

Protecting and improving the nation's health

# Variation in outcomes in sexual and reproductive health in England

A toolkit to explore inequalities at a local level

### Contents

1. Introduction	3
Why explore variation?	3
2. Variation and inequalities within sexual and reproductive health	4
Description of variation	4
Health inequalities	4
Variation and inequalities in sexual and reproductive health outcomes	6
3. Questions to ask about sexual and reproductive health to identify inequalities	17
4. Evaluating actions	31
5. How to use available data to explore the questions	

Note: This document was developed pre–coronavirus (COVID–19). As in other areas of health provision, the pandemic may have exacerbated pre–existing inequalities in terms of sexual health outcomes, including through the shift from face to face to remote service provision. Sexual Health services are continuing to adapt their service delivery models including increasing online provision. It is likely that COVID–19 will have an impact on trends in sexual health data. A number of resources have been developed to support local areas to explore the impact of changes to sexual and reproductive health service delivery – these can be found here. A surveillance report showing the impact of the COVID–19 pandemic and response on prevention, testing, diagnosis and care for sexually transmitted infections (STIs), human immunodeficiency virus (HIV) and hepatitis in England has also been published.

### **1. Introduction**

In most aspects of sexual and reproductive health variations in outcomes are evident between and within local areas and populations or communities. Some of these differences have a clear relationship with social and health inequalities; and may be impacted by differences in behaviour, social networks and risk exposures. Others may indicate geographic variation in local populations' demographics or in access to, and use of sexual and reproductive health services, or in the availability and provision of interventions.

The purpose of this toolkit is to use existing data about sexual and reproductive health indicators between and within local authority areas to understand where variation occurs, identify the principal causes and underlying factors and inform ways to target and reduce sexual and reproductive health inequality and improve outcomes.

### Why explore variation?

There are a number of reasons why this is important:

- many sexual and reproductive health indicators are deteriorating nationally a review and action at a local level is needed to halt or reverse the trend
- a good overall picture can mask inequalities within an area which need to be addressed
- to make more impact and guide best use of resources to improve outcomes
- to ensure that interventions do not widen existing inequalities in sexual and reproductive health
- it is good public health practice

This document is intended to be used by sexual health commissioners, public health teams and sexual health service providers. It is suggested that this would be most beneficial to complete collectively.

# 2. Variation and inequalities within sexual and reproductive health

### **Description of variation**

Healthcare can vary in different ways: in its quality, safety, equity of access and delivery, outcomes, the money spent, healthcare experiences and the types of service available. Not all variation is bad. Some variation is expected, often linked to variation in need, local burden of infection or user–preference. Variation can be an outcome of innovation, as new solutions and models are being introduced. That type of variation, which is expected and normal, is considered warranted. It can be described as differences in care provision that reflect factors such as user preferences, innovations in person–centred care and clinical responsiveness.

However, some variation cannot be explained by these factors – and is 'unwarranted'. Examples of causes of this type of variation are service under– or over– provision, failure to implement evidence based guidelines or poor access for service users because of travelling times, socioeconomic factors, unrecognised as well as unmet need, or poor health literacy leading to a decrease in access or quality of provision for service users. This can have negative impacts on the population as a whole and contribute to widening of existing inequalities.

This document considers variation at different levels:

- with—in area variation
- variation from the national average for England, and compared in context to Chartered Institute of Public Finance and Accountancy (CIPFA) neighbours
- variation between different population demographics, for example, by gender, age, ethnicity, sexual orientation, socioeconomic status

### Health inequalities

Health inequalities are unfair and avoidable differences in health across the population, and between different groups within society. Health inequalities arise because of the conditions in which we are born, grow, live, work and age. These conditions influence our opportunities for good health, and how we think, feel and act, and this shapes our mental health, physical health and wellbeing.

Health inequalities have been documented between population groups across at least 4 dimensions, as illustrated below. It is important to note that these are overlapping dimensions with people often falling into various combinations of these categories.

The diagram below shows overlapping dimensions of health inequalities: socio–economic deprivation, equality and diversity, inclusion health and geography.





Accessible source available at Health Inequalities: Place–based approaches for reducing inequalities. Public Health England, 2019

# Variation and inequalities in sexual and reproductive health outcomes

At a national level, it is known that there is variation in sexual and reproductive health outcomes across each of the dimensions of health inequalities. Inequalities in uptake of or access to interventions can make inequalities in ill health worse. Some parts of the population will be affected by more than one area of sexual and reproductive ill–health. Exploring the inequalities across the topic as a whole will identify these patterns in your local area, and can highlight the potential for interventions that can address multiple concerns. This section explains some of the variation and inequalities that exist for STIs, HIV, teenage pregnancy and abortion.

#### STIs

Sexually transmitted infections (STIs) are more likely to be diagnosed in young people, gay, bisexual and other men who have sex with men (MSM) and black and ethnic minorities.

#### Summary statistics from the national STI surveillance 2019

The national STI surveillance 2019 showed that:

- gay, bisexual and other men who have sex with men (MSM) are more likely to be diagnosed with bacterial STIs than other men
- the majority of syphilis and gonorrhoea diagnoses in men were in MSM, 81% of syphilis, 66% of gonorrhoea
- HIV–diagnosed MSM are three times more likely to be diagnosed with an acute bacterial STI than those that are HIV–negative or of unknown HIV status
- young people are more likely to be diagnosed with an STI:
  - among heterosexuals attending sexual health services, most chlamydia and gonorrhoea diagnoses were in people aged 15 to 24 years
  - among heterosexuals aged 15 to 24 years, men are three and a half and women seven times more likely to be diagnosed with an STI, than their counterparts aged 25 to 64 years
- Black Minority Ethnic (BME) populations are disproportionately affected by STIs:
  - the rate of gonorrhoea is three and a half times that of the general population
  - for trichomoniasis, the rate in BME people is nine times that of the general population

#### Figure 2. Infographic of summary statistics from the national STI surveillance 2019



When considering socio–economic status, rates of new STI diagnosis are shown to be consistently higher in more deprived populations (as measured by the Index of Multiple Deprivation [IMD]). The bar chart below shows that rates of chlamydia, anogenital warts, anogenital herpes, gonorrhoea and syphilis and all STIs are highest in most deprived areas and lowest in least deprived areas as measured using Index of Multiple Deprivation quintiles.



Figure 3. Rates of STI diagnoses by Index of Multiple Deprivation quintile: England 2019

Accessible source available at PHE Sexually transmitted infections in England, 2019 slideset

#### HIV

HIV new diagnosis numbers are declining in the UK, largely driven by a reduction in new HIV diagnoses among gay, bisexual and other men who have sex with men. In 2019, 41% of new diagnoses were among gay and bisexual men; 20% among heterosexual women; 18% among heterosexual men, and 3% among people who inject drugs. (HIV: annual data tables)

Late HIV diagnosis is defined as a CD4 count <350 cells per mm<sup>3</sup> within 3 months of diagnosis. People living with HIV who are diagnosed late have been unaware of their HIV infection on average for around 3 to 5 years, increasing the risk of onward transmission<sup>1</sup> and have a ten–fold greater risk of dying within a year compared to those diagnosed promptly<sup>2</sup>.

The bar chart below shows that there is inequality in late diagnosis of HIV. Higher proportions of late diagnoses are seen in women, older people, black ethnic minorities, heterosexual men and women and those living outside of London.

<sup>&</sup>lt;sup>1</sup> Lodi S and others (2011). 'Time from human immunodeficiency virus seroconversion to reaching CD4+ cell count thresholds <200, <350, and <500 Cells/cubic mm: assessment of need following changes in treatment guidelines'. Clinical Infectious Diseases 53(8): 817-25.

<sup>&</sup>lt;sup>2</sup> Croxford S and others (2017). 'Mortality and causes of death in people diagnosed with HIV in the era of highly active antiretroviral therapy compared with the general population: an analysis of a national observational cohort.' Lancet Public Health 2(1): e35-e46.





1 Includes people aged 15 and older

2 Other ethnic groups include: mixed and other ethnicity.

Accessible source available at HIV in the United Kingdom: 2020 slide set.

#### Under-18 conceptions

Teenage pregnancy is both a cause and consequence of health and education inequalities. Teenagers have the highest rate of unplanned pregnancy with disproportionately poor outcomes<sup>3</sup>. Recent data shows that babies born to mothers in England and Wales under 20 years had a 30% higher rate of stillbirth than average, and a 60% higher rate of infant mortality than average<sup>4</sup>. Rates of low birthweight in younger mothers were 30% higher than average, and this inequality is increasing<sup>5</sup>. Children born to teenage mothers have a 63% higher risk of living in poverty<sup>6</sup>. Mothers under 20 have a 30% higher risk of poor mental health 2 years after giving birth<sup>7</sup>. There is an eight–fold difference in the rate between local authorities and 60% of councils have at least one ward with a rate significantly higher than England, 45% have 2 or more. (Teenage Pregnancy Prevention Framework, PHE and LGA, 2018 (updated 2020))<sup>8</sup>.

<sup>4</sup> 'Childhood mortality in England and Wales, 2016.'

<sup>&</sup>lt;sup>3</sup> 'The prevalence of unplanned pregnancy and associated factors in Britain: findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3)'. Lancet. Wellings K and others. Vol 382. November 2013

<sup>&</sup>lt;sup>5</sup> 'Live births, stillbirths and linked infant deaths: birthweight by age of mother, numbers and rates, 2016.' ONS 2018.
<sup>6</sup> 'Child Poverty Strategy: 2014 to 2017.' HM Government. 2014.

<sup>&</sup>lt;sup>7</sup> 'Long-term consequences of teenage births for parents and their children. Teenage Pregnancy Unit research briefing.' Department of Health, 2014.

<sup>&</sup>lt;sup>8</sup> 'Teenage Pregnancy Prevention Framework, PHE and LGA, updated 2020'.

The graph below shows rates of teenage conception by Index of Multiple Deprivation, with highest rates of teenage conception in the most deprived decile areas.



#### Figure 5. Under 18s conception rate per 1,000 by deprivation decile

— England

Accessible source available at Sexual and reproductive health profiles



#### Figure 6. Maps of under 18s conception rate (per 1,000) and Index of Multiple Deprivation

Child poverty and unemployment are the 2 area deprivation indicators with the strongest influence on under–18 conception rates. At an individual level, the strongest associated risk factors for pregnancy before 18 are free school meals eligibility, persistent school absence by age 14, poorer than expected academic progress between ages 11 to 14, and being looked after or a care leaver. Other associated risk factors include first sex before 16, experience of sexual abuse or exploitation, alcohol, and experience of a previous pregnancy. Young women with lesbian or bisexual experience are also at increased risk of unplanned pregnancy. As with Adverse Childhood Experiences, young people who have experienced a number of these factors will be at significantly higher risk. The maps above show a comparison of under–18 conception rates and Index of Multiple Deprivation.

#### Abortions

Abortion rates vary by age. Abortion rates for those aged under 18 have declined over the last ten years in line with the successes in decreasing the rate of conceptions in this age group. The decline is particularly marked in the under-16 age group where the rates are less than a third of what they were in 2008. However, there is significant variation between local areas in the proportion of under-18 conceptions that end in abortion, ranging from 32% to over 70%. There is similar variation in the under-16s abortion proportion. This may reflect individual choice of young women, perhaps influenced by socio-economic factors, and/or differences in the ease of access to abortion services. Abortion rates have increased in the older age groups with the relative rate of increase being greatest in women over 35.





Accessible source available at Abortion Statistics, England and Wales: 2019 DHSC, 2020

Abortion rates increase as levels of deprivation increase. The graph below shows that in 2019, the rate in the most deprived decile (decile 1) was 26.1 per 1000. This is over twice the rate in the least deprived decile (decile 10) of 12.0 per 1000. The trend of abortion rates increasing as levels of deprivation increase remains consistent when abortion data is studied at both regional and national level.



Figure 8. Crude abortion rate, England, by IMD decile, 2019

#### Variation and scale

There is geographic variation for many aspects of sexual health. This is particularly evident for sexually transmitted infections. The 3 maps and plots below present the same data on new STI diagnoses rates in England. At the regional level (map A), the overall rates of STI diagnoses in London are more than twice those of any other region in the country, which appear relatively similar in contrast with rates below the average for England. At County and Unitary authority level (maps B and C) there is a 12–fold difference in STI diagnoses rate between the highest and lowest areas in the country, with areas with higher rates outside of London being visible. The shading of map C shows the between–area variation across the country in more detail.

A toolkit to explore inequalities in sexual and reproductive health at a local level





Accessible source available at Sexual and reproductive health profiles

A good overall average can hide areas of inequality and poor sexual health. Similar differences can be seen within local authority areas.





The diagram above is illustrating within area inequality and between area variability in STI diagnosis rates.

- Quartile 1 = lower within area inequality in STI rate lower overall rate of STIs
- Quartile 2 = lower within area inequality in STI rate higher overall rate of STIs
- Quartile 3 = higher within area inequality in STI rate lower overall rate of STIs
- Quartile 4 = higher within area inequality in STI rate higher overall rate of STIs

Therefore, this suggests that for areas in quartiles 2, 3 and 4 there is further work to do either in terms of within area inequality or overall high levels of STIs.

Health inequalities are not caused by one single issue, but a complex mix of environmental and social factors which play out in a local area, or place – this means that local areas have a critical role to play in reducing health inequalities. The publication 'Place–based approaches for reducing health inequalities'<sup>9</sup> sets out main questions for local areas to consider. These questions have been used to inform a range of questions that can be asked in relation to sexual health.

<sup>&</sup>lt;sup>9</sup> 'Health Inequalities: Place-based approaches for reducing inequalities.' Public Health England, 2019.





Accessible source available at Health Inequalities: Place-based approaches for reducing inequalities. Public Health England, 2019.

# 3. Questions to ask about sexual and reproductive health to identify inequalities

Outcomes	Questions	
All sexually active adults and young people are free from STIs	1.1 Is your population using services at the level you would expect? Are you testing the right people? (a) STI testing and (b) STI diagnosis	
	<b>1.2</b> Chlamydia is the most common STI – what are your local patterns?	
	<b>1.3</b> High rates of gonorrhoea and syphilis in a population reflect high levels of risky sexual behaviour – what does your data tell you?	
	<b>1.4</b> How effectively is HIV being detected and managed in your local population?	
All sexually active adults and young people have planned pregnancies if and when they want; and have good reproductive health	2.1 England has higher teenage pregnancy rates than most similar countries, what are your local patterns?	
	2.2 Is there good access to contraception?	
	2.3 Are abortions easily accessible for those that choose them?	
All young people and most at–risk or vulnerable populations are supported to	3.1 Do all young people have access to high quality relationships and sex education (RSE) through education settings?	
have choice and control over their sexual health	3.2 Is there a strategic approach to reducing the risk of exploitation in young people (encompassing Child Sexual Exploitation (CSE))?	
	3.3 Are sexual health services being targeted to or used by most at risk or vulnerable groups?	
	<b>3.4</b> Are sexual health services contributing to local work to address sexual violence?	
	<b>3.5</b> Is there a local approach to campaigns and communication based on the main local issues?	

Work through the flowcharts for each question using the highlighted data sources. The final section of this document explains how to access the data.

#### Accessible text description of the following flowcharts are available here.

#### 1.1a Is your population using services at the level you would expect?



### 1.1b Is your population using services at the level you would expect? Are you testing the right people?

This needs to be interpreted in conjunction with the testing rate flowchart at 1.1a



**Further action:** If higher STI rates exist in particular population groups or geographies, consider if targeted local interventions are required.

#### 1.2 Chlamydia is the most common STI – what are your local patterns?



**Further action:** Review local delivery using the Chlamydia Care Pathway and identify key local actions – for further details and support contact: <u>ncspteam@phe.gov.uk</u>

### 1.3 High rates of gonorrhoea and syphilis in a population reflect high levels of risky sexual behaviour – what does your data tell you?



<sup>1</sup> Syphilis: Public Health England action plan

#### 1.4 How effectively is HIV being addressed in your local population?

Is your <b>HIV diagnosed</b> <b>prevalence rate</b> above 2 per 1,000 15-59 year olds? or Is your <b>late diagnosis</b> figure higher than • the England average • your CIPFA neighbours average • 50%	Use SRH profiles	No to all Continue with current delivery Review annually
Yes to any		
Explo	re	
Review HIV prevalence by MSOA identify within area variation	to	Use SPLASH
Review data on those receiving HIV-related care by • ethnicity • probable route of infection		Use SPLASH
Review late diagnosis data for • MSM • women • men		Use SRH profiles
Review HIV testing coverage data • MSM • women • men	for	Use SPLASH
Review repeat testing in MSM data		Use al data from sexual health service
Note: Point of care testing may be this is not included in the above da local data.		
<b>Further action:</b> Based on the review of prevalence and HIV testing identify if there are actions that can be taken in relation to HIV testing within commissioned services. Use the information from the data review to inform your		
prevention strategy Work with local partners to ensure <b>testing guidelines</b> <sup>1</sup> are being imp Consider late diagnosis reviews to and inform work to improve future	lemented identify n	in your area.

<sup>1</sup> NICE HIV testing guidelines

### 2.1 England has higher teenage pregnancy rates than similar western European countries, what are your local patterns?



gaps and action required.

<sup>1</sup> Teenage pregnancy prevention framework

<sup>2</sup> Teenage Pregnancy Prevention Self–Assessment Checklist

#### 2.2 Is there good access to contraception?



#### 2.3 Are abortions easily accessible for those that choose them?



## Outcome 3: All young people and most at-risk or vulnerable populations are supported to have choice and control over their sexual health

Note: This section is not presented in the same way as the previous 2 because nationally accessible data is not available. Instead, main questions to consider and potential data sources have been suggested.

### 3.1 Do all young people have access to high quality Relationship and Sex Education (RSE) through education settings?

#### Rationale

All young people need comprehensive RSE and easy access to services to develop healthy, consensual relationships, prevent unplanned pregnancy and protect their sexual health. Education settings are main in providing RSE. From September 2020 relationships education in primary schools, RSE in secondary schools, and health education in both primary and secondary will be statutory in all schools. This including academies, free schools, faith schools and the independent sector. Statutory guidance was published in 2019.

#### Main questions

- 1. Is there a lead for RSE within the local authority area?
- 2. What support is being offered to local schools to prepare and implement statutory RSE?
- 3. What support is being offered to Alternative Provision settings to prepare and implement statutory RSE?
- 4. The statutory guidance requires all schools to ensure pupils know about local sources of confidential sexual and reproductive health advice. How is information about local services being provided to schools?

#### Potential data sources

The Local Education Authority will hold details of all schools.

Some LEAs conduct health behaviour surveys with children and young people.

Ofsted are incorporating the new statutory requirements into their assessment framework.

### 3.2 Is there a strategic approach to reducing the risk of exploitation in young people (encompassing Child Sexual Exploitation (CSE))?

#### Rationale

Local authorities have a statutory safeguarding duty; and Public Health has a critical role to play in reducing children and young people's risk to exploitation and intervening when it does happen. See Child sexual exploitation: prevention and intervention for further guidance.

#### Main questions

- 1. Is there a system-wide approach to exploitation, CSE and safeguarding; is the local authority (LA) Public Health team linked in with the local structures?
- 2. Is local data and intelligence used to understand the local picture and inform further work?
- 3. Is there a holistic approach to prevention, including universal approaches such as addressing CSE as part of RSE, as well as targeted preventative measures where there is increased risk?
- 4. Is exploitation, CSE and safeguarding built into contracts for all public health commissioned services (not just sexual and reproductive health) and LA commissioned services for children and young people?
- 5. Is Spotting the Signs used within the Sexual Health service?

A CSE self-assessment tool for local authority use can be found on the national Sexual Health, Reproductive Health and HIV Knowledge Hub ( $\rightarrow$ Library  $\rightarrow$ Inequalities and Inclusion  $\rightarrow$ Children and Young People).

#### Potential data sources

Local Safeguarding Boards may hold some data.

Some Joint Strategic Needs Assessments may include exploitation and CSE.

### 3.3 Are sexual health services being targeted to or used by most at risk or vulnerable groups?

#### Rationale

There is a need to consider main groups from an inclusion health perspective; failure to do so could lead to a widening of inequalities. The main groups should be identified based on local knowledge but may include: looked after children, care leavers, substance misuse service users, people with serious mental illness, people with learning disabilities, sex workers, victims of sexual violence, victims of domestic abuse, migrants and refugees, people who are homeless or in insecure housing, people in the criminal justice system or prisons.

#### Main questions

- 1. Are front-line staff from service providers that work with most at risk or vulnerable groups aware of local sexual and reproductive health services?
- 2. Are front–line staff from service providers that work with most at risk or vulnerable groups supported to take a Making Every Contact Count (MECC) approach, and are they accessing local sexual health training?
- 3. Are people from most at risk or vulnerable groups accessing local sexual health services? Is there a proactive system in place to reach the most vulnerable populations, for example, outreach services?
- 4. Is access or delivery supported through partner services, for example, provision of postnatal contraception at time of delivery through maternity services for vulnerable women?

#### Potential data sources

Some Joint Strategic Needs Assessments may include information most at risk or vulnerable groups.

Local sexual health providers may collect data on service use by most at risk or vulnerable groups.

Information about attendees of local sexual health training.

#### 3.4 Are sexual health services contributing to local work to address sexual violence?

#### Rationale

Sexual violence is used to describe any kind of unwanted sexual act or activity including rape, sexual assault, sexual abuse, sexual harassment and female genital mutilation (FGM). Sexual violence is a serious public health and human rights problem with both short– and long–term consequences on the physical, mental, sexual and reproductive health of victims.

#### Main questions

- 1. Does the service have a system in place for the identification of service users affected by violence? And is there access to Domestic Violence Advisors (DVAs)?
- 2. Are there pathways in place for referral to and from local Sexual Assault Referral Centres (SARCs)?
- 3. Have sexual health (SH) staff received adequate training around FGM and understand the mandatory reporting requirements for those under 18?
- 4. Are pathways for onward referral for women that have experienced FGM in place and known by SH staff?
- 5. Is sufficient FGM information available within sexual health clinics and on their websites to support affected women?

FGM guidance from DHSC and from RCN.

#### Potential data sources

Violent crime: sexual offences per 1,000 population – see SRH Profile.

Sexual health services report attendances related to sexual assault to GUMCAD – see HIV/STI portal.

FGM enhanced dataset reports (sexual health services are excluded from mandatory reporting).

Local data may be available from Regional SARC Commissioning Boards.

### 3.5 Is there a local approach to campaigns and communication based on the main local issues?

#### Rationale

Public health information and campaigns aim to improve knowledge and awareness; and influence behaviour change.

#### Main questions

- 1. Is information promoting good sexual health and providing details of local sexual health services widely available to the local population?
- 2. Is there a local communications or campaign strategy or plan tailored to local needs?

#### Potential data sources

Data on use of local sexual health service websites or social media channels.

Local survey data may be available.

### 4. Evaluating actions

The process set out in this document aims to help local areas review local data and identify where further work and action is required to address inequalities. Following this process, actions should be implemented and then evaluated to determine whether inequalities have been reduced. A useful guide to evaluating sexual health, reproductive health and HIV services can be found here.

To assist in evaluating whether local services or interventions have helped reduce health inequalities, it is recommended that output and outcome measures include indicators that specifically relate to health inequalities. A helpful framework for this is PROGRESS<sup>10</sup>, which provides a framework to guide data extraction, and a tool to guide equity analyses to ensure explicit consideration of equity. The acronym that stands for:

- P Place of residence
- R Race or ethnicity, culture and language
- O Occupation
- G Gender and sex
- R Religion
- E Education
- S Socioeconomic status
- S Social capital

Another useful tool is the Health Equity Assessment Tool (HEAT). This is a framework consisting of a series of questions and prompts, designed to support professionals across the public health system and wider health economy systematically address health inequalities and equity in their work programmes, services or business planning cycles.

<sup>&</sup>lt;sup>10</sup> 'Applying an equity lens to interventions: using PROGRESS ensures consideration of socially stratifying factors to illuminate inequities in health.' Jennifer O'Neill and others, Journal of Clinical Epidemiology 67 (2014) 56-64.

# 5. How to use available data to explore the questions

Information on how to use the data sources highlighted in this document is described below. Additional information about data can be found in Sexual health, reproductive health and HIV in England: A guide to local and national data (Revised December 2018). A wide range of additional information can be found on the national Sexual Health, Reproductive Health and HIV Knowledge Hub including examples of good practice from around the country.

#### Sexual and Reproductive Health Profiles (on PHE's Fingertips Tool)

- Watch a video explaining how to use the Fingertips tool
- · Visit the sexual and reproductive health profiles

Tip: Start by setting the Area type, Areas grouped by and Benchmark settings



## What are the main causes of sexual and reproductive ill-health in my population?



For an overview use the sexual and reproductive health profiles and examine the area profile for your area, starting with the main indicators. This will identify outcomes and measures where your area is worse than or better than the average for England using the most recent data available and will also show the overall amount of variation for each measure.

## How does my area compare against national averages, targets or with similar areas over time?

#### Comparison between areas

The SRH profiles allows comparison of areas grouped in various ways or for the whole of England:

- geographically compare with areas nearby
- CIPFA Nearest neighbours compare with statistically similar areas using CIPFA method
- Office of National Statistics (ONS) classifications compare with statistically similar areas using ONS classification
- deprivation deciles compare with areas within the same IMD decile (local authority level)

Differences can be explored using the different views of the data.

In each view the Red Amber Green<sup>11</sup> (RAG) shading compares areas to:

- the average for England
- the average for the specified area grouping or
- to a particular benchmark or target if there is one

The RAG shading is re–calculated when the view is toggled to compare against different averages or benchmarks.

<sup>&</sup>lt;sup>11</sup> Blue-orange-blue shading is sometimes used to show difference between areas when there isn't a better or worse direction to the data.

## Views to compare localities with each other and against an average or benchmark



The **compare areas view** presents the latest data for each indicator and presents these for all the localities within the group specified in 'areas grouped by'. The view can be switched to show all areas within England

Tip: Sorting the display by **value** arranges the data in order and gives a clear comparison between different areas and against the average value for England and the average value for the group specified in 'areas grouped by'.



#### Consider

Explore the indicators identified as of interest in the area profiles:

- 1. Is the indicator in your area significantly different (better or worse) to the average for England, or against the indicator benchmark if there is one?
- 2. How does it compare to other localities in the same deprivation decile? In the same CIPFA nearest neighbours grouping?



The **map view** can be switched to display values for the whole of England or selectively show those areas within the group specified in 'areas grouped by'. Changing the benchmark between England and the group average will zoom the map out and in respectively.

#### Consider

- 1. Is the indicator in your area significantly different (better or worse) to the average for England, or the average for all areas within the specified group?
- 2. Is the local trend following the same pattern as the average trend?
- 3. Is the trend improving or worsening if so, can this be explained by other measures on the profiles. For example:
  - Does an increase in STI diagnosis rate align with an increased testing rate, an increased test positivity or both? (and vice versa)?
  - Does an increase in chlamydia detection align with an increase in the proportion of 15 to 24 year olds screened?
  - Is a change in the trend for all STIs largely explained by the change in a particular STI?

## Is there evidence of inequalities within my area, geographically or for any particular subgroups?

Use the Summary profile of local authority sexual health (SPLASH) reports on the sexual and reproductive health profiles to look at your local area compared with other areas (Upper Tier: County and UA level) and within area variation. And breakdowns published on the HIV/STI data exchange<sup>12</sup> to examine in more detail within–area data.

Report	SPLASH
Full name	Summary profiles of local authority sexual health
	Data source is the SRH profiles
Format	<ul> <li>Selected main indicators presented as Graphs, tables and maps showing:</li> <li>trends over time</li> <li>comparisons with other areas and benchmark</li> <li>Within area breakdowns – maps narrative text featuring statistics specific to the local authority</li> </ul>
Geography	Upper Tier Local Authority (County and UA) ~150
Location	Published on the SRH profiles

#### Using and interpreting maps to explore within area variation

The SPLASH report shows within area variation of: new STI diagnoses (excluding chlamydia in under 25s) chlamydia detection rate in under 25s and HIV diagnosed prevalence by MSOA<sup>13</sup> and teenage conception rate by electoral ward<sup>14</sup> within each Local Authority area.

Tips: Look carefully at the map title – the rates shown in the maps use different denominators, by age and sex depending on what is being shown in the map. For example, STI maps show the rate for the population aged 16 to 54, while teenage conception maps show the rate for females aged 15 to 17 in the area.

Think about the areas with higher rates – do they have higher incidence of infections or teenage pregnancy, or do they have a small population. For example, the central business district of a town or city, an industrial estate or a very rural area.

<sup>&</sup>lt;sup>12</sup> Previously known as the HIV and STI web portal

<sup>&</sup>lt;sup>13</sup> Middle Super Output Areas – defined by the ONS. There are approximately 7,000 of these, with a population range of 5,000 to 15,000 (2,000 to 6,000 households)

<sup>&</sup>lt;sup>14</sup> Electoral wards – may use ward boundaries at a fixed date (statistical wards). Approximately 8,800 of these, with a population range of 100 to 30,000. Average 5,500

#### Examining data by deprivation status – national level



The **inequalities view** shows the general picture of inequalities for any measure or indicator.

Tip: selecting a view of the data by 'District and UA' rather than 'County and UA' gives a more precise measure.

Latest Values: shows the most recent data for any measure by deprivation decile.

#### Consider

- 1. Is there a linear relationship between the indicator and deprivation?
- 2. How strong is that relationship?
- 3. Is there a big range between the most and lease deprived decile?

Trends: shows the trend for a measure over time, split by deprivation deciles.

#### Consider

- 1. Does the pattern of inequality persist over time?
- 2. Are things getting better or worse in general?
- 3. Is the inequality widening or narrowing?

#### Indices of Deprivation 2019 local authority maps and data

These local authority maps have been produced by the Ministry of Housing, Communities and Local Government in collaboration with the University of Sheffield. There is one map for each of England's 317 local authority areas. Each map uses the index of multiple deprivation 2019 to illustrate deprivation at lower-layer super output area level within each area. Each map also displays the number of lower-layer super output areas each area has in each decile of deprivation.

- English indices of deprivation 2019: mapping resources
- English indices of deprivation 2019

### About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-leading science, research, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

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