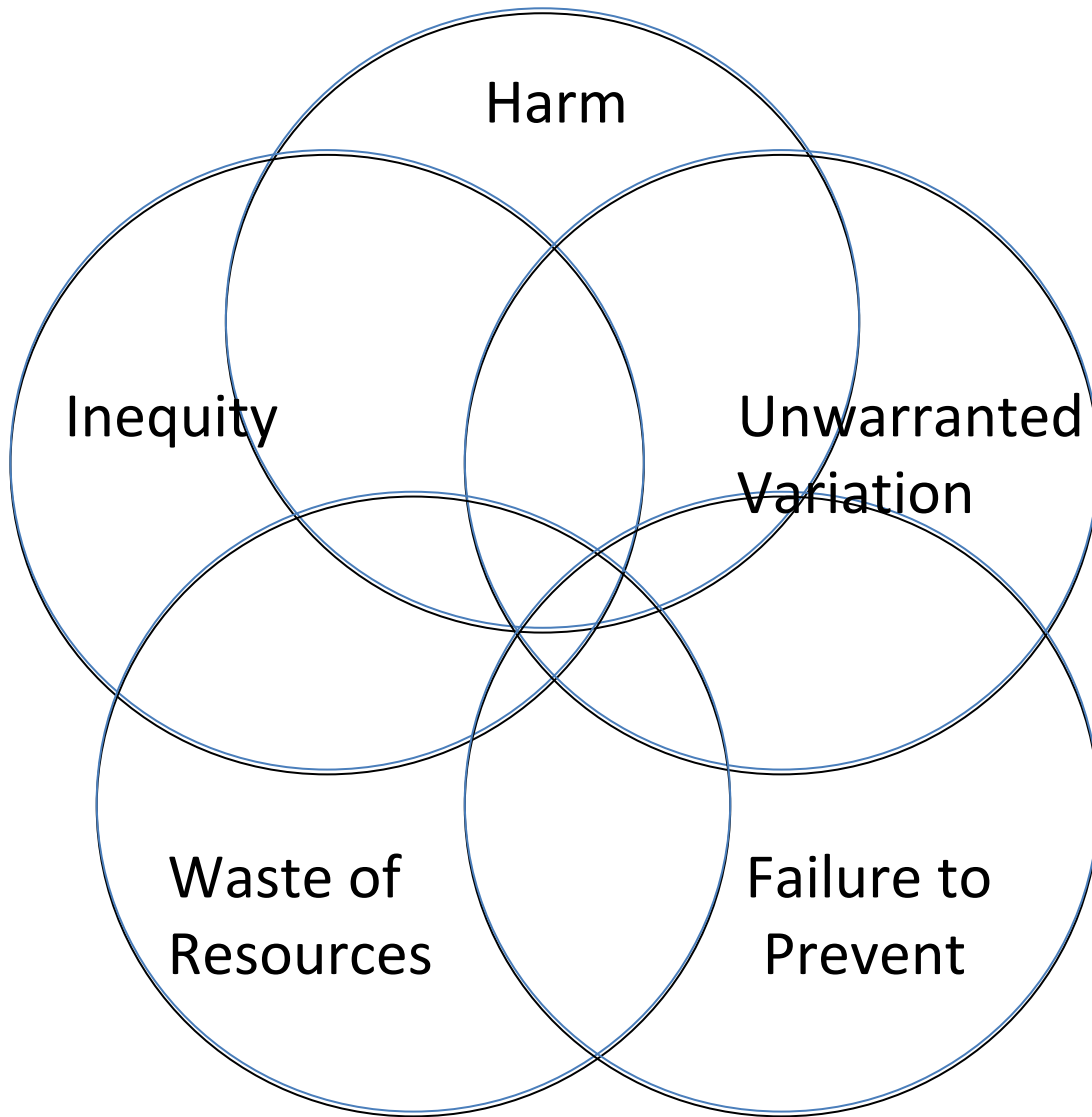


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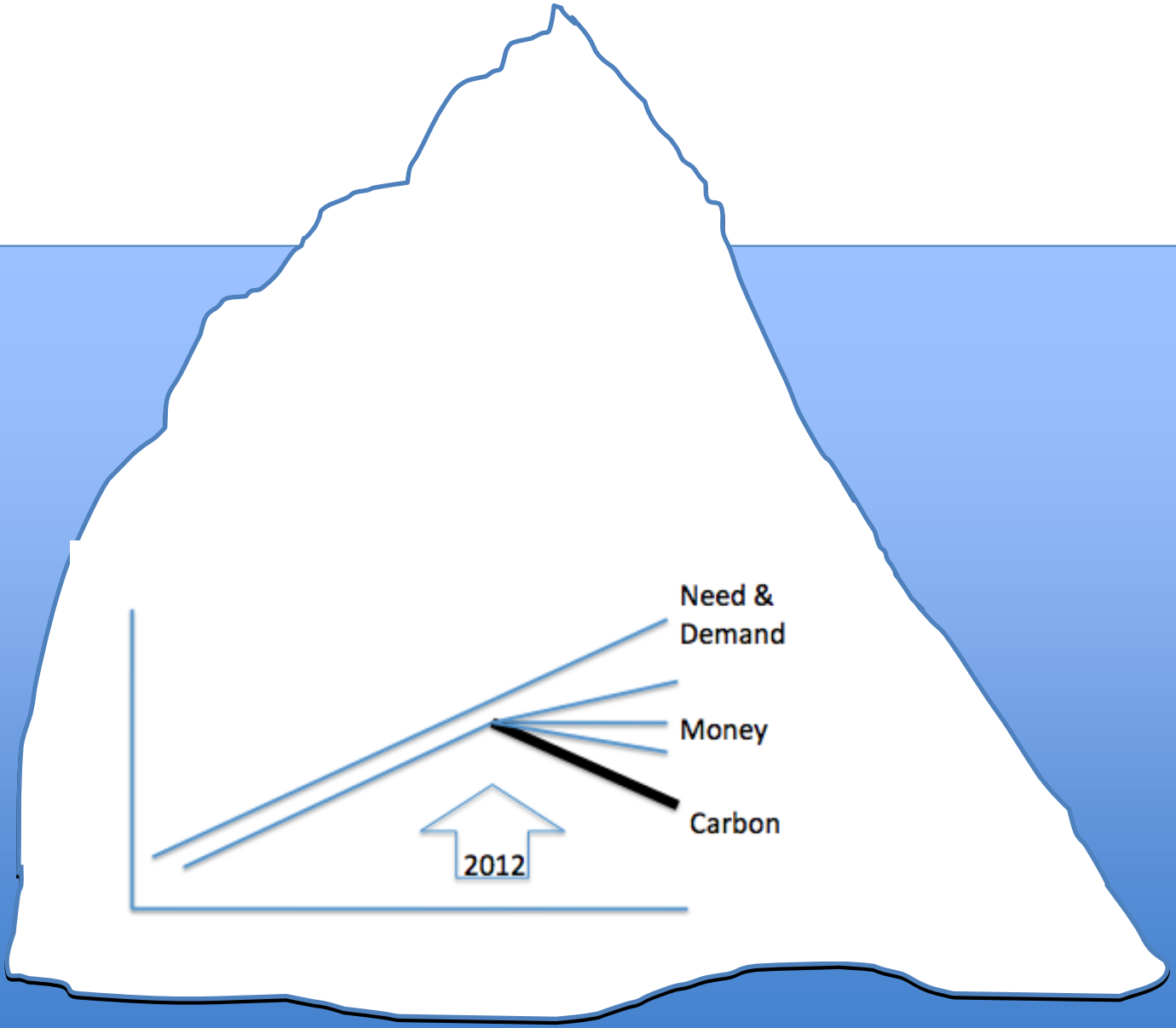
We have seen amazing progress in the last forty years  
BUT all health services face 5 major problems

- SAFETY
- QUALITY -
- FAILURE TO MAXIMISE VALUE
- INEQUALITIES
- FAILURE TO PREVENT



---

***Better Value Healthcare***



Need & Demand

Money

Carbon

2012

PAN-Books



# TOWARDS ZERO

Agatha Christie



*Memboga*

Novel of Detection

2/-  
IN U.K.

More of the same is not the answer ,  
not even better quality, safer, greener  
cheaper of the same

we need a new paradigm

<b>Old Paradigm</b>	<b>New Paradigm</b>
Focus on Effectiveness, quality and safety	Focus on equity & value (outcomes/costs, both financial and carbon) <ul style="list-style-type: none"> <li>• Allocative value,</li> <li>• Technical value,</li> <li>• Personalised value,</li> </ul>
Strengthening of competitive institutions	Development of collaborative systems and networks with patients & carers as equal partners
Good service with known patients	Personalised service for all the people affected in the population
Service improvement by reorganisation	Service transformation by culture change
Clinicians are the users of their institution's resources	Clinicians feel they are the stewards of the population's resources

What do we want to achieve? A service that

- Has allocated resources optimally & equitably
- Uses resources optimally
- Ensures each individual receives care that addresses their particular problem
- Is open and transparent
- Is sustainable

Contract & implement  
the high value service eg for  
Asthma or elderly people with frailty

---

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Design the  
PopulationBased System



Prioritise within the system



Contract & implement  
the high value service

---

***Better Value Healthcare***

Prioritise programme  
to tackle



Design the  
PopulationBased System



Prioritise within the system



Contract & implement  
the high value service

Culture change by  
Publishing  
Variation

Culture change by  
Introducing  
Programme budgets



Prioritise programme  
to tackle



Design the  
PopulationBased System



Prioritise within the system



Contract & implement  
the high value service

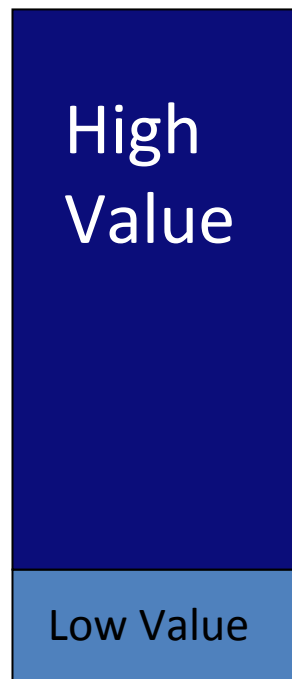
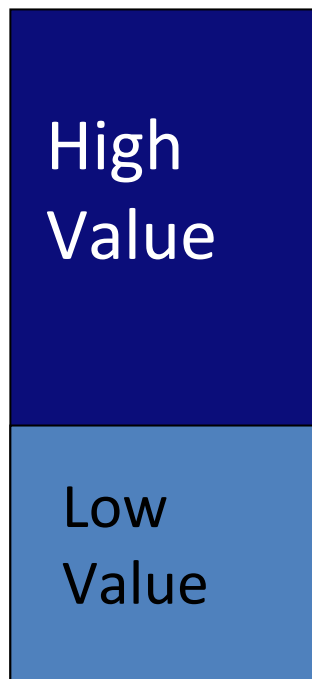
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Variations as an indicator of low value

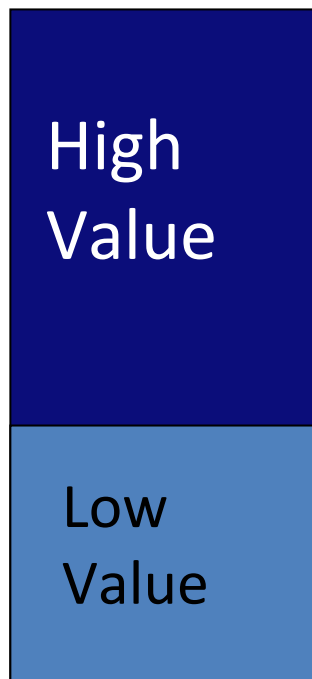
Solution ; go for value

# VALUE IS DETERMINED BY THE RELATIONSHIP BETWEEN OUTCOME AND EXPENDITURE



Added value  
from doing  
things right  
(quality  
improvement)

# VALUE IS DETERMINED BY THE RELATIONSHIP BETWEEN OUTCOME AND EXPENDITURE

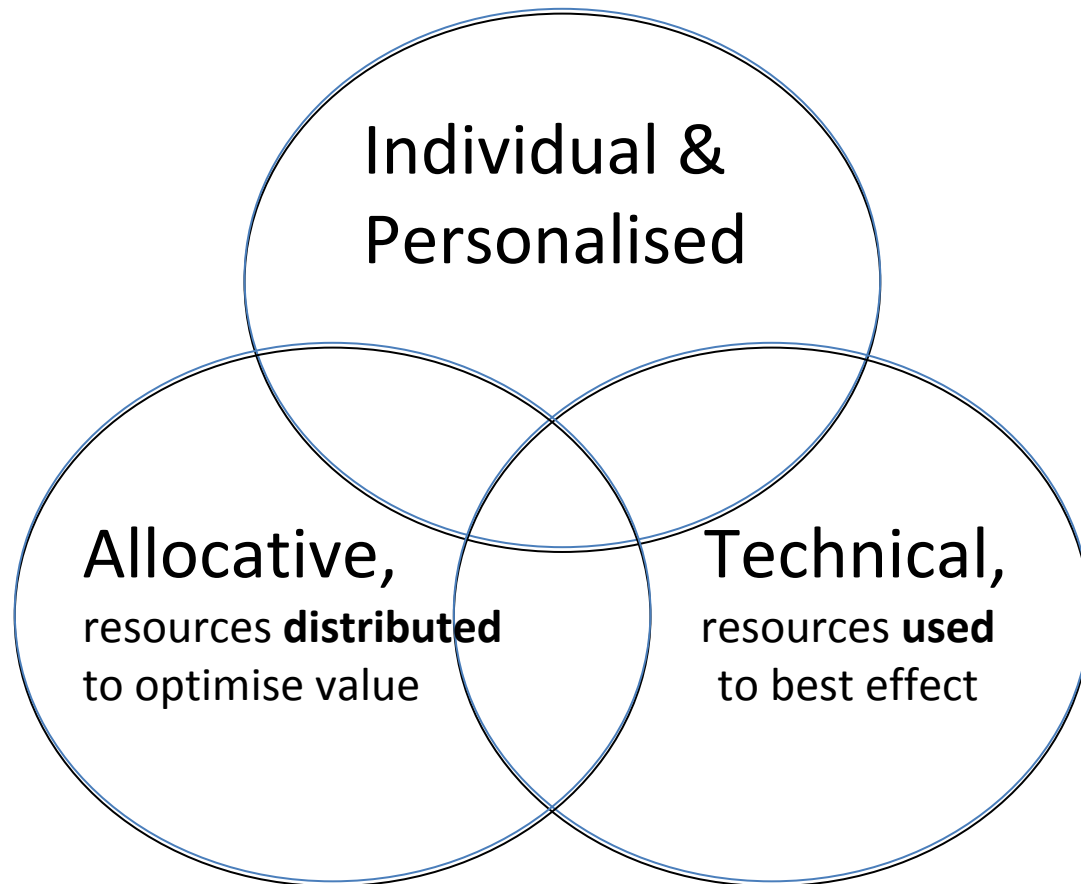


Added value from doing things right (quality improvement)

Added value from doing the right things) making the right decisions

**Better Value Healthcare**

# Triple Value Programme

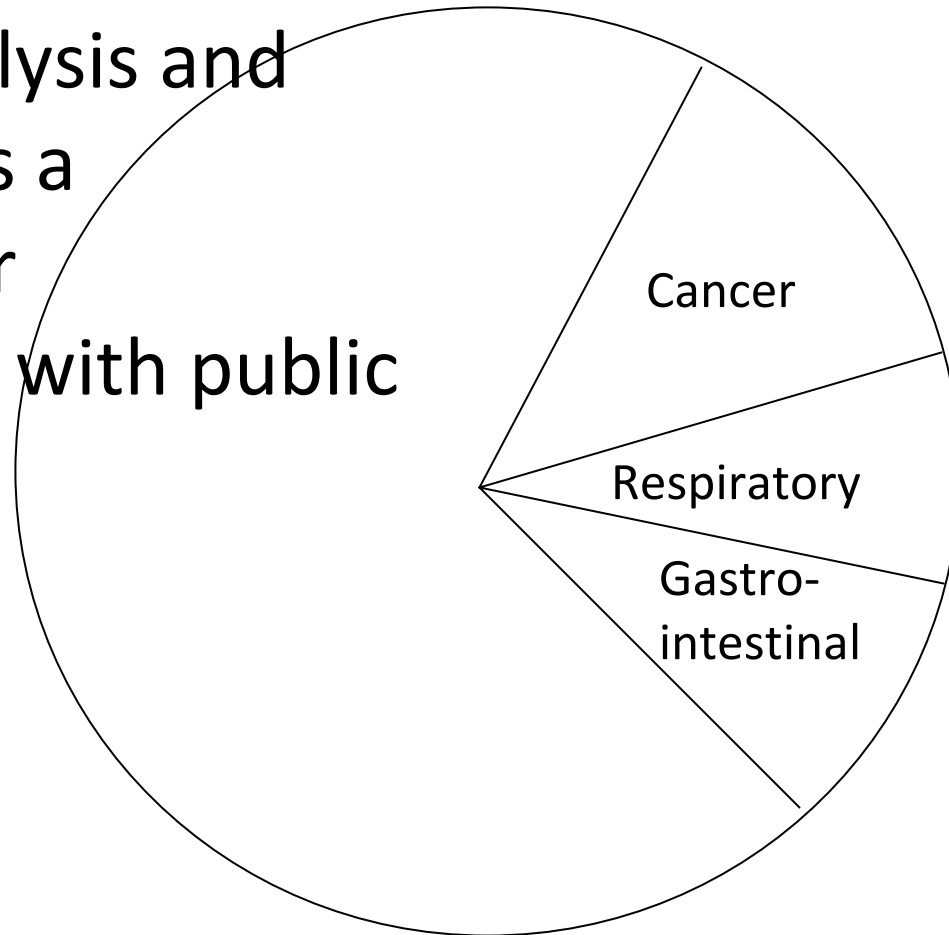


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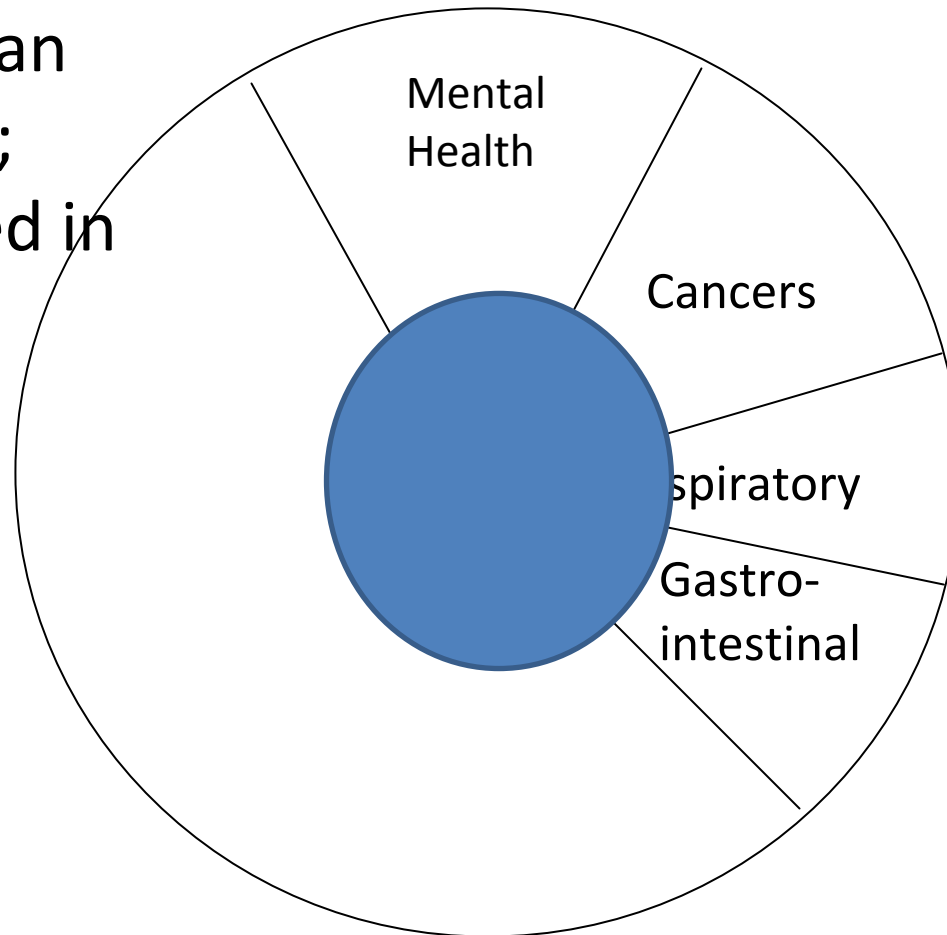
***Better Value Healthcare***



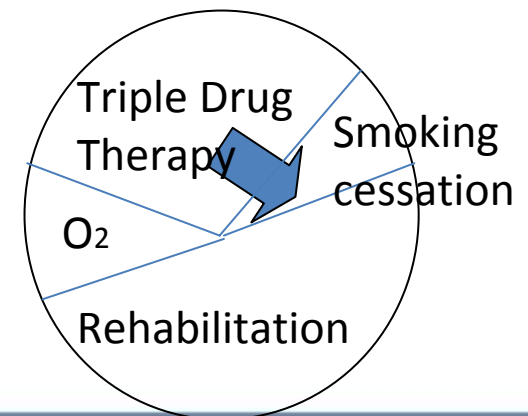
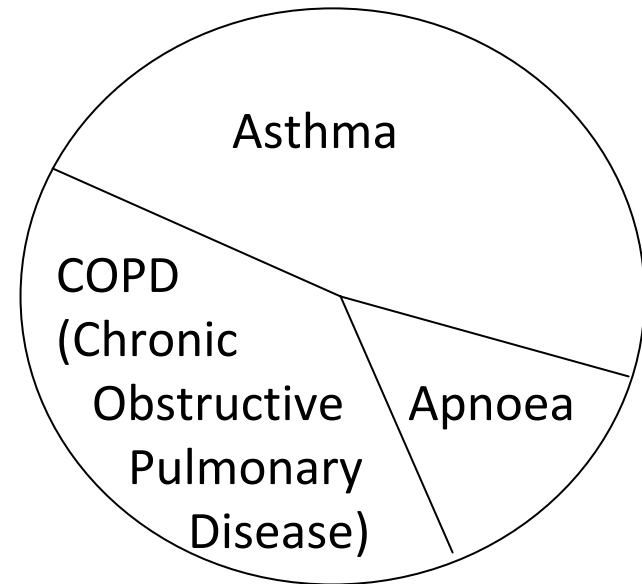
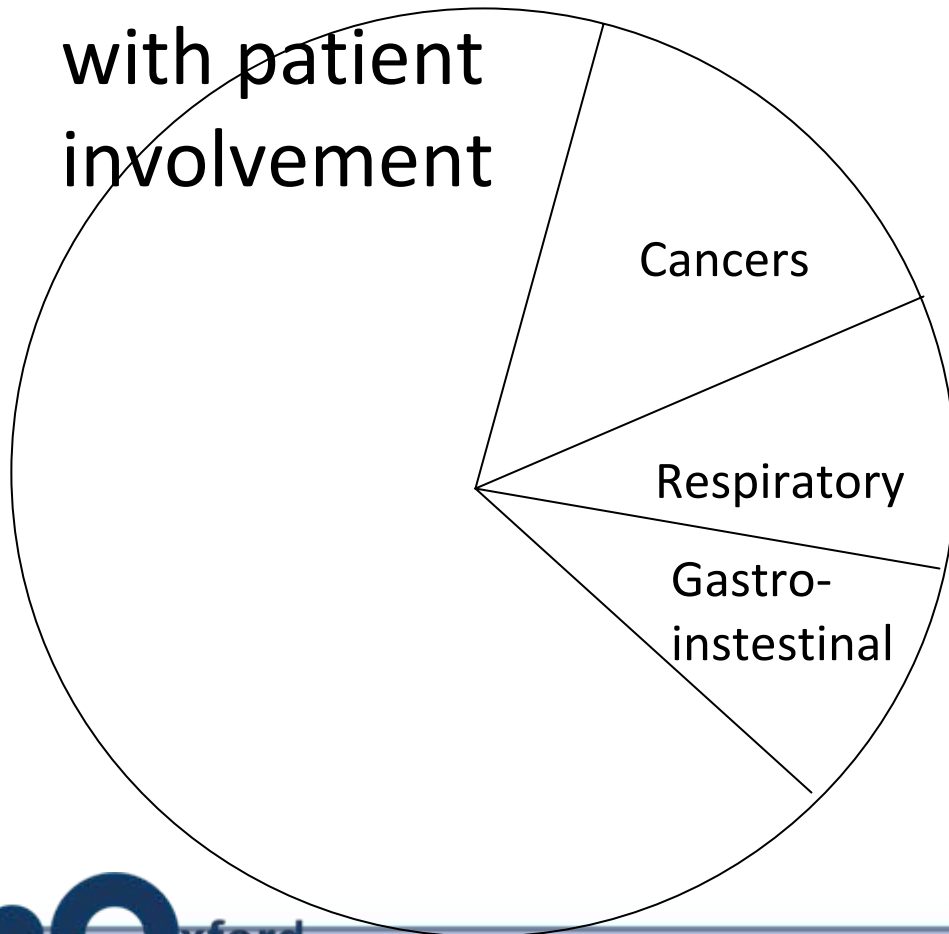
Between Programme  
Marginal Analysis and  
reallocation is a  
commissioner  
responsibility with public  
involvement



Many people  
have more than  
one problem ;  
GP's are skilled in  
managing  
complexity



Within System  
Marginal Analysis is a  
clinician responsibility  
with patient  
involvement



Value = Outcomes / Costs

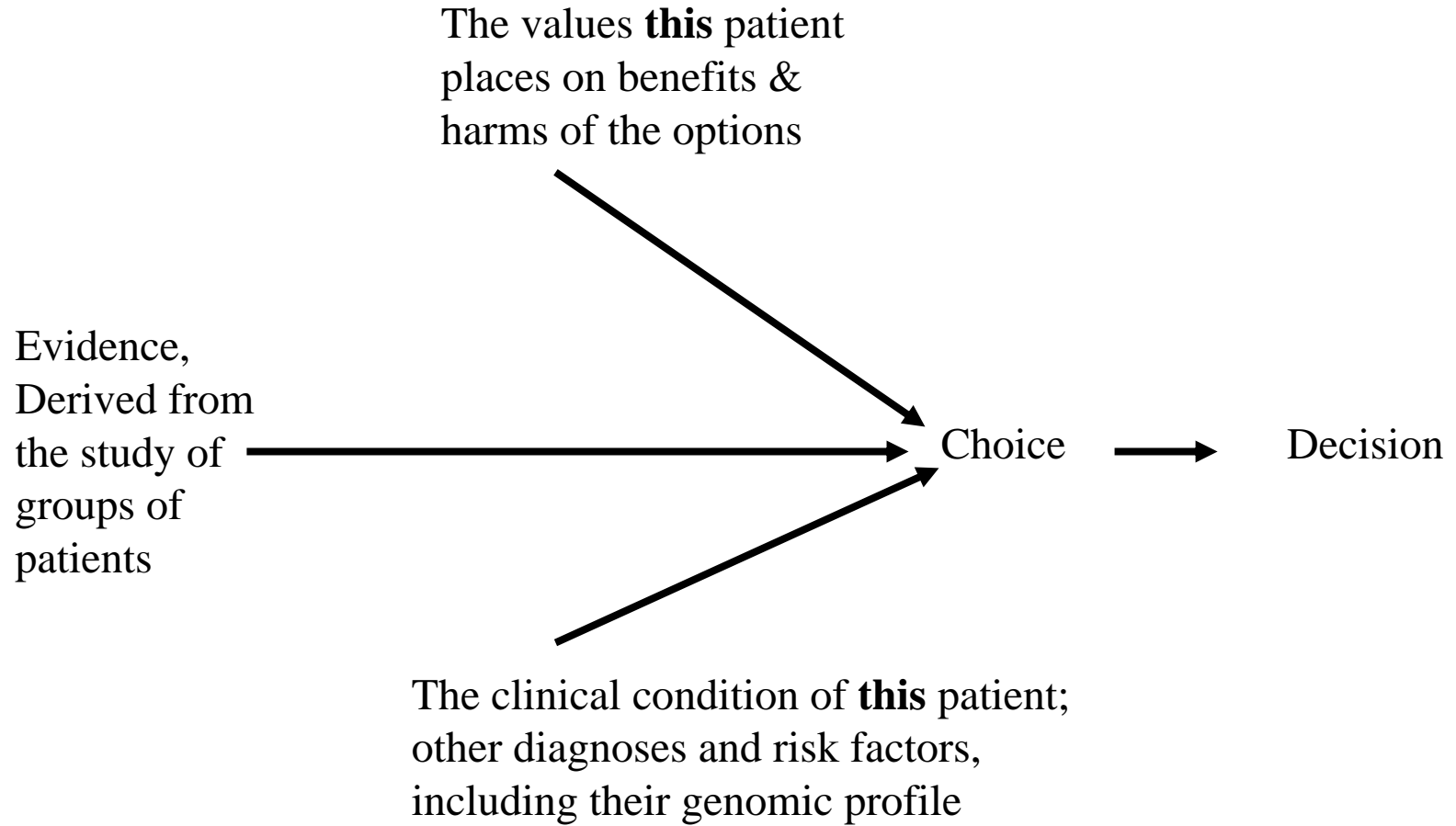
Outcome = Good – Bad

*Outcome = Effectiveness (EBM  
+Quality) – Harm (Safety)*

---

Costs = Money + time + Carbon

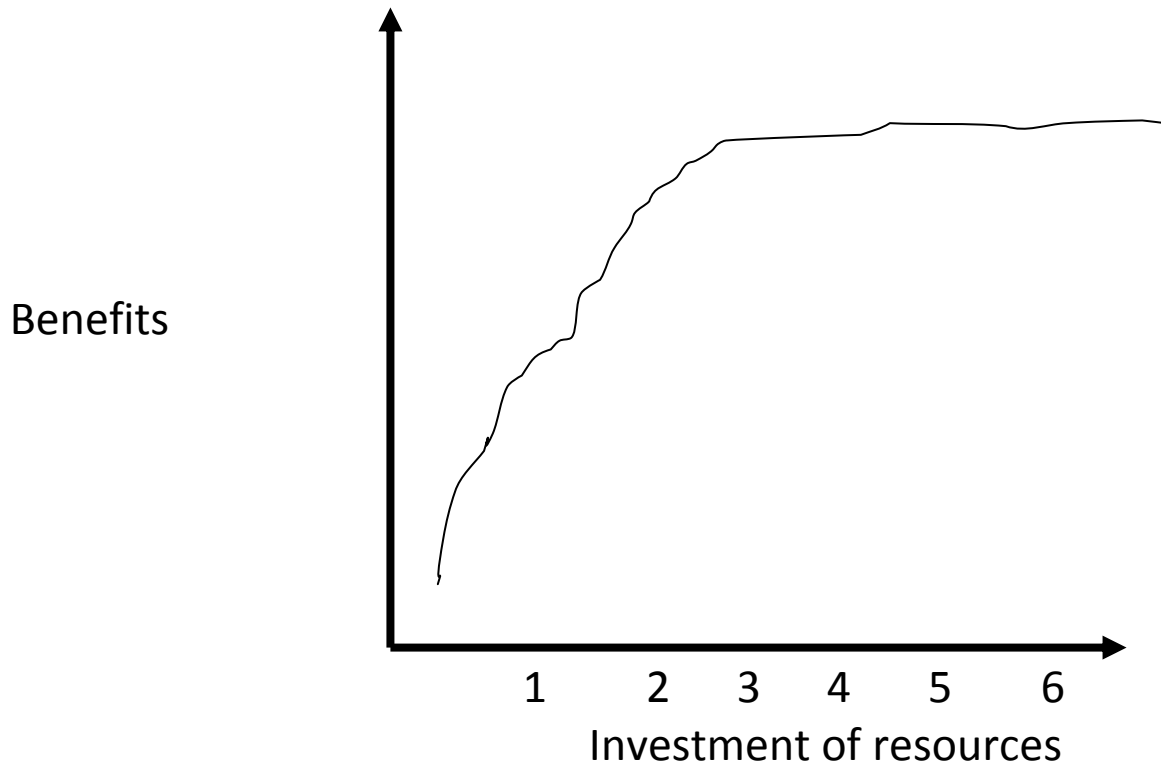
# Variations as an indicator of harm



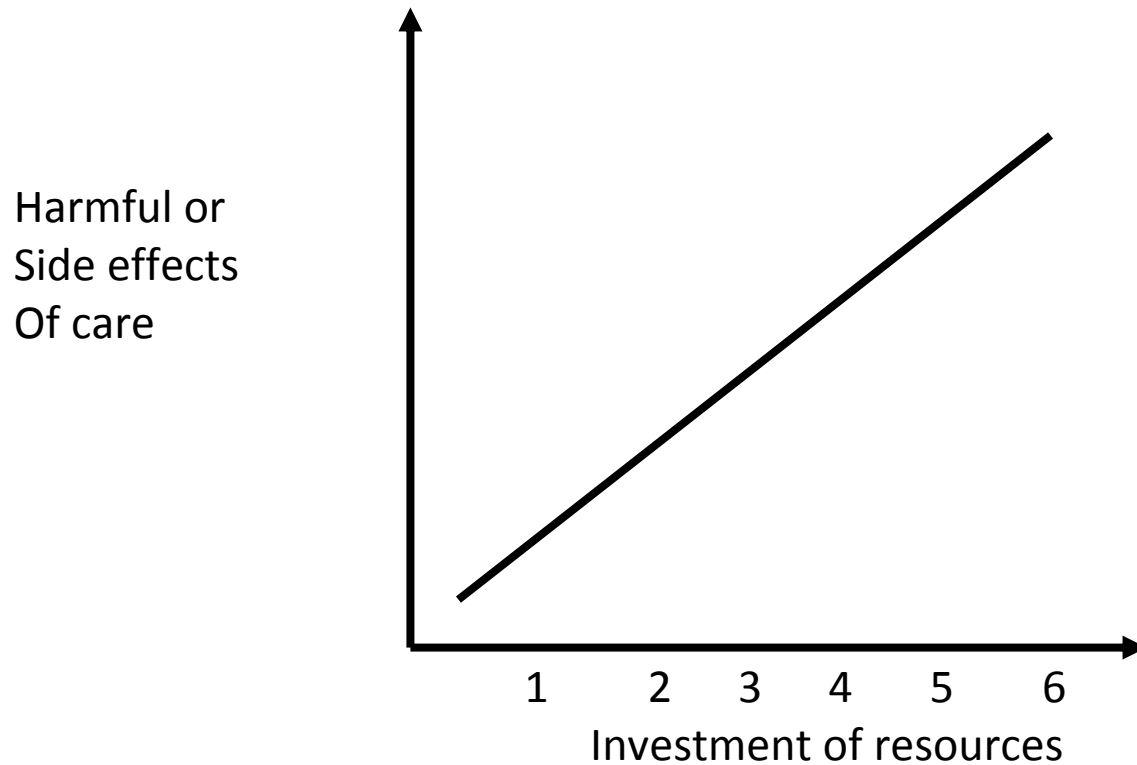
# Personalised Healthcare

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# The law of diminishing returns



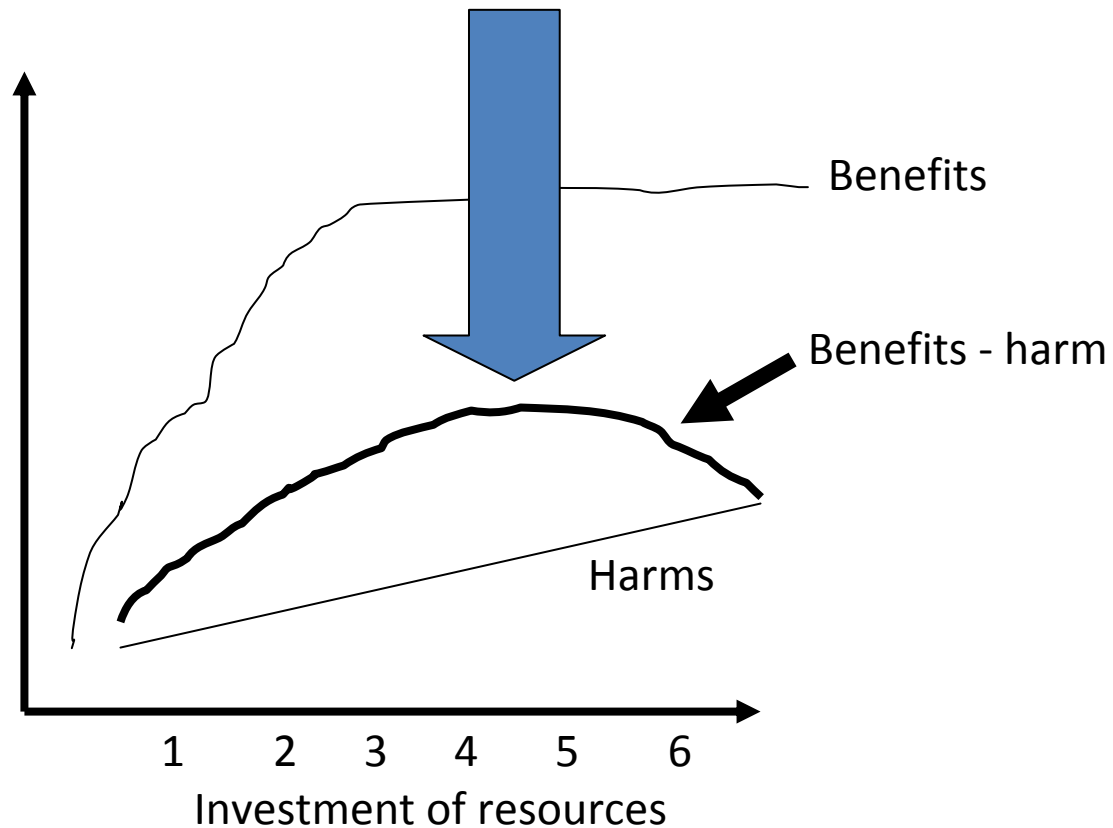
Harmful effects increase in direct proportion to the resources invested



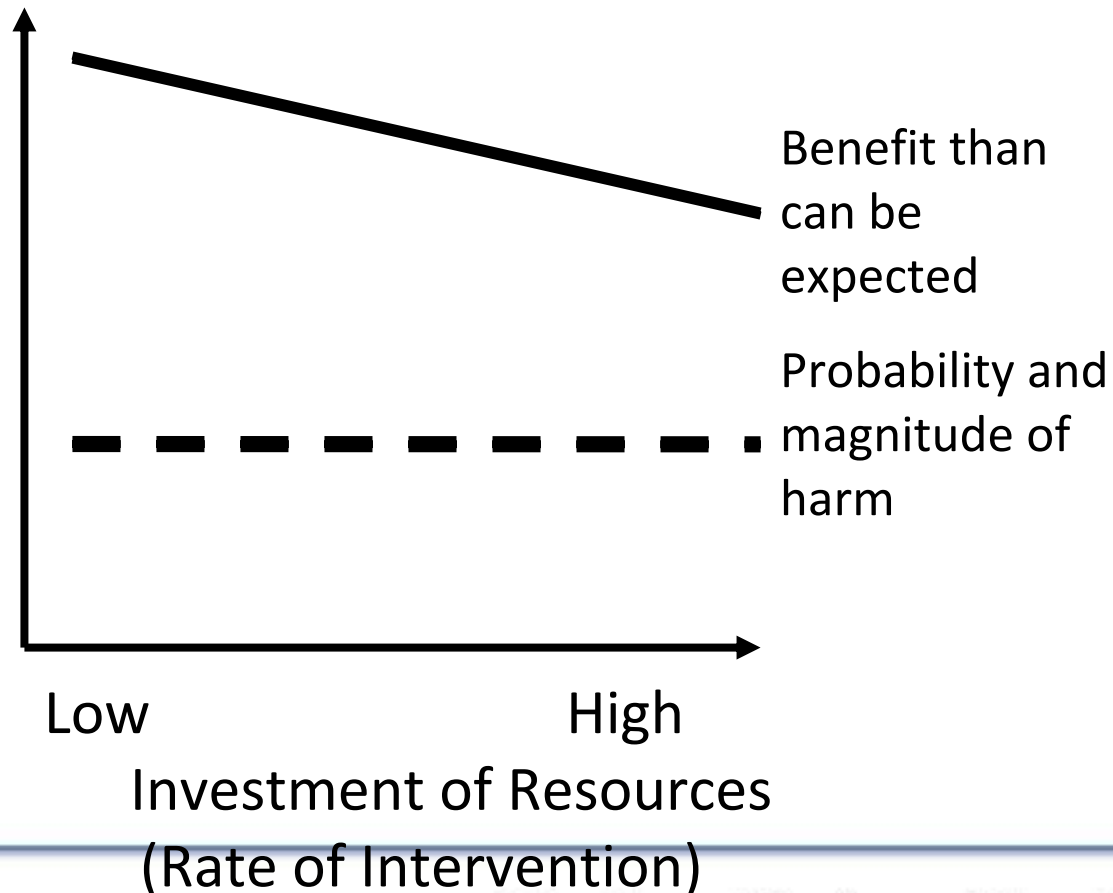
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After a certain level of investment the health gain may start to decline;  
the point of optimality



As the rate of intervention in the population increases, the balance of benefit and harm also changes for the individual patient



Solution ; go for systems with preference sensitive decision making

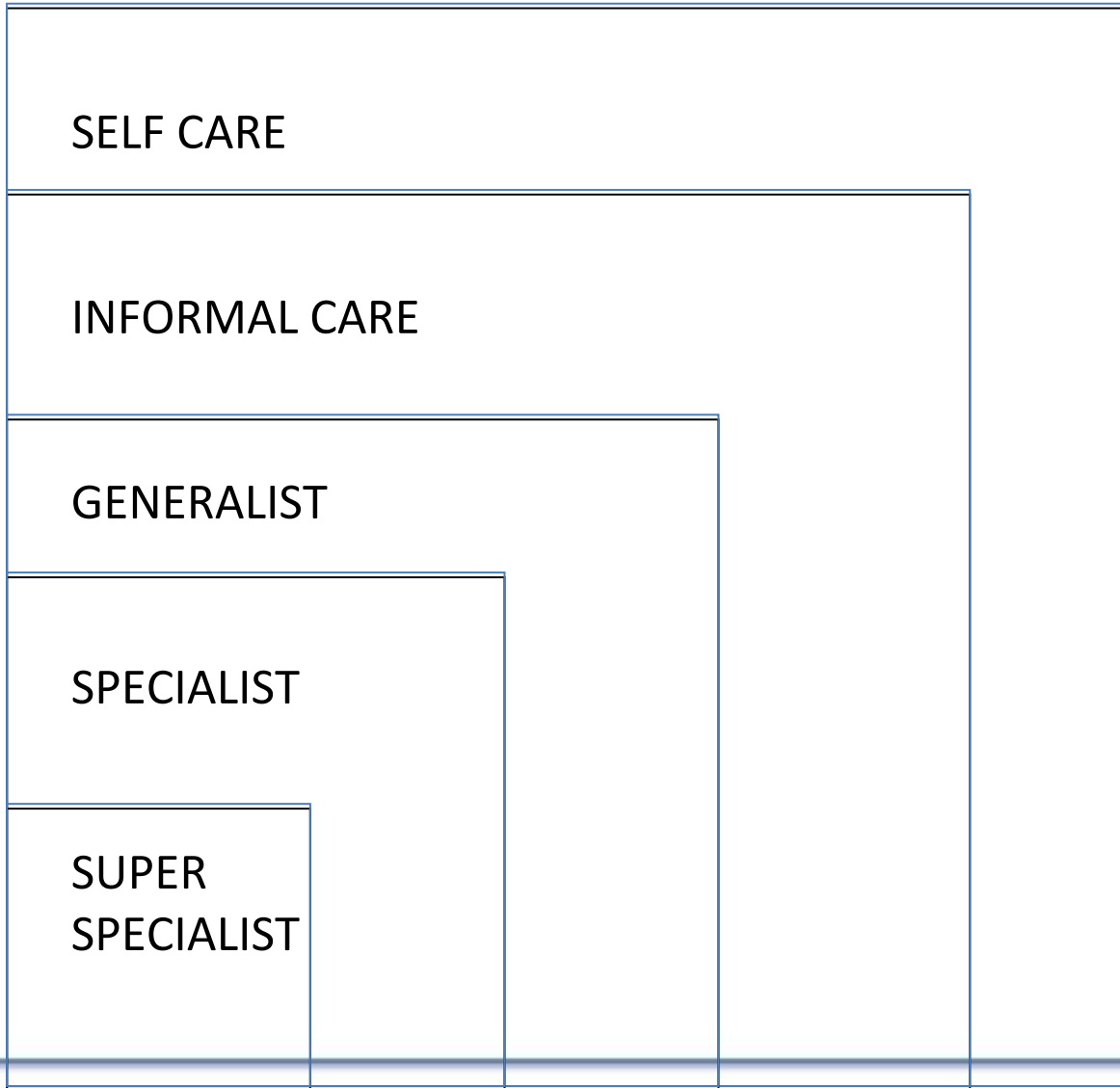
# The Healthcare Archipelago

GENERAL  
PRACTICE

MENTAL  
HEALTH

COMMUNITY  
SERVICES

HOSPITAL  
SERVICES



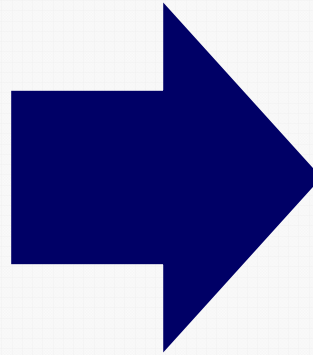
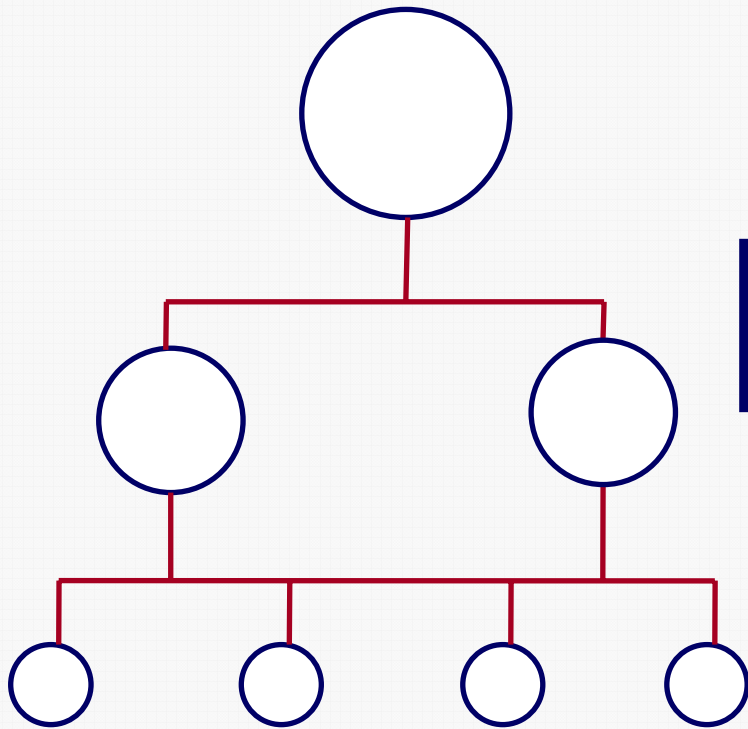
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## Newborn Screening for Sickle Cell Disorders Programme Standards

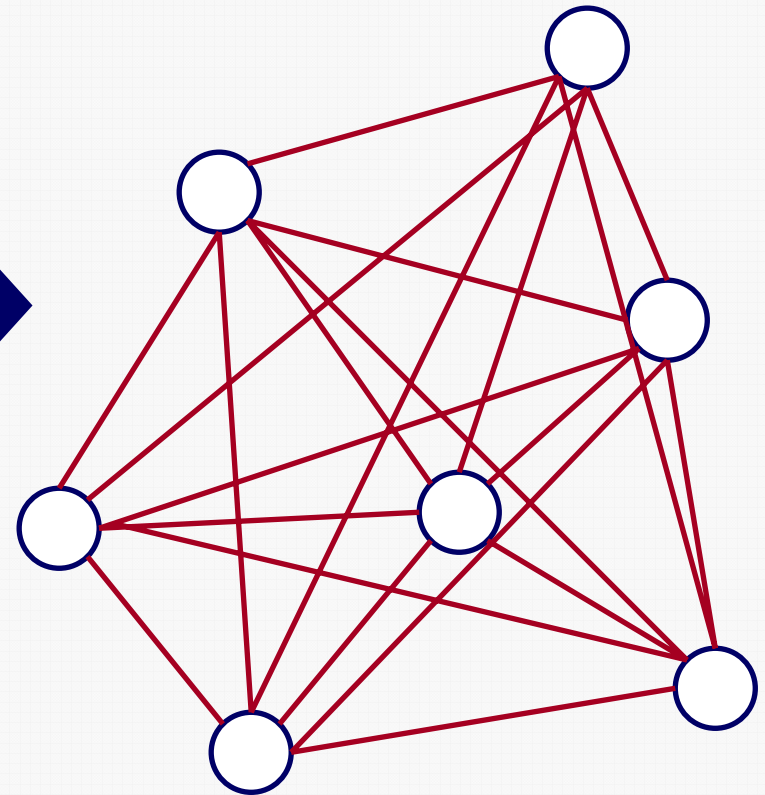
NEWBORN PROGRAMME OBJECTIVES:	CRITERIA	STANDARDS	
		Minimum (Core)	Achievable (Developmental)
<b>Programme Outcome</b>			
Best possible survival for infants detected with a sickle cell disorder by the screening programme	Mortality rates expressed in person years	Mortality rate from sickle cell disease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

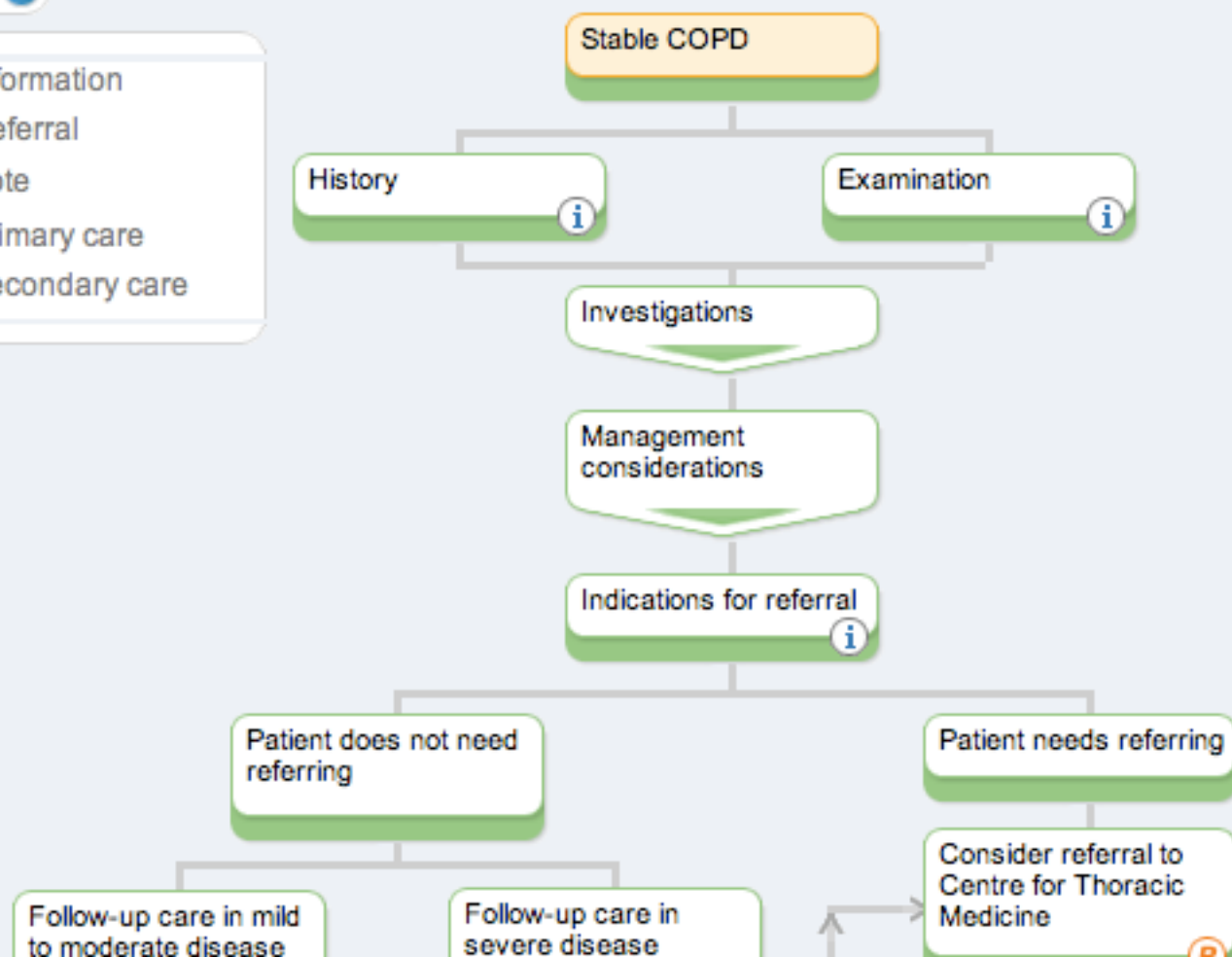


# Stable COPD

Medicine / Thoracic Medicine / COPD

Key ×

- i Information
- R Referral
- Note Note
- Primary care Primary care
- Secondary care Secondary care

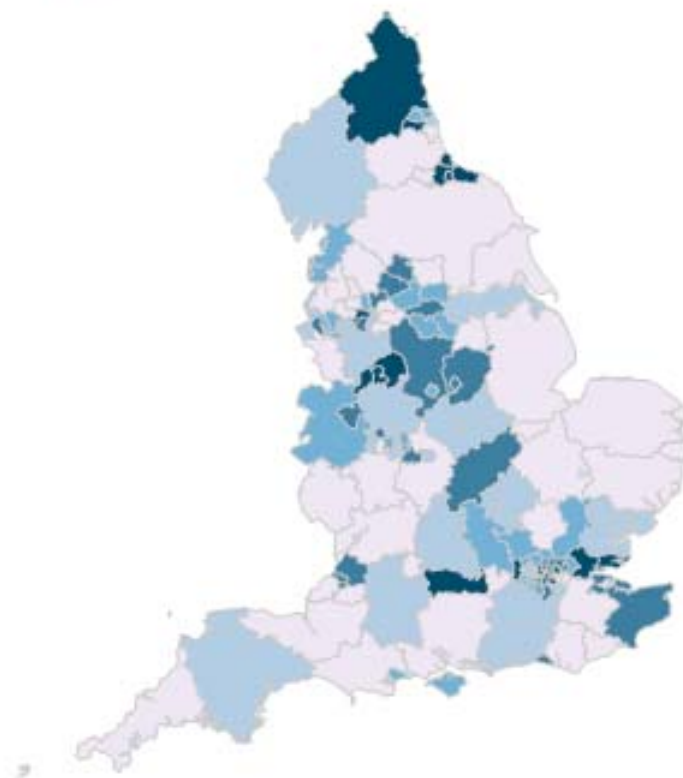




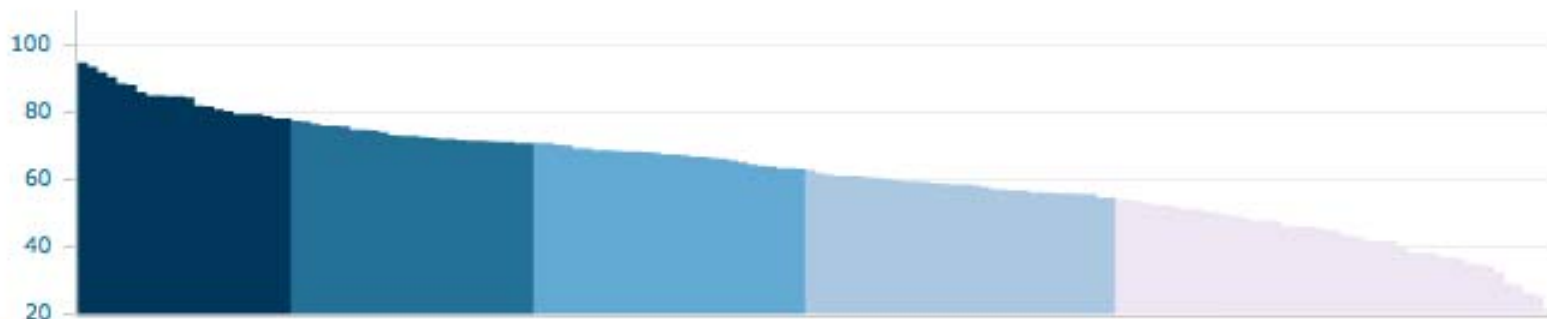
Variations as indicator of failure to prevent

# Right Care NHS Atlas of Variation in Healthcare

Percentage of patients admitted to hospital following a stroke who spend 90% of their time on a stroke unit, by PCT, 2009/10



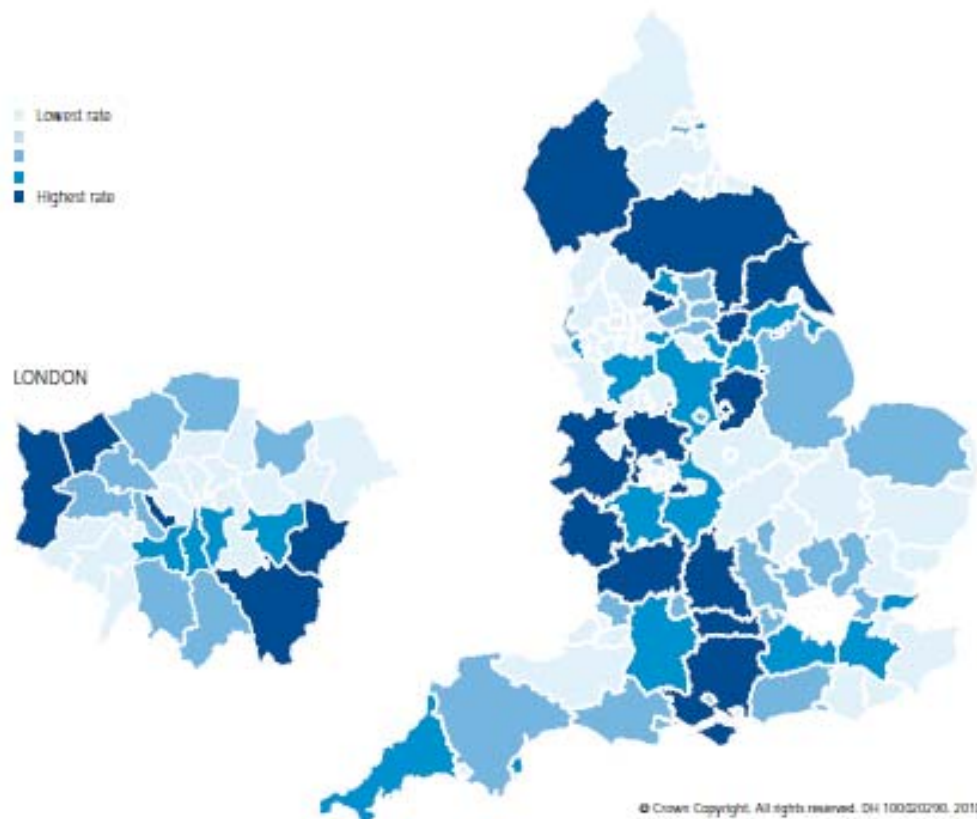
© DH 100020290



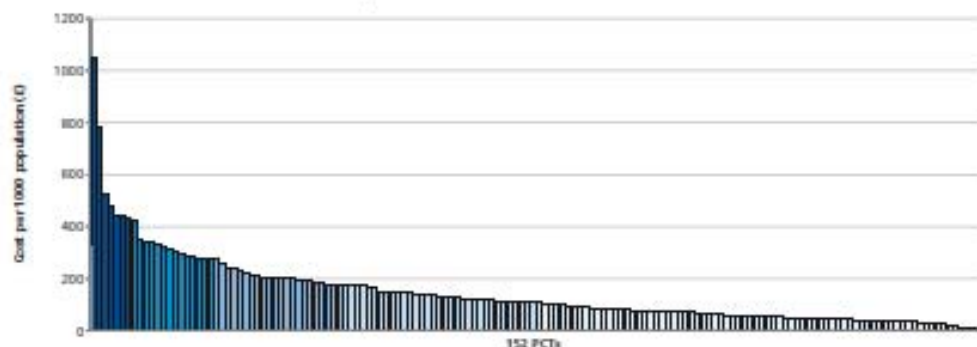
care

# Rate of anterior cruciate ligament reconstruction expenditure per 1000 population by PCT Weighted by age, sex, and need; 2008/09

The variation among PCTs in the rate of expenditure for anterior cruciate ligament reconstruction per 1000 population is 50-fold.



© Crown Copyright. All rights reserved. DH 100520200, 2010



## Variations as indicator of inequity

If there are lower rates of intervention in one subgroup of the population which has the same, or greater, need than the population as a whole, this would suggest there are problems with the equity of provision. If patients in one subgroup of the population receive treatment at a later stage in the course of the disease than patients in another subgroup, this would also suggest problems with the equity of provision. In a study of equity of access to total joint replacement of hip and knee in England, Judge et al. (6) concluded that people in affluent areas got most provision relative to need

Judge, A. et al. (2010) Equity in access to total joint replacement of hip and knee in England. Br. Med. J. doi 10/1136bmj.c4902.

Solution ; clinicians responsible for  
whole populations as well as referred  
patients

The use of common surgical procedures varies widely across regions. Differences in illness burden, diagnostic practices, and patient attitudes about medical intervention explain only a small degree of regional variation in surgery rates. Evidence suggests that surgical variation results mainly from differences in physician beliefs about the indications for surgery, and the extent to which patient preferences are incorporated into treatment decisions.

### **Understanding of regional variation in the use of surgery**

John D Birkmeyer, Bradley N Reames, Peter McCulloch, Andrew J Carr, W Bruce Campbell, John E Wennberg

Lancet 2013; 382: 1121–29

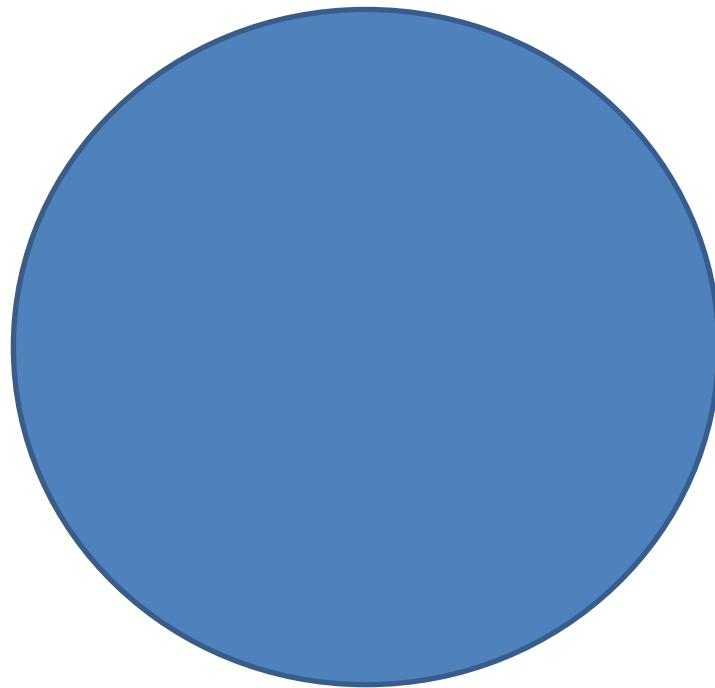
Provision rates for surgery vary widely in relation to identifiable need, suggesting that reduction of this variation might be appropriate. The definition of unwarranted variation is difficult because the boundaries of acceptable practice are wide, and information about patient preference is lacking. Very little direct research evidence exists on the modification of variations in surgery rates, so inferences must be drawn from research on the alteration of overall rates. The available evidence has large gaps, which suggests that some proposed strategies produce only marginal change. Micro-level interventions target decision making that affects individuals, whereas macro-level interventions target health-care systems with the use of financial, regulatory, or incentivisation strategies.

### **Strategies to reduce variation in the use of surgery**

Peter McCulloch, Myura Nagendran, W Bruce Campbell, Andrew Price, Anant Jani, John D Birkmeyer, Muir Gray

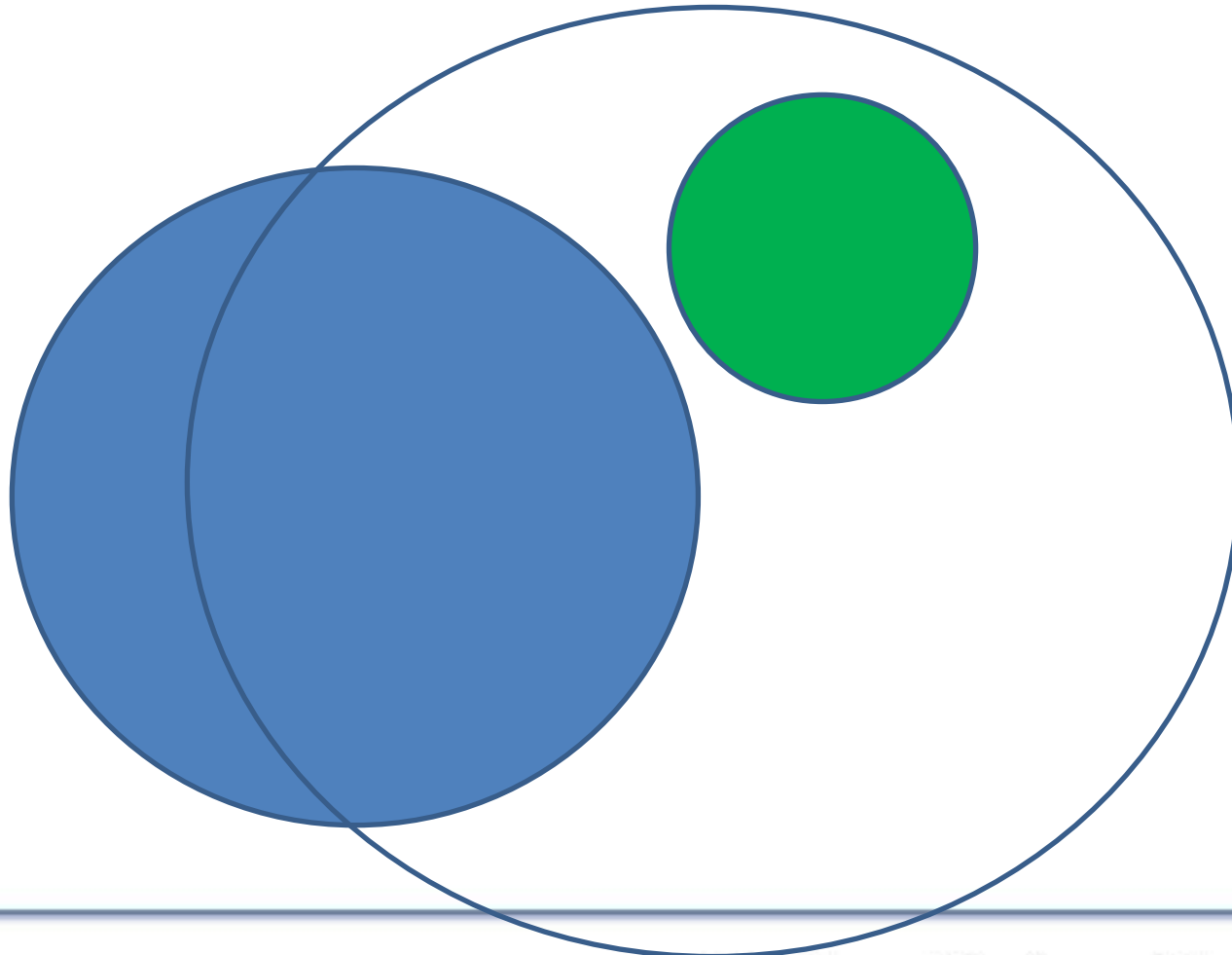
Lancet 2013; 382: 1130–39

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

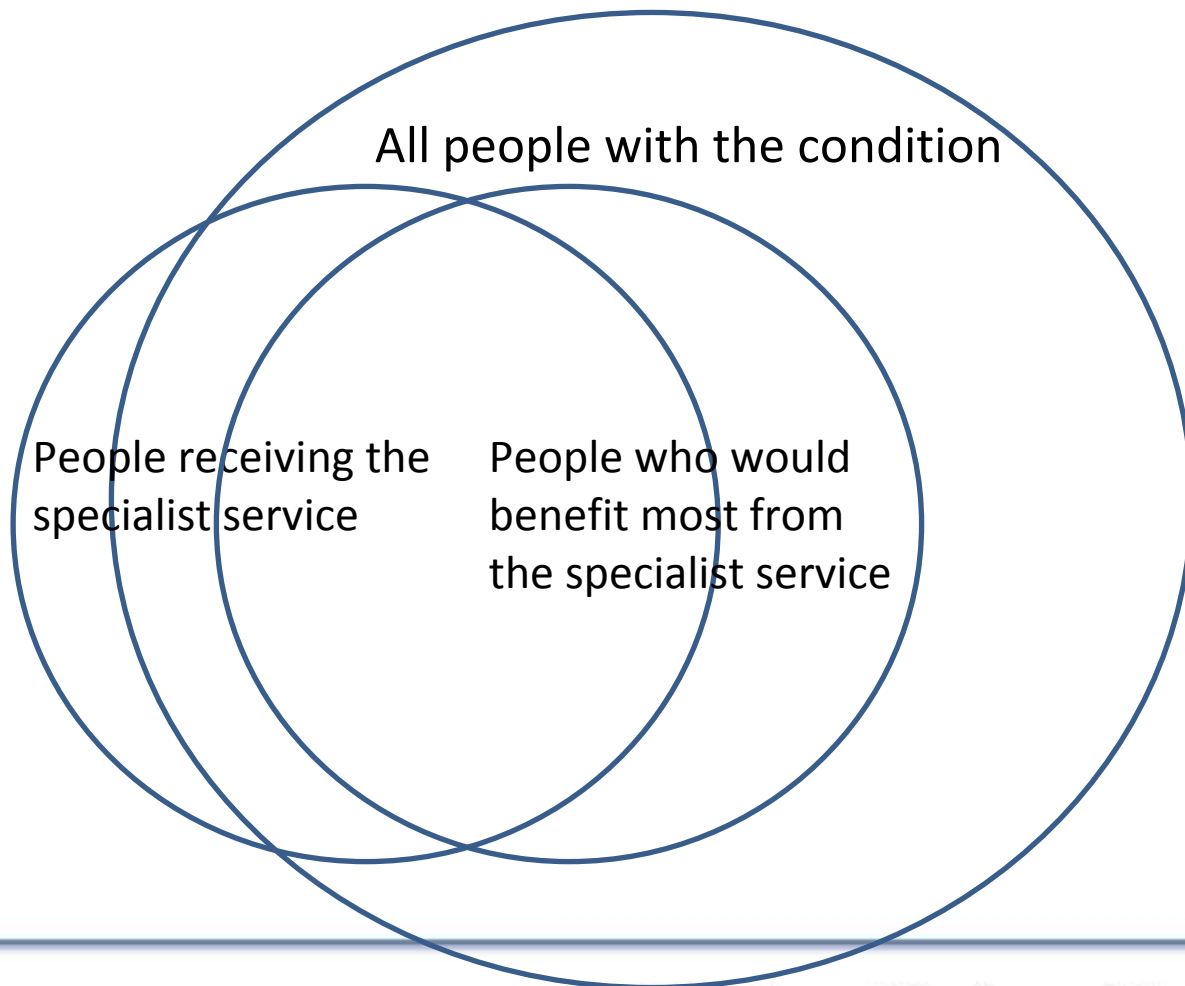




Dr Jones estimated that there are 1000 people with COPD in South Derbyshire and a population based audit showed that there were 100 people who were not referred who would benefit from the knowledge of her team



***Better Value Healthcare***



All people with the condition

People receiving the specialist service

People who would benefit most from the specialist service

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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

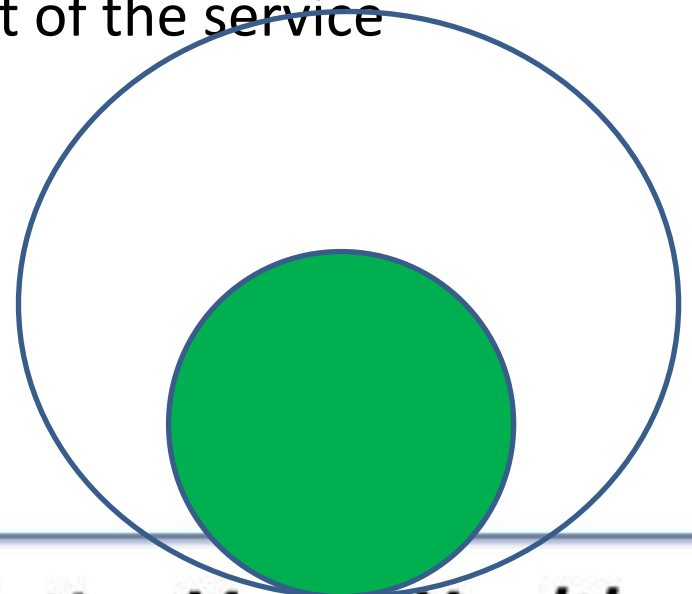
Network development

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 27<sup>th</sup> out of the 106 COPD services, and of greater importance, 6<sup>th</sup> out of the 23 services in the prosperous counties



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# Solution Population and personalised

1. rely on patients (and the smartphone and knowledge)
2. mandatory training
3. change the culture/start the revolution ; destabilise through an Atlas ,  
engage the young control the communication

# Mandatory training

- *Understanding and Increasing Value*
- *Designing and building Systems of Care*
- *Creating the Right Healthcare Culture*
- *Delivering Population-based Medicine*
- *Designing and delivering Patient Centred and Personalised Care*

Culture

Patients

CREATE

INFLUENCE

Structure  
Professionals

Systems

Public

***Better Value Healthcare***

**“Culture...the shared tacit assumptions of a group that it has learned in coping with external threats and dealing with internal relationships.”**

*Schein, E.H (1999) The Corporate Culture Survival Guide*

**“Leadership ...and a company’s culture are inextricably intertwined.”**

*Morgan, J.M. and Liker, J.K. (2006) The Toyota Product Development System*

**[www.ocht-glossary.net](http://www.ocht-glossary.net)**

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 a common knowledge base and a common budget

PrimarySecondaryAcuteCommunityOutpatientHubandSpoke





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

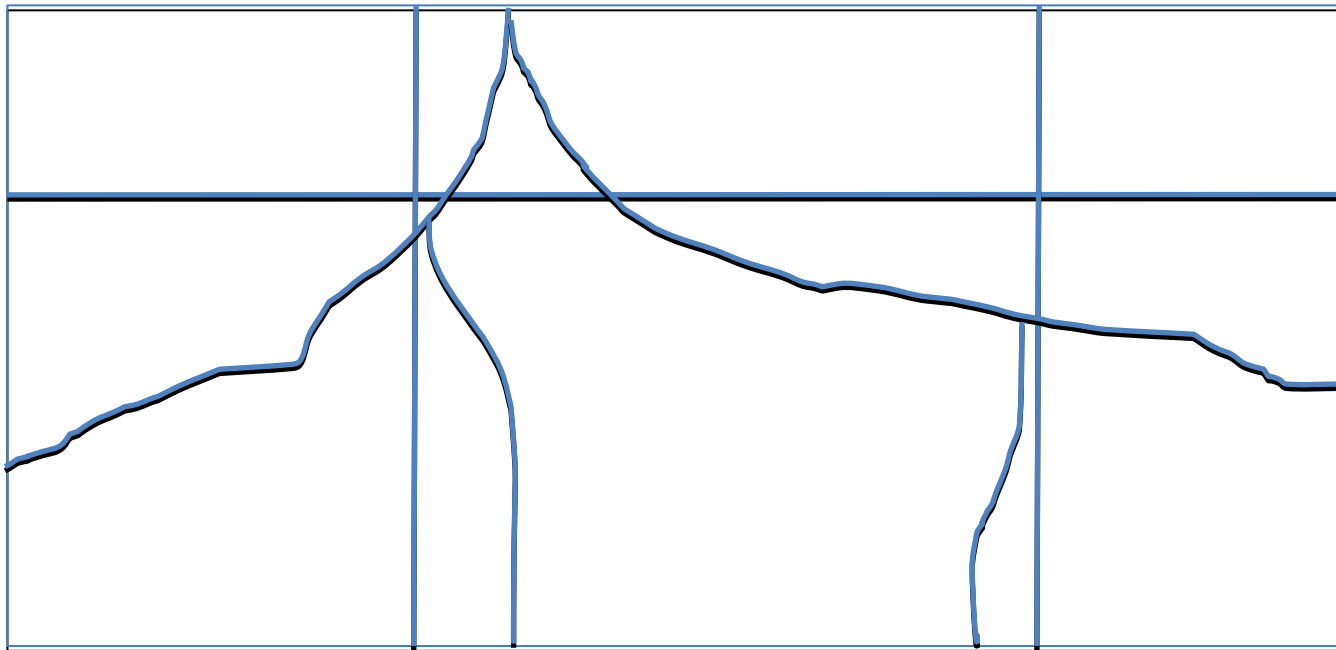
Population healthcare focuses primarily on populations defined by a common need which may be a symptom such as breathlessness, a condition such as arthritis or a common characteristic such as frailty in old age, not on institutions , or specialties or technologies. Its aim is to maximise value for those populations and the individuals within them

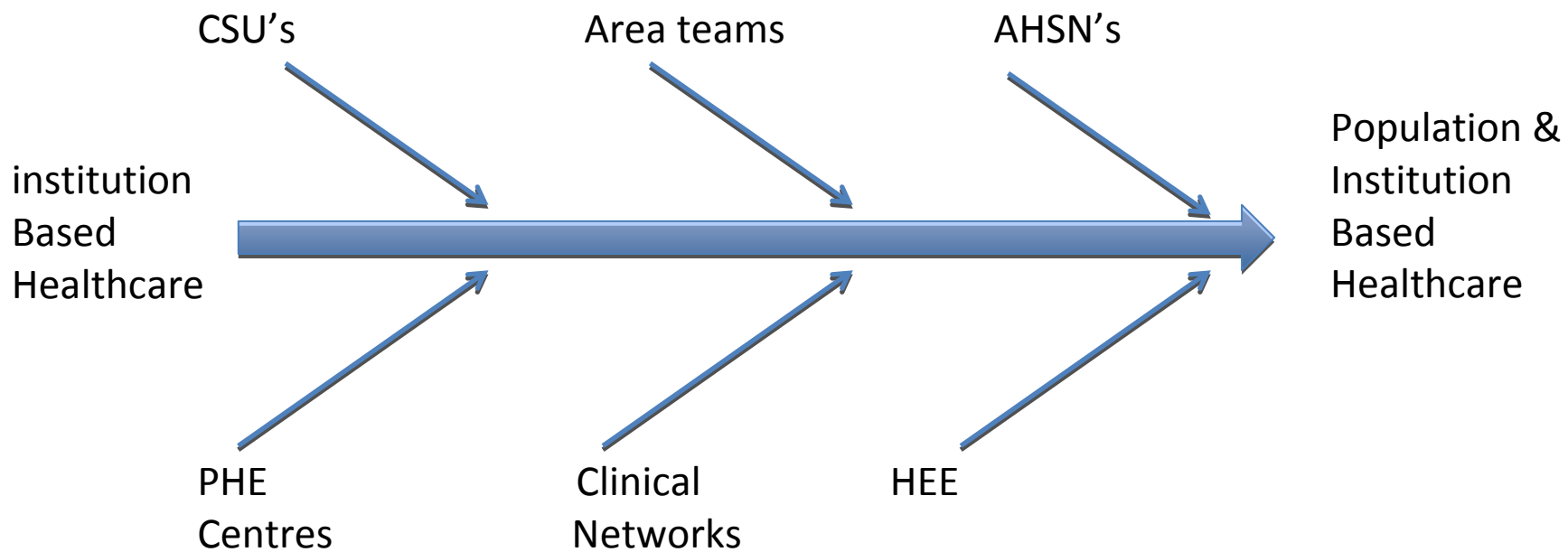
# Population Healthcare

1. Is the service for people with seizures & epilepsy in Queensland better than the service in Auckland or Wales or Massachusetts ?
2. Who is responsible for the inflammatory bowel disease service for people in Wellington?
3. How many liver disease services are there in New Zealand and how many should there be?
4. Which service for frail elderly people with frailty in New South Wales provides the best value?
5. Is the service for people with back pain in Brisbane better than the service in Melbourne?

There are two types of populations'  
one defined by politicians  
(jurisdictions)


There are two types of populations,  
one defined by politicians  
(jurisdictions) & one defined by need





***Better Value Healthcare***