Progress on public health and health inequalities? Looking back and looking forward

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9th February 2018

ADPH Yorkshire and the Humber conference, Cloth Hall Court, Leeds

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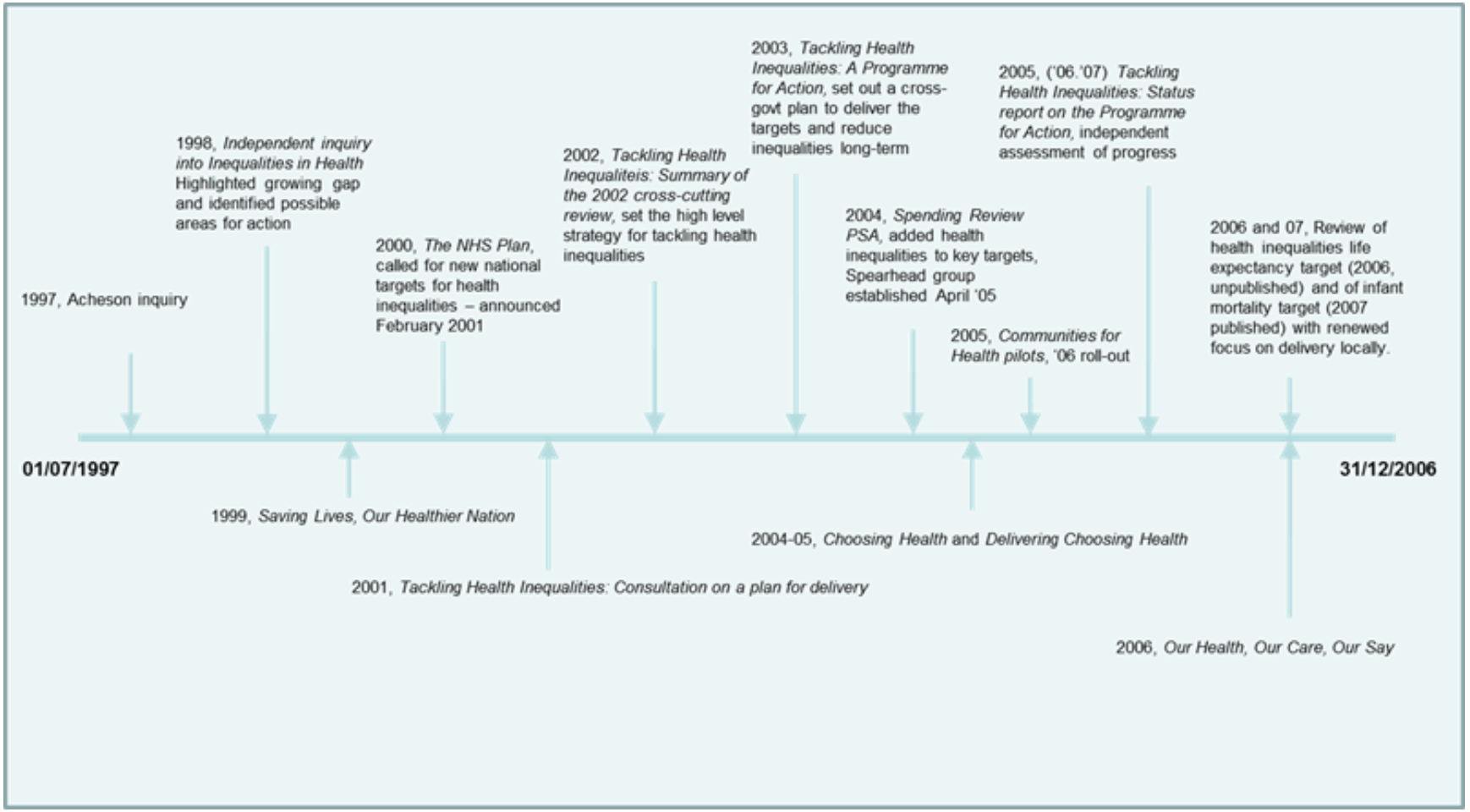
Ideas that change health care

Running order

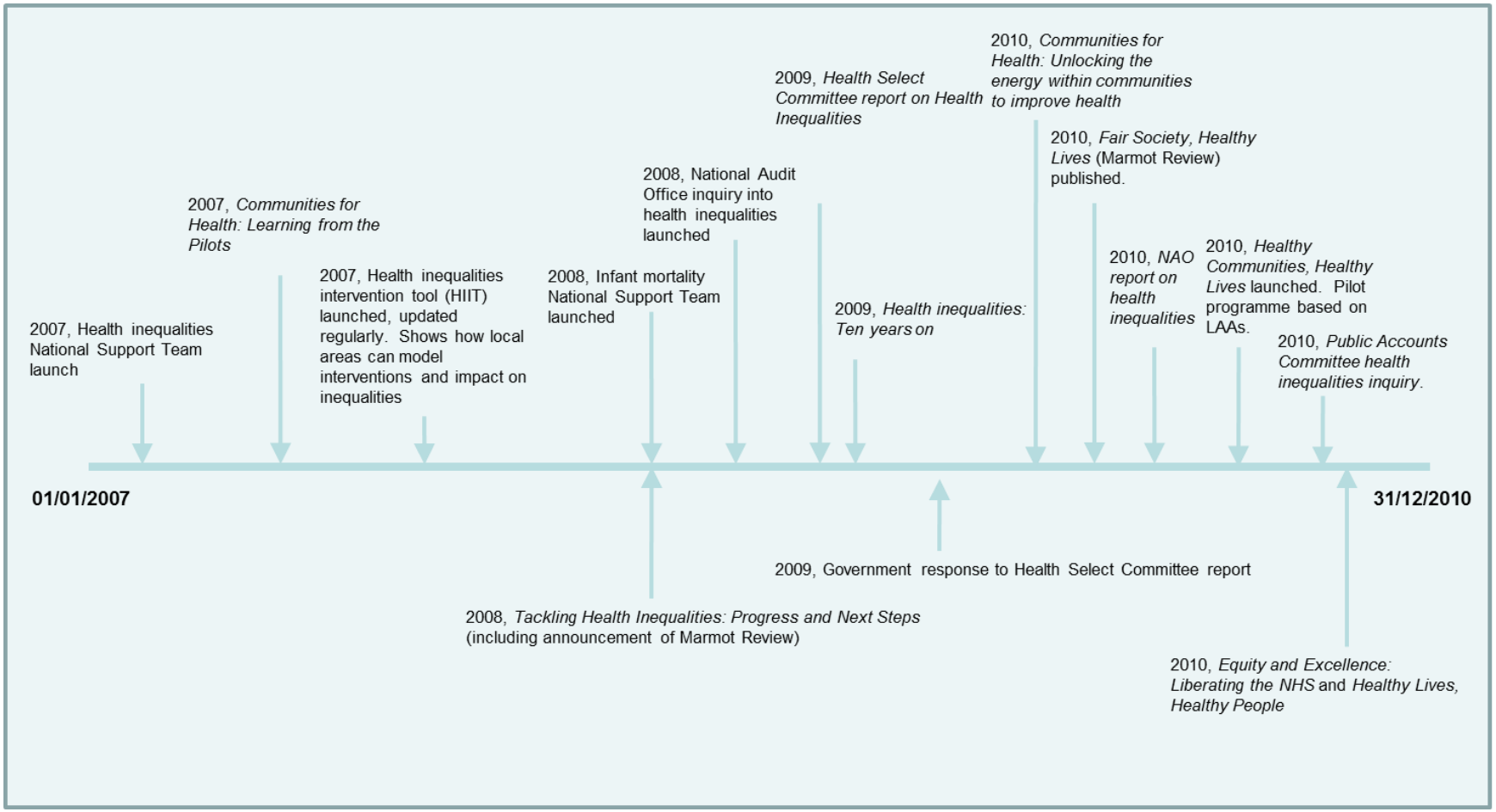
1. Where we've been
    - 1997-2010
    - 2010-15
2. Where we are now
3. Where we should be heading, some thoughts
    - Keep looking back
    - Integration
    - Putting the NHS in its place
    - Behaviours, focus on people not behaviours
    - Towards connected population health systems

Labour 1997-2010

1997-2003, lots of "talk"



2006-2010, lots of "action"



A focus on targets (with some money)

"Starting with local authorities, by 2010 to reduce by at least 10 per cent the gap in life expectancy between the fifth of areas with the worst health and deprivation indicators (the spearhead group) and the population as a whole."

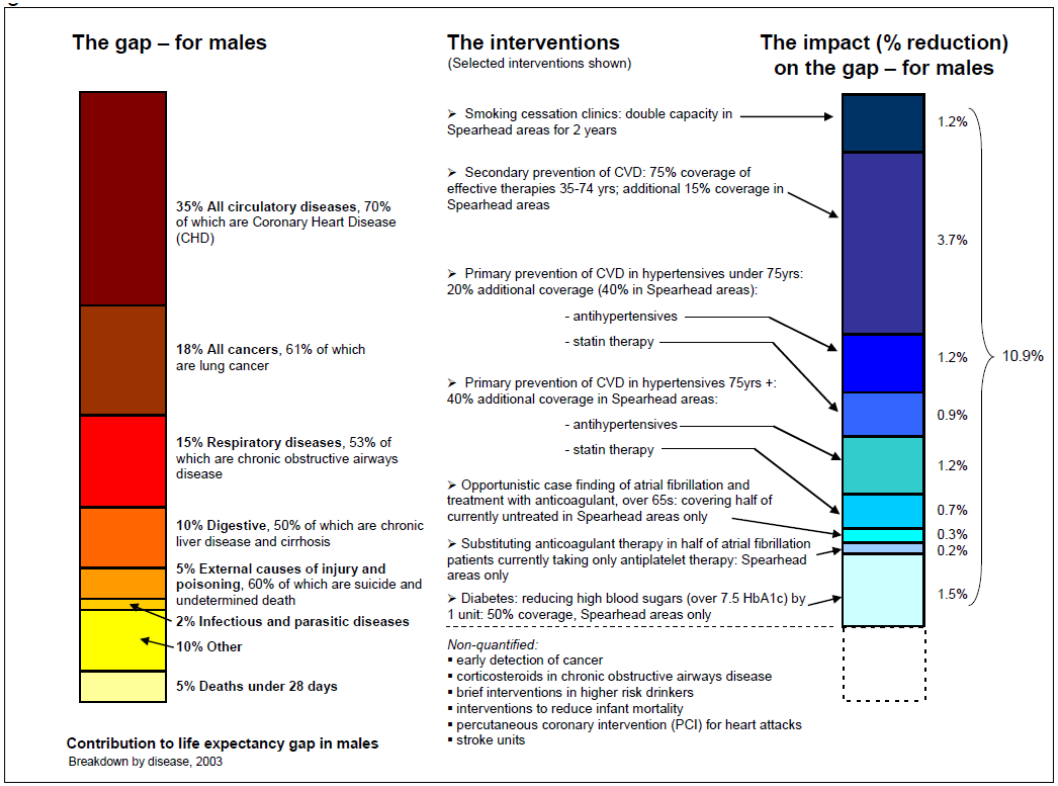
"Starting with children under one year, by 2010 to reduce by at least 10 per cent the gap in mortality between the routine and manual group and the population as a whole."[1]

- **Operationalised through**
  - Definition of Spearhead local authorities
  - More specific money (in the early years) on top of allocations (already weighted for deprivation)
  - Performance management of the NHS (of SHAs)
  - Performance support to the NHS (with partners) including analytic tools, National Health Inequalities Support Team
  - Wider strategy across govt ('A Programme for Action'), with local authorities and future strategy (commissioning of Fair Society, Healthy Lives, aka Marmot Review)

..main focus scaled up secondary prevention

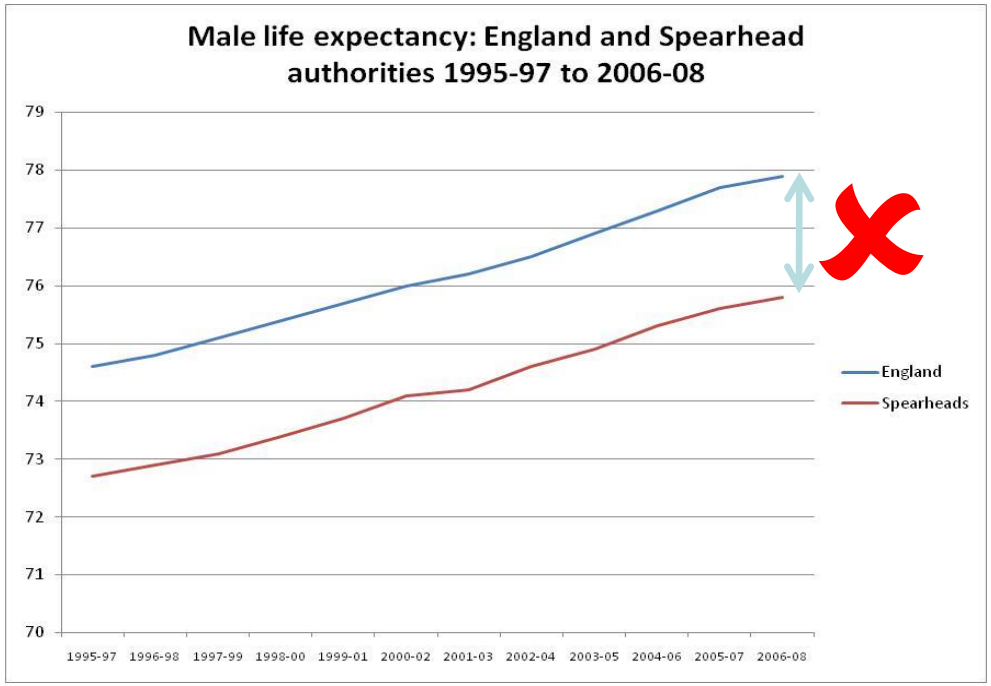
- Good treatment in primary care is the chief way to quick wins in narrowing life expectancy gaps

Department of Health modelling of the life expectancy gap between the most deprived areas with health inequalities problems (former "Spearheads") and England and the evidence of what can close the gap



The NAO evaluated Labour's time in office

- Main* target to narrow gap in life expectancy by 10% between Spearheads and non-Spearheads



* Other element an infant mortality target, it was met, after initial widening. Although important in itself, in scale terms for most areas, the infant mortality target is quantifiably much less significant, and not discussed here.

Evaluation – the target

- NAO 2010
  - A "serious attempt", but started too late
  - At the end DH knew what to do, in terms of NHS role, but failed to do it

- Machenbach 2011
  - Did not address the most relevant "entrypoints", or appropriate scale
  - Hampered by lack of evidence on interventions, "*reducing health inequalities is much more difficult than most researchers had for-seen*."

- McGuire et al 2011
  - Self-assessed health, long-standing illness and health limitations didn't improve in Spearheads compared to non
  - Arguably though, these were not the focus of the targets or interventions associated with it..

Coalition 2010-15

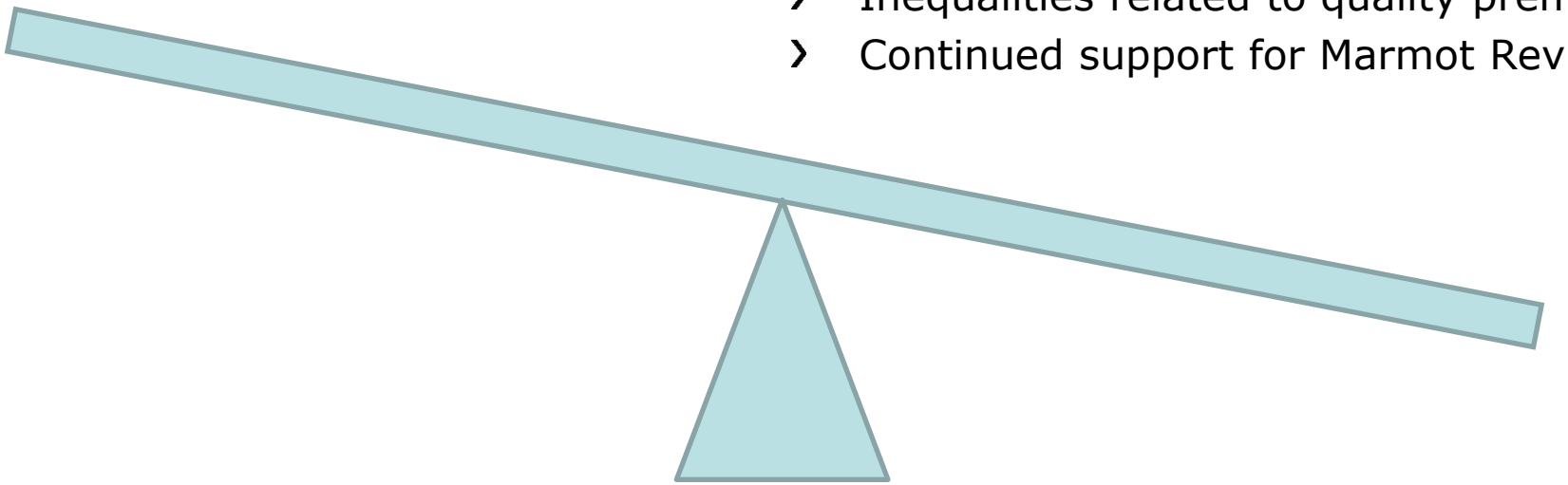
The government's response to inequalities

End of targets and performance management

- End of inequalities targets
- End of support (e.g. NSTs)
- Reduction in inequalities weighting

More focus on incentives

- New inequalities duties for NHS
- Health premium with inequalities focus
- Inequalities in NHSOF/PHOF
- Inequalities related to quality premium
- Continued support for Marmot Review



The Coalition's record on inequalities in health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Good progress? The coalition's track record on inequalities in health

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David Buck
Senior Fellow, Public Health and Inequalities

9 April 2015
5 comments

One of the early mantras of the coalition government was the intention to 'improve the health of the poorest, fastest'. So where have we got to with this ambition, and more broadly, with inequalities in health?

- ☑ Legislation in Health and Social Care Act 2012, a new duty on system to have due regard to inequalities in health
- ☑ NHS England beginning to use its operational independence – putting more weight on deprivation in NHS resource allocation and more focus on representativeness of its own workforce
- ☑ Some of the structures and tools are in place, if used. For instance PHE, local authority role (with funding), Health and Wellbeing Boards, new legislation
- ☑ HWBs "get Marmot" (but yet to move to significant action as opposed to strategic decisions)

The Coalition's record on inequalities in health

- ☒ Legislation hasn't bitten, despite warm words in NHS mandate, Dept of Health has not held the system to account for reductions in inequalities in health outcomes
- ☒ An opportunity missed, NHS England as a monopoly purchaser of primary care could have been transformative in focussing primary care on inequalities reduction
- ☒ Setting up PHE was assumed to "sort inequalities in health" in and of itself, health premium incentive risible (regardless of views on desirability), MECC not a national priority
- ☒ Wider government role inequalities creation, and solution, has been largely ignored – cross-government sub-committee on public health (where HIAs could have happened) abolished
- ☒ Overall, a clutch of disconnected, under-powered sub-strategies, not helped by fragmentation of system leader role

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Ideas that change health care

The Coalition's record on inequalities in health

"The coalition's own brief assessment of its record is buried in the Department of Health's annual accounts, stating 'good progress' has been made to 'embed action on inequalities across the system'. There is some truth in this, including legislative change and the Workforce Race Equality Standard. But across the term, the lack of a coherent strategy and translating that into accountability means the initial rhetoric has not been lived up to."

Where are we now?

The Department's 2016-17 annual report

Indicator	Inequality by area deprivation (measured by the slope index of inequality)			Latest data compared to...	
	Baseline	Previous	Latest	Baseline	Previous
Life expectancy at birth (males)	9.1	9.1	9.2	Widened	Widened
Life expectancy at birth (females)	6.8	6.9	7.1	Widened	Widened
Healthy life expectancy at birth (males)	18.6	18.9	18.9	Widened	Static
Healthy life expectancy at birth (females)	19.1	19.7	19.6	Widened	Narrowed
Potential years of life lost from causes am healthcare – ad 100,000)	2,817	-	3,194	Widened	-
Life expectancy males (years of					
Life expectancy females (years					
Under 75 morta from cardiovasc disease (per 10					

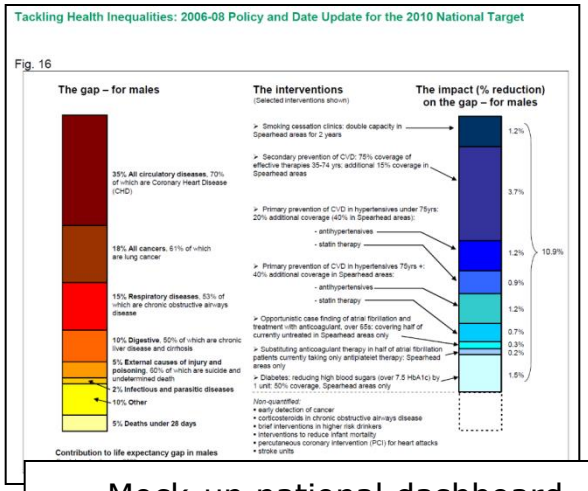
Indicator	Inequality by area deprivation (measured by the slope index of inequality)			Latest data compared to...	
	Baseline	Previous	Latest	Baseline	Previous
Under 75 mortality rate from cancer (per 100,000)	103.9	103.5	105.5	Widened	Widened
Infant mortality (per 100,000)	3.0	2.7	3.1	Widened	Widened
Health-related quality of life for people with long-term conditions (health status score)	0.149	0.150	0.153	Widened	Widened
Unplanned hospitalisation for chronic ambulatory care sensitive conditions (per 100,000)	978	1,009	1,007	Widened	Narrowed
Emergency admissions for acute conditions that should not usually require hospital admission (per 100,000)	932	952	965	Widened	Widened
Patient experience of GP service (% reporting good experience)	5.2	6.5	7.4	Widened	Widened
Access to GP services (% reporting good experience of making appointments)	5.2	6.8	8.2	Widened	Widened

Source: Adapted from Table 8 , Department of Health Annual Report and Accounts 2016 to 2017

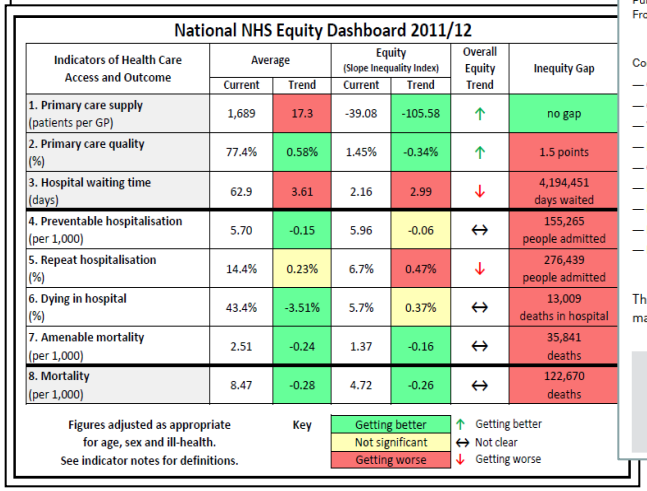
- Inequalities on all 15 indicators have widened since baseline (mostly 2010-12)
- For 9 of the 12 for which there has been some mid-point measurement since baseline, latest data shows widening since that mid-point.
- NB. Point estimates, not confidence intervals

A lost 7 years...?

- Could have built on large store of knowledge, using the legislation, NHS mandate and PHE remit letter to deliver using these and other tools



Mock-up national dashboard



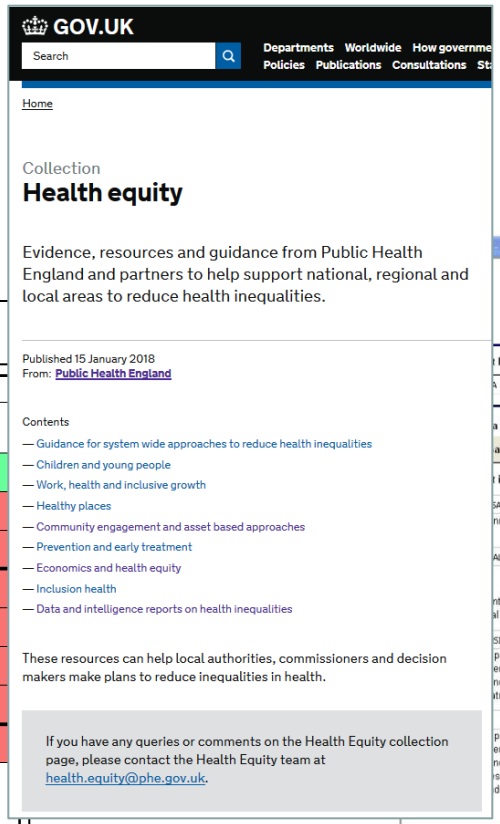
National NHS Equity Dashboard 2011/12

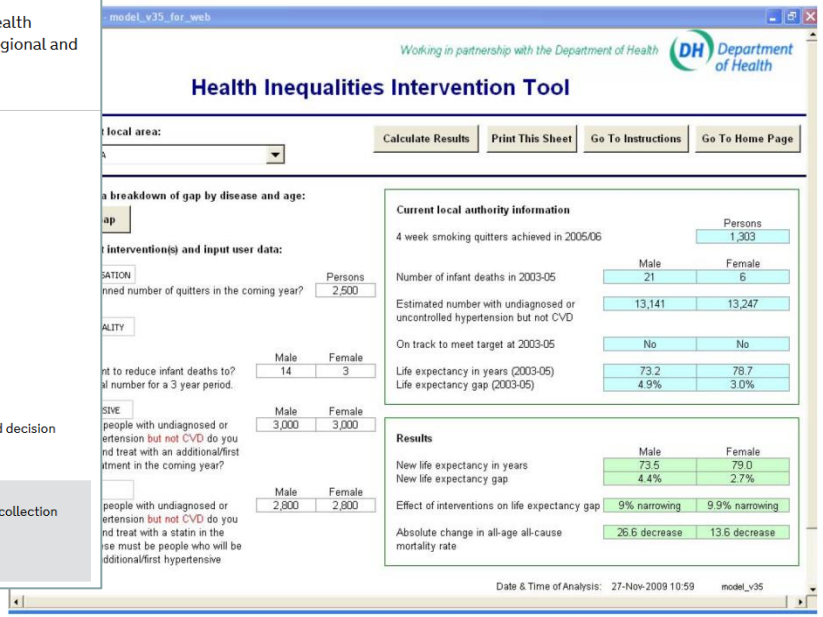
Indicators of Health Care Access and Outcome	Average		Equity (Slope Inequality Index)		Overall Equity Trend	Inequity Gap
	Current	Trend	Current	Trend		
1. Primary care supply (patients per GP)	1,689	17.3	-39.08	-105.58	↑	no gap
2. Primary care quality (%)	77.4%	0.58%	1.45%	-0.34%	↑	1.5 points
3. Hospital waiting time (days)	62.9	3.61	2.16	2.99	↓	4,194,451 days waited
4. Preventable hospitalisation (per 1,000)	5.70	-0.15	5.96	-0.06	↔	155,265 people admitted
5. Repeat hospitalisation (%)	14.4%	0.23%	6.7%	0.47%	↓	276,439 people admitted
6. Dying in hospital (%)	43.4%	-3.51%	5.7%	0.37%	↔	13,009 deaths in hospital
7. Amenable mortality (per 1,000)	2.51	-0.24	1.37	-0.16	↔	35,841 deaths
8. Mortality (per 1,000)	8.47	-0.28	4.72	-0.26	↔	122,670 deaths

Figures adjusted as appropriate for age, sex and ill-health.
See indicator notes for definitions.

Key: Getting better / Not significant / Getting worse

↑ Getting better
↔ Not clear
↓ Getting worse





Looking forward

Looking forward

1. Some themes
    - Don’t be afraid to look back!
    - Integration has to be about inequality reduction
    - Putting the NHS in it’s place
    - Behaviour change people, not behaviour focussed
2. Bringing it together: towards connected population health systems
    - Goals and connections
    - ACOs/ACSs part of picture, not the whole picture

A range of assessments of 1997-2010 are coming…

- Ben Barr et al have looked at the impact of NHS funding on amenable mortality reductions

BMJ 2014;348:g3231 doi: 10.1136/bmj.g3231 (Published 27 May 2014) Page 1 of 10

RESEARCH

The impact of NHS resource allocation policy on health inequalities in England 2001-11: longitudinal ecological study

OPEN ACCESS

Ben Barr *senior clinical lecturer in applied public health*, Clare Bambra *professor of public health policy*[2], Margaret Whitehead *professor, and W H Duncan professor of public health*[1]

[1]Department of Public Health and Policy, Institute of Psychology, Health and Society, University of Liverpool, Liverpool L69 3GB, UK; [2]Department of Geography, Wolfson Research Institute for Health and Wellbeing, Durham University, Stockton on Tees, UK

- We are relooking at and updating some of Marmot's work, with a focus on what happened to the end of 2010 and others are looking at the long-term effect of the Spearhead policy
- My sense, is we will see a greater range of benefit than the NAO suggested

Change is possible – keep looking back

BMJ 2017;358:j3310 doi: 10.1136/bmj.j3310 (Published 26 July 2017) Page 1 of 8

RESEARCH

Investigating the impact of the English health inequalities strategy: time trend analysis

OPEN ACCESS

Ben Barr *senior clinical lecturer in applied public health research*, James Higgerson *research fellow*, Margaret Whitehead *WH Duncan professor of public health*

Department of Public Health and Policy, Institute of Psychology, Hea

Table 1| Trend in absolute inequalities in life expectancy between the most deprived local authorities and the rest of England, before, during, and after the health inequalities strategy. Trend is shown as the annual increase or decrease (minus values) in the absolute gap in life expectancy (months)

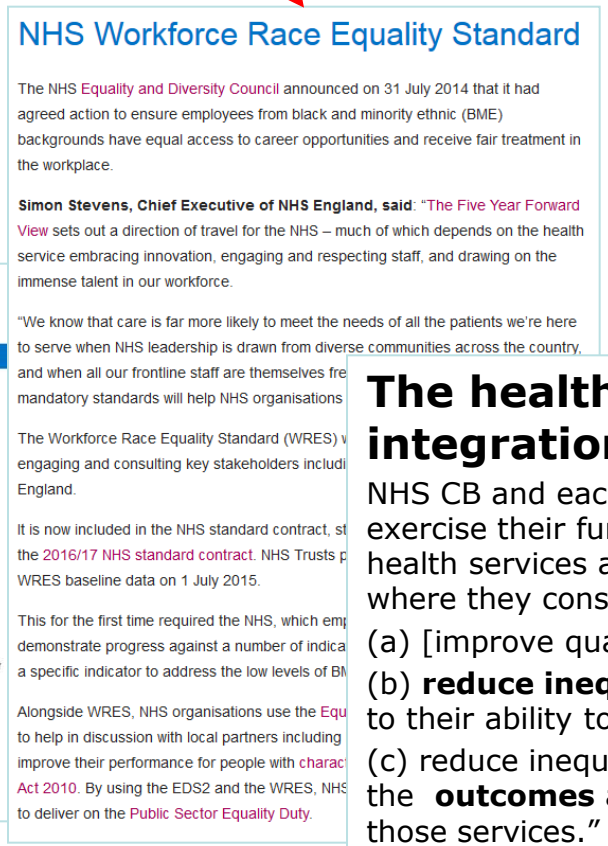
Period, by sex	Annual change (months) in absolute gap in life expectancy between most deprived 20% of LAs and rest of England (95% CI)	P value for trend	P value for change in trend from previous period
Men:			
Before (1983-2003)	0.57 (0.40 to 0.74)	<0.001	
During (2004-12)	−0.91 (−1.27 to −0.54)	<0.001	<0.001
After (2013-15)	0.68 (−0.20 to 1.56)	0.13	<0.001
n=10 692 LA years, R^2=0.74			
Women:			
Before (1983-2003)	0.3 (0.12 to 0.48)	<0.001	
During (2004-12)	−0.5 (−0.86 to −0.15)	0.01	<0.001
After (2013-15)	0.31 (−0.26 to 0.88)	0.29	0.01
n=10 692 LA years, R^2=0.65			

LA=local authority.

Estimates based on fixed effects regression model using LA panel dataset of life expectancy from 1983 to 2015, also adjusted for local unemployment rates.

There are multiple roles for the NHS

It's not just this



The health inequalities duty.. and integration

NHS CB and each clinical commissioning group must exercise their functions with a view to securing that health services are provided **in an integrated way** where they consider that this would -

(a) [improve quality];

(b) **reduce inequalities** between persons with respect to their ability to **access** those services; or

(c) reduce inequalities between persons with respect to the **outcomes** achieved for them by the provision of those services."

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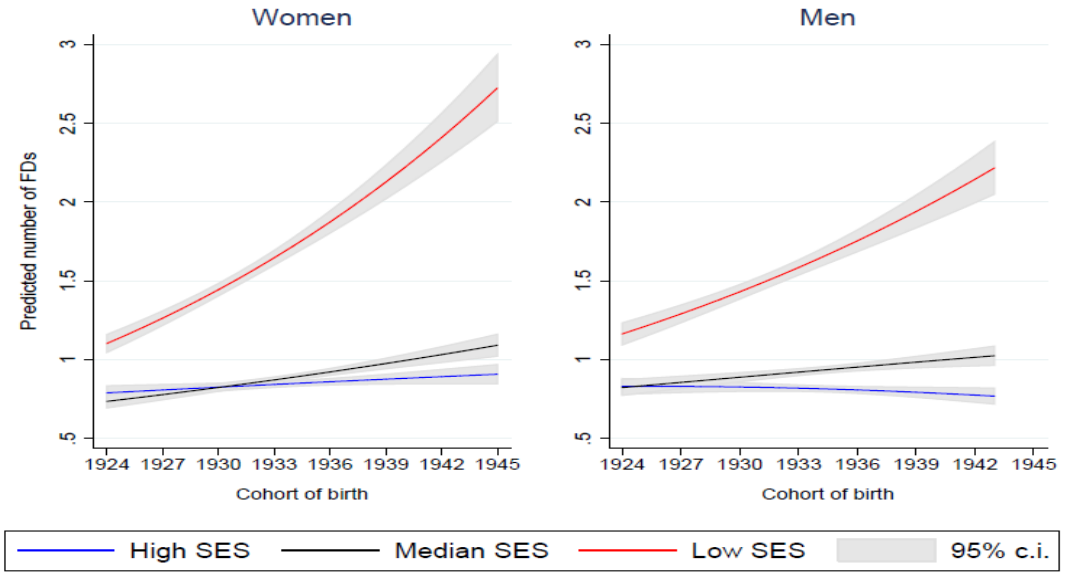
Integration needs to focus on inequality

- Frailty and functional decline is an inequalities problem

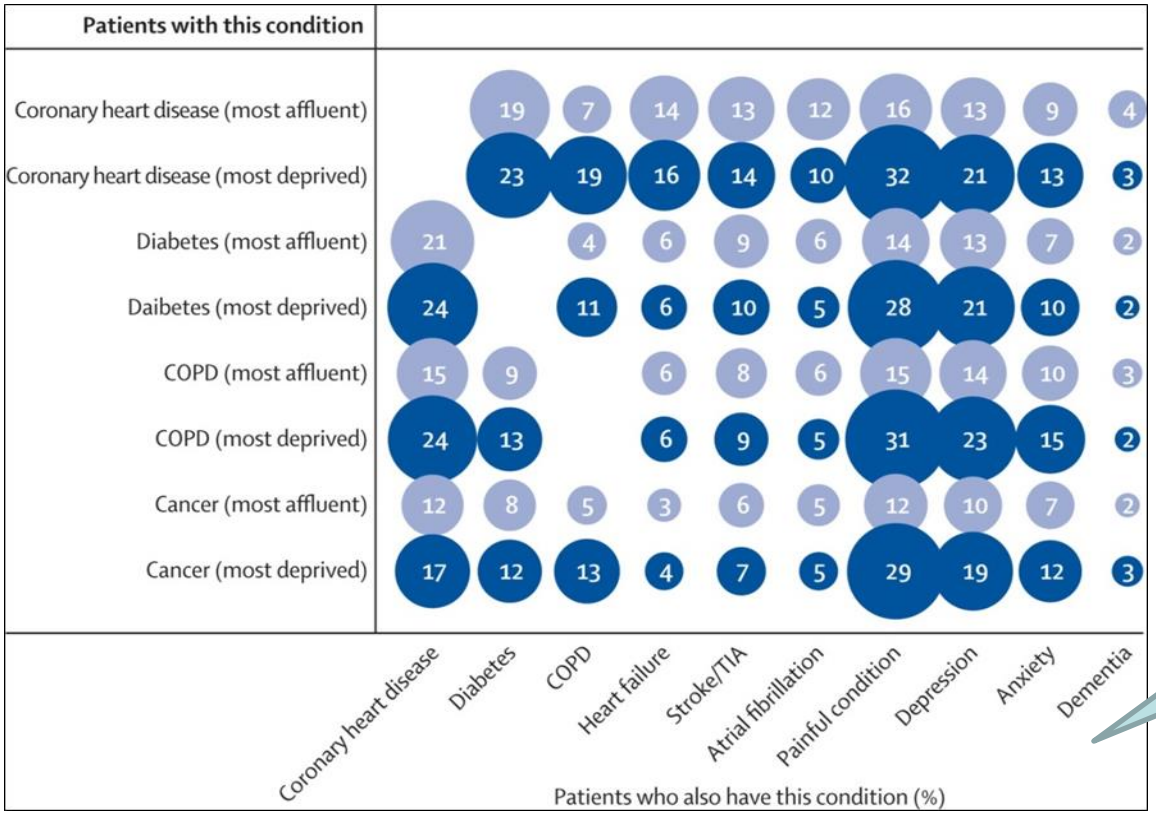
Figure 2: Predicted number of FDs by cohort of birth and SES



Notes: [a] For definition of High/Median/Low SES see text.

Integration needs to go back up the life-course

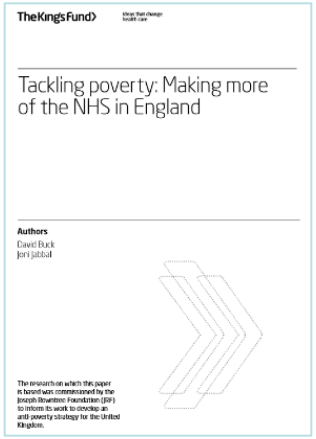
- Multi-morbidity is not only a frail elderly problem, it is a working age and inequality problem

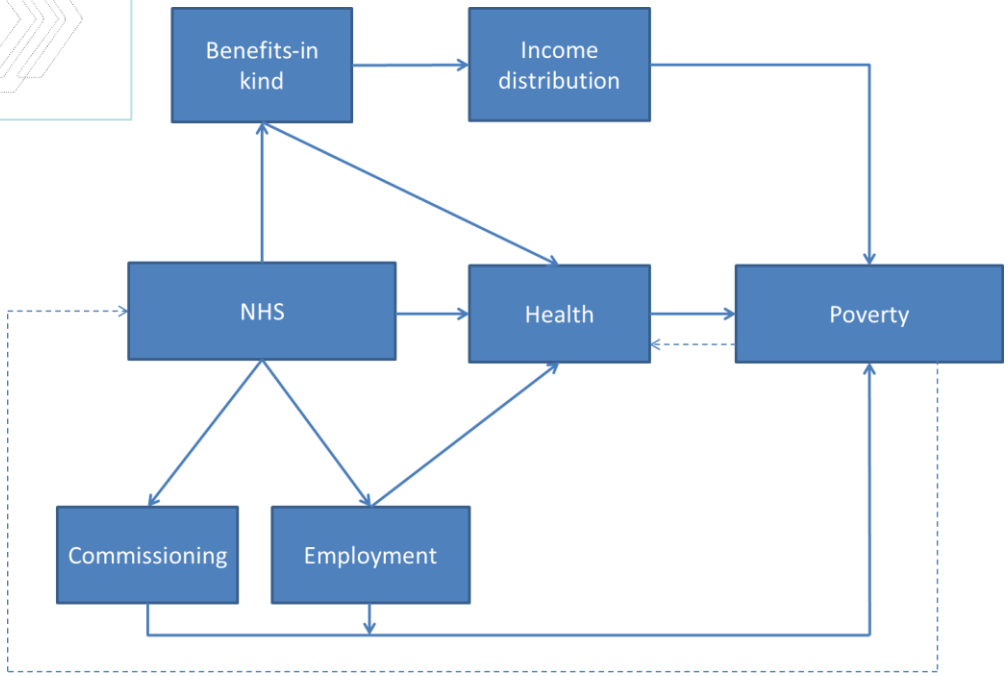


"Onset of multi-morbidity occurred 10–15 years earlier in people living in the most deprived areas compared with the most affluent, with socioeconomic deprivation particularly associated with multimorbidity that included mental health disorders"

Barnett et al, 2012

The NHS → recognised/accountable as determinant





- The very existence of the NHS narrows income inequalities across England by 13%
- The NHS spends £114mn of commissioning power and employs £1.4mn employees. This needs to work much harder for wider social value, not just treatment and not just lifestyle prevention.
- 1mn NHS employees are non-clinical. Only half of NHS trusts specify paying the "living wage" in their contracts.
- Healthcare spending has a higher fiscal multiplier effect than other government spending.

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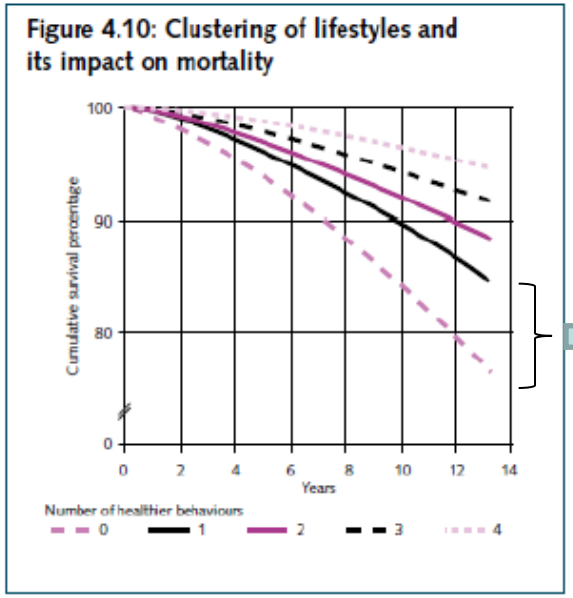
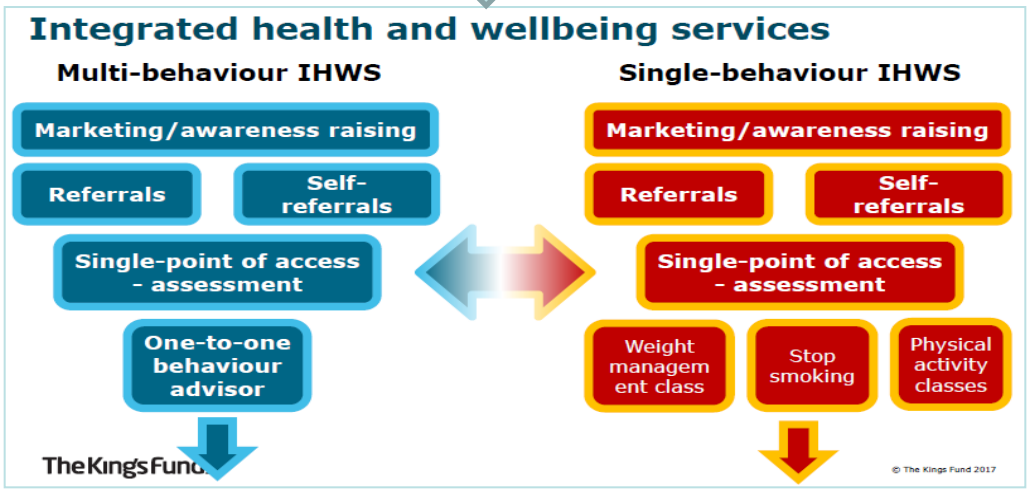
Ideas that change health care

Behaviours cluster → services need to adapt



- Co-occurrence of unhealthy behaviours effect on life expectancy greater than sum of the parts
- 1 in 4 adults 3+ unhealthy behaviours, those with 0 qualifications 5x more likely than those with degrees

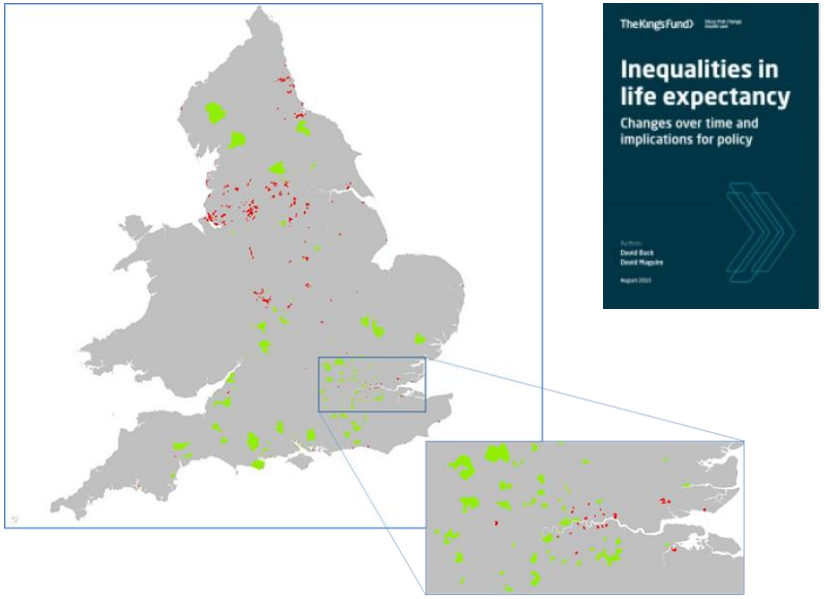


Wider determinants and ‘place’, of course

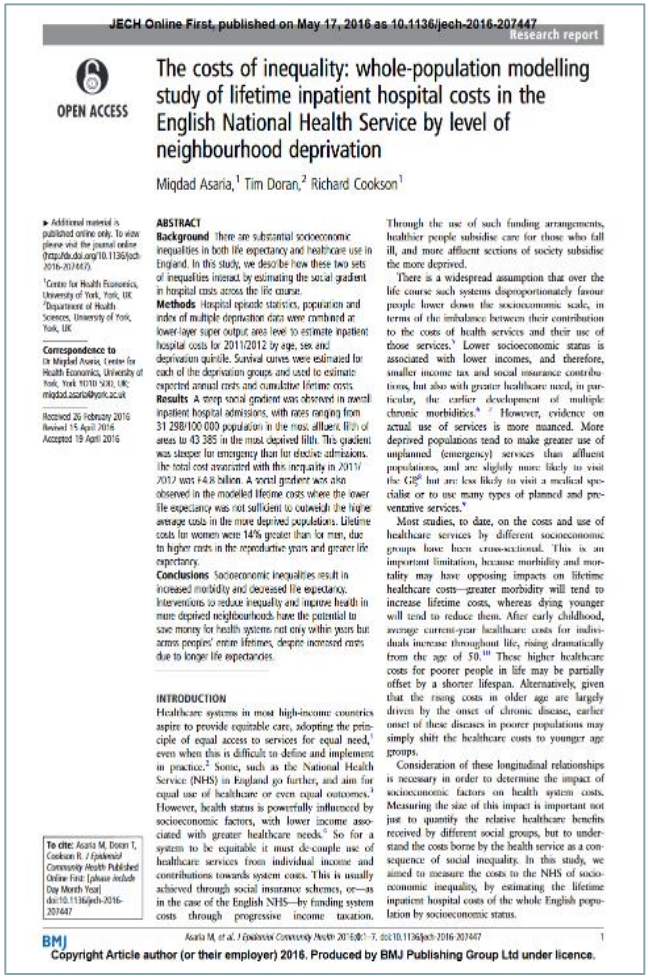
Table 2 What explains life expectancy in 2006–10 across 6,700 areas in England?

Explanatory factors		Impact of every 10 per cent difference between areas on months of life expectancy
Constant		85.3 (years, in absence of explanatory factors)
Wider determinants		
Older people's deprivation		-6.1
Employment deprivation		-11.8
Housing deprivation		-2.2
Behaviours		
Fruit and vegetable consumption		6.9
Binge drinking		-4.0
Services		
More than 1.1 miles from 'other services'		2.0
Demographics		
Male		-7.0
BME status non-white British		-0.9
		Impact of being in geographical area on life expectancy
Area variables		
Travel-to-work areas (suburbs)		
London		5.3
North West		-9.3
Travel-to-work areas (central)		
London		10.4
North West		-9.4
South West		-8.0
Other areas		
North West		-4.5
Yorkshire and Humber		-8.5
East Midlands		-4.2
West Midlands		-2.6
South West		5.1
Number of observations	6,700	
Adjusted R^2	0.44	

- London has areas of persistent significantly low and significantly high life expectancy over time.
- If in travel to work area of central London
  - 46x more likely to have persistently high life expectancy, all other things equal
  - 4x as likely to have low life expectancy, same basis



Not the reason for doing it, but good for NHS budget



JECH Online First, published on May 17, 2016 as 10.1136/jech-2016-207447

Research report

OPEN ACCESS

The costs of inequality: whole-population modelling study of lifetime inpatient hospital costs in the English National Health Service by level of neighbourhood deprivation

Miqdad Asaria,[1] Tim Doran,[2] Richard Cookson[1]

► Additional material is published online only. To view please visit the journal online (http://dx.doi.org/10.1136/jech-2016-207447).

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ABSTRACT

Background There are substantial socioeconomic inequalities in both life expectancy and healthcare use in England. In this study, we describe how these two sets of inequalities interact by estimating the social gradient in hospital costs across the life course.

Methods Hospital episode statistics, population and index of multiple deprivation data were combined at lower-layer super output area level to estimate inpatient hospital costs for 2011/2012 by age, sex and deprivation quintile. Survival curves were estimated for each of the deprivation groups and used to estimate expected annual costs and cumulative lifetime costs.

Results A steep social gradient was observed in mental inpatient hospital admissions, with rates ranging from 31 298/100 000 population in the most affluent fifth of areas to 43 385 in the most deprived fifth. This gradient was steeper for emergency than for elective admissions. The total cost associated with this inequality in 2011/2012 was £4.8 billion. A novel gradient was also observed in the modelled lifetime costs where the lower life expectancy was not sufficient to outweigh the higher average costs in the more deprived populations. Lifetime costs for women were 14% greater than for men, due to higher costs in the reproductive years and greater life expectancy.

Conclusions Socioeconomic inequalities result in increased morbidity and decreased life expectancy. Interventions to reduce inequality and improve health in more deprived neighbourhoods have the potential to save money for health systems not only within years but across peoples' entire lifetimes, despite increased costs due to longer life expectancies.

To cite: Asaria M, Doran T, Cookson R. *J Epidemiol Community Health* Published Online First: [please include Day Month Year] doi:10.1136/jech-2016-207447

INTRODUCTION

Healthcare systems in most high-income countries aspire to provide equitable care, adopting the principle of equal access to services for equal need,[1] even when this is difficult to define and implement in practice.[2] Some, such as the National Health Service (NHS) in England go further, and aim for equal use of healthcare or even equal outcomes.[3] However, health status is powerfully influenced by socioeconomic factors, with lower income associated with greater healthcare needs.[4] So for a system to be equitable it must de-couple use of healthcare services from individual income and contributions towards system costs. This is usually achieved through social insurance schemes, or—as in the case of the English NHS—by funding system costs through progressive income taxation. Through the use of such funding arrangements, healthier people subsidise care for those who fall ill, and more affluent sections of society subsidise the more deprived.

There is a widespread assumption that over the life course such systems disproportionately favour people lower down the socioeconomic scale, in terms of the imbalance between their contribution to the costs of health services and their use of those services.[5] Lower socioeconomic status is associated with lower incomes, and therefore, smaller income tax and social insurance contributions, but also with greater healthcare need, in particular, the earlier development of multiple chronic morbidities.[6 7] However, evidence on actual use of services is more nuanced. More deprived populations tend to make greater use of unplanned (emergency) services than affluent populations, and are slightly more likely to visit the GP,[8] but are less likely to visit a medical specialist or to use many types of planned and preventative services.[9]

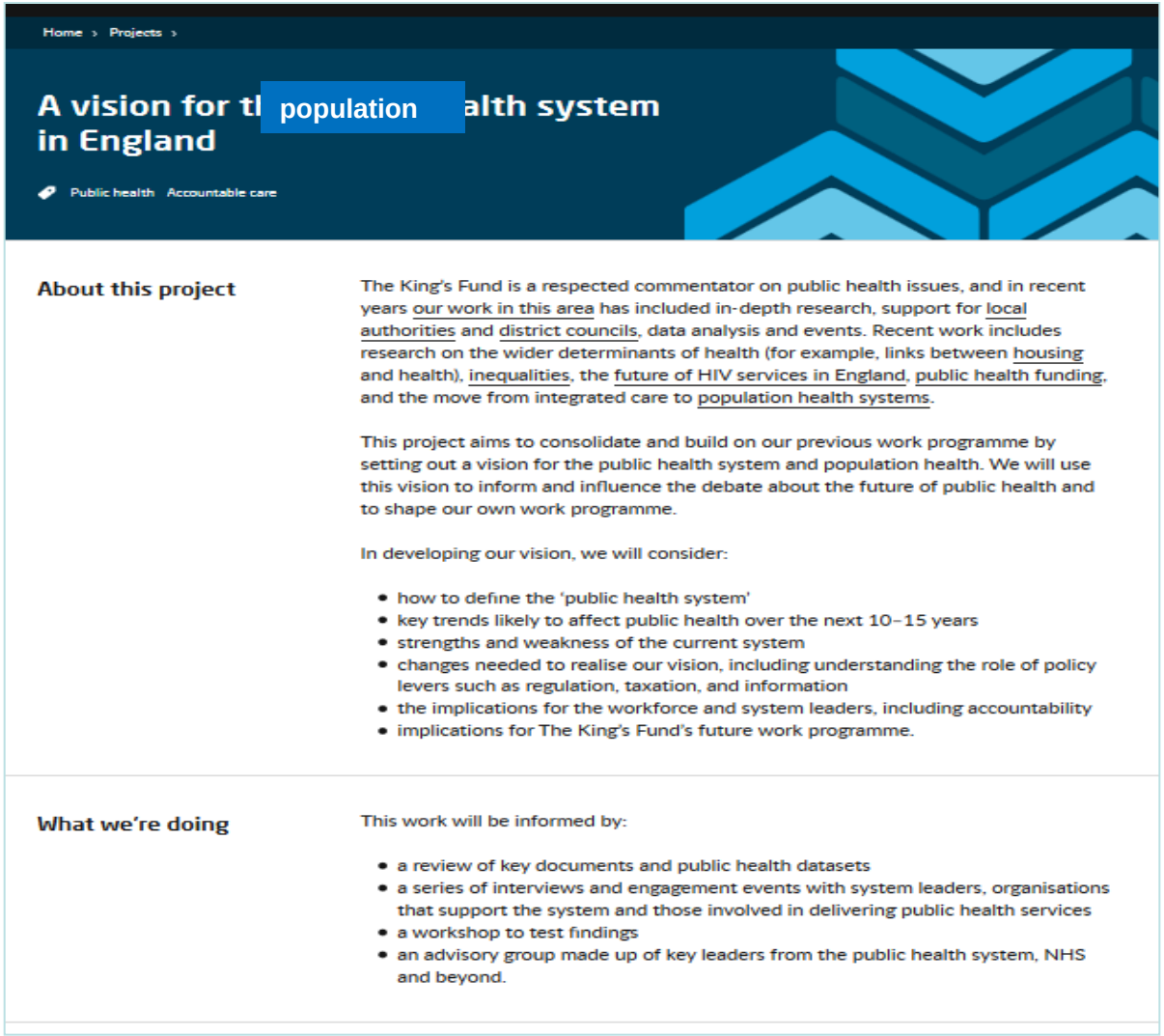
Most studies, to date, on the costs and use of healthcare services by different socioeconomic groups have been cross-sectional. This is an important limitation, because morbidity and mortality may have opposing impacts on lifetime healthcare costs—greater morbidity will tend to increase lifetime costs, whereas dying younger will tend to reduce them. After early childhood, average current-year healthcare costs for individuals increase throughout life, rising dramatically from the age of 50.[10] These higher healthcare costs for poorer people in life may be partially offset by a shorter lifespan. Alternatively, given that the rising costs in older age are largely driven by the onset of chronic disease, earlier onset of these diseases in poorer populations may simply shift the healthcare costs to younger age groups.

Consideration of these longitudinal relationships is necessary in order to determine the impact of socioeconomic factors on health system costs. Measuring the size of this impact is important not just to quantify the relative healthcare benefits received by different social groups, but to understand the costs borne by the health service as a consequence of social inequality. In this study, we aimed to measure the costs to the NHS of socioeconomic inequality, by estimating the lifetime inpatient hospital costs of the whole English population by socioeconomic status.

- Socioeconomic inequality costs NHS inpatient services in England £4.8 billion a year, if extrapolated to the whole NHS budget, £20bn per year.
- Over a lifetime, men (women) living in the most deprived neighbourhoods cost the NHS 16% (22%) more than men living in the most affluent neighbourhoods, despite having shorter life expectancies.
- Miqdad Asaria, from the Centre for Health Economics said:

"At a time when the NHS budget is under a great deal of pressure this study shows that socioeconomic inequalities in society are exacting a huge bill on the health service."

Developing a King's Fund vision



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A vision for t[population]alth system in England

Public health Accountable care

About this project

The King's Fund is a respected commentator on public health issues, and in recent years our work in this area has included in-depth research, support for local authorities and district councils, data analysis and events. Recent work includes research on the wider determinants of health (for example, links between housing and health), inequalities, the future of HIV services in England, public health funding, and the move from integrated care to population health systems.

This project aims to consolidate and build on our previous work programme by setting out a vision for the public health system and population health. We will use this vision to inform and influence the debate about the future of public health and to shape our own work programme.

In developing our vision, we will consider:

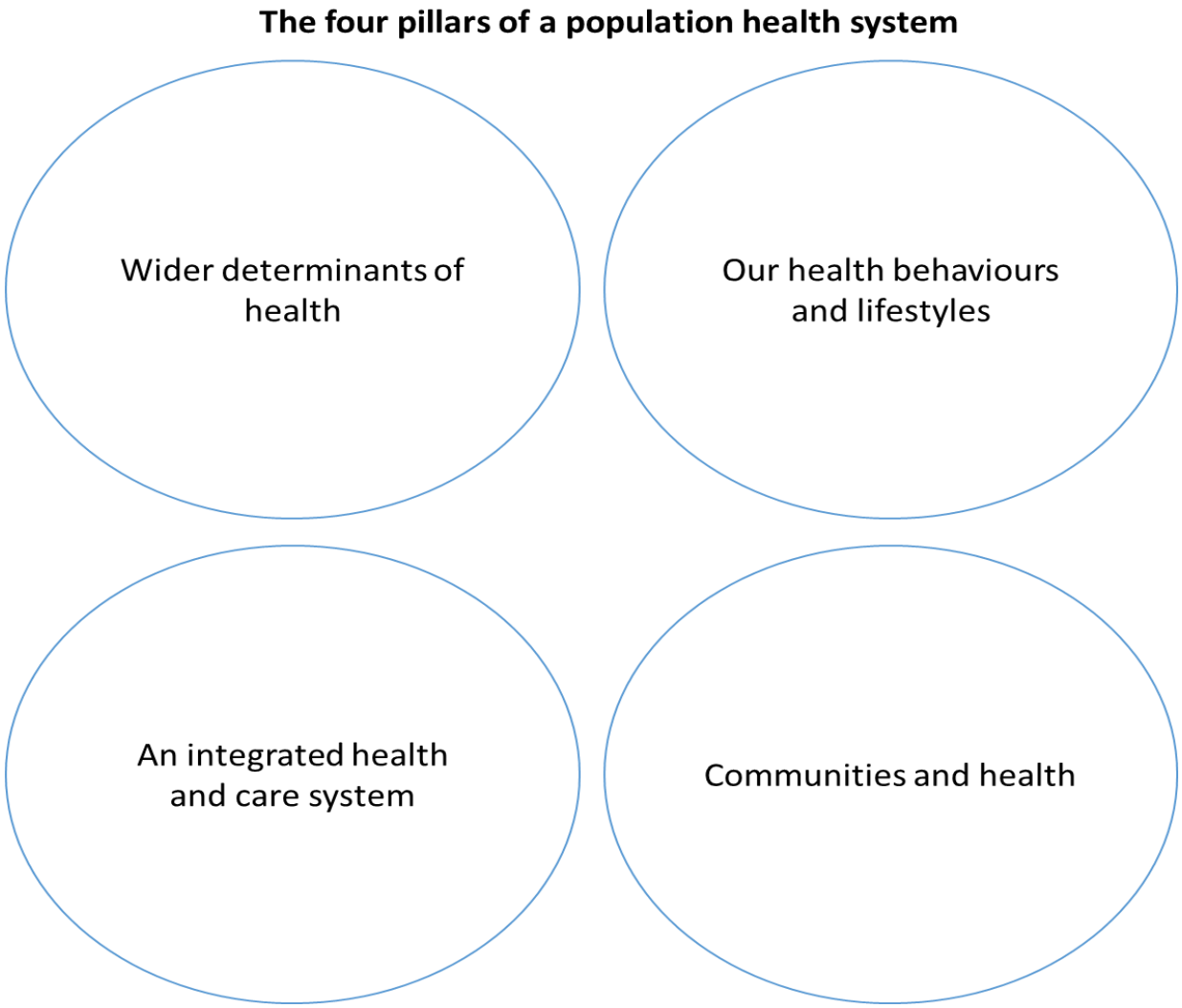
- how to define the 'public health system'
- key trends likely to affect public health over the next 10–15 years
- strengths and weakness of the current system
- changes needed to realise our vision, including understanding the role of policy levers such as regulation, taxation, and information
- the implications for the workforce and system leaders, including accountability
- implications for The King's Fund's future work programme.

What we're doing

This work will be informed by:

- a review of key documents and public health datasets
- a series of interviews and engagement events with system leaders, organisations that support the system and those involved in delivering public health services
- a workshop to test findings
- an advisory group made up of key leaders from the public health system, NHS and beyond.

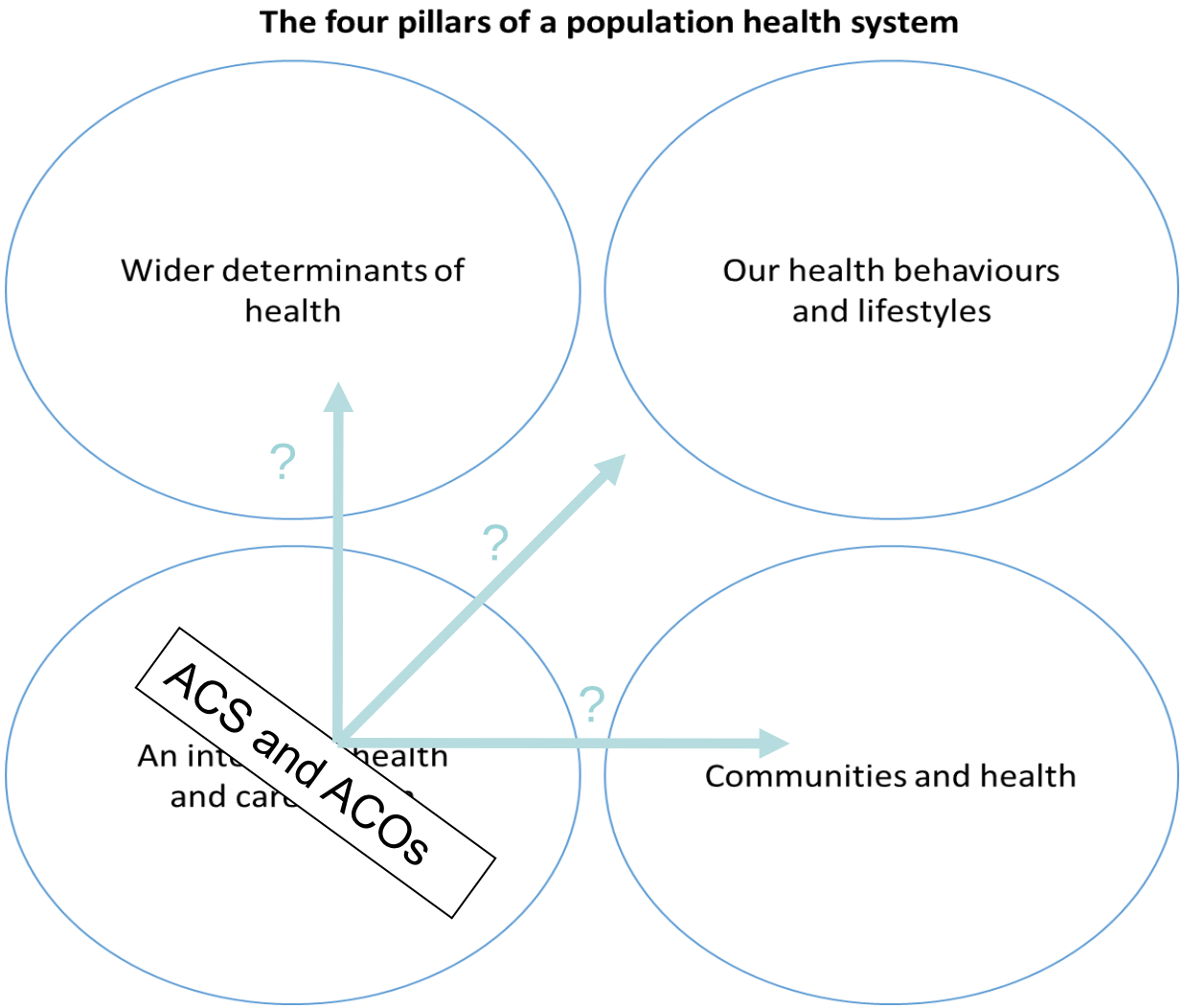
The core pillars



The Kings Fund

Ideas that change health care

ACS (err, ICS) how far beyond integrated care?



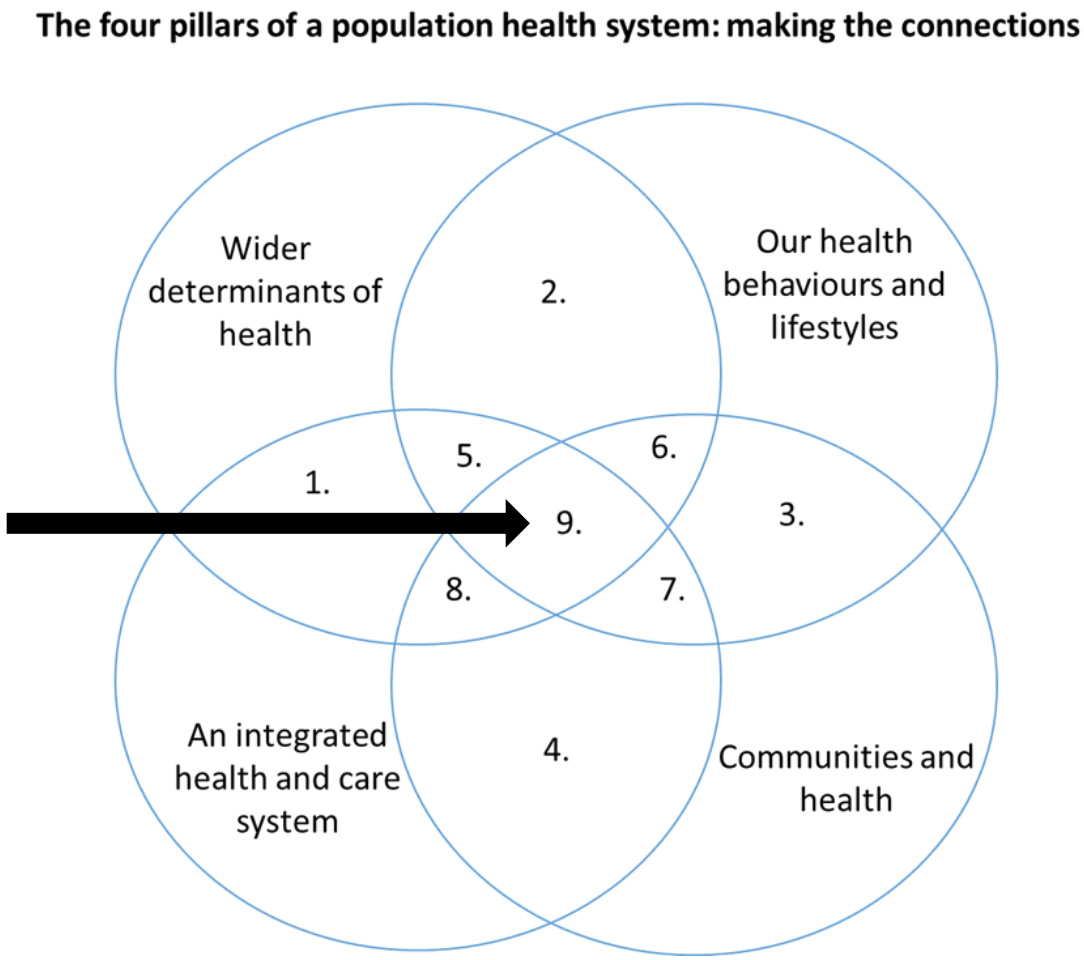
Towards 'Accountable Health Communities'?

- **The weaknesses of ACOs (US)**
  - Responsible for attributed patients, not all living within an area
  - Medical interventions have overall priority, not wider social needs or causes

- **Accountable Health Communities (US), ACSs/STPs (here?)**
  - Geographically defined populations e.g. Henepin Health Minnesota, CCOs Oregon
  - Starting to address housing, transportation and food needs
  - Some Medicaid Managed Care Organisations are screening for non-medical needs e.g. San Francisco RCT of social needs (food, benefits, housing, legal) > improvements in health
  - Healthcare organisations acting as 'anchor institutions' seeing themselves as contributing to the wider determinants of health in their communities

A full vision → all connections, inequality core

At the centre:
A system that understands and is able to make all the connections > with a stronger shared narrative, supported by incentives, information and leadership for population health with a focus on inequality reduction



Supporting and cementing those connections

	Immediate	2-5 years	Longer term
Local	?	?	?
Regional	?	?	?
National	?	?	?

Conclusions

Conclusion

- Keep looking back, it helps us going forward. Learn from the past.

- It can be done!

- The NHS still has multiple roles to play…
  - Access to care → reducing inequality in outcomes from that care
  - Prevention → for all, not just low-hanging fruit
  - Wider determinants → massive potential, including use of SVA
  - Being a better place-based partner than it is now → a social actor

- Place-based population health systems are the future, this is where we are going, but…
  - they have to have inequalities reduction at their heart
  - this is an ACTIVE decision, locally and nationally
  - we will be saying more about this later in the year