



## Sexually transmitted infections: update for PNs & PAs

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## Since 2017 NICE on board with our approach...

**NICE** National Institute for Health and Care Excellence

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### Sexual Health in Practice Training to increase HIV testing in primary care

**Shared learning database**

Organisation: Sexual Health in Practice Community Interest Organisation (SHIP CIC)

Published date: July 2017

Sexual health in practice (SHIP) community interest company is an implementation partner that supports delivery of high quality and effective sexual and reproductive health care in general practice. We work collaboratively with practices and their teams and commissioners using peer-led approaches to education and service development.

We offer 8 interrelated training sessions, with 2 that are core for Practice Nurses, and 1 that is core for GPs. Each session's educational narrative includes an integrated approach to sexual health encompassing STIs, HIV, contraception, unplanned pregnancy, young people's access and sexual health promotion.

SHIP is the only educational intervention in sexual and reproductive healthcare with peer-reviewed published evidence of impact on practice (lack of impact of other training has been published). We have demonstrated that our training causes a significant and sustained increase in HIV testing by GPs (Pillay et al, 2018; Pillay et al, 2018).

## Learning outcomes

By the end of this session you should be able to:

- ✦ Explain why diagnosing and treating STIs is important
- ✦ Demonstrate to patients how to use condoms
- ✦ Understand which STI tests you can offer to your patients and management of STIs
- ✦ Outline risk groups and behaviours for STIs

## What we'll cover today

### Clinical significance of STIs in general practice

- ✦ STI prevention – benefits & limitations of condom use
- ✦ STI testing, including taking swabs
- ✦ STI management
- ✦ Patterns of STI risk, including risk groups and risk behaviour and their relevance to clinical practice

## The potential of general practice

### ✦ Accessibility

Geography

Users

### ✦ Experience

Contraception

Cervical screening

Travel health

### ✦ Ways of working

Opportunistic

Active recall

Linking 'sperms and germs'



## Lots of evidence that people with high risk use GP

People living with HIV (PLHIV):

- 95% registered with GP
- 87% disclosed HIV status
- 60% prefer GP to HIV clinic

General practice is the preferred health service of street-based sex workers

### How visible these attendees are is up to us as clinicians

65% of men seen GP in the past year

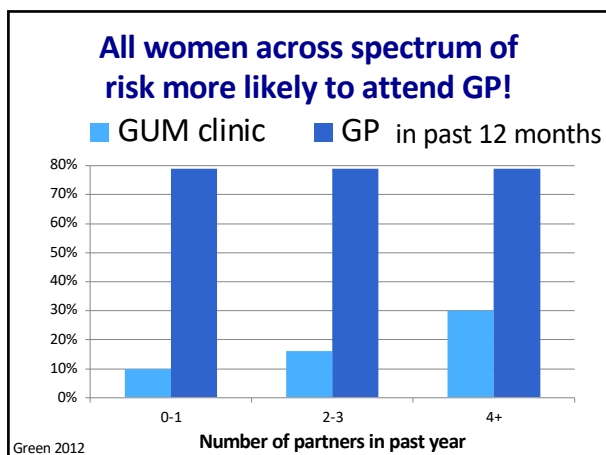
60% think staff not aware of sexual orientation

Metcalfe 2015

Very likely to attend GP

Very unlikely to attend GUM

Green 2012, Sonnenberg 2013, Clifton 2016



**A study of patients attending GP for sexual health care found:**

- ★ Patients expect to be asked about their sexual history
- ★ Dissatisfaction centred on perceived avoidance of the subject by practitioners

*Sutcliffe et al 2011 Sex Transm Infect*

### Predominantly sexually transmitted

|                          |                    |
|--------------------------|--------------------|
| ★ Chlamydia trachomatis  | Chlamydia          |
| ★ Neisseria gonorrhoea   | Gonorrhoea         |
| ★ HPV                    | Genital warts      |
| ★ Treponema pallidum     | Syphilis           |
| ★ HIV                    |                    |
| ★ Trichomonas vaginalis  | TV, trichomoniasis |
| ★ Pediculosis pubis      | Pubic lice         |
| ★ Herpes simplex type II | Genital herpes     |
| ★ Mycoplasma genitalium  |                    |
| ★ Mpox virus             |                    |

### Mpox epidemic UK 2022

- ★ Usually self-limiting infection, symptoms lasting 2-4 wks.
- ★ Occasionally severe
- ★ 99% men who have sex with men; highest risk subgroup
- ★ Usually transmitted by close sexual contact
- ★ Initial presentation may be fever, headache, myalgia, swollen glands, joint pain
- ★ Solitary lesions common

### Mycoplasma Genitalium

- ★ Men: NG urethritis (discharge & balanitis)
- ★ Women: PID/cervicitis
- ★ **But considered harmless in those without symptoms**
- ★ Present in 1% population
- ★ Currently no screening
- ★ Often co-exists w Chlamydia and other STIs
- ★ Difficult to diagnose
- ★ Difficult to treat - Macrolide resistance problem

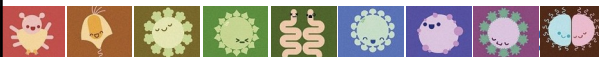
### Sexual transmission well recognised, not predominant route

- ★ Hepatitis B
- ★ Hepatitis A
- ★ Herpes simplex type I
- ★ Sarcoptes scabiei
- ★ Molluscum contagiosum
- ★ Shigella flexneri

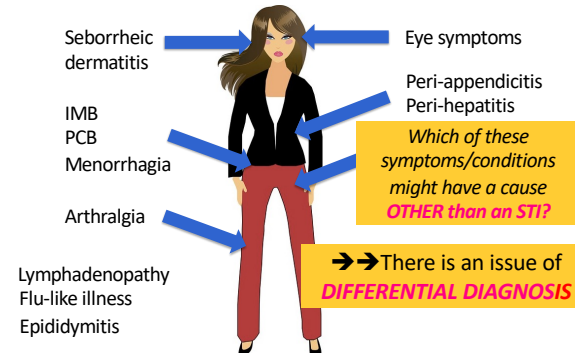
*Hepatitis C rarely recognised to transmit sexually*

## Genital infections NOT generally sexually transmitted

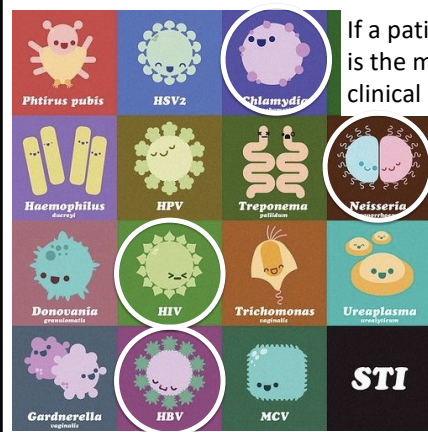
- ✦ Candida
- ✦ Bacterial vaginosis
- ✦ Group B Strep



## These symptoms / conditions could be caused by STIs



If a patient has... what is the most typical clinical picture?



## STIs

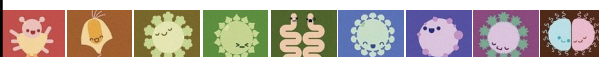
Symptomatic

Asymptomatic

|                |                 |
|----------------|-----------------|
| Chlamydia      | 80-90%          |
| Gonorrhoea     | 70-80%          |
| TV             | 70-80%          |
| Herpes         | 30-60%          |
| HIV            | up to 10 years! |
| Syphilis       | 20 years +      |
| Hep B & C, HPV | 20 years +      |

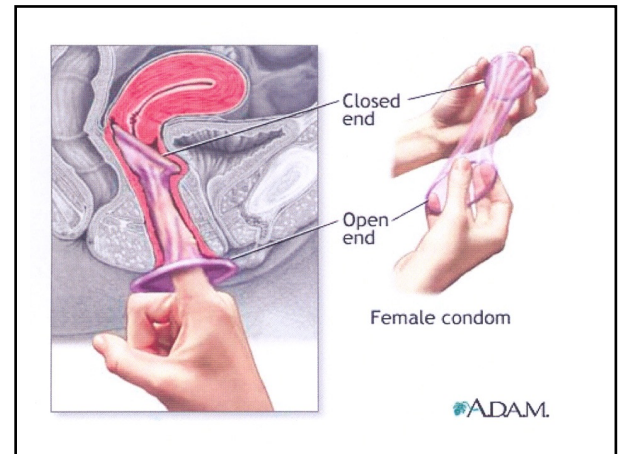
## Summary of implications so far...

- ✦ STIs often have no symptoms
  - Can still be transmitted
  - People with STIs often unaware
- ✦ Symptoms can be insidious, subtle and not obviously related to the genital area
  - Not recognised as STIs by patients or clinicians
- ✦ Left untreated many STIs have serious consequences




## What we'll cover today

- ✦ Clinical significance of STIs in general practice
- ✦ **STI prevention – benefits & limitations of condom use**
- ✦ STI testing, including taking swabs
- ✦ STI management
- ✦ Patterns of STI risk, including risk groups and risk behaviour and their relevance to clinical practice



### Stages of condom use associated with 'failure'



- ✦ Opening package
- ✦ Putting the condom onto the penis
- ✦ Removing after ejaculation
- ✦ Use of lubricants
- ✦ Non-use

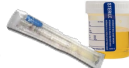

**Practise makes perfect**

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### Diagnosing STIs

1. Microbiology samples
2. Blood tests
3. Clinical findings

### How are these STIs diagnosed or confirmed?

|                       | Microbiology sample                 | Blood test                          | Clinical findings                   |
|-----------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Chlamydia             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Gonorrhoea            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Genital warts         | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Herpes simplex virus  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Syphilis              | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| HIV                   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Hepatitis B           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| TV                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Pubic lice            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Mycoplasma genitalium | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Mpox                  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |



## Ulcers and vesicles

*Patient with an ulcer? – could it be syphilis?*

**For herpes:**

**Simply rub swab on ulcer!**

*Some labs ALSO test herpes samples for syphilis DNA...*

*...ask your lab*



## Which STIs are not routinely tested in GUM clinic?

- ✦ Human Papilloma Virus
- ✦ Herpes Simplex Virus (unless ulcers)

- ✦ Syphilis
  - ✦ Hep B
  - ✦ Hep C
- may or may not have been done with HIV blood test



Beware of the phrase 'full screen'

## LET'S TALK ABOUT SWABS

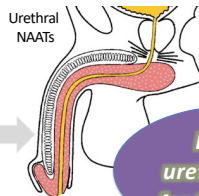
## NAATs



- ✦ Chlamydia
- ✦ Gonorrhoea
- ✦ Herpes
- ✦ Syphilis
- ✦ Mpox

- ✦ They detect & amplify an organism's genetic material so can detect **dead** organisms
- ✦ Ideal for general practice
- ✦ Your labs are already doing these tests

Chlamydia



Sens: 92 – 96%  
Spec: 97 – 98%

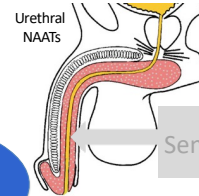
Sens: 98%  
Spec: 98%



*Bye bye  
urethral swab  
for Chlamydia!*



Gonorrhoea



Sens: 100%

*Bye bye  
urethral swab  
for gonorrhoea!*



Sens: 100%

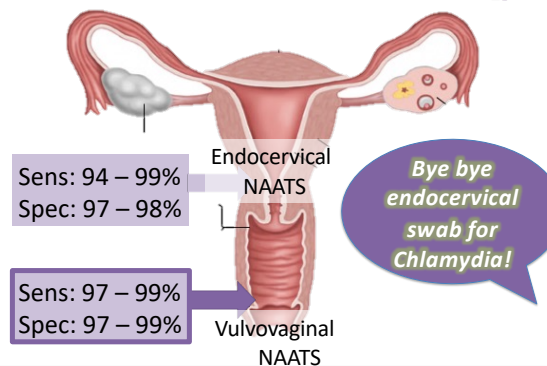


What are the key points to explain about doing a urine sample for NAATs?

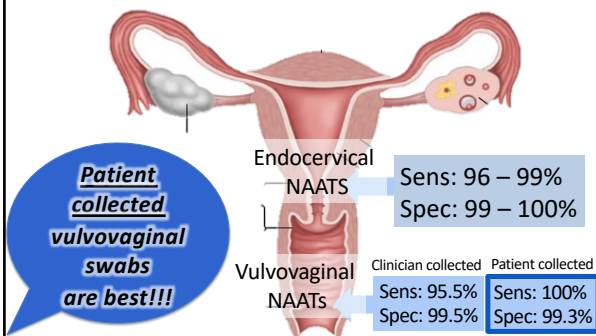
1. First pass urine
2. Over one hour since last PU



## NAATs for chlamydia



## Gonorrhoea



## Gonorrhoea Culture vs NAATs

|                | Pros   | Cons  |
|----------------|--|---|
| <b>Culture</b> | <ul style="list-style-type: none"> <li>Gives antibiotic susceptibilities</li> <li>High specificity: positives are true</li> </ul>          | <ul style="list-style-type: none"> <li>Low sensitivity: misses cases++</li> <li>Especially poor if transported</li> <li>Invasive</li> </ul>                 |
| <b>NAATs</b>   | <ul style="list-style-type: none"> <li>Much more sensitive for primary care, unlikely to miss cases</li> <li>Less invasive test</li> </ul> | <ul style="list-style-type: none"> <li>No antibiotic susceptibilities</li> <li>?False positives, risk increases as not-at-risk testing increases</li> </ul> |

## Gonorrhoea summary

- ★ Routine testing of those *at risk*
  - Women: vulvovaginal NAATs
  - Men: first pass urine
- ★ High risk patient with relevant symptoms  
Eg Discharge, dysuria, PID  
Consider adding EC or urethral culture too

## Window periods

How long after infection will tests be positive?

**NAATs:** 2 weeks

- ★ Likely sooner if symptomatic
- ★ Take longer to turn negative after infection cleared

**HIV** 45 days (7 weeks)

- ★ Rapid tests = 90 days

**Viral hepatitis** usually 3 months, occ longer

## TV prevalence in the community

- ★ NATSAL study – 4400 tested



Prevalence 0.3%



- ★ 4/7 Black or mixed ethnicity
- ★ 6/7 symptomatic

Field et al, Lancet 2018

## Permission to not panic about TV

- ★ Detection of trichomonas (TV) on HVS is poor
- ★ TV is very uncommon in the primary care setting
- ★ TV screening is not recommended in the UK
- ★ TV is not a devastating infection to leave undiagnosed...

**Therefore only consider TV culture for women with**

- ★ a sexual health risk
- ★ who have recurrent or persistent vaginal discharge - where commoner causes have been excluded

***Use of the HVS becomes rare!***



You see you have written 'For triple swabs' here.....?

I am afraid we no longer use language like that in this practice.

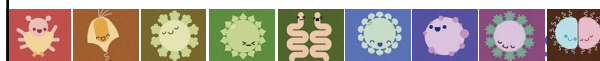
## Asymptomatic patients where STI is a possibility



- ★ Self-taken vulvo-vaginal swab
- ★ HIV (and syphilis)
- ★ Hepatitis B & C if risk group



- ★ First pass urine after no PU for  $\geq 1$  hr
- ★ HIV (and syphilis)
- ★ Hepatitis B & C if risk group



## Symptomatic patients where STI is a possibility



Same as for no symptoms but also:

- ★ Examine for warts, vesicles, ulcers, etc

Consider:

- ★ Ulcer swab if possible herpes, syphilis (don't forget Mpox in MSM)
- ★ High vaginal swab if concern about TV
- ★ Gonorrhoea culture if likely gonorrhoea



## Online testing - SHL

[www.shl.uk](http://www.shl.uk)



Asymptomatic patients > 16 years

Sent home sampling STI kit for free

***Send the link by Accurx!***



## Vaginal discharge top 3

### 1. Physiological

pH < 4.5

### 2. Candida

White curdy discharge  
Itch, irritation, soreness, redness

pH < 4.5

### 3. BV

Thin grey/white discharge  
Generally not sore  
Fishy/offensive odour

pH > 4.5

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- ★ **STI management**
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## Treatment

[www.bashh.org.uk](http://www.bashh.org.uk)

Treatment protocols evolve!  
Always look up!

- Chlamydia
- PID
- Herpes rescue packs

## Prevention

- Immunisation:
  - Hep B and Hep A
  - Mpox
  - HPV



- Condoms and lube



- Contraception



- PrEP



## Other tests?

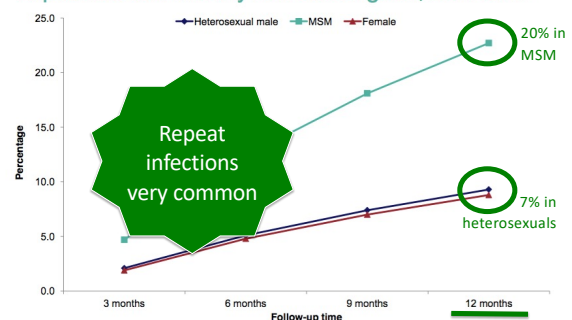
### Other infections?

Review tests needed: HIV? Chlamydia?

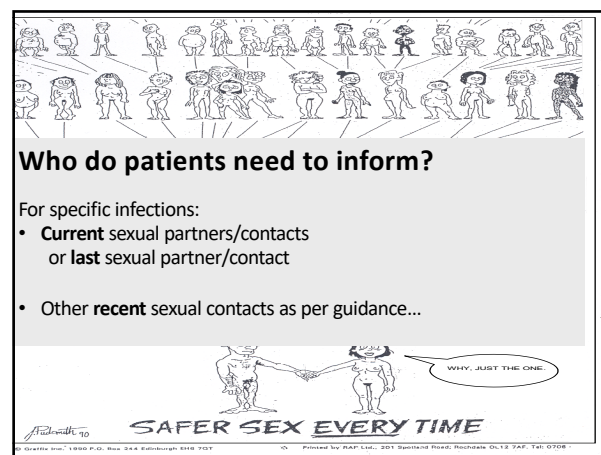
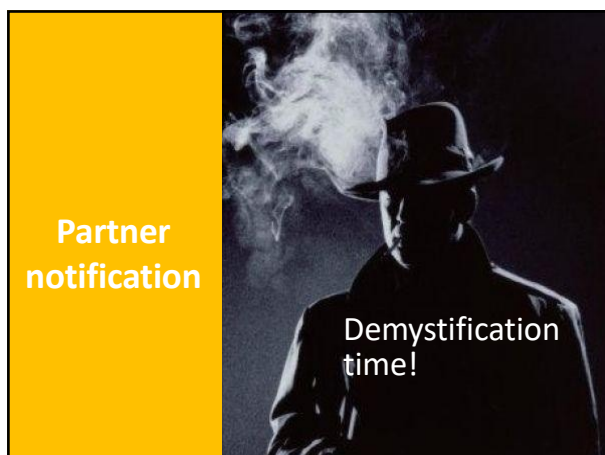
### Repeat tests?

- After window period?
- Possible antibiotic failure  
(NB Chlamydia Rx with erythromycin or TV)
- For possible non-compliance / re-infection risk

Repeat infection with any new STI: England, 2011-2015







| Partner Notification<br>Suggested 'look back' periods |                                 |
|---|---------------------------------|
| <b>Gonorrhoea</b>                                     |                                 |
| • Men with urethral symptoms                          | • 2 weeks prior to onset Sx     |
| • All others  | • 3 months                      |
| <b>Chlamydia</b>                                      |                                 |
| • Men with urethral symptoms                          | • 4 weeks prior to onset Sx     |
| • All others  | • 6 months                      |
| <b>PID and epididymo-orchitis</b>                     | As per infection detected OR 6m |
| <b>Trichomonas vaginalis</b>                          | 4 weeks prior to Sx onset       |
| <b>Mycoplasma genitalium</b>                          | Current partner                 |
| <b>HIV, Hepatitis B and C, Syphilis</b>               | Refer to GUM                    |
| <b>Genital warts (HPV), Genital herpes</b>            | None!                           |

## Referral

***Do it well:***  
Give the patient a letter to take

**Check they will go!  
Check they went!**

## Referral

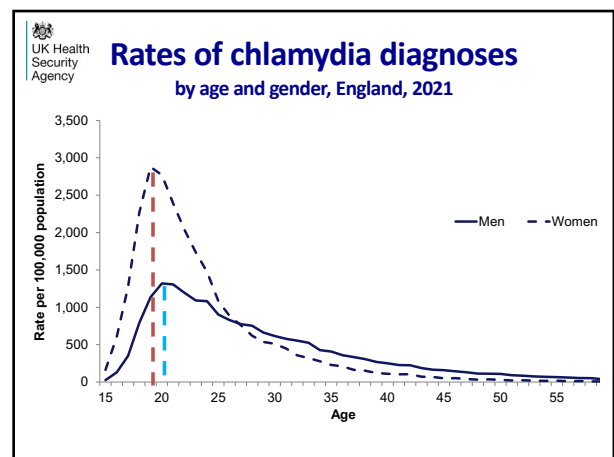
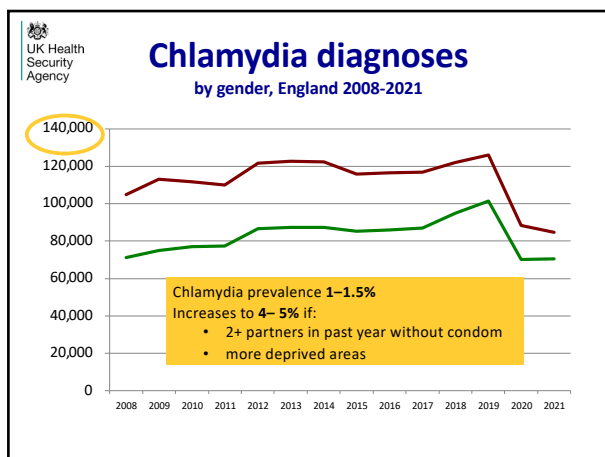
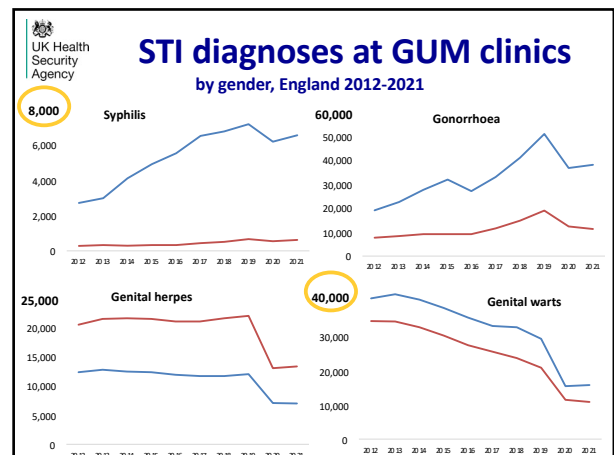
### Who should we refer?

- Management of new diagnoses:
  - HIV, HBV, Syphilis, Gonorrhoea
- Severe PID
- Suspect Mpox
- Suspect Mgen:
  - Severe or persistent PID
  - Cervicitis, urethritis, prostatitis, IMB, vaginal discharge
- Diagnostic uncertainty (Does that lump need biopsy? Gynae, dermatology, GUM?)
- Hard to treat TV or warts
- High sexual health risk esp for PrEP

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✦ Patterns of STI risk, including risk groups and risk behaviour and their relevance to clinical practice



### Chlamydia risk factors – risk vs scale

Chlamydia prevalence 1–1.5%  
Increases to 4–5% if:

- 2+ partners in past year without condom
- more deprived areas

However *most* of those with chlamydia had only had **one partner in the last 12 months** (largest group)

Sonnenberg et al, Lancet 2013

### How many partners have 16-24 year olds had in their lifetime?

**10 or more partners**  
20% men 16% women

Of these... only 66% been to GUM/SRH clinic in last FIVE years

**No partners**  
20% men 20% women

GPs see people from across the whole spectrum of risk

Natsal 2014

## Why is country of origin and ethnic origin important to clinicians?

Where are you or your family from?

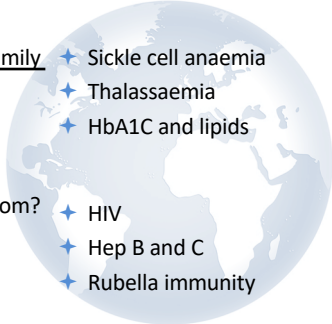
**Genetic factors**

- ★ Sickle cell anaemia
- ★ Thalassaemia
- ★ HbA1C and lipids

Which country are you from?

**Infections**

- ★ HIV
- ★ Hep B and C
- ★ Rubella immunity

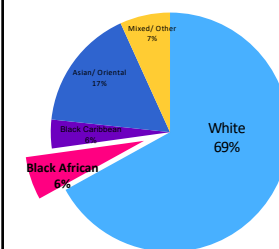


## Ethnicity of people living with HIV

UK 2019

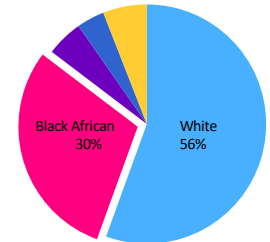
London ethnicity....

compared with those in HIV care



Public Health England

**Black Africans 6%**

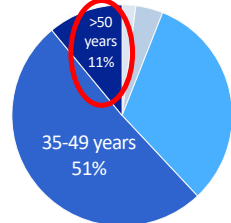


**Black Africans 30%**

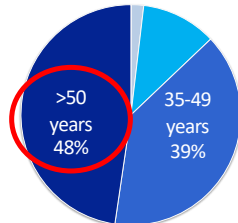
## Ages of people living with HIV

England 2001 and 2021

2001



2021



UK Health Security Agency

2021 National HIV surveillance data tables

## High risk areas for Hepatitis B & C



Islington Public Health

In the consultation...

**Knowledge of risk behaviour is more valuable than knowledge of risk group**

## Symptomatic patients where STI is a possibility



Same as for non-symptomatic but also:

+ Examine for sores, vesicles, ulcers, etc

How do we decide whether STI is a possibility?

Rapid risk assessment...

