

**MRC Network of Hubs for Trials Methodology Research:
HTMR project R38: Creating Guidance for Costing Methodology within
Clinical Trials**

Final report – 27th May 2014

Professor Alastair Gray, Dr Sarah Wordsworth and Dr Helen Dakin (University of Oxford).
Dr Sian Noble and Dr Jo Thorn (University of Bristol).
Professor Dyfrig Hughes and Dr Colin Ridyard (University of Bangor).

Summary of original objectives

The objective of this project was to organise a one day workshop in Oxford for about 50 attendees, to explore and improve the costing methodologies being used when conducting economic evaluations alongside randomised controlled trials.

Although there is consistency in the basic principles of costing, even guidelines contain disagreements about how best to apply costs to resource use, and this has led to substantial variation in costing methodologies being applied in different trials, making comparisons of study results difficult and hindering improvements in trial methodology. At present, health economists typically use either published mean costs (e.g. PSSRU), or consult finance departments in NHS trusts to request cost data relating to resource use that has been identified in a trial. Sometimes, researchers conduct micro-costings to estimate bespoke unit costs at a local level. A recent review found that over half of health technology assessment (HTA) studies that reported an economic evaluation, used costs from local sources. However, this can be time-consuming, may not reflect costs across the UK and may not represent the best use of research time or funding. Increased access to readily-available cost data in the UK is providing researchers with opportunities to reduce the amount of micro-costing required to estimate the cost of trial interventions and subsequent clinical events. For example, the Department of Health Reference Costs are freely available on an unrestricted basis. Submitted annually by all trusts in England, the Reference Costs list the costs associated with each of the healthcare resource groups (HRG) currently in use. This case-mix system, in which the same HRG is assigned to patients with similar diagnoses when combined with resource-use quantities obtained through the Hospital Episode Statistics (HES) dataset, could be an efficient costing method. However, routine data sources such as HES may not be entirely suitable for use by researchers, as they are primarily recorded for the purposes of administering the health service.

The few studies that have compared costing methodologies have generally concluded that different types of costing produce very different total cost results. Therefore, health economists from the Universities of Bangor, Bristol and Oxford agreed that the opportunity to bring together researchers to examine whether we could improve our costing methods would be valuable, and a workshop would be the best format to do this.

The objectives for the workshop were:

- a) To raise awareness of work that is being done in costing methodology research;
- b) To facilitate discussions to identify future research needs;
- c) To facilitate collaboration between groups undertaking similar methodology with an aim to encourage collaborations for future grant applications;
- d) To identify and publish a consensus statement on the current state of the art in costing methodology, the implications for clinical trial design and analysis and any guidelines and future research needs.

What was achieved

We organised a one-day workshop for around 50 participants to be held at St Catherine's College at the University of Oxford. We then advertised the workshop through the Health Economists' Study Group (HESG) mailing list and the Health Economics Jiscmail Superlist. This advert also asked potential attendees to submit abstracts and/or register for the workshop. The same call also went out through the HTMR. When organising the programme for the workshop we planned to have at least five abstract-led sessions, which would include presentations by the authors of successful abstracts, followed by a discussion of each paper by the audience to be led by a chair. We also aimed to have one or two more sessions focussing on practical issues in costing, such as how Reference Costs are compiled, which could be led by one or more member(s) of a Hospital Trust Finance team, the Department of Health or the NHS Information Centre. Finally, we aimed to have a general discussion on the current state of the art in costing methodology, guidelines for best practice and the future research needed to improve costing methodology.

When the deadline passed for the submission of abstracts, we received more good quality papers than we could accept for a one-day workshop. We therefore made a pragmatic decision to have posters at the workshop as well as presented papers. The workshop was oversubscribed, so we increased its size from 50 to 61 participants, but still had a waiting list on the day of the workshop, which was a good indication that the workshop was based on a topic of interest for many health economists. We were also fortunate to have two guest speakers agree to attend the workshop and provide practical sessions on costing within the NHS; Paula Monteith from the National Casemix Office and Neil Galbraith from Oxford University Hospitals Trust finance.

The final programme for the workshop is presented in the Appendix for this report. There were many interesting discussions during the presentation sessions, during poster sessions and at the wrap up session at the end of the day. The presentations from the guest speakers were reported to be the highlight of the workshop, and there was broad agreement to try to foster links with NHS financing as a great deal was learnt from these presentations. Among the points raised in the course of the workshop were:

1. There is currently no agreement on a gold standard for costing.
2. Not enough is known about predicting during trial design which costs are likely to be important, and so decisions concerning whether or not to undertake micro-costing and what cost data to collect are often inadequately evidence-based.
3. Reference costs and HRG costs reflect different costing methods at the hospital level.
4. Micro-costing may not capture true hospital cost.
5. The difference between costs incurred in clinical trials and in routine clinical practice is not fully understood but may be substantial.

Next steps for the project

At the end of the workshop, anyone who was interested in potentially forming a methods working group met at St Catherine's College. A decision was made by the group to work together and prepare a proposal for the formation of a Costing Working Group, which would include trial analysis of costs as well as methods to collect data on resource use and unit costs. It was considered premature to prepare and publish a consensus statement on the current state of the art in costing methodology. The group agreed to foster future collaborative projects and grant applications, and work to improve links between academic health economists and those working within NHS finance departments, building on a process initiated at the workshop, with the objective of improving the costing data on which trial based evaluations rely.

Appendix

Creating Guidance for Costing Methodology within Clinical Trials
Workshop Funded by MRC Network of Hubs for Trials Methodology Research
10th October 2013
St Catherine's College Oxford

Programme

Creating Guidance for Costing Methodology within Clinical Trials

- 9.30 10:00 Registration & Coffee
- 10:00 10:10 Workshop introduction
- 10:10 10:40 **James Shearer** (*Chair: Sarah Byford*)
'Being more economic with the collection of cost data in clinical trials'
- 10:40 11:10 **Helen Dakin** (*Chair: Sarah Byford*)
'What is the value of collecting detailed costing data in clinical trials?'
- 11.10 11.30 Coffee and Poster Viewing
- 11.30 12.00 **Ed Wilson** (*Chair: Dyfrig Hughes*)
'A comparison of relative value of information from different resource use data collection processes in an economic evaluation alongside a clinical trial'
- 12.00 13:30 Special Guest Lectures (*Chair: Dyfrig Hughes*)
Paula Monteith
'The Where, How and What of Healthcare Resource Groups'
Neil Galbraith
'How does an acute provider trust go about making the annual reference cost return?'
- 13:30 14:30 Lunch and Poster Viewing
- 14:30 15:20 **Colin Ridyard** (*Chair: Richéal Burns*)
'Comparison of data from patient administration systems and case report forms for recording lengths of hospital stays in a trial-based economic evaluation'
Joanna Thorn
'Comparison of costing methodologies applied to cost profiles at the end of life'
- 15:20 15:50 **Tracey Sach** (*Chair: Rachael Morton*)
'Micro costing intervention costs and a comparison of wider resource use data collection from GP records and care home records in a RCT of Multi-professional clinical medication reviews in care homes for the elderly'
- 15:50 16:20 **Seamus Kent** (*Chair: Rachael Morton*)
'Using individual participant RCT data to estimate impact of disease events on healthcare costs'
- 16.20 16.45 Workshop Summary (*Chair: Sian Noble et al.*)

Posters

Eva Bonin

'Costing multi-site, group-based interventions'

Lesley Curtis

'Unit Costs of Health and Social Care'

Claudia Geue

'Spoilt For Choice: Implications of Using Alternative Methods of Costing Hospital Episode Statistics'

Margaret Heslin

'Calculating the cost of medications in a drug trial: a comparison of different approaches'

Hristina Petkova

'Costing group treatments'