

## **EPIDEMIOLOGICAL APPROACHES TO MEASURE HIV TEST UPTAKE AMONG PEOPLE WHO INJECT DRUGS AND EVALUATE THE RESPONSE TO AN HIV OUTBREAK IN GLASGOW, SCOTLAND.**

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### **Background:**

Glasgow, Scotland has experienced an outbreak of HIV among people who inject drugs (PWID) since 2015, concentrated in the city centre. Scaling-up HIV testing has been a focus of the outbreak response. Our aim was to: 1) quantify and compare trends in HIV test uptake through a range of approaches and 2) evaluate changes in test uptake associated with the outbreak response.

### **Methods:**

Three approaches were used to measure HIV test uptake (last 12 months) in Glasgow: (1) self-report among PWID recruited in seven Needle Exchange Surveillance Initiative (NESI) bio-behavioural surveys from 2008-2019 (n=6,707); and linked laboratory HIV test records for people: (2) prescribed opioid agonist therapy (OAT) during 2010-2019 (n=13,069) and (3) who died from a drug-related death (DRD) during 2010-2019 (n=2,368). Multi-variate logistic regression was undertaken to examine test uptake over time.

### **Results:**

HIV test uptake increased from the pre (2008-14) to ongoing phase (2017-19) of the outbreak across all approaches but was found to be higher among participants surveyed in (1) NESI (27-58%) and the (2) OAT cohort (17-54%) compared to the (3) DRD cohort (10-37%). Factors associated with test uptake were NESI recruitment/OAT prescription/DRD ongoing outbreak relative to the pre-outbreak phase (NESI: aOR=3.58; 95%CI 3.03-4.23; OAT cohort: aOR=6.19, 95%CI 5.80-6.61; DRD cohort: aOR=2.79, 95%CI 1.97-3.96) and Glasgow city recruitment/residence (NESI: aOR=1.52, 95%CI 1.32-1.74; OAT cohort: aOR=1.32, 95%CI 1.28-1.36; DRD cohort: aOR=1.67, 95%CI: 1.31 to 2.12).

### **Conclusion:**

Evidence from multiple sources demonstrate that HIV test uptake increased since the onset of the outbreak reflecting efforts to scale-up testing among PWID, particularly in Glasgow city. Our findings also highlight that additional monitoring of populations at risk of HIV – beyond those engaged in bio-behavioural surveys and OAT programmes - is essential to identify gaps in testing and measure progress on strategies to eliminate HIV as a public health concern.

### **Disclosure of Interest Statement:**

SJ Hutchinson received Honoria from Gilead; all remaining authors have nothing to disclose.