



**Cost, activity and price: implications for the
Pathology service**

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What cost? (1)

- Acquisition cost
- Depreciated cost
- Direct cost
- Fixed cost
- Historical cost
- Indirect cost
- Marginal cost
- Operating cost
- Opportunity cost

What cost? (2)

- Original cost
- Replacement cost
- Standard cost
- Sunk cost
- Total cost
- Transaction cost
- Transfer cost
- Unit cost
- Variable cost

What cost? (3)

- The total money, time and resources associated with a purchase or activity

Appropriate costing methodologies for Pathology

- What should be included? The cost of
 - Producing the test result?
 - Interpreting the result?
 - Taking the sample and transporting it to the laboratory?
 - Training / development / multidisciplinary team meetings and clinical duties?

- And in the Laboratory, how to treat
 - Equipment leasing / reagent rental / fully depreciated equipment / PFI deals?
 - A workforce that is not compliant with the Working Time Regulations?
 - Premiums charged by external agencies for the temporary staff?

- And for a fully loaded cost, how to treat
 - Trust overheads 'consumed' by Pathology?
 - Trust overheads 'apportioned' to Pathology?
 - Historic deficits?

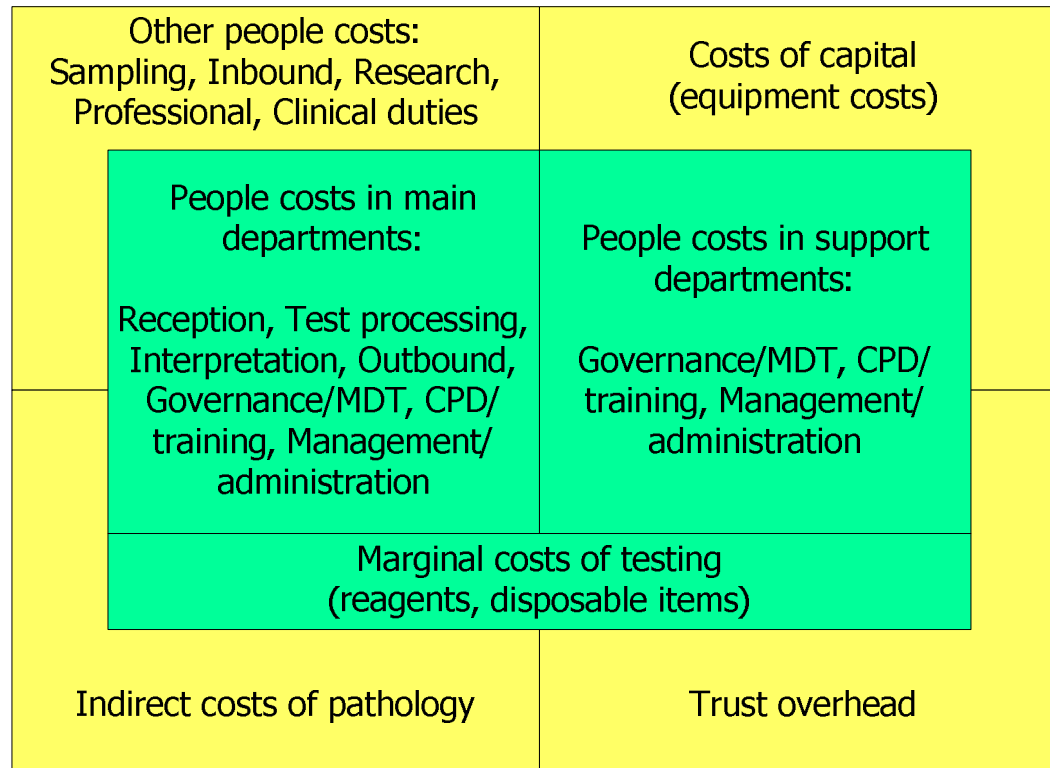
For example – a 'laboratory' cost

- The laboratory cost includes the costs of people and the marginal costs of testing. The cost of people are included for all activities allocated directly to the main departments and to the administrative centre of the pathology service. Marginal costs include reagents and disposable items

For example – a 'fully loaded Pathology' cost

- A fully loaded cost includes the laboratory cost, plus internal overheads and the costs of the external system. Internal overheads cover the indirect costs of the pathology service, its cost of capital and a Trust overhead. External system costs include the costs of sampling outside the hospital, transportation of samples to the laboratory and an overhead to cover the work of the SHA and DH
 - cost per test
 - interpreted result
 - and the scientific breakthrough!

The Pathology 'onion'



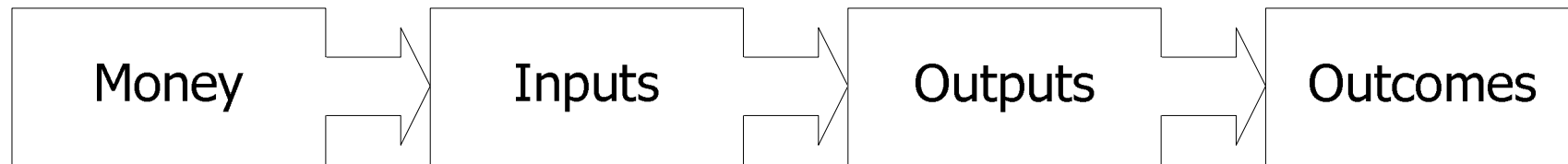
Laboratory
cost

Fully loaded
cost

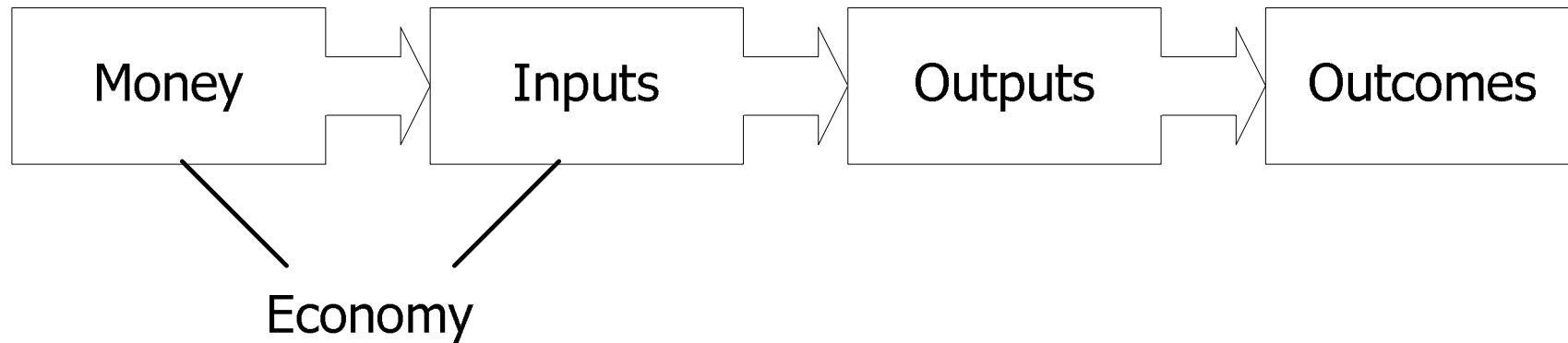
Activity

- Is the service doing the right things?
- Are services provided in the best way?
- Can things be done more cheaply?
- Are services equitable?
- Are patients getting better, more quickly, and at a lower cost?
(Longdon (1995))
- What gets measured, gets done!

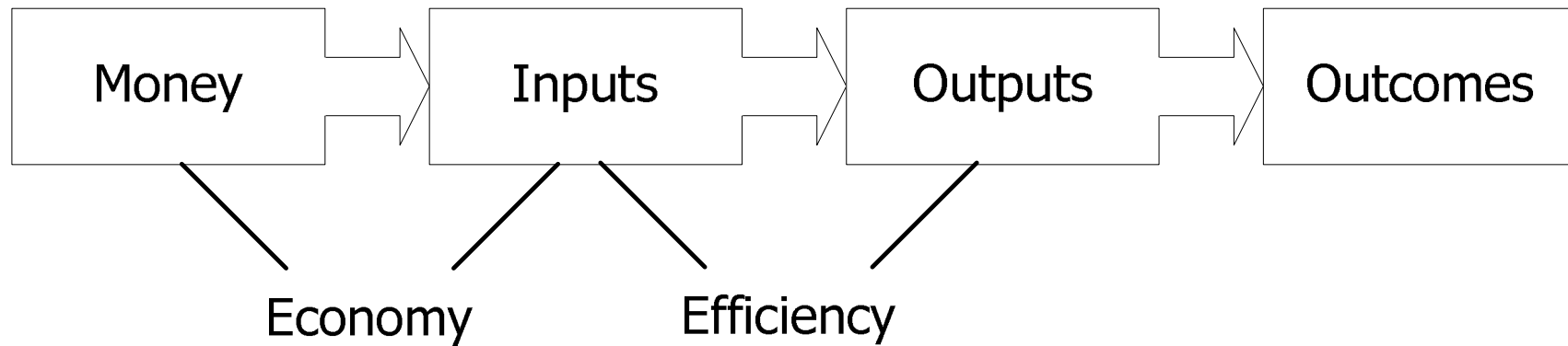
Economy, efficiency and effectiveness (1)



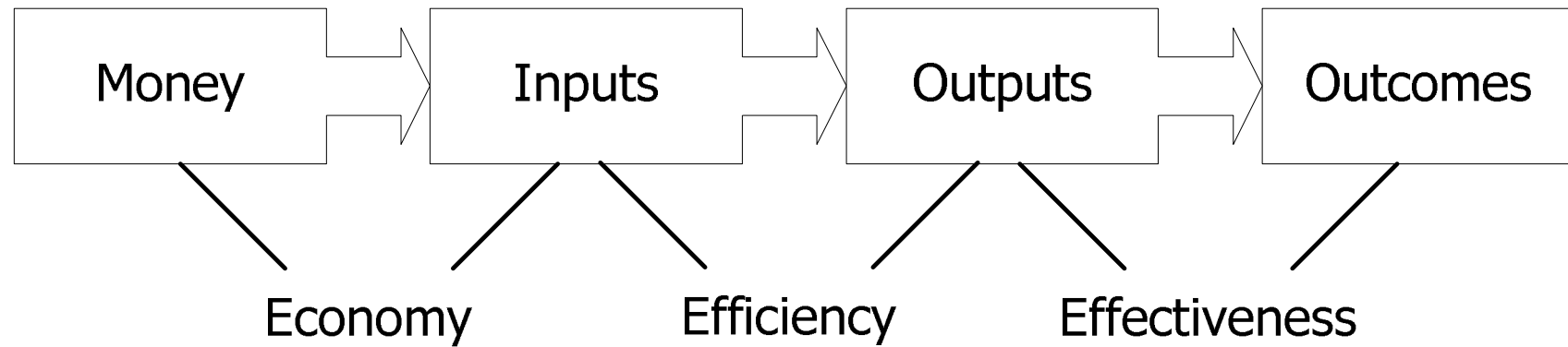
Economy, efficiency and effectiveness (2)



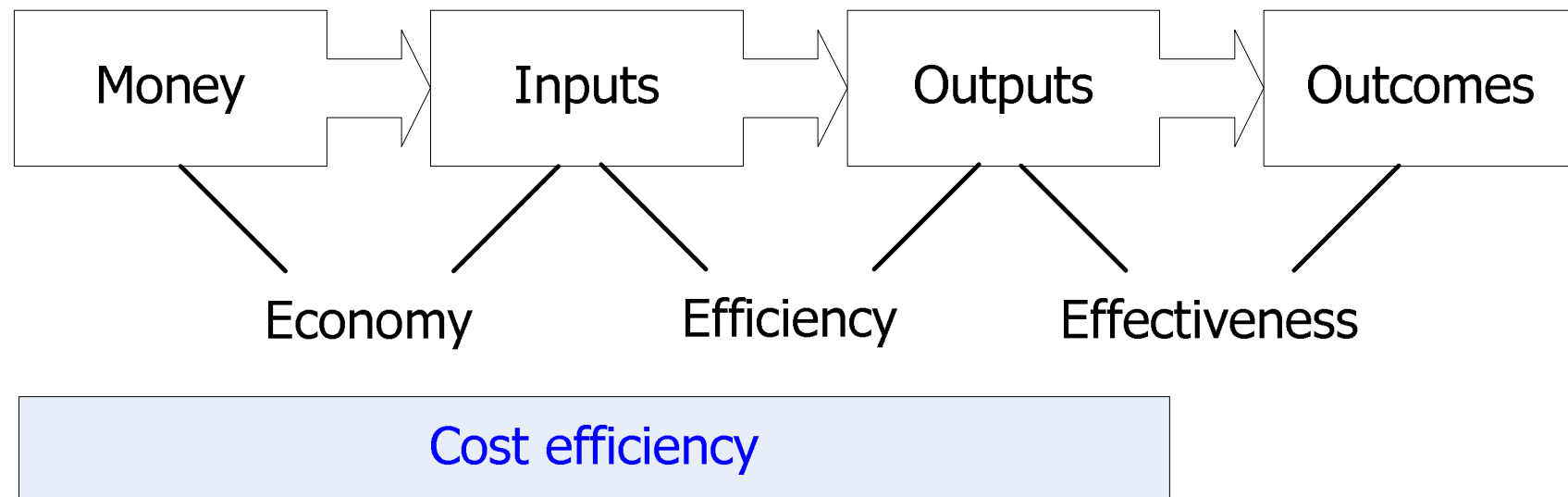
Economy, efficiency and effectiveness (3)



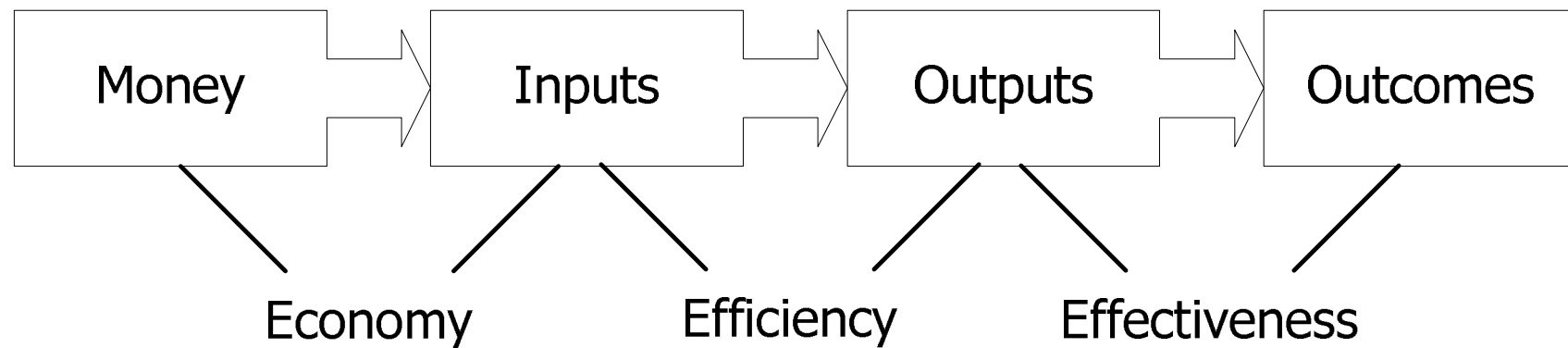
Economy, efficiency and effectiveness (4)



Economy, efficiency and effectiveness (5)



Economy, efficiency and effectiveness (6)



Cost efficiency

Cost effectiveness / value for money

The managerial task

- **Maximise economy** by reducing the cost of inputs
- **Optimise efficiency** in the use of resources to achieve agreed organisational outputs
 - Ask why a process exists in the first place
 - Improvement focuses on increasing flow and eliminating waste
 - 'Lean' is a commonly used methodology
- **Ensure effectiveness** in the conversion of outputs into strategic outcomes
 - To consider the effectiveness of a process is *not* to challenge the need for it per se: it is just to see whether the process does what it is supposed to
 - Improvement focuses on reducing variation and eliminating defective outputs
 - 'Six Sigma' is a commonly used methodology

Variation exists

- Cost per test
- Productivity of the staff
- Use of capacity
- Staffing profiles
- Speed of turnaround
- Accreditation (or otherwise!)

(and in the price charged by Acute Trusts to Primary Care!)

And variation leads to poor value for money

- Efficiency is the optimisation of the use of resources to achieve agreed organisational outputs

Price (1)

- Christopher P., PhD, FRCPath, FACB, Visiting Professor at Oxford University

or

Price (2)

- The amount of money required to purchase a good or service
- The buying price of a service from the perspective of the purchaser is the same as the cost of the service to the purchaser
- The cost of the service from the perspective of the provider is the total money, time and resources associated with any associated purchases or activities. It is not the same as the selling price of the service
- The selling price of the service from the perspective of the provider is the cost of the service PLUS a margin

Or to put it another way.....

- *Selling price twenty pounds, cost nineteen nineteen six, result happiness*
- *Selling price twenty pounds, cost twenty pounds ought and six, result misery*
(with apologies to Mr Micawber in Charles Dickens' *David Copperfield*)

Who buys pathology?

- One of the requirements of 'World Class Commissioning' is that Primary Care Trusts should be externally assessed against a number of organisational competences. These include
 - Competence 7: 'Effectively stimulate the market to meet demand and secure required clinical and health and wellbeing outcomes'
 - Competence 9: 'Secure procurement skills that ensure robust and viable contracts'
- These competences are concerned with how Primary Care manages the local healthcare market and its relationships with providing organisations. They must demonstrate that they can

'Design and negotiate open and fair contracts that provide value for money and are enforceable, with agreed performance measures and intervention protocols'

And your point is?

- It is reasonable to assume that Primary Care Directors of Commissioning will soon start to examine whether they might obtain what some consider a 'commodity' service at less cost
 - Top 20 tests by volume requested by Primary Care account for 87% of all Primary Care demand (CGH client, 2008)
- They could seek lower prices and/or more services from the incumbent provider
- Or they could become 'rate tarts', commissioning services from the lowest-priced 'willing provider'
- 41.7% of biochemistry requests and 30.6% of haematology requests originate in Primary Care

(Getting results: Pathology services in Acute and Specialist Trusts, Healthcare Commission, 2007)

How is Pathology purchased currently by Primary Care?

- Block budget / grant
 - Lump sum, independent of population or number of units of activity

- Per head – capitation
 - Lump sum per head of the population

- Per period
 - Lump sum per defined care service and per patient list

- Per case – diagnostic procedure
 - Groups of cases using similar resources and procedures

- Fee for individual service
 - All activities and contacts identified and priced

A word about Demand management – who cares? (1)

- Primary care, if it pays a 'fee for individual service' (Secondary care if it doesn't!)
- Secondary care, if excess demand occurs in the hospital
- Pathology managers, who are accountable for costs regardless of who pays
- The patient, who is inconvenienced each time a sample is taken
- The taxpayer, who ends up paying for the activity

Demand management – who cares? (2)

- A lot of the biochemistry work exhibiting the greatest growth in demand is carried out on large analysers, most of which still have significant spare capacity. Comparisons of the capacity of the main biochemistry analysers with current workload are crude and potentially misleading, since they exclude set-up time and assume that they can be run at full capacity, 24 hours a day.
- With these reservations, there is currently 14 times (!) as much capacity as demand

(Getting results: Pathology services in Acute and Specialist Trusts, Healthcare Commission, 2007)

So why wouldn't Primary Care simply buy tests at tariff?

Speciality	DH 2008/09 indicative tariff (£)
Biochemistry	1.42
Haematology	2.71
Microbiology / Virology	6.66
Cytology	11.26
Histology / Histopathology	20.69
Immunology	7.12
Phlebotomy	2.63
Neuropathology	1.28
Other	3.48

(BIVDA 2008)

Or from the lowest cost provider?

- The cost of a Biochemistry request varies from £4.67 to £8.45; a microbiology request from £7.26 to £13.71; and a histopathology request from £68.42 to £118.71

(Getting results: Pathology services in Acute and Specialist Trusts, Healthcare Commission, 2007)

- 'and between the pilots there is wide variation in terms of the average cost per test, which applies across all specialties and degrees of complexity'
- 'For example, the direct cost of a routine automated biochemistry test ranges from £0.84 to £3.95'
- 'The direct costs of the most complex histopathology cases range from £122 to £937'

(Lord Carter's speech to the IBMS congress, 2007 (www.thecarterreview.com))

So what am I bid for an extra 20,000 Full Blood Counts?

- The same price as you are currently paying for 100,000, stupid!
- A reduced price for the additional 20,000 units of activity
- A reduced price for all 120,000 units of activity
- An increased price, as we shall have to invest in new machinery / employ more people
- An increased price, because we don't want to be seen to destabilise the local health economy (take work from our clinical colleagues in the adjoining trust!) unless we are a
 - predatory foundation trust
 - private sector organisation ('any willing provider')
 - pathology service in deficit, or in a trust that is in deficit
- The network agreed tariff, independent of the provider!

Summary

- Pick a cost, any cost, measure and attempt to reduce it! (economy)
- Optimise efficiency (reduce waste) while challenging effectiveness
- Consider demand
- Draw up pricing strategies

A word about Collinson Grant Healthcare

- For over 20 years we have been helping managers in Healthcare - public *and* private - to transform the performance of their organisations. How? First we get them to look at what really matters. Then we help them to improve it: to change what is done, alter the structure, manage the staff, cut costs where possible and boost performance
- We have worked at all levels of the NHS. We have helped the Department of Health to plan and develop the workforce. A Strategic Health Authority engaged us to examine the costs, structure and effectiveness of a confederated network. We have led projects in many acute and primary care trusts. And we have played a big part in a major independent review of NHS services.
- We have also supported many private providers of social care and mental health services. Our experience in care homes is wide. And in mental health, we have worked in acute and secure units, in rehabilitation, and in long-term care.



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