

# Economic Plan

This document identifies the priorities for economic analysis and the proposed methods for addressing these questions as described in section 7 of the Guidelines Manual (2012).

## 1 Guideline

Full title of guideline: **Obesity: the prevention, identification, assessment and management of overweight and obesity in children, young people and adults.** (obesity)

## 2 Process for agreement

The economic plan was prepared by the guideline health economist in consultation with the rest of the National Collaborating Centre (NCC)/Internal Clinical Guidelines (ICG) technical team and Guideline Development Group (GDG). It was discussed and agreed on 02/05/14 by the following people<sup>a</sup>:

***For the NCC and GDG:***

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NCC/ICG economist: Alex Haines, Grace Marsden

NCC representative(s)<sup>b</sup>: Sue Latchem

GDG representative(s)<sup>c</sup>: Peter Barry

***For NICE (completed by NICE):***

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CCP lead: Sharon Summer-Ma

Commissioning manager: Katie Perryman Ford

Economic lead: Bhash Naidoo

Costing lead: Edgar Masanga

Proposals for any changes to the agreed priorities will be circulated by email to this group. If substantive revisions are agreed, they will require to be recorded as addenda to this

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<sup>a</sup> This may be done by face-to-face meeting, teleconference, or email as convenient.

<sup>b</sup> This may be the project manager, a systematic reviewer or research fellow and/or the centre director or manager, as appropriate for the NCC and guideline.

<sup>c</sup> This may be GDG chair, clinical lead and/or other members as appropriate.

document (section 7) or as an updated version of the document<sup>d</sup>.

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<sup>d</sup> In case clinical questions are changed, for example, section 3 requires updating as well as other sections if modelling priorities are affected.

### 3 Topic priorities identified in the Scope

This section contains all topics, or clinical review questions as covered by the scope. These topics usually reflect selected clinical issues. Please indicate if an area is relevant for economic consideration and if modelling is deemed appropriate to address it.

Area <sup>e</sup>	Relevant? <sup>f</sup>	Appropriate for modelling? <sup>g</sup>
The role of bariatric surgery in the management of type 2 diabetes of recent onset in people with obesity.	Yes	Four cost-utility analyses have been found which address this question. <sup>1,2,4,5</sup> Two of the studies <sup>4,5</sup> take a recent UK NHS perspective, one <sup>2</sup> takes an Australian healthcare payer perspective, and one <sup>1</sup> a US healthcare perspective. One study assesses the cost effectiveness of a gastric bypass, <sup>1</sup> the other three <sup>2,4,5</sup> assess the cost effectiveness of laparoscopic adjustable gastric bands. All four studies found bariatric surgery to be cost effective for people with recent onset type 2 diabetes. The GDG felt that the review of this literature was sufficient to assess the cost-effectiveness of bariatric surgery for the management of recent onset type 2 diabetes in people with obesity, and did not think that conducting an additional economic analysis would be of benefit. Therefore this area is considered to be of low priority for original economic analysis.
Follow-up care packages after bariatric surgery.	Yes	No formal economic evaluations have been found for this question. To model this topic would require long-run follow up data on patients after bariatric surgery, and the GDG explained that this evidence does not exist. Original economic modelling will therefore

<sup>e</sup> This corresponds to the “Key clinical issues that will be covered “ section in the scope, or if available, clinical review questions

<sup>f</sup> Please state if this area is deemed relevant for considering opportunity costs and likely disinvestments. Areas might pose a decision problem directly or implicitly inform the choice between options. Categories should include information on relevance and if of high or low priority for health economic work (see below).

<sup>g</sup> Health economic work comprises of literature reviews, qualitative consideration of expected costs and effects and/or formal decision modelling. Decision modelling is particularly useful where it can reduce uncertainty over cost effectiveness and/or where a recommendation is likely to result in considerable changes in health and/or costs. For further details please see section 7.1 of the Guidelines Manual (2012). It may not be feasible or efficient to address every relevant decision problem by de novo work. There rationale for choosing areas for cost effectiveness modelling should be discussed in detail in Sections 3 and 4.

		not be feasible in this area, and as such is considered to be of low priority. This said; where possible we will estimate the costs of various core components of follow up packages (as identified by the GDG) in order to facilitate discussions of cost-effectiveness.
Very-low-calorie diets (VLCDs), including their definition, safety and adherence issues, and providing effective support	Yes	<p>No formal economic evaluations have been found in this topic area. Modelling is unlikely to be feasible, as we do not expect to find RCTs that will provide us with the data we would need to build a model. The main issue is that long run data is crucial in determining the cost-effectiveness of VLCDs as it is the maintenance of weight loss that leads to improved clinical outcomes, and the GDG have explained that such evidence is unlikely to exist. VLCDs are therefore considered to be a low priority for economic modelling. As far as possible we will identify the costs of VLCDs, and cost effectiveness will be discussed with the GDG with the use of threshold analyses.</p> <p>Two studies<sup>3,6</sup> have been identified which evaluate health related quality of life for obese patients using EQ5D in a UK population. In particular, Lee et al (2005) provide a utility change per unit decrease in BMI. This data will be incorporated into threshold analyses where possible.</p>

## 4 Planned modelling

This section will specify modelling work prioritised by the GDG. It will provide details on how cost effectiveness will be considered for relevant, prioritised clinical areas/decision problems. Proposed modelling work should be listed in chronological order. For each decision model, please state the proposed analytical methods, relevant references and any comments and justifications on, for example, possible diversions from the reference case.

<i>Area<sup>h</sup> (clinical question(s)<sup>i</sup>)</i>	<i>Outline proposed analysis</i>
	Formal modelling is not prioritised for this guideline but costing work will be undertaken to aid informal consideration of cost-effectiveness where published literature is not available. Simple threshold analyses will also be undertaken if feasible and useful.

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<sup>h</sup> This should be the key areas relevant for considering opportunity costs and high priority for de novo modelling, as identified in section 3.

<sup>i</sup> Two or more questions may be addressed by a single analysis if appropriate.

## 5 Clinical Guidelines technical support unit<sup>j</sup>

Please indicate if any of the analyses or areas suggested in section 3 require or would benefit from the Clinical Guidelines Technical Support Unit support or validation.

We do not anticipate that support or validation will be needed from the Clinical Guidelines Technical Support Unit

## 6 References

- 1 Hoerger TJ, Zhang P, Segel JE, Kahn HS, Barker LE, Couper S. Cost-effectiveness of bariatric surgery for severely obese adults with diabetes. *Diabetes Care*. 2010; 33:1933-1939
- 2 Keating CL, Dixon JB, Moodie ML, Peeters A, Bulfone L, Magliano DJ et al. Cost-effectiveness of surgically induced weight loss for the management of type 2 diabetes: modeled lifetime analysis. *Diabetes Care*. 2009; 32(4):567-574
- 3 Lee AJ, Morgan CL, Morrissey M, Wittrup-Jensen KU, Kennedy-Martin T, Currie CJ. Evaluation of the association between the EQ-5D (health-related utility) and body mass index (obesity) in hospital-treated people with Type 1 diabetes, Type 2 diabetes and with no diagnosed diabetes. *Diabetic Medicine*. 2005; 22(11):1482-1486
- 4 Picot J, Jones J, Colquitt JL, Loveman E, Clegg AJ. Weight loss surgery for mild to moderate obesity: a systematic review and economic evaluation. *Obesity Surgery*. 2012; 22(9):1496-1506
- 5 Pollock RF, Muduma G, Valentine WJ. Evaluating the cost-effectiveness of laparoscopic adjustable gastric banding versus standard medical management in obese patients with type 2 diabetes in the UK. *Diabetes, Obesity and Metabolism*. 2013; 15(2):121-129
- 6 Sach TH, Barton GR, Doherty M, Muir KR, Jenkinson C, Avery AJ. The relationship between body mass index and health-related quality of life: comparing the EQ-5D, EuroQol VAS and SF-6D. *International Journal of Obesity*. 2007; 31(1):189-196

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<sup>j</sup> The clinical guidelines technical support unit provides academic support to guideline developers at any point in guideline development: conduct, or support the NCC/ICG team in the development of, advanced evidence synthesis, support complex economic analyses, conduct validation of or amendments to, existing evidence syntheses used in guideline models and address concerns from stakeholder (via consultation). Please contact the senior technical adviser for further details.

## 7 Addenda to economic plan

Please state any changes that have been made to the above agreed plan, together with date. If clinical questions have changed since the economic plan was signed off, include a new list with all clinical questions as part of the addenda, together with a comment where questions were inserted, deleted or altered and an explanation.

<i>Scope area<sup>k</sup> (clinical question(s) <sup>l</sup>)</i>	<i>Proposed changes</i>	<i>Date agreed</i>

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<sup>l</sup> Two or more questions may be addressed by a single analysis if appropriate.