worldclasscommissioning

adding life to years and years to life

NHS

Maximising effectiveness of healthcare spend – a thought starter

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Objectives of this session and areas we will cover

- Overview of Competency 11, “ensuring efficiency and effectiveness of spend”
- Tools and techniques for assessing health benefits and effectiveness of spend
- Practical application of these tools on-the-ground to redesign pathways and make decisions and tradeoffs in spending

Competency 11 has been reinstated for Year 2 of WCC

Competency 11 – ensuring efficiency and effectiveness of spend

a **Measuring and understanding effectiveness of spend**

- Robust analysis of spend and its impact on health benefit to ensure well informed trade-off and investment decisions

b **Identifying opportunities to maximise effectiveness of spend**

- Identifying and unlocking effectiveness, efficiency and productivity improvements to deliver better health outcomes and greater value for money

c **Delivering sustainable efficiency and effectiveness of spend**

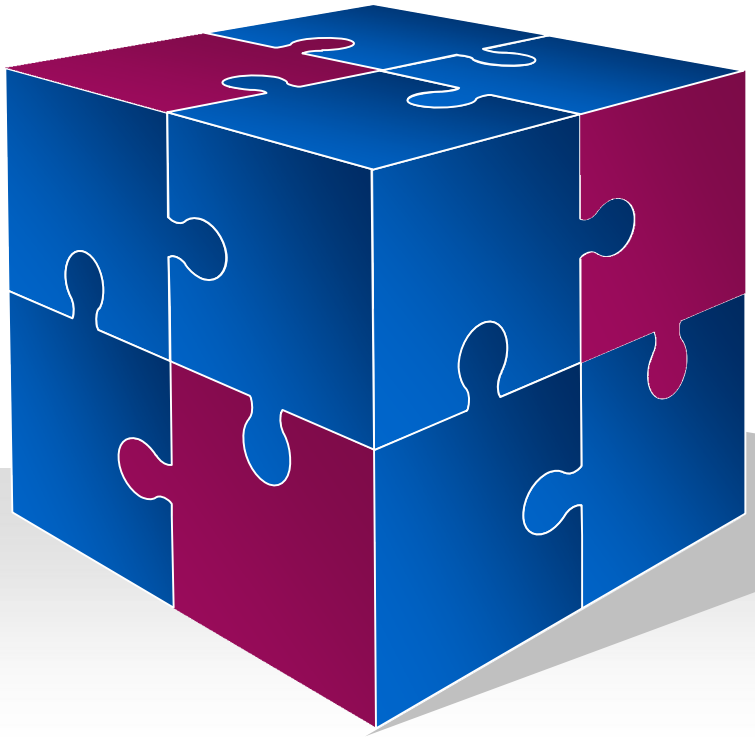
- Manage change to maintain appropriate stability of the Local Health Economy.

The mission is to add years to life and life to years, whilst improving quality at reduced cost

A. Access

B. Quality

C. Cost



A. Lord Darzi Work

B. QIPP

C. International Comparators

D. Public/Users/Colleagues

A. Efficiency

B. Effectiveness

C. Standards

D. Variation

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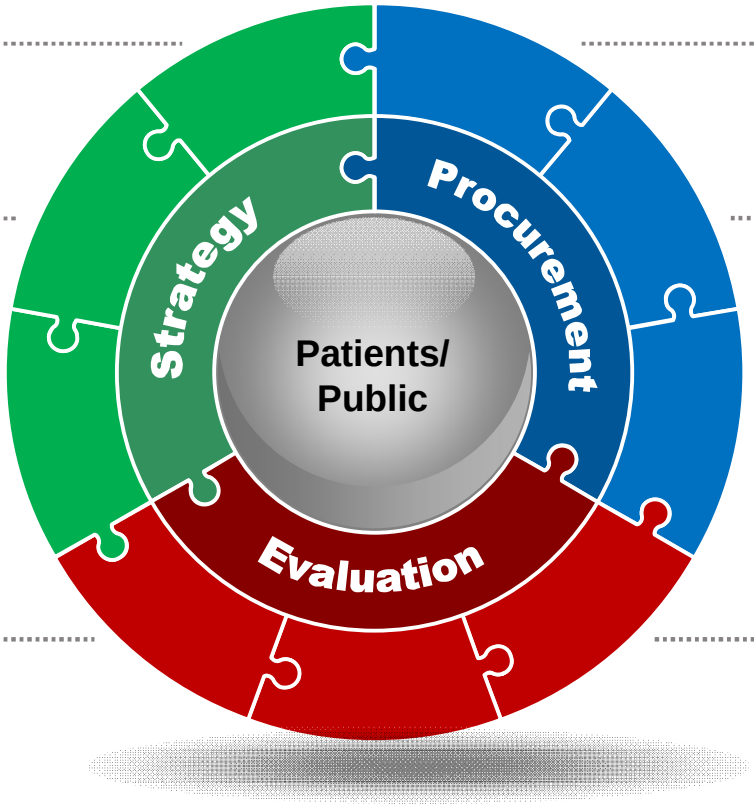
Deciding Priorities

Reviewing Services

Assessing Needs

Seeking Patient and Public Views



Designing Services

Shaping Structure of Supply

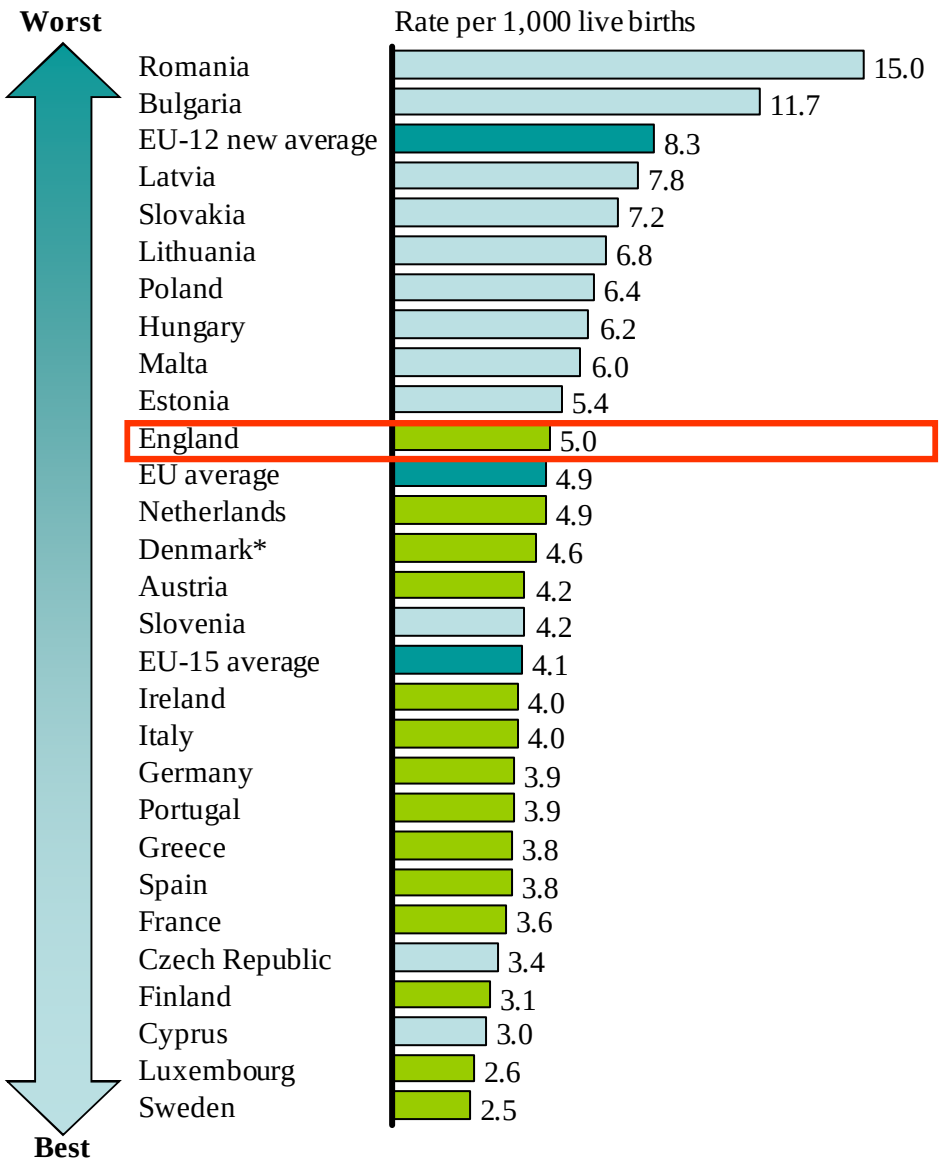
Planning Capacity and Managing Demand

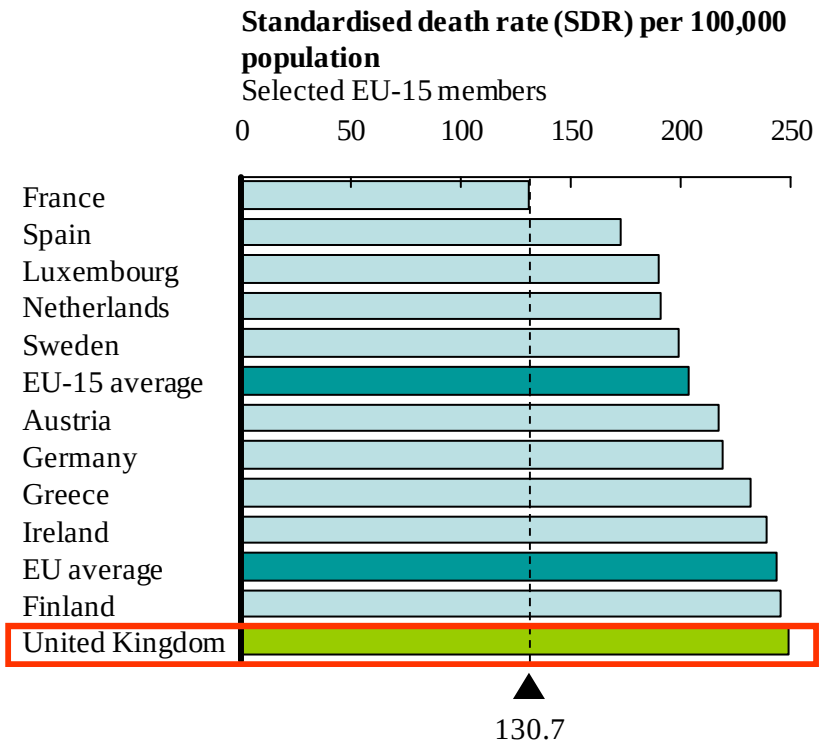
Supporting Patient Choice

Managing Performance

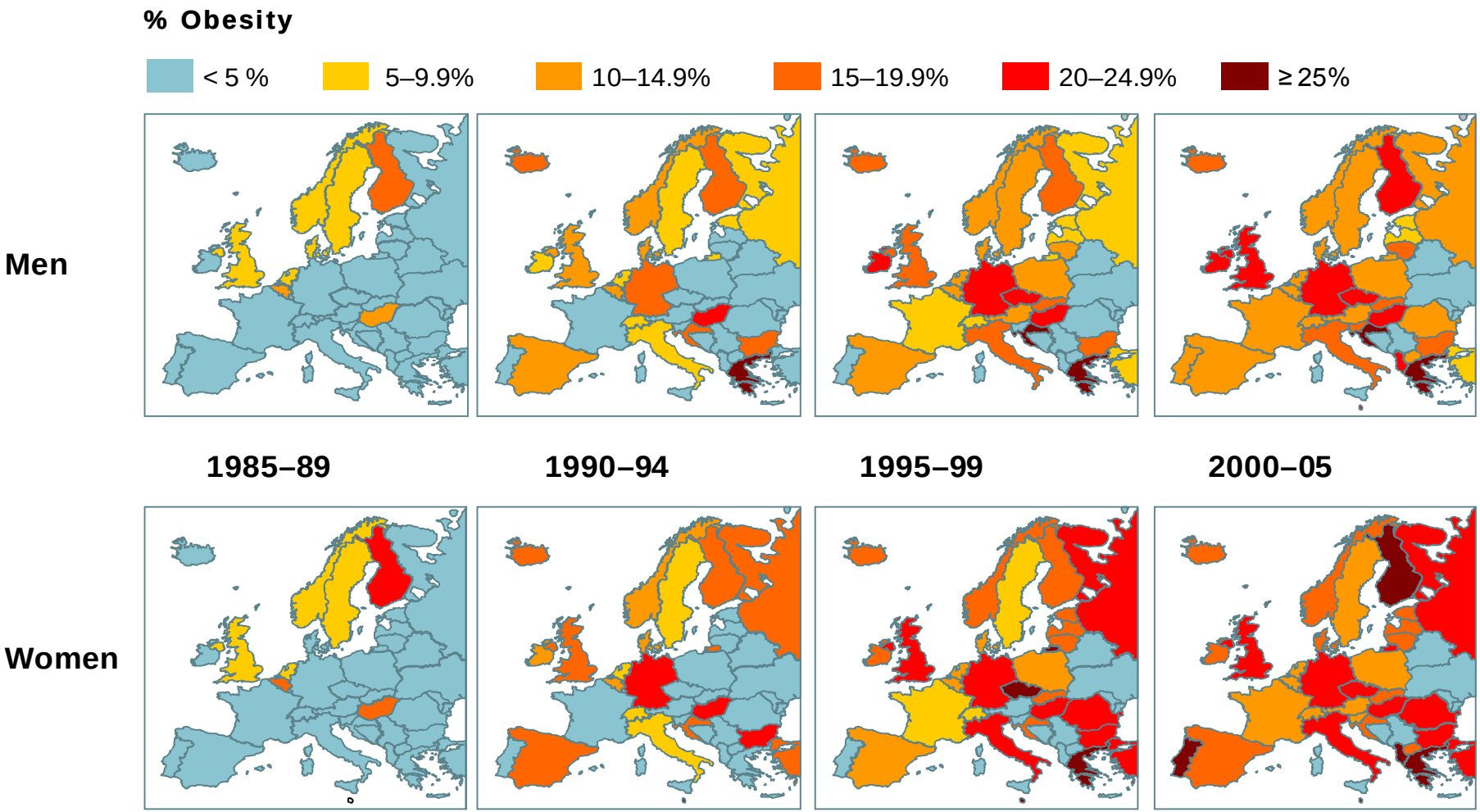
Source: The Information Centre

Infant mortality & Standardised death rates, England & the EU

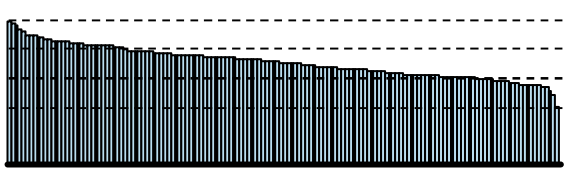
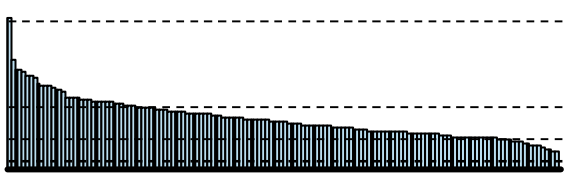
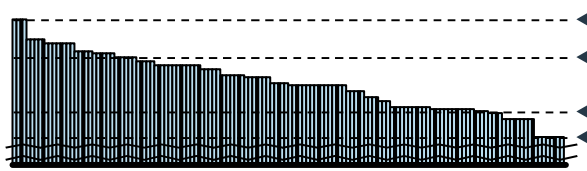
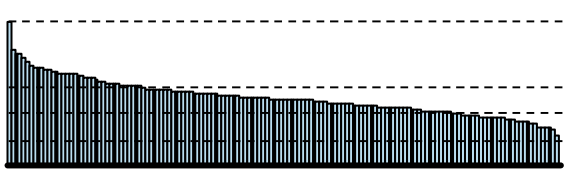




Rates of Obesity are increasing in the UK and in Europe

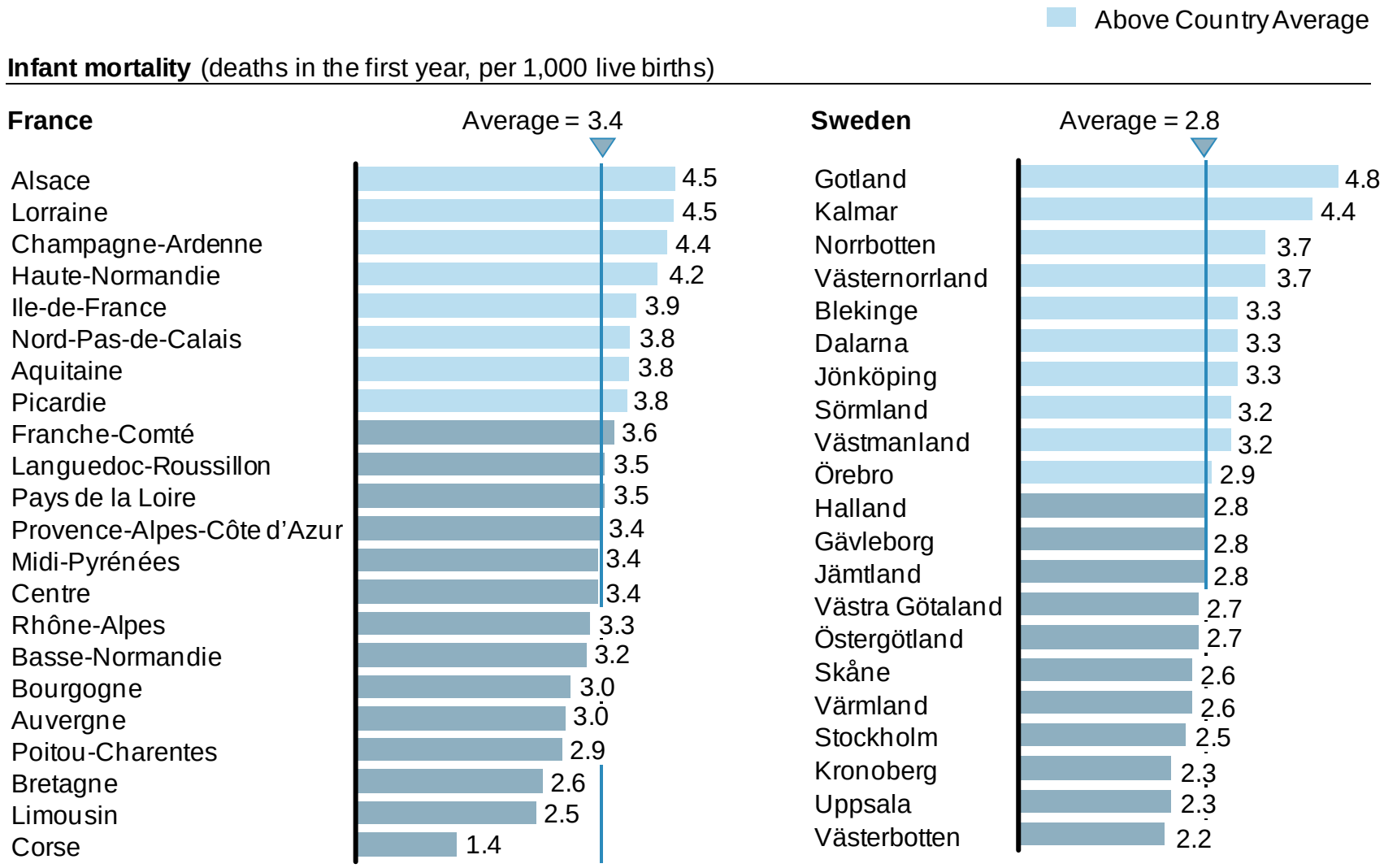


What is driving the variance in health outcomes?

Disease area	Outcome Metric	PCT Outcomes: Average	PCT Outcomes: Distribution across 152 PCTs		
Coronary Heart Disease	Standardized mortality ratio	104		Worst	147
				80th percentile	119
				20th percentile	89
				Best	58
Diabetes	Years of life lost / 10,000	4.8		Worst	14
				80th percentile	6.2
				20th percentile	3.1
				Best	1.6
Cervical cancer	5 year relative survival %	64		Best	74
				80th percentile	68
				20th percentile	60
				Worst	56
Infant mortality	Deaths in first year, per 1,000 live births	5.1		Worst	10.8
				80th percentile	6.1
				20th percentile	4.0
				Best	2.3

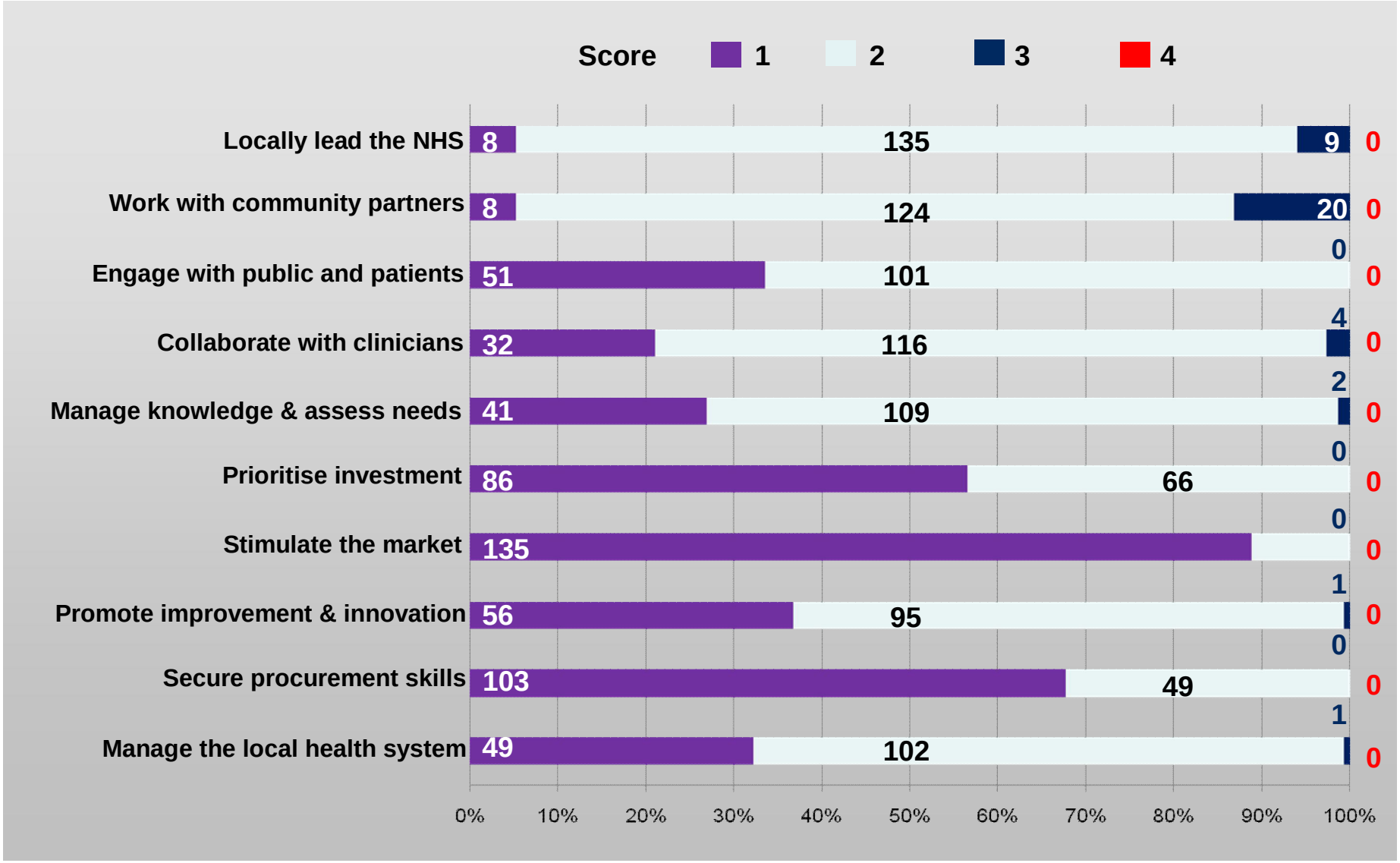
Source: McKinsey PCT Health Index, based on publicly available data

Context: … and the same pattern exists across Europe



Source: France - INSEE 2007; Sweden – Statistics Sweden 2007

Year one competency scores



A structured approach to improve cost effectiveness of health and healthcare services

1. **Select disease area**
2. **Describe the pathway**
3. **Develop performance metrics**
4. **Measure performance gaps**
5. **Assess cost and impact**
6. **Prioritize interventions**

Description

- Select disease areas to focus on based on
  - Potential impact (e.g., disease burden, avoidable mortality)
  - Feasibility (e.g., availability of cost-effective interventions)
- Identify evidence-based best-practice pathway for that disease
  - Describe pathway and specific interventions along the pathway
  - Assess clinical and cost effectiveness of each intervention
- Develop a set of appropriate metrics
  - Prioritize interventions based on scientific evidence of clinical benefit and cost of each intervention in pathway
- Measure gaps in payor performance vs. best-practice for each intervention
- Calculate the payor's cost of closing each gap, and construct a cost curve to determine the maximum improvement in quality possible for a given spend
- Prioritise / sequence interventions by assessing realistic improvement vs. feasibility

Identify and agree the best pathway

Stage of care	Primary prevention and prevention of onset of diabetes	Prevention of complications of diabetes	Management of complications and prevention of progression
Pathway definition			
Start	Healthy adult	Diagnosis of diabetes	Diagnosis of diabetic complications
End	Diagnosis of diabetes	Diagnosis of diabetic complications	End of life
Outcome metrics	▪ Prevalence of diabetes detected	▪ Incidence of specific complications ▪ % of well managed patients (HbA1C<7.5%)	▪ Mortality from diabetes related complications ▪ Hospitalization due to complications from Diabetes ▪ Incidence of serious vision loss ▪ Renal failure ▪ Amputations ▪ Stroke/CHD/MI

SOURCE: Map of medicine, American Diabetes Association, National Guidelines Clearinghouse

We review published pathways and recommended interventions, and created a 'consensus' best practice pathway for Diabetes…

Primary prevention and prevention of onset of diabetes

Prevention of complications of diabetes

Management of complications and prevention of progression

Guidelines

- American Diabetes Association
- Royal College of Physicians
- NICE
- SIGN
- National Guidelines Clearinghouse

Scientific articles

- Map of Medicine
- Pubmed
- UpToDate

Expert interviews

- Key Opinion Leaders
- Leading academic practitioners
- Professional associations

…and then quantified the quality and cost-effectiveness of each step of the pathway

EXAMPLE

Most effective according to literature
Also critical according to experts

Stage of care	Intervention	Quality effect	Clinical benefits	Cost per QALY/LYG	Cost effec-tiveness
Prevention of complications of diabetes	9 Regularly test for optimal glycemic control (every 2-6 months)	n/a	○	n/a	–
	10 Train patients in Self-monitoring of Blood Glucose (initial instruction and follow-ups)	0.20- 0.6% reduction in A1c	◔	£4,508-15,515/QALY	+++
	11 Train patients on monitoring of carbohydrate intake (carbohydrate counting, exchanges, or experience-based estimation)[1]	A1c levels reduction 1-2%	◑	£2,529 savings/ year	++++
	12 Provide general foot self-care education to all patients	32% reduction of amputation rate	●	Net savings	++++
	13 Counsel on lifestyle changes, especially exercise, weight loss and smoking cessation[2]	A1c reduction1-2%	◑	£6,700/QALY	+++
	14 If lifestyle interventions not sufficient alone, add Metformin treatment as first line oral drug treatment	42% reduction in mortality	●	£1,600/LYG	++++
	15 If lifestyle interventions + Metformin don't achieve glycaemic control, add second oral treatment, preferably Sulfonylureas	16-27% reduction in A1c	◑	n/a	–
	16 If all previous measures insufficient, modify treatment to lifestyle interventions+ Metformin+ Insulin	2.9 kg/year less weight gain than on Insulin alone	◕	£9,761-11,777/ QALY £10,566-18,545/LYG	+++
	17 Intensify drug treatment until glycemic control is reached	Reduction of complications 64-100% 6-15% reduction of mortality	●	Net savings from reduction of complications	++++
	18 Use other, less validated treatment agents, only if indicated: Glucosidase inhibitors, Exenatide, Glinides, Pramlintide[3]	tbd[3]	◔	tbd	–

1 As in MNT in primary preventions
2 As in primary prevention
3 Trials come to varying results; long term safety and efficiency can not yet be judged conclusively

SOURCE: American Diabetes, Association, American Association of Clinical Endocrinologists, NICE, National Guidelines Clearinghouse, UpToDate, Royal College of Physicians, SIGN, Diabetes Research and Clinical Practice, J Fam Practice, Diebetologia, Diabetes Care, JAMA,

We then looked at four types of opportunities in diabetes pathway spend.....

Opportunity	Description
1 Disinvest	▪ Stop spending on interventions or services that are not on the recommended pathway
2 Reallocate	▪ Shift spending from interventions with low cost-effectiveness to those with high cost-effectiveness
3 Ensure per-formance	▪ Ensure high provider performance in areas where spending has already been committed but performance is poor
4 Invest to save	▪ Spend more on preventive interventions than can save costs further down stream on the pathway

We have identified significant opportunities to improve DM spending

£ thousands

	Primary prevention and prevention of onset of diabetes	Prevention of complications of diabetes	Management of complications and prevention of progression	Total
Current spend	**3,600**	**10,000**	**13,300**	**26,900**
Identified opportunities				
1 **Disinvest**	-	700-900	2,900 -3,500	**3,600 -4400**
2 **Reallocate**	-	500	-	**500**
3 **Ensure performance***	3,500	100	1,200	**4,800**
4 **Invest to save****	600	650	80	**1,330**

* Current spend where performance could be improved
** Annual investment required to improve performance and capture downstream savings

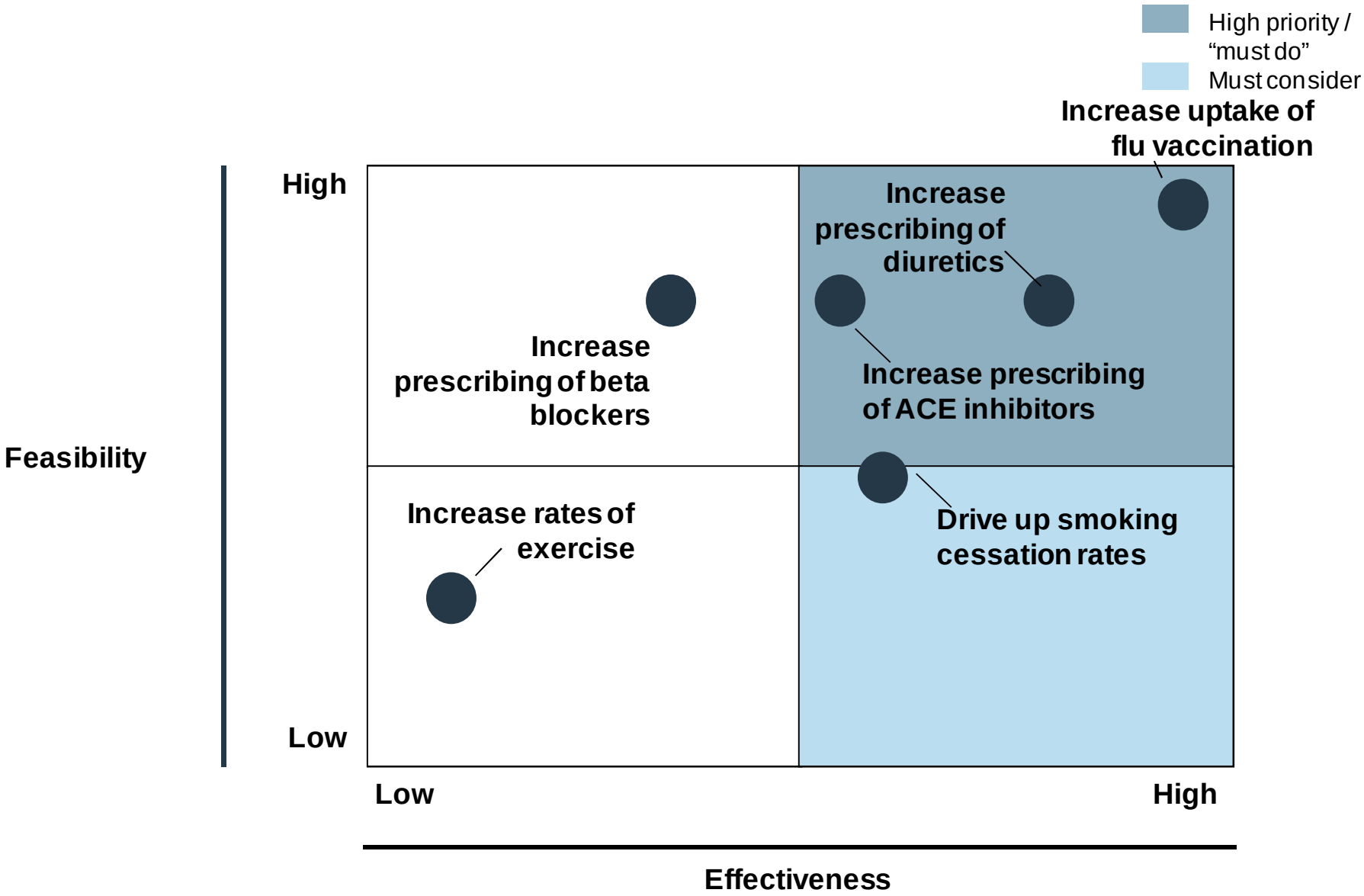
Some specific examples of opportunities

£ thousands

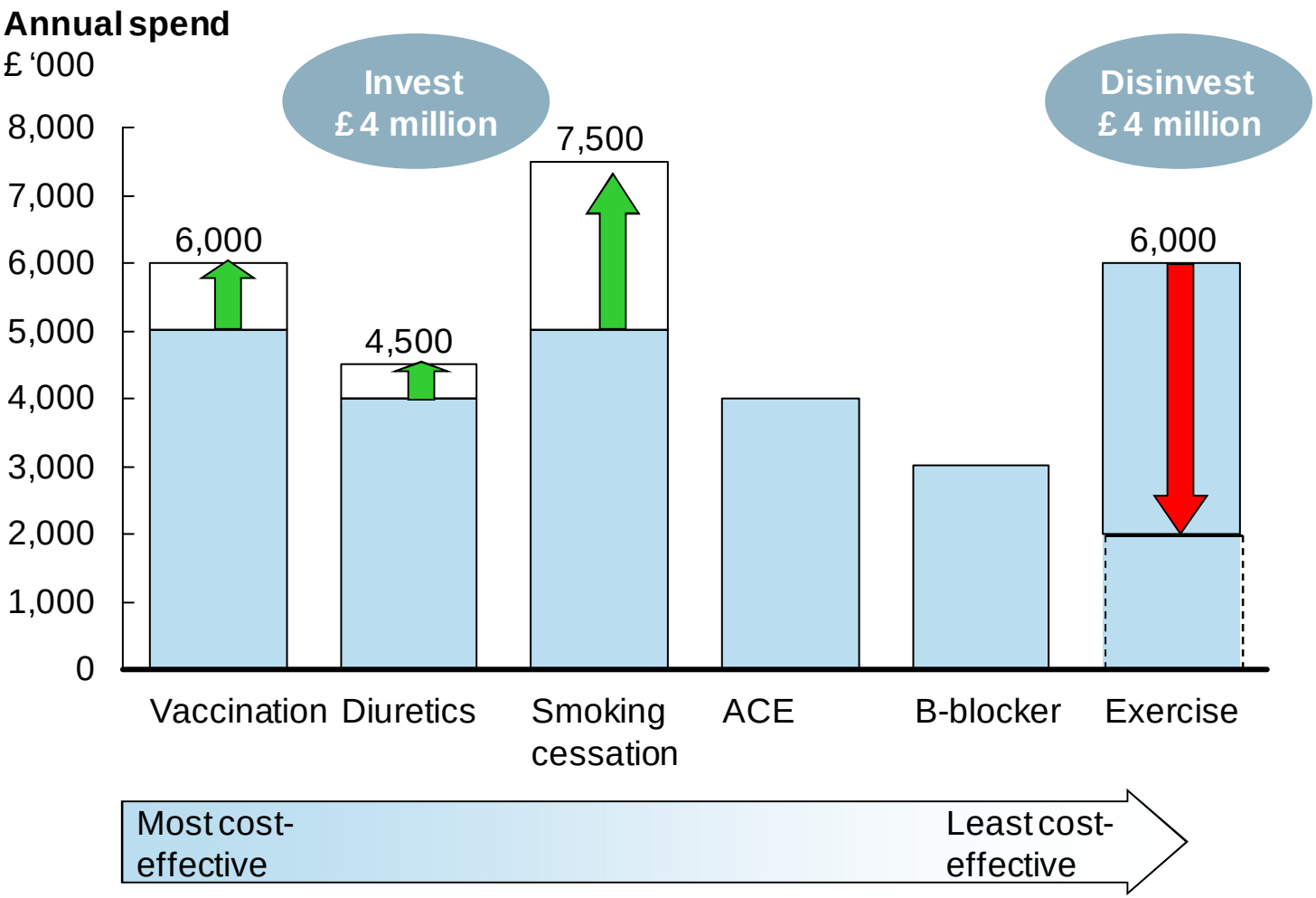
	Intervention	Current performance	Current spend	Potential opportunity
Disinvest-ment	**Intervention 18**: Use less validated medications only if indicated e.g., Exenatide	Not captured	900	▪ Disinvest 700-900
Reallocate	**Intervention 16**: If lifestyle and oral anti-diabetics fail, add insulin to treatment	Not captured	4,100	▪ Switch away from expensive insulins not recommended as first-line by NICE ▪ Free up 500 to reallocate
Ensure performance	**Intervention 20**: Initiate aspirin treatment in patients with increased cardiovascular risk	94.6%	Part of capitation fee in primary care	▪ Increase performance to 98%+ of at-risk population, avert 3 MIs per year and save on associated costs
Invest to save	**Intervention 22**: Provide influenza vaccines to elderly patients with DM	91.8%	229	▪ Invest incremental 20 to cover rest of at-risk, avoid 18 hospitalisations per year and save on associated costs

1 = 24.8% of population overweight or obese (proxy metric only)

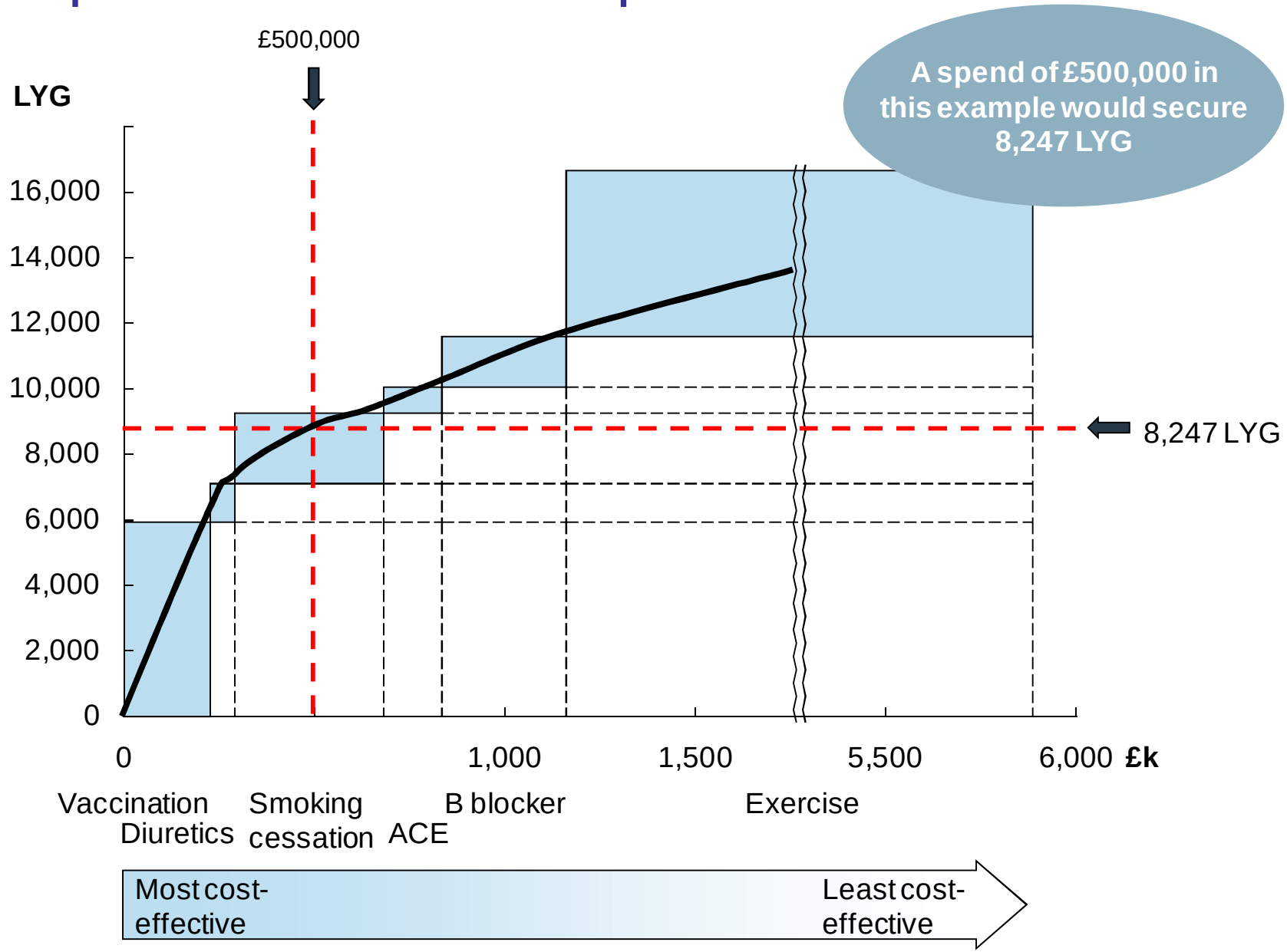
Prioritise and sequence interventions: Example of prioritisation matrix for CHD



Alternatively, use the data to make disinvestment decisions: Illustrative example



Calculate benefits and costs of closing gaps, and build cost curve: Example of cost curve. This example is CHD



Finally …. recognise that significant changes to provider structure may be required

New models of primary care

- How can multidisciplinary teams best be organised to ensure consistently high quality care?

New models of community care

- How should nursing staff support primary care services?

New models for social care

- How should social care services be organised to support the most vulnerable patients?

Changes to public health delivery structures

- How should public health teams commission and provide care to maximise health gain?

Changes in hospital configuration

- What is the optimal hospital configuration to drive improved outcomes in care?

questions