Hertfordshire and West Essex Integrated Care System

NHS Hertfordshire and West Essex Integrated Care Board

Primary Care Networks
Overview Pack

WELWYN GARDEN CITY A 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

Hertfordshire and West Essex Integrated Care Board

Welwyn Garden City A PCN has a similar population profile compared to England except in the age categories 4-14 and 35-54 which is higher and lower in the age categories 20-29. The majority of people live within the 5 least deprived deciles (6-10).

27.2% population have at least 1 Long Term Condition. 4.7% have more than 5 LTCs compared to 5.6% for the ICB.The population pyramid shows a similar profile to England for those living with LTCs, except the age categories 20-54 which is higher and lower in age categories 60-79.

Wider determinants analysis from Public Health Evidence and Intelligence shows Welwyn Garden City A as a mid-ranged PCN set within the ICB across except for Income and Employment where it is one of the most deprived.

The spread of patients for Welwyn Garden City A PCN indicates 6.96% 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 Welwyn Hatfield 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 ~20k to ~23k.

When analysing the underlying Segmentation Model data the conditions with highest per 1,000 registered prevalence that are highlighted for Welwyn Garden City A PCN, it is to be noted that there are no significant areas of concern but some that need to be monitored going forward, such as COPD, Obesity, Cancer, Learning Disabilities, Hypertension, Chronic Kidney Disease, Atrial Fib, Anxiety and MH.

Urgent & Emergency Care in 2022/23 for Welwyn Garden City A PCN A&E Attendance rates per 1,000 population, is the highest of all PCNs for East & North place.

When comparing the Ambulatory Care Sensitive rates per 1,000 population between places, the East & North place has the lowest rate in the ICB. Within East & North place, Welwyn Garden City A has a higher rate per 1,000 population, than the average.

When looking at the ACS conditions for Welwyn Garden City A the highest volume and cost is within the End of Life, Frailty and Dementia segment 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 as well. It is to be noted that under End of Life, Frailty and Dementia and Advanced Disease and Complexity segments, there is a notable use by the 41-64 age group for volume and cost.

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

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 Welwyn Garden City A 21.61% 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 Welwyn Garden City A PCN is below the ICB, and the data shows higher usage of GP services.

Within this segment we can see the presence of Chronic Cardiac Disease, Chronic Respiratory Disease and Heart Disease being highlighted which chimes with the reason for admission within previous analysis for ACS conditions. It is to be noted that Hypertension is high across all deciles and higher than the ICB.

For Welwyn Garden City A the data shows higher Asthma, COPD and Heart Failure rates which was identified as a theme within the ACS analysis.

Source: HWE PHM Team

Demographics, Conditions & Segment Overview

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

WELWYN GARDEN CITY A PCN

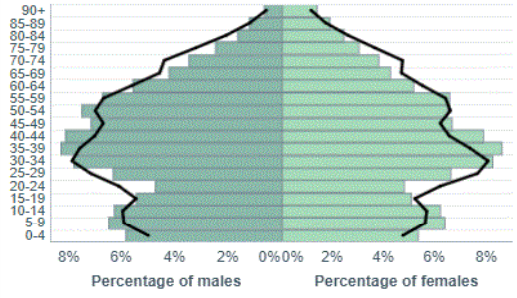
Snapshot as at: 30/06/2021

Registered population		Demographics				Prevalence		Acute utilisation		Covid	
% of total	100.0%	% White	72.1%	% IMD top	0.3%	% with 1+ conditions	27.2%	% of annual activity (total 96,439)	100.0%	% one or more at risk conditions	16.2%
% of annual change	0.9%	% BAME	13.2%	% IMD bottom	24.4%	% with 5+ conditions	2.5%	% of annual cost (total £26M)	100.0%	% two or more at risk conditions	5.9%

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

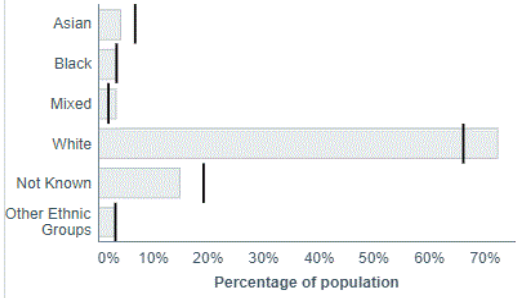
Choose benchmark: England

Population pyramid



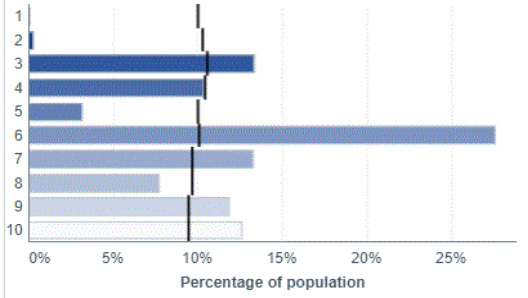
Black line represents the **England** average

Population proportion by ethnic category



Black line represents the **England** average

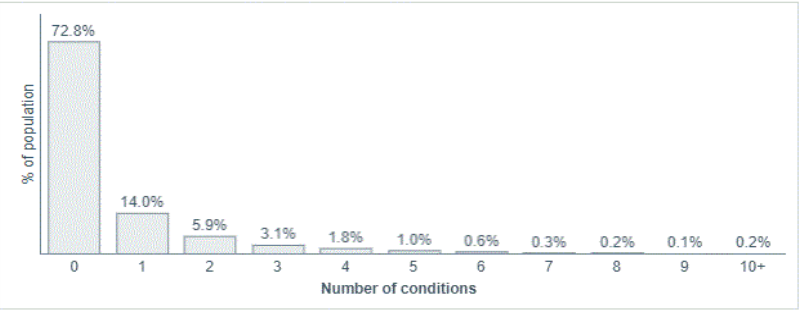
Population proportion by IM Deprivation decile



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

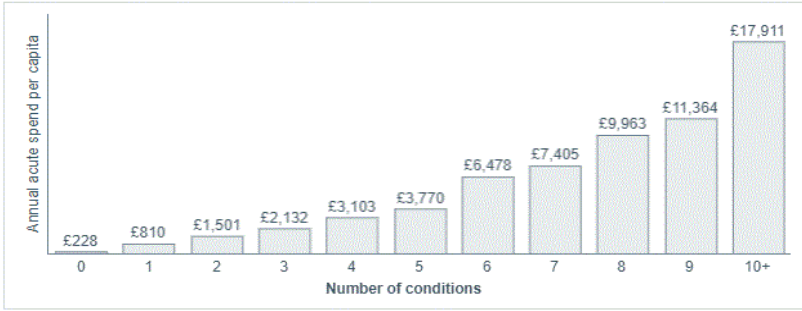
Prevalence - Snapshot as at: 30/06/2021

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.

Welwyn Garden City A PCN has a similar population profile compared to England except in the age categories 4-14 and 35-54 which is higher and lower in the age categories 20-29. The majority of people live within the 5 least deprived deciles (6-10).

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

PCN Demographics - NHS England

NHS Hertfordshire and West Essex Integrated Care Board

LTC
WELWYN GARDEN CITY A PCN

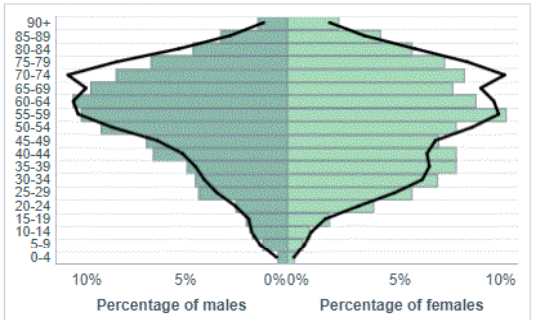
Snapshot as at: 30/06/2021

Registered population		Demographics				Prevalence		Acute utilisation		Covid	
% of total	23.9%	% White	85.8%	% IMD top	0.2%	% with 1+ conditions	100.0%	% of annual activity (total 47,935)	49.7%	% one or more at risk conditions	52.3%
% of annual change	5.8%	% BAME	11.4%	% IMD bottom	23.7%	% with 5+ conditions	4.7%	% of annual cost (total £12M)	44.0%	% two or more at risk conditions	15.8%

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

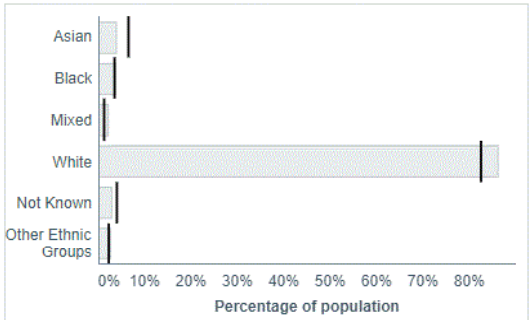
Choose benchmark: England

Population pyramid



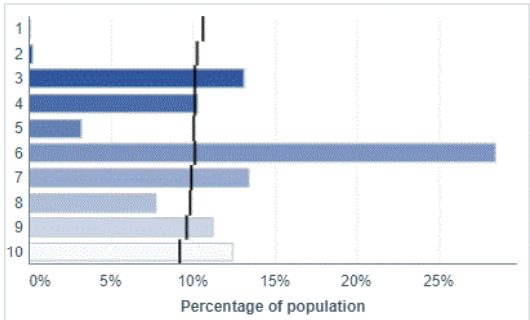
Black line represents the **England** average

Population proportion by ethnic category



Black line represents the **England** average

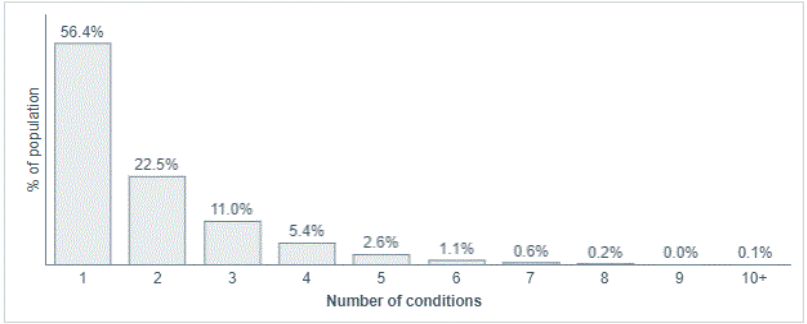
Population proportion by IM Deprivation decile



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

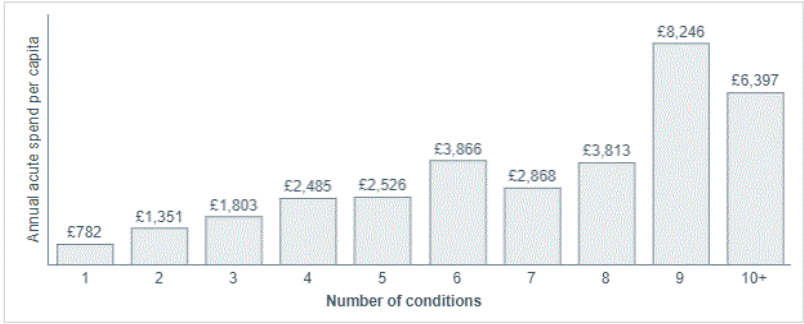
Prevalence - Snapshot as at: 30/06/2021

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 27.2% population have at least 1 Long Term Condition. 4.7% have more than 5 LTCs compared to 5.6% for the ICB.
The population pyramid shows a similar profile to England for those living with LTCs, except the age categories 20-54 which is higher and lower in age categories 60-79.

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 WELWYN GARDEN CITY A PCN		HALL GROVE GROUP PRACTICE			PEARTREE LANE SURGERY			SPRING HOUSE HEALTH MEDICAL CENTRE			THE GARDEN CITY PRACTICE		
Clinical Domain	Indicator Name	Latest Score	Time Period	Trigger Level	Latest Score	Time Period	Trigger Level	Latest Score	Time Period	Trigger Level	Latest Score	Time Period	Trigger Level
Clinical Diagnosis	Detection rate Cancer	0.568	2020/21	No Trigger	0.475	2020/21	No Trigger	0.64	2020/21	No Trigger	0.481	2020/21	No Trigger
Coronary heart disease	% AF anticoagulation therapy CHADS2-VASc score >1	93.8	2020/21	Positive	89.3	2020/21	Positive	92.5	2020/21	Positive	88.7	2020/21	Positive
	% CHD aged <=79 BP reading 140/90mmHg or less	70.6	2020/21	Level 1	54.5	2020/21	Level 1	62.2	2020/21	Level 1	41.4	2020/21	Level 1
	% CHD cholesterol 5 mmol/l or less	56.9	2016/17	No Trigger	45.6	2021/22	No Trigger	62.2	2021/22	No Trigger	65.3	2021/22	No Trigger
	% hypertension aged <=79 BP reading 140/90mmHg or less	65.8	2020/21	Level 1	45	2020/21	Level 1	62	2020/21	Level 1	38.1	2020/21	Level 2
Diabetes	% Diabetes aged >=40 years no CVD history without moderate or severe frailty treated with statin	79	2020/21	Level 1	75	2020/21	Level 1	71.8	2020/21	Level 1	70.1	2020/21	Level 1
	% Diabetes without moderate or severe frailty BP 140/80 mmHg or less	60.7	2020/21	Level 1	36	2020/21	Level 2	51.7	2020/21	Level 1	34	2020/21	Level 2
	% diabetes without moderate or severe frailty IFCC-HbA1c is 58 mmol/mol or less	58.9	2020/21	Level 1	43.9	2020/21	Level 2	60.7	2020/21	Level 1	48.2	2020/21	Level 2
Exception Rating	Overall Personalised Care Adjustment Rate	0.03	2020/21	No Trigger	0.044	2020/21	No Trigger	0.055	2020/21	No Trigger	0.033	2020/21	No Trigger
Medicines Management	% antibiotics Co-amoxiclav, Cephalosporins, Quinolones	8	2021/22 Q4	No Trigger	7.4	2021/22 Q4	No Trigger	10.7	2021/22 Q4	Level 1	8.3	2021/22 Q4	No Trigger
	% Naproxen and Ibuprofen	79	2021/22 Q4	No Trigger	83.3	2021/22 Q4	No Trigger	81.2	2021/22 Q4	No Trigger	75.4	2021/22 Q4	No Trigger
	Antibacterial Items/Star Pu	0.764	2021/22 Q4	Positive	0.87	2021/22 Q4	Positive	0.915	2021/22 Q4	Positive	1.03	2021/22 Q4	Positive
	Hypnotics ADQ/Star Pu	0.491	2021/22 Q4	No Trigger	0.664	2021/22 Q4	No Trigger	0.318	2021/22 Q4	No Trigger	0.558	2021/22 Q4	No Trigger
	Oral NSAIDS ADQs/STAR-PU	4.627	2021/22 Q4	No Trigger	4.487	2021/22 Q4	No Trigger	3.968	2021/22 Q4	No Trigger	4.368	2021/22 Q4	No Trigger
Mental Health	% first choice generic SSRIs	75.7	2021/22 Q4	No Trigger	73.1	2021/22 Q4	No Trigger	75.8	2021/22 Q4	No Trigger	79	2021/22 Q4	Positive
	% MH comprehensive care plan	54.5	2020/21	Level 1	66.1	2020/21	Level 1	15.4	2020/21	Level 1	17.1	2020/21	Level 1
	% SMI alcohol record	92.5	2018/19	No Trigger	98.7	2018/19	Positive	100	2018/19	Positive	15.6	2020/21	Level 2
	% SMI BP record	71.3	2020/21	Level 1	46.7	2020/21	Level 2	52.5	2020/21	Level 1	43.4	2020/21	Level 2
	Dementia Face to Face review	35.5	2020/21	Level 1	38	2020/21	Level 1	9.1	2020/21	Level 1	19.1	2020/21	Level 1
	Select antidepressants ADQs/STARPU	1.699	2021/22 Q4	No Trigger	2.321	2021/22 Q4	No Trigger	1.545	2021/22 Q4	No Trigger	1.886	2021/22 Q4	No Trigger
Patient Experience	Confidence and trust in healthcare professional	96.8	2020/21	No Trigger	97.6	2020/21	No Trigger	94	2020/21	No Trigger	95.5	2020/21	No Trigger
	Frequency seeing preferred GP	44.5	2020/21	No Trigger	35.9	2020/21	No Trigger	31.7	2020/21	No Trigger	41.7	2020/21	No Trigger
	Healthcare professional treating with care and concern	91.3	2020/21	No Trigger	91.9	2020/21	No Trigger	86.4	2020/21	No Trigger	92.3	2020/21	No Trigger
	Overall experience of your GP practice	89.8	2020/21	No Trigger	83.3	2020/21	No Trigger	82	2020/21	No Trigger	91.2	2020/21	No Trigger
	Satisfaction with appointment times	74.1	2020/21	No Trigger	56.7	2020/21	No Trigger	61.2	2020/21	No Trigger	68	2020/21	No Trigger
Public Health	% Child Imms DTaP/IPV/Hib/HepB (age 1 year)	86.7	2020/21	Level 1	93.6	2020/21	Level 1	94.4	2020/21	Level 1	96.5	2020/21	No Trigger
	% Child Imms Hib/MenC booster	91.4	2020/21	Level 1	95.2	2020/21	No Trigger	92.8	2020/21	Level 1	95.5	2020/21	No Trigger
	% Child Imms MMR (Age 2 yrs)	91.4	2020/21	Level 1	94.8	2020/21	Level 1	92.8	2020/21	Level 1	94.8	2020/21	Level 1
	% Child Imms PCV Booster	90.9	2020/21	Level 1	94.8	2020/21	Level 1	92.8	2020/21	Level 1	95.5	2020/21	No Trigger
	Cervical Screening	79.9	2021/22 Q4	Level 1	74.4	2021/22 Q4	Level 1	80.3	2021/22 Q4	No Trigger	77.1	2021/22 Q4	Level 1
Respiratory	% Asthma review in last 6 mths	10	2020/21	Level 1	39	2020/21	Level 1	81.1	2020/21	No Trigger	30.4	2020/21	Level 1
	% Asthma spirometry and one other objective test	0	2020/21	Level 2	5.3	2020/21	Level 2	100	2020/21	No Trigger	22.2	2020/21	Level 1
	% COPD with review in last 12 mths	32.8	2020/21	Level 1	48.3	2020/21	Level 1	84.8	2020/21	Level 1	20.7	2020/21	Level 1
	% LTC patients who smoke	11.5	2020/21	No Trigger	16.4	2020/21	No Trigger	15.8	2020/21	No Trigger	11.3	2020/21	No Trigger
	% LTC Smoker offer support	94.5	2020/21	Level 1	98.3	2020/21	No Trigger	67.2	2020/21	Level 1	88.3	2020/21	Level 1
	% Smoking patients over 15 recorded	74	2016/17	No Trigger	67.7	2021/22	No Trigger	72.9	2021/22	No Trigger	79.9	2021/22	Positive
	% Smoking status recorded	96.2	2020/21	No Trigger	88.3	2020/21	Level 1	90	2020/21	No Trigger	93.3	2020/21	No Trigger
	% w. MRC dyspnoea score >=3 w. offer of referral to pulm. rehab. Clinic	48.1	2020/21	Level 1	32	2020/21	Level 1	100	2020/21	No Trigger	40	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

NHS Hertfordshire and West Essex Integrated Care Board

Wider Determinants

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

In Welwyn Garden City A PCN an estimated:

- 13.6% of children live in poverty.
- 12.5% of older people live in poverty.
- 12.1% of households live in fuel poverty.
- 7.9% of households are overcrowded.
- 35.4% of people aged 65 and over live alone.
- 0.6% of people cannot speak English well.
- 4% of working age people are claiming out of work benefits.
- 22.3% of children aged 4-5 and 29.1% of children aged 10-11 are overweight.

PH.Intelligence@hertfordshire.gov.uk

Hertfordshire Public Health Evidence & Intelligence Epidemiology

Hertfordshire

The above provides a summary of the wider determinants of health for Welwyn Garden City A.

Wider determinants analysis from Public Health Evidence and Intelligence shows Welwyn Garden City A as a mid-ranged PCN set within the ICB across except for Income and Employment where it is one of the most deprived.

Source: Public Health Team

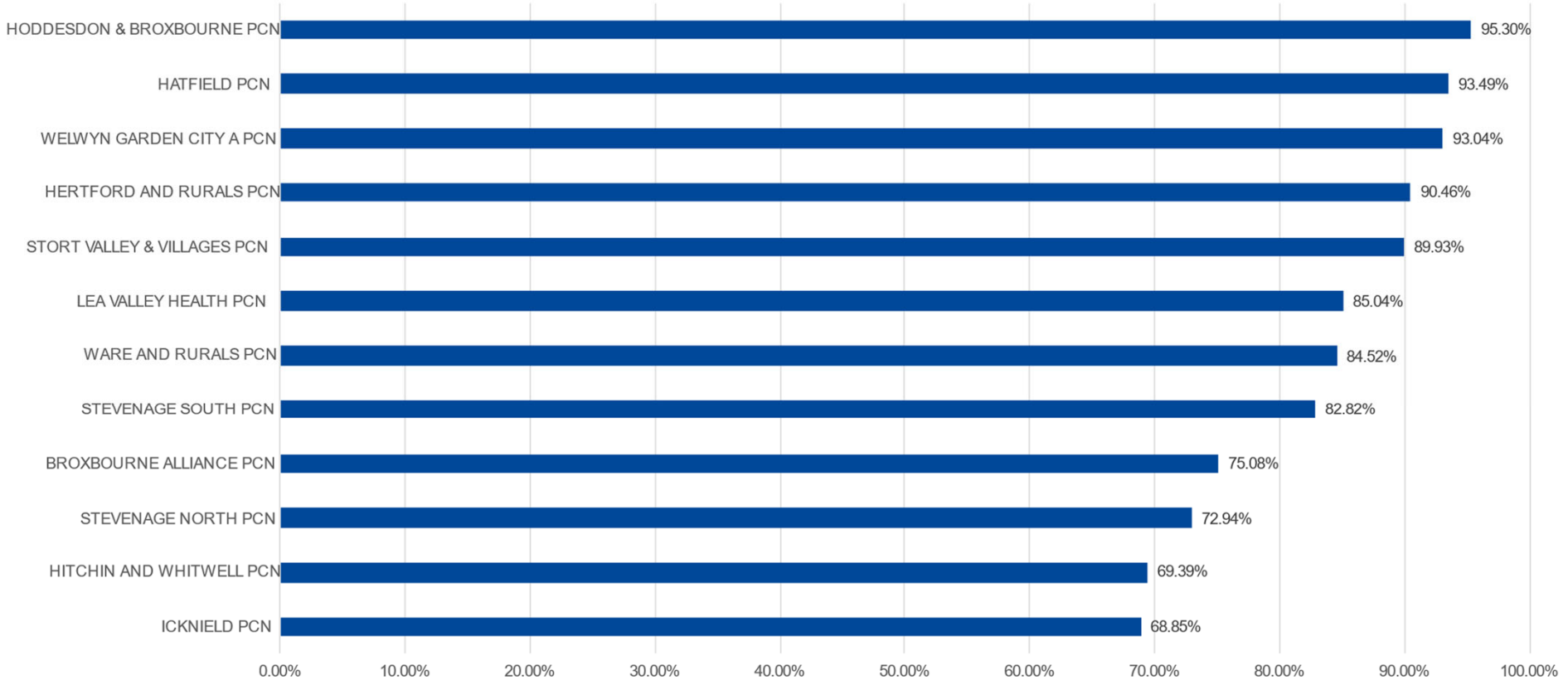
Spread of Patients

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.

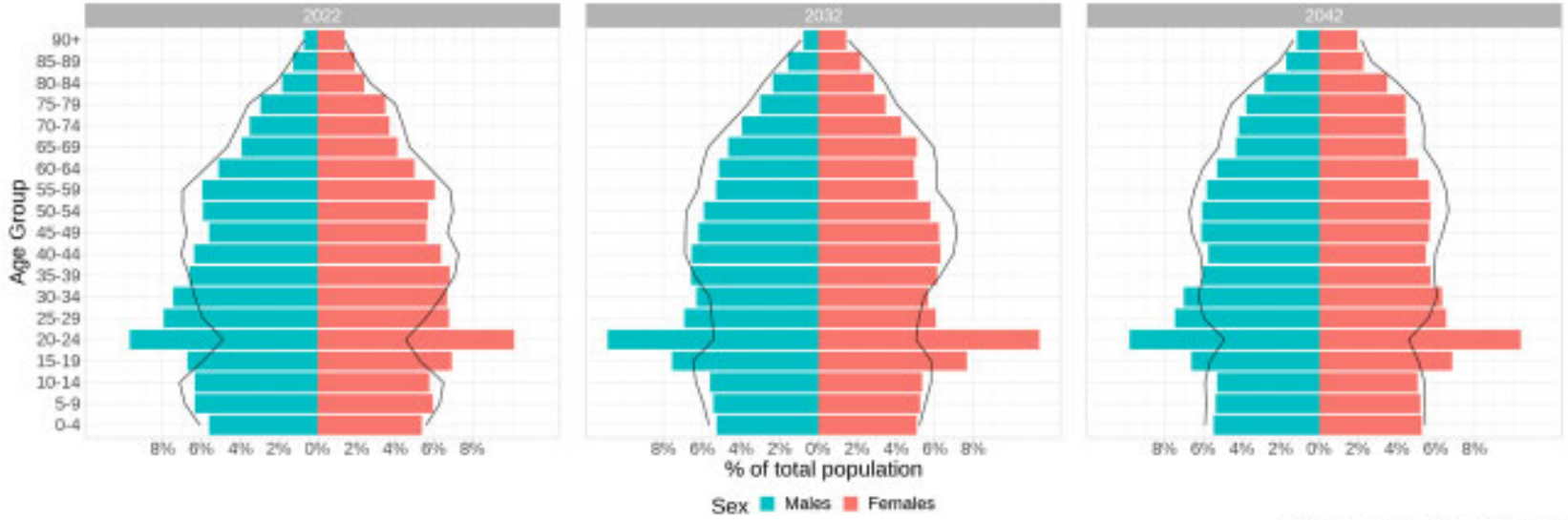
The spread of patients for Welwyn Garden City A PCN indicates 6.96% of the population are not located within the Hertfordshire & West Essex boundaries; this means that this population may be accessing services outside of the ICB and the impact of coterminous alignment with neighbouring ICBs must be taken 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 Welwyn Hatfield 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	6,916	6,767	7,208
Under 24	43,311	45,626	43,848
24-64	62,924	62,453	64,211
65+	19,648	23,456	26,229
85+	3,339	3,917	4,775

PH.Intelligence@hertfordshire.gov.uk

Hertfordshire Public Health Evidence & Intelligence Epidemiology

Hertfordshire

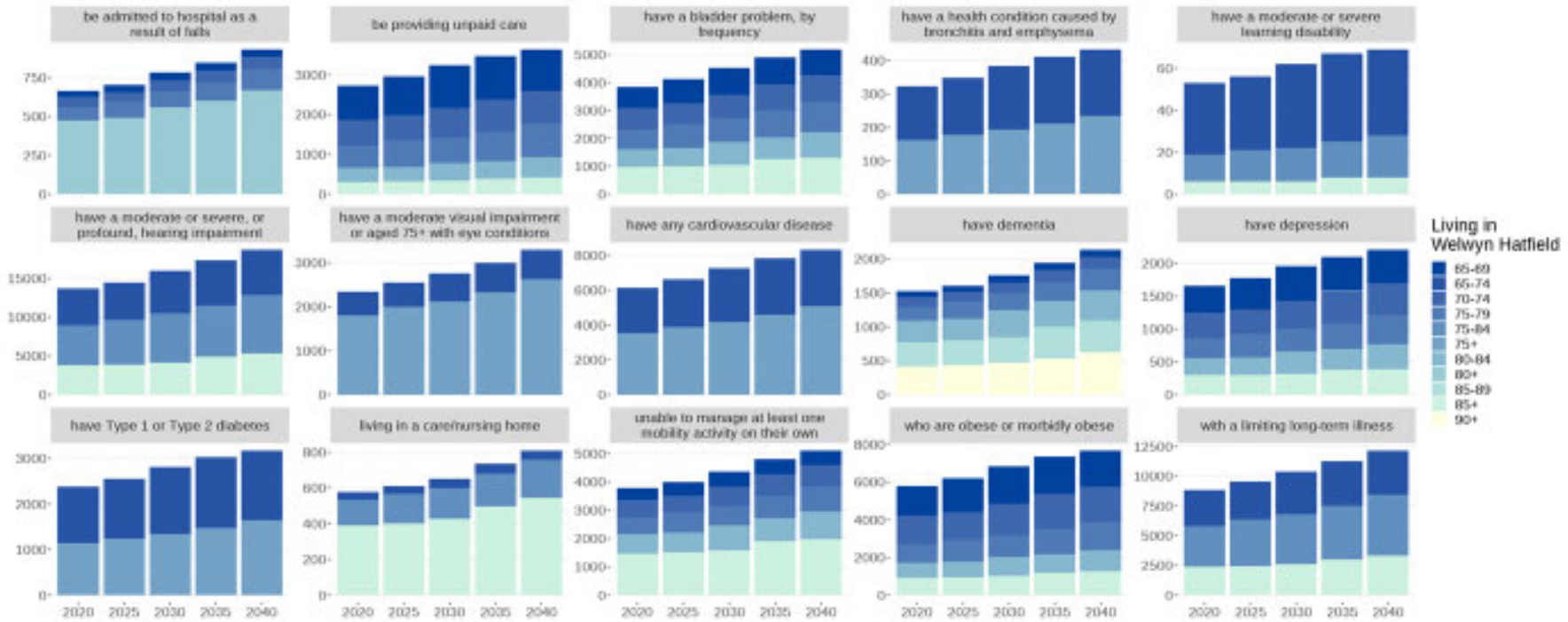
Expected population growth for Welwyn Hatfield district by the Local Authority, forecasts continued increase between 2023 through to 2034 which will bring additional demands for healthcare. Projections show an expected increase in the number of people over 65 from ~20k to ~23k.

Source: Public Health Team

Public Health - Projections on Conditions

NHS Hertfordshire and West Essex Integrated Care Board

People aged 65+ projected to...



PH.Intelligence@hertfordshire.gov.uk

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

Optum

HWE

Segment & Outcomes
Framework Documentation

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PHM Segment Model - Overview

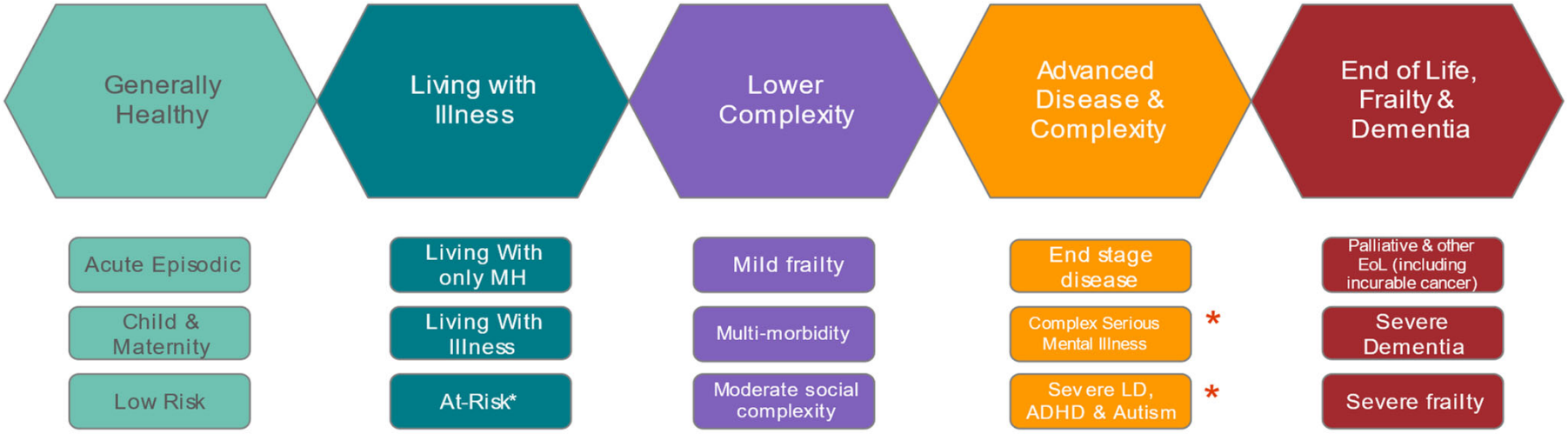
NHS Hertfordshire and West Essex Integrated Care Board

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

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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.

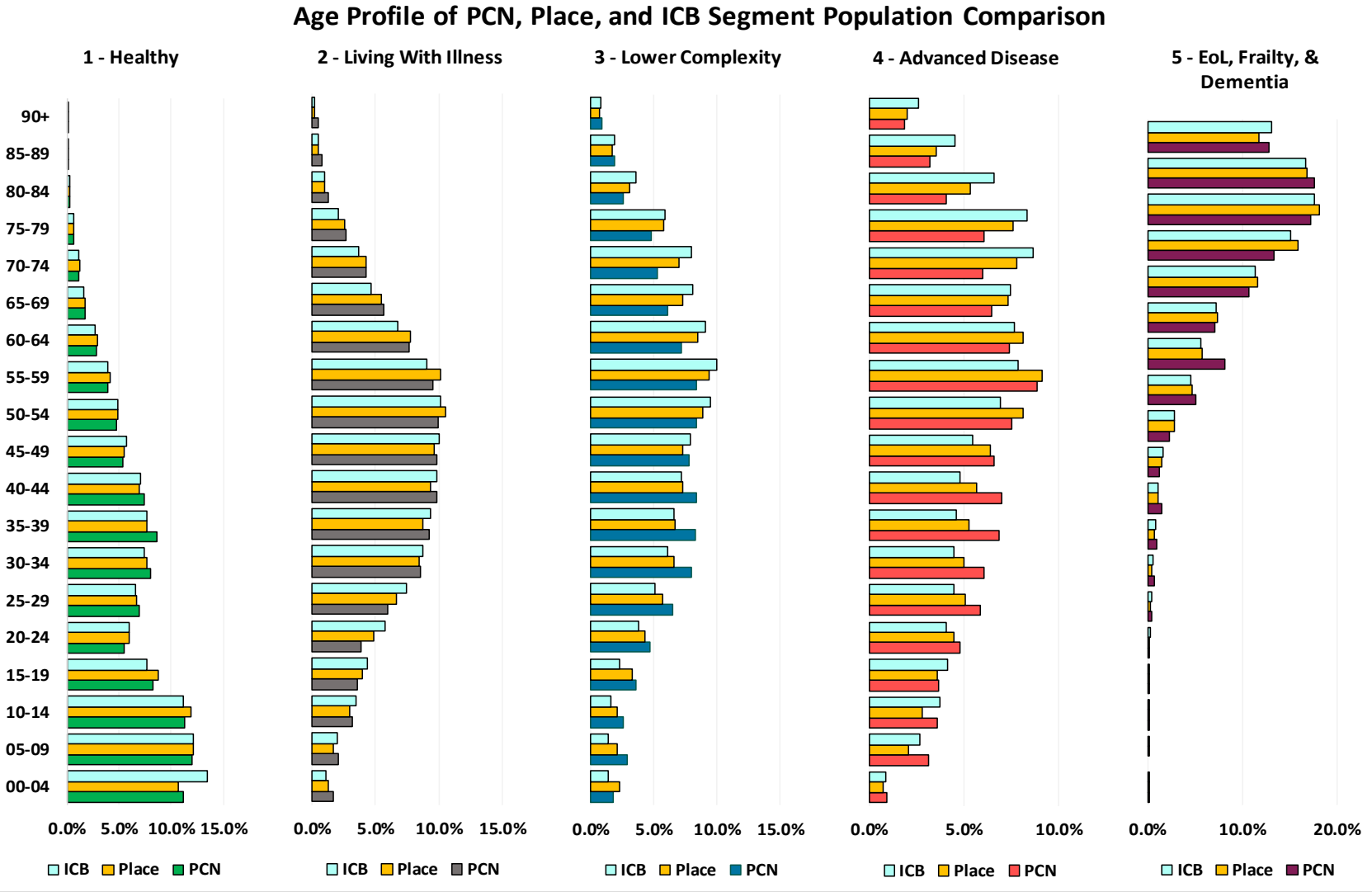
Whole Population Outcomes

- 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



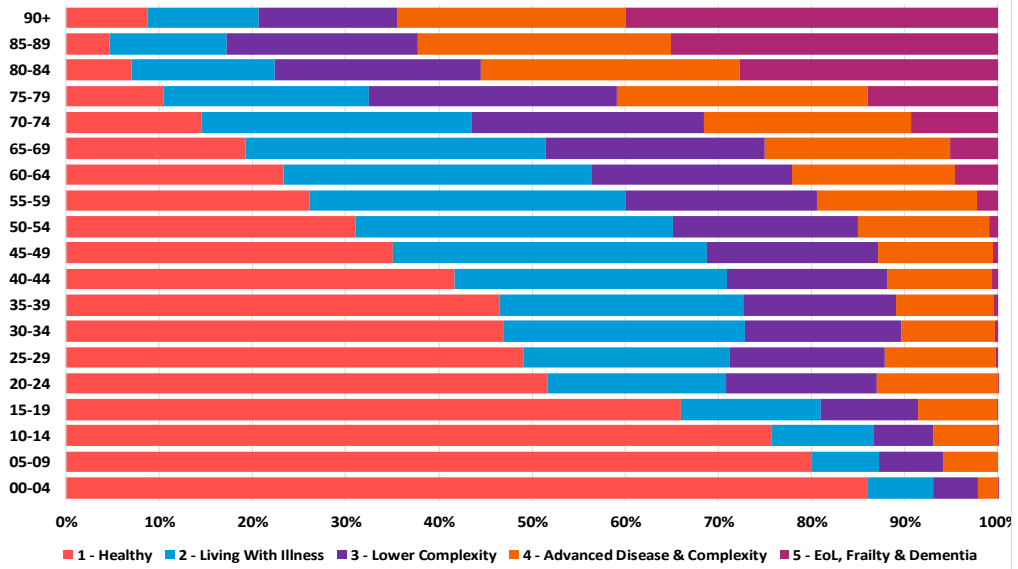
Each registered person is assigned to a segment and this can be cut by age group and also geographically by Place or PCN.

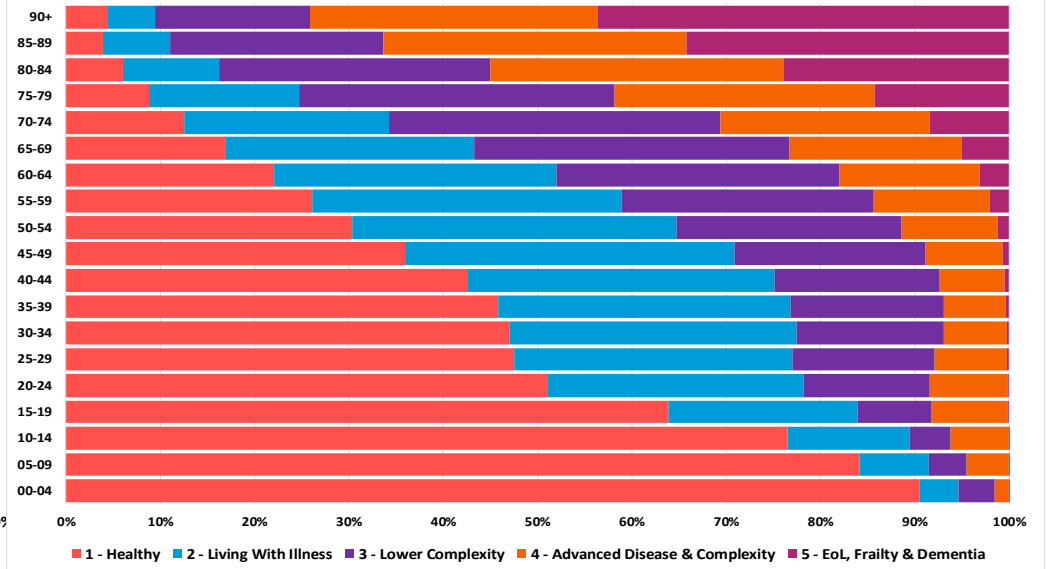
The above looks at the breakdown by age of people within each segment. It provides the PCN value against the Place and ICB value.

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

Demographic Breakdowns - Segment & Deprivation Quintiles

Hertfordshire and West Essex Integrated Care Board



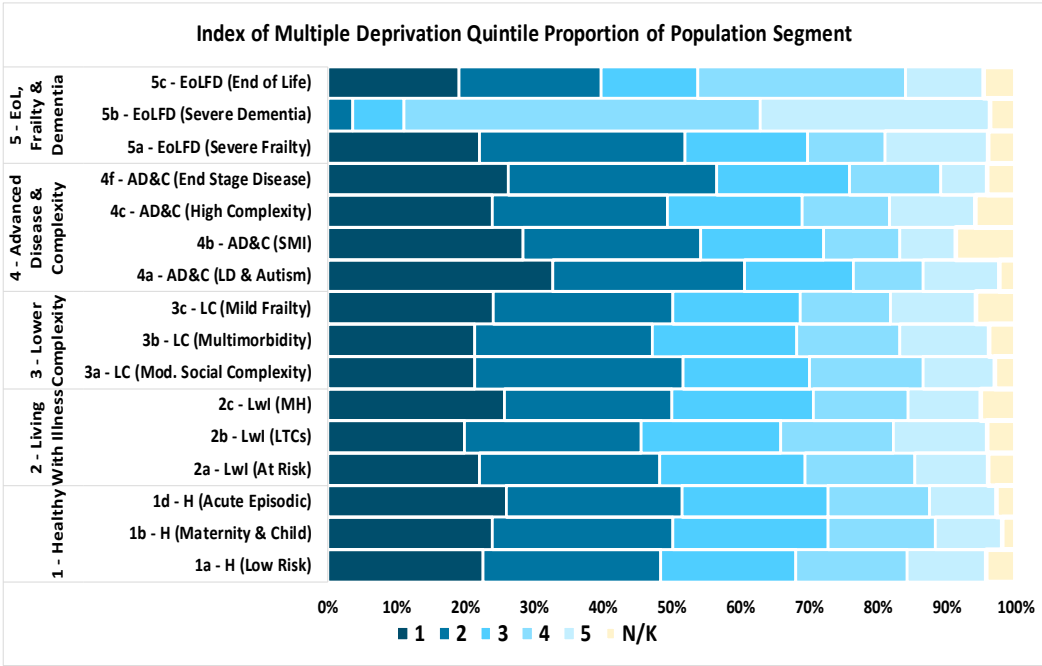


The ICB Health Segments here are broken down by total population and 5 year age groups; as expected with age the proportion of people within the healthy segment decreases.

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

Overall Welwyn Garden City A has a higher profile for most age categories for segments 2 to 5, 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 Welwyn Garden City A PCN, it is to be noted that there are no significant areas of concern but some that need to be monitored going forward, such as COPD, Obesity, Cancer, Learning Disabilities, Hypertension, Chronic Kidney Disease, Atrial Fib, Anxiety and MH.

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

Continued

NHS Hertfordshire and West Essex Integrated Care Board

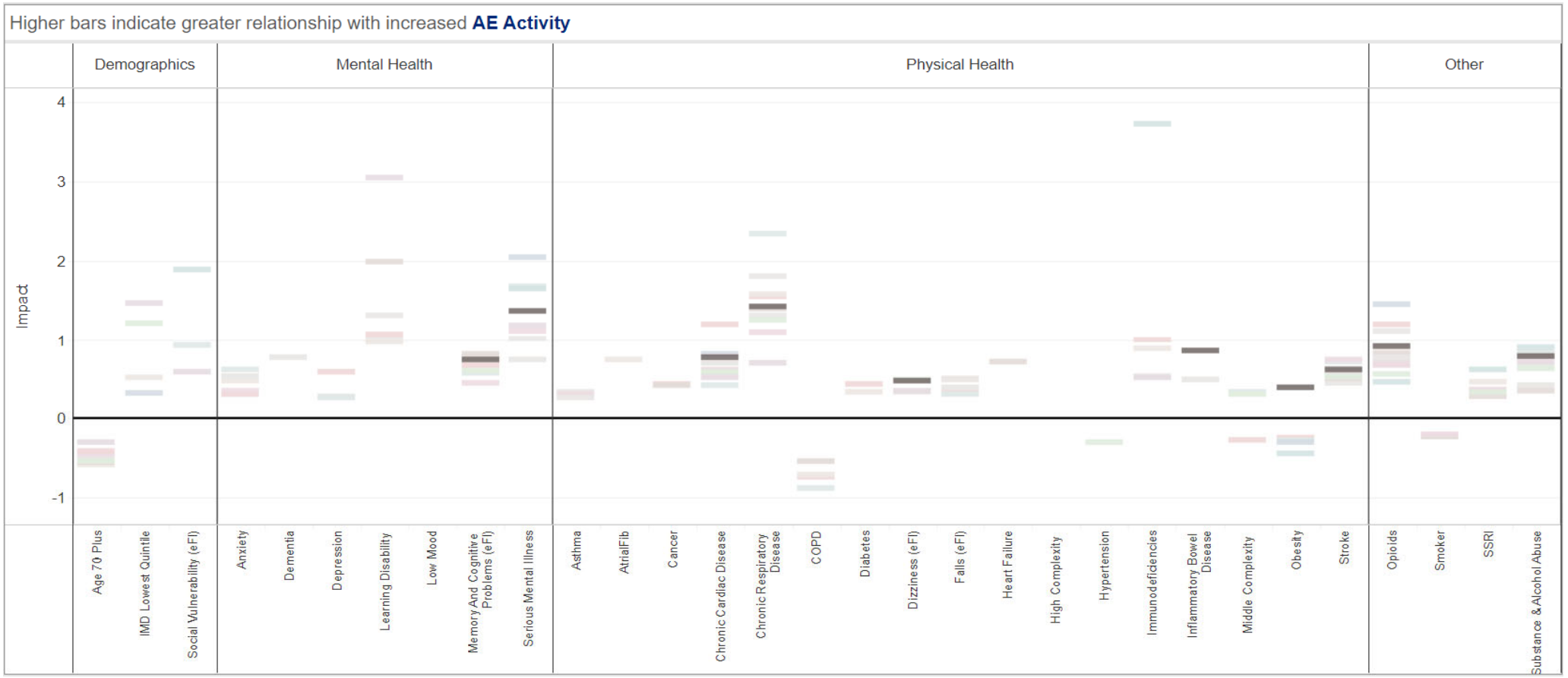
PCN NAME	ASD	Cerebral Palsy	Chronic Respiratory Disea	Cystic Fibrosis	Huntingtons Disease	Inflammatory Bowel Dise	Kidney Transplant	Metastatic Cancer	Multiple Sclerosis	Muscular Dystrophy	Myasthenia Gravis	Osteoporosis	Other Neurological Condi	Parkinsons Disease	Rheumatoid Arthritis	Lupus (SLE)	Sickle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

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

PCN Benchmarking - A&E Activity

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.

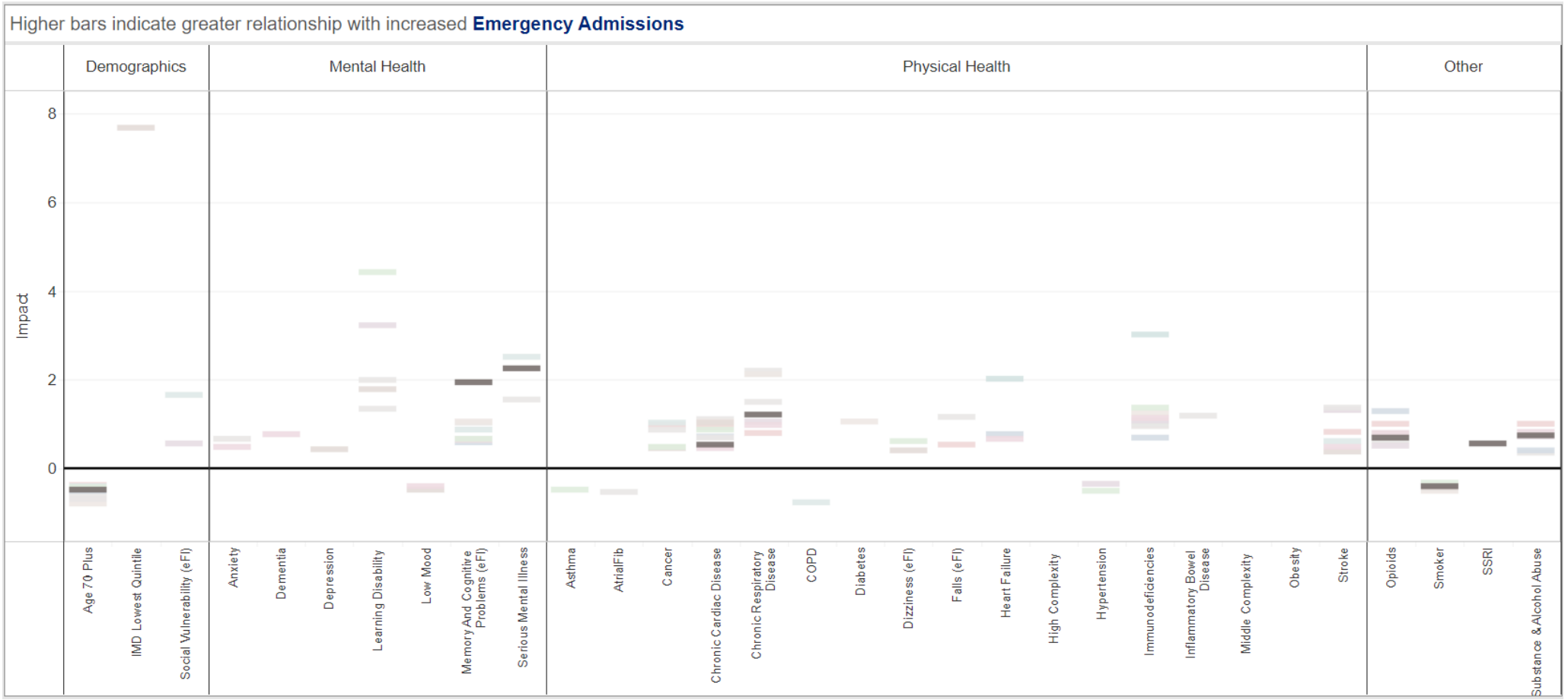
The Model - A statistical regression model is used to decide which Risk Factors correlate with a significant impact on the selected targets as presented in these charts, the height of the bar for each PCN relates to the correlation of a Risk Factor and an increase in impact on the selected target condition.

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

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 & West Essex ICB – East & North

A&E Summary – Who are attending and why?

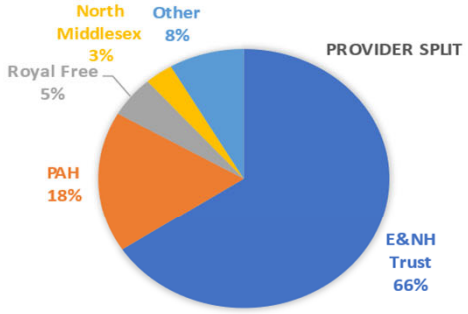
Children 0 -18
Adults 19 -64
Older People 65+

218,296 A&E Attendances in 2021/22

Children = 56,287 (25.8%)
Adults = 111,219 (50.9%)
Older People = 50,790 (23.3%)

128,296 people attended A&E in 2021/22

Children = 34,197 (26.5%)
Adults = 68,101 (52.8%)
Older People = 26,873 (20.8%)



57,811 26.5% of attendances resulted in no investigation and no treatment (includes Uncoded Activity)

Children = 19,082 (34%)
Adults = 30,658 (27.6%)
Older People = 6,944 (15.9%)

This translates to 1 in 5 people registered with East & North attending A&E

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

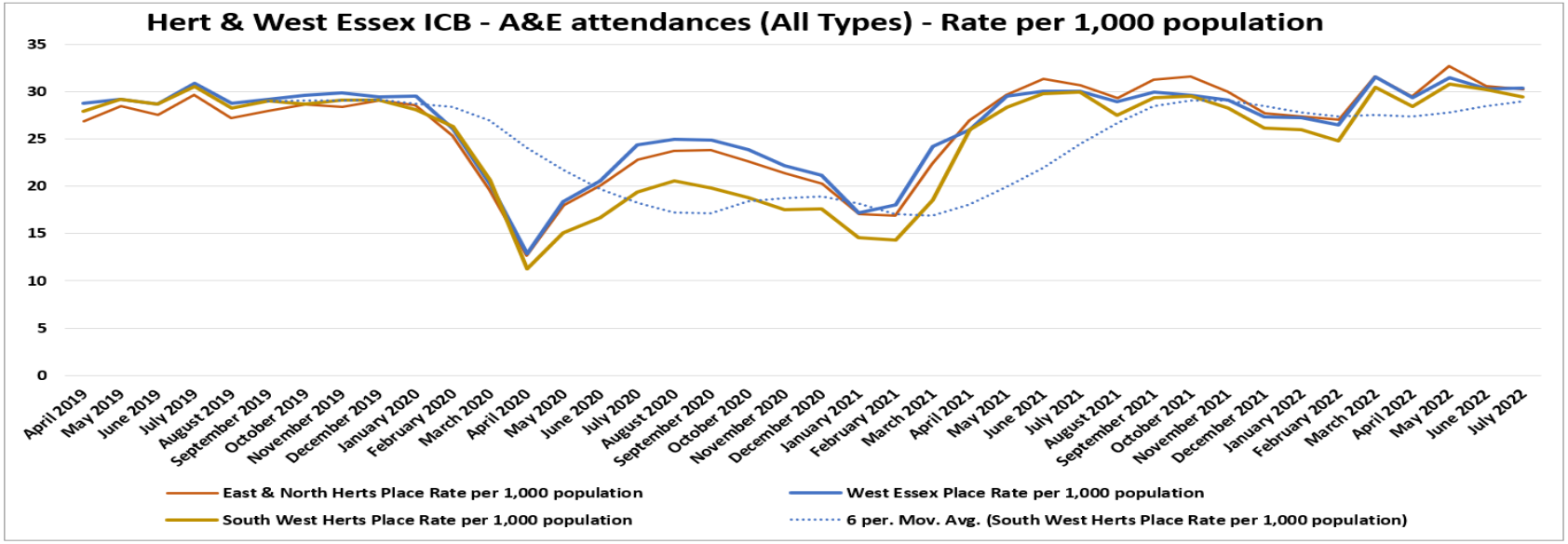
Hertfordshire and West Essex Integrated Care System

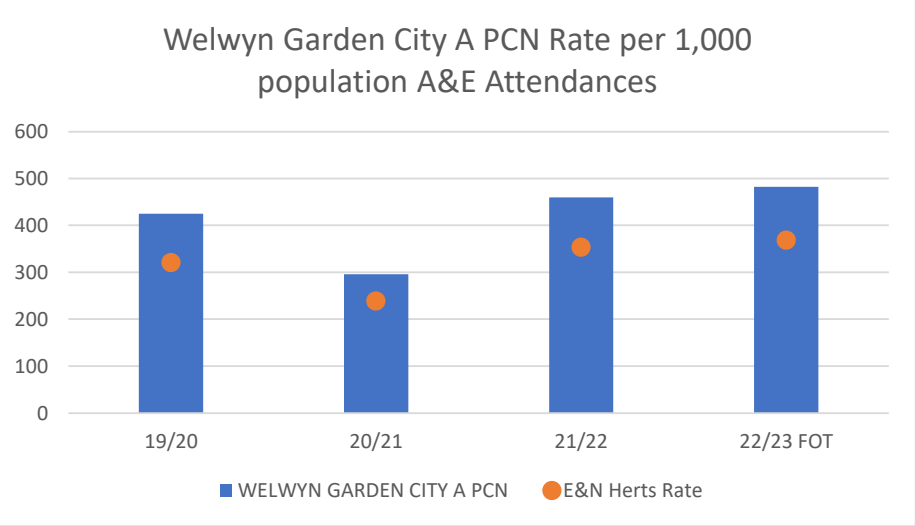
2

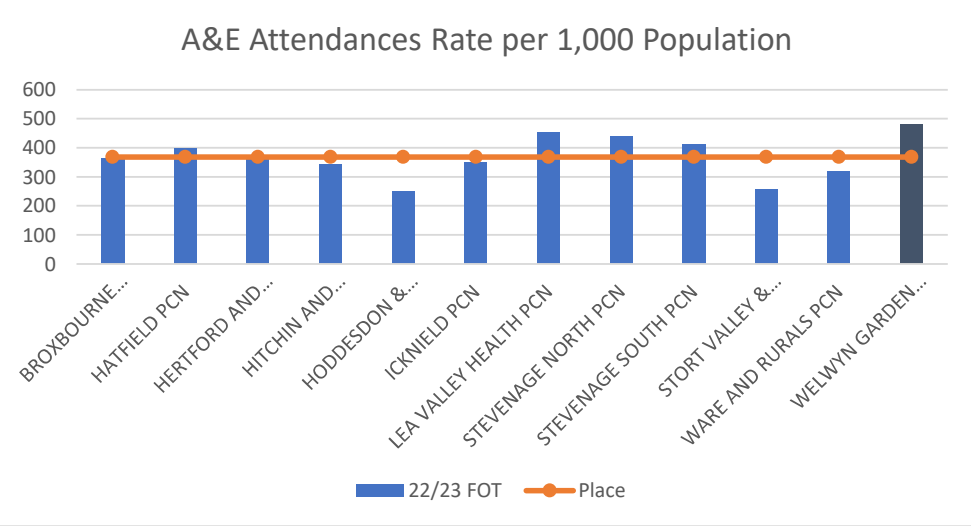
Source: SUS

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 Welwyn Garden City A PCN A&E Attendance rates per 1,000 population, is the highest of all PCNs for East & North place.

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

Unplanned Hospitalisation for Chronic Ambulatory Care Sensitive Conditions

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 Welwyn Garden City A PCN.

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

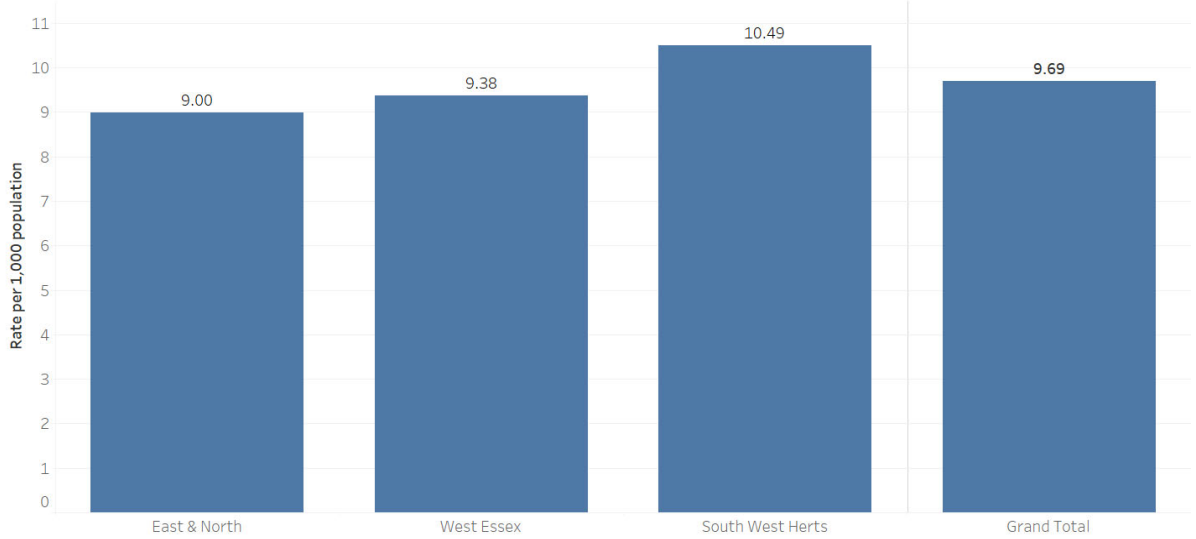
Chronic ACS admissions
April 2021 - September 2022
Herts & West Essex ICB

Chronic ACS	Admissions	People	Average cost of admission	Tariff Total Payment National
CVD: AF and Flutter	62	55	£2,422	£150,186
CVD: Angina	18	16	£1,383	£24,892
CVD: Congestive Heart Failure	125	103	£4,585	£573,086
CVD: Hypertension	11	11	£756	£8,311
Diseases of the blood	15	15	£2,500	£37,493
Mental and Behavioural Disorders	9	5		
Neurological Disorders	53	33	£1,714	£90,839
Nutritional, endocrine and metabolic	64	44	£2,537	£162,385
Respiratory: Asthma	35	31	£1,608	£56,278
Respiratory: COPD	160	113	£2,723	£435,659
Grand Total	**552**	**400**	**£2,788**	**£1,539,129**

Source: HWE PHM Team, SUS UEC data-sets

ACS Admission Rates per 1,000 Population by Place

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

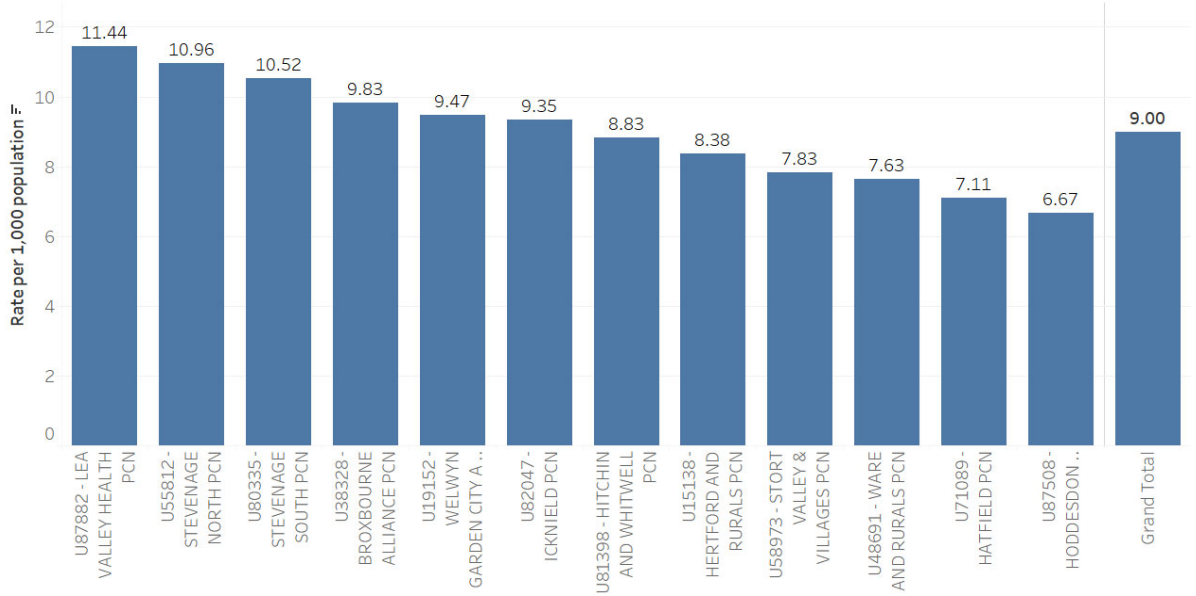


When comparing the Ambulatory Care Sensitive rates per 1,000 population between places, the East & North place has the lowest rate in the ICB.

Within East & North place, Welwyn Garden City A has a slightly higher rate per 1,000 population, than the average.

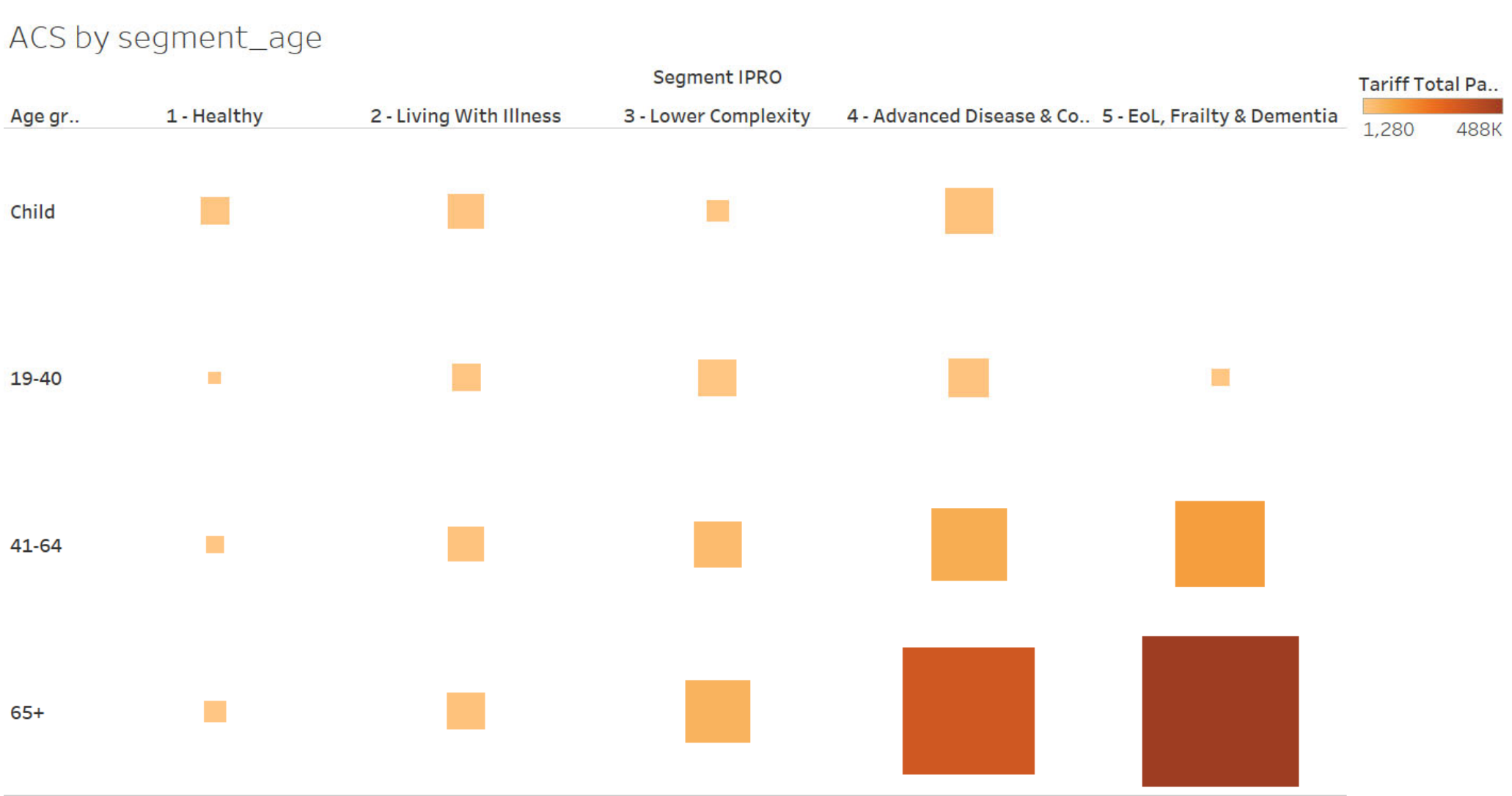
The following slides look at how this is broken down by the different ACSs and how the patients fall within the different segments.

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



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 Welwyn Garden City A the highest volume and cost is within the End of Life, Frailty and Dementia segment 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 as well. It is to be noted that under End of Life, Frailty and Dementia and Advanced Disease and Complexity segments, there is a notable use by the 41-64 age group for volume and cost.

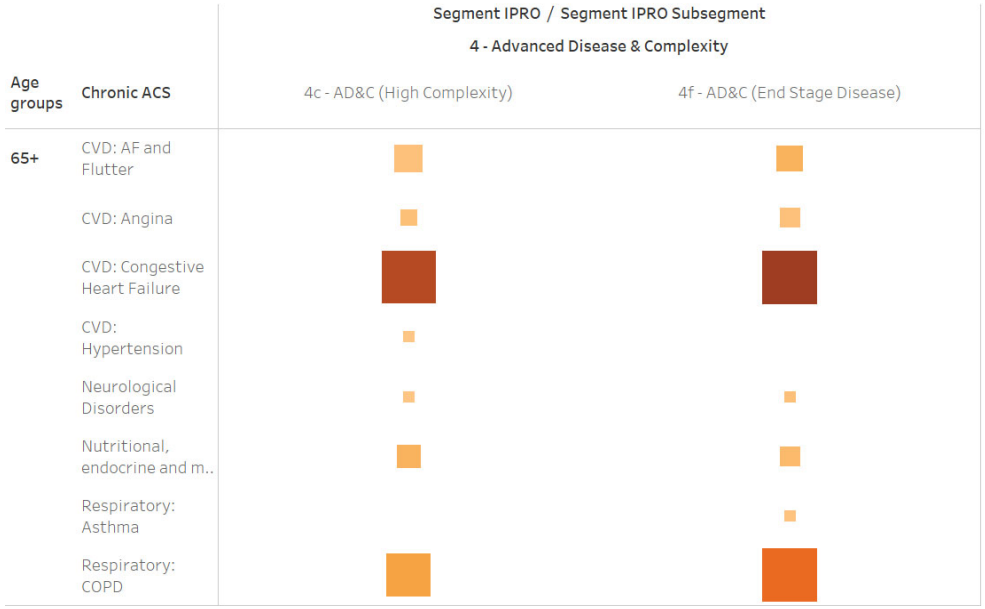
The following pages look at which ACSs contribute to this.

Source: HWE PHM Team, SUS UEC data-sets

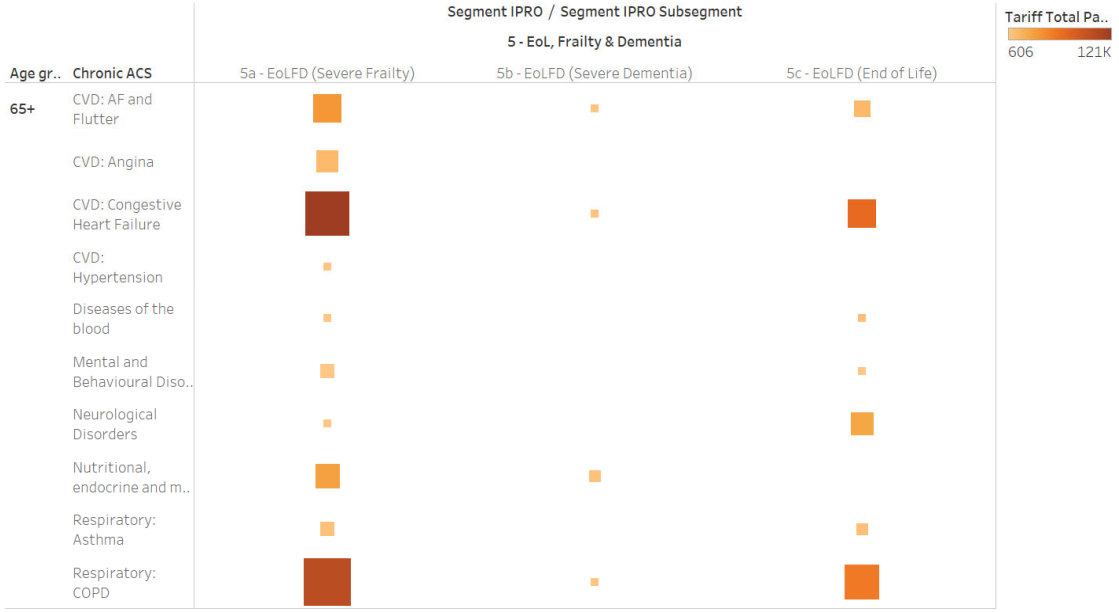
UEC by Advanced Disease & Complexity, and EOL, Frailty & Dementia

Hertfordshire and West Essex Integrated Care Board

Segment 4



Segment 5

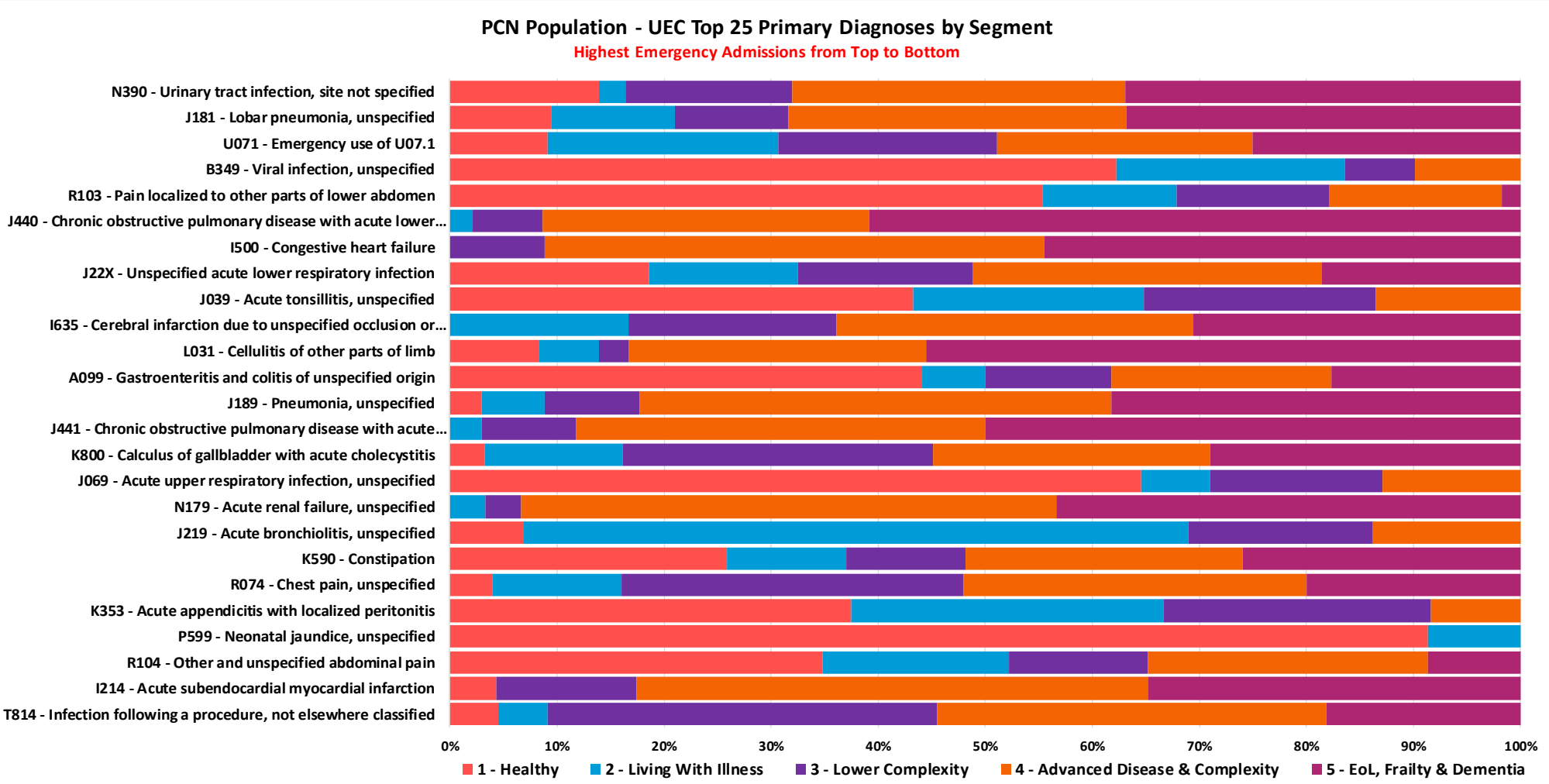


Ambulatory Care Sensitive conditions of note for people aged over 65 within the Advanced Disease and Complexity, is highlighted as Heart Failure with the highest volume and cost, followed by COPD and AF and Flutter.

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

Source: HWE PHM Team, SUS UEC data-sets

UEC Diagnoses by Segment



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

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
Bandley Hill	1					1
Batchwood				1		1
Bishop's Stortford Silverleys					2	2
Borehamwood Kenilworth					2	2
Brookmans Park and Little Heath	1		2			3
Broxbourne and Hoddesdon South				1		1
Cadwell	1					1
Chells				1		1
Chesfield				3		3
Cheshunt South and Theobalds	1					1
Codicote	1		1			2
Colney Heath				5		5
Datchworth & Aston				1	1	2
Haldens	97	54	84	134	127	496
Handside	53	54	68	136	121	432
Hatfield Central	13	8	1	12	7	41
Hatfield East	13	9	9	16	8	55
Hatfield South	13	5	4	3	2	27
Hatfield Villages	22	16	6	14	16	74
Hatfield West	6	8	3	1	2	20
Hertford Bengeo	5		1			6
Hertford Castle		1		1		2
Hertford Kingsmead				5		5
Hertford Rural North			1	2		3
Hertford Rural South	3	4	4	2	4	17
Hitchin Bearton				1		1
Hitchin Oughton				3		3
Hitchin Walsworth					7	7
Hollybush	91	55	83	142	94	465
Howlands	82	55	76	104	85	402
Knebworth		1	2		1	4
Longmeadow	2			1		3
Manor		4				4
Martins Wood				2		2
Northaw and Cuffley	2					2
Old Town				1		1
Panshanger	48	41	34	76	142	341
Peartree	116	82	83	158	86	525
Pin Green			1			1
Potters Bar Furzefield			1			1
Potters Bar Parkfield	1					1
Roebuck		3	1			4
Shephall	1			2		3
Sherrards	81	40	59	85	73	338
St Nicholas		2				2
St Peters			1			1
Symonds Green		1				1
Thundridge & Standon		1	1			2
Waltham Cross			1			1
Welham Green		4	1			5
Welwyn East	7	7	13	3	16	46
Welwyn West	8	2	3	13	7	33
Wheathampstead	3			2		5
Woodfield				1		1
Unknown Ward	11	8	20	30	65	134
Grand Total	683	465	564	962	868	3542

UEC Patients Seen by Deprivation Quintile & Ward 1 = Most Deprived, 5 = Least Deprived	1	2	3	4	5	(blank)	Grand Total
Bandley Hill			1				1
Batchwood			1				1
Bishop's Stortford Silverleys					2		2
Borehamwood Kenilworth	2						2
Brookmans Park and Little Heath					3		3
Broxbourne and Hoddesdon South				1			1
Cadwell			1				1
Chells		1					1
Chesfield				3			3
Cheshunt South and Theobalds	1						1
Codicote			1		1		2
Colney Heath			5				5
Datchworth & Aston				2			2
Haldens	272	164		60			496
Handside		164	102	93	73		432
Hatfield Central	24	17					41
Hatfield East	31	7		17			55
Hatfield South	13	7	7				27
Hatfield Villages		10	12	52			74
Hatfield West		15	5				20
Hertford Bengeo				3	3		6
Hertford Castle				2			2
Hertford Kingsmead					5		5
Hertford Rural North			3				3
Hertford Rural South			17				17
Hitchin Bearton			1				1
Hitchin Oughton		3					3
Hitchin Walsworth				7			7
Hollybush		378	87				465
Howlands		70	209	123			402
Knebworth				4			4
Longmeadow		2	1				3
Manor				4			4
Martins Wood	2						2
Northaw and Cuffley			2				2
Old Town			1				1
Panshanger		145		129	67		341
Peartree	525						525
Pin Green	1						1
Potters Bar Furzefield				1			1
Potters Bar Parkfield				1			1
Roebuck	1	3					4
Shephall		3					3
Sherrards			213		125		338
St Nicholas	2						2
St Peters				1			1
Symonds Green	1						1
Thundridge & Standon		2					2
Waltham Cross	1						1
Welham Green			5				5
Welwyn East				8	38		46
Welwyn West		20		13			33
Wheathampstead				3	2		5
Woodfield		1					1
Unknown Ward						134	134
Grand Total	876	1012	674	527	319	134	3542

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	WELWYN GARDEN CITY A PCN
Emergency admissions injuries due to falls in those aged 65+	2020/21	2026	1794
Emergency asthma, diabetes and epilepsy admissions (aged 0-18)	2020/21	130.8	78.5
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	190.2
Mental health admissions (all ages)	2020/21	177.2	113.3
Emergency Cancer Admissions	2020/21	494.9	446.8
Emergency admissions for acute conditions shouldn't require admissions	2020/21	611.6	369.5

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.

Welwyn Garden City A PCN rates vary from significantly better and similar 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**	**NULL**	**PCN**	**ICS**
Overall Population Measures													
Population	1	4	183	167	52	435	198	97	210	249	46	1642	37725
% of population in cohort	0.1%	0.2%	11.1%	10.2%	3.2%	26.5%	12.1%	5.9%	12.8%	15.2%	2.8%	100.0%	100.0%
Avg. Age	76.0	77.0	71.9	72.6	73.3	75.0	74.9	76.9	81.0	78.0	71.2	75.6	75.6
% BAME Where recorded		0%	8%	5%	10%	7%	5%	6%	6%	7%	9%	7%	8%
Avg. number of Acute and Chronic Condition	4.0	2.5	5.5	4.9	4.8	5.1	4.7	4.8	5.1	4.5	5.6	5.0	5.5
Activity Measure													
Emergency Admissions	0.0	0.5	0.5	0.5	1.0	0.5	0.4	0.4	0.7	0.3	1.1	0.5	0.6
A&E Attendances	0.0	0.8	1.4	1.0	2.1	1.0	0.9	0.7	1.3	0.7	2.2	1.1	0.9
GP Encounters	145.0	83.8	122.4	122.8	123.3	112.5	109.4	94.9	131.1	101.4	112.5	114.2	103.4
Admitted Bed Days	0.0	2.0	3.5	2.8	6.9	3.5	2.7	2.4	4.9	2.0	4.6	3.4	4.2
Physical Health													
Asthma	0.0%	25.0%	23.0%	20.4%	21.2%	21.1%	19.7%	17.5%	13.3%	18.5%	28.3%	19.7%	25.2%
Cancer	0.0%	0.0%	26.8%	24.0%	28.8%	28.3%	30.8%	30.9%	23.8%	33.3%	28.3%	28.3%	32.8%
Chronic Cardiac Disease	100.0%	0.0%	53.6%	40.7%	32.7%	43.7%	40.4%	41.2%	44.8%	36.1%	54.3%	42.8%	47.5%
Chronic Respiratory Disease	100.0%	25.0%	27.9%	24.6%	23.1%	25.1%	18.7%	26.8%	17.6%	18.1%	37.0%	23.0%	22.2%
CKD	0.0%	25.0%	16.9%	19.8%	19.2%	18.9%	20.7%	18.6%	11.9%	19.7%	10.9%	18.0%	20.7%
Heart Disease	0.0%	0.0%	47.5%	35.3%	30.8%	35.2%	31.8%	33.0%	38.6%	26.5%	45.7%	35.2%	39.1%
Hypertension	0.0%	50.0%	78.7%	74.3%	76.9%	75.4%	76.3%	77.3%	73.3%	76.7%	73.9%	75.7%	74.5%
Diabetes	0.0%	25.0%	45.4%	48.5%	34.6%	41.6%	39.4%	34.0%	33.3%	27.7%	30.4%	38.2%	42.8%
Obesity	100.0%	50.0%	36.1%	39.5%	32.7%	34.9%	32.3%	28.9%	23.8%	24.5%	45.7%	32.2%	32.8%
Rheumatoid Arthritis	100.0%	0.0%	3.3%	7.2%	3.8%	4.6%	1.0%	3.1%	6.2%	4.0%	0.0%	4.2%	5.3%
Stroke	0.0%	25.0%	27.9%	22.8%	28.8%	25.5%	25.8%	20.6%	33.8%	24.5%	26.1%	26.2%	34.5%
Mental Health													
Anxiety	0.0%	50.0%	44.8%	34.7%	34.6%	40.7%	33.8%	37.1%	40.5%	28.9%	47.8%	37.7%	29.0%
Depression	0.0%	0.0%	35.0%	37.7%	21.2%	34.7%	29.8%	30.9%	26.2%	22.9%	39.1%	30.9%	33.6%
Dementia	0.0%	0.0%	7.1%	10.8%	11.5%	7.4%	6.6%	4.1%	30.0%	14.5%	10.9%	11.6%	18.6%
Serious Mental Illness	0.0%	0.0%	6.0%	3.0%	3.8%	2.5%	3.5%	2.1%	1.4%	1.6%	4.3%	2.9%	6.5%
Low Mood	0.0%	50.0%	18.6%	24.0%	15.4%	15.9%	15.2%	12.4%	15.2%	7.6%	19.6%	15.5%	18.5%
Suicide	0.0%	0.0%	3.3%	1.8%	0.0%	2.8%	2.0%	2.1%	0.5%	1.2%	4.3%	2.0%	1.5%
Mental Health Flag	0.0%	50.0%	62.8%	57.5%	44.2%	58.4%	49.5%	49.5%	53.3%	41.0%	58.7%	53.4%	48.8%
Screening and Verification Refusal													
Bowel Screening Refused	100.0%	50.0%	37.2%	35.9%	28.8%	27.1%	28.8%	23.7%	17.1%	14.9%	41.3%	26.6%	25.5%
Cervical Screening Refused	0.0%	0.0%	2.7%	4.2%	1.9%	1.6%	3.5%	3.1%	1.0%	2.4%	2.2%	2.4%	3.6%
Flu Vaccine Refused	100.0%	25.0%	24.6%	27.5%	17.3%	21.1%	22.2%	24.7%	21.0%	17.7%	19.6%	21.9%	26.4%
Wider Indicators													
Has A Carer	100.0%	25.0%	26.8%	19.2%	25.0%	24.4%	22.7%	20.6%	33.8%	18.9%	19.6%	24.0%	19.0%
Is A Carer	0.0%	0.0%	19.7%	20.4%	13.5%	23.9%	21.2%	21.6%	20.0%	16.5%	13.0%	20.3%	11.9%
MED3 Not Fit For Work (ever)	0.0%	0.0%	19.1%	21.6%	23.1%	17.0%	15.2%	11.3%	7.1%	8.0%	26.1%	14.9%	13.4%
MED3 Not Fit For Work (in Last Year)	0.0%	0.0%	4.4%	6.6%	9.6%	5.3%	5.1%	4.1%	1.4%	2.8%	4.3%	4.4%	3.5%
MED3 Not Fit For Work (in Last Six Months)	0.0%	0.0%	3.3%	4.8%	9.6%	5.3%	3.5%	3.1%	1.0%	2.0%	2.2%	3.7%	2.8%
Avg. number of eFI Deficits	16.0	10.5	14.4	14.2	13.6	14.7	14.4	13.8	13.1	13.8	13.8	14.1	13.4
eFI_Housebound	0.0%	25.0%	7.7%	4.2%	11.5%	5.7%	5.6%	6.2%	1.4%	4.4%	8.7%	5.4%	10.9%
eFI_SocialVulnerability	100.0%	25.0%	32.2%	29.9%	32.7%	37.2%	24.7%	22.7%	30.0%	24.9%	34.8%	30.6%	27.3%
People_ChildrenInPoverty	35.7	29.9	17.6	18.4	19.2		8.2		6.9	6.4		18.0	15.5
Housing_FuelPoverty	32.0	15.3	14.4	14.5	15.4	11.6	12.4	9.6	7.5	6.8		11.1	11.1
Housing_OnePersonHousehold	19.5	43.8	36.8	31.1	34.3	37.7	25.7	29.0	26.9	20.5		30.7	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 Welwyn Garden City A 21.61% 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 Welwyn Garden City A PCN is below the ICB, and the data shows higher usage of GP services.

Within this segment we can see the presence of Chronic Cardiac Disease, Chronic Respiratory Disease and Heart Disease being highlighted which chimes with the reason for admission within previous analysis for ACS conditions. It is to be noted that Hypertension is high across all deciles and higher than the ICB.

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

Hertfordshire and West Essex Integrated Care Board

Contents:

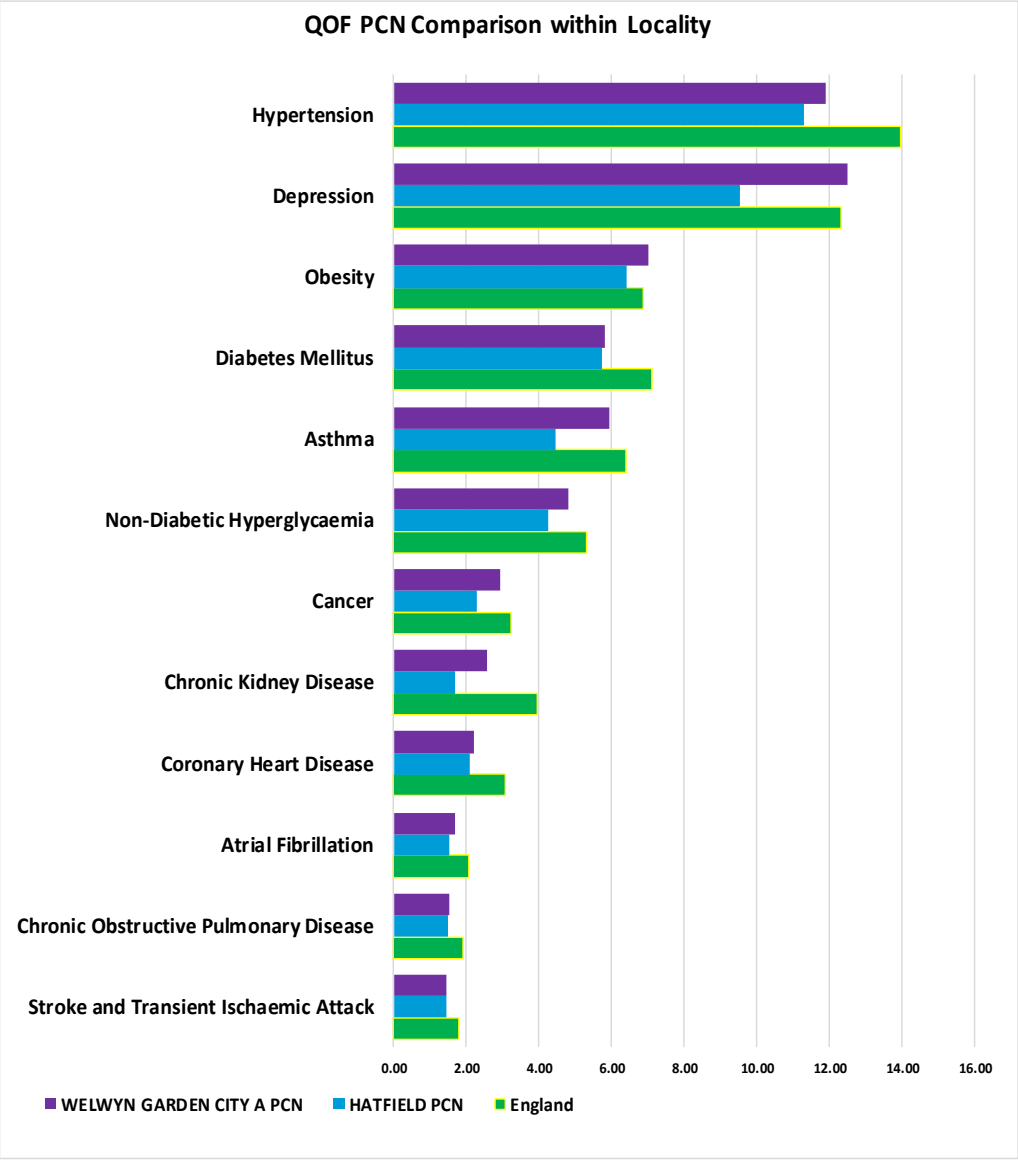
- QOF Local, Regional, & National Comparison

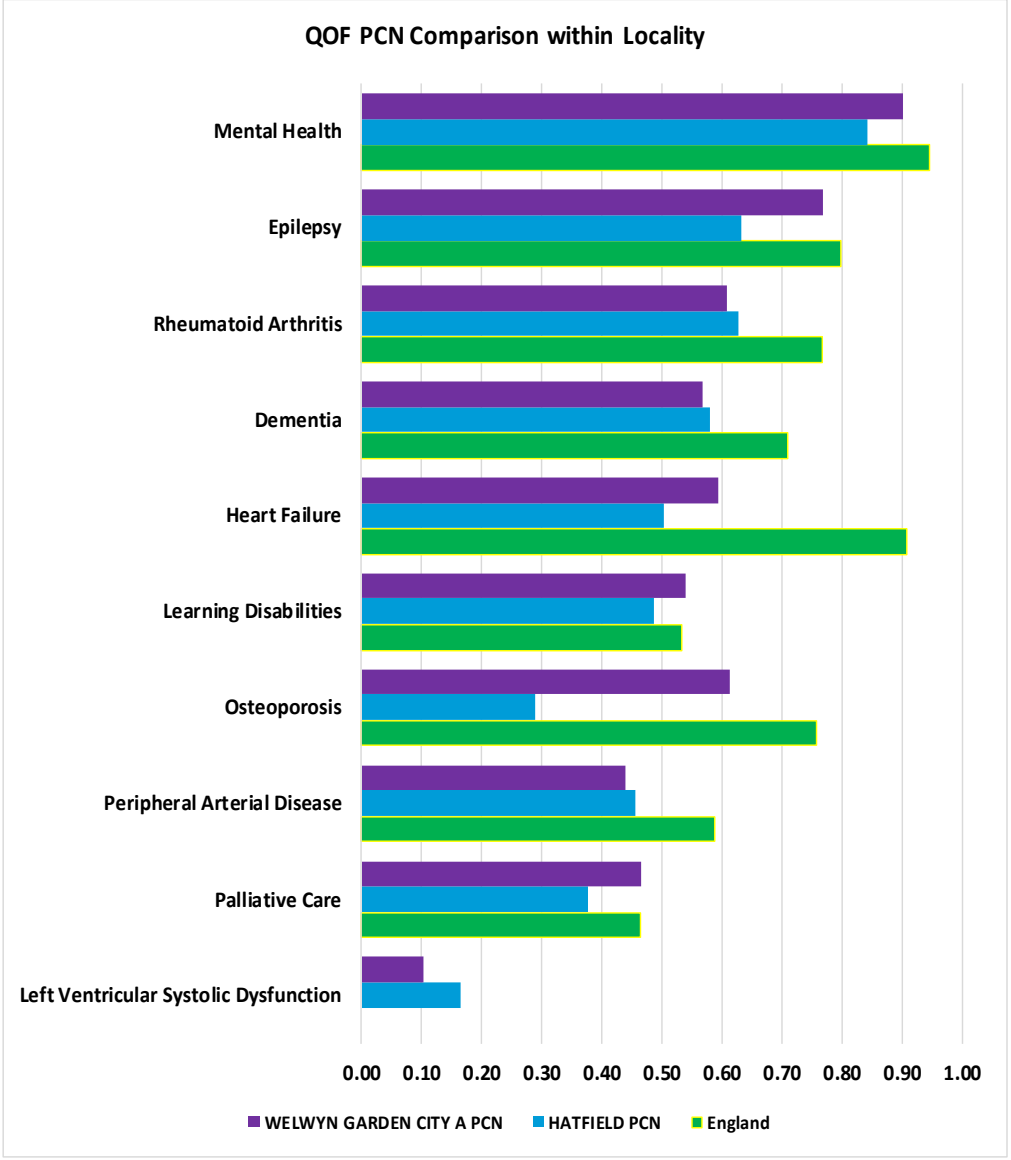
- QOF Locality & PCN Comparison

- QOF Missed Diagnoses & Admission Rates

- Admission Rates Benchmarking against ICB/Place

QOF - Locality & PCN Comparison



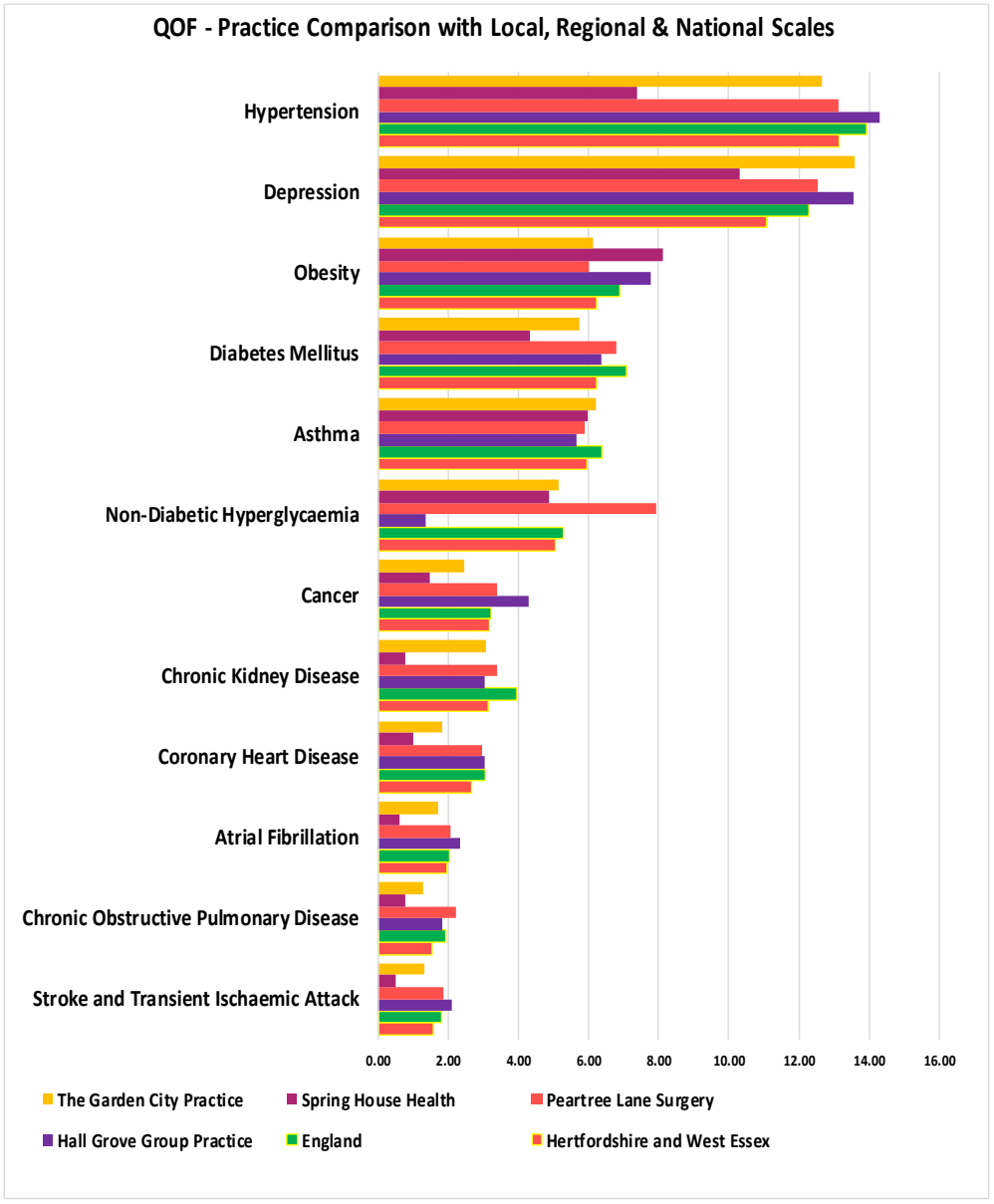


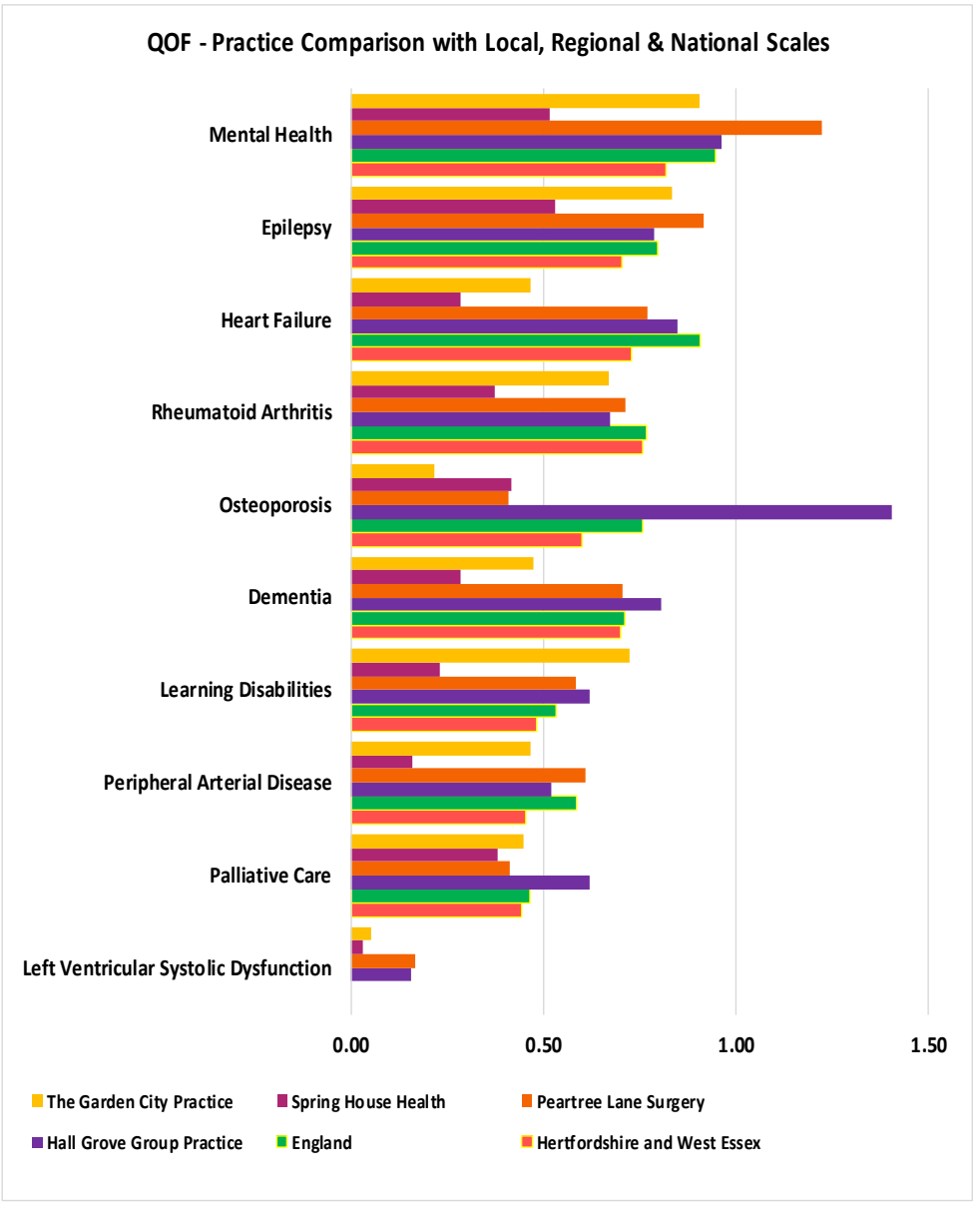
The Quality and Outcome Framework incorporates important benchmarking and scoring for all Practices across the county; we have combined a number of local, regional, and national data sets to highlight the areas that the PCN will need to consider.

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

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	53807	3353	6.23%	6.39%	6.17%		84	-34	
COPD	57962	948	1.64%	1.54%	1.49%	1.76%	-58	-87	72
Diabetes	45581	2808	6.16%	6.29%	6.39%	7.78%	59	103	736
Non-diabetic hyperglyaemia	44922	2649	5.90%	4.63%	5.87%	10.87%	-569	-12	2235
Hypertension	57962	7255	12.52%	13.25%	13.21%		427	403	
Atrial Fibrillation	57962	1107	1.91%	2.01%	2.02%	2.13%	60	65	125
Stroke and TIA	57962	970	1.67%	1.70%	1.61%		15	-37	
Coronary Heart Disease	57962	1404	2.42%	2.62%	2.65%		117	134	
Heart failure	57962	406	0.70%	0.71%	0.75%	1.19%	6	32	283
Left Ventricular Systolic Dysfunction	57962	74	0.13%	0.20%	0.30%		42	100	
Chronic Kidney Disease	44922	1239	2.76%	2.53%	3.21%		-102	202	
Peripheral Arterial Disease	57962	264	0.46%	0.46%	0.44%		1	-7	
Cancer	57962	1899	3.28%	3.33%	3.35%		31	40	
Palliative care	57962	235	0.41%	0.50%	0.43%		56	13	

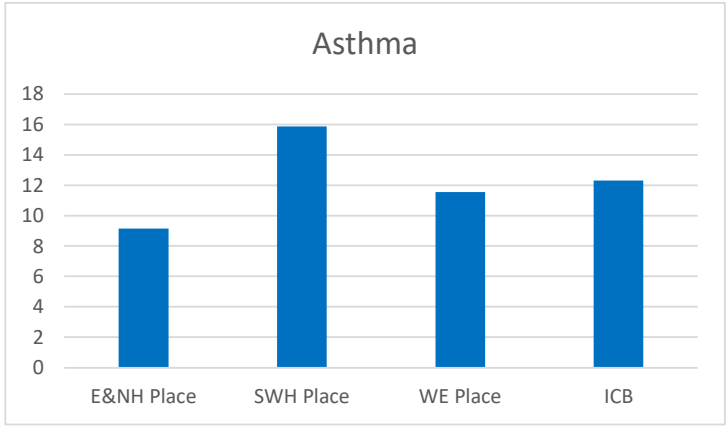
The table above shows the latest prevalence (2021/22 published August 20222) for the PCN alongside the place prevalence, ICB prevalence and the modelled prevalence for the PCN.

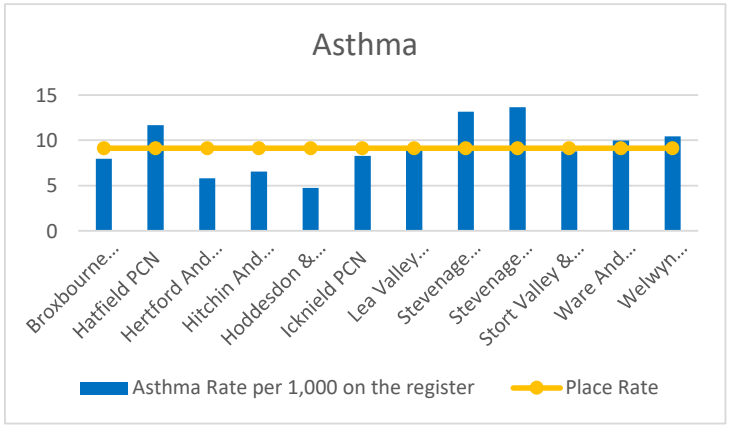
This table shows opportunities for further identification. It outlines the diagnoses to meet the place, ICB and estimated prevalence.

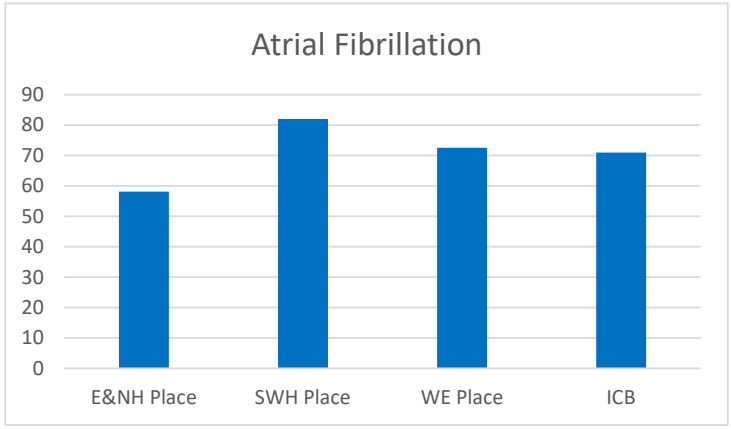
Within Ardens Manager there are case finding searches that can support PCN with identification.

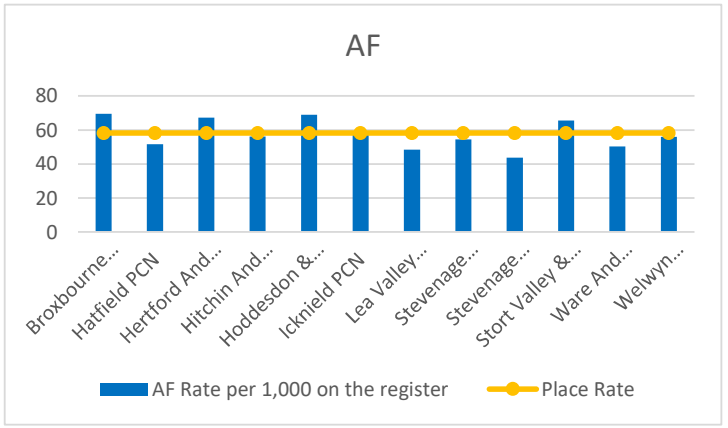
Source: QOF National Figures, HWE PHM Team

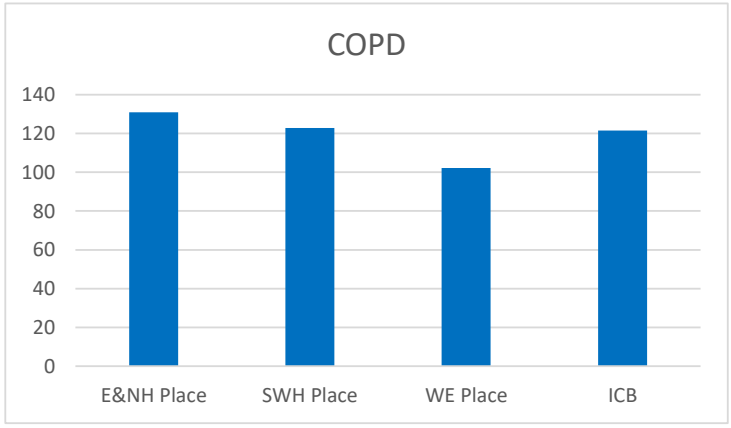
Emergency Admission Rates per 1,000 population on the Disease Register

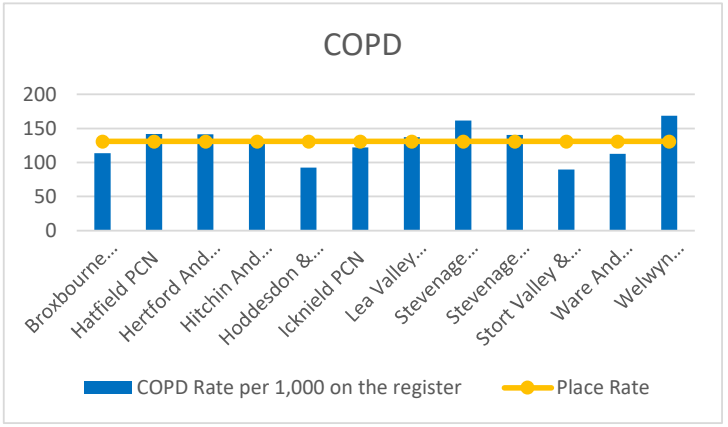












The charts on the left shows the Emergency Admissions Rates per 1,000 population on the disease register.

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

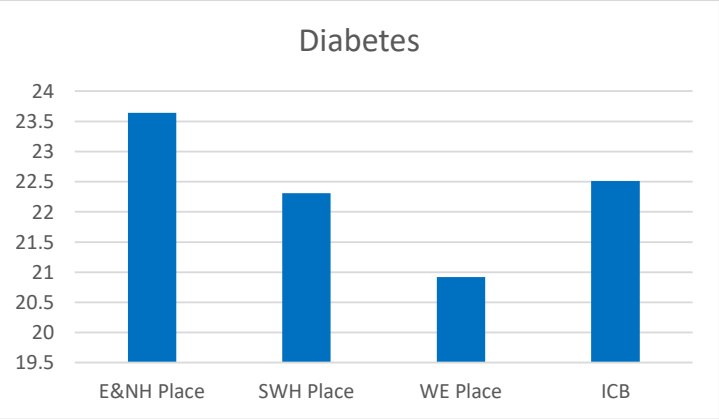
These are continued on the following place.

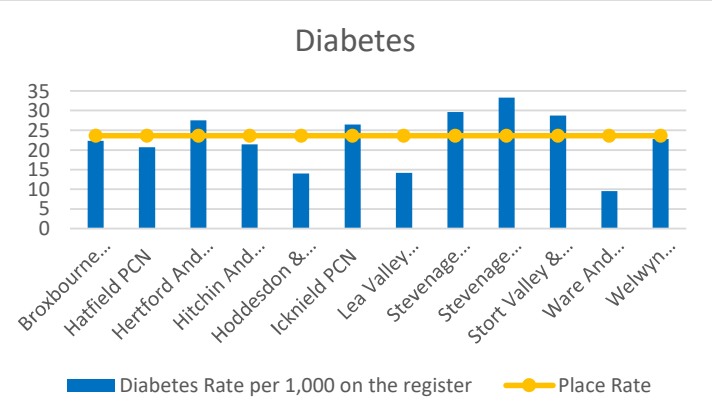
Rates may be high due to a number of factors which may include low identification.

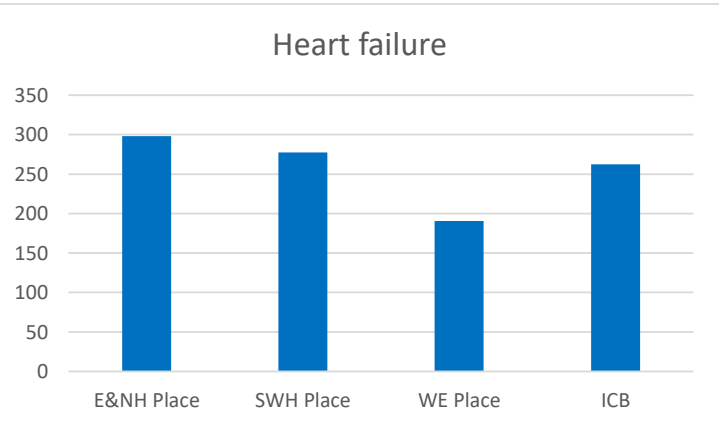
For Welwyn Garden City A the data shows higher Asthma, COPD and Heart Failure rates which was identified as a theme within the ACS analysis.

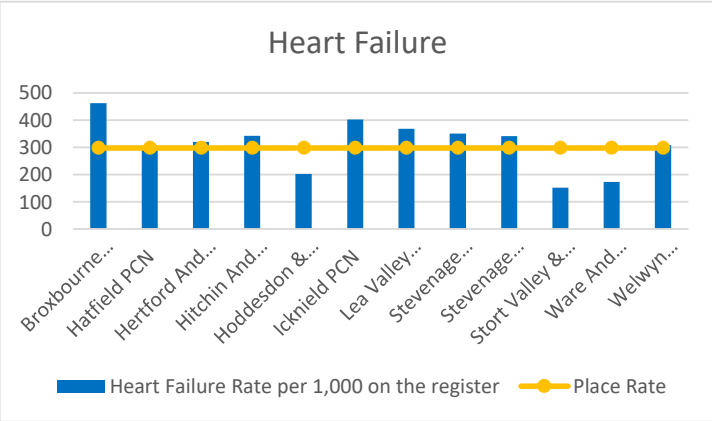
Source: HWE PHM Team, SUS data

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

Matrix Data - Ethnicity

NHS Hertfordshire and West Essex Integrated Care Board

Ethnicity Group	Other Ethnic Groups			Asian			Asian or Asian British		Black			Mixed			Other			White			Unknown			Grand Total
Complexity	Low Complexi	Middle Complexi	High Complexi	Low Complexi	Middle Complexi	High Complexi	Low Complexi	Middle Complexi	Low Complexi	Middle Complexi	High Complexi	Low Complexi	Middle Complexi	High Complexi	Low Complexi	Middle Complexi	High Complexi	Low Complexi	Middle Complexi	High Complexi	Low Complexi	Middle Complexi	High Complexi	
Overall Population Measures																								
Population	818	172		1,469	655	49	91	36	1,055	554	18	842	344	12	867	408	27	21,941	16,124	1,848	5,968	1,487	20	**54,810**
Age	34	46	76	30	47	71	33	43	29	45	62	21	34	67	27	45	65	31	50	71	33	44	73	**39**
Male %	59.8%	45.9%	20.0%	46.8%	40.6%	42.9%	63.7%	66.7%	49.7%	48.7%	55.6%	48.5%	44.5%	25.0%	52.2%	49.3%	55.6%	51.3%	44.6%	47.8%	59.1%	58.3%	45.0%	**50.0%**
IMD	6.3	6.6	5.8	6.5	6.5	6.7	6.0	6.4	5.9	5.8	6.1	6.2	6.2	5.4	6.3	6.4	6.6	6.5	6.5	6.4	6.5	6.6	7.0	**6.5**
% BAME (where recorded)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%				**16%**
Multimorbidity (acute & chronic)	0.0	1.3	6.4	0.0	1.6	6.4	0.0	1.5	0.0	1.5	5.6	0.0	1.6	6.7	0.0	1.6	6.1	0.0	1.8	6.4	0.0	1.5	6.5	**0.9**
Finance and Activity Measures																								
Spend - Total	£0.1M	£0.1M	£0.0M	£0.4M	£0.6M	£0.3M	£0.0M	£0.0M	£0.3M	£0.5M	£0.1M	£0.2M	£0.3M	£0.0M	£0.4M	£0.4M	£0.1M	£6.6M	#####	£7.6M	£0.5M	£0.4M	£0.1M	#####
PPPY - Total	£127	£367	£477	£291	£951	£5,388	£232	£188	£302	£862	£4,669	£275	£916	£4,008	£424	£1,093	£2,672	£301	£919	£4,106	£76	£301	£6,042	**£618**
Acute Elective	£24	£117	£138	£100	£431	£1,955	£73	£22	£155	£410	£956	£82	£481	£1,027	£149	£451	£1,420	£112	£445	£1,520	£17	£108	£847	**£261**
Acute Non-Elective	£39	£103	£0	£108	£333	£2,988	£78	£24	£70	£266	£3,286	£122	£275	£2,642	£186	£451	£898	£104	£292	£2,200	£14	£91	£4,827	**£234**
GP Encounters	£64	£148	£339	£84	£188	£444	£82	£142	£77	£186	£427	£71	£160	£339	£89	£191	£354	£85	£182	£386	£45	£102	£368	**£124**
Community	£0	£0	£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	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	**£0**
Social Care	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	**£0**
GP PPPY	17	42	102	21	49	114	25	41	20	50	104	18	44	87	22	51	99	21	49	105	12	29	100	**32**
Beddays PPPY - Acute EM	0	0	0	0	1	7	0	0	0	1	7	0	1	6	0	1	1	0	1	4	0	0	8	**0**
Physical Health																								
Diabetes	0.0%	25.6%	20.0%	0.0%	31.3%	65.3%	0.0%	30.6%	0.0%	23.5%	55.6%	0.0%	15.1%	58.3%	0.0%	20.8%	48.1%	0.0%	13.8%	42.7%	0.0%	10.6%	45.0%	**6.9%**
COPD	0.0%	1.2%	20.0%	0.0%	0.5%	18.4%	0.0%	0.0%	0.0%	0.0%	5.6%	0.0%	0.9%	41.7%	0.0%	1.5%	29.6%	0.0%	2.3%	32.8%	0.0%	1.3%	35.0%	**1.9%**
Chronic Respiratory Dis...	0.0%	1.7%	20.0%	0.0%	1.7%	22.4%	0.0%	2.8%	0.0%	1.3%	27.8%	0.0%	3.8%	58.3%	0.0%	2.2%	33.3%	0.0%	3.7%	38.0%	0.0%	2.0%	45.0%	**2.6%**
Hypertension	0.0%	29.7%	80.0%	0.0%	31.3%	87.8%	0.0%	22.2%	0.0%	37.5%	77.8%	0.0%	16.3%	83.3%	0.0%	30.1%	81.5%	0.0%	29.1%	78.0%	0.0%	24.8%	75.0%	**13.2%**
Obesity	3.2%	11.6%	60.0%	2.9%	8.9%	20.4%	6.6%	5.6%	5.9%	18.6%	22.2%	1.9%	9.9%	16.7%	3.0%	12.5%	29.6%	5.4%	19.8%	30.5%	2.3%	11.7%	25.0%	**10.5%**
Mental Health																								
Anxiety/Phobias	0.0%	15.7%	60.0%	0.0%	14.4%	40.8%	0.0%	22.2%	0.0%	14.6%	44.4%	0.0%	21.2%	16.7%	0.0%	20.8%	29.6%	0.0%	27.1%	45.0%	0.0%	24.4%	35.0%	**10.9%**
Depression	0.0%	16.9%	40.0%	0.0%	14.5%	28.6%	0.0%	27.8%	0.0%	17.5%	33.3%	0.0%	22.4%	41.7%	0.0%	19.9%	40.7%	0.0%	30.1%	41.7%	0.0%	26.0%	40.0%	**11.8%**
Learning Disability	0.0%	1.2%	0.0%	0.0%	1.1%	0.0%	0.0%	2.8%	0.0%	1.4%	0.0%	0.0%	3.2%	0.0%	0.0%	2.2%	0.0%	0.0%	1.5%	4.4%	0.0%	1.7%	15.0%	**0.7%**
Dementia	0.0%	0.0%	20.0%	0.0%	0.6%	8.2%	0.0%	0.0%	0.0%	0.5%	5.6%	0.0%	0.6%	16.7%	0.0%	0.5%	7.4%	0.0%	0.8%	10.1%	0.0%	1.3%	20.0%	**0.7%**
Other Characteristics																								
Housebound (eFI)	0.0%	0.0%	20.0%	0.0%	0.3%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	3.7%	0.0%	0.2%	3.8%	0.0%	0.4%	5.0%	**0.2%**
Social Vulnerability (eFI)	0.0%	1.7%	20.0%	0.0%	3.5%	28.6%	1.1%	0.0%	0.0%	4.2%	22.2%	0.4%	3.2%	8.3%	0.3%	2.9%	33.3%	0.2%	3.5%	23.2%	0.1%	1.4%	30.0%	**2.1%**
History of Smoking (Tw...	3.2%	6.4%	0.0%	1.4%	3.5%	2.0%	7.7%	11.1%	2.0%	7.0%	5.6%	2.7%	9.3%	8.3%	3.7%	10.3%	11.1%	4.0%	10.7%	14.9%	3.1%	9.5%	15.0%	**6.4%**
Not Fit for Work (In Year)	1.5%	7.6%	0.0%	1.2%	6.0%	2.0%	2.2%	0.0%	3.4%	10.8%	11.1%	1.5%	8.1%	8.3%	3.5%	8.3%	3.7%	2.0%	7.8%	6.8%	1.0%	5.8%	0.0%	**4.1%**
On a Waiting List	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%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**

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 (Multimorbidity	3c - LC (Mild Frailty)	4a - AD&C (High Complexity)	4b - AD&C - High Social Complexity	4e - AD&C (End Stage Disease)	5a - EoLFD (Severe Frailty)	5b - EoLFD (Severe Dementia)	5c - EoLFD (End of Life)	
Overall Population Measures																
Population	23,352	665	1,831	4,110	5,810	1,851	211	4,576	4,430	5,438	376	518	1,253	27	362	**54,810**
Age	30	15	21	44	45	37	47	50	41	50	58	69	75	86	76	**39**
Male %	55.8%	30.1%	55.1%	52.8%	54.8%	48.1%	54.0%	47.7%	37.1%	34.8%	45.2%	52.9%	38.9%	33.3%	40.3%	**50.0%**
IMD	6.5	6.2	6.4	6.4	6.7	6.3	6.5	6.5	6.4	6.5	6.1	6.1	6.5	8.8	7.0	**6.5**
% BAME (where recorded)	20%	22%	19%	16%	16%	10%	20%	9%	14%	11%	9%	5%	6%	0%	9%	**16%**
Multimorbidity (acute & chronic)	0.0	0.0	0.0	0.0	1.0	1.0	0.6	2.4	1.2	2.1	2.9	4.7	4.9	5.0	5.1	**0.9**
Finance and Activity Measures																
Spend - Total	£2.2M	£0.8M	£2.3M	£1.8M	£3.0M	£0.8M	£0.2M	£4.3M	£3.2M	£6.7M	£0.5M	£1.9M	£3.9M	£0.1M	£2.2M	**£33.9M**
PPPY - Total	£95	£1,208	£1,267	£450	£522	£414	£765	£942	£720	£1,229	£1,216	£3,688	£3,094	£4,837	£6,067	**£618**
Acute Elective	£28	£204	£557	£195	£245	£155	£514	£475	£315	£591	£557	£1,304	£1,214	£94	£1,863	**£261**
Acute Non-Elective	£9	£866	£574	£135	£149	£140	£95	£283	£249	£427	£370	£2,071	£1,522	£4,288	£3,709	**£234**
GP Encounters	£58	£139	£137	£120	£129	£118	£156	£184	£155	£211	£289	£314	£359	£454	£494	**£124**
Community	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	**£0**
Mental Health	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	**£0**
Social Care	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	**£0**
GP PPPY	14	36	33	31	32	31	42	45	44	61	84	71	108	100	138	**32**
Beddays PPPY - Acute EM	0	1	1	0	0	0	1	1	0	1	1	5	3	8	8	**0**
Physical Health																
Diabetes	0.0%	0.0%	0.0%	0.0%	13.4%	0.0%	11.8%	16.2%	10.4%	17.1%	25.5%	22.8%	41.6%	18.5%	28.2%	**6.9%**
COPD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	1.0%	3.8%	5.9%	59.5%	18.5%	18.5%	22.7%	**1.9%**
Chronic Respiratory Dis...	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	0.0%	4.3%	1.5%	5.2%	8.2%	65.8%	21.5%	22.2%	28.2%	**2.6%**
Hypertension	0.0%	0.0%	0.0%	0.0%	26.8%	0.0%	9.5%	31.2%	18.3%	32.1%	40.2%	57.9%	80.4%	66.7%	60.2%	**13.2%**
Obesity	0.0%	0.0%	0.0%	28.9%	12.1%	9.4%	14.7%	17.7%	16.9%	24.9%	30.1%	18.1%	35.6%	14.8%	21.5%	**10.5%**
Mental Health																
Anxiety/Phobias	0.0%	0.0%	0.0%	0.0%	0.0%	41.7%	5.2%	44.6%	17.5%	28.8%	29.8%	17.0%	39.5%	29.6%	32.0%	**10.9%**
Depression	0.0%	0.0%	0.0%	0.0%	0.0%	43.3%	5.2%	47.9%	20.7%	33.2%	21.8%	25.3%	33.2%	22.2%	23.8%	**11.8%**
Learning Disability	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	0.9%	2.3%	0.4%	1.2%	25.3%	0.6%	1.8%	0.0%	3.9%	**0.7%**
Dementia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	5.3%	2.1%	6.0%	100.0%	24.3%	**0.7%**
Other Characteristics																
Housebound (eFI)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.5%	1.4%	5.0%	3.7%	6.6%	**0.2%**
Social Vulnerability (eFI)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	51.7%	1.7%	2.0%	4.4%	26.1%	10.0%	32.4%	18.5%	25.1%	**2.1%**
History of Smoking (Tw...	0.0%	0.0%	0.0%	23.6%	5.5%	8.9%	9.0%	10.5%	10.8%	14.6%	10.4%	15.6%	10.3%	0.0%	6.1%	**6.4%**
Not Fit for Work (In Year)	0.0%	0.0%	0.0%	9.9%	2.9%	7.4%	7.1%	7.1%	8.4%	13.1%	3.5%	5.0%	4.5%	0.0%	4.4%	**4.1%**
On a Waiting List	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%	0.0%	0.0%	**0.0%**

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	Low Complexity	Middle Complexity	Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	
Overall Population Measures																	
Population	2,705	236	8	701	70	2,425	302	2,572	388		5,789	1,212		18,859	17,572	1,968	**54,810**
Age	31	36	81	24	34	23	31	26	34	54	29	38	72	34	50	71	**39**
Male %	67.8%	77.5%	50.0%	60.3%	68.6%	58.6%	67.5%	63.4%	66.8%	100.0%	57.0%	62.1%	0.0%	46.7%	43.2%	47.7%	**50.0%**
IMD	6.2	6.2	6.9	6.2	6.6	6.4	6.0	6.5	6.4	3.0	6.5	6.5	4.5	6.5	6.5	6.4	**6.5**
% BAME (where recorded)	30%	24%	13%	23%	14%	21%	17%	19%	14%		18%	13%	0%	18%	12%	6%	**16%**
Multimorbidity (acute & chronic)	0.0	1.3	6.9	0.0	1.5	0.0	1.3	0.0	1.3	5.0	0.0	1.3	5.5	0.0	1.8	6.4	**0.9**
Finance and Activity Measures																	
Spend - Total	£0.0M	£0.0M	£0.0M	£0.0M	£0.0M	£0.1M	£0.0M	£0.1M	£0.0M	£0.0M	£0.5M	£0.1M	£0.0M	£7.7M	£17.0M	£8.1M	**£33.9M**
PPPY - Total	£15	£102	£4,346	£11	£8	£25	£19	£50	£71	£12	£92	£118	£89	£411	£968	£4,139	**£618**
Acute Elective	£5	£58	£18	£3	£0	£7	£4	£15	£23	£0	£30	£46	£46	£151	£463	£1,520	**£261**
Acute Non-Elective	£9	£44	£4,328	£3	£4	£7	£4	£15	£29	£0	£27	£37	£0	£142	£310	£2,230	**£234**
GP Encounters	£0	£0	£0	£5	£4	£12	£11	£21	£19	£12	£35	£36	£43	£119	£195	£389	**£124**
Community	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	**£0**
Mental Health	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	**£0**
Social Care	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	**£0**
GP PPPY	0	0	0	1	1	2	2	4	4	4	8	8	9	30	52	105	**32**
Beddays PPPY - Acute EM	0	0	13	0	0	0	0	0	0	0	0	0	0	0	1	4	**0**
Physical Health																	
Diabetes	0.0%	5.1%	25.0%	0.0%	1.4%	0.0%	5.6%	0.0%	3.9%	0.0%	0.0%	6.8%	0.0%	0.0%	15.9%	43.7%	**6.9%**
COPD	0.0%	0.4%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	100.0%	0.0%	2.3%	32.2%	**1.9%**
Chronic Respiratory Dis...	0.0%	2.1%	37.5%	0.0%	1.4%	0.0%	1.7%	0.0%	1.3%	0.0%	0.0%	2.4%	100.0%	0.0%	3.6%	37.6%	**2.6%**
Hypertension	0.0%	16.9%	75.0%	0.0%	17.1%	0.0%	8.9%	0.0%	12.1%	0.0%	0.0%	13.4%	50.0%	0.0%	30.8%	78.4%	**13.2%**
Obesity	0.7%	2.1%	0.0%	0.3%	7.1%	0.9%	3.6%	0.9%	5.7%	0.0%	2.1%	5.0%	0.0%	7.0%	20.1%	30.3%	**10.5%**
Mental Health																	
Anxiety/Phobias	0.0%	22.9%	37.5%	0.0%	28.6%	0.0%	22.2%	0.0%	19.3%	0.0%	0.0%	21.2%	50.0%	0.0%	26.3%	44.5%	**10.9%**
Depression	0.0%	28.4%	37.5%	0.0%	24.3%	0.0%	23.2%	0.0%	20.1%	100.0%	0.0%	22.1%	100.0%	0.0%	29.2%	41.2%	**11.8%**
Learning Disability	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.7%	0.0%	0.8%	0.0%	0.0%	0.7%	0.0%	0.0%	1.6%	4.3%	**0.7%**
Dementia	0.0%	2.1%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.9%	10.1%	**0.7%**
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%	0.1%	0.0%	0.0%	0.3%	3.8%	**0.2%**
Social Vulnerability (eFI)	0.1%	0.4%	12.5%	0.1%	0.0%	0.1%	0.3%	0.2%	0.3%	0.0%	0.1%	0.9%	0.0%	0.2%	3.6%	23.5%	**2.1%**
History of Smoking (Tw...	1.9%	8.1%	0.0%	1.0%	10.0%	1.3%	5.0%	2.0%	4.9%	0.0%	2.5%	4.8%	50.0%	4.8%	10.8%	14.4%	**6.4%**
Not Fit for Work (In Year)	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	0.3%	0.0%	0.2%	0.7%	0.0%	3.1%	8.6%	6.6%	**4.1%**
On a Waiting List	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%	0.0%	0.0%	0.0%	**0.0%**

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	Not known	
Overall Population Measures																					
Population	8,202	13,741	3,490	415	3,722	6,169	1,581	299	2,876	4,815	1,257	269	1,838	3,408	834	252	556	852	188	46	**54,810**
Age	31	28	27	35	47	42	40	42	49	45	42	41	54	52	48	48	79	74	72	71	**39**
Male %	53.8%	55.4%	55.8%	63.9%	53.1%	53.2%	51.6%	58.5%	43.6%	42.1%	43.1%	44.2%	36.7%	37.6%	34.5%	36.9%	36.5%	38.1%	46.3%	58.7%	**50.0%**
IMD	9.1	5.8	3.0		9.1	5.8	3.0		9.2	5.8	3.0		9.2	5.8	3.0		9.3	5.8	3.0		**6.5**
% BAME (where recorded)	17%	21%	23%	17%	13%	16%	16%	18%	11%	13%	13%	13%	9%	10%	12%	11%	7%	6%	8%	9%	**16%**
Multimorbidity (acute & chronic)	0.0	0.0	0.0	0.0	0.7	0.6	0.6	0.6	1.8	1.8	1.7	1.7	2.2	2.5	2.3	2.5	4.8	5.0	5.5	5.6	**0.9**
Finance and Activity Measures																					
Spend - Total	£1.7M	£2.8M	£0.7M	£0.1M	£1.7M	£3.1M	£0.7M	£0.1M	£2.3M	£4.1M	£1.1M	£0.2M	£2.3M	£5.1M	£1.3M	£0.4M	£2.1M	£3.1M	£0.7M	£0.2M	**£33.9M**
Spend - PPPY - Total	£212	£204	£207	£154	£463	£496	£468	£406	£809	£846	£852	£697	£1,252	£1,492	£1,522	£1,573	£3,750	£3,688	£3,924	£5,199	**£618**
Acute Elective	£77	£68	£65	£38	£208	£221	£197	£208	£417	£405	£350	£322	£644	£631	£636	£914	£1,374	£1,325	£1,314	£1,270	**£261**
Acute Non-Elective	£67	£72	£79	£65	£130	£149	£154	£96	£224	£270	£332	£226	£398	£633	£646	£420	£1,993	£1,974	£2,195	£3,534	**£234**
GP Encounters	£69	£65	£63	£51	£125	£126	£117	£103	£168	£172	£170	£148	£210	£227	£240	£240	£383	£389	£416	£395	**£124**
Community	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	**£0**
Mental Health	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	**£0**
Social Care	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	**£0**
GP PPPY	16	15	16	14	32	32	30	29	45	44	45	42	60	64	67	69	111	114	122	113	**32**
Beddays PPPY - Acute EM	0	0	0	0	0	0	0	1	0	0	1	0	1	1	2	1	4	4	5	5	**0**
Physical Health																					
Diabetes	0.0%	0.0%	0.0%	0.0%	6.4%	6.5%	7.7%	6.4%	12.3%	13.8%	13.8%	13.0%	15.8%	18.7%	18.9%	23.8%	30.9%	42.0%	44.7%	30.4%	**6.9%**
COPD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	2.4%	2.2%	1.5%	6.8%	9.4%	8.6%	8.3%	16.0%	20.1%	22.9%	34.8%	**1.9%**
Chronic Respiratory Dis...	0.0%	0.0%	0.0%	0.0%	0.9%	1.2%	0.9%	0.0%	2.4%	3.1%	2.9%	2.2%	8.4%	11.3%	10.8%	8.7%	19.4%	23.4%	28.2%	37.0%	**2.6%**
Hypertension	0.0%	0.0%	0.0%	0.0%	17.1%	12.3%	8.5%	9.0%	28.1%	24.3%	19.5%	14.5%	37.1%	35.8%	27.0%	26.6%	75.5%	75.5%	77.7%	73.9%	**13.2%**
Obesity	0.0%	0.0%	0.0%	0.0%	16.3%	18.1%	18.5%	16.7%	15.9%	18.2%	16.6%	16.4%	20.8%	26.6%	24.1%	27.8%	25.0%	35.1%	36.7%	45.7%	**10.5%**
Mental Health																					
Anxiety/Phobias	0.0%	0.0%	0.0%	0.0%	6.6%	6.6%	6.4%	7.0%	28.4%	31.0%	32.8%	39.0%	23.2%	28.7%	30.8%	40.5%	34.7%	37.6%	44.7%	47.8%	**10.9%**
Depression	0.0%	0.0%	0.0%	0.0%	5.4%	7.2%	8.3%	8.4%	30.1%	35.0%	35.9%	44.6%	25.7%	33.1%	38.0%	39.7%	25.5%	33.3%	34.0%	39.1%	**11.8%**
Learning Disability	0.0%	0.0%	0.0%	0.0%	0.3%	0.7%	0.4%	0.0%	1.0%	1.3%	2.5%	0.7%	1.4%	2.2%	6.1%	4.0%	1.8%	1.8%	5.3%	4.3%	**0.7%**
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%	3.2%	2.8%	1.7%	1.6%	18.5%	8.1%	6.9%	10.9%	**0.7%**
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%	0.5%	0.7%	0.6%	0.8%	3.6%	5.8%	8.0%	8.7%	**0.2%**
Social Vulnerability (eFI)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	3.5%	2.6%	1.5%	5.5%	6.9%	5.4%	3.6%	26.4%	32.6%	32.4%	34.8%	**2.1%**
History of Smoking (Tw...	0.0%	0.0%	0.0%	0.0%	8.4%	12.9%	17.5%	23.7%	6.8%	10.7%	16.0%	23.4%	8.3%	15.0%	21.8%	27.4%	5.9%	9.3%	14.9%	23.9%	**6.4%**
Not Fit for Work (In Year)	0.0%	0.0%	0.0%	0.0%	4.2%	6.6%	7.5%	10.7%	5.8%	8.1%	9.7%	11.5%	9.0%	12.5%	12.5%	22.2%	2.5%	5.8%	4.3%	4.3%	**4.1%**
On a Waiting List	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%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**

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 / Deprivation	Hall Grove Group Practice				Peartree Lane Surgery				Spring House Health				The Garden City Practice				Grand Total
	Low Deprivation	Middle Deprivation	High Deprivation	Not known	Low Deprivation	Middle Deprivation	High Deprivation	Not known	Low Deprivation	Middle Deprivation	High Deprivation	Not known	Low Deprivation	Middle Deprivation	High Deprivation	Not known	
Overall Population Measures																	
Population	4,714	7,887	1,399	32	5,567	10,158	4,248	1,136	2,327	5,640	829	82	4,586	5,300	874	31	54,810
Age	44	41	38	28	43	40	36	43	34	32	32	37	39	39	34	30	39
Male %	49.3%	49.4%	48.1%	40.6%	49.9%	50.6%	50.6%	53.4%	48.5%	51.8%	50.5%	53.7%	49.8%	48.4%	50.3%	48.4%	50.0%
IMD	9.1	5.9	3.0		9.2	5.7	3.0		9.1	5.7	2.8		9.2	6.0	3.0		6.5
% BAME (where recorded)	12%	15%	18%	8%	11%	12%	16%	14%	22%	25%	21%	19%	13%	16%	22%	25%	16%
Multimorbidity (acute & chronic)	0.6	0.6	0.6	0.3	1.0	1.1	0.9	1.2	0.7	0.6	0.7	0.8	0.9	1.1	0.9	0.5	0.9
Finance and Activity Measures																	
Spend - Total	£2.9M	£4.8M	£0.8M	£0.0M	£3.5M	£6.8M	£2.7M	£0.9M	£1.4M	£2.9M	£0.5M	£0.0M	£2.4M	£3.7M	£0.5M	£0.0M	£33.9M
PPPY - Total	£624	£607	£594	£814	£631	£669	£639	£811	£581	£511	£651	£546	£517	£700	£523	£513	£618
Acute Elective	£289	£253	£254	£322	£285	£284	£246	£371	£214	£193	£232	£229	£241	£294	£187	£89	£261
Acute Non-Elective	£208	£227	£213	£359	£229	£266	£278	£307	£219	£189	£268	£183	£164	£282	£219	£311	£234
GP Encounters	£127	£127	£128	£133	£117	£119	£115	£133	£149	£129	£151	£134	£112	£124	£117	£113	£124
Community	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Mental Health	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Social Care	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
GP PPPY	19	19	19	20	33	34	33	38	43	38	44	39	39	42	40	38	32
Beddays PPPY - Acute EM	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	6	0
Physical Health																	
Diabetes	3.4%	3.7%	4.0%	3.1%	8.2%	9.6%	8.6%	10.8%	5.8%	6.0%	6.3%	4.9%	6.6%	8.5%	7.2%	0.0%	6.9%
COPD	1.5%	1.7%	2.1%	0.0%	2.0%	2.8%	2.3%	3.4%	0.7%	1.2%	1.0%	2.4%	1.1%	2.4%	0.9%	0.0%	1.9%
Chronic Respiratory Dis...	2.1%	2.3%	2.7%	0.0%	2.9%	3.6%	2.9%	3.8%	1.4%	1.9%	2.1%	2.4%	1.6%	3.0%	1.8%	0.0%	2.6%
Hypertension	8.6%	8.3%	6.1%	0.0%	15.9%	14.3%	10.7%	13.6%	9.4%	7.9%	8.0%	13.4%	22.6%	23.4%	16.5%	6.5%	13.2%
Obesity	1.8%	2.4%	2.9%	9.4%	9.6%	12.1%	11.4%	15.1%	10.2%	11.6%	13.1%	12.2%	15.8%	21.4%	15.6%	3.2%	10.5%
Mental Health																	
Anxiety/Phobias	5.9%	7.1%	7.9%	6.3%	11.9%	14.0%	12.9%	20.7%	11.3%	9.6%	11.6%	12.2%	10.4%	12.7%	11.6%	9.7%	10.9%
Depression	5.5%	7.4%	8.6%	3.1%	11.1%	14.1%	14.7%	21.4%	9.2%	9.9%	11.5%	15.9%	12.9%	18.1%	14.2%	19.4%	11.8%
Learning Disability	0.3%	0.5%	0.4%	0.0%	0.5%	0.7%	1.8%	1.1%	0.5%	0.7%	0.8%	0.0%	0.5%	0.9%	1.1%	3.2%	0.7%
Dementia	1.0%	0.6%	0.4%	0.0%	1.5%	0.7%	0.4%	0.7%	0.5%	0.3%	0.4%	1.2%	0.5%	0.6%	0.5%	0.0%	0.7%
Other Characteristics																	
Housebound (eFI)	0.0%	0.0%	0.0%	0.0%	0.2%	0.4%	0.4%	0.5%	0.0%	0.1%	0.1%	0.0%	0.3%	0.4%	0.3%	0.0%	0.2%
Social Vulnerability (eFI)	0.3%	0.4%	0.6%	0.0%	2.4%	2.8%	2.1%	2.3%	3.7%	3.3%	3.1%	3.7%	1.9%	3.4%	1.6%	0.0%	2.1%
History of Smoking (Tw...	0.0%	0.0%	0.0%	0.0%	5.9%	10.1%	12.8%	18.1%	5.8%	7.4%	9.8%	6.1%	5.1%	8.5%	7.4%	9.7%	6.4%
Not Fit for Work (In Year)	0.0%	0.0%	0.0%	0.0%	4.1%	6.5%	5.9%	10.1%	4.1%	5.5%	6.3%	4.9%	3.9%	5.6%	5.5%	6.5%	4.1%
On a Waiting List	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%	0.0%	0.0%	0.0%	0.0%

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

NHS Hertfordshire and West Essex Integrated Care Board

x% also have

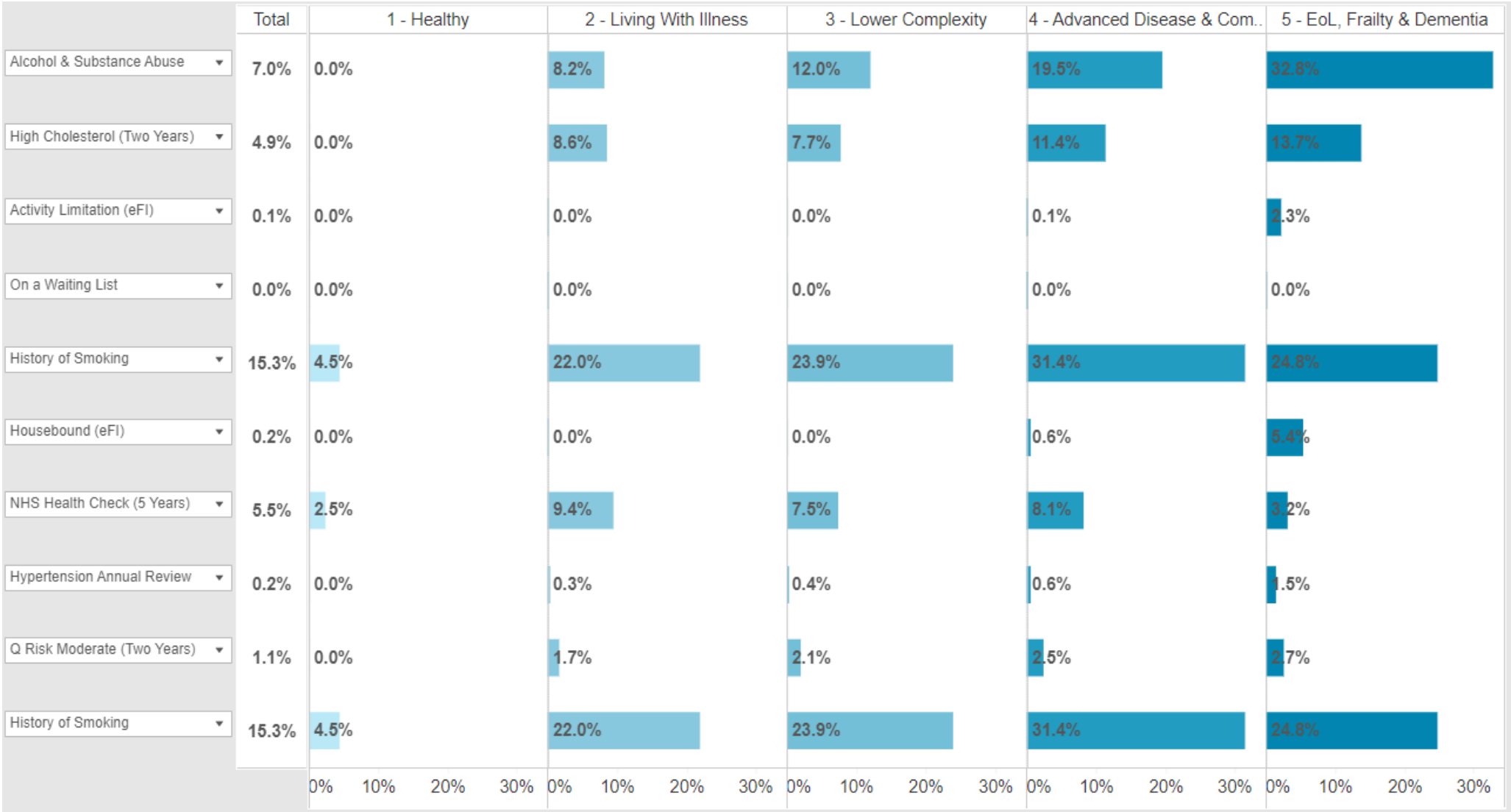
For people with this condition

Initial Condition	Other Conditions												
	Alzheimers Disease	Asthma	COPD	Heart Failure	Anxiety	Autism Spectrum Disorder	Dementia	Alcohol Abuse	ABCD Prescription	Anti-Depressive Prescription	Activity Limitation (eFI)	Housebound (eFI)	No Other Condition
Alzheimers Disease		13%	12%	9%	24%	2%	90%	5%	40%	33%	1%	5%	5%
Asthma	0%		7%	2%	20%	2%	1%	2%	15%	24%	0%	0%	49%
COPD	2%	37%		12%	29%	0%	4%	8%	49%	33%	1%	3%	0%
Heart Failure	3%	20%	22%		29%	1%	8%	6%	80%	27%	2%	5%	0%
Anxiety	1%	19%	5%	3%		2%	2%	5%	20%	51%	0%	1%	19%
Autism Spectrum Disorder	1%	17%	1%	1%	19%		1%	0%	5%	16%	0%	1%	42%
Dementia	43%	13%	11%	12%	28%	2%		6%	42%	35%	0%	5%	6%
Alcohol Abuse	1%	16%	10%	4%	36%	0%	2%		30%	41%	0%	1%	21%
ABCD Prescription	1%	14%	8%	7%	20%	0%	2%	4%		26%	1%	1%	23%
Anti-Depressive Prescription	1%	19%	5%	2%	44%	1%	2%	5%	22%		0%	1%	22%
Activity Limitation (eFI)	2%	21%	28%	23%	45%	2%	2%	6%	68%	43%		15%	2%
Housebound (eFI)	6%	20%	22%	23%	45%	4%	15%	6%	63%	40%	6%		9%

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



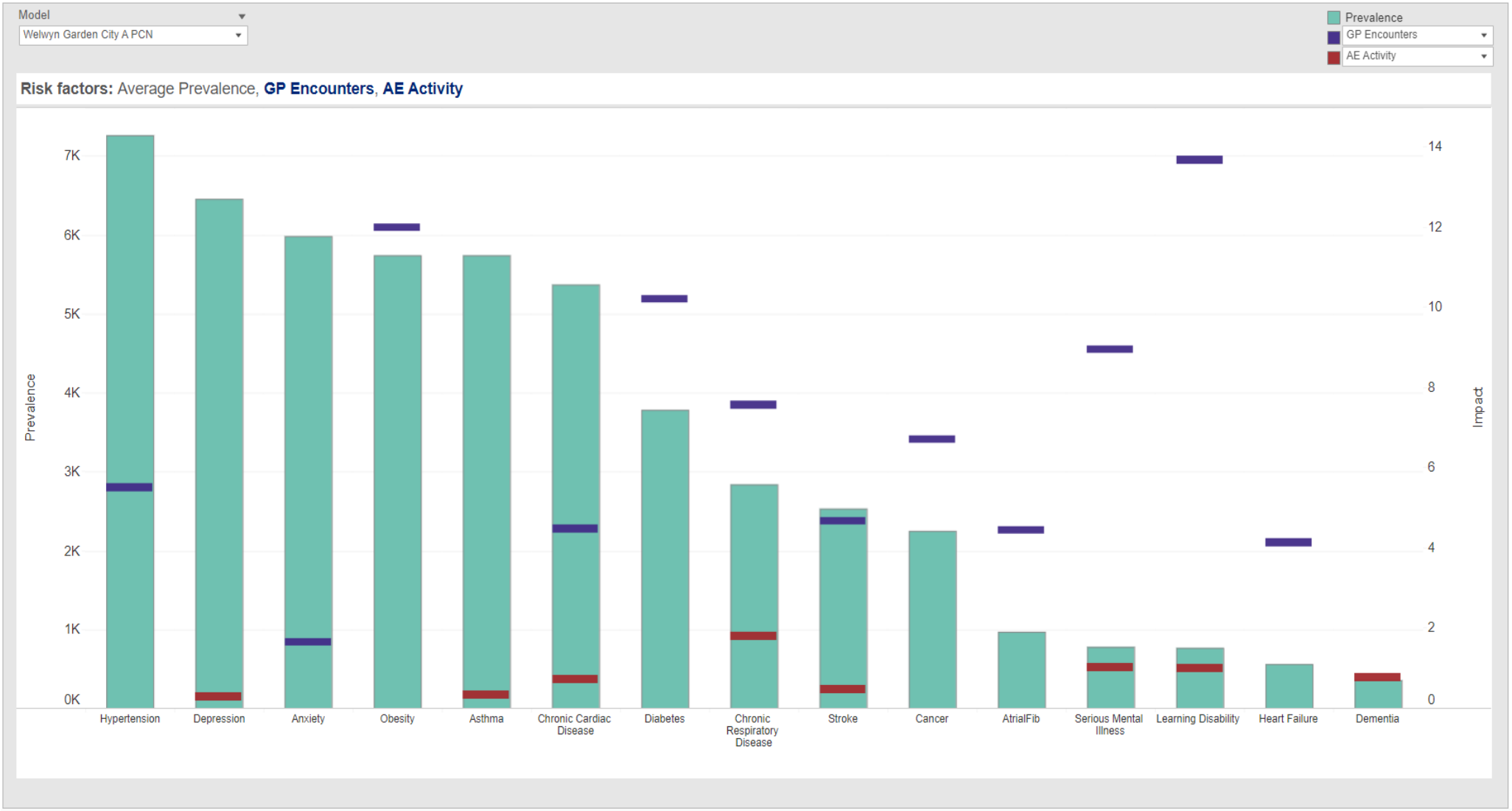
This chart gives a comparison across various selected risk conditions or characteristics, within the health segments of the PCN's population.

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

Hertfordshire and West Essex Integrated Care Board



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

Public Health - Cancer Screening

Hertfordshire and West Essex Integrated Care Board

Cancer Screening

	Period	HERTFORDSHIRE AND WEST ESSEX	WELWYN GARDEN CITY A PCN	PEARTREE LANE SURGERY	THE GARDEN CITY PRACTICE	HALL GROVE GROUP PRACTICE	SPRING HOUSE HEALTH
Women, aged 25-49, with a record of cervical screening in the last 3.5 yrs (denominator includes PCAs)	2020/21	73.3	78.4	74.7	77.7	82.2	80.7
Women, aged 50-64, with a record of cervical screening in the last 5.5 yrs (denominator includes PCAs)	2020/21	78.2	78.4	75.6	76	81.8	82.7
Persons, 25-49, attending cervical screening within target period (3.5 year coverage, %)	2020/21	73	78.3	75.3	76.9	82	79.9
Persons, 50-64, attending cervical screening within target period (5.5 year coverage, %)	2020/21	77	77.7	75.5	76.3	80.6	79.5
Persons, 50-70, screened for breast cancer in last 36 months (3 year coverage, %)	2020/21	63.9	69.7	72.3	65.5	72.5	58.2
Persons, 50-70, screened for breast cancer within 6 months of invitation (Uptake, %)	2020/21	61.3	60.1	35.1	68.7	58.1	48.8
Persons, 60-74, screened for bowel cancer within 6 months of invitation (Uptake, %)	2020/21	72.1	73.4	72.3	72.9	76.4	67.3
Persons, 60-74, screened for bowel cancer in last 30 months (2.5 year coverage, %)	2020/21	68.8	70.7	68.5	71.6	72.8	71.4

Similar Significantly Worse Significantly Better

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Hertfordshire Public Health Evidence & Intelligence Epidemiology

Hertfordshire

Source: Public Health Team

Public Health - Mortality

NHS Hertfordshire and West Essex Integrated Care Board

Mortality

	Period	Hertfordshire CCGs	NHS HERTFORDSHIRE AND WEST ESSEX ICB - 06K	WELWYN GARDEN CITY A PCN
Percentage of deaths that occur at home (All age)	2021	25.3	26.8	28.3
PYLL - Neoplasms	2021	505	509.8	540.3
PYLL - Diseases of the circulatory system	2021	737.5	782.8	962.1
PYLL - All Cause	2021	1537.7	1574	1772.5
Premature Mortality - Respiratory Disease	2021	19.2	19.5	25
Premature Mortality - Liver Disease	2021	14.6	14.6	19.5
Premature Mortality - Cardiovasular Disease	2021	53.8	56.1	61.6
Premature Mortality - Cancer	2021	98.5	99.9	110.6
Premature Mortality - All Cause	2021	269.6	276.1	282.6

Similar Significantly Worse Significantly Better

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Hertfordshire Public Health Evidence & Intelligence Epidemiology

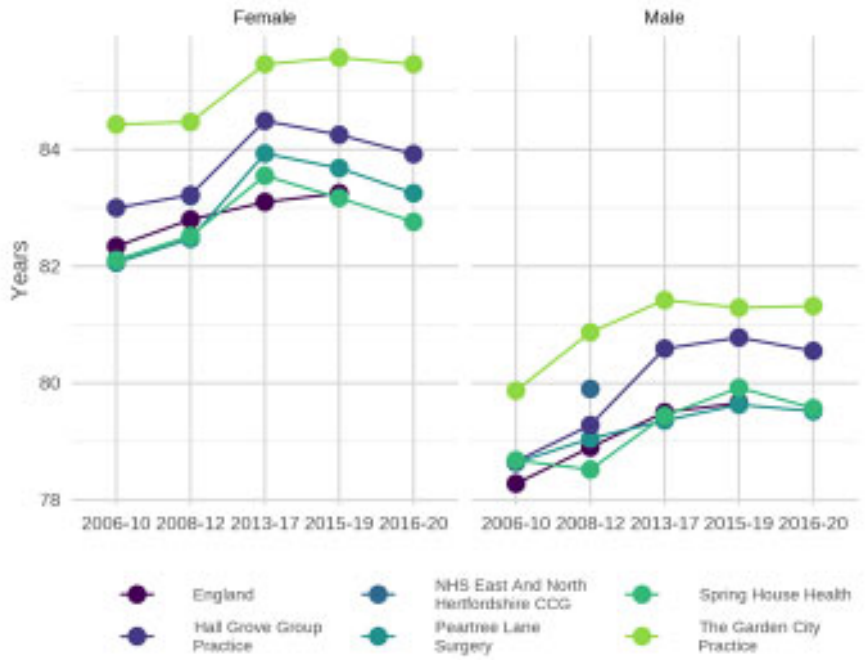
Hertfordshire

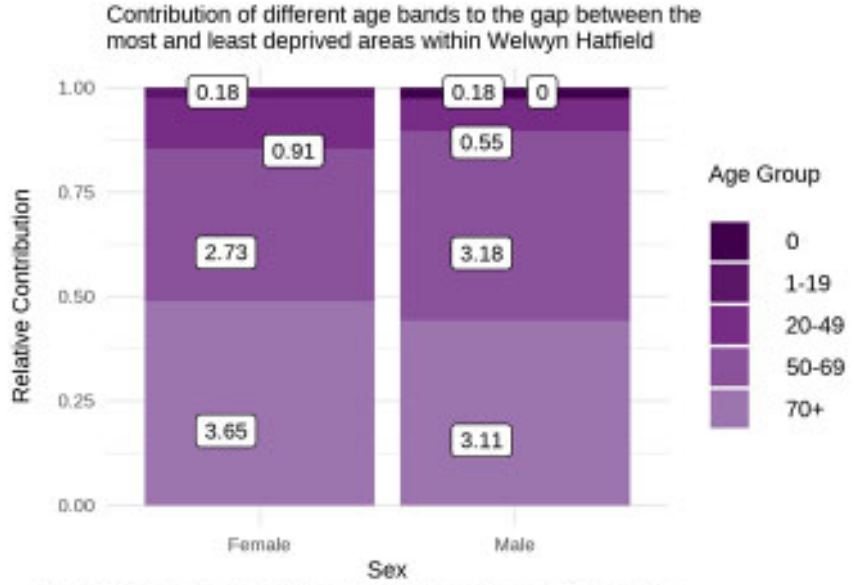
Source: Public Health Team

Public Health - Life Expectancy

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 7.3 years and for males is 7.02 years.

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Hertfordshire Public Health Evidence & Intelligence Epidemiology

Hertfordshire

Source: Public Health Team

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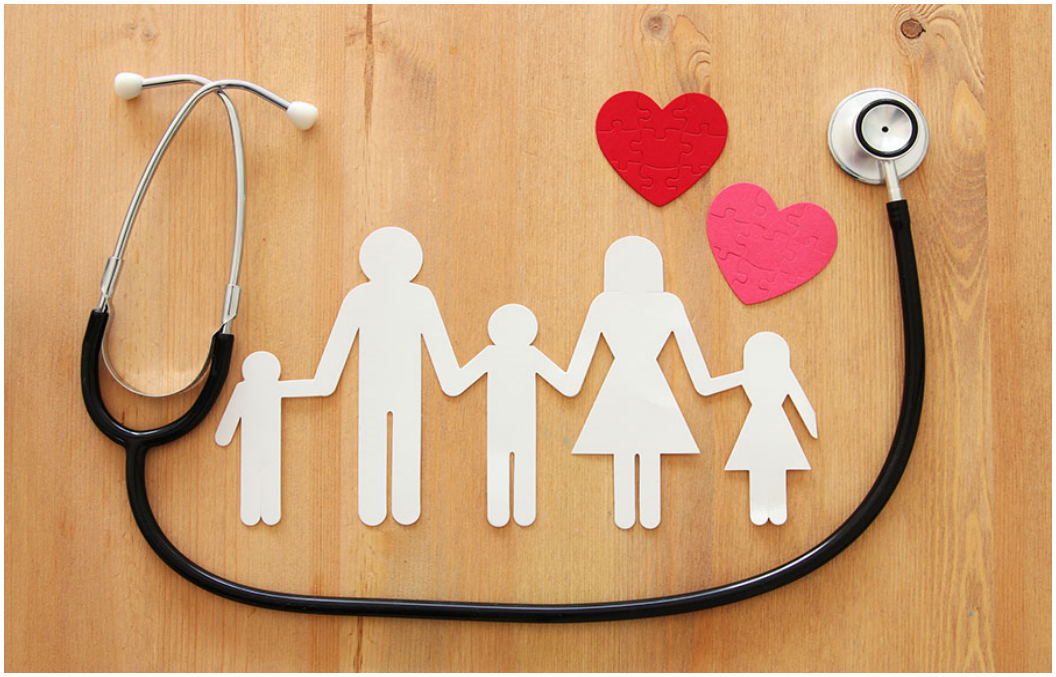

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