Population Health Management

Using linked data to change the way we work

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Public Health & Communities

Suffolk County Council

What we'll cover today:

- An overview of Suffolk, our population and key data
- Why it was crucial to link our data during the COVID-19 pandemic
- How we are continuing to develop linked data as part of a Population Health Management (PHM) approach
- What PHM can tell us about our population which is new
- Impacts, outcomes and opportunities for people needing adult social care

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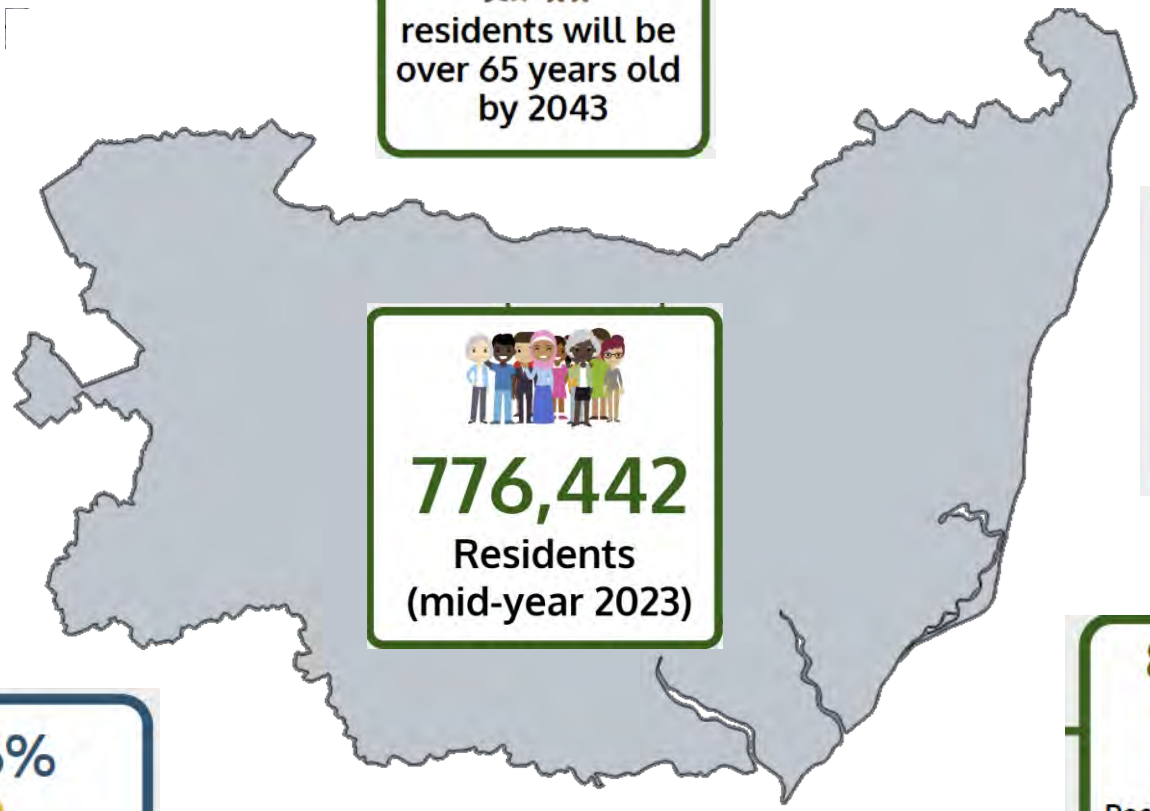
Suffolk Overview

29,633
people had a diagnosis of coronary heart disease (2022/23)

1 in 3
residents will be over 65 years old by 2043

14%
of adults smoke (2022)



776,442
Residents (mid-year 2023)

8.9%
of residents provide weekly unpaid care (2021)

16,029
(12.2%)
children in absolute low income families (2022/23)

67.1%
of adults are overweight or obese (2022/23)

80,000
People living in the 20% most deprived areas (Core20PLUS5)

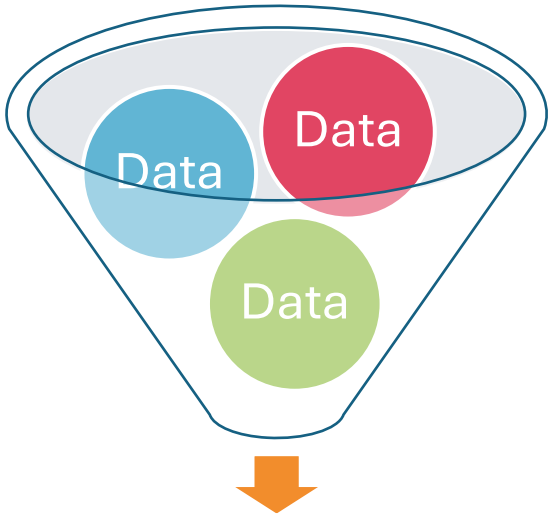
0.6%
diagnosed with learning disabilities (2022/23)

11.5%
of households in fuel poverty (2022)

When the COVID-19 pandemic began, local authorities needed to put in place new services to support communities

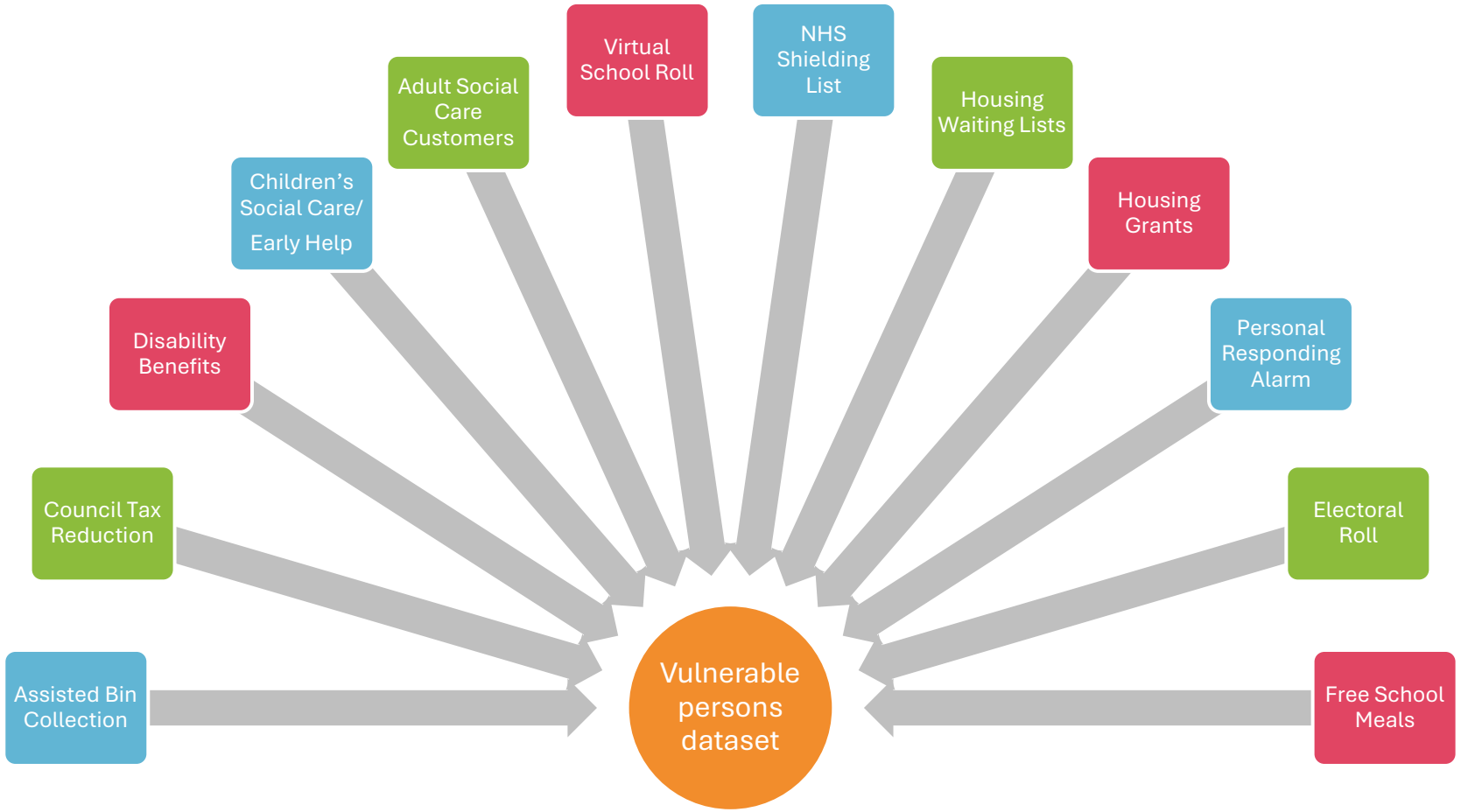
We realised we held a lot of data about the people of Suffolk but most of this data was held in silos…

In order to identify the members of our community who most needed support, it was necessary to link our data



Linked dataset

We linked over 40 datasets to identify individuals and families who may be clinically, socially and financially vulnerable



- In the absence of a unique identifier across systems, a matching process was created using a combination of name, address and date of birth
- The data was combined into one single dataset and flags were added for various vulnerability indicators
- 25,000 proactive calls were made to the most vulnerable to signpost to services and ensure support could be put in place
- Could have taken 3 years – we did it in 3 months

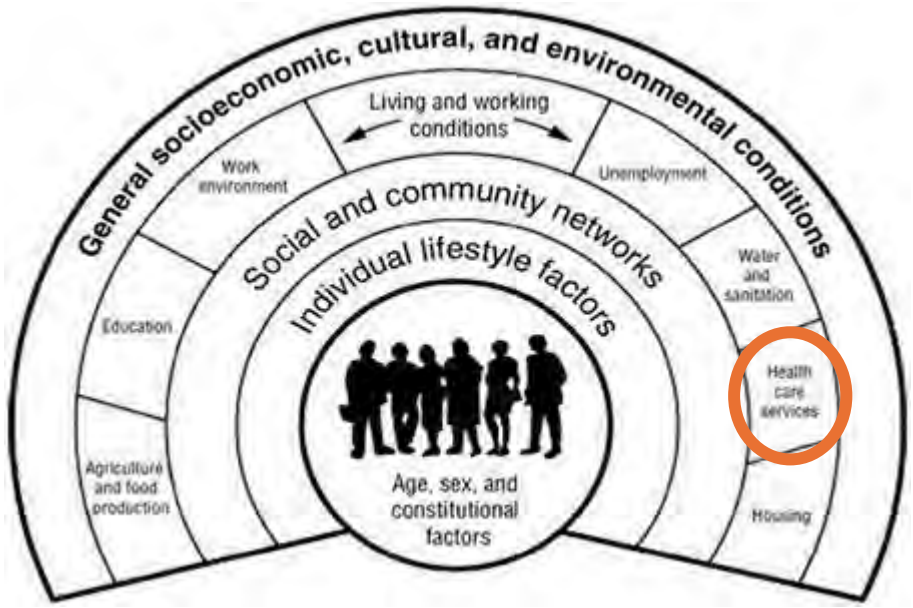
More recently, the need be more proactive and to join up data across the health and care system has been recognised…

Our health and care needs are changing: our lifestyles are increasing our risk of preventable disease and are affecting our wellbeing, we are living longer with more multiple long-term conditions like asthma, diabetes and heart disease, mental health issues are impacting more children and adults – and the health inequality gap is increasing.

Population health is one of the core strategic aims for integrated care systems (ICSs);

- to improve physical and mental health outcomes,
- to promote wellbeing and reduce health inequalities across an entire population,
- to specifically focus on the wider determinants of health, recognising that **only 20% of a person's health outcomes are attributed to the ability to access good health care**

Population Health Management is about using **linked data** from across the system to provide new insight, then taking **linked action** to improve outcomes, wellbeing, and to reduce inequalities.



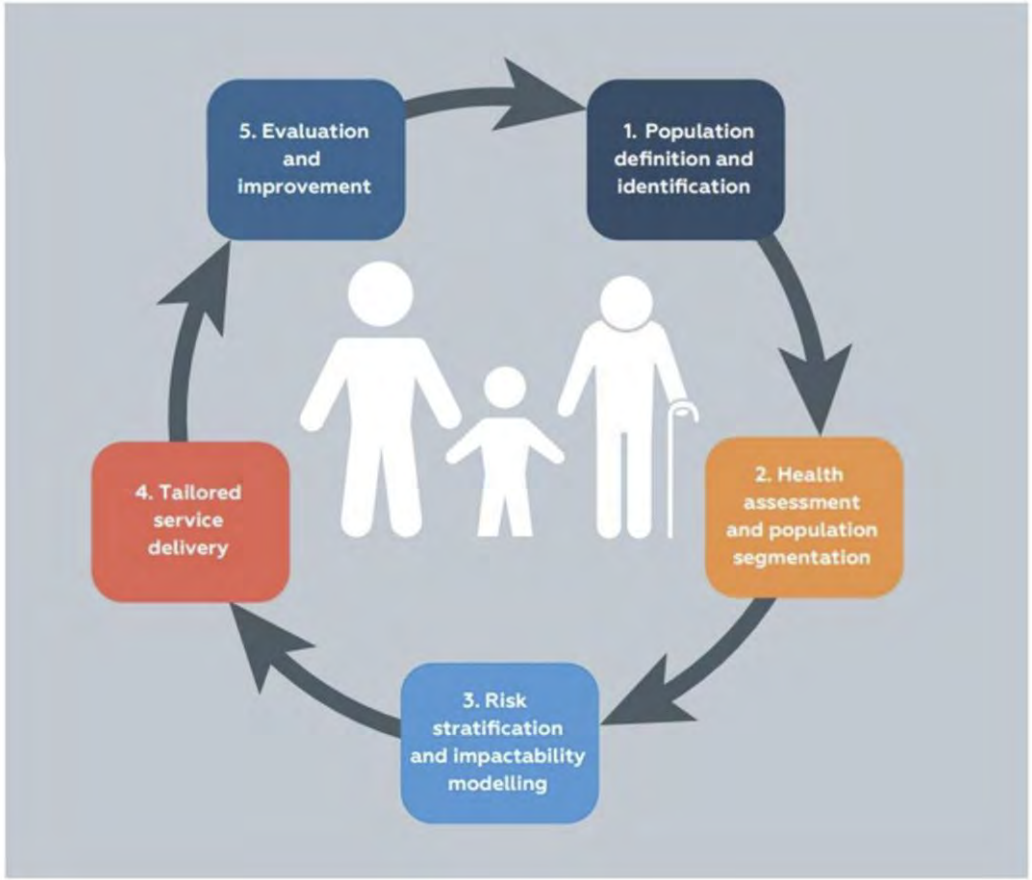
Dahlgren and Whitehead (1991)

Population Health Management in Suffolk & North East Essex (SNEE) ICS

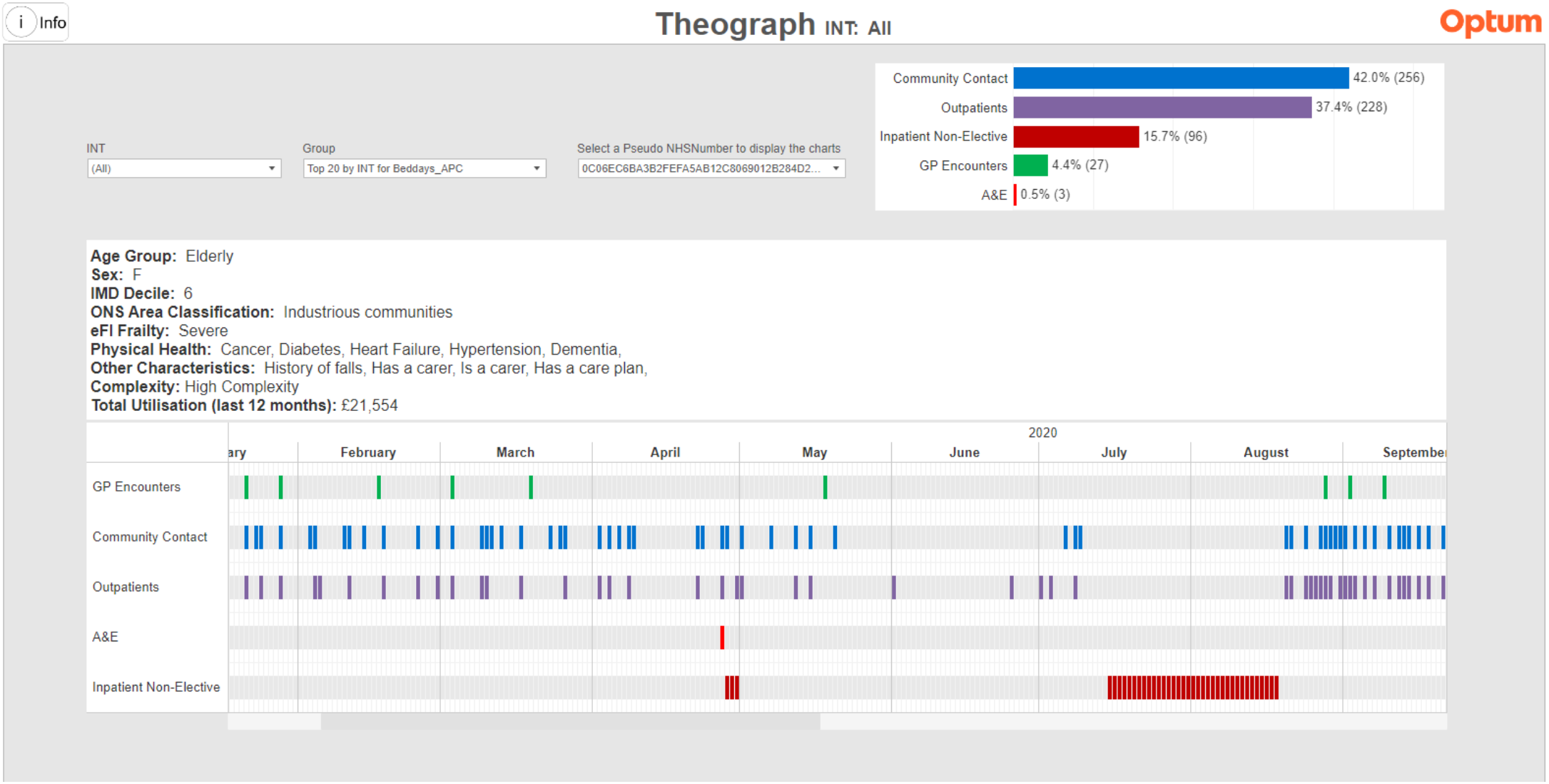
In Suffolk and North East Essex we use a Population Health Management (PHM) approach in three main ways:

1. Identify opportunities for new services and/or solutions. For example, where to geographically put a new service.
2. Identify opportunities for improvement and embed initiatives that improve health and care outcomes. For example, designing and embedding new ways of working to improve dementia outcomes.
3. Targeting high impact initiatives towards impactable segments of the population. For example, finding cohorts of adults that could be most impacted by specialist weight management services.

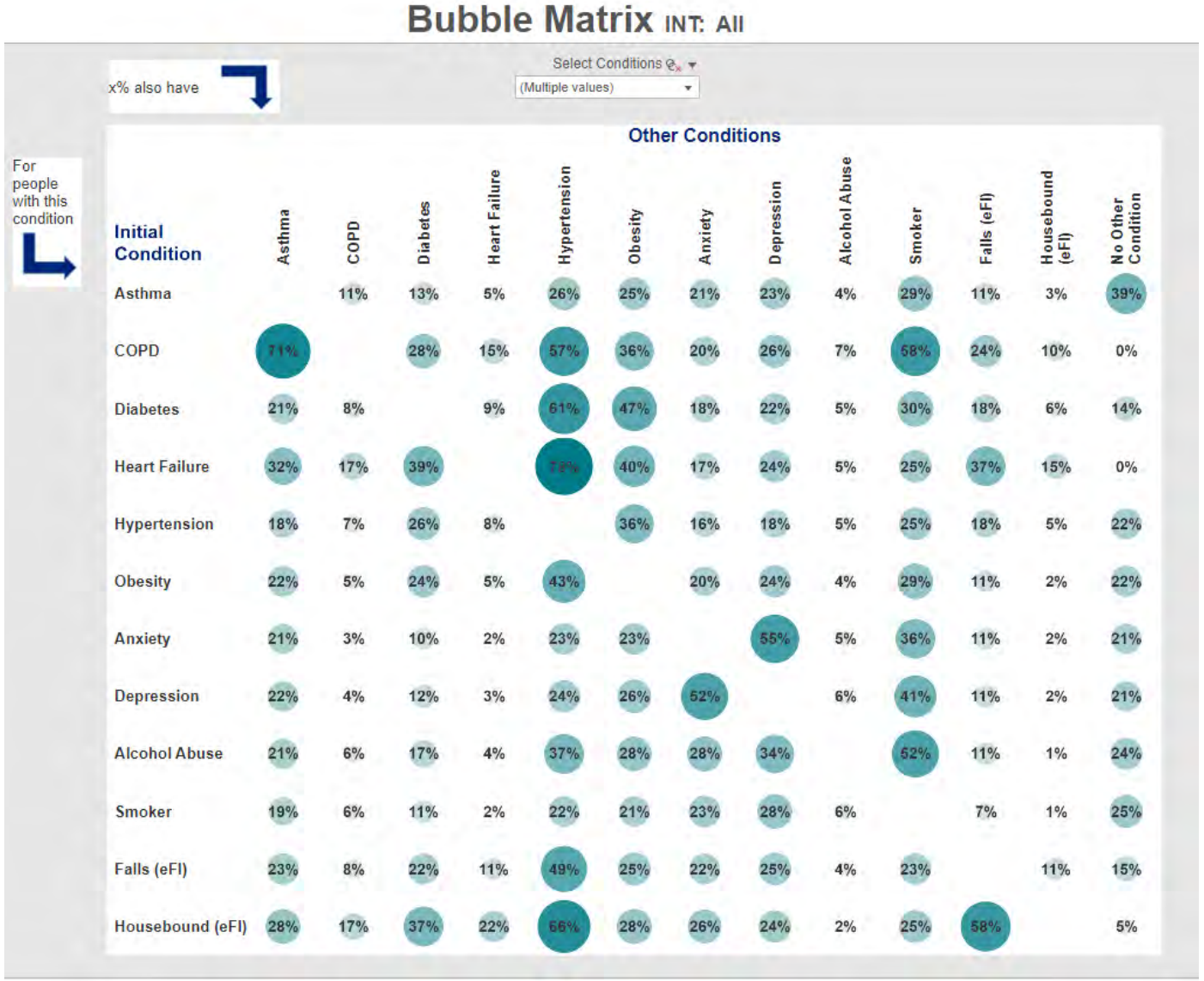
PHM uses tools such as **segmentation**, **stratification** and **modelling** to identify cohorts and to inform the design of effective interventions through a cycle of continuous **evaluation** and **improvement**



Linking data in this way allows us to see all the contacts people are having with the health and social care system



For the first time we can understand how different health conditions interact



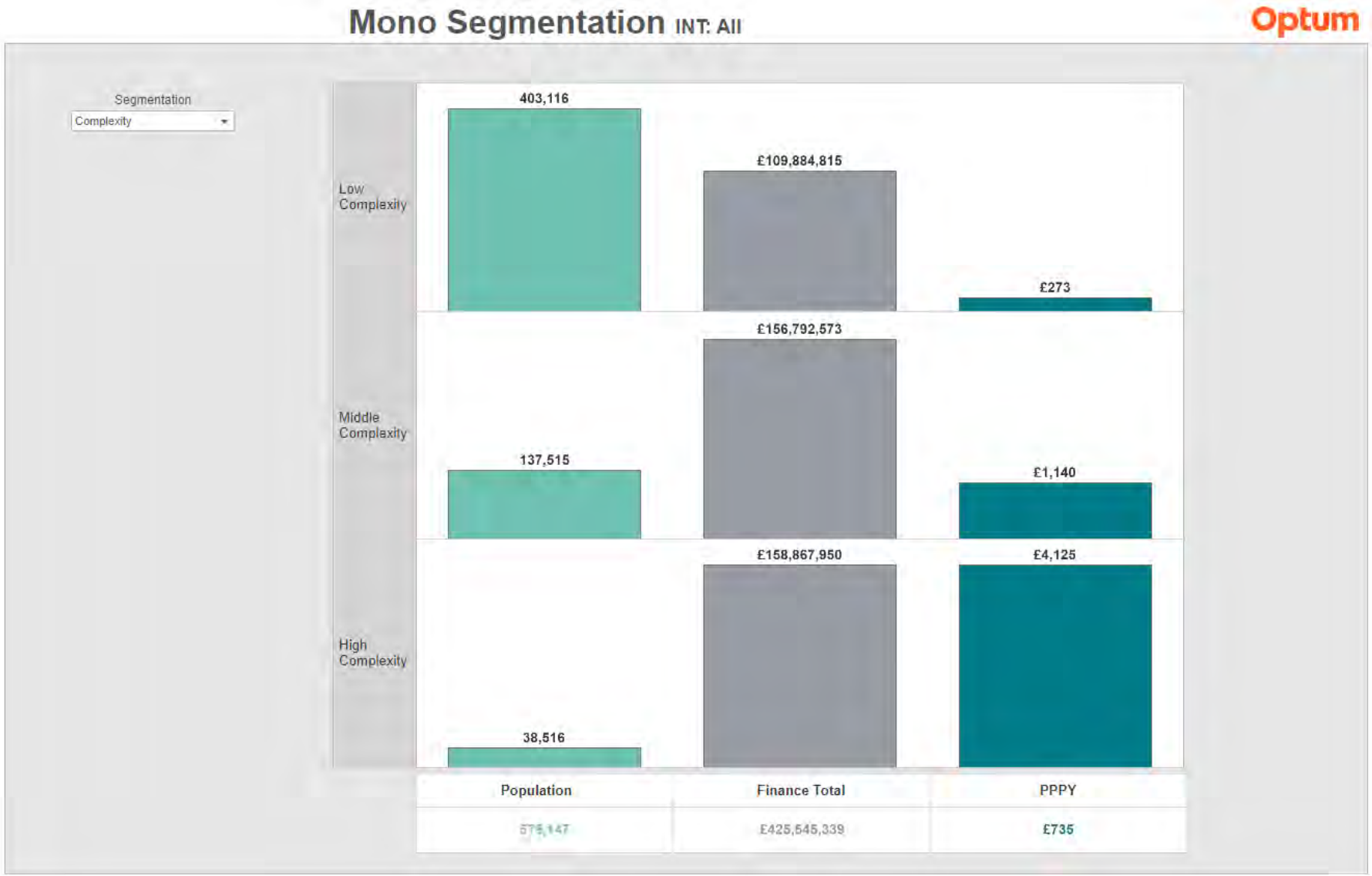
Even if we are focusing on one condition, it's important to understand that often it will not be 'travelling alone'

The chart shows how often common conditions travel together in our local population – and suggests that interventions targeting only one condition are missing an opportunity

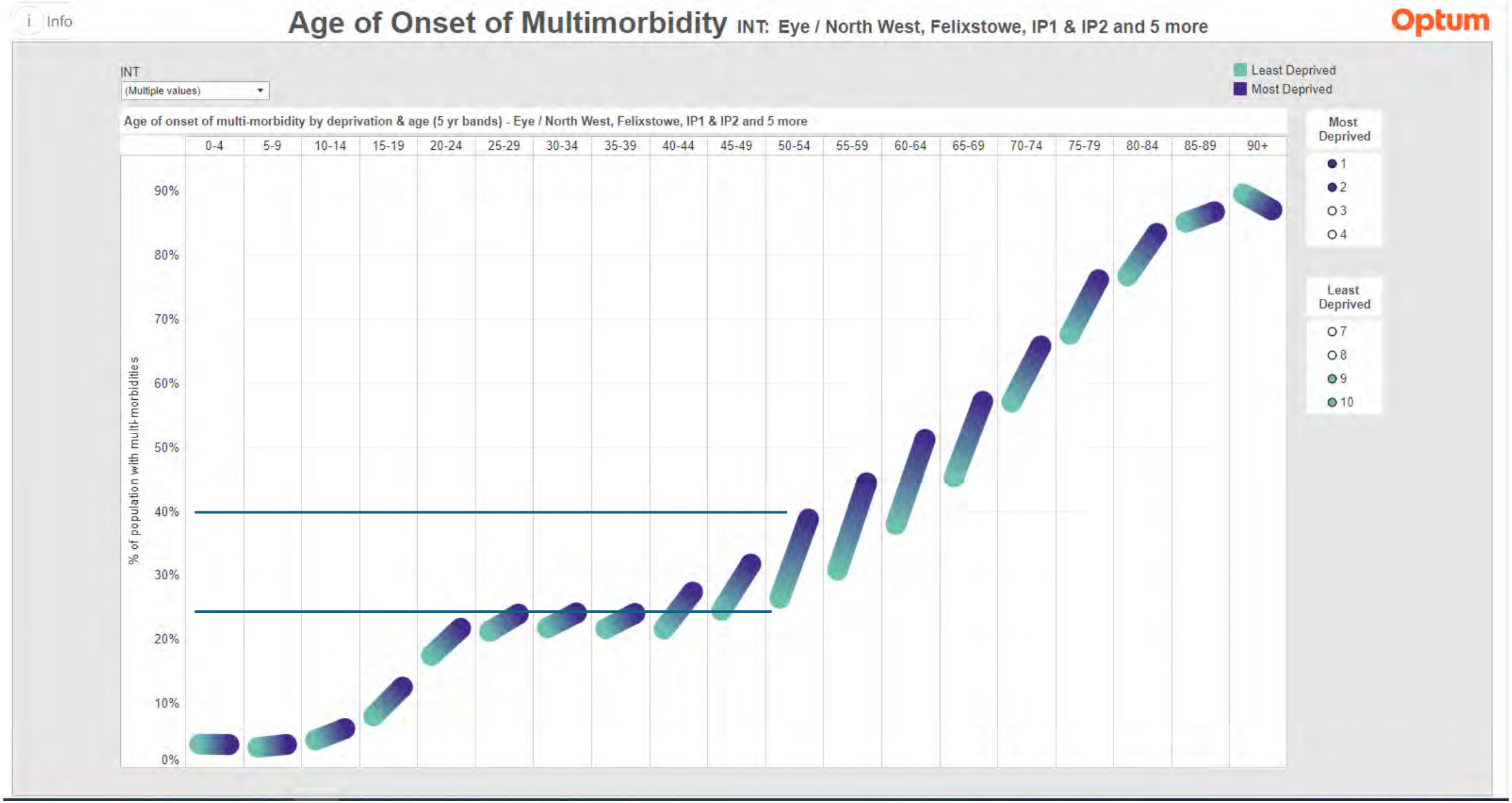
By choosing a condition from the vertical axis, we can read across to understand which conditions commonly occur together.

The end column shows the percentage of people who have no other conditions.

We can see how the population is distributed in terms of complexity and spend



And we can see the impact of deprivation on health and health risks



PHM in action: Using the Optum Pathfinder tool to understand the impact of Reablement services in Suffolk

and

Finding opportunities to prevent falls

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Reablement Overview

- A package of free, short-term care lasting up to 6 weeks, usually following hospital discharge

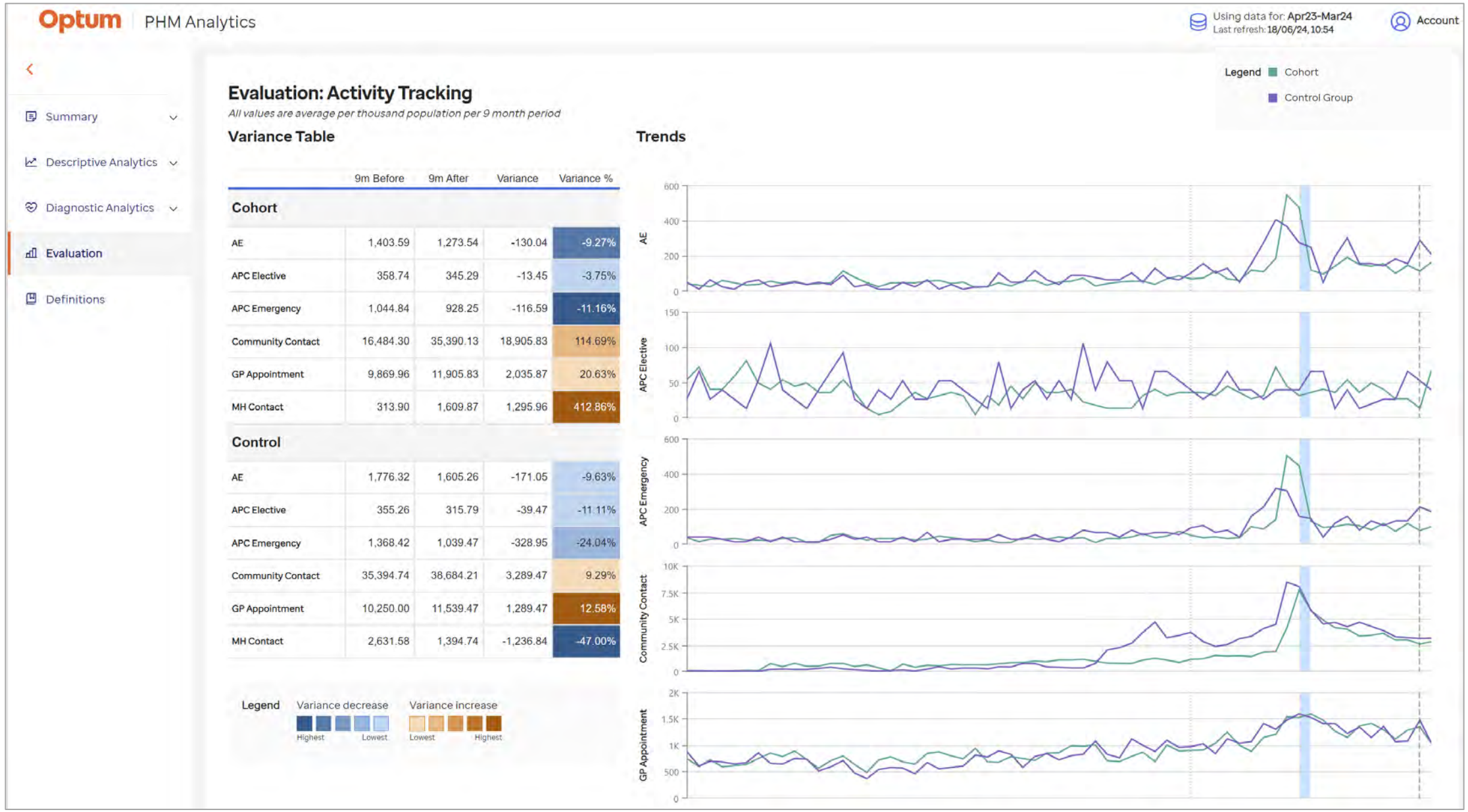
- Provided by the County Council in Suffolk as a key part of integrated care.

- Approximately 80% of reablement customers are over the age of 75.

Aims to:

- Prevent hospital stays that are not needed
- Help people in their home after a hospital stay
- Help people recover their baseline level of functionality before deciding on long term care needs

Here you can see how the evaluation module allows us to track what is happening to defined groups of people over time – this updates every month allowing short- and long-term evaluation



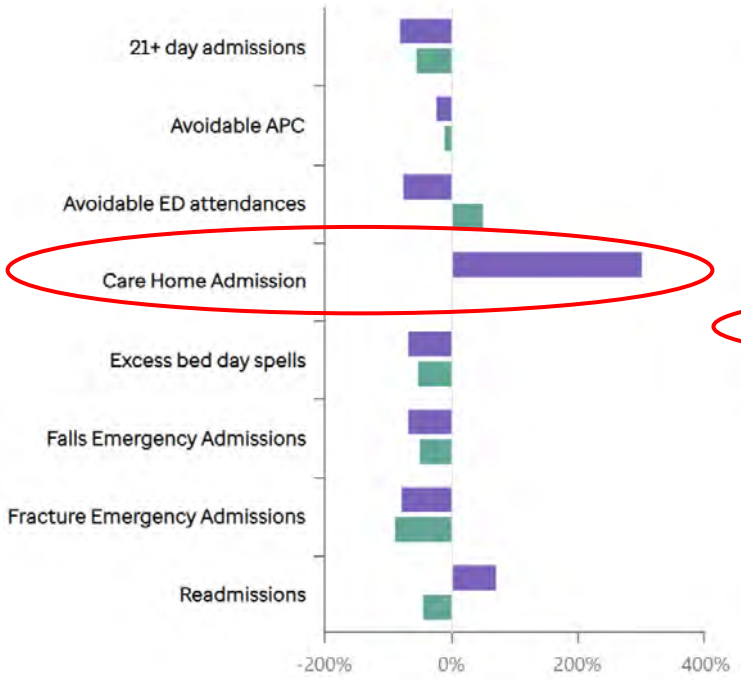
Looking at outcomes we saw some surprising results… particularly in relation to care needs. We can now say that *reablement works* – and when provided 'in house' it is particularly good at *preventing high care needs*, *promoting independence*, *reducing falls and fractures* and *preventing readmissions to hospital*

Evaluation: Outcomes

All values are average per person per 9 month period

Configure Panel

Variance Chart



Variance Table

Group	Cohort				Control			
	9m Before	9m After	Variance	Variance %	9m Before	9m After	Variance	Variance %
21+ day admissions	0.33	0.15	-0.17	-53.42%	0.54	0.11	-0.43	-80.49%
Avoidable APC	1.04	0.93	-0.12	-11.16%	1.37	1.04	-0.33	-24.04%
Avoidable ED attendances	0.05	0.08	0.03	50.00%	0.11	0.03	-0.08	-75.00%
Care Home Admission	0.00	0.09	0.09	∞	0.01	0.05	0.04	300.00%
Excess bed day spells	0.08	0.04	-0.04	-52.94%	0.12	0.04	-0.08	-66.67%
Falls Emergency Admissions	0.24	0.13	-0.12	-48.15%	0.24	0.08	-0.16	-66.67%
Fracture Emergency Admissions	0.12	0.01	-0.11	-88.89%	0.17	0.04	-0.13	-76.92%
Readmissions	0.40	0.23	-0.17	-43.33%	0.32	0.54	0.22	70.83%

Legend Variance decrease (Highest … Lowest) Variance increase (Lowest … Highest)

PHM data has also been used by our Adult Social Care teams to proactively identify personalised opportunities to use digital care technology to prevent falls in older adults

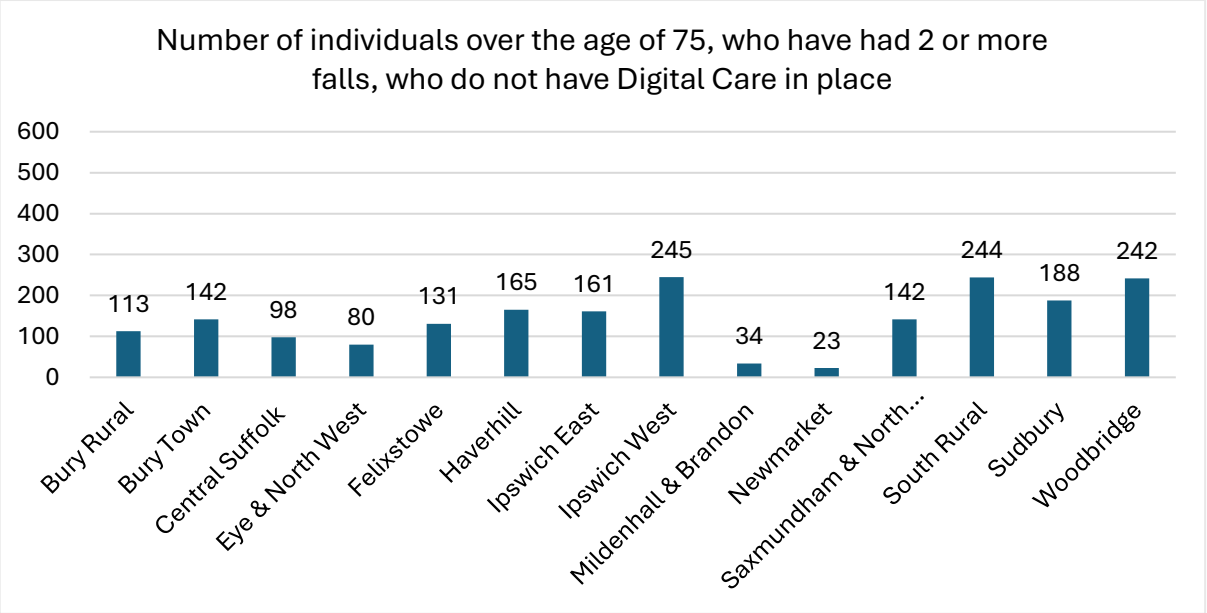
Cassius.

Pioneering and personalised digital care technology to help people live a happy, independent and connected life.

The Cassius Falls Wearable

- Suffolk County Council offer a range of Cassius products which support people to live independently at home.
- The devices can alert others in the event of a fall and are often installed once a person has already had a serious fall or has become an Adult Social Care customer for another reason.
- PHM data has been used in Suffolk to identify other individuals who do not already have digital care in place, but who may benefit as part of a falls prevention approach.

- Analysis of PHM data highlighted **3,738** severely frail individuals over the age of 75, who did not have Digital Care in place, and **2,008** individuals who have had two or more falls but did not have digital care in place.
- **482** people met both these criteria and details were shared with social care teams to consider providing digital care



In Summary

- The need to **pro-actively support people** during the pandemic proved the benefits of bringing together multiple large datasets
- Many of these are not 'health' datasets in the traditional sense – but they are key for understanding the **wider determinants of health, wellbeing and independence**. We are continuing to work in Suffolk to have access to this shared wider determinants data
- The bringing together of health and care datasets is **national policy in the UK**
- We can use this linked data to **make a case for the system benefits of social care** in a way we have never been able to before
- We can use it for **strategy work, planning, needs assessment, evaluation** AND to **provide better care for individuals**
- Thank you for listening - anna.crispe@suffolk.gov.uk

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