

MATCH Tool

...helps users predict the effect of sales volumes on the price of devices

Experience Curve

Prices change, and usually downwards. Determining how quickly they are likely to change is of great importance to strategic decision making. The Experience Curve is a well established tool in marketing and price analysis and can provide an informative snapshot of the market for a product by plotting the average price of a product against experience, represented by the cumulative volume of sales in the market. What is found is that prices decline by a fixed percentage with each doubling of experience.

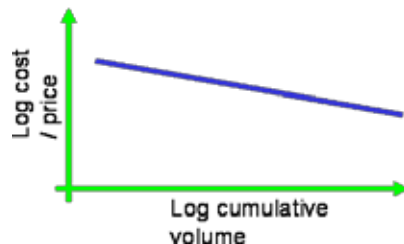


Figure shows an experience curve for Automated External Defibrillators (AEDs), with a slope of 76%, meaning that the units declines to 76 % of its previous value with each doubling of experience.



MATCH researchers have found that the Experience Curve can be used to describe medical device price behaviour, and that a significant number of medical devices exhibit slower price decline rates than the typical 70 – 80 % rates seen in other industries.

The MATCH experience curve calculator will allow manufacturers to quickly assess the experience curve slopes for their products and therefore make better informed decisions in strategic planning and new product assessment. Medical Device purchasers will also be able to use the tool to see how the prices of the product lines that they purchase are changing with experience and improve decision making in price negotiations.



MATCH Tool

...helps users
assess the
commercial
viability of
new devices

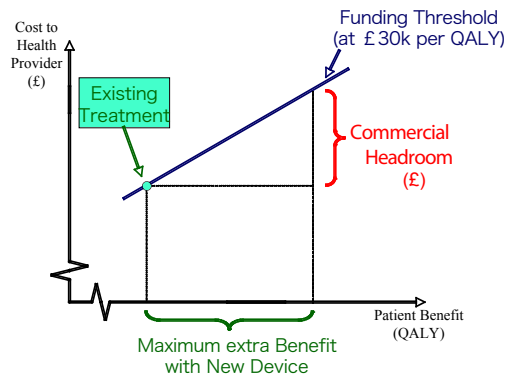


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Headroom Analysis

Assuming the device works as well as it possibly could, what benefit would the average patient enjoy over and above the existing funded treatment?

The answer to this question must be expressed in terms of QALYs (Quality Adjusted Life Years) and then valued at a tariff of £30,000 per QALY. This is the additional amount per patient that the NHS is prepared to pay for the new treatment. The headroom method looks to see if this amount is large enough to support a commercially viable product, making favourable assumptions about production and development costs. Because the calculation is done under the most favourable assumptions, it can give no guarantee that the device will be successful, but can be used to rule out ideas that have no realistic chance of success.



Example:

Headroom analysis of the value of a tissue-engineered bladder

According to a survey of expert urologists, cancer-patients lose about 1/20th of their quality of life if they have to have their bladder removed. So, even if it works perfectly, the health-value of an artificial bladder can be no more than

$$(1/20) \times £30,000 = £1,500 \text{ per patient-year.}$$

After treatment, the average patient with bladder cancer lives for about 10 years. So the headroom value for the technology is:

$$10 \times £1,500 = £15,000 \text{ per patient treated.}$$

In fact, it will be less than this because future benefits are discounted. However, this establishes a best case scenario.

MATCH Tool

...helps
developers
and purchasers
compare
the value of
treatments
using new
medical devices
with existing
devices

Health Economic Evaluator

MATCH has developed an accessible software tool for assessing the value of health technology, suiting those with limited, or no, prior experience of Health Economic (HE) evaluation.

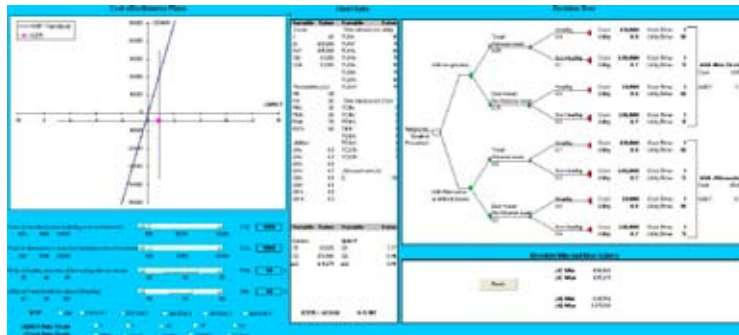
The aim of the tool is to help decision makers form a reliable early view of cost effectiveness, using limited data such as that typically available at the early stages of new product development. The analysis can be refined as data quality improves, for example when clinical trial results are obtained.

The HE Evaluator Tool uses Microsoft Excel and employs a simplified decision tree model structure. It uses clear graphical presentation to show the overall cost effectiveness, including sensitivity to variables, and it allows pricing strategies to be assessed against an adjustable willingness to pay (WTP) threshold.



The HE Evaluator's benefits include:

- instilling understanding of key HE concepts, such as utilities and QALYs;
- systematising processes for taking Net Present Value decisions;
- informing strategies for price optimisation; and
- demonstrating to purchasers cost effectiveness and true product value.



Screenshot of MATCH health economic software tool



MATCH Tool

...helps ensure that new devices meet users' needs

User Requirement Guide

This guide provides help and advice on the issues that should be considered when developing medical devices to ensure that the device meets the requirements of its users. The guide discusses each stage of product development and the user issues that should be considered at each of these.

The guide describes in detail the process of planning a user requirements study and covers issues of sampling, access to users, applying for ethical approval, and the role of user data in medical device standards and regulations. A number of examples of successful user involvement in medical device development are provided, and a glossary is included, providing information on how research



methods can be applied in a medical environment.

The guide is aimed at medical device designers, developers and marketing personnel. It is not prescriptive: rather, it provides generic advice which developers can customise to fit the needs of their particular device.

