

# To test or not to test: exploring why service users of a large e-sexual health service (e-SHS) don't return blood samples for sexually transmitted infection (STI) testing

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## 1 Background

E-SHS have expanded access to STI testing. Many involve home-sampling of capillary blood for blood-borne virus screening (BBVS). Sexual Health London (SHL) is a large e-SHS that serves residents of 30 London boroughs and has received >900,000 kit orders since its launch in 2018. SHL postal kits routinely include blood sampling components. We explore why our service users do not return their blood sample for testing.

## 3 Results

There were 65231 kit orders during the survey period and 19030 (29.2%) responded to the survey. 78.3% reported intention to return a blood sample, 11.0% stated they might do and would decide when the kit arrived. 10.7% of users reported no intention and cited the following reasons: perceived difficulty in the blood-sampling process (42.5%, 865/2036; already tested recently elsewhere (23.1%, 470/2036; didn't feel they were at risk (22.2%, 452/2036). Table 1.

Survey respondents were just as likely to return a kit than non-respondents: 14501/19030 (76.2%) vs 34205/46201 (74.0%) (OR 1.12 95% CI 1.08-1.17,  $p < 0.0001$ ) but more likely to return a kit inclusive of blood, than survey non-respondents: 12152/14501 (83.8%) vs 22146/34205 (64.7%) (OR 2.82 95% CI 2.68-2.96,  $p < 0.0001$ ). Blood returns from survey respondents who intended to return their blood were more likely to obtain a valid BBVS result, than blood returns from those without intention (OR 2.38 95% CI 1.90-2.97,  $P < 0.0001$ ). Failure to obtain a BBVS result is usually because of sample haemolysis or an insufficient volume returned.

Table 1. Survey and e-SHS outcomes for survey respondents

User's intention to return blood sample	Orders (%)	Blood returns / kit returns (%)	Achieved BBVS result from blood returns (%)	Chlamydia / Gonorrhoea Positive (%)	Syphilis or BBV reactive (%)
Yes	14897 (78.3)	10810/11498 (94.0)	9300 (86.0)	677 (5.6)	436 (4.4)
Maybe	2097 (11)	929/1487 (62.5)	716 (77.1)	88 (5.6)	26 (3.4)
No (any reason):	2036 (10.7)	413/1516 (27.2)	298 (72.2)	119 (7.4)	18 (5.5)
Recently tested	470 (2.5)	86/371 (23.2)	70 (81.4)		
Low perceived risk	452 (2.4)	74/336 (22.0)	61 (82.4)		
Perceived difficulty	865 (4.5)	191/629 (30.4)	124 (64.9)		
Decline/other reason	249 (1.3)	62/180 (34.4)	43 (69.4)		
Total	19030 (100%)	12152/14501 (83.8)	10314 (84.9)	884 (6.2)	480 (4.3)

## 4 Conclusion

A significant minority of SHL users were either ambivalent (11%) or never intended to (11%) return a BBVS blood sample yet 63% and 27% ultimately returned one. Providing blood-sampling equipment in all postal kits and/or exploring a user's intention/rationale around returning a sample may encourage users to test for BBVs. More effort is required to influence and support decision making by e-SHS users who are ambivalent or decline to test for BBVs. Examples that could be implemented and evaluated include: clearer educational messages about the benefits of testing; risk-assessment tools to correct those with mis-placed assumptions; interactive chat-box with a healthcare professional; enhance visual aids and display user journeys or testimonies about the self sampling process.

## 2 Methods

Between 03.11.20-01.12.20 all SHL service users ordering a kit were invited to complete an optional e-survey, enquiring about their intention to return a blood sample. We report the survey responses, kit/blood returns and whether a successful BBVS result was obtained from returned blood samples.



STI positivity was similar amongst users regardless of their intention to return a blood sample.