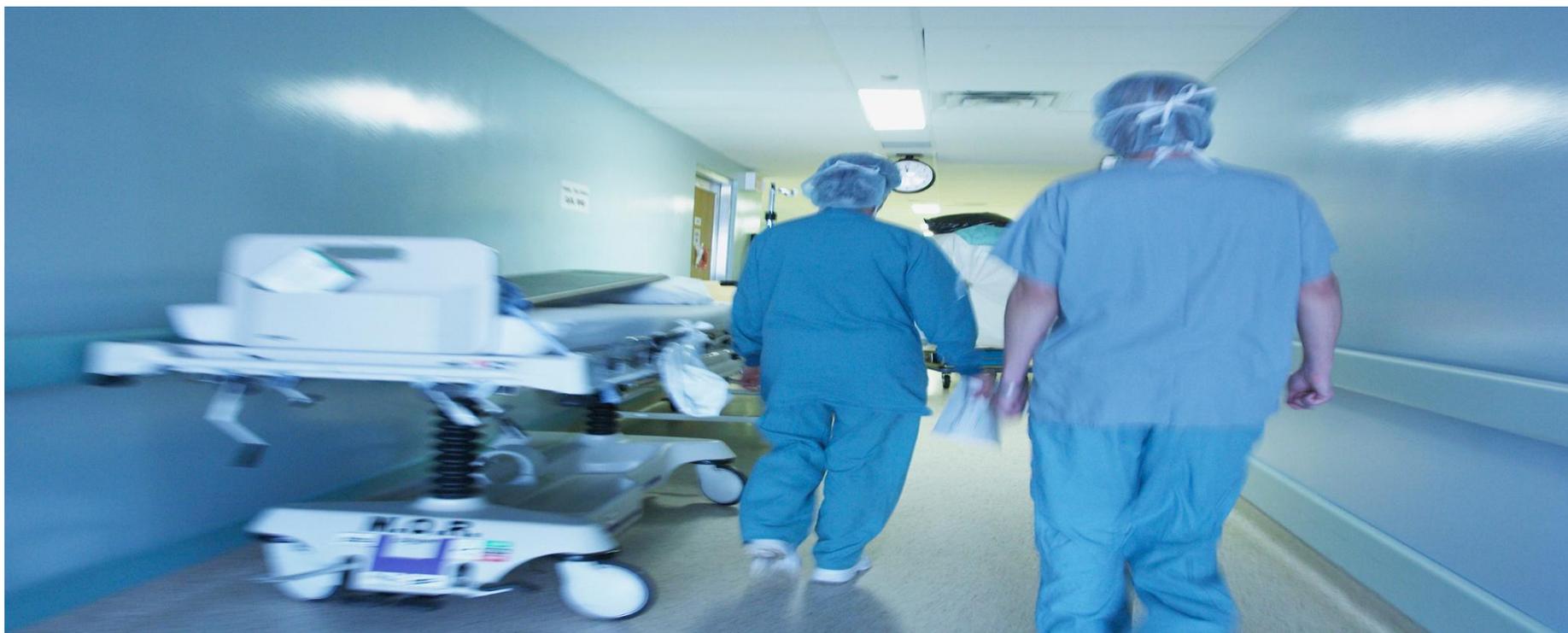


# Department of Health Provider Economics Overview



**DH INFORMATION READER BOX**

Policy	Estates
HR / Workforce	<b>Commissioning</b>
Management	IM & T
Planning /	Finance
Clinical	Social Care / Partnership Working

<b>Document Purpose</b>	Best Practice Guidance
<b>Gateway Reference</b>	15172
<b>Title</b>	Understanding Provider Economics
<b>Author</b>	DH and NHS Confederation
<b>Publication Date</b>	16 Nov 2010
<b>Target Audience</b>	PCT CEs, NHS Trust CEs, SHA CEs, Foundation Trust CEs
<b>Circulation List</b>	PCT Chairs, NHS Trust Board Chairs
<b>Description</b>	<p>This "Provider Economics Commissioning Impact Assess Model" provides further understand of Provider Economics. It enables commissioners and providers to;</p> <ul style="list-style-type: none"><li>• analyse the potential impact of commissioning decisions on service continuity and provider sustainability,</li><li>• understand how financial system risks of decommissioning and reconfiguration services will materialise in differing economic scenarios and if services provide value for money.</li></ul>
<b>Cross Ref</b>	N/A
<b>Superseded Docs</b>	N/A
<b>Action Required</b>	N/A
<b>Timing</b>	<b>N/A</b>
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<b>For Recipient's Use</b>	

## Table of Contents

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	Page	
1	Introduction to Provider Economics	1
2	Provider Sustainability Assessment Framework and Guidance	3
3	Provider Economics Commissioning Impact Assessment Model	6
4	Case studies	14

# Section 1

## Introduction to Provider Economics

## Project deliverables

### Assessment framework to facilitate dialogue

- Key issues to consider (relating to provider economics) when making commissioning decisions

### Revenue and costing model and associated guidance

- Model to support providers and commissioners in understanding provider economics and potential impacts of local commissioning decisions

### Case studies of four commissioners/providers

- Inform the assessment framework and report
- Support development for the model
- Test the model

## Section 2

# Provider Sustainability Assessment Framework and Guidance

## Purpose

### The Assessment Framework and Guidance

- Identify and provide guidance on the main questions that are relevant to assessing the impact of commissioning changes on provider economics

### The Assessment Framework tool will help

- Guide the decision making process, and ensure that the key provider economics issues have been explored before decisions are made

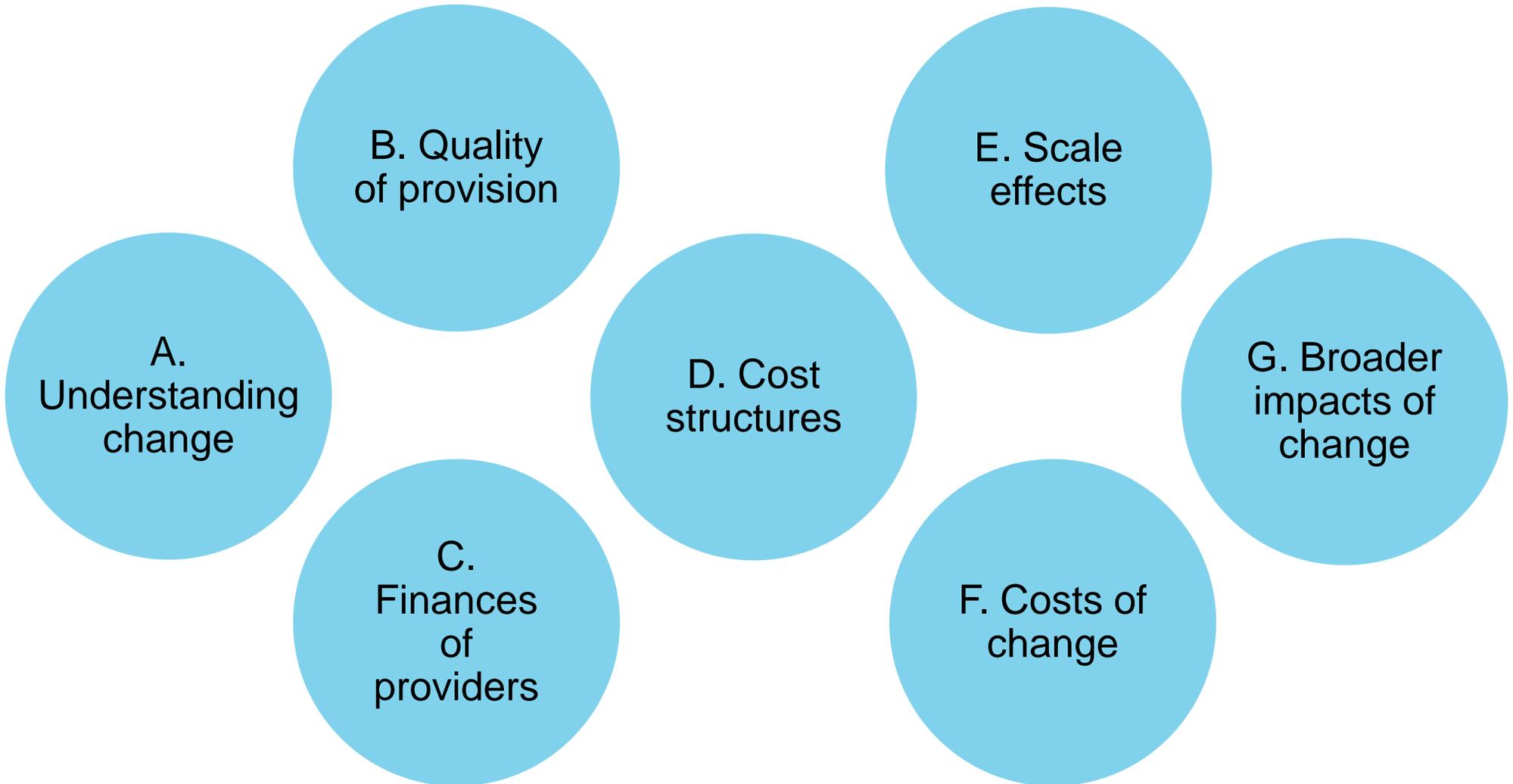
### The Guidance can

- Help commissioners to understand the impact of their decisions on a provider's costs and sustainability

### Provider Sustainability Guidance



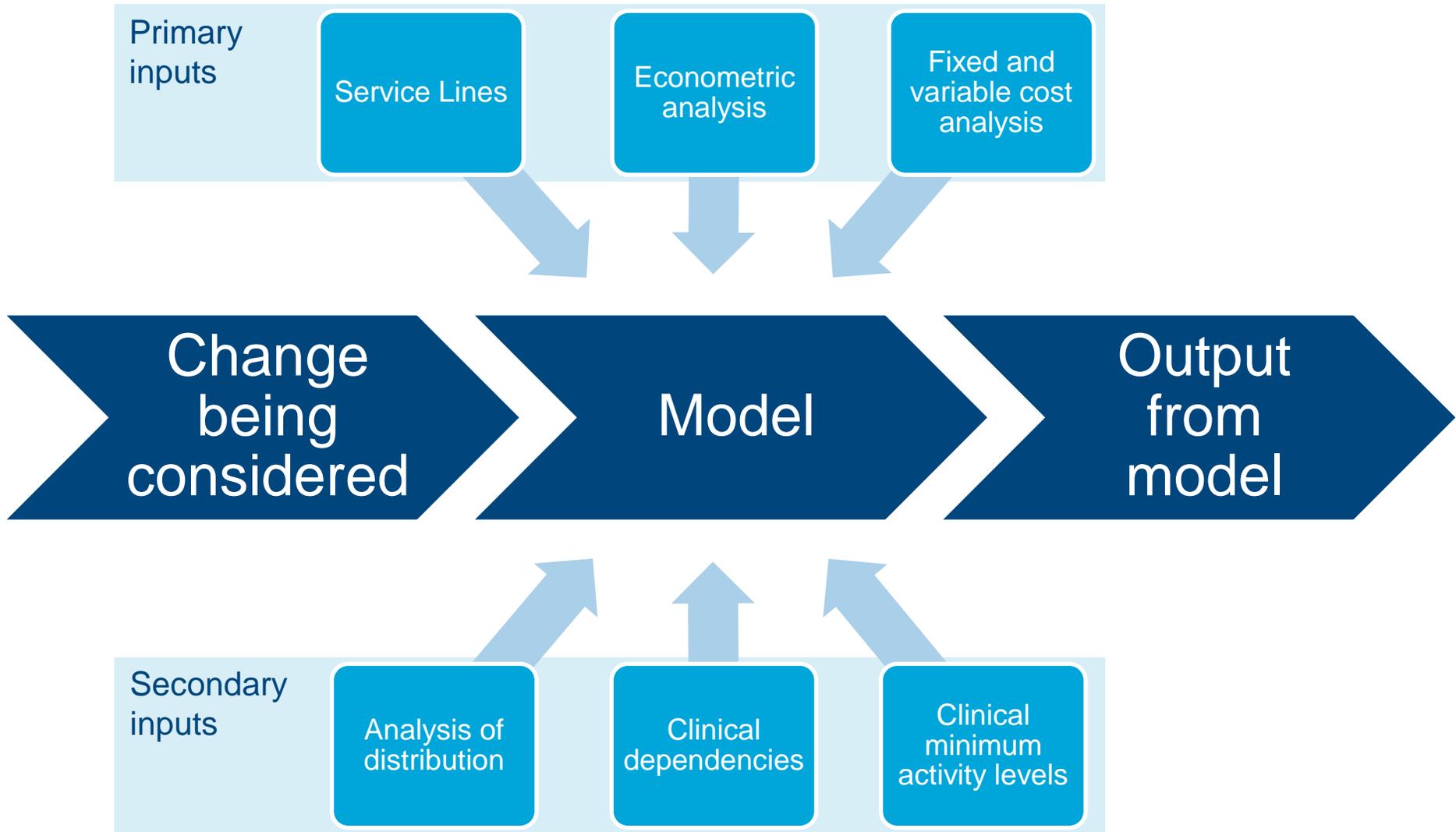
## Subject headings



## Section 3

# Provider Economics Commissioning Impact Assessment Model

## Model Overview

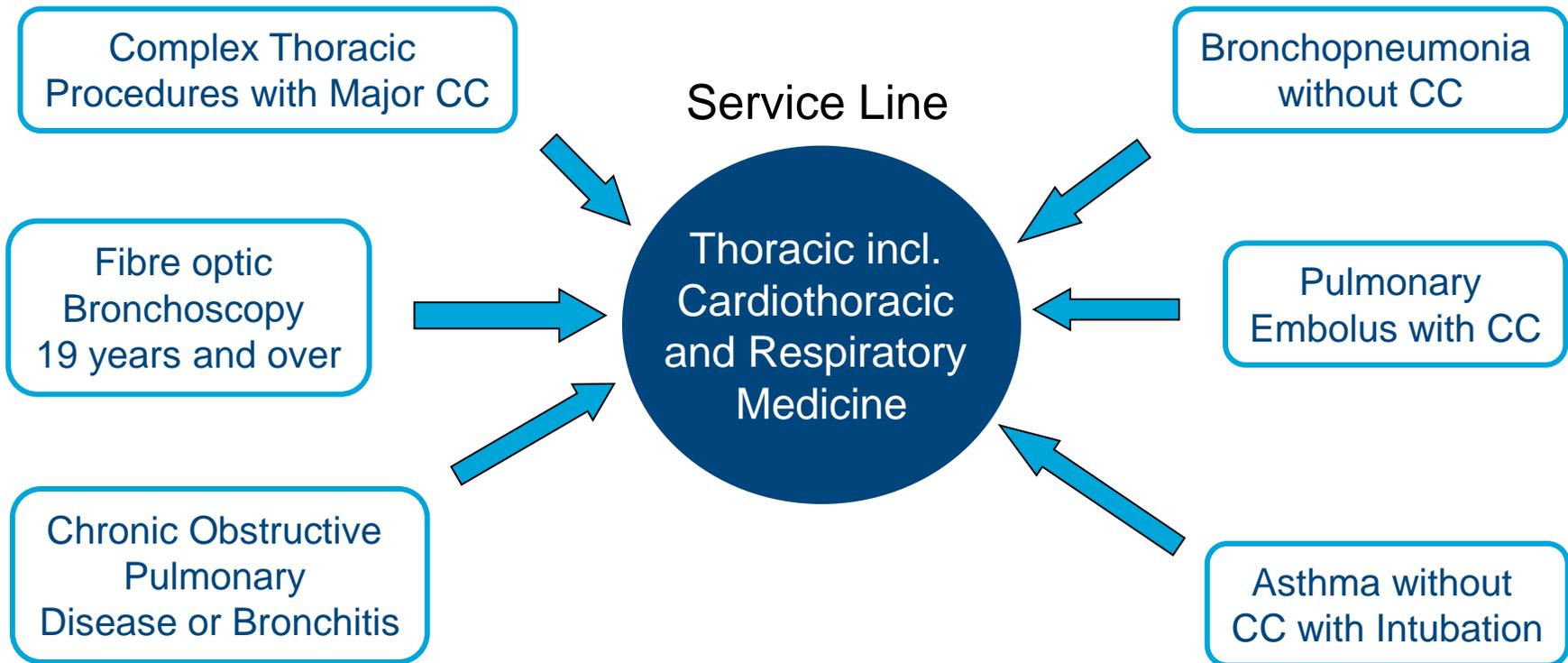


# Main Inputs

## Service Lines

Service Lines are groups of currencies and are the main building blocks of the model

### Example



# Main Inputs

## Econometric analysis

- Econometric analysis was used to:
  - estimate the relationship between cost and level of activity
  - estimate the cost for a provider with equivalent characteristics
- This was done by estimating the impact of various factors on cost for each Service Line, which included activity and also a range of other variables (see table to the right).

Variable	Description
<b>Unit cost</b>	Activity weighted unit cost for a provider
<b>Activity</b>	Variable of interest, measure of economies of scale
<b>Number of sites</b>	Measure of capital cost
<b>Estate costs</b>	Measure of capital cost
<b>Estate age profile</b>	Measure of capital cost
<b>CQC =excellent/good dummy</b>	Dummy variable for top performing providers
<b>Mortality</b>	Indicator variable to proxy quality
<b>MFF</b>	Local prices and costs
<b>Activity weighted tariff</b>	Case mix
<b>Proportion of elective cases</b>	Case mix
<b>Bed occupancy proportion</b>	Efficiency measure
<b>Total provider activity</b>	Overall economies of scale
<b>Number of HRGs</b>	Economies of scope
<b>Doctor and nurse vacancy rates</b>	To proxy the efficiency of staffing arrangements
<b>Children specialist dummy</b>	Specialist provider
<b>R&amp;D / teaching income</b>	Capture differences between R&D/teaching providers
<b>SHA dummy variables</b>	Geographic differences
<b>OAP cases</b>	Demographic
<b>Year = 2007/08 dummy</b>	Changes in over time

# Main Inputs

## Econometric analysis

### Output from the econometric modelling

- What is the % change in unit cost following a 1% increase in activity
- How does actual unit cost compare to predicted unit cost for a hypothetical provider with the same characteristics

Focus on acute providers due to data quality and availability

Examples below show the expected change in unit cost following a 10% **decrease** in activity

Service Line	Coefficient
Emergency and Urgent Care	1.4%
General Medicine	1.6%
General Surgery	2.4%
Renal	3.0%
Radiology	8.4%
Dermatology	1.2%
Emergency and Urgent Care	1.5%
Pathology	2.5%

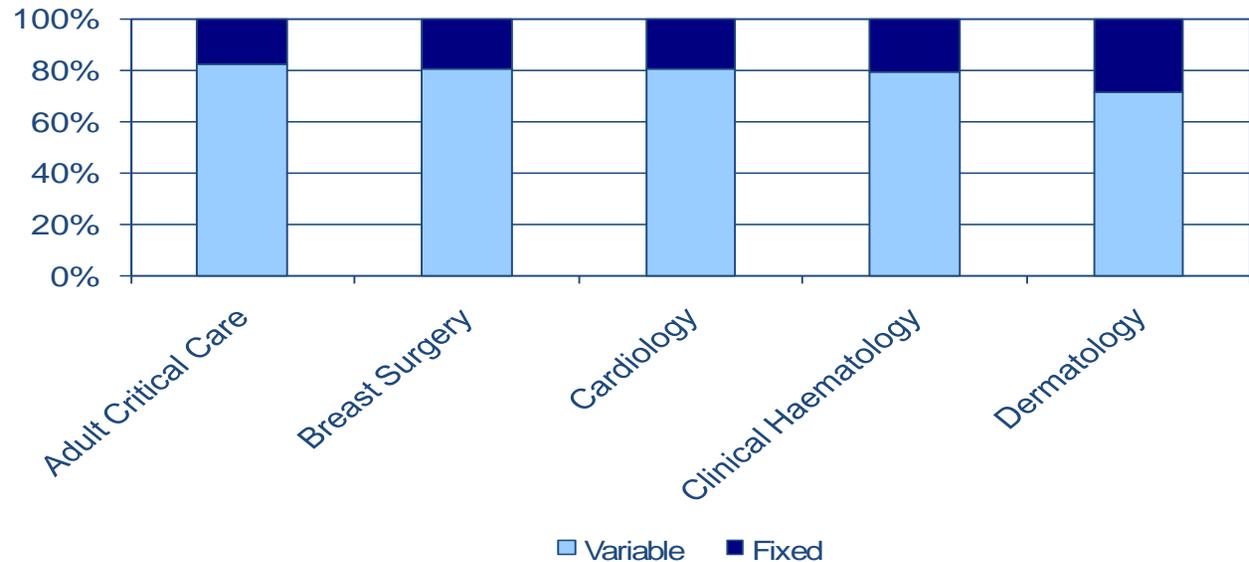
# Main Inputs

## Fixed and variable cost analysis

Analysis of fixed, semi-fixed and variable costs at Service Line level

Type of costs	Comments
<b>Fixed</b>	Includes: board costs, estates costs, establishment costs, depreciation, transport costs
<b>Variable and semi-fixed</b>	Includes: staff costs, clinical and non clinical supply costs

*Example output*



## Other Inputs

### Analysis of distribution

- Information on how the commissioning change affects the activity of the provider relative to other providers of a given service line

### Clinical dependencies

- A starting point for dependencies between certain interventions within Service Lines

### Clinical minimum activity levels

- A starting point for clinically safe minimum levels of activity at intervention level

# Output from Model

## Possible quality implications

- likely dependencies that may exist between service lines
- possible minimum clinically safe levels of activity that may need consideration
- impact of change on activity levels and how this compares to other providers

Service Line	Consider at least the following service line
Cardiothoracic	Adult Critical Care, Emergency and Urgent Care, Trauma and Orthopaedics

Minimum activity level	Consider at least the following areas within service line
Anticipation of cover only (>17 treatments per year per hospital), Colorectal (cancer) (>100 cases per year per hospital), Colorectal (cancer) (>100 cases per year per hospital), Oesophageal Cancer (>3 operations per surgeon per year), Pancreatic Cancer (>40 cases per surgeon per year)	

Year	Activity (%)	% of total
2020/21	757	0.02%
After	399	0.02%
Change	-359	-60.00%

## Cost and general financial implications

- proportion of total costs that are fixed costs
- the econometric relationship between unit cost of provision and the level of activity
- the approximate impact of a commissioning change on tariff income
- the estimated impact of commissioning changes on unit cost
- the estimated impact on total costs

Information on cost structure from modelling	Unit of measurement	Value used in calculations	Centre estimate	Notes
Econometric analysis	% change in unit cost as a result of a 10% decrease in activity	2.63%	2.63%	Possible range: 1.54% to 3.66%
Fixed and variable cost analysis	Proportion of fixed costs	25%	25%	Derived from historical data

Year	Value (£)	% of total
2020/21	1,574,860	0.88%
After	1,259,985	0.70%
Change	-314,875	-20%

Year	Value (£)	% of total
2020/21	3,973	-
After	4,170	-
Change	206	5%

Year	Value (£)	% of total
2020/21	3,989,304	0.58%
After	2,664,722	0.48%
Change	-1,324,582	-33%

# Section 4

## Case studies

## Overview and aims

### Four case studies were conducted:

1. the reorganisation of breast services across a local health economy
2. the piloting of an intervention to manage demand for accident and emergency services
3. the impact of reduced demand for in-patient psychiatric services
4. reorganisation in demand across all service lines for a provider

### Aims:

- gather additional data to improve the model
- gather front line views on the tools and their usefulness when addressing provider economic issues
- develop the tools to meet the needs of frontline practitioners
- demonstrate the added value of the check list and the model
- provide richness to the provider economics issues by using real world examples
- provide a level of validation for the model