

HFMA Eastern Branch: lunch & learn

Population health intelligence

Dr Alexander Royan

Developing health intelligence for integrated care

- **Why do we need insights on population health for integrated care?**
- **What is an intelligent Integrated Care System ?**
- **What is population health management?**
- **What are we doing in SNEE ICS to develop health intelligence?**

Introduction



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Why we need health intelligence?

ICs are 'complex adaptive systems' that are best governed through simple rules

Co-dependent

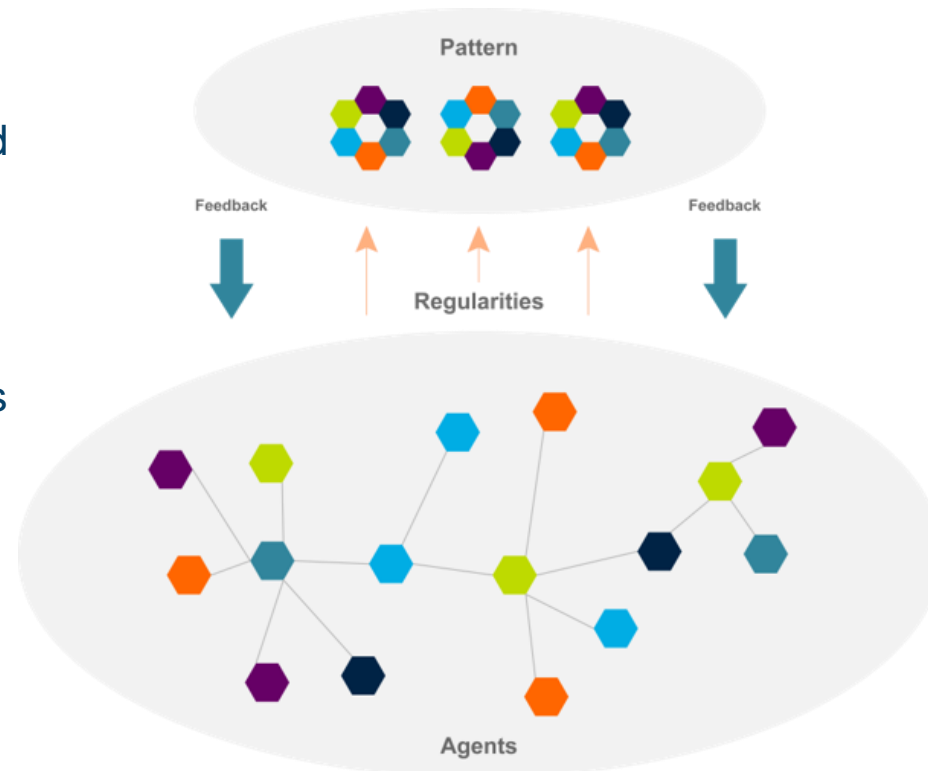
Any element in the system is affected by and affects several other systems

Non-linear interactions

Small changes can have large effects

Openness

Difficult to define system boundaries



Energy

A constant flow to maintain the organisation of the system

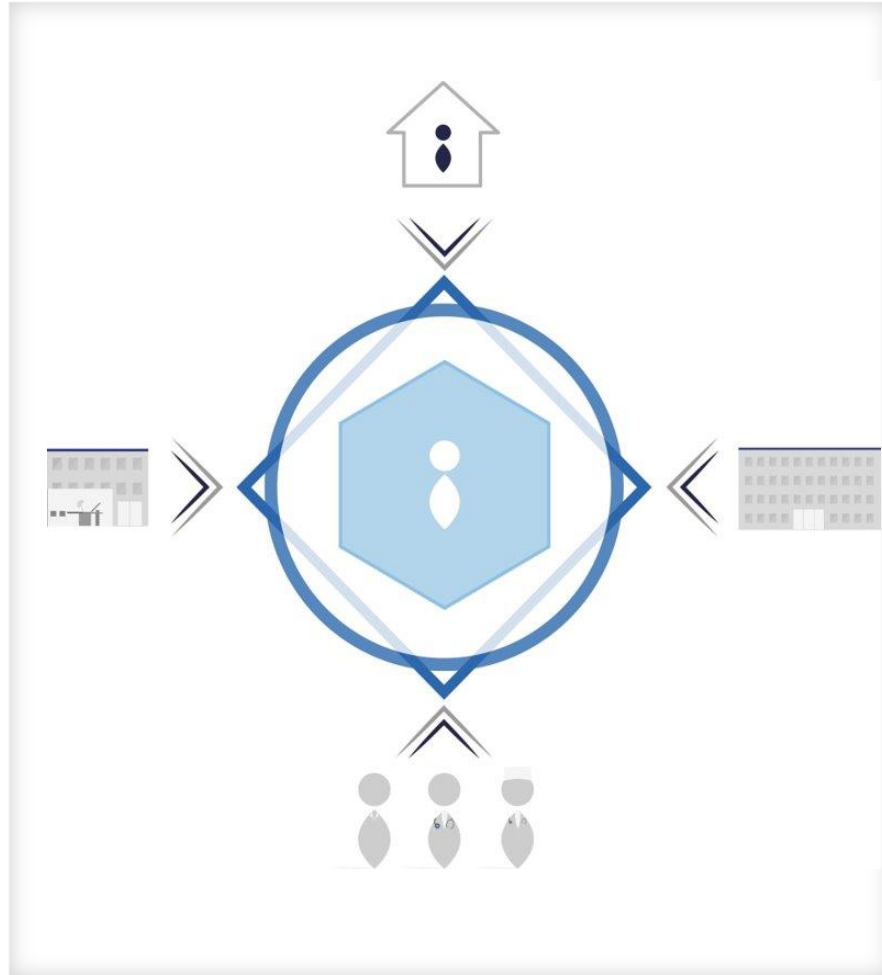
History

The past helps to shape present behaviour

Behaviour

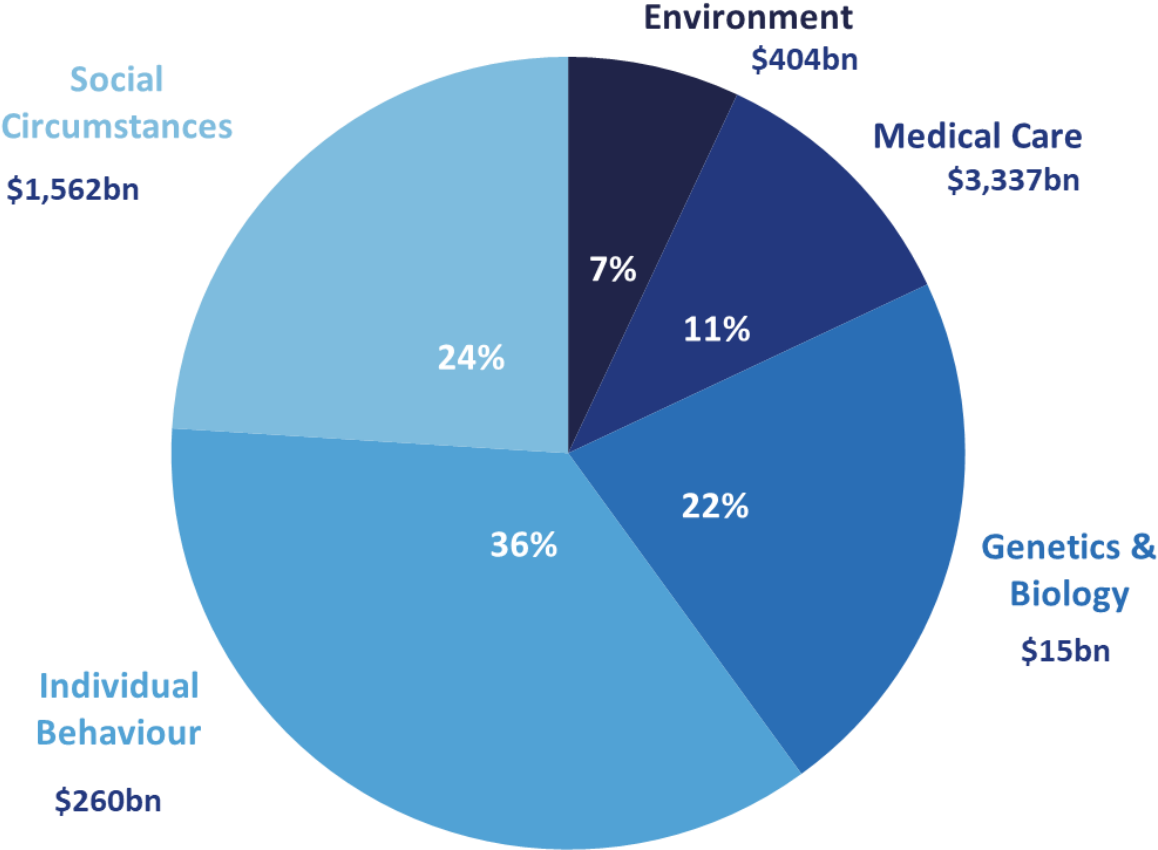
Elements in the system are not aware of the behaviour of the system as a whole and only respond to what is available or known locally

Insights from data contribute to creating an 'enabling environment' for integrated care



1. Leadership & Management & **Quality Improvement**
2. **Information Systems**
3. **Systems Research & Knowledge Management**
4. Workforce
5. Regulatory Frameworks
6. Funding and Payment Reforms

Health care interventions contribute only a small part to someone's health but represents the majority of spend



Source: <https://www.goinvo.com/vision/determinants-of-health/#methodology>

Through Integrated Care we are aiming to create a 'virtuous circle'



Improved
Population Health
+
Health Outcomes

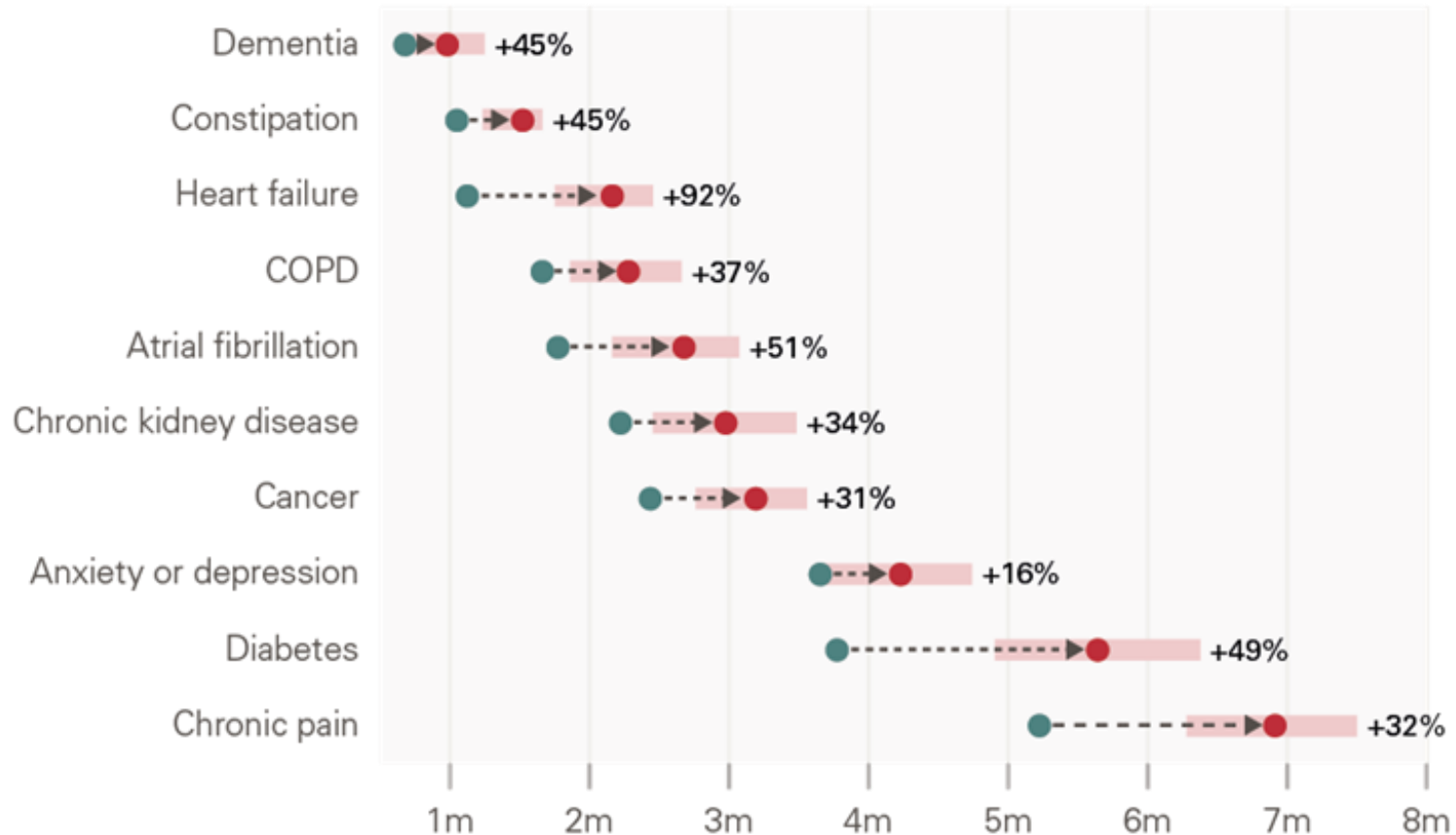


Strong + Resilient
Integrated Health
& Care System



Demand for healthcare could grow faster than growth in capacity given current models of care

Projected total number of diagnosed cases for the ten conditions with the highest impact on health care use and mortality among those aged 30 years and older, including demographic changes, England, 2019 and projected for 2040, Health Foundation ● 2019 ● 2040



What is an intelligent integrated care system?

Intelligent systems understand value

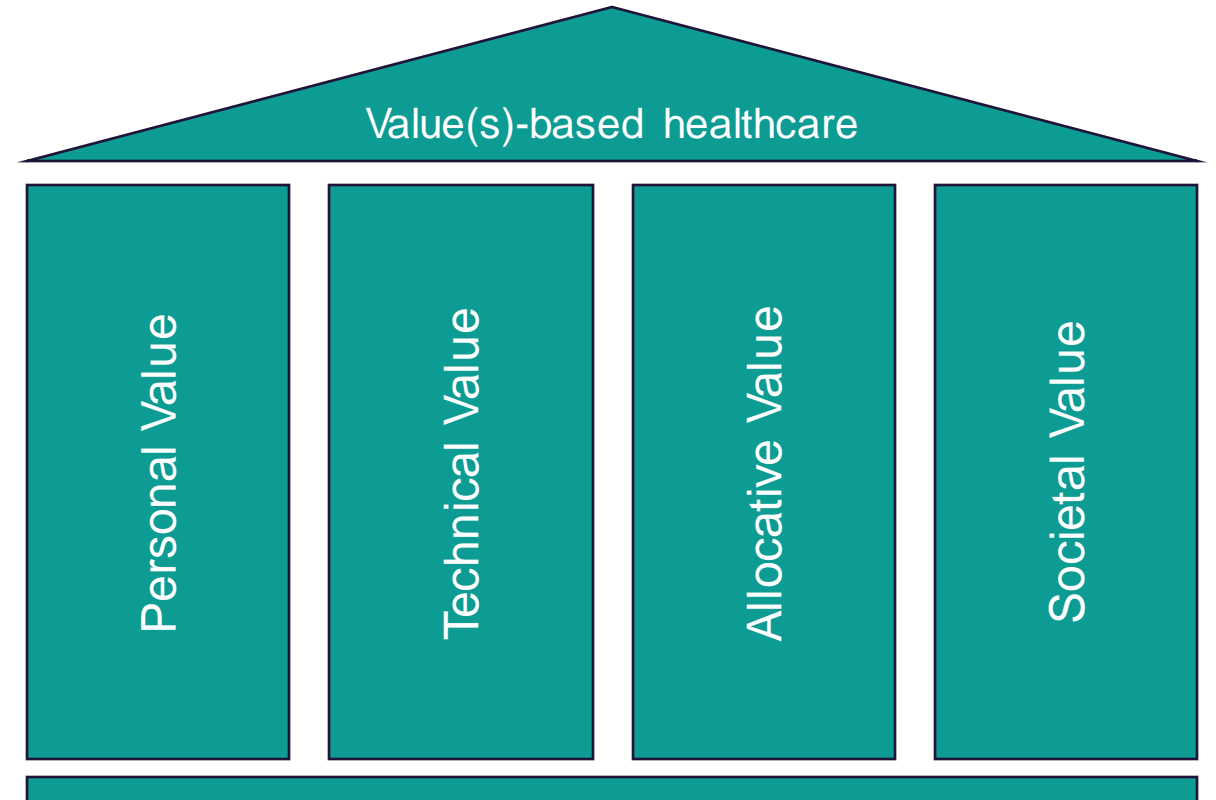
Definition

...**personal value** (meaning that an individual receives appropriate care);

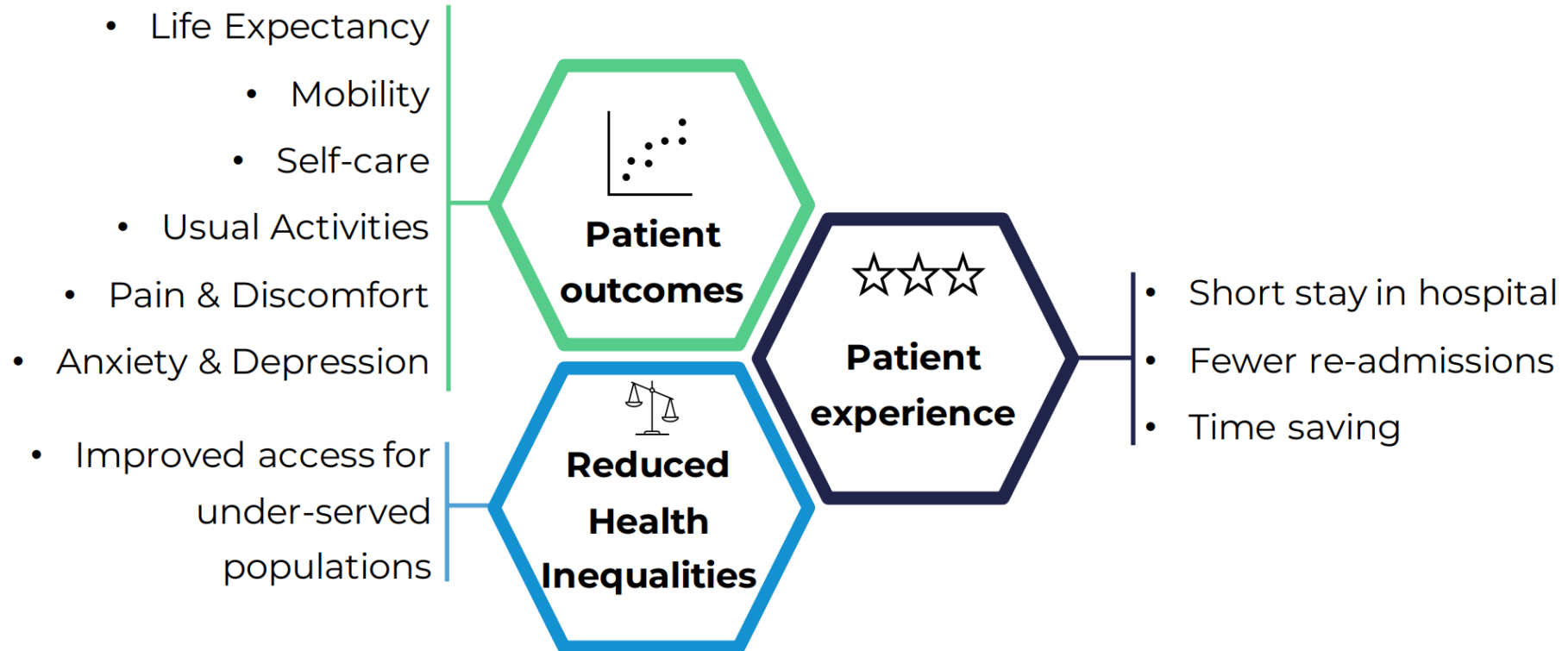
...**allocative value** (referring to the optimal distribution among patient populations);

...**technical value** (relating to the best outcomes with available resources for all the people in need to mitigate inequity); and,

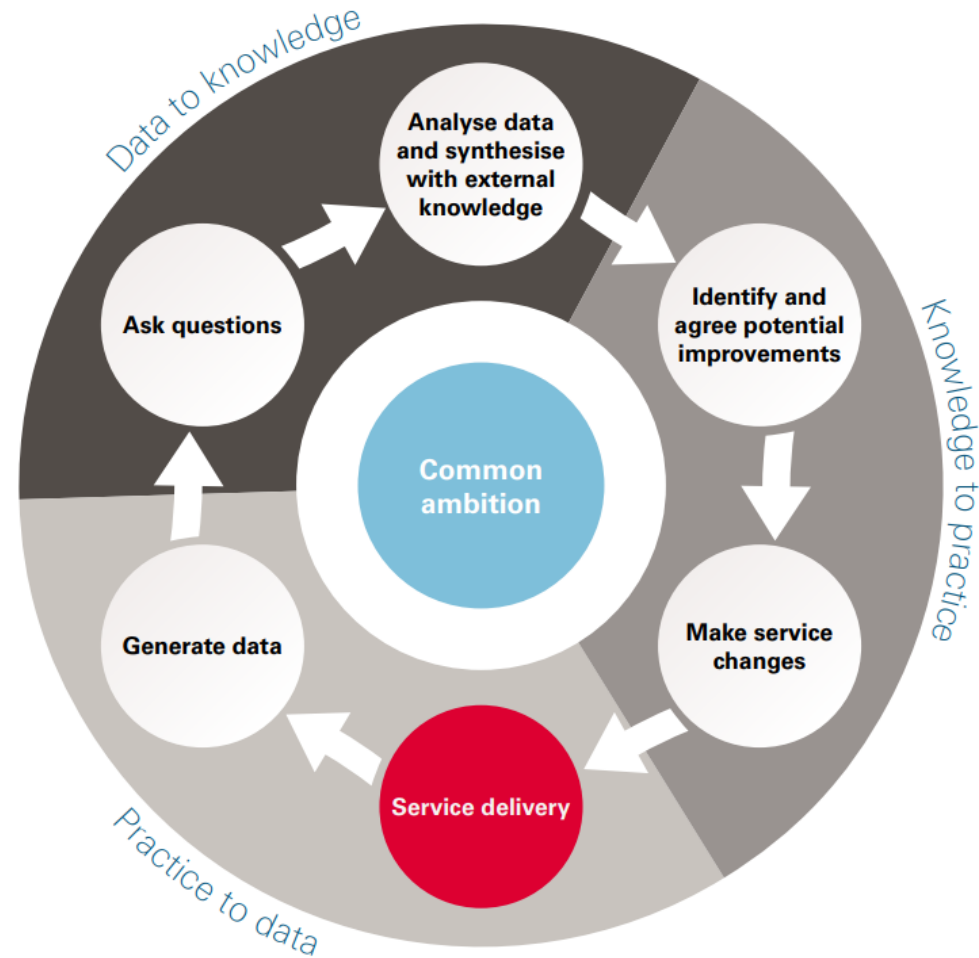
...**societal value** (referring to the intrinsic value of good health as enabler to participate in society and solidarity as contributor to social cohesion of equal individuals).



Value is viewed differently by different stakeholders – a perspective from patients

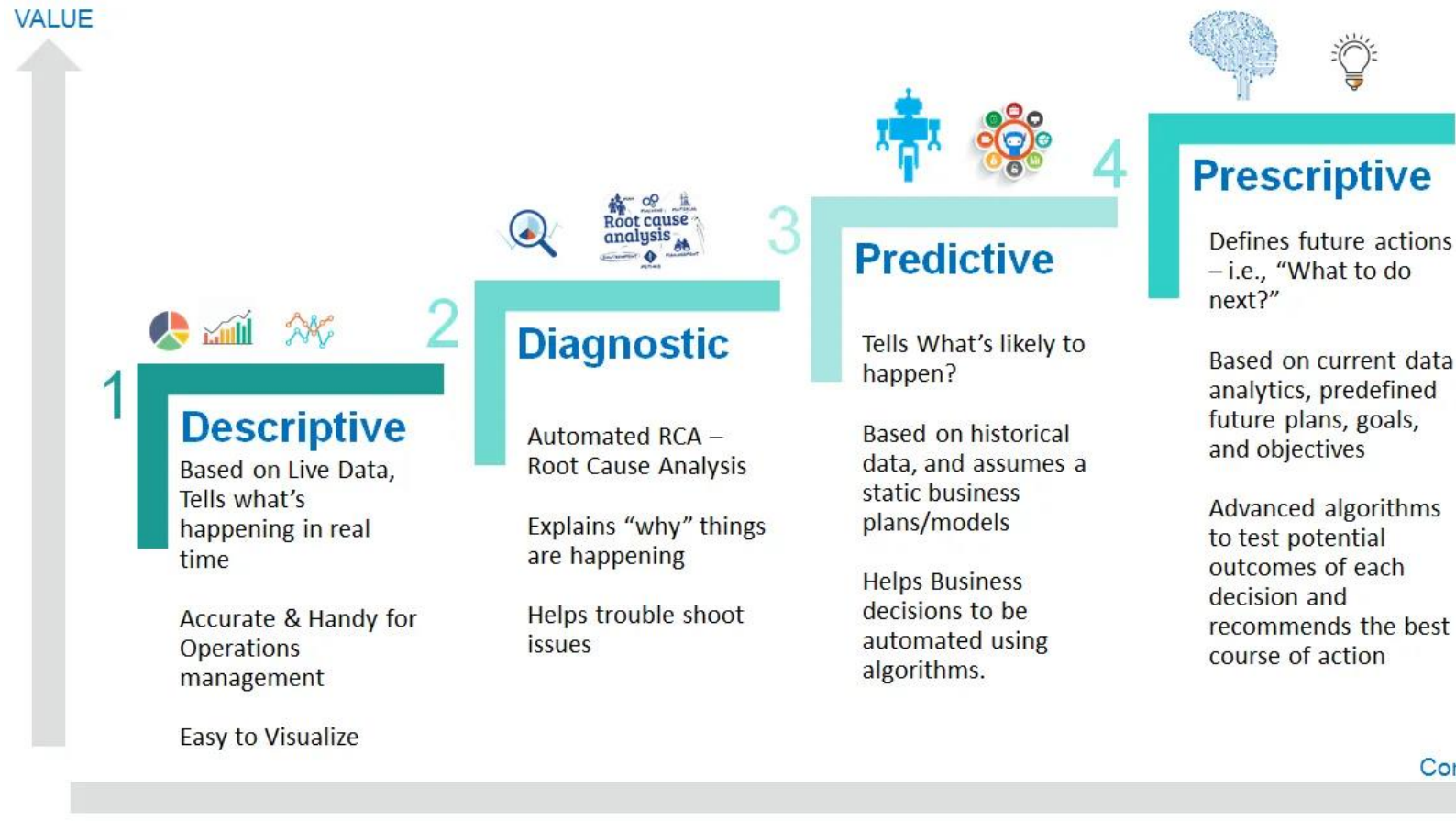


Intelligent healthcare systems effect change through **iterative learning cycles** based on generating and learning from data and formulating and testing service changes

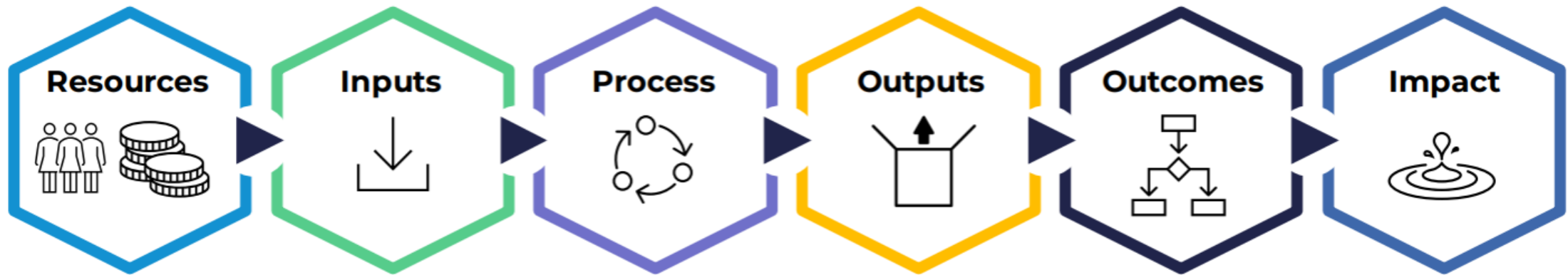


Source: The Health Foundation's Insight & Analysis Unit

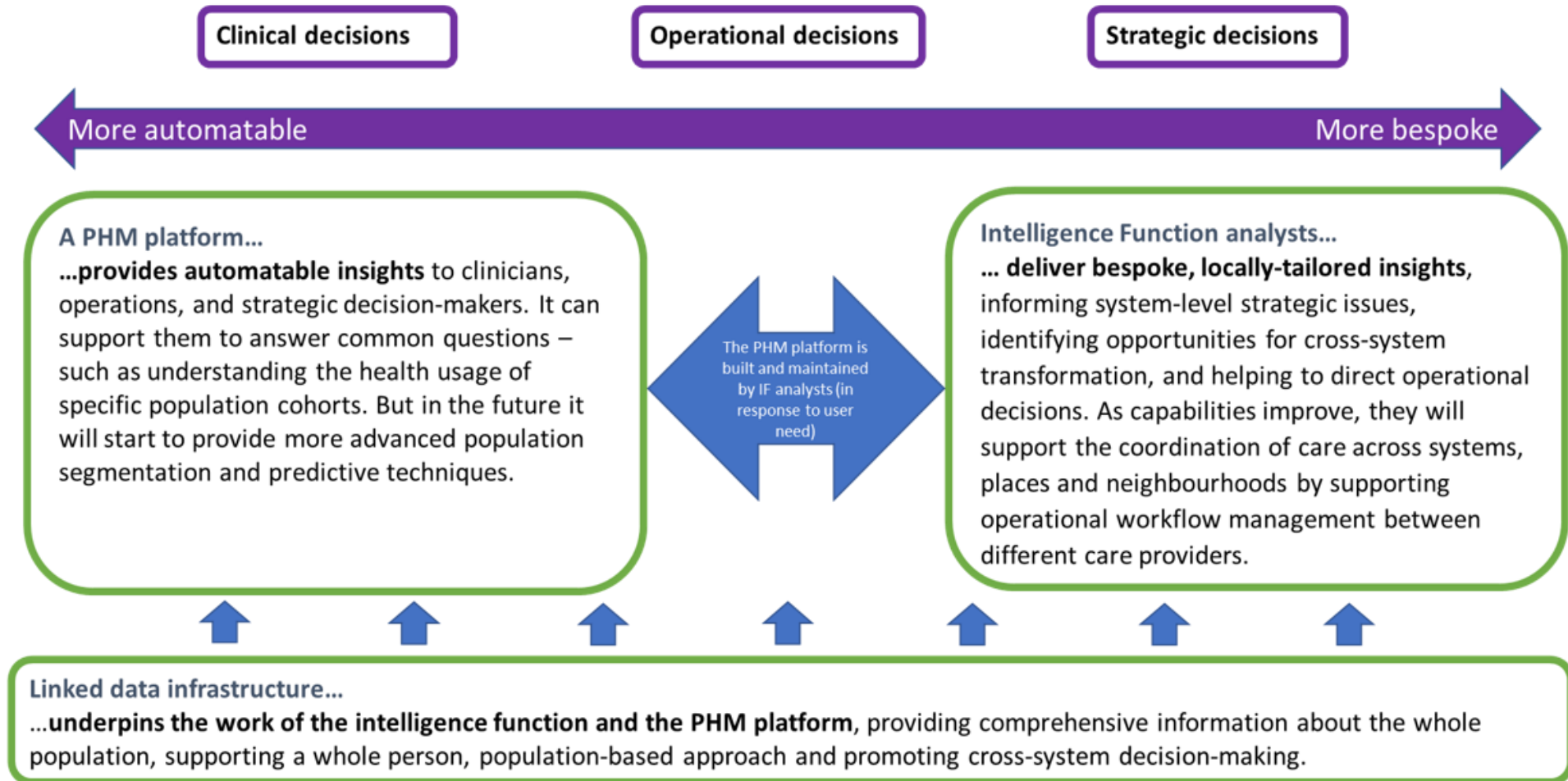
By expanding **analytical capabilities**, we maximise the value of the utility of data and generate insights that shape decisions at all levels of care delivery



Evaluative analytics is required to understand performance and impact across the logical model for an intervention

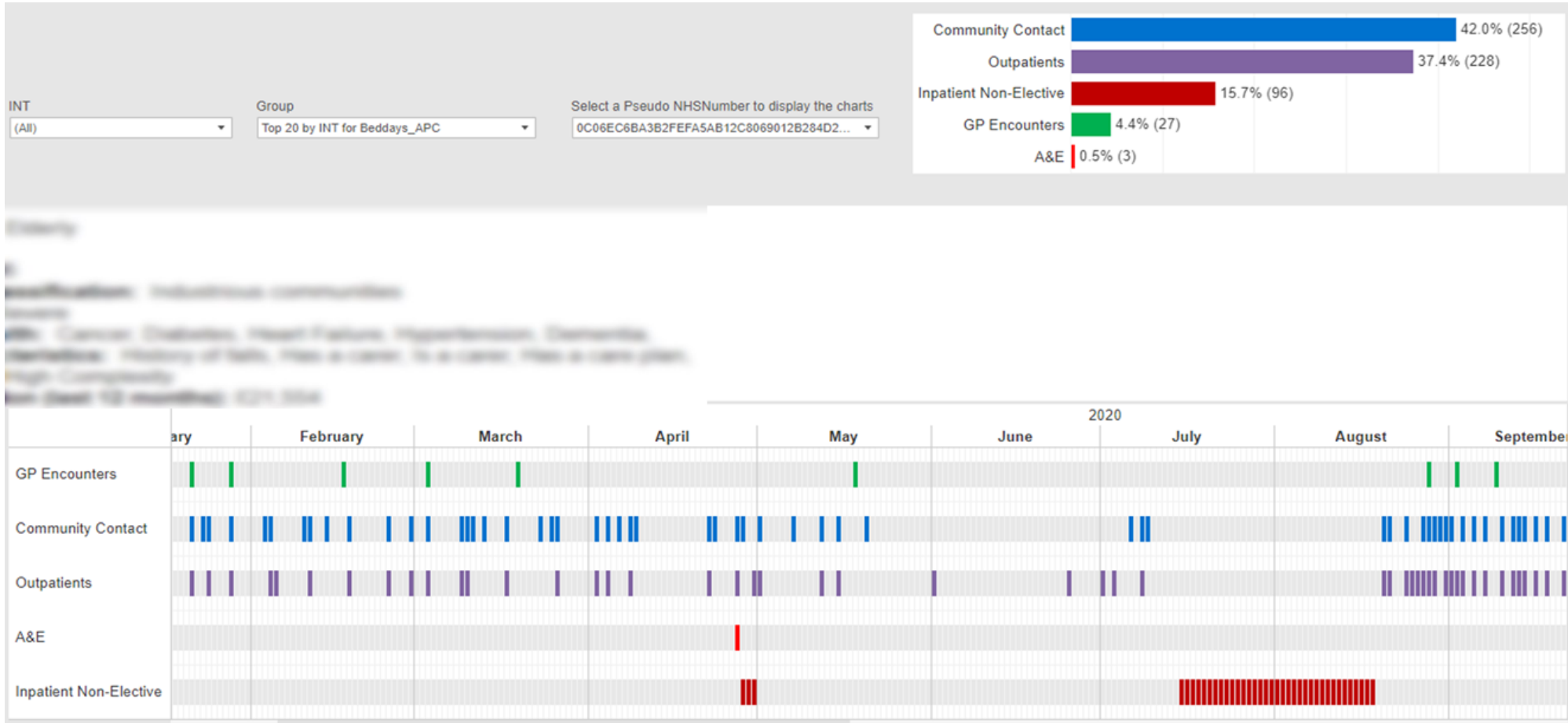


Insights from **linked data** can inform decisions at different layers of an ICS

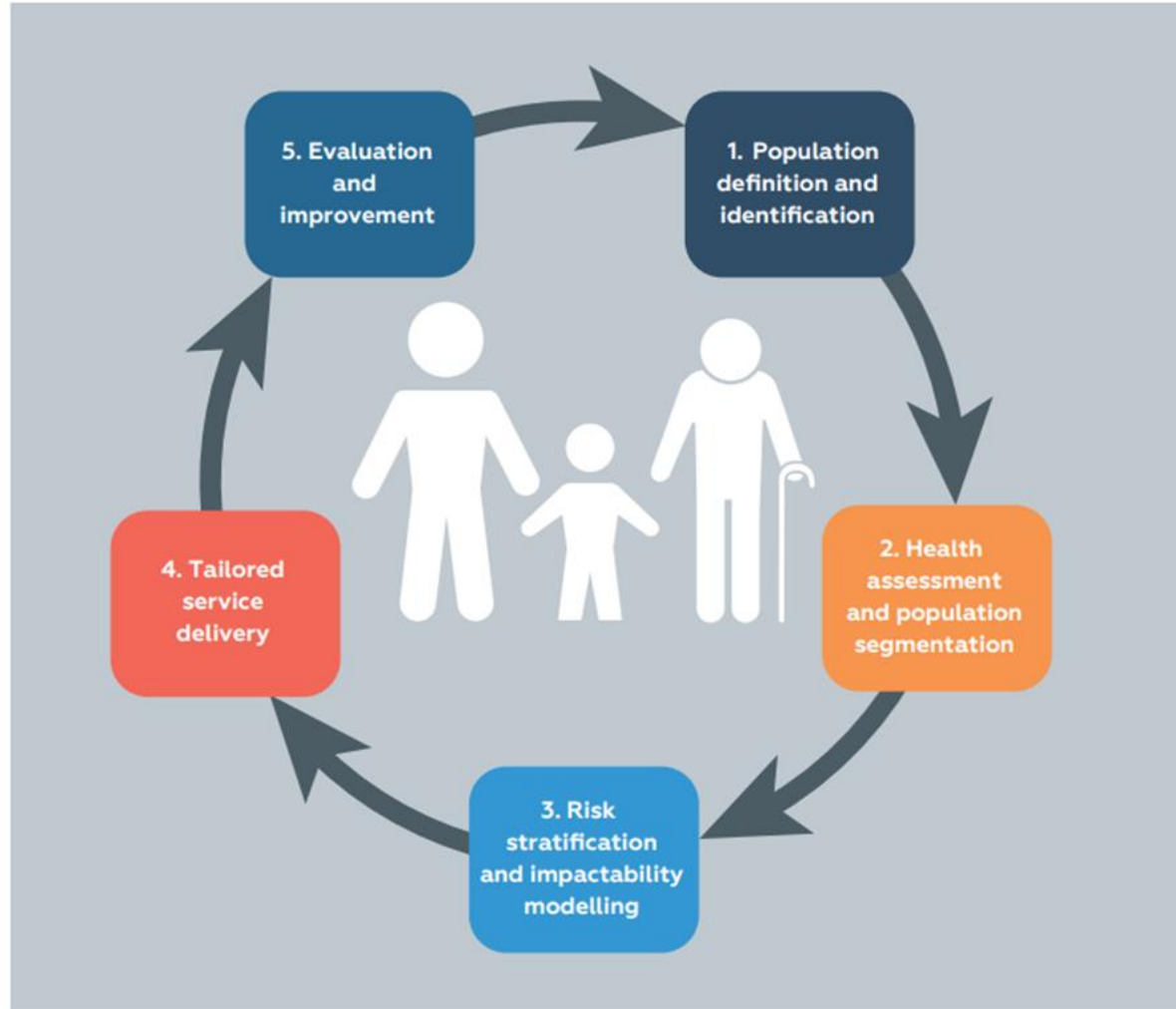


What is population health management?

Why population health management?



The population health management cycle



Case studies

Project Name	Impact description
Waiting Well- stratified support for orthopaedic waiting list patients	<ul style="list-style-type: none"> Supporting adults with health or care concerns to access support and maintain healthy, productive, and fulfilling lives.
Woodbridge Holistic Assessment Team	<ul style="list-style-type: none"> Reducing the number of admissions due to falls and expenditure based on the likely increase in the number of falls.
Stowmarket Risk Stratification Project and co-location	<ul style="list-style-type: none"> Improving the quality of population healthcare and workforce outcomes through proactive and specialist interventions and advice.
Hypertension case finding pilot	<ul style="list-style-type: none"> Targeting resources to identify patients who are at risk of suffering a stroke or heart attack. Improving the management of people known to have hypertension.
West Suffolk Atrial Fibrillation	<ul style="list-style-type: none"> Reducing human suffering associated with stroke and saving NHS and social care resources.

What are we doing in SNEE ICS to develop health intelligence?

Our population health management strategy

The screenshot shows the top section of the website. On the left is the logo for 'CAN DO HEALTH & CARE' with the tagline 'Suffolk & North East Essex Integrated Care System'. To the right is a search bar with a 'Search' button. Below the header is a navigation menu with items: 'Working Together', 'Best Health and Wellbeing', 'Health Equality', 'Live Well', ''Can Do' Health and Care', and 'Get Involved'. A banner image below the menu shows a group of diverse people. At the bottom of the banner is a breadcrumb trail: 'Home / 'Can Do' Health and... / Collaborative / Population Health Management'.

Population Health Management

Our Ambition: People Living in Suffolk & North East Essex Benefit from Population Health Management and Intelligence Led Health and Care

Capabilities for Population Health Management



Infrastructure: the basic building blocks that must be in place



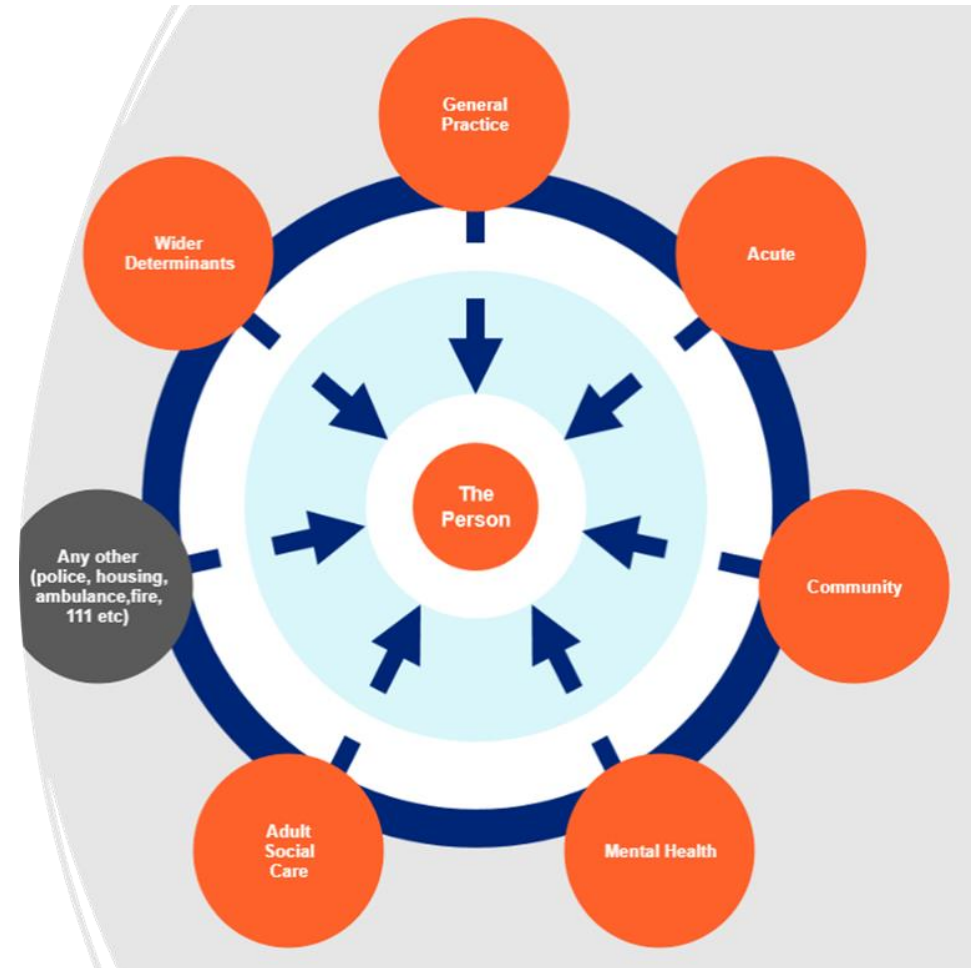
Intelligence: opportunities to improve care quality, efficiency and equity



Interventions: proactive clinical and non-clinical interventions to prevent illness, reduce the risk of hospitalisation

The health and care data we collect and use

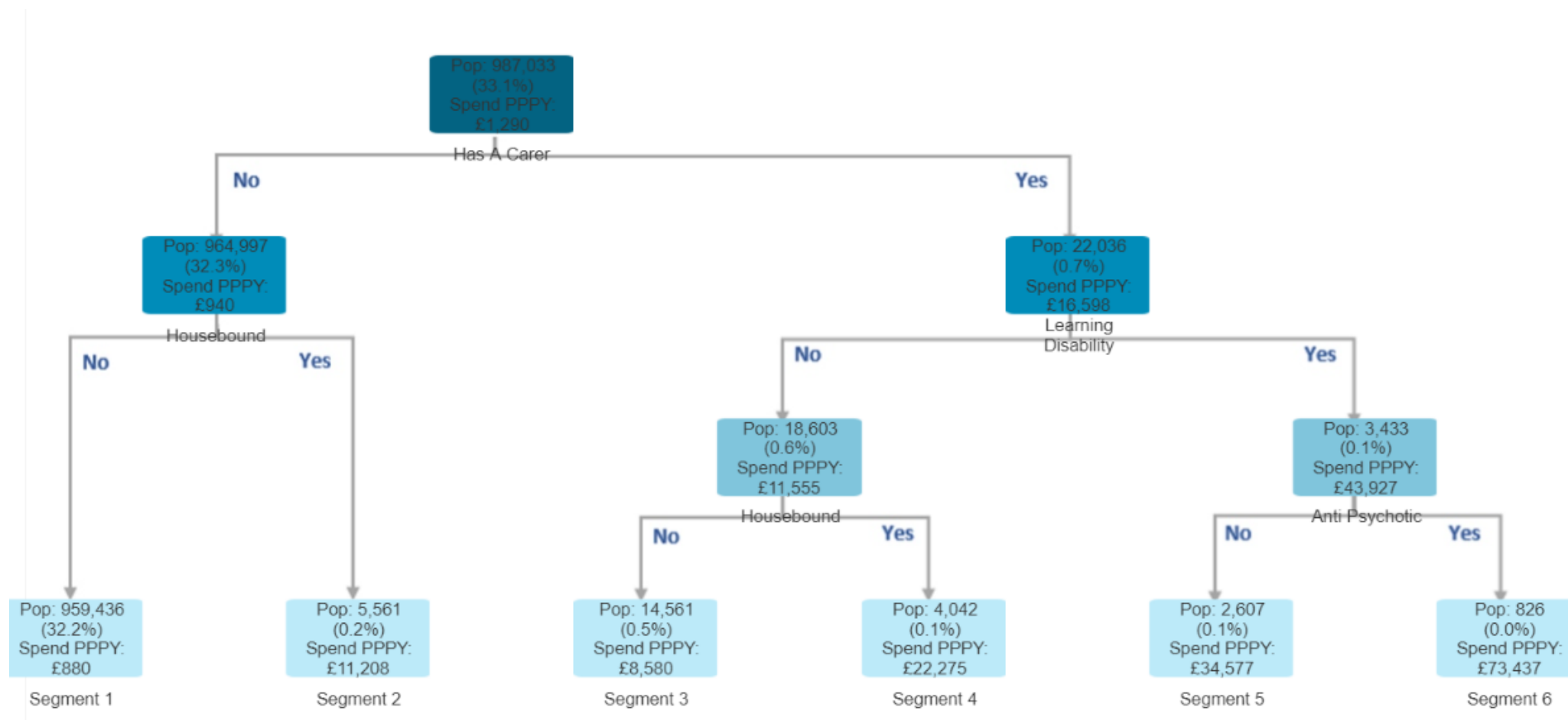
- **Primary care data**, sourced from GP systems (EMIS and Systmone)
- **NHS ICB Commissioning datasets** from providers in SNEE, including emergency care, mental health services, community services and others
- **Adult social care data**, from Essex and Suffolk
- **Reference data** from OpenSafely and other sources



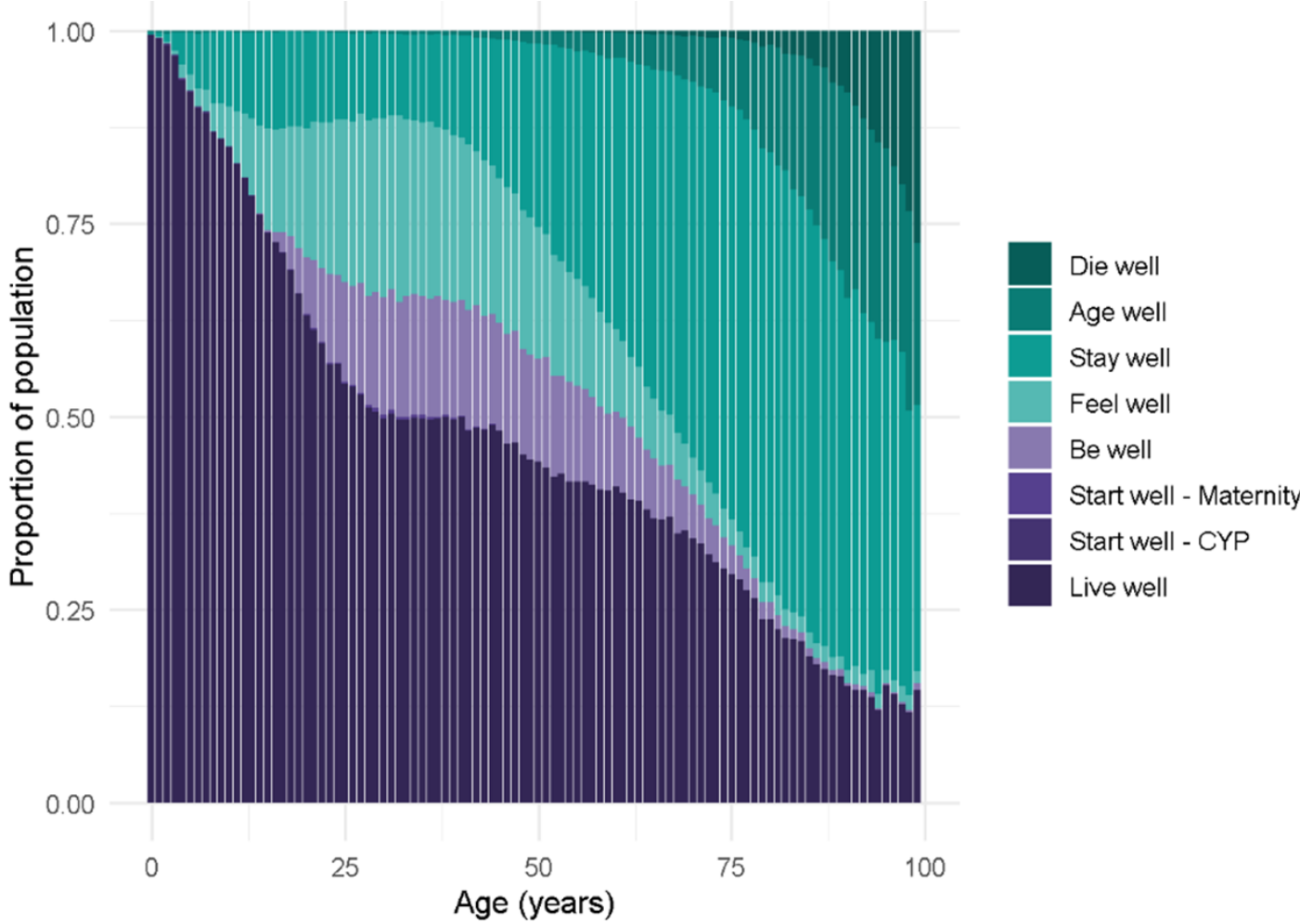
We aggregate data into a population health reporting suite



Decision tree analysis enables identification of the drivers of healthcare need and associated costs of delivery



Population segmentation allows us to group the population into cohorts with comparable health and care needs and to understand how need changes over time



Risk stratification enables a more nuanced approach to case finding

Risk stratification for diabetes in Suffolk and north east Essex

Model version 0.2.1 (beta)

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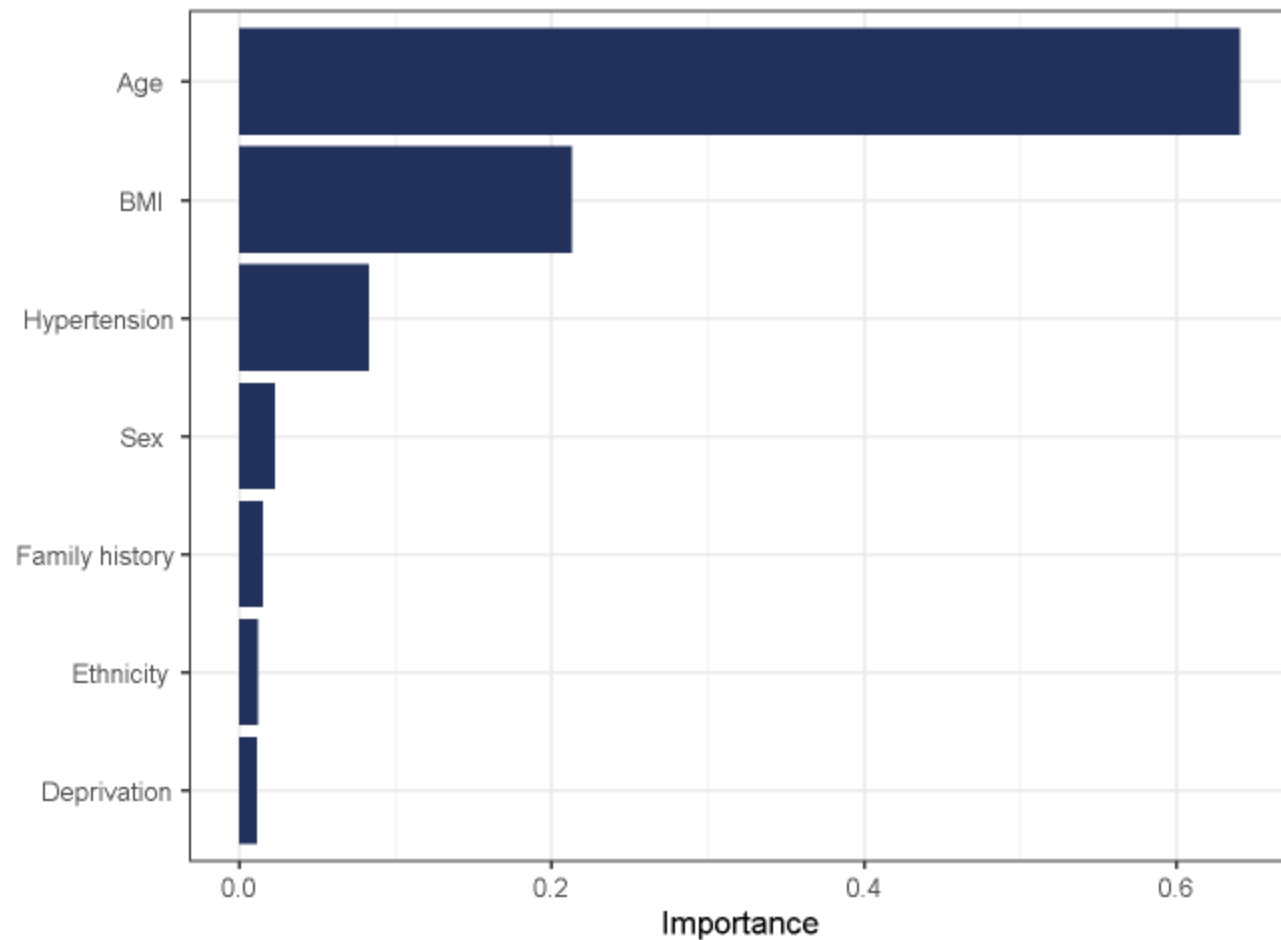


Oesophageal cancer case finding in Ipswich and east Suffolk: a population health management approach

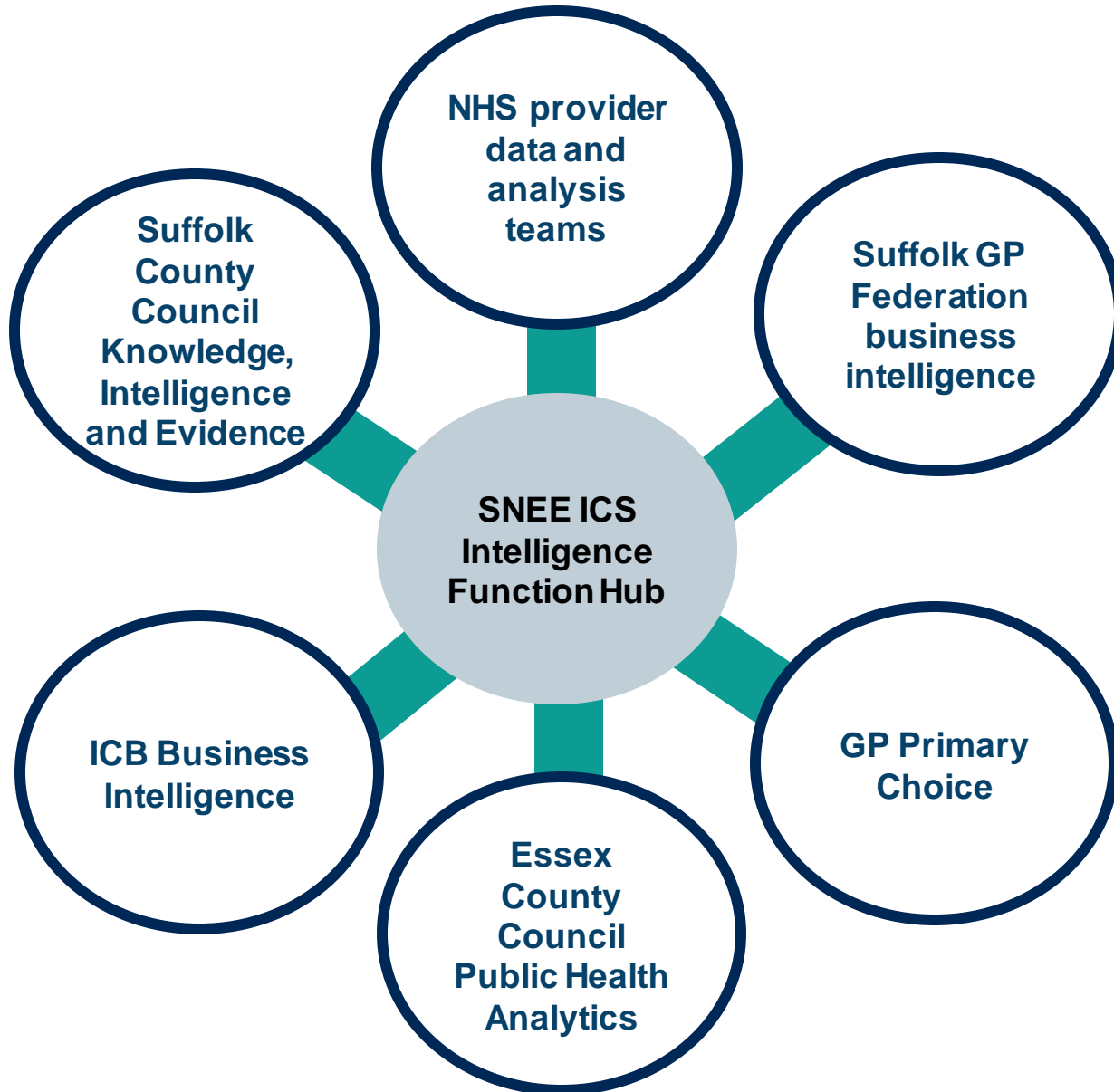
Model version 0.2 (beta)

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The SNEE Intelligence Function is a **partnership** of analytical teams across health and care organisations



A small number of discrete, time-bound projects are led by the hub but delivered in partnership with system analytical teams

The hub delivers analytical specialisms

We focus on **cross-ICS insights** and have produced several reports around demand, health economics, unplanned care, and frailty

Suffolk County Council Public Health & Communities

Suffolk and North East Essex ICS Intelligence Function

Health and care characteristics of emergency admissions and their contribution to system pressure

October 2023

Suffolk County Council CAN DO HEALTH & CARE

Suffolk County Council Public Health & Communities

SNEE ICS Ten Year Demand and Capacity: Analytical report

Suffolk and North East Essex ICS Intelligence Function

July 2023

Suffolk County Council CAN DO HEALTH & CARE

CAN DO HEALTH & CARE Suffolk & North East Essex Integrated Care System

Suffolk & North East Essex Integrated Care System

Intelligence Function

Health Economics Webinar 2

What is the Value of Prevention?

12th October 2023

EBD. EconomicsByDesign[®]

EBD.

Suffolk and North East Essex ICS Intelligence Function

Who is approaching the end-of-life in SNEE and what are the costs of their care?

January 2024

DRAFT

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THANK YOU

ANY QUESTIONS?



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