Population Health Management Academy

Leadership Event

28th May 2019

NHS England and NHS Improvement

The Strategy Unit.

3V Oxford Centre for Triple Value Healthcare

UNIVERSITY OF BIRMINGHAM

THE Dartmouth INSTITUTE

FOR HEALTH POLICY & CLINICAL PRACTICE

Welcome

Why NHSE/I have commissioned this programme

Alison Tonge

NHS England and NHS Improvement

The Strategy Unit.

3V Oxford Centre for Triple Value Healthcare

UNIVERSITY OF BIRMINGHAM

THE Dartmouth INSTITUTE FOR HEALTH POLICY & CLINICAL PRACTICE

The PHM Development programme 2019/20

Peter Spilsbury

NHS England and NHS Improvement

The Strategy Unit.

3V Oxford Centre for Triple Value Healthcare

UNIVERSITY OF BIRMINGHAM

THE Dartmouth INSTITUTE FOR HEALTH POLICY & CLINICAL PRACTICE

1: SCOPING & ONGOING REGIONAL LEADERSHIP

Programme Director and management support

Engage with stakeholders

Supporting lasting regional networks – especially analytical

2: INDIVIDUAL STP/ICS SUPPORT

Understand progress on PHM and support planning

Programme budget and regional comparative analysis

Analytical support and review economic model

Coaching support to 'Core Team' running PHM project

3: PHM ACADEMY

'Core Team' programme (x6 sessions)

Analyst programme (x6)

Leadership 'taster sessions' (x2)

OD professionals (x2)

Open events, webinars, microsite, legacy

*Each STP/ICS has a draft plan with this detail in

Legend

- ICS
- STP
- Expected to join
- Local Authority

Derbyshire

Nottinghamshire

Lincolnshire

Staffordshire

Leicester, Leicestershire & Rutland

Shropshire & Telford & Wrekin

The Black Country

BSol

Coventry & Warwickshire

Herefordshire & Worcestershire

Northamptonshire
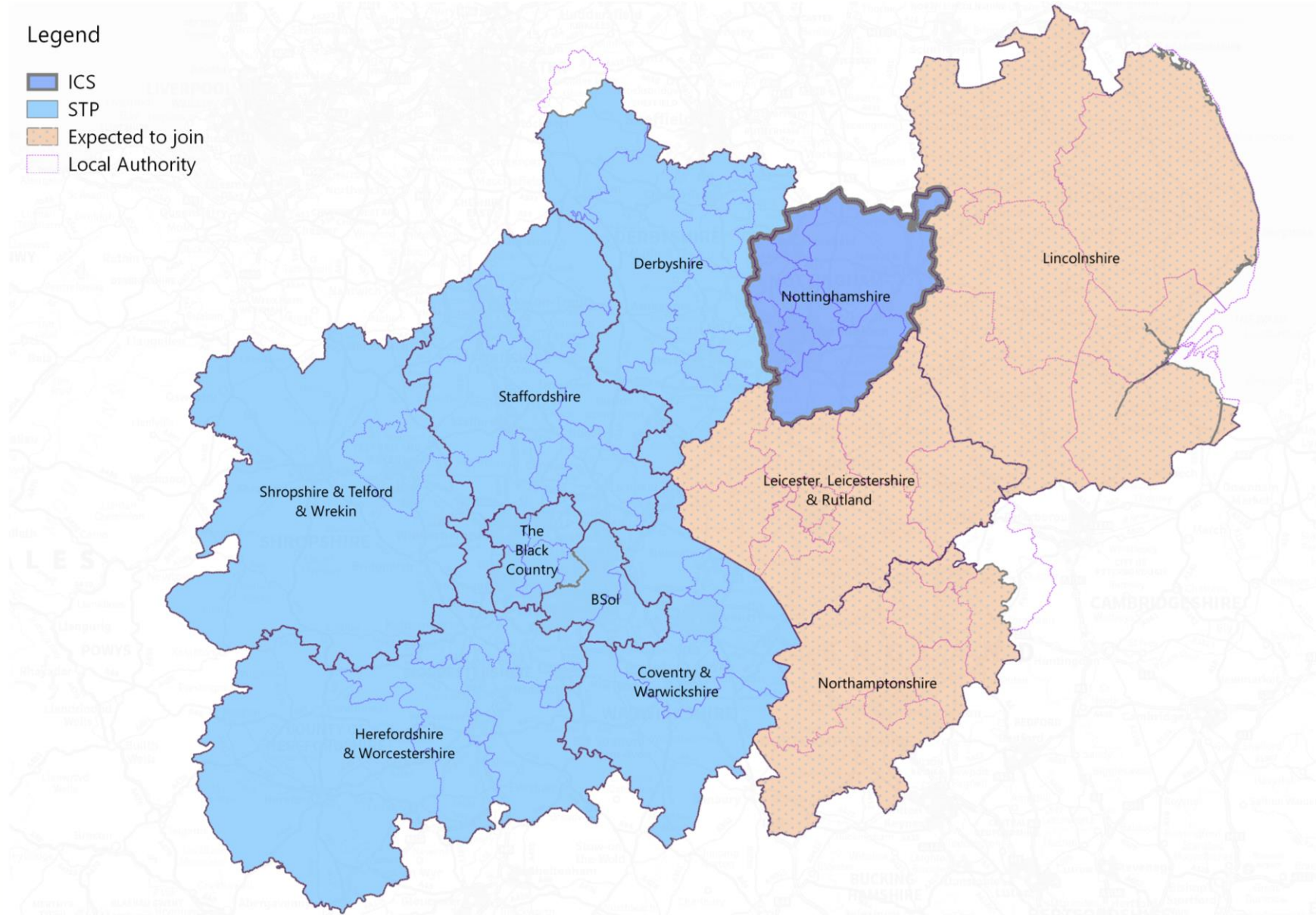
	Population	Local Authority Districts	Life Expectancy		NHS Organisations	Health & Social Care Spend	Deprivation Profile 1 → 10									
			Male	Female												
The Black Country STP	1,362,000	4	77.6	81.9	4 CCGs, 7 NHS Trusts, #	£2.7 billion total (£2,010 per head)	25%	21%	14%	9%	10%	6%	4%	4%	4%	4%
Birmingham & Solihull (BSol) STP	1,175,000	2	78.9	83.1	1 CCG, 5 NHS Trusts, #	£2.42 billion total (£2,060 per head)	33%	14%	11%	8%	9%	6%	6%	4%	4%	7%
Staffordshire & Stoke-on-Trent STP	1,126,000	9	79.3	82.7	6 CCGs, 4 NHS Trusts, #	£2.18 billion total (£1,940 per head)	8%	11%	9%	9%	8%	12%	13%	10%	12%	8%
Nottinghamshire ICS	1,031,000	7	79.3	82.5	6 CCGs, 3 NHS Trusts, *	£2 billion total (£1,940 per head)	13%	15%	9%	10%	9%	9%	9%	8%	7%	10%
Derbyshire STP	1,016,000	9 •	79.2	82.8	4 CCGs, 4 NHS Trusts, *	£2.02 billion total (£1,990 per head)	8%	10%	11%	11%	10%	9%	11%	10%	12%	8%
Coventry & Warwickshire STP	925,000	6	79.5	83.4	3 CCGs, 3 NHS Trusts, #	£1.73 billion total (£1,870 per head)	9%	8%	10%	9%	11%	11%	12%	11%	11%	10%
Herefordshire & Worcestershire STP	779,000	7	79.9	83.9	4 CCGs 2 NHS Trusts, #	£1.42 billion total (£1,830 per head)	1%	7%	3%	20%	35%	9%	13%	6%	5%	2%
Shropshire & Telford & Wrekin STP	493,000	2	79.4	82.7	2 CCGs, 4 NHS Trusts, #	£928 million total (£1,880 per head)	5%	8%	6%	15%	17%	13%	13%	10%	8%	6%

	Source: (ONS) Mid Year Population estimates for UK by CCG 2017 (published 10/2018)\n\nPopulation has been rounded for clarity	Source: (ONS) • North East Derbyshire & Bolsover are separate local authorities (ONS)	Source: (ONS) Average Life expectancy at birth of a baby born between 2015 and 2017 (published 12/2018)	Source: NHS England, http://tiny.cc/0ka66y\n\n* East Midlands Ambulance Service Foundation Trust serves this STP/ICS\n# West Midlands Ambulance Service services this STP/ICS	Source: (Programme Budgeting Data 2016/17)\n\nSpend has been rounded for clarity	1 = Most deprived decile, 10 = Least deprived decile Indices of Deprivation (2015)\n\n**Key**\n\n≤5% population / 6-10% population / 11-15% population / 16-20% population / > 20% population

'Population Health Management'

…improves population health by data driven planning and delivery of proactive care to achieve maximum impact

It includes segmentation, stratification and impactability modelling to identify local 'at risk' cohorts - and, in turn, designing and targeting interventions to prevent ill-health and to improve care and support for people with ongoing health conditions and reducing unwarranted variations in outcomes*

* From the September 2018 'PHM Flatpack'

THINKING

DECIDING

DOING

THINKING

DECIDING

DOING

Strategic allocation of collective resources

What we mean by 'value'

How we think about populations

Culture needed and sense of stewardship

"If I had an hour to solve a problem I'd spend 55 minutes thinking about the problem and five minutes thinking about solutions."
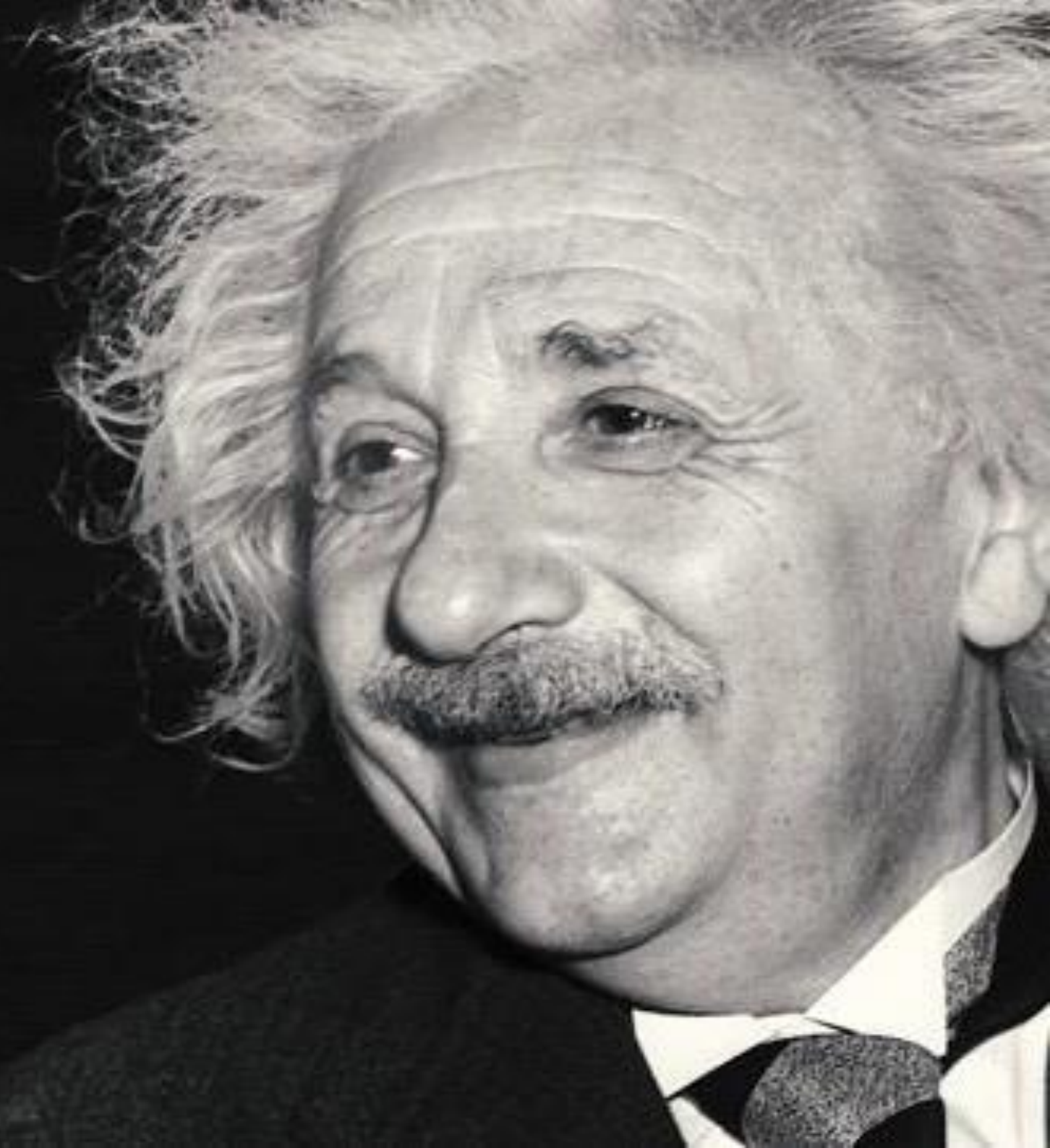
THINKING

DECIDING

DOING

Using evidence to make decisions

Frameworks for decision making

Role of the citizen and patient

Types of evidence / 'data' used – and better use of what we have

"Can we stay away from the evidence?.. It tends to depress people" anon.

THINKING

DECIDING

DOING

Disciplined innovation and testing – evaluation built in

Shifting role of analysts (radical?)

Shared decision making

Cross-sector and cross-organisational
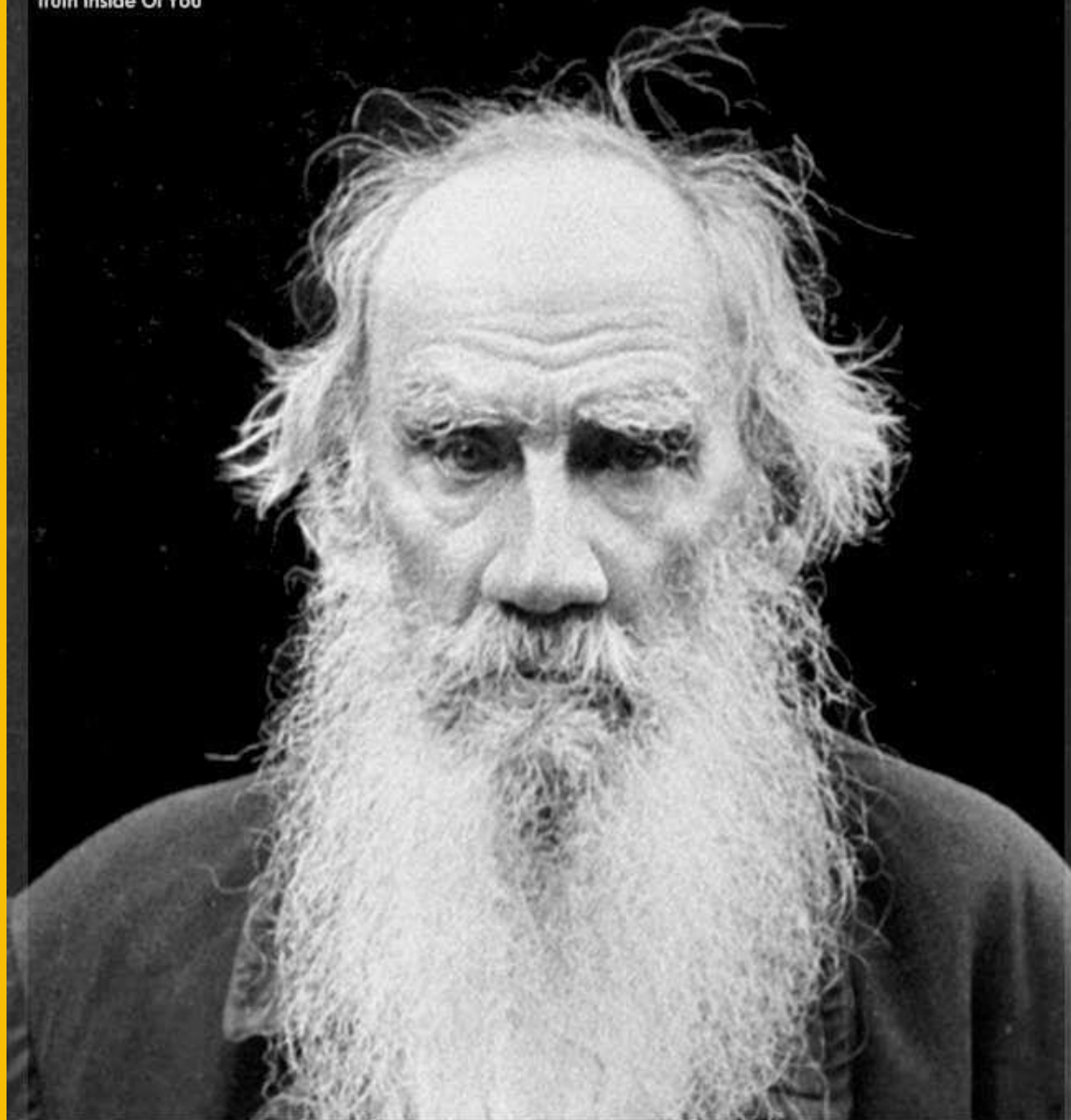
Everyone thinks of changing the
world, but no one thinks
of changing himself.
~ Leo Tolstoy

Morning

- *What is PHM and how does it relate to ICS goals?*

- *Looking at populations.*

- *Learning from, and respecting, the people we serve.*

- *Insights from populations.*

Afternoon

- *Overview of STP projects.*

- *Commitment to PHM core teams.*

- *Rolling out PHM.*

- *Next Steps.*

11.00 Break   13.15 Lunch   16.00 Close

"a stable relationship requires that good interactions outnumber bad interactions by at least 5 to 1."

Daniel Kahneman, _Thinking, Fast and Slow_

Where are we now?

Five questions on PHM to quickly take stock

1= We are very challenged to do this

10 = We are very confident that we can do this

sli.do

www.sli.do

Event code 8116

Enter 8116 and press join
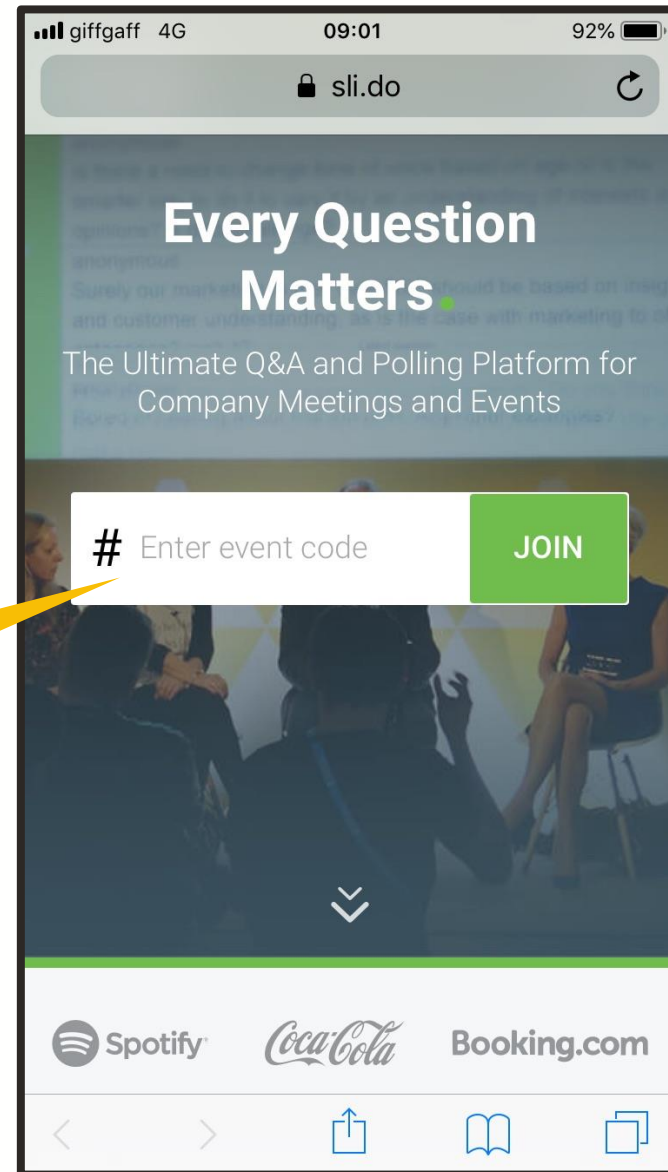
1. We have the capacity, and are ready, to deliver transformation while managing "day job" performance and finance pressures

2. We are agreed on the prioritisation of needs of the whole population and population sub-groups in our STP/ ICS (including those not presently receiving care)
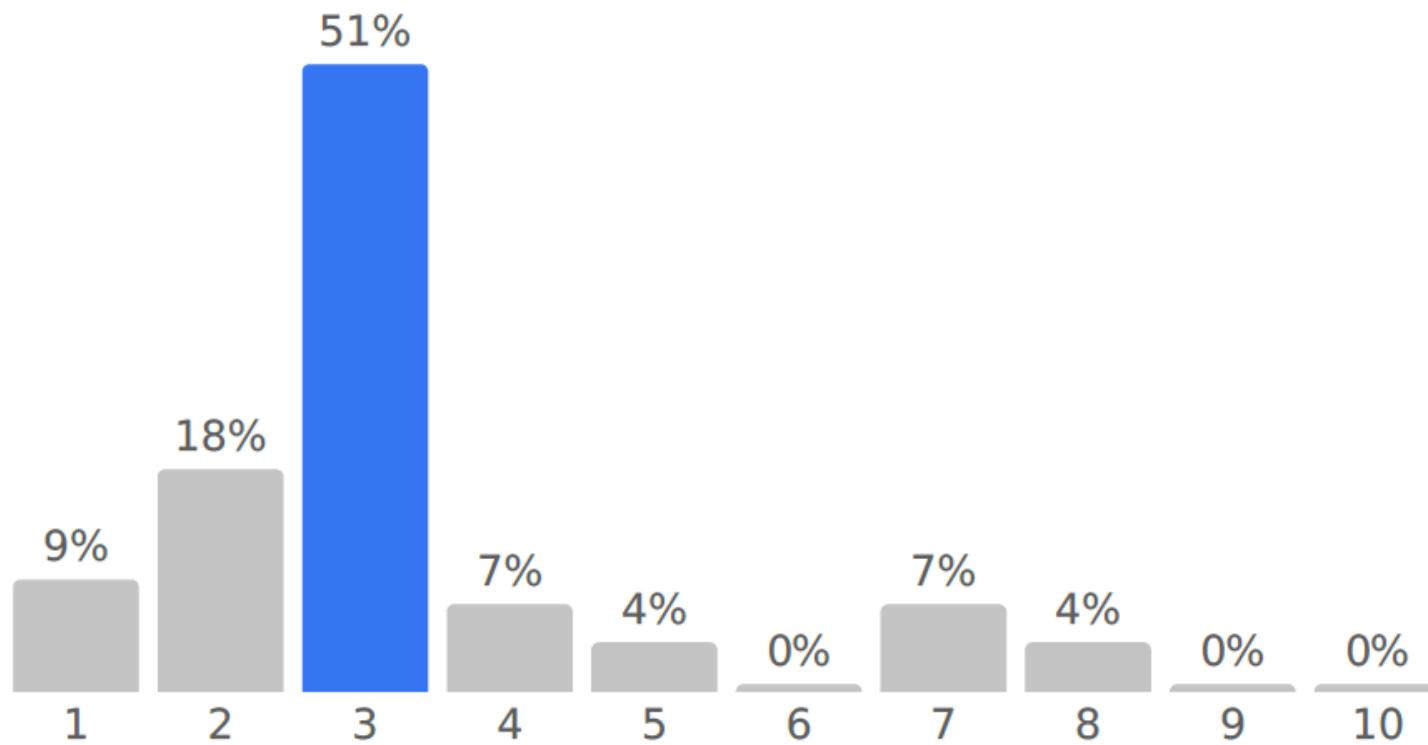
3. We know how and what to invest in (or allocate resources to) for the benefit of the whole population and individuals

4. We work collectively to make best use of the resources available to us for our whole population and individuals

5. We understand and learn from the outcomes that matter, needs and care preferences of the people we serve and their carers

1= very challenged 10 = very confident

We have the capacity, and are ready, to deliver transformation while managing "day job" performance and finance pressures

0 4 4

Score: 4.6

Value	Percentage
1	5%
2	11%
3	18%
4	16%
5	20%
6	7%
7	11%
8	11%
9	0%
10	0%
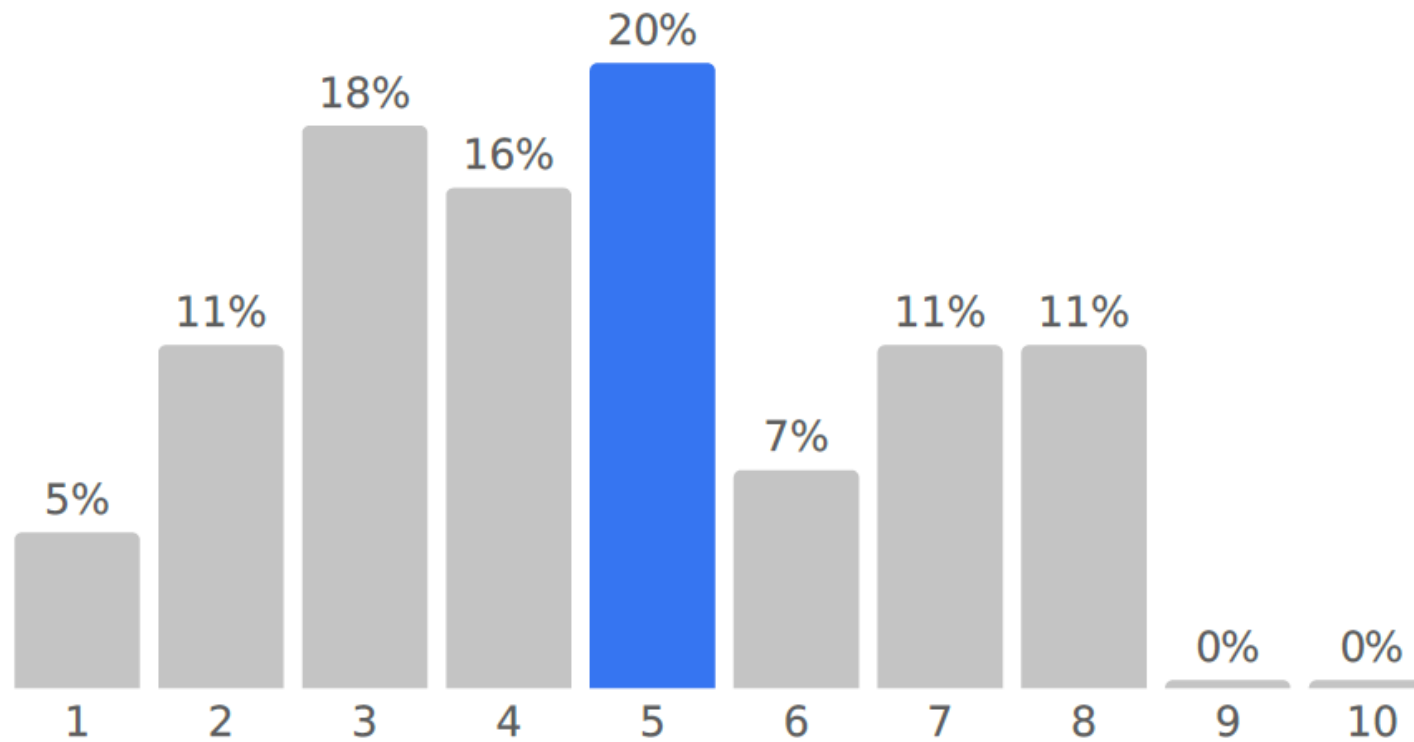
We are agreed on the needs of our whole population and population sub-groups in our STP/ ICS (including those not presently receiving care)

0 4 7

Score: 4.0
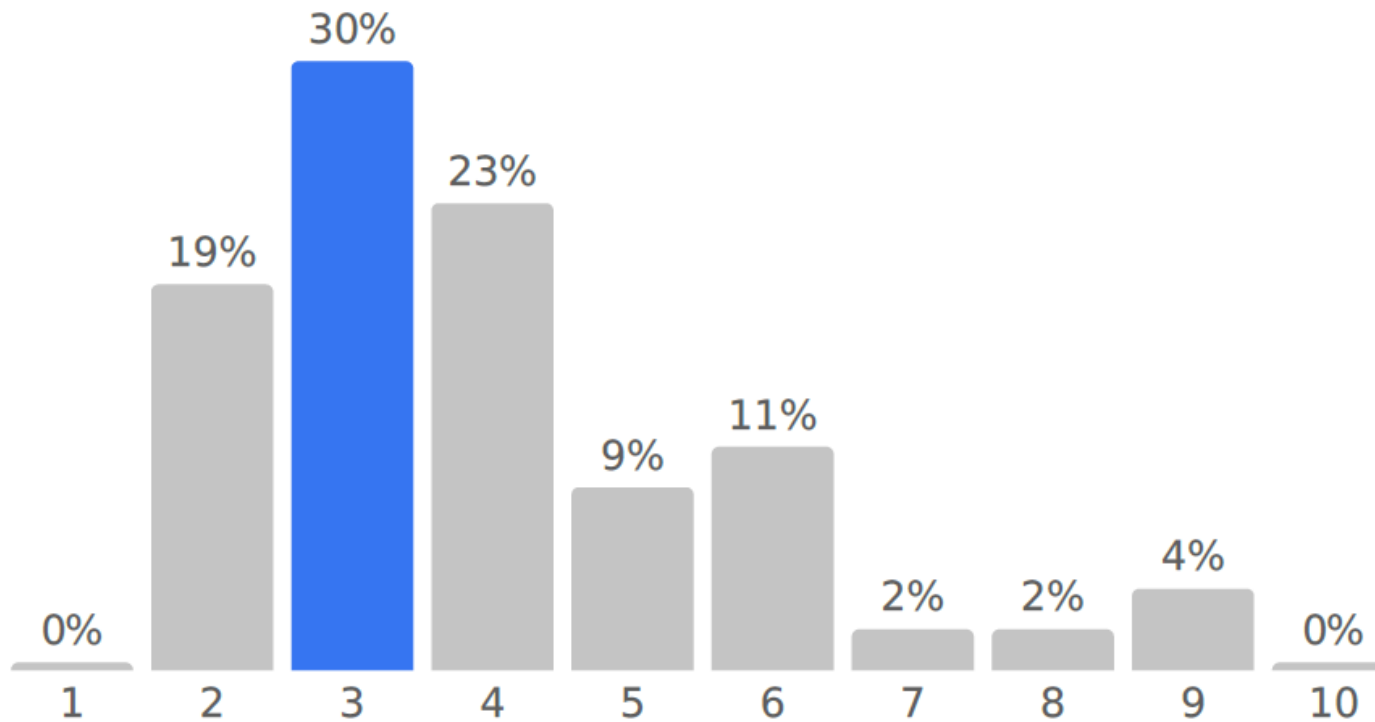
1	2	3	4	5	6	7	8	9	10
0%	19%	30%	23%	9%	11%	2%	2%	4%	0%

We know how and what to invest in (or allocate resources to) for the benefit of the whole population and individuals

Score: 3.3

1	2	3	4	5	6	7	8	9	10
9%	18%	51%	7%	4%	0%	7%	4%	0%	0%

We work collectively to make best use of the resources available to us for our whole population and individuals

Score: 3.3

1	2	3	4	5	6	7	8	9	10
11%	24%	22%	20%	15%	7%	2%	0%	0%	0%
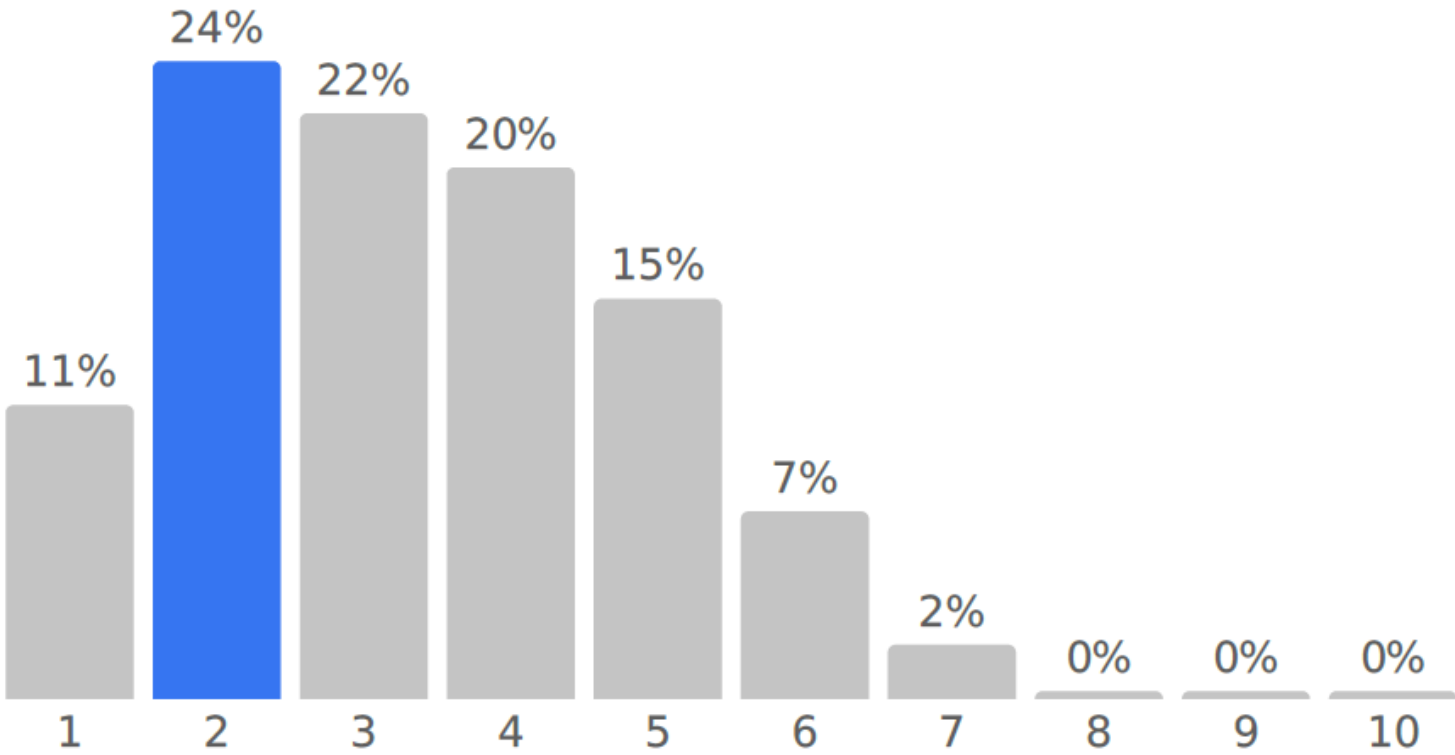
We understand and learn from the outcomes that matter, needs and care preferences of the people we serve and their carers

Score: 3.1
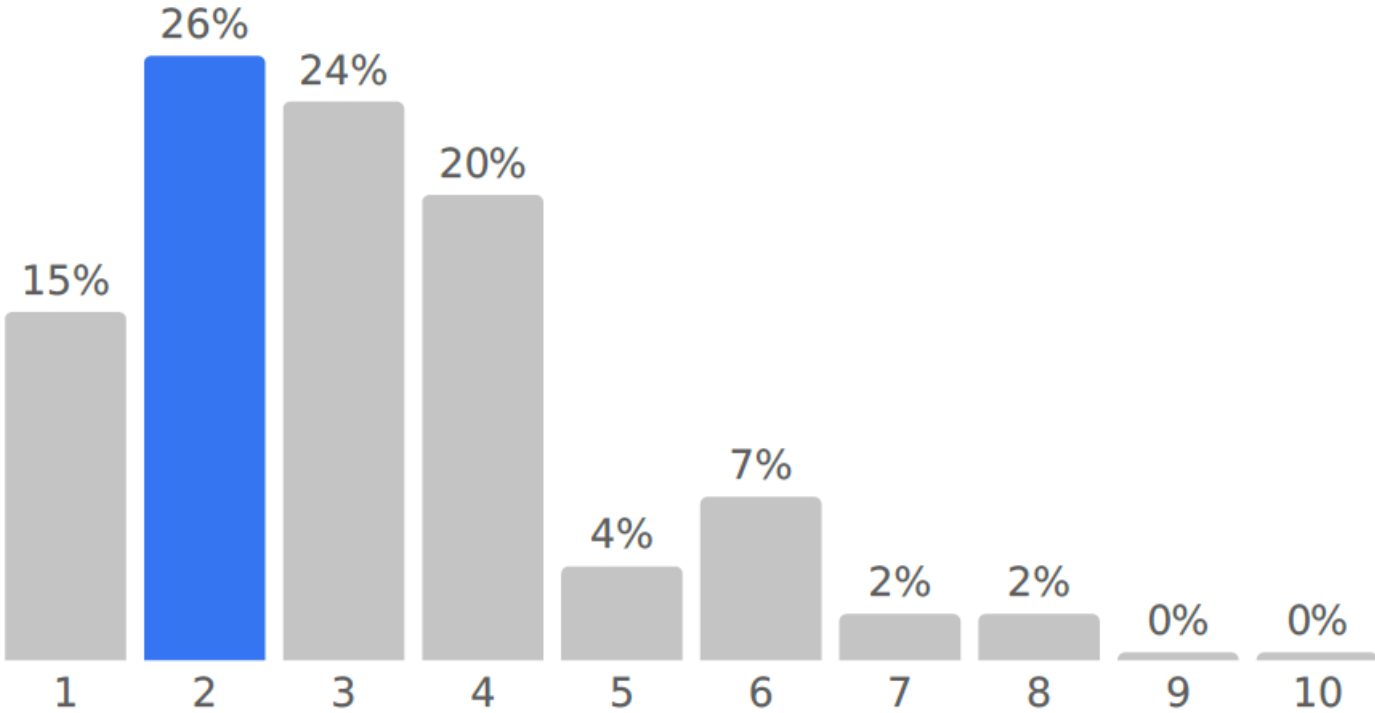
What is PHM? How does it relate to the goals of an ICS?

Margaret Mulley

NHS England and NHS Improvement

The Strategy Unit.

3V Oxford Centre for Triple Value Healthcare

UNIVERSITY OF BIRMINGHAM

THE Dartmouth INSTITUTE FOR HEALTH POLICY & CLINICAL PRACTICE

What is PHM?
How does it relate to the goals of an ICS?
Some Initial Questions

1. What are the goals of an ICS?

2. What is PHM? How can it support you to achieve your ICS goals?

3. How will you know you are achieving your ICS goals? What measures will you use?

What is PHM?
How does it relate to the goals of an ICS?
Feedback

What are the goals of an ICS?

- Improving the health of the population
- Ensuring better value for money
- Collective responsibility for targeting resource use and therefore better allocation of resources
- Whole population thinking 'joining up' the public sector
- Reducing unwarranted variation
- Prevention
- Working together across systems to achieve collective outcomes

What is PHM? How can it support you to achieve your ICS goals?

- Infrastructure = collective view, governance and funding
- Intelligence = population data, insight from engagement
- Intervention = prevent, reduce, delay poor health
- Applying scientific method to decisions
- Good commissioning (but as a process not a function)
- Using whole person / whole system data to drive actions
- PHM is the 'how' we do what an ICS should be doing
- Breaking down barriers in data, contractual relationships and patient pathways
- Moving away from firefighting to forward thinking prevention
- Recognition that this isn't just for public health, everyone needs to be involved
- Not a single tool or piece of analysis
- Collective use of shared data (creating a single version of the truth)

How will you know you are achieving your ICS goals? What measures will you use?

Short term:

- Shift of investment to early intervention
- Less demand / reduction in demand growth
- Understanding inequalities and knowing our population
- Passionate interest in whole population across the NHS/LA workforce
- Outcomes framework developed
- Shared language used
- Starting to see organisations giving resources up to support the system

Long term:

- People living longer healthy lives
- Systematic use of leading edge and longer run measures
- Financial balance and reduction in unwarranted variation
- Reduction in health inequalities

Break

NHS England and NHS Improvement

The Strategy Unit.

3V Oxford Centre for Triple Value Healthcare

UNIVERSITY OF BIRMINGHAM

THE Dartmouth INSTITUTE

FOR HEALTH POLICY & CLINICAL PRACTICE

Value Based Healthcare

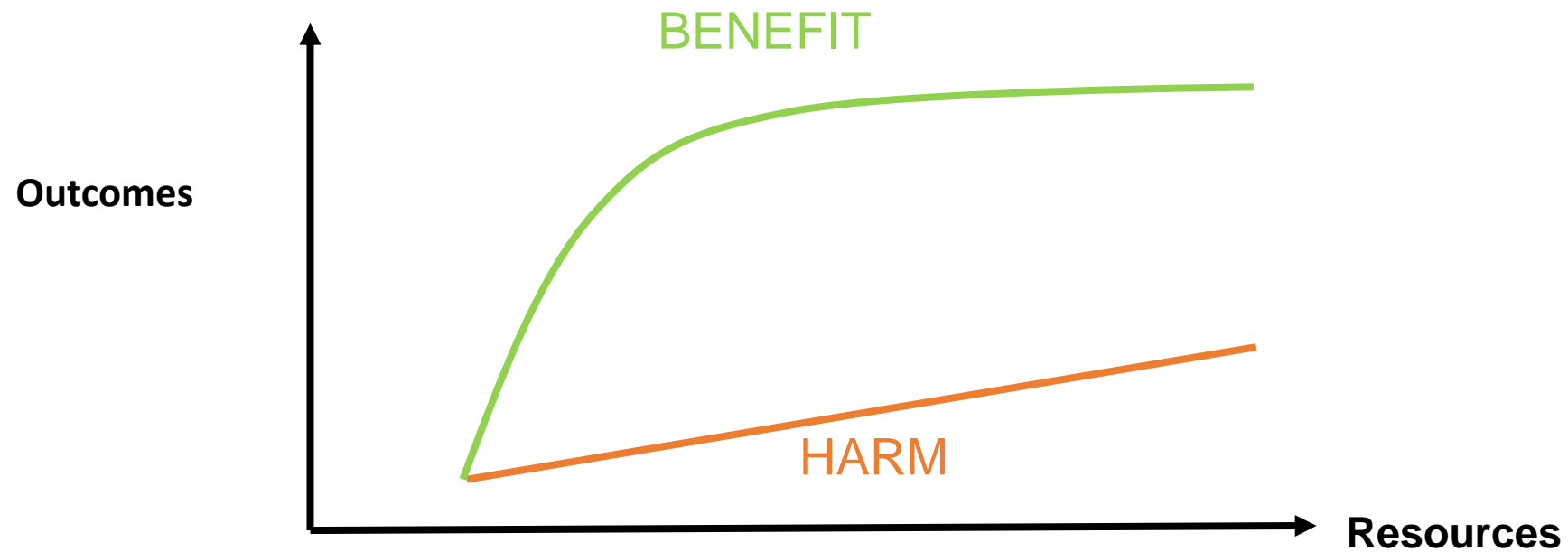## ...for populations and individuals

What is value?

What did Porter tell us?

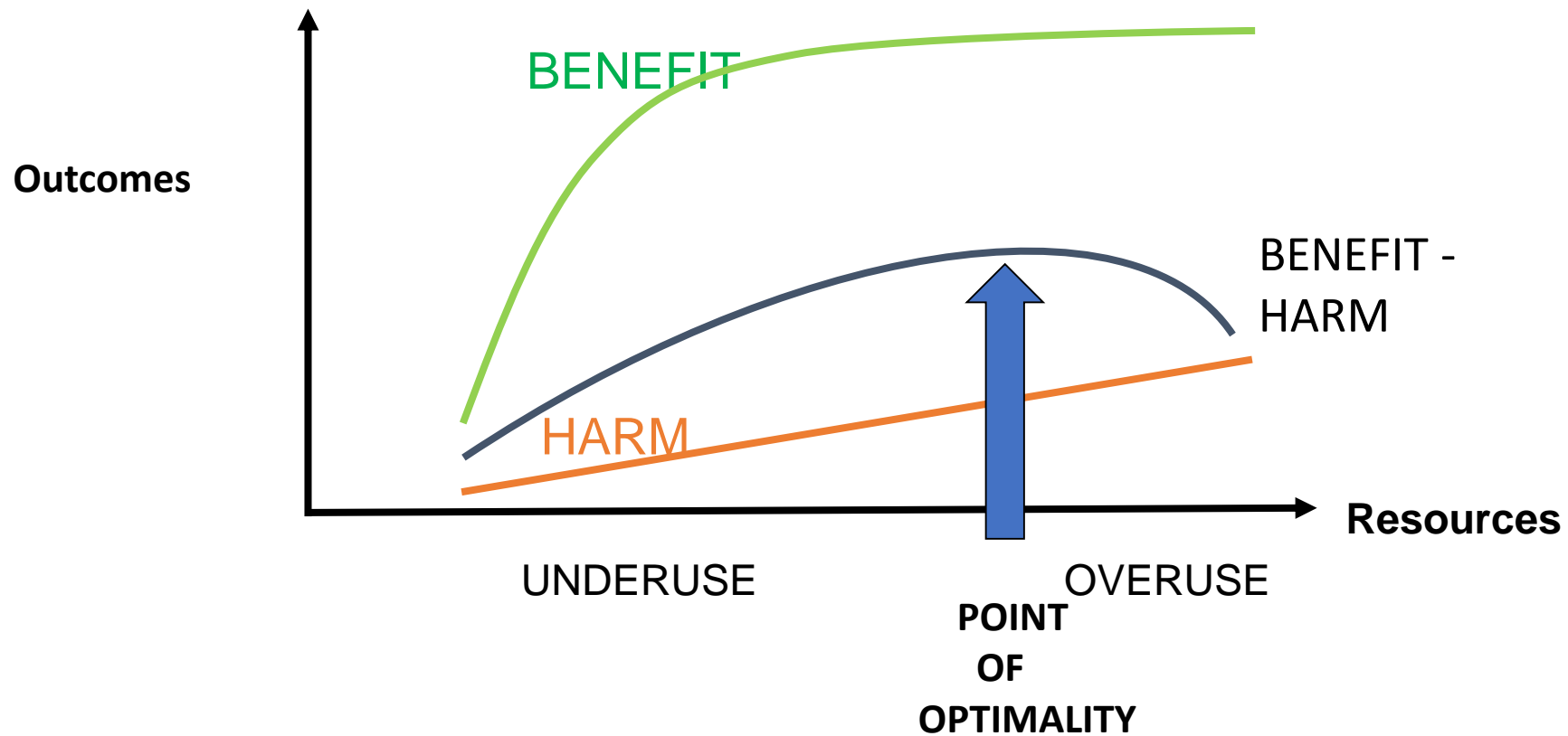$$\text{Technical Value} = \frac{\text{Outcome for patients treated}}{\text{Cost}}$$
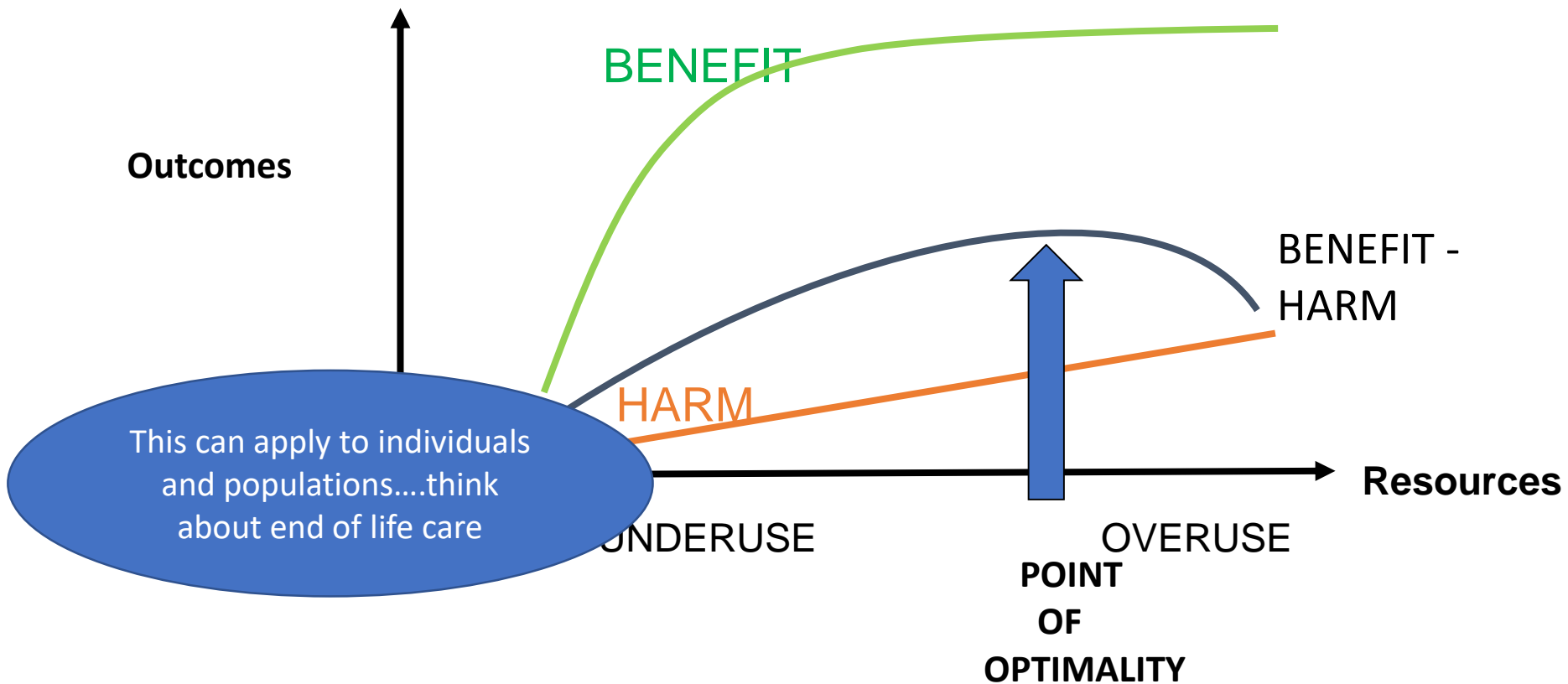
What has Donabedian taught us on value?
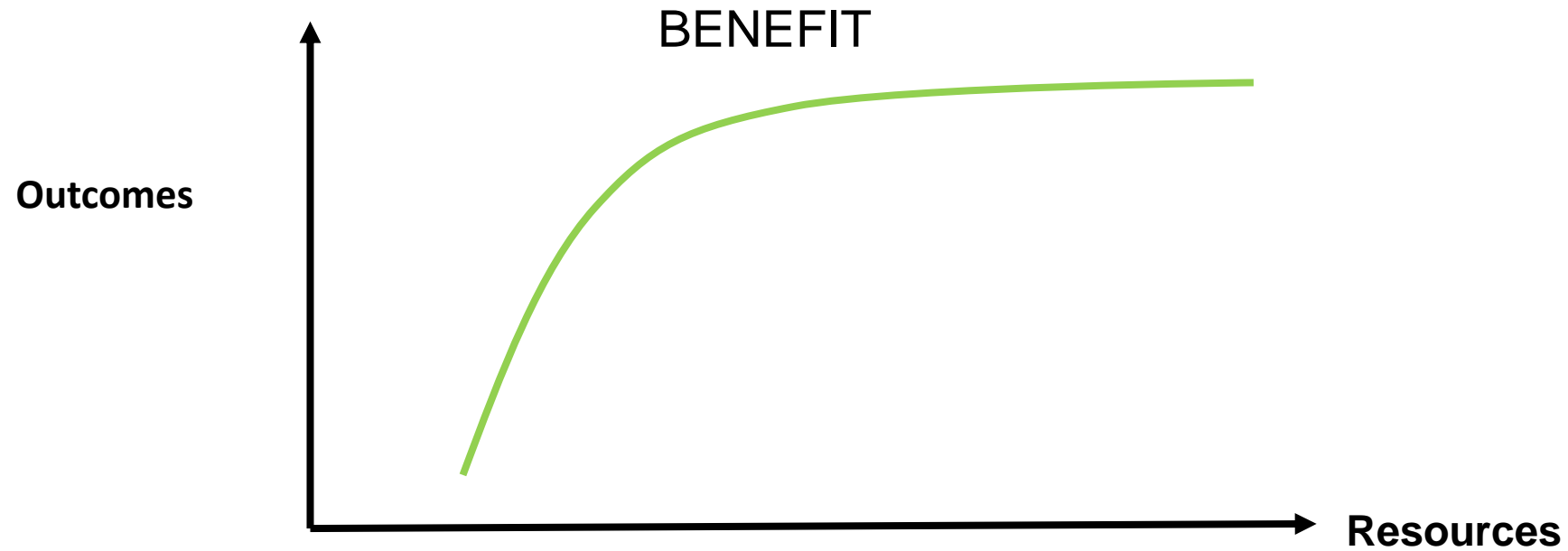
What has Donabedian taught us on value?

What has Donabedian taught us on value?

The context

If we do nothing, need and demand will increase by at least 20% in the next decade and resources will not

Need + Demand

Need

Resources

2019   2024   2029
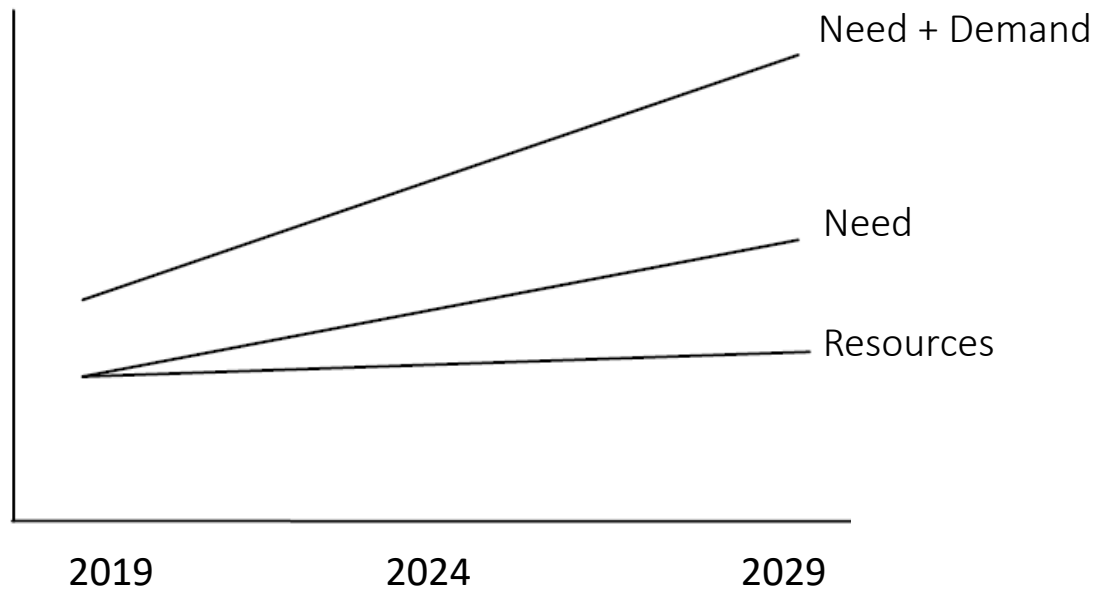
...Resources:
- workforce
- time
- leadership bandwidth
- carbon
- capacity to change
- money

All of these are finite

There are four main causes for the increase in need and demand

1. Population ageing

2. Development of expensive but effective innovations

3. The 'increasing volume and intensity of clinical practice'

4. Mismatch between perceived demand and actual need

We use four means to bridge the gap

1. Prevent disease, disability, dementia and frailty to reduce need

2. Providing cost-effective, evidence based interventions

3. Improve outcome by increasing quality and safety of process

4. Increase productivity

… necessary but insufficient
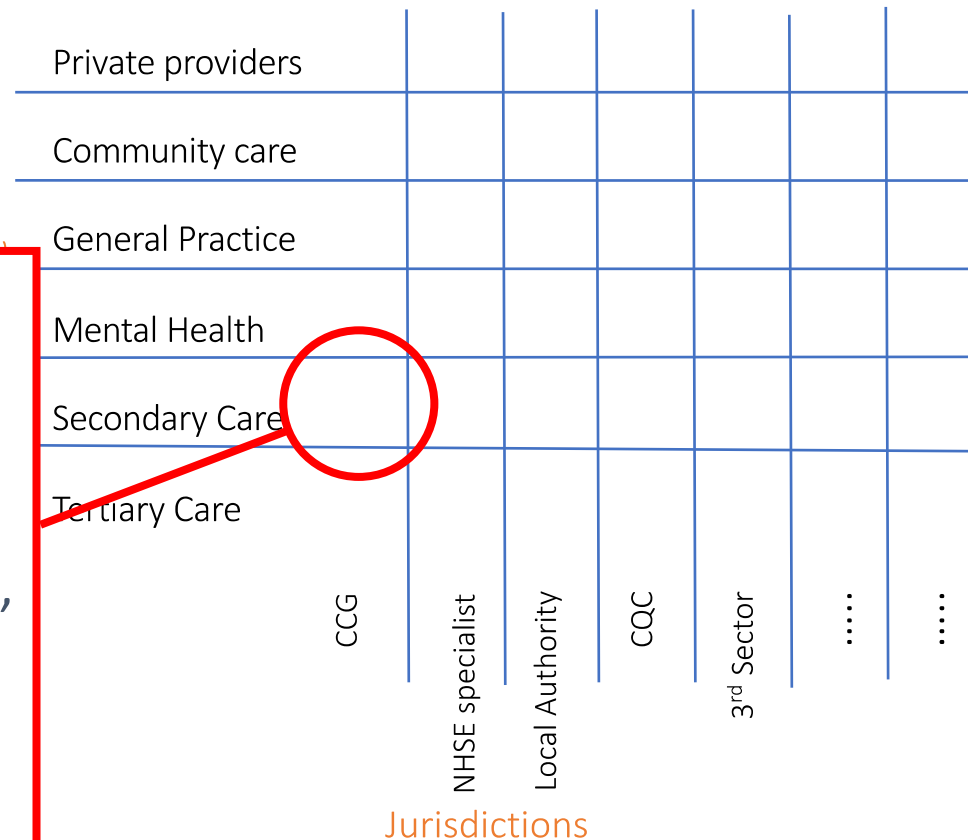
They are applied to 2D Healthcare

1. Prevent disease, disability, dementia and frailty to reduce need

2. Provide only cost-effective, evidence based interventions

3. Improve outcome by increasing quality and safety of process

4. Increase productivity

Applied to

Types of Care

- Private providers
- Community care
- General Practice
- Mental Health
- Secondary Care
- Tertiary Care

Jurisdictions

- CCG
- NHSE specialist
- Local Authority
- CQC
- 3rd Sector
- ...
- ...
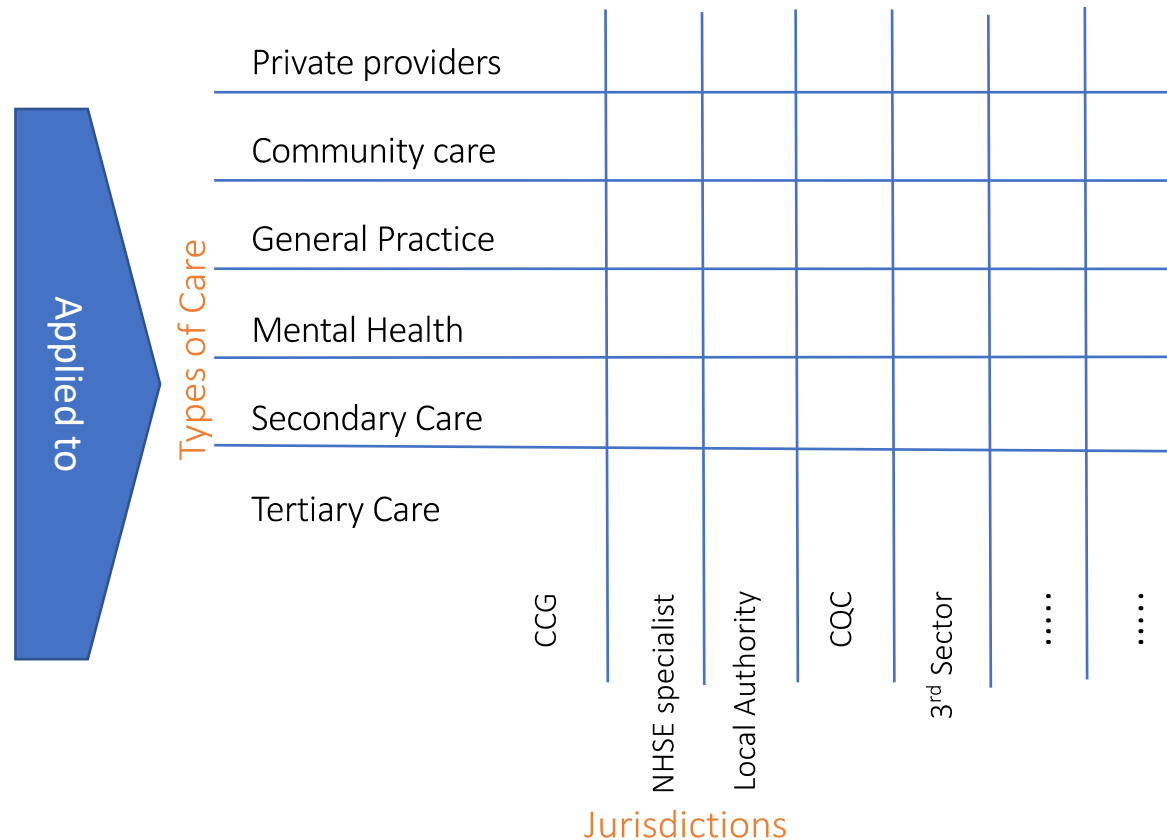
They are applied to 2D Healthcare

1. Prevent disease, disability, dementia and frailty to reduce need

For instance, you can have an efficient, safe, high quality and cost effective service, such as hip replacements, but if those services do not represent the best investment to improve population health, then you haven't taken *collective responsibility for the management of resources*

Private providers

Community care

General Practice

Mental Health

Secondary Care

Tertiary Care

CCG

NHSE specialist

Local Authority

CQC

3rd Sector

⋮

⋮

Jurisdictions

In an Integrated Care System...

NHS organisations, in partnership with local councils and others, take *collective responsibility for managing resources*, delivering NHS standards, and *improving the health of the population they serve*.

NHS England

The symptoms

Congratulations, you're the new head of CVD in England, and the treasury has found £494m because the brother of one of the treasury minister's has just had a stroke ...

- what might you spend it on?

Sorry, it has already been spent on an innovation
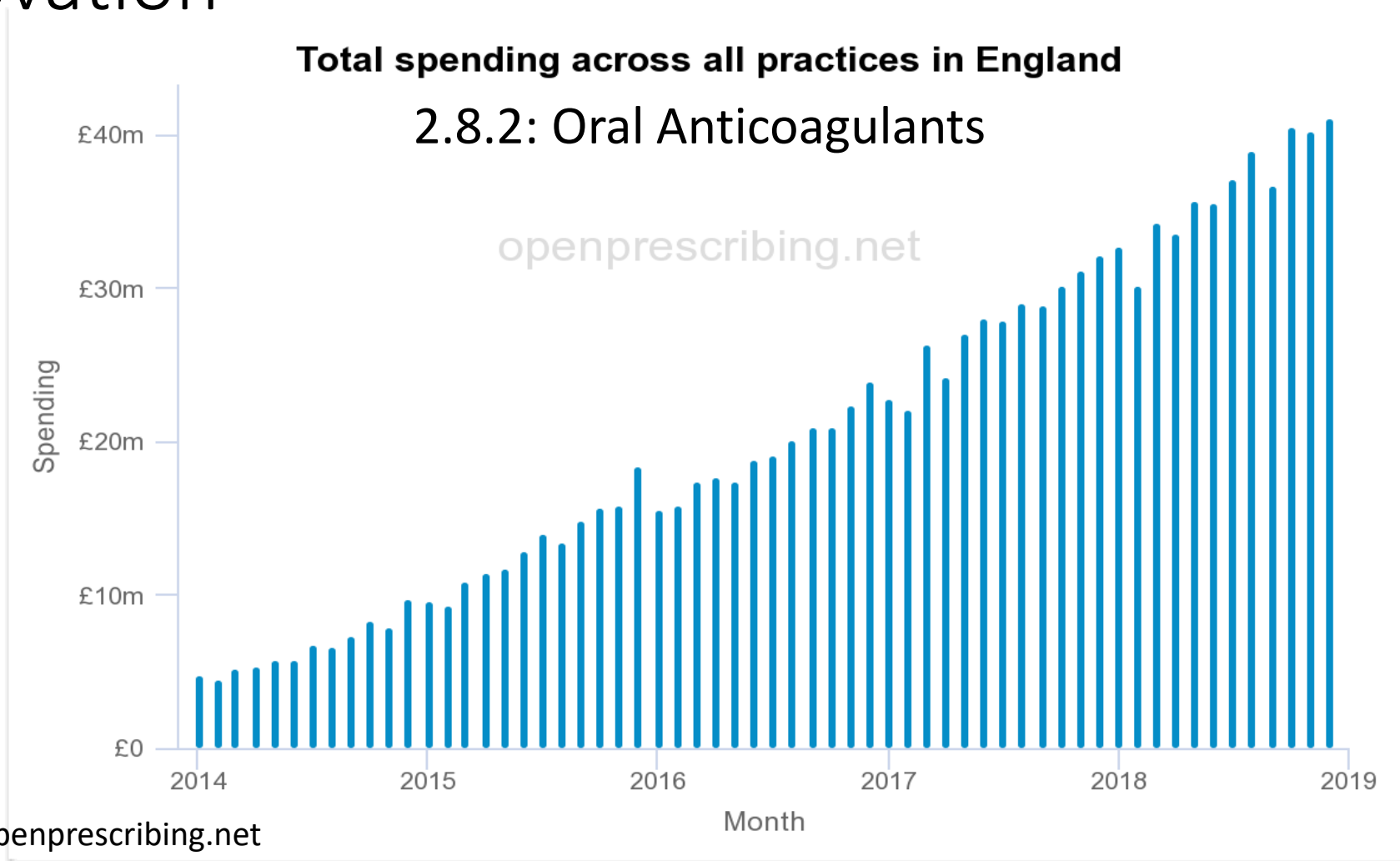
Source: Openprescribing.net

…and now a new cost effective implantable device for heart failure is on its way…

…you ring the treasury, there's a problem with prisons so they have no money, you need to find the money from savings…

You're new head of Primary Care in England and we have found 5000 more GPs
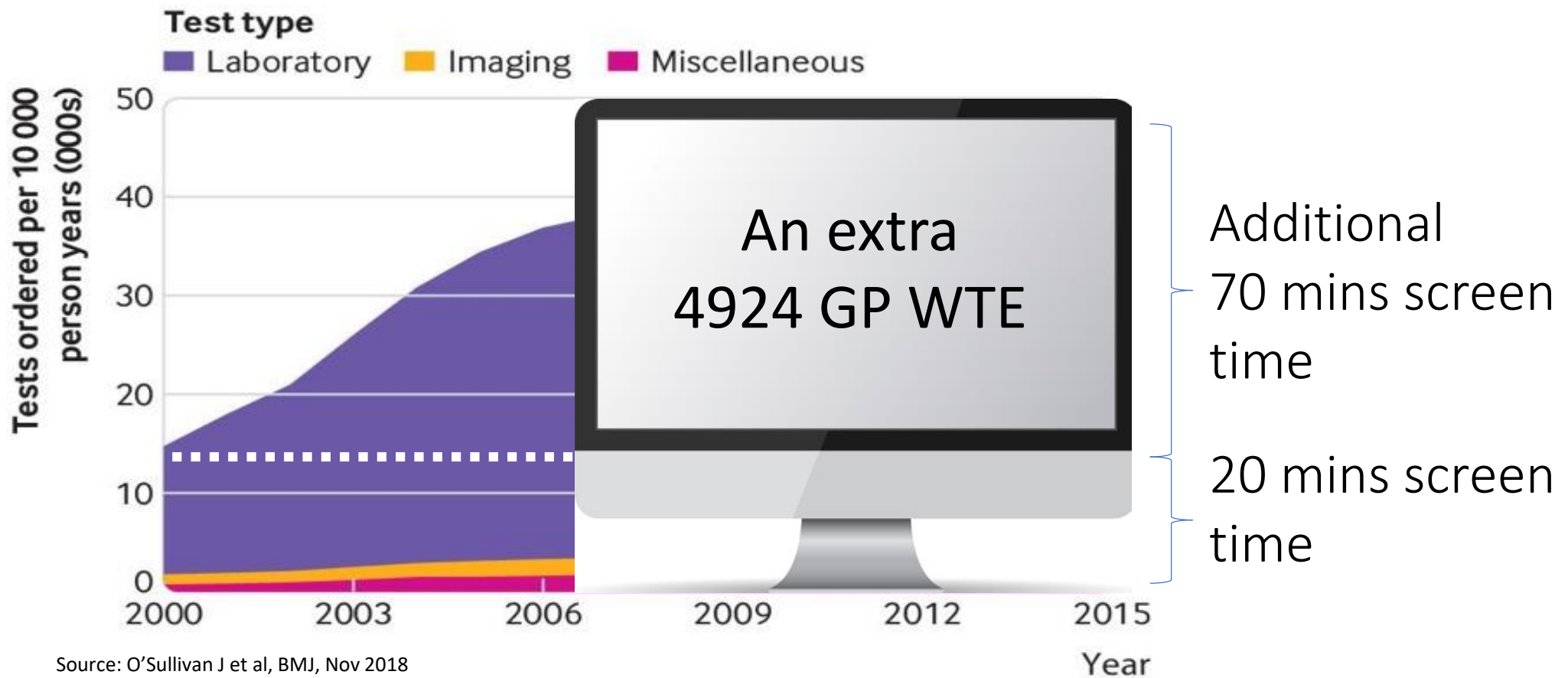
- Where should we locate them and what should they focus on?

There has been a relentless increase in testing
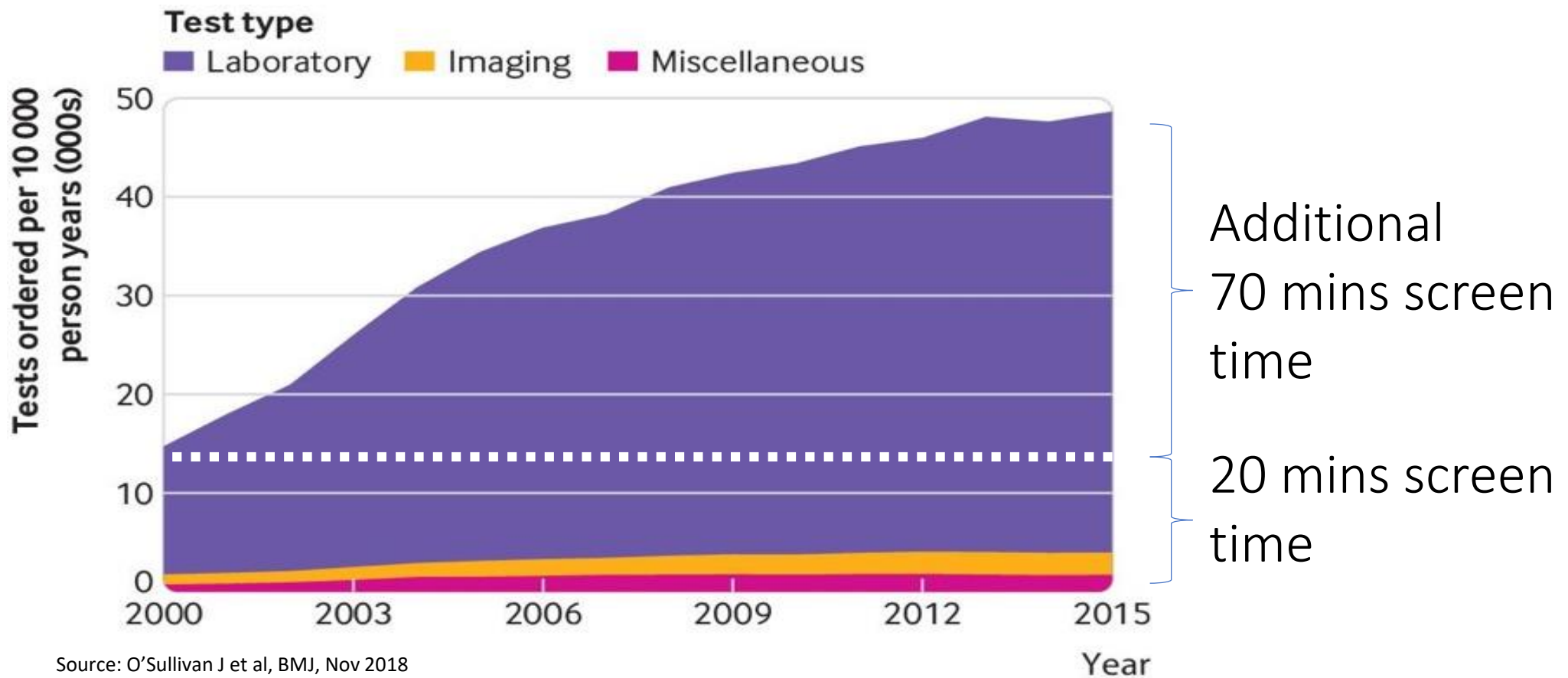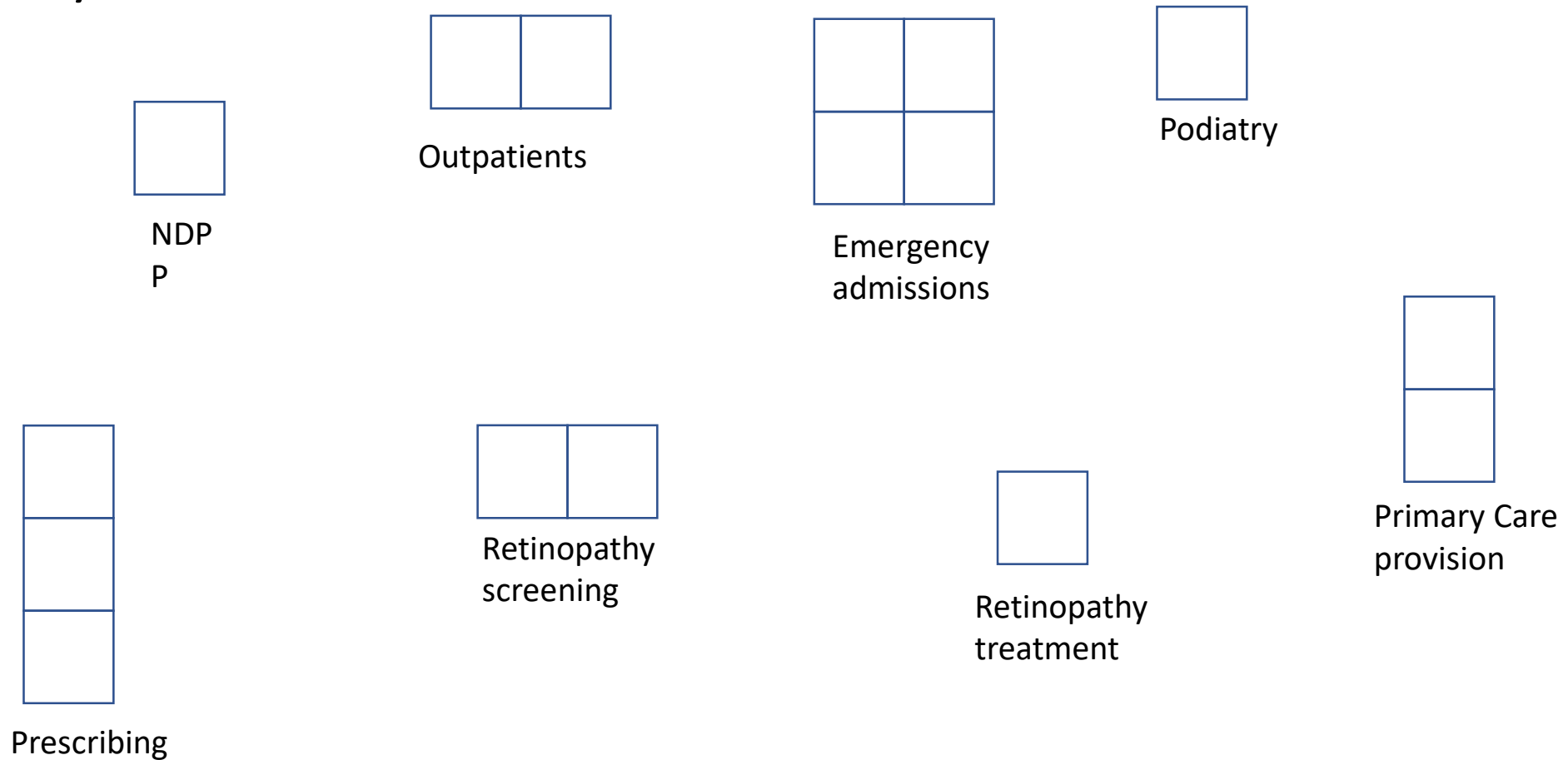

Source: O'Sullivan J et al, BMJ, Nov 2018
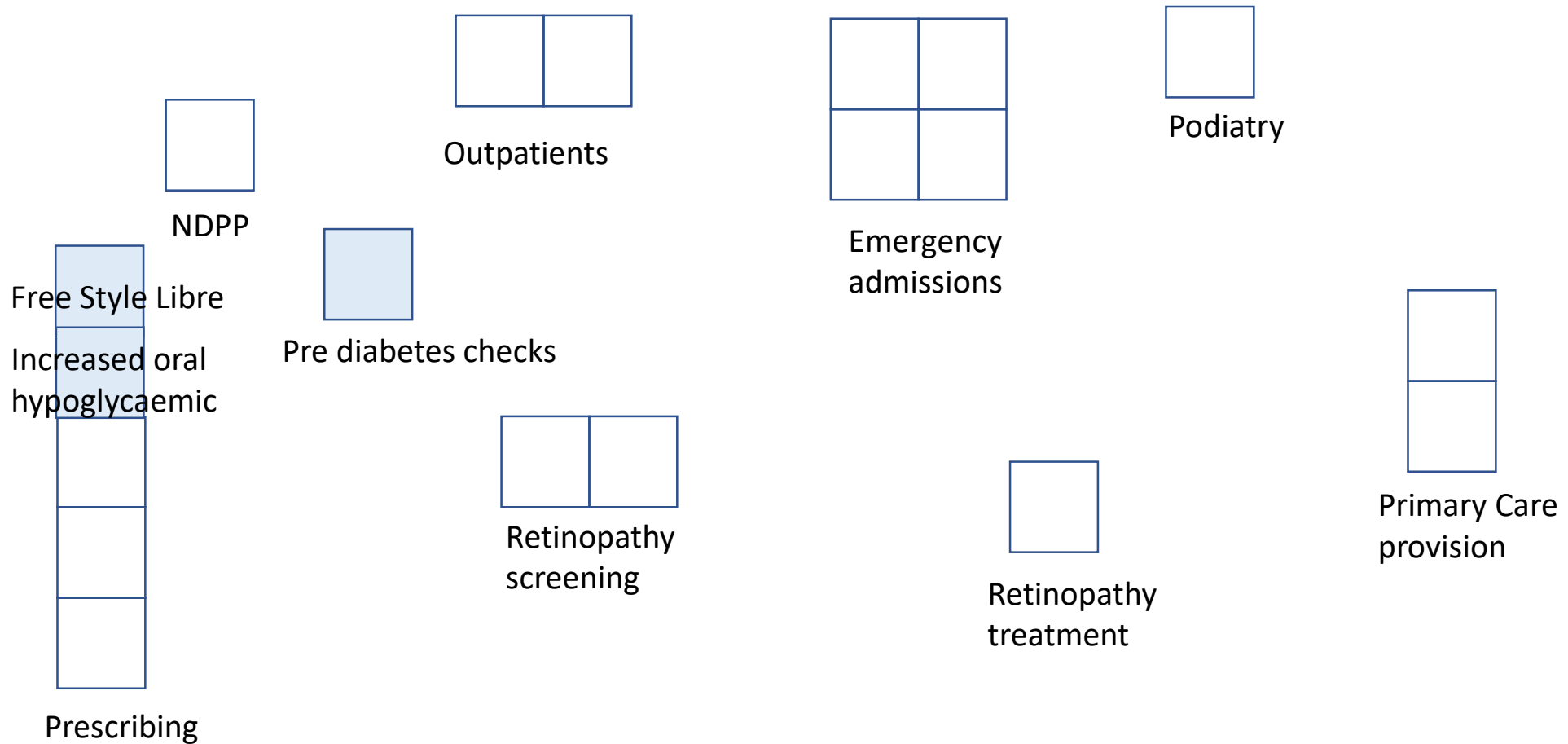
There has been a relentless increase in testing

Test type
- Laboratory
- Imaging
- Miscellaneous

Tests ordered per 10 000 person years (000s)

50
40
30
20
10
0

2000   2003   2006   2009   2012   2015

Year

An extra
4924 GP WTE

Additional 70 mins screen time

20 mins screen time

Source: O'Sullivan J et al, BMJ, Nov 2018

3V Oxford Centre for Triple Value Healthcare

Social Enterprise UK Supporting Member

It is impossible to take *collective responsibility* when something new emerges, or activity increases

Outpatients

Podiatry

NDPP

Emergency admissions

Free Style Libre

Increased oral hypoglycaemic

Pre diabetes checks

Retinopathy screening

Primary Care provision

Retinopathy treatment

Prescribing

Now you have an increase in demand

Previous diabetes activity

New diabetes activity
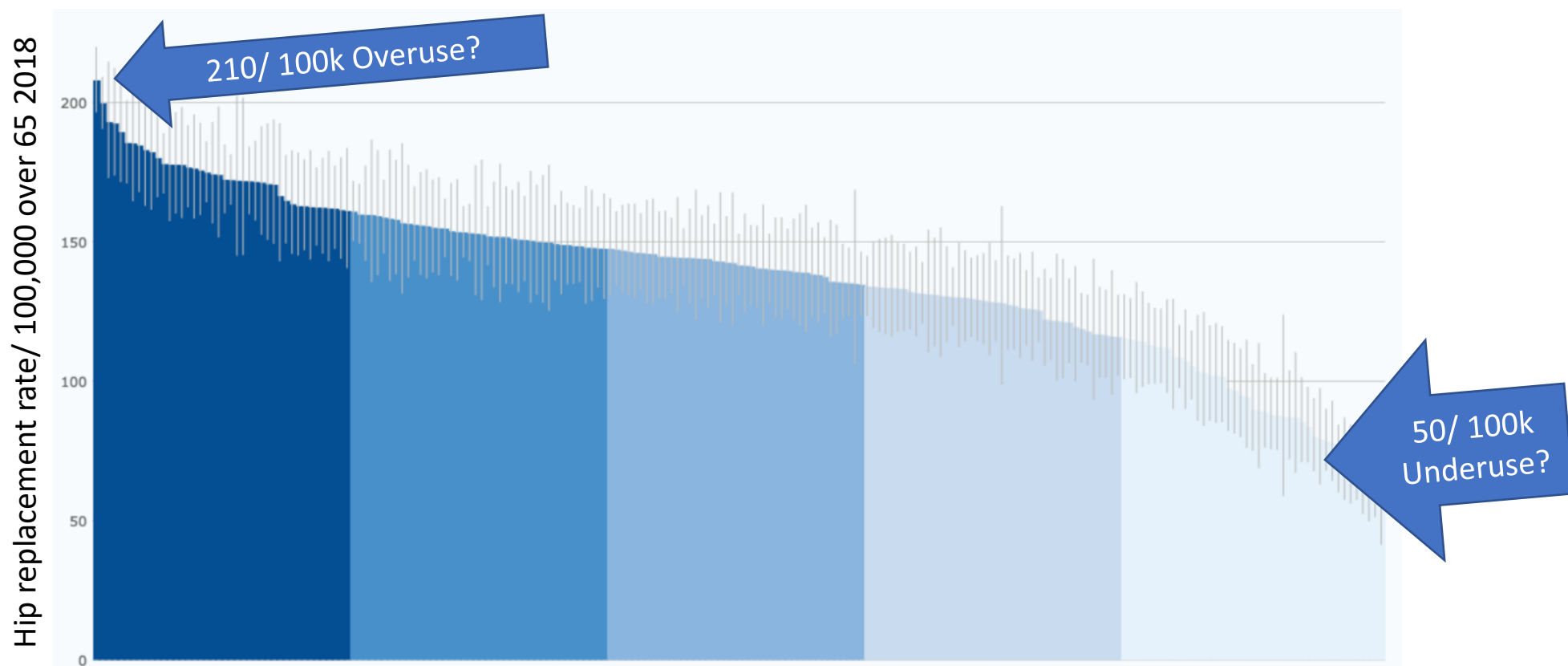
Relentless increase
New innovation
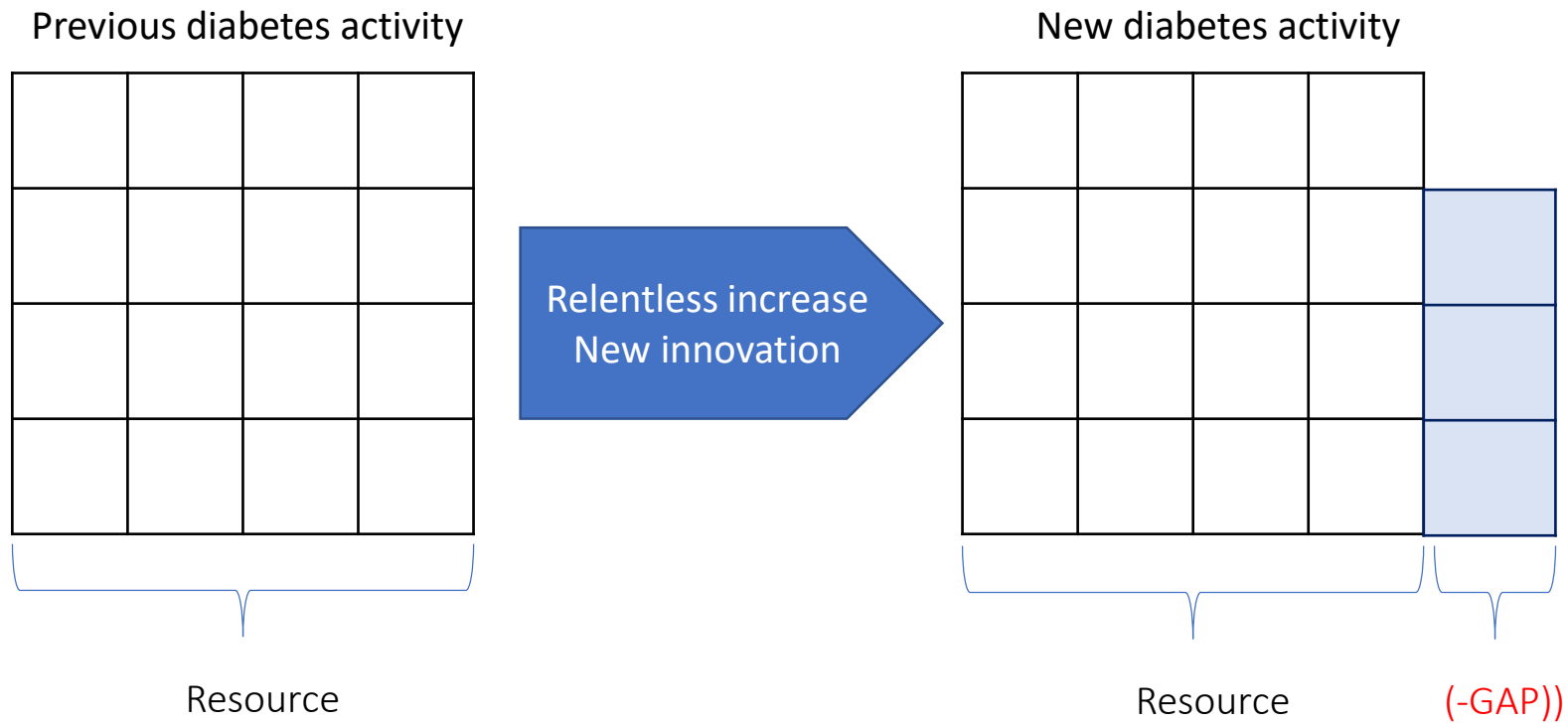
The signs

What is the right rate for hip surgery over 65? Overuse or underuse

210/ 100k Overuse?

50/ 100k Underuse?

Hip replacement rate/ 100,000 over 65 2018

Source NHS England

Overuse or underuse…
…and the inverse care law applies
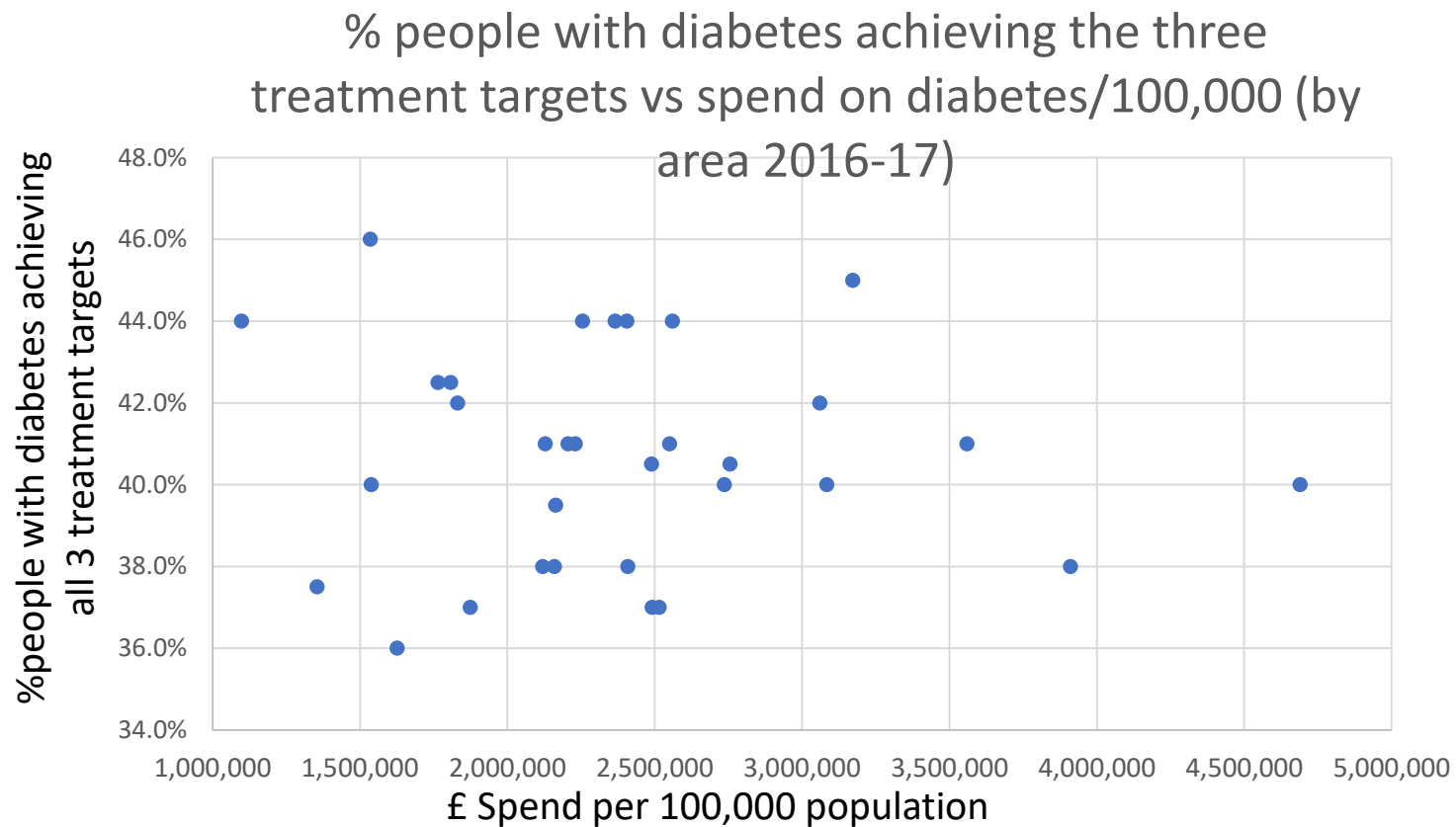

Comparison of NHS joint replacement in NHS
2012
Wealthiest ward =100
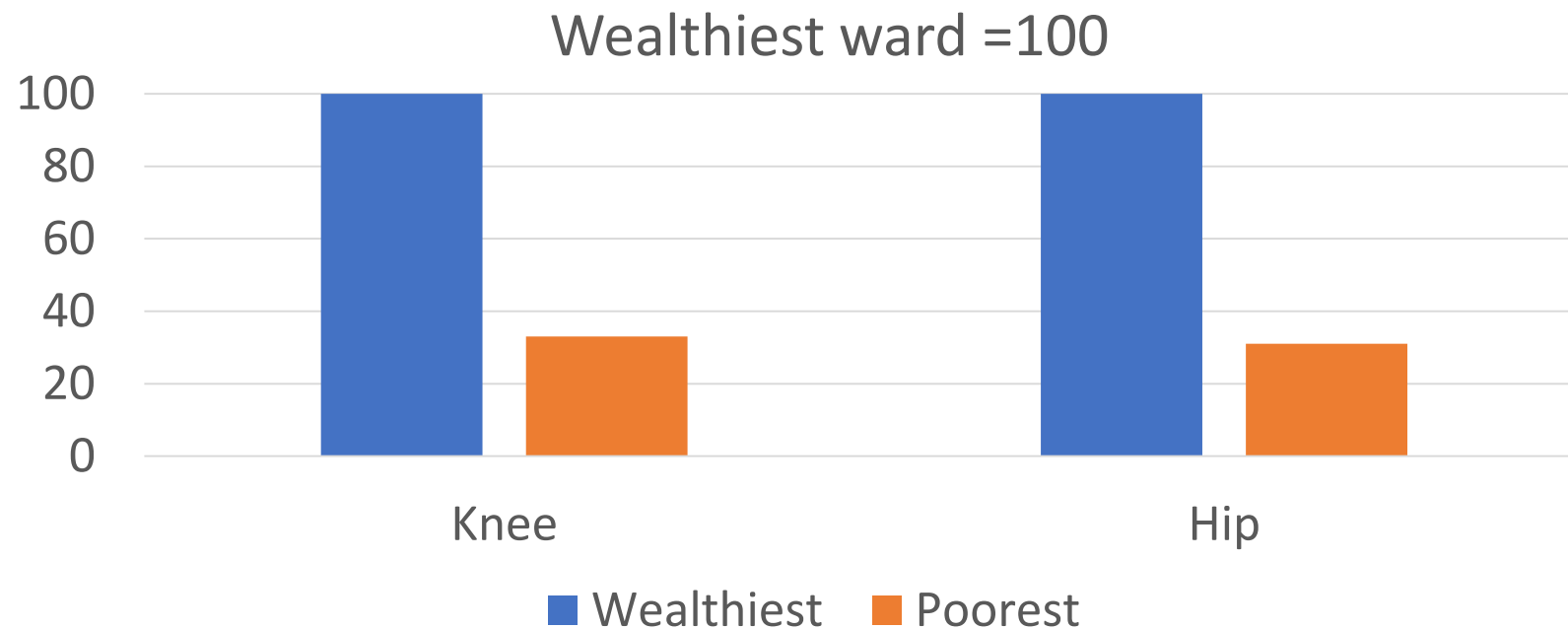
What is happening in Aneurin Bevan Health Board?
Despite high quality, 15% of patients are worse after surgery

Change in visual acuity after cataract surgery
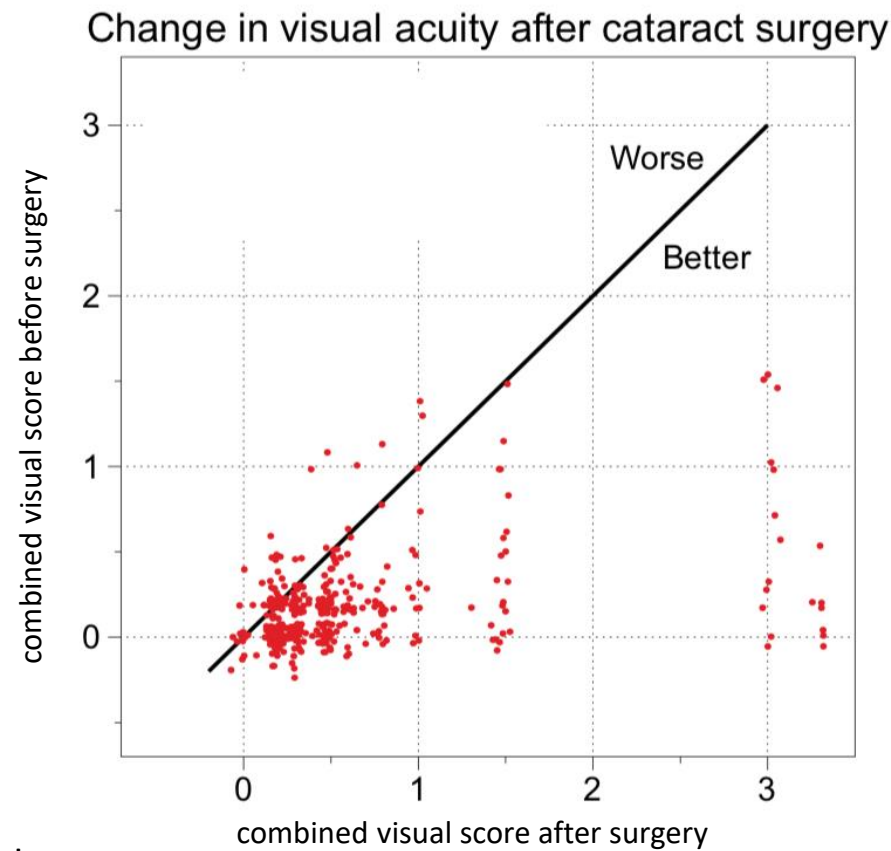
Source Aneurin Bevan Health Board

What happens when we look at value for populations?

% people with diabetes achieving the three treatment targets vs spend on diabetes/100,000 (by area 2016-17)

Source: NHS England
Three treatment targets are BP, cholesterol and HbA1c

# The cure

Five key tasks for ICS to meet their goal:

1. Create the Culture of stewardship
2. Define population sub-groups with a common need and allocate resources
3. Design a value framework for each population sub-group
4. Deliver the value framework through networks
5. Ensure each individual makes decisions to optimise personal value

Underpinned by a new approach to governance to promote collective responsibility.
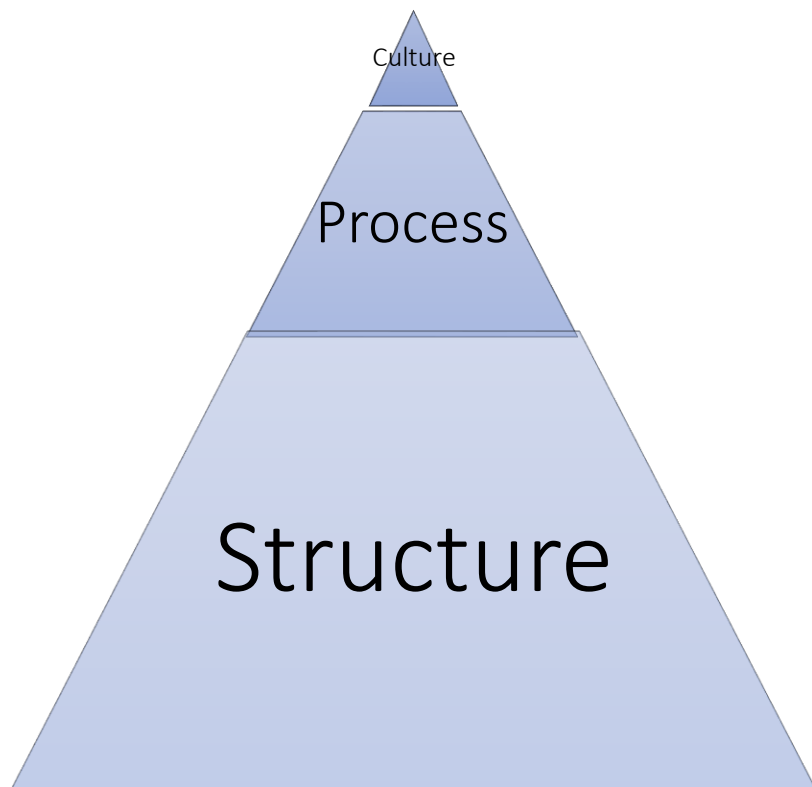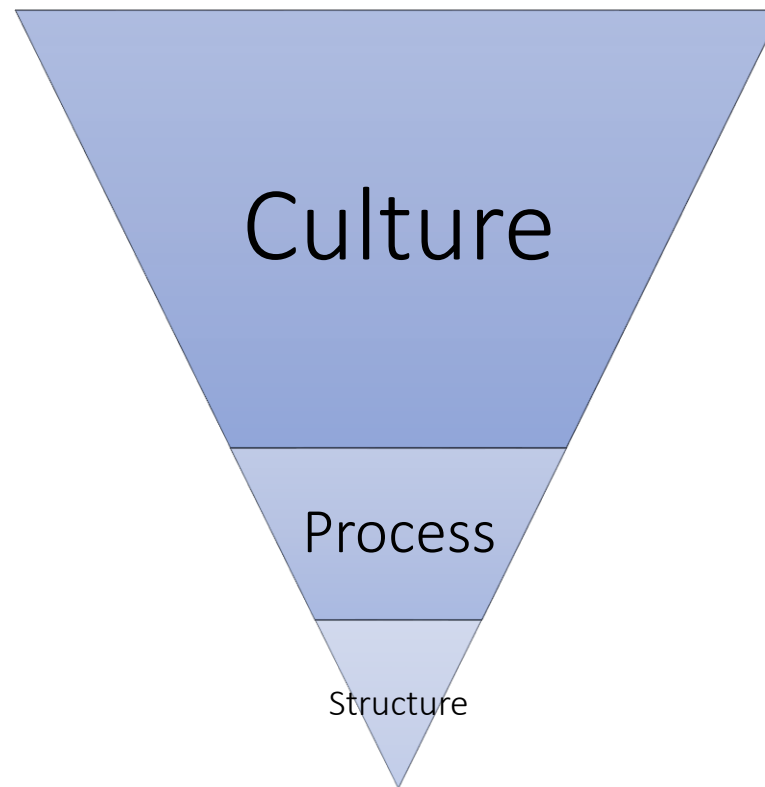
A common doctrine and language to create a culture of stewardship
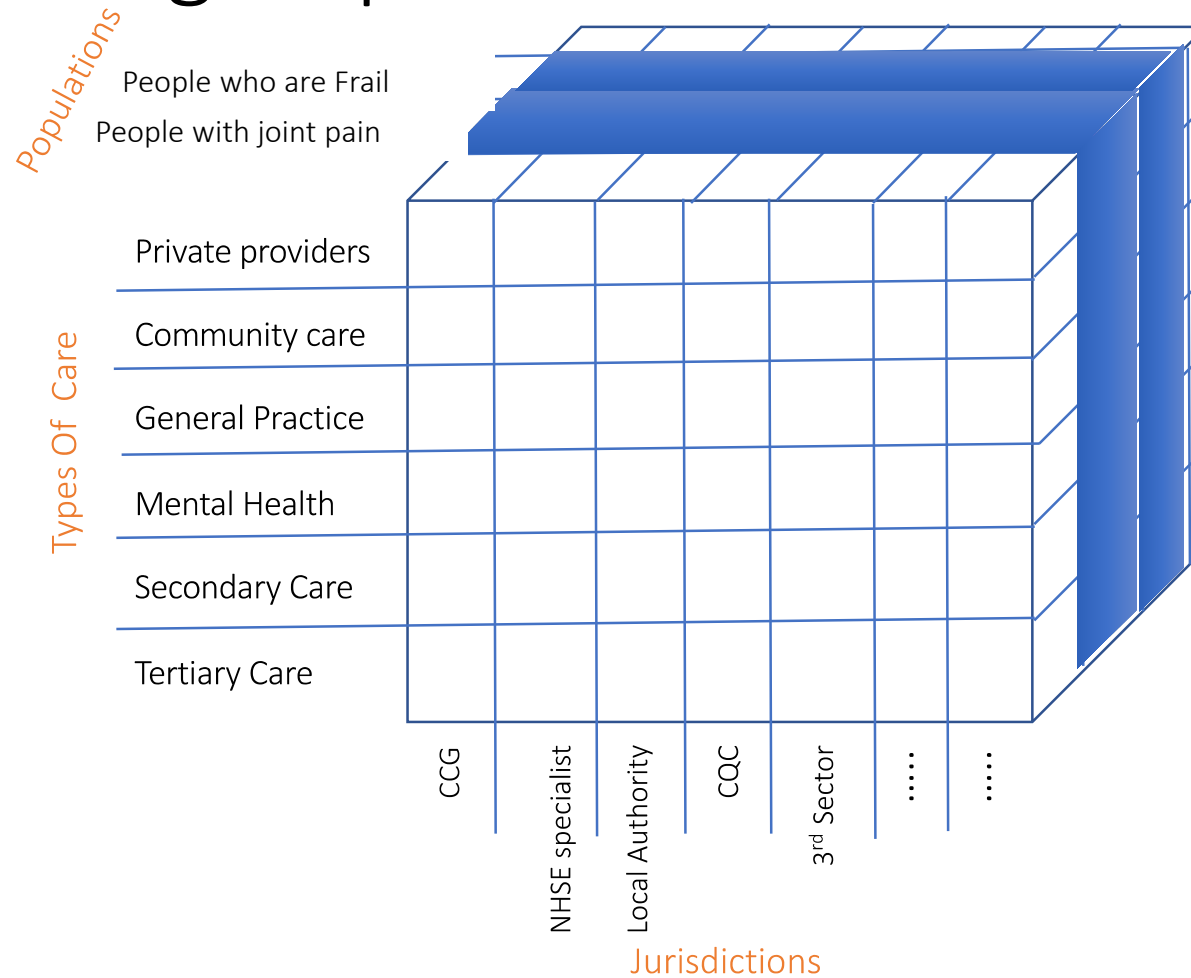

Protecting resources, promoting value:

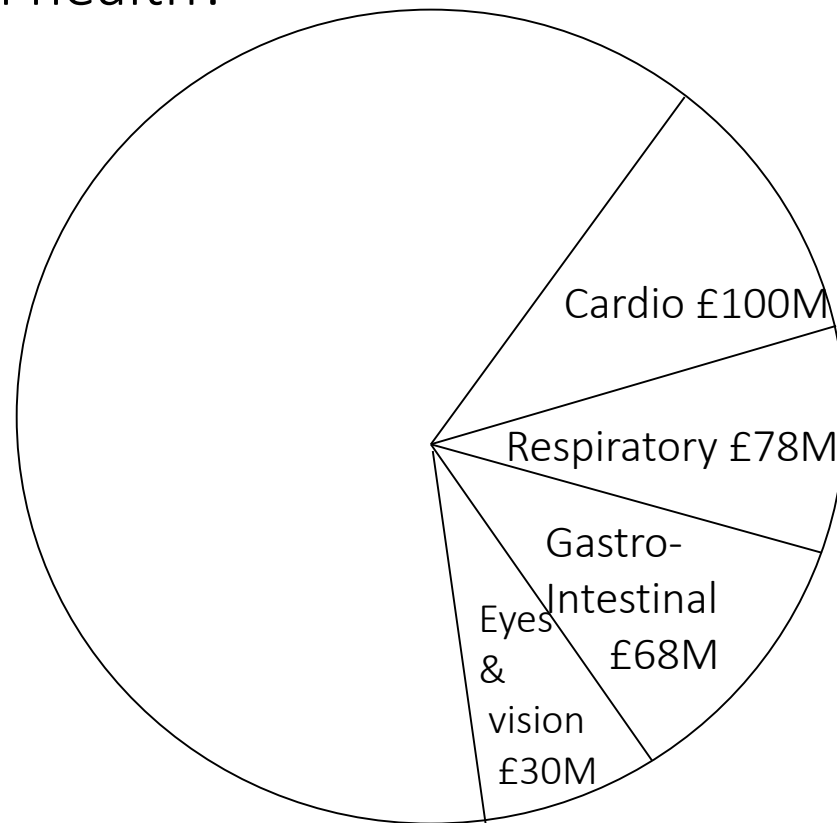A core duty for all those working in the NHS

November 2019

Establish 3D health and social care: Population groups with a common need

Allocate population health resources wisely
How much for mental health?

Is this right for this population?

Mental Health £145m

Cardio £100M

Respiratory £78M

Gastro-Intestinal £68M

Eyes & vision £30M
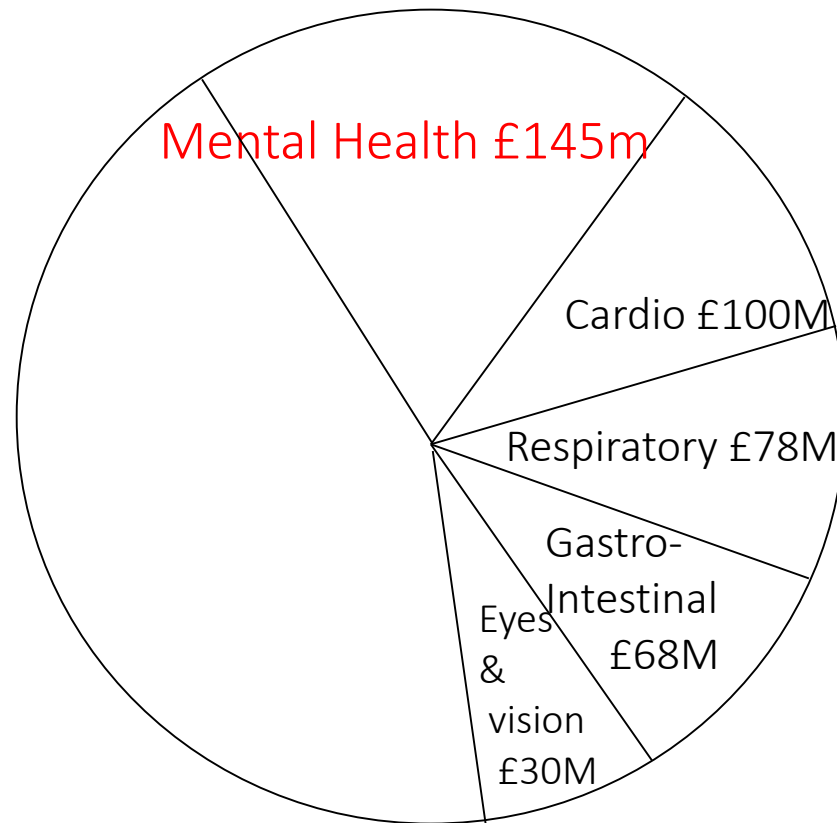
Define a value framework for each population and population sub group

A system is a set of connected activities with a shared aim

✓ Overall aim

✓ Clear Scope (e.g. all people with joint pain);

✓ Defined Population (e.g. all people resident in an area);

✓ Agreed Outcomes and Objectives (limited to 2-sides A4);

✓ Agreed Budget

Create networks alongside hierarchies to deliver the value framework… "Communities of Value"

Primary Care Network

Social Care

Hospital

Hierarchies **and** population-centred networks - Communities of Value (CoV)

Population with a common need

Hierarchies

Community of Value
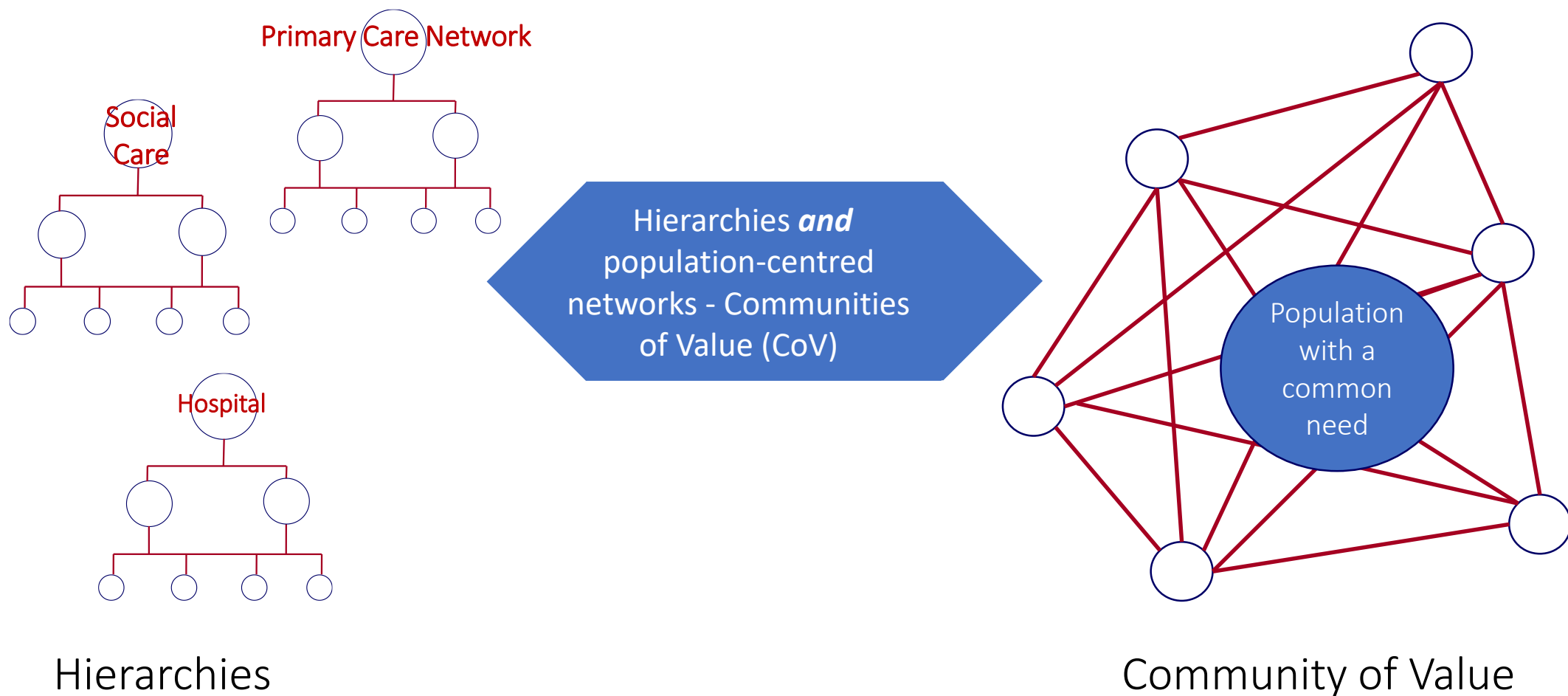
CoV decide which interventions provide best value for the population sub-group
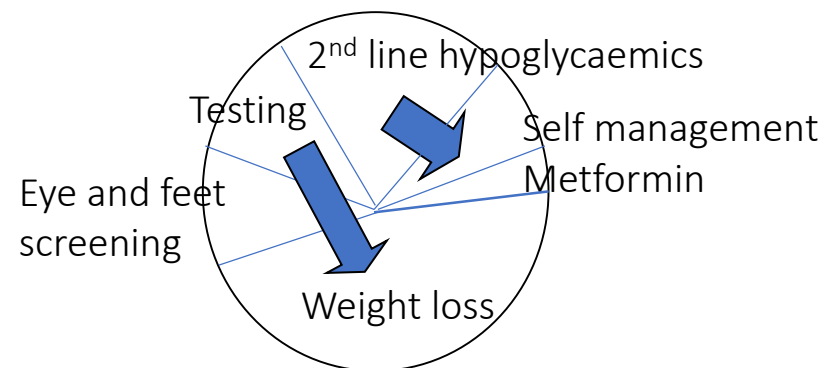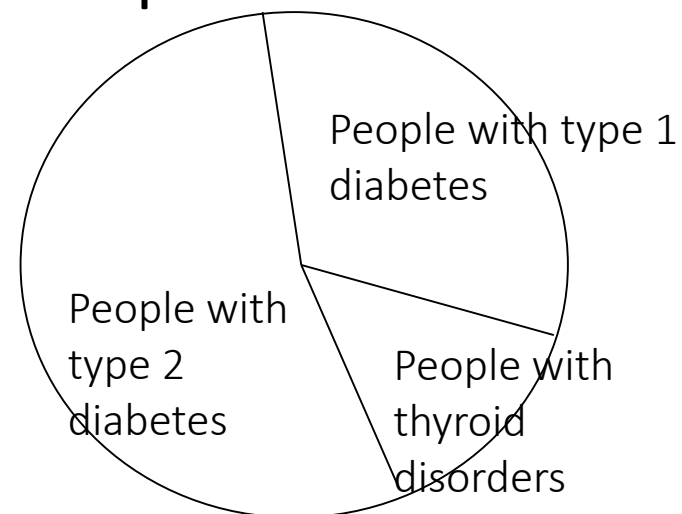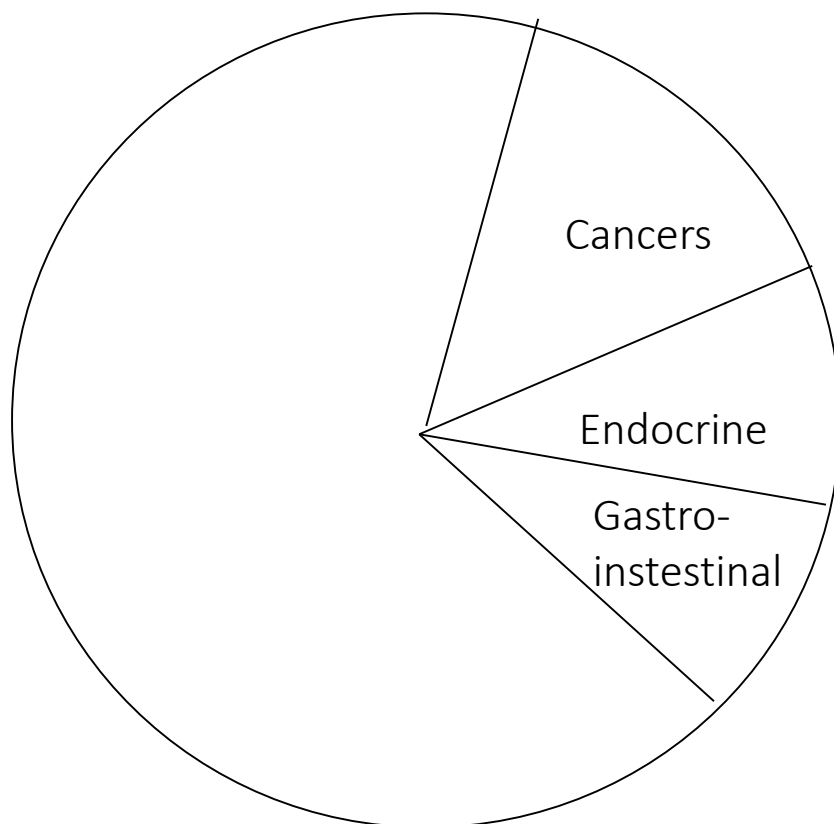
Five key tasks for ICS to meet their goal:

1. Create the Culture of stewardship
2. Define population sub-groups with a common need and allocate resources
3. Design a value framework for each population sub-group
4. Deliver the value framework through networks
5. Ensure each individual makes decisions to optimise personal value

Underpinned by a new approach to governance to promote collective responsibility.

What Does Population Health Management Mean for Us?
Learning from Variation to Deliver What is Valued

Introduction to the PHM Programme for STP/ICS Leaders

Birmingham, 28 May 2019

The Dartmouth Institute for Health Policy and Clinical Practice

Learning from Variation to Deliver What is Valued
A historical perspective
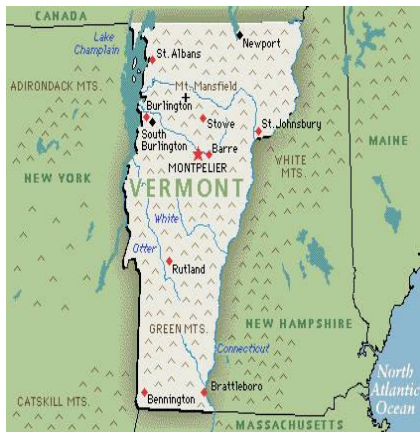
Discovering Variation in Vermont, *Science,* **1973**

Variation in Rates and Outcomes of Surgery
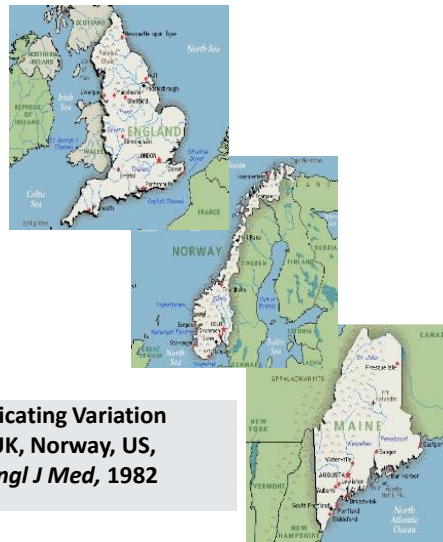
Replicating Variation in UK, Norway, US, *N Engl J Med,* **1982**

Variation in Rates of Surgery
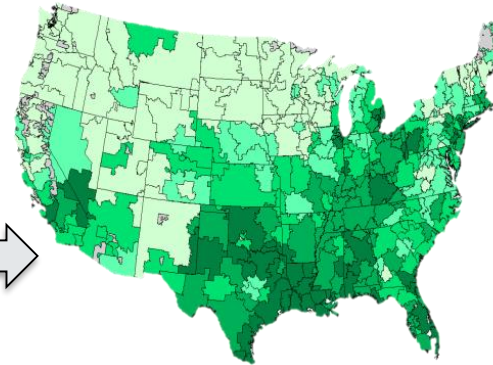
Comprehensive Study of Variation in the US, *Dartmouth Atlas of Health Care,* **1996-2019**

Variation in Inputs, Rates and Outcomes of Diagnostic, Medical and Surgical Interventions
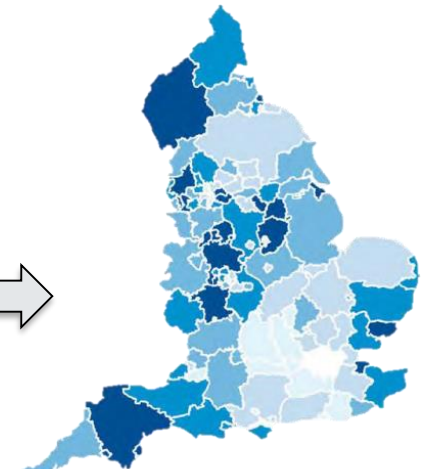
Comprehensive Study of Variation in the UK, *NHS Atlas of Health Care,* **2010-2019**

Variation in Inputs, Rates and Outcomes of Diagnostic, Medical and Surgical Interventions

Learning from Variation to Deliver What is Valued
Testing relevance across global contexts and cultures from 2010

Wennberg International Collaborative
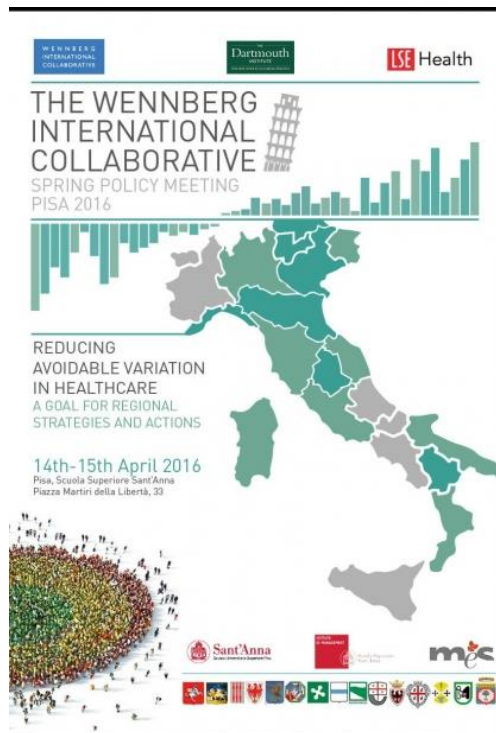
Salzburg Global Seminar

Learning from Variation to Deliver What is Valued
Distinguishing between unwarranted _and_ warranted variation
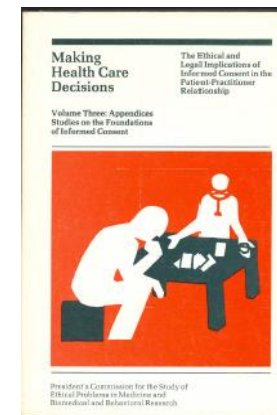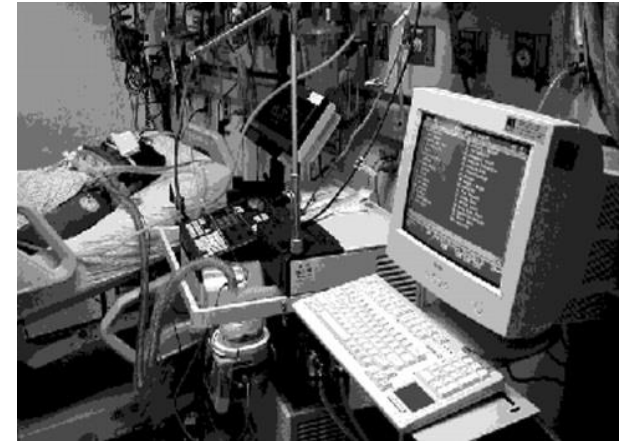
Making Health Care Decisions,
The President's Commission for the Study of Ethical Problems in Medicine and Biomedical Research, 1983

Learning from Variation to Deliver What is Valued
Learning from variation in costs by making visible processes and outcomes

Variation in Surgical Rates in UK, Norway, US, *McPherson, Wennberg N Engl J Med,* **1982**

United States, 1996 - 2012

$10,250 to 17,184
9,500 to < 10,250
8,750 to < 9,500
8,000 to < 8,750
6,039 to < 8,000
Not Populated
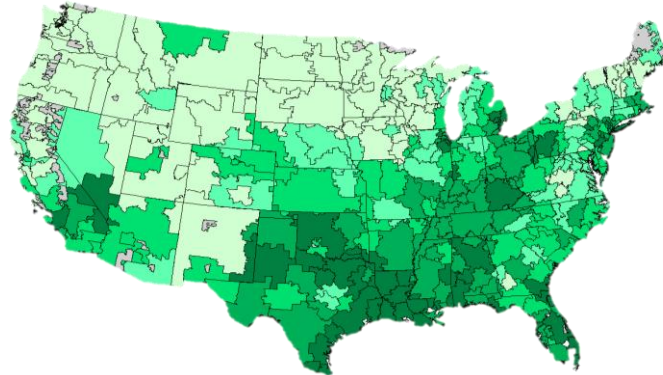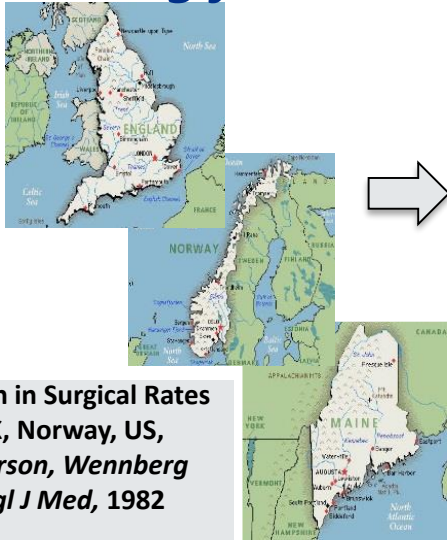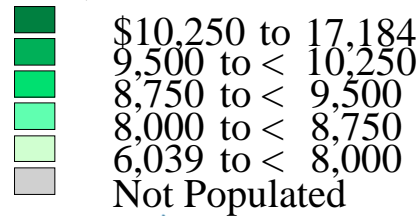
- 3-fold variation among 152 PCTs in per capita costs for cancer and heart disease care

- 8-fold variation in stents for stable heart disease after NHS Plan capacity building
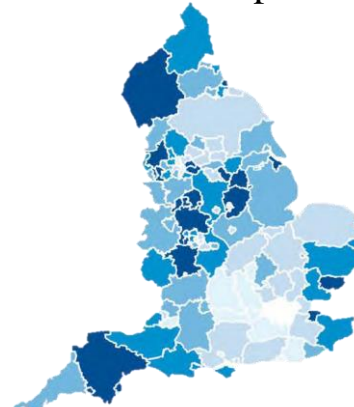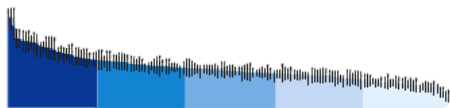
England, 2010

With higher intensity and cost:
- **No better outcomes** in mortality & function
- **More difficulty for patients** seeing doctors, longer waits
- **More difficulty for doctors** admitting to hospitals and obtaining referrals
- **Poorer patient relationships**, ability to provide quality care

Sources of waste and harm:
- **Failure to deliver <u>effective</u> health care safely** (outcome variation)
- **Overuse and underuse of <u>preference-sensitive care</u>** (uninformed clinical decisions)
- **Overuse of <u>supply-sensitive care</u>** (uninformed investments in health system capacity)

Learning from Variation to Deliver What is Valued
Patient preferences matter: Stop the silent misdiagnosis

The King's Fund> Ideas that change health care

Authors
Al Mulley
Chris Trimble
Glyn Elwyn

Patients' preferences matter
Stop the silent misdiagnosis

THE Dartmouth CENTER for HEALTH CARE DELIVERY SCIENCE
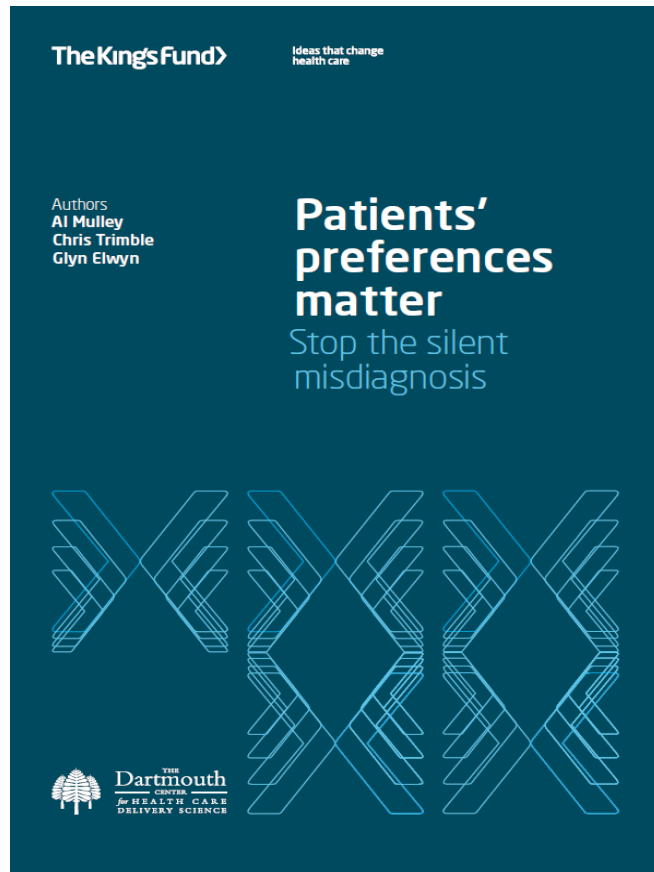
When <u>Linda</u> was diagnosed with breast cancer, she was devastated. She was 58. She quickly found support from others who had dealt with the disease. Nonetheless, her anxieties as she awaited surgery nearly overwhelmed her. Linda's operation went well. However… .

When <u>Susan</u> was diagnosed with breast cancer, she was more stoical than Linda. She was 78, other members of her family had had breast cancer, and she had already been treated for a serious illness – heart failure. She dreaded having surgery, but her surgeon was insistent. Susan's mastectomy was routine….

THE Dartmouth INSTITUTE
FOR HEALTH POLICY & CLINICAL PRACTICE

Learning from Variation to Deliver What is Valued
Patient preferences matter: Stop the silent misdiagnosis
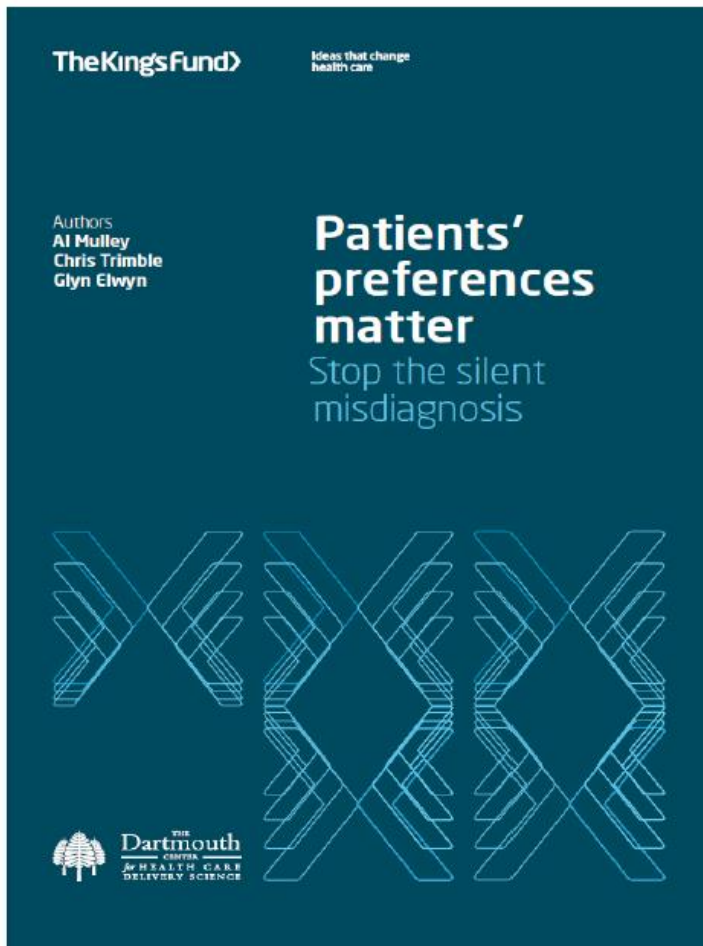
How much does keeping your breast matter?

How bothersome is urinary dysfunction?

Learning from Variation in Joint Replacement Outcomes and Rates

Variation in Outcomes and Costs

- Deep wound infection rates vary from 0.5% to 4% among acute trusts
- Each is traumatic for the patient incurs additional costs of £50-100k
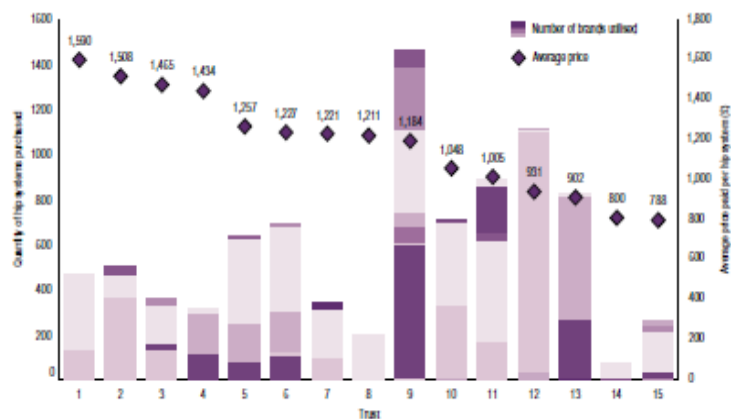
- Quantity of hip systems among trusts vary >15-fold with 1-7 brands
- Average price varies 2-fold from £788 to £1590

Variation in Rates of Intervention

Map 59: Rate of primary hip replacement procedures per population by CCG
Directly standardised rate, adjusted for age and sex, 2012/13

Domain 3: Helping people to recover from episodes of ill health or following injury

Lowest
Highest

LONDON
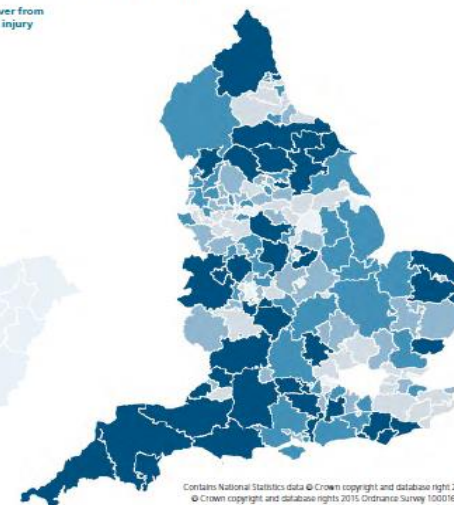
Contains National Statistics data © Crown copyright and database right 2015
© Crown copyright and database rights 2015 Ordnance Survey 100016969
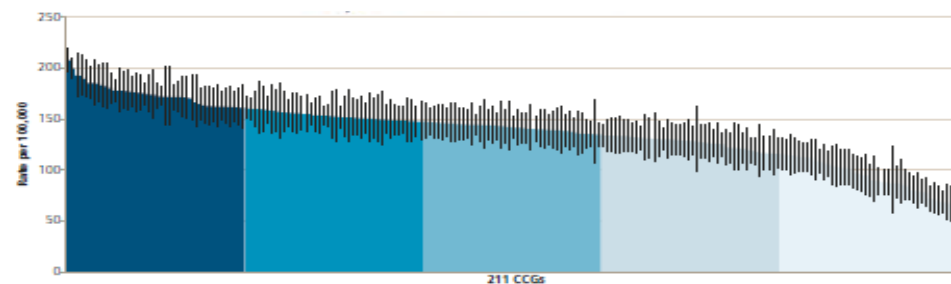
Learning from Practice Variation in the US and Canada
Making Visible the Underlying Variation in Preferences

Total Joint Replacement for Arthritis

	Episodes per 1,000
Salt Lake City, UT	20.3
Denver, CO	17.9
St. Louis, MO	16.3
Milwaukee, WI	16.2
Columbus, OH	16.1
Phoenix, AZ	15.3
Indianapolis, IN	14.8
Seattle, WA	14.8
Atlanta, GA	14.7
Orlando, FL	14.5
Boston, MA	14.2
Pittsburgh, PA	13.9
Dallas, TX	13.7
Philadelphia, PA	13.6
Houston, TX	12.7
Memphis, TN	12.1
Chicago, IL	11.5
Los Angeles, CA	11.0
Miami, FL	10.2
Manhattan, NY	9.3

Lower extremity joint replacement per 1,000 Medicare beneficiaries (2014)

Dartmouth Atlas of Healthcare Analysis: 2016

BACKGROUND. Area variation in the use of surgical interventions such as arthroplasty is viewed as concerning and inappropriate. OBJECTIVES. To determine whether area arthroplasty rates reflect patient-related demand factors, we estimated the need for and the willingness to undergo arthroplasty in a high- and a low-use area of Ontario, Canada. RESEARCH DESIGN. Population-based mail and telephone survey. SUBJECTS. All adults aged ≥55 years in a high (n = 21,925) and low (n = 26,293) arthroplasty use area. MEASURES. We determined arthritis severity and comorbidity with questionnaires, established the presence of arthritis with examination and radiographs, and evaluated willingness to have arthroplasty with interviews. Potential arthroplasty need was defined as severe arthritis, no absolute contraindication for surgery, and evidence of arthritis on examination and radiographs. Estimates of need were then adjusted for patients' willingness to undergo arthroplasty. RESULTS. Response rates were 72.0% for questionnaires and interviews. The potential need for arthroplasty was 36.3/1,000 respondents in the high-rate area compared with 28.5/1,000 in the low-rate area (P <0.0001). Among individuals with potential need, only 14.9% in the high-rate area and 8.5% in the low-rate area were definitely willing to undergo arthroplasty (P = 0.03), yielding adjusted estimates of need of 5.4/1,000 and 2.4/1,000 in the high- and low-rate areas, respectively. CONCLUSIONS. Demonstrable need and willingness were greater in the high-rate area, suggesting these factors explain in part the observed geographic rate variations for

Hawker GA, et al. Med Care 2001;39:206-16.

Learning from Practice Variation in the US and Canada
Making Visible the Underlying Variation in Preferences

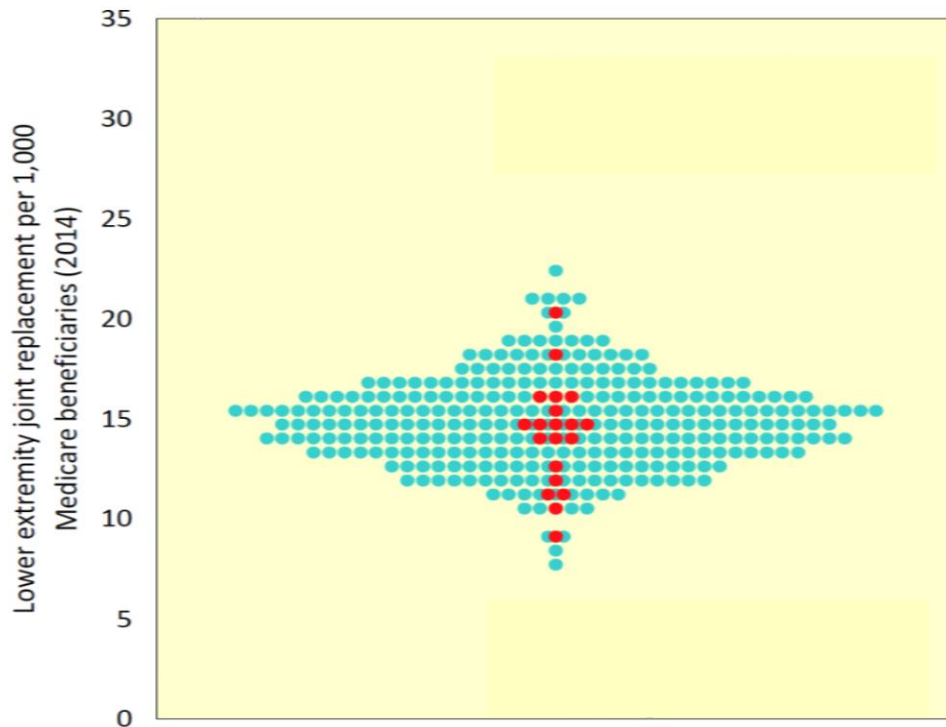**Total Joint Replacement for Arthritis**

Lower extremity joint replacement per 1,000 Medicare beneficiaries (2014)

■ Ontario rate - if all potentially eligible patients underwent surgery

■ Ontario rate - if all patients received shared decision-making

City	Episodes per 1,000
Salt Lake City, UT	20.3
Denver, CO	17.9
St. Louis, MO	16.3
Milwaukee, WI	16.2
Columbus, OH	16.1
Phoenix, AZ	15.3
Indianapolis, IN	14.8
Seattle, WA	14.8
Atlanta, GA	14.7
Orlando, FL	14.5
Boston, MA	14.2
Pittsburgh, PA	13.9
Dallas, TX	13.7
Philadelphia, PA	13.6
Houston, TX	12.7
Memphis, TN	12.1
Chicago, IL	11.5
Los Angeles, CA	11.0
Miami, FL	10.2
Manhattan, NY	9.3

Dartmouth Atlas of Healthcare Analysis: 2016

Hawker GA, et al. Med Care 2001;39:206-16.

There is nothing so useless as doing efficiently that which should not be done at all. – Peter Drucker

THE Dartmouth INSTITUTE FOR HEALTH POLICY & CLINICAL PRACTICE

Learning from Variation to Deliver What is Valued
The need to challenge prevailing assumptions

Prevailing Assumptions	Evidence to the Contrary
Clinical evidence tells us what is the right thing to do for people in need of health care;	Evidence is insufficient; patients' preferences matter in decisions to deliver services that produce value;
Health care is delivery of services by professionals to people unable to understand or do for themselves.	Much of health care is exchange of information about what is possible and what is most valued.
Higher levels of health care produce higher levels of health & wellbeing for people and populations;	Health care contributes less to health than social circumstances, including education and behaviour;

Decision Quality in the Complex System of the Determinants of Health
Making choices matter by understanding context at the level of the individual

http://www.goinvo.com

'the circumstances in which people are born, grow, live, work, and age'

Valuing People by Making Their Choices Matter in Health and Care

the bmj New approaches to measurement and management for high integrity health systems

Published in HFMA's *Leadership* magazine, Winter 2016 (hfma.org/leadership)

New Measures for Learning from Variation to Deliver What is Valued

We learn from **variation ...**
- **in outcomes and costs** by making visible underlying **processes**...
- **in practices and intervention rates** by making visible underlying **preferences**...
- **in health & wellbeing** by making visible patients' **needs and wants**
- **in resource allocation** across localities by understanding **governance context**

If the goal is to provide care that people need and want – no less but no more, system-wide mutual accountability begins with learning at the frontlines of care.

Teams Built for Learning What Matters and Improving Decision Quality
New Roles, Measures, & Tools to Serve as the 'Learning Front End' of Health & Care
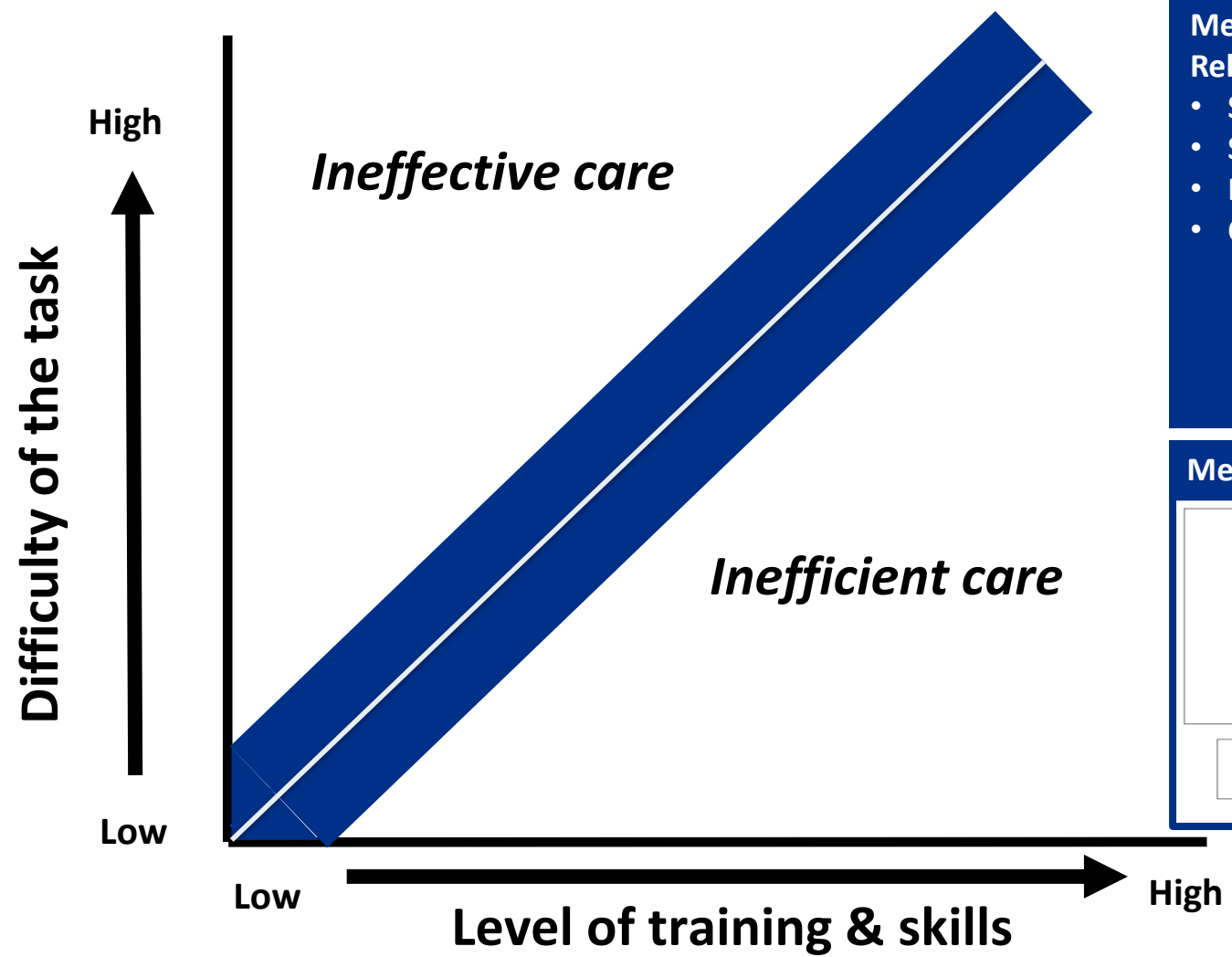
Measuring Teamwork as Relational Coordination (Gittel)
- **Shared Goals**
- **Shared Knowledge**
- **Mutual Respect**
- **Communication that is…**
  - **Frequent**
  - **Timely**
  - **Problem- solving**
  - **Accurate**

Measuring Teamwork as Patient Experience

integRATE

Information Shared	How often did you have to do or explain something because people did not share information with each other?
Consistent Advice	How often were you confused because people gave you conflicting information or advice?
Mutual Respect	How often did you feel uncomfortable because people did not get along with each other?
Role Clarity	How often were you unclear whose job it was to deal with a specific question or concern?

☐	☐	☐	☐
Never	A little	A lot	Always

Ineffective care

Inefficient care

High
Low

Difficulty of the task

Low — **Level of training & skills** — High

THE Dartmouth INSTITUTE FOR HEALTH POLICY & CLINICAL PRACTICE

Organizing for Innovation: Teams Built for Learning What Matters

Shared Staff — PARTNER-SHIP — **Dedicated Team**
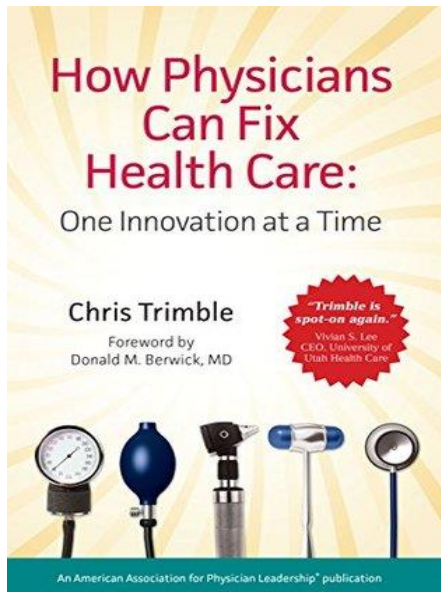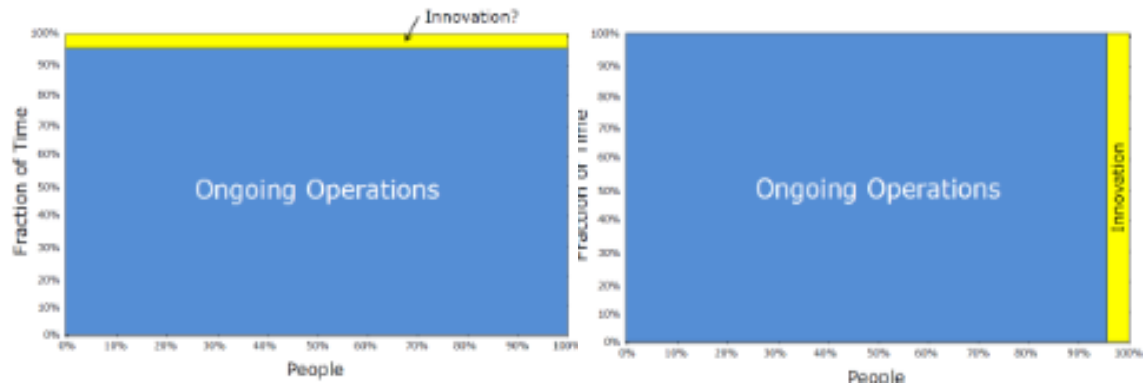
Box 1
Managing the Present

Box 2
Forgetting the Past – Selectively

Box 3
Creating the Future

How Physicians Can Fix Health Care: One Innovation at a Time

Chris Trimble

Foreword by Donald M. Berwick, MD

"Trimble is spot-on again."
Vivian S. Lee, CEO, University of Utah Health Care

An American Association for Physician Leadership publication

Valuing People by Making Their Choices Matter

How can we avoid substituting high risk and cost health care for services in the community that would better meet the needs of those we serve?

People with Mental and Behavioural Health Problems

People with Frailty and Those Near the End of Life

http://www.goinvo.com
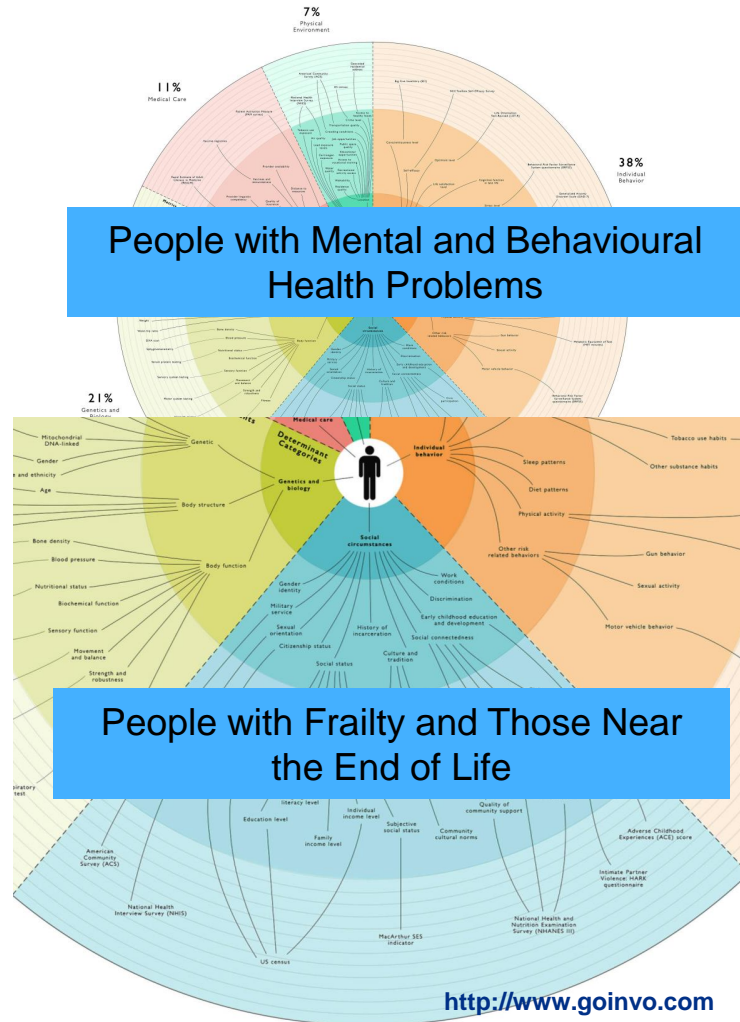
Pat Deegan

'You think your job is to keep me from hearing voices. I it is to keep me functional enough to have a job of my own.'

Archie Cochran

'It was not the pleurisy that caused the screaming but loneliness. I was ashamed of my misdiagnosis and kept the story secret.'

Archie Cochrane's Education at Elsterhorst: A Silent Misdiagnosis

"Another event at Elsterhorst had a marked effect on me. The Germans dumped a young Soviet prisoner in my ward late one night. The ward was full, so I put him in my room as he was moribund and screaming and I did not want to wake the ward.

I examined him. He had obvious gross bilateral cavitation and a severe pleural rub. I thought the latter was the cause of the pain and the screaming. I had no morphia, just aspirin, which had no effect.

I felt desperate. I knew very little Russian then and there was no one in the ward who did. I finally instinctively sat down on the bed and took him in my arms, and the screaming stopped almost at once. He died peacefully in my arms a few hours later.

It was not the pleurisy that caused the screaming but loneliness. It was a wonderful education about the care of the dying.

I was ashamed of my misdiagnosis and kept the story secret."

Insights from Populations

Steven Wyatt and Tim Wilson

NHS England and NHS Improvement

The Strategy Unit.

3V Oxford Centre for Triple Value Healthcare

UNIVERSITY OF BIRMINGHAM

THE Dartmouth INSTITUTE FOR HEALTH POLICY & CLINICAL PRACTICE

Health and social care expenditure in Staffordshire STP

Adjusted for inflation to 2016-17 prices

2013-14 (£2,080m)

other conditions

mental health

social care

musculo-skeletal

circulation

genito-urinary

trauma

cancers & tumours

neurological

specialised services

gastro-intestinal

endocrine

vision

skin

respiratory

social care needs

drugs & poisoning

maternity

learning disabilities

general practice

2016-17 (£2,180m)

other conditions

mental health

social care

musculo-skeletal

circulation

genito-urinary

trauma

cancers & tumours

neurological

specialised services

gastro-intestinal

endocrine

vision

skin

respiratory

social care needs

drugs & poisoning

blood disorders

maternity

learning disabilities

hearing

general practice

Staffordshire STP

Share of total CCG health expenditure for 7 major conditions, 2013-14 to 2016-17

| cancers & tumours | circulation | endocrine | mental health | musculo-skeletal | respiratory | skin |

16%

12%

8%

4%

0%

13-14   16-17   13-14   16-17   13-14   16-17   13-14   16-17   13-14   16-17   13-14   16-17   13-14   16-17
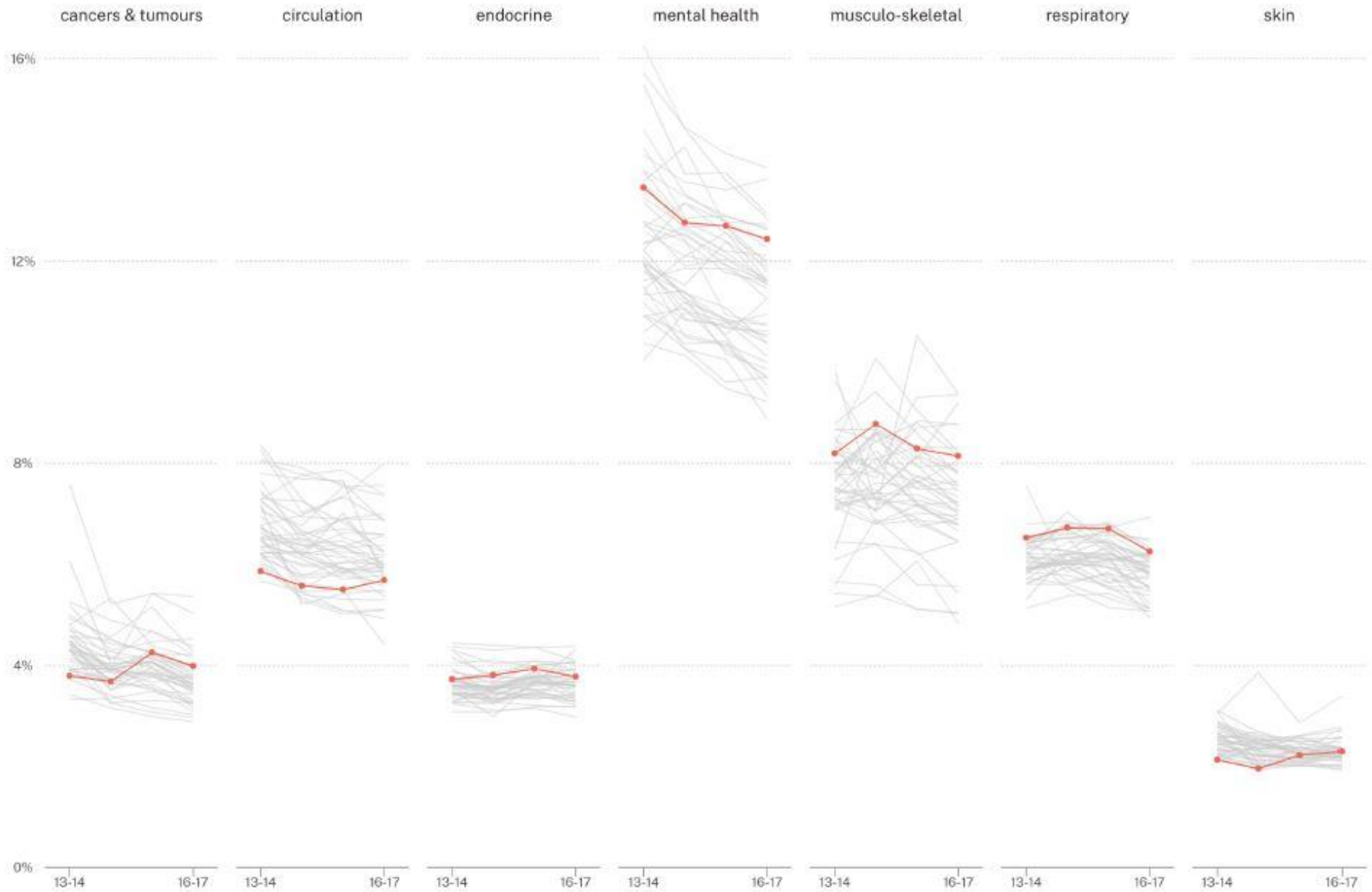
Screening for bowel cancer

%age of people (60-74yrs) screened for bowel cancer (17/18)

Index of Multiple Deprivation 2015

less deprived

more deprived

- Practices from Birmingham and Solihull STP
- Practices from other STPs
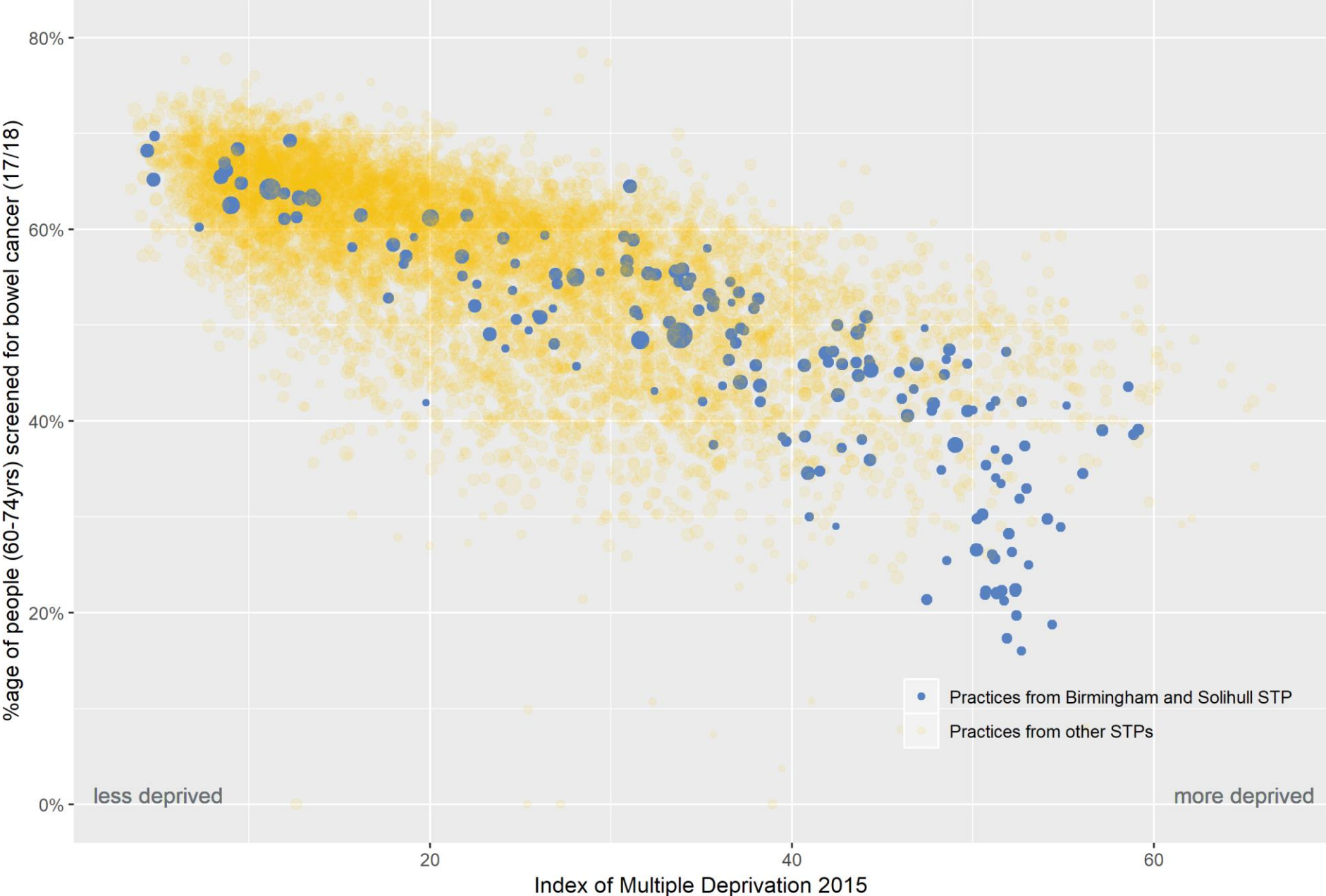
Spend and outcome tool: Detailed quadrant chart

| Organisation | Mansfield & Ashfield | Type | CCG |
| Comparator | Deprivation decile | Period | 2015 |

Lower Spend, Better Outcome

Higher Spend, Better Outcome

Mortality from cancer, <75yrs, DSR, persons. Z score 2013

Cancers and Tumours Z score 2013/14

Lower Spend, Worse Outcome

Higher Spend, Worse Outcome

Spend on populations

2D stuff

2017-18 has been a very challenging year financially for the NHS, with a significant number of providers reporting a deficit. The Trust has however reported a small surplus for the year of £3,548,000 as set out below.

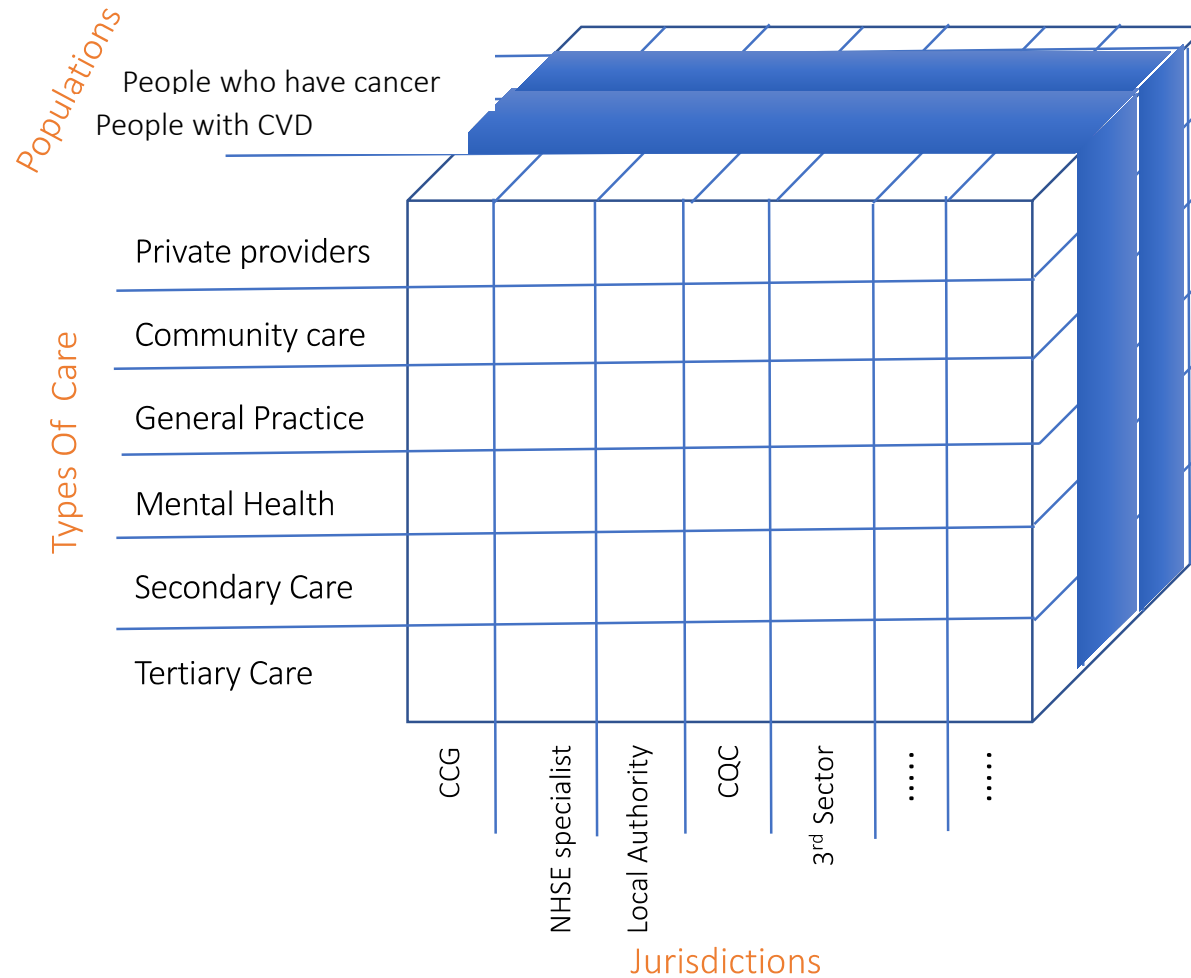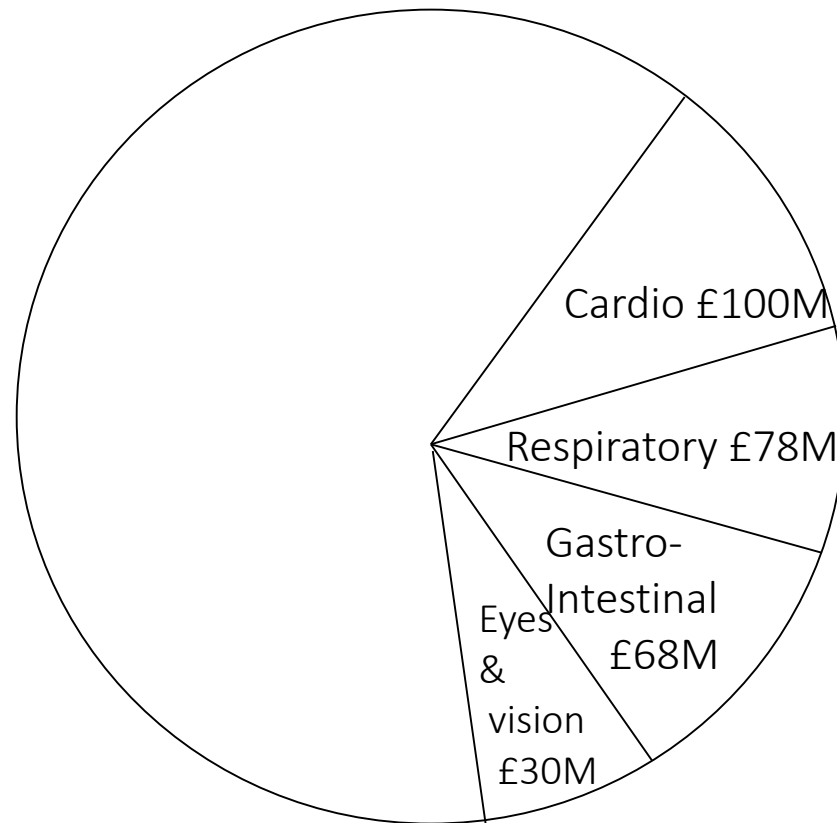| Income and Expenditure Performance 2017-18	actual £m	Note
Income		
Clinical income (incl. revenue from other patient activity)	863.38	
	166.58	(excludes receipt of Capital grants & donations)
Other operating income		
Sub-total: income	**1029.96**	TB2018.46
Operating expenditure		
Pay		
Medical and dental	(207.34)	
Nursing	(161.93)	
Health care assistants and support	(50.60)	
Scientific, therapeutic, technical	(72.68)	
Non-clinical	(92.39)	
	(584.94)	(excludes Staff Costs capitalized as part of assets)
Sub-total: pay expense		
Non-pay		
Clinical supplies and services	(117.96)	
Clinical negligence	(36.88)	
Drugs (including gases)	(121.19)	
Premises and fixed plant	(52.26)	
General supplies and services	(24.95)	
Other non-pay	(45.31)	
Sub-total: non-pay expenses	(398.55)	
Total operating expenses	**(983.49)**	TB2018.46
EBITDA (Income less Operating expenses)	46.46	TB2018.46
Non-operating expenditure		
Depreciation	(32.42)	
Donated asset receipts	0.25	
Impairment	13.27	
Interest expense (non-PFI)	(0.13)	
Interest expense (PFI leases and liabilities)	(13.56)	
Non-operating PFI costs (e.g. contingent rent)	(6.61)	
Other finance costs	(0.72)	
Interest receivable	0.14	
Other gains / losses on investments	3.17	
Profit / (loss) on asset disposals	0.24	
PDC dividend	(6.55)	
Sub-total: non-operating expenditure	**(42.92)**	TB2018.46
Surplus / (deficit) for the year from continuing operations (EBITDA less non-operating expenditure)	3.55	Statement of Comprehensive Income

Spend on populations with a common need

Collective responsibility for management of resources

Resources for a population

- Are you spending the right amount?
- Why is there variation in spending?
- Who decides how much you spend on each condition?

Outcomes
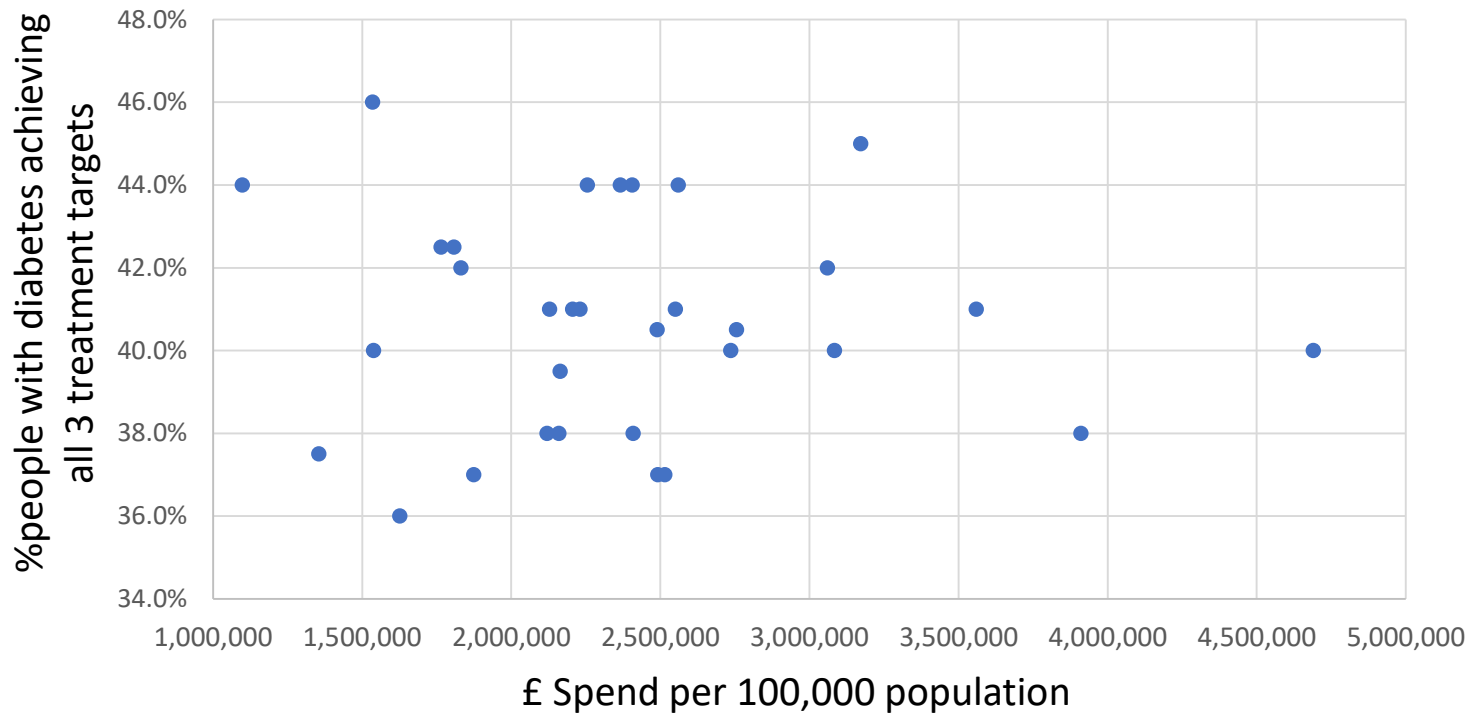
Spend versus outcomes

Research has shown there is a link between spend and outcome:

- Is this a good way of measuring ICS success?
- If not, how else?
- Why is there so much variation?
- What opportunities does this provide for learning?

Variation and inequity

What is the right rate for hip surgery over 65? Overuse or underuse

Overuse or underuse…
…and the inverse care law applies

Comparison of NHS joint replacement in NHS 2012
Wealthiest ward =100
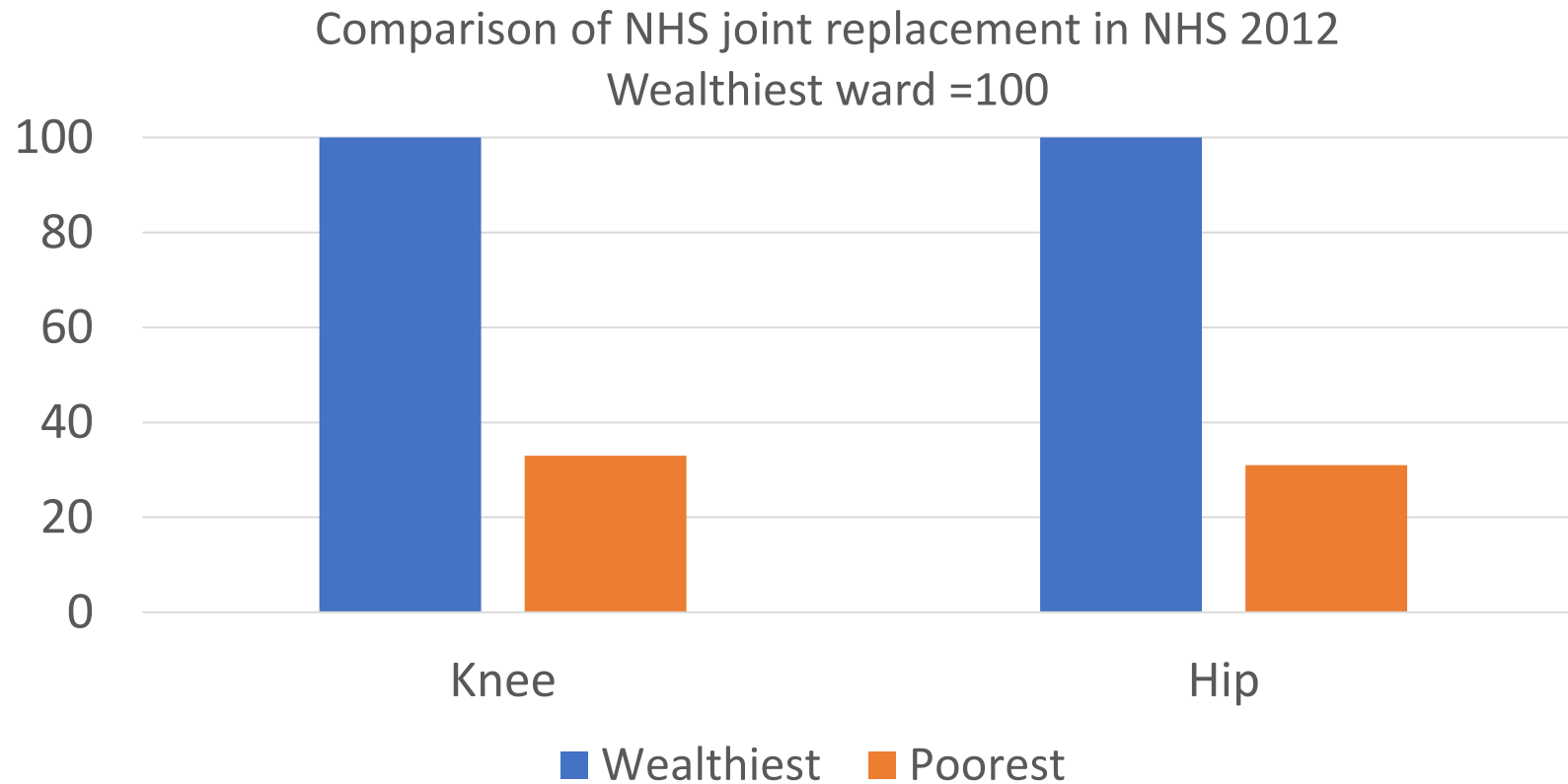
Unwarranted variation and health equity

- Why is there so much variation?
- Is it warranted or unwarranted?
- What does this mean for population health?

- What does this say for health equity?
- What impact will this have in health inequalities?
- What does this mean for population health?
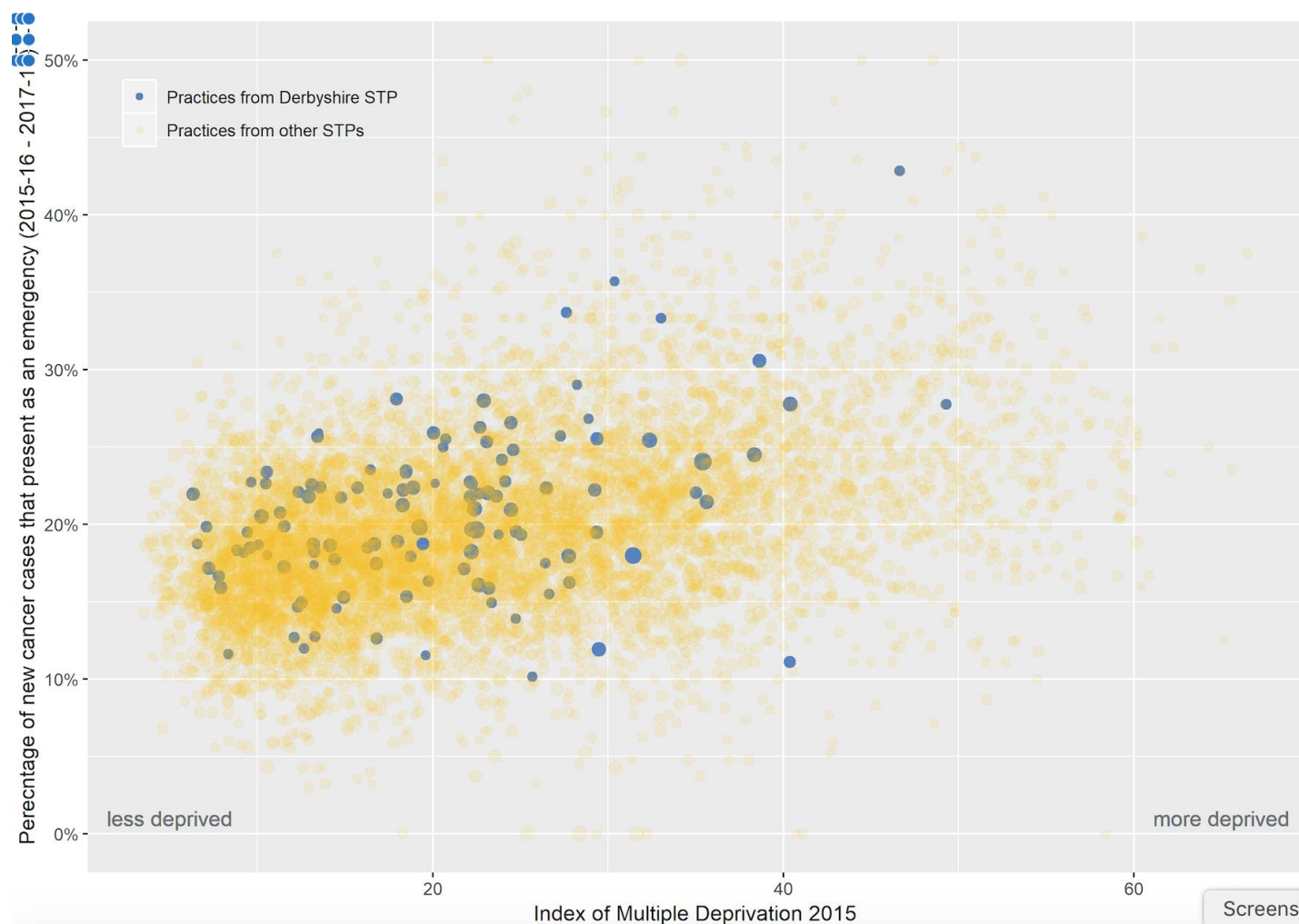
Tasks

On flipcharts, please make a few notes regarding:

- Insights gained regarding your ICS goal

- Population Health insights

- Insights gained regarding your STP/ICS project

- Guidance you would give to your STP/ICS PHM team about using the data

Summary of the Morning

Belinda Weir

NHS England and NHS Improvement

Lunch

NHS England and NHS Improvement

The Strategy Unit.

3V Oxford Centre for Triple Value Healthcare

UNIVERSITY OF BIRMINGHAM

THE Dartmouth INSTITUTE FOR HEALTH POLICY & CLINICAL PRACTICE

Overview of STP Projects

Peter Spilsbury and Belinda Weir

STP/ICS Name: Birmingham & Solihull

What is the population group you will focus on for your project?

- Individuals who are rough sleepers / statutory homelessness / have unstable housing tenure

Why is this a priority?

- Homelessness is a key issue facing both Birmingham and Solihull:

  - Homelessness has increased dramatically in England in the last 10 years – an increase of 169% since 2009/10.

  - Homeless individuals experience severe inequalities, poor health & wellbeing, and a lower life expectancy.

  - Children in homeless households are 3x more likely to experience poor mental health, are vulnerable to family breakdown, domestic abuse, and learning and development issues

What might the outcomes be?

- Shared understanding of the impact of homelessness across multiple agencies within the STP, and contributions towards future homelessness strategies within BSOL STP

- A greater understanding of the mechanisms which causing individuals to move between stable tenure, unstable tenure, and homelessness

- Early identification mechanisms to help describe those at greatest risk of homelessness

- Developing an understanding of actions taken by agencies that may reduce risks of homelessness for those at greatest risk

What other benefits do you believe this might bring?

- Increased levels of multi-agency action for tackling and preventing homelessness

- Development of new strategies for preventing homelessness, and assisting those currently homeless to move into stable accommodation

- Reductions in rates of homelessness

STP/ICS Name: Black Country and West Birmingham

What is the population group you will focus on for your project?

- Feedback resolved to 2 potential areas

  1. Frail Elderly
  2. 0-4y Health & Wellbeing

- Decision to be made at the STP Board 30th May on which of these topics goes forward into the programme

Why is this a priority?

- Significant variance across the STP in outcomes for both these groups
- National outliers for a number of metrics
- Both areas in need of PHM approach
- No extensive geo-demographic profiling including the wider determinants of health to date

What might the outcomes be?

- Improved coordination of care
- Reduced slope index of outcomes
- Optimised service use
- Synergistic improvement through interventions on the wider determinants of health

What other benefits do you believe this might bring?

- Geo-demographic profiling
- Assessment of unwarranted variance
- Predictive analysis of future state
- Segmentation/stratification risk of poor outcomes
- Synergies with other projects
- Embedding PHM at PCN level

STP/ICS Name: Joined Up Care Derbyshire

What is the population group you will focus on for your project?

- 'Place' population – using a PHM approach to understand the population at Place level to support effective use of resources and delivery of care to improve population health.

- STP workforce – aim to develop an understanding of PHM to enable a cultural shift to focus on improving population health and utilising intelligence to support this.

Why is this a priority?

- Place is the cornerstone of our approach to health and social care, model of delivery and transition to an ICS.

- It is a geography across which we are able to work cross-system and across the range of factors affecting health.

- We need to better understand our populations at Place level to appropriately shape our model of delivery, effectively prioritise and determine specific interventions for key cohorts.

- To effectively respond to the NHS Long Term Plan and transition to an ICS.

What might the outcomes be?

- A PHM legacy beyond this one year programme.

- A Strategy to embed a PHM approach at 'Place'.

- A cultural shift in leadership and workforce.

- Appropriate data flows and systems in place.

- Ability to understand local need, implement evidence-based interventions and delivery models and ability evidence changes in population health.

What other benefits do you believe this might bring?

- Shift to considering 'population' health as well as 'patient' health.

- A joined-up cross-system understanding of our populations.

- A 'single truth' – joined up cross-system data.

- Shift from use of data and intelligence to support monitoring and performance to increasingly support transformational change.

STP/ICS Name: Herefordshire and Worcestershire

What is the population group you will focus on for your project?

High Intensity Users of, and those at risk of becoming high intensity users of Health (primary, secondary and mental health) and social care services

What might the outcomes be?

- Development of skills to apply PHM approach more widely, including understanding critical success factors
- Improvement in local PHM maturity
- Reduced reliance on services
- Effective targeting of appropriate support

Why is this a priority?

Herefordshire and Worcestershire have a relatively high population of people aged 65 and over (benchmarked nationally and against ONS comparator CCGs). We know that increasing age is associated with increasing use of health and social care services, particularly non-elective services.

Our system has poor performance against the Emergency 4 hour standard, and against the national O/E Dementia target. In line with the evidence base we believe a more proactive approach to early identification and case management of this cohort will enable us to provide appropriate support, reduce use of non-elective services, improve system performance against constitutional standards and most importantly improve the health outcomes and experiences of this population group.

What other benefits do you believe this might bring?

An understanding of health inequalities within this population:
- Access to services
- Health outcomes

Ability and confidence of the system to complete a cycle of change

Improved patient experience
Improved ability to self-care
Increased uptake and system use of anticipatory care plans
Reduction in non-elective activity – General practice, WMAS, A and E, Non Elective admissions
Increased proportion of people still at home 70 days after discharge
Reduction in people receiving long term support package
Increased O/E dementia prevalence
Improved performance against the 4 hour standard

STP/ICS Name: Shropshire Telford and Wrekin

What is the population group you will focus on for your project?

Diabetes

Why is this a priority?

- Scale of issue locally and nationally
- JSNA, PH Fingertips, Rightcare, JSNA – highlighted as an issue locally (outlier for amputations, not achieving treatment targets, significant undiagnosed)
- Will require a multi-agency approach, as well as data from numerous sources
- Good local, national and international evidence base for implementing response
- Response likely to be multi-faceted - with a range of non-clinical, clinical and community solutions
- Reducing the number of Type 2 diabetics and improving self-care and support for both Type 1 and Type 2 has the potential to significantly improve lives, reduce health inequalities, and reduce the burden on health and care
- Previous insight work with local people highlights significant opportunity for engagement and learning

What might the outcomes be?

Short term
- Greater joint working across health, care, community (and across Shropshire T&W)
- Better understanding of the problem
- Greater insight into people and health behaviours

Medium term
-implementation of well evidenced solutions and support for people in their communities

Long term
- Improved population health
- Reduced inequalities
- Reduced prevalence of Type 2 diabetes
- Reduced ill health and complexity as a result of diabetes (foot disease, amputations)
- Reduced non-elective admissions

What other benefits do you believe this might bring?

- Proven methodology that can be used again in our area
- Prevention advice and improved health behaviours has the capacity to impact on:
  - CVD prevention
  - Cancer prevention (and living well with)
  - Dementia prevention (and living well with)
  - Respiratory conditions
  - Improved lifestyle behaviours, reduced excess weight etc

Nottingham and Nottinghamshire Approach to Population Health Management

Our Six Step Approach

Tom Diamond ICS Director of Strategy
Maria Principe ICS Programme Director PHM

Overview of our 6 step approach

Integrated Care System
Nottingham & Nottinghamshire

1 Develop ICS system outcomes

2 Develop population segments

3 Develop outcome metrics for each population Segment

4 Identify priority population cohorts

5 Identify impactable interventions

6 ICP System implementation and delivery
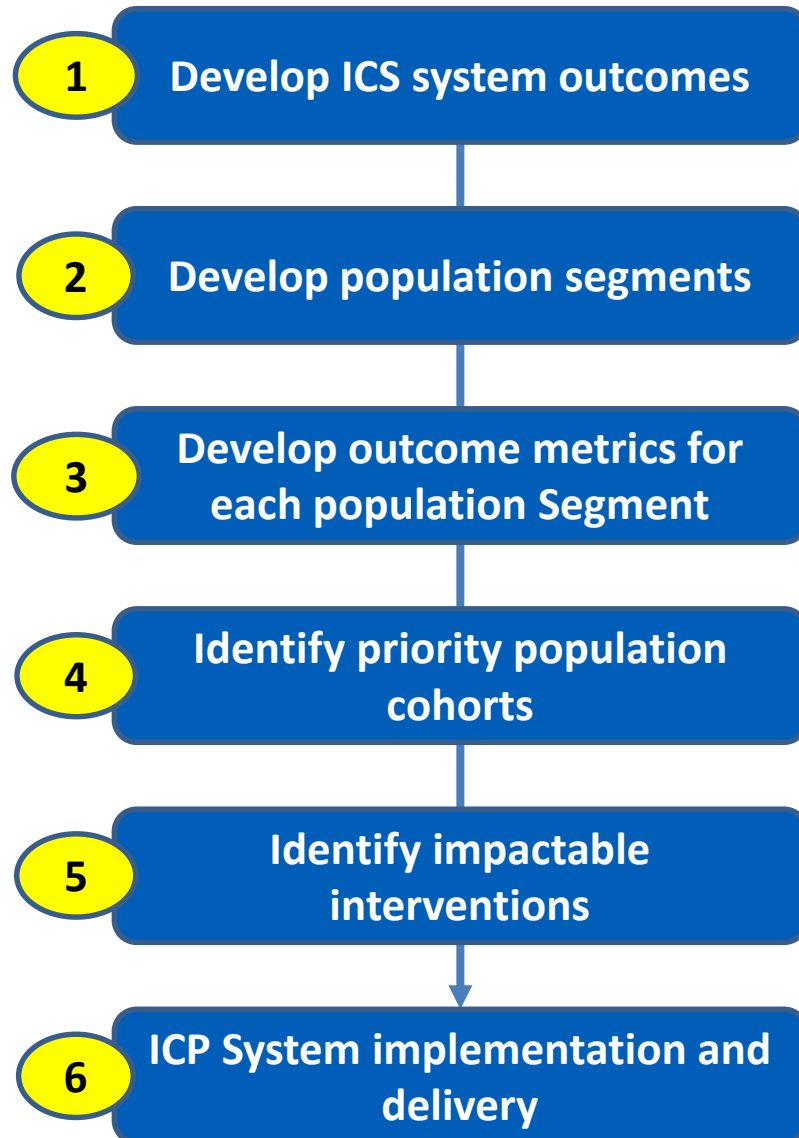
Components will continuously iterate through the development process

How this aligns to the 3 'I's

1 Develop ICS System Outcomes

2 Develop Population Segments

3 Develop Outcome metrics for each population Segment

4 Identify priority population Cohorts

5 Identify Impactable Interventions

6 ICP System implementation and delivery

← Infrastructure →

← Intelligence →
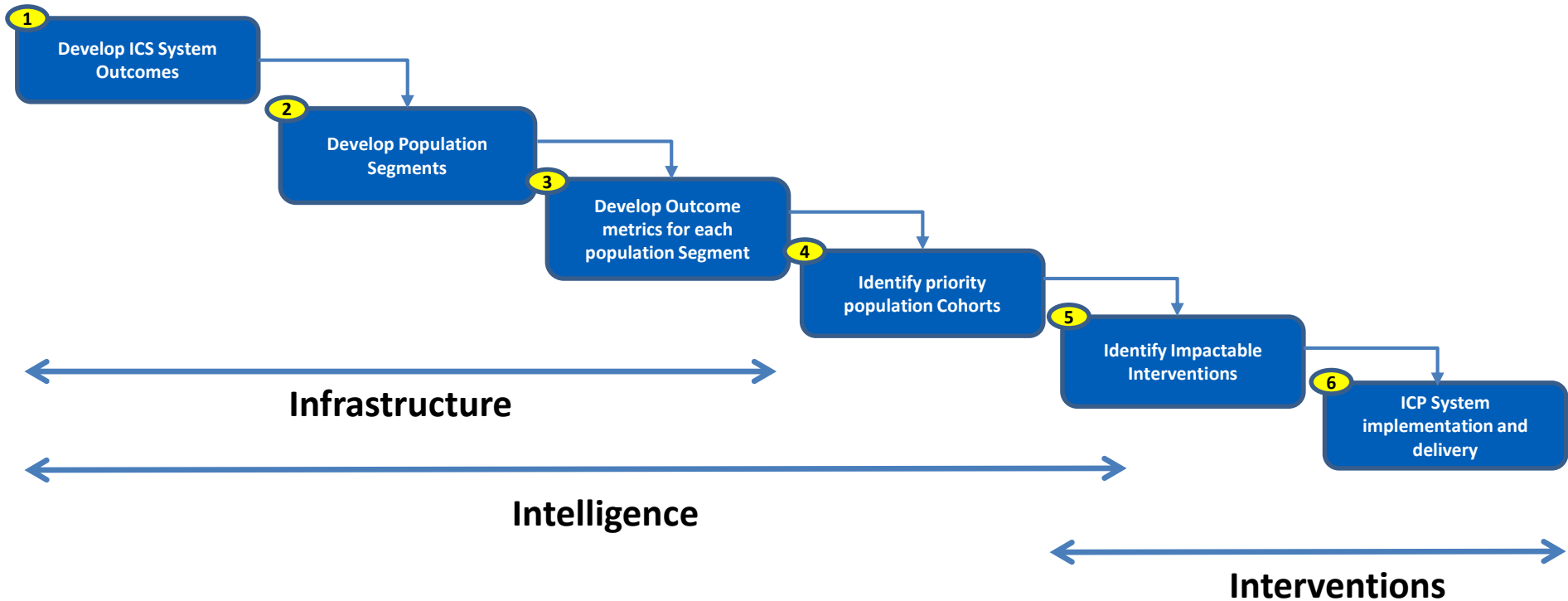
← Interventions →

Infrastructure
What are the basic building blocks that must be in place?

Intelligence
Opportunities to improve care quality, efficiency and equity

Interventions
Care models focusing on proactive interventions to prevent illness, reduce the risk of hospitalisation and address inequalities

Implementing the 6 steps - Diabetes

Integrated Care System
Nottingham & Nottinghamshire

Whole Population Segments

Healthy	Maternity and Infant health	Disability	LTC	End Of Life

Sub Population

• Maintaining good health longer	• Maternity • Child	• • Learning • Physical	• Cancer • **Diabetes** • CVD • Epilepsy • Common Mental Disorders • Serious Mental Illness • MSK • Asthma • COPD	• Short period of decline and dying (cancer) • Organ failure • Neuro • Frailty • Dementia

Step 1
- Agree ICS system Outcomes

Step 2
- Segment the entire population
- Identify whole population outcomes

Step 3
- Agree Sub Population Cohorts
- Identify sub population outcomes health and care

Define characteristics of:-
- Healthy
- Pre-diabetic
- Diabetic
- At risk
- Complex

Implementing the 6 steps - Diabetes

Integrated Care System
Nottingham & Nottinghamshire

Characteristics	
Diabetic with complications	Highest Needs
Diabetic at risk	Ongoing Care Needs Disease Management
Diabetic	Low Complexity/Urgent Care Needs/Self Care
Pre-Diabetic	
Healthy	Relatively Health/Health Promotion

Step 4
- Risk factors used to identify patients/stratification

Step 5.
- Best practice interventions, including baseline and RoI (Short, medium, long term)
- Strong focus on ensuring the healthy stay healthy with focus on prevention

Step 6
- Financial viability – carry out true comparison on health and care outcomes and transformation opportunity
- ICPs to implement best practice interventions localised for impact

Putting it together

Characteristics		Algorithms	Interventions
Diabetic with complications	**Highest Needs**		
Diabetic at risk	Ongoing Care Needs Disease Management		
Diabetic	Low Complexity/Urgent Care Needs/Self Care		
Pre-Diabetic			
Healthy	Relatively Health/Health Promotion		

Thank you

1) **Which STP/ICS project do you want to learn more from?**

2) **Why?**

Commitment to PHM Core Teams

Belinda Weir

1) What will you do to support these teams?

2) What do you as an STP/ICS want to learn?

Support required for 'Core Teams'
Feedback

- 'Critical friends' to the projects, who ask incisive questions in a supportive manner

- System organisations to pool sources of information available

- Time to work on chosen projects

- Regular feedback to raise awareness of the project – teams to present to STP/ICS Leadership?

- Identifying ways to spread the use of the approach outside of core teams

- Sharing knowledge and skills

Rolling out PHM

Margaret Mulley and Tim Wilson

NHS England and NHS Improvement

The Strategy Unit.

3V Oxford Centre for Triple Value Healthcare

UNIVERSITY OF BIRMINGHAM

THE Dartmouth INSTITUTE FOR HEALTH POLICY & CLINICAL PRACTICE

Question 1: *Amend the five aims (as needed) to fit your ICS Goals*

There are five overall aims of Population Health Management

Original Triple Aim

Additional Aims

Enhance experience of care

Improve the health and well-being of the population

Address health and care inequalities

Quintuple Aim

Reduce per capita cost of health care and improve productivity

Increase the well-being and engagement of the workforce
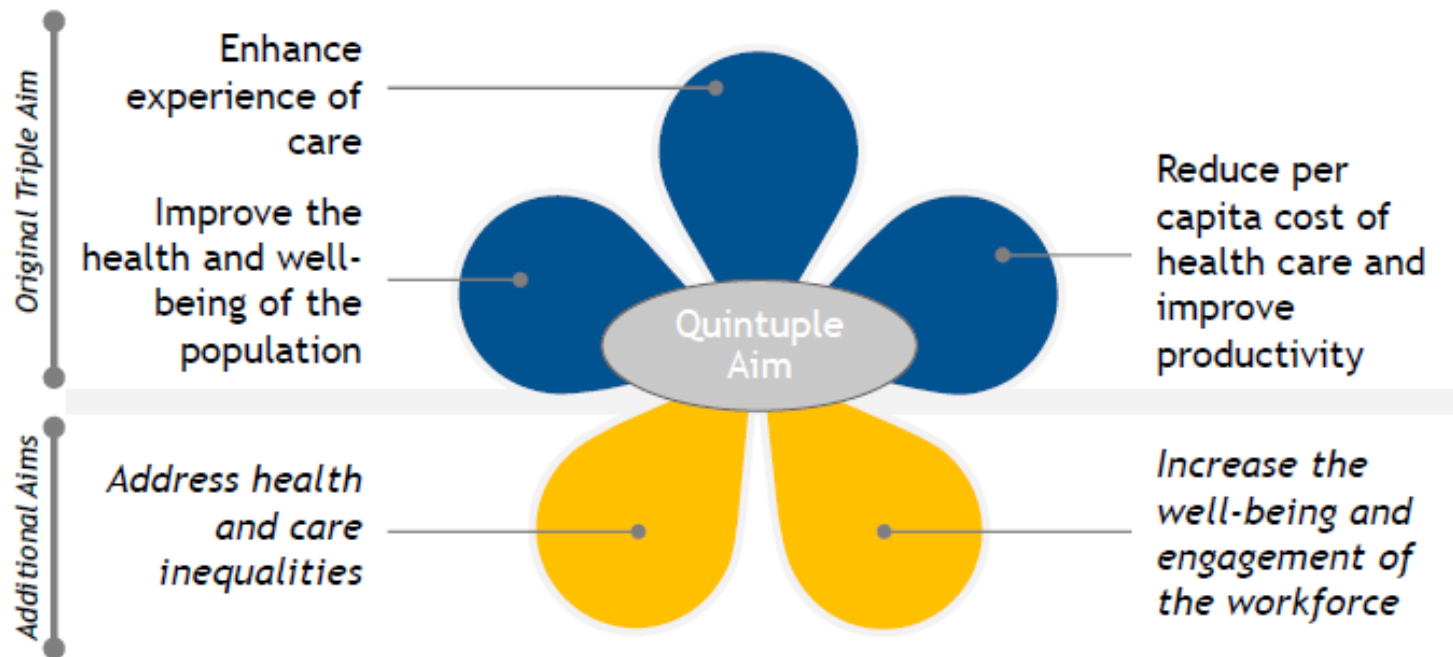
Question 2: *How do you envision PHM rollout at geographic levels?*

The three capabilities should be present at different geographical levels

The principles of PHM across different geographical levels within a system should be the same but the purpose and process will differ to be relevant and appropriate to the different population groupings

Individual

Neighbourhood: ~50k

Place: ~250-500k

System: 1+m
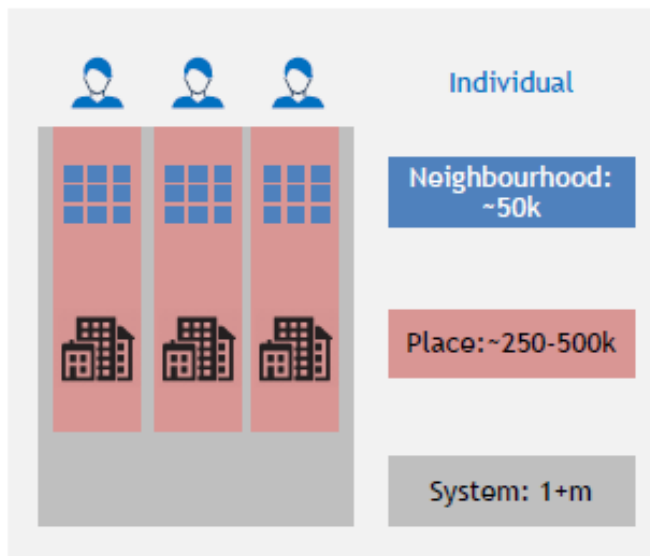
At the individual level PHM can be used to help personalise care according to need

At the neighbourhood level care pathways and interventions can be considered

At the place level PHM techniques should inform integrated care design

At the system level PHM techniques can inform strategic planning of large scale prevention or tertiary services

Question 2: *How do you envision PHM rollout at geographic levels?* Feedback

PCN:
Inclusion of voluntary sector
Focus on specific areas
Linking the right people at the front line
Planning for delivery
Allocation of resources at a local level
'Owned' by health and care professionals
Intelligence gatherers e.g. understanding referral patterns / habits and preferences

Place:
Allows inclusion of the local population in expression of need and allocation of resources
Allows local clinical input from General Practice, Acute trusts, Community, Mental Health, Local Authority and voluntary sector
Links to Local Authority activities e.g. transport, housing, education, jobs etc.
Extending knowledge and experience
Developing pathways across organisations to ensure the right tiers of care
Allocation of resources at 'place' level
PCNs need to be active in place and able to shape the needs prioritisation framework

System:
A cultural shift in the management of resources – which will set the blue print for Place / PCN
Involvement of NEDs to demonstrate system leadership not just organisational leadership
Defining what good looks like
Agreeing outcomes at Place / PCN
Sharing the learning
Setting system priorities
Creates the strategic framework

Question 3: *What are your short, medium and longer term goals for your PHM approach?*

Questions to ask as you set these goals:

- Are you too focused on short-term goals? Or longer-term goals?

- Are your goals too narrow? Are they too broad?

- Are you too focused on specific sub-groups of the population? Are you neglecting a sub-group?

- Are you too concentrated at a particular geographic level?

- Are your goals overly health-focused?

- Will people find these goals compelling? Will it spur them to action?

Question 3: *What are your short, medium and longer term goals for your PHM approach?* Feedback

Short Term:
Developing a shared vision for PHM.
Define what the future looks like.
Start to build knowledge.
Engage the local population.
Permission to explore what PHM is and how it should influence our system to improve health and wellbeing.
Creating a framework that establishes a new language / way of doing things.
Understand need.
Agreement on impactable interventions (and prioritisation of said interventions).
Improve the quality of data available.

Medium term:
PHM becomes how we do decision making.
Cross organisational data sharing in place.
Improved sustainability of services.
Greater accountability and visibility of resources across the system.
Increased involvement of the population in solving problems and system decision making.
Increased staff engagement due to transparency of information.
Plan for learning and spread.
Starting to move resources.
A culture that allows innovation and calculated risk taking (so that people can fail fast and learn).

Long Term:
Greater integration between organisations.
Reduction in inequalities.
Improved outcomes (including patient preference).
Improved population wellbeing.
Improved quality of decision making.
Whole workforce buy in.
Warranted variation arrived at 'eyes wide open' due to an understanding of patient preferences
Reduce unwarranted variation.
Move from fail and fix to predict and prevent.

Question 4: *What is a realistic and appropriate timescale for embracing PHM?*

Next steps

NHS England and NHS Improvement

The Strategy Unit.

3V Oxford Centre for Triple Value Healthcare

UNIVERSITY OF BIRMINGHAM

THE Dartmouth INSTITUTE FOR HEALTH POLICY & CLINICAL PRACTICE

Topics for the core team programme to focus on

Value based approach and financial alignment.

Culture change.

Ability to understand multiple types of data.

Turning information into analysis and insight.

Critical appraisal of evidence.

Promoting conversations between clinicians and analysts.

Communications approach so that everyone gets a consistent message.

How to prioritise and frame questions in a way that leads to action.

Framing hypotheses on what is happening in the population to then decide on appropriate actions to effect change.

Personalisation

Prioritisation

Negotiation

Networking

An operating model for PHM

Ensuring participants are able to train others

Feedback from the day

What went well:
Learning from other areas.
Learning from experts.
Data shared.
Discussions around value and preferences.
New perspectives re shared decision making.
Challenged current thinking.
Hearing from other STPs.
Speakers and data analysis excellent.

Would like to see more on...
Solid examples of what good looks like – PHM in practice.
Sharing examples of success / failure and learning from these.
Taking it from theory to practice.
The key things we need to have in place.

Time for local programme development / planning.
Time for discussion.
Time to share learning / network with colleagues.

How to framing the original question.
Prioritising.

Role of Local Authorities in PHM.
Links to Health and Wellbeing Boards.
Clinical accountability for PHM.
Exploration of culture.

IG / Data sharing support.
How to make information informative.

More information on the core group membership and project.

Academy dates for the diary

'Core Teams'

- Day 1- **2nd July**
- Days 2&3 – **18th and 19th September**
- Days 4&5 – **19th and 20th November**
- Day 6 – **21st January 2020**

A series of webinars will also run between these dates.

Analysts

- Day 1 - **9th July**
- Day 2 - **3rd September**
- Day 3 - **8th October**
- Day 4 - **12th November**
- Day 5 - **10th December**
- Day 6 - **14th January 2020**