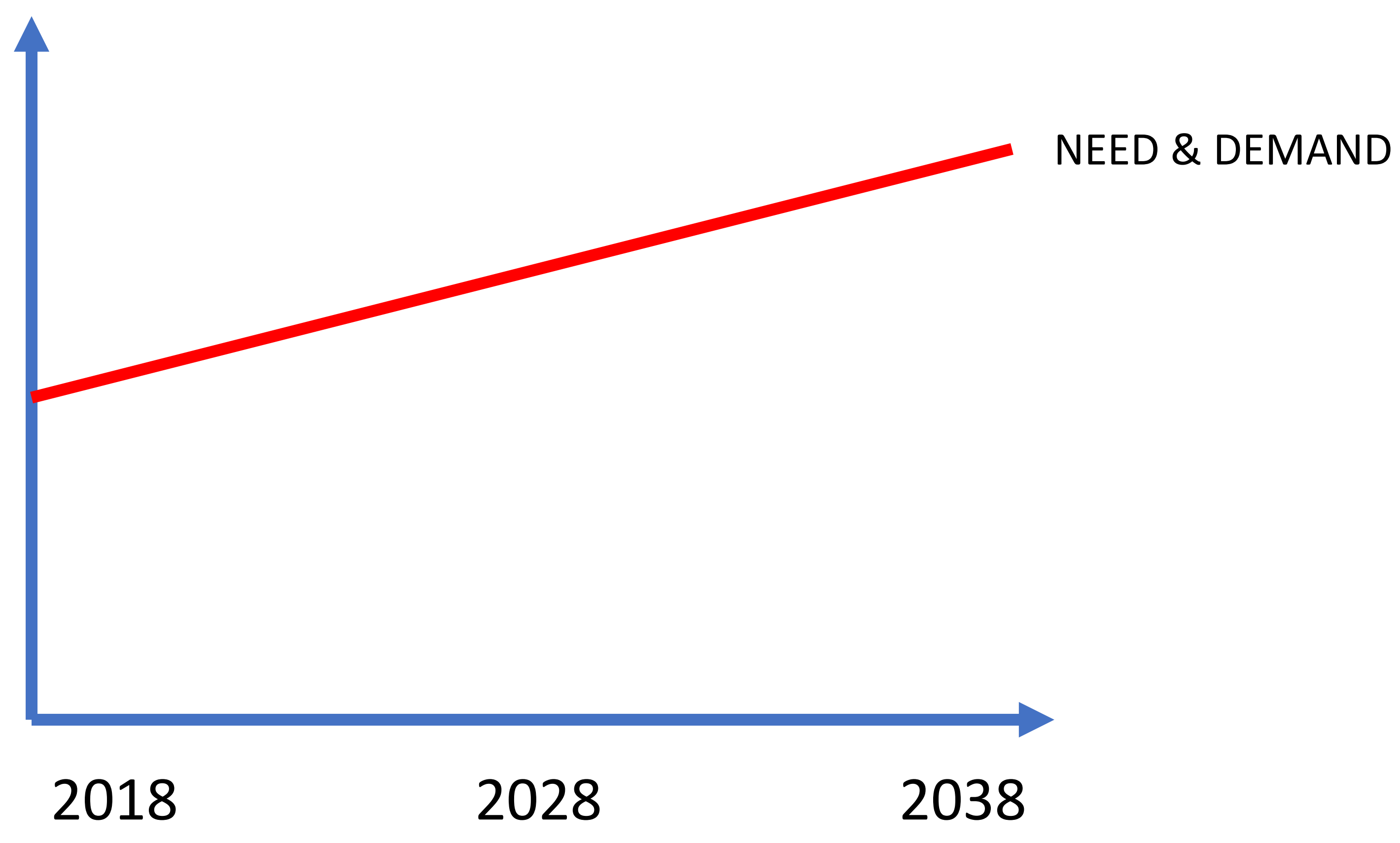
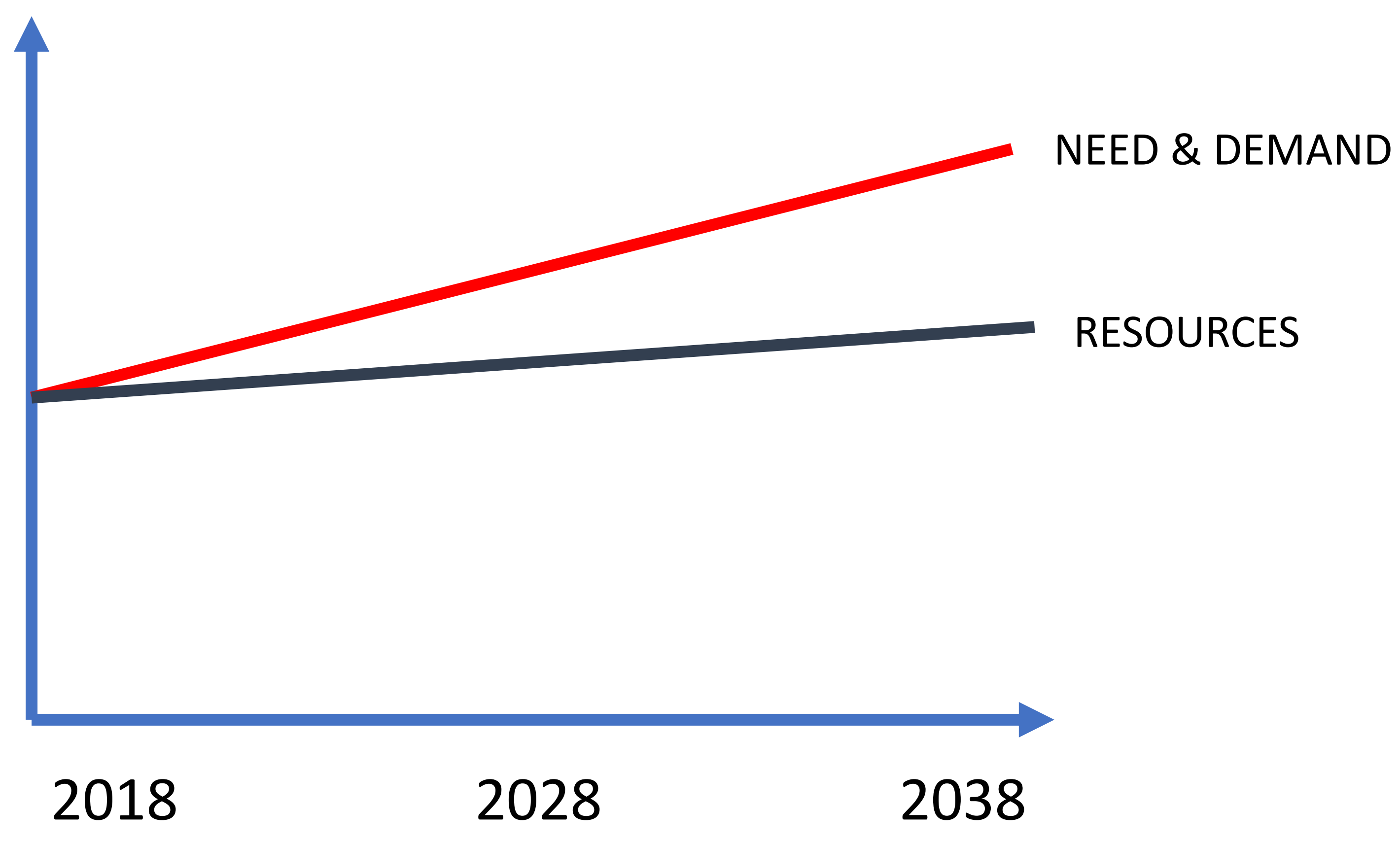
The future is not like the Cuillins, a destination awaiting our arrival…..

It is much more like the Forth Bridge, something we imagine, design, plan and build,

“the future is already here, it is just not evenly distributed”
william gibson
the Neuromancer 1984


NEED & DEMAND
2018
2028
2038


NEED & DEMAND
RESOURCES
2018
2028
2038

INCREASING NEED

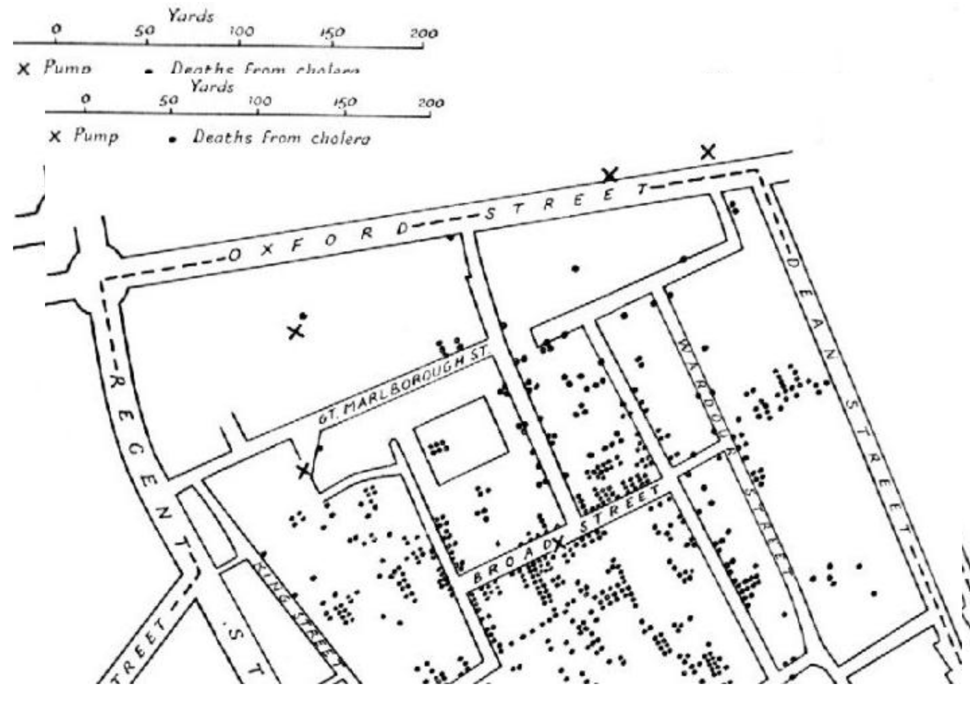
POPULATION AGEING

NEW NEEDS FROM NEW TREATMENTS

NEW NEEDS FROM NEW DISEASES

We have had 2 healthcare revolutions, with amazing impact

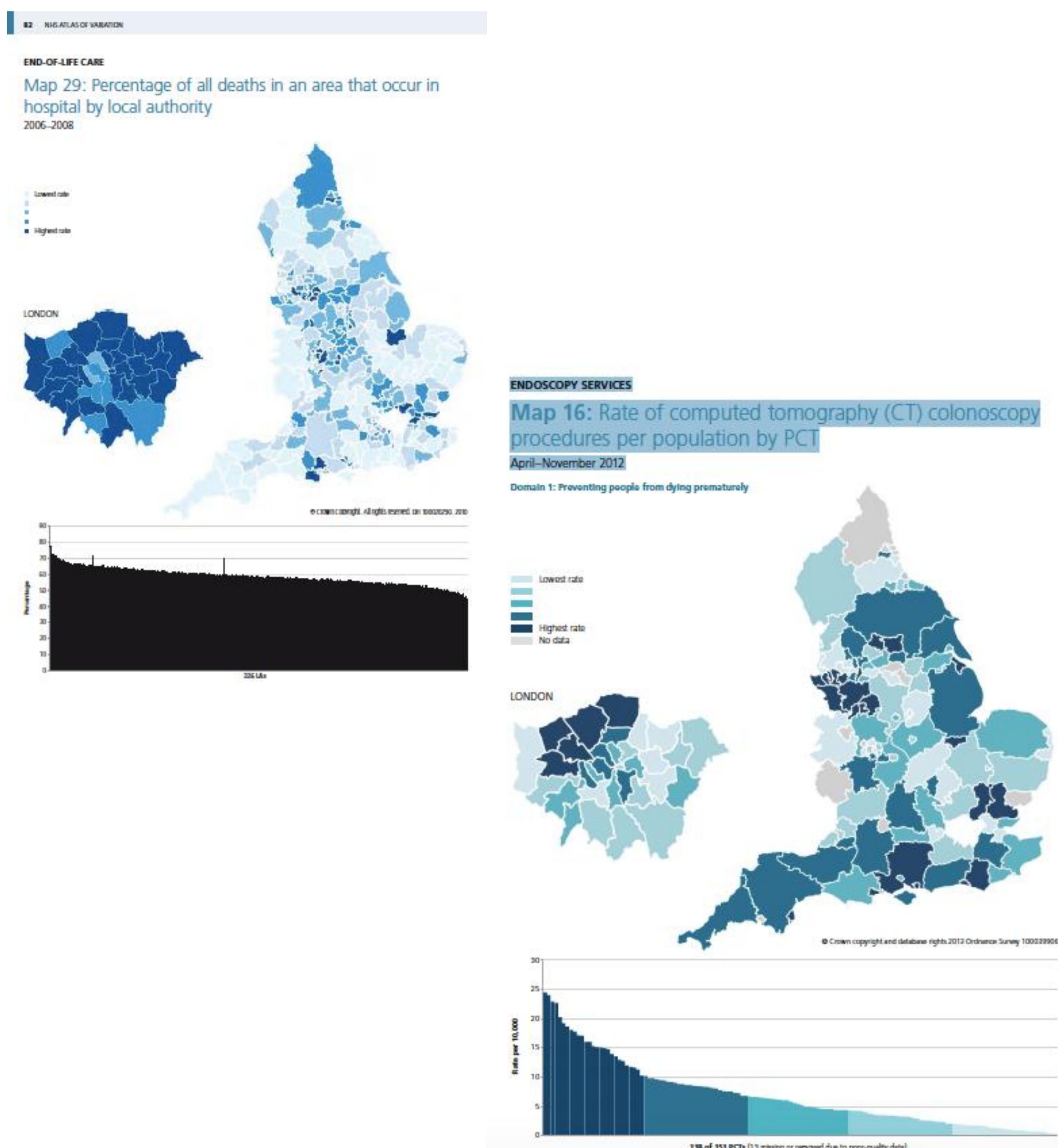
The First was the public health revolution



The Second has been the technological revolution supported by 50 years of increased investment & 20 years of evidence based medicine, quality and safety improvement eg

- Antibiotics
- MRI & CT
- Coronary artery bypass graft surgery
- Hip & knee replacement
- Chemotherapy
- Radiotherapy
- Randomised controlled trials
- Systematic reviews

after 50 years of progress all societies still face three massive problems. The first is unwarranted variation in healthcare ie ”Variation in utilization of health care services that cannot be explained by variation in patient need or patient preferences.”
Jack Wennberg
Variation reveals the other two problems

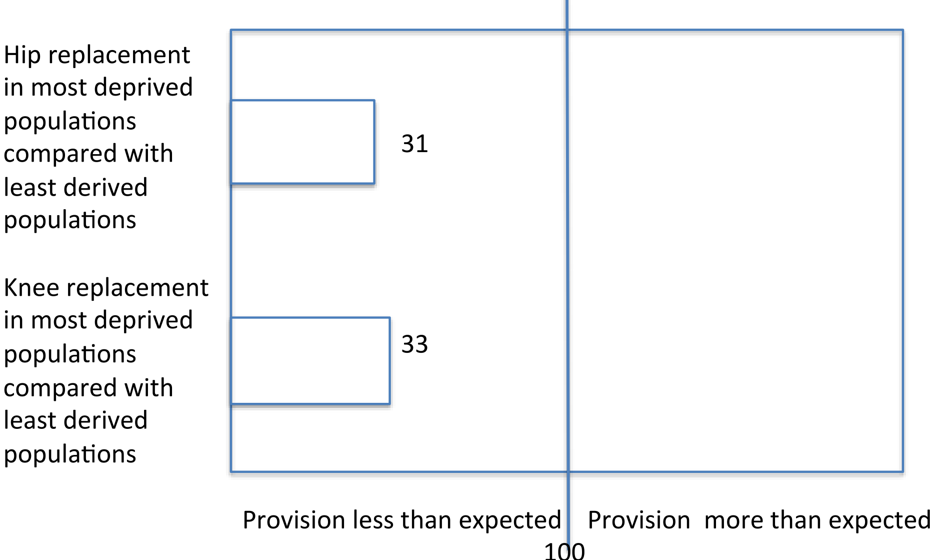


REALISTIC MEDICINE

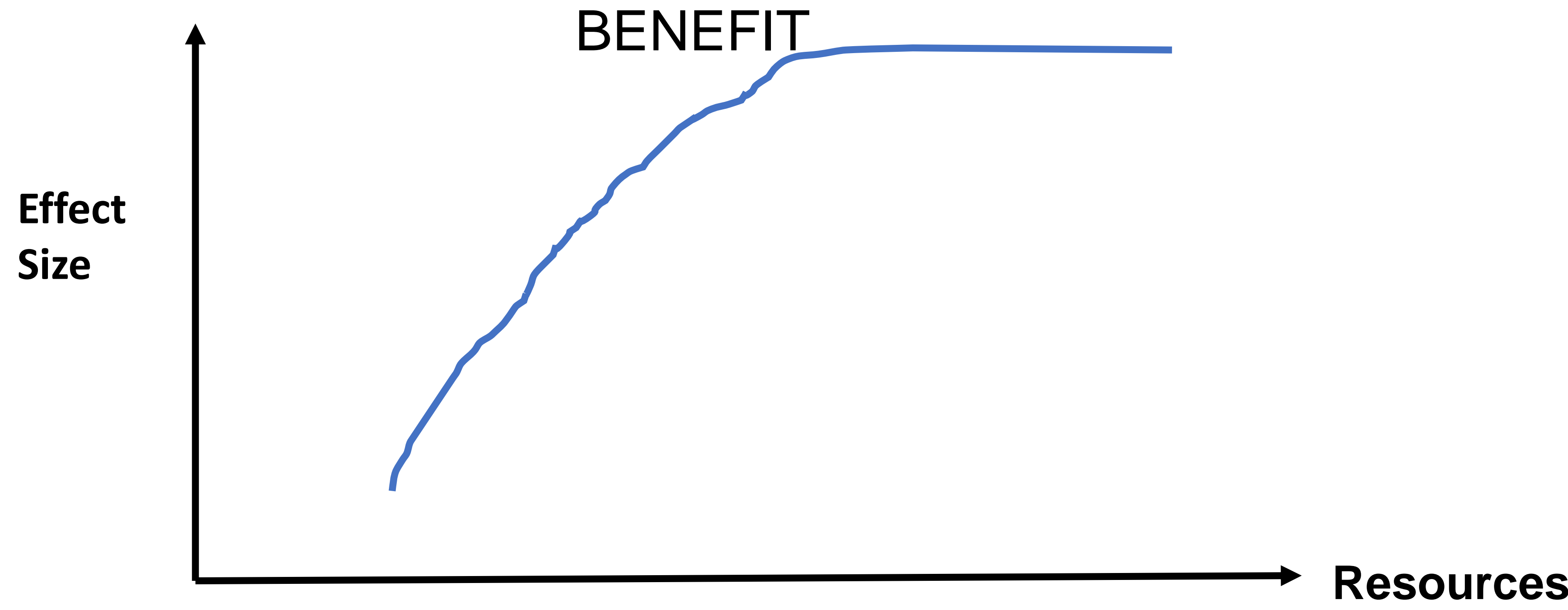
CAN WE:

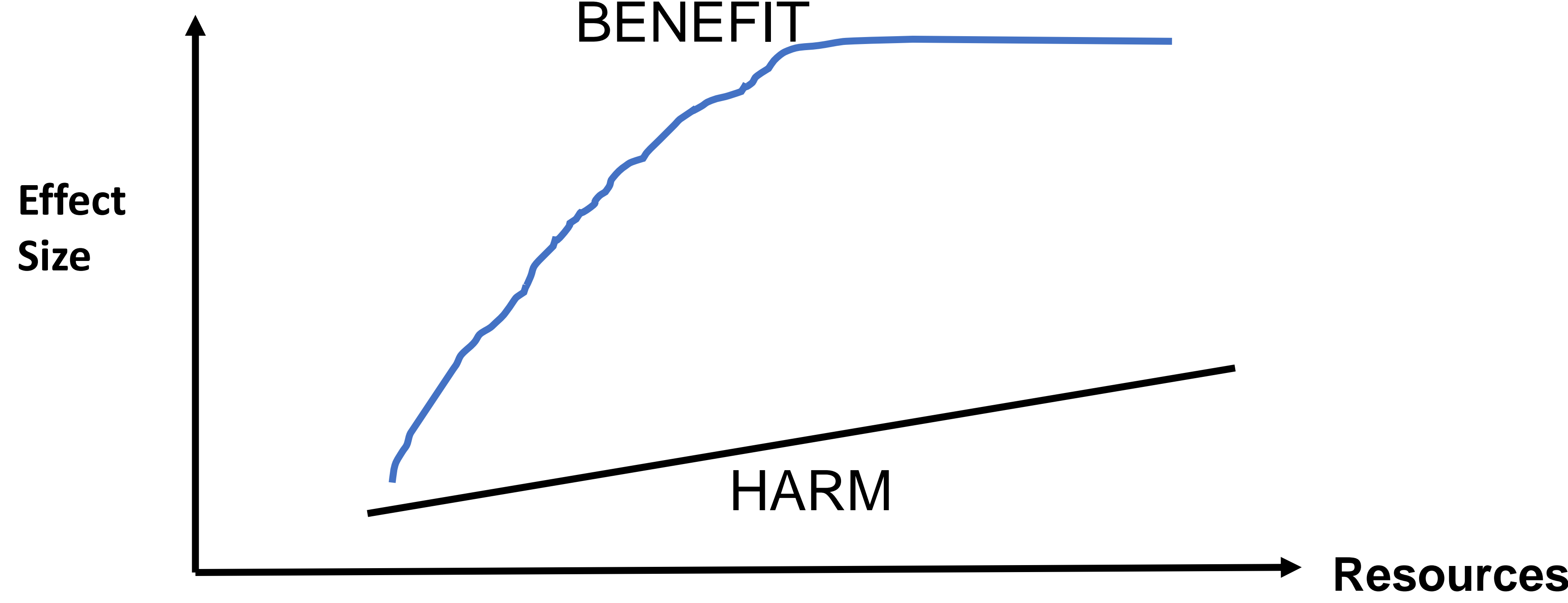
The first is Underuse of high value interventions which results in

1. Preventable disability and death eg if we managed atrial fibrillation optimally there would be 5,000 fewer strokes and10% reduction in vascular dementia, and
2. inequity

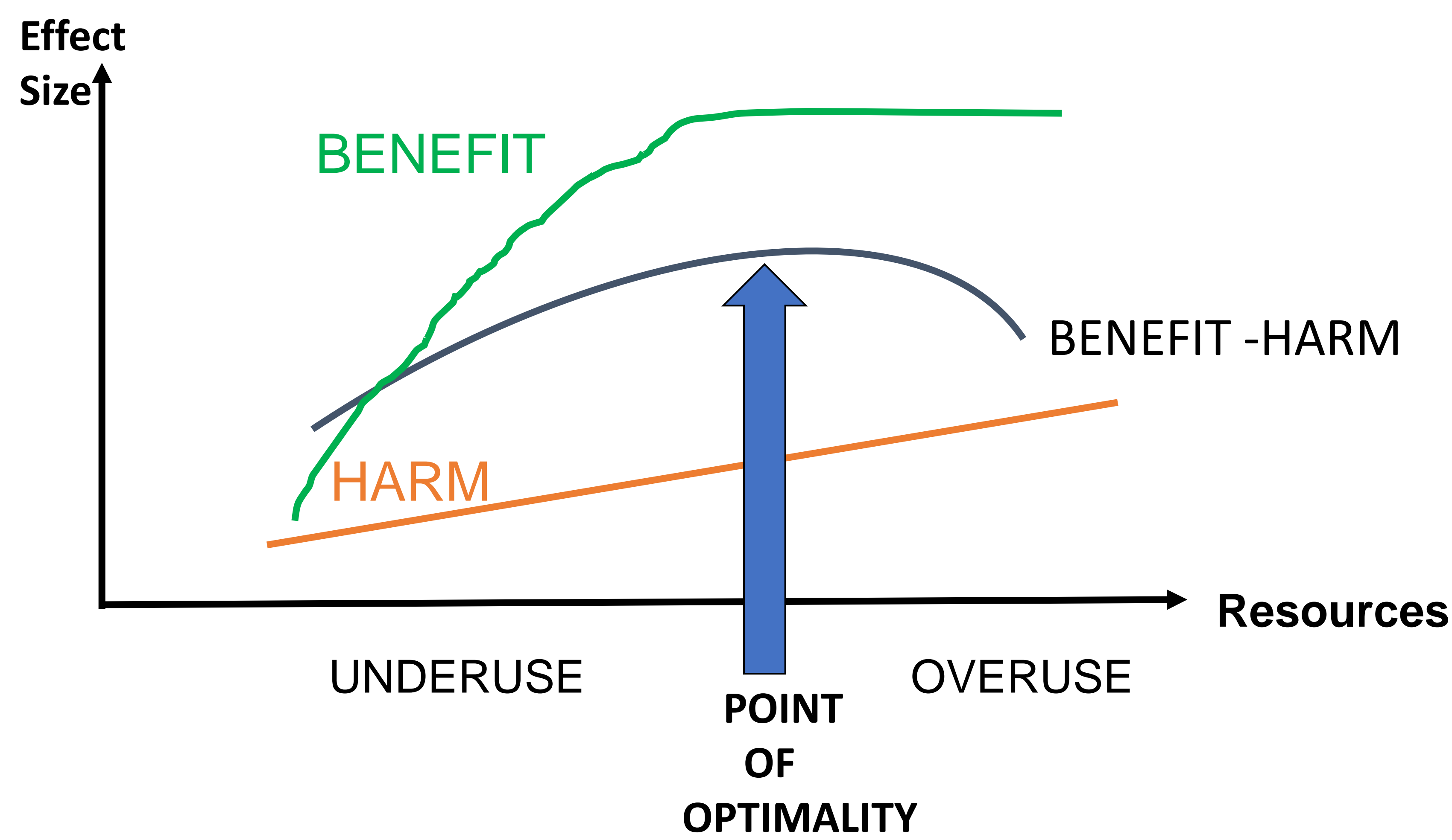


The second is overuse which




BENEFIT
Effect
Size
HARM
Resources

The second is overuse which
1. always wastes resources and
2. can cause harm



In the next decade need and demand will increase by at least 20 % so what can we do?

Well, we need to continue to
1. Prevent disease, disability, dementia and frailty
 to reduce need
2.Improve outcome by provide only cost-effective, evidence based interventions
3. Improve outcome by increasing quality and safety of process
4. Increase productivity by reducing cost

These measures reduce need and improve efficiency

BUT we also need to increase value

The Aim is **triple value**

- Personal value, determined by the value the individual places
  - not only on the outcomes of their treatment, both beneficial and harmful, related to the problem that was bothering them most but also
  - to the way the decision was made and their investment

and, from the population's perspective, two different types of value

- Allocative value , determined by how well the assets are distributed to different sub groups in the population
- Technical value , determined by how well resources are used for all the people in need in the population

ACADEMY OF
MEDICAL ROYAL
COLLEGES

Protecting resources, promoting value: a doctor's guide to cutting waste in clinical care

waste is anything that does not add value and as the Academy's re[port emphasises we need to develop a 'culture of stewardship' to ensure the NHS will be with us in 2028 and 2038

"...One doctors' waste is another patient's delay. Potentially, it could be that other patient's lack of treatment.

This process creates a higher value health care system where resources: cash, carbon and staff time, are released from some parts of the system to develop a new services or support struggling services."

How will we best act as stewards of the service ?

1. Ensuring that every individual really really understands the treatment they are requesting
2. sharing in the responsibility of the allocation of resources
3. Meeting the needs of the whole population

1. Ensure that every individual really really understands the treatment they are requesting

we are now in the third healthcare revolution – driven by three forces , citizens, knowledge and the Internet

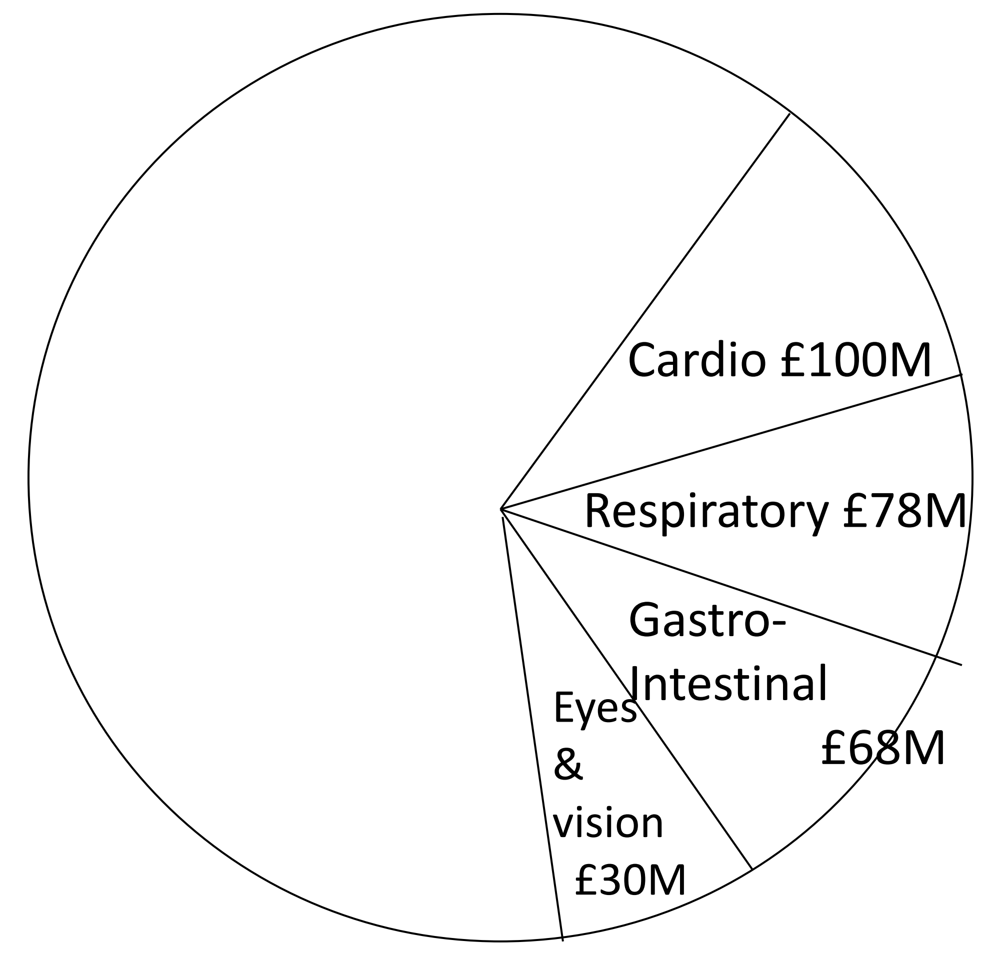
the clinician must ensure that the person requesting treatment has access to both the best current knowledge and empathy

REALISTIC MEDICINE

CAN WE:

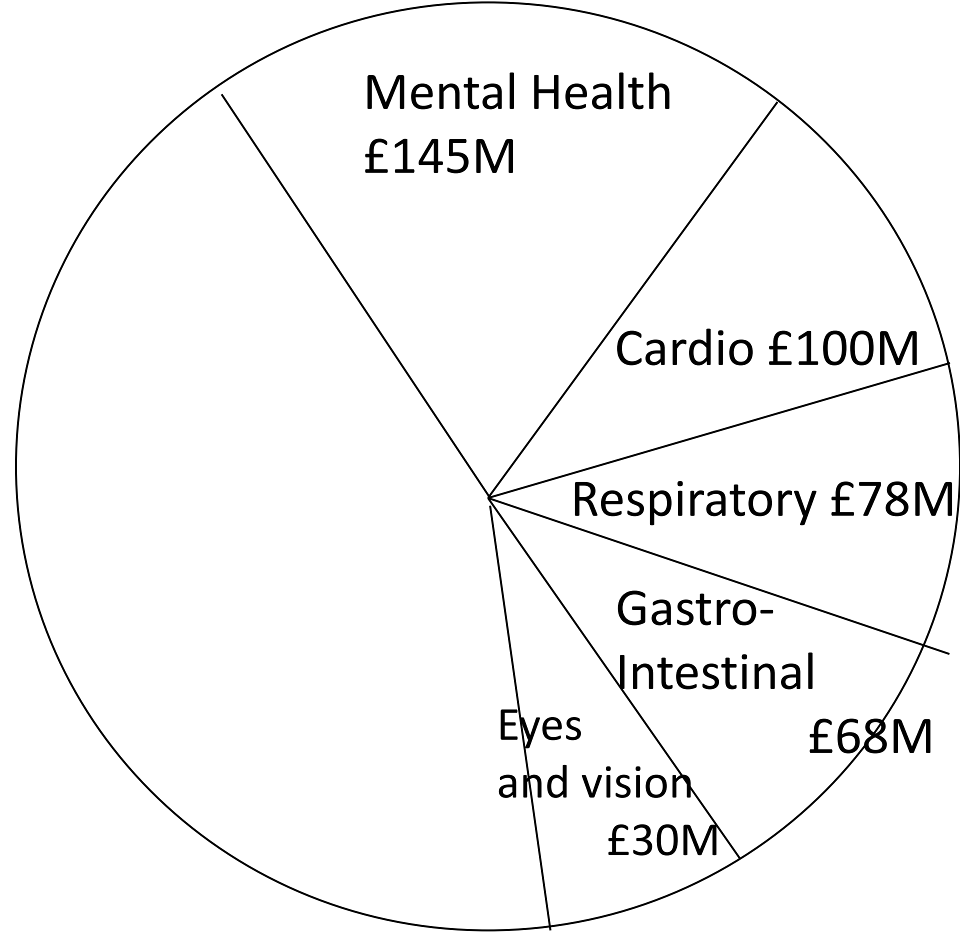
2. Shifting resource from budgets where there is evidence from unwarranted variation of overuse or lower value to budgets for populations in which there is evidence of underuse and inequity

2. shar¸ing in the responsibility of the allocation of resources

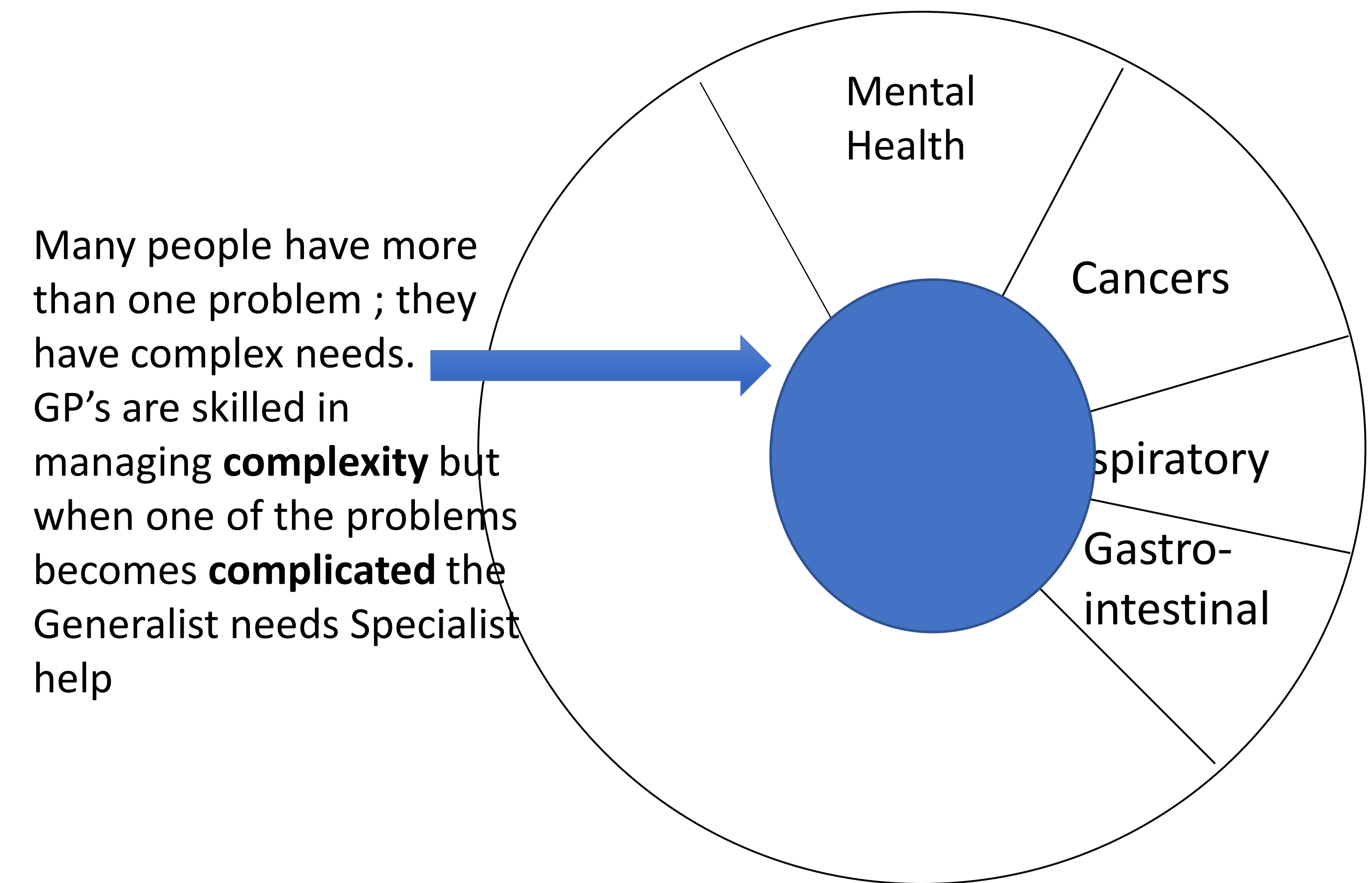


ANNUAL SPEND PER MILLION IN ENGLAND

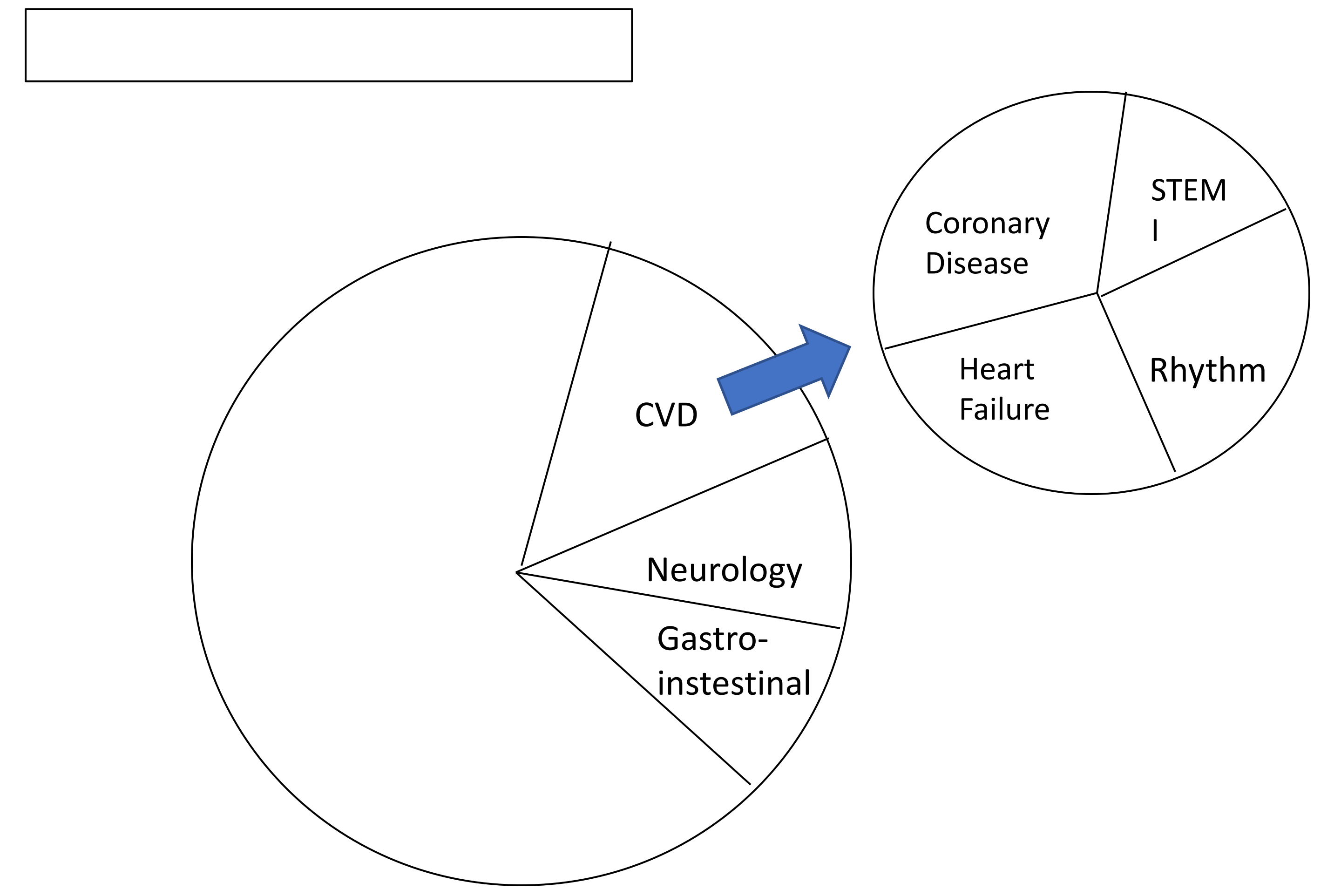
”

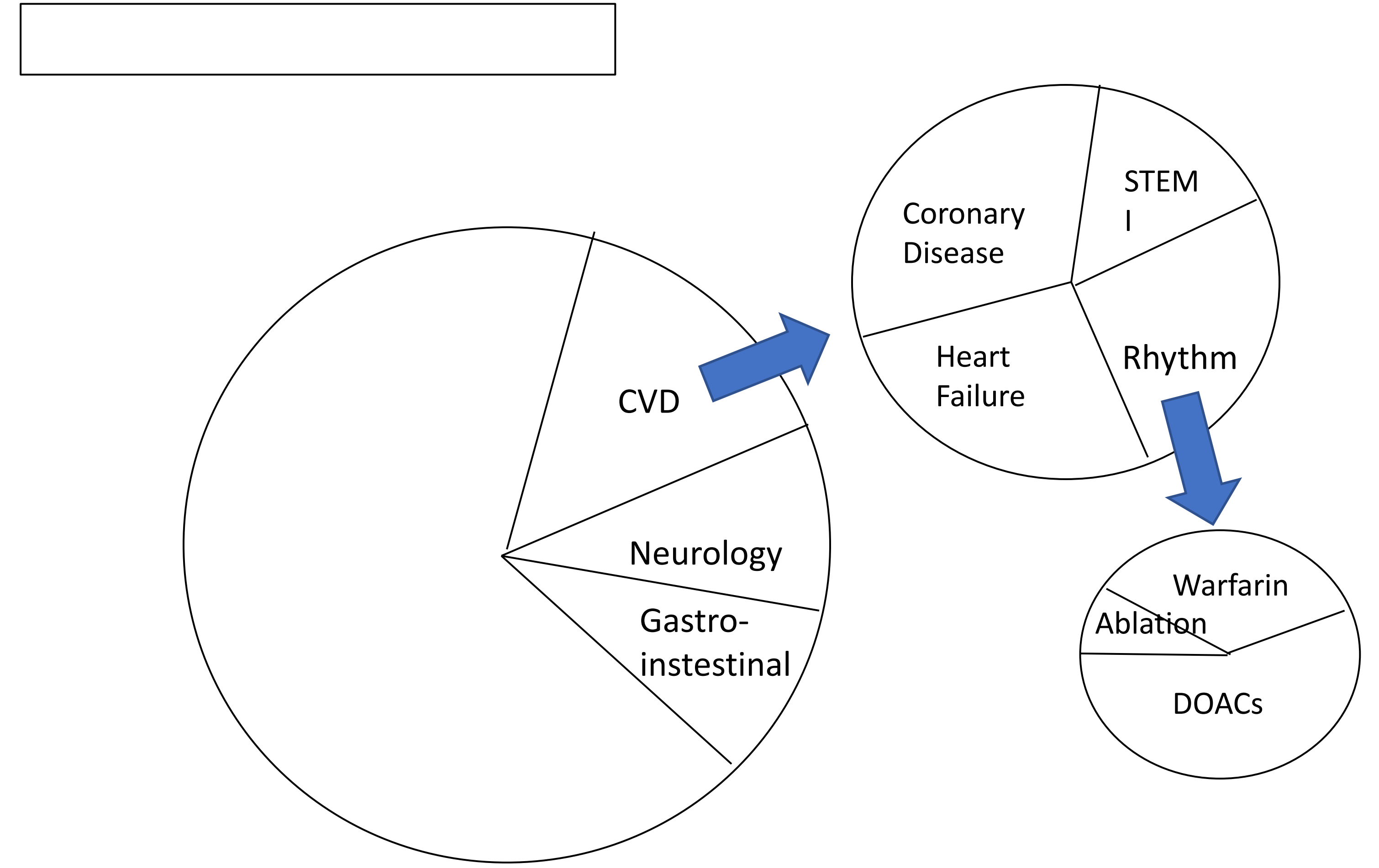


ANNUAL SPEND PER MILLION

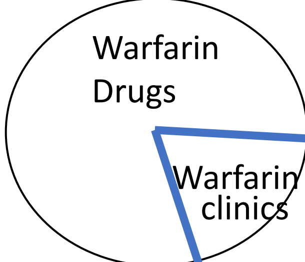


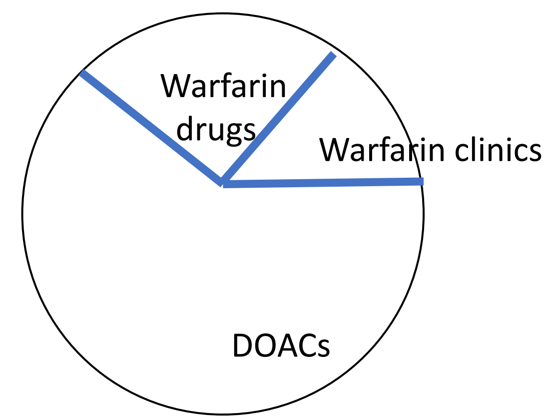
Many people have more
than one problem ; they
have complex needs.
GP’s are skilled in
managing **complexity** but
when one of the problems
becomes **complicated** the
Generalist needs Specialist
help
Mental
Health
Cancers
spiratory
Gastro-
intestinal

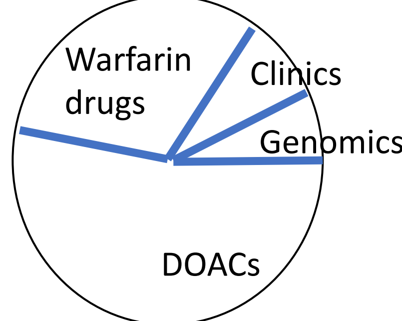

CVD
Neurology
Gastro-
instestinal
Coronary
Disease
STEM
I
Heart
Failure
Rhythm



CVD
Neurology
Gastro-
instestinal
Coronary
Disease
STEM
I
Heart
Failure
Rhythm
Warfarin
Ablation
DOACs


Warfarin
Drugs
Warfarin
clinics


Warfarin
drugs
Warfarin clinics
DOACs


Warfarin
drugs
Clinics
Genomics
DOACs

Open Access Health care delivery, economics and global health care

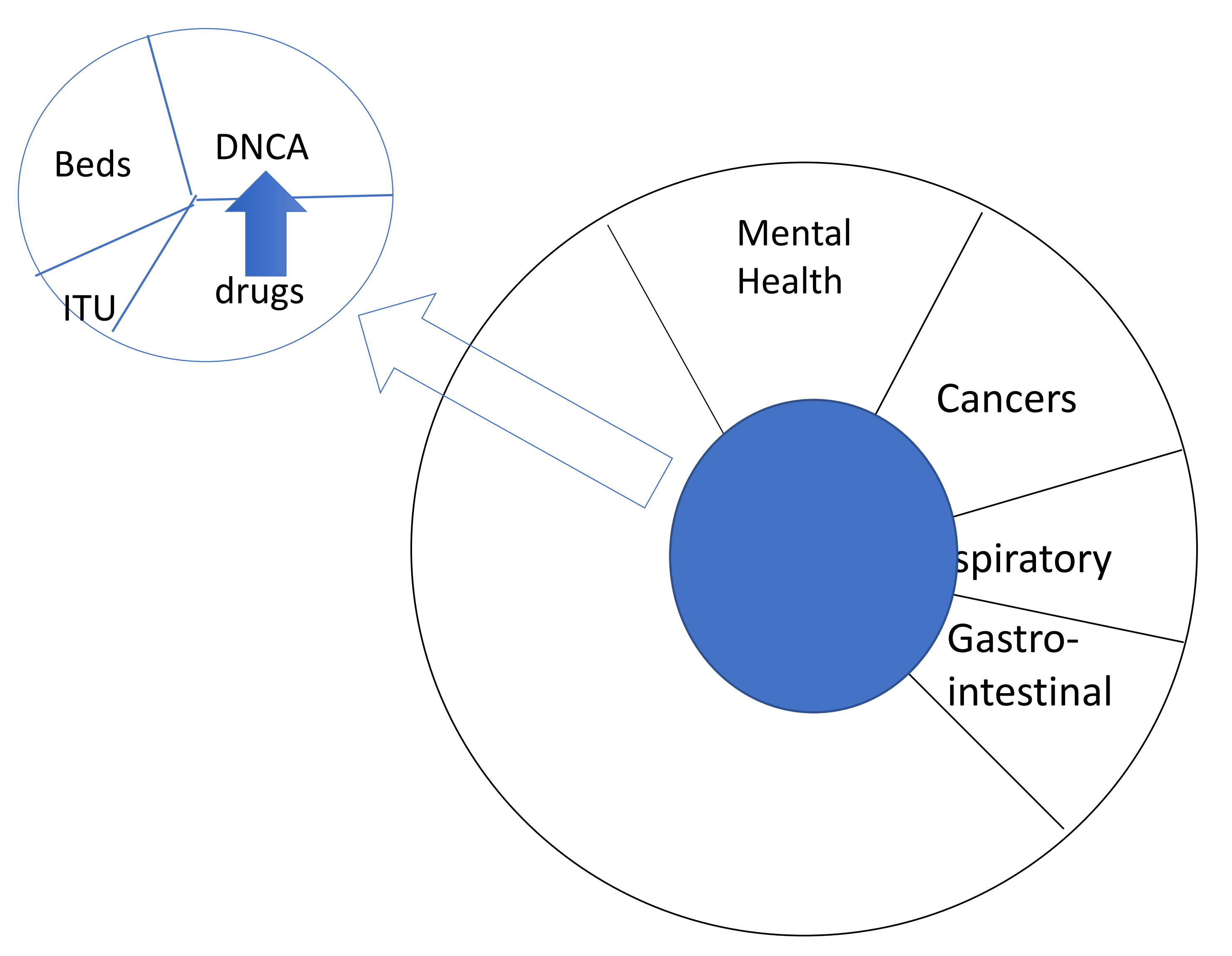
openheart

Direct oral anticoagulants versus warfarin: is new always better than the old?

John Burn,[1] Munir Pirmohamed[2]

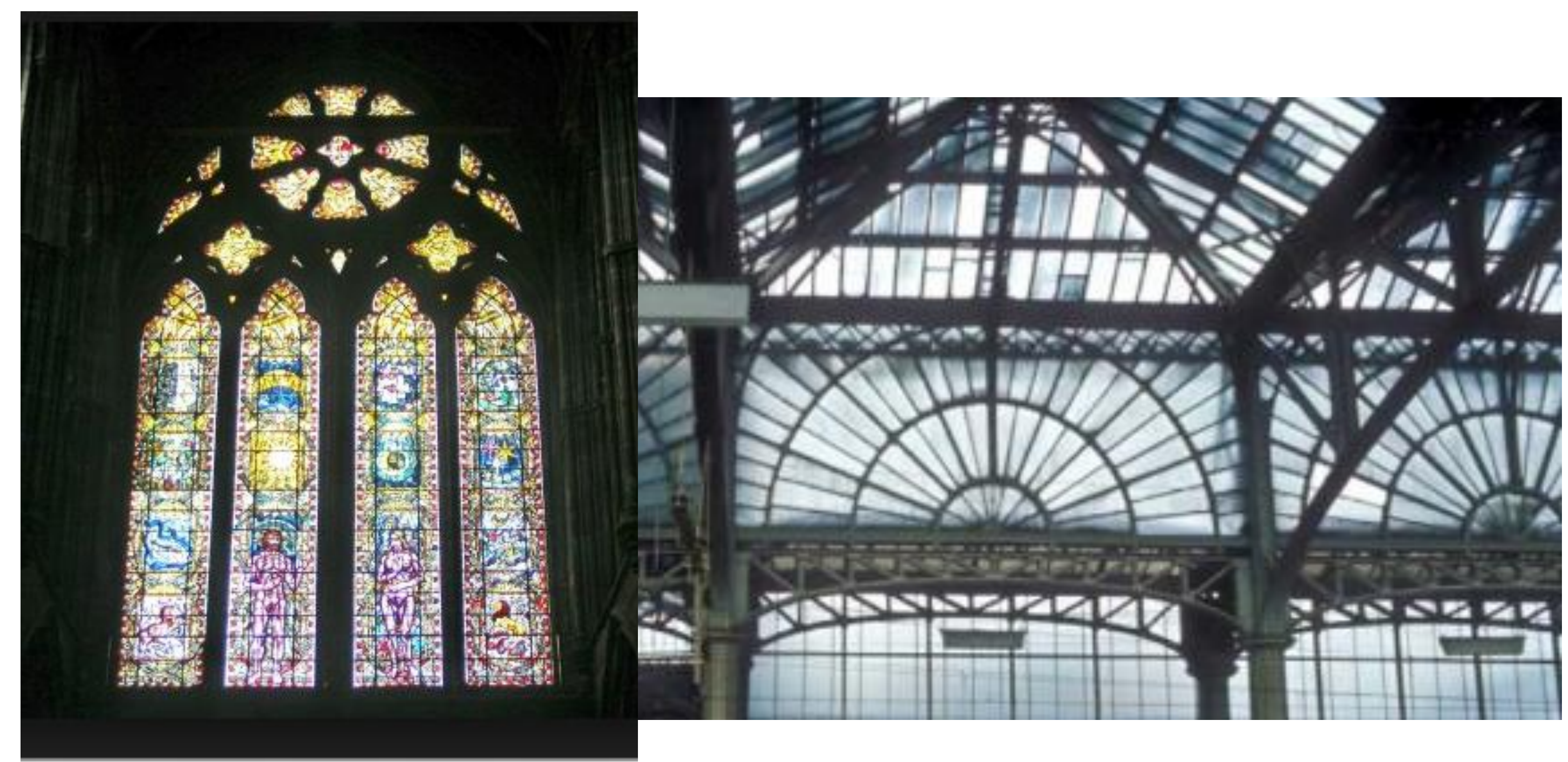
To cite: Burn J, Pirmohamed M Direct oral anticoagulants versus warfarin: is new always better than the old?. *Open Hea* 2018:e000712. doi:10.1136/openhrt-2017-000712

Thus, overall NHS annual expenditure could be reduced by >£0.5B per annum in the near future without impairment of the nation's health if DOACs are restricted to those of working age and/or are shown to be sensitive to warfarin.


Beds
DNCA
ITU
drugs
Mental
Health
Cancers
spiratory
Gastro-
intestinal

3. Meeting the needs of the whole population

BURGER KING



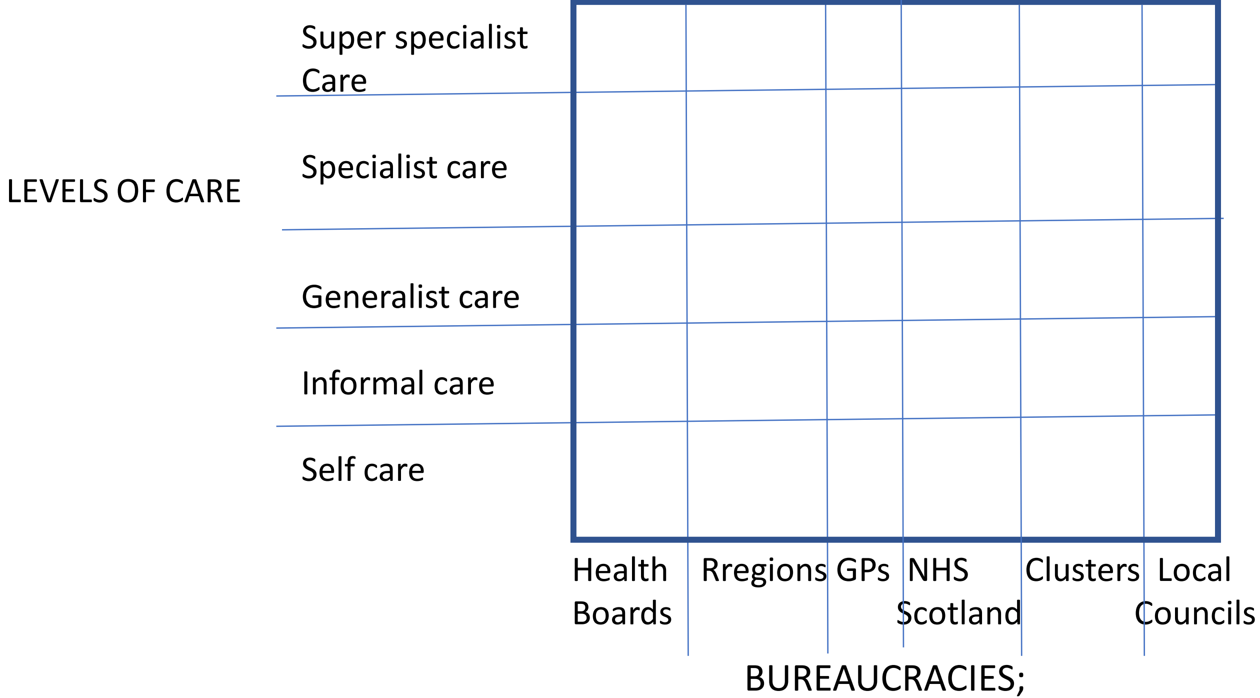
The hospital as the cathedral

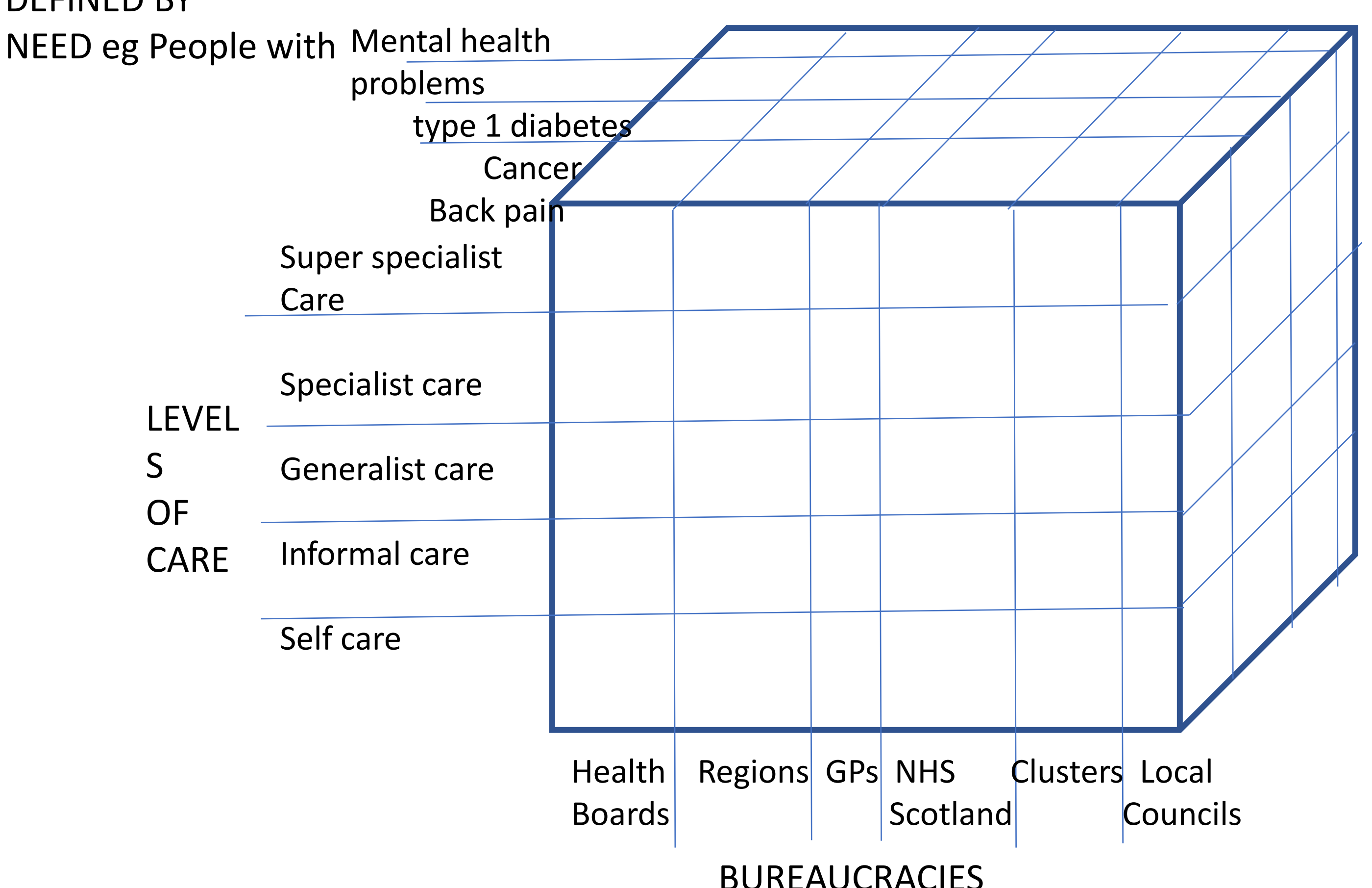
1. Is the service for people with seizures & epilepsy in Glasgow better than the service in Lothians?
2. Who is responsible for the headache service for people in Fife?
3. Is the network for people with liver disease in Tayside better than the service in Grampians?
4. Which network for frail elderly people in the Scotland provides the best value?
5. Which network for children with mental health problems improved most in the last year ?
6. How many networks are there for people with asthma in Lanarkshire, and is that different from the number of networks for people with colorectal ca, or for people with inflammatory bowel disease?

Population healthcare systems focus primarily on populations defined by a common need which may be

a symptom such as breathlessness or
a condition such as arthritis or
a common characteristic such as frailty in old age,

the focus is not on institutions , or specialties or technologies. Its aim is to maximise value for those populations and the individuals within them


LEVELS OF CARE
Super specialist Care
Specialist care
Generalist care
Informal care
Self care
Health Boards
Rregions
GPs
NHS Scotland
Clusters
Local Councils
BUREAUCRACIES;


PROGRAMMES FOR
POPULATIONS
DEFINED BY
NEED eg People with
Mental health
problems
type 1 diabetes
Cancer
Back pain
Super specialist
Care
Specialist care
Generalist care
Informal care
Self care
LEVEL
S
OF
CARE
Health
Boards
Regions
GPs
NHS
Scotland
Clusters
Local
Councils
BUREAUCRACIES

The Care Archipelago

GENERAL PRACTICE

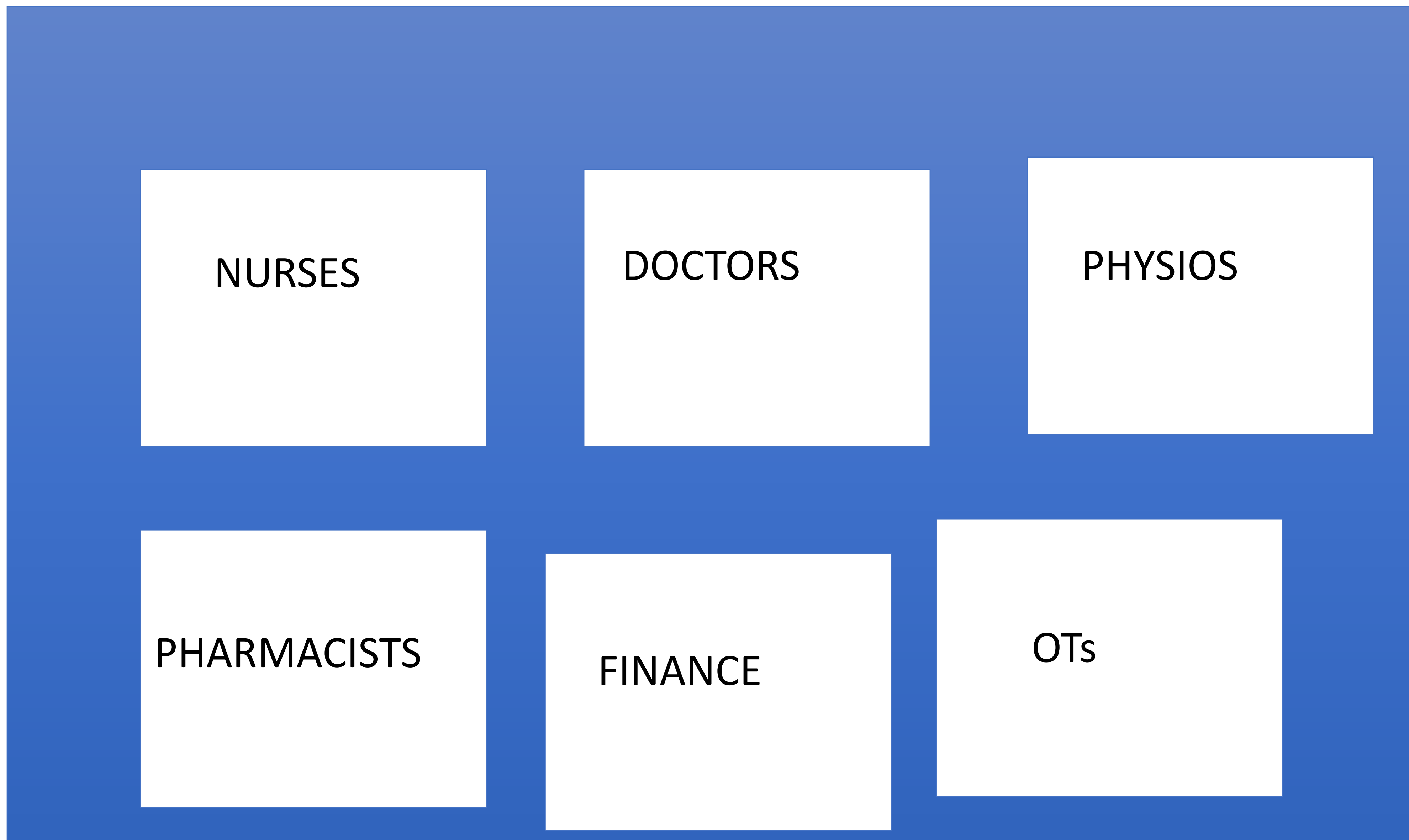
COMMUNITY SERVICES

MENTAL HEALTH

SOCIAL CARE

HOSPITAL SERVICES

The Professional Archipelago



SELF CARE

INFORMAL CARE

GENERALIST

SPECIALIST

SELF CARE

INFORMAL CARE

GENERALIST

SPECIALIST

SUPER SPECIALIST

CHOOSING CRITERIA & SETTING STANDARDS

Newborn Screening for Sickle Cell Disorders Programme Standards

NEWBORN PROGRAMME OBJECTIVES:	CRITERIA	STANDARDS	
		Minimum (Core)	Achievable (Developmental)
Programme Outcome			
Best possible survival for infants detected with a sickle cell disorder by the screening programme	Mortality rates expressed in person years	Mortality rate from sickle cell disease and it's complications in children under five of less than four per 1000 person years of life (two deaths per 100 affected children)	Mortality rate in children under five of less than two per 1000 person years of life (one death per 100 affected children)
Programme Outcome			
Accurate detection of all infants born with major clinically significant haemoglobin disorders*	Sensitivity of the screening process (offer, test and repeat test)	99% detection for Hb-SS 98% detection for Hb-SC 95% detection for other variants	99.5% for Hb-SS 99% for Hb-SC 97% for other variants

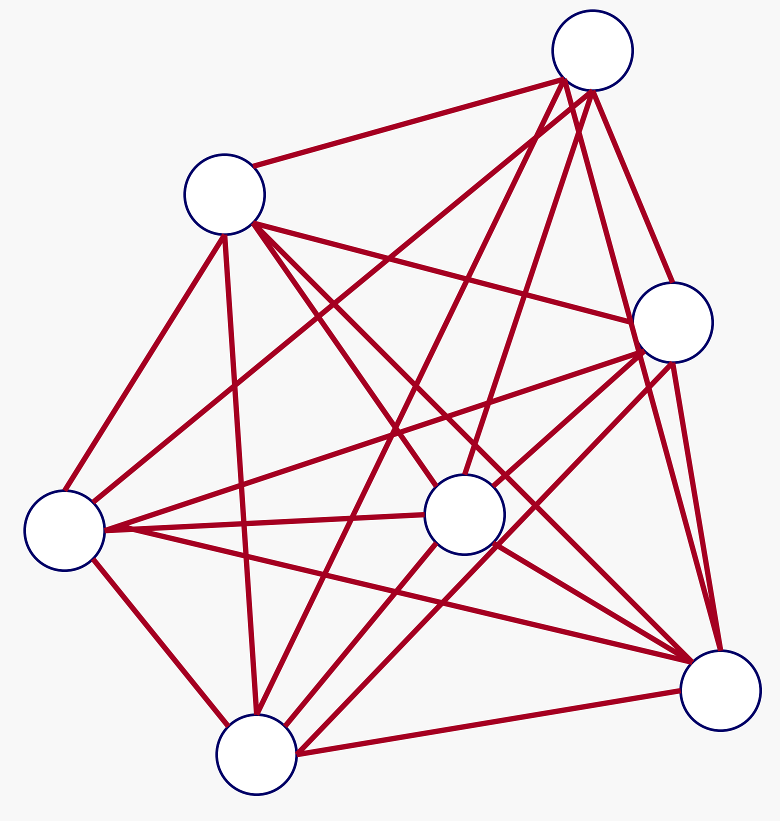
This is an example of a national service set up as a system

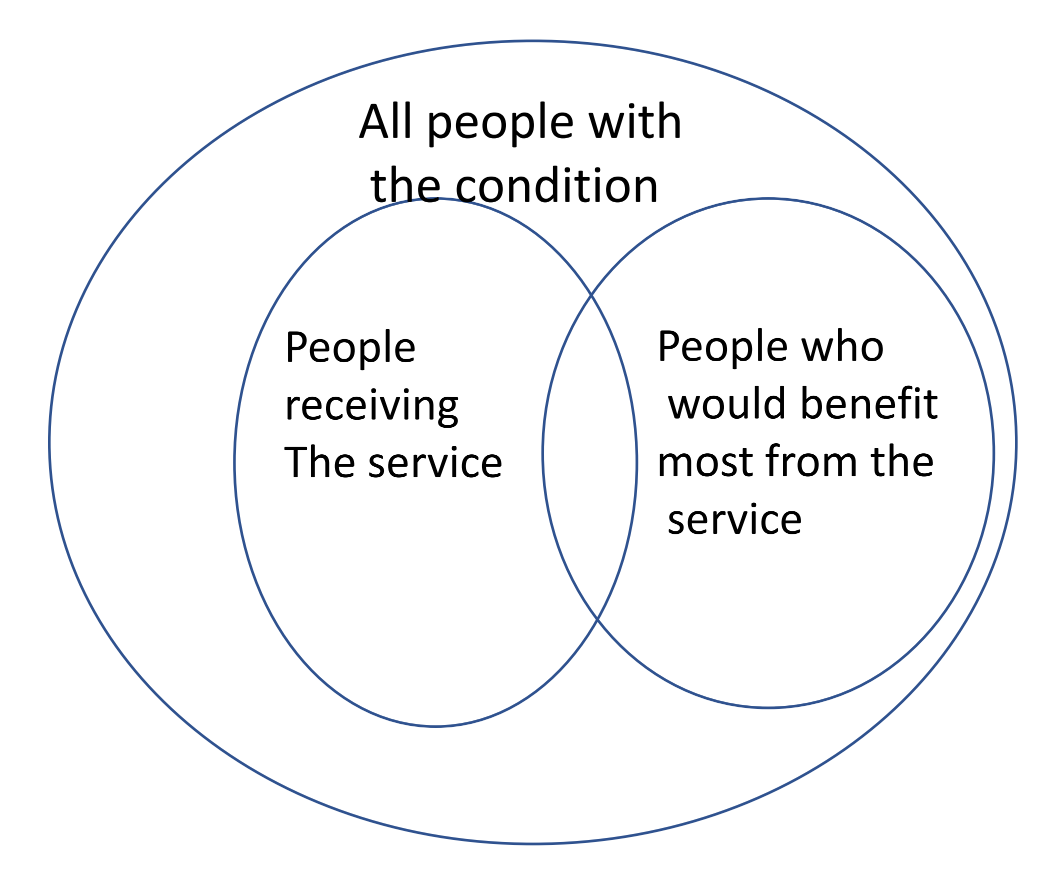
Hierarchy

Network

Pathway

Network

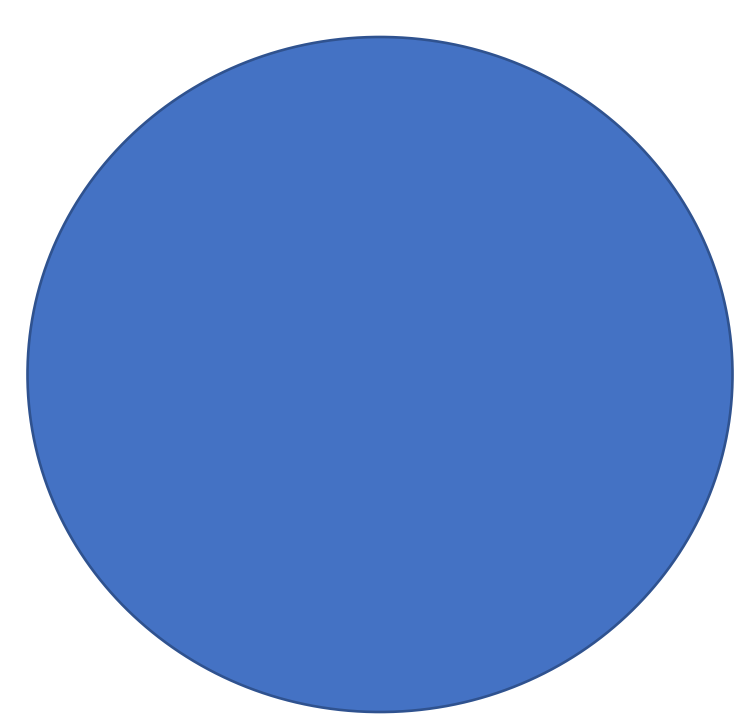



All people with the condition
People receiving The service
People who would benefit most from the service

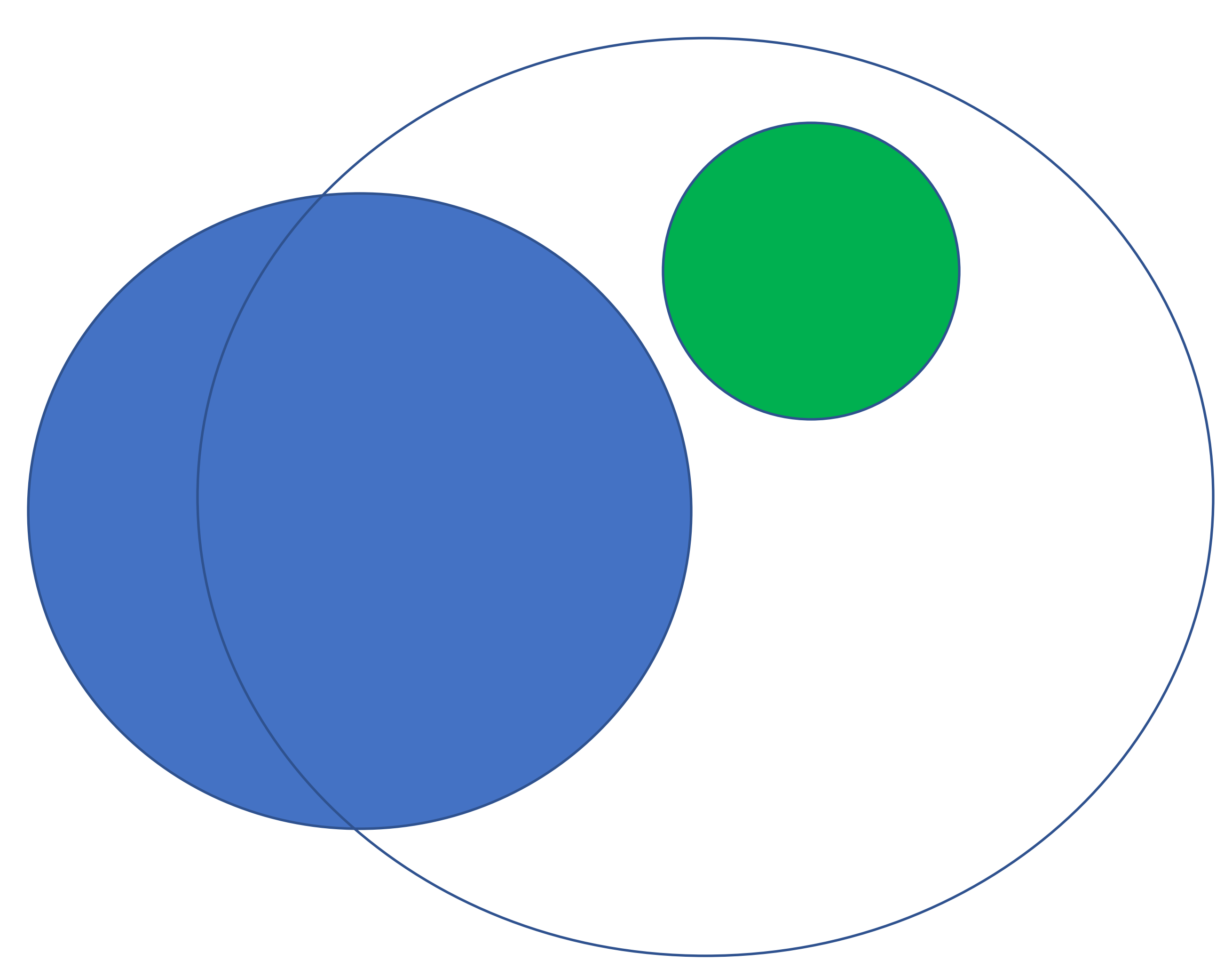
The right
People
receiving
the specialist
service

All people with
the condition who do
not need to see the
specialist service practice
healthcare supported by
generalists who are
themselves supported
by specialists

Dr Jones is a respiratory physician in the Derby Hospital Trust and last year she saw 346 people with COPD and provided
evidence based, patient centred care, and to improve effectiveness, productivity and safety



Dr Jones estimated that there are 1000 people with COPD in South Derbyshire and a population based audit showed that there were 100 people who were not referred who would benefit from the knowledge of her team



Dr Jones is given 1 day a week for Population Respiratory Health and the co-ordinator of the South Derbyshire COPD Network and Service has responsibility, authority and resources for

Working with Public Health to reduce smoking

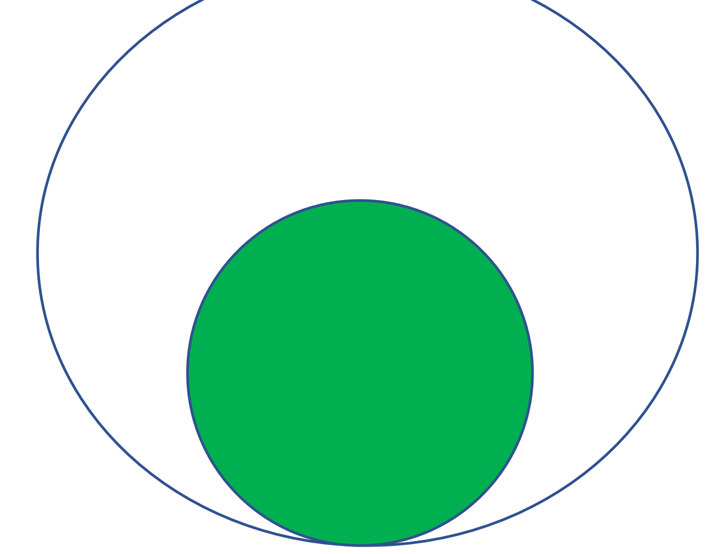
Network development

Quality of patient information

Professional development of generalists, and pharmacists

Production of the Annual Report of the service

She is keen to improve her performance from being 27th out of the 106 COPD services, and of greater importance, 6th out of the 23 services in the prosperous counties

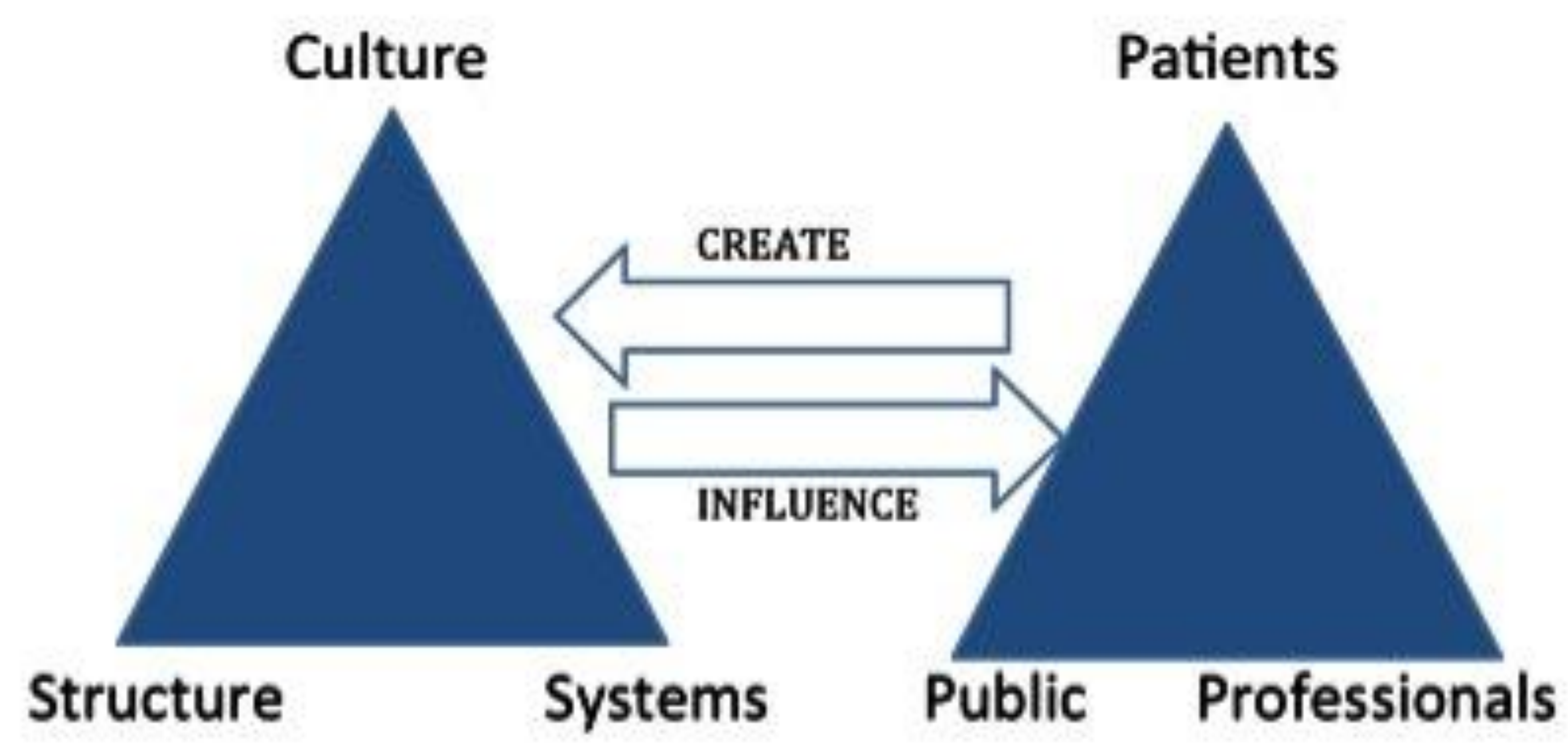


We need a new set of skills

- *Understanding and Increasing Value*
- *Designing and building Systems of Care.*
- *Creating the Right Healthcare Culture*
- *Delivering Population-based Medicine*
- *Delivering Personalised Decision making*
- *Realising the potential of the Internet and digital services*

We need good service management and great population healthcare leadership healthcare, for example asking

how many people are there with XXX in our population ?
What proportion should the specialist service see ?
Is the specialist service seeing the right people?
How many pharmacists are there serving our population?
How many new GPs came to work here last year ?
Could we prevent XXX better
Is everyone with XXX getting an Activity Prescription ?


Culture
Patients
CREATE
INFLUENCE
Structure
Systems
Public
Professionals

Ban old language

AcuteCommunity

Manager

Outpatient

Patient

Introduce new language

A **SYSTEM** is a set of activities with a common set of objectives and outcomes; and an annual report. Systems can focus on symptoms, conditions or subgroups of the population

(delivered as a service the configuration of which may vary from one population to another)

A **NETWORK** is a set of individuals and organisations that deliver the system's objectives

(a team is a set of individuals or departments within one organisation)

A **PATHWAY** is the route patients usually follow through the network

A **PROGRAMME** is a set of systems with ha common knowledge base and a common budget

Work like an ant colony; Neither markets nor bureaucracies can solve the challenges of complexity

Queen

Worker

Soldier