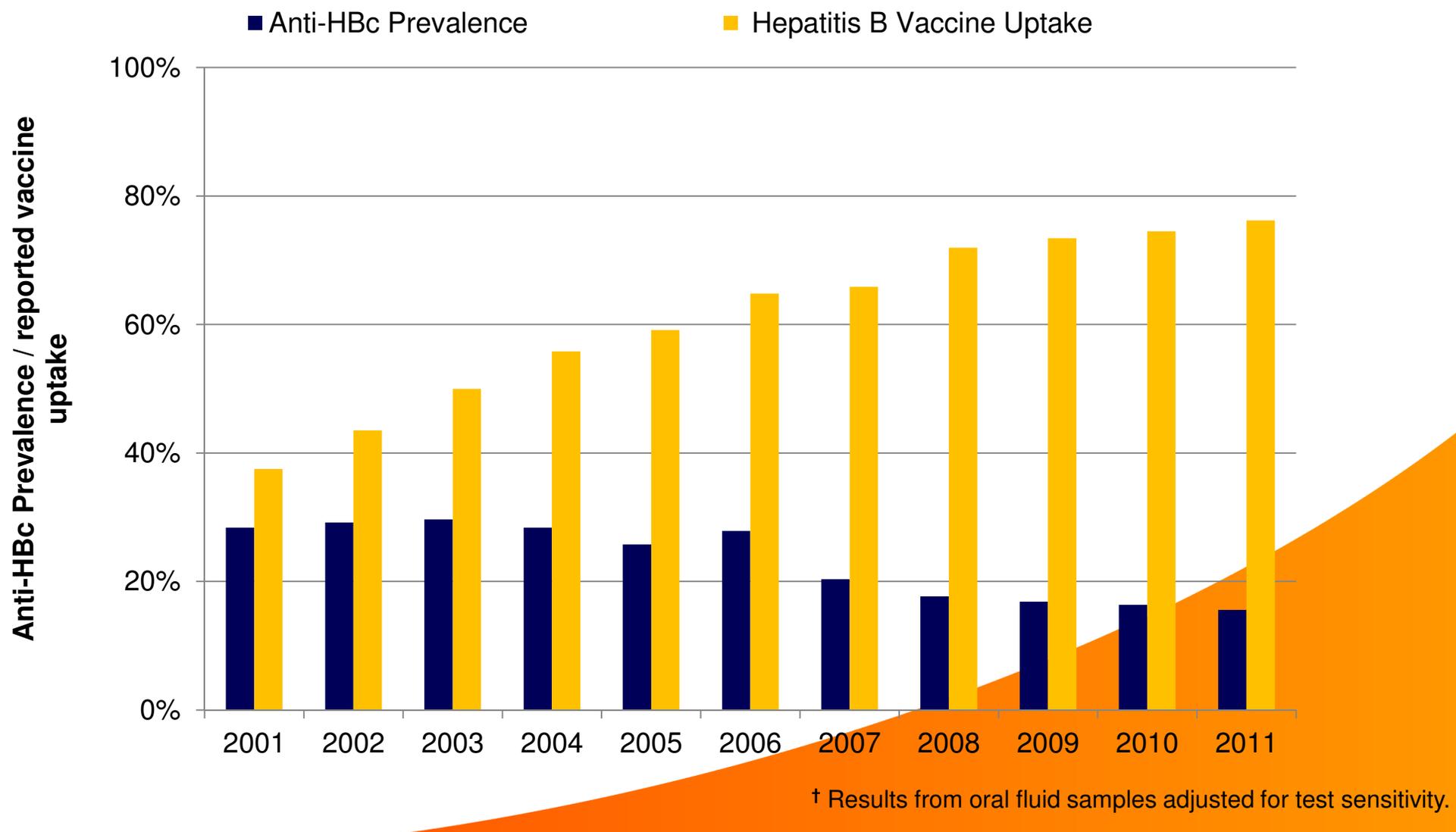




# New tests in 2011: HBsAg and HCV avidity testing

- Permitted introduction of further tests.
- In addition to the 'primary' testing for anti-HIV, anti-HBc, and anti-HCV, the samples collected from 2011 onwards are undergoing two additional laboratory tests:
  - Testing of the anti-HBc +ve samples for HBsAg.
  - Avidity testing of anti-HCV +ve samples - with anti-HCV avidity of <40% in the presence of HCV-RNA and the absence of anti-HIV regarded as probably recent infections.
- Both of these are done after the 'primary' antibody testing.

# Anti-HBc<sup>†</sup> prevalence and HBV vaccine uptake among PWID over time.





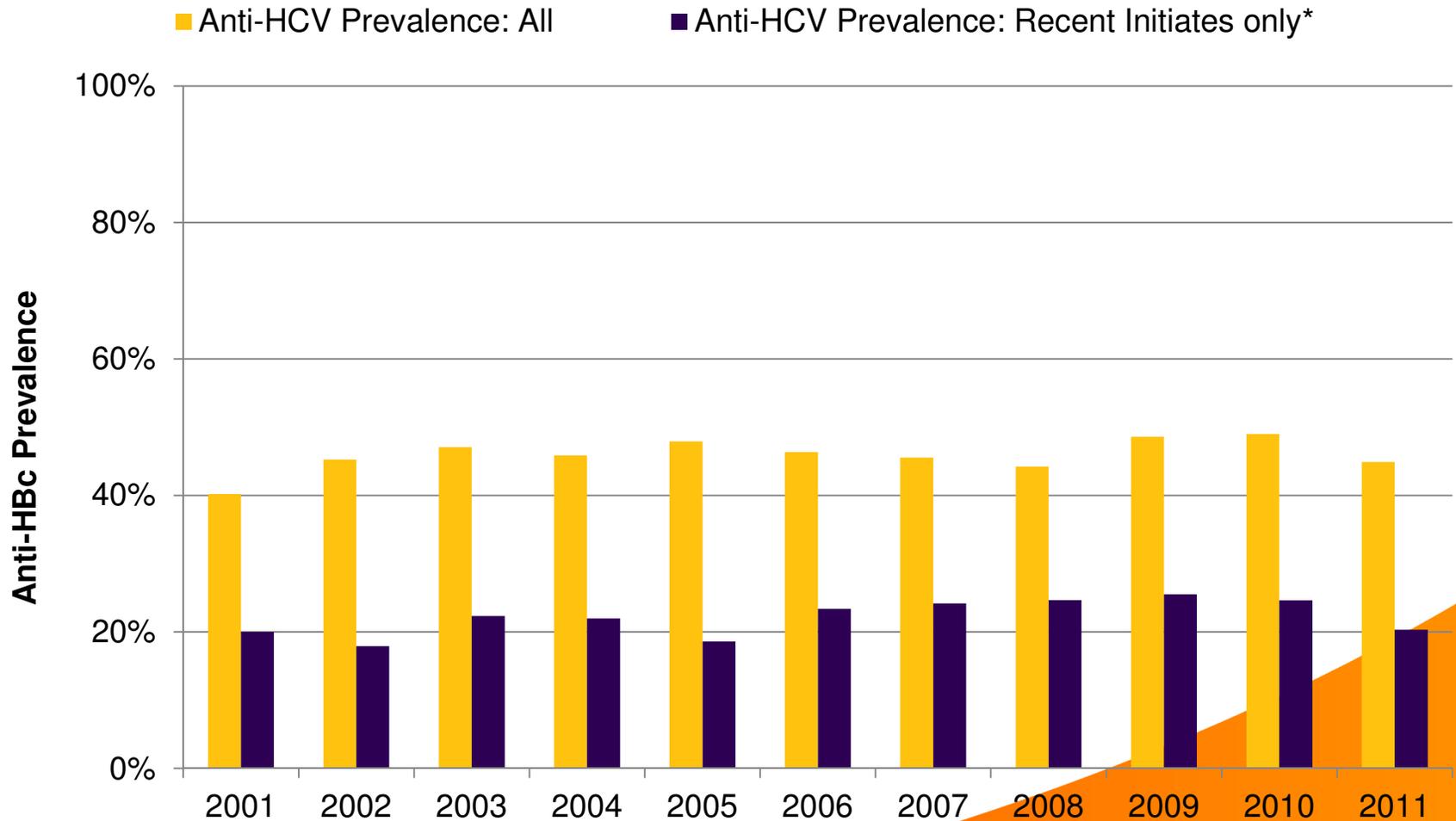
## New tests in 2011: HBsAg

- Anti-HBc prevalence in 2011 was overall 16% (442/2,838).
- HBsAg was detected in around 4.8% (21/433) of the anti-HBc +ve samples sufficient for testing.
- Overall only 0.74% (21/2,829) of the PWID sampled across England, Wales and Northern Ireland had current hepatitis B infection.

	Mean age	Median age
Anti-HBc -ve	35	34
Anti-HBc +ve with HBsAg	43	42
Anti-HBc +ve	41	41

- This indicates that hepatitis B infection is now rare among PWID.

# Anti-HCV<sup>†</sup> prevalence over time: among all the participating PWID and those who were recent initiates to injecting\*



† Results from oral fluid samples adjusted for test sensitivity.

\* Those who had first injected during the current or the preceding two calendar years.



## New tests in 2011: HCV avidity

- Anti-HCV prevalence in 2011 was 43% (1,234/2,838) overall.
- 27 (2.3%) of anti-HCV +ve (n=1,198\*) samples had weak avidity (in the presence of HCV-RNA; excluding those HIV positive).
- There were 1,594 participants who were anti-HCV -ve in 2011; therefore, of the survey participants that could have recently acquired hepatitis C, 1.7% (27/1,621) had been infected.
- This suggests that HCV incidence is between 2 and 10 infections per 100 person years of exposure. However, there is much uncertainty over the 'window period' so this estimate needs to be treated with **great caution**.
- Estimating incidence crudely from the prevalence among the recent initiates suggests an incidence of around 12 infections per 100 person years of exposure in that group.

\* 12 were insufficient for testing.

# HCV incidence in PWID found in other studies: 2001 to 2009.



<b>Bristol</b>	2009	10 per 100 py	HCV RNA in anti-HCV -ve
<b>Birmingham</b>	2009	5.2 per 100 py	HCV RNA in anti-HCV -ve
<b>Leeds</b>	2008	7.6 per 100 py	HCV RNA in anti-HCV -ve
<b>Bristol</b>	2006	40 per 100 py	HCV RNA in anti-HCV -ve
<b>Wales</b>	2004–06	5.6 per 100 py	Cohort
<b>London</b>	2001–02	42 per 100 py	Cohort



## Conclusions & Implications

- Current hepatitis B infection is rare among PWID.
- Data on reported acute infections indicates that few new infections are occurring among PWID – with most HBV transmission in the UK now probably associated with sexual activity.
- Hepatitis C transmission is ongoing among PWID, with overall incidence probably in the range 2-10 infections per 100 person years of exposure.
- Monitoring of the number of probable recent infections using avidity through the UAM survey should provide insights into HCV transmission trends.



Thank you.

