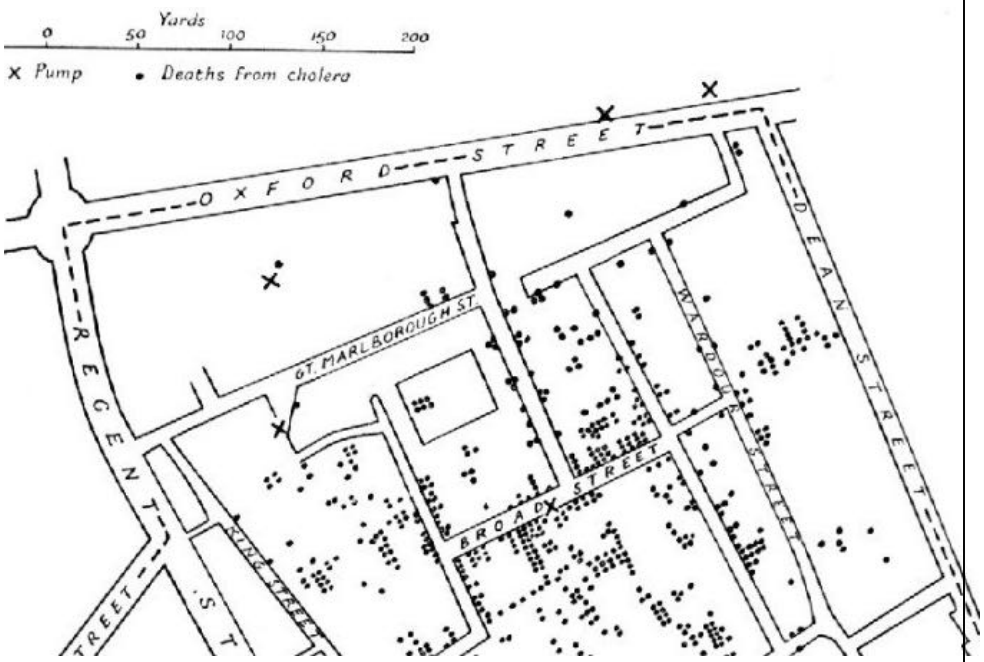
We have had 2 healthcare revolutions, with amazing impact

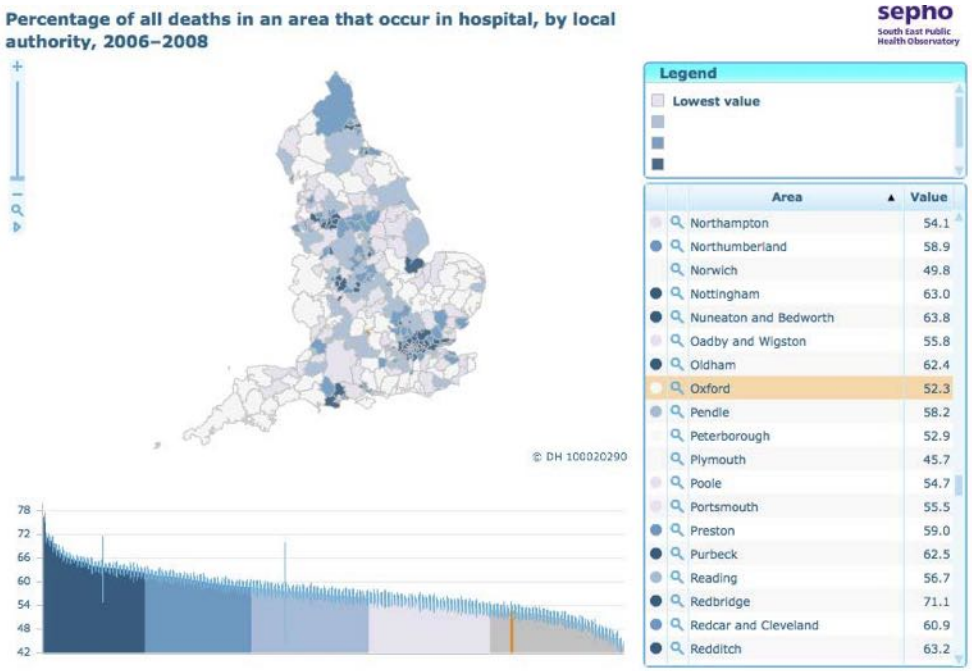
The First was the public health revolution



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

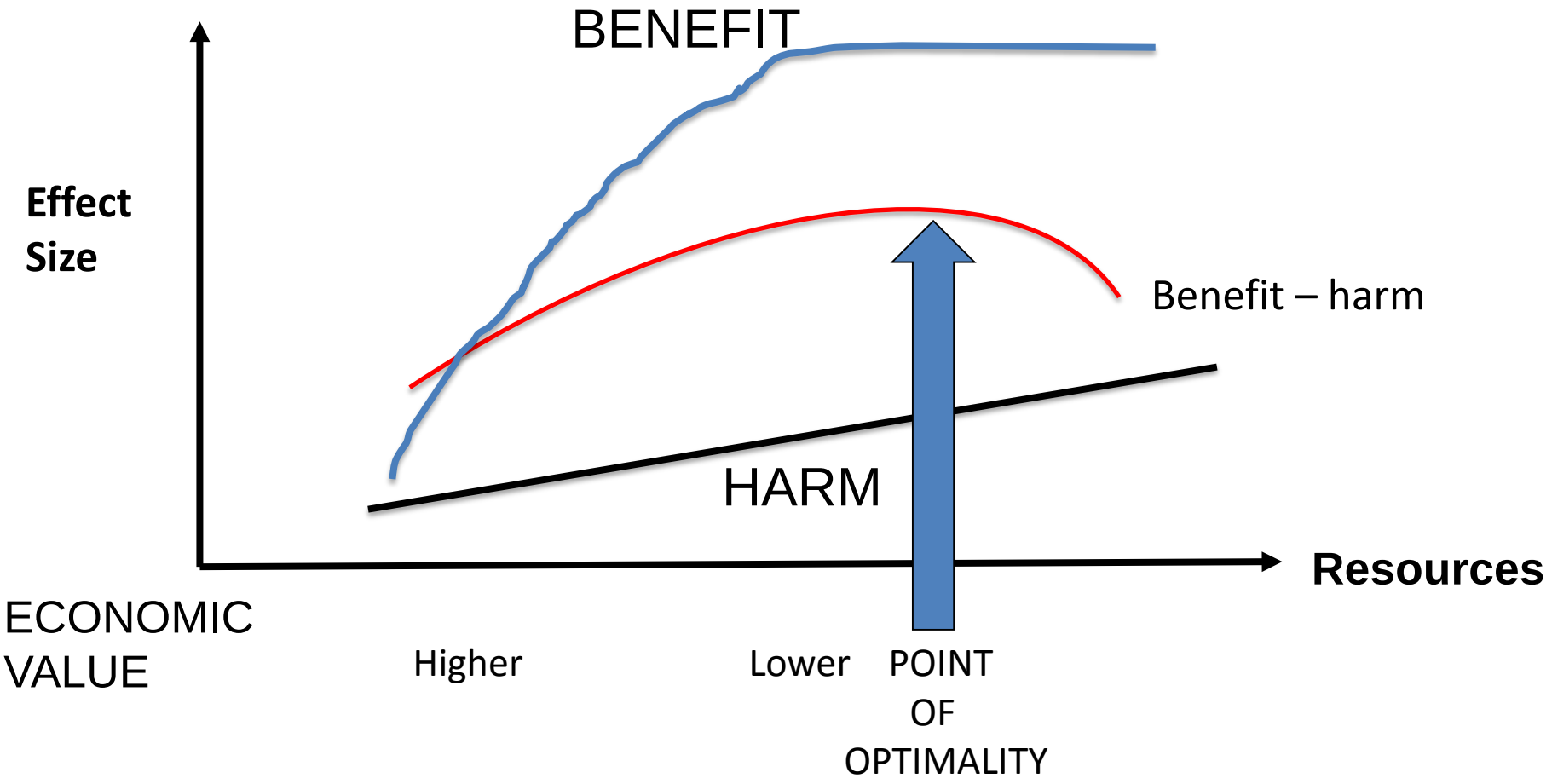
- Antibiotics
- MRI & CT
- Coronary artery bypass graft surgery
- Hip & knee replacement
- Chemotherapy
- Radiotherapy
- Randomised controlled trials
- Systematic reviews

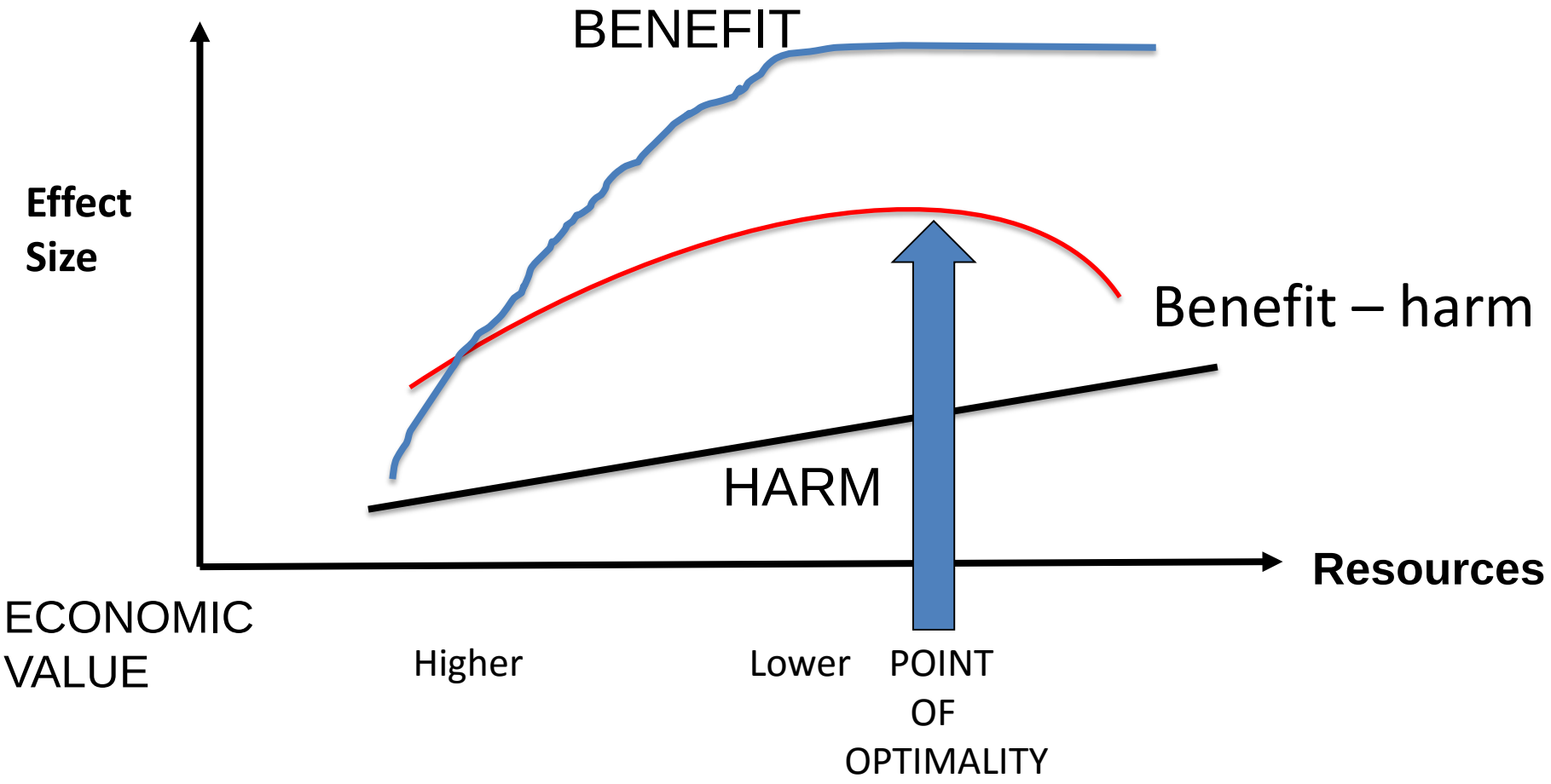
after 50 years of progress all societies still face three massive problems.
The first is unwarranted variation in expenditure, access, quality and outcome healthcare
Variation reveals the other two problems



NHS Atlas of variation

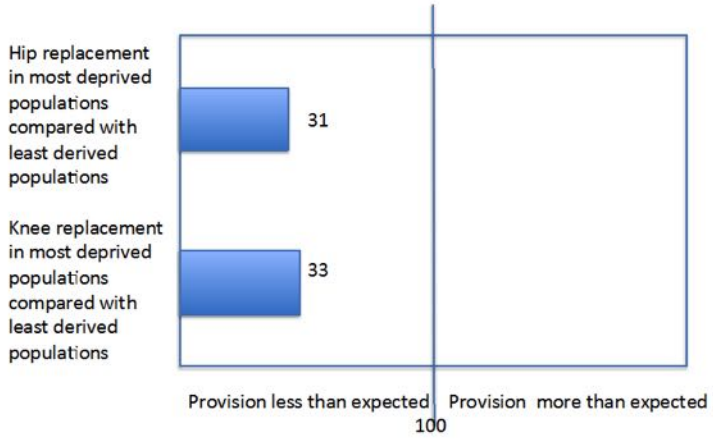
The first is overuse which
1. always wastes resources and
2. can cause harm




BENEFIT
Effect Size
Benefit – harm
HARM
Resources
ECONOMIC VALUE
Higher
Lower
POINT OF OPTIMALITY

The second 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



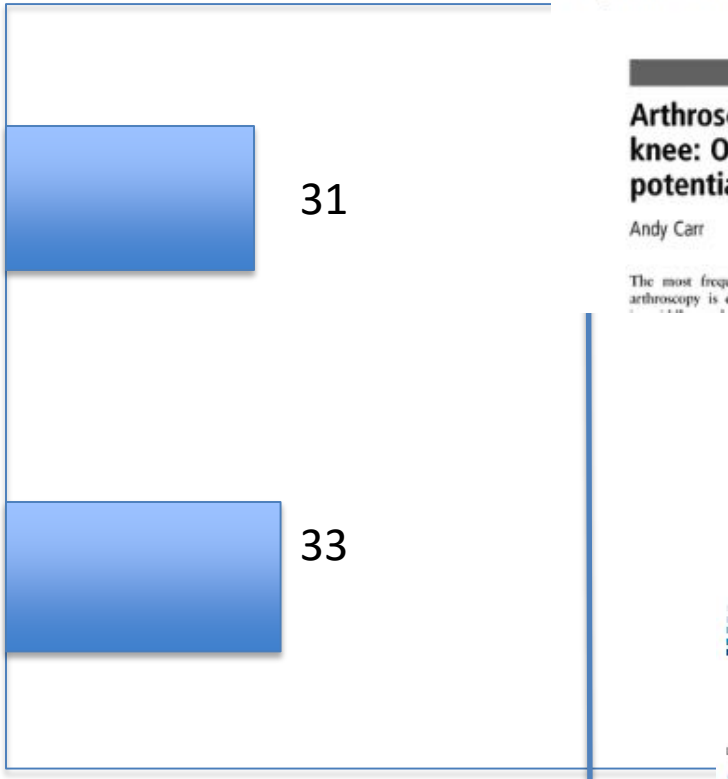
Equity in access to total joint replacement of the hip and knee in England: cross sectional study

BMJ 2010; 341 doi: http://dx.doi.org/10.1136/bmj.c4092 (Published 11 August 2010)

Cite this as: *BMJ* 2010;341:c4092

Hip replacement in most deprived populations compared with least derived populations

Knee replacement in most deprived populations compared with least derived populations



Br J Sports Med 2015;**49**:1223-1224 doi:10.1136/bjsports-2015-h2983rep

Republished editorial from The BMJ

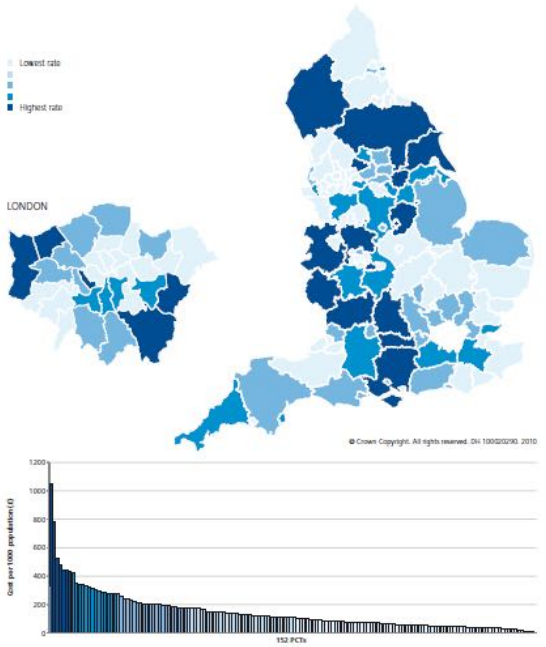
Arthroscopic surgery for degenerative knee: Overused, ineffective, and potentially harmful

Andy Carr

The most frequent indication for knee arthroscopy is degenerative joint disease poorly described and given at a suboptimal dose.

variety of factors that alter beliefs and expectations.[12]

Importantly, Thorlund and colleagues also review the harms associated with arthroscopic knee surgery. They were unable to identify harms from randomised trials alone because the trials were too small, so they did a wider review including observational studies. These studies were heterogeneous and inconsistent, but the risks associated with non-surgical treatment including exercises are clearly



THERE IS ALSO TRIPLE WHAMMY HEALTHCARE !
OVERUSE +
UNDERUSE +
UNWARRANTED VARIATION

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 through by providing only effective, evidence based interventions based on best research
3. Improve outcome by increasing quality and safety of process
4. Increase productivity and efficiency by reducing cost

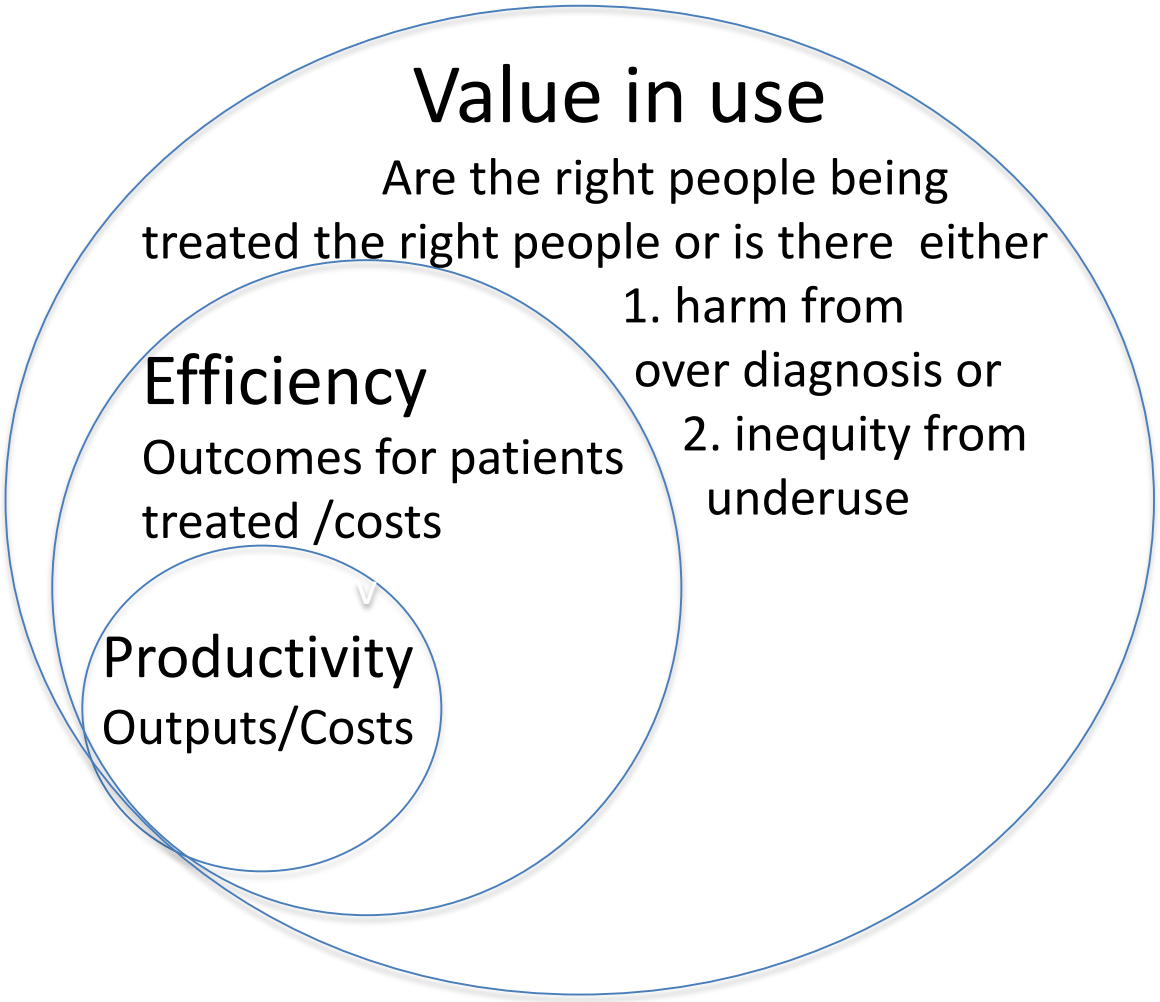
These measures reduce need and improve efficiency

BUT we also need to increase value

The Aim is **triple value**

- Allocative, determined by how well the assets are distributed to different sub groups in the population
  - Between programme
  - Between system
  - Within system
- Technical, determined by how well resources are used for outcomes for all the people in need in the population
- Personalised value, determined by how well the outcome relates to the values of each individual

waste is anything that does not add value and we need to develop a 'culture of stewardship' to ensure the NHS will be with us in 2025 and 2035



This is the definition of value in a service like the NHS, committed to covering a whole population from a finite budget

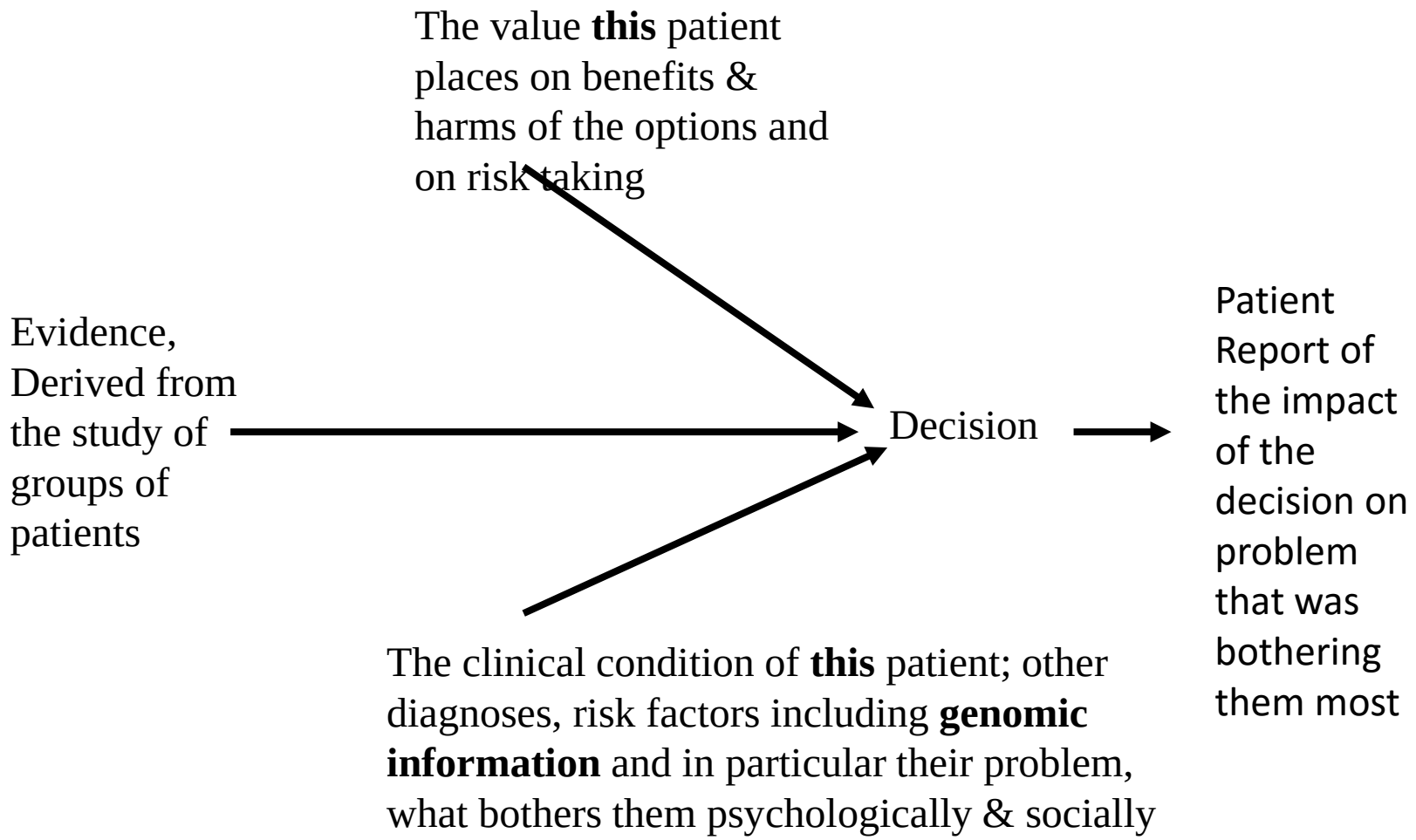
NHS or nHS?

-
- Is care for people with asthma better in Scotland, Wales or Northern Ireland?
-
- And within Wales to ask questions such as
-
- Is care for people with back pain better in Wrexham or Bridgend?
- Is care for people with inflammatory bowel disease better in Swansea or Cardiff?
- Is care for people in the last year of life better in the West Wales or Anglesey wales

THE Better Value Healthcare METHOD OF INCREASING VALUE FOR POPULATIONS AND INDIVIDUALS IS BY

- Ensuring that every individual receives high personal value by providing people with full information about the risks and benefits of the intervention being offered
- Shifting resource from budgets where there is evidence of overuse or lower value to budgets for populations in which there is evidence of underuse and inequity
- Develop population based systems that
  - Address the needs of all the people in need, with the specialist service seeing those who would benefit most
  - Implement high value innovation funded by reduced spending on lower value intervention
  - Increase rates of higher value intervention funded by reduced spending on lower value intervention eg shift resources from treatment to prevention

1. Ensuring that every individual receives high personal value by providing people with full information about the risks and benefits of the intervention being offered and relating that to the problem that bothers them most and their values and preferences



And if genomic information is included the term used is usually precision medicine rather than personalised medicine

Personalised medicine

- This book focuses on the two key questions that are most frequently asked by clinicians about applying the results of randomised controlled trials and systematic reviews to decisions about their individual patients. Is the evidence relevant to my clinical practice? How can I judge whether the probability of benefit from treatment in my current patient is likely to differ substantially from the average probability of benefit reported in the relevant trial or systematic review?Rothwell, P.M. (2007) Treating Indviduals: From randomised trials to personalised medicine. The Lancet Elsevier (p.xi).

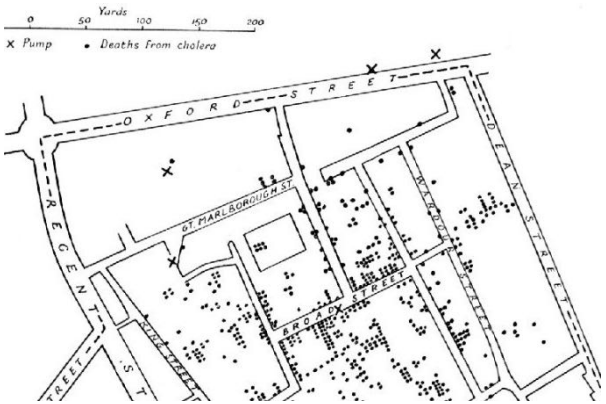
Precision medicine

"We define *precision medicine* as the provision of care for diseases that can be precisely diagnosed, whose causes are understood, and which consequently can be treated with rules-based therapies that are predictably effective. Another term "personalized medicine" is often used for this phenomenon that we're calling "*precision medicine*."

Source: Christensen, C.M. (2003) The Innovator's Dilemma. Harper Business Essentials. (p 45 and 56).

We are now in the thirdhealthcare revolution

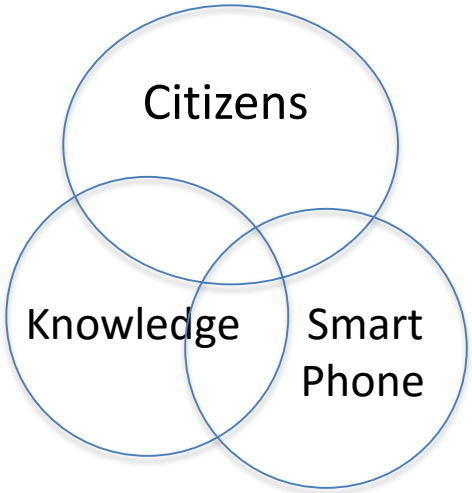
The First

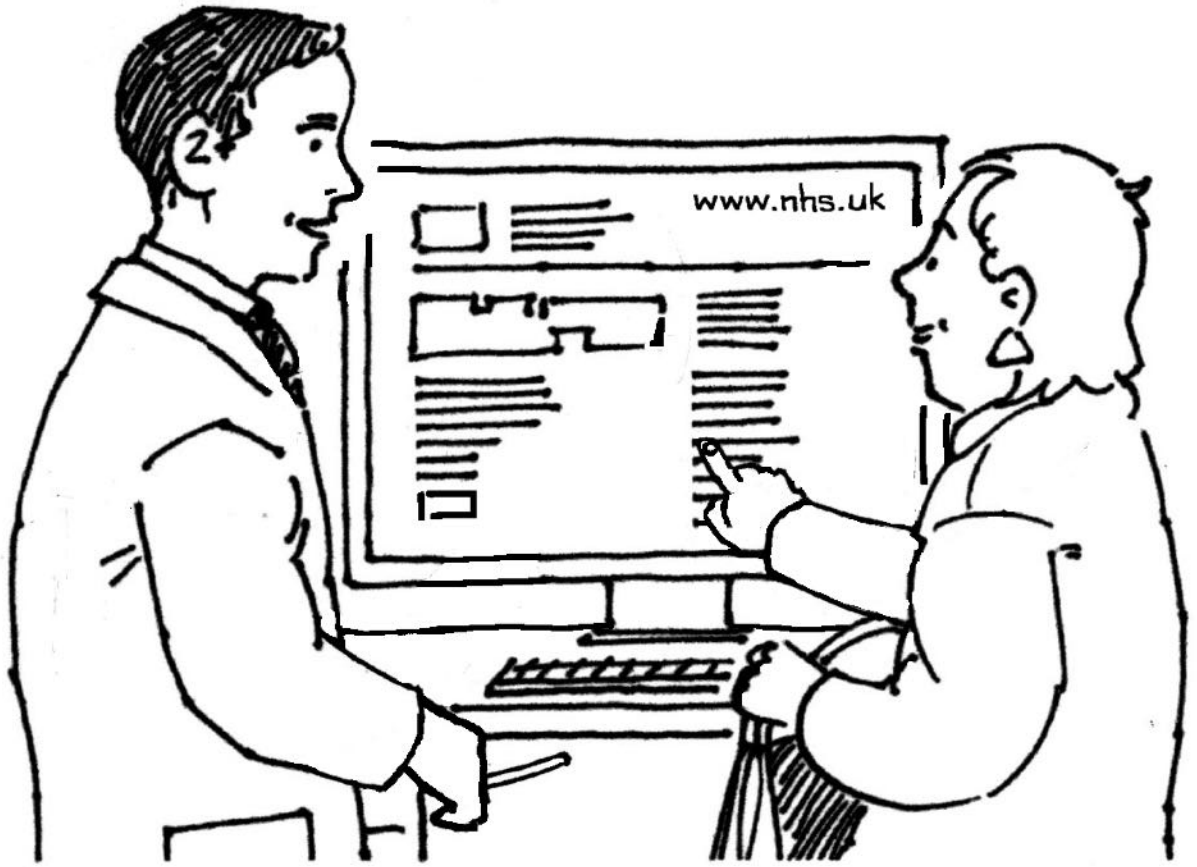


The Second

- Antibiotics
- MRI
- CT
- Ultrasound
- Stents
- Hip and knee replacement
- Chemotherapy
- Radiotherapy
- RCTs
- Systematic reviews

the Third




www.nhs.uk

What is really bothering me most?	
What do I hope the health service can do about it?	

What is really bothering me most?	I am worried that I might have cancer because I seem more tired.
What do I hope the health service can do about it?	Exclude the possibility that my tiredness is the result of a cancer as definitely as possible.

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

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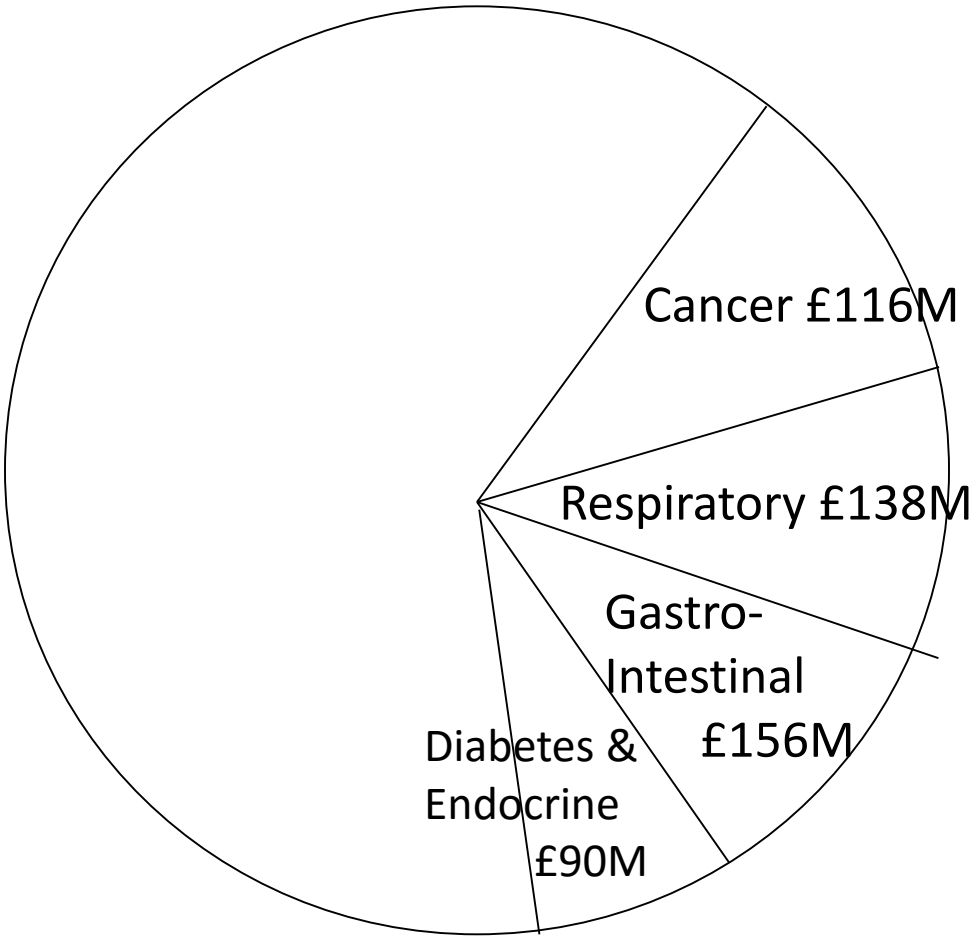

ANNUAL SPEND PER MILLION

www.NHS England.programmebudgeting

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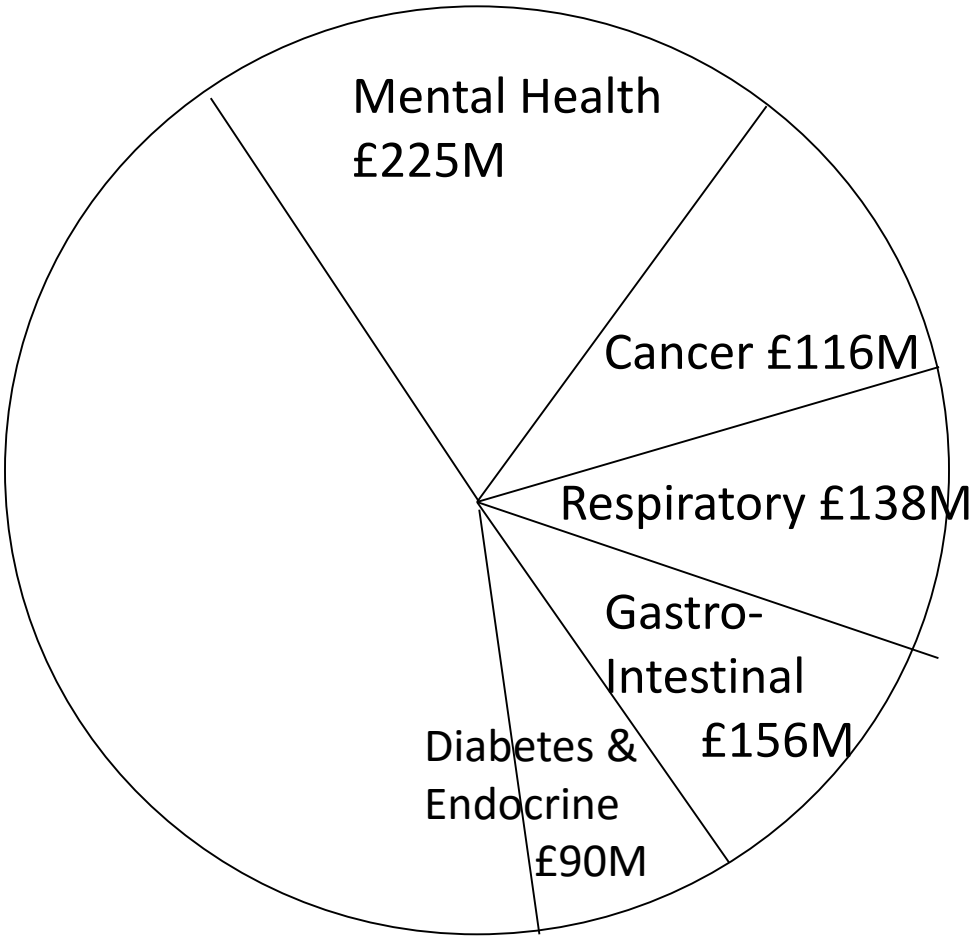
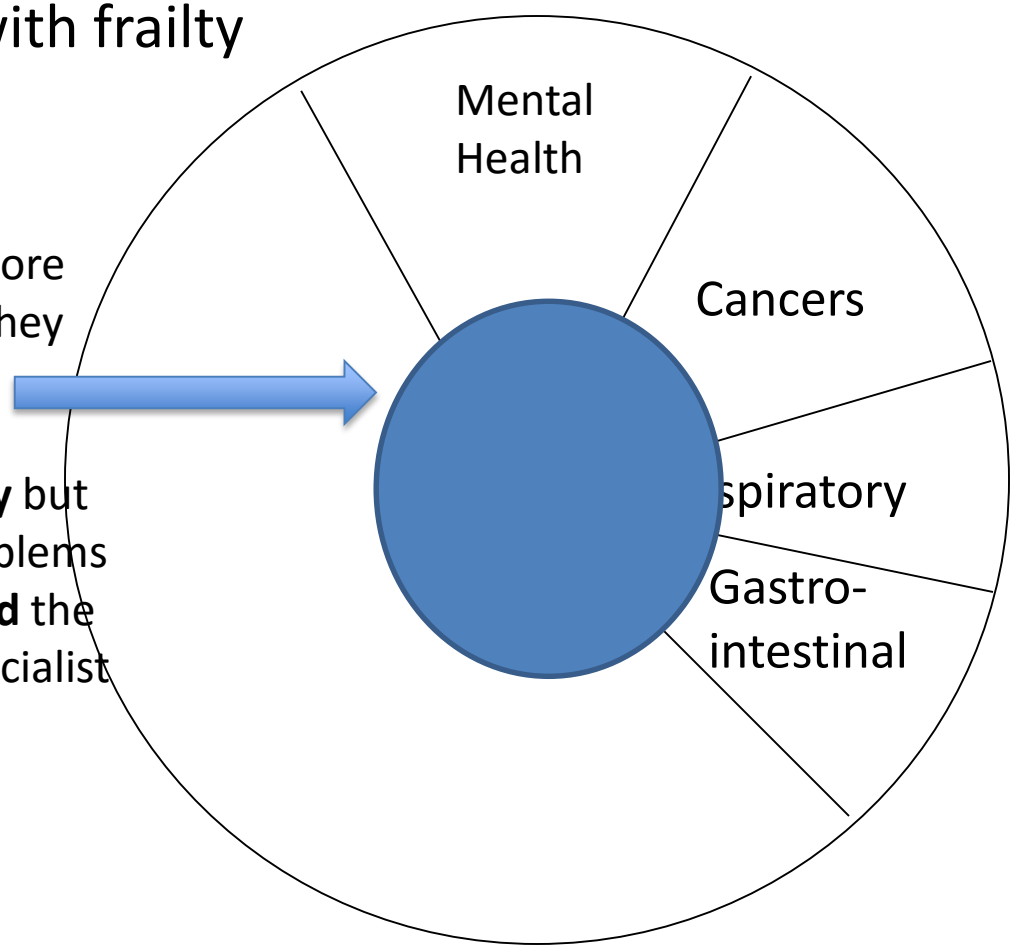


ANNUAL SPEND PER MILLION

www.NHS England.programmebudgeting

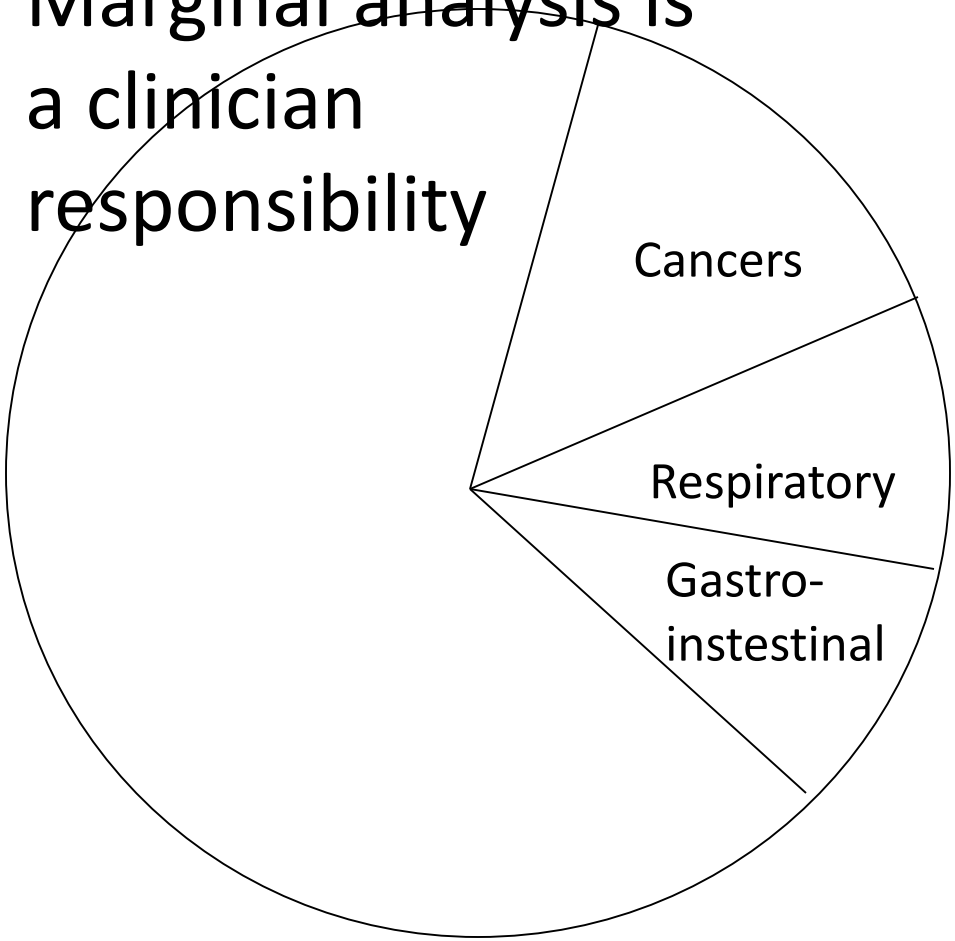
2. We are working to develop programme budgets determined by characteristic such being elderly with frailty

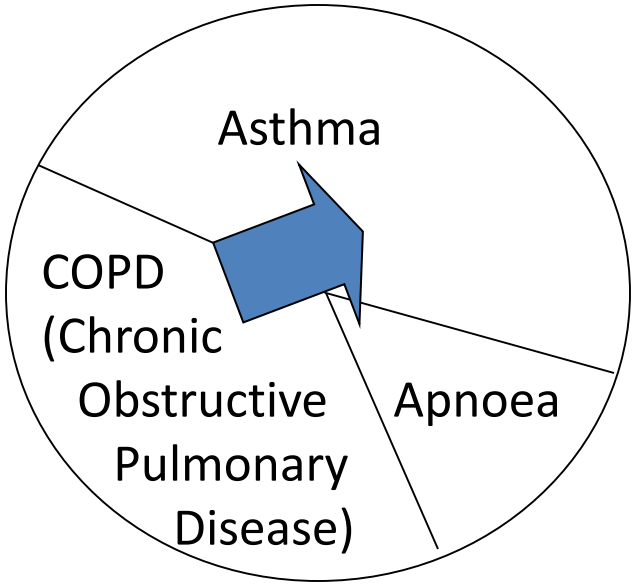
Many people have more than one problem ; they have complex needs. GP's are skilled in managing **complexity** but when one of the problems becomes **complicated** the Generalist needs Specialist help



Oxford

Within Programme, Between System Marginal analysis is a clinician responsibility





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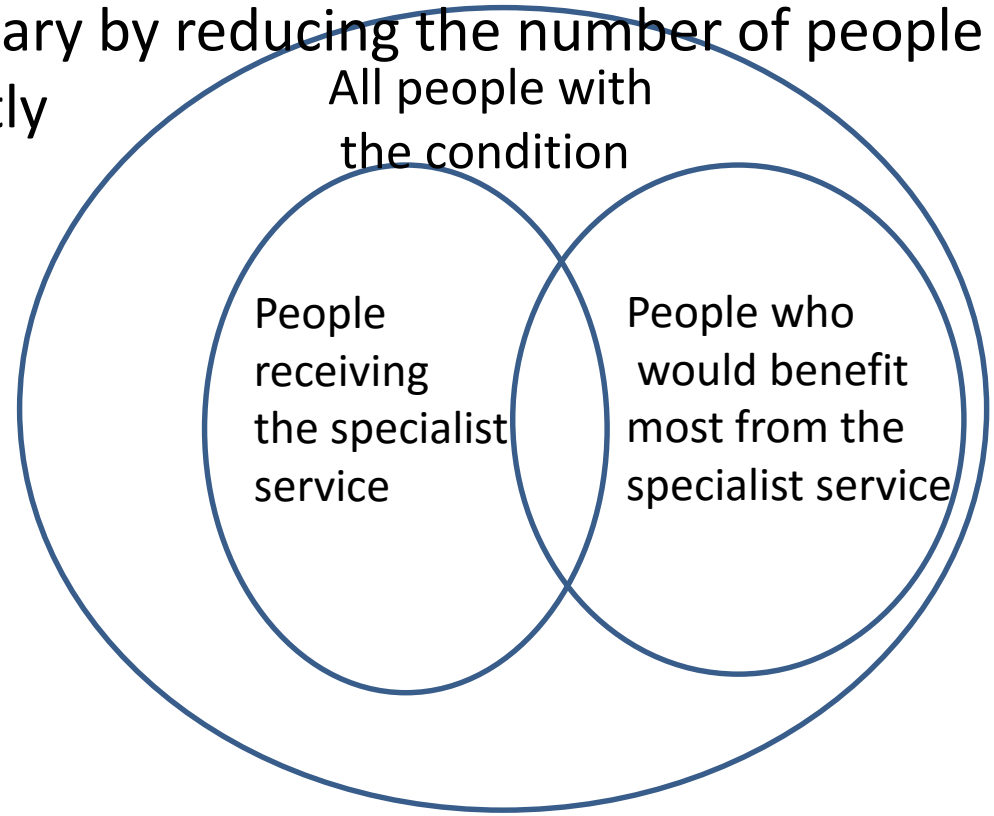
  - Increase rates of higher value intervention funded by reduced spending on lower value intwrvention eg shift resources from treatment to prevention

Population healthcare systems focus primarily on populations defined by a common need which may be a symptom such as breathlessness, a condition such as arthritis or a common characteristic such as frailty in old age, not on institutions , or specialties or technologies.

Its aim is to maximise value for those populations and the individuals within them

3. Develop population based systems that meet the needs of all the people affected by ensuring that those people in the population who will derive most from a service are in receipt of that service if necessary by reducing the number of people seen by that service directly



This requires clinicians including specialists to become population focused as well as delivering high quality care to referred patients and the surgical services initiative which is part of the Efficiency programme will develop this approach

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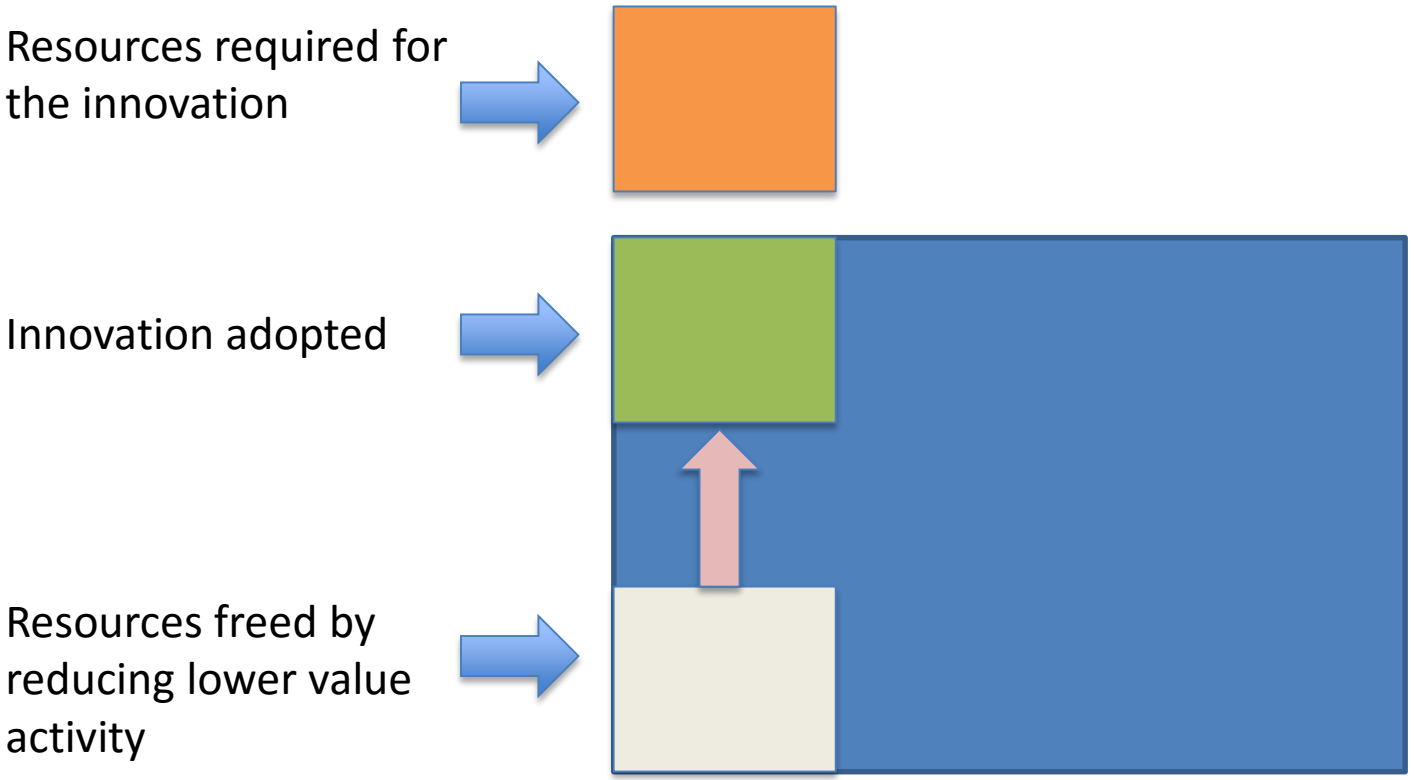
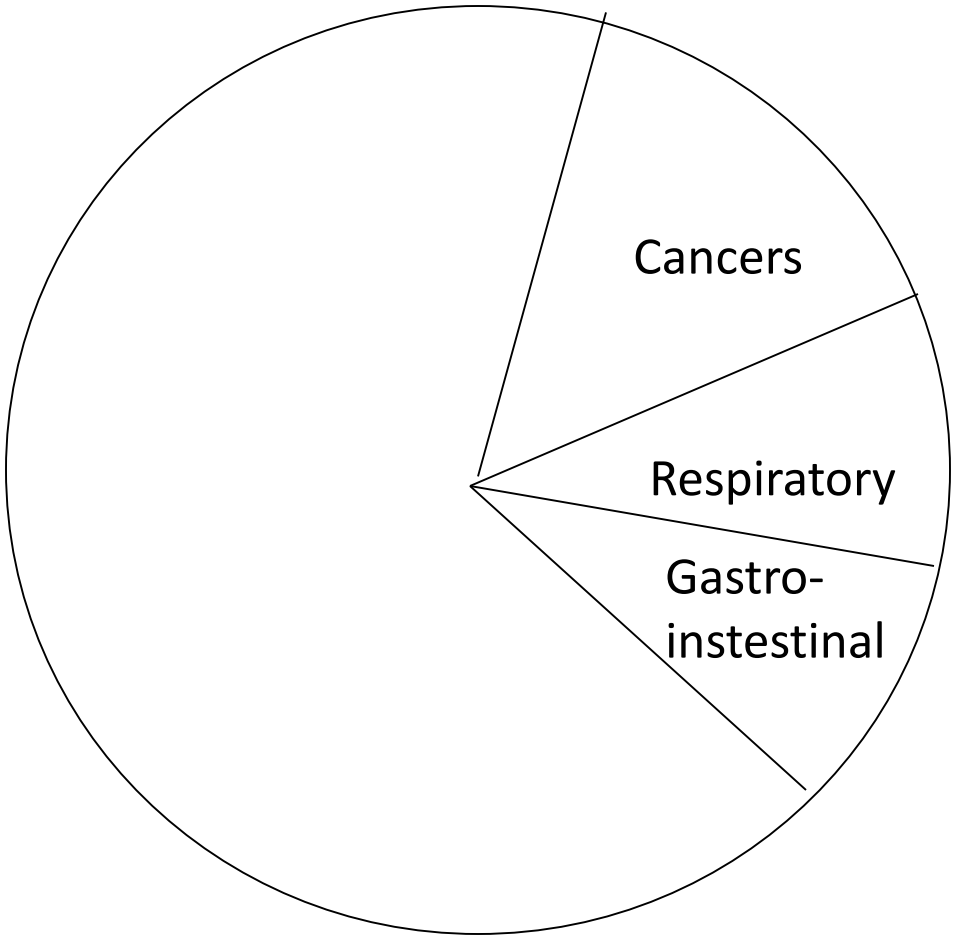
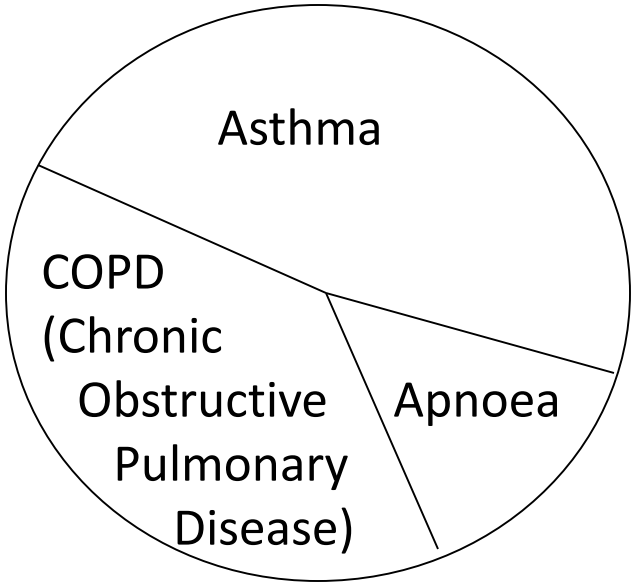
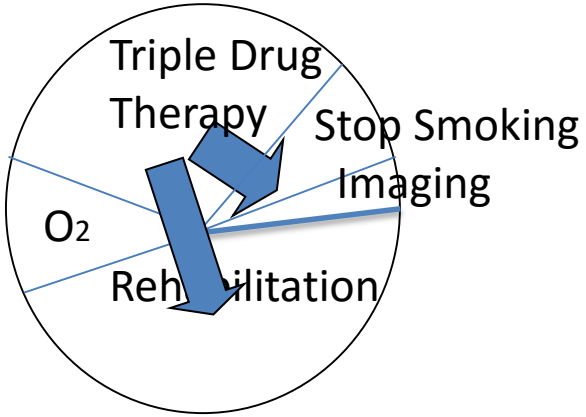


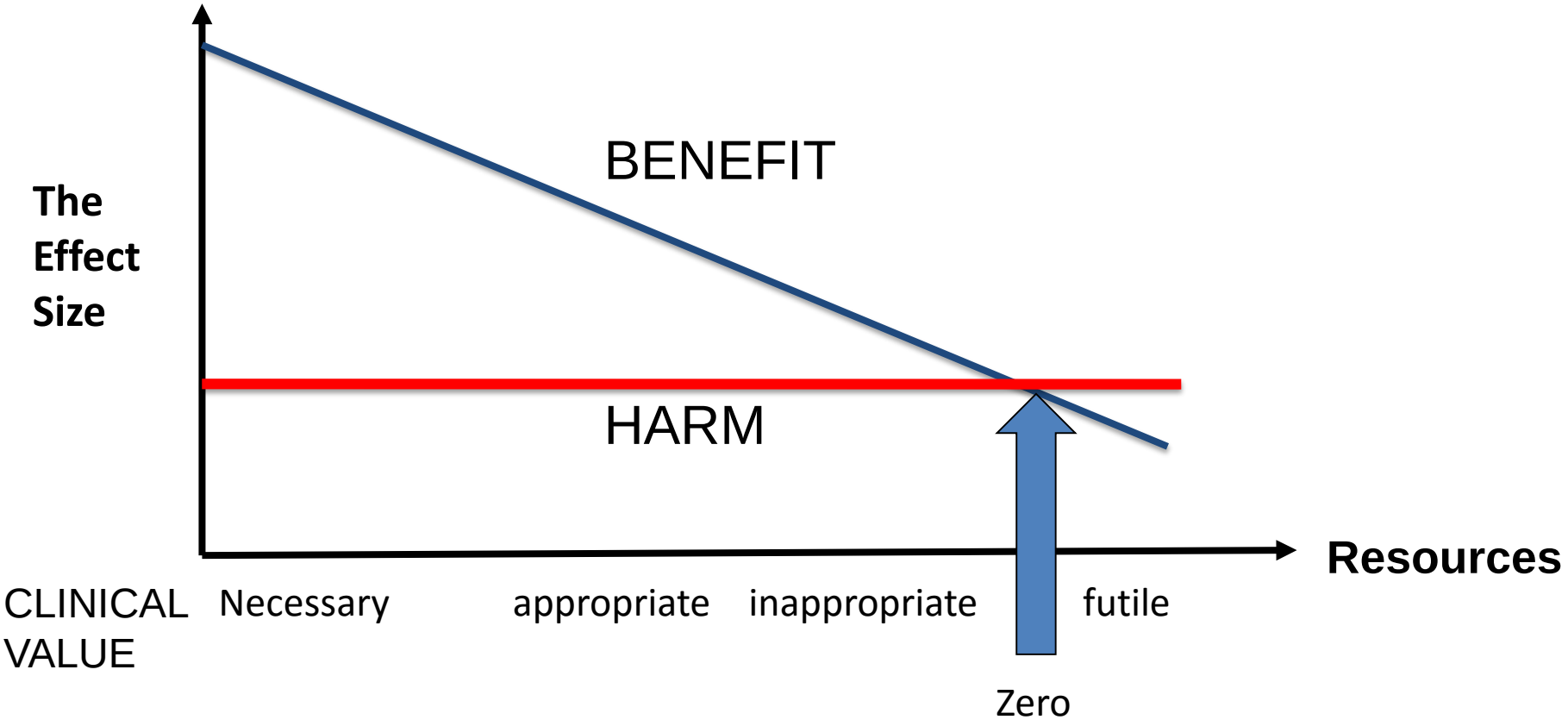
Population based systems that Implement high value innovation funded by reduced spending on lower value intervention in the same programme budget

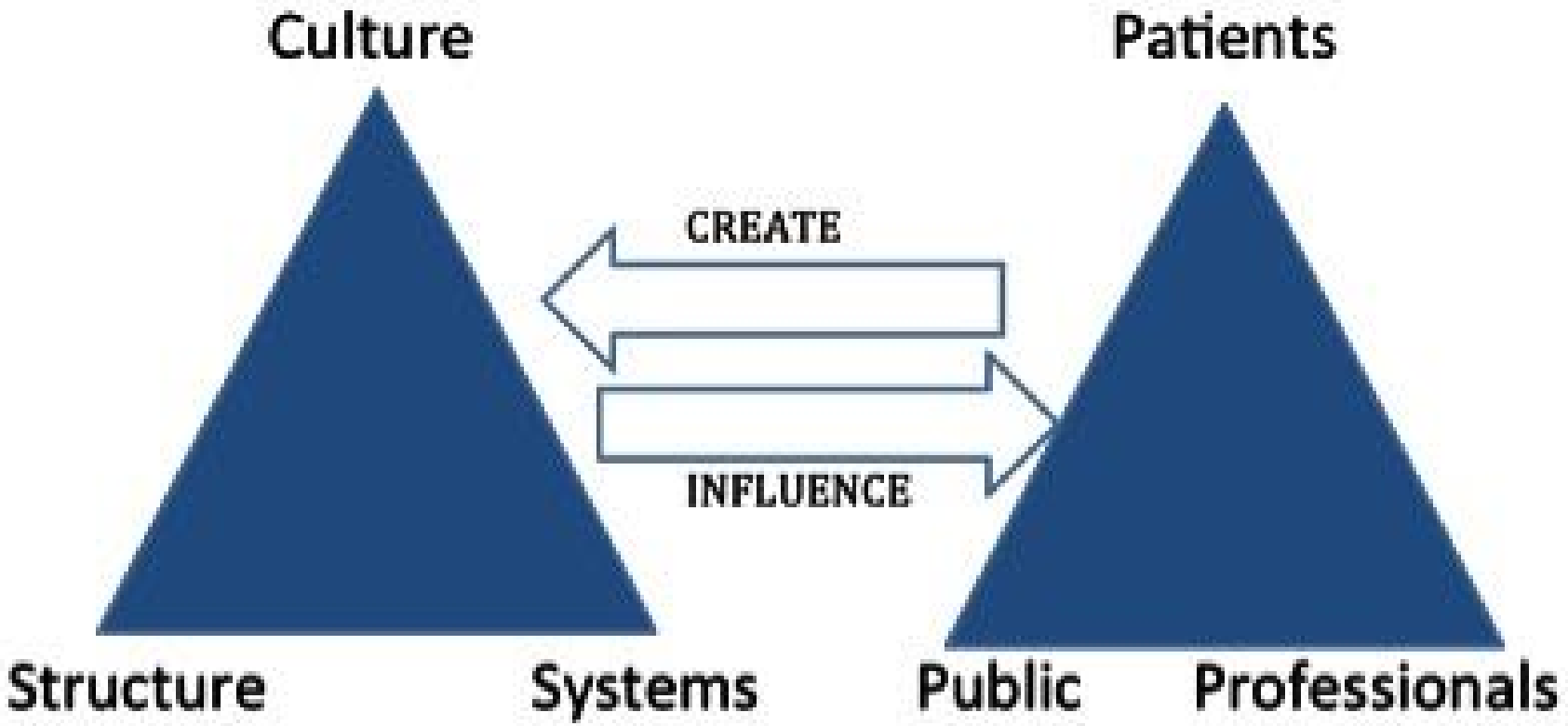
Population based systems that optimise resource use for each population








BENEFIT
HARM
The Effect Size
Resources
CLINICAL VALUE
Necessary
appropriate
inappropriate
futile
Zero


Culture
Patients
CREATE
INFLUENCE
Structure
Systems
Public
Professionals

The Healthcare Archipelago

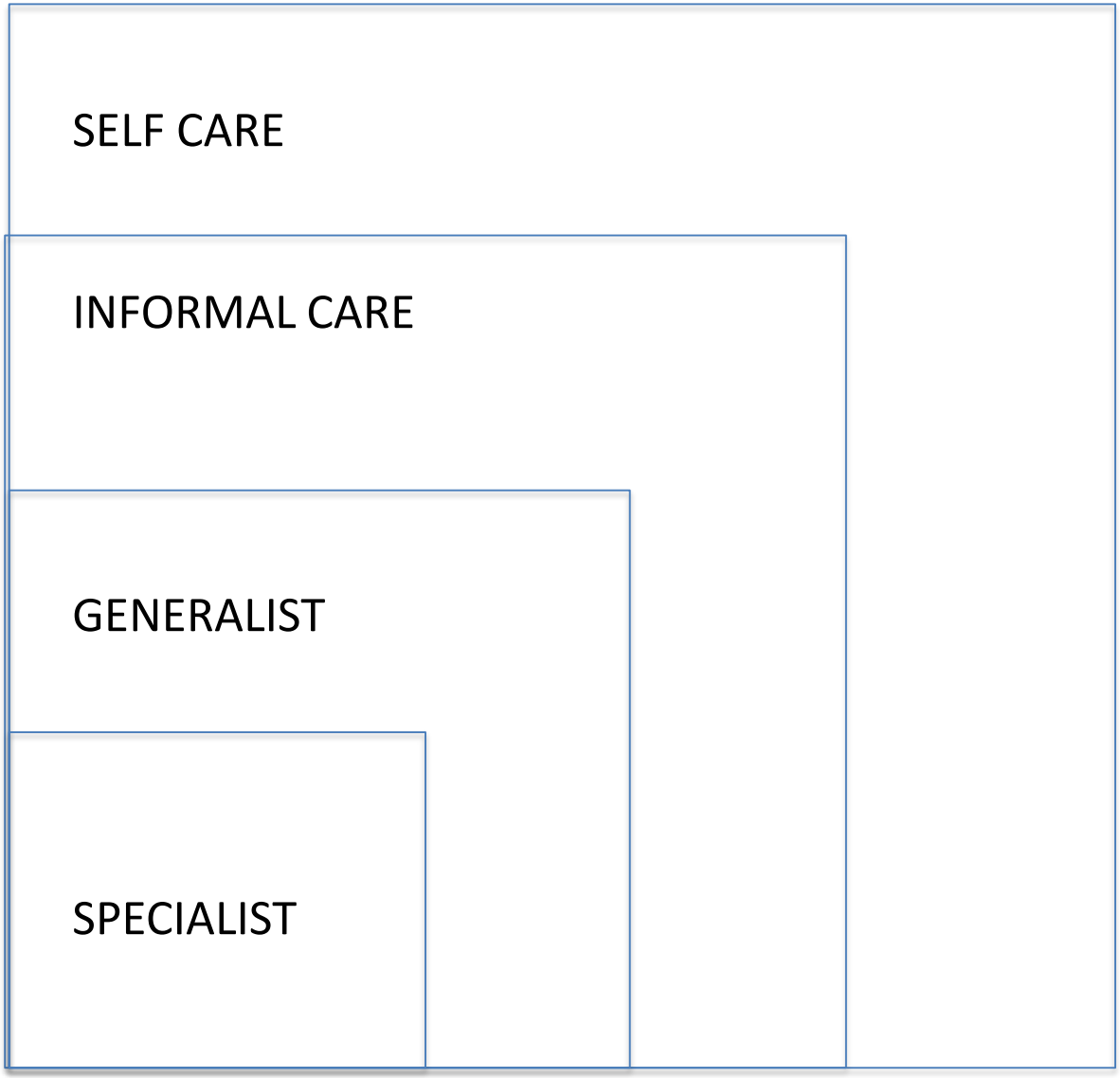
GENERAL PRACTICE

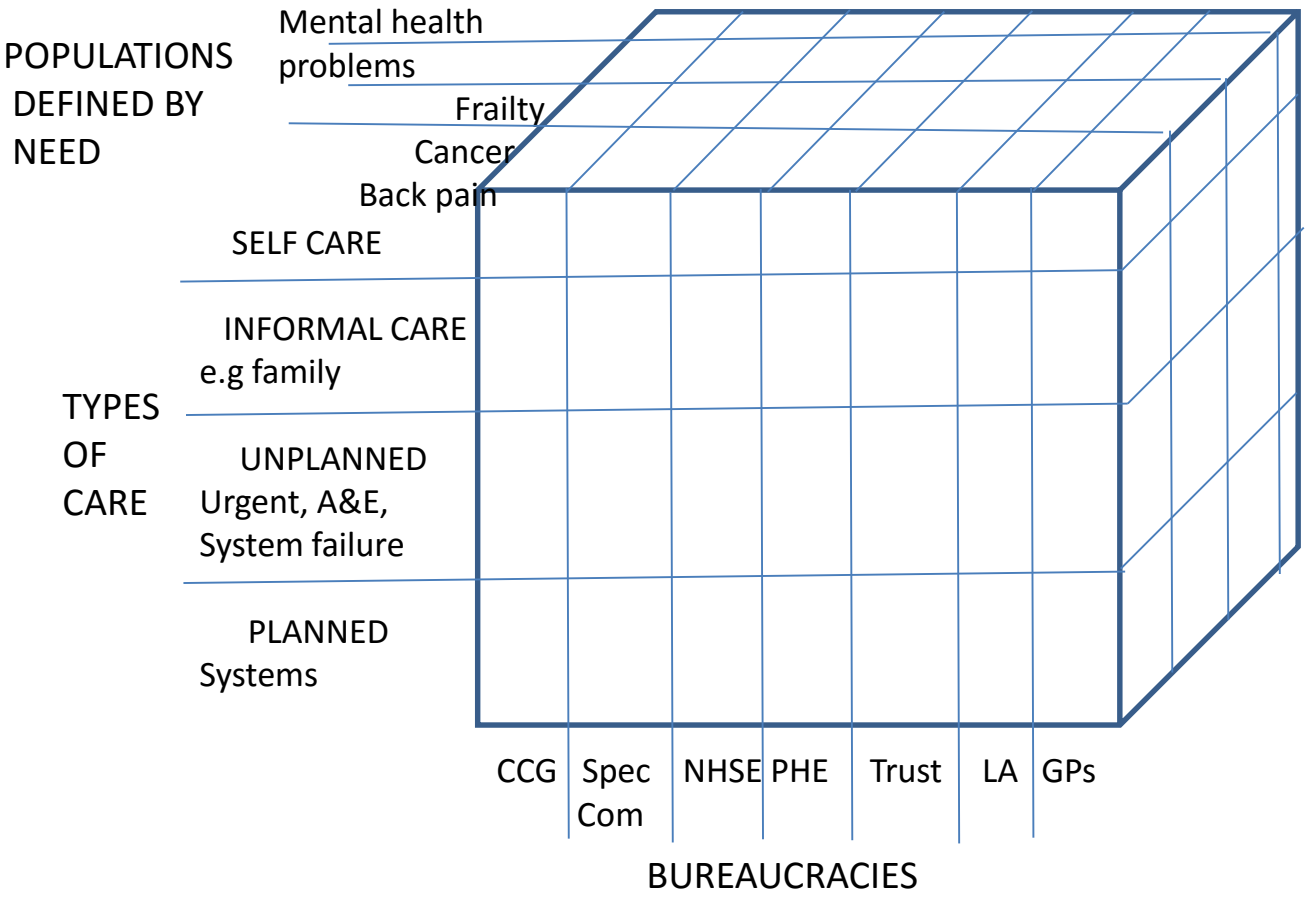
MENTAL HEALTH

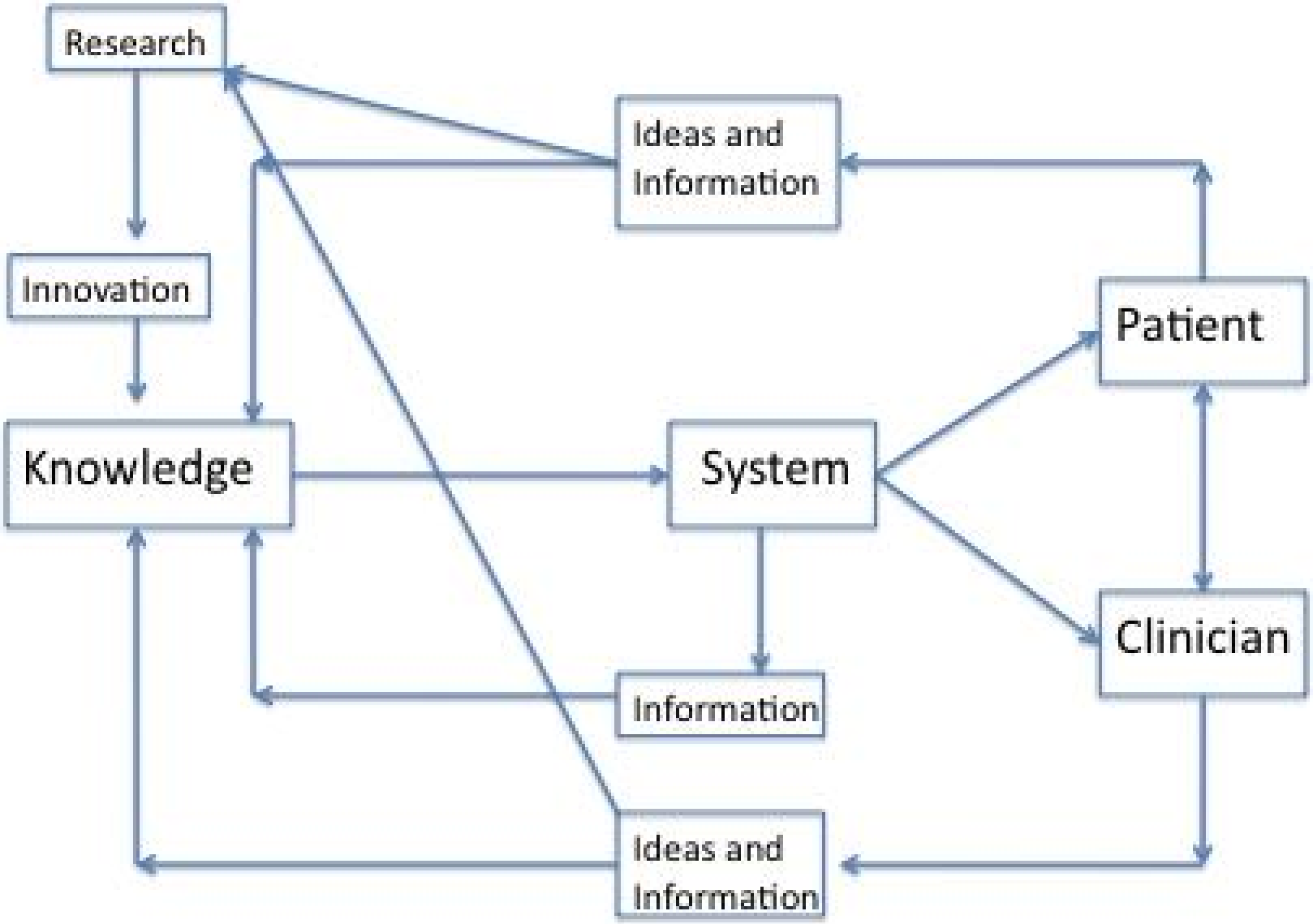
PRIVATE PHYSIOTHERAPY
OSTEOPATHY
CHIROPRACTIC

HOSPITAL

SERVICES


SELF CARE
INFORMAL CARE
GENERALIST
SPECIALIST


POPULATIONS DEFINED BY NEED
Mental health problems
Frailty
Cancer
Back pain
TYPES OF CARE
SELF CARE
INFORMAL CARE e.g family
UNPLANNED Urgent, A&E, System failure
PLANNED Systems
CCG
Spec Com
NHSE
PHE
Trust
LA
GPs
BUREAUCRACIES


Research
Ideas and Information
Innovation
Patient
Knowledge
System
Clinician
Information
Ideas and Information

CHOOSING CRITERIA & SETTING STANDARDS

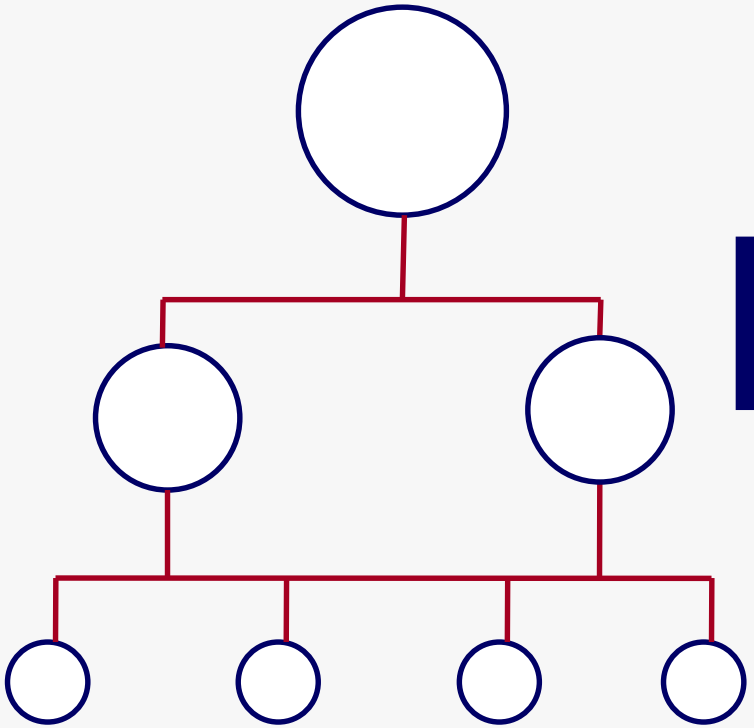
Newborn Screening for Sickle Cell Disorders Programme Standards

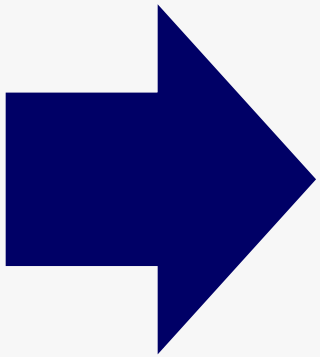
NEWBORN PROGRAMME OBJECTIVES:	CRITERIA	STANDARDS	
		Minimum (Core)	Achievable (Developmental)
Programme Outcome			
Best possible survival for infants detected with a sickle cell disorder by the screening programme	**Mortality rates expressed in person years**	**Mortality rate from sickle cell disease 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

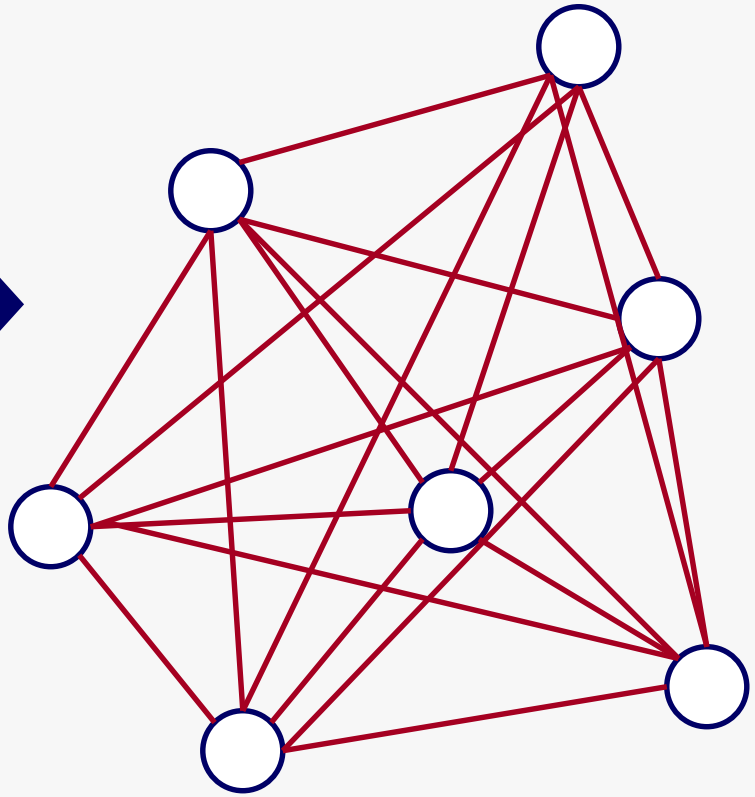
This is an example of a national service set up as a system

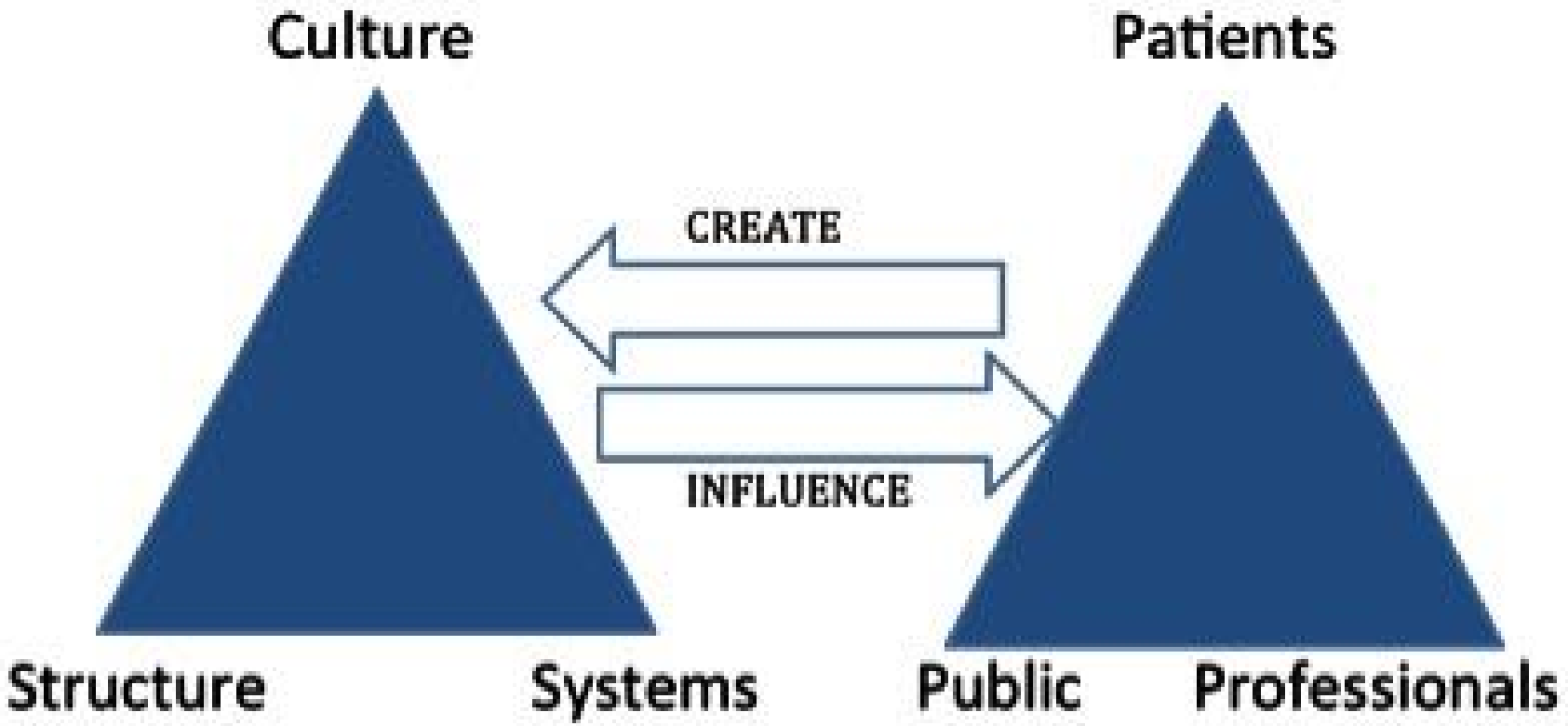
Hierarchy

Network








Culture
Patients
CREATE
INFLUENCE
Structure
Systems
Public
Professionals

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

WE NEED A NEW CULTURE

Ban old language

PrimarySecondaryAcuteCommunityManagerOutpatientHubandSpoke

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

We need a new set of skills and tools

what is the relationship between value and efficiency?
What is the relationship between value and quality ?
what is meant by the optimal use of resources?
How would you assess the culture of an organisation?
What is a system and what is a network?
What is the relationship between a system and a service?

Safari File Edit View History Bookmarks Window Help

45% Tue 10:20

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Tomorrow
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Snooze

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This module consists of three videos.

First - please watch this short introductory video.

LESSON

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Slide 139 of 155 Notes Comments 56%

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NEW: Oxford Healthcare Value Briefing... | healthcaretransformacademy - Yahoo S... | Course: Value in Healthcare - Core | Training and Development | Better Va...

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Healthcare Transformation Acade...
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Better Value HEALTHCARE

My Courses

First - please watch this short introductory video.

Slide 139 of 155 Notes Comments 56%

Items: 538 Unread: 64 All folders are up to date. Connected to: Bvhc

Solution:

Better Value

A free national health service.

A New Paradigm

Thomas Kuhn coined the phrase *paradigm-shift* in his book, The Structure of Scientific Revolutions. He described how new paradigms often assimilate the old ideas rather than totally replace them. When the NHS was founded in 1948 the overarching principle behind it could be captured in one word – *free*. In the 70's the paradigm was defined by the term *effective* and following Archie Cochrane's monograph in 1989 *evidence-based* became the focus. The 90's saw a shift towards *cost effectiveness* and *efficiency* followed by the current paradigm of *quality and safety*. And the new paradigm for the future? *Value*. We need to ensure we achieve value for money, time and the other resources we use.

Perspectives on Value

Even in its economic sense, value is subjective. The clinician has a different perspective on value to their patients', each patient has their own thoughts on what is of value to them, and the hospital manager has a different view on value to the commissioner. The payer takes a population-based perspective on value which is different again. Industry has yet another view on value; its overriding concern is to achieve a return on capital.

Outcome vs. Cost

Value describes the relationship between outcome and cost. Improving quality and safety improves outcomes and therefore increases value but, cost is just as important to value as outcome. Cost is more complicated than just the monetary cost of an intervention. Cost includes all of the resources that go into an intervention, some of which we can monetise easily and some which we cannot – staff time, patient time, transport costs etc. Even ties such as pollution and carbon emissions. As hard as they are to measure we will soon all be required to manage the carbon emissions produced by our services.

The last, but most important aspect of cost for us to consider is the *opportunity cost*. In other words, could we get more value for these resources by using them for some other intervention for this group of patients or a different group of patients entirely?

Five Old Healthcare Problems

Of the five outstanding problems that continue to face healthcare (safety, inequality, failure to prevent preventable diseases, waste and quality) waste clearly impacts value. Waste is any activity that doesn't contribute to value and clearly should be stopped as soon as possible. Quality is also closely related to value. Interventions may be very high quality but also very high cost. In these cases although quality is high the value is low once costs are considered. On the other hand some interventions may be low cost but also of low quality. If low quality causes poor outcomes then despite low cost, the value of the intervention will also be low.

Value Questions

There are a number of questions we can ask about healthservices which are fundamental to value:

- How much of the nation's gross domestic product (GDP) should be spent on healthcare?
- What would happen if you increased that amount? Would you necessarily get more value?
- How much of the healthcare budget should be spent on education?
- How much of the budget should be spent on research?
- What might happen if you were to put that money directly into services instead of into education and research?
- What would happen if you increased the education and research budget? Would better trained professionals give more value?
- How should we distribute resources geographically?
- How do we allocate money to different patient groups?
- Which specific patients should get the service?
- Which interventions should they get?

Most of these questions are largely political and clinicians and managers can only contribute in an advisory role, it is the politicians who ultimately make these decisions. The last three questions however come under the remit of programme budgeting and that is something clinicians, managers and commissioners have direct control over.

Solution: Better Value

A free national health service.

A New Paradigm

Thomas Kuhn coined the phrase *paradigm-shift* in his book, The Structure of Scientific Revolutions. He described how new paradigms often assimilate the old ideas rather than totally replace them. When the NHS was founded in 1948 the overarching principle behind it could be captured in one word – *free*. In the 70's the paradigm was defined by the term *effective* and following Archie Cochrane's monograph in 1989 *evidence-based* became the focus. The 90's saw a shift towards *cost effectiveness* and *efficiency* followed by the current paradigm of *quality* and *safety*. And the new paradigm for the future? *Value*. We need to ensure we achieve value for money, time and the other resources we use.

Perspectives on Value

Even in its economic sense, value is subjective. The clinician has a different perspective on value to their patients', each patient has their own thoughts on what is of value to them, and the hospital manager has a different view on value to the commissioner. The payer takes a population-based perspective on value which is different again. Industry has yet another view on value; its overriding concern is to achieve a return on capital.

Outcome vs. Cost

Value describes the relationship between outcome and cost. Improving quality and safety improves outcomes and therefore increases value but, cost is just as important to value as outcome. Cost is more complicated than just the monetary cost of an intervention. Cost includes all of the resources that go into an intervention, some of which we can monetise easily and some which we cannot – staff time, patient time, transport costs etc. Even ties such as pollution and carbon emissions. As hard as they are to measure we will soon all be required to manage the carbon emissions produced by our services.

The last, but most important aspect of cost for us to consider is the *opportunity cost*. In other words, could we get more value for these resources by using them for some other intervention for this group of patients or a different group of patients entirely?

Five Old Healthcare Problems

Of the five outstanding problems that continue to face healthcare (safety, inequality, failure to prevent preventable diseases, waste and quality) waste clearly impacts value. Waste is any activity that doesn't contribute to value and clearly should be stopped as soon as possible. Quality is also closely related to value. Interventions may be very high quality but also very high cost. In these cases although quality is high the value is low once costs are considered. On the other hand some interventions may be low cost but also of low quality. If low quality causes poor outcomes then despite low cost, the value of the intervention will also be low.

Value Questions

There are a number of questions we can ask about health-services which are fundamental to value:

- How much of the nation's gross domestic product (GDP) should be spent on healthcare?
- What would happen if you increased that amount? Would you necessarily get more value?
- How much of the healthcare budget should be spent on education?
- How much of the budget should be spent on research?
- What might happen if you were to put that money directly into services instead of into education and research?
- What would happen if you increased the education and research budget? Would better trained professionals give more value?
- How should we distribute resources geographically?
- How do we allocate money to different patient groups?
- Which specific patients should get the service?
- Which interventions should they get?

Most of these questions are largely political and clinicians and managers can only contribute in an advisory role, it is the politicians who ultimately make these decisions. The last three questions however come under the remit of programme budgeting and that is something clinicians, managers and commissioners have direct control over.