Syphilis and Gonorrhoea update

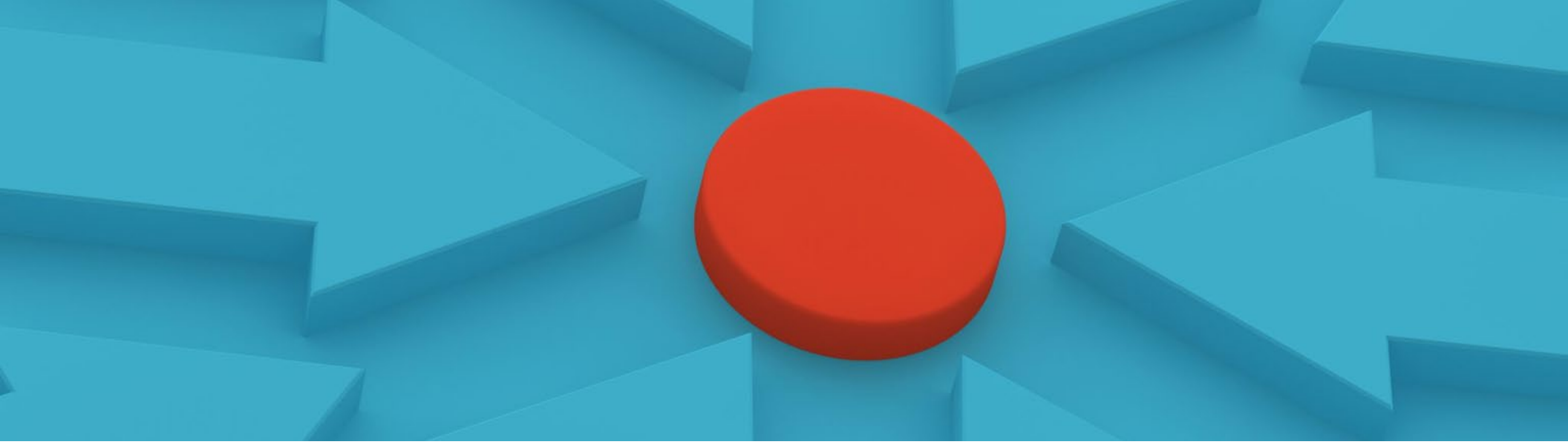
Clinical Sexual Health Network Event

2nd November 2023

Helen Wiggins

Consultant, Sexual Health and HIV

MPFT



Objectives

1. To understand the local and national picture of both Gonorrhoea and Syphilis infections.
2. To understand the basics of Gonorrhoea and Syphilis
3. To understand what action can be taken to address rising levels of Gonorrhoea and Syphilis infections

Press release

UKHSA urges those with new or multiple sexual partners to get tested after gonorrhoea cases resurge

Gonorrhoea cases have resurged in England since the easing of coronavirus (COVID-19) restrictions in 2021.

From: UK Health Security Agency
Published 16 March 2023

Syphilis cases at highest level for 75 years in England last year

Figures also show gonorrhoea diagnoses rose by 50% to 82,600 – the highest figure since records began in 1918

Patrick Butler, Michael Goodier *and* Carmen Aguilar García

Tue 6 Jun 2023 18.21 BST

Soaring congenital syphilis rates in US risk lives of thousands of babies

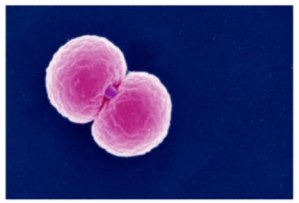
government/news/gonorrhoea-and-syphilis-at-record-levels-in-2022

Press release

Gonorrhoea and syphilis at record levels in 2022

Last year, gonorrhoea diagnoses were highest on record and syphilis diagnoses were highest since 1948.

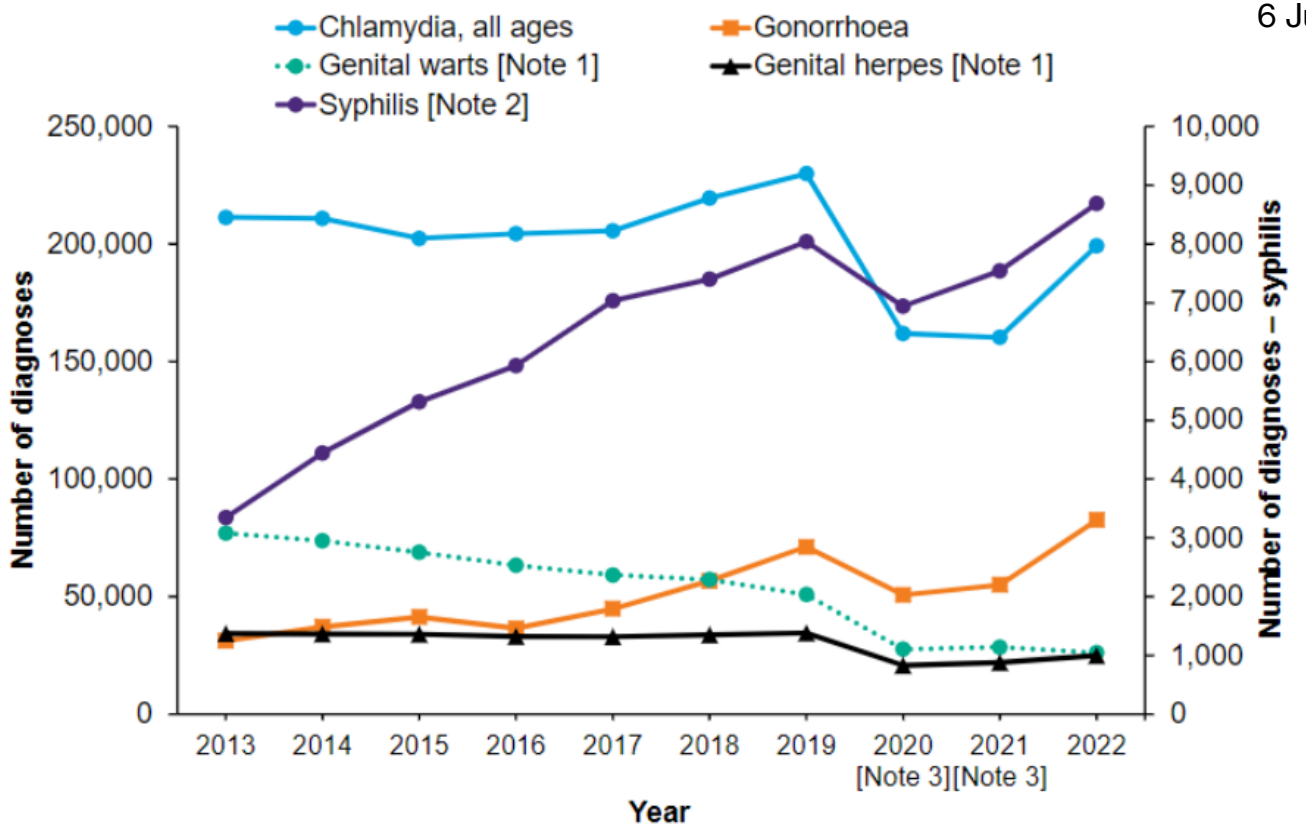
From: UK Health Security Agency
Published 6 June 2023
Last updated 6 June 2023 — See all updates



ata from the UK Health Security Agency (UKHSA) published today

Number of new diagnoses of chlamydia, gonorrhoea, genital warts, genital herpes and syphilis

Taken from UKHSA presentations UK Health Security Agency: 2022 STI slide set (version 1.0, published 6 June 2023



Different scales are used on the primary and secondary y-axes.

Sexually transmitted infections and screening for chlamydia in England: 2022 report

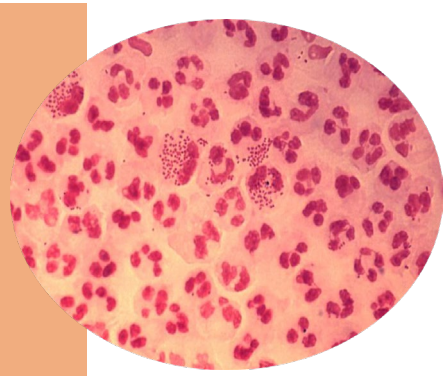
https://www.gov.uk/government/statistics/sexually-transmitted-infections-stis-annual-data-tables/sexually-transmitted-infections-and-screening-for-chlamydia-in-england-2022-report

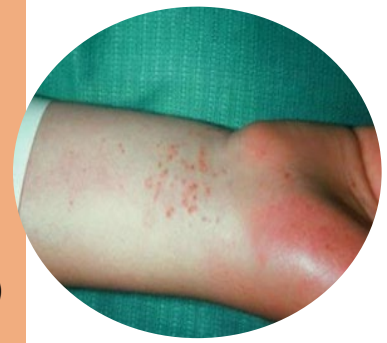
Gonorrhoea

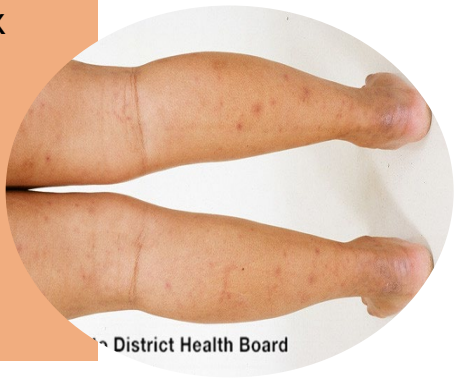
- Gram negative, intracellular diplococci
- Develops AMR easily
- Variable clinical picture
  - Asymptomatic
  - Local infection
    - Urethritis, cervicitis, proctitis
    - Extragenital sites- throat, eye
  - Complicated infections
    - Transluminal spread- PID, EO, prostatitis
    - Systemic spread- Disseminated infections.
      - Pustular rash, microabscesses, papules,
      - Tenosynovitis
      - Arthritis- reactive, septic
      - Arthralgia
      - Sepsis

Management

- Test all exposed sites (including relevant extragenital sites)
  - NAAT test
  - Culture for sensitivities
    - although may commenced rx whilst result pending
- First line treatment for uncomplicated infections
  - 1g Ceftriaxone IM
  - Ciprofloxacin 500mg PO stat if sensitivities known
  - Partner notification (test +/- treat depending on WP)
    - 2/52 for symptomatic penile infection
    - 3/12 if other sites or asymptomatic
  - Abstinence until 1/52 post patient and partner rx
  - Test of cure required
    - (after at 2/52)
- Ceftriaxone treatment failures should be reported to the UKHSA

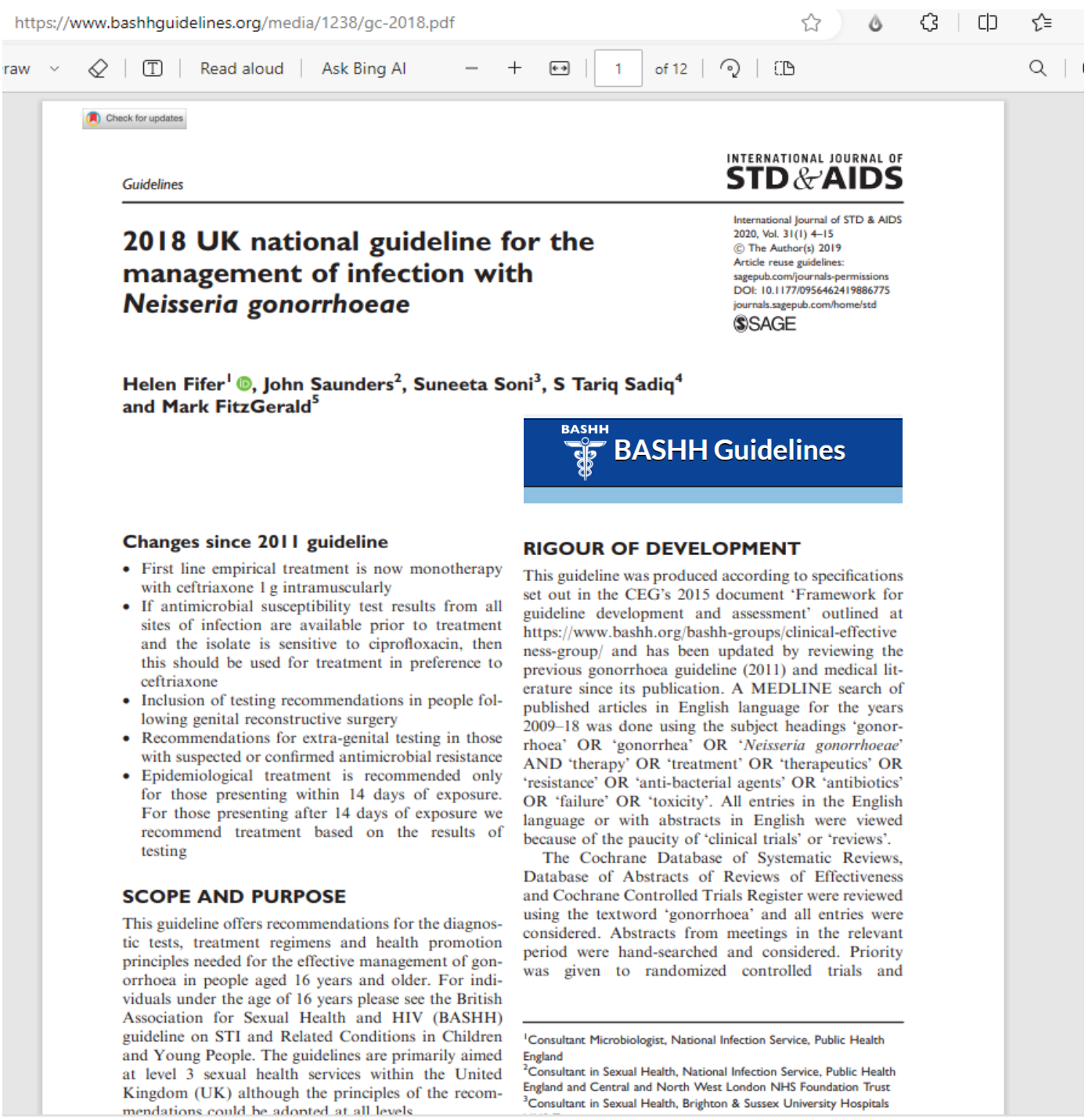






In 2022 there was an increase in Gonorrhoea diagnosed by 50.3% compared to 2021 (and 16.1% compared to 2019 (prior to the COVID-19 pandemic)

This represented the highest number of diagnoses in any one year since records began in 1918



https://www.bashhguidelines.org/media/1238/gc-2018.pdf

raw | Read aloud | Ask Bing AI | 1 of 12

Check for updates

Guidelines

INTERNATIONAL JOURNAL OF STD & AIDS

2018 UK national guideline for the management of infection with *Neisseria gonorrhoeae*

International Journal of STD & AIDS
2020, Vol. 31(1) 4–15
© The Author(s) 2019
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/0956462419886775
journals.sagepub.com/home/std
SAGE

Helen Fifer[1], John Saunders[2], Suneeta Soni[3], S Tariq Sadiq[4] and Mark FitzGerald[5]

BASHH Guidelines

Changes since 2011 guideline

- First line empirical treatment is now monotherapy with ceftriaxone 1 g intramuscularly
- If antimicrobial susceptibility test results from all sites of infection are available prior to treatment and the isolate is sensitive to ciprofloxacin, then this should be used for treatment in preference to ceftriaxone
- Inclusion of testing recommendations in people following genital reconstructive surgery
- Recommendations for extra-genital testing in those with suspected or confirmed antimicrobial resistance
- Epidemiological treatment is recommended only for those presenting within 14 days of exposure. For those presenting after 14 days of exposure we recommend treatment based on the results of testing

SCOPE AND PURPOSE

This guideline offers recommendations for the diagnostic tests, treatment regimens and health promotion principles needed for the effective management of gonorrhoea in people aged 16 years and older. For individuals under the age of 16 years please see the British Association for Sexual Health and HIV (BASHH) guideline on STI and Related Conditions in Children and Young People. The guidelines are primarily aimed at level 3 sexual health services within the United Kingdom (UK) although the principles of the recommendations could be adopted at all levels

RIGOUR OF DEVELOPMENT

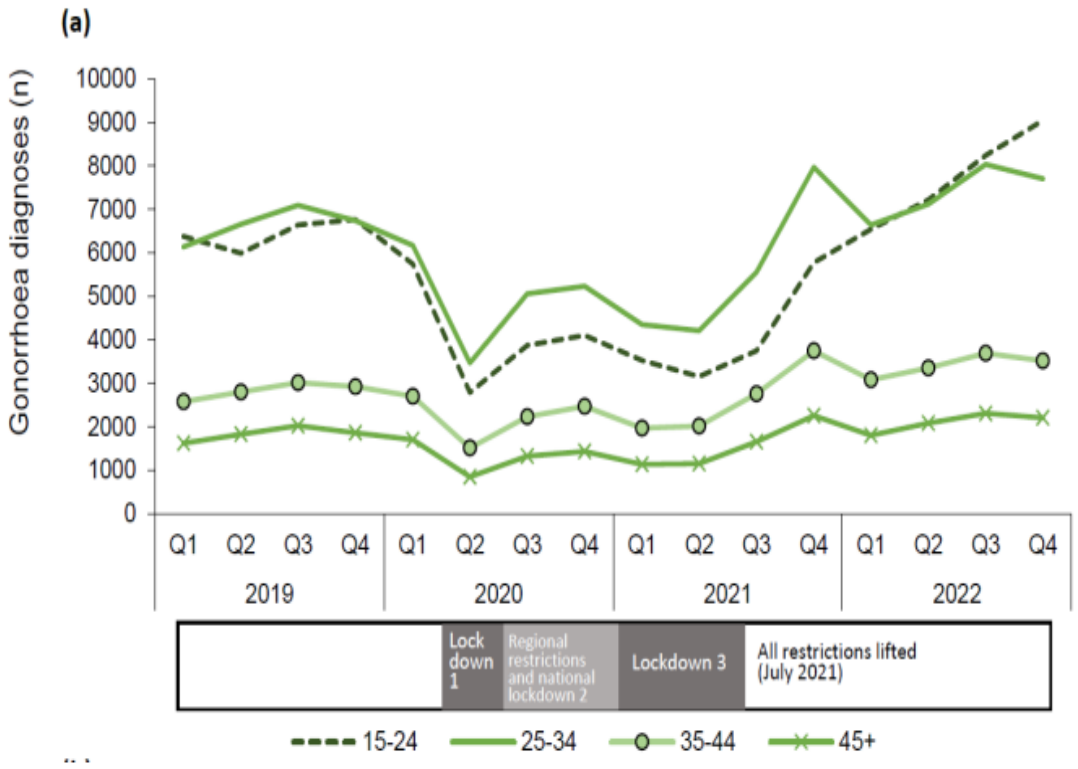
This guideline was produced according to specifications set out in the CEG's 2015 document 'Framework for guideline development and assessment' outlined at https://www.bashh.org/bashh-groups/clinical-effectiveness-group/ and has been updated by reviewing the previous gonorrhoea guideline (2011) and medical literature since its publication. A MEDLINE search of published articles in English language for the years 2009–18 was done using the subject headings 'gonorrhoea' OR 'gonorrhea' OR '*Neisseria gonorrhoeae*' AND 'therapy' OR 'treatment' OR 'therapeutics' OR 'resistance' OR 'anti-bacterial agents' OR 'antibiotics' OR 'failure' OR 'toxicity'. All entries in the English language or with abstracts in English were viewed because of the paucity of 'clinical trials' or 'reviews'.

The Cochrane Database of Systematic Reviews, Database of Abstracts of Reviews of Effectiveness and Cochrane Controlled Trials Register were reviewed using the textword 'gonorrhoea' and all entries were considered. Abstracts from meetings in the relevant period were hand-searched and considered. Priority was given to randomized controlled trials and

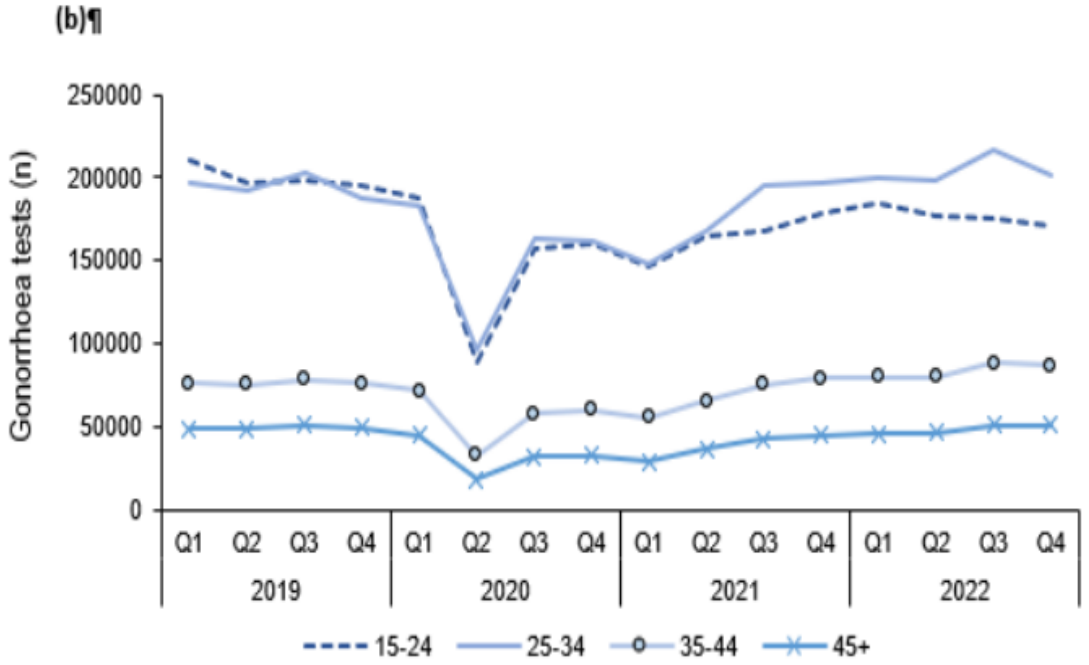
[1]Consultant Microbiologist, National Infection Service, Public Health England
[2]Consultant in Sexual Health, National Infection Service, Public Health England and Central and North West London NHS Foundation Trust
[3]Consultant in Sexual Health, Brighton & Sussex University Hospitals

Increases most marked in younger age groups

Diagnoses

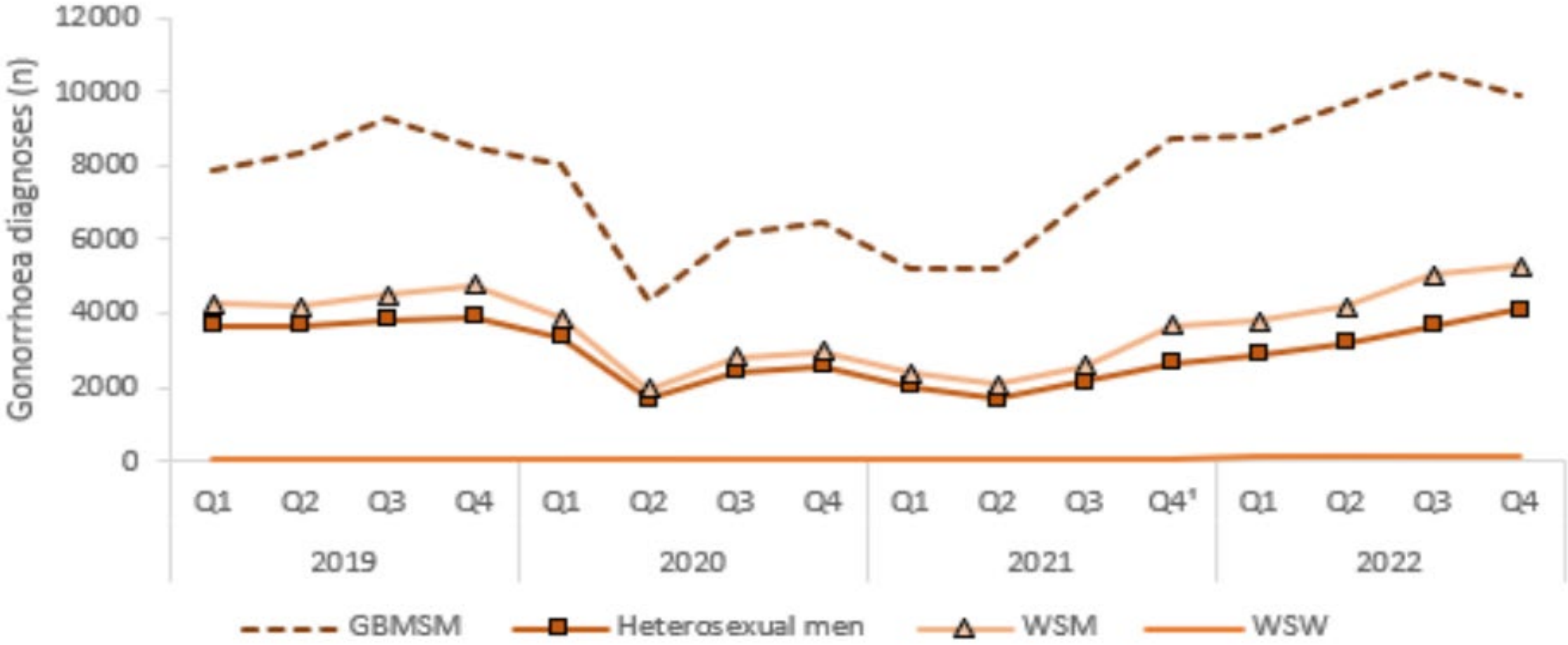


Tests



Taken from UKHSA presentations
UK Health Security Agency: 2022 STI slide set (version 1.0, published 6 June 2023

Gonorrhoea diagnoses by gender and sexual orientation



Taken from UKHSA presentations
UK Health Security Agency: 2022 STI slide set (version 1.0, published 6 June 2023

Gonorrhoea in Leicester

By sexual orientation

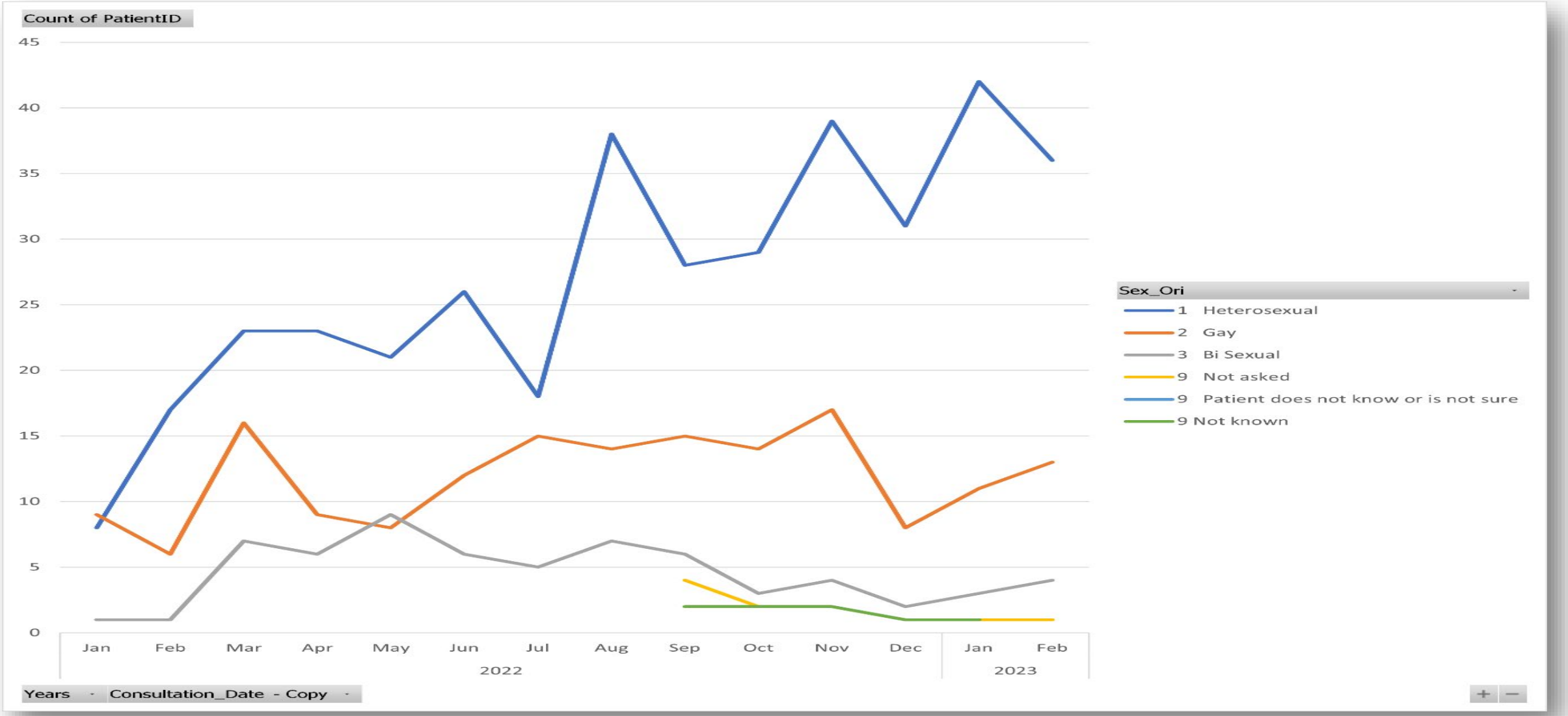


Figure 2. Rates by ethnicity for Leicester residents diagnosed with gonorrhoea: 2022

Data sources: GUMCAD and CTAD

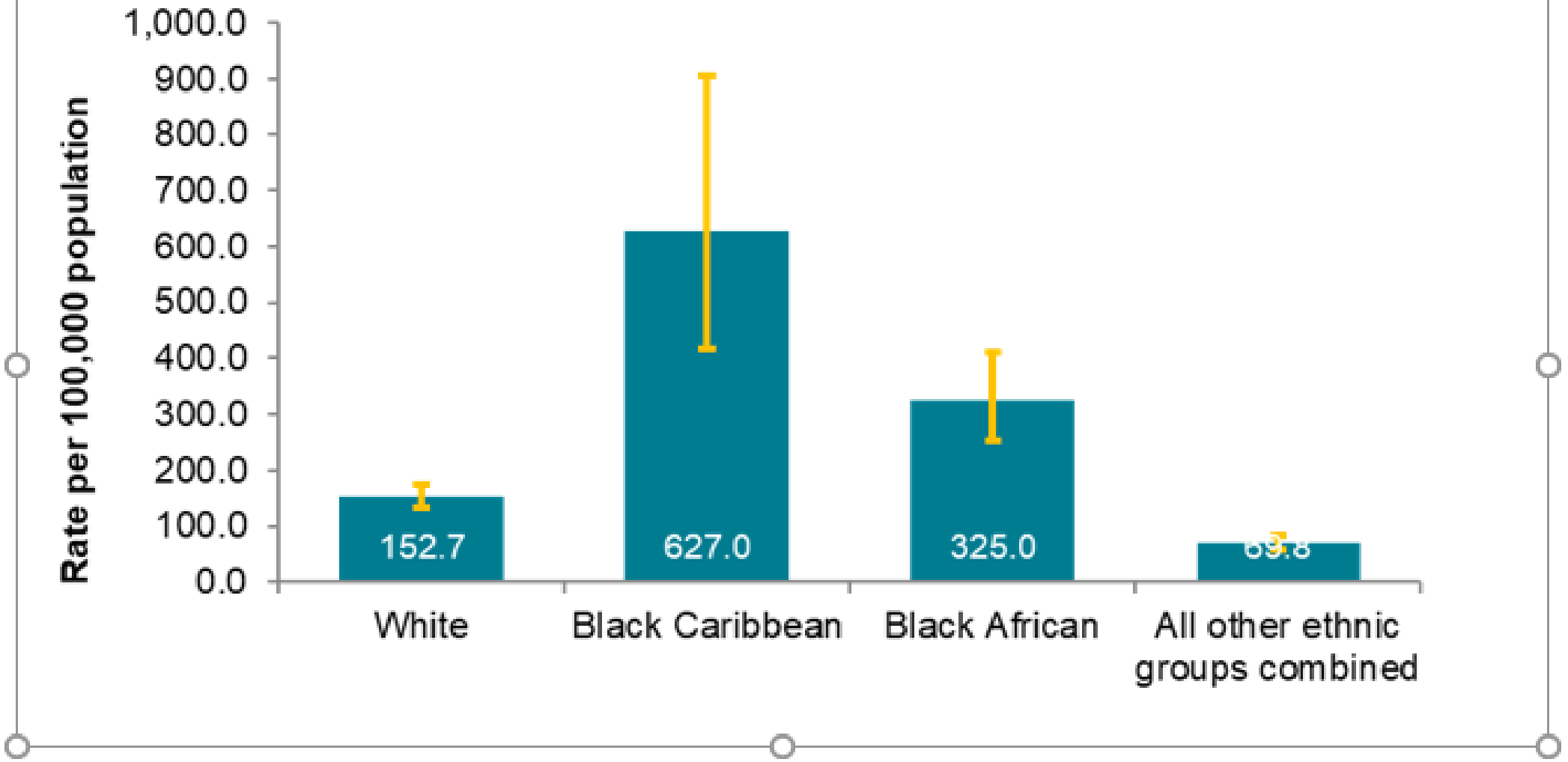
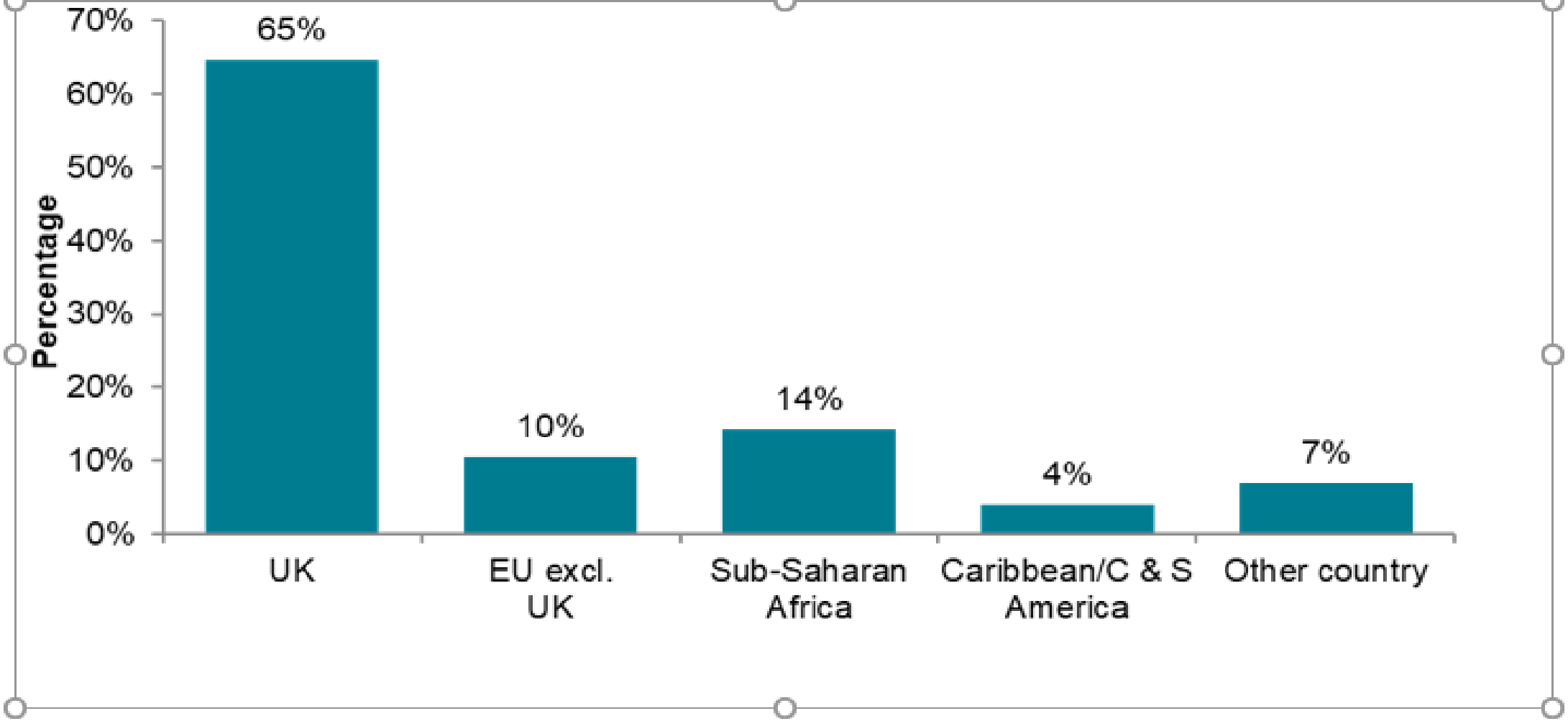


Figure 3. World region of birth of Leicester residents diagnosed with gonorrhoea in GUM clinics: 2022

Data source: GUMCAD



What are we worried about?

With increased infections we will see increased complications;

- Complicated infections, disseminated infections, neonatal infections.
- STI's also increase risk of acquisition of other infections such as BBI

Gonorrhoea develops antimicrobial resistance easily

- What are our options if Ceftriaxone/multi-drug resistance becomes more widespread?

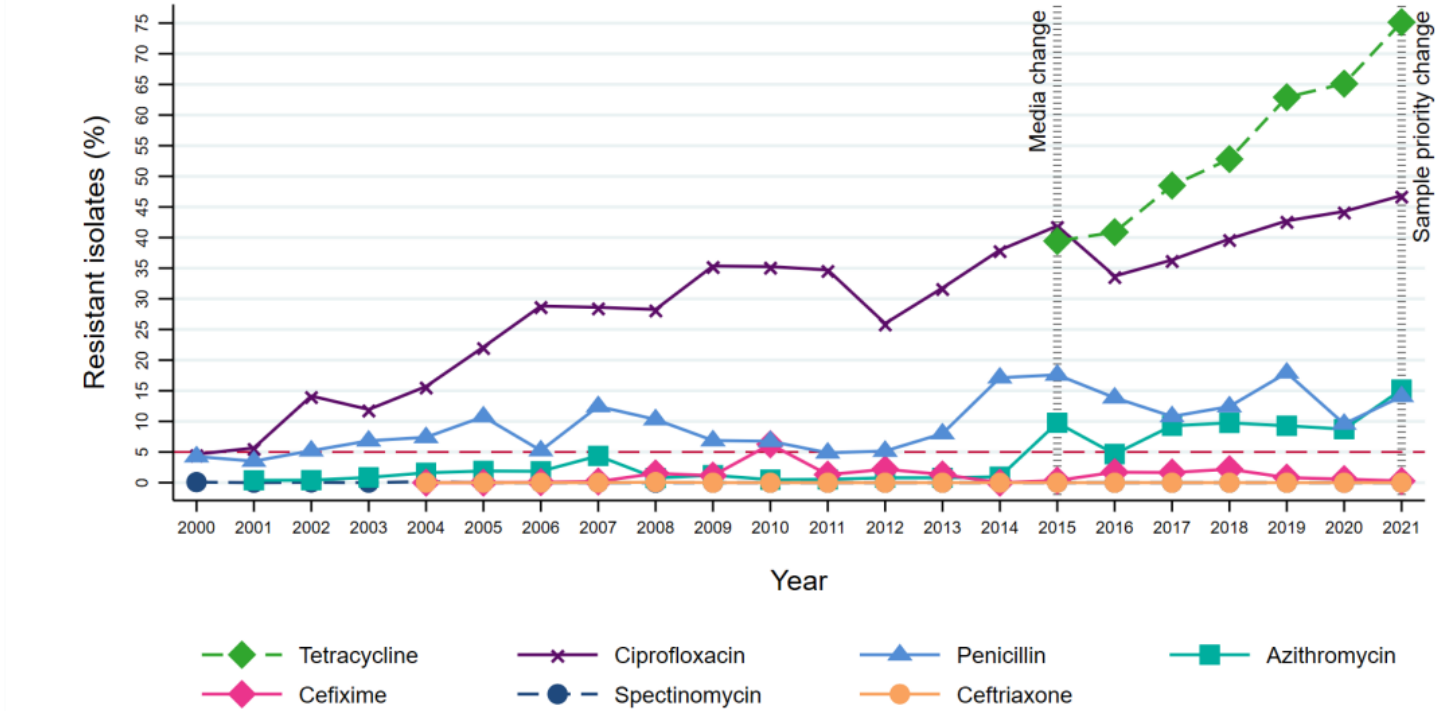
UK Health Security Agency

Antimicrobial resistance in *Neisseria gonorrhoeae* in England and Wales

Key findings from the Gonococcal Resistance to Antimicrobials Surveillanc Programme (GRASP 2021)

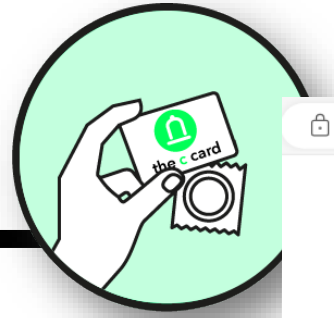
Data to June 2022

Figure 3. Percentage of *N. gonorrhoeae* isolates in the GRASP sentinel surveillance system that were resistant to selected antimicrobials, England and Wales, 2000 to 2021†



† Due to changes in the diagnostic sensitivity medium used to test antimicrobial susceptibility of sentinel surveillance isolates, MICs for the 2015 to 2021 collections are not directly comparable with those from previous years. Trends from 2000 to 2014 compared to 2015 to 2021 must be interpreted with caution (point of change indicated by vertical dashed black line), particularly for azithromycin and tetracycline (data for tetracycline is only included from 2015 onwards due to this issue) (7). The 5% threshold (≥5% of infections resistant to the first-line therapy) at which the WHO recommends that first-line monotherapy guidelines should be changed is indicated by the horizontal dashed red line. In 2021, pharyngeal isolates were prioritised ahead of all other sites for the first time, resulting in a substantial change in the distribution of specimen sites included in the 2021 sample.

What can we do?



https://leicestersexualhealth.nhs.uk/professionals/referrals

- Post
- Con
  - In
    -
    -
- Outr
  - St
  - Er
    -
  - W
    -
    -
    - Pharmacies

ing cultures

xual health for

eatment

- Robust partner notification

NHS Midlands Partnership NHS Foundation Trust
A Keele University Teaching Trust

L S H Leicester Sexual Health

Referral form for professionals working with children/adults identified as vulnerable

Once form is completed please email to: - LLRHealthAdvisingTeam@mpft.nhs.uk

We will respond to you as soon as possible to arrange an appointment.

Referrers Name: ..... Job Title: .....

Tel. No: ..... Email: .....

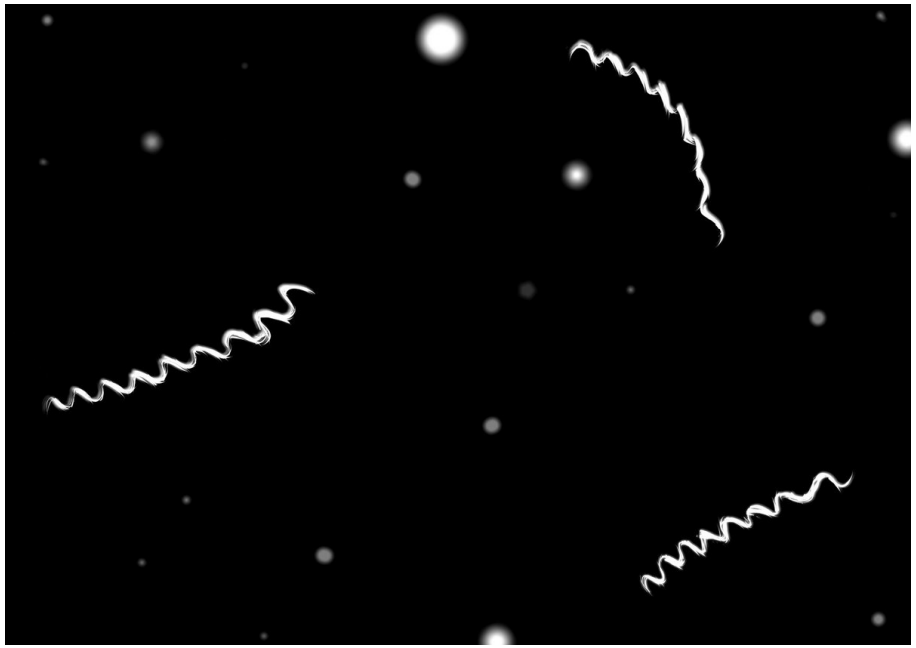
Organisation: ..... Date of referral: .....

PLEASE COMPLETE ALL BOXES TO ASSIST IN A SMOOTH REFERRAL PATHWAY

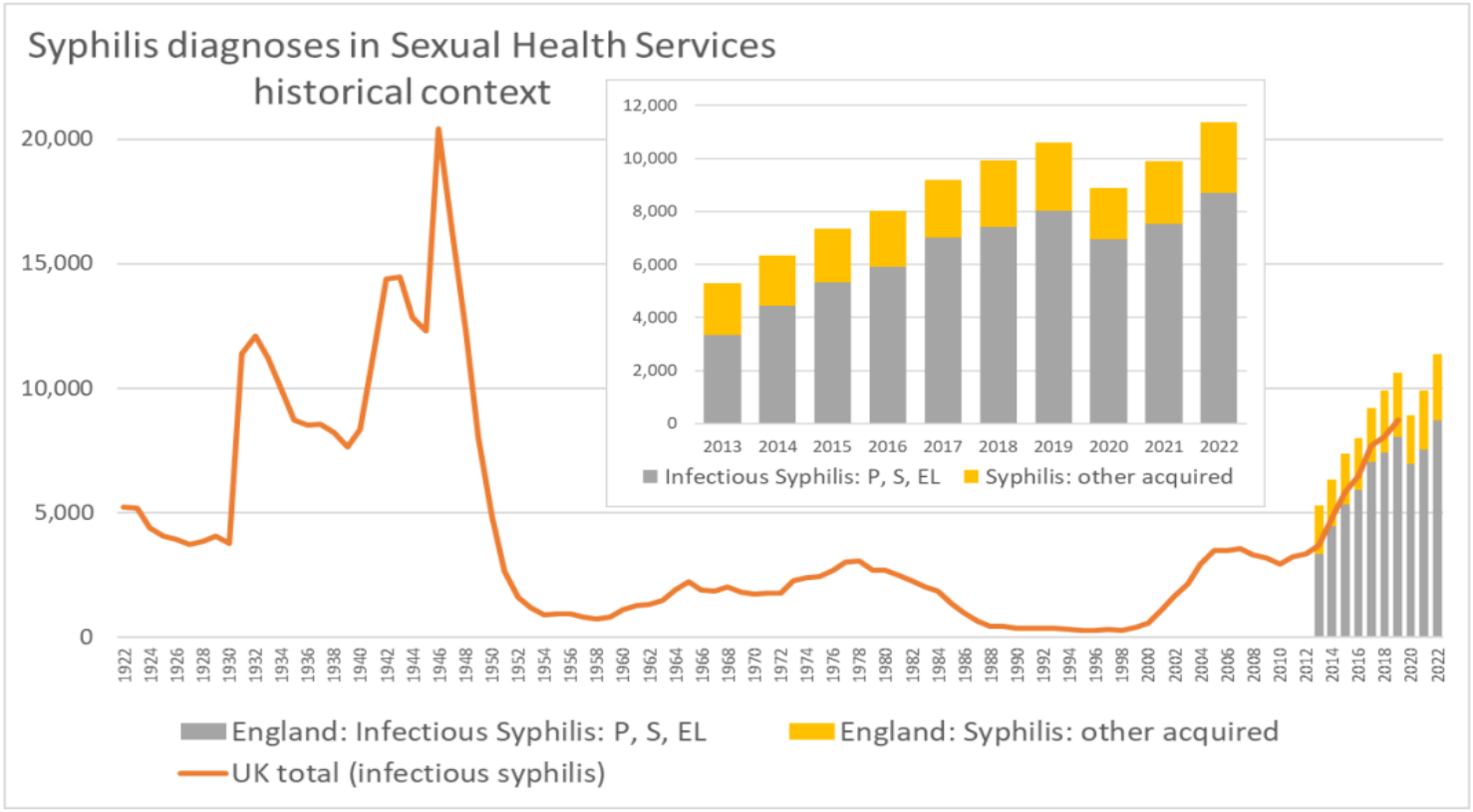
Patient Forename/s:	**Patient Surname:**	**Date of Birth:**	**Ethnicity:**
Country of birth:	**Patient's telephone Number:** **Mobile:** **Landline :**		

Syphilis

Treponema pallidum



100 years of syphilis



In 2022 in England there were:

8,692 diagnoses of infectious syphilis: primary, secondary and early latent stages

2,677 diagnoses of "Other acquired syphilis": including cardiovascular, neurosyphilis or any other late or latent syphilis (asymptomatic, non-infectious, but requiring treatment)

Early Latent: asymptomatic within 2 years of infection. Late Latent: asymptomatic: infection >2 years prior

Taken from UKHSA presentations
UK Health Security Agency: 2022 STI slide set (version 1.0, published 6 June 2023

LEICESTER

Office for Health Improvement & Disparities

Fingertips | Public health data

Guidance API Contact us Your data

Home > Profile home > Data

Sexual and Reproductive Health Profiles

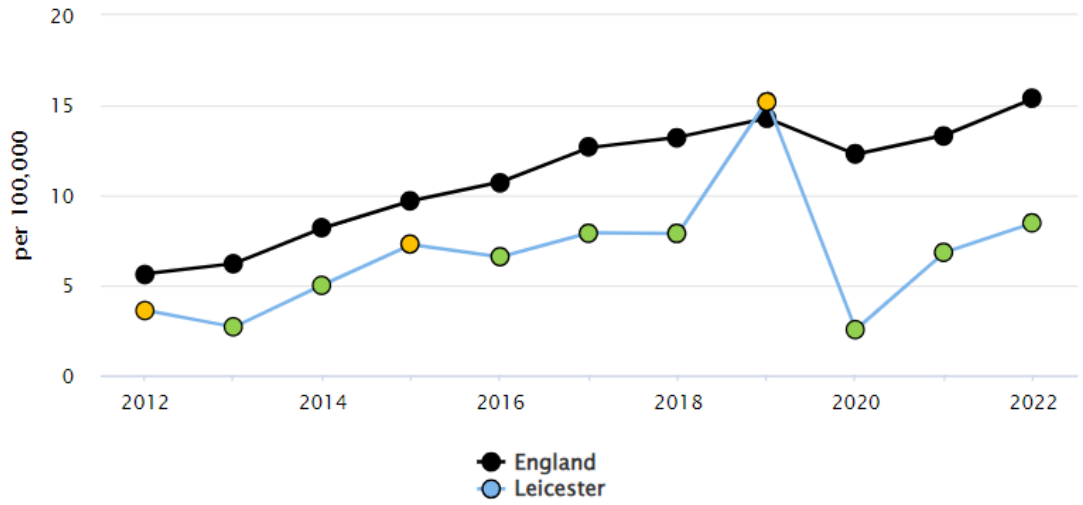
Data view
Area profiles

Geography
England

Syphilis diagnostic rate per 100,000

Show confidence intervals Show 99.8% CI values

More options



Recent trend: No significant change

Period		Leicester Count	Value	95% Lower CI	95% Upper CI	England
2012		12	3.6	1.9	6.3	5.6
2013		9	2.7	1.2	5.1	6.2
2014		17	5.0	2.9	8.0	8.2
2015		25	7.3	4.7	10.7	9.7
2016		23	6.6	4.2	9.9	10.7
2017		28	7.9	5.3	11.4	12.7
2018		28	7.9	5.2	11.4	13.2
2019		54	15.2	11.5	19.9	14.3
2020		9	2.5	1.2	4.8	12.3
2021		25	6.8	4.4	10.1	13.3
2022		31	8.5	5.8	12.0	15.4

Source: UK Health Security Agency (UKHSA)

Indicator Definitions and Supporting Information

LEICESTERSHIRE

Office for Health Improvement & Disparities

Fingertips | Public health data

Guidance API Contact us Your data

Home > Profile home > Data

Sexual and Reproductive Health Profiles

Data view
Area profiles

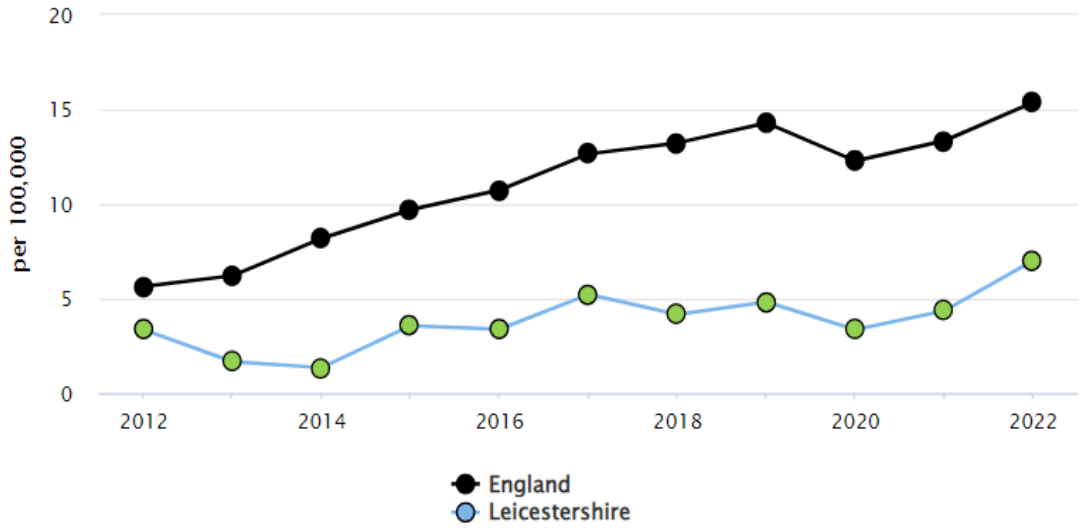
Geography
England

Syphilis diagnostic rate per 100,000

Crude rate - per 100,000

Show confidence intervals Show 99.8% CI values

More options



Recent trend: No significant change

Period		Leicestershire Count	Value	95% Lower CI	95% Upper CI	England
2012		22	3.4	2.1	5.1	5.6
2013		11	1.7	0.8	3.0	6.2
2014		9	1.3	0.6	2.6	8.2
2015		24	3.6	2.3	5.3	9.7
2016		23	3.4	2.1	5.1	10.7
2017		36	5.2	3.7	7.2	12.7
2018		29	4.2	2.8	6.0	13.2
2019		34	4.8	3.3	6.7	14.3
2020		24	3.4	2.2	5.0	12.3
2021		31	4.4	3.0	6.2	13.3
2022		50	7.0	5.2	9.3	15.4

Source: UK Health Security Agency (UKHSA)

Indicator Definitions and Supporting Information

Tracking the syphilis epidemic:

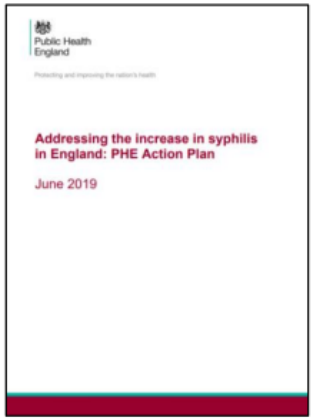


Figure 2. Number of infectious syphilis diagnoses by gender and sexual orientation, 2010 to 2019, England*

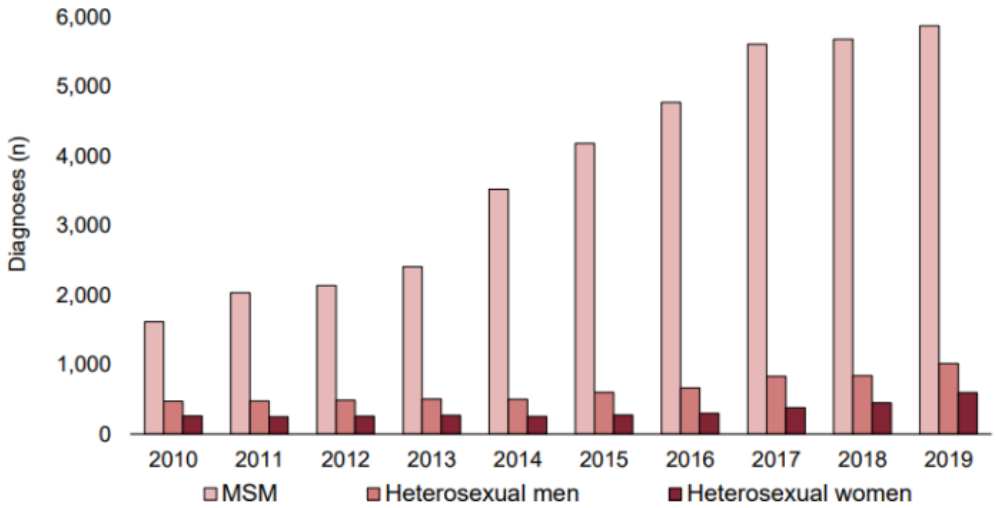
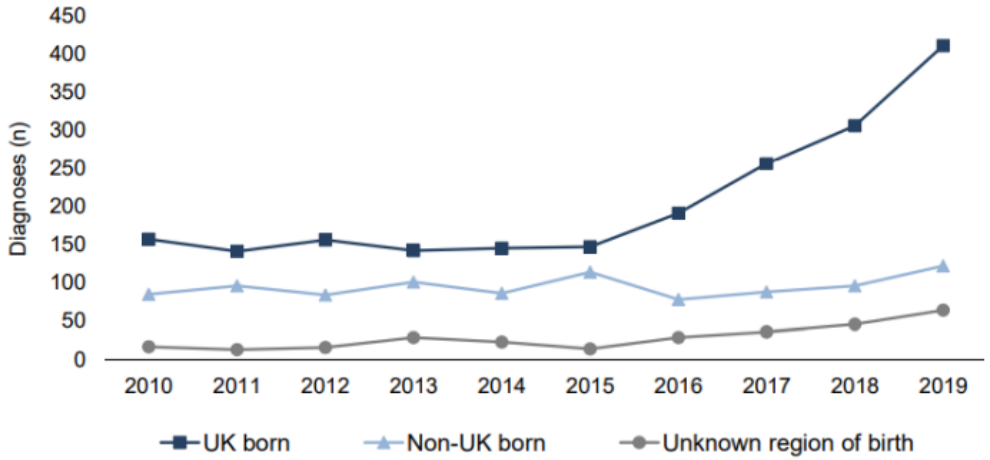


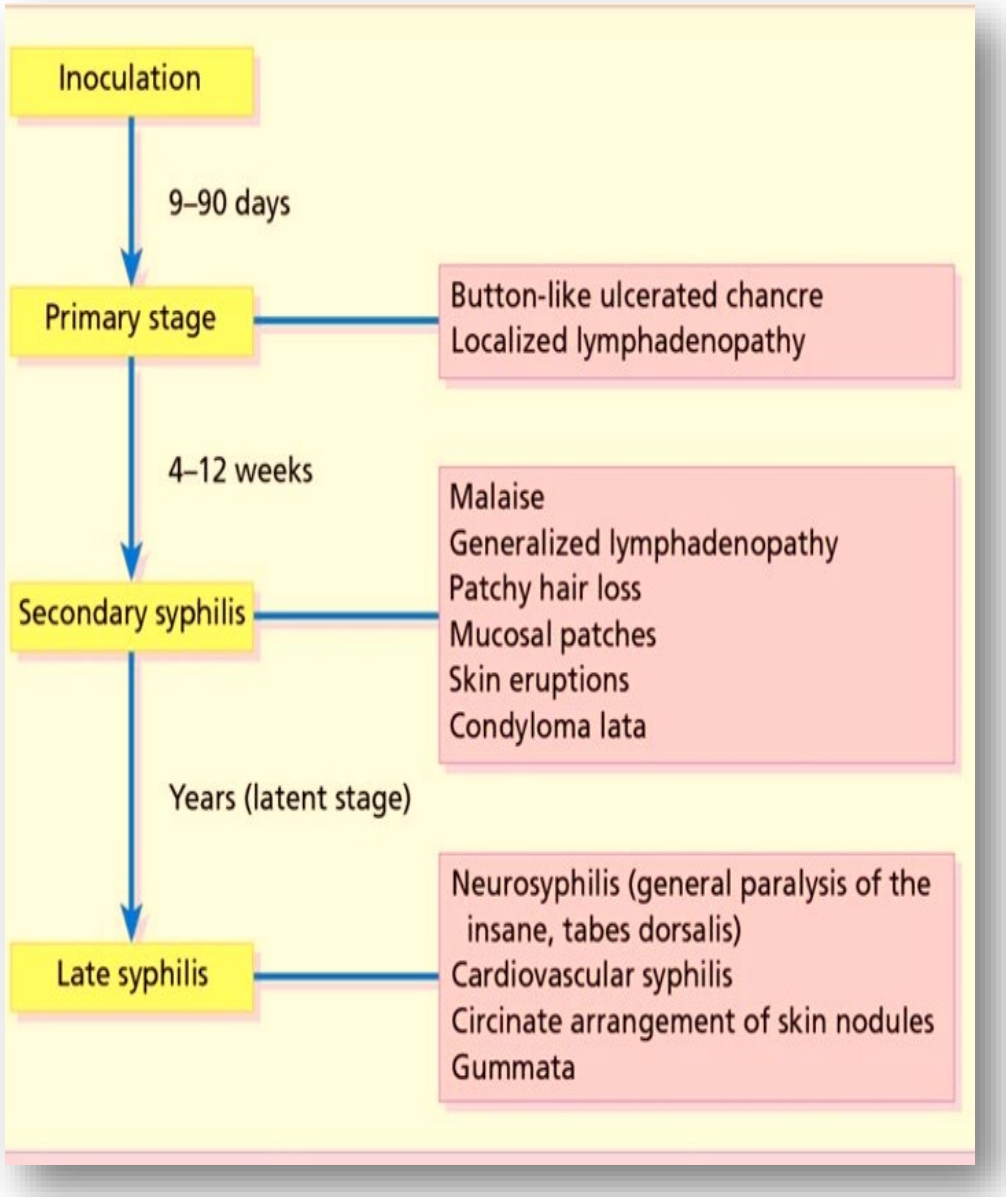
Figure 35. Number of infectious syphilis diagnoses among women by region of birth, 2010 to 2019, England*



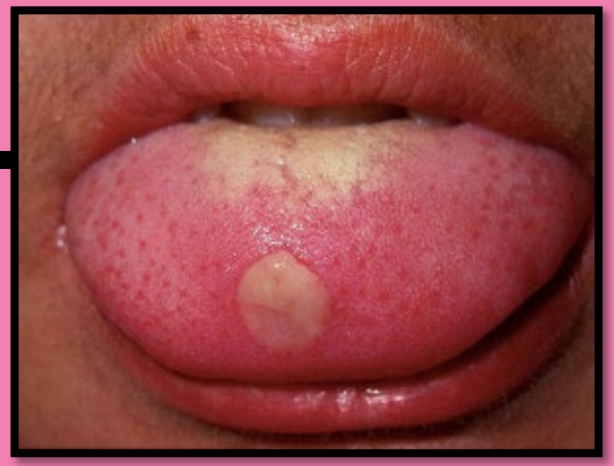
https://www.gov.uk/government/publications/tracking-the-syphilis-epidemic-in-england

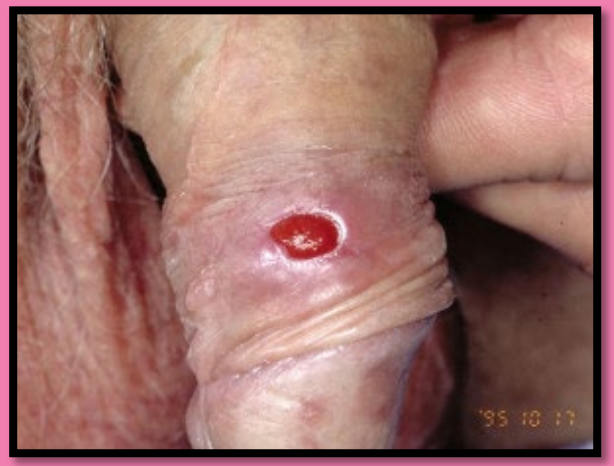
Treponema Pallidum

- Transmission route – Sexually (direct contact), Vertical
- **Diagnosis**
  - <u>Blood test</u>
    - Antibody Screening test
      - Remains +ve post clearance
      - 3/12 Window period, risk false ngative
    - Confirmed further tests
      - RPR (non-specific), numerical value
        - Can help to evaluate stage, rx response, reinfection
        - 3,6, 12 months post rx
        - , *4 fold decline at 12/12 and aim for neg/serofast low level*
        - Four-fold rise is significant for reinfection
      - TPPA/TPHA specific test
  - <u>Swab from Chancre</u>
    - Dark ground microscopy
    - PCR test for T.pallidum
- **Treatment**
  - Benzathine Penicillin or Doxycycline, course depends on clinical stage

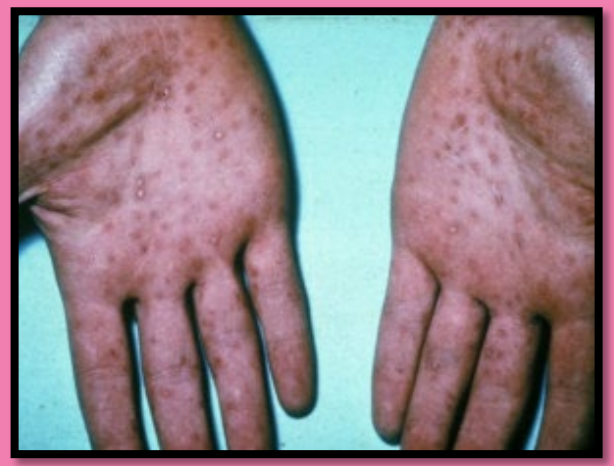


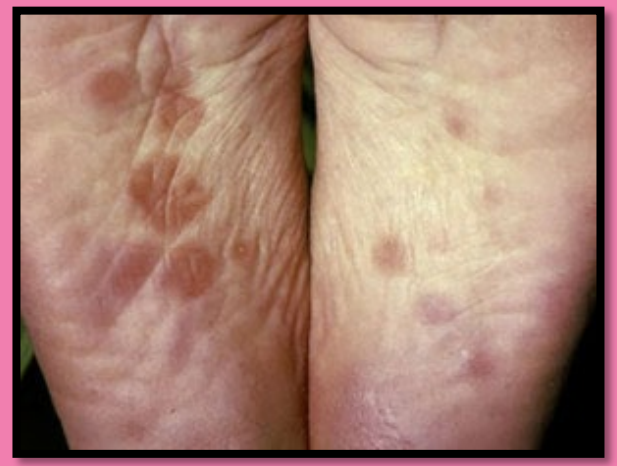
Images from Dermnet NZ. (Syphilis images | DermNet (dermnetnz.org))

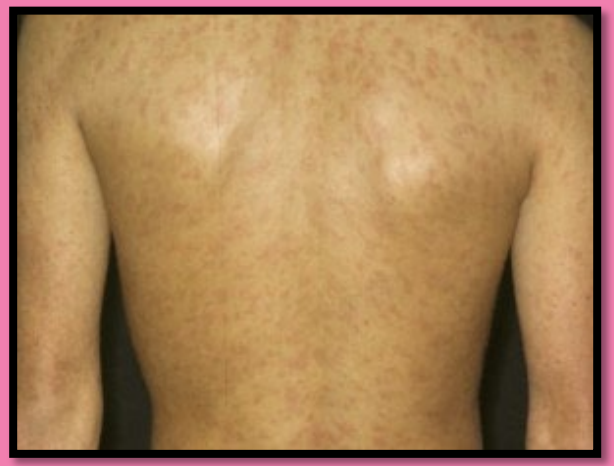




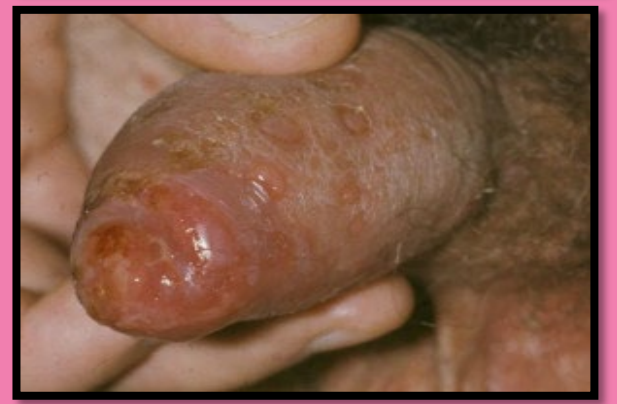
Primary Chancre

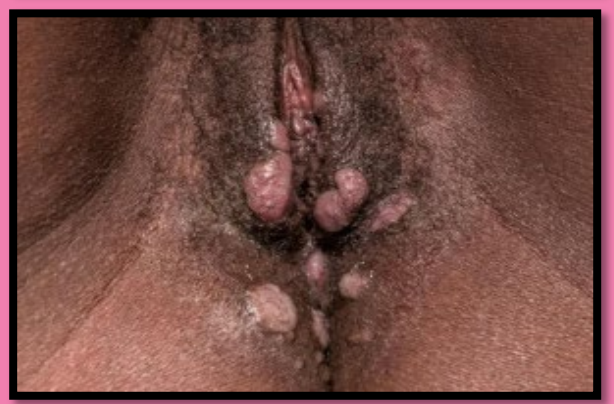






Secondary syphilis





Secondary **syphilis**

With more infections come more complications

Secondary	Hepatitis Splenomegaly Glomerulonephritis Neurological- Meningitis, CN palsies, Uveitis, Optic neuropathy, Interstitial Keratitis, retinal involvement
Late	**Neurological** Meningovascular (2-7yrs) - focal arteritis , vascular insult, CVA, typically not thought to be tertiary Parenchymous 10-20 years- cortical neurone loss, memory, personality change Tabes dorsalis 15-25 years- Inflammation of the dorsal column/nerve roots, argyl Robertson pupil **Cardiovascular** 10-30 years, aortitis causing dilatation and AR, coronary ostial stenosis, aneurysm **Gummatous** inflammatory destructive lesions

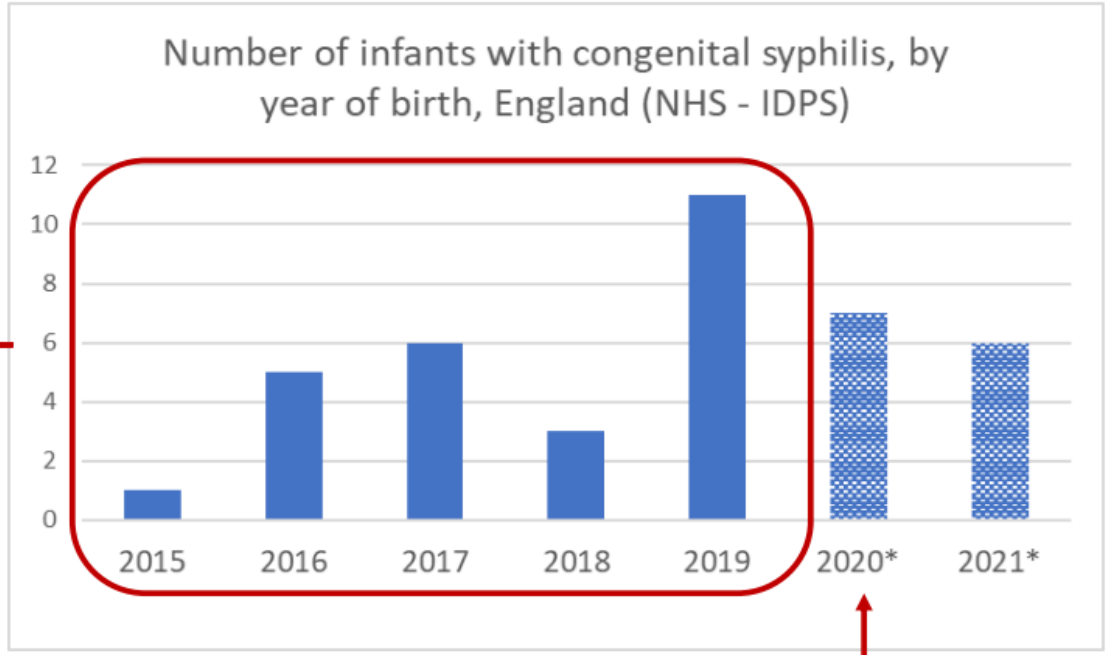
Congenital syphilis

ISOSS congenital syphilis review: 2015 – 2019

For all 24 infants diagnosed with congenital syphilis, screening was offered and accepted by all women.

For 15 infants, the women had negative antenatal screening results, meaning the women became infected with syphilis later during their pregnancy.

Of these women:
- 2 presented to sexual health services with symptoms postnatally
- 2 had a screen positive result in a subsequent pregnancy
- 10 were diagnosed following their symptomatic infant's diagnosis
- 1 was diagnosed following a stillbirth investigation



ISOSS syphilis report 2022

Overall, 390 of 906 (43.0%) women booked in 2020 with a positive result for syphilis required treatment in pregnancy. Newly diagnosed women requiring treatment accounted for 33.0% of screen positive results and 9.8% of women were previously diagnosed requiring treatment. Three women who were found to be positive for syphilis in pregnancy had previously screened negative earlier in their pregnancy. All 3 of these women were retested as clinically indicated by sexual health services.

https://www.gov.uk/government/publications/infectious-diseases-in-pregnancy-screening-isoss-congenital-syphilis-report-2015-to-2020/isoss-congenital-syphilis-case-review-report-2015-to-2020

https://www.gov.uk/government/publications/infectious-diseases-in-pregnancy-screening-isoss-syphilis-report-2022

SYPHILIS IN PREGNANCY

- Increase risk of miscarriage/foetal loss
  - *It is estimated that up to 40% of babies with congenital syphilis may be stillborn or die as a newborn*
- Delayed rx = increased risk
- Treatment options limited, Penicillin only
  - Doxy not safe,
  - Macrolides do not cross placenta
  - If allergic to penicillin urgent referral for desensitisation required.

CONGENITAL SYPHILIS

Risk increases with later rx, early infections with higher infectivity

Early

- 2/3 asymptomatic at birth but sx develop by 5/52
- Rash, haemorrhagic rhinitis, generalised lymphadenopathy, hepatosplenomegaly, skeletal abnormalities,
- Condylomata lata, vesiculobullous lesions, osteochondritis periostitis, pseudoparalysis, mucous patches, perioral fissures, non-immune hydrops, glomerulonephritis, neurological ocular involvement, haemolysis, thrombocytopenia

Late

- Interstitial keratitis, Cluttons joints, Hutchinsons incisors, mulberry molars, high palatal arch, Sensineural deafness, frontal bossing, saddle nose deformity, cold haemoglobinuria, neurological involvement

Why is this happening?

Accelerators	Brakes
Higher Burden of infection	Prevention
Reduced use of condoms	Health promotion
Changing behaviours, societal norms	Condoms
New ways to meet partners	Vaccination
Travel & globally connected networks	Biomedical interventions
Financial and system pressures on sexual health	Case finding
System shocks- COVID, MPx	Testing and treatment
	Partner notification
	Time to treatment

WHAT CAN BE DONE?

"A successful response to the current increase in syphilis incidence is dependent upon action that optimises 4 prevention pillars fundamental to syphilis control and prevention:

1. Increase testing frequency of high-risk MSM and re-testing of syphilis cases after treatment

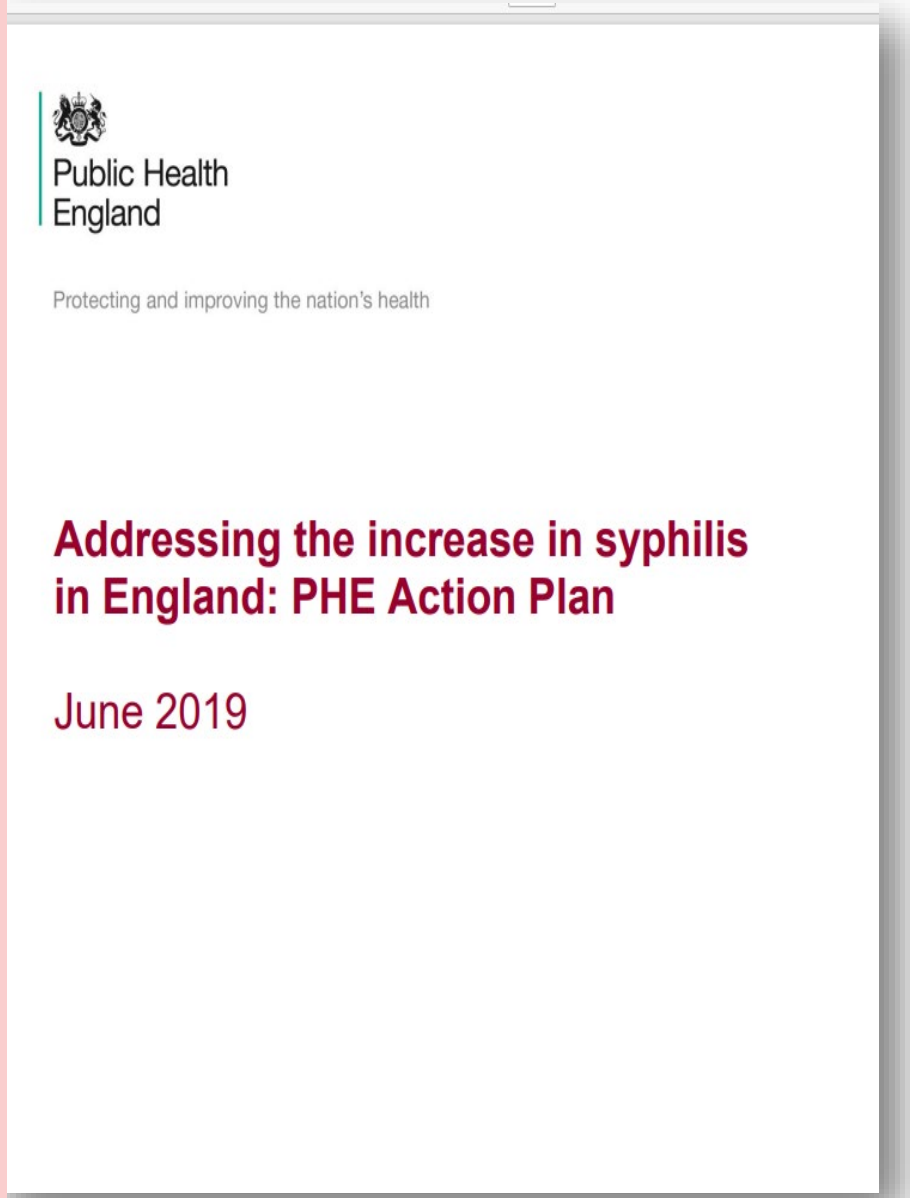
2. Deliver partner notification to BASHH standards

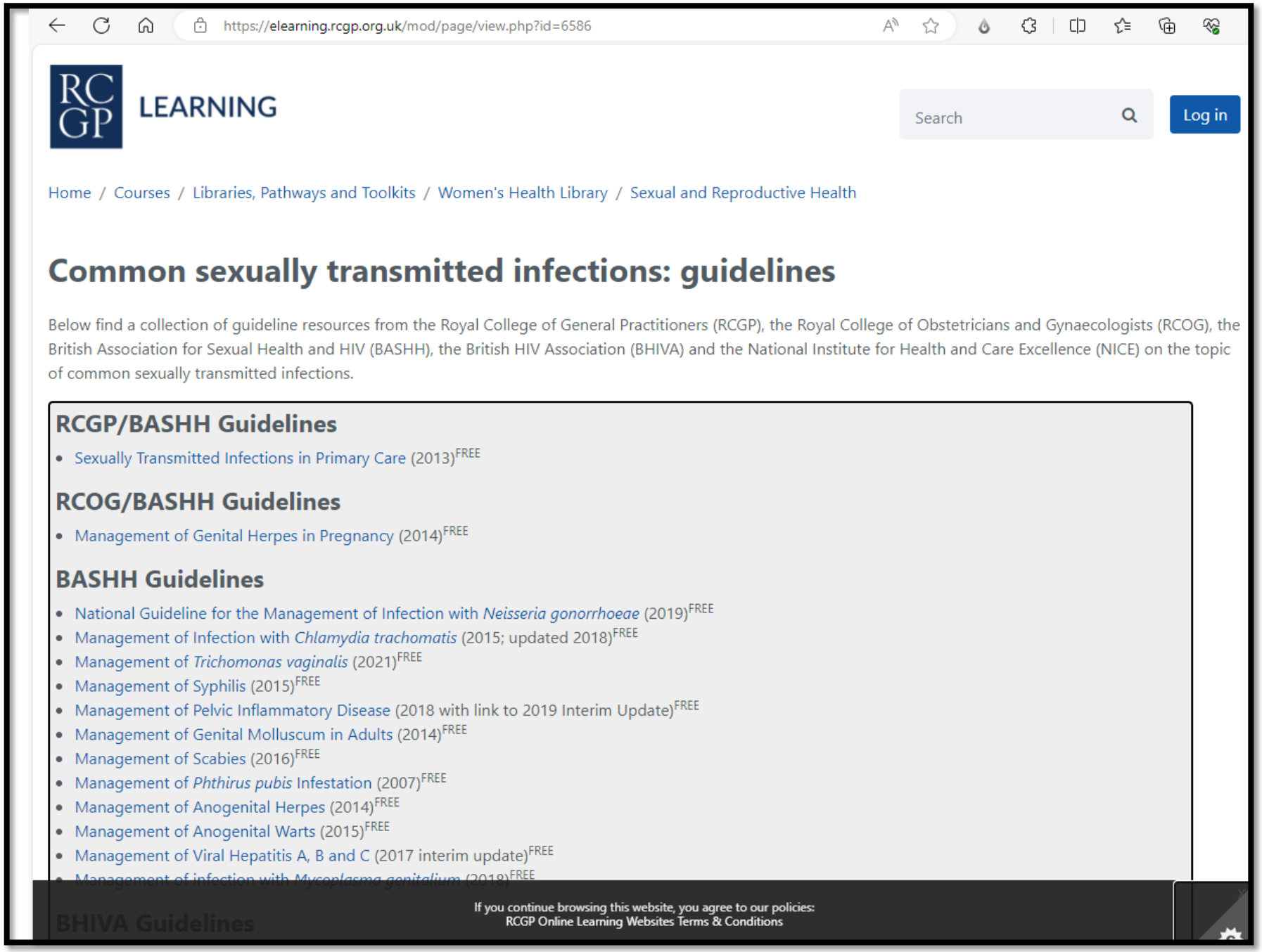
3. Maintain high antenatal screening coverage and vigilance for syphilis throughout antenatal care.

- *Further syphilis testing in the later stages of pregnancy should be offered to women whose apparent risk of acquiring an STI has changed during the pregnancy.*
- *MDT approach, birth plans*
- *Remember partners!*

4. Sustain targeted health promotion.

- *General population and targeted*
- *Risk reduction counselling*
- *Collaborate with community groups*
- *Understand local population*




https://elearning.rcgp.org.uk/mod/page/view.php?id=6586
RCGP LEARNING
Search
Log in
Home / Courses / Libraries, Pathways and Toolkits / Women's Health Library / Sexual and Reproductive Health
Common sexually transmitted infections: guidelines
Below find a collection of guideline resources from the Royal College of General Practitioners (RCGP), the Royal College of Obstetricians and Gynaecologists (RCOG), the British Association for Sexual Health and HIV (BASHH), the British HIV Association (BHIVA) and the National Institute for Health and Care Excellence (NICE) on the topic of common sexually transmitted infections.
RCGP/BASHH Guidelines
Sexually Transmitted Infections in Primary Care (2013)FREE
RCOG/BASHH Guidelines
Management of Genital Herpes in Pregnancy (2014)FREE
BASHH Guidelines
National Guideline for the Management of Infection with Neisseria gonorrhoeae (2019)FREE
Management of Infection with Chlamydia trachomatis (2015; updated 2018)FREE
Management of Trichomonas vaginalis (2021)FREE
Management of Syphilis (2015)FREE
Management of Pelvic Inflammatory Disease (2018 with link to 2019 Interim Update)FREE
Management of Genital Molluscum in Adults (2014)FREE
Management of Scabies (2016)FREE
Management of Phthirus pubis Infestation (2007)FREE
Management of Anogenital Herpes (2014)FREE
Management of Anogenital Warts (2015)FREE
Management of Viral Hepatitis A, B and C (2017 interim update)FREE
Management of infection with Mycoplasma genitalium (2018)FREE
BHIVA Guidelines
If you continue browsing this website, you agree to our policies:
RCGP Online Learning Websites Terms & Conditions

https://www.gov.uk/government/publications/tracking-the-syphilis-epidemic-in-england

Research and analysis

Tracking the syphilis epidemic in England

An examination of the epidemiology of syphilis in England and the progress towards priorities identified under the 4 Syphilis Action Plan prevention pillars.

From: Public Health England

Published 3 February 2021

Get emails about this page

Applies to England

Documents

Tracking the syphilis epidemic in England: 2010 to 2019

Ref: PHE publications gateway number: GW-1884

PDF, 1.53 MB, 57 pages

This file may not be suitable for users of assistive technology.

Related content

Collection

Syphilis: surveillance, data and management

https://www.bashh.org/guidelines

BASHH British Association for Sexual Health and HIV

Search LOGIN Menu

About BASHH | News | Events & Education | BASHH Groups | Branches | Public | Members

Home | Back | Favourite

Search...

- All Guidelines
- Urethritis and Cervicitis
- Vaginal discharge
- Genital ulceration
- Systemic presentation and complications
- HIV
- Skin conditions
- Viral hepatitis
- Sexual history taking, STI testing and specific groups
- Self-sampling recommendations
- Other Clinical Guidance Endorsed by BASHH

BSIG MICROSCOPY

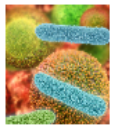
STI FOUNDATION

BASHH COVID-19 RESOURCES

BASHH PUBLICATIONS

UPCOMING EVENTS

03 NOVEMBER 2023
BASHH Sexual Function and Wellbeing SIG 2023

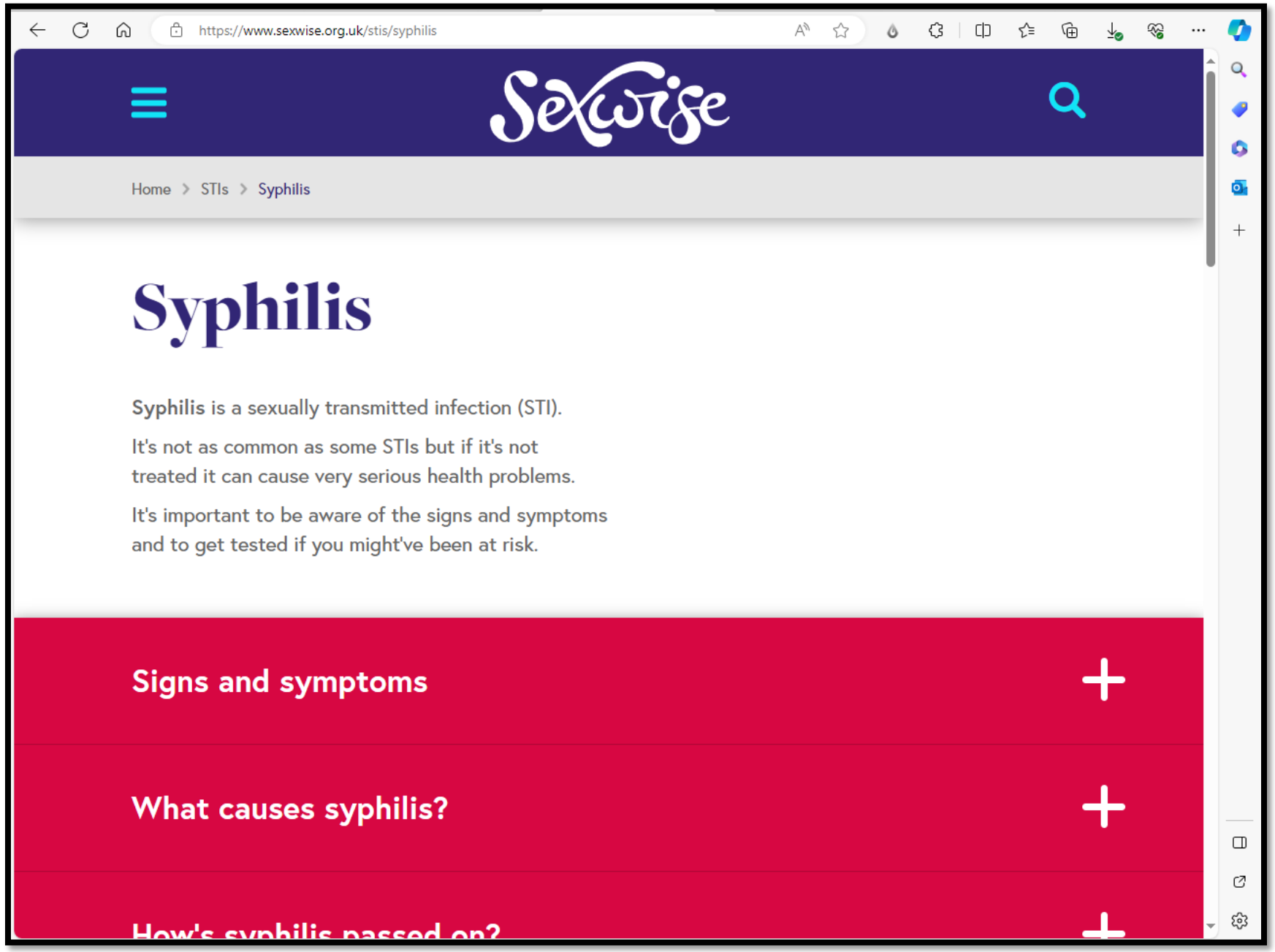


13 NOVEMBER 2023
BASHH STI / HIV Course Modules 3 & 4

20 NOVEMBER 2023
Wessex BASHH Meeting

08 DECEMBER 2023
Genital Dermatology Basics Workshop
BASHH Genital Dermatology Basics Workshop 2023

ALL EVENTS


https://www.sexwise.org.uk/stis/syphilis
Sexwise
Home > STIs > Syphilis
Syphilis
Syphilis is a sexually transmitted infection (STI).
It's not as common as some STIs but if it's not treated it can cause very serious health problems.
It's important to be aware of the signs and symptoms and to get tested if you might've been at risk.
Signs and symptoms
What causes syphilis?
How's syphilis passed on?


THANK YOU
ANY QUESTIONS?