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."
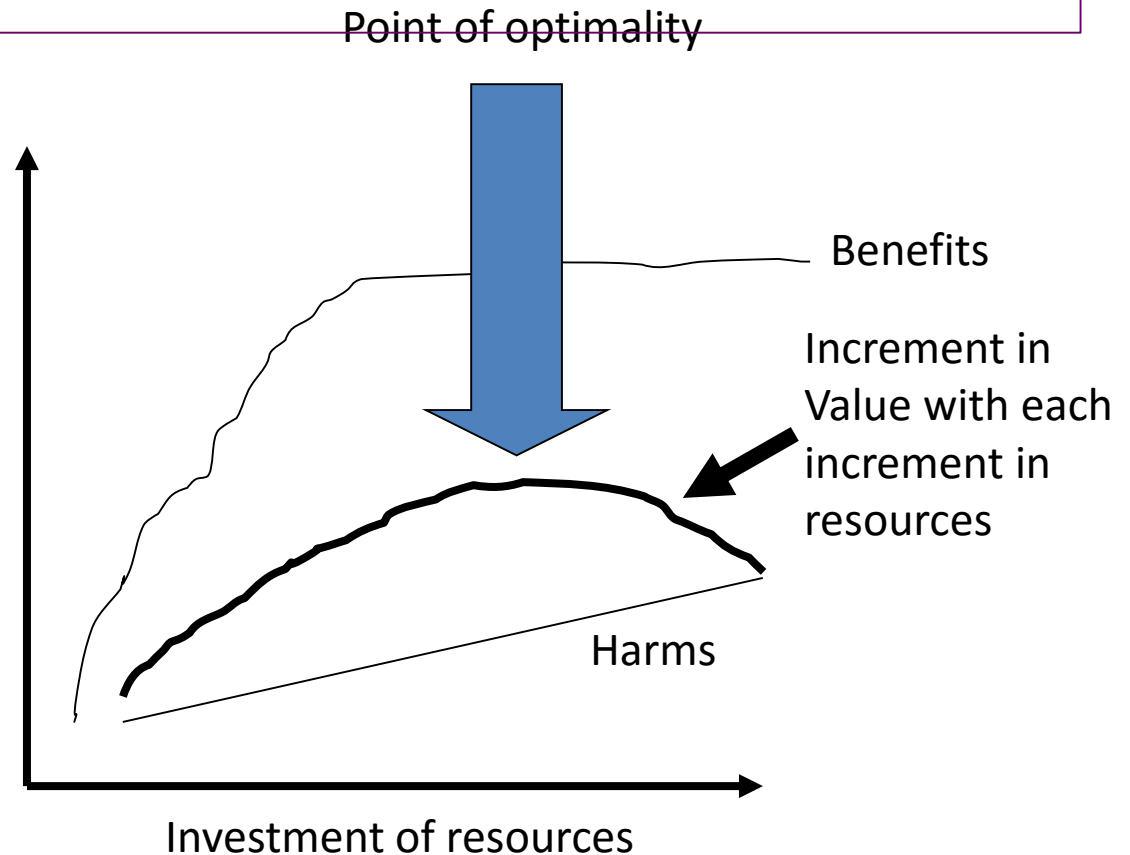Jack Wennberg
Variation reveals the other two problems

Percentage of all deaths in an area that occur in hospital, by local authority, 2006–2008
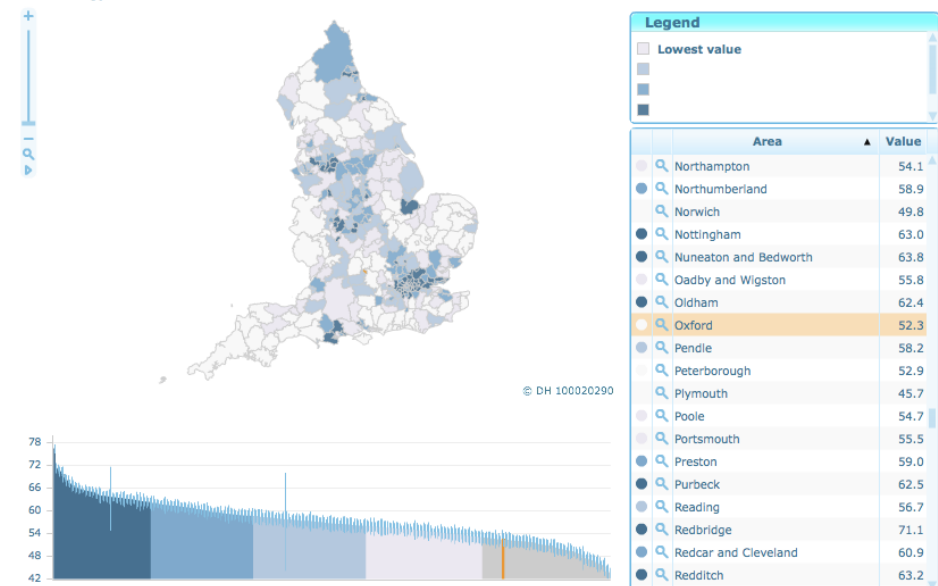
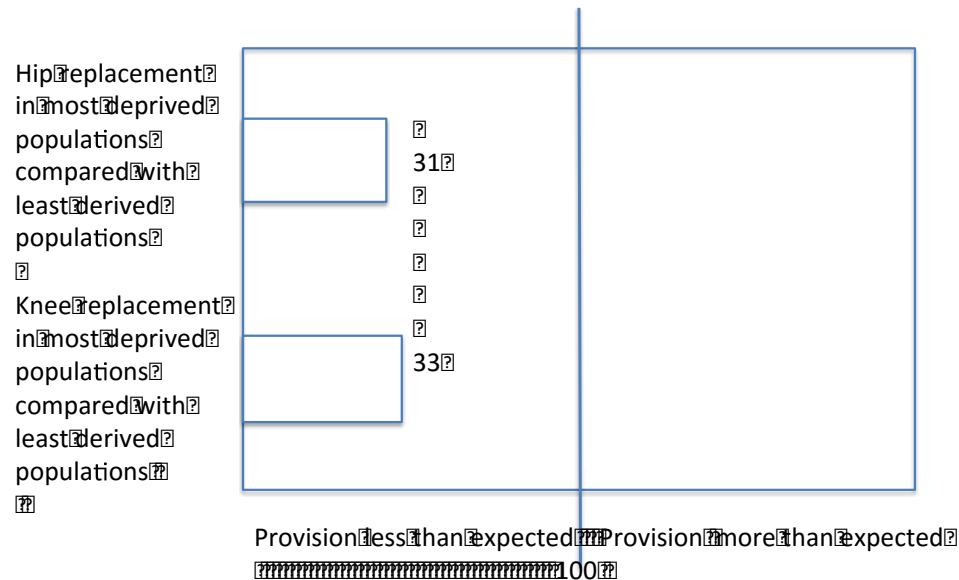# The first is OVERUSE of lower or zero value interventions which results in
1. waste of resources
2. harm

Point of optimality

Benefits

Increment in Value with each increment in resources

Harms

Investment of resources

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

Hip replacement in most deprived populations compared with least derived populations

31

Knee replacement in most deprived populations compared with least derived populations

33

Provision less than expected   Provision more than expected

100

Republished editorial from The BMJ

Hip replacement in most deprived populations compared with least derived populations

31

Knee replacement in most deprived populations compared with least derived populations

33

Republished editorial from *The BMJ*

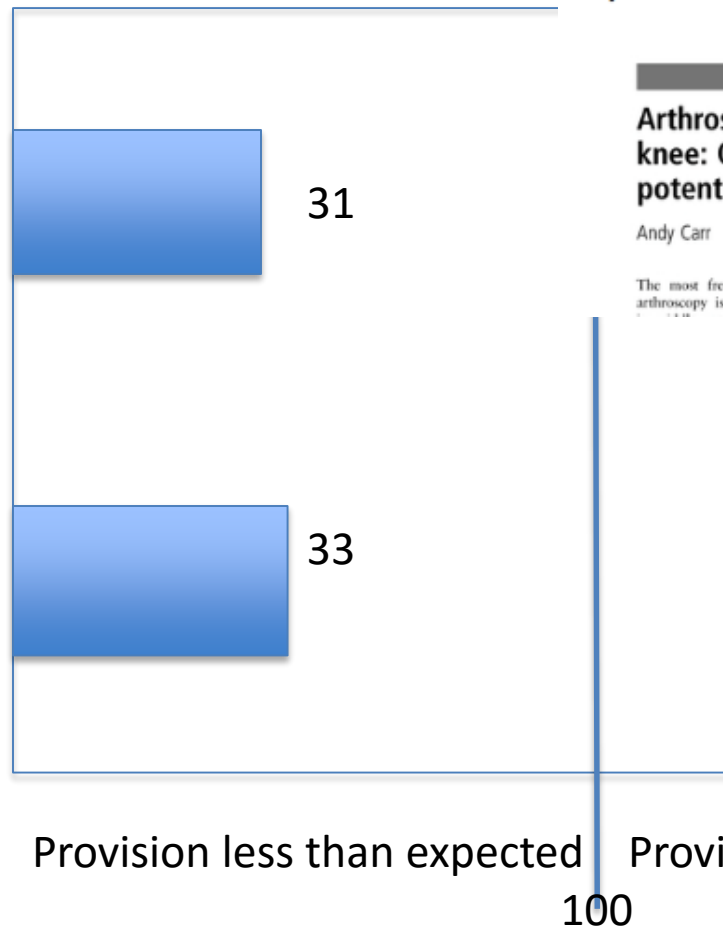**Arthroscopic surgery for degenerative knee: Overused, ineffective, and potentially harmful**

Andy Carr

The most frequent indication for knee arthroscopy is degenerative joint disease ... poorly described and given at a suboptimal dose. ...
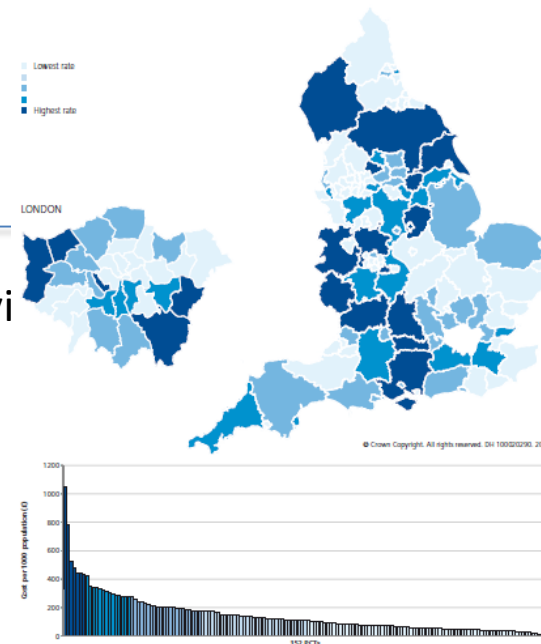
variety of factors that alter beliefs and expectations.[12]

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 ...

Provision less than expected   Provi

100

Lowest rate

Highest rate

LONDON

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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 by provide only 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**

- 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

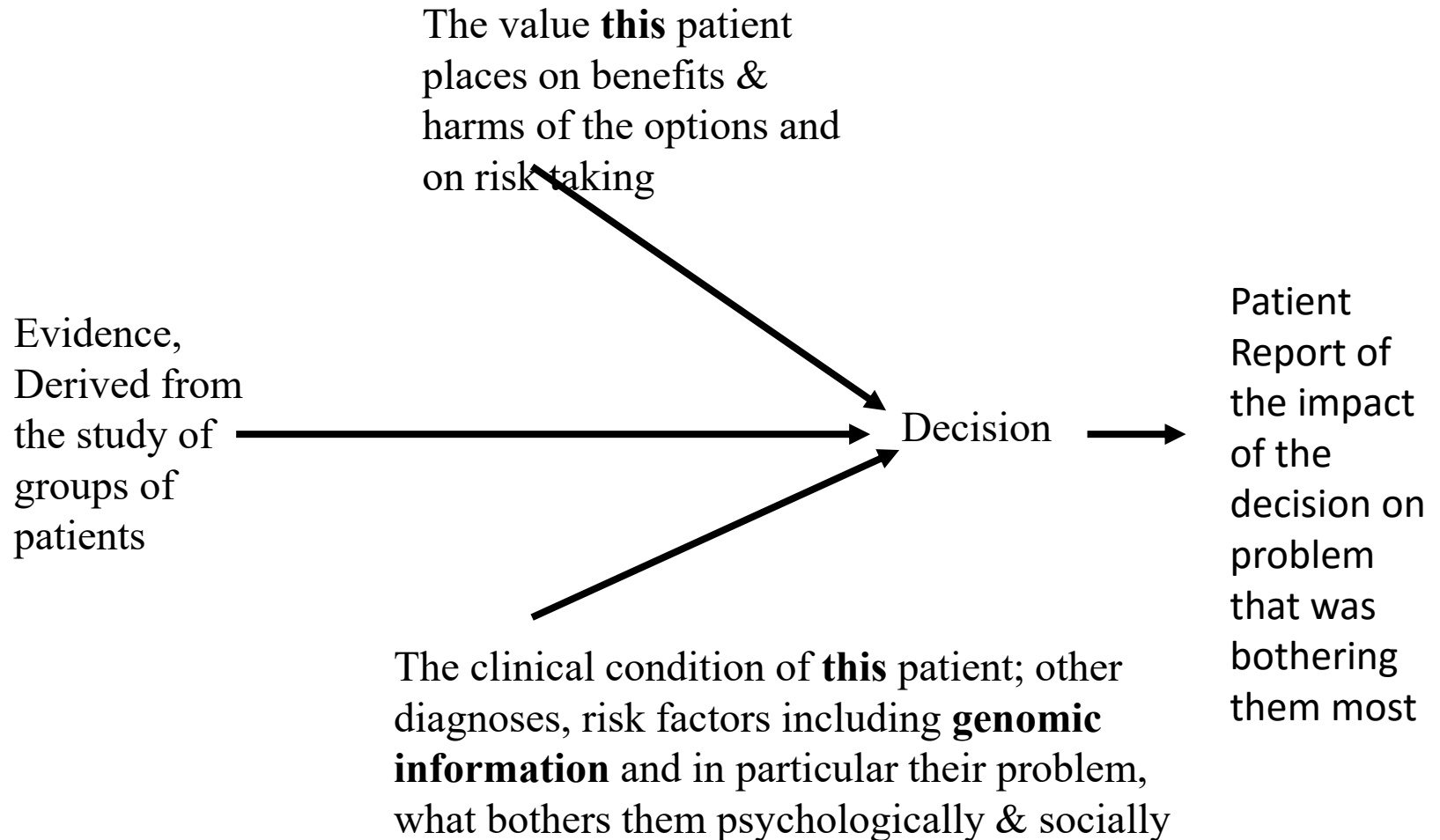# THE RIGHTCARE METHOD OF INCREASING VALUE FOR POPULATIONS AND INDIVIDUALS IS BY

CITIZENS & **COMMISSIONERS**

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
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
3. Ensuring that those people in the population who will derive most value from a service reach that service
4. Implementation of high value innovation funded by reduced spending on lower value interventions for the population
5. Increased rates of higher value intervention eg helping a higher proportion of people die well at home funded by reduced spending on lower value care in hospital in that population

THE RIGHTCARE METHOD OF INCREASING VALUE FOR POPULATIONS AND INDIVIDUALS IS BY
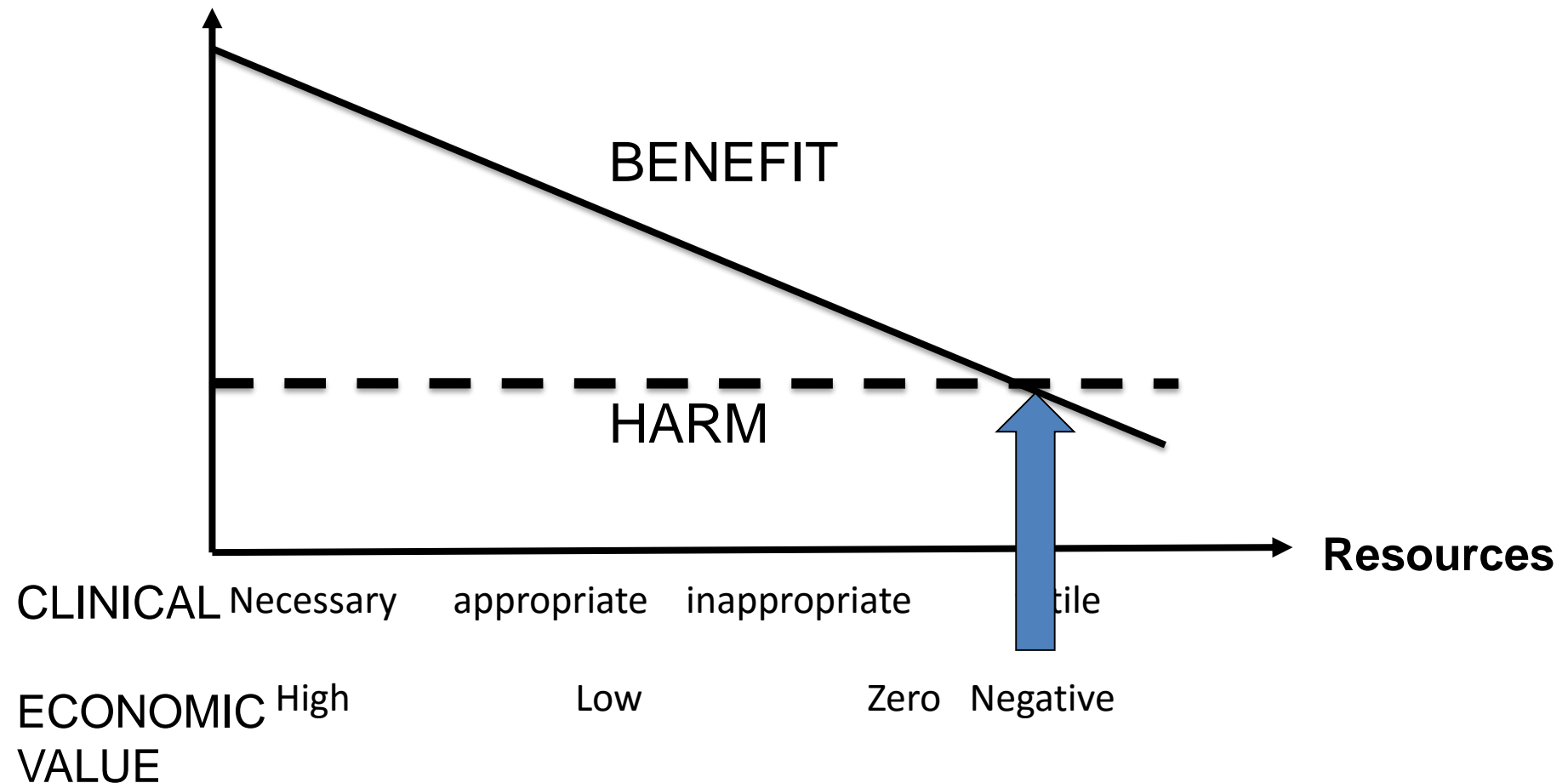
1. Ensuring that every individual receives high personal value by providing people with full information about the risks and benefits of the intervention being offered and relating that to the problem that bothers them most and their values and preferences

The value **this** patient places on benefits & harms of the options and on risk taking

Evidence, Derived from the study of groups of patients

Decision

Patient Report of the impact of the decision on problem that was bothering them most

The clinical condition of **this** patient; other diagnoses, risk factors including **genomic information** and in particular their problem, what bothers them psychologically & socially

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

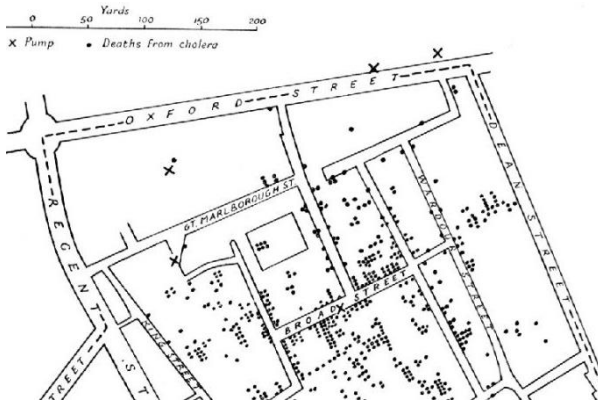| OLD PARADIGM	NEW PARADIGM
Healthcare means what the NHS provides	Healthcare means what you do for your self
We give people information about disease prevention	Everyone, including people diagnosed with a serious disease, is offered the opportunity to develop a personal health improvement plan
The patient presents for a consultation and tells her 'history'	The person who perceives a need is asked to respond to a set of questions such as 'what is bothering you most?" hat do you hope the NHS can do about what is bot st'. Also if they have defined a problem such as p n be asked to complete a tried and tested questior
The whole issue including explanation of technical terms is covered in the consultation	If appropriate the patient is sent learning resources about the condition and the evidence before the consultation
In the consultation the clinician often has to look at the screen	The clinician's attention is focused on the person with empathy not evidence as the principal consideration
For significant events eg hip replacement some patients are linked to a decision aid	All offers of tests or treatments are accompanied by information using evidence based methods to prevent framing eg
Treatment consists of pills or operations	Treatment also includes positive psychology and stress management and health promotion
Outcome rarely measured	Outcome routinely measured

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

BENEFIT

HARM

Resources

CLINICAL Necessary   appropriate   inappropriate   tile

ECONOMIC High   Low   Zero   Negative
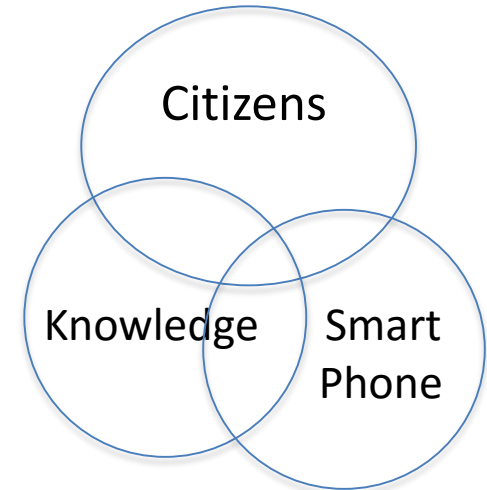VALUE

We are now in the thirdhealthcare revolution

The First

The Second

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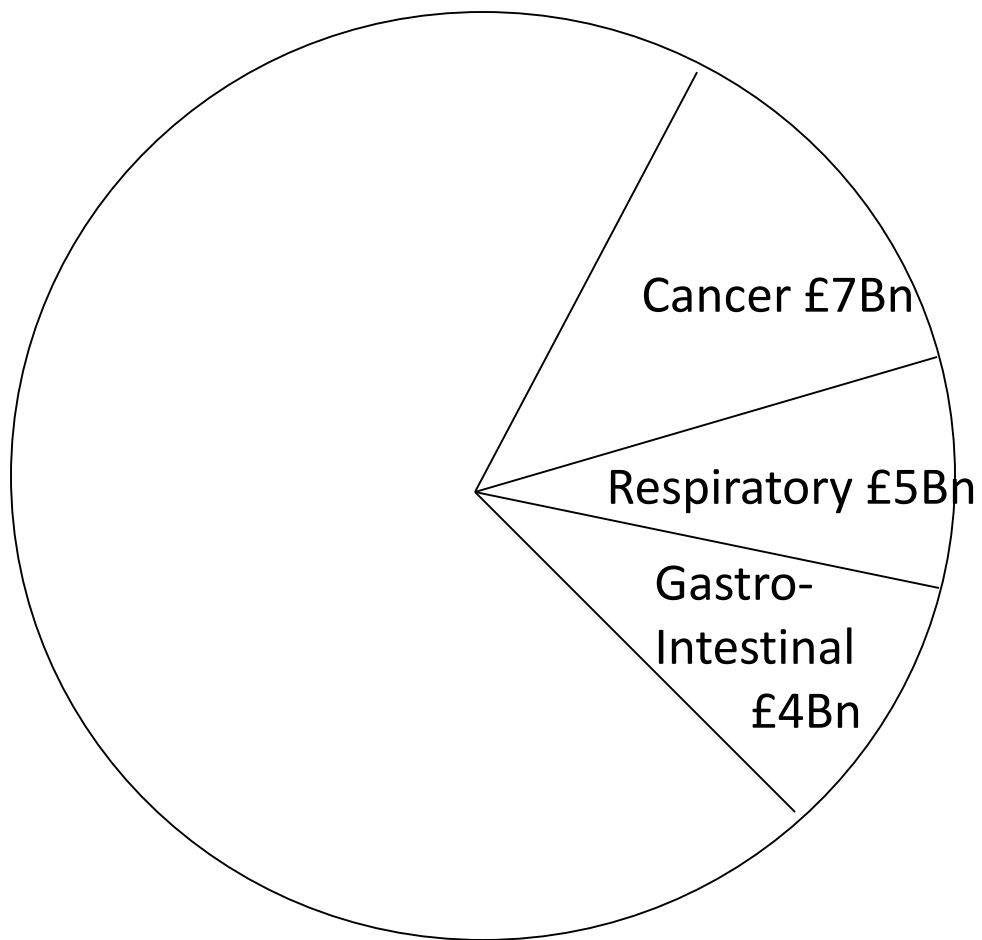- Radiotherapy
- RCTs
- Systematic reviews

the Third

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
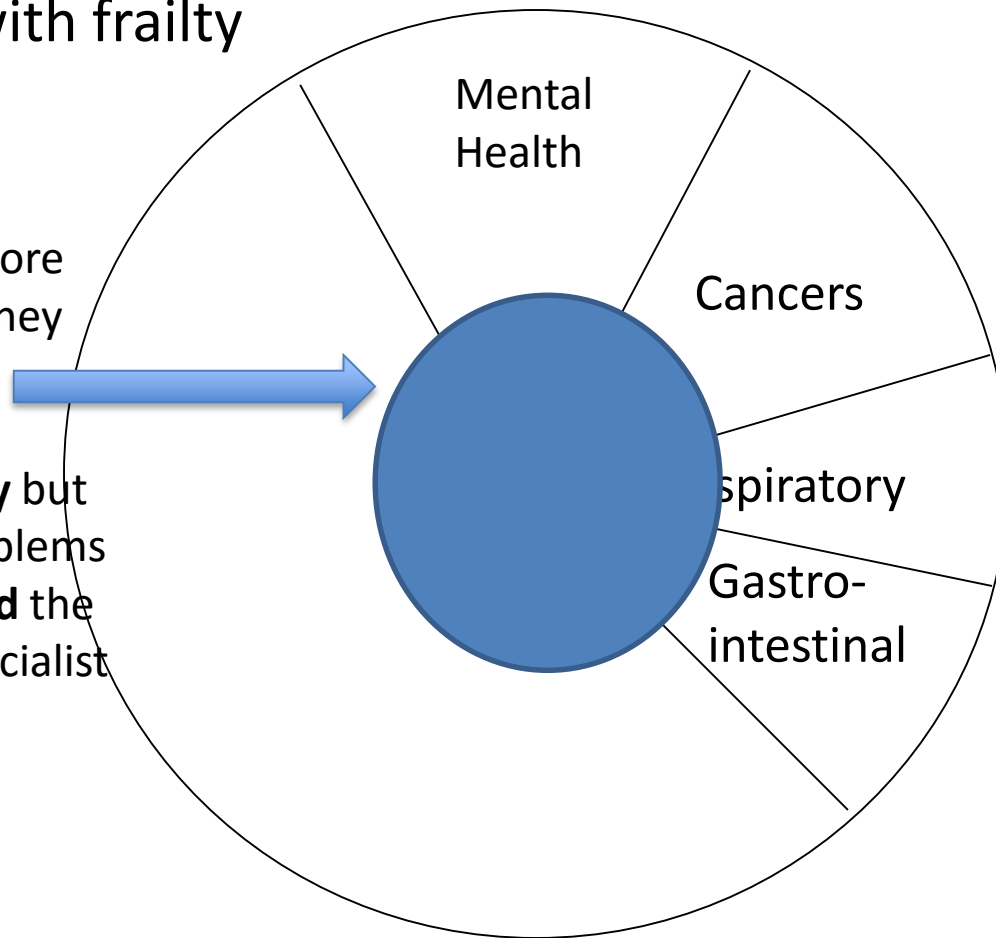
"

Cancer £7Bn

Respiratory £5Bn

Gastro-
Intestinal
£4Bn

£11Bn!

At this point Gps' will say "but lots of people have more than one disease"
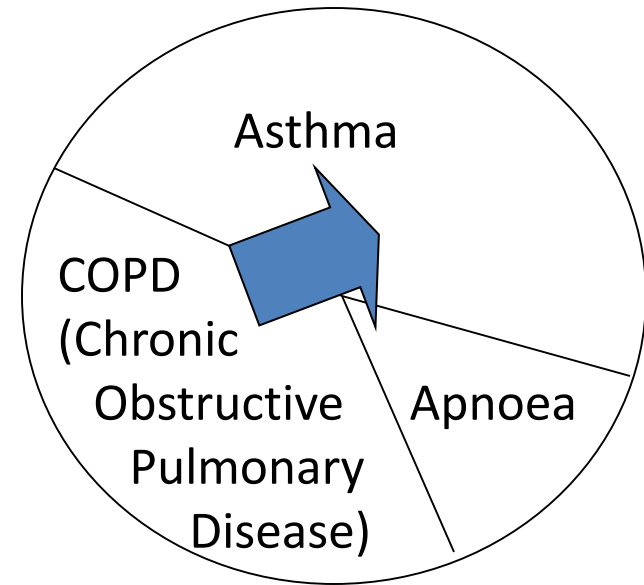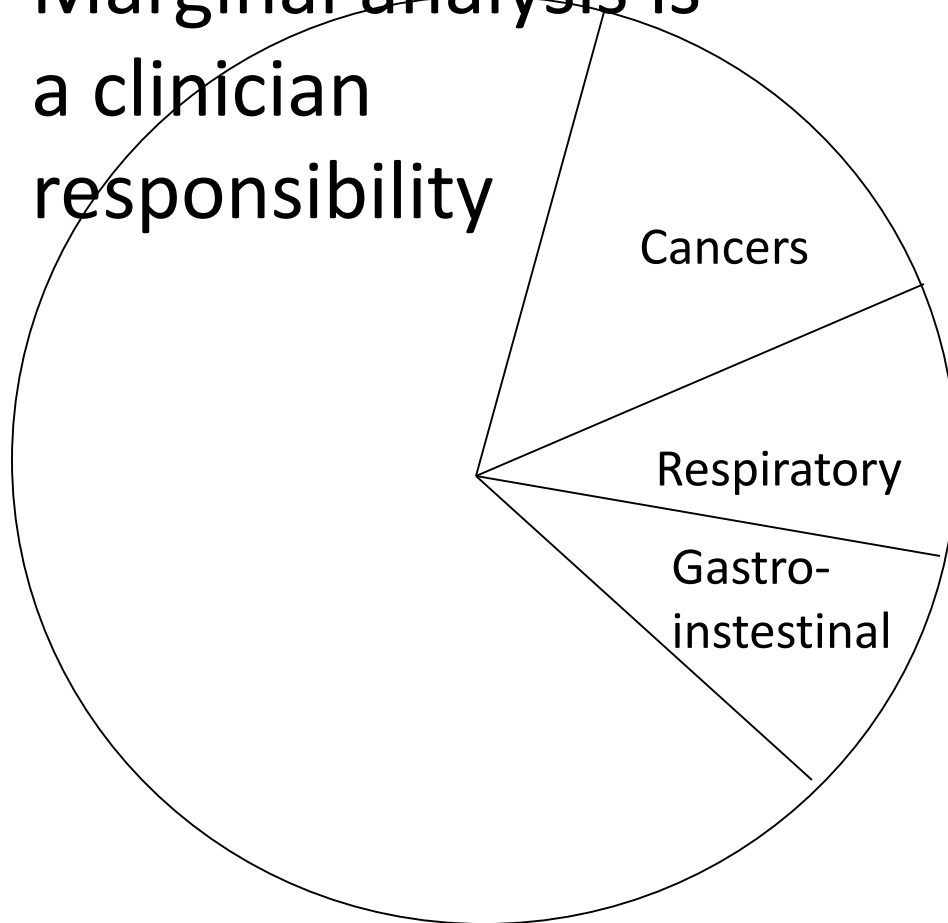
Mental Health

Cancer

Respiratory

Gastro-intestinal

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

Mental Health

Cancers

spiratory

Gastro-intestinal

Oxford

Within Programme, Between System Marginal analysis is a clinician responsibility

Cancers

Respiratory

Gastro-instestinal

Asthma

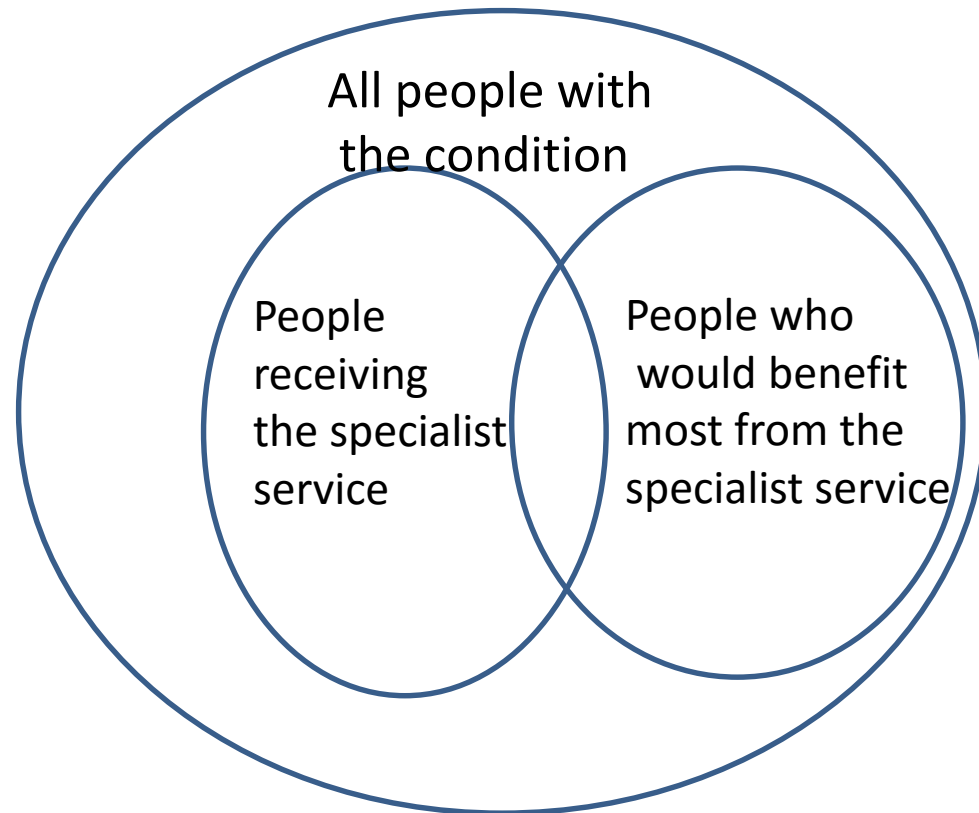COPD (Chronic Obstructive Pulmonary Disease)

Apnoea

THE RIGHTCARE METHOD OF INCREASING VALUE FOR POPULATIONS AND INDIVIDUALS IS BY

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
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3. Ensuring that those people in the population who will derive most value from a service reach that service

3. 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

All people with the condition

People receiving the specialist service

People who would benefit most from the specialist service

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

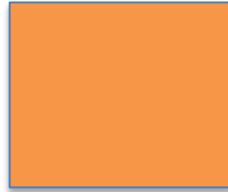THE RIGHTCARE METHOD OF INCREASING VALUE FOR POPULATIONS AND INDIVIDUALS IS BY

4. Implementation of high value innovation funded by reduced spending on lower value interventions for the population
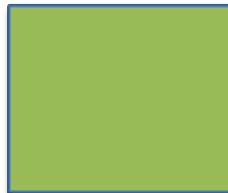
5. Increased rates of higher value intervention eg helping a higher proportion of people die well at home funded by reduced

Resources required for the innovation

4. Implementation of high value innovation eg troponin in heart disease funded by reduced spending on lower value intervention in the cardiovascular programme budget
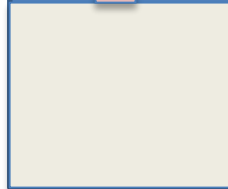
Innovation adopted
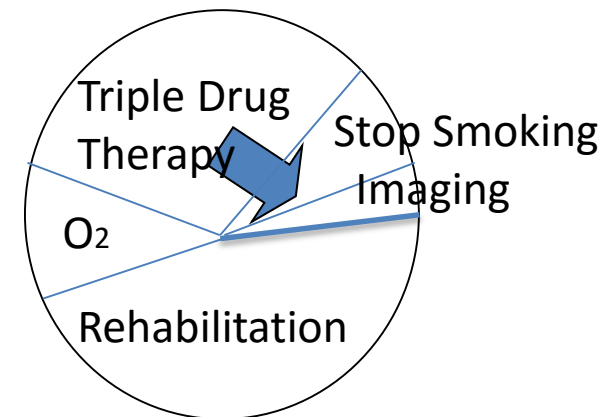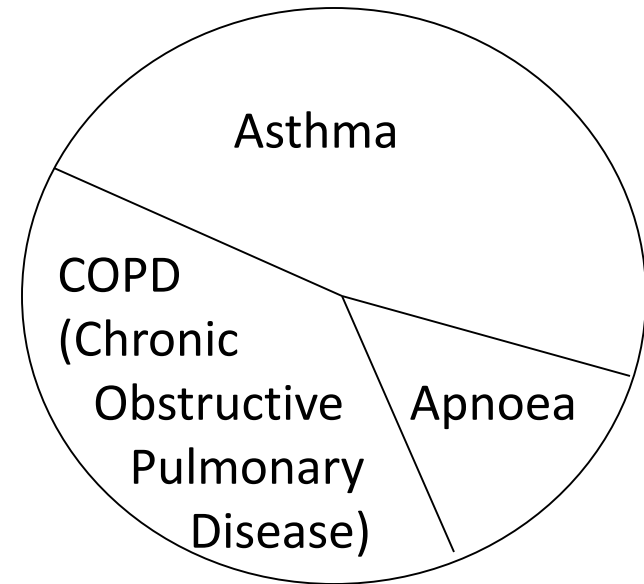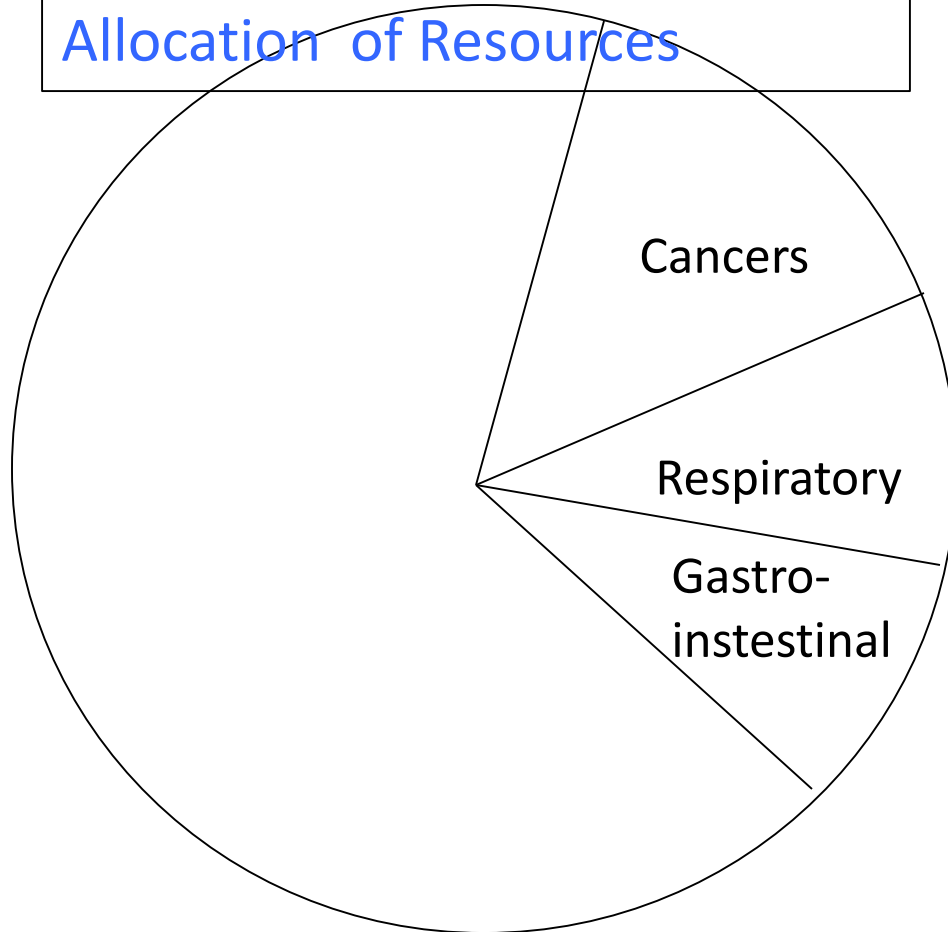
Resources freed by reducing lower value activity

and control of innovation of uncertain value by using the IDEAL method

THE RIGHTCARE METHOD OF INCREASING VALUE FOR POPULATIONS AND INDIVIDUALS IS BY

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Optimise resource use for each system by carrying out Within System Marginal Analysis Using the STAR tool – Socio Technical Allocation of Resources

Cancers

Respiratory

Gastro-instestinal

Asthma

COPD (Chronic Obstructive Pulmonary Disease)

Apnoea

Triple Drug Therapy

Stop Smoking Imaging

O_2

Rehabilitation

How well the individual felt they had been able to express what was bothering them most
How well they felt they had been listened to
How much the decision making took into account what mattered most to them

5. Increasing rates of higher value intervention funded by reduced spending on lower value eg

HIGHER LEVELS OF
- district nurses
- identification and treatment of people with atrial fibrillation
- promotion of activity among people with long term conditions
- prevention of a second fracture in people with fragility fractures

LOWER LEVELS OF
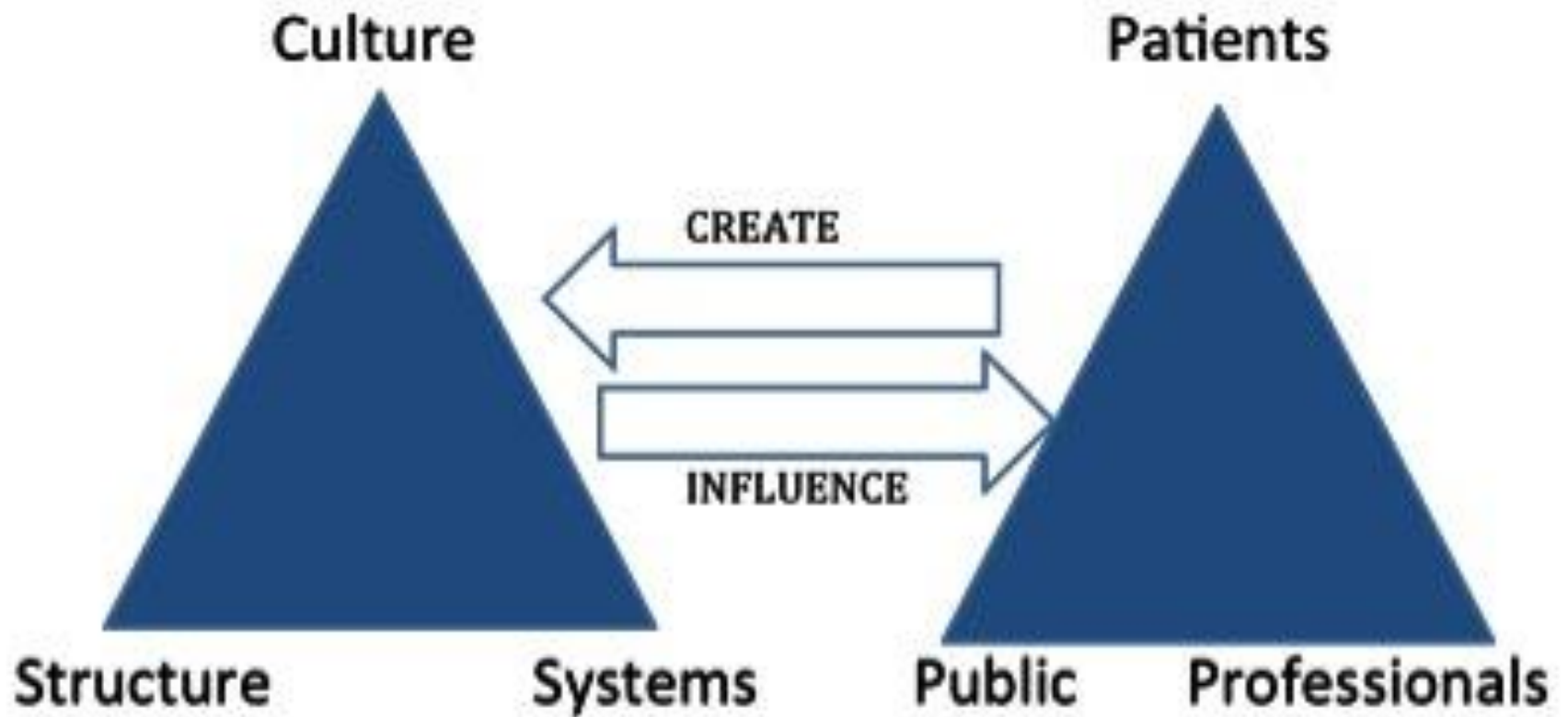- Polypharmacy
- Knee ligament arthroscopy
- Unnecessary hospital follow ups
- Non generic prescribing

We need

new systems
a new culture
New skills

Culture

Patients

CREATE

Structure   Systems

Public   Professionals

INFLUENCE

1.Is the service for people with seizures & epilepsy in Manchester of higher value than the service in Liverpool?

2. Who is responsible for service for all the women with pelvic pain in South Yorkshire?

3.How many liver disease services are there in England and how many should there be?

4.Which service for people at the end of life in the North West provides the best value?

5. Is the service for people with asthma in Cumbria of higher value than the service in Northumberland?

6.Who is responsible for the quality outcome and value of the service for people with depression in Manchester?

The Care Archipelago

Primary ⟷ Secondary ⟷ Tertiary
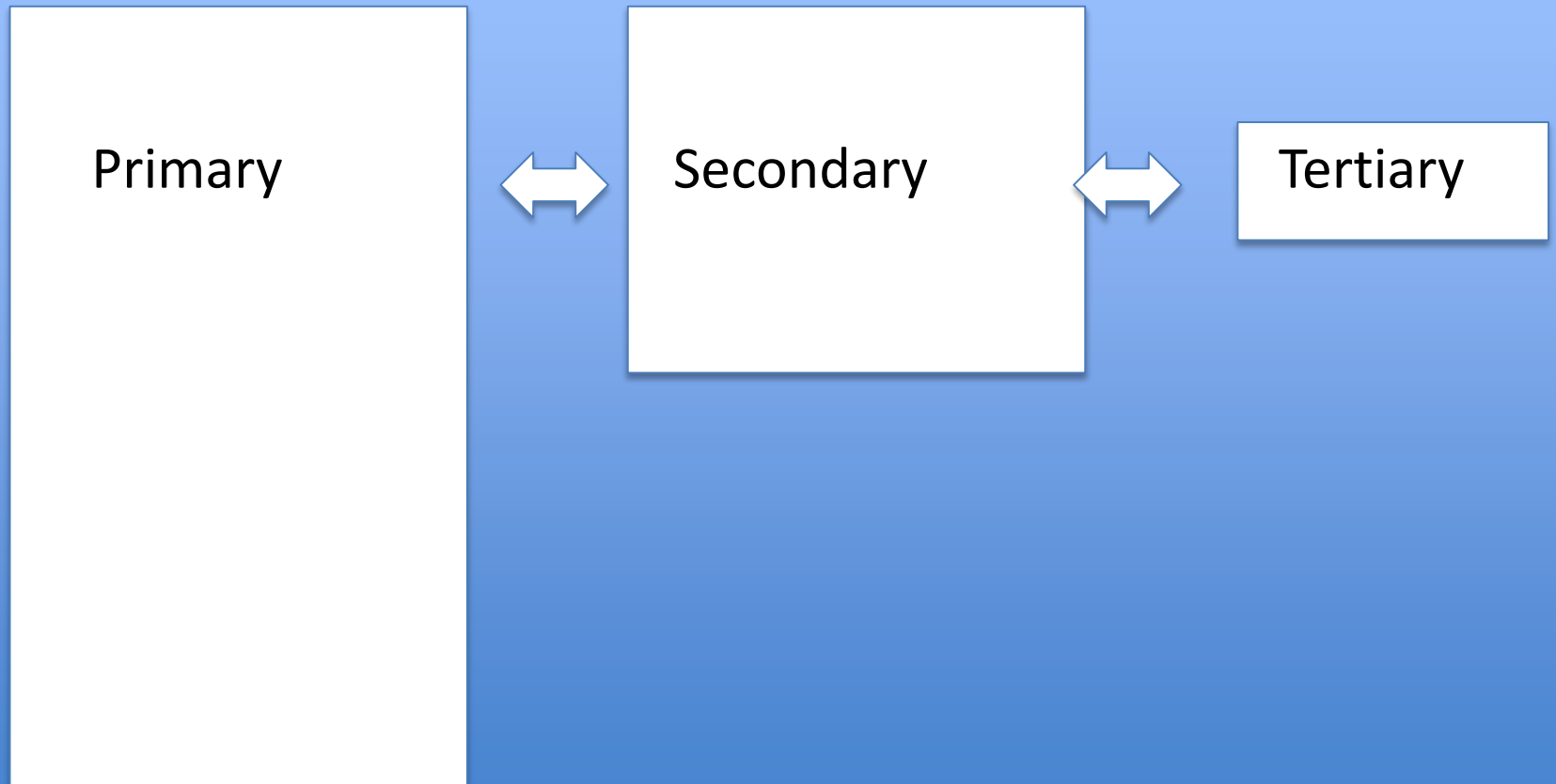
The Commissioning Archipelago

GP/ Pharmacists/ optometrists

152 Local Authorities

211 CCG's

Public Health

Specialist commissioning

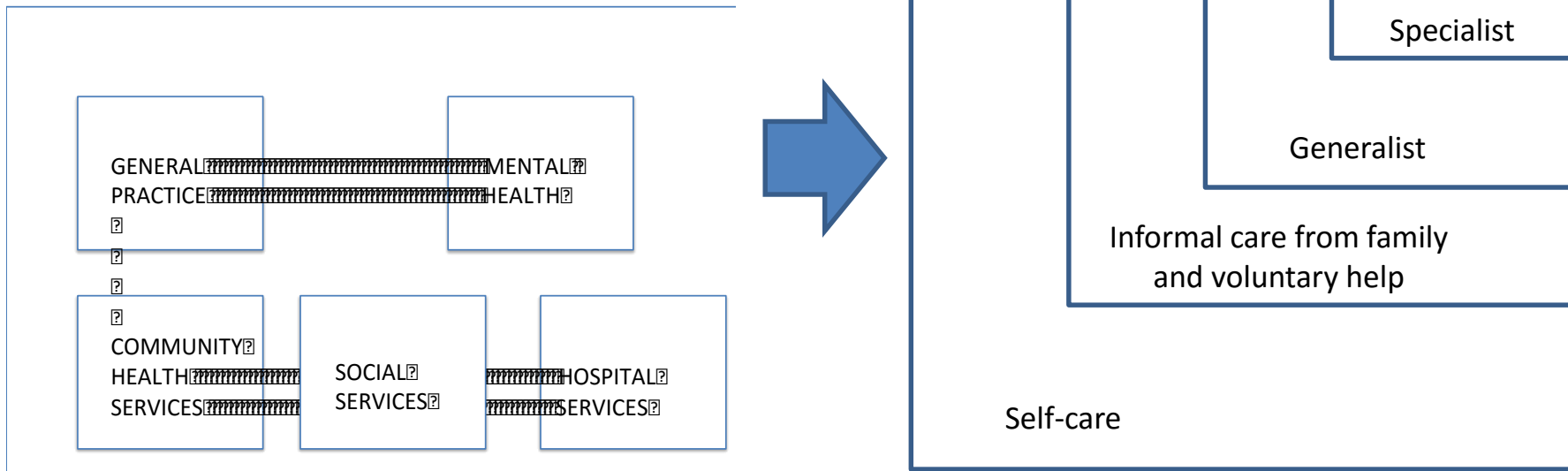JURISDICTIONS ⟷ INSTITUTIONS

PROFESSIONS

REGULATORS AND INSPECTORS
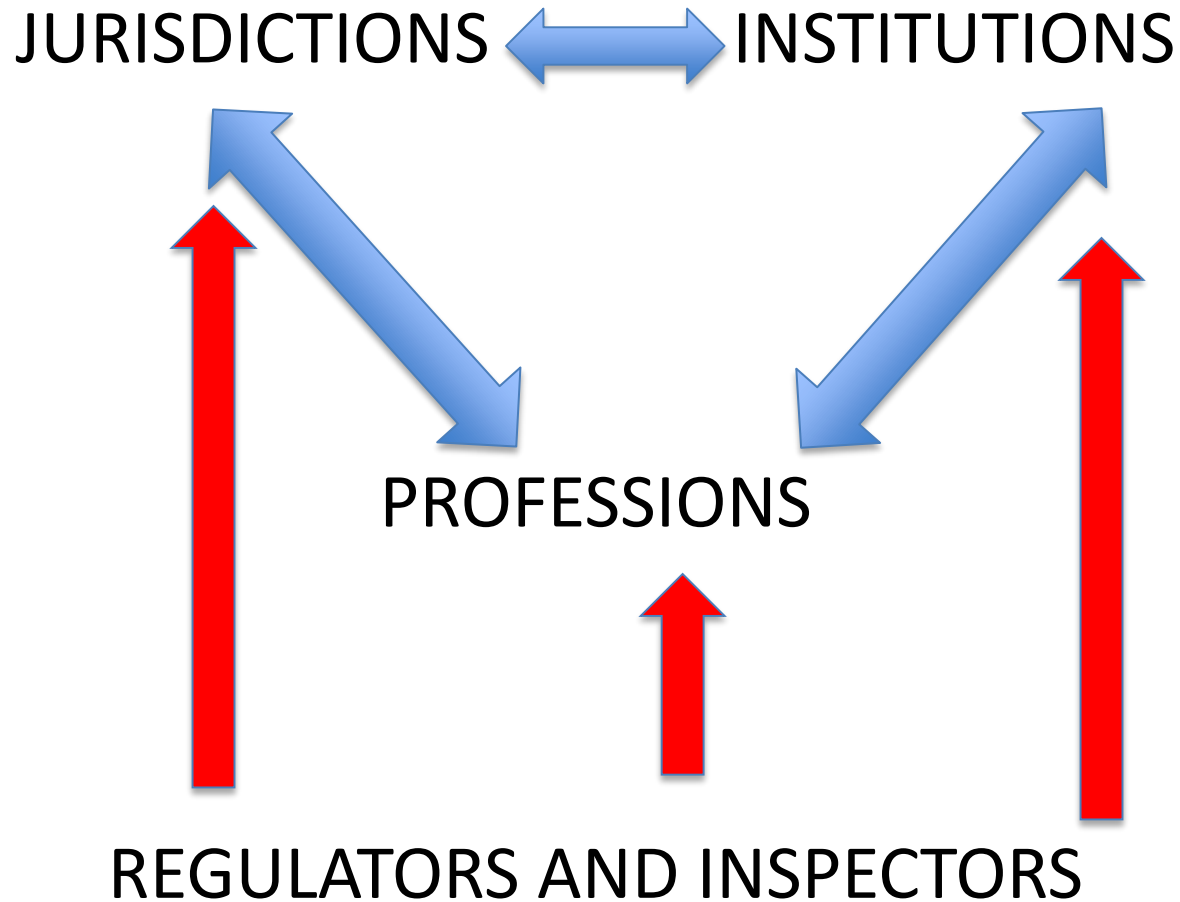
Complexity is the dynamic state between order and chaos

Kieran Sweeney, Complexity in Primary care

New Models of care will ensure that People receive care that is co-ordinated around their needs and supports them to live the lives they want to lead

The Care Archipelago

GENERAL PRACTICE

MENTAL HEALTH

COMMUNITY HEALTH SERVICES

SOCIAL SERVICES

HOSPITAL SERVICES

Super Specialist

Specialist

Generalist

Informal care from family and voluntary help

Self-care

Population healthcare focuses primarily on delivering care to 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
and New Models of Care are evolving to meet the needs of populations and individuals

Chaos……..Complexity……..Order

Services for homeless
people

Services for people
With physical and mental
Co-morbidity

People who are
elderly and frail

People with pelvic pain
People with dizziness

People with multiple morbiditiy
who are alert and online

People with atrial fibrillation

young men with lower limb
fractures from football

Screening for cervical ca
Immunisation

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

BVHC

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

BVHC
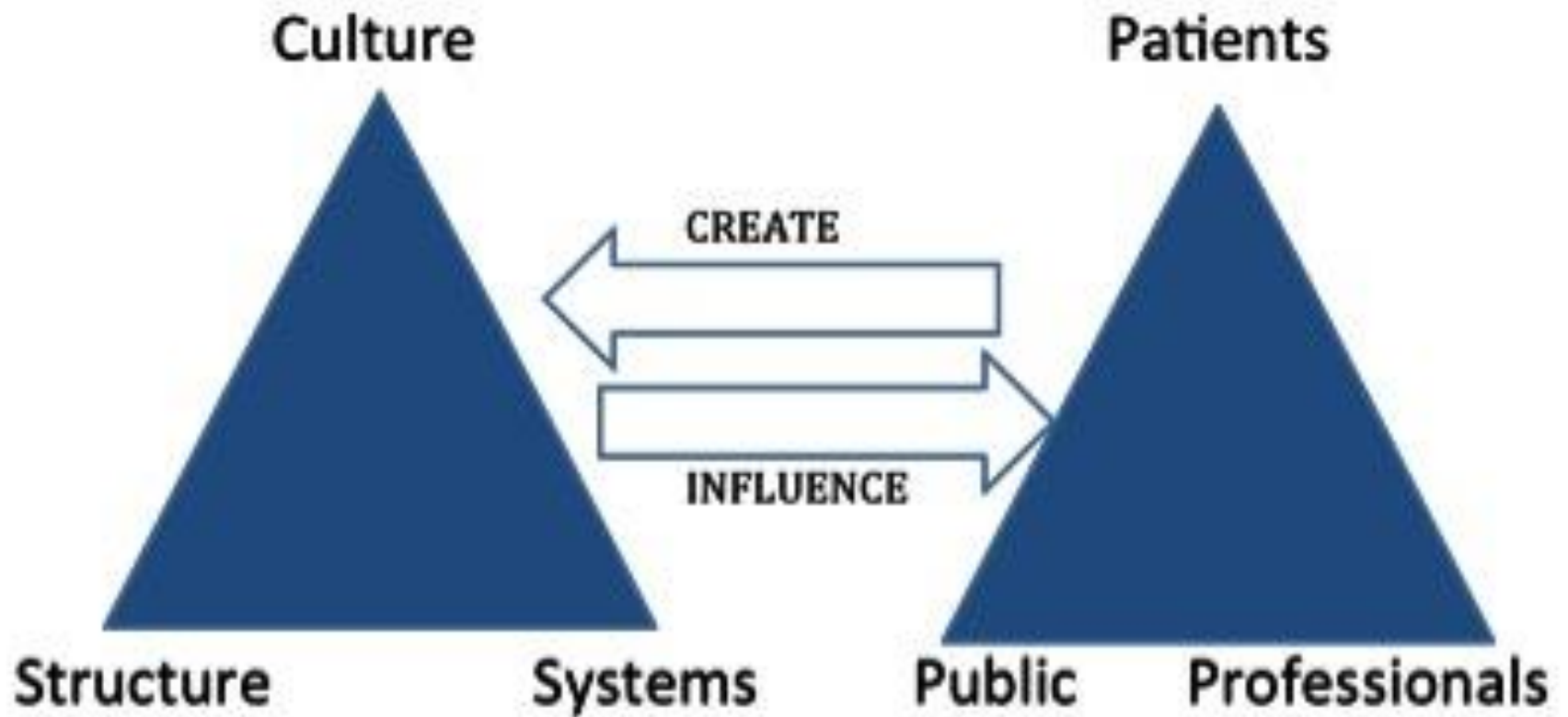
WE NEED A NEW CULTURE

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

BVHC

"Waste (muda) is anything that does not add value to the outcome" Taiichi Ohno

Previous   Next   Zoom   Move   Text   Select   Annotate   Sidebar   Search

BetterValueHealthcare Podcast Library

BVHC

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Released Wednesday 14 December

What does Toyota mean by the word waste?

Book review by Sir Muir Gray

0:00 ▶

Download mp3

Access learning record

Taiichi Ohno

TOYOTA PRODUCTION SYSTEM
Beyond Large-Scale Production

The Toyoda family played a dominant part in the history of the Toyota Motor Corporation, always honourable and positive, but there were other key people apart from family members who made the company what it is today.

The most famous of these is Taiichi Ohno, charismatic, ferocious and relentless personality who developed the Toyota Production System and waged unrelenting war on *muda*.

The stories are legion. For example, when he thought there was too much inventory space beside a production line, one of the seven types of wastes, he got an electric saw and simply cut the twelve foot high stacks of shelves down to six feet, thus reducing the inventory space by 100% – problem solved.

His book The Toyota Production System should really be

Microso

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?

Deliver Care through High Quality, Population Based Systems

Develop clinician's focus on population served

LOWER VALUE (BUREAUCRACY BASED CARE)

DIGITALLY DELIVERED EVIDENCE & INTEGRATION

HIGHER VALUE (PERSONALISED & POPULATION BASED CARE)

Personalise Care & Decision – making

Create a culture of Stewardship, Financial & Carbon