



**System P**

Community and Mental Health Services



# Complex Lives Patient Cohort: NHS Liverpool CCG

**A preventative, predictive, precise approach to population, patient and person in a joined-up intelligence led system**

*Enabling us to programme equity, rather than tackle inequality*

## Welcome to System P

System P is the whole system approach to addressing multiagency, multisector challenges that negatively impact population health and will deliver transformational change in service provision through collaborative working.

System P is a Cheshire & Merseyside ICS funded programme, which commenced in September 2021. This initial phase will run through to the end of March 2023.

We have the opportunity to form virtual networks based on a common purpose rather than an oppositional view. In doing this we can change outcomes for individuals and communities.

System P uses the Bridges to Health segmentation methodology, which has been endorsed by NHS England. Segmentation aims to categorise the population according to health status, health care needs and priorities. This methodology identifies groups of people who share characteristics that influence the way they interact with health and care services.

Our initial focus in this first phase of System P, is around the Complex Lives and Frailty & Dementia segments. Insight packs will be available for all 9 Places across Cheshire & Merseyside for both segment areas.

Please do not hesitate to contact the Programme Director, Andrea Astbury or Project Support Officer, Shahina Rashid on the below email addresses, for further help and support:

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# Data Sharing Agreements

Population Health Data Sharing Agreements (DSAs) need to be signed by each GP practice to allow System P to access data for that practice area.

Those CCG areas which have a high percentage return of DSAs will produce reliable Insight Packs for the area. Conversely, those areas which have a low sign-up need to be interpreted with greater consideration and some caution.

The total return rate of signed DSAs as of 8 April 2022 for NHS Liverpool CCG is 95%.

## Practice Sign Up

### Practices with a signed Data Sharing Agreement

N82001 THE MARGARET THOMPSON MED CENTRE  
 N82002 YEW TREE CENTRE  
 N82003 DOVECOT HEALTH CENTRE  
 N82004 GARSTON FAMILY HEALTH CENTRE  
 N82009 GRASSENDALE MEDICAL CENTRE  
 N82011 PRIORY MEDICAL CENTRE  
 N82014 LANCE LANE MEDICAL CENTRE  
 N82018 ELLERGREEN MEDICAL CENTRE  
 N82019 LANGBANK MEDICAL CENTRE  
 N82022 EDGE HILL HEALTH CENTRE  
 N82024 WEST DERBY MEDICAL CENTRE  
 N82026 PENNY LANE SURGERY  
 N82033 DINGLE PARK PRACTICE  
 N82034 THE VILLAGE SURGERY  
 N82035 MATHER AVENUE SURGERY  
 N82036 NETHERLEY HEALTH CENTRE  
 N82037 WESTMORELAND GP CENTRE  
 N82039 STORRSDALE MEDICAL CENTRE  
 N82041 OAK VALE MEDICAL CENTRE  
 N82046 SEFTON PARK MEDICAL CENTRE  
 N82048 WALTON MEDICAL CENTRE  
 N82049 WESTMINSTER MEDICAL CENTRE  
 N82050 GATEACRE MEDICAL CENTRE  
 N82052 TOWNSEND MEDICAL CENTRE  
 N82053 AINTREE PARK GROUP PRACTICE  
 N82054 ABERCROMBY FAMILY PRACTICE  
 N82058 ROCK COURT SURGERY  
 N82059 GREENBANK DRIVE SURGERY  
 N82062 FULWOOD GREEN MEDICAL CTR

N82065 EARLE ROAD MEDICAL CENTRE  
 N82066 WOOLTON HOUSE MEDICAL CTR  
 N82067 DR A GUPTA BENIM MEDICAL CENTRE  
 N82070 THE ELMS MEDICAL CENTRE  
 N82073 THE ASH SURGERY  
 N82074 OLD SWAN HEALTH CENTRE  
 N82076 BROWNLOW HEALTH @ PRINCES PARK  
 N82077 BOUSFIELD SURGERY - DR SHAH  
 N82078 BOUSFIELD - ROBERTS  
 N82079 GREENBANK ROAD SURGERY  
 N82081 ISLINGTON HOUSE MEDICAL CENTRE  
 N82082 ST. JAMES' HEALTH CENTRE  
 N82083 JUBILEE MEDICAL CENTRE  
 N82084 GATEACRE BROW SURGERY  
 N82086 ABINGDON FAMILY HEALTH CARE CENTRE  
 N82089 PICTON GREEN  
 N82090 GREEN LANE MEDICAL CENTRE  
 N82091 GP PRACTICE RIVERSIDE (DR JUDE)  
 N82092 THE VALLEY MEDICAL CENTRE  
 N82093 DERBY LANE MEDICAL CENTRE  
 N82094 BELLE VALE HEALTH CENTRE  
 N82097 THE GREY ROAD SURGERY  
 N82099 MERE LANE GROUP PRACTICE  
 N82101 KIRKDALE MEDICAL CENTRE  
 N82103 ANFIELD GROUP PRACTICE  
 N82104 STONECROFT MEDICAL CENTRE  
 N82106 THE VILLAGE MEDICAL CTRE  
 N82107 EDGE HILL HEALTH @ MOSSLEY HILL SURGERY  
 N82108 RUTHERFORD MEDICAL CENTRE  
 N82109 SPEKE HC - DR THAKUR

N82110 LONG LANE  
 N82113 FAIRFIELD MEDICAL CENTRE  
 N82115 VAUXHALL HEALTH CENTRE  
 N82116 HILLFOOT HEALTH  
 N82117 BROWNLOW GROUP PRACTICE  
 N82617 BROWNLOW AT MARYBONE  
 N82633 CALVARY HEALTH CENTRE  
 N82641 SANDRINGHAM MEDICAL CENTRE  
 N82645 BROWNLOW HEALTH AT KENSINGTON  
 N82646 DR JUDE'S PRACTICE - RIVERSIDE  
 N82648 POULTER ROAD MEDICAL CENTRE  
 N82650 SPEKE HC - DR SINGH & DR BICHA  
 N82651 STANLEY MEDICAL CENTRE  
 N82655 MOSS WAY  
 N82662 DUNSTAN VILLAGE GROUP PRACTICE  
 N82663 HORNSPIT MEDICAL CENTRE  
 N82664 ROCKY LANE MEDICAL CENTRE  
 N82668 WALTON VILLAGE MEDICAL CENTRE  
 N82669 GREAT HOMER STREET MEDICAL CENTRE  
 N82670 PARK VIEW  
 N82671 BIGHAM ROAD MEDICAL CENTRE  
 N82676 FIR TREE  
 N82678 STOPGATE LANE MEDICAL CTR  
 Y00110 WEST SPEKE HEALTH CENTRE

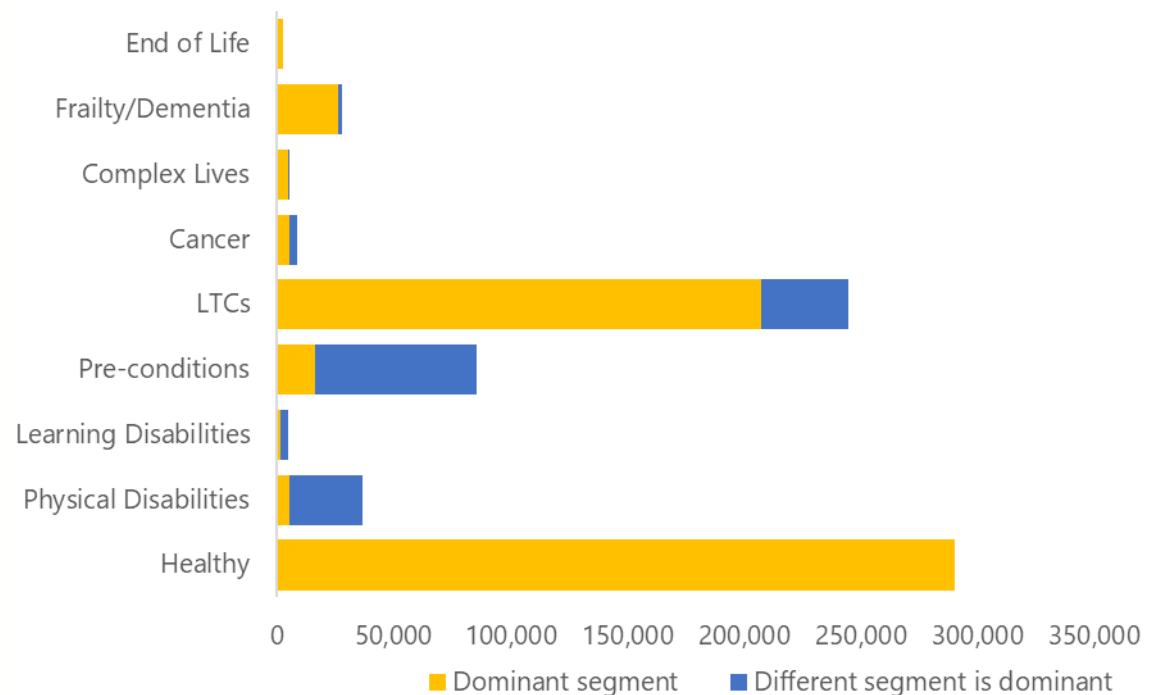
### Practices without a signed Data Sharing Agreement

Y03097 ROPEWALKS GEN. PRACTICE  
 Y03101 DEYSBROOK LANE M.C  
 N82087 GILLMOSS MEDICAL CENTRE  
 N82095 ALBION SURGERY

# All Segments

Segmentation methodology comprises nine different segments. Individuals may belong to one segment or more, excepting the healthy group who by definition belong to that group alone. Where individuals belong to more than one segment it is possible to assign a dominant segment but in this analysis all people in Complex Lives are included, whether this is their dominant segment or not.

For the population (based on signed DSAs) the number of people in each segment is shown and is split by whether this is the dominant segment or not.



# How are the Complex Lives segment defined

People are defined as belonging to the Complex Lives if they have:



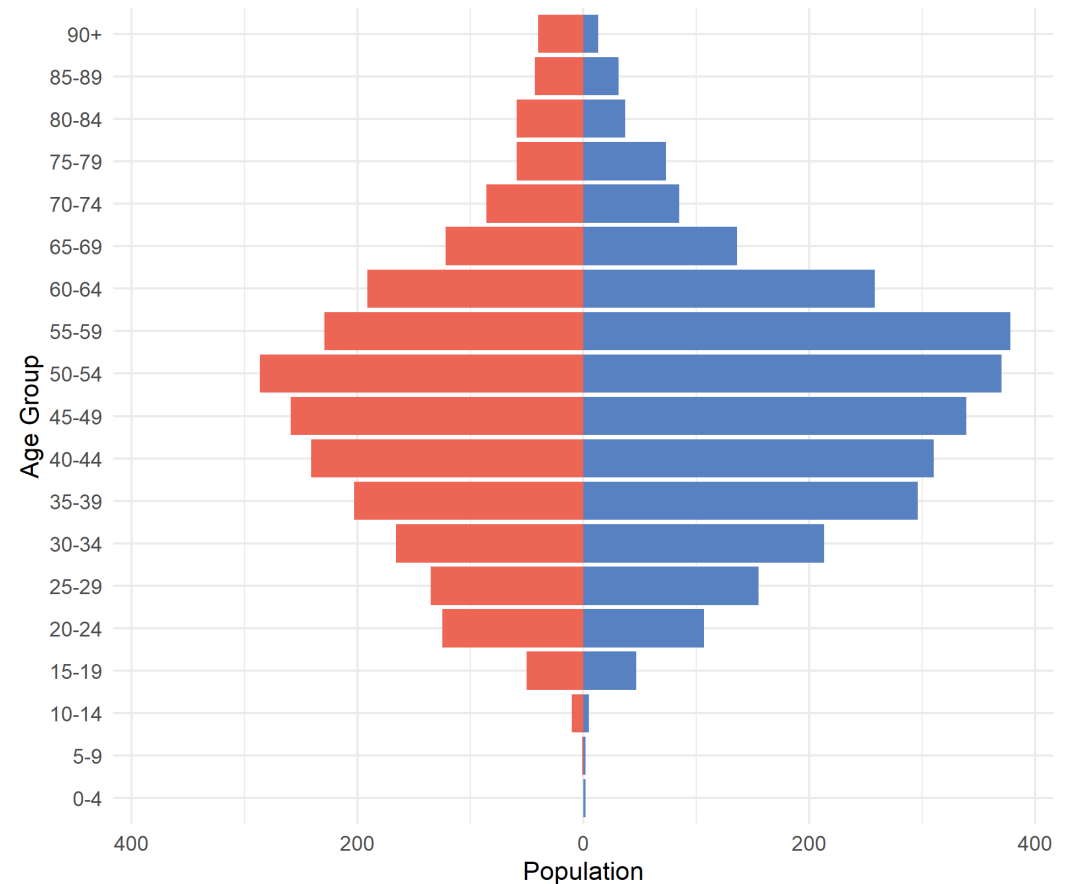
In NHS Liverpool CCG 5,163 individuals (0.9% of the population) were identified as belonging to the Complex Lives segment. In this pack we describe the characteristics of people in this segment, before moving on to describe their other healthcare issues and how they use services.

Through existing data it is only possible to detect small amounts of those who have disclosed domestic abuse or who have a history of being looked after.

# Patient Characteristics – Age and Gender

For the Complex Lives segment the mean average age of these individuals is 49 (interquartile range from 37 to 59).

Gender splits within the segment are 55% male and 45% female.

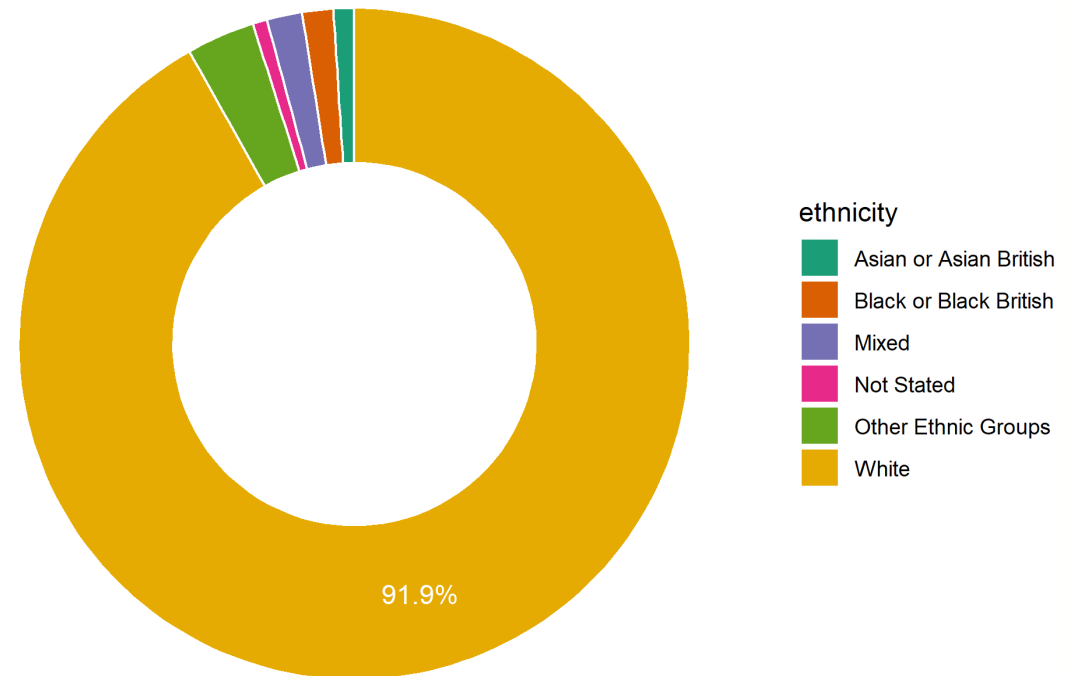


## Patient Characteristics - Ethnicity

92% of people in the Complex Lives segment class their ethnicity as White.

The remaining 8% class themselves as one of the ethnic minority groups.

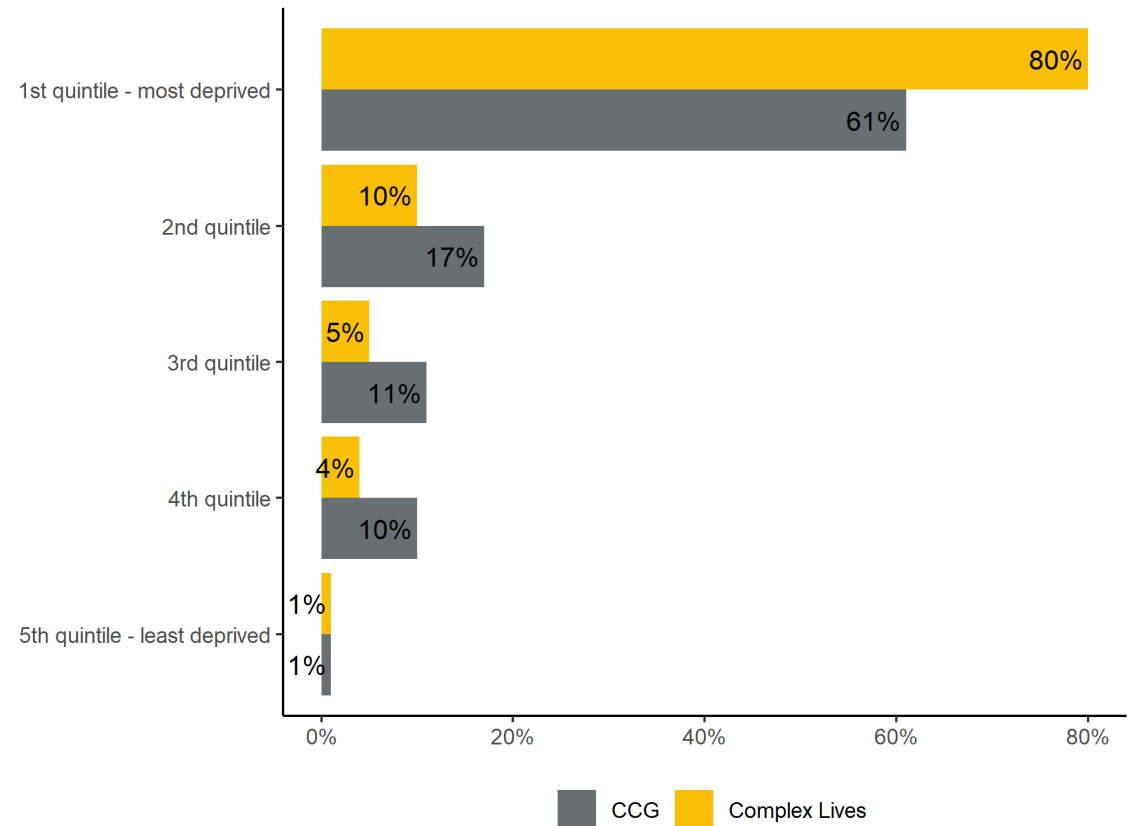
A small number did not state their ethnicity.





# Patient Characteristics - Deprivation

Those with Complex Lives are more likely to reside in areas of higher deprivation. 80% of the segment live in the most deprived quintile.



This analysis excludes a small number of people for whom no deprivation was recorded. CCG figures based on practices with signed DSA

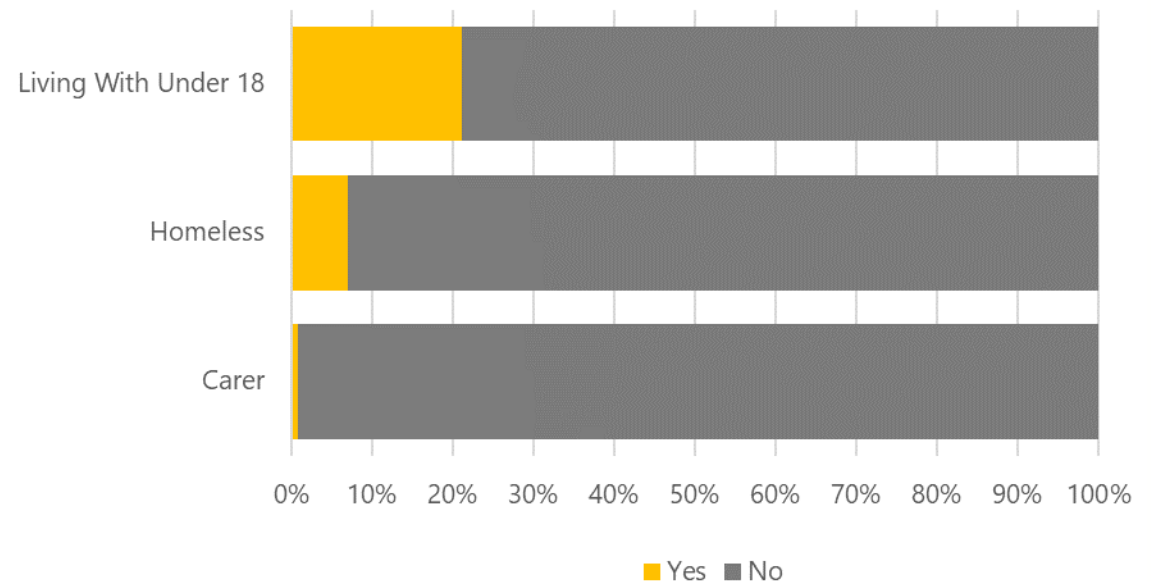
# Patient Characteristics - Living Arrangements

Those in the Complex Lives segment are found to be living with, on average, 1.6 other people. Therefore, beyond the Complex Lives individuals already identified, an additional estimated 8,407 people are also affected by Complex Lives. A number of these will be children.

For the Complex Lives segment 1,017 people (21%) are identified as living in a household with someone under 18.

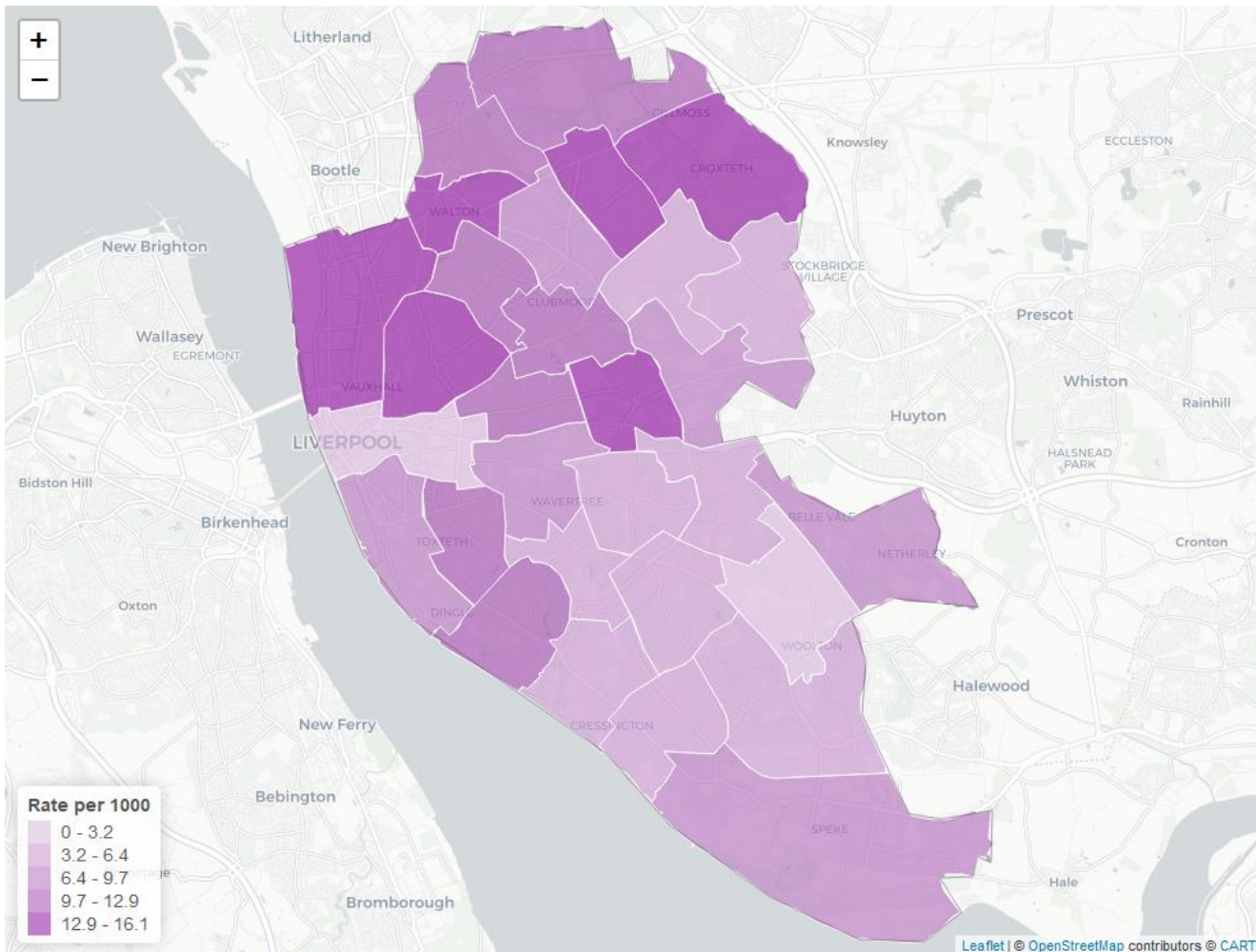
7% in the segment have experienced homelessness in the last 2 years and 1% have caring responsibilities.

40 people were found with a status of asylum seeker.



## Patient Characteristics - Geography

The map shows, for wards within the CCG, the rate of Complex Lives individuals per 1,000 population.



Areas with some of the highest density for Complex Lives are:

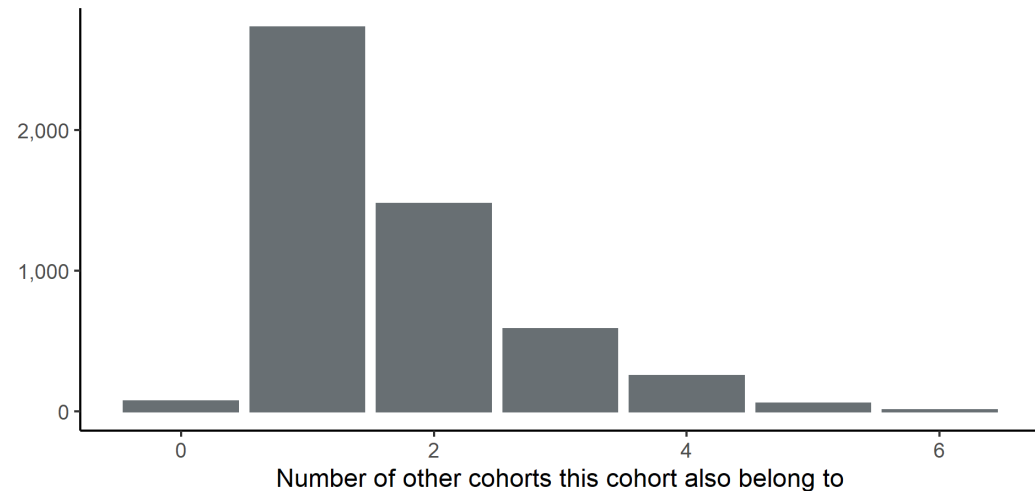
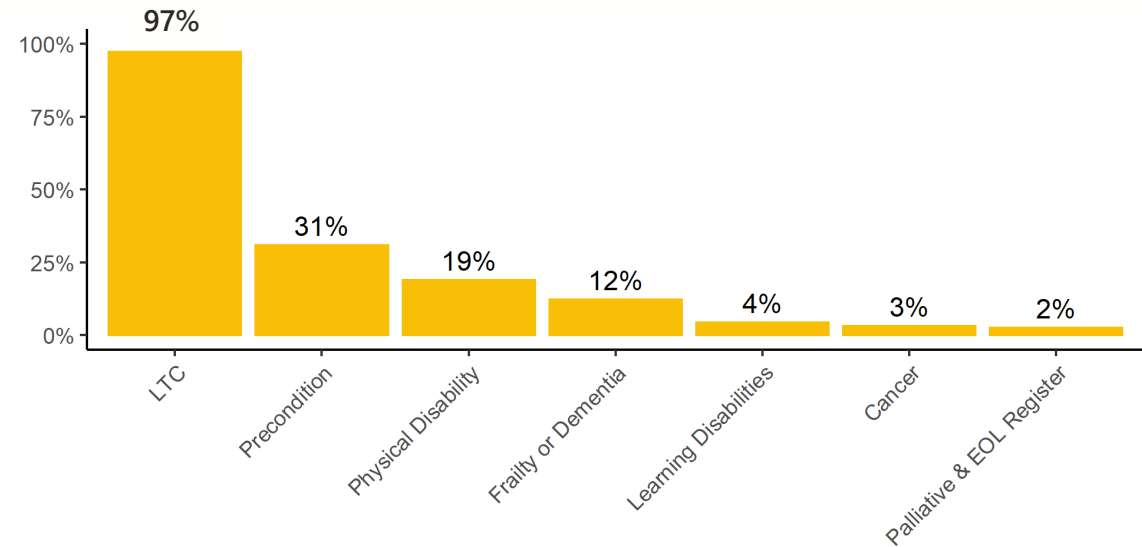
- Everton
- Norris Green
- Kirkdale

## Health Care Conditions - Other segments

Those in the Complex Lives segment also fall into other, sometimes multiple other, segments.

By considering individual segments it can be seen that a significant number in Complex Lives are also living with a Long term condition.

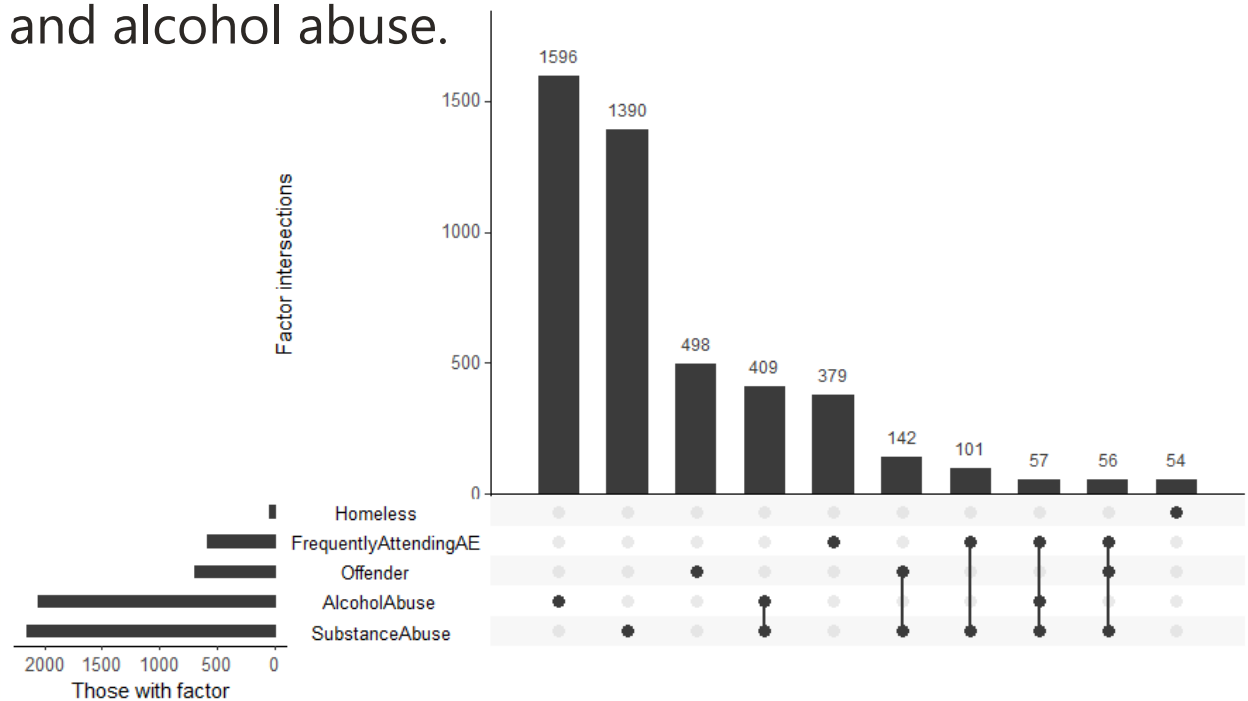
On average, those in the segment fall into an additional 1.7 segments.



# Patient Characteristics - Factors

The definition for a individual to be assigned to the Complex Lives segment relates to certain factors about that person. For those in the Complex Lives segment the largest factors are substance and alcohol abuse.

The 'Those with factor' bars represent all those in the segment with those factors. The 'Factor intersection' represents the combination of factors and the number of individuals with those combinations.

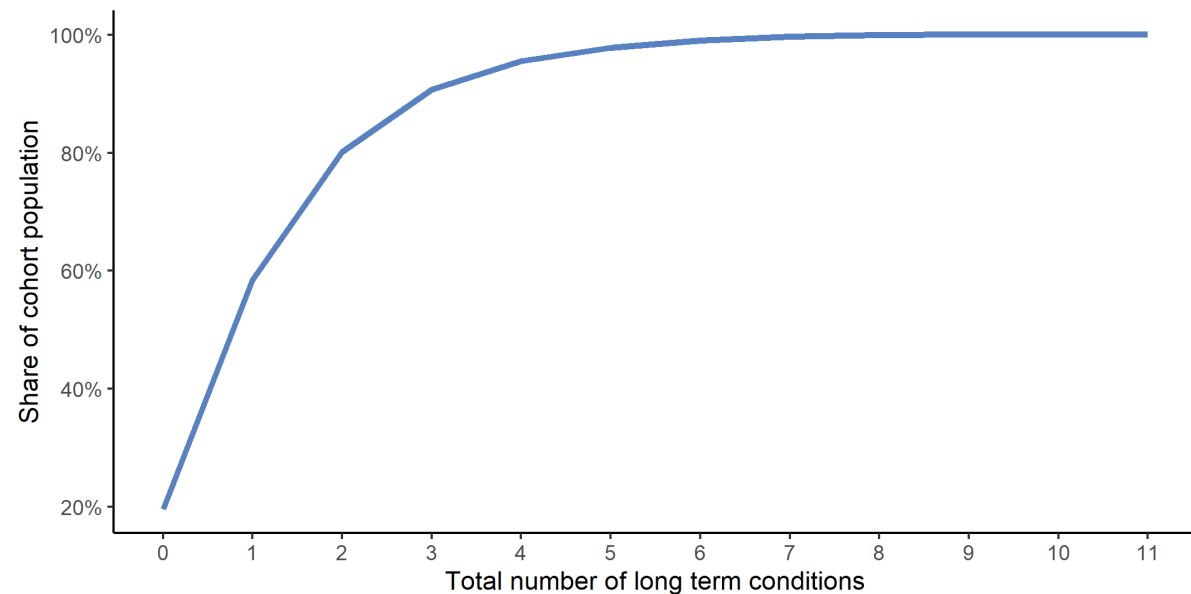


Although not a factor in assigning individuals to Complex Lives, there was interest in identifying those at risk of self harm. 4% of those in the segment were identified as being at risk of self harm. Compared to 0.2% in the total population.

# Health Care Conditions of Interest

Complex Lives individuals will have a range of long term health issues. Specific long term conditions investigated here are:

- Asthma
- Chronic liver disease (CLD)
- Hypertension
- Chronic Obstructive Pulmonary Disease (COPD)
- Diabetes
- Epilepsy
- Coronary Vascular Disease (CVD)
- Chronic kidney disease (CKD)
- Stroke or Transient ischaemic attack (TIA)
- Gastroenterology conditions
- Atrial Fibrillation
- Heart Failure



On average, each individual in this segment has 1.6 of the specified long term health conditions. Nearly a fifth of the segment do not have one of these specific LTCs at all.

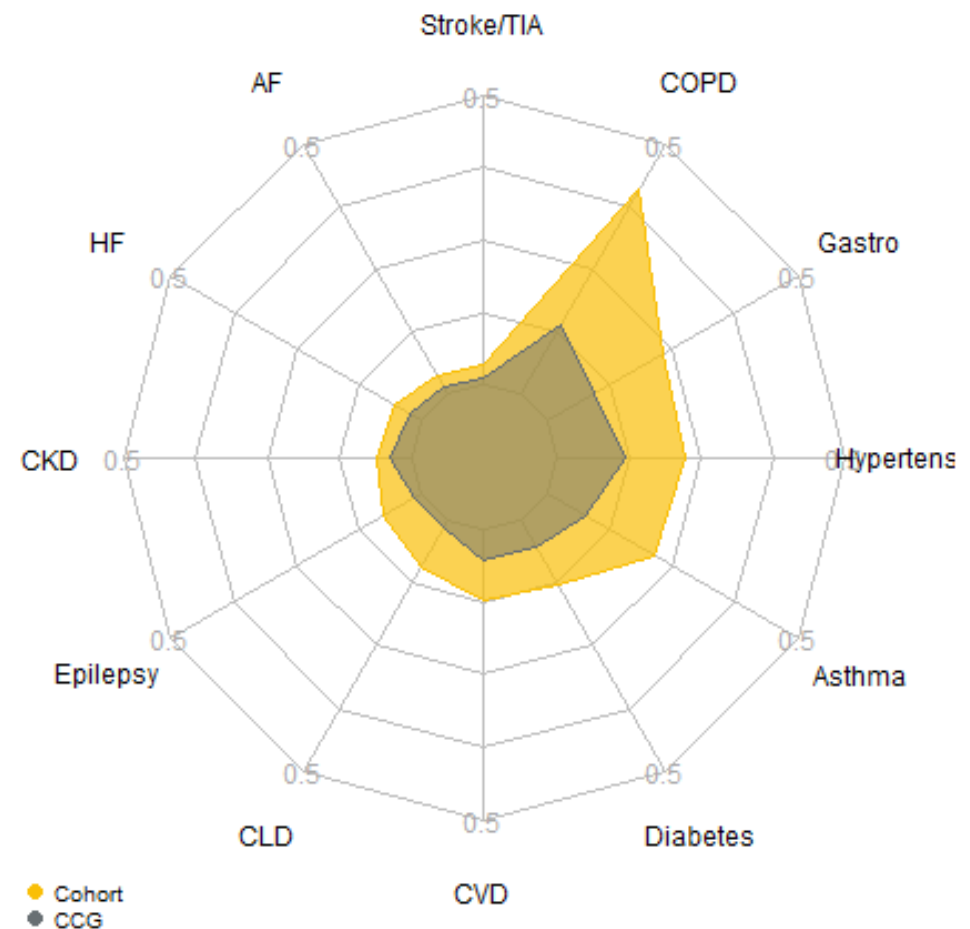
The Long Term Condition segment is defined with more extensive list of conditions.

# Health Care Conditions - LTCs in the Population

For the specified long term conditions a comparison of prevalence rates is made between those in the Complex Lives segment and the total population (aged 15+). This indicates the scale of the difference in these disease areas between the segment and the total population.

The scale shows the rate per person so 0.5 represents prevalence of 50% of people.

Proportion of LTC prevalence in cohort compared to overall CCG population



## Health and Care Use – A&E Services

Those in the Complex Lives segment attend A&E services on average **2.5** times per person, per year. This is much higher than the total population who attend A&E services **0.3** times per person, per year. Emergency Departments are the most used A&E service and also the service where there is the greatest disparity in use between segment and total population. In a year **56%** of people in the Complex Lives segment attend an A&E service. For the total population the same figure is **20%**.

When attending A&E services the average cost per attendance is **£144** for those in the Complex Lives segment. This is similar to the average cost per attendance for the total population.

Where a clinical reason for attending A&E has been recorded this identifies that for the Complex Lives segment common reasons for attending A&E relate to *Trauma / musculoskeletal or Gastrointestinal*.



## Health and Care Use – Emergency Admissions

On average those in the Complex Lives segment have **0.9** emergency admissions per person, per year. This is again much higher than the total population who have on average **0.1** emergency admissions per year.

**35%** of people in Complex Lives segment have an emergency admission in a year. For the total population the same figure is lower at **7%**.

The average emergency admission cost is **£2,105** for Complex Lives compared to **£2,006** for the total population.

When those in the Complex Lives segment are admitted as an emergency common reasons for admission relate to *Poisoning Toxic Effects Special Examinations Screening and Other Healthcare Contacts or Treatment of Mental Health Patients by Non-Mental Health Service Providers*.

## Health and Care Use – Planned Care

Those in the Complex Lives segment use more planned admissions, both as electives and as daycases, on average per person, per year. They also use more outpatient attendances.

In a year **14%** of people in Complex Lives segment have a planned admission. For the total population the same figure is **6%**. For outpatient attendances **64%** of those in the Complex Lives segment attended at least one outpatient appointment in a year compared to **33%** for the total population.

For elective planned care the Complex Lives segment are often admitted with a reason of *Urological and Male Reproductive System Procedures and Disorders*. In daycase admissions their main reason for admission is related to *Digestive System Endoscopic Procedures*. For outpatients their most common clinical specialty is *Gastroenterology* (first attendances) and also *Gastroenterology* (follow-up attendances).

## Health and Care Use – Mental Health

On average those in the Complex Lives segment have **8.0** mental health contacts per person, per year. This is much higher than the total population who on average have **0.4** contacts with mental health services per year.

**50%** of people in the Complex Lives segment have an contact with mental health services in a year. For the total population the same figure is only **4%**.

When those in the Complex Lives segment are in contact with mental health this most commonly involves contacts with *General Psychiatry Service* or *Community Mental Health Team – Functional* teams.

## Health and Care Use – Community Services

On average those in the Complex Lives segment have **6.8** contacts with community services per person, per year. This is higher than the total population who, on the same basis, have **1.5**.

**28%** of people in the Complex Lives segment are in contact with community services in a year. For the total population the figure is **17%**.

The most used community service for the Complex Lives segment is *District Nursing Service*.

## Health and Care Use – Social Care

From available data there were on average **0.17** of the Complex Lives segment known to social services in the last year. More than the total population where the same figure is **0.03**. However, social services data should be viewed as indicative and treated with caution. A recent review of the data indicated concerns with the data and further work is already underway to improve the consistency and quality of social care data.

Social services data includes information collected by councils and does not include services purchased directly by patients or provided by the voluntary sector.

# Health and Care Use – Summary Tables

	Average activity per person, per year		Ratio between average activity for cohort compared to the whole population	Average activity cost		Difference in average cost for cohort compared to the total population	% of people accessing service	
	Segment	Total Population		Segment	Total Population		Segment	Total Population
<b>A&amp;E Attendance</b>								
Emergency Department	2.5	0.3	7.6	£145	£144	1%	56%	20%
MIU/Other	0.0	0.0	3.2	£79	£79	0%	1%	1%
Walk In Centre	0.0008	0.0005	1.6	-	-	-	0.1%	0.0%
<b>Total: A&amp;E Attendance</b>	<b>2.5</b>	<b>0.3</b>	<b>7.5</b>	<b>£144</b>	<b>£142</b>	<b>1%</b>	<b>56%</b>	<b>20%</b>
<b>Emergency Admission</b>	<b>0.9</b>	<b>0.1</b>	<b>9.1</b>	<b>£2,105</b>	<b>£2,006</b>	<b>5%</b>	<b>35%</b>	<b>7%</b>
<b>Planned Inpatient Care</b>								
Daycase	0.2	0.1	2.2	£703	£761	-8%	12%	5%
Elective	0.0	0.0	3.6	£3,749	£4,492	-17%	4%	1%
<b>Total: Planned Inpatient Admission</b>	<b>0.2</b>	<b>0.1</b>	<b>2.4</b>	<b>£1,060</b>	<b>£1,179</b>	<b>-10%</b>	<b>14%</b>	<b>6%</b>
<b>Outpatient Attendances</b>								
First	1.5	0.4	3.4	£196	£178	10%	51%	24%
Follow-up	2.6	1.1	2.4	£99	£106	-7%	50%	25%
<b>Total: Outpatient Attendances</b>	<b>4.1</b>	<b>1.5</b>	<b>2.7</b>	<b>£146</b>	<b>£131</b>	<b>11%</b>	<b>64%</b>	<b>33%</b>
<b>Mental Health Contact</b>	<b>8.0</b>	<b>0.4</b>	<b>19.3</b>	-	-	-	<b>50%</b>	<b>4%</b>
<b>Community Contact</b>	<b>6.8</b>	<b>1.5</b>	<b>4.5</b>	-	-	-	<b>28%</b>	<b>17%</b>
<b>Social Services (known to)</b>	<b>0.2</b>	<b>0.0</b>	<b>6.6</b>	-	-	-	<b>17%</b>	<b>3%</b>

# Primary Care Prescribing

From the prescribing data available for primary care the top 10 drugs types prescribed to those in the Complex Lives segment are:

- 1 Selective Serotonin Re-Uptake Inhibitors
- 2 Proton pump inhibitors
- 3 Other Antidepressant Drugs
- 4 Control Of Epilepsy
- 5 Corticosteroids (respiratory)
- 6 Compound Bronchodilator Preparations
- 7 Single Substances
- 8 Non-Opioid Analgesics And Compound Prep
- 9 Beta-adrenoceptor blocking drugs
- 10 Broad-Spectrum Penicillins

## Technical note

Alongside the excluded practices (see appendix 1) patients who opted out of their data being available for analysis purposes are also excluded. So are any patients whose NHS Number is blank. Also excluded are a small number of patients marked as deceased.

An exact date of birth is not accessible, only year and month of birth is available. When calculating the age of patient all dates of birth are therefore estimated as the 15<sup>th</sup> day of a calendar month.

Primary care data is used as the main basis for identifying patients and their segments. Primary care from April 2014 to date was the underlying source of this analysis.



## meet the System P Team

Individual	System P role	Role outside of the programme
Professor Joe Rafferty CBE	Executive Sponsor	Chief Executive Mersey Care NHS Foundation Trust
Dr Louise Edwards	Senior Responsible Officer	Executive Director of Strategy, Mersey Care
Andrea Astbury	Programme Director	Deputy Director of Strategy, NHS Liverpool CCG
Wes Baker	Strategic Analytics	Director of Strategic Analytics, Economics and Population Health Management, Mersey Care
Shahina Rashid	Project Support	Project Support, Midlands & Lancashire Commissioning Support Unit
Helen Bennett	Senior Advisor	Deputy Director of Strategic Planning & Intelligence, Mersey Care
Helen Duckworth	Intelligence Infrastructure	Associate Director of Business Intelligence C&M, Programme Director for CIPHA
Professor Ben Barr	Data Science & Analytics	Professor in Applied Public Health Research, Institute of Population Health, University of Liverpool

