Preventx, the largest provider of public remote sexual health testing and treatment in Europe, enables such progress through their approach to the public health management of STIs, which integrates online channels and physical clinics. This engages more diverse populations, ensuring rapid and effective access to healthcare for all.

With over 15 years' experience, more than 5.5 million kits dispatched, and 15 million tests completed, Preventx holds the largest bank of remote testing data in the public health sphere and is now offering services in the US.

To find out more, contact Nick Malhomme nick.malhomme@preventx.com

# The science and innovation of remote sexual health testing

HealthInvestor Awards 2023 WINNER Diagnostics Provider of the Year HealthInvestor Awards 2023 WINNER Public/Private Partnership of the Year









## Preventx has been awarded 'Diagnostics Provider of the Year'

#### Judges said:

"Preventx's commitment to innovation in technology and whole pathway management using remote testing and case management is impressive. Its overall commitment to firsttime accuracy is underpinned by excellent outcome statistics."

"Its unique and holistic approach, underpinned by an adaptable technology platform, empowers people to access reliable and trusted remote sexual health services."

"It is using industry standard laboratory and diagnostic services, but has developed a user-centric way of improving access to diagnostics." HealthInvestor Awards 2023 WINNER Diagnostics Provider of the Year

## A letter from our CEO

Preventx has spent the past 15 years working with public healthcare officials in the fight for sexual health. We believe that remote testing gives people the choice to safely manage their sexual health from home, helping our public sector partners to prioritise in-person appointments for people who need them most. Our innovative tech platform continually evolves to meet the needs of our partners and service users.

We are excited to be opening a specialized lab in Cincinnati, Ohio, making our award-winning services available to U.S. public health departments to help control the rapidly increasing spread of sexually transmitted infections (STI) in their communities. In the face of decreased funding for STI prevention, rising STI rates and the complexities of the U.S. healthcare system, Preventx has unmatched public health experience providing services that combine the convenience and accessibility of digital with the reliability and expertise of in-person clinical care.

One of the strengths of online services is that they can be tailored and targeted to fit local population needs as well as available budgets. Our local partners are demonstrating true innovation, using digital methodologies to enhance and expand services where they are most needed, keeping local people at the very heart of service design.

I hope that sharing some of our learning from almost 15 million online tests across England will help to inform and inspire new ways that we can all work together to achieve the best clinical and experiential outcomes for everyone. Preventx is honored to work hand-in-hand with our US partners and local public health officials to develop solutions that are not only clinically robust, but easy-to-use.

We are excited to see what the future holds for sexual health testing. We look forward to working with you.

Ruth Poole

Ruth Poole Chief Executive Officer

## Making remote testing accessible for all

With US headquarters now established in Cincinnati, Ohio, Preventx provides full-service remote sexual health testing solutions that empower public health officials to implement reliable, trusted, remote sexual health services through an adaptable digital platform, efficient self-sampling, and in-house specialty diagnostic laboratory.

We understand the challenges you face and will work with you to identify a path forward for implementing a new testing solution that is tailored to your local needs and budget.



## **Built to empower** every body

For over 15 years, Preventx has supported public health officials and local authorities with innovative, technology-based solutions that make remote sexual testing accessible to all.

One's ability to "stop the spread" of sexually transmitted diseases (STIs) is greatest when you are able to reach those groups or areas where the prevalence of STIs is highest.

Our science and research play a crucial role in driving the insights and innovation that enable us to successfully reach and serve those individuals in high-risk, underserved, or under-resourced communities.

- Customisable triage and testing algorithm
- Comprehensive reporting capabilities
- Cloud-based secure clinical record system
- Unique SmartKit model for local collection



Tests carried out



Of users would recommend us to friends of family

## **Case study: The NHS** self-testing service for hepatitis C powered by Preventx

We are pleased to introduce a ground breaking service developed by Preventx in partnership with NHS England – the NHS Self-Testing Service for Hepatitis C. This innovative website empowers individuals at increased risk of hepatitis C to order convenient self-testing kits.

NHS England is on track to eliminate hepatitis C by 2030, but around two-thirds of individuals with the virus in the UK are unaware of their condition and so easy access to testing has never been more important.

#### **Accessible Testing Developed with Users**

This digital platform has been created by Preventx in collaboration with NHS England. As part of developing the service, Preventx partnered with the Hepatitis C Trust and commissioned a discovery and design phase for the portal. This co-designed and user-led approach ensured the design of a solution that would lead to more people getting tested; including a streamlined ordering process and the need for the web portal to mirror the look and feel of other national NHS websites.

#### **Innovative Solution** for Increased Testing

Using Preventx's cutting-edge technology, efficient self-sampling services, and state-of-the-art in-house laboratory, this new service empowers individuals to discreetly order reliable and convenient hepatitis C self-testing kits to any UK address. The scalable and resilient technology platform ensures seamless integration with partner systems, guaranteeing an exceptional user experience.

"As patient numbers get smaller and each remaining case becomes harder to find and cure, it's vital we offer easy-to-access self-test kits. This latest tool will therefore be critical to ensuring more people can receive the treatment they need, or peace of mind, at the earliest opportunity."

**Professor Sir Stephen Powis** National Medical Director at NHS



NIS

Get a free home test

for hepatitis C

s C is a virus that affects liver. It can be cured by takin

0.0.0





# **Our research**

## **Five year experience of Sexual Health London** (SHL): a large, regional, online postal sexually transmitted infection (STI) testing service

Sara Day,<sup>2</sup> Sophie Jones,<sup>2</sup> Emma Ostridge,<sup>3</sup> Charlotte Goward1 and Adrian Kelly<sup>4</sup>

<sup>1</sup> Preventx, <sup>2</sup>Chelsea and Westminster Hospitals NHS Foundation Trust, <sup>3</sup>Lloyds Pharmacy Online Doctor, <sup>4</sup>City of London Corporation

#### Background

Internet services now account for >40% STI tests performed in England. Sexual Health London (SHL) is one of the largest publicly funded online postal STI testing services in the world. It's available to London residents and commissioned by 30/33 local government authorities. SHL launched in January 2018, initially for asymptomatic STI screening, with bidirectional referral pathways to local sexual health clinics (clinics manage symptomatic or complex patients and treat/manage SHL service users who receive abnormal STI results). During the pandemic when clinic access was significantly impacted, SHL rapidly scaled up capacity, offered kits to symptomatic individuals, launched online contraception and provided a number of other adaptations. We aim to share our e-service learnings by describing SHL's clinical and safeguarding outcomes since its launch.

#### **Methods**

SHL is available to individuals aged 16years or older who self-sample and receive testing for chlamydia, gonorrhoea, HIV, syphilis and hepatitis. SHL is operated by Preventx Ltd (laboratory and technology provider), Chelsea and Westminster Hospital Foundation Trust (oversees clinical governance including safeguarding and management of abnormal results) and Lloyds Pharmacy Online Doctor (remote chlamydia treatment and contraception provider). Individuals register for an SHL account, complete a sexual health e-questionnaire and order a test kit or contraception.

#### Results

Between 08/01/2018 and 13/01/2023, SHL has received 2 million kit orders, of which 78% have been returned for testing. Service users are 56% female, 43% male and 1% trans/nonbinary or other gender minorities; 82% heterosexual, 17% gay/ bisexual; 75% aged between 20–34yrs; 42% are from racially minoritised groups/communities. 80% of service users ordering kits are asymptomatic. >70% current orders are from returning service users. 6% kit orders are from individuals taking PrEP.

#### Conclusion

By collaboratively commissioning a sexual healthcare model that involves online and physical clinics working cohesively within a regional network, substantial STI testing volumes were achieved and sustained access to STI testing/treatment was enabled during the pandemic. SHL demonstrated excellent clinical outcomes, patient satisfaction metrics and operational efficiencies within a resource stretched NHS. Adopting similar models of care in other regions nationally/internationally could help enhance access to sexual healthcare.

#### Table 1. Key performance indicators, clinical and safeguarding outcomes and service user evaluation of SHL

Test positivity		Partner notification for chlamydia	
Chlamydia	5.3%	No of contacts per index case treated	0.9
Gonorrhoea	2.5%	remotely/attend a service <4wks	
Syphilis	4.5%	% of contactable contacts treated remotely or attend service <4wks	4%
HIV	0.6%		
Hepatitis B	1.6%	Safeguarding	
Hepatitis C	0.3%	Service user disclosing 1. domestic abuse 1.	7%
Linkage to clinic for care/treatment after positive SHL results		Under 18s triggering safeguarding 25 concern and require an assessment	5%
HIV new diagnoses	100%	Under 18s who had a safeguarding	
Hepatitis B new diagnoses	100%	assessment conducted after 85 triggering a safeguarding concern	5%
Hepatitis C new diagnoses	100%	Onward referrals (ea social services)	9%
All abnormal results	99%	required from all safeguarding	
Service user uptake for remote chlamydia treatment (vs clinic)	91%	assessments performed	
Chlamydia remote treatment received by user within 2 days	99%	Contraception (Launched Sept 2020)	
		Total emergency hormonal 316	98
Results notification to service user		contraceptive prescriptions	
Negative results received within 2 days	98%	Total routine hormonal contraceptive 272 prescriptions	26
Reactive results received within 3 days	99.8%	Home delivered vs Pharmacy569collected contraception44	% / 4%

Test positivity		Partner notification for chlamydia
Chlamydia	5.3%	No of contacts per index case treated 0.9
Gonorrhoea	2.5%	remotely/attend a service <4Wks
Syphilis	4.5%	% of contactable contacts treated remotely or attend service <4wks 74%
HIV	0.6%	
Hepatitis B	1.6%	Safeguarding
Hepatitis C	0.3%	Service user disclosing 1.7% domestic abuse
Linkage to clinic for care/treatment after positive SHL results		Under 18s triggering safeguarding 25% concern and require an assessment
HIV new diagnoses	100%	Under 18s who had a safeguarding
Hepatitis B new diagnoses	100%	assessment conducted after 85% triggering a safeguarding concern
Hepatitis C new diagnoses	100%	Onward referrals (eq social services)
All abnormal results	99%	required from all safeguarding 9%
Service user uptake for remote chlamydia treatment (vs clinic)	91%	assessments performed
Chlamydia remote treatment received by user within 2 days	99%	Contraception (Launched Sept 2020)
		Total emergency hormonal 31698
Results notification to service user		contraceptive prescriptions
Negative results received within 2 days	98%	Total routine hormonal contraceptive 27226 prescriptions
Reactive results received within 3 days	99.8%	Home delivered vs Pharmacy56% /collected contraception44%

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norrhoea	2.5%	remotely/attend a service <4wks
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/	0.6%	
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patitis C	0.3%	Service user disclosing 1.7% domestic abuse
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sults notification to service user		contraceptive prescriptions
gative results received thin 2 days	98%	Total routine hormonal contraceptive 27226 prescriptions
active results received thin 3 days	99.8%	Home delivered vs Pharmacy56% /collected contraception44%

Patient experience/e	evaluation
----------------------	------------

Service user recommends SHL to friends/family if appropriate	98.
Service user happy or very happy with the service	98





- .5%
- 9%

# Online testing over samples population groups with the greatest STI risk

Lesley Navaratne,<sup>2</sup> Mark Clune,<sup>1</sup> John White,<sup>1</sup> Anatole Menon-Johansson<sup>1</sup> and Efejiro Ashano<sup>1</sup> <sup>1</sup>Preventx, <sup>2</sup>Maidstone and Tunbridge Wells NHS Trust

#### Background

## Methods

Online postal self-sampling services provide home sampling kits for Chlamydia, Gonorrhoea, Trichomonas, HIV, Syphilis, Hepatitis B & C tests and they have been shown to improve access to testing. In the UK, Sexually Transmitted Infections (STIs) are disproportionally high among young people, Black and Minority Ethnic Groups, Men who have Sex with Men (MSM) and communities of relative poverty; however, it is not known whether these 'at risk' groups engage with online services. We therefore investigated how the demographics of online users compared to the local population.

The demographics of clients who completed online STI orders between April 4th, 2021 and March 21, 2022, were obtained from the online postal selfsampling service serving a county in Southeast England with a population of 1,589,100 in 2020. The proportion of online clients by each demographic were compared with the proportions of the county provided by the UK Office of National Statistics. The Index of Multiple Deprivation (IMD) is an aggregate score of seven domains that include income, employment, education, health, crime, barriers to housing & services and the living environment. IMD is divided into deciles, with decile 1 representing those living in highest levels of deprivation and decile 10 those living with least deprivation.

#### Results

All the results, summarised in tables 1 to 3, show the number of test orders by demographic category, their proportion, the known demographic proportion for the county and the difference. Online testing clients were more likely to be younger, Black African, and living in areas with the lowest deciles of deprivation (most deprived). Men were significantly under sampled; however, of the men who tested, 21% were MSM.

#### Conclusion

In this analysis of service users of an online postal selfsampling service for STI testing we have demonstrated an overrepresentation by those very groups with the greatest STI risk. Additional work is required to repeat this analysis across other counties and metropolitan areas in England.

Age Groups	Number of Orders	Proportion of Orders	Proportion in Population (all ages)	Delta
16-17*	1261	2.6%	2.6%	0.0%
18-21	10370	21.5%	5.8%	15.8%
22-24	8988	18.7%	3.6%	15.1%
25-34	17440	36.2%	14.6%	21.6%
35-44	6581	13.7%	15.2%	-1.5%
44-54	2555	5.3%	16.1%	-10.8%
55+	946	2.0%	42.1%	-40.2%
Grand Total	48141			

IMD Decile	Number of Orders	Proportion of Orders	Proportion in Population (all ages)	Delta
1	3593	7.5%	5.2%	2.3%
2	5130	10.7%	7.6%	3.1%
3	4648	9.7%	7.1%	2.6%
4	5084	10.6%	11.1%	-0.6%
5	6943	14.4%	13.8%	0.7%
6	5500	11.4%	12.7%	-1.3%
7	5991	12.4%	15.1%	-2.6%
8	3867	8.0%	10.2%	-2.2%
9	3734	7.8%	8.3%	-0.6%
10	3595	7.5%	9.0%	-1.5%
Unknown	56			
Grand Total	48141			

Ethnicity	Number of Orders	Proportion of Orders	Proportion in Population (all ages)	Delta
African	2477	5.1%	0.8%	4.3%
Bangladeshi	53	0.1%	0.2%	-0.1%
Caribbean	660	1.4%	0.2%	1.2%
Chinese	123	0.3%	0.4%	-0.1%
Indian	392	0.8%	1.2%	-0.4%
Latin American	88	0.2%	0.0%	0.2%
Not Stated	48	0.1%	0.0%	0.1%
Other Asian Background	513	1.1%	1.2%	-0.1%
Other Black Background	139	0.3%	0.1%	0.2%
Other Ethnic Group	271	0.6%	0.5%	0.1%
Other Mixed Background	492	1.0%	0.4%	0.6%
Other White Background	2268	4.7%	3.9%	0.8%
Pakistani	69	0.1%	0.2%	-0.1%
White and Asian	376	0.8%	0.5%	0.3%
White and Black African	324	0.7%	0.2%	0.5%
White and Black Caribbean	754	1.6%	0.4%	1.2%
White British	38829	80.7%	89.1%	-8.4%
White Irish	265	0.6%	0.7%	-0.1%
Grand Total	48141			

Sex	Number of Orders	Proportion of Orders	Proportion in Population (all ages)	Delta
Female	31505	65.4%	50.9%	14.5%
Male	16311	33.9%	49.1%	-15.2%
Non Binary	151	0.3%	0.0%	0.3%
Other	88	0.2%	0.0%	0.2%
Trans	86	0.2%	0.0%	0.2%
Grand Total	48141			

## An analysis of the demography of users who choose chlamydia treatment at a pharmacy rather than have it posted to them after a triage through an online service

Sara Day,<sup>2</sup> Sophie Jones,<sup>2</sup> Emma Ostridge,<sup>3</sup> Efejiro Ashano' and Vanessa Apea' <sup>1</sup>Preventx, <sup>2</sup>Chelsea and Westminster Hospitals NHS Foundation Trust, <sup>3</sup>Lloyds Pharmacy Online Doctor

#### Background

Following triage, patients diagnosed with chlamydia (CT) via an STI screening e-service, collaboratively funded by 30/33 London local authorities, may be offered remote management with an option to receive treatment via post or via face-to-face dispensing at a community pharmacy. Exploring the uptake and preferences of remote CT treatment provides important insight for tailoring services and mitigating inequities. We describe the cohort of patients using a London e-service and opting for remote CT treatment in 2022.

#### Methods

We conducted a retrospective analysis of those who were diagnosed with CT and chose remote treatment between Q1–Q4 2022 and compared the choice of treatment access (postal versus pharmacy), analysing by age, ethnicity and indices of multiple deprivation (IMD).

#### Results

Of the 19468 who opted for remote CT treatment, 14360 (73.8%) selected postal treatment. Users under 25 were 7% more likely (24.4% versus 31.6%) to opt for postal treatment than those over 25. As users aged, the probability of pharmacy collection increased, from 24.9% (980/3934) (ages 18-21) to 40.09% (89/222) (ages 55+). 42.7% (8327/19380) of those receiving remote treatment were from a racially minoritised background (RMB), with 74.3% (6190/8327) opting for postal treatment. Those of Bangladeshi background were more likely opt more community pharmacy than their white counterparts (40.4% versus 26.9%). Bangladeshi users were also 15% more likely than those from other RMBs to use the pharmacy (40.4% versus 25.07%). Users living in the bottom two IMDs were 3% less likely (27.25% versus 24.2%) to opt for pharmacy collection than

those in higher deciles.

#### Discussion

Postal treatment was the preferred option by those under 25 and those from RMBs, both of whom are key populations in the diagnosis and prevention of sexually transmitted infections. This data must be supplemented with mapping of pharmacy locations and qualitative insight to gain a deeper understanding of patient decision making.

## Number of users who chose to receive chlamydia treatment by post versus those who chose to collect them across age groups



Chinese
White and Black Caribbean
Other Asian Background
White and Asian
Other Ethnic Group
White Irish
Latin American
Caribbean
Other White Background
Pakistani
Other Mixed Background
Indian
White and Black African
Other Black Background
African
Bangladeshi
White British
Grand Total

Ethnicity





Post	Collected	% Delta
291	56	0.9%
613	196	0.4%
361	113	0.3%
183	54	0.2%
355	116	0.2%
292	96	0.2%
194	63	0.1%
1697	599	0.1%
2576	912	0.0%
76	25	0.0%
440	156	0.0%
149	55	0.0%
234	90	-0.1%
125	57	-0.2%
1410	515	-0.3%
62	42	-0.4%
5245	1932	-1.4%
14303	5077	

# Delivering a world class online postal self-sampling service at scale for HIV and STIs

The user follows a bespoke online

John White,' Vanessa Apea,' Ryan Kinsella' and Kate Ebbutt' ' Preventx

#### Background

## Issue

Increasing demand and limited resources, alongside diagnostic developments, have been key drivers for the expansion of online sexual health services within the UK. Remote selfsampling with centralised lab testing is an important, accessible and cost-effective way to carry out wide-spread STI and HIV testing; critical in reducing the burden of infection and achieving zero HIV transmissions by 2030. Since 2008, a UK-based commercial organisation has partnered with the National Health Service to empower people to access reliable, trusted online testing services. It runs the largest publicly-funded online testing programme, globally. We describe their differentiated model of delivery and key outcomes.

consultation that recommends the most appropriate screen/ tests, and personalised selfsampling kits are posted (vaginal, rectal, urine, pharyngeal, capillary blood) via in-house packing and dispatchment teams. Samples returned are processed through an in-house ISO 15189 accredited medical laboratory, embedded as part of an innovative, integrated, end-toend technology platform. Testing via the Roche Cobas 8800® and e801 systems includes HIV (5th generation assay), Syphilis (antibody and quantitative RPR), +/- hepatitis B (surface antigen and core antibody) and hepatitis C (antibody) performed on a single 400-600µL sample, as well as Chlamydia trachomatis. Neisseria gonorrhoeae, Trichomonas vaginalis and Mycoplasma genitalium assays; plus manual testing. In-house management enables heightened governance and quality assurance. Results are automated and users are notified by text, with clinical teams handling reactive/positive results. Individuals with reactive test results are signposted to a local clinic for management with appropriate safeguarding procedures in place.

#### Results

In 2022, the laboratory tested 1,694,866 samples, carrying out 3,794,935 individual tests. On average, 6,500 tests per day are performed (3,500 serology tests, 3000 molecular tests). In 2022, 97.54% of blood samples passed the quality review check after transit to the laboratory. 99.8% positive results were reported within 72h of sample receipt and 97.8% of negative results were reported within 48h of sample receipt.

#### Lessons learned

A UK organisation has developed a vertically-integrated online sexual health service, which extends from an innovative technology platform and sampling kit logistics through to in-house laboratory. This is a world-class, scalable, flexible solution which can be implemented globally.

## Increasing rates of gonorrhoea among services users tested through online STI testing services across England in 2022

Sara Day<sup>2</sup>, Sophie Jones<sup>2</sup>, Emma Ostridge<sup>3</sup>, Efejiro Ashano<sup>1</sup>, Vanessa Apea<sup>1</sup>, <sup>1</sup>Preventx, <sup>2</sup>Chelsea and Westminster Hospitals NHS Foundation Trust, <sup>3</sup>Lloyds Pharmacy Online Doctor

#### Background

The UKHSA recently announced a 21% increase in gonorrhoea cases in England in 2022, despite stable rates of chlamydia. We queried the 2022 GC testing data from pan-UK online postal self-sampling services (OPSS) to determine if GC rates had also changed among those testing online.

#### Methods

We conducted a retrospective analysis of monthly GC testing data obtained from January 2019 to December 2022 and compared positivity rates over time, analysing by age, gender, ethnicity, sexual identity, deprivation decile and symptom status. The cohort included samples from OPSS across 70 NHS services in England (n=2238505 tests; 47% from London). All diagnoses were made by Neisseria gonorrhoeae CT/NG PCR (Roche cobas®), confirmed with the Diagenode S-Diagono PCR assay at the Preventx laboratory in Sheffield, England.

#### Results

There was an overall increase in GC positivity rates of 1.09% between 2019 and 2022. In April 2020, a significant increase in positivity was detected (0.9%), with a significantly larger increase of 1.09% occurring between July 2021 and November 2022 (p = 0.006566). The 2021–22 GC positivity rates and trend are detailed in Figure 1.

Increased rates of GC were associated with age 18–21 years, male gender, Asian and Latin American ethnicities, gay/bisexual MSM, higher deprivation deciles and asymptomatic status.

#### Figure 1: GC positivity rates and trend from July 2021–December 2022



Preventx.





Preventx.



#### Discussion

The recent increase in English GC diagnoses in 2022 is reflected in this large OPSS dataset showing an increased proportion of GCpositive tests from service users. Whilst OPSS use has increased since pre-COVID, these data demonstrate a 55% increase in positivity rates for GC testing across this period (1.28% in 2019 vs. 1.99% in 2022). Health promotion and prevention interventions for GC should include people of Asian and Latin American ethnicities in the UK. These data also demonstrate that early trends in STI epidemiology can be observed from analysis of monthly data obtained by OPSS.

Chelsea and Westminster Hospital

## **Are Online Postal Self Sampling Services** contributing to a widening of sexual health inequalities through a digital divide in East Sussex, England?

Mark Clune,<sup>1</sup> Tony Proom,<sup>2</sup> Jane Hosking,<sup>1</sup> Steve Bonner<sup>3</sup> and John White<sup>1</sup> <sup>1</sup> Preventx, <sup>2</sup>East Sussex County Council, <sup>3</sup>East Sussex Healthcare Trust

#### Background

Online Postal Self Sampling (OPSS) services have become the default asymptomatic STI testing option in many areas of England. This has led to concerns that OPSS may only be accessible by users who are not digitally excluded, and that a 'digital divide' could be contributing to a widening of sexual health inequalities. OPSS services collect ethnicity and demographic data that allows Index of Multiple Deprivation Decile (IMDD) to be identified.

#### Methods

We conducted a retrospective analysis of all 15,174 OPSS orders and 7526 in-clinic testing appointments between November 1st 2021 and October 31st 2022 in East Sussex, England.

We compared the number of OPSS orders and clinic appointments for testing by ethnicity and IMDD\*.

\*IMDD is used to assess relative deprivation: lower deciles (1) have the poorest health outcomes and higher deciles (10) have better health outcomes.

NHS

#### **Results**

Twice as many individuals used OPSS testing compared to in-clinic testing appointments (n=15174 vs. 7526).

For IMDD, the ratio of OPSS:clinic testing varied from 1.69 in the most deprived areas to 3.09 in the least deprived areas.

For ethnicity, 87% of the total population identified as White British, among whom the OPSS: clinic testing ratio was 2.16. For those ethnicities with higher UK STI prevalence, OPSS testing rates were 2.1 to 5.2 times higher than clinic testing episodes.

#### Discussion

Higher numbers of OPSS testing episodes occurred across all IMDD deciles as well as most higher STI risk ethnicities compared to in-clinic testing. OPSS in this region is declined if significant STI symptoms are present or safeguarding triggers disclosed in those aged <18 years. As higher STI prevalence is seen in lower IMDD and Black African/Caribbean/ Mixed ethnicities this might underestimate intended OPSS use among those risk groups as they would be diverted to clinic for assessment. These data suggest that OPSS testing is accessed by those across all deprivation deciles and among ethnicities with the poorest sexual health outcomes and we are unable to discern clear evidence of a digital divide in this population. OPSS could contribute to the reduction in sexual health inequalities but more research is needed in other populations to explore if these results are replicated.

#### Figure 1: Number of people who tested online and in-clinic for STIs by IMD decile in East Sussex between 1st November 2021 and 31st October 2022





17

## **Rates of Trichomonas vaginalis in** asymptomatic and symptomatic females tested via an online STI testing service in south-east England in 2022

Lesley Navaratne,<sup>2</sup> Mark Clune<sup>1</sup> and John White<sup>1</sup> <sup>1</sup>Preventx, <sup>2</sup>Maidstone and Tunbridge Wells NHS Trust

#### Background

#### Online postal self-sampling services (OPSS) enable female service users to test for gonorrhoea, chlamydia and Trichomonas vaginalis (TV) infection with self-collected vaginal swab samples. During the COVID period, our use of TV testing in this setting detected a significant reservoir of TV among both symptomatic and asymptomatic women, associated with racially minoritised communities (RMCs) and increased deprivation. We queried our 2022 TV testing data to determine if TV rates had reduced in response to testing and treatment in these populations.

#### Methods

In addition to GC/CT testing, targeted TV testing is offered routinely to women from RMCs as well as those reporting vaginal discharge symptoms during online triage for our OPSS in south-east England. TV testing was done using the Cobas TV PCR assay (Roche). We conducted a retrospective analysis of TV testing data obtained from Q1–Q3 2022 and compared positivity rates with those from 2021, analysing by ethnicity and symptom status.

#### Results

The overall TV positivity rate observed for 2022 was 2.7% (133/4848), a slight increase from 2.4% seen in 2021 (151/6391), but not statistically significant (p=0.2015).

The TV positivity rate among asymptomatic women from RMCs was 1.9% (31/1642), also up from 1.6% in 2021 (31/1946), but not significantly (p=0.4994). TV rates among women with vaginal discharge also increased to 3.2% (102/3206) in 2022, up from 2.9% (117/3984) in 2021 (p=0.5483).

#### Discussion

TV rates in our OPSS population in 2022 remained high despite implementation of TV testing over 2 years ago. TV positivity is higher than GC, syphilis and HIV in this population. Ongoing targeted testing, treatment and partner notification for TV via OPSS is warranted.

## TV positivity rate among all women with



![](_page_9_Figure_15.jpeg)

Preventx

![](_page_9_Figure_17.jpeg)

## Testing 16739 samples for Trichomonas vaginalis from ten separate online STI testing services across different regions of England

Mark Clune,<sup>1</sup> Lesley Navaratne,<sup>2</sup> Rachel Marsden,<sup>2</sup> Tony Proom,<sup>3</sup> Susan Whalen,<sup>4</sup> Emma Twydall,<sup>5</sup> Andrew De Burgh-Thomas,<sup>5</sup> Jane Scott,<sup>6</sup> Paula Hill,<sup>6</sup> Naomi Wareham,<sup>6</sup> Claudia Krause,<sup>7</sup> June Agius,<sup>8</sup> Joelle Turner,<sup>9</sup> Sharon Nettleford<sup>10</sup> and John White<sup>1</sup>

<sup>1</sup>Preventx, <sup>2</sup>Maidstone And Tunbridge Wells NHS Trust, <sup>3</sup>East Sussex County Council, <sup>4</sup>Sandwell Sexual Health, <sup>5</sup>Gloucestershire Health and Care NHS Foundation Trust, <sup>6</sup>Somerset-wide Integrated Sexual Health Service, <sup>7</sup>ICaSH Cambridgeshire Community Services NHS Trust, <sup>8</sup>City Health Care Partnership CIC, <sup>9</sup>Luton And Dunstable University Hospital NHS Foundation Trust, <sup>10</sup>Walsall Healthcare NHS Trust

#### Background

The online symptomatic triage within our pan-UK online postal self-sampling services (OPSS) has enabled service users with self-identified symptoms to be tested for Trichomonas vaginalis (TV) according to a tailored local protocol. TV testing in asymptomatic service users is also available according to ethnicity and deprivation parameters, guided by local prevalence.

#### **Methods**

Using the Cobas TV PCR assay (Roche), TV testing has been performed in ten different English Local Authority areas through their OPSS (Hull, East Riding of Yorkshire, Maidstone and Tunbridge Wells, East Sussex, Gloucestershire, Walsall, Sandwell, Somerset, iCaSH and Luton).

#### Results

To date we have analysed 16739 samples, mostly among females (n=16523; 98.7%). The overall TV positivity rate (TV+) across all services was 3.5% (n=590), with 4.5% TV+ (n=489) observed in females (of any ethnicity) with vaginal discharge, 1.1% TV+ (n=15) in asymptomatic White British females and 2.0% TV+ (n=86) for asymptomatic females from racially minoritised communities.

The highest positivity was observed among those of any Caribbean ethnicity (5.9% TV+; n=127). There was a linear association with deprivation, ranging from 7.0% TV+ (n=132) among those from IMD decile 1 (most deprived) to 1.5% TV+ (n=14) among those from IMD decile 10 (least deprived). The age range with the highest positivity was those females aged 45–54 years (5.2% TV+; n=32).

Only 216 (1.3%) of the TV tests were done by men/nonbinary/ trans/other service users (overall TV+ 1.9%).

#### Discussion

The consistently high TV positivity rates observed among females across ten different regions of England suggests that TV prevalence is underestimated and warrants more widespread use of TV PCR testing, including via OPSS. Further testing and analysis are needed in male populations to determine more accurate prevalence estimates and explore associations with TV positivity.

## I V INTECTIO

![](_page_10_Figure_15.jpeg)

#### TV Infection Rate by Age group

![](_page_10_Figure_17.jpeg)

**Preventx**.

![](_page_10_Figure_19.jpeg)

![](_page_10_Figure_20.jpeg)

#### TV Infection Rate by IMDD

#### **TV Infection Rates by Ethnicity**

## Do transgender populations use online postal self-sampling services for HIV/STI testing in the UK?

Kate Ebbutt<sup>1</sup>, Efejiro Ashano<sup>1</sup> and Vanessa Apea<sup>1</sup> <sup>1</sup>Preventx

#### Background

There is limited research on sexually transmitted infections (STIs) among transgender populations in the UK, despite evidence of STIs and HIV burden globally. One reason could be the significant barriers trans people face when trying to access appropriate healthcare. Online postal self-sampling services (OPSS) may help address barriers to physical sexual health clinics. We sought to quantify and characterise the transgender people using a pan UK OPSS.

#### **Methods**

We conducted a retrospective analysis of individual users who self-identified as trans/ trans male/trans female across a pan UK OPSS from 11<sup>th</sup> November 2015 to 2<sup>nd</sup> February 2023. We stratified data by age, gender and ethnicity.

#### Results

We identified 6170 individual trans OPSS users who had completed at least one test order during the time period. Gender identities captured were trans (n=2427; 36.2%), trans female (n=2219; 33.1%) and trans male (n=2064; 30.8%), with the majority aged 16–24 (60.2%). 57% were of White British ethnicity and the remaining 43% comprised a diverse spread from racially minoritised communities (RMC). The data demonstrated increasing usage year by year with total orders and return rates peaking to 1852 and 71.8%, respectively in 2021 from 11 and 39.5%, respectively in 2015. Trans females were more likely to test positive for an STI (12.3%), with the rate being significantly higher for gonorrhoea. Those from

RMC were more likely to test

Latin American and Chinese

populations.

positive for an STI, particularly

#### Discussion

This is one of the largest cohorts of trans people using OPSS. Based on the 2021 census, 6.4% of trans people in the UK (6170/96000) utilise this OPSS. These data demonstrate OPSS as an important route of access for transpeople that is contributing to removing barriers to sexual health care. Further analysis of STI positivity rates among trans users will help identify those at increased risk to best inform health promotion and prevention interventions.

#### Yearly number of Trans-people using online postal self-sampling services between 2015 and 2021

![](_page_11_Figure_12.jpeg)

## Ethnicity of Trans-people using online postal self-sampling services

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