Cost Versus Value: What is a Fair Price for a Drug?

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Manufacturer and health system decisions

**Manufacturer development decision**
Will a product deliver a better rate of return on investment, across the countries in which it is marketed, than other uses of capital?

**Health system funding/pricing decision**
Will this product deliver greater benefits to our population than other uses of available resources?
Defining benefits

- Rarity
- Gains in productivity
- Disease burden
- Gains in survival
- Gains in quality of life

How much should a health system pay?

Health system funding

Opportunity cost
- Estimate of the benefits forgone per $1m reduced expenditure
- Marginal productivity
- Becomes a benchmark of value
How much should a health system pay?

Health system funding

Funded intervention 1
Gains in survival
Gains in QoL

Funded intervention 2
Gains in survival
Gains in QoL

Funded intervention 3
Gains in survival
Gains in QoL

Funded intervention 4
Gains in survival
Gains in QoL

Funded intervention 5
Gains in survival
Gains in QoL

Funded intervention n
Gains in survival
Gains in QoL

New pharmaceutical
Gains in survival
Gains in QoL

Opportunity cost
- Estimate of the benefits gained per $1m increased expenditure
- Marginal productivity
- Becomes a benchmark of value

Unfunded intervention 1
Gains in survival
Gains in QoL

Unfunded intervention 2
Gains in survival
Gains in QoL

Unfunded intervention 3
Gains in survival
Gains in QoL

Funded intervention 1
Gains in survival
Gains in QoL

Funded intervention 2
Gains in survival
Gains in QoL

Funded intervention 3
Gains in survival
Gains in QoL

Funded intervention 4
Gains in survival
Gains in QoL

Funded intervention 5
Gains in survival
Gains in QoL

Funded intervention n
Gains in survival
Gains in QoL


Pricing decisions

Additional costs

Price = $20,000

Net health benefit 1 QALY

Opportunity cost
50 QALYs per $1,000,000
$20,000 per QALY

$10,000 per QALY

QALYs gained
Pricing decisions

Additional costs

Opportunity cost
50 QALYs per $1,000,000
$20,000 per QALY

Price = $40,000

$20,000 per QALY

Net health benefit
0 QALYs

QALYs gained


Pricing decisions

Additional costs

Opportunity cost
50 QALYs per $1,000,000
$20,000 per QALY

Price = $60,000

$30,000 per QALY

Net health benefit
-1 QALY

QALYs gained

Summary

- Health systems need to consider:
  - Additional health new drug expected to confer on patients
  - The health it could generate with the same resources (opportunity cost)
- The price of that product should be no more than implied by opportunity cost of the resources
  - A higher price reduces population health
- Over patent period this ‘value-based price’ may give no health gain overall, but appropriate return to manufacturers and gains after patents
- No basis to consider the manufacturers’ costs of development or manufacture

Thank you!

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