Conducting Health Equity Data Analysis

A guide for those wanting to improve equity

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Introduction

Measurement and the use of both qualitative and quantitative data a key aspect of quality improvement (QI) . It helps understand the issue we are tackling as well as know if the changes we are making have resulted in an improvement. You can see where the use of data fits within the ELFT sequence of improvement below.

Identifying the Quality issue	Understanding the problem	Developing a strategy and change ideas	Testing	Implementation and sustaining the gains

| Data to help us identify what the problem we are tacking is, the size of it and the potential nature of the issue	Developing a family of measures (outcome, process and balancing)	Data over time to help us know if changes have resulted in an improvement and if those improvements are sustained

This guide is intended to support those undertaking work around improving equity for those communities we serve using quality improvement methods. In it you will find resources around

- Key questions to consider?
- What data might be helpful?
- Where you can access data to support improving equity
- How you might analyse your data

1. What is Health Equity?

Health Equity is the absence of unfair, avoidable, or remediable differences among groups of people. Groups of people can be defined socially, economically, demographically, geographically or by other aspects of inequity.

Equity is different to equality, in that equality focuses on treating everyone the same, whereas, health equity focuses on treating everyone **fairly**, to ensure disadvantaged groups are not put at further disadvantage.
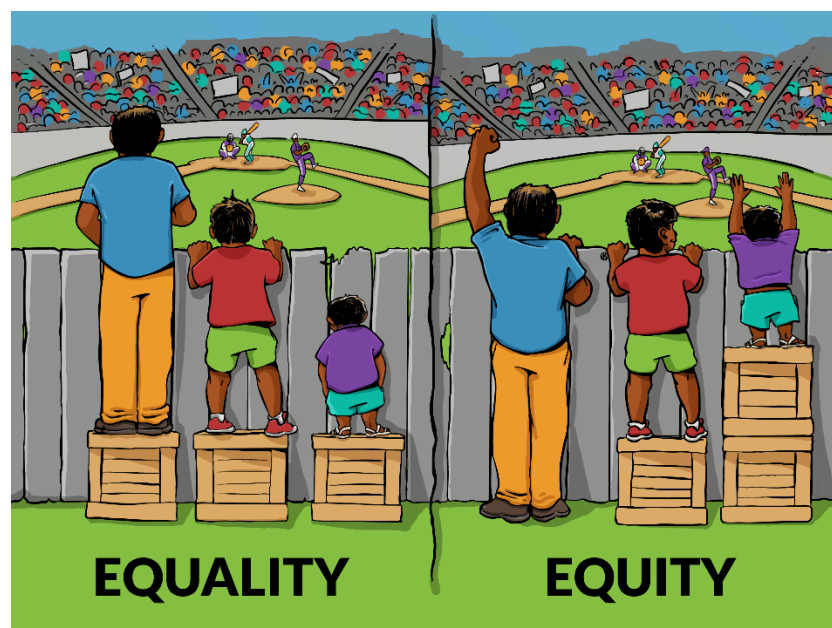
Reproduced from Interaction Institute for Social Change | Artist: Angus Maguire

2. How can we use data to understand health equity?

Health equity data analysis is a process by which data is gathered and explored to identify the differences between population groups. These differences can be understood in terms of access, experience and outcomes of patients using our services:

- *Access*: who accesses our services? Does it reflect the need in the local population?
- *Experience*: do certain groups discontinue their treatment or have worse experiences?
- *Outcomes*: do certain groups do less well, for example have increased readmissions?

Sometimes, a helpful way to consider the problem being tackled, and identify the data required, is to frame it as a series of questions, for example:

- *What does service and wider population data tell you about who is impacted by the issue you are tackling?*
- *What do people providing care or support tell you about the extent of the issue at hand?*
- *What can those in the population experiencing the inequity tell us? What is not working well and what would make it better?*

3. What data do I need to gather?

a) Data about your service and the people that use it

You can look at your service data by aspects of inequity, for example:

Protected characteristics outlined in the Equality Act 2010:	Social disadvantages:
- Age - Sex - Race - Religion or Belief - Disability - Sexual Orientation - Gender Reassignment - Pregnancy and Maternity - Marriage and Civil Partnership	- Postcode and Deprivation - Employment status - Benefits status - Housing status - Smoking status

b) Local Population Data

To understand if there are inequities in your service, you should compare the health data of your service users with that of the local population. It is important to consider what size of population data you will compare your data set to, for example, you could compare your service user data set with:

- Data within your service, for example, comparing waiting list data with referral data
- Borough data
- City data
- National data

By understanding the demographics of our local population, we can better comprehend how certain characteristics and wider factors might contribute to health inequities. Below you can find some examples of where you might find some of this data
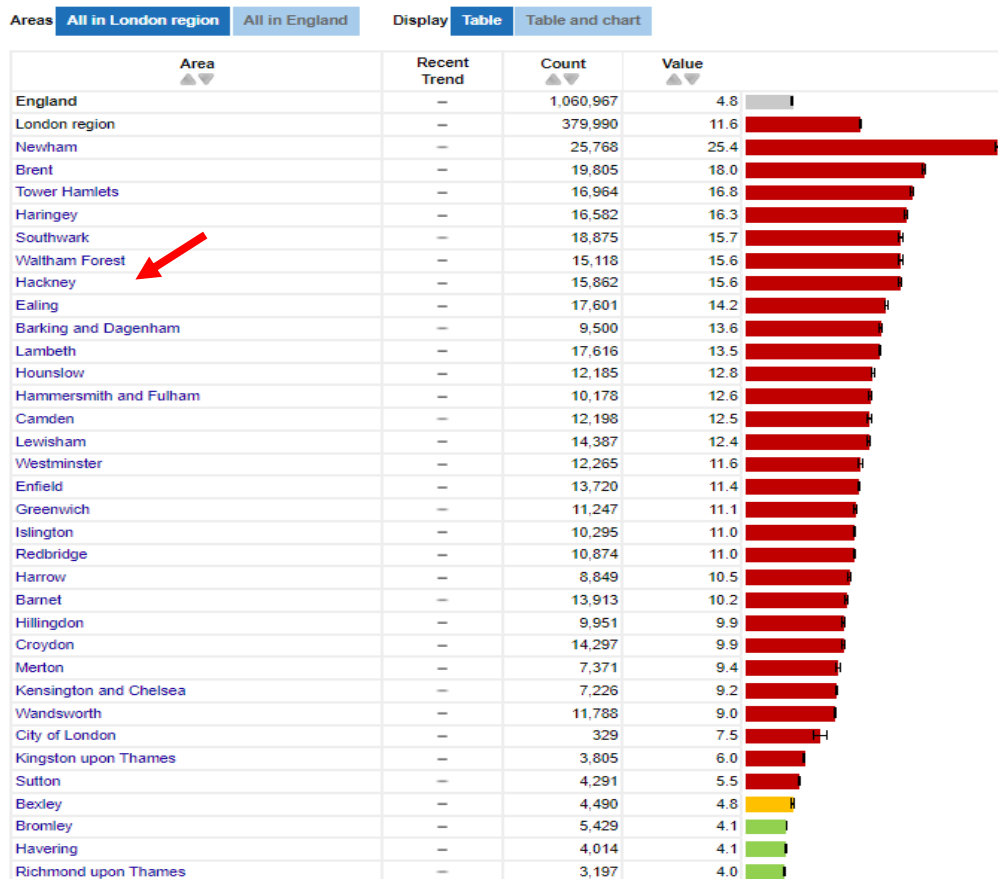
An example comparing waiting list data with referral data in one service

In Tower Hamlets Community Mental Health Team (CMHT), there is greater proportion of service users on the long waiters list who live in the second most deprived decile than might be expected by referral volume. This could suggest that those living in the second most deprived area are not receiving a fair level of treatment, however, further investigation would need to be carried out to determining the factors underlying this pattern.

Deprivation decile of service users referred to Tower Hamlets Community Mental Health Team compared with those waiting longest for first assessment

1.6%	38.1%	33.7%	14.3%	4.1%	3.2%	3.8%	0.3%	1.0%	0.0%

Deprivation Decile

◇ Long Waiters   ▨ Range of Referrals (Apr 2020 – March 2022)
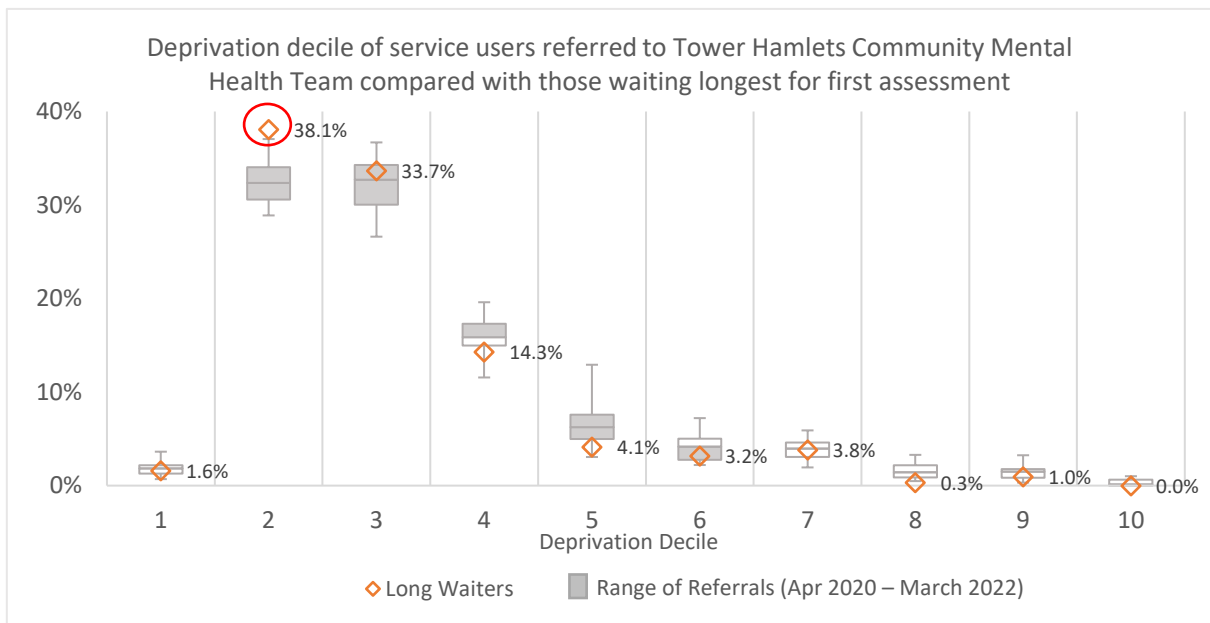
An example comparing borough data, city data and national data

In Hackney, 15.6% of households are overcrowded (have fewer bedrooms than the standard requirement). This is compared with 11.6 % in London and 4.8% in England. This is important as housing is a key social determinant for both mental and physical health (i.e. good quality, stable and affordable housing in safe and healthy neighbourhoods leads to better health outcomes).

Areas **All in London region** | All in England   Display **Table** | Table and chart

Area	Recent Trend	Count	Value
England	—	1,060,967	4.8
London region	—	379,990	11.6
Newham	—	25,768	25.4
Brent	—	19,805	18.0
Tower Hamlets	—	16,964	16.8
Haringey	—	16,582	16.3
Southwark	—	18,875	15.7
Waltham Forest	—	15,118	15.6
Hackney	—	15,862	15.6
Ealing	—	17,601	14.2
Barking and Dagenham	—	9,500	13.6
Lambeth	—	17,616	13.5
Hounslow	—	12,185	12.8
Hammersmith and Fulham	—	10,178	12.6
Camden	—	12,198	12.5
Lewisham	—	14,387	12.4
Westminster	—	12,265	11.6
Enfield	—	13,720	11.4
Greenwich	—	11,247	11.1
Islington	—	10,295	11.0
Redbridge	—	10,874	11.0
Harrow	—	8,849	10.5
Barnet	—	13,913	10.2
Hillingdon	—	9,951	9.9
Croydon	—	14,297	9.9
Merton	—	7,371	9.4
Kensington and Chelsea	—	7,226	9.2
Wandsworth	—	11,788	9.0
City of London	—	329	7.5
Kingston upon Thames	—	3,805	6.0
Sutton	—	4,291	5.5
Bexley	—	4,490	4.8
Bromley	—	5,429	4.1
Havering	—	4,014	4.1
Richmond upon Thames	—	3,197	4.0

Source: Census

The comparison group in this case is: **households in other London boroughs, the London average, and England average.**

c) Specific Health Topic Data

By researching current literature or national reports, we can understand if certain lifestyle factors are more likely to be associated with certain groups of people. For example, there is a wide body of evidence that suggests those from certain ethnic groups were more impacted by COVID-19.

4. Where can I find the data I need?

Data can be found from multiple sources, here are some examples:

Service User Health Data	- *Power BI* - *Contact the Informatics Team* - *Raise a report request on ServiceNow* - *Conversations with, or feedback from, service users and/or staff*
Local Population Data	- *The Public Health England website 'Fingertips' is a large public health data collection, containing many data sets on the health of our local communities.* - *The Office for National Statistics (ONS) is a rich source of data on a range of topics, including statistics on your local area and information about people and population health* - *The Quality and Outcomes Framework (QOF) provides data on the care quality achievement rates of individual GP practices, as well as the prevalence of certain diseases in your area.* - *The Index of Multiple Deprivation (IMD) data packs provide data and resources on relative deprivation levels across the UK. You may need to register to see this data.* - *The London Datastore is a free and open data-sharing portal, containing over 700 datasets concerning London, including health and community.* - *The Local Government Association provide a portal with data and reports covering a number of themes, including health and social care, housing, schools and education, advice and benefits.*
Specific Health Topic Data	*Here are some example of websites containing data on specific topics:* - *Obesity* - *Smoking* - *Inequalities*

5. I have my data...how do I analyse it?

Before analysing your data, it is important to understand the type of data you are working with. Broadly, data can be split into 2 types: *Quantitative data* and *Qualitative data.*

Quantitative Data	*Qualitative data are numbers, rates, and percentages. They tell us "the who, what, where, when, how many, how much or how often". Quantitative data can be used to describe the **size** of a health inequity.*
Qualitative Data	*Qualitative data are descriptions, observations and perceptions; data that cannot easily be expressed as numbers. They tell us "the how and the why", giving quantitative data real life meaning and narrative.*

Once you understand what type of data you are collecting, it is important to compose a set of questions that can help you frame your analysis, for example:

- *What am I trying to show?*
- *What is the best way to tell the story of the data?*
- *Who is the comparison group? Is it service users from other boroughs? Is it people of the same age/gender in the general population within the borough? Is it people within the region (London/East of England), or the population in England?*
- *What type of graph or table will be best to display this data? Or would a written piece of work concerning the findings be easier to understand?*

As with all improvement work, we are looking at variation within our system. In the case of equity this might be variation in access, outcomes and experiences of certain groups compared to others. The use of data over time displayed as run charts or control charts are simple tools that can help us visualise and understand variation. For example, if you were working on increasing access to a service for certain religious groups, you might plot the % of a caseload that identify as that religious group overtime on a run or control chart. This

would help give you a baseline to work from and a simple measure you could use as part of you work going forward. You can see an example of a control chart below

Total ELFT Pressure Ulcers (Unstageable, Suspected deep tissue injury, and Category 2, 3, & 4)
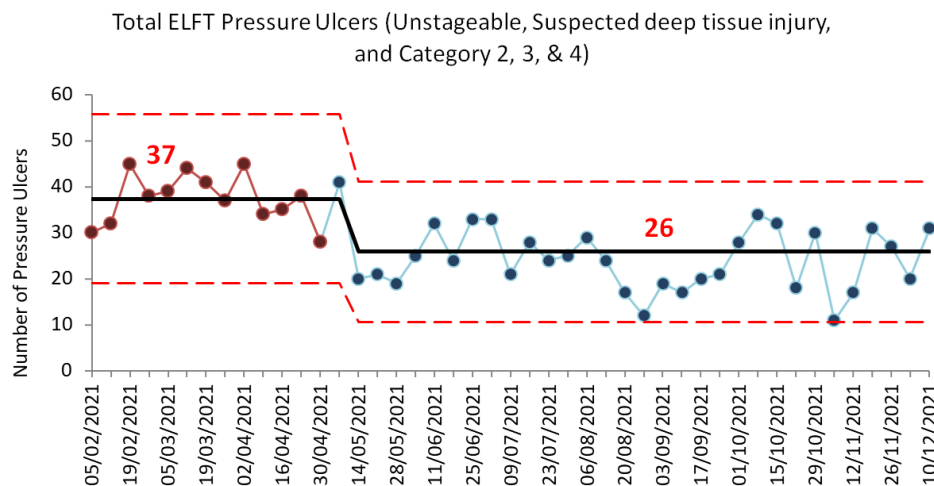
You can find more about data for improvement here or sign up to learn more about QI via a training programme here

Tools and resources to help you analyse your data:

1. PHE Fingertips – Local Health Profiles

The PHE health profiles provide a consistent, concise, comparable overview of the population's health indicators. The pdf profiles and raw data in Excel can be downloaded from: https://fingertips.phe.org.uk/profile/health-profiles/.

The user guide video is available at:

https://www.youtube.com/watch?v=j_8WJUDldb8&feature=youtu.be
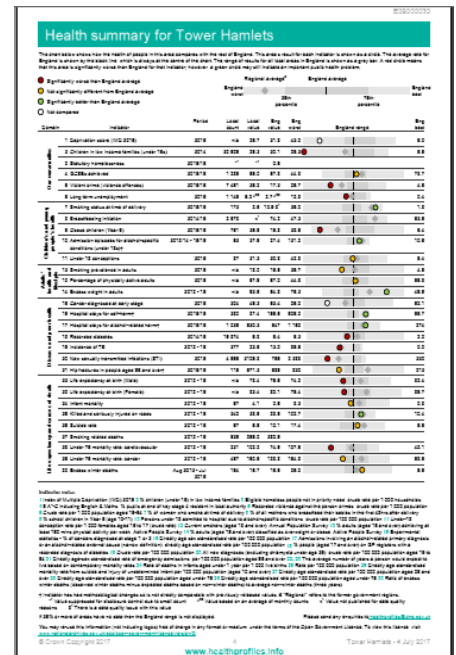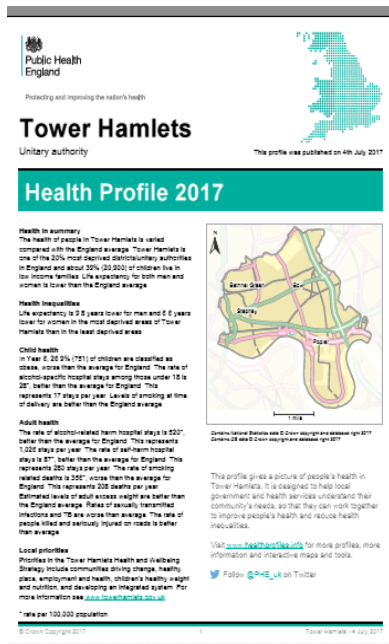
The PHE fingertips website allows the search of many indicators relevant to various public health areas. You can do this through using the search bar at the top right or by going through one of the 'profiles'. https://fingertips.phe.org.uk/

Public Health Profiles

All Public Health England profiles are found at https://fingertips.phe.org.uk/

The Perinatal Mental Health profile is found in the 'Mental Health Dementia and Neurology' section.

Navigating PHE Fingertips, using the perinatal mental health theme as an example:

Direct Link:
http://fingertips.phe.org.uk/profile-group/mental-health/profile/perinatal-mental-health

Or google 'perinatal profile'

Once on the profiles, there is an introduction page with key links to the data, indicator list and updates:

See at a glance how areas compared to their selected group and selected benchmark:

2. Health Equity Assessment Tool (HEAT)

HEAT is a practical framework, produced by the UK Government and Health Education England, that enables professionals to systematically identify and address health inequalities and inequities in their services. The resource consists of:

- HEAT executive summary
- HEAT tool – full version (intended for a more in-depth assessment)
- HEAT tool – simplified version (intended for a rapid assessment)
- Case studies demonstrating the practical application of the tool.

The HEAT tool can be found [here](#). There is also an [e-learning module](#) that can equip you with essential skills for undertaking a HEAT assessment, this takes around 20 minutes to complete.

3. Power BI

ELFT's Power BI Apps hold a variety of data covering the following services:
- Community Mental Health (Adult CMHTs, PCNs, Early Intervention, Employment Services)
- Community Health Services (Bedfordshire Community Health)
- CAMHS
- SCYPS
- Perinatal Services
- Inpatient MH (Adult Inpatient)
- Forensic Analytics (Forensic Inpatient)

See information under '4. The Informatics Department' in this section to find out how to gain access to the PowerBI Apps.

The left-hand side of each app has a range of pages containing data that you may want to use when investigating equity in your service. The pages are a mix of data

summarised into graphs and 'raw' data in tables. There is also a handy 'How to Guide' and a 'How to Video Guide' that can help you navigate the Apps, filter the information, and export data.
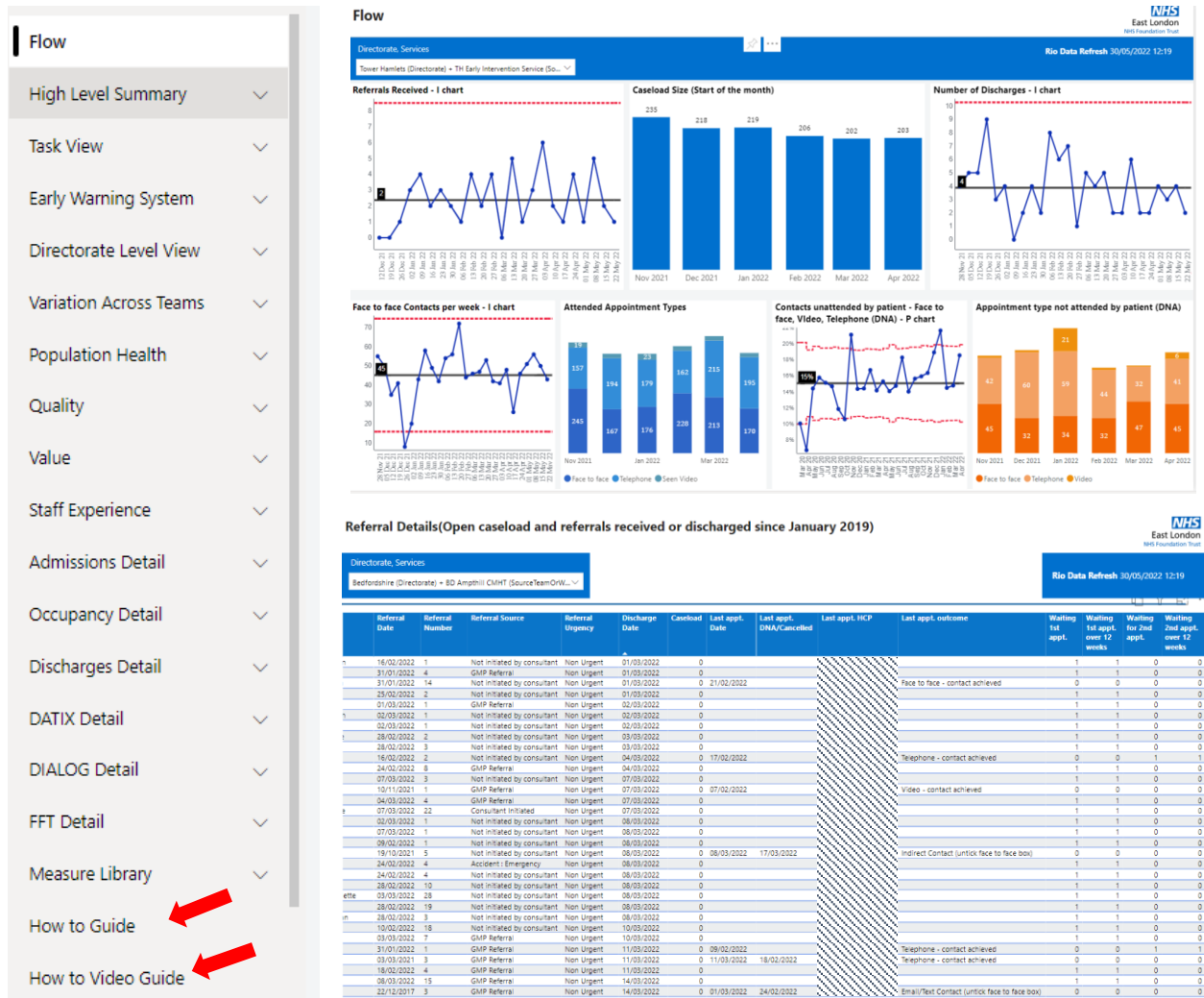
4. The Informatics Department

The Informatics Department can visit your team virtually or face to face to help you learn how to access information about your service, and how you might analyse this. If you would like support, you can complete this form.

If you need data that is not contained in PowerBI, find the Informatics homepage on the Intranet under 'Teams that support me' and request a report to be sent to you by accessing the 'IT Service Desk', 'Raising a request' and choosing the 'Report Request' option under 'Informatics'. This is also where you can request access to Power BI Apps, under 'Access to Power BI Analytics'

5. Excel

Excel has a range of features that can help you to understand your data. For example, there are a range of functions that can help you to analyse your data, as well as a range of graphs that you can use to present it. If you are unfamiliar with Excel, we suggest you google 'excel for beginners', for handy guides and videos.

An example using the RAG (Red, Amber, Green) Rating

Premature mortality in adults with severe mental illness (SMI) is significantly worse in Luton compared with the England average. The rate is 121.7 per 100,000 in Luton compared with 103.6 per 100,000. The red rating tells us that this is significantly worse. An amber rating would tell us that there was no significant difference with the England average and a green rating that the rates were significantly better than the England average.

Indicator	Period		England	East of England region	Bedford	Cambridgeshire	Central Bedfordshire	Essex	Hertfordshire	Luton	Norfolk	Peterborough	Southend-on-Sea	Suffolk	Thurrock
Premature mortality in adults with severe mental illness (SMI) New data	2018 - 20	◀▶	103.6	89.8	111.0	91.7	81.1	96.3	76.7	121.7	83.6	126.8	115.1	71.1	184.1
Premature mortality due to cancer in adults with severe mental illness (SMI) New data	2018 - 20	◀▶	20.2	17.7	23.4	18.5	18.0	19.8	14.5	20.8	14.3	31.9	18.7	11.7	50.8
Premature mortality due to cardiovascular diseases in adults with severe mental illness (SMI) New data	2018 - 20	◀▶	18.9	16.3	14.9	14.7	13.2	17.9	14.1	25.7	14.2	23.8	21.4	12.7	43.2

Source: NHS Digital Mental Health Services

An example of Geographical comparison
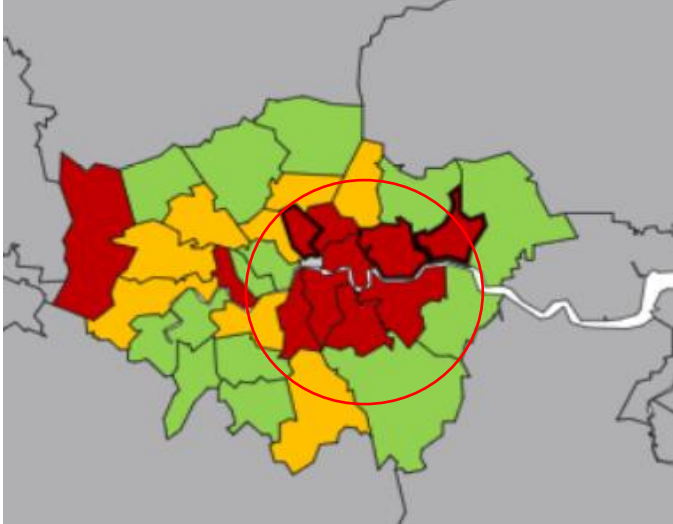
This map shows the rate of premature mortality in people with Severe Mental Illness (SMI) per 100,000 across London.

It shows that areas including Tower Hamlets, Newham and Hackney are significantly worse than the England average.

Source: NHS Digital Mental Health Services Data Set

6. Some things to consider

1. Not all equity-related characteristics about a patient are collected.

2. Your analysis will depend hugely on what data is available, and it is important to understand from the outset what is feasible and practical within the timeframe.

3. Consider the date that the data collected and published. How relevant is data if it is from a few years ago (e.g. census data is only collected every 10 years). This is particularly important in a 'post-pandemic' world, where the NHS came under unprecedented pressure that shaped the services we see today.

4. Data may not always be 'complete', in the sense that the information is collected for some service-users, but not others. Depending on the problem you are trying to tackle, you will have to decide whether there are sufficient records to produce a meaningful output.

5. The source of data may be primary or secondary. For example, service data is a primary source, but some data on Public Health Fingertips or London Datastore will be secondary (come from other sources).

6. When combining geographies, for instance looking across the entirety of ELFT, consider that some areas may contribute a much larger proportion of service users and therefore mask key differences that could be seen when looking at the data at a smaller geographical level, for instance by a single borough.

Next Steps and support

Once you have identified inequities, the next steps will involve considering why the inequities exist and considering solutions to reduce the inequity. This will likely involve working with service users and staff, i.e. using qualitative data. Monitoring and evaluating inequities is a

continuous process and shouldn't end after your analysis, your project could result in changes in practice or implementation of new ways of working that could help reduce inequities.

If you would like support in better understanding inequities and public health then please contact: Angela.Bartley@nhs.net

If you would like support in accessing data from the trust then please informatics via this form

If you would like to know more about Quality Improvement, then please contact the QI inbox here