

Putting NICE guidance into practice

**Costing report: Managing
overweight and obesity in
adults: lifestyle weight
management services**

**Implementing the NICE guidance on
overweight and obese adults: lifestyle
weight management (PH53)**

Published: May 2014

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Executive summary

This costing report looks at the resource impact of implementing NICE's guideline on [overweight and obese adults: lifestyle weight management PH53](#) in England.

The costing method adopted uses the most accurate data available. It was produced in conjunction with professionals working in the area, and reviewed by financial professionals. (For details of the method used see appendix A).

Local authorities will commission lifestyle weight management programmes. Local authorities and clinical commissioning groups (CCGs) may see reductions in diseases associated with obesity, such as coronary heart disease, stroke, hypertension, osteoarthritis, type 2 diabetes and some cancers.

Providers of lifestyle weight management programmes may be private, public or voluntary sector organisations working in the community or in (or via) primary care settings.

For other related NICE guidance relevant to managing obesity see [Managing overweight and obesity among children and young people](#), NICE public health guidance 47.

Significant¹ resource-impact recommendations

This report focuses on the recommendation that is considered to need the most additional resources to implement or can potentially generate the biggest savings.

This is [recommendation 6](#):

- Refer overweight and obese adults to a lifestyle weight management programme.

Net resource impact

The annual resource impact of implementing the recommendation from year 5 onwards per 100,000 population is around £28,000. This assumes the proportion of overweight and obese people referred to lifestyle weight management programmes

¹ The following impacts have been defined as significant:

- more than 300 people are estimated to be affected by the recommendations (equivalent to 1 patient per 170,000)
- initial costing work indicates that the national cost is more than £1 million (equivalent to £2000 per 100,000 population).

will increase by 1%. This assumption has been used in this costing model but can be amended in the local costing template to reflect local circumstances or a different future uptake rate, which could vary significantly. The impact of different potential future uptake rates is addressed in the sensitivity analysis (section 4). Uptake of lifestyle weight management programmes may increase over 5 years as the referral process improves and people become more aware of the benefits.

Costs

If a lifestyle weight management programme is commissioned, this involves setting up contracts with, and service specifications for, the programme providers.

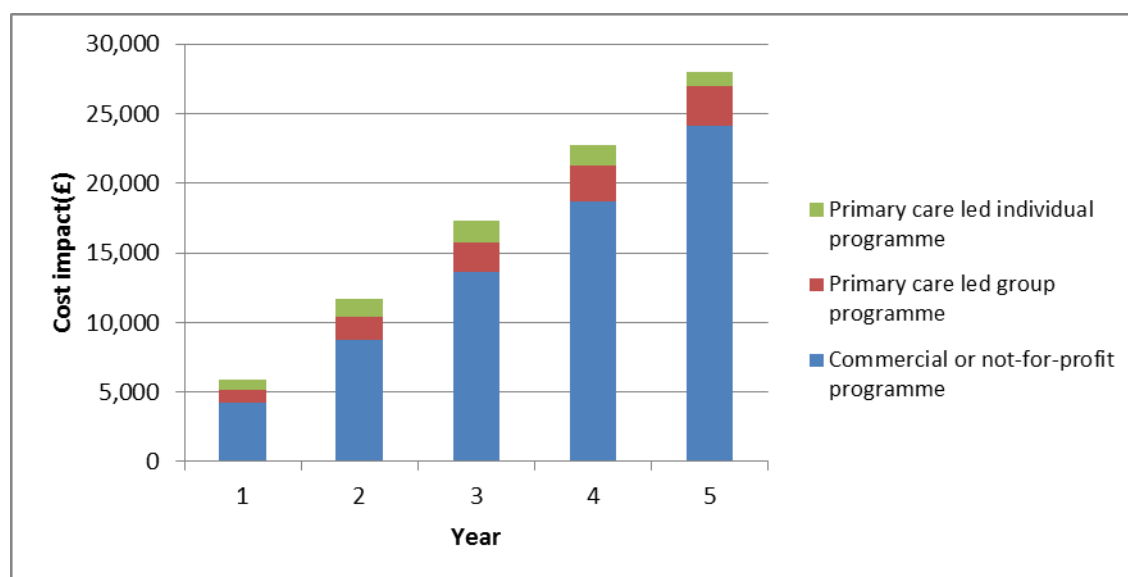
If a local authority establishes their own primary care led weight management programme, the non-recurrent set-up costs include marketing, programme equipment and initial staff training costs. The recurrent costs will include paying for a multidisciplinary team to administer and coordinate a range of programmes.

Recurrent costs will also include monitoring and evaluation of the programmes, measuring the quality of the service, patient satisfaction and overall cost effectiveness along with ongoing training costs for programme staff.

We do not expect implementation of the recommendations to affect services commissioned under payments by results (PbR) in the short to medium term.

The full cost impact of the guideline may therefore occur in year 5. It is assumed that costs will remain steady from year 5 onwards. Section 3.3 explains how costs are estimated for years 1, 2, 3, 4 and 5 and this is summarised in figure 1:

Figure 1 Potential costs over time, per 100,000 population, for referral to commissioned lifestyle weight management programmes



Changes can be made in the costing template to model different increases in future referrals to lifestyle weight management programmes.

Benefits and savings

Implementing NICE's guideline may result in the following benefits and savings:

- The 2007 Foresight report estimated that in 2050, costs attributable to people being obese or overweight would be £9.7 billion per year ([The economic burden of obesity](#), National Obesity Observatory 2010). Preventing a 1% increase in the number of people who are overweight or obese could save the NHS and local authorities around £97 million per year.
- If improvements to body mass index (BMI) are achieved and maintained, this will reduce a range of conditions associated with obesity. This includes coronary heart disease, type 2 diabetes, stroke, hypertension, osteoarthritis and some cancers. This could lead to significant savings for clinical commissioning groups (CCGs) and local authorities. Diabetes, for example, cost the NHS approximately £23.7 billion in 2010/11 ([Diabetes: cases and costs predicted to rise](#), NHS Choices 2012).
- Obese and overweight people who change their lifestyles and lose weight may benefit from a longer life and a better quality of life. These benefits are difficult to quantify in financial terms.

- Savings could arise as a result of decreased prescription costs and GP contacts if the guidance successfully changes the lifestyles and behaviours of those who are classified as overweight or obese.

Local costing template

The local costing template for this guideline helps local areas to estimate the impact by replacing a series of variables with ones that depict the current local position. A sample calculation using this template showed that additional costs of £28,000 could be incurred for a population of 100,000 by year 5. This assumes an increase of 1% in the proportion of overweight or obese adults being referred to weight management services.

1 Introduction

1.1 *Supporting implementation*

1.1.1 NICE's guideline on overweight and obese adults: lifestyle weight management is supported by the following [implementation tools](#):

- costing tools:
 - costing report (this document)
 - local costing template (a simple spreadsheet) that can be used to estimate the local cost of implementation
- baseline assessment tool to determine how your organisation meets the recommendations and to plan future activity and monitor progress over time.

1.2 *What is the aim of this report?*

1.2.1 This report provides estimates of the cost impact per 100,000 population of implementing the guideline on lifestyle weight management for overweight and obese adults in England. The estimates are based on assumptions made about current practice and predictions of how current practice might change after implementation.

1.2.2 This report aims to help local areas plan for the financial implications of implementing the NICE guideline. The main commissioners for this guideline are local authorities. Providers of lifestyle weight management programmes may be private, public or voluntary sector organisations working in the community or in (or via) primary care settings.

1.2.3 This report does not reproduce our guideline and should be read in conjunction with it.

1.2.4 The costing template that accompanies this report aims to help those assessing the local resource impact in England.

1.3 **Background**

- 1.3.1 In 2012, just under a quarter of men (24%) and about a quarter of women (25%) in England were classed as obese (BMI 30 kg/m² or more). A further 42% of men and 32% of women were classed as overweight (BMI 25 kg/m² to 29.9 kg/m²) ([Statistics on obesity, physical activity and diet: England 2014: report](#), Health and Social Care Information Centre 2014).
- 1.3.2 It is estimated that life expectancy is reduced by an average of 3 years for those with a BMI of 30 to 35 kg/m² and 8 to 10 years for those with a BMI of 40 to 50 kg/m². ([Briefing note: obesity and life expectancy](#), National Obesity Observatory 2010).
- 1.3.3 Overweight and obesity increase the risk of various diseases and conditions, including coronary heart disease, type 2 diabetes, stroke and some cancers. ([Adult obesity](#), Public Health England 2014).
- 1.3.4 In many areas, public, private or voluntary sector weight management providers may be commissioned to provide individual or group lifestyle weight management services. People can also self-refer to voluntary or commercial lifestyle weight management programmes. Local policies vary but generally funded referrals to a lifestyle weight management programme (in tier 2 services) lasts for around 12 weeks or 12 sessions.

1.4 **Lifestyle weight management programmes for overweight and obese adults**

- 1.4.1 Commissioned programmes should include the core components for weight loss and the prevention of weight regain, as set out in [recommendations 9 and 10](#).

- 1.4.2 Lifestyle weight management programmes may be courses or clubs that are based in the community, workplaces, primary care or online. They can be provided by private, public or voluntary sector organisations.
- 1.4.3 Commissioners of lifestyle weight management services should work with all referrers and providers to put systems in place to share relevant information about people referred to lifestyle weight management programmes. This should include information on someone's weight at baseline, programme end and at 12 months.

2 Costing methodology

2.1 *Process*

- 2.1.1 We use a structured approach for costing guidelines (see appendix A).
- 2.1.2 We have to make assumptions in the costing model. These are tested for reasonableness with professionals in the relevant area.
- 2.1.3 The costing template can be used as a starting point to assess local costs and can be amended to reflect local circumstances.

2.2 *Scope of the cost-impact analysis*

- 2.2.1 The guideline offers best practice advice on overweight and obese adults: lifestyle weight management.
- 2.2.2 The guideline does not cover:
- services that focus on preventing obesity (usually called tier 1 services) or address the wider determinants of health
 - pharmacological treatments
 - specialist weight management services (usually called tier 3 services)
 - surgical treatments for obesity (usually called tier 4 services)

- the additional needs of obese adults with a range of complex conditions
- pregnant women.

These issues are therefore outside the scope of the costing work.

2.2.3 We worked with professionals working in this area to identify the recommendations that would have the most significant resource-impact. Costing work has focused on [recommendation 6](#):

- Refer overweight and obese adults to a lifestyle weight management programme.

3 Significant resource-impact costs and savings

3.1 *Refer overweight and obese adults to a lifestyle weight management programme*

Background

3.1.1 If a lifestyle weight management programme is commissioned, this involves setting up contracts with, and service specifications for, the programme providers.

3.1.2 Providers of lifestyle weight management programmes usually accept adults through self-referral or referral by a health practitioner. Referrals by a health practitioner should be carried out in the same way as referrals to other health services (Lewis et al. 2013). No extra staff will be required so making a referral should not incur any extra costs.

Assumptions made

3.1.3 The absolute level of obesity is very high and England, along with the rest of the UK, ranks as one of the most obese nations in Europe with few signs yet of a sustained decline ([Healthy lives, healthy people](#), Department of Health 2011). In England,

there are approximately 32,300 overweight and 18,200 obese adults per 100,000 population.

- 3.1.4 In 2013, approximately 69,000 adults in England were referred to Weight Watchers and Slimming World under the NHS referral schemes. According to Jolly et al. (2011) 71% of adults who attended a weight management programme opted for a commercial or not-for-profit programme. Inflating the figure of 69,000 to account for the 29% of people who attend other types of weight management programmes gives a total of approximately 97,000 adults in England. This is equivalent to around 0.3% of overweight or obese adults, or 170 adults per 100,000 population.
- 3.1.5 By year 5 onwards, it is assumed that the proportion of overweight or obese adults attending lifestyle weight management programmes each year will increase by 1%. This would represent a quadrupling of existing levels of uptake for these programmes. The 1% increase equates to approximately 680 overweight or obese adults per 100,000 population. This is the assumption used in the costing model. It can be amended locally in the costing template, based on local assumptions about future uptake of lifestyle weight management programmes which could vary significantly. The impact of different potential future uptake rates is addressed in the sensitivity analysis (section 4).
- 3.1.6 The guideline recommends that overweight or obese adults eligible for referral to lifestyle weight management are identified by a health practitioner (such as a GP or practice nurse) when the opportunity arises. We do not expect appointments to have a significant cost impact, but it will absorb some existing staff time.

- 3.1.7 The guideline recommends referring people to a group rather than an individual programme, if they have not expressed a preference. That is because group programmes tend to be more effective. People should also be given the opportunity for a re-referral because weight management is a long-term process.
- 3.1.8 The study by Jolly et al. (2011) calculated that the average cost per person attending a 12-week group lifestyle weight management programme run by a commercial or not-for profit company is £53. This compares with a primary care led group programme (£70) and a primary care led individual programme (£91). These costs have been used in the costing model but can be amended in the local costing template to reflect local circumstances.
- 3.1.9 Although dropout rates can be high for lifestyle weight management programmes, the model assumes commissioners will not get a refund for non-attendees. However, we anticipate that the guideline will help reduce programme dropout rates. In addition, after the 12-week funded period, participants are expected to continue attending on a self-funded basis. So there will be no additional costs for commissioners after the initial period.
- 3.1.10 The Jolly et al. (2011) study estimated that 71% of overweight or obese adults who attended a lifestyle weight management programme opted for a commercial or not-for-profit programme. A further 16% opted for a primary care led group programme and 13% for a primary care led individual programme. It is assumed future attendance will change and that more people (85%) will attend commercial or not-for-profit programmes, with 10% opting for a primary care led group programme and 5% for a primary care led individual programme.

Cost summary

- 3.1.11 The net cost of [recommendation 6](#) is summarised in table 1 below.
- 3.1.12 The table assumes that around 170 overweight or obese adults per 100,000 population currently attend a lifestyle weight management programme on an annual basis. It is also assumed that this will increase to around 680 adults by year 5 and remain at this level in the longer term.

Table 1 Summary of annual net cost impact of lifestyle weight management programmes per 100,000 population from year 5 onwards

Programme type	Unit cost (£)	Current		Proposed		Change	
		Attendances	Total cost (£)	Attendances	Total cost (£)	Attendances	Total cost (£)
Commercial or not-for-profit (group)	53	123	6,565	578	30,706	455	24,141
Primary care led (group)	70	28	1,948	68	4,756	40	2,808
Primary care led individual programme	91	23	2,049	34	3,079	11	1,030
Total		174	10,562	680	38,541	506	27,979

Other considerations

- 3.1.13 Multicomponent lifestyle weight management programmes are likely to be effective, at least up to 12 to 18 months. Evidence suggests that primary care led programmes may be less effective than commercial programmes, but it is unclear why. Primary care led services may be established to support people living in particular geographic areas, or from lower income groups, particularly if their needs are not being met by commercial programmes.

- 3.1.14 It is assumed that there will be an increase in referrals to all lifestyle weight management programmes as a result of the recommendations. It is also assumed that referrals to either commercial or not-for-profit providers may increase the most.
- 3.1.15 When programmes become more established, there may be referrals into tier 2 services from tiers 3 and 4 to support the need for more expensive clinical treatment and surgery for those who are unable to lose weight. The department of Health's Report of the working group into: [Joined up clinical pathways for obesity](#) describes the commissioning of, and access to elements of the obesity care pathway.
- 3.1.16 There is not expected to be any extra cost for training health and social care professionals in weight management. Continuing professional development or GP practice training time should be used for training.

3.2 *Monitor and evaluate local provision*

Background

- 3.2.1 After programmes for referral have been selected it is important that health professionals and commissioners continue to monitor the programme to ensure it meets local needs (as identified by the joint strategic needs assessment). We do not expect this to incur any significant extra costs because we do not expect more staff to be recruited as a result of the guideline. However, it may use up some existing staff time.

Other considerations

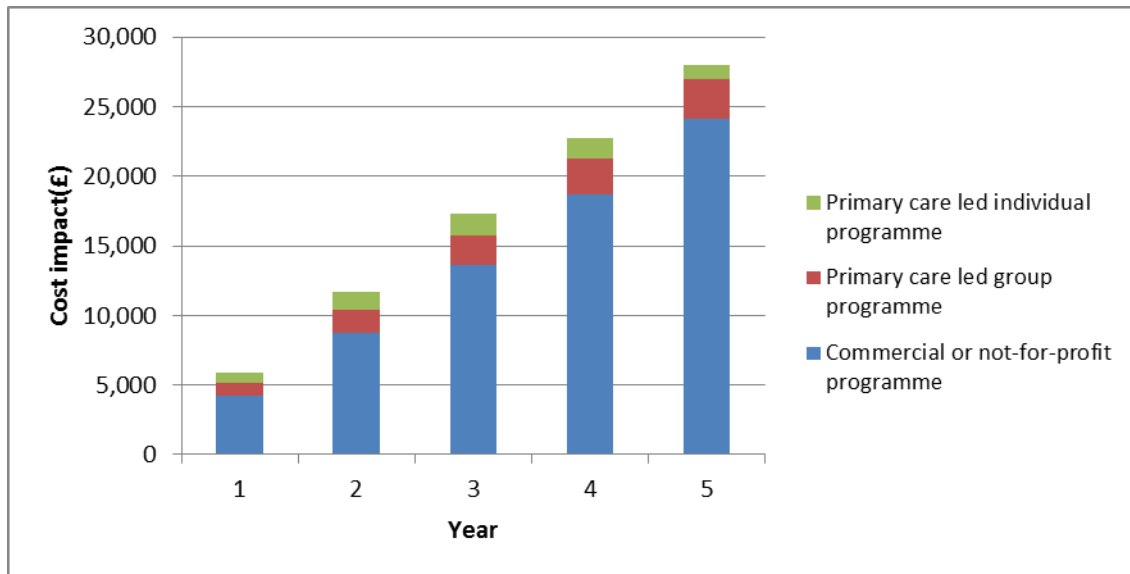
- 3.2.2 The National Obesity Observatory has developed a [standard evaluation framework for weight management interventions](#). This provides guidance to support the evaluation of lifestyle weight management programmes and meet the recommendations in the guideline.

- 3.2.3 Awareness of the programmes among health and social care professionals and potential users should be monitored. Results of routine monitoring and programme expenditure should be collated and analysed in relation to the characteristics of the local population.
- 3.2.4 Relevant information needed for the evaluation of lifestyle weight management programmes should be included as part of the information required from the provider of the service.

3.3 Costs over time

- 3.3.1 Accurately estimating the future uptake of lifestyle weight management programmes is difficult. Based on expert clinical opinion we have assumed that implementing the guideline will lead to a 1% increase in the proportion of the eligible population who will attend lifestyle weight management programmes from year 5 onwards. We assumed that around 0.5% of overweight or obese adults will attend in year 1, 0.7% in year 2, 0.9% in year 3, 1.1% in year 4 and 1.3% in year 5. The impact of different potential future uptake rates is addressed in the sensitivity analysis (section 4).
- 3.3.2 The cost impact of implementing the guideline per 100,000 population is estimated to be £5,900 in year 1, £11,700 in year 2, £17,300 in year 3, £22,700 in year 4 and £28,000 in year 5. The annual cost impact is assumed to reach £28,000. This will be incurred each year from year 5 onwards (see figure 2).

Figure 2 Potential costs over time, per 100,000 population, for referral to commissioned lifestyle weight management programmes



3.3.3 The costs in figure 2 are modelled on a specific approach to implementing the recommendations. The costing model assumes:

- Attendance at lifestyle weight management programmes will increase by around 1% of the eligible population because of improvements in the referral process and a greater awareness of the programme benefits.
- From year 5 onwards, around 1.3% of the eligible population will attend a lifestyle weight management programme every year.

3.4 ***Benefits and savings***

3.4.1 If improvements to BMI are achieved and maintained this could reduce the prevalence of conditions associated with obesity. This includes coronary heart disease, type 2 diabetes, stroke, hypertension, osteoarthritis and some cancers. In turn, this could lead to significant savings for clinical commissioning groups and local authorities.

3.4.2 There is good evidence to suggest that moderate weight loss (5 to 10% of initial body weight) is beneficial to health (McTigue et al. 2003). A study by Hamman et al. (2006) found that, on

average, there was a 16% reduction in the risk of diabetes for each kilogram of weight lost.

- 3.4.3 Diabetes cost the NHS approximately £23.7 billion in the UK in 2010/11 ([Diabetes: cases and costs predicted to rise](#), NHS Choices 2012). A reduction in diabetes will reduce the need for diabetes drugs and provide associated savings for the NHS.
- 3.4.4 If the guideline successfully changes the lifestyle of people who are overweight or obese, this could reduce the prevalence of other conditions associated with obesity. However, the resulting potential savings for local authorities and the NHS have not been quantified in this report. Other benefits, such as prolonging someone's life and improving their quality of life, are also difficult to quantify in financial terms.
- 3.4.5 If lifestyle interventions help control and prevent obesity in adults it will avoid referrals for more expensive clinical treatment, such as for specialist weight management services (tier 3) and bariatric surgery (tier 4).
- 3.4.6 The 2007 Foresight report estimated that, in 2050, the costs attributable to people being obese or overweight would be £9.7 billion per year ([The economic burden of obesity](#), National Obesity Observatory 2010). Preventing a 1% increase in the prevalence of people who are overweight and obese could lead to combined savings of around £97 million per year for the NHS and local authorities.

4 Sensitivity analysis

4.1 Methodology

- 4.1.1 A number of assumptions have been made in the model. These assumptions can be amended in the local costing template to estimate the cost of increased referrals and the number of

people whose lives will be helped by lifestyle improvements, according to local circumstances.

- 4.1.2 Minimum and maximum values were used in the sensitivity analysis to assess which variables have the largest impact on the net cost or saving. This helps users to identify significant cost drivers.
- 4.1.3 It is not possible to arrive at an overall range for total cost because the minimum or maximum of individual assumptions are unlikely to occur simultaneously. We undertook 1-way simple sensitivity analysis, altering each variable independently to identify those that have the greatest impact on the calculated total cost.
- 4.1.4 Appendix B contains a table detailing all variables that were modified. The key conclusions are discussed below.

4.2 *Impact of sensitivity analysis on costs*

Future proportion of adults attending a lifestyle weight management programme

- 4.2.1 The future proportion of overweight or obese adults attending lifestyle weight management programmes is based on clinical opinion. The baseline assumption of an increase of 1% leads to a cost impact of £28,000 per 100,000 population from year 5 onwards. Varying the proportion of overweight or obese adults who attend these programmes, from 1 to 10%, leads to a cost impact of £18,100 and £276,200 per 100,000 population respectively, a significant difference. A 10% increase in the proportion of overweight or obese adults who attend these programmes would represent a more than 30 fold increase in the estimated uptake level today. This is examined in more detail in the associated costing template.

Future proportion of adults attending each type of programme

- 4.2.2 The future proportion of overweight or obese adults attending each type of lifestyle weight management programme is based on expert clinical opinion. The baseline assumption was that 85% will attend a commercial or not-for-profit group, 10% will attend a primary care led group and 5% will attend a primary care led individual programme. This leads to a cost impact of £28,000 per 100,000 population from year 5 onwards.
- 4.2.3 Varying the proportion of overweight or obese adults attending a commercial or not-for-profit programme, from 80 to 90% (with an equal split between attendance at a primary care led group and a primary care led individual programme), leads to a cost impact of £29,100 and £27,100 per 100,000 population respectively.

5 Impact of the guideline for commissioners

- 5.1.1 It is expected that local authorities will commission lifestyle weight management programmes.
- 5.1.2 The cost of commissioning lifestyle weight management programmes comes under programme budgeting category 21X (healthy individuals – other).
- 5.1.3 We do not expect this service to affect other services commissioned under payments by results (PbR) in the short to medium term. PbR commissioning is expected to change in the longer term (see 'Benefits and savings' for further information).

6 Conclusion

6.1 *Total cost per 100,000 population*

- 6.1.1 Using the significant resource-impact recommendations and assumptions specified in section 3, the annual cost of

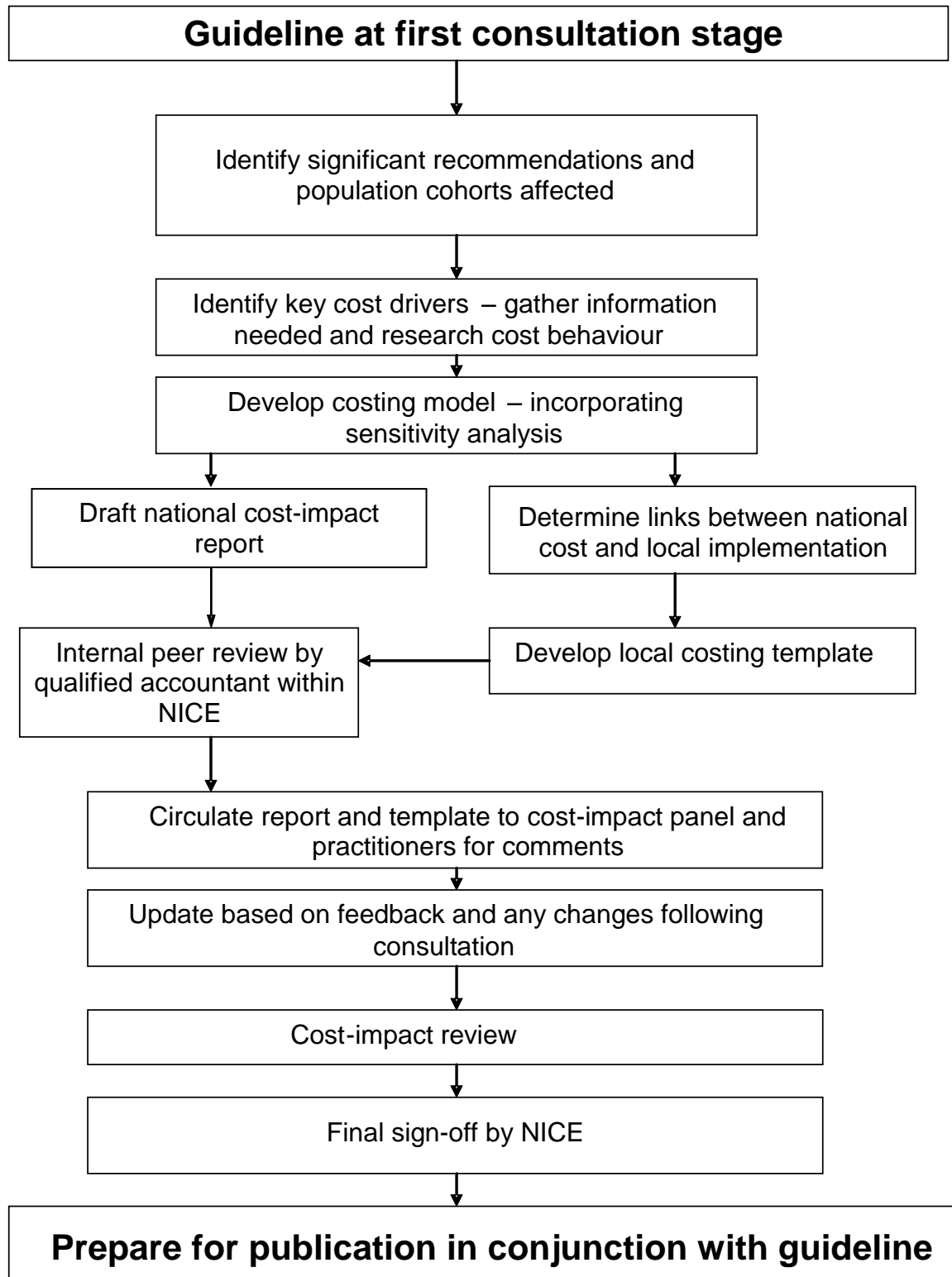
implementing these recommendations is around £28,000 per 100,000 population from year 5 onwards.

- 6.1.2 The costs presented are estimates and should not be taken as the full cost of implementing the guideline.

6.2 *Next steps*

- 6.2.1 The local costing template produced to support this guideline helps organisations such as health and wellbeing boards in England to estimate the impact locally. They can do this by replacing variables with factors that depict the local position. A sample calculation using this template showed that additional costs of £28,000 could be incurred by a population of 100,000 by year 5, assuming an increase of 1% of the proportion of overweight or obese adults being referred to weight management services. Use this template to calculate the cost of implementing our guideline in your area.

Appendix A. Approach to costing a guideline



Appendix B. Results of sensitivity analysis

Assessment of sensitivity costs using a range of variables per 100,000 population							
Parameter varied	Baseline value	Minimum value	Maximum value	Baseline costs (£)	Minimum costs (£)	Maximum costs (£)	Change (£)
Future proportion of overweight or obese adults who may attend a lifestyle weight management programme	1.3%	1.0%	10%	28,000	18,100	276,200	258,100
Future proportion of overweight or obese adults who may attend: <ul style="list-style-type: none"> • a commercial or not-for-profit lifestyle weight management programme • a primary care led group lifestyle weight management programme • an primary care led individual lifestyle weight management programme 	85% 10% 5%	80% 12.5% 7.5%	90% 7.5% 2.5%	28,000	29,100	27,100	-2,000

Appendix C. References

Hamman R, Wing R, Edelstein S, et al. (2006) [Effect of Weight Loss with Lifestyle Intervention on Risk of Diabetes](#). American Diabetes Association. Diabetes Care 29: 2102–17.

Jolly K, Lewis A, Beach J, et al. (2011) [Comparison of range of commercial or primary care led weight reduction programme with minimal intervention control for weight loss in obesity: Lighten Up randomised controlled trial](#). BMJ 343: d6500

Lewis A, Jolly K, Adab P, et al. (2013) [A brief intervention for weight management in primary care: study protocol for a randomized controlled trial](#). Trials 14: 393

McTigue K, Harris R, Hemphill B, et al. (2003) [Screening and Interventions for Obesity in Adults: Summary of the Evidence for the U.S. Preventive Services Task Force](#). Ann Intern Med 139: 933-949.

About this costing report

This costing report accompanies NICE's guideline on [Managing overweight and obesity in adults: lifestyle weight management services](#) (NICE public health guideline PH53).

Issue date: May 2014

This report is written in the following context

This report represents NICE's view, which was arrived at after careful consideration of the available data and by consulting professionals. It should be read in conjunction with our guideline. The report is an implementation tool and focuses on those areas that were considered to have a potential impact on resources.

The cost and activity assessments in the report are estimates based on a number of assumptions. They provide an indication of the potential impact of the principal recommendations and are not absolute figures.

Implementation of this guideline is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guideline, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations. Nothing in this guideline should be interpreted in a way that would be inconsistent with compliance with those duties.

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