



Hertfordshire and
West Essex Integrated
Care System



Hertfordshire and
West Essex
Integrated Care Board

Primary Care Networks Overview Pack

ATTENBOROUGH PCN

Pack produced - January 2023 - NHS Hertfordshire & West Essex ICB

Produced by Hertfordshire & West Essex ICB's - Population Health Management & Public Health Teams



Working together
for a healthier future

Population Health Management



Population Health Management (PHM) is a partnership approach across the NHS and other public services including councils, the public, schools, fire service, voluntary sector, housing associations, social services and police. All have a role to play in addressing the interdependent issues that affect people's health and wellbeing.

The coronavirus (COVID-19) pandemic has further highlighted the known link between poorer health outcomes, ethnicity and deprivation. Integrated care systems, working with the local authority and the voluntary sector, have used PHM to identify people who need more support and those with the most complex needs within their localities, so that efforts can be targeted to protect certain populations through personalised care models, public health advice, testing and vaccination programmes.

For the public, it should mean that health and care services are more proactive in helping people to manage their health and wellbeing, provide more personalised care when it's needed and that local services are working together to offer a wider range of support closer to people's homes.

For doctors, nurses, social care, therapists and other frontline staff, this should mean greater support and insight from integrated care systems to enable care and support to be designed and proactively delivered to meet individual needs – it should mean less duplication and a reduction in workload pressures as it ensures the right care is given at the right time by the right person.

For local councils, health care managers and clinicians who commission services – greater understanding of the local population will ensure they can better predict what residents need. PCNs are key to this, as health and care providers work together and take collective responsibility for the care and support offered to improve outcomes, they can use their resources to keep people healthier.

Key Messages

Attenborough PCN can be seen with a slightly larger younger & middle age population profile than England. The vast majority of the population are living within the 3-8 decile range, with distinct populations at the least deprived end 9-10.

27.5% population have at least 1 Long Term Condition. 6.0% have more than 5 LTCs compared to 5.6% for the ICB.

Wider determinants analysis from Public Health Evidence and Intelligence shows Attenborough is one of the lowest ranked PCNs for Environment, is on the lower end for Older People in Poverty, and Fuel Poverty. Attenborough PCN ranks in the medium for all other determinant groupings.

The spread of patients for Attenborough PCN indicates 33.45% of the population are not located within the Hertfordshire & West Essex boundaries, the PCN has the third highest rate in Herts Valleys; this means that this population may be accessing services outside of the ICB and the impact of coterminous alignment with neighbouring ICBs must be taken into account for this population by the PCN.

Expected population growth for Attenborough adjusted for the Local Authority forecasts shows continued increase between 2023 through to 2034 which will bring additional demands for healthcare. Projections show an expected increase in the number of people over 65 from ~13k to ~16k.

When analysing the underlying Segmentation Model data the conditions with highest per 1,000 registered prevalence that are highlighted for Attenborough PCN, are for SMI patients; some of the higher areas are also Asthma, Diabetes, and higher than average Alzheimer's. In this data we can see that the PCN has mid to higher prevalence of ASD, Muscular Dystrophy, and Sickle Cell Disease.

When comparing the Ambulatory Care Sensitive rates per 1,000 population between places, the South West Herts Place has the highest rate in the ICB; Attenborough has the 2nd highest ACS admission rate in the area.

When looking at the ACS conditions for Attenborough, the highest volume and cost is within the End of Life, Severe Frailty and Dementia in the over 65 age group, and the highest volume is within the same age in the Advanced Disease and Complexity segment. ACSs of note for people aged over 65 with advanced disease and complexity within this analysis are Heart Failure, and AF & Flutter. For those within the End of Life, Frailty & Dementia sub segment, Heart Failure and COPD are the ACS's with the highest volume and cost.

Within the Frailty segment, 14.8% of the general population in HWE ICB live within the 4 most deprived deciles, whilst 16.1% of the population in the EoL, severe frailty and severe dementia segment live within the 4 most deprived deciles. In Attenborough 23.0% of the population in the EoL, severe frailty and severe dementia segment live within the 4 most deprived deciles.

As we would expect the average number of acute and chronic conditions is significantly higher within this segment than the general population as are all activity measures. The average number of Chronic Conditions for people within Attenborough PCN is higher than the ICB, and the data shows higher usage of acute and GP services.

Also Within the Frailty segment we can see the presence of Chronic Cardiac Disease, Diabetes, Obesity, and heart disease being highlighted.

Emergency Admission Rates per 1,000 on the Disease Registers show that for Attenborough PCN, the data shows very high rates for Asthma, COPD, and Heart Failure, and slightly higher rates for Atrial Fibrillation, which was identified as a theme within the ACS analysis.

National Tool View and Population Demographics and Projections

The following slides represent screen shots from the Nationally Available Tools provided via NHSE.

The information within these tools are used by NHSE to measure and monitor progress. There is some valuable information available within these tools, however the value of these tools is realised when the information within them is triangulated with local data and intelligence.

Public Health Wider Determinants

These provide context for understanding the wider population need, so as Integrated Neighbourhood Teams develop you have a shared understanding of the health and care needs of your population to inform the development of interventions for different patient groups.



PCN Demographics - NHS England

Total Population

ATTENBOROUGH & TUDOR PCN

Snapshot as at: 30/06/2021

Registered population

% of total	100.0%
% of annual change	0.8%

Demographics

% White	59.5%	% IMD top	1.3%
% BAME	25.0%	% IMD bottom	37.0%

Prevalence

% with 1+ conditions	27.5%
% with 5+ conditions	3.3%

Acute utilisation

% of annual activity (total 50,435)	100.0%
% of annual cost (total £14M)	100.0%

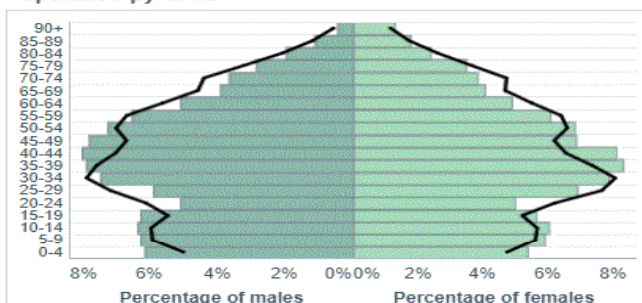
Covid

% one or more at risk conditions	17.3%
% two or more at risk conditions	6.6%

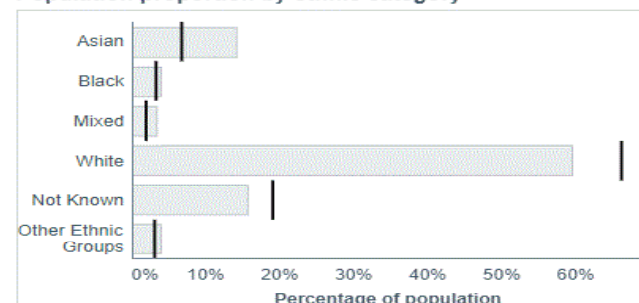
Population demographics - Snapshot as at: 30/06/2021

Choose benchmark: England

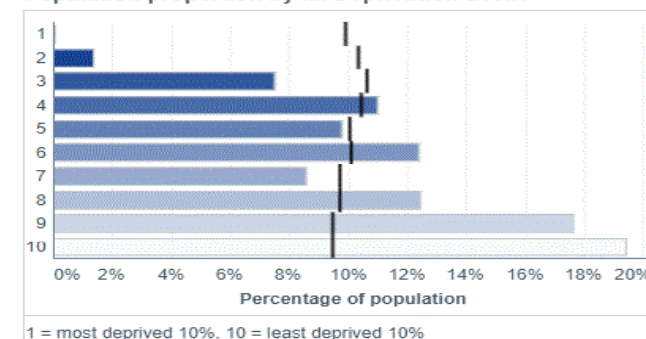
Population pyramid



Population proportion by ethnic category

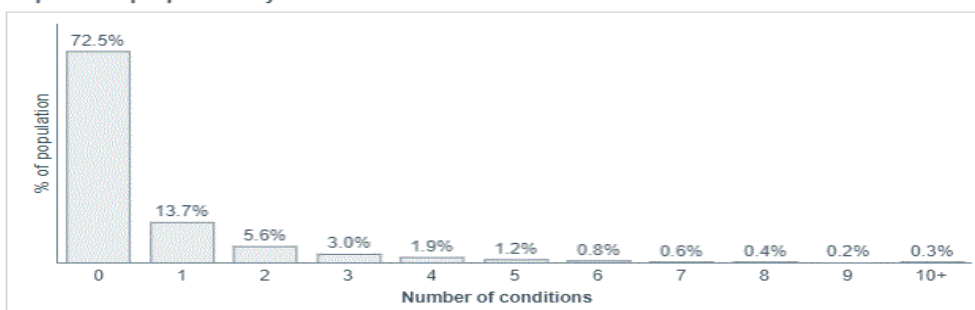


Population proportion by IM Deprivation decile



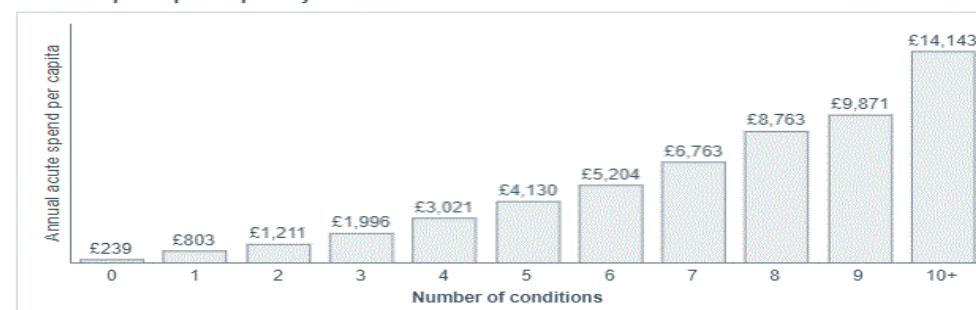
Prevalence - Snapshot as at: 30/06/2021

Population proportion by number of conditions



Annual spend per capita by number of conditions

Financial Year: 2020/21



The Population & Person Insights dashboard has provided good overall summary metrics on the PCN's total population, here we have benchmarked views on standardised demographics, such as deprivation deciles, and proportion of the PCN population by number of conditions.

Attenborough PCN can be seen with a slightly larger younger & middle age population profile than England. The vast majority of the population are living within the 3-8 decile range, with distinct populations at the least deprived end 9-10.

PCN Demographics - NHS England

LTC

ATTENBOROUGH & TUDOR PCN

Snapshot as at: 30/06/2021

Registered population

% of total	23.9%
% of annual change	5.6%

Demographics

% White	74.5%	% IMD top	1.4%
% BAME	22.7%	% IMD bottom	36.7%

Prevalence

% with 1+ conditions	100.0%
% with 5+ conditions	6.0%

Acute utilisation

% of annual activity (total 22,277)	44.2%
% of annual cost (total £5M)	39.6%

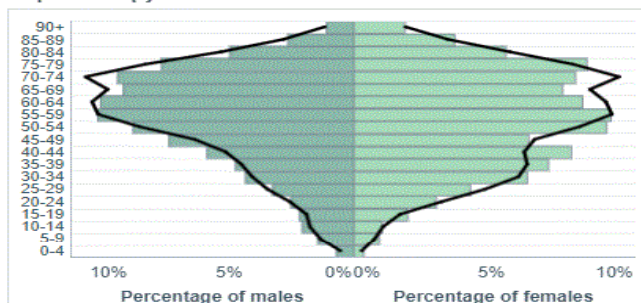
Covid

% one or more at risk conditions	54.7%
% two or more at risk conditions	17.4%

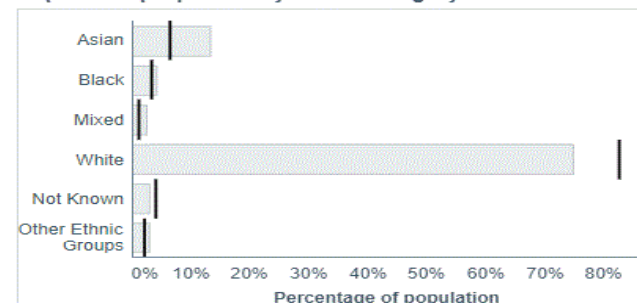
Population demographics - Snapshot as at: 30/06/2021

Choose benchmark: England

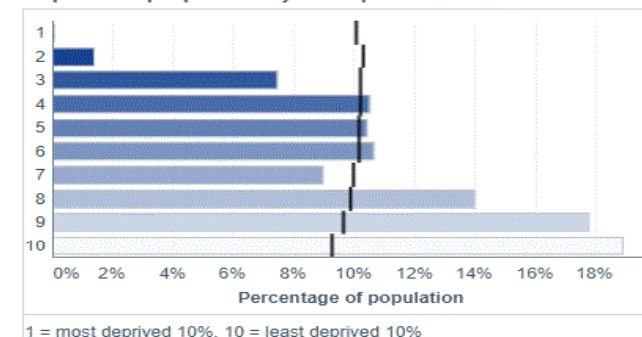
Population pyramid



Population proportion by ethnic category

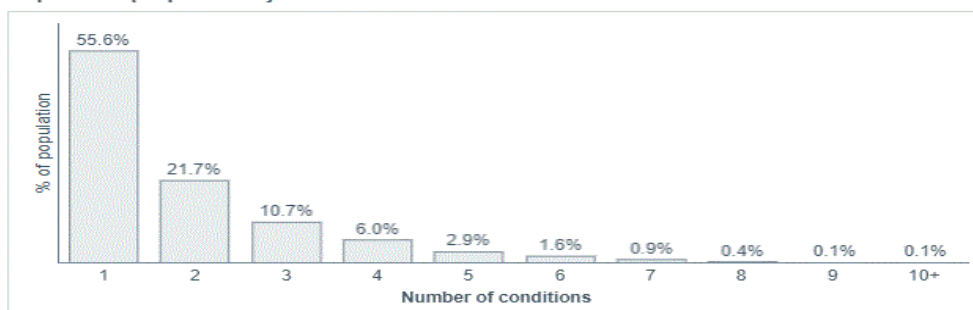


Population proportion by IM Deprivation decile



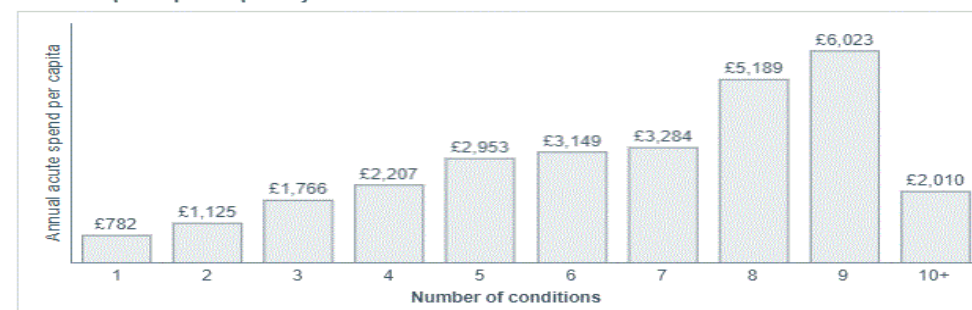
Prevalence - Snapshot as at: 30/06/2021

Population proportion by number of conditions



Annual spend per capita by number of conditions

Financial Year: 2020/21



When compared with the overall PCN demographics on the previous page, those in the PCN whom have an LTC as defined by NHS England, are benchmarked against the English averages, the view for the PCN shows us that 27.5% population have at least 1 Long Term Condition.

6.0% have more than 5 LTCs compared to 5.6% for the ICB.

Practice Indicators - Triggers and Levels

Practice Indicators for		ATTENBOROUGH SURGERY		
Clinical Domain	Indicator Name	Latest Score	Time Period	Trigger Level
Clinical Diagnosis	Detection rate Cancer	0.568	2020/21	No Trigger
Coronary heart disease	% AF anticoagulation therapy CHADS2-VASc score >1	87.9	2020/21	Positive
	% CHD aged <=79 BP reading 140/90mmHg or less	53.1	2020/21	Level 1
	% CHD cholesterol 5 mmol/l or less	65.4	2021/22	No Trigger
	% hypertension aged <=79 BP reading 140/90mmHg or less	49.1	2020/21	Level 1
Diabetes	% Diabetes aged >=40 years no CVD history without moderate or severe frailty treated with statin	67.7	2020/21	Level 1
	% Diabetes without moderate or severe frailty BP 140/80 mmHg or less	37.6	2020/21	Level 2
	% diabetes without moderate or severe frailty IFCC-HbA1c is 58 mmol/mol or less	39.7	2020/21	Level 2
Exception Rating	Overall Personalised Care Adjustment Rate	0.043	2020/21	No Trigger
Medicines Management	% antibiotics Co-amoxiclav, Cephalosporins, Quinolones	8.8	2021/22 Q4	No Trigger
	% Naproxen and Ibuprofen	83.6	2021/22 Q4	No Trigger
	Antibacterial Items/Star Pu	0.787	2021/22 Q4	Positive
	Hypnotics ADQ/Star Pu	0.457	2021/22 Q4	No Trigger
	Oral NSAIDs ADQs/STAR-PU	2.381	2021/22 Q4	No Trigger
Mental Health	% first choice generic SSRIs	68.4	2021/22 Q4	No Trigger
	% MH comprehensive care plan	35.2	2020/21	Level 1
	% SMI alcohol record	91.7	2018/19	No Trigger
	% SMI BP record	46.7	2020/21	Level 2
	Dementia Face to Face review	34	2020/21	Level 1
	Select antidepressants ADQs/STARPU	1.309	2021/22 Q4	No Trigger
Patient Experience	Confidence and trust in healthcare professional	96.5	2020/21	No Trigger
	Frequency seeing preferred GP	28.7	2020/21	No Trigger
	Healthcare professional treating with care and concern	93.7	2020/21	No Trigger
	Overall experience of your GP practice	90.5	2020/21	No Trigger
	Satisfaction with appointment times	77.2	2020/21	No Trigger
Public Health	% Child Imms DTaP/IPV/Hib/HepB (age 1 year)	72.9	2020/21	Level 2
	% Child Imms Hib/MenC booster	69.4	2020/21	Level 2
	% Child Imms MMR (Age 2 yrs)	68.9	2020/21	Level 2
	% Child Imms PCV Booster	68.9	2020/21	Level 2
	Cervical Screening	70.2	2021/22 Q4	Level 1
Respiratory	% Asthma review in last 6 mths	12	2020/21	Level 1
	% Asthma spirometry and one other objective test	0	2020/21	Level 2
	% COPD with review in last 12 mths	14.6	2020/21	Level 2
	% LTC patients who smoke	12.2	2020/21	No Trigger
	% LTC Smoker offer support	50.1	2020/21	Level 1
	% Smoking patients over 15 recorded	69.6	2021/22	No Trigger
	% Smoking status recorded	85.9	2020/21	Level 1
	% w. MRC dyspnoea score >=3 w. offer of referral to pulm. rehab. Clinic	25.4	2020/21	Level 1

Primary Care clinical domain indicators as provided by NHS England as highlighted here with Trigger Levels against each, and represents a consolidation of data sets, designed to reduce the burden on GPs following these outlier identification. This indicator set is to support quality assurance and improvement of GP services; here, the higher the Level indicated, the more indicative of risk that has been found for that indicator.

The Practices have opportunities for every Level 1 indicated metric; however, any Level 2 indicator must be reviewed; guidance on this data set can be found in the below link, and for more up-to-date data, please log into your Ardens Manager (<https://app.ardensmanager.com/>).

Wider Determinants



Where 1 is the most deprived in HWE ICB and 35 the least

In Attenborough PCN an estimated:

- 10.7% of children live in poverty.
- 12.5% of older people live in poverty.
- 11.9% of households live in fuel poverty.
- 10.8% of households are overcrowded.
- 33.4% of people aged 65 and over live alone.
- 1.7% of people cannot speak English well.
- 4.4% of working age people are claiming out of work benefits.
- 19.3% of children aged 4-5 and 33.2% of children aged 10-11 are overweight.

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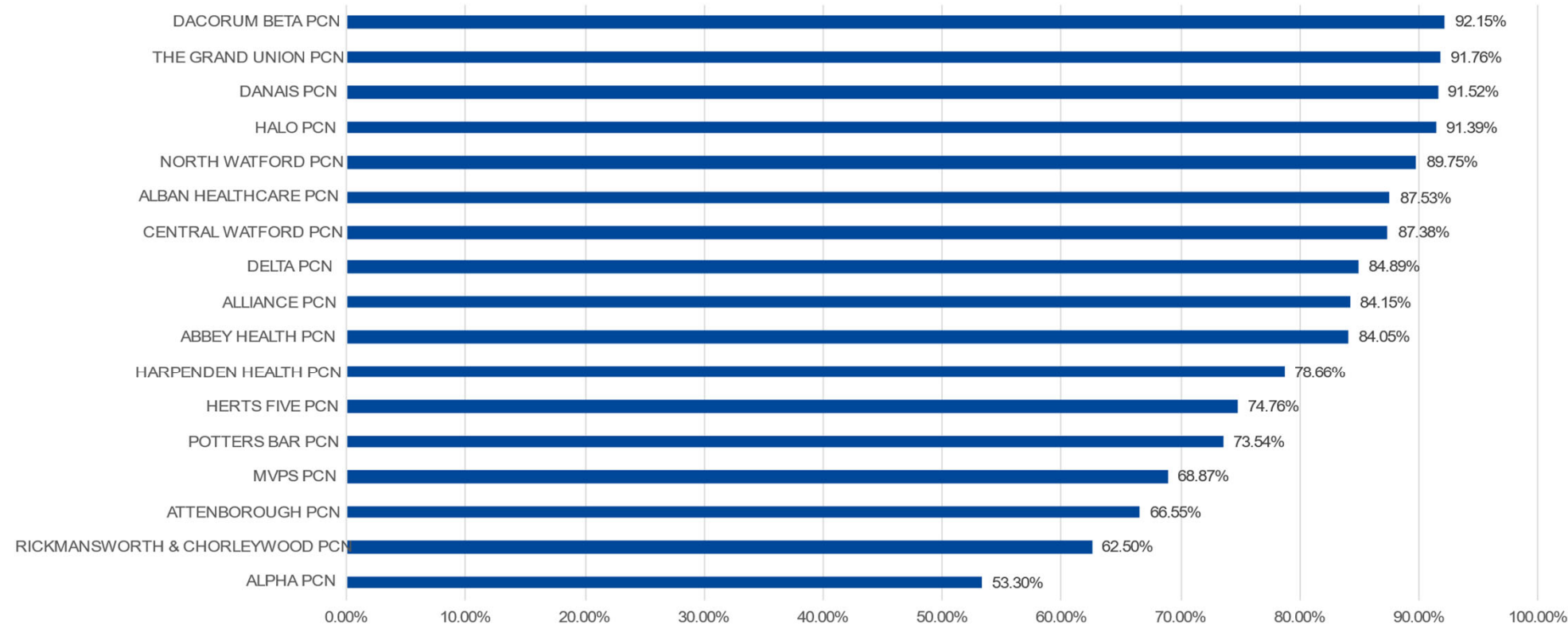


The above provides a summary of the wider determinants of health for Attenborough PCN.

Wider determinants analysis from Public Health Evidence and Intelligence shows Attenborough is one of the lowest ranked PCNs for Environment, is in the medium to lower end for Older People in Poverty, and Fuel Poverty. Attenborough PCN ranks in the medium for all other determinant groupings.

SPREAD OF PATIENTS ACROSS ENGLAND CONT.

Percent of Herts Valley patients within Hertfordshire and West Essex boundary

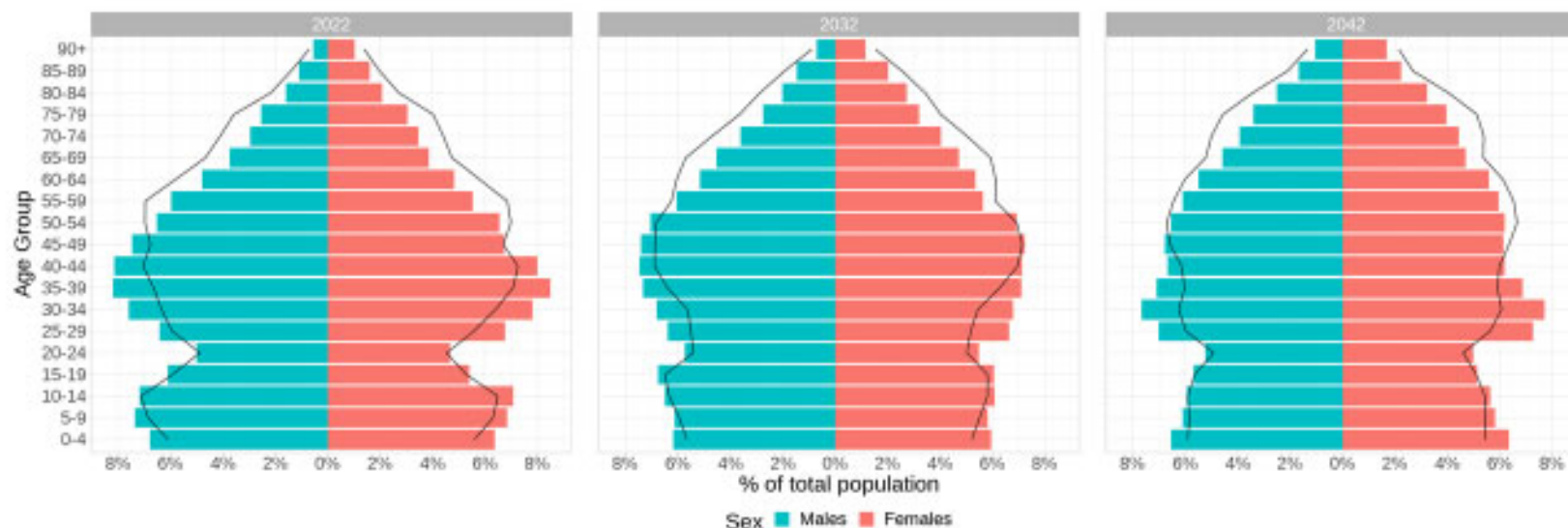


This chart shows the proportion of the registered population living within the ICB geographical boundary.

The spread of patients for Attenborough PCN indicates 33.45% of the population are not located within the Hertfordshire & West Essex boundaries, the PCN has the third highest rate in Herts Valleys; this means that this population may be accessing services outside of the ICB and the impact of coterminous alignment with neighbouring ICBs must be taken into account for this population by the PCN.



Projection Pyramids



Black line indicates HWE ICS values.
Population pyramids and table shown for Watford district.
District shown is based on the largest majority of the PCN's registered population.

Age Band	2022 Projection	2032 Projection	2042 Projection
Under 5	6,405	5,872	6,305
Under 24	30,539	29,406	28,089
24-64	53,388	51,625	51,474
65+	13,370	15,951	18,249
85+	2,077	2,584	3,224

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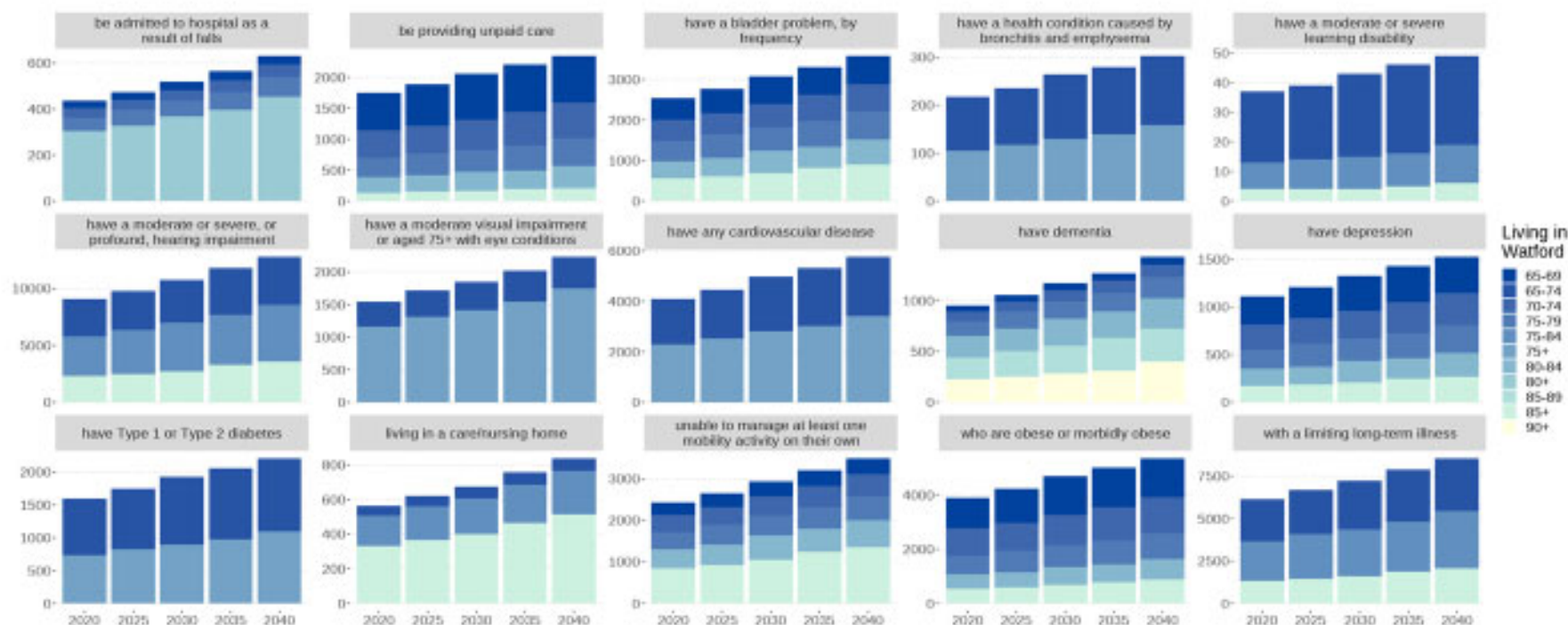
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The above projection pyramids show the growth in population expected. These projections show an expected increase in the number of people over 65 from ~13k to ~16k.



People aged 65+ projected to...



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The above shows the impact on health due to the expected increase in the number of people over 65.

Optum

HWE

Segment & Outcomes
Framework Documentation

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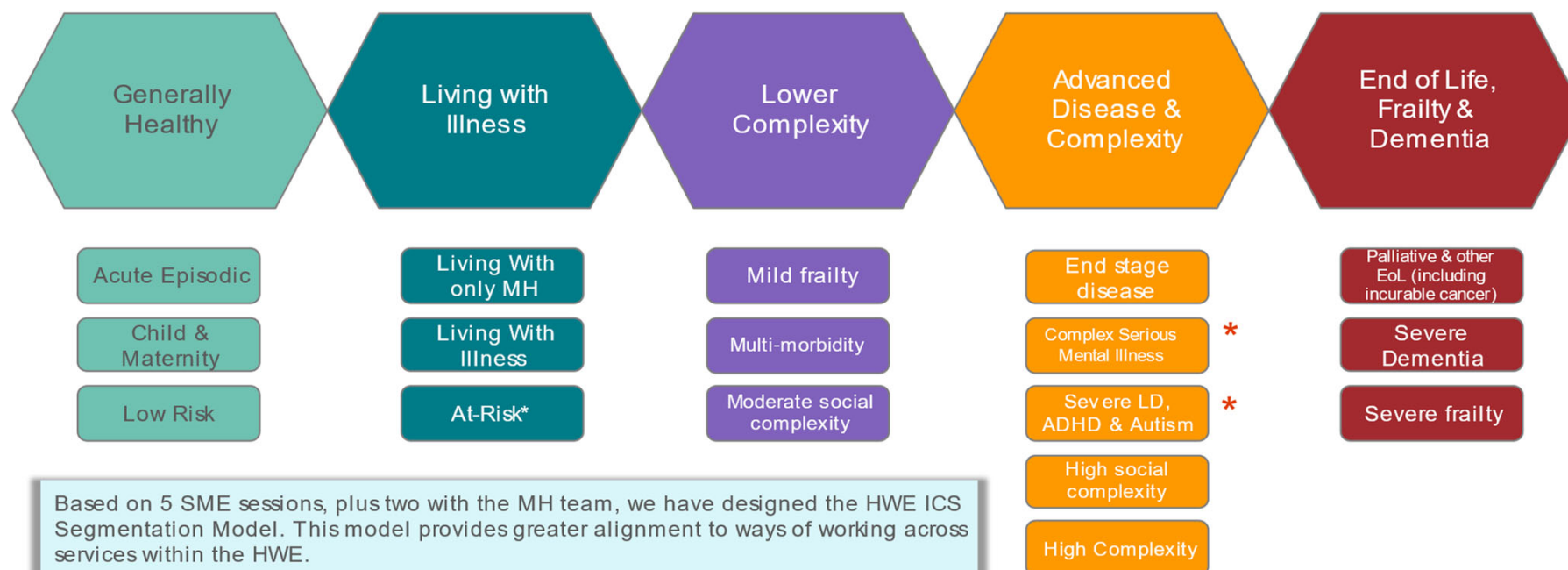
PHM Segment Model - Overview

The ICB has worked in partnership with Optum to develop a Health Segmentation model using linked data covering 1.2m of our ICS population. As part of the process representation from different care settings and internal ICB teams were engaged.

Our core PHM and Population Segmentation model combines primary and acute care data with wider determinants and community, mental health and social care data where available. The model has been built with a view to include additional data sets as they become available. The segmentation model provides the foundations for advanced population health management analytics that goes beyond patient level risk stratification.

The below demonstrates the 5 high level segments and the sub segments beneath within the model.

Segmentation model – third iteration



Based on 5 SME sessions, plus two with the MH team, we have designed the HWE ICS Segmentation Model. This model provides greater alignment to ways of working across services within the HWE.

It follows a MECE model, assigned in order from right to left in segment, and top to bottom in subsegment.

* awaiting finalisation of methodology

PHM Segment Model - Overview

The logic behind the ICB Health Segmentation model has been developed to allow the ICB to consider its whole population and the different interventions required to improve the outcomes of different groups of people with similar characteristics.

Alongside the segmentation logic an outcomes framework was developed.

Whole Population Outcomes

- INCREASE life expectancy / INCREASE average age at death in adults.
- REDUCE gap in age at death between most and least deprived deciles.
- INCREASE disease-free life expectancy
- REDUCE rates of suicide
- REDUCE proportion of population who are digitally excluded either by lack of equipment, connectivity, skills, cost, or confidence to be able to access clinical services.

"Generally healthy"

Who is in this group?

- Children and adults in the general population who are not otherwise captured in other segments.
- Most likely receive episodic care due to accidents and injuries or linked to maternity and CYP routine services.
- No diagnosed conditions.

Social & Clinical Outcomes

- INCREASE screening.
- IMPROVE experience of Maternity services.
- REDUCE rates of childhood obesity in reception and year 6.
- REDUCE rate of infant mortality.
- REDUCTION in proportion of people diagnosed with low mood and/or depression.

Living with Illness

Who is in this group?

- Includes people with single illnesses (including MH), that are currently controlled or able to self-manage and will receive most of their care in a planned way through primary care.
- Includes people with social or behavioural risk factors for more advanced disease.

Social & Clinical Outcomes

- INCREASE proportion of patients who feel able to self-manage their condition.
- REDUCE prevalence of behavioural risk factors for more advanced diseases, including: obesity, smoking status and drug abuse.
- REDUCE episodes of ill -health requiring emergency admissions for long term condition.
- INCREASE percentage of people with mental health problems in employment.
- INCREASE proportion of people who are able to maintain life routines considered important to the individual, e.g work, ..
- REDUCE emergency attendances due to alcohol -related harm.

Lower Complexity

Who is in this group?

- Includes people with moderate levels of morbidity and complexity. This is either as a result of: Multi-morbidity (24 long term conditions), Mild frailty and/or Social complexity.

Social & Clinical Outcomes

- INCREASE proportion of patients who feel able to self-manage their condition.
- REDUCE rate of emergency admissions for people with lower complexity.
- INCREASE proportion of patients offered personalised care and support planning.
- REDUCE prevalence of behavioural risk factors for more advanced diseases, including: obesity, smoking status and drug abuse.

Advanced Disease & Complexity

Who is in this group?

- Advanced disease and complexity represents a cohort of people with one or more significant illnesses that impact on their day to day functioning as well as people with significant risk from social complexity

Social & Clinical Outcomes

- INCREASE five year survival from cancer.
- REDUCE rate of emergency admissions in people with advanced disease or complexity.
- REDUCE the difference in average age of death between people with learning disability/SMI compared to general population.
- REDUCE proportion of whole population who are living with advanced disease and/or complexity.

End of Life, Frailty & Dementia

Who is in this group?

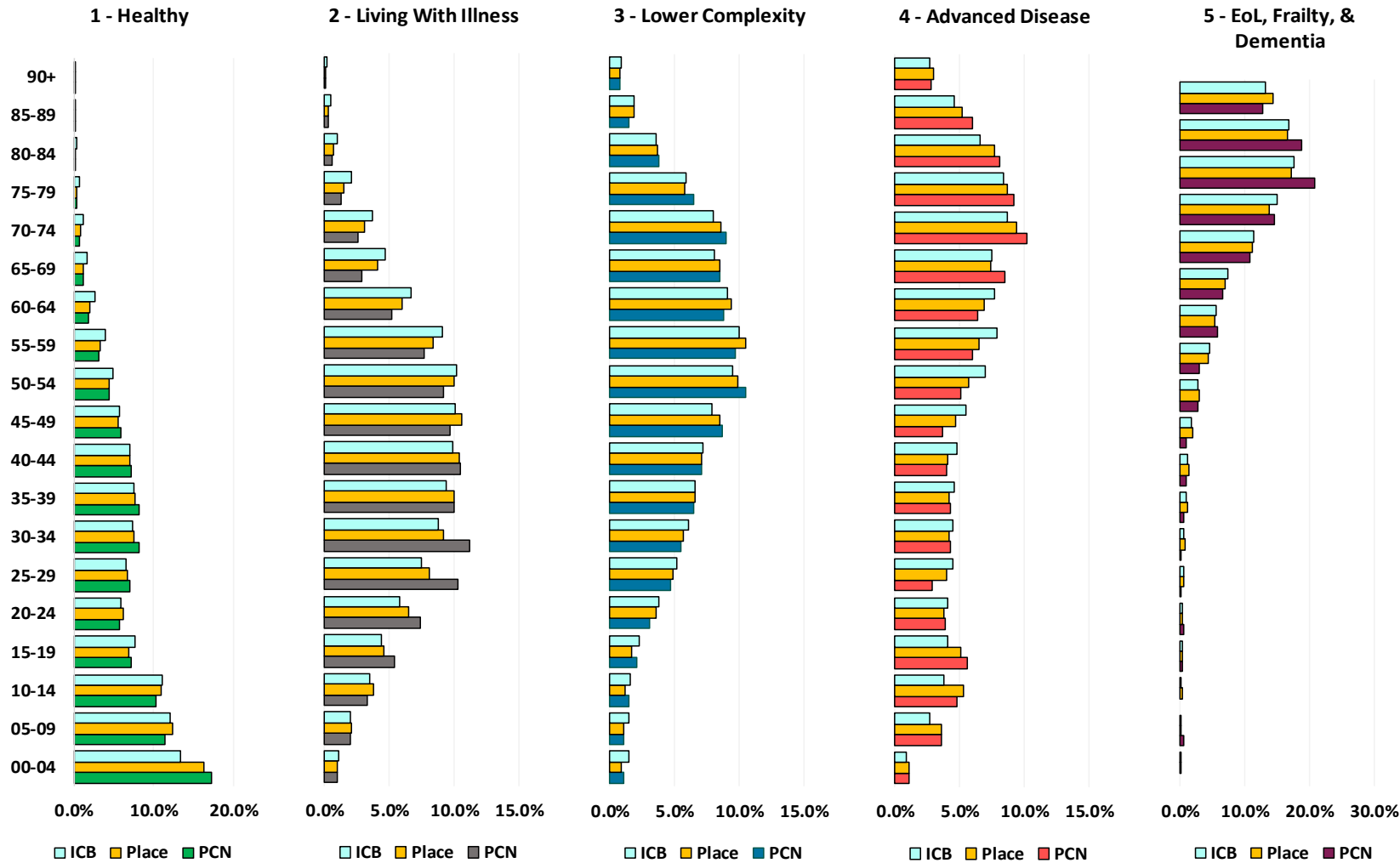
- End of Life, frailty and dementia is the first segment in the logic and is the first set of criteria on which people are assessed. The segment includes: people who are identified as being in their last year of life, or on the palliative disease register as well as people with incurable cancer. This segment also includes those with severe frailty and/or severe dementia.

Social & Clinical Outcomes

- REDUCE dependency for emergency care services e.g A&E attendances and emergency admissions.
- INCREASE proportion of people who die in their preferred place of death.
- INCREASE identification of frail and complex patients, including those with dementia or at end of life.
- REDUCE proportion of days disrupted by emergency care in last year of life.
- INCREASE number of days spent at home in last year of life.
- INCREASE proportion of people supported at home instead of in residential care.

Age Profile and Health Segment

Age Profile of PCN, Place, and ICB Segment Population Comparison

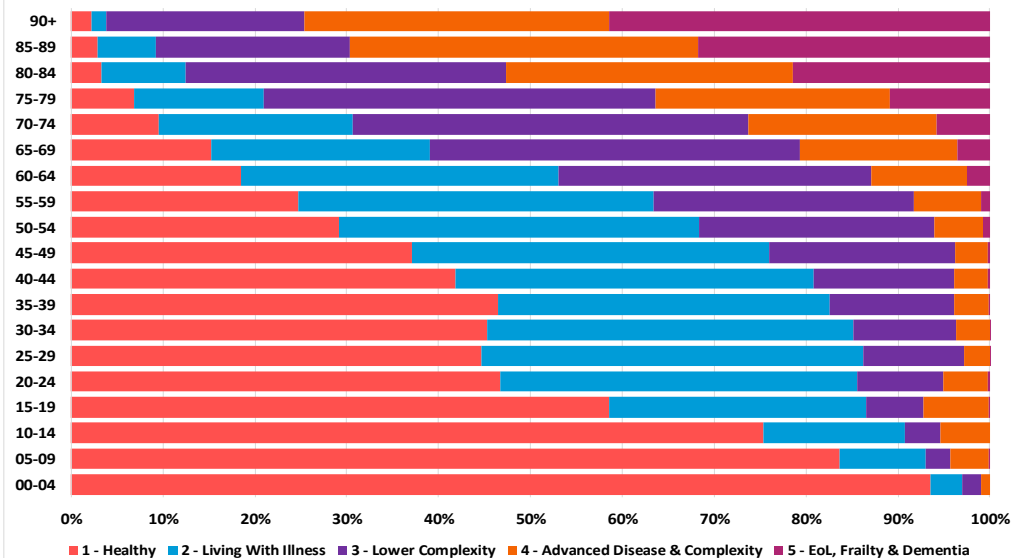


Each registered person is assigned to a segment and this can be cut by age group and also geographically by Place or PCN.

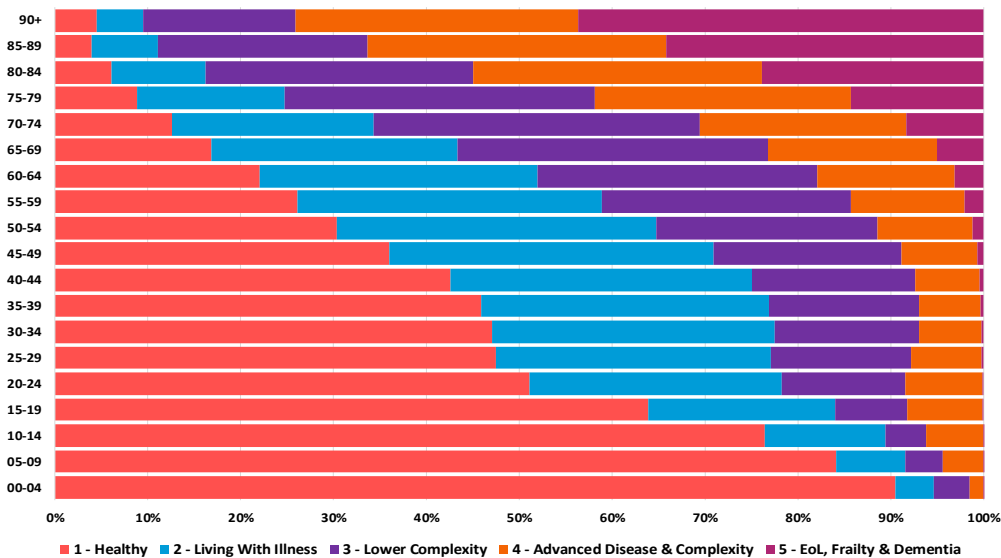
The above looks at the breakdown by age of people within each segment. It provides the PCN value against the Place and ICB value.

Demographic Breakdowns - Segment & Deprivation Quintiles

Segment Proportion by Age Group



ICB Segment Proportion by Age Group as a Comparator



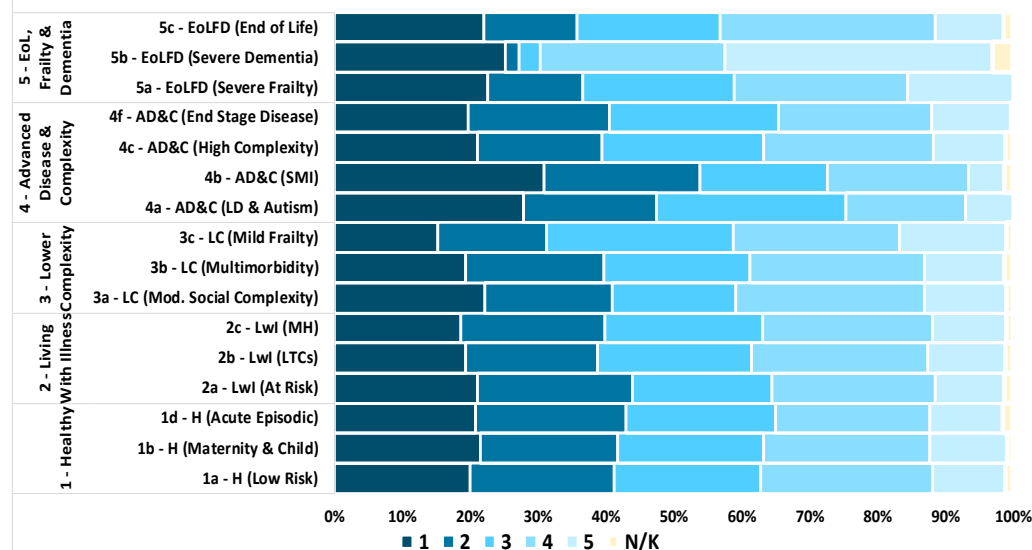
The ICB Health Segments here are broken down by total population and 5 year age groups; as expected with age the proportion of people within the healthy segment decreases.

The illustration on the left represents the PCN breakdown whilst the one on the right shows the ICB breakdown.

In general the PCN has a much larger Lower Complexity population in the 15 to 39 age groups.

The illustration bottom right shows the Sub-Segments by Deprivation Quintile, here we can see the levels of deprivation illustrated within the earlier wider determinants slide demonstrated within this breakdown.

Index of Multiple Deprivation Quintile Proportion of Population Segment



Major Conditions Comparison - Per 1,000 Registered

PCN NAME	COPD	Obesity	Asthma	Diabetes	Dementia	Cancer	Learning Disabilities	Hypertension	Stroke	Chronic Kidney Disease	Heart Disease	Heart Failure	AtrialFib	Chronic Cardiac Disease	Depression	MH	Anxiety	Serious Mental Illness	Alzheimers
ABBEY HEALTH	16.94	91.79	134.57	138.01	16.06	35.32	15.82	119.23	33.72	10.05	35.88	10.65	11.77	57.71	121.19	171.41	86.11	25.15	10.73
ALBAN HEALTHCARE	16.78	79.37	154.97	90.13	16.99	53.76	14.22	149.53	34.73	24.16	39.98	10.97	17.65	50.69	127.50	205.23	111.71	23.36	13.08
ALLIANCE	19.90	114.36	123.67	105.84	15.86	29.28	17.82	155.51	31.61	9.04	39.00	10.29	9.50	62.66	114.55	160.93	87.83	25.81	10.21
ALPHA	16.29	121.01	139.73	97.63	14.00	55.48	10.91	161.78	34.67	18.36	42.29	11.02	21.77	53.43	153.71	233.41	120.24	17.12	9.22
ATTENBOROUGH	18.14	113.20	126.85	105.43	15.54	36.21	11.81	130.54	33.07	15.51	42.51	11.91	11.43	50.85	118.02	176.61	95.74	19.13	8.70
BROXBORNE ALLIANCE	20.30	160.08	122.01	81.19	7.50	61.16	6.46	171.90	29.87	23.09	49.05	11.84	19.50	68.57	135.43	191.17	116.76	7.91	4.09
CENTRAL WATFORD	17.17	97.89	108.55	152.70	20.12	25.21	13.25	123.19	30.90	8.01	34.88	10.09	16.32	46.23	98.31	132.67	62.41	20.54	8.28
DACORUM BETA	24.98	156.71	132.83	158.17	30.23	40.07	18.80	156.86	44.28	19.23	50.10	16.42	26.50	78.15	176.09	245.43	132.71	31.47	14.12
DANAIS	22.41	131.50	138.52	116.70	19.56	36.00	19.66	181.38	45.29	7.84	44.34	12.86	11.35	57.63	137.60	185.74	82.50	28.26	11.88
DELTA	16.90	150.87	135.59	125.22	17.35	45.07	13.06	152.28	34.37	21.60	42.61	10.85	19.87	55.43	142.21	222.46	128.07	22.98	10.97
HALO	18.22	93.22	137.55	112.78	20.85	47.83	20.12	137.28	37.23	16.03	41.35	11.68	16.94	85.83	149.64	217.88	111.29	29.96	14.75
HARLOW NORTH	32.17	113.01	160.55	104.04	9.63	65.83	5.80	185.36	41.56	27.03	59.02	17.64	18.36	73.07	152.95	249.04	129.75	8.61	4.78
HARLOW SOUTH	30.09	197.29	169.79	120.15	9.20	57.49	8.17	162.96	38.98	37.02	62.04	19.34	19.54	83.34	174.03	246.72	118.60	11.48	4.96
HARPENDEN HEALTH	21.78	81.60	149.03	107.08	23.86	69.52	12.79	172.72	49.21	21.85	55.34	17.04	25.35	73.71	145.13	230.18	127.83	21.83	14.49
HATFIELD	16.88	58.23	77.11	65.91	7.71	28.28	6.46	107.06	21.36	5.41	34.69	8.47	14.84	42.95	91.34	131.15	87.53	7.83	2.94
HERTFORD AND RURALS	16.86	116.98	126.99	67.48	7.52	54.51	5.99	147.29	25.97	13.35	42.51	10.83	20.25	52.05	138.84	203.98	117.47	7.46	3.97
HERTS FIVE	18.05	119.79	133.62	149.84	32.47	49.57	15.73	175.39	37.47	28.64	46.04	11.72	28.70	67.86	143.18	211.93	115.95	24.53	12.18
HITCHIN AND WHITWELL	21.11	126.63	141.53	80.38	10.25	64.91	5.36	160.97	32.99	22.56	48.88	11.81	23.23	63.10	146.25	217.69	134.47	9.83	6.42
HODDESDON & BROXBORNE	22.63	163.45	129.18	88.31	9.82	69.33	6.52	182.13	32.80	23.48	54.65	14.88	26.00	65.08	128.92	211.87	124.10	7.19	5.53
ICKNIELD	20.58	132.39	147.83	85.32	11.91	60.97	6.57	164.18	31.52	35.00	51.59	12.61	22.87	68.86	140.93	220.11	121.08	8.97	7.19
LEA VALLEY HEALTH	23.93	166.87	126.46	86.47	6.11	51.75	9.26	172.10	28.22	18.66	48.18	13.17	18.01	57.90	154.32	231.01	165.70	10.89	5.53
LOUGHTON BUCKHURST HILL & CHIGWELL	15.51	82.36	108.00	75.16	9.75	48.63	3.25	126.39	27.64	12.08	48.45	12.73	24.57	58.16	115.48	166.39	109.95	7.20	4.74
MVPS	20.48	132.18	129.05	118.23	17.10	37.36	15.43	141.83	33.00	29.68	40.10	11.91	12.32	50.34	135.02	189.04	100.76	22.35	10.35
NORTH UTTLESFORD	15.67	23.10	103.62	50.30	8.89	35.46	3.02	82.42	26.01	0.19	40.66	8.29	27.47	50.49	94.73	129.90	109.54	4.31	4.09
NORTH WATFORD	21.96	115.98	140.15	136.45	18.26	39.04	14.64	168.63	39.54	20.47	47.73	15.48	20.13	64.24	142.44	194.02	96.65	24.51	9.80
POTTERS BAR	22.98	140.98	142.22	136.58	24.74	53.46	12.70	148.52	37.34	84.75	44.43	12.35	20.80	65.37	132.36	187.18	88.62	20.73	11.56
RICKMANSWORTH & CHORLEYWOOD	17.43	111.90	132.75	112.05	18.36	44.50	13.90	188.27	41.26	6.88	45.98	15.23	20.02	59.08	127.24	185.97	93.22	19.48	8.82
SOUTH UTTLESFORD	15.28	43.19	113.74	57.46	8.33	38.05	2.34	96.24	24.00	4.96	39.00	9.02	20.59	48.74	99.33	142.19	108.67	4.65	3.60
STEVENAGE NORTH	24.27	273.76	124.18	170.45	10.46	46.58	8.92	155.20	29.48	9.51	46.26	11.84	14.55	64.91	136.82	194.88	111.38	8.02	6.11
STEVENAGE SOUTH	23.31	128.57	101.25	75.88	9.99	44.87	6.69	144.52	30.88	15.08	46.63	12.90	13.69	62.56	105.37	151.85	76.49	7.45	6.03
STORT VALLEY & VILLAGES	17.85	122.87	132.49	65.60	7.18	53.86	6.92	144.16	26.39	19.45	44.05	13.41	19.82	60.97	120.51	203.15	127.69	6.34	3.43
THE GRAND UNION	17.43	143.73	135.30	134.24	19.14	42.21	12.89	149.94	36.78	28.86	46.99	12.45	19.10	62.75	138.79	195.84	95.98	20.23	9.53
WARE AND RURALS	18.09	163.30	165.40	77.77	7.63	58.28	5.79	154.35	27.24	22.49	47.89	12.74	20.82	60.01	132.46	198.85	108.67	6.62	4.13
WELWYN GARDEN CITY A	19.05	104.74	104.65	68.93	6.62	41.07	6.99	132.35	23.08	10.49	38.53	10.24	17.72	48.93	117.64	178.45	109.12	7.12	3.14

The data from the ICB model has been collated and the above provides a rate per 1,000 population with a recording of each condition. The darker the blue the higher the presence of the condition within the PCN's population.

Further information and tools that monitor identification and management of people with conditions are available in Ardens Manager rolled out to support the ICB's ECF. Searches available via Ardens can support with case finding and identifying people with management indicators that are due.

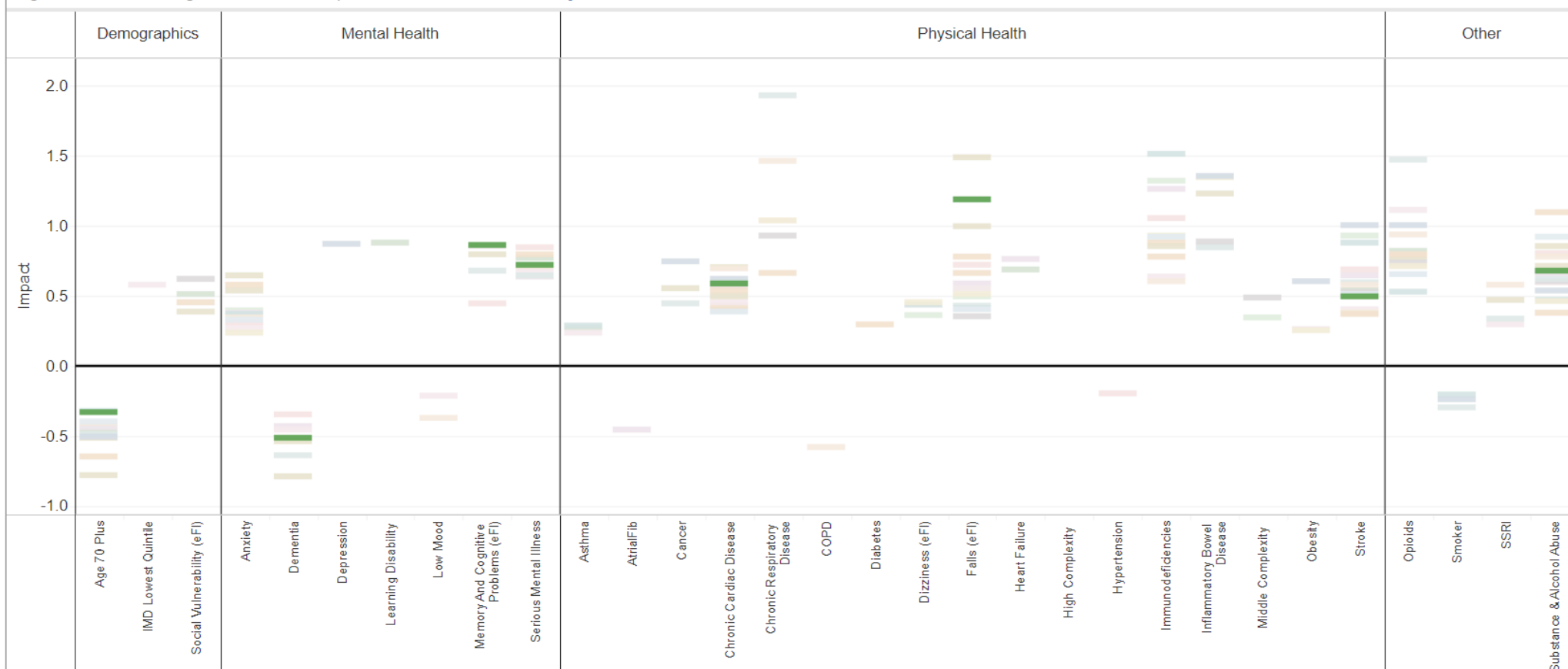
When analysing the underlying Segmentation Model data the conditions with highest per 1,000 registered prevalence that are highlighted for Attenborough PCN, are for SMI patients; some of the higher areas are also Asthma, Diabetes, and higher than average Alzheimer's.

PCN NAME	ASD	Cerebral Palsy	Chronic Respiratory Disease	Cystic Fibrosis	Huntingtons Disease	Inflammatory Bowel Disease	Kidney Transplant	Metastatic Cancer	Multiple Sclerosis	Muscular Dystrophy	Myasthenia Gravis	Osteoporosis	Other Neurological Conditions	Parkinsons Disease	Rheumatoid Arthritis	Lupus (SLE)	Sickle Cell Disease	Solid Organ Transplant	High Bp
ABBEY HEALTH	14.98	1.20	20.95	0.40	0.04	9.37	2.04	2.48	1.56	0.52	0.28	14.46	1.20	2.08	7.53	0.92	0.44	1.48	25.51
ALBAN HEALTHCARE	13.61	1.20	22.10	0.77	0.23	11.13	2.30	3.02	1.73	0.30	0.33	24.28	1.10	2.77	8.39	1.43	0.28	1.34	31.80
ALLIANCE	17.30	1.66	25.28	1.73	0.04	10.85	2.45	3.01	1.13	0.19	0.15	10.55	1.06	2.60	9.01	1.24	1.70	1.09	30.03
ALPHA	11.10	0.64	21.64	0.66	0.13	10.97	2.67	2.41	2.46	0.36	0.30	20.86	1.30	3.14	9.41	1.22	0.17	1.39	35.30
ATTENBOROUGH	11.11	0.96	22.70	1.41	0.13	10.43	2.57	2.70	1.80	0.42	0.29	17.75	1.12	1.99	7.64	1.25	0.55	1.44	42.89
BROXBORNE ALLIANCE	8.71	1.08	27.27	0.55	0.02	13.59	2.21	3.15	2.09	0.32	0.34	24.44	1.56	1.95	9.86	1.43	0.78	1.45	87.88
CENTRAL WATFORD	10.69	1.11	20.87	0.87	0.15	7.62	2.32	2.65	1.20	0.27	0.21	11.29	1.30	2.44	7.53	1.17	0.54	1.14	29.37
DACORUM BETA	17.95	1.28	29.89	1.09	0.15	11.68	2.62	4.19	2.11	0.53	0.10	17.54	1.16	3.61	9.52	1.33	0.75	1.60	36.87
DANAIS	16.34	1.18	26.91	0.79	0.26	10.93	2.13	3.22	1.77	0.39	0.30	8.73	1.31	2.92	10.14	1.21	0.89	1.71	39.02
DELTA	13.39	1.02	21.36	0.96	0.27	11.99	2.31	3.60	2.28	0.42	0.24	18.70	0.96	2.97	8.99	1.14	0.51	1.20	37.04
HALO	20.38	1.52	23.45	0.73	0.18	11.68	2.31	3.56	1.90	0.23	0.20	20.47	1.40	3.88	8.70	1.34	0.41	0.99	31.92
HARLOW NORTH	7.53	1.38	42.10	1.26	0.06	13.93	3.47	3.41	2.51	0.30	0.36	29.48	2.45	2.39	13.51	1.49	0.60	2.21	69.06
HARLOW SOUTH	11.58	2.48	42.29	0.93	0.10	13.55	2.38	4.24	1.65	0.52	0.52	40.02	2.27	2.38	13.55	2.48	0.31	1.86	95.65
HARPENDEN HEALTH	12.54	1.06	28.25	0.66	0.12	10.84	2.47	5.89	2.22	0.39	0.48	29.04	1.89	4.68	9.54	1.18	0.39	1.41	28.50
HATFIELD	6.55	0.76	21.97	0.47	0.06	10.21	2.74	1.89	0.90	0.32	0.23	19.79	1.43	1.51	6.72	1.25	0.84	1.54	71.96
HERTFORD AND RURALS	8.19	0.81	24.68	0.69	0.12	15.00	2.38	2.24	2.26	0.44	0.30	27.37	1.37	2.38	7.72	0.89	0.10	1.53	90.91
HERTS FIVE	13.79	1.39	23.04	0.77	0.13	12.86	2.98	2.86	2.45	0.25	0.36	22.67	1.69	3.63	17.88	1.26	0.62	1.66	34.03
HITCHIN AND WHITWELL	9.93	1.49	30.11	0.50	0.00	15.61	2.87	3.41	2.41	0.32	0.32	34.83	1.42	2.52	8.34	1.63	0.14	1.60	92.26
HODDESDON & BROXBORNE	9.14	0.96	31.53	0.58	0.27	14.77	2.84	3.29	2.38	0.43	0.23	33.55	1.73	2.33	9.37	1.35	0.22	1.73	96.87
ICKNIELD	10.67	1.08	29.47	0.62	0.08	16.17	2.69	2.91	3.58	0.43	0.32	27.18	1.29	2.67	8.51	1.27	0.05	2.02	82.47
LEA VALLEY HEALTH	10.05	1.27	31.63	0.59	0.10	12.74	2.37	2.80	1.53	0.36	0.46	22.43	1.89	1.72	10.47	1.63	1.11	1.98	97.79
LOUGHTON BUCKHURST HILL & CHIGWELL	4.13	0.84	22.95	0.79	0.14	14.26	2.42	3.62	1.77	0.46	0.33	38.42	1.90	2.04	8.87	1.53	0.19	1.35	65.68
MVPS	14.28	1.17	34.30	10.11	0.07	11.35	2.43	3.60	2.06	0.30	0.15	15.86	1.17	2.47	8.53	1.69	0.59	1.30	32.96
NORTH UTTLESFORD	2.34	0.78	21.65	0.73	0.05	11.09	1.18	2.48	1.13	0.48	0.11	23.32	1.16	1.27	10.04	1.29	0.03	1.72	26.93
NORTH WATFORD	12.70	1.07	27.72	2.17	0.11	12.20	2.44	3.36	2.40	0.42	0.31	16.47	1.53	2.63	9.42	1.45	0.34	0.92	37.13
POTTERS BAR	12.98	0.76	27.06	0.62	0.17	8.31	1.90	2.70	2.01	0.38	0.48	21.07	1.49	3.25	7.96	1.07	0.42	1.28	33.70
RICKMANSWORTH & CHORLEYWOOD	11.74	1.12	23.30	2.02	0.25	9.40	2.45	3.20	1.33	0.54	0.18	15.52	0.97	2.88	7.38	0.97	0.11	1.51	32.44
SOUTH UTTLESFORD	3.05	1.02	21.93	0.53	0.02	10.61	1.97	2.44	1.89	0.28	0.22	29.23	1.34	1.71	10.30	1.48	0.08	2.01	24.13
STEVENAGE NORTH	12.22	1.43	32.98	0.27	0.05	16.52	3.40	2.92	2.23	0.64	0.27	15.67	1.81	2.71	7.06	1.27	0.48	1.54	94.81
STEVENAGE SOUTH	10.81	1.57	31.16	0.88	0.06	13.08	2.69	4.03	2.09	0.27	0.33	14.90	1.57	2.09	5.81	1.12	0.39	1.73	75.58
STORT VALLEY & VILLAGES	10.22	1.05	25.19	0.51	0.00	12.73	1.89	3.26	1.95	0.41	0.36	41.69	1.69	2.08	9.13	1.63	0.13	1.39	76.18
THE GRAND UNION	13.30	1.32	22.90	1.36	0.18	11.75	2.22	3.19	2.19	0.25	0.25	26.69	1.27	2.29	9.07	1.53	0.53	1.68	74.02
WARE AND RURALS	7.25	1.01	25.52	0.77	0.09	14.85	2.67	2.64	1.81	0.18	0.27	26.11	1.63	2.58	7.58	1.22	0.03	1.75	86.12
WELWYN GARDEN CITY A	9.18	0.77	25.87	0.71	0.05	13.17	2.65	2.13	1.92	0.46	0.20	20.42	1.30	1.37	7.02	1.11	0.38	1.55	89.89

On this page of conditions, we can see that the PCN has mid to higher prevalence of ASD, Muscular Dystrophy, and Sickle Cell Disease.

PCN Benchmarking - A&E Activity

Higher bars indicate greater relationship with increased **AE Activity**



The charts in the next two pages show activity for the PCN compared against all other PCNs at the Place level.

The Model - A statistical regression model is used to decide which Risk Factors correlate with a significant impact on the selected targets as presented in these charts, the height of the bar for each PCN relates to the correlation of a Risk Factor and an increase in impact on the selected target condition.

The impact for the PCN is given and will vary for each characteristic; a wide variance may indicate differences in care or good practice which could be shared; some impacts are positive. Higher bars indicate a greater relationship with increased A&E attendances

PCN Benchmarking - Emergency Admissions

Higher bars indicate greater relationship with increased **Emergency Admissions**



This uses the same principles as the previous slide but looks at Emergency Admission.

Learning Disability admissions shows the most variance across all PCNs, meaning that characteristic has a high impact on emergency admissions.

Urgent and Emergency Care

As part of the ICB Urgent and Emergency Care Programme a needs analysis was undertaken.

Overall aim

* To understand what and where the need is for access to urgent and emergency care in Hertfordshire and West Essex

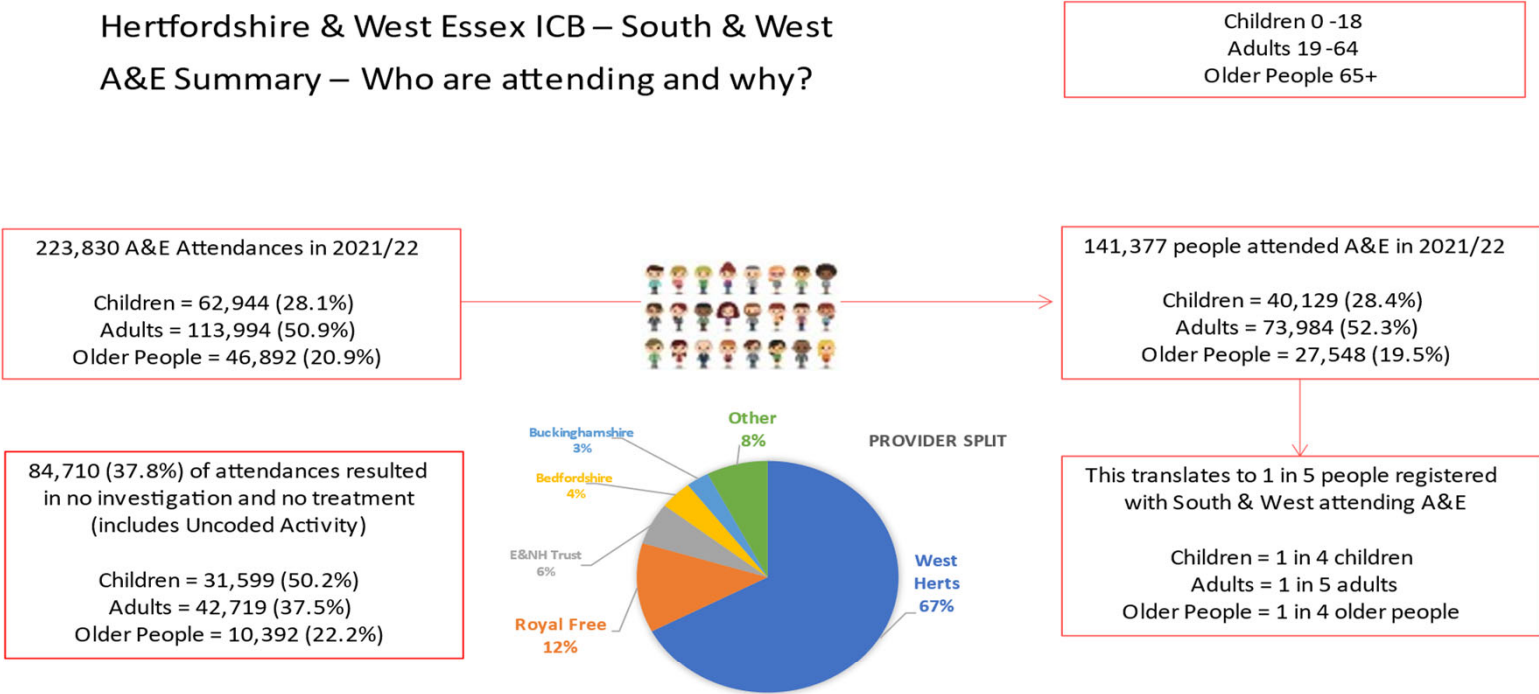
Objectives

- * To build a comprehensive picture of **who** needs to access UEC in HWE and who could be better cared for in alternative settings.
- * To understand the root causes of **why** people are accessing UEC when there could have been more appropriate alternative pathways
- * To build consensus among stakeholders around what the key issues in UEC are
- * To draw conclusions based on public health intelligence and triangulation of data to inform a successful and achievable UEC strategy

Some of the initial outputs from this work have been included within the next few pages, providing the PCN benchmarking.



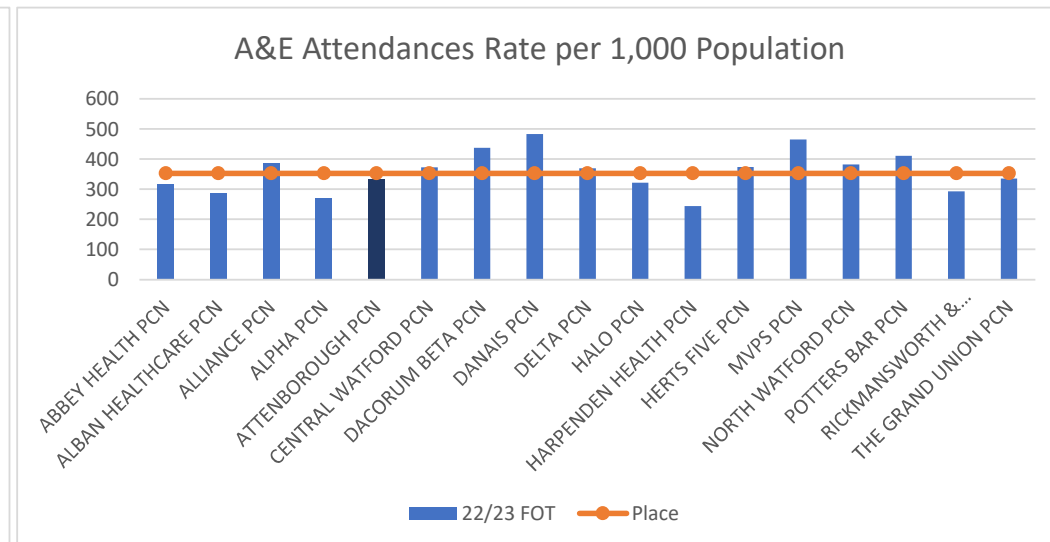
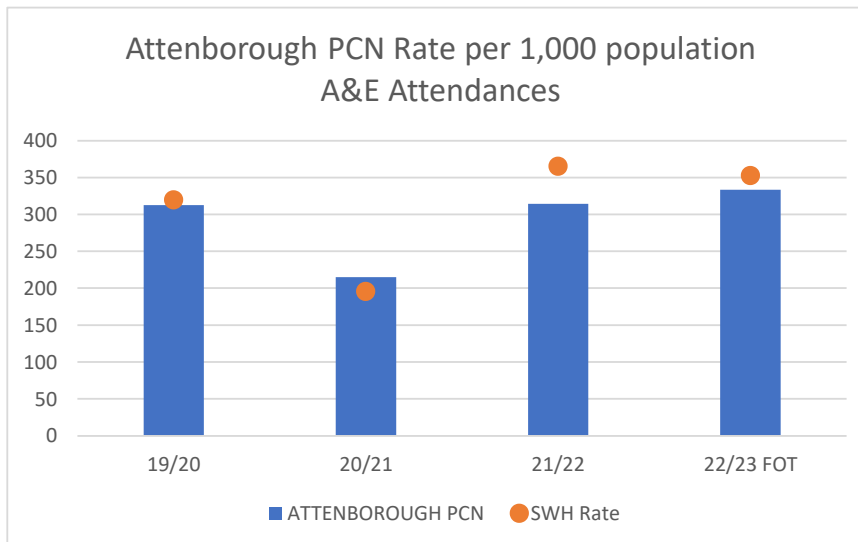
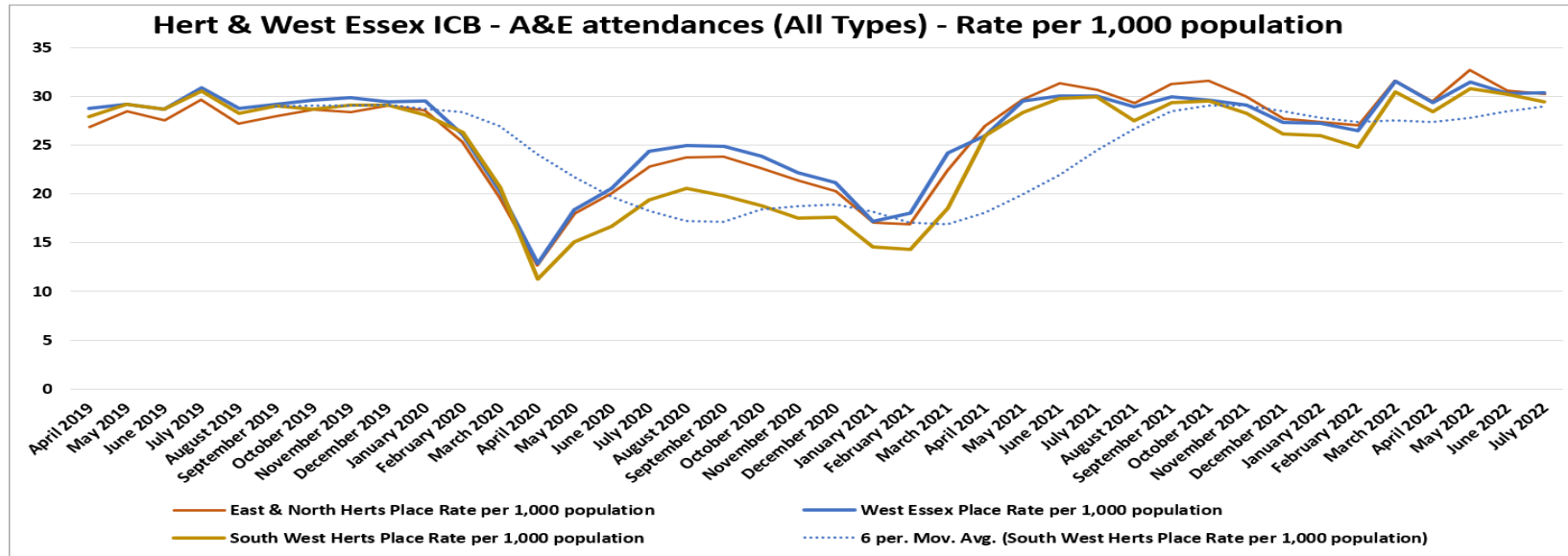
Hertfordshire & West Essex ICB – South & West A&E Summary – Who are attending and why?



Hertfordshire and
West Essex Integrated
Care System



Source: SUS



Rates of A&E attendances across the ICB have returned to pre covid levels and above.

The impact of covid can clearly be seen in the top left chart.

2022/23 rates for Attenborough are slightly lower than the place rate.

Unplanned Hospitalisation for Chronic Ambulatory Care Sensitive Conditions

This analysis looks at Unplanned hospitalisation for chronic ambulatory care sensitive conditions
NHS Outcomes Framework Methodology.

Between April 2021 and September 2022 there have been 11,953 people admitted 15,563 times for chronic ambulatory care sensitive conditions across the ICB.

Costed at tariff the value was approximately £42 million.

The table here shows the breakdown for Attenborough PCN.

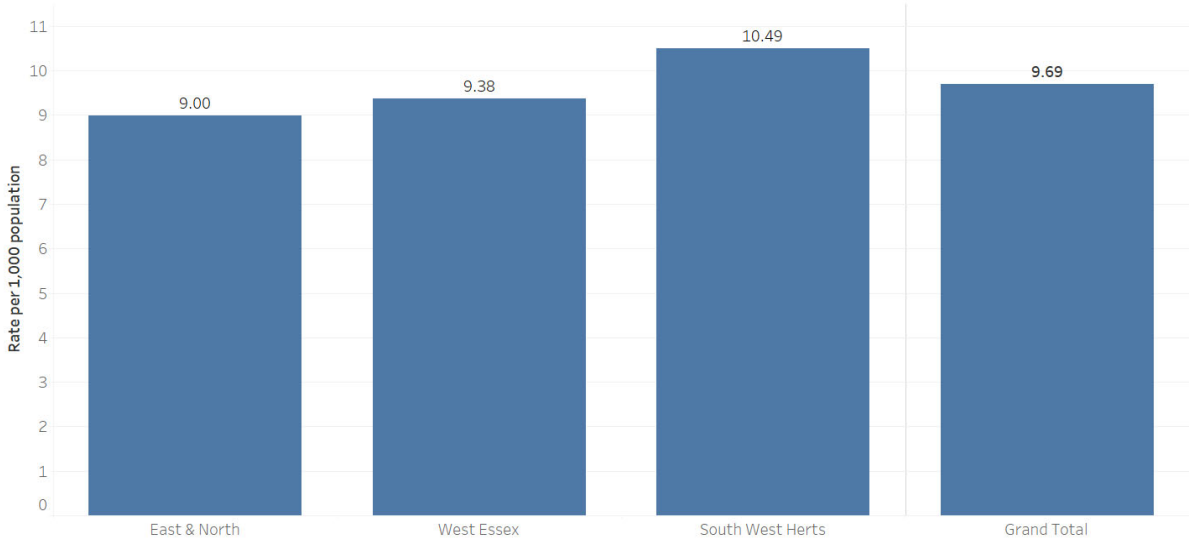
* Average cost for Mental and Behavioural is not representative as non-PbR

Chronic ACS admissions April 2021 - September 2022 Herts & West Essex ICB

Chronic ACS	Admissions	People	Average cost of admission	Tariff Total Payment National
CVD: AF and Flutter	58	51	£2,091	£121,261
CVD: Angina	12	10	£723	£8,673
CVD: Congestive Heart Failure	74	54	£5,214	£385,869
CVD: Hypertension	38	34	£642	£24,389
Diseases of the blood	38	33	£1,494	£56,786
Mental and Behavioural Disorders	3	3	£0	£0
Neurological Disorders	30	21	£2,147	£64,413
Nutritional, endocrine and metabolic	38	33	£1,434	£54,502
Respiratory: Asthma	46	29	£1,634	£75,183
Respiratory: COPD	86	49	£2,719	£233,821
Grand Total	423	302	£2,423	£1,024,897

ACS Admission Rates per 1,000 Population by Place

Chronic Ambulatory Care Sensitive Conditions by Place
Rate per 1,000 Population
(Total Population)

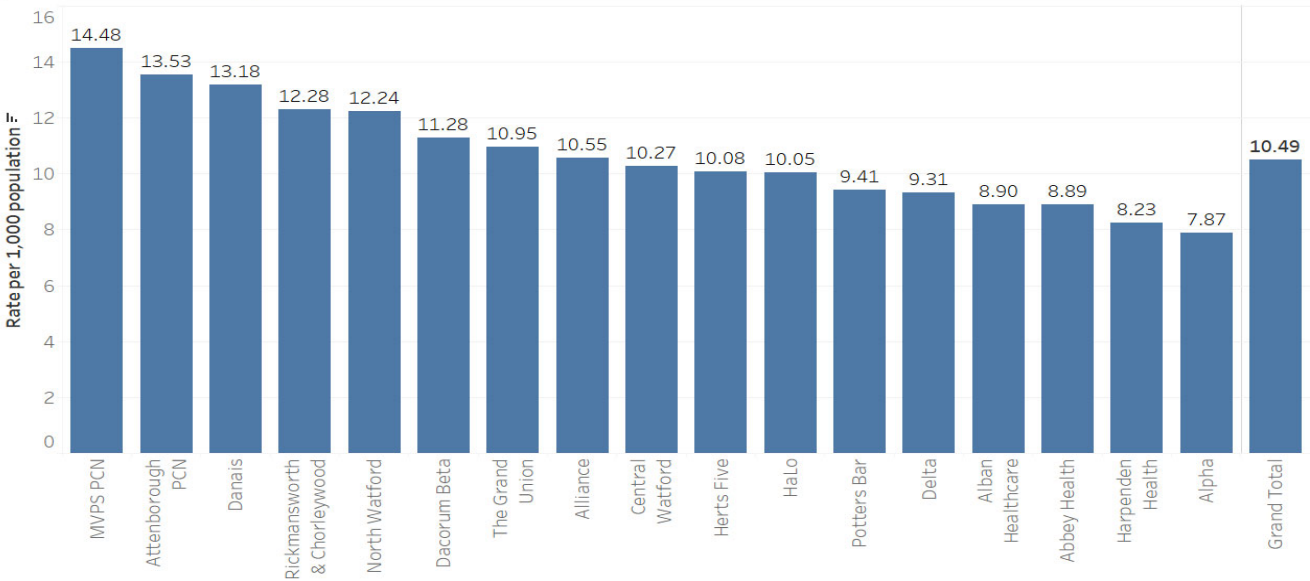


When comparing the rates per 1,000 population between places, the South West Herts place has the highest rate in the ICB.

Within South West Herts Place, Attenborough PCN has the second highest rate per 1,000 population.

The following slides look at how this is broken down by the different ACSs and how the patients fall within the different segments.

Chronic Ambulatory Care Sensitive Conditions by Place
Rate per 1,000 Population
(Total Population)



Source: HWE PHM Team, SUS UEC data-sets

Chronic ACS by Segment

ACS by segment_age



The above chart looks at the ACS admissions by age and segment. The size reflects volume and the depth of colour reflects cost.

When looking at the ACS conditions for Attenborough, the highest volume and cost is within the End of Life, Severe Frailty and Dementia in the over 65 age group, and the highest volume is within the same age in the Advanced Disease and Complexity segment.

The following pages look at which ACSs contribute to this.

UEC by Advanced Disease & Complexity, and EOL, Frailty & Dementia

Segment 4



ACSs of note for people aged over 65 with advanced disease and complexity within this analysis are Heart Failure, and AF & Flutter.

For those within the End of Life, Frailty & Dementia sub segment, Heart Failure and COPD are the ACS's with the highest volume and cost.

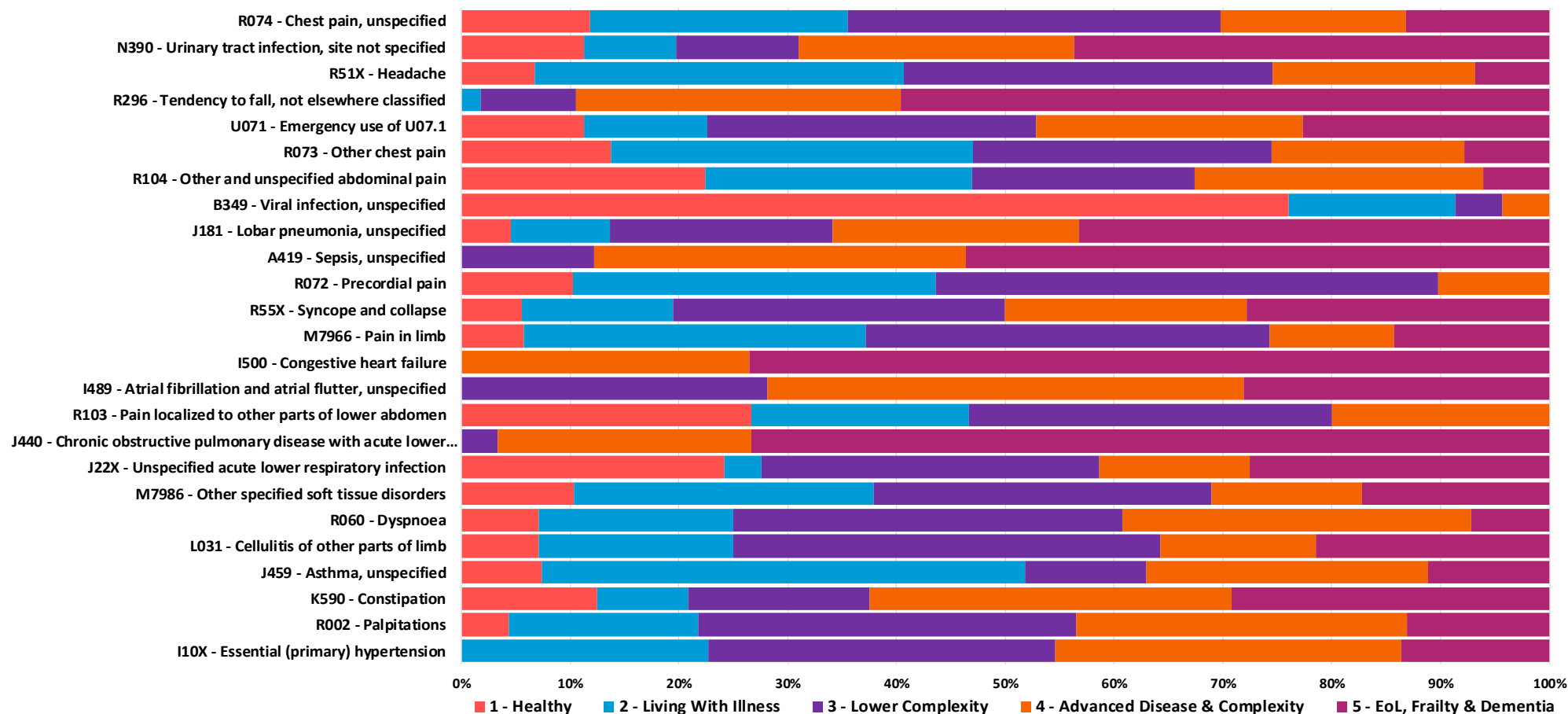
Segment 5



UEC Diagnoses by Segment

PCN Population - UEC Top 25 Primary Diagnoses by Segment

Highest Emergency Admissions from Top to Bottom



Here we have identified the top 25 primary diagnoses for the PCN's population, for all UEC admissions - and then these diagnoses split these by the health segments that each patient falls into to see where outliers are for the PCN.

UEC & Segmentation + Deprivation by Ward

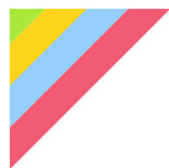
UEC Patients Seen by Segment & Ward	1 - Healthy	2 - Living With Illness	3 - Lower Complexity	4 - Advanced Disease & Complexity	5 - EoL, Frailty & Dementia	Grand Total
Abbots Langley & Bedmond			3	1		4
Aldenharn West		1	1			2
Apsley and Corner Hall		1	3			4
Berkhamsted Castle			1			1
Borehamwood Brookmeadow			2		4	6
Borehamwood Cowley Hill		1				1
Bushey Heath	6	8	39	10	16	79
Bushey North	46	47	52	56	47	248
Bushey Park	21	12	15	20	20	88
Bushey St James	44	37	51	54	68	254
Callowland	8	23	23	25	7	86
Carpenders Park	51	62	103	154	108	478
Central	14	25	12	34	34	119
Chorleywood North & Sarratt		1	1			2
Chorleywood South & Maple Cross		2	1			3
Dickinsons		1				1
Durrants	2		2			4
Gade Valley	2	1	3	1		7
Gadebridge	1					1
Hitchin Priory					2	2
Holywell	48	48	48	69	75	288
Leavesden	1	3	5	4	3	16
Leggatts	4	12	19	18	13	66
London Colney		1				1
Meriden	2	5	8	8	12	35
Moor Park & Eastbury	2		2	2		6
Nascot	3	5	7	7	81	103
Oxhey	37	48	71	69	43	268
Oxhey Hall & Hayling	22	32	39	50	21	164
Park	3	2	4	9		18
Park Street				1		1
Penn & Mill End	1	2	2	1		6
Potters Bar Oakmere			1			1
Redbourn			1			1
Rickmansworth Town				2		2
Shenley			1			1
South Oxhey	17	19	51	58	24	169
St Stephen		1			2	3
Stanborough	3	3	2	3	4	15
Tring Central				2		2
Tudor	27	39	69	46	87	268
Vicarage	19	21	20	10	4	74
Woodside	3	2	4	8	2	19
Unknown Ward	7	8	5	5	6	31
Grand Total	394	473	671	727	683	2948

It is also useful to note under which Wards that the PCNs population are linked to, and specifically here, where the admissions are highest.

The indication then for these patients split by health segments also adds a layer of importance when considering how the District Councils may help you investigate your population and where the wider determinants and health inequalities may be present.

UEC Patients Seen by Deprivation Quintile & Ward 1 = Most Deprived, 5 = Least Deprived	1	2	3	4	5	(blank)	Grand Total
Abbots Langley & Bedmond		2			2		4
Aldenharn West			2				2
Apsley and Corner Hall		3		1			4
Berkhamsted Castle					1		1
Borehamwood Brookmeadow		4	2				6
Borehamwood Cowley Hill	1						1
Bushey Heath			44	12	23		79
Bushey North	79	38	90	41			248
Bushey Park			58		30		88
Bushey St James	59		28	167			254
Callowland	8	60	18				86
Carpenders Park	34		147	162	135		478
Central	26	93					119
Chorleywood North & Sarratt					2		2
Chorleywood South & Maple Cross	2			1			3
Dickinsons					1		1
Durrants					4		4
Gade Valley		1	4	2			7
Gadebridge		1					1
Hitchin Priory				2			2
Holywell	243	45					288
Leavesden			16				16
Leggatts	12	38	16				66
London Colney		1					1
Meriden	22	6	7				35
Moor Park & Eastbury					6		6
Nascot			6	7	90		103
Oxhey	72		72	124			268
Oxhey Hall & Hayling		107		57			164
Park			14		4		18
Park Street					1		1
Penn & Mill End		6					6
Potters Bar Oakmere	1						1
Redbourn					1		1
Rickmansworth Town					2		2
Shenley		1					1
South Oxhey	51	118					169
St Stephen			1		2		3
Stanborough	4		2	5	4		15
Tring Central	2						2
Tudor			102	98	68		268
Vicarage	10	31	33				74
Woodside	5	10		4			19
Unknown Ward						31	31
Grand Total	631	565	662	683	376	31	2948

It is also important to know that a Ward may be made up of different LSOAs, and therefore have different levels of deprivation as found in the Indices of Multiple Deprivation scoring given to us by the Government; in the graph quintile 1 is the Highest or Most deprived, and quintile 5 is the Least deprived.



Hospital Admissions

	Period	HERTFORDSHIRE AND WEST ESSEX	ATTENBOROUGH PCN
Emergency admissions injuries due to falls in those aged 65+	2020/21	2026	2315
Emergency asthma, diabetes and epilepsy admissions (aged 0-18)	2020/21	130.8	
Emergency admissions for children with lower respiratory tract infections (age 0-18)	2020/21	40.5	
Emergency admissions for chronic ambulatory care sensitive conditions	2020/21	505.9	713.4
Mental health admissions (all ages)	2020/21	177.2	236.2
Emergency Cancer Admissions	2020/21	494.9	544.3
Emergency admissions for acute conditions shouldn't require admissions	2020/21	611.6	674.1

■ Similar
 ■ Significantly Worse

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 Hertfordshire Public Health
Evidence & Intelligence
Epidemiology



The above table produced by the Hertfordshire Public Health Evidence and Intelligence team shows the emergency admissions data within fingertips.

Attenborough PCN rates vary from Similar to Significantly worse rate of admissions to the ICB, dependent on Admission categories.

Frailty Segment - Detailed PCN Breakdown

Index of Multiple Deprivation Decile	1	2	3	4	5	6	7	8	9	10	NULL	PCN	ICS
Overall Population Measures													
Population		6	35	94	37	36	29	82	101	164	3	587	37725
% of population in cohort		1.0%	6.0%	16.0%	6.3%	6.1%	4.9%	14.0%	17.2%	27.9%	0.5%	100.0%	100.0%
Avg. Age		62.0	70.5	79.7	72.5	68.4	75.8	77.0	77.6	79.0	80.7	76.7	75.6
% BAME Where recorded		33%	29%	9%	14%	11%	21%	20%	14%	16%	33%	16%	8%
Avg. number of Acute and Chronic Conditions		4.2	5.8	7.1	6.2	5.4	7.1	6.2	6.7	6.4	6.3	6.4	5.5
Activity Measure													
Emergency Admissions		0.3	1.0	1.0	1.6	1.0	1.5	1.3	1.1	1.2	1.3	1.2	0.6
A&E Attendances		0.8	1.2	1.0	1.7	0.9	1.6	1.4	1.2	1.5	1.3	1.3	0.9
GP Encounters		62.7	74.5	72.7	87.0	60.1	66.0	64.7	66.3	65.1	105.7	68.3	103.4
Admitted Bed Days		1.2	4.7	9.2	15.2	10.4	9.2	8.6	7.1	16.1	10.3	10.8	4.2
Physical Health													
Asthma		33.3%	25.7%	26.6%	35.1%	11.1%	48.3%	28.0%	23.8%	20.7%	0.0%	25.2%	25.2%
Cancer		0.0%	22.9%	28.7%	29.7%	33.3%	31.0%	30.5%	28.7%	26.2%	33.3%	28.1%	32.8%
Chronic Cardiac Disease		33.3%	51.4%	51.1%	59.5%	55.6%	62.1%	63.4%	58.4%	52.4%	33.3%	55.5%	47.5%
Chronic Respiratory Disease		0.0%	31.4%	30.9%	27.0%	22.2%	37.9%	28.0%	22.8%	17.7%	33.3%	24.7%	22.2%
CKD		33.3%	25.7%	22.3%	21.6%	13.9%	34.5%	19.5%	22.8%	18.3%	0.0%	21.1%	20.7%
Heart Disease		33.3%	45.7%	43.6%	54.1%	47.2%	55.2%	53.7%	50.5%	46.3%	33.3%	48.4%	39.1%
Hypertension		83.3%	71.4%	81.9%	70.3%	75.0%	86.2%	79.3%	83.2%	77.4%	100.0%	79.0%	74.5%
Diabetes		50.0%	42.9%	62.8%	51.4%	36.1%	65.5%	45.1%	53.5%	48.2%	33.3%	50.9%	42.8%
Obesity		33.3%	48.6%	38.3%	45.9%	38.9%	55.2%	30.5%	40.6%	30.5%	0.0%	37.1%	32.8%
Rheumatoid Arthritis		16.7%	8.6%	3.2%	10.8%	0.0%	6.9%	11.0%	5.9%	5.5%	0.0%	6.3%	5.3%
Stroke		33.3%	40.0%	47.9%	51.4%	33.3%	58.6%	56.1%	53.5%	54.9%	100.0%	51.4%	34.5%
Mental Health													
Anxiety		0.0%	20.0%	33.0%	21.6%	30.6%	10.3%	24.4%	28.7%	27.4%	33.3%	26.4%	29.0%
Depression		33.3%	54.3%	43.6%	45.9%	33.3%	27.6%	30.5%	40.6%	40.2%	0.0%	39.4%	33.6%
Dementia		0.0%	20.0%	53.2%	10.8%	16.7%	20.7%	15.9%	33.7%	46.3%	100.0%	33.9%	18.6%
Serious Mental Illness		0.0%	2.9%	23.4%	16.2%	13.9%	13.8%	9.8%	14.9%	15.9%	0.0%	14.8%	6.5%
Low Mood		16.7%	25.7%	19.1%	16.2%	11.1%	6.9%	18.3%	16.8%	17.7%	0.0%	17.2%	18.5%
Suicide		0.0%	0.0%	2.1%	2.7%	0.0%	3.4%	2.4%	2.0%	0.6%	0.0%	1.5%	1.5%
Mental Health Flag		33.3%	62.9%	56.4%	59.5%	47.2%	34.5%	46.3%	49.5%	51.8%	33.3%	51.1%	48.8%
Screening and Verification Refusal													
Bowel Screening Refused		83.3%	37.1%	26.6%	32.4%	44.4%	24.1%	28.0%	25.7%	25.0%	0.0%	28.6%	25.5%
Cervical Screening Refused		16.7%	0.0%	5.3%	0.0%	0.0%	6.9%	3.7%	4.0%	3.0%	0.0%	3.4%	3.6%
Flu Vaccine Refused		0.0%	42.9%	40.4%	45.9%	36.1%	34.5%	28.0%	34.7%	32.3%	33.3%	34.9%	26.4%
Wider Indicators													
Has A Carer		33.3%	14.3%	36.2%	32.4%	13.9%	17.2%	17.1%	20.8%	32.9%	33.3%	26.1%	19.0%
Is A Carer		0.0%	5.7%	13.8%	10.8%	8.3%	0.0%	12.2%	12.9%	6.7%	0.0%	9.5%	11.9%
MED3 Not Fit For Work (ever)		16.7%	31.4%	12.8%	18.9%	30.6%	10.3%	7.3%	9.9%	9.1%	0.0%	12.9%	13.4%
MED3 Not Fit For Work (in Last Year)		0.0%	17.1%	0.0%	5.4%	13.9%	3.4%	2.4%	4.0%	3.0%	0.0%	4.3%	3.5%
MED3 Not Fit For Work (in Last Six Months)		0.0%	5.7%	0.0%	5.4%	11.1%	6.9%	2.4%	2.0%	2.4%	0.0%	3.1%	2.8%
Avg. number of eFI Deficits		11.8	12.7	13.5	12.2	10.6	12.9	13.5	12.4	13.2	12.0	12.8	13.4
eFI_Housebound		0.0%	14.3%	20.2%	29.7%	11.1%	20.7%	22.0%	14.9%	25.0%	0.0%	20.3%	10.9%
eFI_SocialVulnerability		33.3%	48.6%	46.8%	45.9%	19.4%	44.8%	39.0%	33.7%	45.7%	33.3%	41.2%	27.3%
People_ChildrenInPoverty				7.8			5.3		9.3			7.4	15.5
Housing_FuelPoverty		14.7	15.5	14.3	13.6	12.6	12.6	11.6	9.7	9.5		11.6	11.1
Housing_OnePersonHousehold		45.6	32.1	36.3	36.1	28.0	34.4	29.7	25.3	25.8		29.8	28.3

14.8% of the general population in HWE ICB live within the 4 most deprived deciles, whilst 16.1% of the population in the EoL, severe frailty and severe dementia segment live within the 4 most deprived deciles.

In Attenborough PCN, 23.0% of the population in the EoL, severe frailty and severe dementia segment live within the 4 most deprived deciles.

The average age of a person within the Frail and End of life segment increases with affluence, ranging from 69 in the most deprived decile to 77 within the most affluent decile within the ICB.

As we would expect the average number of acute and chronic conditions is significantly higher within this segment that the general population as are all activity measures. The average number of Chronic Conditions for people within Attenborough PCN is higher compared to the ICB.

Within this segment we can see the presence of Chronic Cardiac Disease, Diabetes, Obesity, Stroke, and Heart Disease being highlighted.

Applying Machine Learning factors without our data platform

Why Machine Learning?

With limited capacity available across the ICB available to review lists of patients it is important that the data available is used to its maximum to refine our process and target our resources where they will have the most impact.

The aim is to build the features identified from the machine learning in to system searches for EMIS and SystmOne.

Approach

- Trained several machine learning models on ~1 million linked patient records across ~200 features from the ICS segmentation dataset, for binary A&E risk prediction (will this patient use A&E within the next year?).

- Selected a final twin ensemble model with a binary classification accuracy of 81.3%.

- Extracted output probabilities for each class to estimate a risk score for each patient, and generated risk scores for all of the patients in the segmentation data. We can think of the risk score as the model's confidence in a patient requiring A&E.

- Partitioned the patient population into 3 distinct grades, Low, Medium and High risk, based on the machine learning predictions:

Risk grade	Range of predicted risk scores	Number of patients in grade	% of population in grade
High	0.8 to 1.0	22603	1.8
Medium	0.6 to 0.8	100446	8.1
Low	0.0 to 0.6	1115544	90.1

Creating search logic from significant features

- Features input to the predictive model include demographic features, diagnosis codes, prescribed medication, waitlist information and environmental factors such as housing and proximity to healthcare.

- Used feature rankings learned by the model to reduce the set of ~200 features to the 30 most significant features that best explain the variance in the predicted class (requiring A&E or not).

- Trained secondary machine learning models, 5-split decision trees, to classify patients into each of the three risk grades based on these 30 significant features.

- Extracted decision tree logic to create search filters for patients by risk grade. 5 splits → $2^5 = 32$ unique rules. These rules have been merged and prioritised (by considering individual accuracies and sample sizes) to maximise precision and recall in the final search filters.

Feature	Relative significance (%)
Age	15.03
Drug: Pain Management	10.22
Substance Abuse	4.19
Med3 Not Fit For Work	3.41
Stroke	3.03
eFI: Falls	2.23
Air Rank Quality	2.01
Waiting List Count All	1.83
...	...

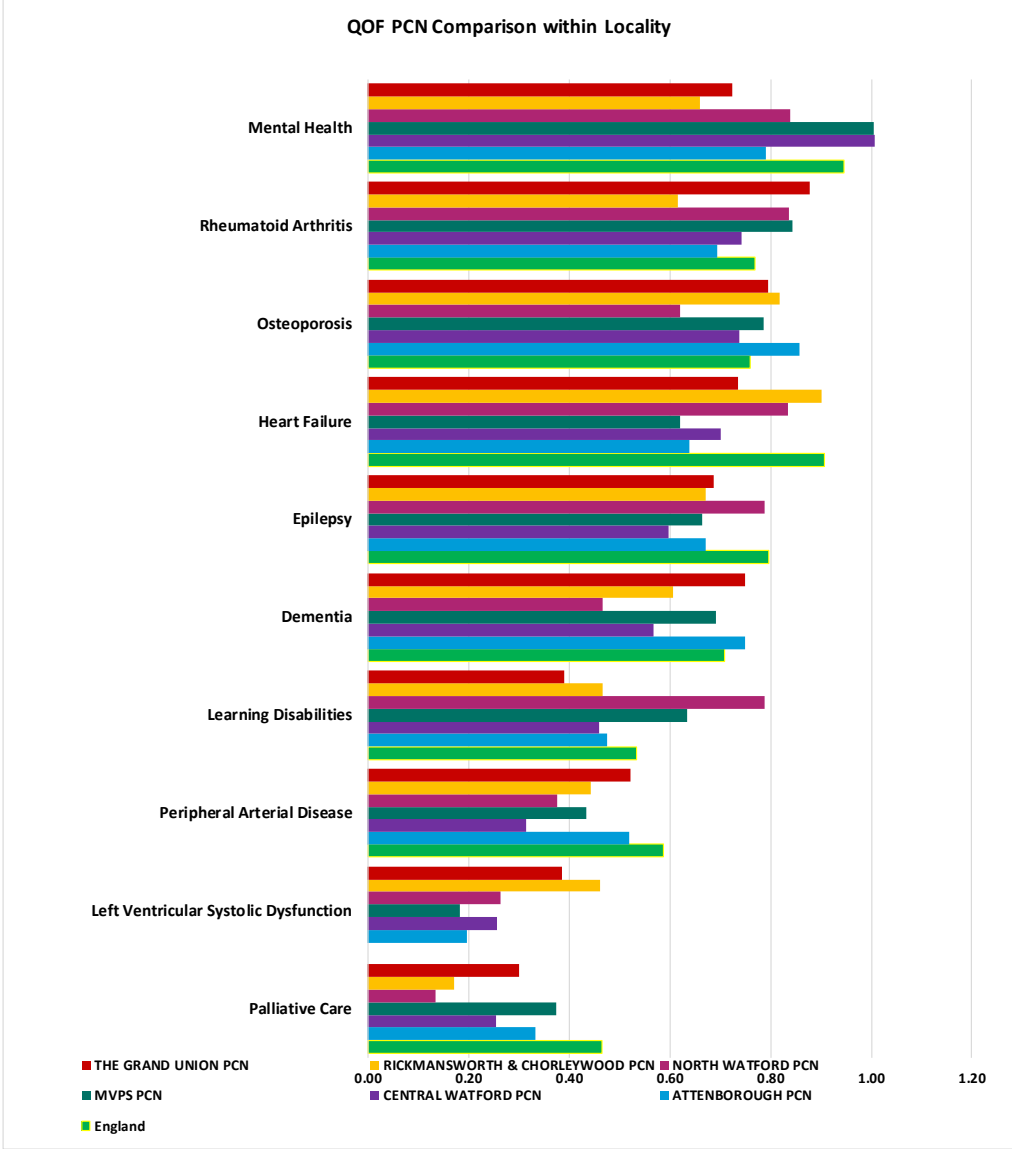
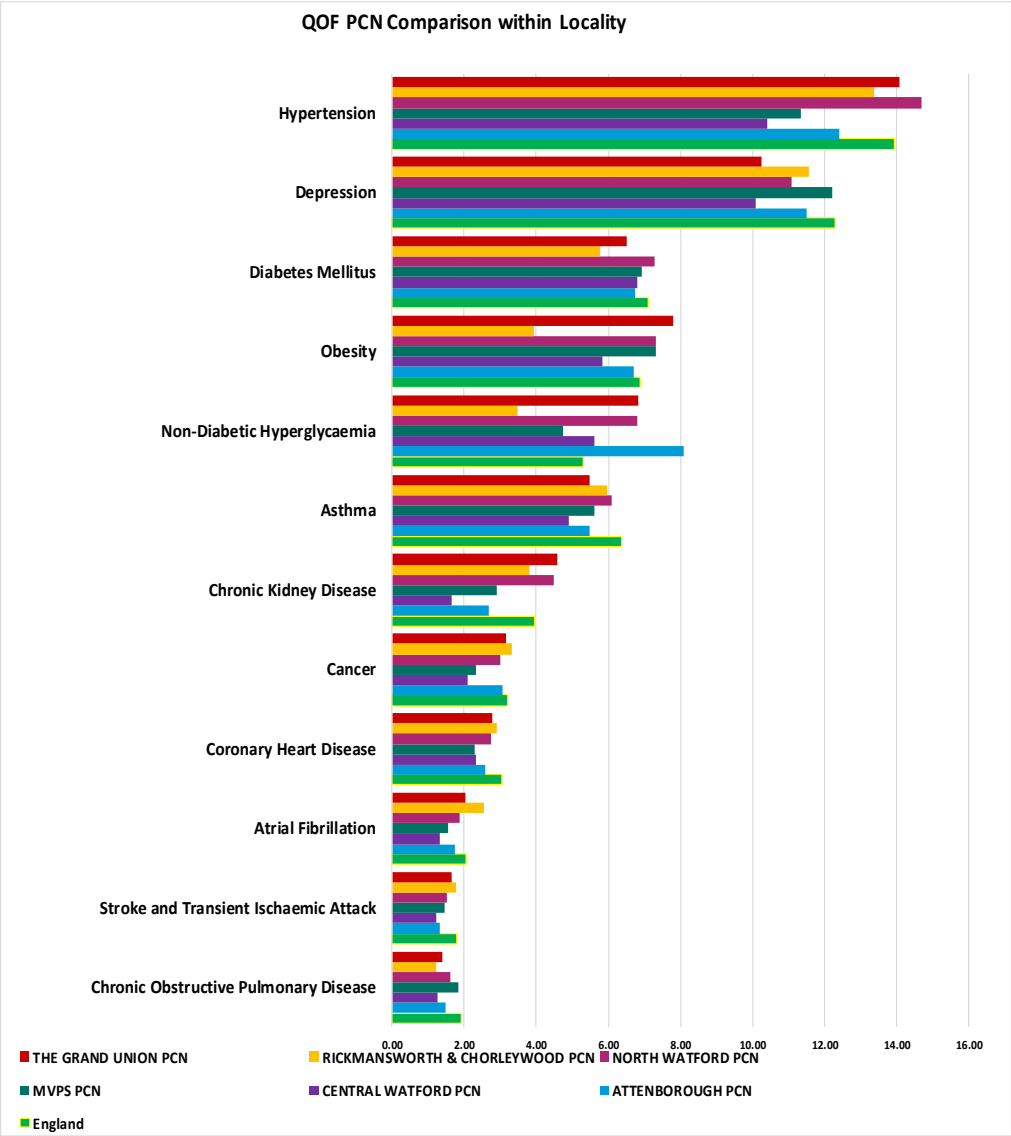
Risk Grade: High	Age < 3 AND Drug: Salbutamol AND eFI: Dyspnoea
	Med3 Not Fit For Work (last six months) AND Substance Abuse AND ONE OF:- <ul style="list-style-type: none"> • Drug: Pain Management AND eFI: Peptic Ulcer • Chronic Cardiac Disease
	Drug: Pain Management AND eFI: Falls AND ONE OF:- <ul style="list-style-type: none"> • Stroke AND eFI: Memory and Cognitive Problems • Stroke AND Substance Abuse • End Stage Disease
Risk Grade: Medium	Age < 3 AND ONE OF:- <ul style="list-style-type: none"> • Drug: Salbutamol AND NO eFI: Dyspnoea • On any waiting list
	Med3 Not Fit For Work (last six months) AND Substance Abuse AND NO Chronic Cardiac Disease
	Age < 45 AND Med3 Not Fit For Work (last six months) AND Drug: Pain Management
Risk Grade: Low	Drug: Pain Management AND Substance Abuse AND ONE OF: <ul style="list-style-type: none"> • Drug: Opioids • eFI: Falls AND NO Stroke AND NO End Stage Disease
	All others

Contents:

- QOF Local, Regional, & National Comparison
- QOF Locality & PCN Comparison
- QOF Missed Diagnoses & Admission Rates
- Admission Rates Benchmarking against ICB/Place



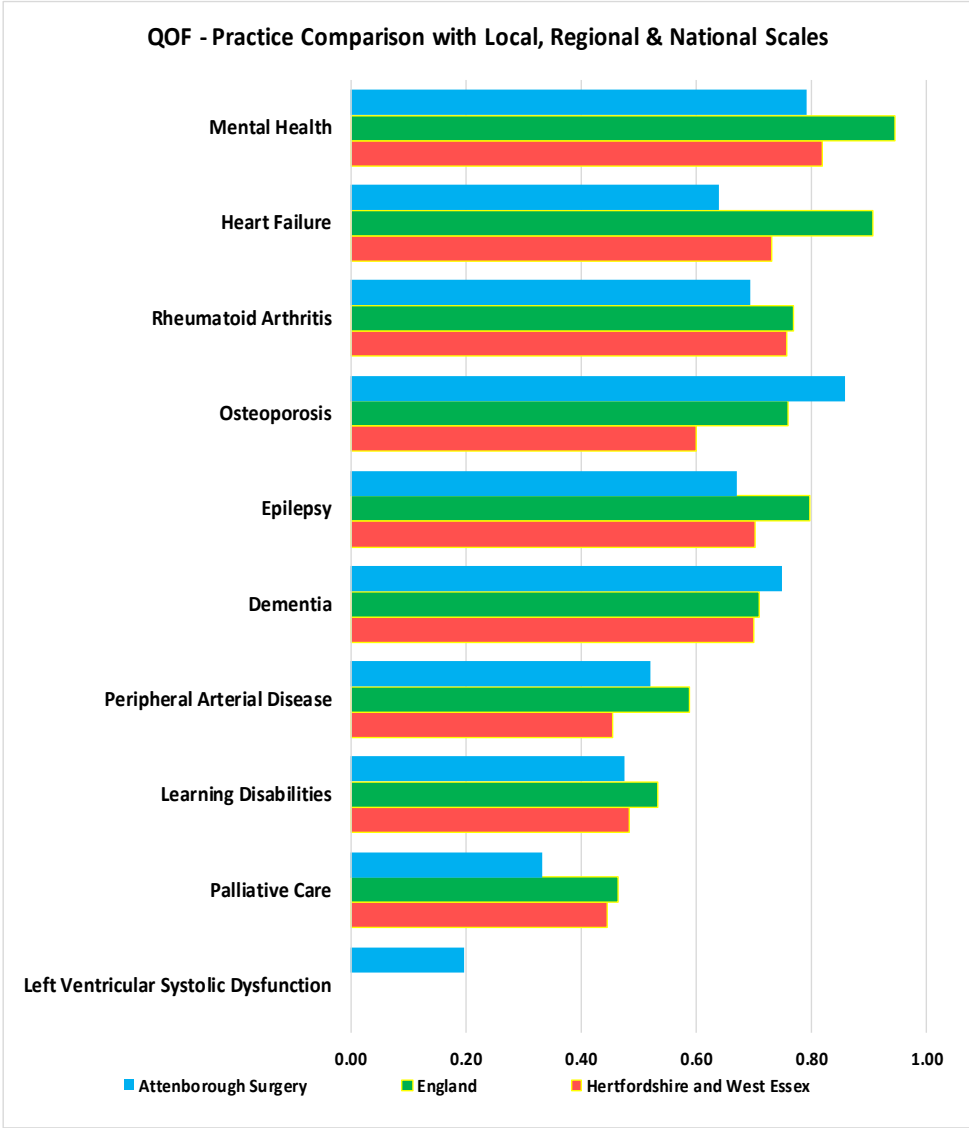
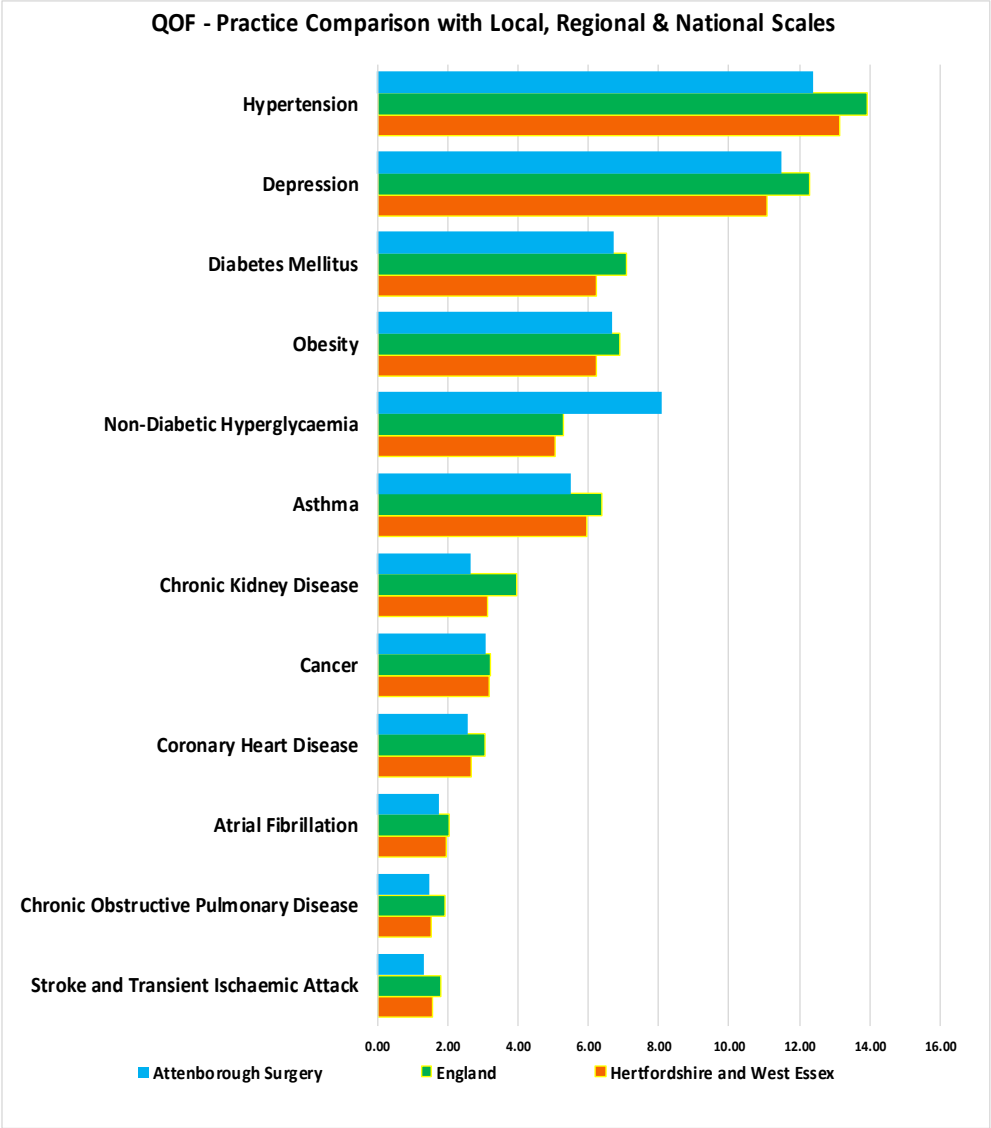
QOF - Locality & PCN Comparison



The Quality and Outcome Framework incorporates important benchmarking and scoring for all Practices across the county; we have combined a number of local, regional, and national data sets to highlight the areas that the PCN will need to consider.

In this graph we have shown all your neighbouring PCNs within the Locality, and benchmarked against England's average.

QOF - Local, Regional, & National Comparison



The charts here are similar to the previous slide but provides the comparison between practices within the PCN.

QOF - Missed Diagnoses & Admission Rates

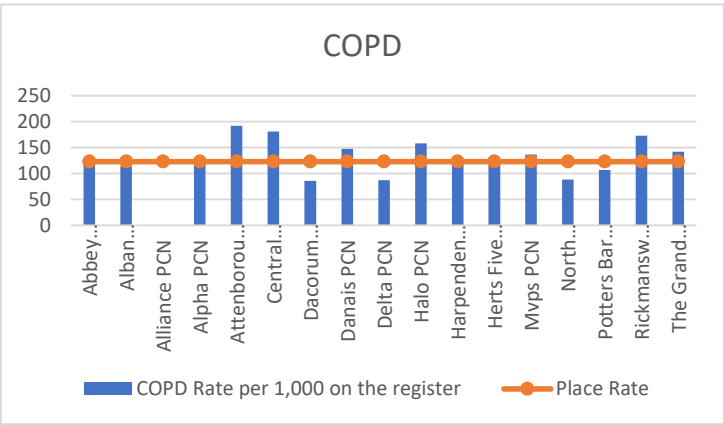
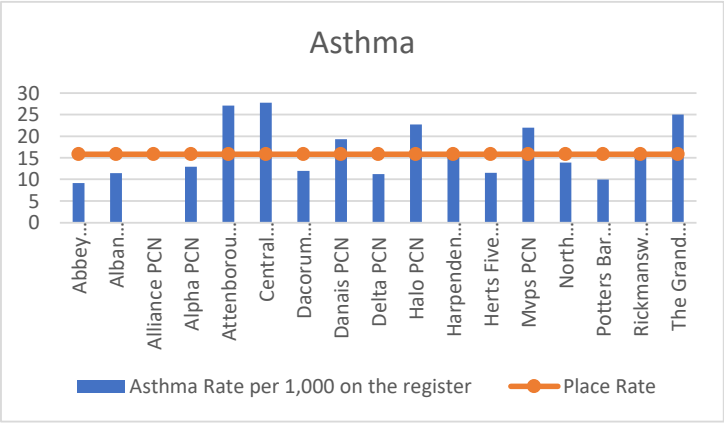
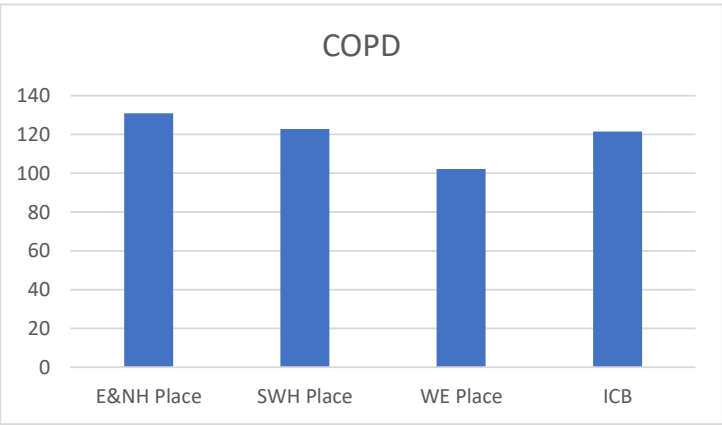
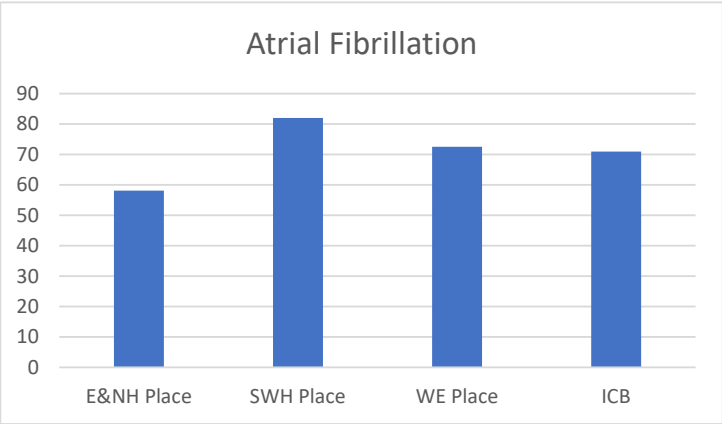
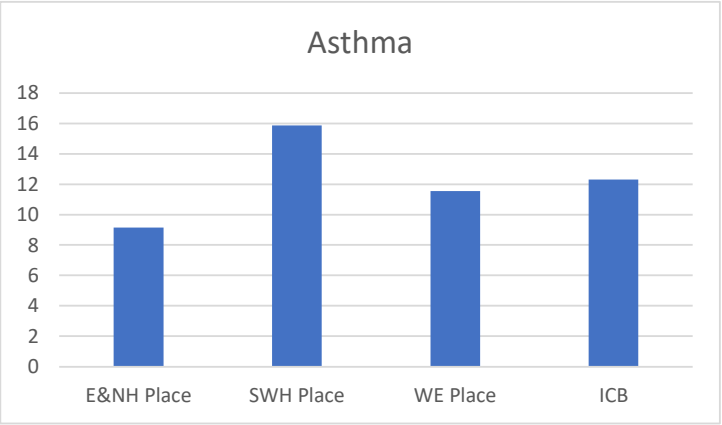
Disease	QOF List size 21-22	QOF Register 21- 22	QOF Prevalence 21/22	Place prevalence	ICB prevalence	Modelled prevalence	New diagnoses to meet Place average	new diagnoses to meet ICB average	New diagnoses to meet estimated prevalence
Asthma	29044	1700	5.85%	5.89%	6.17%		10	91	
COPD	31179	448	1.44%	1.38%	1.49%	2.05%	-17	15	193
Diabetes	24816	1767	7.12%	6.26%	6.39%	7.77%	-214	-182	162
Non-diabetic hyperglycaemia	24389	2289	9.39%	6.73%	5.87%	11.28%	-648	-857	463
Hypertension	31179	3984	12.78%	12.66%	13.21%		-36	136	
Atrial Fibrillation	31179	552	1.77%	1.98%	2.02%	2.20%	66	78	134
Stroke and TIA	31179	440	1.41%	1.53%	1.61%		37	62	
Coronary Heart Disease	31179	830	2.66%	2.60%	2.65%		-19	-3	
Heart failure	31179	206	0.66%	0.69%	0.75%	1.47%	10	29	251
Left Ventricular Systolic Dysfunction	31179	84	0.27%	0.29%	0.30%		6	9	
Chronic Kidney Disease	24389	673	2.76%	3.75%	3.21%		240	109	
Peripheral Arterial Disease	31179	162	0.52%	0.42%	0.44%		-32	-24	
Cancer	31179	1026	3.29%	3.38%	3.35%		29	17	
Palliative care	31179	99	0.32%	0.33%	0.43%		5	35	

The table above shows the latest prevalence (2021/22 published August 2022) for the PCN alongside the place prevalence, ICB prevalence and the modelled prevalence for the PCN.

This table shows opportunities for further identification. It outlines the diagnoses to meet the place, ICB and estimated prevalence.

Within Ardens Manager there are case finding searches that can support PCN with identification.

Emergency Admission Rates per 1,000 population on the Disease Register



The charts on the left shows the Emergency Admissions Rates per 1,000 population on the disease register.

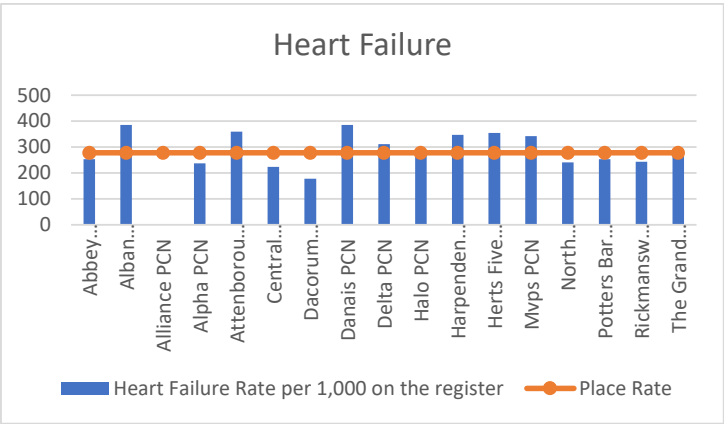
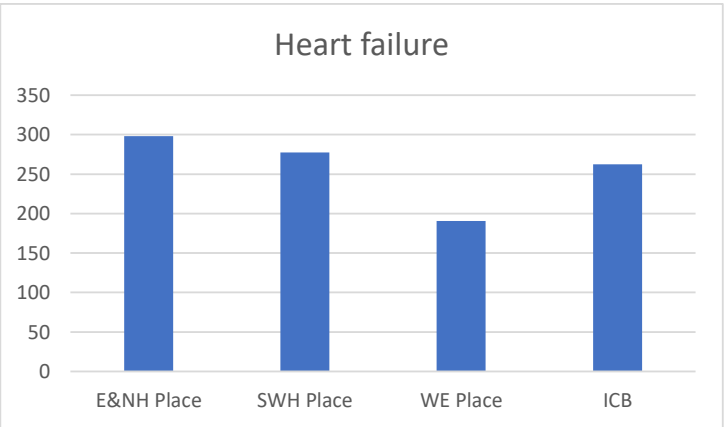
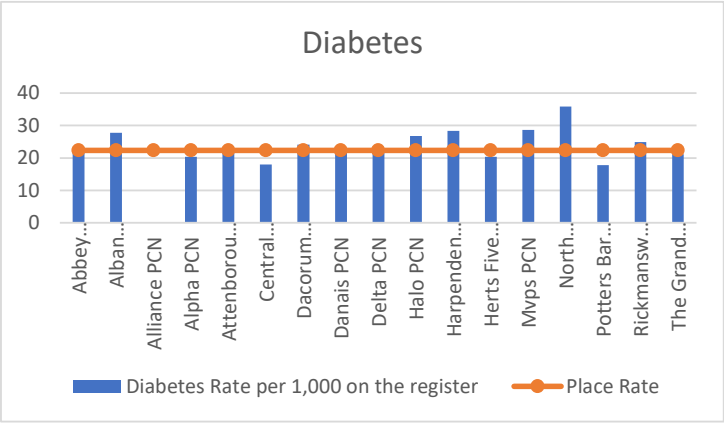
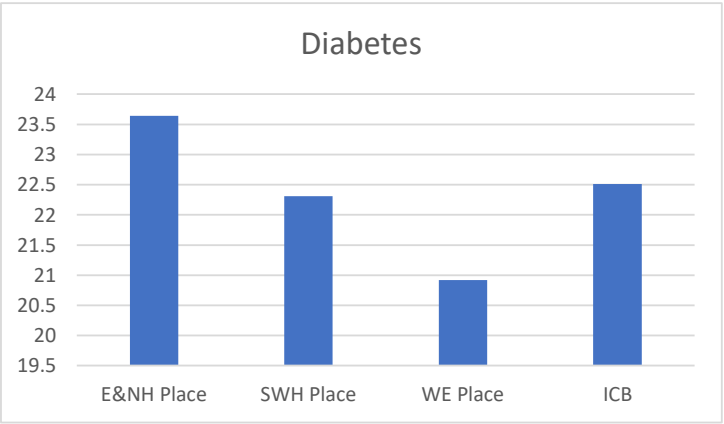
It shows the places compared with the ICB on the left and on the right it show the PCNs within a Place.

These are continued on the following place.

Rates may be high due to a number of factors which may include low identification.

For Attenborough PCN the data shows very high rates for Asthma, COPD, and Heart Failure, and higher rates for Atrial Fibrillation, which was identified as a theme within the ACS analysis.

Emergency Admission Rates per 1,000 population on the Disease Register



Appendices

The following pages provide additional information breakdowns relating to the segmentation and population data

Contents:

- Matrix by Ethnicity
- Matrix by Health Segment & Subsegment
- Matrix by GP Activity
- Matrix by Health Segment & Deprivation
- Matrix by Practice & Deprivation
- Bubble Matrix on Conditions
- Bio-Psycho-Social Example
- Risk Factors by Prevalence against GP Activity & A&E
- Public Health Cancer Screening
- Public Health Mortality
- Public Health Life Expectancy
- Public Health Projection on Populations



Matrix Data - Ethnicity

Ethnicity Group		Other Ethnic Groups			Asian			Black			Mixed			Other			White			Unknown			Grand Total
Complexity		Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	
Overall Population Measures																							
Population		346	64		3,453	1,538	157	933	402	40	719	247	24	1,733	911	67	10,086	7,575	1,206	1,325	317		31,148
Age		30	44	83	25	43	62	29	45	56	17	35	56	27	43	56	29	50	68	36	43	41	37
Male %		50.6%	50.0%	0.0%	48.5%	45.6%	50.3%	52.0%	45.0%	50.0%	49.7%	44.5%	37.5%	53.1%	50.9%	47.8%	51.2%	45.1%	45.2%	63.7%	58.4%	50.0%	49.4%
IMD		7.2	7.5	6.3	6.8	7.1	7.2	6.2	6.1	7.2	6.7	6.9	6.5	7.0	6.8	7.3	7.1	7.2	7.1	7.2	7.3	7.0	7.0
% BAME (where recorded)		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%	100%	100%	100%	36%
Multimorbidity (acute & chronic)		0.0	1.5	8.7	0.0	1.6	6.4	0.0	1.7	6.9	0.0	1.6	6.3	0.0	1.7	6.2	0.0	1.8	6.8	0.0	1.3	6.5	0.9
Finance and Activity Measures																							
Spend	Total	£0.0M	£0.0M	£0.0M	£1.0M	£1.2M	£0.7M	£0.2M	£0.3M	£0.1M	£0.2M	£0.2M	£0.1M	£0.5M	£0.6M	£0.2M	£2.7M	£6.7M	£4.9M	£0.1M	£0.0M	£0.0M	£19.6M
	PPPY - Total	£59	£228	#####	£285	£756	£4,523	£222	£753	£3,076	£233	£731	£4,822	£277	£653	£2,746	£267	£880	£4,042	£46	£78	£2,026	£629
Acute Elective		£7	£91	£152	£75	£312	£1,316	£60	£324	£371	£99	£247	£1,865	£97	£240	£555	£95	£372	£956	£7	£4	£1,041	£215
Acute Non-Elective		£3	£3	£11,202	£127	£263	£2,766	£99	£246	£1,998	£70	£217	£1,756	£95	£235	£1,437	£96	£315	£2,528	£4	£7	£0	£277
GP Encounters		£49	£93	£478	£81	£170	£364	£62	£174	£252	£61	£151	£308	£81	£146	£295	£72	£164	£319	£35	£67	£135	£114
Community		£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Mental Health		£0	£3	£0	£2	£11	£76	£1	£9	£455	£3	£111	£892	£5	£17	£275	£4	£27	£224	£0	£0	£850	£21
Social Care		£0	£37	£56	£0	£0	£0	£0	£1	£0	£0	£4	£2	£0	£14	£185	£0	£2	£16	£0	£0	£0	£2
GP PPPY		8	16	93	14	29	61	11	30	44	10	26	52	14	25	49	12	28	55	6	11	23	20
Beddays PPPY - Acute EM		0	0	23	0	0	5	0	0	34	0	1	5	0	0	2	0	1	5	0	0	0	0
Physical Health																							
Diabetes		0.0%	20.3%	66.7%	0.0%	36.8%	66.2%	0.0%	38.3%	67.5%	0.0%	19.4%	66.7%	0.0%	19.8%	61.2%	0.0%	19.1%	54.7%	0.0%	8.8%	50.0%	10.5%
COPD		0.0%	0.0%	33.3%	0.0%	0.9%	17.2%	0.0%	0.0%	5.0%	0.0%	0.4%	8.3%	0.0%	0.8%	17.9%	0.0%	2.1%	27.9%	0.0%	0.6%	50.0%	1.8%
Chronic Respiratory Dis...		0.0%	0.0%	33.3%	0.0%	1.6%	22.9%	0.0%	1.0%	7.5%	0.0%	2.0%	12.5%	0.0%	1.4%	23.9%	0.0%	3.0%	30.5%	0.0%	0.6%	50.0%	2.3%
Hypertension		0.0%	21.9%	100.0%	0.0%	23.8%	77.7%	0.0%	33.8%	75.0%	0.0%	18.2%	66.7%	0.0%	22.3%	65.7%	0.0%	27.9%	77.4%	0.0%	12.0%	50.0%	13.1%
Obesity		0.6%	4.7%	66.7%	1.9%	9.4%	29.3%	4.4%	13.7%	32.5%	1.3%	8.9%	25.0%	3.1%	10.2%	13.4%	6.6%	23.3%	38.9%	3.2%	7.3%	0.0%	11.3%
Mental Health																							
Anxiety/Phobias		0.0%	18.8%	33.3%	0.0%	12.1%	27.4%	0.0%	12.7%	42.5%	0.0%	19.0%	54.2%	0.0%	23.9%	43.3%	0.0%	24.1%	38.0%	0.0%	24.6%	0.0%	9.6%
Depression		0.0%	23.4%	33.3%	0.0%	14.8%	42.7%	0.0%	16.7%	45.0%	0.0%	21.5%	45.8%	0.0%	30.1%	59.7%	0.0%	29.4%	49.6%	0.0%	24.9%	50.0%	11.8%
Learning Disability		0.0%	3.1%	0.0%	0.0%	1.0%	10.2%	0.0%	1.5%	22.5%	0.0%	3.2%	16.7%	0.0%	1.4%	14.9%	0.0%	1.7%	12.3%	0.0%	1.3%	50.0%	1.2%
Dementia		0.0%	3.1%	33.3%	0.0%	0.2%	21.0%	0.0%	0.5%	42.5%	0.0%	0.8%	20.8%	0.0%	0.5%	25.4%	0.0%	1.0%	26.3%	0.0%	1.6%	100.0%	1.6%
Other Characteristics																							
Housebound (eFI)		0.0%	0.0%	66.7%	0.0%	0.3%	6.4%	0.0%	0.0%	7.5%	0.0%	0.0%	4.2%	0.0%	0.2%	6.0%	0.0%	0.8%	8.9%	0.1%	0.3%	0.0%	0.6%
Social Vulnerability (eFI)		0.9%	6.3%	33.3%	1.0%	3.2%	19.1%	1.1%	6.0%	25.0%	0.8%	6.1%	25.0%	0.9%	5.0%	20.9%	1.3%	6.6%	26.4%	1.5%	4.7%	0.0%	4.0%
History of Smoking (Tw...		4.9%	4.7%	0.0%	2.1%	5.3%	5.7%	3.1%	6.5%	0.0%	2.6%	9.3%	16.7%	4.5%	11.0%	17.9%	4.3%	10.6%	13.7%	3.2%	5.4%	0.0%	6.2%
Not Fit for Work (In Year)		0.9%	4.7%	0.0%	2.5%	6.6%	5.1%	3.4%	12.2%	10.0%	1.9%	7.7%	20.8%	3.7%	10.5%	13.4%	2.2%	7.6%	7.1%	0.5%	3.2%	0.0%	4.5%
On a Waiting List		2.3%	3.1%	0.0%	4.1%	10.4%	26.1%	4.0%	11.2%	17.5%	3.8%	10.5%	25.0%	5.0%	7.8%	19.4%	4.7%	11.6%	20.1%	1.0%	3.8%	50.0%	7.4%

PHM is underpinned by good linked data, with an appropriate method of extracting segmented or patients under key metrics; this matrix is showing the complexity of ethnic groups is broadly categorised across the PCN.

Matrix Data - Segment & Sub-Segment

Life Course Segment ▼		1 - Healthy			2 - Living With Illness			3 - Lower Complexity			4 - Advanced Disease & Complexity					5 - EoL, Frailty & Dementia			Grand Total	
Life Course Subsegment ▼		1a - H (Low Risk)	1b - H (Maternity & Child)	1c - H (Acute Episodic)	2a - Lwl (At Risk)	2b - Lwl (LTCs)	2c - Lwl (MH)	3a - LC (Mod. Social Co..)	3b - LC (Multimorbidi	3c - LC (Mild Frailty)	4a - AD&C (High Complexity)	4b - AD&C - High Social Co..	4c - AD&C (Severe LD/ASD/..	4d - AD&C (Complex SMI)	4e - AD&C (End Stage Dis..	5a - EoLFD (Severe ..	5b - EoLFD (Severe ..	5c - EoLFD (End of Li..		
Overall Population Measures																				
Population		13,047	1,058	930	3,075	3,784	1,357	430	3,292	1,714	946	280	59	239	350	270	99	218	31,148	
Age		28	7	19	40	41	38	45	48	60	65	58	26	32	67	79	81	72	37	
Male %		53.6%	39.5%	53.1%	50.2%	55.7%	41.6%	32.6%	44.7%	35.2%	41.9%	41.8%	49.2%	45.2%	53.4%	39.3%	30.3%	36.7%	49.4%	
IMD		7.0	6.8	6.8	6.8	7.1	7.0	7.0	7.0	7.4	7.1	6.9	6.7	6.3	6.9	7.2	8.1	7.2	7.0	
% BAME (where recorded)		42%	48%	45%	38%	38%	27%	28%	27%	25%	24%	25%	22%	22%	13%	16%	12%	18%	36%	
Multimorbidity (acute & chronic)		0.0	0.0	0.0	0.0	1.0	1.0	0.4	2.4	2.2	4.9	2.8	2.9	5.7	5.4	7.1	7.1	5.3	0.9	
Finance and Activity Measures																				
Spend ▼		Total	£1.0M	£0.7M	£1.3M	£1.4M	£1.8M	£0.6M	£0.2M	£2.6M	£1.9M	£2.0M	£0.5M	£0.2M	£0.6M	£1.2M	£1.7M	£0.5M	£1.3M	£19.6M
		PPPY - Total	£79	£634	£1,371	£465	£476	£430	£454	£798	£1,120	£2,135	£1,756	£2,786	£2,453	£3,492	£6,277	£5,475	£6,187	£629
Acute Elective		£20	£69	£561	£190	£202	£133	£217	£363	£537	£935	£565	£306	£229	£1,152	£1,095	£138	£1,297	£215	
Acute Non-Elective		£6	£472	£672	£153	£154	£156	£116	£248	£360	£906	£925	£1,110	£583	£1,931	£4,692	£4,444	£4,435	£277	
GP Encounters		£51	£93	£129	£117	£118	£120	£114	£172	£213	£266	£233	£250	£242	£300	£408	£360	£373	£114	
Community		£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
Mental Health		£2	£0	£9	£5	£3	£21	£7	£14	£9	£25	£22	£798	£1,355	£107	£72	£380	£65	£21	
Social Care		£0	£0	£0	£0	£0	£1	£0	£0	£1	£4	£11	£322	£44	£2	£10	£153	£17	£2	
GP PPPY		9	16	22	20	20	20	19	29	36	45	40	42	41	51	71	70	64	20	
Beddays PPPY - Acute EM		0	1	1	0	0	0	0	0	1	2	2	2	3	3	9	21	10	0	
Physical Health																				
Diabetes ▼		0.0%	0.0%	0.0%	0.0%	18.7%	0.0%	5.1%	28.5%	30.0%	50.2%	27.5%	20.3%	31.4%	46.3%	63.3%	45.5%	38.1%	10.5%	
COPD ▼		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	1.6%	10.0%	7.5%	0.0%	2.5%	58.3%	27.0%	8.1%	20.2%	1.8%	
Chronic Respiratory Dis... ▼		0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	4.2%	2.6%	12.3%	8.2%	0.0%	3.3%	63.4%	30.0%	10.1%	24.8%	2.3%	
Hypertension ▼		0.0%	0.0%	0.0%	0.0%	18.9%	0.0%	6.7%	29.4%	46.4%	70.4%	40.4%	16.9%	29.7%	66.6%	91.9%	75.8%	64.7%	13.1%	
Obesity ▼		0.0%	0.0%	0.0%	26.8%	13.5%	11.0%	10.9%	22.0%	27.8%	33.0%	25.4%	18.6%	18.4%	39.1%	42.6%	32.3%	32.6%	11.3%	
Mental Health																				
Anxiety/Phobias ▼		0.0%	0.0%	0.0%	0.0%	0.0%	39.9%	3.3%	41.1%	19.1%	32.1%	20.4%	27.1%	59.4%	20.0%	25.2%	37.4%	22.9%	9.6%	
Depression ▼		0.0%	0.0%	0.0%	0.0%	0.0%	53.1%	8.1%	47.2%	23.3%	39.5%	24.6%	37.3%	73.2%	27.4%	40.7%	52.5%	31.7%	11.8%	
Learning Disability ▼		0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	1.2%	2.3%	0.6%	4.3%	12.5%	57.6%	42.7%	4.3%	2.2%	18.2%	5.0%	1.2%	
Dementia ▼		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	13.5%	5.0%	6.8%	46.4%	8.0%	16.7%	100.0%	25.2%	1.6%	
Other Characteristics																				
Housebound (eFI) ▼		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.9%	0.0%	0.4%	3.7%	20.4%	25.3%	17.9%	0.6%	
Social Vulnerability (eFI) ▼		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	79.1%	4.4%	11.4%	15.0%	26.4%	11.9%	22.2%	16.6%	44.4%	49.5%	33.5%	4.0%	
History of Smoking (Tw... ▼		0.0%	0.0%	0.0%	22.0%	7.5%	10.5%	4.9%	12.3%	7.5%	10.3%	9.6%	10.2%	23.8%	14.6%	7.8%	4.0%	7.8%	6.2%	
Not Fit for Work (In Year) ▼		0.0%	0.0%	0.0%	13.2%	4.2%	9.1%	5.1%	10.7%	8.1%	8.6%	4.3%	18.6%	17.2%	6.3%	3.7%	1.0%	6.4%	4.5%	
On a Waiting List ▼		3.0%	5.8%	9.8%	6.6%	7.2%	6.4%	6.5%	11.5%	17.9%	20.7%	15.4%	10.2%	15.1%	24.6%	27.4%	6.1%	13.8%	7.4%	

This matrix is important in defining the PCN's main segment and sub-segment health classifications, giving simple volumes but also linking how many as a percentage of each subsegment, have defined and diagnosed conditions.

Matrix Data - GP Activity

GP Activity		0			1			2-3			4-5			6-9			10+			Grand Total
Complexity		Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	
Overall Population Measures																				
Population		1,197	131		1,650	256		2,020	354	11	2,085	426	10	4,303	1,362	35	7,340	8,525	1,437	31,148
Age		24	37	52	28	38	36	21	36	53	26	39	36	30	42	50	31	50	67	3
Male %		61.9%	58.0%	50.0%	60.4%	62.9%	75.0%	57.4%	62.7%	81.8%	58.9%	62.7%	60.0%	54.9%	60.1%	45.7%	42.7%	41.6%	45.3%	49.4%
IMD		6.7	6.8	10.0	6.7	6.8	7.3	6.8	6.8	7.5	7.0	7.0	6.2	7.0	7.1	7.6	7.0	7.1	7.1	7.0
% BAME (where recorded)		39%	38%	0%	38%	35%	75%	43%	37%	18%	41%	30%	33%	41%	32%	20%	43%	29%	19%	36%
Multimorbidity (acute & chronic)		0.0	1.3	6.5	0.0	1.3	5.5	0.0	1.3	5.7	0.0	1.3	7.2	0.0	1.4	6.3	0.0	1.9	6.7	0.9
Finance and Activity Measures																				
Spend	Total	£0.0M	£0.0M	£0.0M	£0.0M	£0.0M	£0.0M	£0.1M	£0.0M	£0.0M	£0.1M	£0.0M	£0.0M	£0.6M	£0.2M	£0.0M	£3.8M	£8.7M	£6.0M	£19.6M
	PPPY - Total	£3	£7	£0	£16	£9	£6	£37	£46	£112	£61	£58	£602	£132	£130	£621	£519	£1,023	£4,188	£629
Acute Elective		£2	£7	£0	£4	£1	£0	£11	£12	£23	£16	£17	£0	£37	£42	£18	£178	£427	£1,015	£215
Acute Non-Elective		£0	£0	£0	£6	£3	£0	£11	£14	£37	£18	£13	£18	£48	£37	£342	£196	£364	£2,590	£277
GP Encounters		£0	£0	£0	£6	£6	£6	£14	£15	£15	£26	£26	£24	£45	£47	£49	£139	£198	£333	£114
Community		£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Mental Health		£0	£0	£0	£0	£0	£0	£0	£5	£36	£1	£1	£560	£2	£5	£203	£6	£30	£228	£21
Social Care		£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£9	£0	£4	£22	£2
GP PPPY		0	0	0	1	1	1	3	3	3	4	5	4	8	8	8	24	34	57	20
Beddays PPPY - Acute EM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6	0
Physical Health																				
Diabetes		0.0%	4.6%	50.0%	0.0%	5.5%	25.0%	0.0%	13.8%	36.4%	0.0%	10.6%	50.0%	0.0%	14.0%	37.1%	0.0%	25.0%	57.6%	10.5%
COPD		0.0%	0.8%	50.0%	0.0%	0.0%	0.0%	0.0%	0.8%	18.2%	0.0%	1.4%	20.0%	0.0%	0.5%	14.3%	0.0%	1.9%	25.9%	1.8%
Chronic Respiratory Dis...		0.0%	2.3%	50.0%	0.0%	1.2%	0.0%	0.0%	2.0%	18.2%	0.0%	2.6%	20.0%	0.0%	1.4%	14.3%	0.0%	2.8%	29.1%	2.3%
Hypertension		0.0%	12.2%	50.0%	0.0%	12.9%	50.0%	0.0%	13.3%	63.6%	0.0%	12.7%	50.0%	0.0%	17.3%	51.4%	0.0%	29.7%	77.7%	13.1%
Obesity		0.7%	1.5%	50.0%	1.6%	3.5%	0.0%	1.7%	5.4%	18.2%	2.5%	8.0%	30.0%	4.0%	7.9%	11.4%	8.0%	22.6%	37.2%	11.3%
Mental Health																				
Anxiety/Phobias		0.0%	18.3%	100.0%	0.0%	18.4%	25.0%	0.0%	15.0%	54.5%	0.0%	17.4%	50.0%	0.0%	19.5%	60.0%	0.0%	23.0%	36.6%	9.6%
Depression		0.0%	22.1%	100.0%	0.0%	24.6%	50.0%	0.0%	17.5%	54.5%	0.0%	20.4%	70.0%	0.0%	24.4%	68.6%	0.0%	27.8%	48.4%	11.8%
Learning Disability		0.0%	0.8%	50.0%	0.0%	0.4%	0.0%	0.0%	0.8%	27.3%	0.0%	1.4%	30.0%	0.0%	2.0%	25.7%	0.0%	1.7%	12.0%	1.2%
Dementia		0.0%	0.8%	0.0%	0.0%	0.0%	50.0%	0.0%	0.6%	36.4%	0.0%	0.5%	80.0%	0.0%	0.6%	48.6%	0.0%	0.9%	25.1%	1.6%
Other Characteristics																				
Housebound (eFI)		0.1%	1.5%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	10.0%	0.0%	0.1%	2.9%	0.0%	0.7%	8.7%	0.6%
Social Vulnerability (eFI)		0.5%	2.3%	0.0%	0.8%	3.5%	0.0%	0.7%	4.0%	9.1%	1.2%	2.6%	0.0%	0.8%	2.9%	22.9%	1.8%	6.8%	25.7%	4.0%
History of Smoking (Tw...		0.2%	0.8%	0.0%	0.7%	1.2%	0.0%	1.8%	3.1%	0.0%	2.4%	4.0%	10.0%	3.5%	5.7%	8.6%	6.0%	11.1%	12.9%	6.2%
Not Fit for Work (In Year)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.5%	0.0%	0.7%	1.6%	0.0%	5.3%	9.7%	7.8%	4.5%
On a Waiting List		0.4%	0.0%	0.0%	0.3%	1.2%	0.0%	0.4%	1.4%	0.0%	1.4%	0.5%	0.0%	2.0%	1.8%	5.7%	8.9%	13.6%	21.4%	7.4%

Whilst the previous GP activity matrix was to investigate HIUs, this matrix has split out the GP activity by order of complexity; another method of looking at distinct patient volumes coming into the PCN which may be managed in a different way.

Matrix Data - Health Segment & Deprivation

Life Course Segment ▼		1 - Healthy				2 - Living With Illness				3 - Lower Complexity				4 - Advanced Disease & Complexity				5 - EoL, Frailty & Dementia				Grand Total
Deprivation ▼		Low Deprivation	Middle Deprivation	High Deprivation	Not known	Low Deprivation	Middle Deprivation	High Deprivation	Not known	Low Deprivation	Middle Deprivation	High Deprivation	Not known	Low Deprivation	Middle Deprivation	High Deprivation	Not known	Low Deprivation	Middle Deprivation	High Deprivation	Not known	
Overall Population Measures																						
Population		7,074	6,593	1,337	31	3,964	3,493	728	31	2,821	2,121	484	10	911	765	193		347	196	41		31,148
Age		27	25	23	19	42	39	37	39	54	49	47	46	62	56	51	38	78	76	69	81	37
Male %		51.8%	53.6%	51.5%	51.6%	51.6%	51.2%	50.5%	45.2%	41.5%	40.2%	38.6%	60.0%	46.1%	43.0%	45.6%	0.0%	34.0%	43.4%	26.8%	66.7%	49.4%
IMD		9.2	5.5	2.9		9.1	5.4	2.8		9.1	5.5	2.8		9.1	5.4	2.8		9.2	5.0	2.9		7.0
% BAME (where recorded)		39%	45%	51%	71%	33%	38%	43%	63%	24%	27%	33%	50%	20%	23%	26%	40%	16%	12%	29%	33%	36%
Multimorbidity (acute & chronic)		0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.5	2.1	2.2	2.2	2.3	4.6	4.8	4.7	6.2	6.4	6.6	5.6	6.3	0.9
Finance and Activity Measures																						
Spend ▼	Total	£1.4M	£1.3M	£0.3M	£0.0M	£1.8M	£1.6M	£0.4M	£0.0M	£2.4M	£2.0M	£0.4M	£0.0M	£2.2M	£2.0M	£0.3M	£0.0M	£2.1M	£1.2M	£0.2M	£0.1M	£19.6M
	PPPY - Total	£196	£199	£202	£189	£454	£456	£536	£901	£860	£923	£727	£498	£2,365	£2,603	£1,714	£1,602	£6,067	£6,192	£5,185	£18,105	£629
Acute Elective		£60	£55	£50	£22	£187	£177	£218	£176	£422	£415	£284	£92	£838	£821	£635	£856	£953	£1,009	£1,536	£268	£215
Acute Non-Elective		£73	£83	£93	£100	£144	£153	£195	£564	£248	£313	£242	£196	£1,033	£1,243	£538	£134	£4,553	£4,648	£3,195	£17,252	£277
GP Encounters		£61	£57	£56	£67	£117	£118	£118	£161	£179	£182	£184	£210	£259	£270	£264	£293	£373	£402	£418	£586	£114
Community		£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Mental Health		£2	£3	£2	£0	£6	£8	£4	£0	£11	£12	£16	£0	£199	£267	£265	£180	£133	£126	£5	£0	£21
Social Care		£0	£0	£0	£0	£0	£0	£0	£0	£1	£0	£0	£0	£36	£2	£12	£139	£54	£7	£31	£0	£2
GP PPPY		10	10	10	12	20	20	20	28	30	31	31	37	44	45	45	51	65	72	73	106	20
Beddays PPPY - Acute EM		0	0	0	0	0	0	0	0	0	0	0	0	2	3	1	0	12	12	4	13	0
Physical Health																						
Diabetes ▼		0.0%	0.0%	0.0%	0.0%	8.3%	9.1%	8.2%	6.5%	25.7%	28.9%	27.9%	30.0%	40.7%	44.2%	46.1%	60.0%	49.0%	56.1%	43.9%	33.3%	10.5%
COPD ▼		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	2.3%	2.7%	0.0%	16.6%	19.0%	15.0%	20.0%	18.2%	26.0%	26.8%	0.0%	1.8%
Chronic Respiratory Dis... ▼		0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	2.8%	4.1%	3.5%	0.0%	18.8%	21.6%	16.6%	20.0%	21.6%	29.6%	26.8%	33.3%	2.3%
Hypertension ▼		0.0%	0.0%	0.0%	0.0%	9.5%	8.2%	6.6%	12.9%	34.4%	32.3%	27.9%	30.0%	62.5%	55.2%	51.3%	60.0%	79.5%	79.1%	73.2%	100.0%	13.1%
Obesity ▼		0.0%	0.0%	0.0%	0.0%	15.7%	20.5%	19.1%	22.6%	19.9%	26.1%	27.1%	50.0%	26.9%	33.9%	35.2%	60.0%	33.4%	42.3%	46.3%	0.0%	11.3%
Mental Health																						
Anxiety/Phobias ▼		0.0%	0.0%	0.0%	0.0%	7.4%	5.7%	6.5%	6.5%	29.7%	32.7%	33.5%	20.0%	28.4%	33.3%	37.8%	40.0%	27.1%	27.0%	17.1%	33.3%	9.6%
Depression ▼		0.0%	0.0%	0.0%	0.0%	8.2%	9.2%	9.6%	6.5%	33.3%	39.0%	45.5%	20.0%	34.1%	41.6%	53.9%	60.0%	38.0%	39.8%	51.2%	0.0%	11.8%
Learning Disability ▼		0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	0.1%	0.0%	1.5%	1.6%	3.1%	0.0%	10.9%	12.3%	16.1%	60.0%	6.3%	5.6%	4.9%	0.0%	1.2%
Dementia ▼		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.8%	15.7%	14.5%	40.0%	35.4%	33.7%	17.1%	100.0%	1.6%
Other Characteristics																						
Housebound (eFI) ▼		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.6%	4.2%	3.6%	0.0%	21.3%	20.4%	12.2%	0.0%	0.6%
Social Vulnerability (eFI) ▼		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.2%	12.6%	14.5%	10.0%	17.6%	17.3%	21.2%	20.0%	40.6%	41.3%	46.3%	33.3%	4.0%
History of Smoking (Tw... ▼		0.0%	0.0%	0.0%	0.0%	10.9%	15.3%	17.9%	22.6%	7.8%	11.7%	17.8%	10.0%	9.0%	14.2%	24.4%	0.0%	6.3%	8.2%	9.8%	0.0%	6.2%
Not Fit for Work (In Year) ▼		0.0%	0.0%	0.0%	0.0%	6.3%	10.5%	9.5%	9.7%	7.0%	11.5%	14.9%	10.0%	6.5%	11.5%	9.8%	20.0%	3.2%	4.1%	14.6%	0.0%	4.5%
On a Waiting List ▼		3.9%	3.4%	2.8%	3.2%	6.8%	7.0%	6.5%	3.2%	12.3%	14.0%	14.0%	10.0%	17.8%	20.3%	25.4%	20.0%	17.6%	20.4%	19.5%	33.3%	7.4%

Deprivation is an important marker for a variety of issues and not just in health, and this matrix has taken the PCN's population split them by health segment, and then further by high, middle, or low deprivation groupings - this may further allows the PCNs to target that selected cohort of individuals to find where the determinants may be, and where a targeted approach from local partners, could be directed.

Matrix Data - Practice & Deprivation

Practice		Attenborough Surgery				Grand Total
Deprivation		Low Deprivation	Middle Deprivation	High Deprivation	Not known	
Overall Population Measures						
Population		15,117	13,168	2,783	80	31,148
Age		39	35	34	34	37
Male %		49.1%	50.0%	48.3%	47.5%	49.4%
IMD		9.1	5.5	2.8		7.0
% BAME (where recorded)		33%	38%	43%	62%	36%
Multimorbidity (acute & chronic)		1.0	0.9	0.9	1.1	0.9
Finance and Activity Measures						
Spend	Total	£9.9M	£8.1M	£1.6M	£0.1M	£19.6M
	PPPY - Total	£653	£613	£559	£1,264	£629
Acute Elective		£228	£204	£197	£152	£215
Acute Non-Elective		£285	£274	£222	£937	£277
GP Encounters		£117	£111	£115	£155	£114
Community		£0	£0	£0	£0	£0
Mental Health		£20	£23	£23	£11	£21
Social Care		£4	£0	£1	£9	£2
GP PPPY		20	19	20	27	20
Beddays PPPY - Acute EM		1	0	0	1	0
Physical Health						
Diabetes		10.6%	10.5%	10.9%	11.3%	10.5%
COPD		1.8%	1.9%	1.9%	1.3%	1.8%
Chronic Respiratory Dis...		2.2%	2.4%	2.2%	2.5%	2.3%
Hypertension		14.5%	11.8%	11.2%	16.3%	13.1%
Obesity		10.2%	12.2%	12.8%	18.8%	11.3%
Mental Health						
Anxiety/Phobias		9.8%	9.1%	10.4%	8.8%	9.6%
Depression		11.3%	11.7%	14.9%	8.8%	11.8%
Learning Disability		1.1%	1.1%	1.8%	3.8%	1.2%
Dementia		1.7%	1.4%	1.3%	6.3%	1.6%
Other Characteristics						
Housebound (eFI)		0.8%	0.5%	0.4%	0.0%	0.6%
Social Vulnerability (eFI)		4.3%	3.6%	4.7%	3.8%	4.0%
History of Smoking (Tw...		5.0%	6.9%	9.6%	10.0%	6.2%
Not Fit for Work (In Year)		3.4%	5.4%	6.0%	6.3%	4.5%
On a Waiting List		7.4%	7.3%	7.5%	6.3%	7.4%

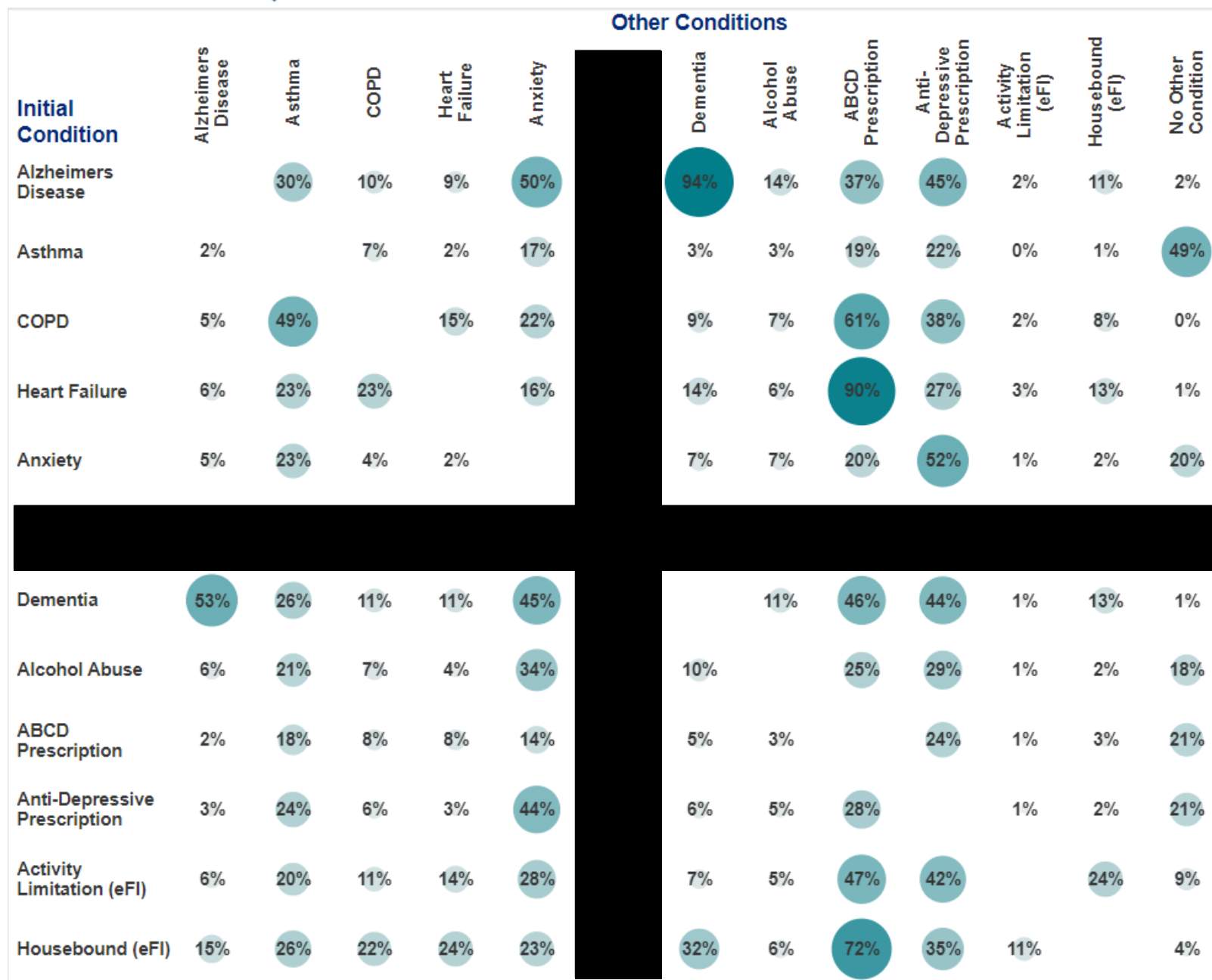
This detailed table is offering actionable insight across the PCN's population for each Practice and where their populations are in terms of a High, Medium, or Low deprivation ranking; deprivation is levied from the IMD 2019 scoring per LSOA, and is applied for every individual registered within the PCN's borders.

Bubble Matrix - Conditions

x% also have

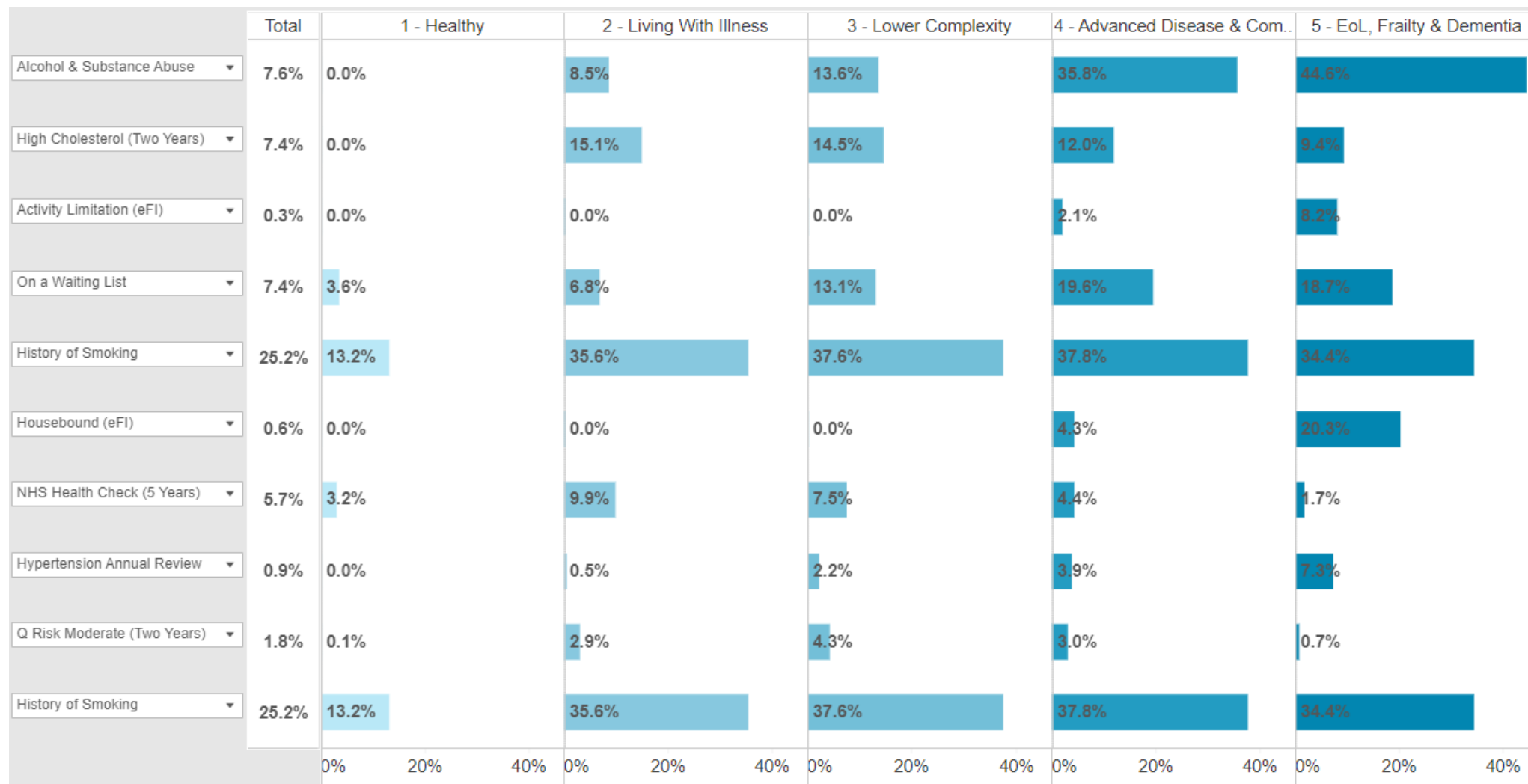


For people with this condition



When targeting specific conditions to look into, a simple Bubble matrix helps us understand that a single condition will rarely be occurring by itself; this chart then highlights the PCN's linked conditions and breaks down the common diseases linked together in the PCN.

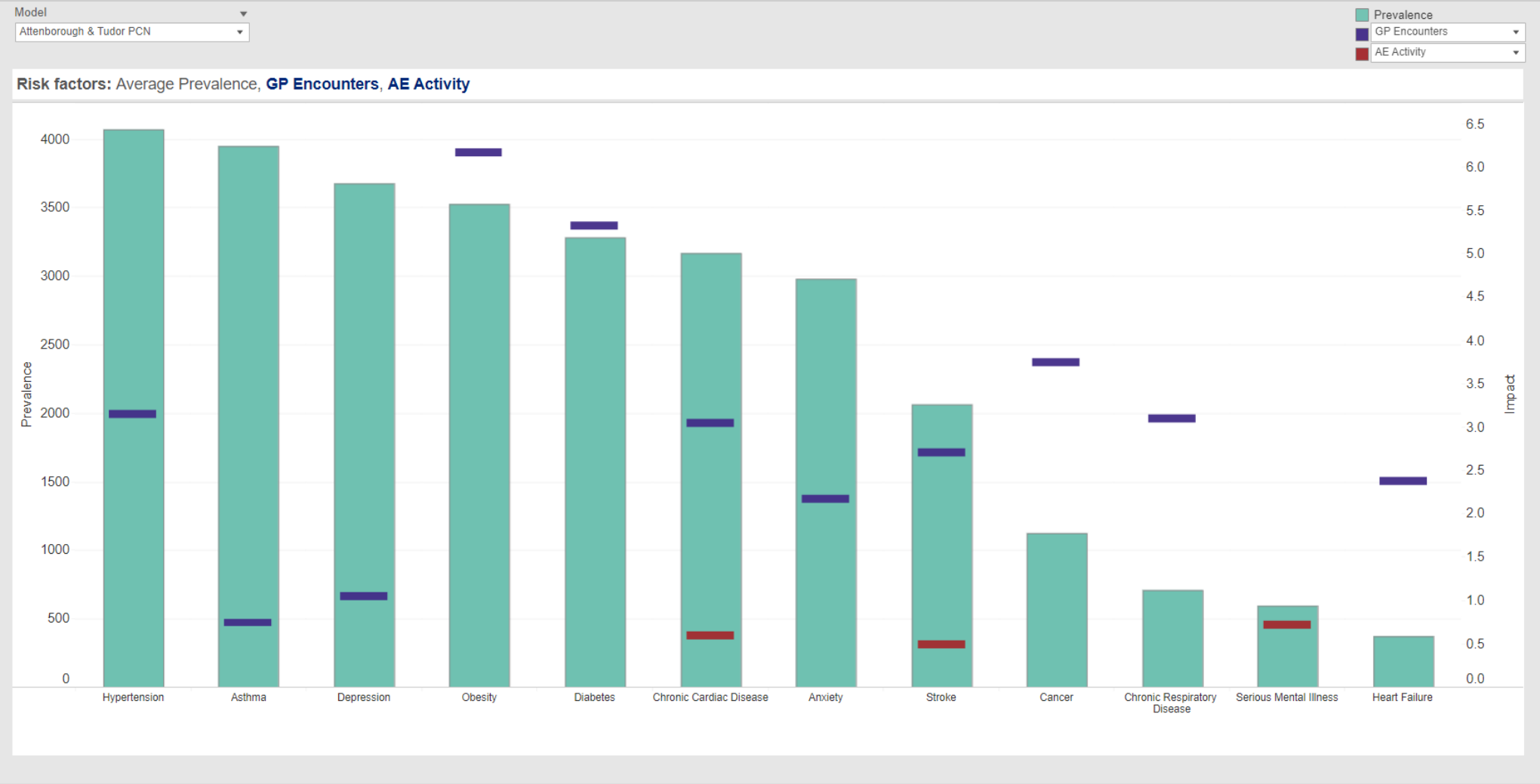
Bio-Psycho-Social Indicators - Example



This chart gives a comparison across various selected risk conditions or characteristics, within the health segments of the PCN's population.

Here we have selected a few characteristics within the PCN's data as an example, within each segment the percentage with that risk condition is highlighted proportionately by the shaded bars in the chart.

Risk Modelling - Prevalence against GP Activity & A&E



This Risk Model looks at the PCN's prevalence for major conditions, and this chart illustrates the number of people with certain risk factors, and also shows the impact on service utilisation, that these factors have. The height of each bar for each risk factor, shows the number of people who meet that criteria, as shown on the left hand axis; the horizontal lines relate to the correlation of a risk factor and an increase in impact on the selected target, shown on the right hand axis.



Cancer Screening

	Period	HERTFORDSHIRE AND WEST ESSEX	ATTENBOROUGH PCN	ATTENBOROUGH SURGERY
Women, aged 25-49, with a record of cervical screening in the last 3.5 yrs (denominator includes PCAs)	2020/21	73.3	70.3	70.3
Women, aged 50-64, with a record of cervical screening in the last 5.5 yrs (denominator includes PCAs)	2020/21	78.2	75.3	75.3
Persons, 25-49, attending cervical screening within target period (3.5 year coverage, %)	2020/21	73	70	70
Persons, 50-64, attending cervical screening within target period (5.5 year coverage, %)	2020/21	77	74.6	74.6
Persons, 50-70, screened for breast cancer in last 36 months (3 year coverage, %)	2020/21	63.9	59	59
Persons, 50-70, screened for breast cancer within 6 months of invitation (Uptake, %)	2020/21	61.3	34.6	34.6
Persons, 60-74, screened for bowel cancer within 6 months of invitation (Uptake, %)	2020/21	72.1	67.2	67.2
Persons, 60-74, screened for bowel cancer in last 30 months (2.5 year coverage, %)	2020/21	68.8	63.7	63.7

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Mortality

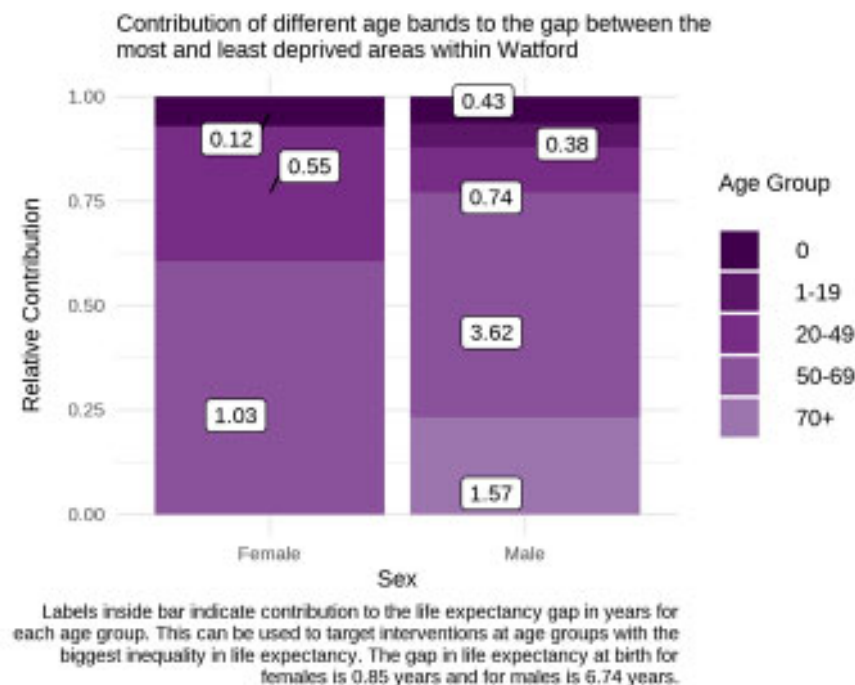
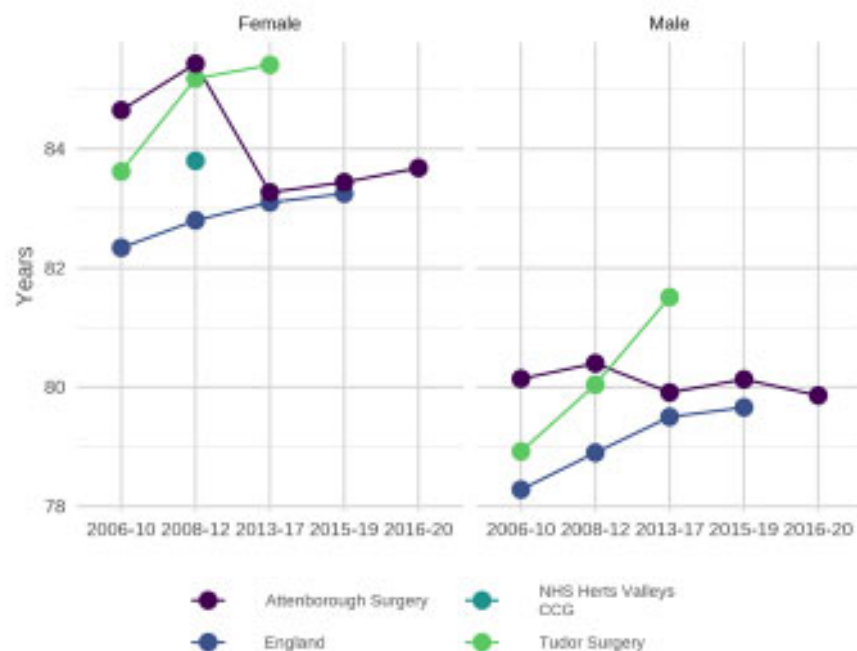
	Period	Hertfordshire CCGs	NHS HERTFORDSHIRE AND WEST ESSEX ICB - 06N	ATTENBOROUGH PCN
Percentage of deaths that occur at home (All age)	2021	25.3	23.9	20.4
PYLL - Neoplasms	2021	505	498.3	411.4
PYLL - Diseases of the circulatory system	2021	737.5	690.5	987.9
PYLL - All Cause	2021	1537.7	1496.4	1653.1
Premature Mortality - Respiratory Disease	2021	19.2	19	
Premature Mortality - Liver Disease	2021	14.6	14.4	
Premature Mortality - Cardiovascular Disease	2021	53.8	51.4	70
Premature Mortality - Cancer	2021	98.5	97.1	118.5
Premature Mortality - All Cause	2021	269.6	262.3	309.6

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Life Expectancy



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