Hertfordshire and West Essex Integrated Care System

NHS Hertfordshire and West Essex Integrated Care Board

Primary Care Networks
Overview Pack

CENTRAL WATFORD 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

NHS Hertfordshire and West Essex Integrated Care Board

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.

Source: HWE PHM Team, Cerner, England.nhs.uk

Key Messages

NHS Hertfordshire and West Essex Integrated Care Board

Central Watford PCN has a dissimilar population profile compared to England in most age categories. About half the people live within the 5 most deprived deciles (1-5).

23.8% population have at least 1 Long Term Condition. 5.9% have more than 5 LTCs compared to 5.6% for the ICB. The population pyramid shows dissimilar profile to England for those living with LTCs, except the age categories 0-24.

Wider determinants analysis from Public Health Evidence and Intelligence shows Central Watford is one of the most deprived PCNs within the ICB across most indicators, except Education, Skills and Training; it is ranked in the ICB as having the worst for Older People in Poverty and Environment.

The spread of patients for Central Watford PCN indicates 12.62% of the population are not located within the Hertfordshire & West Essex boundaries; 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 Watford district by the Local Authority, forecasts 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 Central Watford PCN are Obesity, Diabetes, Dementia, Learning Disabilities, Serious Mental Illness and Alzheimers.

Urgent & Emergency Care in 2022/23 for Central Watford PCN A&E Attendance rates per 1,000 population, is above South West Herts place.

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. Within South West Herts place, Central Watford has a lower rate per 1,000 population, than the average.

When looking at the ACS conditions for Central Watford the highest volume and cost is within the End of Life, Frailty and Dementia in the over 65 age group and the next highest volume and cost is for the over 65 age group in the Advanced Disease and Complexity segment. It is to be noted that under Advanced Disease and Complexity and Lower Complexity segments there is a notable use by the 41-64 age group.

Ambulatory Care Sensitive conditions of note for people aged over 65 within the Advanced Disease and Complexity, is highlighted as COPD followed by Heart Failure and AF and Flutter in terms of volume and cost. For those people aged over 65 within the End of Life, Frailty & Dementia is highlighted as COPD followed by Heart Failure in terms of volume and cost.

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 Central Watford 22.6% 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 that the general population as are all activity measures. The average number of Chronic Conditions for people within Central Watford PCN is above the ICB, and the data shows lower usage of GP services.

Within this segment we can see the presence of Chronic Cardiac Disease, Chronic Respiratory Disease, Heart Disease, Diabetes and Obesity being highlighted which chimes with the reason for admission within previous analysis for ACS conditions.

For Central Watford the data shows higher Asthma (the highest) and COPD rates which was identified as a theme within the ACS analysis.

Source: HWE PHM Team

Demographics, Conditions & Segment Overview

NHS Hertfordshire and West Essex Integrated Care Board

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

NHS Hertfordshire and West Essex Integrated Care Board

Total Population
CENTRAL WATFORD PCN

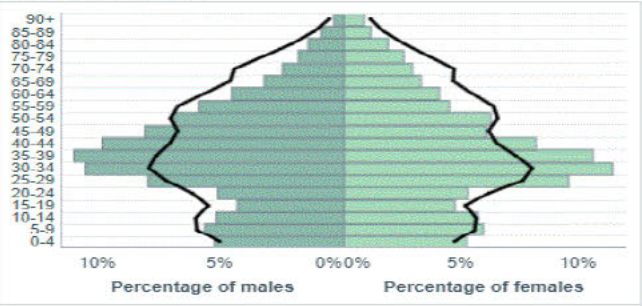
Snapshot as at: 30/06/2021

Registered population		Demographics				Prevalence		Acute utilisation		Covid	
% of total	100.0%	% White	40.4%	% IMD top	4.5%	% with 1+ conditions	23.8%	% of annual activity (total 53,565)	100.0%	% one or more at risk conditions	16.0%
% of annual change	1.6%	% BAME	36.0%	% IMD bottom	20.5%	% with 5+ conditions	2.8%	% of annual cost (total £14M)	100.0%	% two or more at risk conditions	6.2%

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

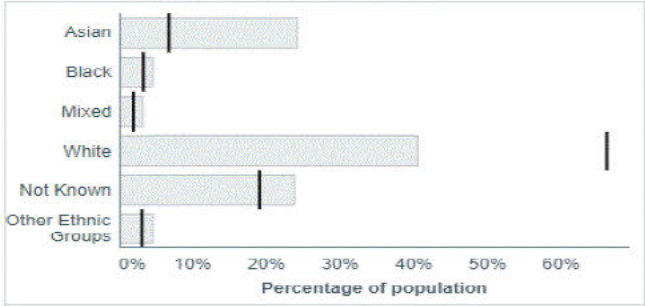
Choose benchmark: England

Population pyramid



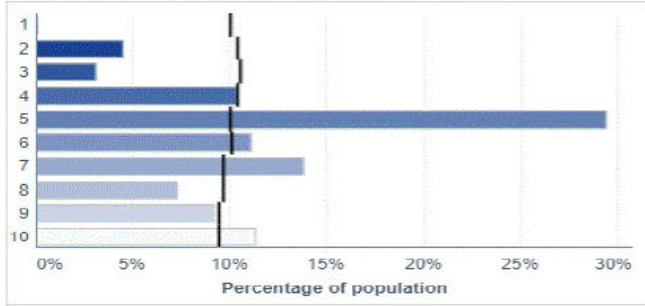
Black line represents the England average

Population proportion by ethnic category



Black line represents the England average

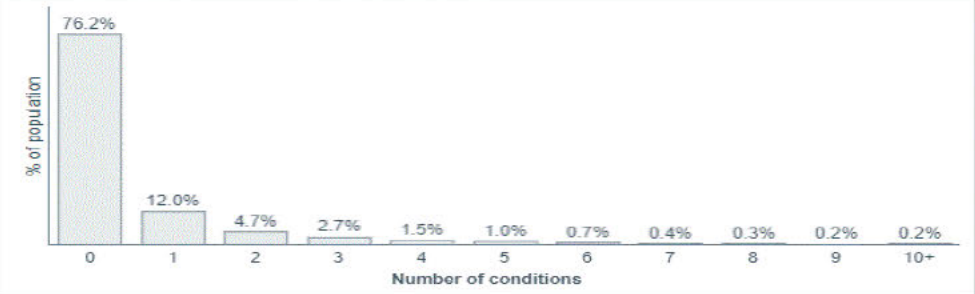
Population proportion by IM Deprivation decile



1 = most deprived 10%, 10 = least deprived 10%

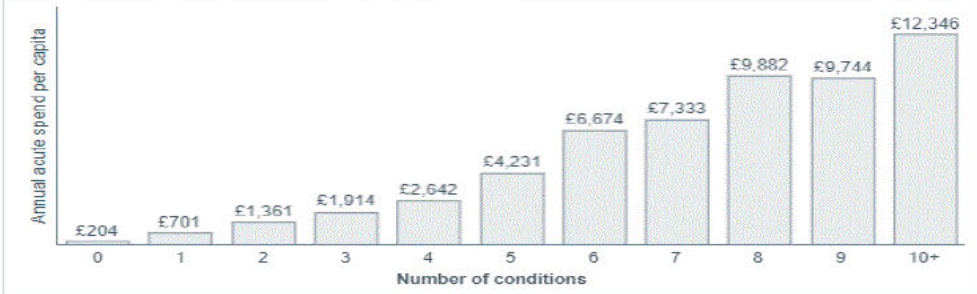
Prevalence - Snapshot as at: 30/06/2021

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.

Central Watford PCN has a dissimilar population profile compared to England in most age categories. About half the people live within the 5 most deprived deciles (1-5).

Source: NHS Digital (2022) https://apps.model.nhs.uk/report/PaPi

PCN Demographics - NHS England

NHS Hertfordshire and West Essex Integrated Care Board

LTC
CENTRAL WATFORD PCN

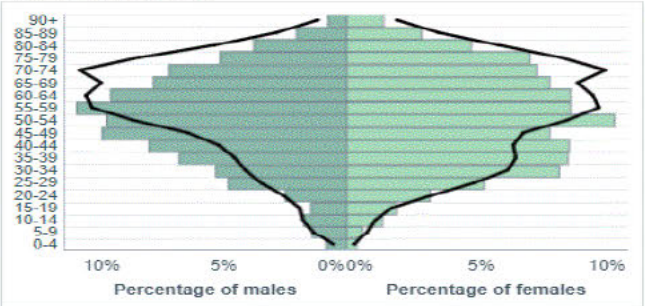
Snapshot as at: 30/06/2021

Registered population		Demographics				Prevalence		Acute utilisation		Covid	
% of total	20.6%	% White	56.0%	% IMD top	5.0%	% with 1+ conditions	100.0%	% of annual activity (total 22,189)	41.4%	% one or more at risk conditions	58.9%
% of annual change	4.8%	% BAME	39.8%	% IMD bottom	22.4%	% with 5+ conditions	5.9%	% of annual cost (total £5M)	37.8%	% two or more at risk conditions	18.8%

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

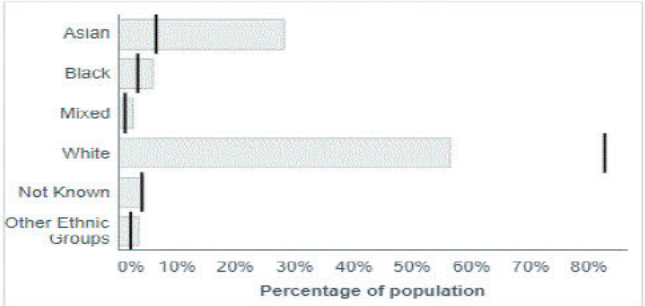
Choose benchmark: England

Population pyramid



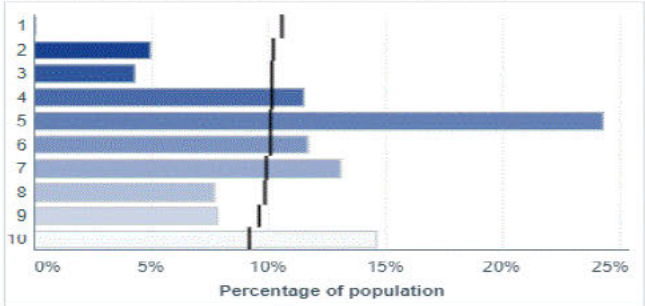
Black line represents the England average

Population proportion by ethnic category



Black line represents the England average

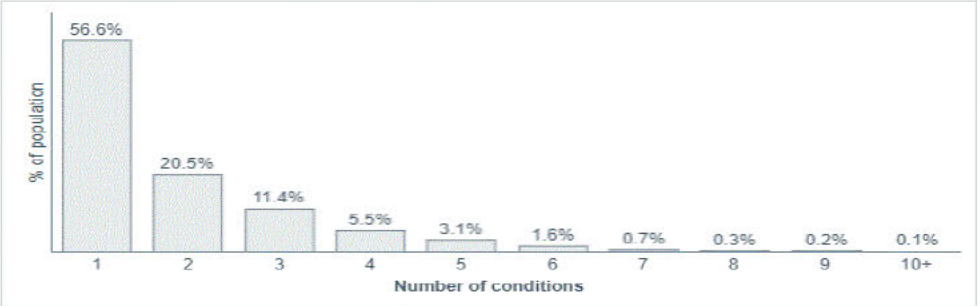
Population proportion by IM Deprivation decile



1 = most deprived 10%, 10 = least deprived 10%

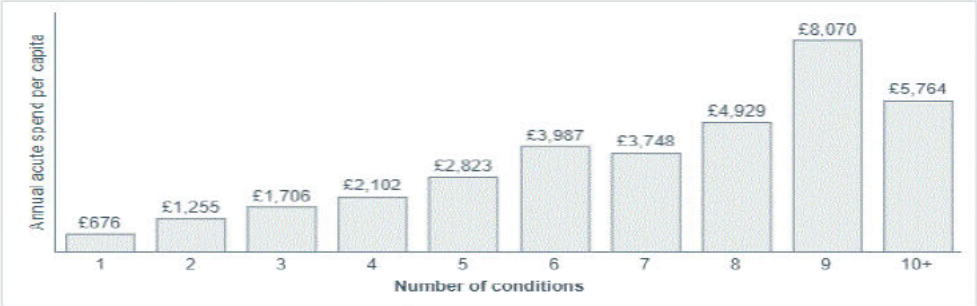
Prevalence - Snapshot as at: 30/06/2021

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 23.8% population have at least 1 Long Term Condition. 5.9% have more than 5 LTCs compared to 5.6% for the ICB.

The population pyramid shows dissimilar profile to England for those living with LTCs, except the age categories 0-24.

Source: NHS Digital (2022) https://apps.model.nhs.uk/report/PaPi

Practice Indicators - Triggers and Levels

NHS Hertfordshire and West Essex Integrated Care Board

Practice Indicators for CENTRAL WATFORD PCN		SUTHERGREY HOUSE MEDICAL CENTRE			THE ELMS SURGERY			WATFORD HEALTH CENTRE		
Clinical Domain	Indicator Name	Latest Score	Time Period	Trigger Level	Latest Score	Time Period	Trigger Level	Latest Score	Time Period	Trigger Level
Clinical Diagnosis	Detection rate Cancer	0 333	2020/21	Level 1	0 5	2020/21	No Trigger	0.595	2020/21	No Trigger
Coronary heart disease	% AF anticoagulation therapy CHADS2-VASc score >1	91 5	2020/21	Positive	94.4	2020/21	Positive	86.3	2020/21	Positive
	% CHD aged <=79 BP reading 140/90mmHg or less	50 8	2020/21	Level 1	64.1	2020/21	Level 1	55.6	2020/21	Level 1
	% CHD cholesterol 5 mmol/l or less	71 8	2021/22	No Trigger	64 3	2021/22	No Trigger	68.2	2021/22	No Trigger
	% hypertension aged <=79 BP reading 140/90mmHg or less	53.2	2020/21	Level 1	42 2	2020/21	Level 1	47.7	2020/21	Level 1
Diabetes	% Diabetes aged >=40 years no CVD history without moderate or severe frailty treated with statin	79 8	2020/21	Level 1	64.4	2020/21	Level 1	79.9	2020/21	Level 1
	% Diabetes without moderate or severe frailty BP 140/80 mmHg or less	46.4	2020/21	Level 1	48.5	2020/21	Level 1	37.3	2020/21	Level 2
	% diabetes without moderate or severe frailty IFCC-HbA1c is 58 mmol/mol or less	45	2020/21	Level 2	52 8	2020/21	Level 1	49.7	2020/21	Level 2
Exception Rating	Overall Personalised Care Adjustment Rate	0 051	2020/21	No Trigger	0 055	2020/21	No Trigger	0.046	2020/21	No Trigger
Medicines Management	% antibiotics Co-amoxiclav, Cephalosporins, Quinolones	10 6	2021/22 Q4	Level 1	8 3	2021/22 Q4	No Trigger	8.4	2021/22 Q3	No Trigger
	% Naproxen and Ibuprofen	79.4	2021/22 Q4	No Trigger	87.9	2021/22 Q4	No Trigger	90.1	2021/22 Q3	No Trigger
	Antibacterial Items/Star Pu	0.784	2021/22 Q4	Positive	0.768	2021/22 Q4	Positive	0.623	2021/22 Q3	Positive
	Hypnotics ADQ/Star Pu	0.428	2021/22 Q4	No Trigger	0.452	2021/22 Q4	No Trigger	0.531	2021/22 Q3	No Trigger
	Oral NSAIDS ADQs/STAR-PU	1.282	2021/22 Q4	Positive	2.493	2021/22 Q4	No Trigger	2.142	2021/22 Q3	No Trigger
Mental Health	% first choice generic SSRIs	67.4	2021/22 Q4	No Trigger	74	2021/22 Q4	No Trigger	58.1	2021/22 Q3	No Trigger
	% MH comprehensive care plan	23.2	2020/21	Level 1	85.4	2020/21	Level 1	63.9	2020/21	Level 1
	% SMI alcohol record	20.5	2020/21	Level 2	94.7	2018/19	No Trigger	64.5	2020/21	Level 1
	% SMI BP record	53.6	2020/21	Level 1	55	2020/21	Level 1	67.9	2020/21	Level 1
	Dementia Face to Face review	11.9	2020/21	Level 1	85 3	2020/21	No Trigger	38.3	2020/21	Level 1
	Select antidepressants ADQs/STARPU	1 236	2021/22 Q4	No Trigger	0 856	2021/22 Q4	Positive	1.096	2021/22 Q3	No Trigger
Patient Experience	Confidence and trust in healthcare professional	95.7	2020/21	No Trigger	92.4	2020/21	No Trigger	94.7	2020/21	No Trigger
	Frequency seeing preferred GP	35.8	2020/21	No Trigger	56.7	2020/21	No Trigger	37.2	2020/21	No Trigger
	Healthcare professional treating with care and concern	87.7	2020/21	No Trigger	89.1	2020/21	No Trigger	86	2020/21	No Trigger
	Overall experience of your GP practice	80.7	2020/21	No Trigger	84	2020/21	No Trigger	82.2	2020/21	No Trigger
	Satisfaction with appointment times	50.5	2020/21	No Trigger	64 3	2020/21	No Trigger	60.3	2020/21	No Trigger
Public Health	% Child Imms DTaP/IPV/Hib/HepB (age 1 year)	86.5	2020/21	Level 1	79	2020/21	Level 1	88.4	2020/21	Level 1
	% Child Imms Hib/MenC booster	93.2	2020/21	Level 1	85.4	2020/21	Level 1	84.2	2020/21	Level 1
	% Child Imms MMR (Age 2 yrs)	91.5	2020/21	Level 1	85.4	2020/21	Level 1	84.2	2020/21	Level 1
	% Child Imms PCV Booster	89.7	2020/21	Level 1	84	2020/21	Level 1	83.8	2020/21	Level 1
	Cervical Screening	69.2	2021/22 Q4	Level 1	58 3	2021/22 Q4	Level 2	63.9	2021/22 Q4	Level 1
Respiratory	% Asthma review in last 6 mths	38.8	2020/21	Level 1	36 9	2020/21	Level 1	32.4	2020/21	Level 1
	% Asthma spirometry and one other objective test	0	2020/21	Level 2	0	2020/21	Level 2	0	2020/21	Level 2
	% COPD with review in last 12 mths	15.4	2020/21	Level 2	83.3	2020/21	Level 1	25.6	2020/21	Level 1
	% LTC patients who smoke	10	2020/21	No Trigger	9.1	2020/21	No Trigger	18.6	2020/21	No Trigger
	% LTC Smoker offer support	90.2	2020/21	Level 1	84.4	2020/21	Level 1	90.4	2020/21	Level 1
	% Smoking patients over 15 recorded	77.1	2021/22	No Trigger	64.7	2021/22	No Trigger	68.6	2021/22	No Trigger
	% Smoking status recorded	92	2020/21	No Trigger	91.1	2020/21	No Trigger	91.7	2020/21	No Trigger
	% w. MRC dyspnoea score >=3 w. offer of referral to pulm. rehab. Clinic	0	2020/21	Level 2	100	2020/21	No Trigger	27.3	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/).

Source: NHSE&I - https://www.primarycareindicators.nhs.uk/ https://www.primarycareindicators.nhs.uk/wp-content/uploads/2022/02/GPI-Tech-Guidance-v5.pdf

Public Health - PCN Wider Determinants

Hertfordshire and West Essex Integrated Care Board

Wider Determinants

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

In Central Watford PCN an estimated:

- 10.3% of children live in poverty.
- 16.4% of older people live in poverty.
- 12.9% of households live in fuel poverty.
- 17.1% of households are overcrowded.
- 35.5% of people aged 65 and over live alone.
- 2.9% of people cannot speak English well.
- 5.2% of working age people are claiming out of work benefits.
- 18.5% of children aged 4-5 and 35.8% of children aged 10-11 are overweight.

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Hertfordshire Public Health Evidence & Intelligence Epidemiology

Hertfordshire

The above provides a summary of the wider determinants of health for Central Watford.

Wider determinants analysis from Public Health Evidence and Intelligence shows Central Watford is one of the most deprived PCNs within the ICB across most indicators, except Education, Skills and Training; it is ranked in the ICB as having the worst for Older People in Poverty and Environment.

Source: Public Health Team

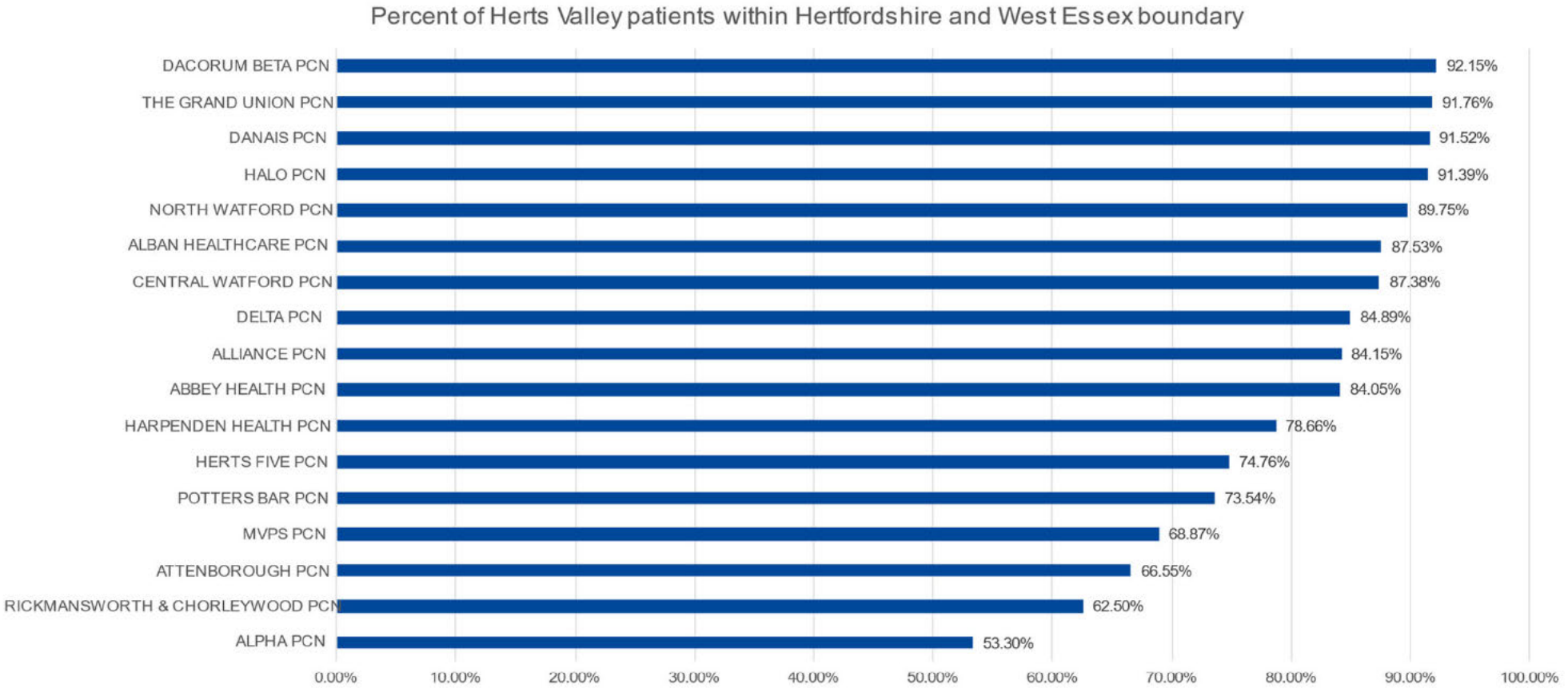
Spread of Patients

NHS Hertfordshire and West Essex Integrated Care Board

Correct as of July 2022

Source: NHS Digital (2022)

SPREAD OF PATIENTS ACROSS ENGLAND CONT.



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

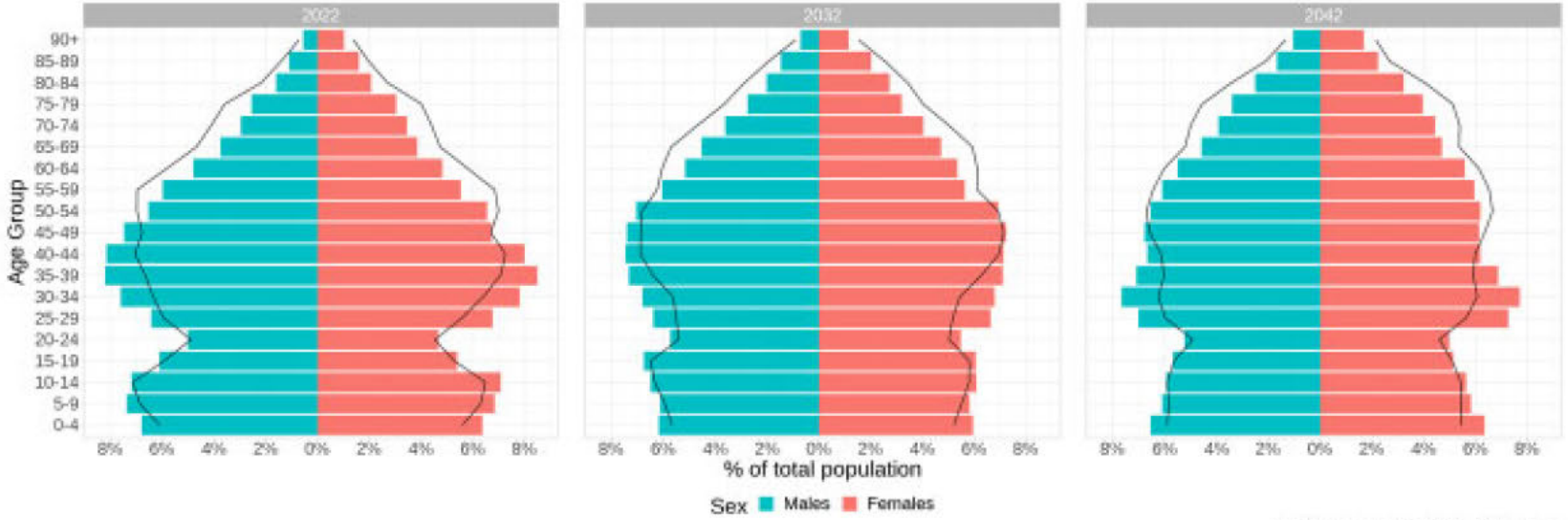
The spread of patients for Central Watford PCN indicates 12.62% of the population are not located within the Hertfordshire & West Essex boundaries; this means that this population may be accessing services outside of the ICB and the impact of coterminous alignment with neighbouring ICBs must be taken into account for this population by the PCN.

Source: Essex County Council PHM Team, NHS Digital (2022)

Public Health - Population Projections

NHS Hertfordshire and West Essex Integrated Care Board

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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Hertfordshire Public Health Evidence & Intelligence Epidemiology

Hertfordshire

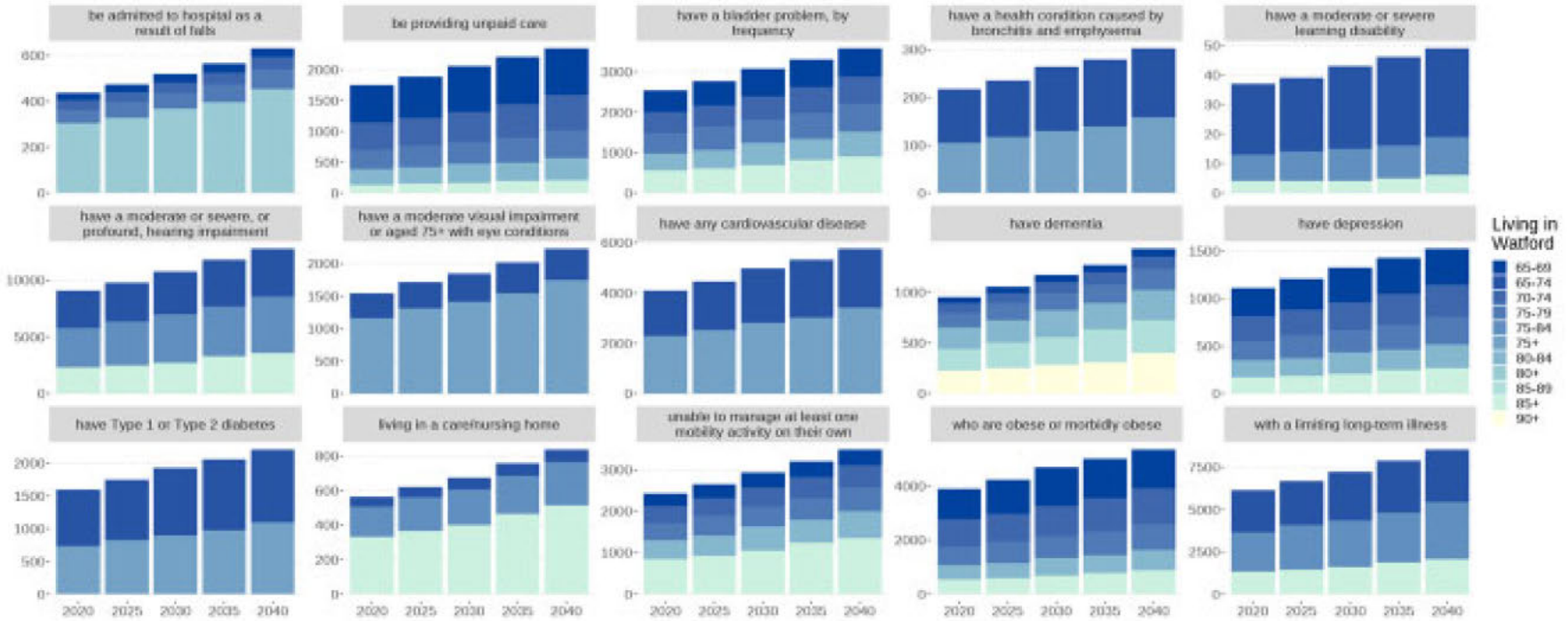
Expected population growth for Watford district by the Local Authority, forecasts continued increase between 2023 through to 2034 which will bring additional demands for healthcare. Projections show an expected increase in the number of people over 65 from ~13k to ~16k.

Source: Public Health Team

Public Health - Projections on Conditions

NHS Hertfordshire and West Essex Integrated Care Board

People aged 65+ projected to...



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Hertfordshire Public Health Evidence & Intelligence Epidemiology

Hertfordshire

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

Source: Public Health Team

Segmentation within the ICB

Hertfordshire and West Essex Integrated Care Board

Optum

HWE

Segment & Outcomes Framework Documentation

PHM Segment Model - Overview

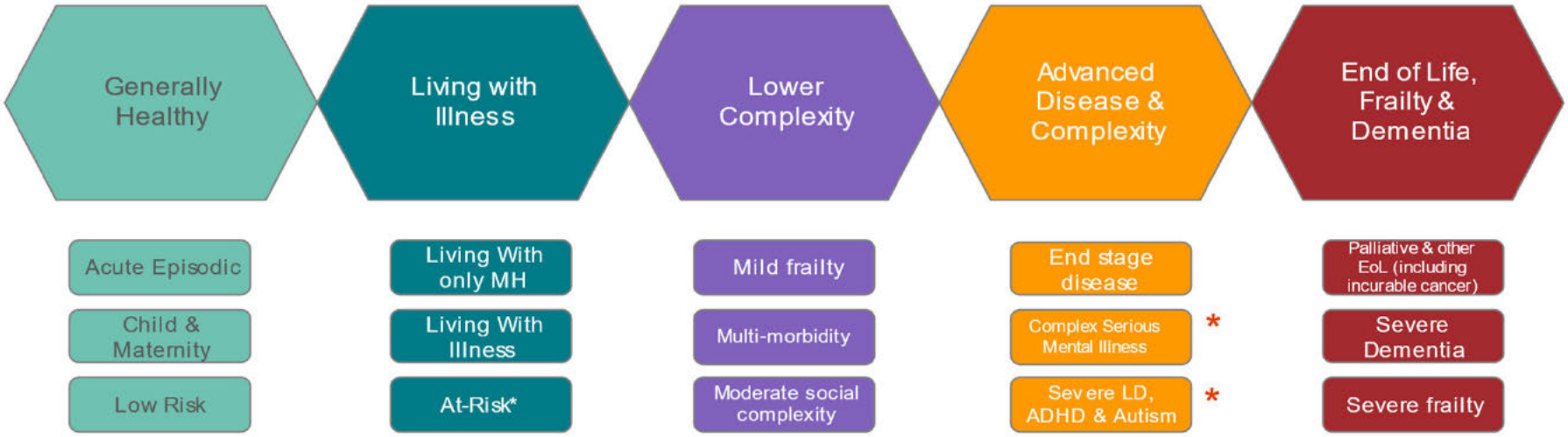
NHS Hertfordshire and West Essex Integrated Care Board

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 orderfrom right to left in segment, and top to bottom in subsegment.

* awaiting finalisation of methodology

Optum

2

Source: Optum & HWE PHM Team - 14th Oct 2022

PHM Segment Model - Overview

NHS Hertfordshire and West Essex Integrated Care Board

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.

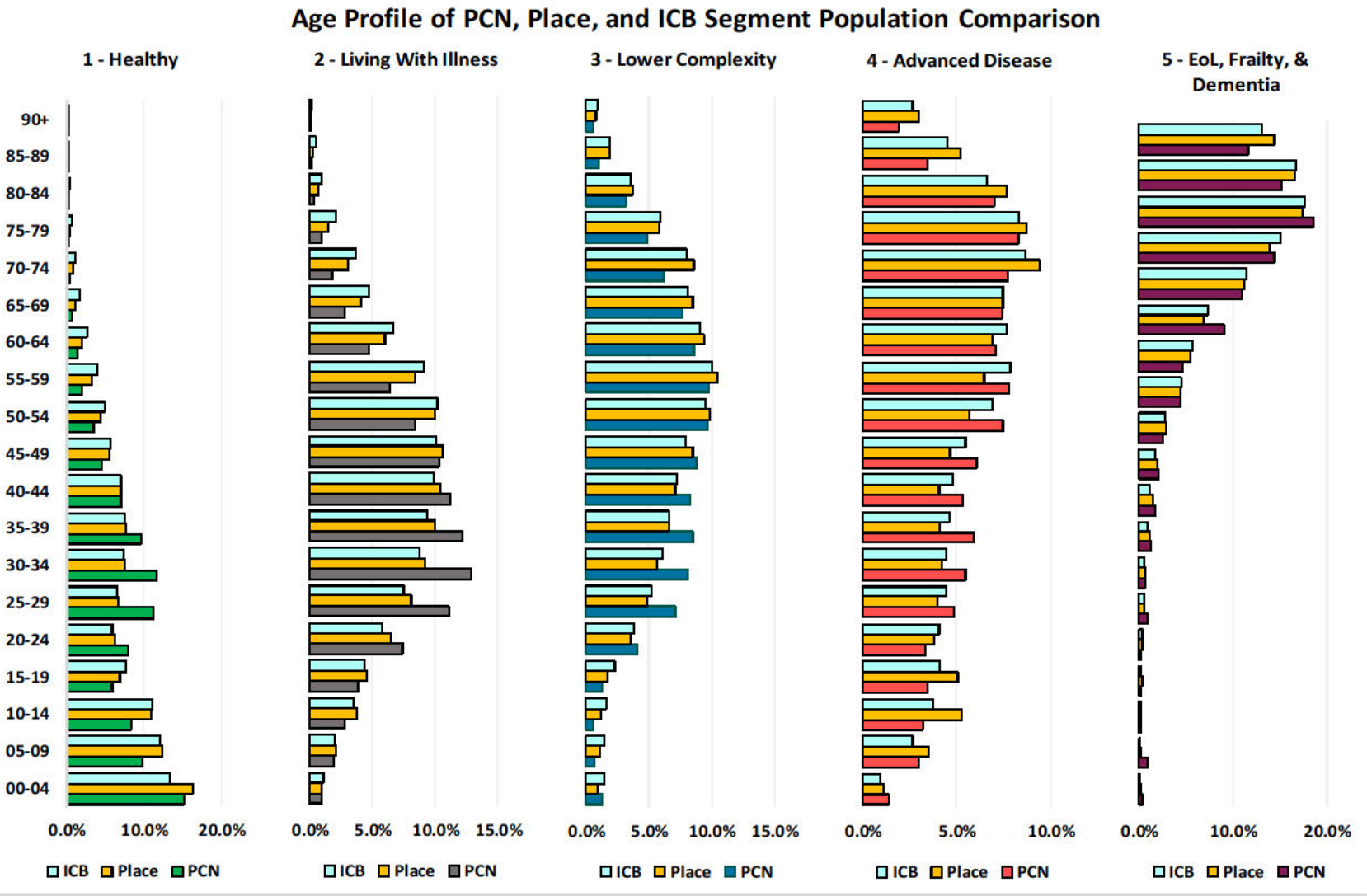
Whole Population Outcomes

- 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"	Living with Illness	Lower Complexity	Advanced Disease & Complexity	End of Life, Frailty & Dementia
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.	**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.	**Who is in this group?** • Includes people with moderate levels of morbidity and complexity. This is either as a result of: Multi-morbidity (2-4 long term conditions), Mild frailty and/or Social 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 do functioning as well as people with significant risk from social complexity	**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 • 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.	**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.	**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.	**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.	**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.

Source: Optum & HWE PHM Team - 14th Oct 2022

Age Profile and Health Segment



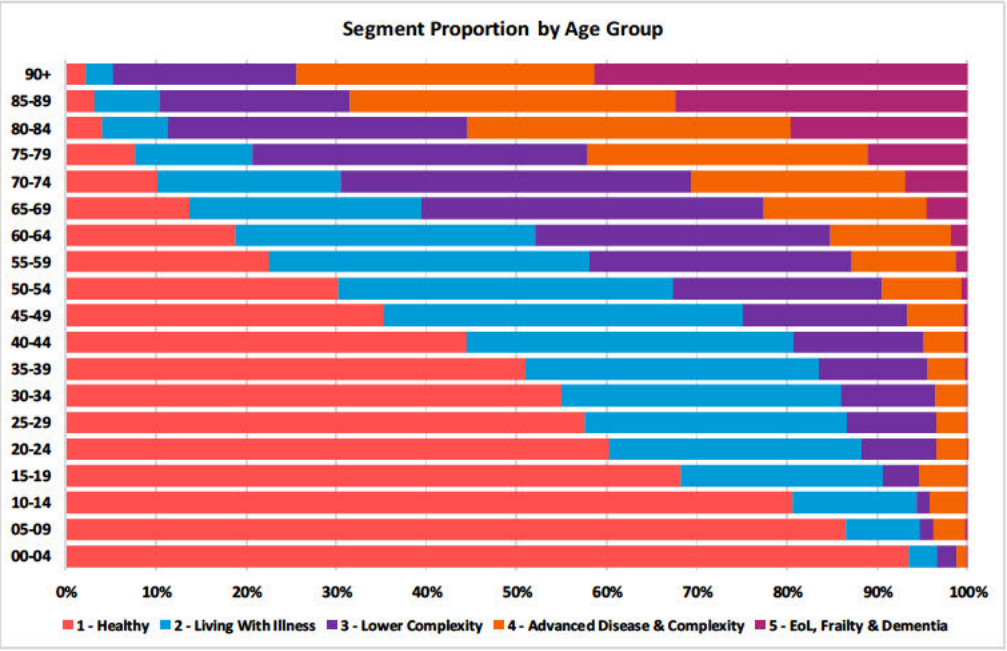
Each registered person is assigned to a segment and this can be cut by age group and also geographically by Place or PCN.

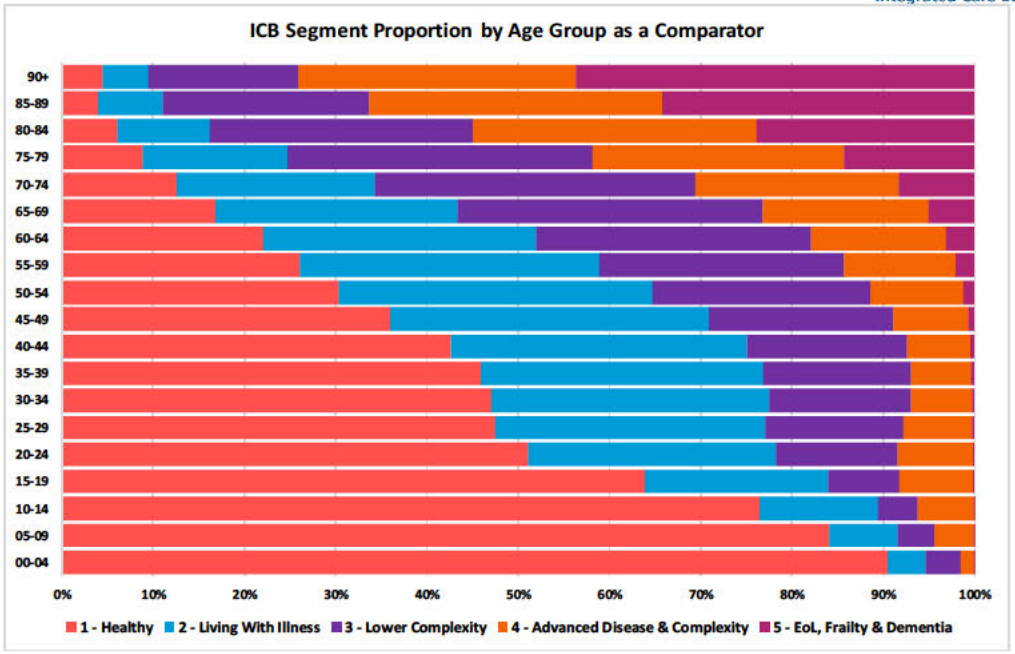
The above looks at the breakdown by age of people within each segment. It provides the PCN value against the Place and ICB value.

Source: HWE PHM Team, Combined population data re-extract via Optum

Demographic Breakdowns - Segment & Deprivation Quintiles

Hertfordshire and West Essex Integrated Care Board



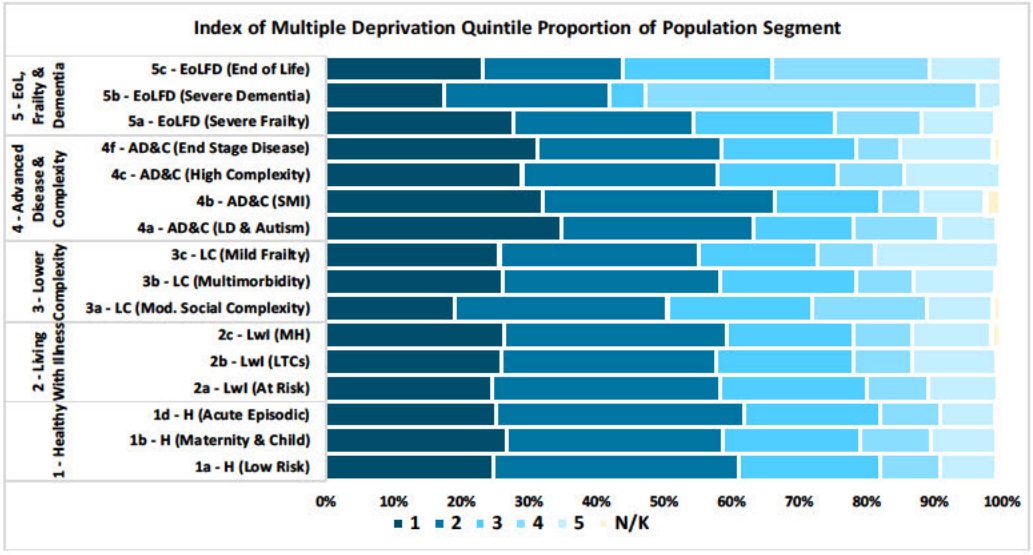


The ICB Health Segments here are broken down by total population and 5 year age groups; as expected with age the proportion of people within the healthy segment decreases.

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

Overall Central Watford PCN has a similar profile for most age categories, compared to the ICB population.

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.



Source: HWE PHM Team, Combined population data re-extract via Optum

Major Conditions Comparison - Per 1,000 Registered

NHS Hertfordshire and West Essex Integrated Care Board

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
BROXBOURNE 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 & BROXBOURNE	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 Central Watford PCN are Obesity, Diabetes, Dementia, Learning Disabilities, Serious Mental Illness and Alzheimers.

Source: HWE PHM Team, Combined population data re-extract via Optum

Continued

NHS Hertfordshire and West Essex Integrated Care Board

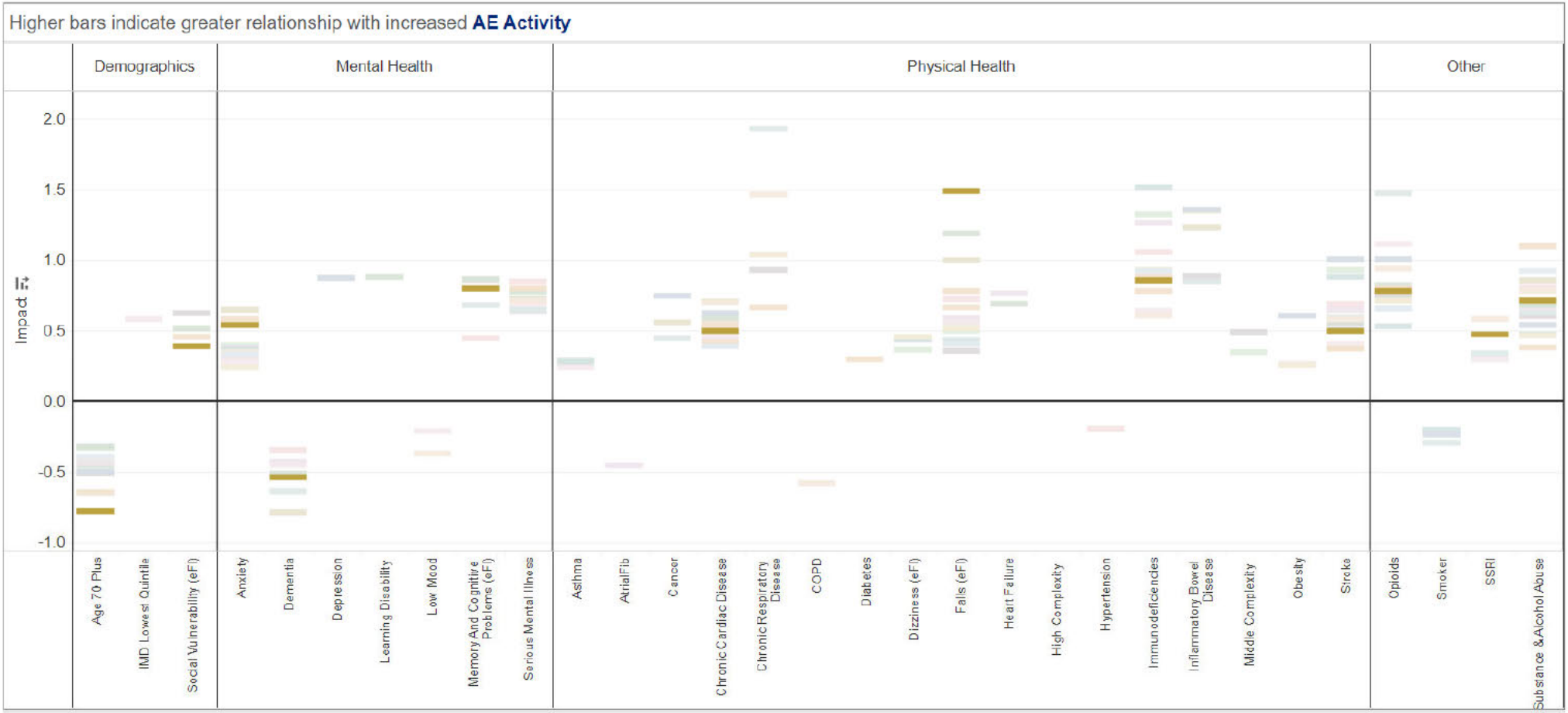
PCN NAME	ASD	Cerebral Palsy	Chronic Respiratory Disea	Cystic Fibrosis	Huntingtons Disease	Inflammatory Bowel Dise	Kidney Transplant	Metastatic Cancer	Multiple Sclerosis	Muscular Dystrophy	Myasthenia Gravis	Osteoporosis	Other Neurological Condi	Parkinsons Disease	Rheumatoid Arthritis	Lupus (SLE)	Sickle 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
BROXBOURNE 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 & BROXBOURNE	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 higher prevalence of ASD, Huntington Disease, Parkinsons Disease and Sickle cell Disease.

Source: HWE PHM Team, Combined population data re-extract via Optum

PCN Benchmarking - A&E Activity

NHS Hertfordshire and West Essex Integrated Care Board



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

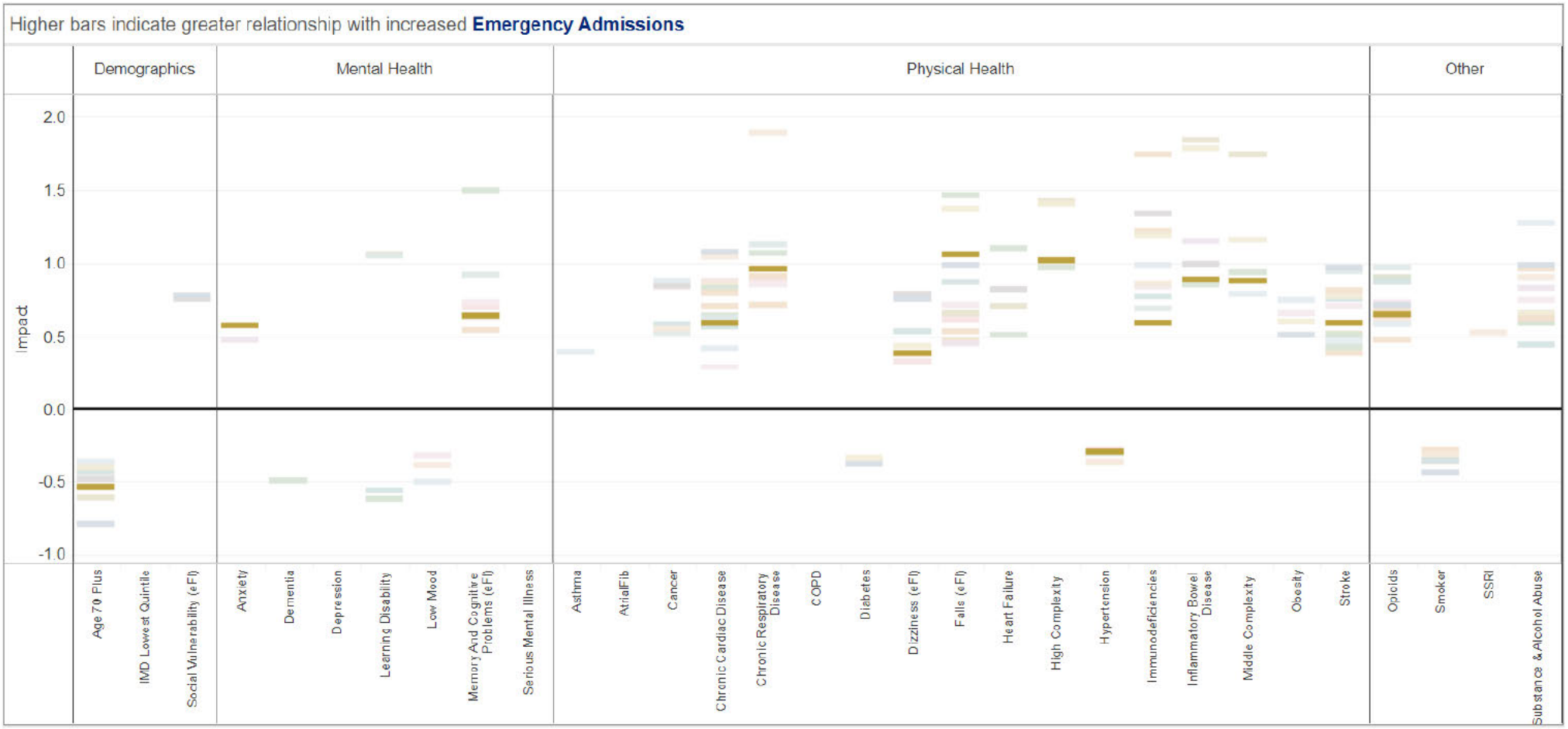
The Model - A statistical regression model is used to decide which Risk Factors correlate with a significant impact on the selected targets as presented in these charts, the height of the bar for each PCN relates to the correlation of a Risk Factor and an increase in impact on the selected target condition.

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

Source: HWE PHM Team modelled data, phm.optum.co.uk - Calendar Year 2021

PCN Benchmarking - Emergency Admissions

NHS Hertfordshire and West Essex Integrated Care Board



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.

Source: HWE PHM Team modelled data, phm.optum.co.uk - Calendar Year 2021

Urgent and Emergency Care

NHS Hertfordshire and West Essex Integrated Care Board

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.

UEC Overview

Hertfordshire and West Essex Integrated Care Board

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

Children 0 -18
Adults 19 -64
Older People 65+

223,830 A&E Attendances in 2021/22

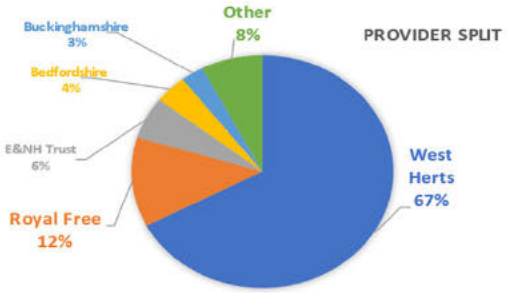
Children = 62,944 (28.1%)
Adults = 113,994 (50.9%)
Older People = 46,892 (20.9%)

141,377 people attended A&E in 2021/22

Children = 40,129 (28.4%)
Adults = 73,984 (52.3%)
Older People = 27,548 (19.5%)

84,710 (37.8%) of attendances resulted in no investigation and no treatment (includes Uncoded Activity)

Children = 31,599 (50.2%)
Adults = 42,719 (37.5%)
Older People = 10,392 (22.2%)



This translates to 1 in 5 people registered with South & West attending A&E

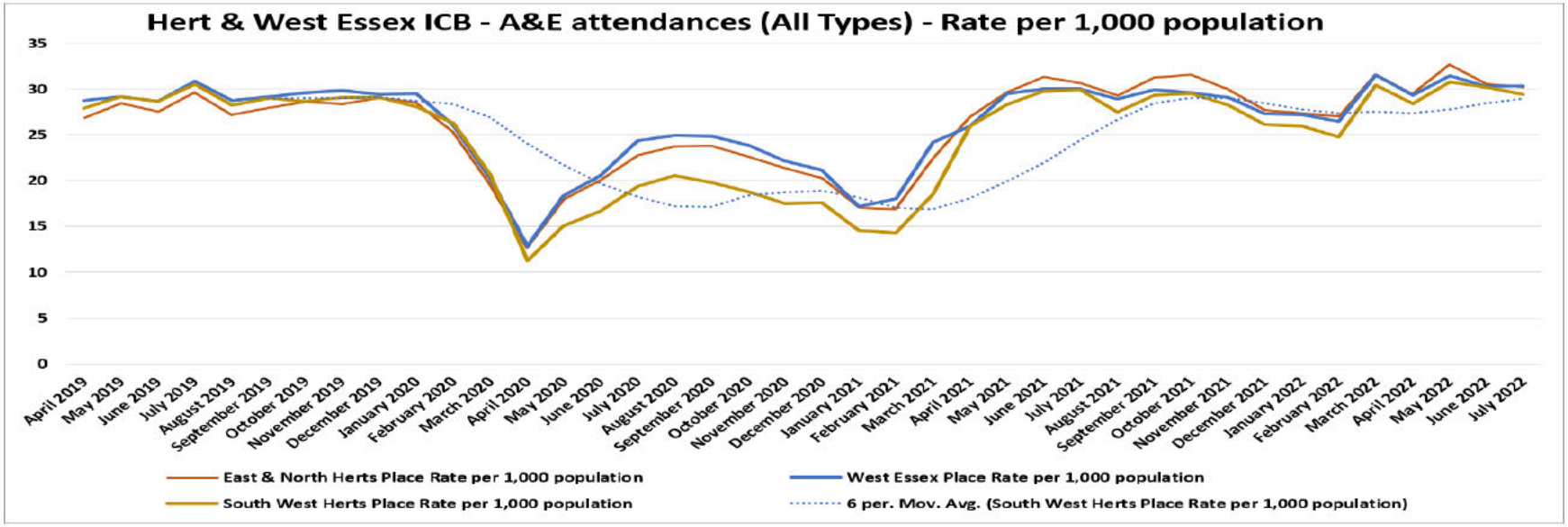
Children = 1 in 4 children
Adults = 1 in 5 adults
Older People = 1 in 4 older people

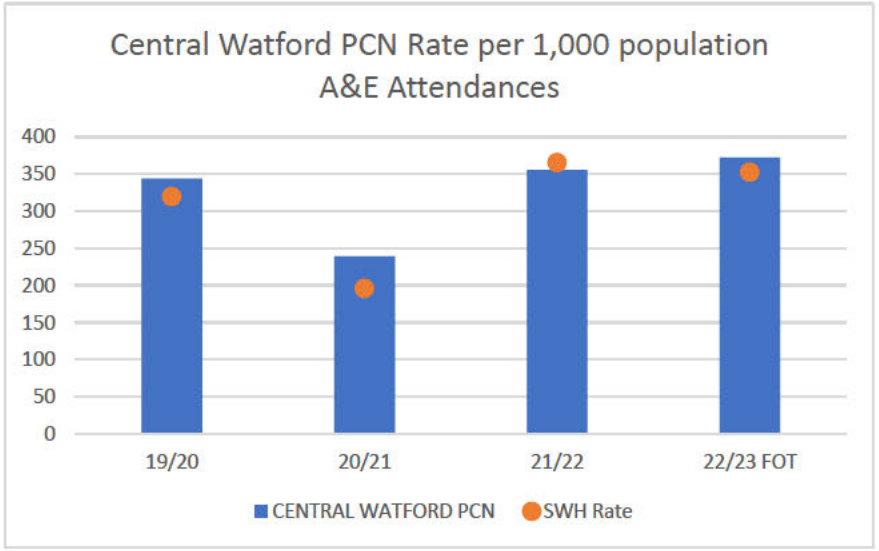
Hertfordshire and West Essex Integrated Care System

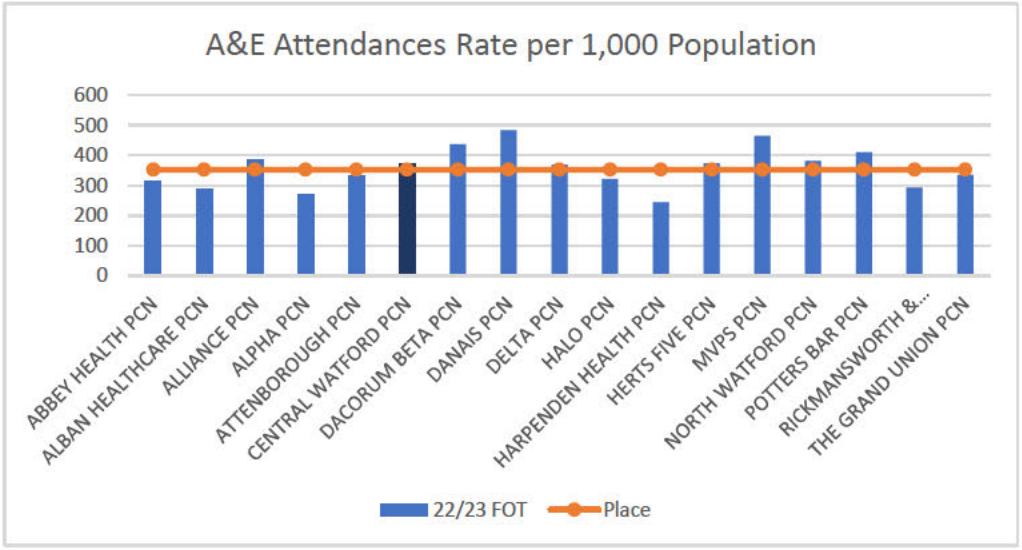
Source: SUS

Source: HWE PHm Team, SUS Data Sets

UEC







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.

Urgent & Emergency Care in 2022/23 for Central Watford PCN A&E Attendance rates per 1,000 population, is just above South West Herts place average.

Source: HWE PHM Team modelled data, phm.optum.co.uk - Calendar Year 2021

Unplanned Hospitalisation for Chronic Ambulatory Care Sensitive Conditions

NHS Hertfordshire and West Essex Integrated Care Board

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 Central Watford PCN.

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

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

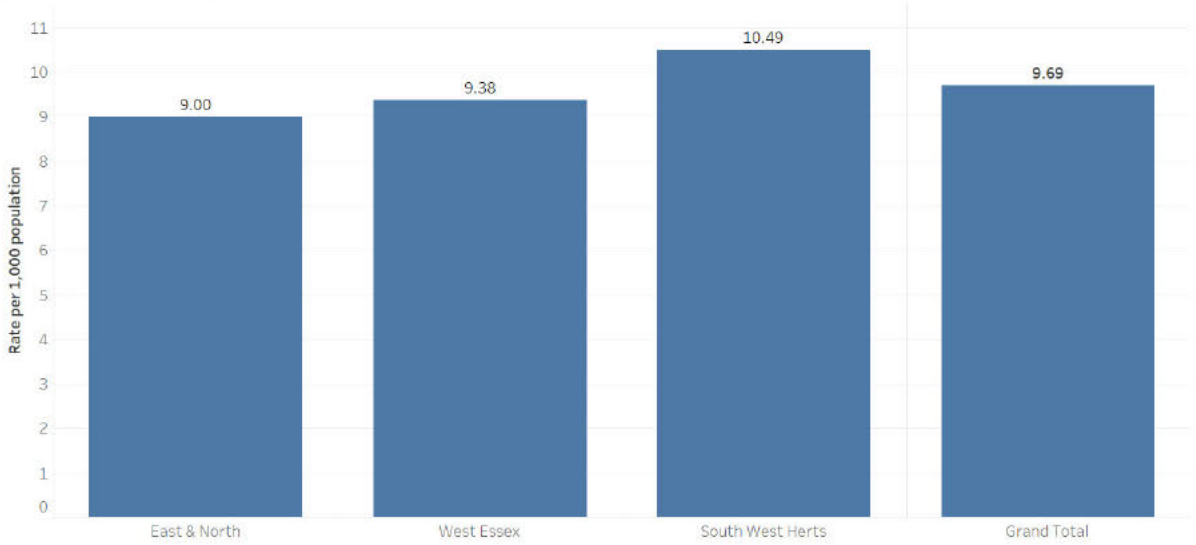
Chronic ACS	Admissions	People	Average cost of admission	Tariff Total Payment National
CVD: AF and Flutter	35	30	£1,945	£68,088
CVD: Angina	25	24	£889	£22,235
CVD: Congestive Heart Failure	57	47	£4,421	£252,018
CVD: Hypertension	38	36	£649	£24,674
Diseases of the blood	23	22	£1,685	£38,757
Mental and Behavioural Disorders	2	1	£0	£0
Neurological Disorders	22	16	£2,629	£57,837
Nutritional, endocrine and metabolic	39	38	£2,038	£79,472
Respiratory: Asthma	47	33	£1,577	£74,130
Respiratory: COPD	84	46	£2,940	£246,982
Grand Total	**372**	**286**	**£2,323**	**£864,193**

Source: HWE PHM Team, SUS UEC data-sets

ACS Admission Rates per 1,000 Population by Place

Hertfordshire and West Essex Integrated Care Board

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

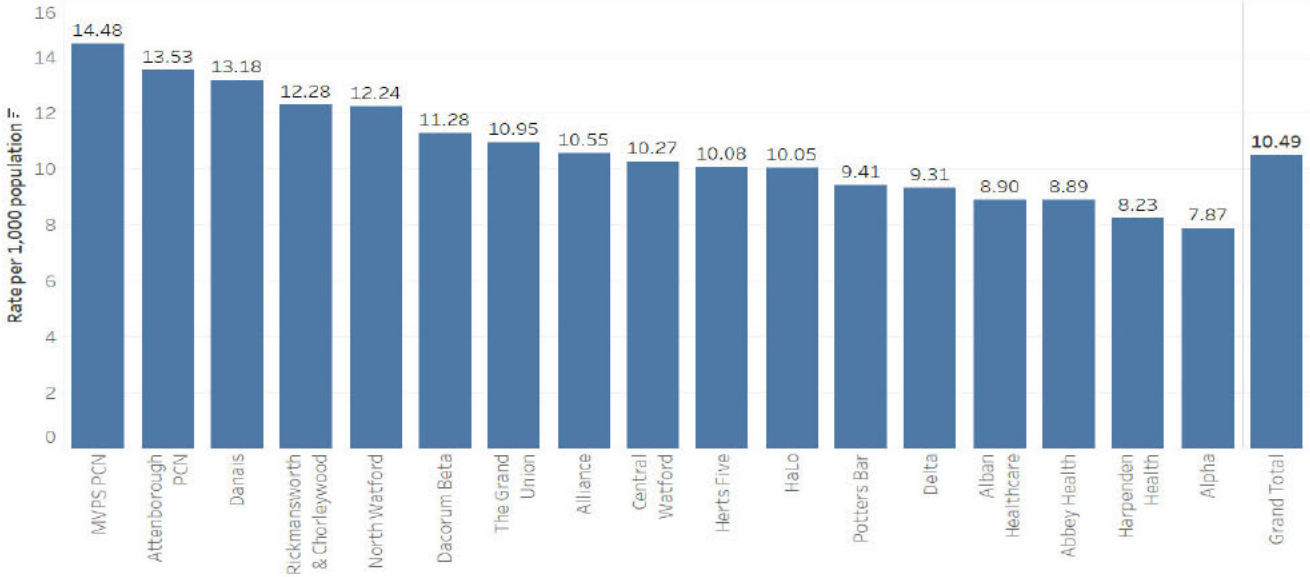


When comparing the Ambulatory Care Sensitive rates per 1,000 population between places, the South West Herts place has the highest rate in the ICB.

Within South West Herts place, Central Watford has a lower rate per 1,000 population, than the average.

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)

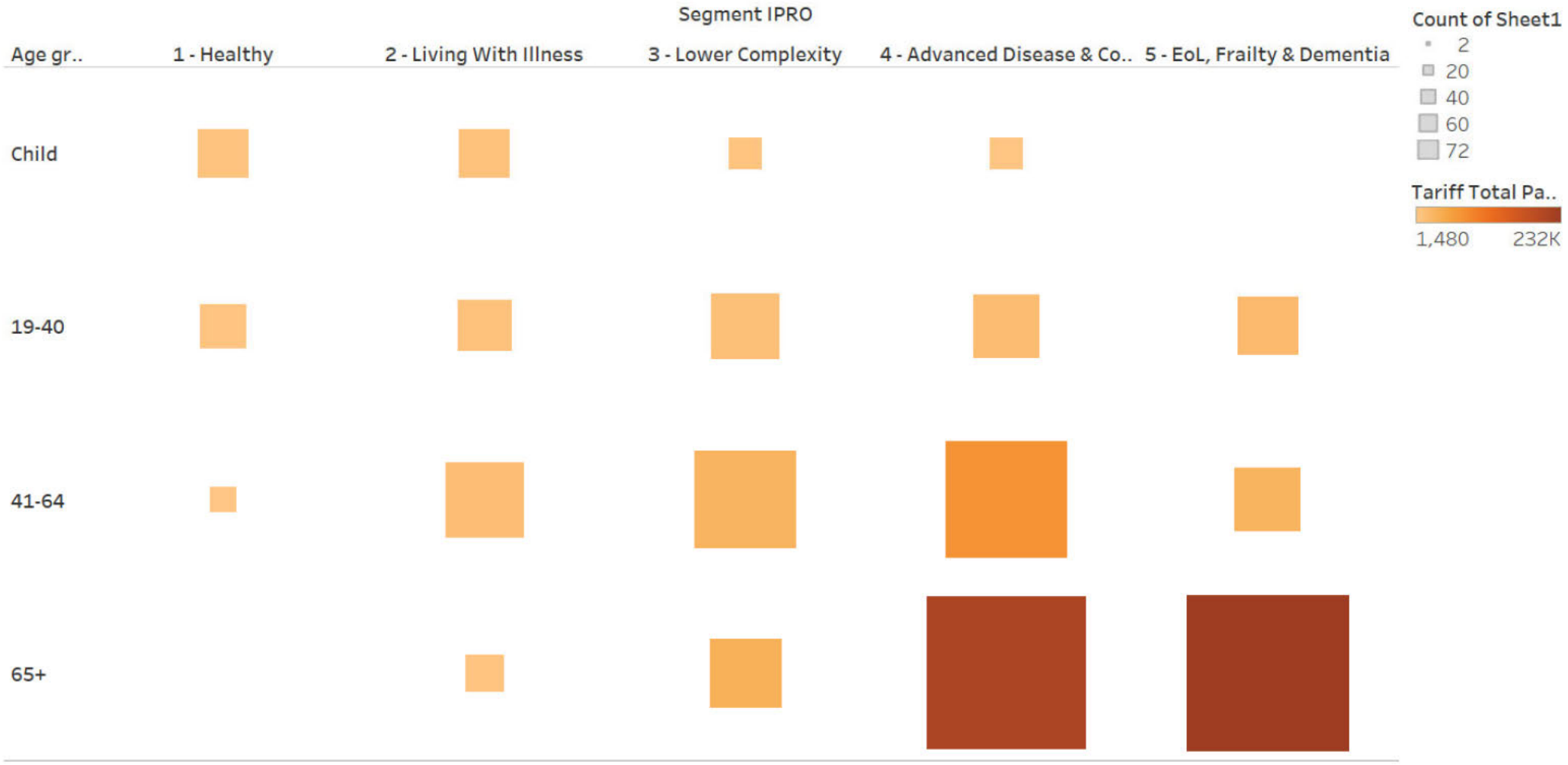


Source: HWE PHM Team, SUS UEC data-sets

Chronic ACS by Segment

NHS Hertfordshire and West Essex Integrated Care Board

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 Central Watford the highest volume and cost is within the End of Life, Frailty and Dementia in the over 65 age group and the next highest volume and cost is for the over 65 age group in the Advanced Disease and Complexity segment. It is to be noted that under Advanced Disease and Complexity and Lower Complexity segments there is a notable use by the 41-64 age group.

The following pages look at which ACSs contribute to this.

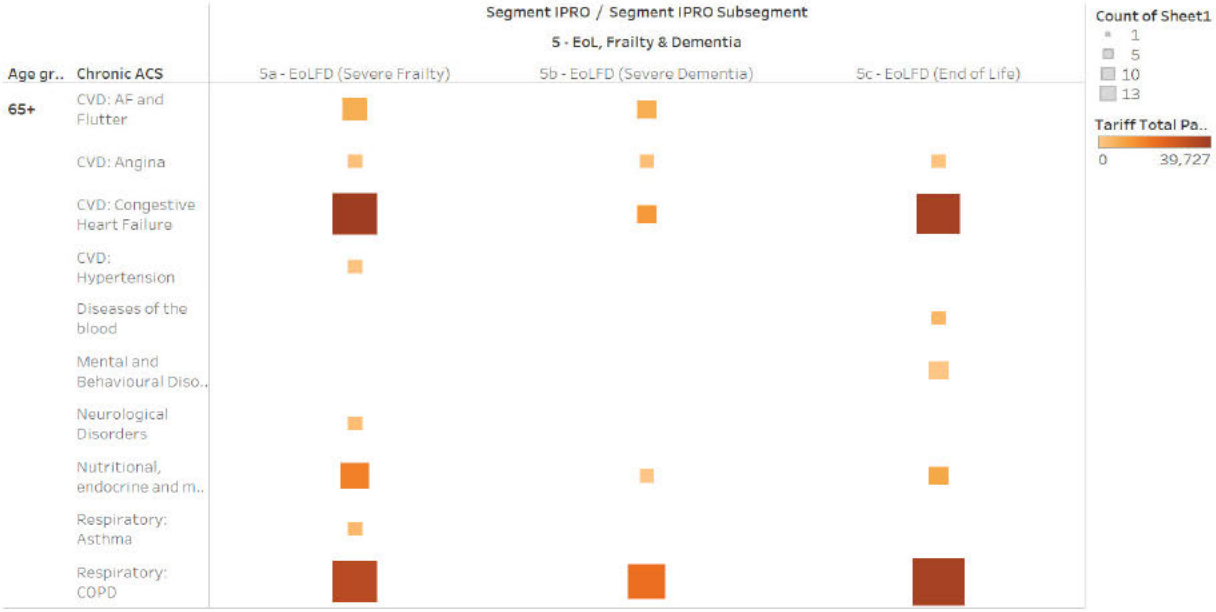
Source: HWE PHM Team, SUS UEC data-sets

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

Hertfordshire and West Essex Integrated Care Board

Segment 4

Segment 5



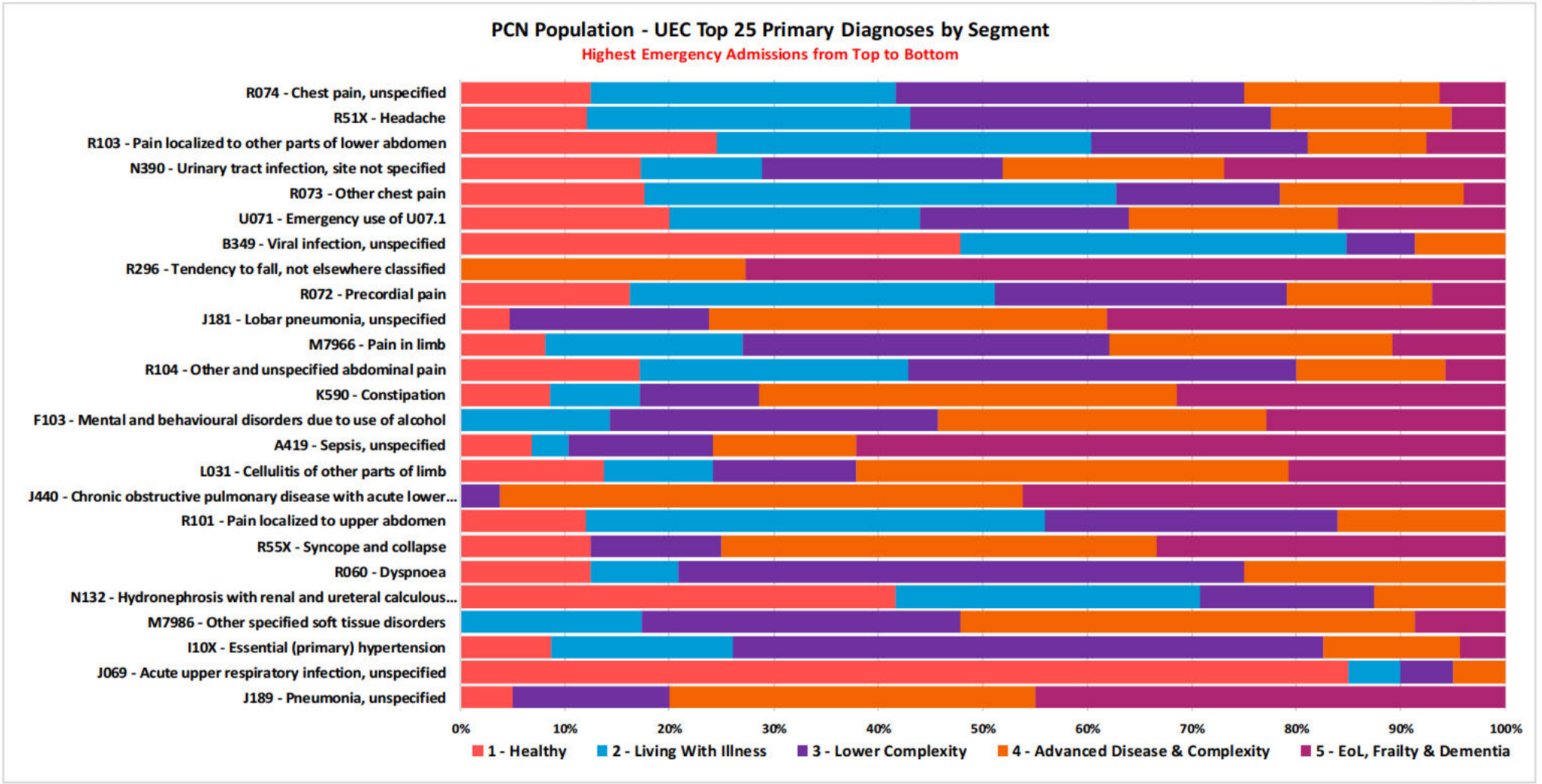
Ambulatory Care Sensitive conditions of note for people aged over 65 within the Advanced Disease and Complexity, is highlighted as COPD followed by Heart Failure and AF and Flutter in terms of volume and cost.

For those people aged over 65 within the End of Life, Frailty & Dementia is highlighted as COPD followed by Heart Failure in terms of volume and cost.

Source: HWE PHM Team, SUS UEC data-sets

UEC Diagnoses by Segment

NHS Hertfordshire and West Essex Integrated Care Board



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.

Source: HWE PHM Team, SUS UEC data-sets

UEC & Segmentation + Deprivation by Ward

NHS Hertfordshire and West Essex Integrated Care Board

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	2		1			3
Adeyfield East	1					1
Aldenham West	1					1
Borehamwood Brookmeadow				1		1
Borehamwood Cowley Hill			3			3
Bushey Heath					5	5
Bushey North	3	7	4	5	23	42
Bushey Park	1		1			2
Bushey St James	2	1				3
Callowland	24	39	31	31	13	138
Carpenders Park	1		2			3
Central	139	156	144	183	50	672
Chorleywood North & Sarratt			4	1		5
Dickinsons	2	5	1	3		11
Durrants		2	7	4	8	21
Gade Valley	2		1			3
Hatfield Central	1					1
Hemel Hempstead Town	1					1
Holywell	59	62	60	61	57	299
Kings Langley				1		1
Leavesden	1	1	4		3	9
Leggatts	21	38	41	52	21	173
Leverstock Green			2	2		4
Meriden	6	8	9	11	15	49
Moor Park & Eastbury	2					2
Nascot	49	66	64	110	166	455
Oxhey	4	14	20	32	7	77
Oxhey Hall & Hayling	4	1	3	7	2	17
Park	28	40	77	57	48	250
Park Street		3				3
Potters Bar Parkfield					1	1
South Oxhey		1	3	3	3	10
St Stephen		1				1
Stanborough		1	3	9	1	14
Tudor	11	20	19	33	27	110
Vicarage	113	123	116	104	76	532
Woodside	4	4	8	10		26
Unknown Ward	2	3	3	8		16
Grand Total	484	596	631	728	526	2965

UEC Patients Seen by Deprivation Quintile & Ward 1 = Most Deprived, 5 = Least Deprived	1	2	3	4	5	(blank)	Grand Total
Abbots Langley & Bedmond					3		3
Adeyfield East			1				1
Aldenham West			1				1
Borehamwood Brookmeadow			1				1
Borehamwood Cowley Hill	3						3
Bushey Heath			5				5
Bushey North	8	14	15	5			42
Bushey Park					2		2
Bushey St James	3						3
Callowland	53	62	23				138
Carpenders Park	1		2				3
Central	318	354					672
Chorleywood North & Sarratt					5		5
Dickinsons					11		11
Durrants				2	19		21
Gade Valley		3					3
Hatfield Central		1					1
Hemel Hempstead Town		1					1
Holywell	169	130					299
Kings Langley			1				1
Leavesden			9				9
Leggatts	55	87	31				173
Leverstock Green		2			2		4
Meriden	35	5	9				49
Moor Park & Eastbury					2		2
Nascot			136	202	117		455
Oxhey	64		9	4			77
Oxhey Hall & Hayling		13		4			17
Park			125		125		250
Park Street				3			3
Potters Bar Parkfield				1			1
South Oxhey	4	6					10
St Stephen			1				1
Stanborough	6		5	1	2		14
Tudor			25	70	15		110
Vicarage	139	192	201				532
Woodside	3	20		3			26
Unknown Ward						16	16
Grand Total	861	890	600	295	303	16	2965

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.

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 be the Government; in the graph quintile 1 is the Highest or Most deprived, and quintile 5 is the Least deprived.

Source: HWE PHM Team, Combined population data re-extract via Optum, NHS England

Public Health - Nationally Reported Admissions

NHS Hertfordshire and West Essex Integrated Care Board

Hospital Admissions

	Period	HERTFORDSHIRE AND WEST ESSEX	CENTRAL WATFORD PCN
Emergency admissions injuries due to falls in those aged 65+	2020/21	2026	2200.2
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	634.8
Mental health admissions (all ages)	2020/21	177.2	327.6
Emergency Cancer Admissions	2020/21	494.9	439.4
Emergency admissions for acute conditions shouldn't require admissions	2020/21	611.6	715

Similar | Significantly Worse | Significantly Better

PH.Intelligence@hertfordshire.gov.uk

Hertfordshire Public Health Evidence & Intelligence Epidemiology

Hertfordshire

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

Central Watford PCN rates vary from Significantly Better to Significantly Worse rate of admissions to the ICB, dependent on Admission categories.

Source: Public Health Team

Frailty Segment - Detailed PCN Breakdown

NHS Hertfordshire and West Essex Integrated Care Board

	Most deprived								Most affluent			
Index of Multiple Deprivation Decile	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**PCN**	**ICS**
Overall Population Measures												
Population		13	25	69	80	45	45	48	98	50	473	37725
% of population in cohort		2.7%	5.3%	14.6%	16.9%	9.5%	9.5%	10.1%	20.7%	10.6%	100.0%	100.0%
Avg. Age		69.6	69.6	70.8	71.1	73.9	76.1	72.8	79.8	72.7	73.8	75.6
% BAME Where recorded		62%	20%	38%	34%	42%	29%	21%	6%	14%	26%	8%
Avg. number of Acute and Chronic Conditions		5.4	6.6	6.2	7.0	7.0	6.4	6.2	7.3	6.6	6.7	5.5
Activity Measure												
Emergency Admissions		0.5	0.9	1.0	0.8	1.2	0.9	1.4	1.4	1.0	1.1	0.6
A&E Attendances		1.2	1.4	1.2	1.1	1.5	1.0	1.5	1.5	1.0	1.3	0.9
GP Encounters		69.8	65.3	72.5	76.4	78.7	71.2	82.2	97.1	74.5	79.5	103.4
Admitted Bed Days		2.4	6.2	6.0	5.0	8.1	4.8	11.2	12.5	3.2	7.4	4.2
Physical Health												
Asthma		46.2%	44.0%	36.2%	33.8%	24.4%	28.9%	18.8%	28.6%	26.0%	30.2%	25.2%
Cancer		15.4%	24.0%	26.1%	17.5%	26.7%	48.9%	25.0%	28.6%	46.0%	29.0%	32.8%
Chronic Cardiac Disease		46.2%	68.0%	47.8%	50.0%	68.9%	68.9%	56.3%	60.2%	60.0%	57.9%	47.5%
Chronic Respiratory Disease		7.7%	56.0%	27.5%	36.3%	40.0%	31.1%	25.0%	27.6%	24.0%	30.9%	22.2%
CKD		7.7%	16.0%	13.0%	15.0%	20.0%	13.3%	18.8%	24.5%	2.0%	15.9%	20.7%
Heart Disease		46.2%	56.0%	40.6%	45.0%	60.0%	60.0%	50.0%	56.1%	52.0%	51.4%	39.1%
Hypertension		76.9%	80.0%	73.9%	80.0%	93.3%	77.8%	75.0%	78.6%	78.0%	79.1%	74.5%
Diabetes		69.2%	68.0%	66.7%	68.8%	71.1%	73.3%	50.0%	60.2%	68.0%	65.3%	42.8%
Obesity		30.8%	36.0%	34.8%	48.8%	37.8%	44.4%	50.0%	41.8%	38.0%	41.6%	32.8%
Rheumatoid Arthritis		0.0%	0.0%	7.2%	6.3%	8.9%	4.4%	6.3%	4.1%	4.0%	5.3%	5.3%
Stroke		30.8%	52.0%	55.1%	55.0%	46.7%	48.9%	52.1%	56.1%	64.0%	53.7%	34.5%
Mental Health												
Anxiety		30.8%	28.0%	21.7%	28.8%	15.6%	15.6%	25.0%	22.4%	26.0%	23.3%	29.0%
Depression		38.5%	28.0%	37.7%	50.0%	31.1%	15.6%	37.5%	39.8%	24.0%	35.5%	33.6%
Dementia		15.4%	12.0%	30.4%	38.8%	24.4%	17.8%	22.9%	48.0%	28.0%	31.3%	18.6%
Serious Mental Illness		23.1%	8.0%	10.1%	22.5%	8.9%	6.7%	14.6%	14.3%	10.0%	13.3%	6.5%
Low Mood		15.4%	16.0%	18.8%	13.8%	11.1%	13.3%	12.5%	16.3%	6.0%	14.0%	18.5%
Suicide		7.7%	8.0%	0.0%	2.5%	0.0%	0.0%	4.2%	1.0%	0.0%	1.7%	1.5%
Mental Health Flag		53.8%	44.0%	49.3%	60.0%	48.9%	24.4%	50.0%	48.0%	36.0%	46.9%	48.8%
Screening and Verification Refusal												
Bowel Screening Refused		61.5%	20.0%	37.7%	30.0%	35.6%	28.9%	29.2%	22.4%	32.0%	30.4%	25.5%
Cervical Screening Refused		15.4%	8.0%	4.3%	6.3%	0.0%	6.7%	8.3%	7.1%	4.0%	5.9%	3.6%
Flu Vaccine Refused		84.6%	36.0%	34.8%	41.3%	51.1%	26.7%	47.9%	35.7%	38.0%	40.0%	26.4%
Wider Indicators												
Has A Carer		46.2%	28.0%	36.2%	35.0%	22.2%	20.0%	35.4%	40.8%	36.0%	33.8%	19.0%
Is A Carer		23.1%	12.0%	14.5%	11.3%	13.3%	13.3%	10.4%	8.2%	18.0%	12.5%	11.9%
MED3 Not Fit For Work (ever)		30.8%	24.0%	20.3%	22.5%	24.4%	8.9%	18.8%	6.1%	22.0%	17.5%	13.4%
MED3 Not Fit For Work (in Last Year)		7.7%	12.0%	4.3%	3.8%	6.7%	4.4%	2.1%	1.0%	8.0%	4.4%	3.5%
MED3 Not Fit For Work (in Last Six Months)		0.0%	12.0%	2.9%	2.5%	6.7%	4.4%	0.0%	0.0%	4.0%	3.0%	2.8%
Avg. number of eFI Deficits		10.9	12.6	12.8	11.8	12.6	11.5	11.8	14.4	11.6	12.5	13.4
eFI_Housebound		15.4%	20.0%	24.6%	17.5%	24.4%	15.6%	20.8%	20.4%	12.0%	19.5%	10.9%
eFI_SocialVulnerability		38.5%	60.0%	62.3%	55.0%	57.8%	57.8%	45.8%	41.8%	38.0%	51.0%	27.3%
People_ChildrenInPoverty							5.3	11.4			8.4	15.5
Housing_FuelPoverty		12.0	17.0	22.1	16.8	16.3	15.1	11.8	8.1	7.7	14.0	11.1
Housing_OnePersonHousehold		45.7	30.2	29.7	42.8	30.6	28.6	35.6	34.9	20.0	33.0	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 Central Watford 22.6% 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 Central Watford PCN is above the ICB, and the data shows lower usage of GP services.

Within this segment we can see the presence of Chronic Cardiac Disease, Chronic Respiratory Disease, Heart Disease, Diabetes and Obesity being highlighted which chimes with the reason for admission within previous analysis for ACS conditions.

Source: HWE PHM Team, SUS UEC data-sets

Applying Machine Learning factors without our data platform

NHS Hertfordshire and West Essex Integrated Care Board

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:- • **Drug: Pain Management** AND **eFI: Peptic Ulcer** • **Chronic Cardiac Disease**
	Drug: Pain Management AND **eFI: Falls** AND ONE OF:- • **Stroke** AND **eFI: Memory and Cognitive Problems** • **Stroke** AND **Substance Abuse** • **End Stage Disease**
Risk Grade: Medium	**Age < 3** AND ONE OF:- • **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**
	Drug: Pain Management AND **Substance Abuse** AND **ONE OF:** • **Drug: Opioids** • **eFI: Falls** AND NO **Stroke** AND NO **End Stage Disease**
Risk Grade: Low	All others

Source: HWE PHM Team

Quality & Outcomes Framework

Contents:

- QOF Local, Regional, & National Comparison

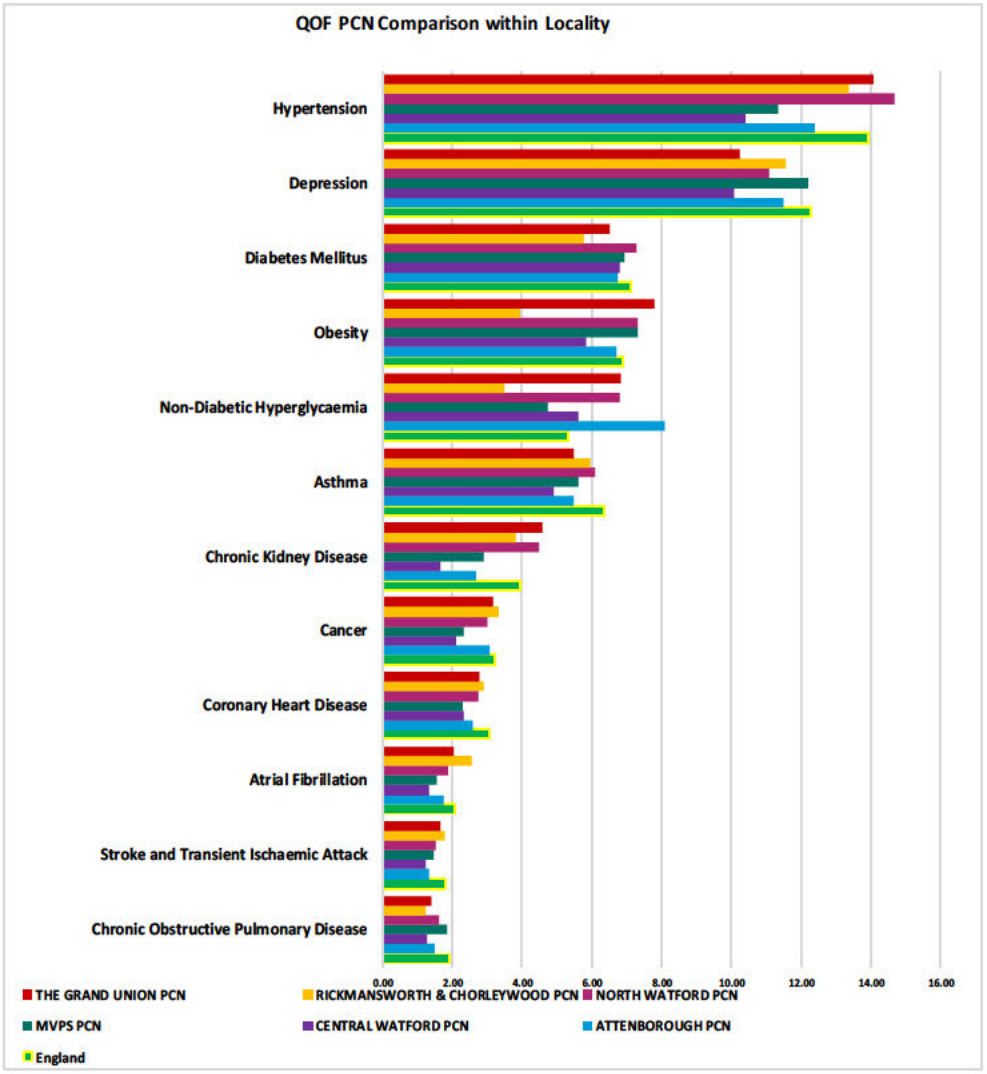
- QOF Locality & PCN Comparison

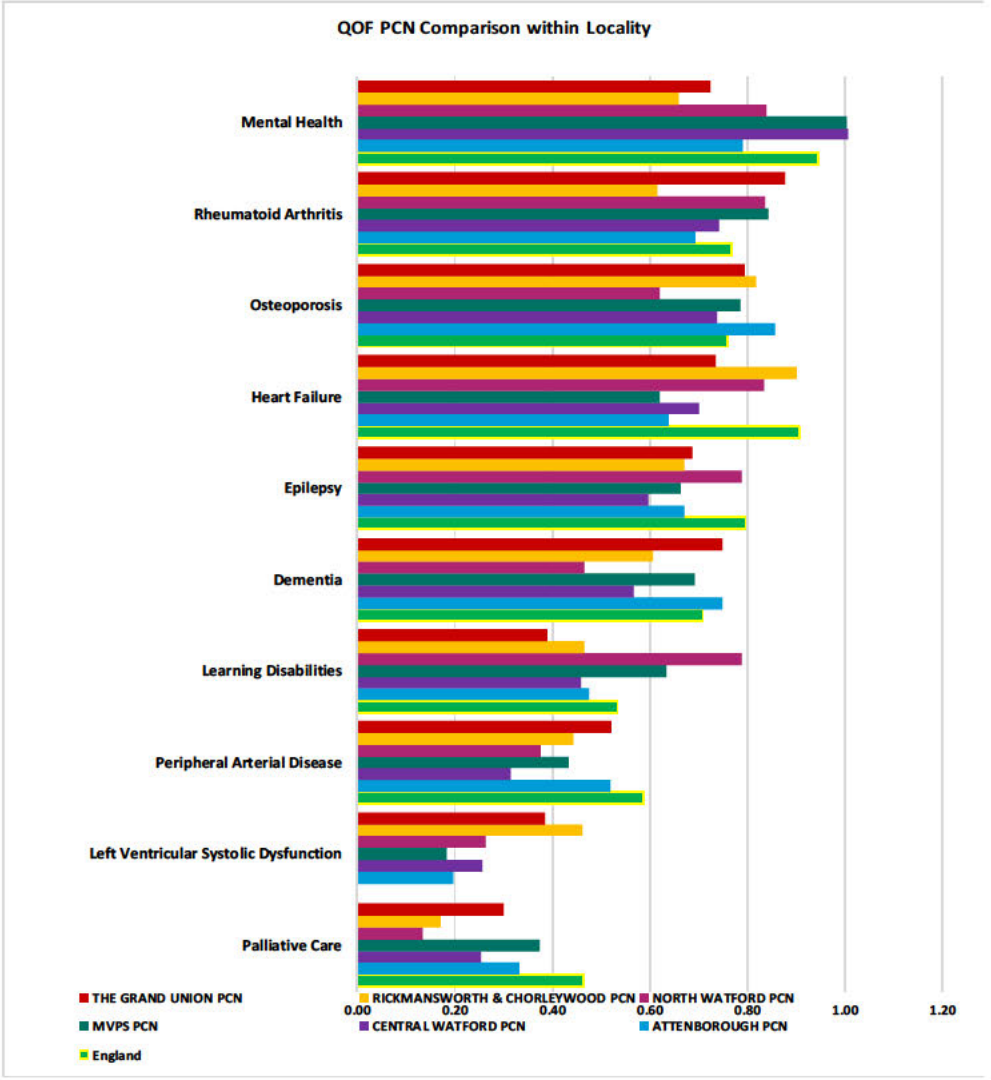
- QOF Missed Diagnoses & Admission Rates

- Admission Rates Benchmarking against ICB/Place

QOF - Locality & PCN Comparison

Hertfordshire and West Essex Integrated Care Board



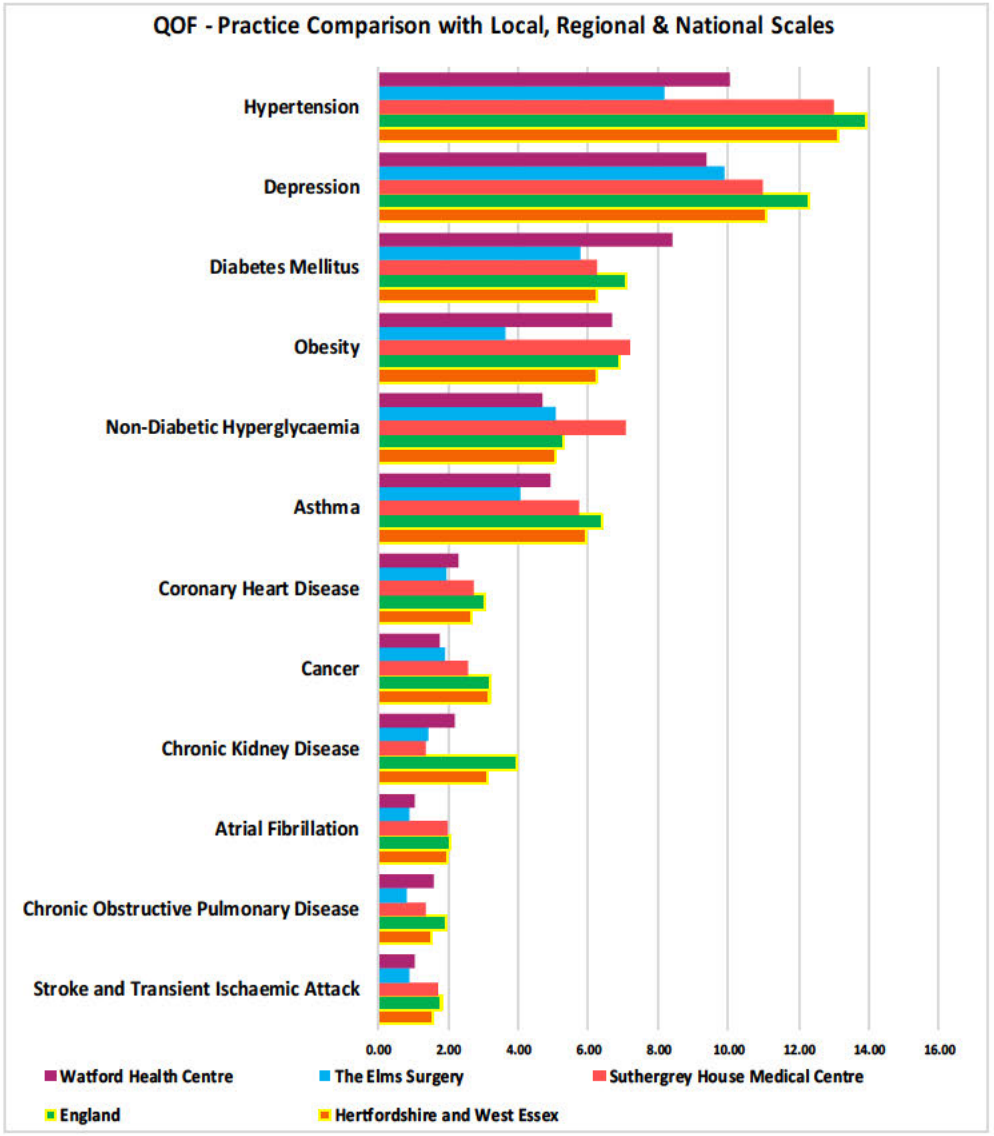


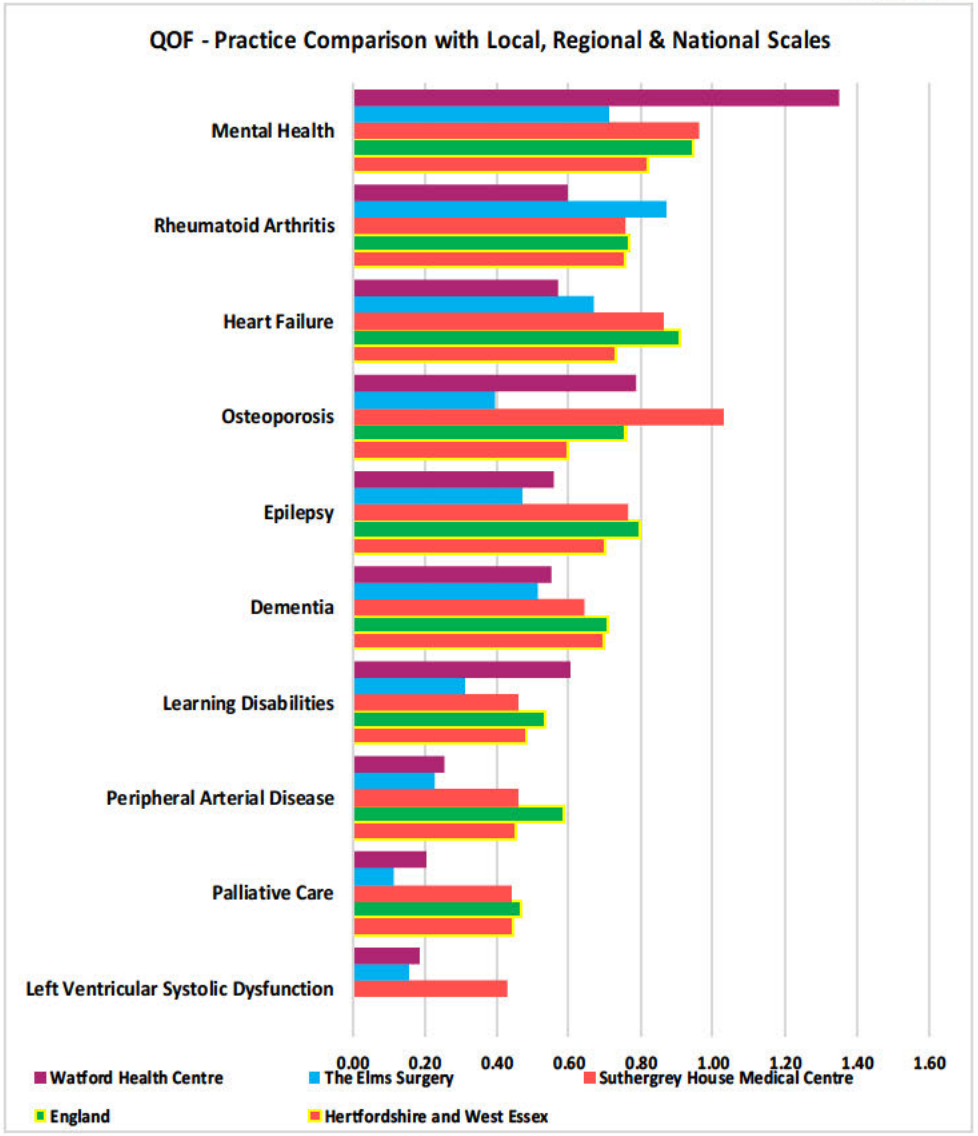
The Quality and Outcome Framework incorporates important benchmarking and scoring for all Practices across the county; we have combined a number of local, regional, and national data sets to highlight the areas that the PCN will need to consider.

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

Source: QOF National Figures, HWE PHM Team

QOF - Local, Regional, & National Comparison





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

Source: QOF National Figures, HWE PHM Team

QOF - Missed Diagnoses & Admission Rates

NHS Hertfordshire and West Essex Integrated Care Board

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	33693	1693	5.02%	5.89%	6.17%		291	385	
COPD	36124	465	1.29%	1.38%	1.49%	1.41%	34	72	43
Diabetes	29317	2174	7.42%	6.26%	6.39%	7.77%	-339	-302	105
Non-diabetic hyperglyaemia	28977	2063	7.12%	6.73%	5.87%	11.28%	-114	-362	1207
Hypertension	36124	3883	10.75%	12.66%	13.21%		691	890	
Atrial Fibrillation	36124	451	1.25%	1.98%	2.02%	1.77%	265	279	187
Stroke and TIA	36124	452	1.25%	1.53%	1.61%		101	129	
Coronary Heart Disease	36124	841	2.33%	2.60%	2.65%		99	117	
Heart failure	36124	255	0.71%	0.69%	0.75%	1.18%	-5	18	173
Left Ventricular Systolic Dysfunction	36124	89	0.25%	0.29%	0.30%		15	19	
Chronic Kidney Disease	28977	618	2.13%	3.75%	3.21%		467	311	
Peripheral Arterial Disease	36124	114	0.32%	0.42%	0.44%		37	46	
Cancer	36124	774	2.14%	3.38%	3.35%		449	435	
Palliative care	36124	103	0.29%	0.33%	0.43%		17	52	

The table above shows the latest prevalence (2021/22 published August 20222) for the PCN alongside the place prevalence, ICB prevalence and the modelled prevalence for the PCN.

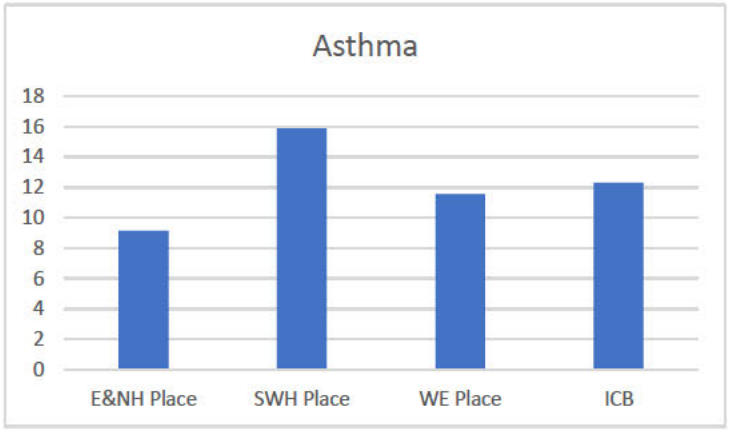
This table shows opportunities for further identification. It outlines the diagnoses to meet the place, ICB and estimated prevalence.

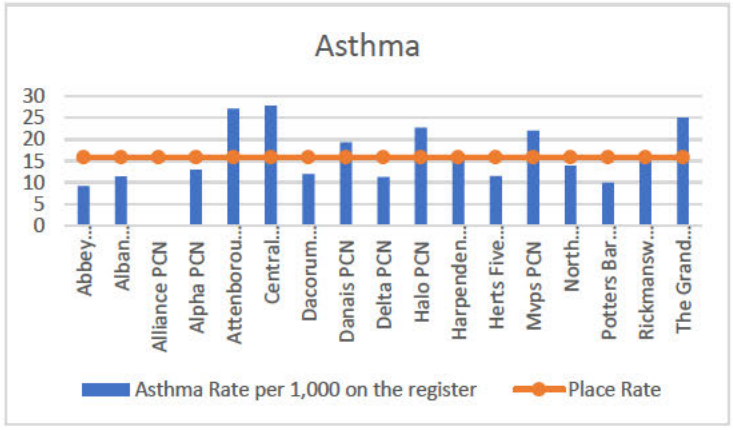
Within Ardens Manager there are case finding searches that can support PCN with identification.

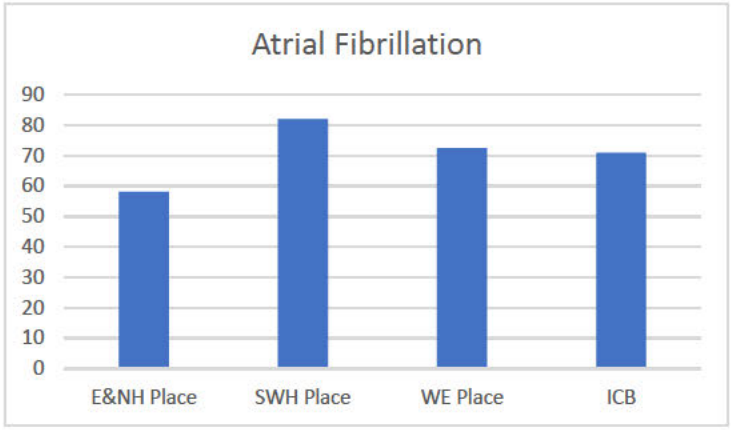
Source: QOF National Figures, HWE PHM Team

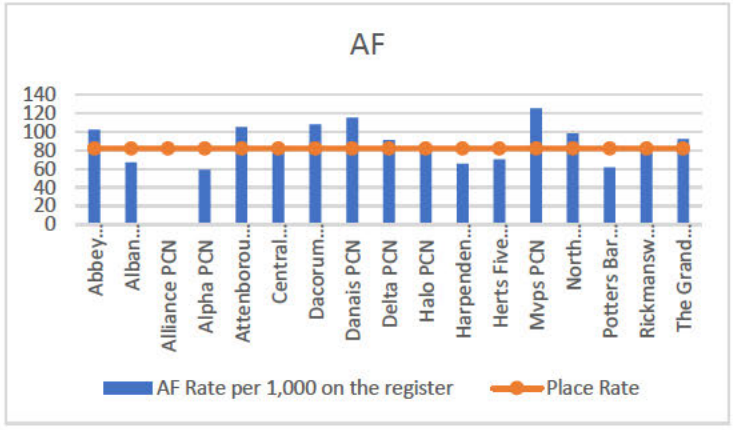
Emergency Admission Rates per 1,000 population on the Disease Register

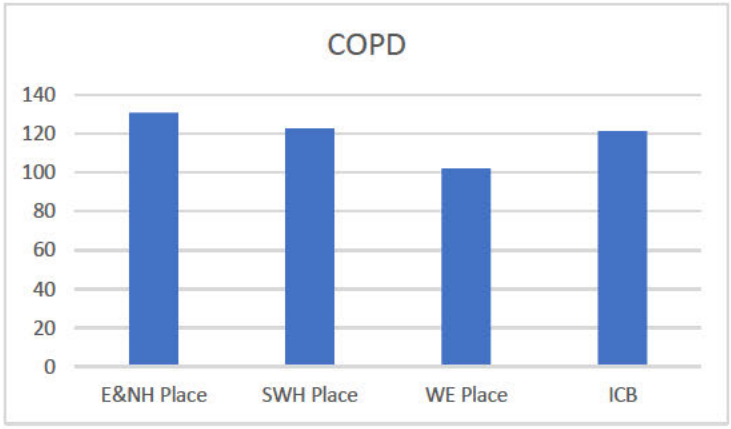
NHS Hertfordshire and West Essex Integrated Care Board

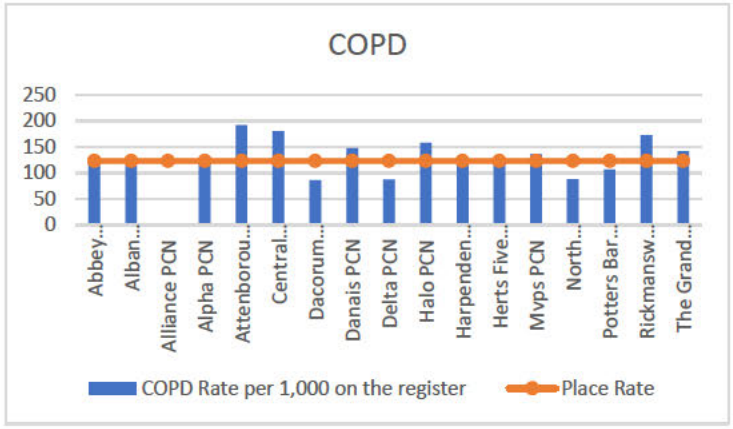












The charts on the left shows the Emergency Admissions Rates per 1,000 population on the disease register.

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

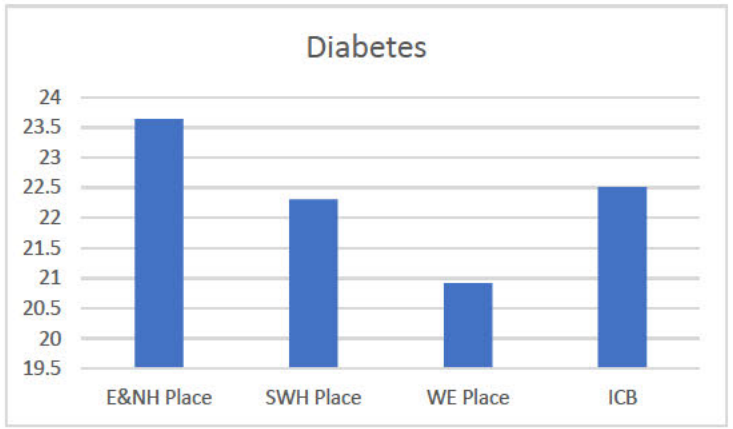
These are continued on the following place.

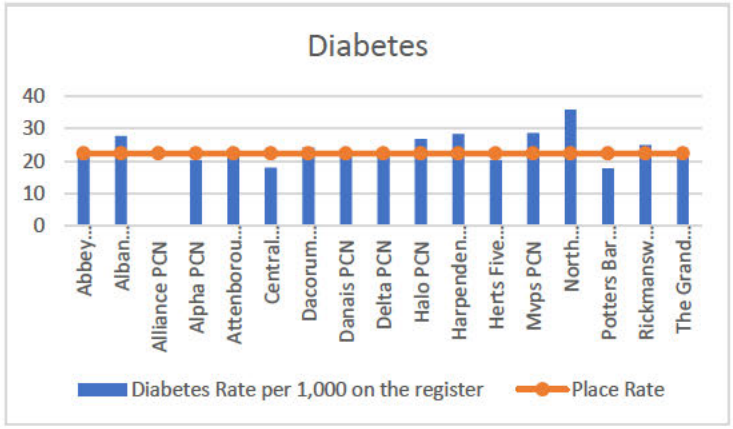
Rates may be high due to a number of factors which may include low identification.

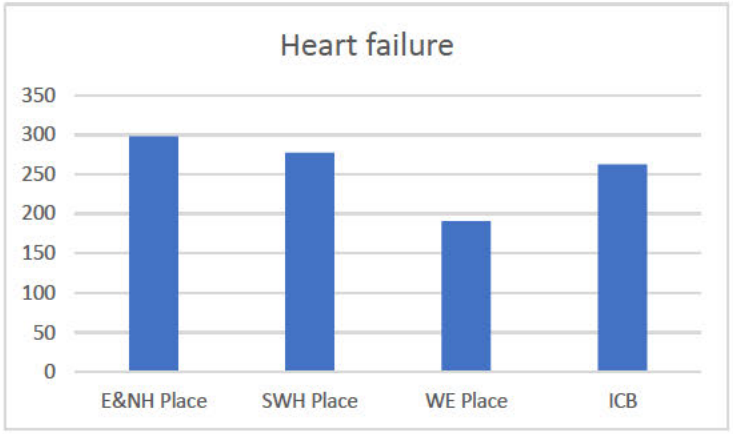
For Central Watford the data shows higher Asthma (the highest) and COPD rates which was identified as a theme within the ACS analysis.

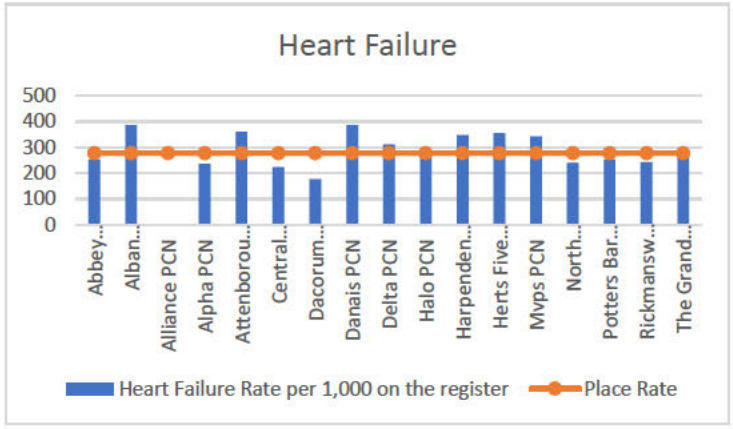
Source: HWE PHM Team, SUS data

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









Source: HWE PHM Team, SUS data

Appendices

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

Contents:

Matrix Data - Ethnicity

NHS Hertfordshire and West Essex Integrated Care Board

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	471	68		5,980	3,089	317	1,066	594	64	724	265	21	1,951	1,012	78	8,328	5,094	1,056	2,620	398		33,202
Age	31	44	76	24	42	57	28	46	57	20	36	46	26	41	57	30	49	65	32	43	81	35
Male %	54.6%	45.6%	66.7%	52.3%	47.5%	50.5%	52.4%	47.5%	48.4%	54.1%	48.3%	38.1%	53.8%	52.3%	56.4%	52.6%	48.9%	48.8%	65.5%	62.3%	0.0%	52.5%
IMD	6.1	6.6	6.7	6.0	5.9	5.9	6.0	5.7	5.7	6.3	6.1	5.6	6.1	6.0	5.9	6.3	6.5	6.5	6.3	6.3	7.0	6.2
% BAME (where recorded)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%	100%	100%		52%
Multimorbidity (acute & chronic)	0.0	1.6	8.0	0.0	1.7	6.6	0.0	1.7	6.8	0.0	1.7	6.8	0.0	1.7	6.2	0.0	1.9	6.8	0.0	1.3	5.7	0.9
Finance and Activity Measures																						
Spend: Total	£0.0M	£0.0M	£0.0M	£1.6M	£2.6M	£1.1M	£0.3M	£0.5M	£0.2M	£0.2M	£0.2M	£0.0M	£0.6M	£0.7M	£0.2M	£2.1M	£4.6M	£4.3M	£0.1M	£0.0M	£0.0M	£19.3M
PPPY - Total	£84	£297	£2,139	£263	£842	£3,386	£237	£827	£3,259	£274	£819	£1,669	£289	£653	£2,202	£249	£911	£4,113	£42	£124	£280	£582
Acute Elective	£7	£143	£181	£70	£309	£1,137	£65	£250	£1,025	£65	£243	£312	£76	£207	£739	£74	£334	£986	£4	£22	£0	£179
Acute Non-Elective	£15	£38	£1,656	£113	£323	£1,662	£99	£366	£1,487	£122	£363	£139	£124	£250	£970	£99	£356	£2,421	£4	£10	£0	£259
GP Encounters	£63	£115	£302	£79	£192	£358	£71	£180	£342	£80	£173	£260	£85	£168	£296	£75	£180	£358	£34	£90	£280	£119
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	£1	£0	£1	£17	£215	£1	£31	£405	£6	£37	£957	£5	£28	£197	£2	£37	£334	£0	£1	£0	£24
Social Care	£0	£0	£0	£0	£1	£13	£0	£0	£0	£0	£2	£0	£0	£1	£0	£0	£4	£14	£0	£1	£0	£1
GP PPPY	11	20	53	13	33	61	12	31	60	13	29	46	14	28	51	13	31	62	6	15	39	20
Beddays PPPY - Acute EM	0	0	2	0	0	3	0	0	5	0	0	0	0	1	2	0	1	5	0	0	0	0
Physical Health																						
Diabetes	0.0%	38.2%	100.0%	0.0%	52.2%	81.1%	0.0%	48.0%	81.3%	0.0%	28.3%	61.9%	0.0%	36.7%	69.2%	0.0%	29.5%	65.3%	0.0%	31.7%	100.0%	15.3%
COPD	0.0%	0.0%	0.0%	0.0%	0.9%	18.0%	0.0%	0.5%	20.3%	0.0%	0.4%	9.5%	0.0%	1.3%	16.7%	0.0%	2.3%	30.8%	0.0%	0.0%	0.0%	1.7%
Chronic Respiratory Di...	0.0%	0.0%	0.0%	0.0%	1.5%	22.1%	0.0%	1.3%	21.9%	0.0%	3.0%	19.0%	0.0%	1.8%	19.2%	0.0%	3.1%	33.4%	0.0%	0.0%	0.0%	2.1%
Hypertension	0.0%	23.5%	100.0%	0.0%	25.9%	80.8%	0.0%	37.2%	82.8%	0.0%	19.6%	66.7%	0.0%	23.4%	69.2%	0.0%	29.5%	75.5%	0.0%	20.1%	100.0%	12.3%
Obesity	1.9%	8.8%	33.3%	1.6%	11.7%	32.8%	2.7%	15.2%	42.2%	0.7%	7.5%	23.8%	2.5%	10.1%	33.3%	6.3%	24.5%	42.4%	2.3%	11.1%	33.3%	9.8%
Mental Health																						
Anxiety/Phobias	0.0%	14.7%	33.3%	0.0%	7.3%	26.8%	0.0%	8.2%	32.8%	0.0%	19.2%	66.7%	0.0%	15.5%	33.3%	0.0%	19.5%	37.3%	0.0%	11.1%	0.0%	6.2%
Depression	0.0%	23.5%	0.0%	0.0%	14.4%	36.3%	0.0%	17.0%	48.4%	0.0%	25.7%	71.4%	0.0%	27.8%	57.7%	0.0%	30.1%	50.9%	0.0%	19.6%	0.0%	9.8%
Learning Disability	0.0%	0.0%	0.0%	0.0%	2.3%	18.0%	0.0%	1.5%	20.3%	0.0%	2.3%	38.1%	0.0%	1.3%	17.9%	0.0%	1.7%	14.7%	0.0%	1.3%	0.0%	1.3%
Dementia	0.0%	2.9%	100.0%	0.0%	1.8%	26.2%	0.0%	0.8%	32.8%	0.0%	1.5%	47.6%	0.0%	1.3%	32.1%	0.0%	1.8%	32.8%	0.0%	1.3%	66.7%	2.0%
Other Characteristics																						
Housebound (eFI)	0.0%	0.0%	0.0%	0.0%	0.4%	5.0%	0.0%	0.0%	1.6%	0.0%	0.4%	0.0%	0.1%	0.4%	3.8%	0.0%	0.8%	7.2%	0.0%	0.0%	0.0%	0.5%
Social Vulnerability (eFI)	2.3%	2.9%	0.0%	1.3%	6.1%	27.1%	1.8%	8.6%	37.5%	1.9%	6.8%	33.3%	1.0%	5.6%	29.5%	1.8%	9.3%	34.0%	1.0%	2.5%	0.0%	4.9%
History of Smoking (T...	7.9%	11.8%	0.0%	2.5%	7.9%	11.0%	3.0%	12.0%	17.2%	3.0%	10.2%	23.8%	4.6%	14.5%	21.8%	7.4%	16.2%	23.1%	2.3%	7.0%	33.3%	8.0%
Not Fit for Work (In Year)	0.8%	7.4%	0.0%	2.9%	9.5%	13.6%	3.3%	12.1%	23.4%	2.5%	10.9%	14.3%	5.5%	12.4%	15.4%	3.1%	10.6%	8.9%	1.1%	4.5%	0.0%	5.7%
On a Waiting List	2.5%	4.4%	33.3%	4.4%	11.2%	26.8%	4.4%	10.4%	21.9%	5.4%	10.2%	28.6%	4.6%	9.2%	15.4%	4.5%	11.1%	23.5%	0.9%	2.5%	0.0%	7.0%

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.

Source: HWE PHM Team modelled data, phm.optum.co.uk - Calendar Year 2021

Matrix Data - Segment & Sub-Segment

NHS Hertfordshire and West Essex Integrated Care Board

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 - LwI (At Risk)	2b - LwI (LTCs)	2c - LwI (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	15,287	1,085	1,092	3,235	4,196	939	509	3,415	973	933	342	59	268	396	227	57	189	33,202
Age	27	7	18	39	40	37	38	47	60	59	59	24	36	62	77	79	69	35
Male %	56.5%	38.1%	53.0%	51.1%	52.4%	42.4%	49.5%	49.1%	42.2%	50.6%	45.3%	52.5%	50.7%	54.3%	41.9%	43.9%	43.4%	52.5%
IMD	6.2	6.0	6.0	6.2	6.2	6.1	6.5	6.2	6.5	6.4	6.1	6.1	5.9	6.1	6.3	7.1	6.8	6.2
% BAME (where recorded)	58%	57%	63%	43%	58%	40%	49%	47%	45%	39%	44%	42%	38%	30%	30%	7%	26%	52%
Multimorbidity (acute & chronic)	0.0	0.0	0.0	0.0	1.0	1.0	0.3	2.4	2.5	5.1	3.0	3.3	5.7	5.7	7.1	8.4	5.7	0.9
Finance and Activity Measures																		
Spend - Total	£1.1M	£0.7M	£1.4M	£1.4M	£2.0M	£0.5M	£0.2M	£3.0M	£1.4M	£1.8M	£0.5M	£0.1M	£0.8M	£1.4M	£1.1M	£0.4M	£1.4M	£19.3M
PPPY - Total	£75	£646	£1,319	£424	£469	£491	£379	£885	£1,482	£1,979	£1,512	£2,076	£2,880	£3,471	£4,962	£7,130	£7,541	£582
Acute Elective	£17	£69	£461	£132	£158	£126	£96	£345	£648	£731	£490	£436	£187	£1,115	£1,050	£256	£2,225	£179
Acute Non-Elective	£5	£477	£719	£164	£172	£209	£126	£324	£550	£945	£684	£425	£708	£1,840	£3,363	£5,953	£4,783	£259
GP Encounters	£52	£99	£134	£128	£136	£136	£141	£197	£266	£275	£260	£264	£278	£318	£448	£545	£432	£119
Community	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Mental Health	£1	£1	£4	£1	£3	£20	£14	£19	£18	£26	£36	£831	£1,662	£193	£96	£312	£100	£24
Social Care	£0	£0	£0	£0	£0	£0	£2	£0	£0	£2	£42	£119	£44	£6	£5	£65	£1	£1
GP PPPY	9	16	23	22	23	23	23	34	46	48	44	43	46	55	79	95	76	20
Beddays PPPY - Acute EM	0	1	1	0	0	0	0	0	1	1	1	1	3	5	6	19	9	0
Physical Health																		
Diabetes	0.0%	0.0%	0.0%	0.0%	34.7%	0.0%	9.4%	47.1%	51.2%	70.5%	44.2%	22.0%	41.8%	55.1%	80.2%	57.9%	49.7%	15.3%
COPD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	1.2%	9.8%	3.8%	0.0%	2.2%	59.1%	30.4%	28.1%	21.7%	1.7%
Chronic Respiratory Dis...	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	3.7%	2.4%	11.7%	4.4%	0.0%	2.6%	63.9%	33.0%	31.6%	28.0%	2.1%
Hypertension	0.0%	0.0%	0.0%	0.0%	15.5%	0.0%	4.9%	37.8%	55.9%	73.5%	44.4%	13.6%	34.0%	67.4%	91.6%	78.9%	64.0%	12.3%
Obesity	0.0%	0.0%	0.0%	22.7%	12.0%	10.3%	9.6%	21.3%	31.4%	35.9%	22.8%	11.9%	26.5%	36.6%	46.7%	33.3%	38.1%	9.8%
Mental Health																		
Anxiety/Phobias	0.0%	0.0%	0.0%	0.0%	0.0%	26.5%	1.2%	30.6%	12.0%	25.9%	13.5%	35.6%	55.6%	21.7%	22.5%	35.1%	20.6%	6.2%
Depression	0.0%	0.0%	0.0%	0.0%	0.0%	66.3%	8.1%	42.4%	21.3%	37.2%	19.6%	44.1%	76.9%	32.8%	34.8%	50.9%	31.7%	9.8%
Learning Disability	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.4%	1.8%	0.6%	7.0%	23.7%	61.0%	39.6%	6.3%	9.3%	15.8%	6.9%	1.3%
Dementia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	35.6%	7.9%	5.1%	42.9%	10.9%	20.7%	100.0%	23.3%	2.0%
Other Characteristics																		
Housebound (eFI)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.1%	5.1%	0.7%	2.0%	22.0%	17.5%	16.9%	0.5%
Social Vulnerability (eFI)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	89.8%	6.4%	17.3%	17.5%	51.5%	20.3%	28.0%	26.5%	59.9%	56.1%	38.6%	4.9%
History of Smoking (Tw...	0.0%	0.0%	0.0%	29.8%	9.1%	11.8%	11.6%	17.0%	11.8%	16.2%	12.3%	18.6%	36.9%	25.3%	11.5%	8.8%	11.1%	8.0%
Not Fit for Work (In Year)	0.0%	0.0%	0.0%	18.6%	6.7%	11.4%	8.6%	14.2%	11.4%	11.4%	3.8%	23.7%	17.5%	11.9%	2.6%	0.0%	7.9%	5.7%
On a Waiting List	2.9%	5.0%	10.5%	6.5%	6.8%	9.1%	4.9%	11.3%	21.0%	21.2%	16.4%	15.3%	11.6%	25.5%	26.4%	21.1%	24.3%	7.0%

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.

Source: HWE PHM Team modelled data, phm.optum.co.uk - Calendar Year 2021

Matrix Data - GP Activity

NHS Hertfordshire and West Essex Integrated Care Board

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	1,130	66		1,896	161		2,431	309		2,241	351		5,039	1,124	28	8,403	8,509	1,504	33,202
Age	24	32	44	24	29	26	24	33	33	26	34	40	29	37	38	30	48	63	35
Male %	68.1%	78.8%	50.0%	70.4%	68.3%	0.0%	61.8%	62.5%	66.7%	61.4%	62.4%	25.0%	58.2%	61.2%	64.3%	42.5%	46.0%	49.1%	52.5%
IMD	6.0	5.5	9.0	5.8	5.9	7.0	6.1	6.1	4.7	6.1	6.1	4.8	6.2	6.2	5.9	6.3	6.2	6.3	6.2
% BAME (where recorded)	58%	50%	0%	50%	53%	100%	57%	59%	100%	55%	57%	50%	55%	49%	32%	56%	49%	31%	52%
Multimorbidity (acute & chronic)	0.0	1.2	5.0	0.0	1.2	8.0	0.0	1.3	9.0	0.0	1.3	8.0	0.0	1.4	7.5	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	£0.5M	£0.1M	£0.0M	£4.1M	£8.5M	£5.8M	£19.3M
PPPY - Total	£2	£2	£0	£11	£10	£6	£28	£29	£1,818	£58	£104	£28	£106	£126	£846	£483	£998	£3,863	£582
Acute Elective	£2	£0	£0	£3	£1	£0	£7	£4	£0	£11	£41	£0	£21	£41	£26	£138	£357	£1,018	£179
Acute Non-Elective	£0	£2	£0	£2	£3	£0	£6	£9	£0	£19	£30	£0	£38	£32	£43	£202	£392	£2,168	£259
GP Encounters	£0	£0	£0	£6	£6	£6	£14	£14	£18	£26	£26	£28	£46	£47	£49	£140	£213	£360	£119
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	£1	£2	£1,800	£1	£5	£0	£1	£6	£729	£3	£34	£304	£24
Social Care	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£2	£0	£0	£0	£0	£0	£3	£13	£1
GP PPPY	0	0	0	1	1	1	2	2	3	5	5	5	8	8	8	24	36	62	20
Beddays PPPY - Acute EM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0
Physical Health																			
Diabetes	0.0%	15.2%	50.0%	0.0%	11.2%	0.0%	0.0%	19.7%	33.3%	0.0%	20.5%	50.0%	0.0%	25.9%	46.4%	0.0%	41.7%	70.1%	15.3%
COPD	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	33.3%	0.0%	0.3%	0.0%	0.0%	0.6%	7.1%	0.0%	1.8%	27.1%	1.7%
Chronic Respiratory Dis...	0.0%	1.5%	0.0%	0.0%	0.6%	0.0%	0.0%	1.0%	33.3%	0.0%	0.6%	0.0%	0.0%	1.0%	7.1%	0.0%	2.6%	30.1%	2.1%
Hypertension	0.0%	6.1%	50.0%	0.0%	7.5%	100.0%	0.0%	13.3%	0.0%	0.0%	13.7%	25.0%	0.0%	12.8%	75.0%	0.0%	31.3%	76.9%	12.3%
Obesity	0.4%	0.0%	0.0%	1.1%	1.9%	0.0%	1.3%	5.8%	33.3%	2.0%	6.8%	0.0%	3.0%	8.5%	7.1%	6.1%	20.3%	40.5%	9.8%
Mental Health																			
Anxiety/Phobias	0.0%	15.2%	100.0%	0.0%	16.8%	0.0%	0.0%	11.7%	100.0%	0.0%	10.5%	25.0%	0.0%	13.7%	60.7%	0.0%	14.9%	34.4%	6.2%
Depression	0.0%	13.6%	50.0%	0.0%	22.4%	100.0%	0.0%	19.4%	100.0%	0.0%	23.1%	100.0%	0.0%	24.0%	78.6%	0.0%	24.3%	47.3%	9.8%
Learning Disability	0.0%	1.5%	0.0%	0.0%	1.2%	100.0%	0.0%	1.6%	100.0%	0.0%	2.3%	50.0%	0.0%	1.5%	50.0%	0.0%	1.9%	15.1%	1.3%
Dementia	0.0%	3.0%	0.0%	0.0%	0.6%	100.0%	0.0%	0.6%	100.0%	0.0%	0.6%	75.0%	0.0%	1.5%	67.9%	0.0%	1.8%	30.9%	2.0%
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%	0.0%	0.3%	0.0%	0.0%	0.7%	6.4%	0.5%
Social Vulnerability (eFI)	0.3%	1.5%	0.0%	0.3%	3.7%	100.0%	0.6%	1.3%	0.0%	1.1%	3.1%	0.0%	1.5%	3.5%	32.1%	2.3%	8.6%	32.5%	4.9%
History of Smoking (Tw...	0.1%	0.0%	0.0%	0.6%	1.9%	0.0%	1.2%	3.2%	0.0%	3.4%	5.1%	0.0%	4.9%	6.3%	21.4%	7.7%	14.7%	20.4%	8.0%
Not Fit for Work (In Year)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.3%	0.0%	1.2%	1.8%	0.0%	6.7%	12.5%	11.1%	5.7%
On a Waiting List	0.4%	0.0%	0.0%	0.3%	1.2%	0.0%	1.0%	0.3%	0.0%	0.6%	1.1%	0.0%	1.9%	1.5%	7.1%	8.4%	12.7%	24.2%	7.0%

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.

Source: HWE PHM Team modelled data, phm.optum.co.uk - Calendar Year 2021

Matrix Data - Health Segment & Deprivation

NHS Hertfordshire and West Essex Integrated Care Board

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	
Overall Population Measures																				
Population	4,363	11,877	1,195	29	2,256	5,407	692	15	1,421	3,014	451	11	607	1,183	204		196	239	38	33,202
Age	26	25	24	15	43	38	37	35	52	48	47	31	59	54	54	46	76	72	70	35
Male %	53.8%	55.5%	55.9%	51.7%	48.1%	51.9%	50.6%	46.7%	46.9%	48.1%	47.9%	72.7%	46.0%	51.9%	55.9%	50.0%	40.8%	43.1%	50.0%	52.5%
IMD	9.1	5.4	2.4		9.2	5.4	2.4		9.2	5.4	2.5		9.2	5.3	2.4		9.0	5.3	2.7	6.2
% BAME (where recorded)	53%	60%	58%	73%	41%	53%	53%	73%	37%	52%	46%	36%	31%	42%	35%	25%	12%	36%	34%	52%
Multimorbidity (acute & chronic)	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.7	2.2	2.2	2.4	2.2	5.0	4.9	5.0	5.0	6.9	6.7	6.2	0.9
Finance and Activity Measures																				
Spend: Total	£0.8M	£2.3M	£0.2M	£0.0M	£1.0M	£2.4M	£0.4M	£0.0M	£1.3M	£2.9M	£0.4M	£0.0M	£1.5M	£2.7M	£0.5M	£0.0M	£1.5M	£1.3M	£0.2M	£19.3M
PPPY - Total	£182	£191	£184	£142	£459	£446	£510	£211	£947	£971	£846	£424	£2,469	£2,254	£2,264	£1,217	£7,407	£5,497	£5,062	£582
Acute Elective	£57	£45	£41	£21	£166	£134	£151	£74	£420	£377	£278	£94	£785	£652	£583	£152	£1,519	£1,475	£612	£179
Acute Non-Elective	£55	£87	£87	£71	£153	£176	£218	£47	£315	£366	£335	£184	£1,074	£1,005	£1,053	£694	£5,172	£3,521	£3,980	£259
GP Encounters	£68	£57	£56	£50	£138	£131	£136	£90	£198	£206	£217	£147	£282	£280	£279	£321	£497	£428	£383	£119
Community	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Mental Health	£1	£1	£1	£0	£1	£5	£5	£0	£14	£21	£15	£0	£300	£300	£344	£50	£193	£72	£84	£24
Social Care	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£28	£17	£4	£0	£25	£0	£2	£1
GP PPPY	11	10	10	9	23	22	24	16	34	35	38	24	48	48	49	53	88	75	67	20
Beddays PPPY - Acute EM	0	0	0	0	0	0	0	0	0	1	0	1	3	2	2	0	13	6	5	0
Physical Health																				
Diabetes	0.0%	0.0%	0.0%	0.0%	13.8%	18.9%	17.2%	26.7%	37.4%	46.6%	47.2%	36.4%	56.0%	58.9%	55.4%	50.0%	59.7%	69.5%	68.4%	15.3%
COPD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	2.2%	1.8%	0.0%	13.8%	17.3%	26.0%	50.0%	22.4%	29.7%	28.9%	1.7%
Chronic Respiratory Dis...	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.0%	3.2%	3.1%	2.7%	0.0%	15.8%	19.4%	27.9%	50.0%	26.0%	33.5%	39.5%	2.1%
Hypertension	0.0%	0.0%	0.0%	0.0%	8.3%	7.6%	7.4%	6.7%	40.5%	36.8%	38.8%	9.1%	63.9%	58.8%	57.8%	50.0%	77.6%	80.3%	78.9%	12.3%
Obesity	0.0%	0.0%	0.0%	0.0%	15.7%	15.9%	17.2%	6.7%	21.5%	21.9%	25.7%	0.0%	30.1%	32.0%	35.3%	50.0%	42.9%	41.8%	34.2%	9.8%
Mental Health																				
Anxiety/Phobias	0.0%	0.0%	0.0%	0.0%	3.5%	2.7%	3.2%	26.7%	20.6%	24.7%	27.9%	54.5%	23.9%	28.0%	31.9%	75.0%	24.0%	21.8%	28.9%	6.2%
Depression	0.0%	0.0%	0.0%	0.0%	7.3%	7.2%	10.0%	6.7%	28.9%	36.0%	43.5%	54.5%	35.3%	38.7%	49.0%	100.0%	35.2%	36.4%	31.6%	9.8%
Learning Disability	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.3%	0.0%	1.1%	1.5%	2.0%	9.1%	14.7%	16.3%	15.2%	0.0%	9.2%	9.6%	5.3%	1.3%
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%	28.8%	25.1%	23.5%	0.0%	36.7%	29.7%	13.2%	2.0%
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%	2.5%	4.1%	2.5%	0.0%	18.4%	20.5%	18.4%	0.5%
Social Vulnerability (eFI)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.6%	17.3%	18.4%	27.3%	21.4%	28.5%	30.4%	50.0%	41.8%	58.2%	52.6%	4.9%
History of Smoking (Tw...	0.0%	0.0%	0.0%	0.0%	11.0%	20.1%	17.3%	20.0%	9.5%	17.0%	23.7%	18.2%	9.7%	23.0%	34.3%	50.0%	8.2%	13.4%	10.5%	8.0%
Not Fit for Work (In Year)	0.0%	0.0%	0.0%	0.0%	9.4%	12.9%	11.4%	6.7%	8.9%	14.1%	19.7%	18.2%	6.9%	13.2%	13.7%	25.0%	3.1%	4.6%	10.5%	5.7%
On a Waiting List	3.7%	3.4%	3.8%	0.0%	6.3%	7.2%	6.5%	6.7%	11.8%	13.1%	11.3%	0.0%	21.9%	18.3%	21.6%	25.0%	25.5%	25.5%	18.4%	7.0%

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.

Source: HWE PHM Team modelled data, phm.optum.co.uk - Calendar Year 2021

Matrix Data - Practice & Deprivation

NHS Hertfordshire and West Essex Integrated Care Board

Practice	Suthergrey House Medical Centre				The Elms Surgery				Watford Health Centre				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	
Overall Population Measures													
Population	3,801	5,054	759		2,739	2,349	211	8	2,303	14,317	1,610	47	33,202
Age	43	37	38	20	29	30	29	27	40	33	34	25	35
Male %	50.2%	52.1%	50.7%	75.0%	49.5%	52.4%	55.0%	37.5%	52.0%	53.8%	53.8%	55.3%	52.5%
IMD	9.3	5.4	2.2		9.0	5.5	2.2		9.1	5.4	2.6		6.2
% BAME (where recorded)	33%	43%	35%	50%	51%	50%	53%	63%	53%	61%	60%	63%	52%
Multimorbidity (acute & chronic)	1.2	1.0	1.2	0.5	0.5	0.6	0.6	1.5	1.2	0.8	1.1	0.9	0.9
Finance and Activity Measures													
Spend — Total	£2.9M	£2.8M	£0.5M	£0.0M	£1.3M	£1.1M	£0.1M	£0.0M	£1.9M	£7.6M	£1.0M	£0.0M	£19.3M
Spend — PPPY - Total	£757	£558	£613	£385	£484	£484	£530	£165	£834	£533	£640	£297	£582
Acute Elective	£281	£203	£188	£243	£135	£144	£141	£26	£241	£151	£154	£46	£179
Acute Non-Elective	£321	£214	£253	£22	£182	£200	£232	£0	£427	£249	£330	£159	£259
GP Encounters	£125	£108	£119	£121	£128	£129	£131	£114	£143	£111	£132	£91	£119
Community	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Mental Health	£28	£33	£53	£0	£36	£11	£27	£25	£19	£20	£24	£0	£24
Social Care	£1	£1	£0	£0	£3	£0	£0	£0	£4	£1	£0	£0	£1
GP PPPY	23	20	22	22	18	18	18	16	25	19	23	16	20
Beddays PPPY - Acute EM	1	0	0	0	1	0	0	0	1	0	0	0	0
Physical Health													
Diabetes	16.0%	13.0%	14.0%	0.0%	6.0%	7.8%	10.0%	25.0%	22.8%	17.1%	21.4%	17.0%	15.3%
COPD	2.1%	1.7%	2.8%	0.0%	0.5%	0.8%	0.5%	0.0%	2.7%	1.6%	3.1%	4.3%	1.7%
Chronic Respiratory Dis...	2.7%	2.1%	3.6%	0.0%	0.7%	1.0%	0.9%	0.0%	3.3%	2.0%	3.5%	4.3%	2.1%
Hypertension	19.3%	14.1%	17.1%	0.0%	5.3%	6.8%	5.7%	0.0%	18.5%	10.7%	14.4%	8.5%	12.3%
Obesity	13.4%	13.1%	17.5%	0.0%	5.8%	6.1%	6.6%	12.5%	11.3%	8.3%	10.7%	4.3%	9.8%
Mental Health													
Anxiety/Phobias	7.2%	7.4%	10.0%	50.0%	6.0%	7.1%	9.0%	37.5%	5.5%	5.1%	8.0%	17.0%	6.2%
Depression	11.0%	11.9%	16.3%	0.0%	7.6%	9.1%	11.4%	37.5%	10.0%	8.4%	14.2%	17.0%	9.8%
Learning Disability	1.7%	1.2%	2.2%	0.0%	1.2%	1.1%	1.4%	12.5%	1.1%	1.3%	1.5%	0.0%	1.3%
Dementia	4.2%	3.3%	4.0%	0.0%	1.2%	1.2%	1.9%	0.0%	2.4%	1.2%	1.2%	0.0%	2.0%
Other Characteristics													
Housebound (eFI)	0.7%	0.4%	0.3%	0.0%	0.1%	0.1%	0.0%	0.0%	0.8%	0.5%	0.6%	0.0%	0.5%
Social Vulnerability (eFI)	3.8%	2.9%	3.7%	0.0%	5.1%	6.1%	3.3%	0.0%	7.1%	4.9%	8.1%	10.6%	4.9%
History of Smoking (Tw...	4.3%	8.4%	10.7%	0.0%	4.9%	7.3%	10.0%	0.0%	6.9%	9.1%	12.4%	14.9%	8.0%
Not Fit for Work (In Year)	3.7%	5.0%	7.8%	25.0%	4.5%	6.7%	10.0%	0.0%	5.3%	6.1%	7.5%	6.4%	5.7%
On a Waiting List	8.5%	7.7%	8.6%	0.0%	5.7%	5.9%	7.1%	0.0%	7.7%	6.6%	7.0%	4.3%	7.0%

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.

Source: HWE PHM Team modelled data, phm.optum.co.uk - Calendar Year 2021

Bubble Matrix - Conditions

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x% also have

For people with this condition

Initial Condition	Alzheimers Disease	Asthma	COPD	Heart Failure	Anxiety	Dementia	Alcohol Abuse	ABCD Prescription	Anti-Depressive Prescription	Activity Limitation (eFI)	Housebound (eFI)	No Other Condition
	Other Conditions											
Alzheimers Disease		36%	13%	10%	51%	96%	16%	31%	48%	1%	4%	1%
Asthma	3%		8%	2%	14%	5%	6%	21%	22%	1%	1%	47%
COPD	6%	48%		13%	24%	13%	17%	57%	36%	4%	6%	0%
Heart Failure	8%	23%	22%		17%	19%	8%	89%	29%	6%	12%	0%
Anxiety	7%	25%	7%	3%		11%	13%	21%	56%	1%	2%	13%
Dementia	40%	29%	11%	9%	33%		12%	43%	37%	2%	6%	1%
Alcohol Abuse	4%	20%	9%	2%	24%	7%		22%	28%	1%	1%	21%
ABCD Prescription	2%	19%	8%	7%	11%	7%	6%		23%	2%	3%	20%
Anti-Depressive Prescription	4%	25%	6%	3%	37%	8%	10%	30%		1%	2%	20%
Activity Limitation (eFI)	3%	28%	21%	19%	13%	15%	6%	68%	32%		16%	8%
Housebound (eFI)	7%	26%	21%	24%	21%	26%	5%	71%	38%	11%		7%

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.

Source: HWE PHM Team modelled data, phm.optum.co.uk - Calendar Year 2021

Bio-Psycho-Social Indicators - Example

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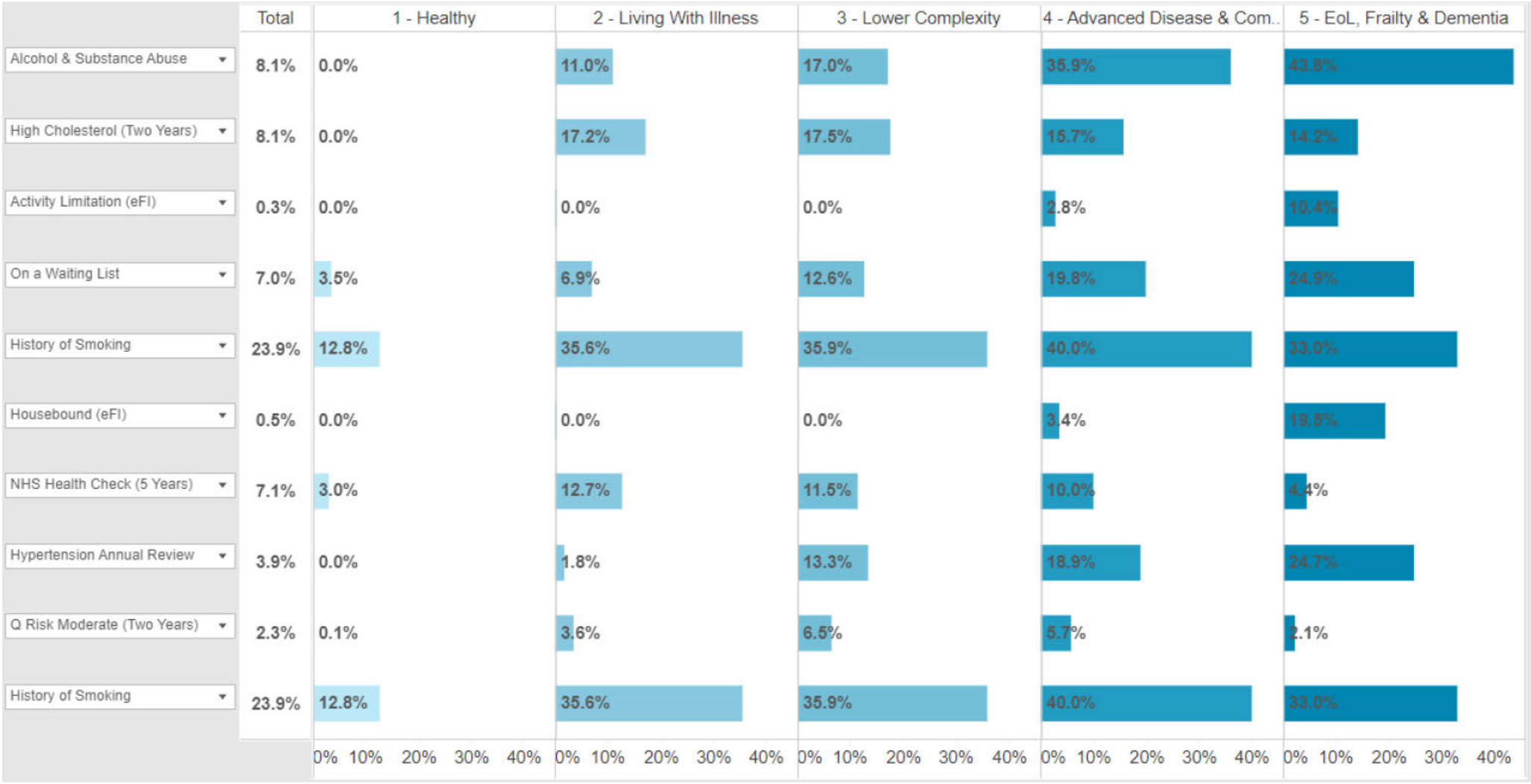

This chart gives a comparison across various selected risk conditions or characteristics, within the health segments of the PCN's population.

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.

Source: HWE PHM Team modelled data, phm.optum.co.uk - Calendar Year 2021

Risk Modelling - Prevalence against GP Activity & A&E

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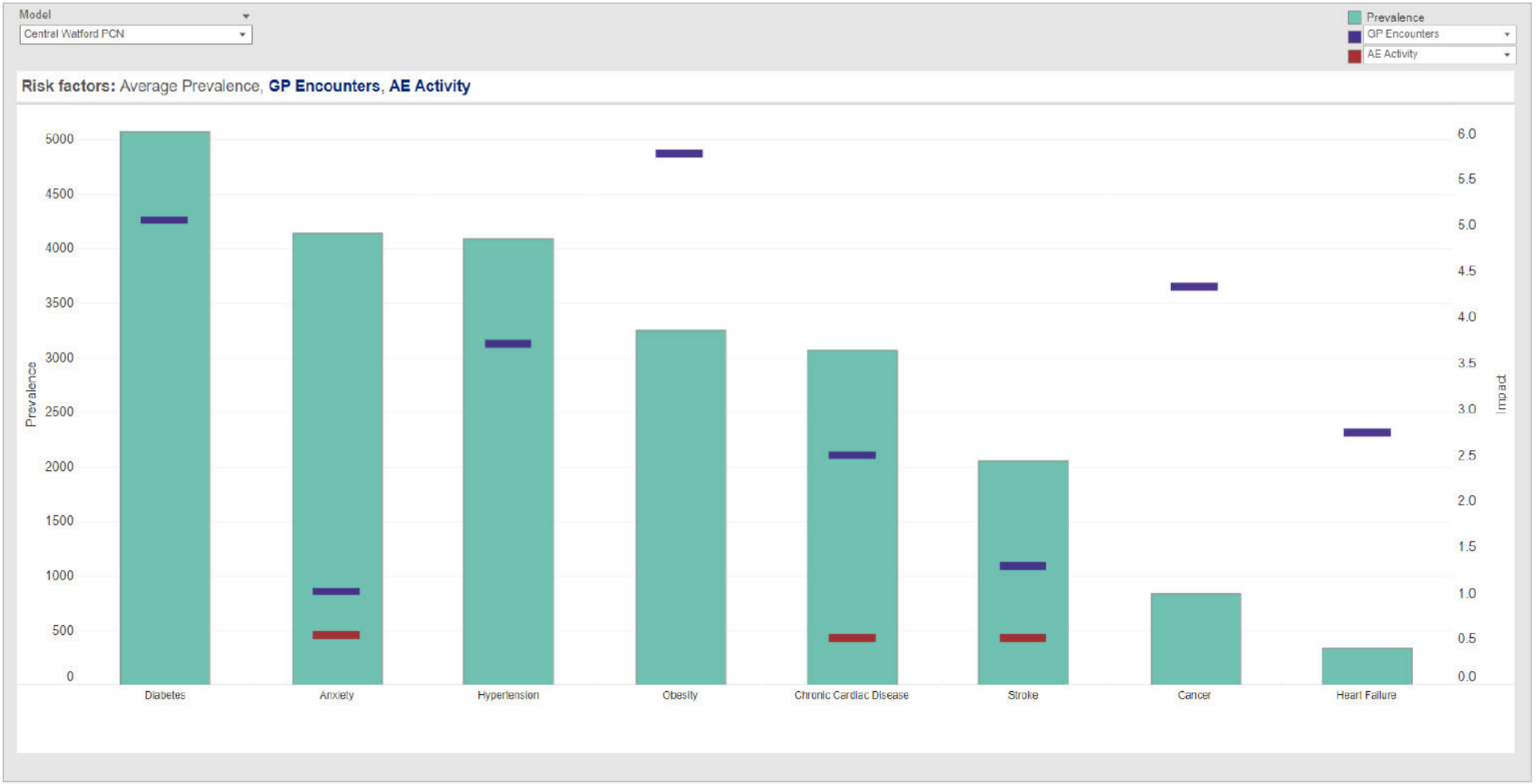

This Risk Model looks at the PCN's prevalence for major conditions, and this chart illustrates the number of people with certain risk factors, and also shows the impact on service utilisation, that these factors have. The height of each bar for each risk factor, shows the number of people who meet that 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.

Source: HWE PHM Team modelled data, phm.optum.co.uk - Calendar Year 2021

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Cancer Screening

	Period	HERTFORDSHIRE AND WEST ESSEX	CENTRAL WATFORD PCN	SUTHERGREY HOUSE MEDICAL CENTRE	WATFORD HEALTH CENTRE	THE ELMS SURGERY
Women, aged 25-49, with a record of cervical screening in the last 3.5 yrs (denominator includes PCAs)	2020/21	73.3	62.3	72.1	59	58.7
Women, aged 50-64, with a record of cervical screening in the last 5.5 yrs (denominator includes PCAs)	2020/21	78.2	74	74.7	75.6	68.1
Persons, 25-49, attending cervical screening within target period (3.5 year coverage, %)	2020/21	73	60.5	70.1	57.2	57.2
Persons, 50-64, attending cervical screening within target period (5.5 year coverage, %)	2020/21	77	72.4	75	73.3	64.5
Persons, 50-70, screened for breast cancer in last 36 months (3 year coverage, %)	2020/21	63.9	57.9	62.1	56.8	50.9
Persons, 50-70, screened for breast cancer within 6 months of invitation (Uptake, %)	2020/21	61.3	27	10	43.8	18.2
Persons, 60-74, screened for bowel cancer within 6 months of invitation (Uptake, %)	2020/21	72.1	59.5	65.9	55.7	53.2
Persons, 60-74, screened for bowel cancer in last 30 months (2.5 year coverage, %)	2020/21	68.8	59.1	63.3	56.7	55.5

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Hertfordshire Public Health Evidence & Intelligence Epidemiology

Hertfordshire

Source: Public Health Team

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Mortality

	Period	Hertfordshire CCGs	NHS HERTFORDSHIRE AND WEST ESSEX ICB - 06N	CENTRAL WATFORD PCN
Percentage of deaths that occur at home (All age)	2021	25.3	23.9	22.1
PYLL - Neoplasms	2021	505	498.3	435.4
PYLL - Diseases of the circulatory system	2021	737.5	690.5	520.2
PYLL - All Cause	2021	1537.7	1496.4	1396.5
Premature Mortality - Respiratory Disease	2021	19.2	19	
Premature Mortality - Liver Disease	2021	14.6	14.4	
Premature Mortality - Cardiovasular Disease	2021	53.8	51.4	38.8
Premature Mortality - Cancer	2021	98.5	97.1	95.5
Premature Mortality - All Cause	2021	269.6	262.3	253.9

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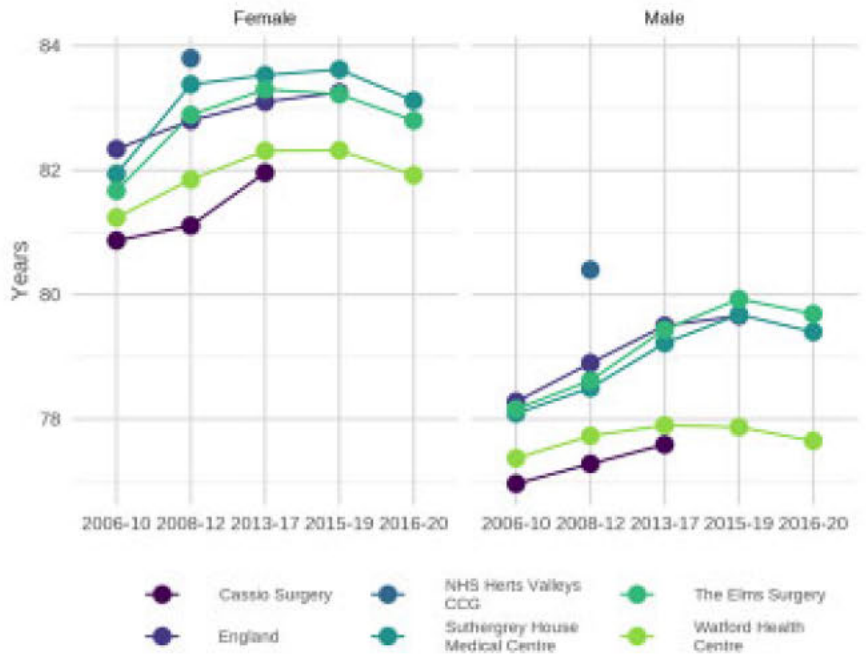
Hertfordshire Public Health Evidence & Intelligence Epidemiology

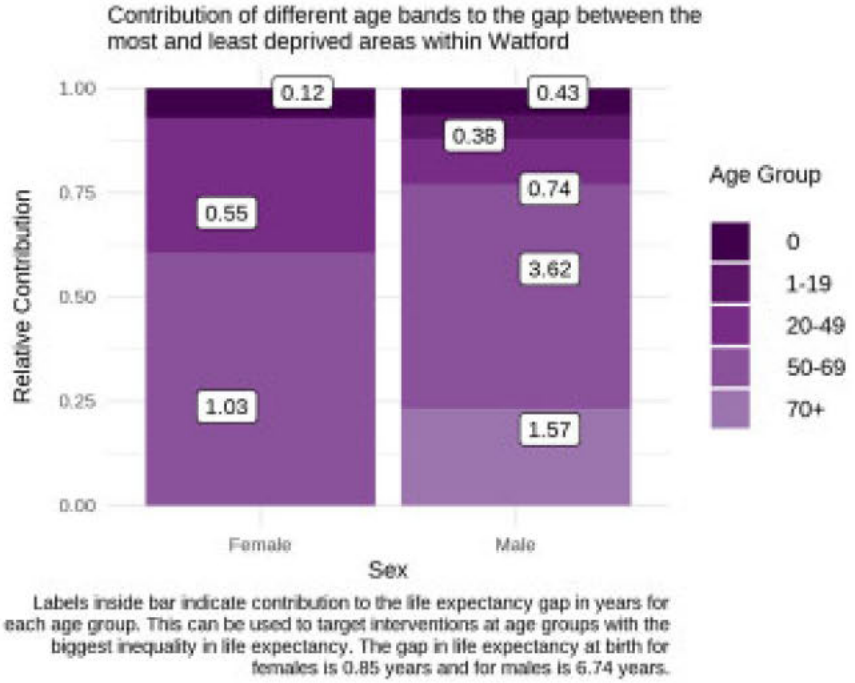
Hertfordshire

Source: Public Health Team

NHS Hertfordshire and West Essex Integrated Care Board

Life Expectancy





Labels inside bar indicate contribution to the life expectancy gap in years for each age group. This can be used to target interventions at age groups with the biggest inequality in life expectancy. The gap in life expectancy at birth for females is 0.85 years and for males is 6.74 years.

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Hertfordshire Public Health Evidence & Intelligence Epidemiology

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Source: Public Health Team

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