NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

Briefing paper for methods review working party on costs

The briefing paper is intended to provide a brief summary of the issues that are proposed for discussion by the Methods Review Working Party to inform an update to the Institute's Guide to Methods of Technology Appraisal. It is not intended to reflect a comprehensive or systematic review of the literature. The views presented in this paper are those of the authors and do not reflect the views of the Institute.

1 Review of the 'Guide to Methods of Technology Appraisal'

The Institute is reviewing the 'Guide to the methods of technology appraisal', which underpins the technology appraisal programme.

The original Methods Guide was published in February 2001, and revised versions were published in 2004 and 2008. The Methods Guide provides an overview of the principles and methods used by the Institute in assessing health technologies. It is a guide for all organisations considering submitting evidence to the technology appraisal programme and describes appraisal methodology.

The revised draft of the Methods Guide will be available for a 3-month public consultation, expected to begin in June 2012. We encourage all interested parties to take part in this consultation.

2 Background

2.1 Relevance of topic to NICE technology appraisals

When appraising the cost effectiveness of a technology, it is critical to get an accurate estimate of the true costs associated with its use. Costs that must be calculated include the actual purchase costs of the intervention of interest and any comparators, but also administration costs and costs associated with living with the condition (for example monitoring, any additional treatments, potentially palliation) and so on. Without accurate costs to input into an economic model, there is a risk that the subsequent cost-effectiveness estimates (those used for decision-making) may be inaccurate and even unreliable.

Particular issues that arise when ascertaining the costs to use in an economic model include the use of Healthcare Resource Group (HRG) codes and the use of list prices. The varying use of HRG codes and of list prices in technology appraisals can lead to inconsistent cost-effectiveness estimates, which could in turn result in differing decisions and recommendations on the use of technologies. Therefore greater clarity and direction surrounding the use of HRG codes and list prices within technology appraisals would be beneficial for those that create evidence submissions and for those that have to use them for decision-making purposes.

2.2 Introduction to costs

When calculating the costs associated with a technology, there are a number of issues that must be considered. Firstly the purchase price of the technology, but also associated costs, such as the administration of the technology and additional treatments that will be given (such as pain medication) and length of stay in hospital, rehabilitation and so on. In order to do this, Healthcare Resource Groups (HRGs) are used. HRGs are standard groupings of clinically similar treatments which use common levels of healthcare resources (http://www.ic.nhs.uk/services/the-casemix-service/new-to-this-service/what-are-healthcare-resource-groups-hrgs). For example “complex neurosurgical pain procedures” is a HRG code. HRGs are used as

they are readily available, standardised, estimates of what a particular treatment for a condition will cost the NHS. They can reduce the need for local micro-costing (that is, costing of each individual component that is involved along a pathway of care in the NHS). A further benefit is that for acute care they are readily understood by people working within the NHS due to them becoming the main contracting currency.

However, there are issues when using HRGs in determining the costs to be used in an economic model. It is possible that the HRG codes used in calculating treatment costs are incomplete or incorrectly compiled and the costs are therefore underestimated. This is however becoming increasingly less likely as Reference Cost submissions have to reconcile to an organisation's annual accounts to ensure full cost recovery. Furthermore, the Audit Commission have undertaken an assurance programme since 2007 and note increasing improvements. Latest figures suggest that coding errors found were 0.03% of total Payment By Results (PbR) expenditure.

HRG codes can be considered too crude and it is possible that they do not adequately discern between treatments for a particular condition (for example if one chemotherapy takes much less time to administer than another, but it is still included in the costlier HRG). Sometimes, the HRGs are costed in such a way that they do not represent the totality of costs within one HRG. For example, there will be one cost for an admission for cardiac arrest, but if the patient has spent time in critical care then this will be captured and costed as a separate HRG. This unbundling is designed to make the costs of high cost care more visible, or to facilitate delivery of care across different organisations, but it also makes it more complex for health economists to use them accurately. Additionally, it is possible that if a new intervention provides innovative benefits (such as reduced administration time, reduced monitoring requirements and so on), then it may be unfair to use an existing HRG that is no longer reflective of the intervention of interest. It is therefore crucial that the Appraisal Committee are presented with sufficient detail to ascertain whether or not the HRG codes have been applied correctly and appropriately in a technology appraisal.

Recently the HRG4 has been published, and this major revision to HRG codes introduced new groupings, which increased from 650 to over 1,400. The new and updated groupings are intended to more accurately reflect treatment pathways in the NHS, with more refinement and consideration of disease severity and associated complications and comorbidities. Whilst the HRG4 is likely to improve granularity and accuracy of costs for individual HRGs, it may also make it more complicated for analysts to determine which HRGs are most relevant.

When HRGs are considered inappropriate for use, it may be possible to micro-cost every component of the treatment pathway using costs from other sources (such as from existing literature, from other countries, from registry data or from surveys and/or clinical opinion). In these circumstances, clear justification as to why HRGs are not used and full details of the methodology that has been used are rarely presented to the Appraisal Committee. This can mean that the exact components that contribute to the cost estimates can be unclear and without confidence in the costing estimates the robustness and reliability of the subsequent cost-effectiveness estimates can therefore be reduced.

A further issue in estimating the costs of technologies is the use of list prices or prices that are discounted when purchased in the NHS. List prices of a technology are those that are set nationally and are available in the British National Formulary which is currently updated twice per year, however, the NHS Electronic Drug Tariff (http://www.ppa.org.uk/ppa/edt_intro.htm) is updated monthly and includes costs for all drugs prescribed within primary care. However, very often the price that the NHS actually pays for a technology can be much lower than the list price due to discounts that have been negotiated with the supplier when buying in bulk. This is particularly the case for technologies that are off patent and technologies that are widely used. This is however rare for newer technologies to be discounted when first launched, unless it is part of a patient access scheme agreed with the Department of Health. This in itself gives rise to issues of transparency as the level of discount within a patient access scheme is often held as commercial-

in-confidence. In some technology appraisals the effect on the cost-effectiveness estimates in using a list price or a price with an NHS discount can be substantial. For example if a comparator is off patent and available to the NHS at a heavily discounted price but the intervention of interest is new and no discounts are available, then an analysis using list prices will result in a small cost difference between the technologies, whereas an analysis using the prices with the NHS discounts will result in a much larger difference between the two.

It is important that if prices with NHS discounts are used instead of list prices in a cost effectiveness analysis, that they are nationally available throughout the NHS and it is clear how long the discounts will apply for. The Commercial Medicine Unit (CMU) collects some information on the discounts that are available for generic (that is off-patent) drugs bought in the NHS via its Electronic Marketing Information Tool (eMIT).

There may be some situations where it is appropriate to use prices with NHS discounts rather than list prices. However, there is often limited discussion or detail as to why a price with an NHS discount rather than a list price has been used in a technology appraisal. Clear justification for this choice is rarely presented to the Appraisal Committee. Additionally, if a price with an NHS discount is used, full details of how the discounts were identified and accompanying descriptions (such as where the discounts are available and for how long) are rarely presented clearly to the Appraisal Committee.

2.3 What the current Methods Guide advises with respect to costs

The current methods guide contains a reasonable amount of detail and flexibility surrounding costing:

> *5.6.1.1 For the reference case, costs should relate to resources that are under the control of the NHS and PSS where differential effects on costs between the technologies under comparison are possible. These resources should be valued using the prices relevant to the NHS and PSS. Where the actual price paid for a resource may differ from the public list price (for*

example, pharmaceuticals, medical devices), the public list price should be used. Sensitivity analysis should assess the implications of variations from this price. Evidence should be presented to demonstrate that resource use and cost data have been identified systematically.

5.6.1.2 Given the perspective in the reference case, it is appropriate for the financial costs relevant to the NHS/PSS to be used as the basis of costing, even though these may not always reflect the full social opportunity cost of a given resource. As far as possible, estimates of unit costs and prices for particular resources should be used consistently across appraisals. A first point of reference in identifying such costs and prices should be any current official listing published by the Department of Health and/or the Welsh Assembly Government.

5.6.1.3 The methods of identification of resource use and unit cost data are not as well defined as for evidence for the identification of clinical effectiveness. Where cost data are taken from literature, the methods used to identify the sources should be defined. Where several alternative sources are available, a justification for the costs chosen should be provided. Where appropriate, sensitivity analysis should be used to assess the implications for results of using alternative data sources.

5.6.1.4 Value added tax (VAT) should be excluded from all economic evaluations but included in budget impact calculations at the appropriate rate (currently 17.5%) when the resources in question are liable for this tax.

5.6.2 Although not part of the reference case, there will be occasions where non-NHS/PSS costs will be differentially affected by the technologies under comparison. In these situations, the Institute should be made aware of the implications of taking a broader perspective on costs for the decision about cost effectiveness. When non-reference case analyses include these broader costs, explicit methods of valuation are required. In all cases, these costs should be reported separately from NHS/PSS costs.

3 Proposed issues for discussion

After consideration of the developments in this methodological area, the current Methods Guide and the requirements of the Institute's Technology Appraisal Programme, it is proposed that the following key areas are discussed by the Methods Guide Review Working Party.

- Can clearer guidance on the appropriate use of HRG codes be provided?
    - Are there any situations where HRG codes are always inappropriate?
    - Should the justification for choice of HRG codes be made more explicit?
    - Should justification for departing from HRG codes be made more explicit?

What could be the impact of providing explicit wording in the methods guide on the use of HRG codes?

- Can further guidance on the use of prices that are available at a discount, rather than list prices be provided?
    - Are there any situations where list prices are inappropriate?

What could be the consequences of specifying situations where list prices are appropriate or inappropriate in the methods guide?

- Can further guidance be given on justifying and identifying prices that are available at a discount? Should the onus be on the evidence submitter to provide certainty on the discounts that are available?

What could be the impact of providing clear direction of how discounts should be identified and then subsequently presented?

4 Authors

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