

Heavy menstrual bleeding

Costing report

Implementing NICE guidance in
England

January 2007

This costing report accompanies the clinical guideline: 'Heavy menstrual bleeding' (available online at www.nice.org.uk/CG044).

Issue date: January 2007

This guidance is written in the following context

This report represents the view of the Institute, which was arrived at after careful consideration of the available data and through consulting healthcare professionals. It should be read in conjunction with the NICE guideline. The report and templates are implementation tools and focus on those areas that were considered to have significant impact on resource utilisation.

The cost and activity assessments in the reports are estimates based on a number of assumptions. They provide an indication of the likely impact of the principal recommendations and are not absolute figures. Assumptions used in the report are based on assessment of the national average. Local practice may be different from this, and the template can be used to estimate local impact.

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Executive summary

This costing report looks at the resource impact of implementing the NICE guideline 'Heavy menstrual bleeding' in England.

The costing method adopted is outlined in appendix A; it uses the most accurate data available, was produced in conjunction with key clinicians, and was reviewed by clinical and financial experts.

Supporting implementation

The NICE clinical guideline on heavy menstrual bleeding is supported by the following implementation tools available on our website www.nice.org.uk/CG44:

- costing tools
 - a national costing report; this document
 - a local costing template; a simple spreadsheet that can be used to estimate the local cost of implementation
- a slide set; key messages for local discussion
- implementation advice; practical suggestions on how to address potential barriers to implementation
- audit criteria.

A practical guide to implementation, 'Putting NICE guidance into practice: a guide to implementation for organisations', is also available to download from the NICE website. It includes advice on establishing organisational level implementation processes as well as detailed steps for people working to implement different types of guidance on the ground.

Significant resource-impact recommendations

Because of the breadth and complexity of the guideline, this report focuses on recommendations that are considered to have the greatest resource impact and therefore require the most additional resources to implement or generating savings. They are:

- laboratory tests
- investigations for structural abnormalities including ultrasound scans and hysteroscopy
- a change in the proportions of pharmaceutical interventions being prescribed
- reductions in hysterectomy and an increase in endometrial ablation.

Total cost impact

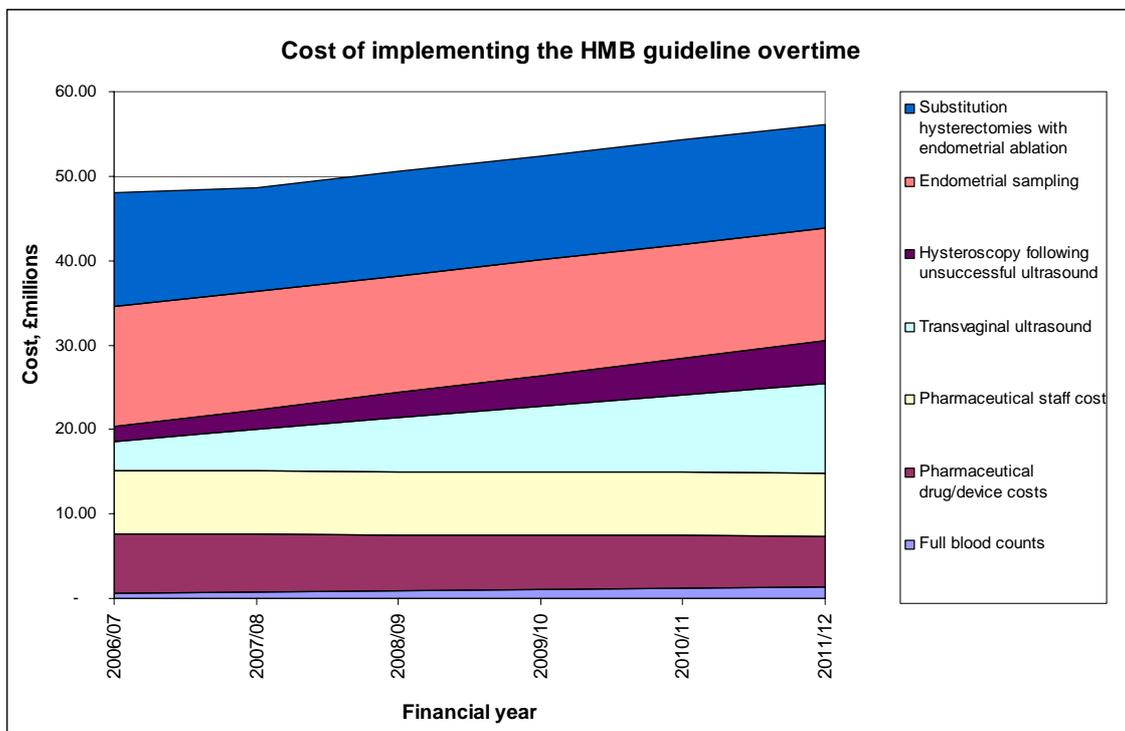
We have assumed a five year timeline from current practice to full implementation. The annual changes in recurrent costs arising from fully implementing the guideline are summarised in the table below.

Annual net cost impact of changes	England, £000s
The provision of full blood count	722
The provision of pharmaceutical drug/device costs	124
The provision of pharmaceutical staff cost	-971
The use of transvaginal ultrasound	7,057
Hysteroscopy following unsuccessful ultrasound	3,368
The use of endometrial sampling	-866
The use of hysterectomy for treatment of heavy menstrual bleeding	-1,694
The use of endometrial ablation for treatment of heavy menstrual bleeding	483
Total cost impact	8,223

The annual changes in revenue costs arising from full implementation of the significant resource-impact recommendations until a steady state is reached have been calculated.

Total cost, £millions	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Full blood counts	0.63	0.78	0.92	1.07	1.21	1.36
Pharmaceutical drug/device costs	6.99	6.79	6.60	6.40	6.21	6.01
Pharmaceutical staff cost	7.47	7.48	7.48	7.49	7.49	7.50
Transvaginal ultrasound	3.51	4.93	6.34	7.75	9.16	10.57
Hysteroscopy following unsuccessful ultrasound	1.68	2.35	3.02	3.70	4.37	5.05
Endometrial sampling	14.20	14.03	13.86	13.68	13.51	13.34
Substitution hysterectomies with endometrial ablation	13.55	12.34	12.34	12.34	12.34	12.34
Net annual cost	48.04	48.69	50.56	52.42	54.29	56.16
Annual cost impact	-	0.66	1.87	1.87	1.87	1.87

The net cost impact of the recommendations of significant resource impact is shown in a graphical format below.



Local costing template

The local costing template produced to support this guideline enables organisations such as primary care trusts (PCTs) to estimate the impact locally and replace variables with ones that depict the current local position. A sample calculation using this template showed that a PCT with a population of 300,000 could expect to incur additional costs of £50,000.

1 Introduction

1.1 *Supporting implementation*

1.1.1 The NICE clinical guideline on heavy menstrual bleeding (HMB) is supported by the following implementation tools available on our website www.nice.org.uk/CG44:

- costing tools
 - a national costing report; this document
 - a local costing template; a simple spreadsheet that can be used to estimate the local cost of implementation
- a slide set; key messages for local discussion
- implementation advice; practical suggestions on how to address potential barriers to implementation
- audit criteria.

1.1.2 A practical guide to implementation, 'How to put NICE guidance into practice: a guide to implementation for organisations', is also available to download from the NICE website. It includes advice on establishing organisational level implementation processes as well as detailed steps for people working to implement different types of guidance on the ground.

1.2 *What is the aim of this report?*

1.2.1 This report provides estimates of the national cost impact arising from implementation of guidance on heavy menstrual bleeding in England. These estimates are based on assumptions made about current practice and predictions of how current practice might change following implementation.

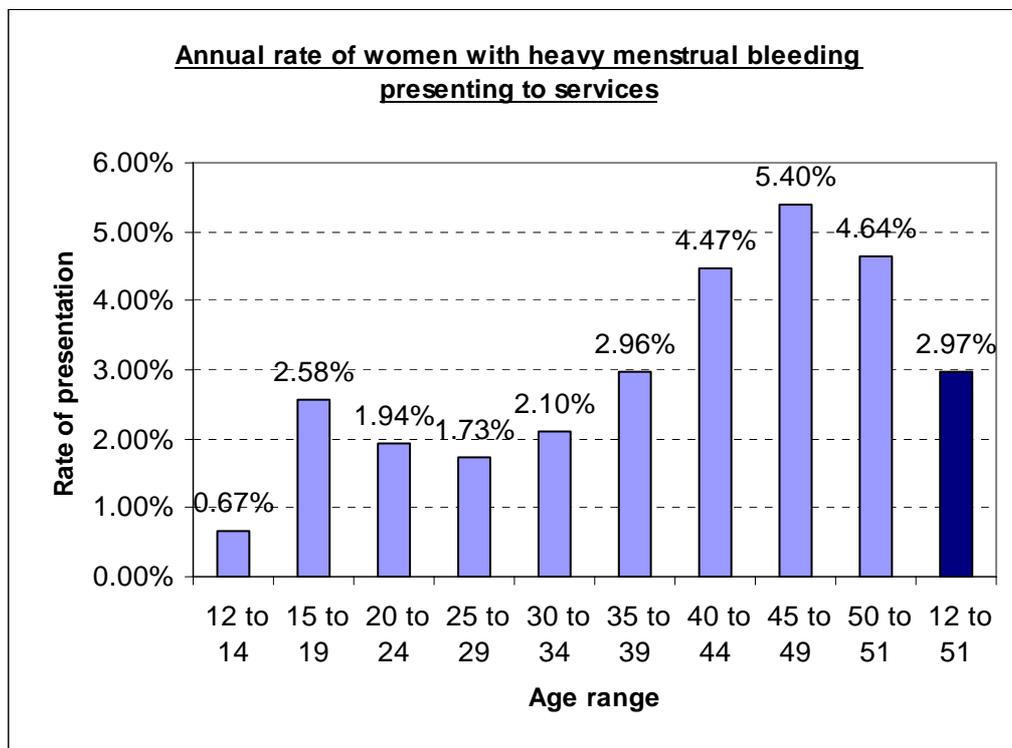
1.2.2 This report aims to help organisations in England plan for the financial implications of implementing NICE guidance.

- 1.2.3 This report does not reproduce the NICE guideline on heavy menstrual bleeding and should be read in conjunction with it (see www.nice.org.uk/CG44).

1.3 Epidemiology of heavy menstrual bleeding

- 1.3.1 It has been suggested that 1 in 20 women aged 30–49, or 5% of women in this age range, consult their general practitioners each year with heavy menstrual bleeding (HMB) (Vessey et al. 1992). A more recent survey of the management of HMB in primary care in Somerset by Grant et al. (2000) found that the average annual rate of the presentation of HMB in women aged 30–49 was 2.58%. The same survey found that the annual rate of HMB presentation varied between practices from 1.71% to 3.1%.
- 1.3.2 The Information Centre for health and social care completed an analysis derived from the IMS Health Disease Analyzer to find how many women active within general practice had a diagnosis anywhere in the patient record of one or more of six Read codes. This analysis suggested that 2.97% of women presented to practice in the last 12 months and were diagnosed with heavy menstrual bleeding. The analysis also enabled rates of presentation to be aggregated by age group. This variation by age group is shown in figure 1. We have used the rates of heavy menstrual bleeding from this analysis to calculate the annual incidence of heavy menstrual bleeding presenting to services.

Figure 1 Graph of the rate of women presenting to practice with a diagnosis of heavy menstrual bleeding by age range



1.3.3 The full guideline ('Heavy menstrual bleeding. Full guideline 44') found one systematic review and seven observational studies that reported data on the prevalence of HMB. The systematic review reported a prevalence of excessive menstrual bleeding of between 4% and 9% from four studies (Harlow and Campbell 2004). We have used the mid-point of the range of prevalence rates taken from the Harlow and Campbell studies. This means that the prevalence of HMB for the purposes of this cost assessment is 6.5%.

2 Costing methodology

2.1 Process

2.1.1 We use a structured approach for costing clinical guidelines (see appendix A).

2.1.2 Little information has been systematically collected about heavy menstrual bleeding, and this led to problems in building a comprehensive bottom-up model for costing. To overcome this limitation, we had to make assumptions in the costing model. We developed these assumptions and tested them for reasonableness with members of the Guideline Development Group (GDG) and key clinical practitioners in the NHS.

2.2 Scope of the cost-impact analysis

2.2.1 The guideline offers best practice advice on the care of women who are suspected of having, or are diagnosed with, heavy menstrual bleeding.

2.2.2 The guideline does not cover the following groups or treatments.

- Conditions where heavy menstrual bleeding is not the main presenting menstrual symptom. An example is endometriosis, which is often dysmenorrhoea associated with pelvic pain. Such conditions will not be covered even if there is concurrent menorrhagia.
- Issues relating to anaesthetics in surgery.
- Issues relating to fertility will only be examined as they relate to treatment for HMB, not as a separate issue.
- Women with heavy bleeding receiving exogenous steroids (for example, hormone replacement therapy).
- Gynaecological bleeding problems (other than HMB).

Therefore, these issues are also outside the scope of the costing work.

2.2.3 Due to the breadth and complexity of the guideline, we worked with the GDG and other professionals to identify the recommendations that would have the most significant resource impact (see table 1). Costing work has focused on these recommendations. Other recommendations have been used to add further detail to these key areas. These additional recommendations are outlined in section 3.

Table 1 Recommendations with a significant resource-impact

High-cost recommendations	Recommendation number	Key priority?
A full blood count test should be carried out on all women with HMB. This should be done in parallel with any HMB treatment offered.	1.2.8	
<p>If history and investigations indicate that pharmaceutical treatment is appropriate and either hormonal or non-hormonal treatments are acceptable, treatments should be considered in the following order:</p> <ul style="list-style-type: none"> a) levonorgestrel-releasing intrauterine system (LNG-IUS) provided long-term (at least 12-months) use is anticipated b) tranexamic acid or non-steroidal anti-inflammatory drugs (NSAIDs) or combined oral contraceptives (COCs) c) norethisterone (15 mg) daily from days 5 to 26 of the menstrual cycle, or injected long-acting progestogens. 	1.5.3	✓
If hormonal treatments are not acceptable to the woman, then either tranexamic acid or NSAIDs can be used.	1.5.4	✓
Ultrasound is the first-line diagnostic tool for identifying structural abnormalities.	1.2.15	✓

<p>If appropriate, a biopsy should be taken to exclude endometrial cancer or atypical hyperplasia. Indications for a biopsy include, for example, persistent intermenstrual bleeding, and in women aged 45 and over treatment failure or ineffective treatment.</p>	<p>1.2.13</p>	<p>✓</p>
<p>Hysterectomy should not be used as a first-line treatment solely for HMB. Hysterectomy should be considered only when:</p> <ul style="list-style-type: none"> • other treatment options have failed, are contraindicated or are declined by the woman • there is a wish for amenorrhoea • the woman (who has been fully informed) requests it • the woman no longer wishes to retain her uterus and fertility. 	<p>1.8.1</p>	
<p>In women with HMB alone, with uterus no bigger than a 10-week pregnancy, endometrial ablation should be considered preferable to hysterectomy.</p>	<p>1.6.5</p>	<p>✓</p>

2.2.4 Nine of the recommendations in the guideline have been identified as key priorities for implementation, and five of these are also among the seven recommendations considered to have significant resource-impact.

2.2.5 The key recommendation relating to the route of hysterectomy was not felt to represent a significant cost impact as the national tariff for vaginal and abdominal hysterectomies is currently the same (M07 upper genital tract major procedures). However the procedures do vary in terms of mean length of stay. For abdominal hysterectomy procedures (OPCS Q07.1-Q07.9) the mean length of

stay weighted by activity was 6.0 days, while for vaginal hysterectomy procedures (OPCS Q08.1-Q08.9) the mean length of stay weighted by activity was 4.2 days (HES 2004/05).

Consequently while a shift in the route of hysterectomy will not have a cost impact in terms of tariff payments, more vaginal hysterectomies could potentially release some bed days. The potential impact of other recommendations relating to hysterectomy and ablation are discussed in more detail below.

2.2.6 Another key recommendation suggests that women with HMB referred to specialist care should be given information before their outpatient appointment (recommendation 1.3.1). It is suggested that the NICE 'Understanding NICE guidance' publication on HMB could fulfil this function. Because this publication is available free of charge this recommendation was not felt to have a significant impact.

2.2.7 We have limited the consideration of costs and savings to direct costs to the NHS that will arise from implementation. We have not included consequences for the individual, the private sector or the not-for-profit sector. Where applicable, any cost savings arising from a change in practice have been offset against the cost of implementing the change.

2.3 General assumptions made

2.3.1 The model is based on annual incidence and population estimates. The guideline relates to women of reproductive age; that is, postpuberty and premenopause. In the UK, the mean age for the start of the menopause is 51 years (Prodigy 2006). Whincup and colleagues (2001) found that the median menarcheal age was 12 years 11 months (95% confidence interval 12 years 10 months to 13 years 1 month). This cost impact report assumes that women of reproductive age are aged between 12 and 51. The population of

women in England aged between 13 and 51 who are registered with a GP is 13.6 million (Information Centre 2006).

2.3.2 We have applied the rates of women presenting to services with heavy menstrual bleeding from the analysis performed by the Information Centre to the English female population aged between 12 and 51. This calculation suggests that there are approximately 404,000 cases of heavy menstrual bleeding presenting per year in England (table 2).

Table 2 Annual rates and numbers of cases of heavy menstrual bleeding presenting to services in England

Age band	English female population, 000s	Annual rate of women with heavy menstrual bleeding presenting to services	Average annual number of cases of heavy menstrual bleeding presenting to services, 000s
12 to 14	942	0.67%	6
15 to 19	1,579	2.58%	41
20 to 24	1,567	1.94%	30
25 to 29	1,542	1.73%	27
30 to 34	1,816	2.10%	38
35 to 39	1,981	2.96%	59
40 to 44	1,896	4.47%	85
45 to 49	1,652	5.40%	89
50 to 51	621	4.64%	29
12 to 51	13,597	2.97%	404

2.3.3 Applying the prevalence rate of heavy menstrual bleeding shown in section 1.3 to the same population of 12 to 51-year-old women suggests that there may be as many as 884,000 cases of heavy menstrual bleeding at any one time in England (table 3).

Table 3 Prevalence rates and numbers of cases of heavy menstrual bleeding in England

Age band	English female population, 000s	Prevalence of heavy menstrual bleeding			Number of cases of heavy menstrual bleeding at any one time, 000s		
		Average	Range		Average	Range	
12 to 51	13,597	6.5%	4.0%	9.0%	884	544	1,224

2.4 Basis of unit costs

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- 2.4.1 The way the NHS is funded has undergone reform with the introduction of 'Payment by results', based on a national tariff. The national tariff will be applied to all activity for which Healthcare Resource Groups (HRGs) or other appropriate case-mix measures are available. Where a national tariff price or indicative price exists for an activity this has been used as the unit cost; this has then been inflated by the national average market forces factor.
- 2.4.2 Using these prices ensures that the costs in the report are the cost to the primary care trust (PCT) of purchasing predicted changes in activity at the 2006/2007 tariff price, but may not represent the actual cost to individual trusts of delivering the activity.
- 2.4.3 For new or developing services, where there is no national average unit cost, some trusts already undertaking this activity have been asked their current unit cost.

3 Cost of significant resource-impact recommendations

3.1 *Laboratory tests*

Background

- 3.1.1 The guideline suggests that a full blood count test should be carried out on all women with HMB. This should be done in parallel with any HMB treatment offered. (recommendation 1.2.8)

Assumptions made

- 3.1.2 The survey of the management of HMB in primary care in Somerset by Grant et al. (2000) found that a full blood count test was carried out on 39.3% of women with HMB. Based on the number of women with HMB presenting to practice calculated in section 2.3 this means that about 159,000 full blood count tests are being performed per year. We have assumed that all women who

receive some for of treatment either treatment in primary care or referral onto secondary care with HMB will receive a full blood count test in the future. The survey by Grant suggests that 84% of women are currently treated in some way and consequently the number of full blood tests required will rise to 339,000, an increase of 180,000 tests.

- 3.1.3 The indicative tariff 2006/07 for haematological tests (DAP823) when inflated by the national market force factor is £3.22. Discussion with trusts that provide full blood count tests suggest that the actual cost of commissioning these tests may be slightly more expensive than suggested by this tariff price at around £4 per test. We have used this higher unit cost as the cost of a full blood test.

Cost summary

- 3.1.4 The net cost of the recommendation relating to the provision of full blood count tests is shown in table 4.

Table 4 The net cost impact of changes to the provision of full blood count tests

	Current		Future		Change	
	Number	Cost, £000s	Number	Cost, £000s	Number	Cost, £000s
Full blood count test	158,667	635	339,135	1,357	180,468	722

3.2 *Pharmaceutical interventions*

Background

- 3.2.1 If history and investigations indicate that pharmaceutical treatment is appropriate and either hormonal or non-hormonal treatments are acceptable, treatments should be considered in the following order:¹

¹ World Health Organization 'Pharmaceutical eligibility criteria for contraceptive use' (WHOME) apply.

- a) levonorgestrel-releasing intrauterine system (LNG-IUS) provided long-term (at least 12-months) use is anticipated^{2,3}
- b) tranexamic acid or non-steroidal anti-inflammatory drugs (NSAIDs) or combined oral contraceptives (COCs)
- c) norethisterone (15 mg) daily from days 5 to 26 of the menstrual cycle, or injected long-acting progestogens. ⁴ (recommendation 1.5.3)

3.2.2 If hormonal treatments are not acceptable to the woman, then either tranexamic acid or NSAIDs can be used (recommendation 1.5.4).

3.2.3 Danazol should not be used routinely for the treatment of HMB (recommendation 1.5.12).

3.2.4 Etamsylate should not be used for the treatment of HMB (recommendation 1.5.14).

Assumptions made

3.2.5 The analysis completed by the Information Centre also examined the current prescribing levels among women with heavy menstrual bleeding. Data from the IMS Health Disease Analyzer were retrieved about the number of patients with a diagnosis of heavy menstrual bleeding who had presented to practice in the last 12

These criteria can be used to assess the individual's suitability for particular contraceptives. This allows informed decision making by the woman prior to the start of treatment.

www.ffprhc.org.uk/admin/uploads/298_UKMEC_200506.pdf

² Check the Summary of Product Characteristics for current licensed indications. Informed consent is needed when using outside the licensed indications. This should be discussed and documented in the notes.

³ See 'Long-acting reversible contraception. NICE clinical guideline 30' www.nice.org.uk/CG030 for more detail.

⁴ Check the Summary of Product Characteristics for current licensed indications. Informed consent is needed when using outside the licensed indications. This should be discussed and documented within the notes. In adolescents and women older than 40 years, refer to CSM advice issued in November 2004. Go to www.mhra.gov.uk and search for Depo Provera.

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months and who had been prescribed at least one of the drugs mentioned in the guideline recommendations. This analysis found that approximately 36% of women with HMB received at least one of the medications. We have assumed that the proportion of women receiving medication will not change but that the relative proportion of each type of medication being prescribed will change.

- 3.2.6 Discussions with clinicians suggested that an overall increase in management using medication in primary care could lead to a reduction in referrals to secondary care. These issues will be discussed in the sensitivity analysis.
- 3.2.7 We have assumed that the current use of danazol and etamsylate will decrease to no use and that there will be a proportionate increase in the use of LNG-IUS and in the use of long acting progestogens to the levels suggested by the LARC guidance. We have also assumed a decrease in the use of combined oral contraceptive to the levels suggested by the LARC guidance. Any remaining cases will receive a LNG-IUS. The proportionate changes are shown in table 5.

Table 5 The relative proportion of each medication prescribed to women with a diagnosis of heavy menstrual bleeding.

Pharmacological intervention	Current	Future	Change
Levonorgestrel-releasing intrauterine system (LNG-IUS)	4.1%	10.3%	6.2%
Tranexamic acid	44.0%	44.0%	0.0%
NSAID (mefenamic acid)	8.7%	8.7%	0.0%
Combined oral contraceptives	25.6%	19.0%	-6.6%
Norethisterone	31.8%	31.8%	0.0%
Injected long-acting progestogens (Depo-provera)	1.7%	3.7%	2.0%
Danazol	0.6%	0.0%	-0.6%
Etamsylate	1.0%	0.0%	-1.0%

- 3.2.8 Annual unit costs were calculated based on the costs outlined in the economic analysis that accompanied the full guideline updated to 2006/07 prices using the British National Formulary 52. A LNG-IUS will last for up to 5 years and first-year costs associated with

insertion are considerably higher than in subsequent years when only a follow-up appointment is required. Consequently we have calculated an average annual cost for the use of levonorgestrel releasing intra-uterine system (LNG-IUS). Staff costs will vary depending on whether the device is initiated and managed in primary or secondary care.

3.2.9 Secondary care costs have been calculated using the national tariff for adult gynaecological new outpatient appointments (specialty code 502) and with follow up in general practice. Intra-uterine contraceptive device fitting can be provided by general practice as a national enhanced service. In 2003/04 each practice contracted to provide this service received a £75 insertion fee per patient and a £20 annual review fee per patient (British Medical Association 2006). When inflated to 2006/07 prices, insertion fees are approximately £83 and annual review fees are approximately £23. These unit costs have been used to calculate an average cost for providing LNG-IUS.

3.2.10 Finally we have followed the staff costs described in the health economic analysis that accompanied the full guideline to outline the potential opportunity costs that could arise where LNG-IUS is provided in general practice by general practitioners and practice nurses without an enhance service arrangement. The unit costs for a GP appointment and a practice nurse appointment have been based on costs for 2005/06 taken from Unit Costs of Health and Social Care 2006 (PSSRU 2006). These are £21.84 and £10.40 respectively. The costs per year and the average costs are shown in table 6.

Table 6 The costs associated with 5-year use of a levonorgestrel releasing intra-uterine system (LNG-IUS)

Year	Drug/ device costs	GP national enhanced service		Outpatient provision		Calculated cost following the health economics	
		Staff costs	Total costs	Staff costs	Total costs	Staff costs	Total costs
1	101.36	82.00	183.36	152.00	253.36	127.78	229.14
2	0.00	22.00	22.00	21.84	21.84	21.84	21.84
3	0.00	22.00	22.00	21.84	21.84	21.84	21.84
4	0.00	22.00	22.00	21.84	21.84	21.84	21.84
5	3.17	22.00	25.17	35.41	38.58	32.24	35.41
Total	104.53	170.00	274.53	252.93	357.46	225.54	330.07
Average	20.91	34.00	54.91	50.59	71.49	45.11	66.01

3.2.11 Discussions with clinicians suggest that many general practices are not currently fitting levonorgestrel intra-uterine device (LNG-IUS). We have assumed that 20% of LNG-IUS are fitted in general practice under a national enhanced service arrangement, 20% are fitted in general practice or by family planning services without additional service payments and that 60% are fitted within secondary care. Consequently the average annual weighted staff costs for fitting LNG-IUS is £46.17. We have assumed that this will stay the same in the short term, however an increase in the proportion of LNG-IUS fitted in primary care would reduce the staff costs and these variations will be examined within the sensitivity analysis below.

3.2.12 Annual device/drug costs and staff costs for each medication described in the guideline have been separated out and are shown in table 7. Staff costs for interventions other than the LNG-IUS have been based on an initial and follow up 10 minute appointment with a GP (PSSRU 2005) which amounts to £43.68. A detailed cost breakdown and a list of the sources used for each pharmacological intervention are shown appendix E.

Table 7 The annual unit costs of pharmacological interventions for HMB

Pharmacological intervention	Drug/device costs	Staff costs	Total costs
Levonorgestrel-releasing intrauterine system (LNG-IUS)	£20.91	£46.17	£67.08
Tranexamic acid	£76.55	£43.68	£120.23
NSAID (mefenamic acid)	£91.44	£43.68	£135.12
Combined oral contraceptives	£13.07	£43.68	£56.75
Norethisterone	£27.37	£43.68	£71.05
Injected long-acting progestogens (Depo-provera)	£20.04	£43.68	£63.72
Danazol	£346.20	£43.68	£389.88
Etamsylate	£26.34	£43.68	£70.02

Cost summary

3.2.13 The net cost of potential changes to pharmacological interventions is summarised in Table 8.

Table 8 The net cost impact of changes to pharmaceutical interventions

Pharmacological intervention	Current		Future		Change	
	Device/drug costs, £000s	Staff costs, £000s	Device/drug costs, £000s	Staff costs, £000s	Device/drug costs, £000s	Staff costs, £000s
Levonorgestrel-releasing intrauterine system (LNG-IUS)	125	275	313	691	188	416
Tranexamic acid	836	2,793	836	2,793	0	0
NSAID (mefenamic acid)	968	552	968	552	0	0
Combined oral contraceptives	3,402	1,625	2,525	1,206	-877	-419
Norethisterone	1,265	2,019	1,265	2,019	0	0
Injected long-acting progestogens (Depo-provera)	50	108	108	235	58	127
Danazol	302	38	0	0	-302	-38
Etamsylate	38	63	0	0	-38	-63
Total	£6,985	£7,474	£6,015	£7,497	-£971	£22
		£14,460		£13,512		-£948

Other considerations

3.2.14 Use of intrauterine devices for contraceptive purposes and for the management of heavy menstrual bleeding in the UK was found to be 4 times lower than in Scandinavia where IUDs make up 20% of contraceptive usage (United Nations 1994).

3.3 Investigations for structural pathology

Background

- 3.3.1 The guideline states that if the history suggests HMB with structural or histological abnormality, with symptoms such as intermenstrual or postcoital bleeding, pelvic pain and/or pressure symptoms, a physical examination and/or other investigations (such as ultrasound) should be performed (recommendation 1.2.4).
- 3.3.2 Imaging should be undertaken in the following circumstances:
- The uterus is palpable abdominally.
 - Vaginal examination reveals a pelvic mass of uncertain origin.
 - Pharmaceutical treatment fails (recommendation 1.2.14).
- 3.3.3 Ultrasound is the first-line diagnostic tool for identifying structural abnormalities (recommendation 1.2.15).
- 3.3.4 Hysteroscopy should be used as a diagnostic tool only when ultrasound results are inconclusive, for example, to determine the exact location of a fibroid or the exact nature of the abnormality. (recommendation 1.2.16).
- 3.3.5 Saline infusion sonography should not be used as a first-line diagnostic tool (recommendation 1.2.18). Magnetic resonance imaging (MRI) should not be used as a first-line diagnostic tool (recommendation 1.2. 19). Dilatation and curettage alone should not be used as a diagnostic tool (recommendation 1.2.20).

Assumptions made

- 3.3.6 The survey of the management of HMB in primary care in Somerset by Grant et al (2000) found that 37.6% of women with HMB are being referred to secondary care and that 12.5% of women with HMB are given an ultrasound scan. Based on the number of women with HMB presenting to practice calculated in

section 2.3 this means that about 50,000 ultrasound scans are currently being performed per year.

3.3.7 Critchley (2001) suggests that 88% of transvaginal ultrasound scans result in successful visualisations. Therefore at the very least 12% of scans would be unsuccessful and a hysteroscopy would be required. We therefore assume that currently 6,000 hysteroscopies are being performed following an unsuccessful ultrasound visualisation.

3.3.8 If an ultrasound is provided to all women being referred to secondary care then we will need 152,000 scans per year. Again we assume that at least 12% of these scans would be unsuccessful and that approximately 18,000 hysteroscopy would be required. We therefore assume an additional 102,000 ultrasound scans might be performed.

3.3.9 Discussions with clinicians suggest the following:

- that saline infusion sonography is very rarely used and generally not as a first line diagnostic tool,
- that MRI scans are not routinely used as a diagnostic tool for HMB,
- that although historically dilatation and curettage was used as a diagnostic procedure this is no longer the case.

Consequently no shift in resources has been attributed to these recommendations at a national level. Unit costs have been calculated for these three procedures and added to the local costing template. Should the local situation be found to vary from that described above, NHS organisations can use the local template to calculate the cost impact of a reduction in the use of these procedures.

3.3.10 An average unit cost for transvaginal ultrasound has been calculated at £69.64 using unbundled tariff 2007/08 for RA US2

Ultrasound, scan 0-15 minutes inflated by the national market forces factor. Average unit costs for the other procedures mentioned in the guideline have been calculated using national tariff 2006/07 unit costs inflated by the national market forces factor. Lower and upper range unit costs have also been calculated using NHS reference costs 2004/05 inflated to 2006/07 prices and will be used in the sensitivity analysis below. These unit costs are shown in table 9. A detailed cost breakdown and a list of the sources used are shown appendix E.

Table 9 Unit costs for procedures used to investigate structural abnormalities.

Procedure	Unit costs		
	Average	Lower range	Upper range
Transvaginal ultrasound	£69.64	£41.56	£103.34
Saline infused sonography	£165.76	£113.84	£241.38
Hysteroscopy	£277.00	£152.23	£290.67
MRI scan	£344.56	£204.33	£576.99
Dilation and curettage	£702.34	£700.14	£1,259.31

3.3.11 The unit costs have been applied to the changes in activity listed above to give a summary of the cost impact relating to these recommendations.

Cost summary

3.3.12 The net cost of the recommendations relating to investigations for structural abnormalities is summarised in Table 10.

Table 10 The net cost impact of changes to the provision of transvaginal ultrasound scans

	Current		Future		Change	
	Number	Cost, £000s	Number	Cost, £000s	Number	Cost, £000s
Transvaginal ultrasound scans	50,467	3,515	151,803	10,572	101,336	7,057
Hysteroscopy	6,056	1,678	18,216	5,046	12,160	3,368
Total		5,192		15,617		10,425

3.4 Biopsy for suspected endometrial cancer

Background

3.4.1 If appropriate, a biopsy should be taken to exclude endometrial cancer or atypical hyperplasia. Indications for a biopsy include, for example, persistent intermenstrual bleeding, and in women aged 45 and over treatment failure or ineffective treatment (recommendation 1.2.13).

Assumptions made

3.4.2 The guidance relating to endometrial biopsy published by the Royal College of Obstetricians and Gynaecologists in 2000 states that an endometrial biopsy should be considered for all women with persistent menorrhagia. Discussions with clinicians suggest that endometrial biopsies are currently offered women aged 40 and over to exclude endometrial cancer.

3.4.3 The survey of the management of HMB in primary care in Somerset by Grant et al. (2000) found that endometrial sampling was conducted for 16.4% of women with HMB. Based on the number of women with HMB presenting to practice calculated in section 2.3 this means that about 66,000 full blood count tests are being performed per year.

3.4.4 A reduction by 1% in the number of biopsies performed would mean that 15.4% of all women will receive an endometrial biopsy. Consequently in the future the number of endometrial biopsies required will fall to 62,000; a reduction of 4,000 biopsies.

3.4.5 The national tariff 2006/07 for an outpatient hysteroscopy with biopsy (OPPHYS1) when inflated by the national market force factor is £277. Endometrial sampling can be completed without the use of a hysteroscope using a Pipelle curettage tool. The unit cost for this activity would be the national tariff for a gynaecology

outpatient adult first attendance appointment of £152. We have used the average of these two unit costs, £214.50, as the cost of a biopsy for endometrial cancer.

Cost summary

3.4.6 The net cost of changes to the provision of biopsy for endometrial cancer is summarised in Table 11.

Table 11 The net cost impact of changes to the provision of biopsy for endometrial cancer

	Current		Future		Change	
	Number	Cost, £000s	Number	Cost, £000s	Number	Cost, £000s
Endometrial biopsy	66,212	14,202	62,175	13,337	-4,037	-866

3.5 Hysterectomy and ablation

Background

3.5.1 Hysterectomy should not be used as a first-line treatment solely for HMB. Hysterectomy should be considered only when:

- other treatment options have failed, are contraindicated or are declined by the woman
- there is a wish for amenorrhoea
- the woman (who has been fully informed) requests it
- the woman no longer wishes to retain her uterus and fertility. (recommendation 1.8.1)

3.5.2 In women with HMB alone, with uterus no bigger than a 10-week pregnancy, endometrial ablation methods should be considered preferable to hysterectomy (recommendation 1.6.5).

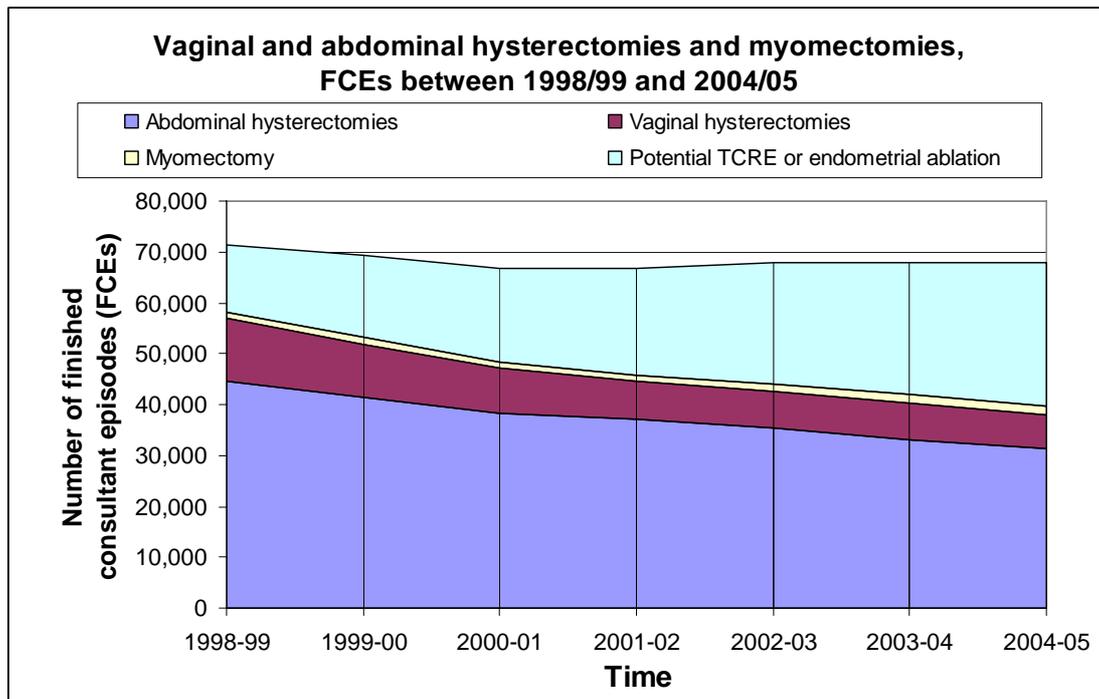
3.5.3 Taking into account the need for individual assessment, the route of hysterectomy should be considered in the following order: first line, vaginal; and second line, abdominal (recommendation 1.8.6).

Assumptions made

- 3.5.4 Abdominal hysterectomy procedures (OPCS Q07.1-Q07.9) and vaginal hysterectomy procedures (OPCS Q08.1-Q08.9) are included with the health resource group M07 (upper genital tract major procedures). The health resource group M07 attracts an elective and non-elective procedure national tariff of £2,886 and £3,646 respectively. Hospital Episode Statistics secondary care data for 200405 suggests that 98% of hysterectomies for any indication were performed abdominally.
- 3.5.5 Using the SNOMED CT browser (Connecting for Health 2006) endometrial ablation and transcervical resection of the endometrium (TCRE, a first generation ablation technique) currently maps to a number of OPCS codes (appendix D) and two health resource groups (HRG). Other procedures will be recorded under these OPCS codes and this acts as a confounding factor when trying to calculate the number of endometrial ablations or TRCEs being performed in the NHS from freely available HES data.
- 3.5.6 It is suggested that an endometrial ablation will receive a national tariff payment under HRG M05 or M06. HRG M05 (upper genital tract minor procedures) attracts an elective and non-elective procedure national tariff of £634 and £933 respectively. The HRG M06 (upper genital tract intermediate procedures) attracts an elective and non-elective procedure national tariff of £822 and £2,125 respectively.
- 3.5.7 The difference between the elective tariff for a hysterectomy and the elective tariff for HRGs M05 and M06 is £2,252 and £2,064 respectively. Consequently any shift from hysterectomies to endometrial ablation or TRCE could result in a significant reduction in cost.
- 3.5.8 Figure 2 shows the change in activity for hysterectomies (vaginal and abdominal) and myomectomies for any diagnosis (Information

Centre 1998/99 – 2004/05). It also shows the number of procedures coded Q16.8 and Q17.1 to 17.9 that will include endometrial ablations and TCREs.

Figure 2 Graph of surgical procedures for heavy menstrual bleeding over time



3.5.9 It is clear from this graph that the number of hysterectomies, irrespective of route, for any diagnosis is reducing on an annual basis. The average annual rate of change between 1998/98 and 2004/05 is –6%. The relative proportion of vaginal to abdominal hysterectomies for any diagnosis has also changed slightly from 21% (vaginal) and 79% (abdominal) in 1998/99 to 17% (vaginal) and 83% (abdominal) in 2004/05.

3.5.10 The key recommendation relating to the route of hysterectomy was not felt to represent a significant cost impact as the national tariff for vaginal and abdominal hysterectomies is currently the same (M07 upper genital tract major procedures). However the procedures do vary in terms of mean length of stay. For abdominal hysterectomy procedures (OPCS Q07.1-Q07.9) the mean length of

stay weighted by activity was 6.0 days, while for vaginal hysterectomy procedures (OPCS Q08.1-Q08.9) the mean length of stay weighted by activity was 4.2 days (HES 2004/05). Consequently while a shift in the route of hysterectomy will not have a cost impact in terms of tariff payments, more vaginal hysterectomies could potentially release some bed days.

3.5.11 Reid and Mukri (2005) suggest that the number of hysterectomies performed in England specifically for menorrhagia has been declining since 1994–95. Table 12 gives approximate figures for the number of hysterectomies for HMB over time and the relative change from year to year based on the work published by Reid and Mukri. The average annual rate of change between 1994/95 and 2002/03 is –12.5% which is twice the rate suggested from activity data for hysterectomies for any diagnosis. We shall assume that activity will continue to decline annually at this rate. The extrapolated figures from 2003/04 to 2008/09 are also shown in table 12.

Table 12 The number of hysterectomies performed in England for menorrhagia between 1994/95 and 2002/03

Year	Number of hysterectomies	Change from previous years activity	
		Number	%
1994-95	24,000	0	0%
1995-96	21,000	-3,000	-13%
1996-97	17,000	-4,000	-19%
1997-98	14,500	-2,500	-15%
1998-99	15,500	1,000	7%
1999-00	12,500	-3,000	-19%
2000-01	10,000	-2,500	-20%
2001-02	9,000	-1,000	-10%
2002-03	8,000	-1,000	-11%
2003-04	7,000	-1,000	-12.5%
2004-05	6,125	-875	-12.5%
2005-06	5,359	-766	-12.5%
2006-07	4,689	-670	-12.5%
2007-08	4,103	-586	-12.5%
2008-09	3,590	-513	-12.5%

3.5.12 We shall assume that any reduction in the number of hysterectomies will result in an equivalent number of extra endometrial ablations. The cost impact arising from these changes in activity can then be estimated. The cost impact of a reduction in hysterectomies that results in no surgery will be considered in the sensitivity analysis.

Cost summary

3.5.14 Table 13 indicates that for 2007/08 a shift from hysterectomy to endometrial ablation could result in a reduction in cost of between £1.2 and £1.3 million.

Table 13 Cost impact of shift from hysterectomy to endometrial ablation

Year	Extrapolated reduction in number of hysterectomies	Cost of elective hysterectomy, £000s	Cost of equivalent activity if performed as an elective endometrial ablation, £000s		Cost impact in shift from hysterectomy to ablation (M06), £000s	Cost impact in shift from hysterectomy to ablation (M05), £000s
			M06	M05		
(HRG)		M07	M06	M05	M07 to M06	M07 to M05
2007-08	586	1,691	482	372	-1,210	-1,320

Other considerations

3.5.15 A reduction in the number of hysterectomies performed may continue into the future. Using the assumptions above we have extrapolated the potential change in activity and cost up to 2009/10.

Year	Extrapolated reduction in number of hysterectomies	Cost of elective hysterectomy, £000s	Cost of equivalent activity if performed as an elective endometrial ablation, £000s		Cost impact in shift from hysterectomy to ablation (M06), £000s	Cost impact in shift from hysterectomy to ablation (M05), £000s
			M06	M05		
(HRG)		M07	M06	M05	M07 to M06	M07 to M05
2006-07	669	1,931	550	424	-1,381	-1,507
2007-08	586	1,691	482	372	-1,210	-1,320
2008-09	513	1,481	422	325	-1,059	-1,155
2009-10	449	1,296	369	285	-927	-1,011

3.5.16 Discussions with clinicians suggests that clinician and patient preference have contributed to the observed changes in practice and that the NICE guideline may support further change by raising

awareness of other alternatives to hysterectomy. However Kennedy et al. (2003) found that the use of information and interviews to discuss treatment options and potential outcomes for women with heavy menstrual bleeding failed to significantly change the management choices chosen by these women.

4 Sensitivity analysis

4.1 Methodology

- 4.1.1 There are a number of assumptions in the model for which no empirical evidence exists. Because of the limited data, the model developed is based mainly on discussions of typical values with NHS healthcare professionals and is therefore subject to a degree of uncertainty.
- 4.1.2 As part of discussions with practitioners, we discussed possible minimum and maximum values of variables, and calculated their impact on costs across this range.
- 4.1.3 Wherever possible we have used the national tariff 2006/07 plus market forces factor to determine cost. We used the variation of costs for the 25th and 75th percentiles from reference costs compared with the reference cost national average as a guide to inform the maximum and minimum range of costs.
- 4.1.4 It is not possible to arrive at an overall range for total cost because the minimum or maximum of individual lines would not occur simultaneously. We undertook one-way simple sensitivity analysis, altering each variable independently to identify those that have greatest impact on the calculated total cost.
- 4.1.5 Appendix C contains a table detailing all variables modified and the key conclusions drawn are discussed below.

4.2 Impact of sensitivity analysis on costs

Annual rate of women with heavy menstrual bleeding presenting to services

- 4.2.1 A survey by Grant et al. (2000) found that the average annual rate of the presentation of HMB in women aged 30–49 varied between practices from 1.71% to 3.1%.
- 4.2.2 When these minimum and maximum values are added to the costing model, the overall resource impact of recommendations relating to the diagnosis and treatment of HMB from £4.2 to £8.6 million.

Cost of a transvaginal ultrasound

- 4.2.3 An average unit cost for transvaginal ultrasound has been calculated at £69.64 using unbundled tariff 2007/08 for RA US2 Ultrasound, scan 0-15 minutes inflated by the national market forces factor. Lower and upper range unit costs have been calculated using NHS reference costs 2004/05 inflated to 2006/07 prices as £41.56 and £103.34 respectively.
- 4.2.4 When these minimum and maximum values are added to the costing model, the overall resource impact of recommendations relating to the diagnosis and treatment of HMB from £5.4 to £11.6 million.

5 Conclusion

5.1 Total national cost for England

- 5.1.1 We have assumed a five year timeline from current practice to full implementation. Using the significant resource-impact recommendations shown in Table 2 and assumptions specified in section 3.2 we have calculated the annual cost impact of fully implementing the guideline to be £8.2 million. Table 15 shows the

breakdown of cost of each significant resource-impact recommendation.

Table 15 The net cost compact of the significant resource-impact recommendations for England

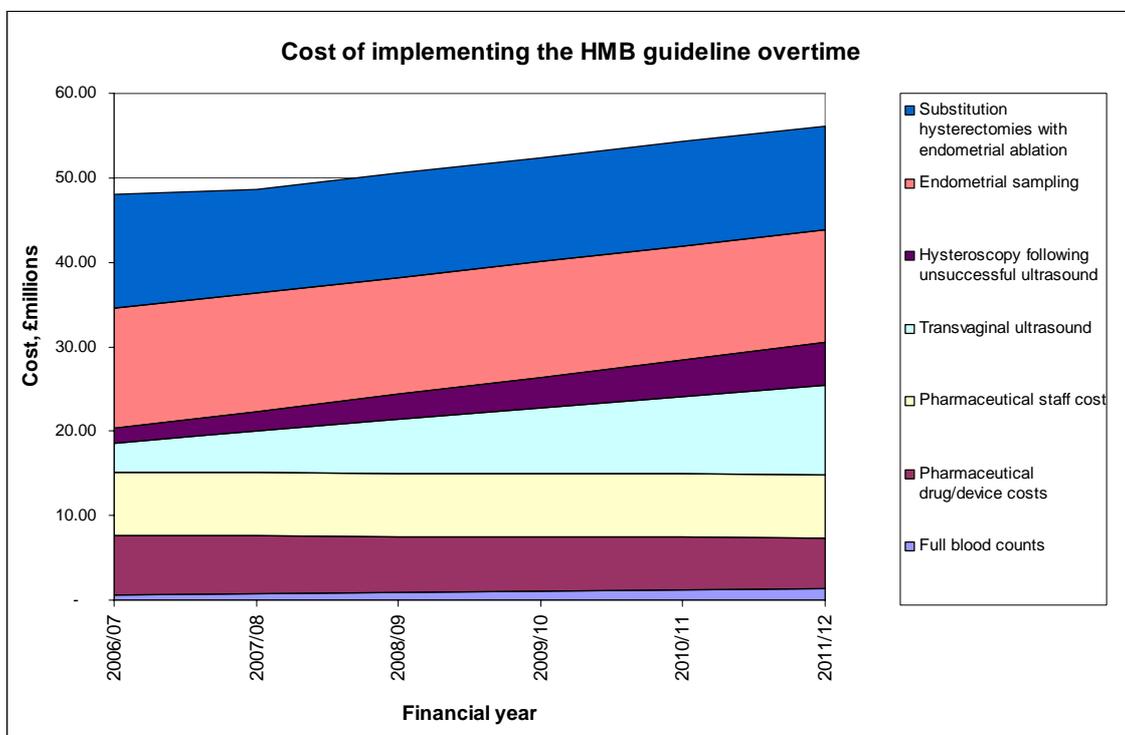
Annual net cost impact of changes	England, £000s
The provision of full blood count	722
The provision of pharmaceutical drug/device costs	124
The provision of pharmaceutical staff cost	-971
The use of transvaginal ultrasound	7,057
Hysteroscopy following unsuccessful ultrasound	3,368
The use of endometrial sampling	-866
The use of hysterectomy for treatment of heavy menstrual bleeding	-1,694
The use of endometrial ablation for treatment of heavy menstrual bleeding	483
Total cost impact	8,223

5.1.2 We applied reality tests against existing data wherever possible, but this was limited by the availability of detailed data. We consider this assessment to be reasonable, given the limited detailed data regarding diagnosis and treatment paths and the time available. However, the costs presented are estimates and should not be taken as the full cost of implementing the guideline.

5.1.3 The annual changes in revenue costs arising from full implementation of the significant resource-impact recommendations until a steady state is reached have been calculated.

Total cost, £millions	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Full blood counts	0.63	0.78	0.92	1.07	1.21	1.36
Pharmaceutical drug/device costs	6.99	6.79	6.60	6.40	6.21	6.01
Pharmaceutical staff cost	7.47	7.48	7.48	7.49	7.49	7.50
Transvaginal ultrasound	3.51	4.93	6.34	7.75	9.16	10.57
Hysteroscopy following unsuccessful ultrasound	1.68	2.35	3.02	3.70	4.37	5.05
Endometrial sampling	14.20	14.03	13.86	13.68	13.51	13.34
Substitution hysterectomies with endometrial ablation	13.55	12.34	12.34	12.34	12.34	12.34
Net annual cost	48.04	48.69	50.56	52.42	54.29	56.16
Annual cost impact	-	0.66	1.87	1.87	1.87	1.87

5.1.4 The net cost impact of the recommendations of significant resource impact is shown in a graphical format below.

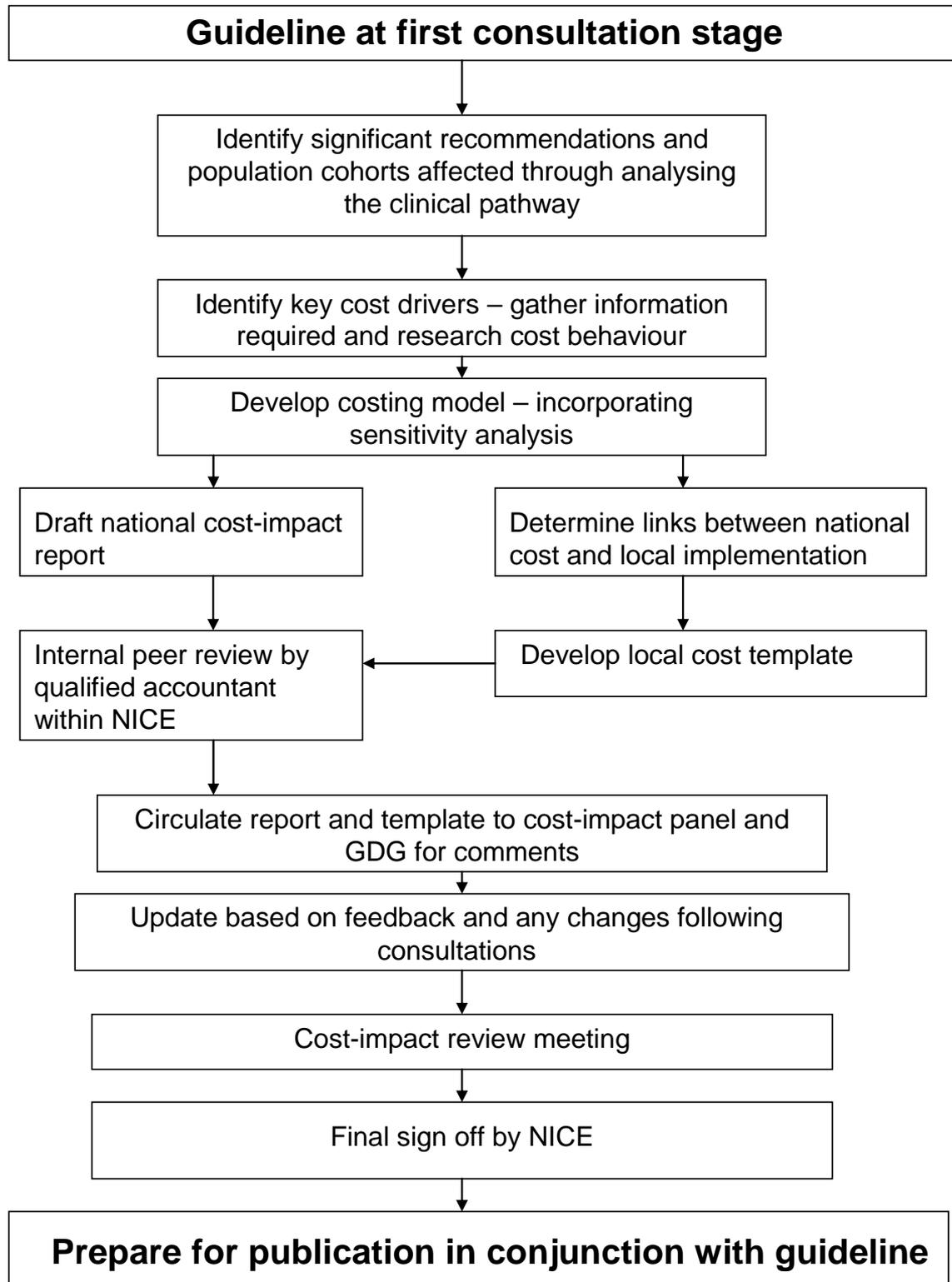


5.2 Next steps

5.2.1 The local costing template produced to support this guideline enables organisations such as primary care trusts (PCTs) to estimate the impact locally and replace variables with ones that depict the current local position. A sample calculation using this template showed that a PCT with a population of 300,000 could

expect to incur additional costs of £50,000. Use this template to calculate the cost of implementing this guidance in your area.

Appendix A: Approach to costing guidelines



Appendix B: Model of care assumptions

	Current practice		Following NICE guidance		Change in practice	
	%	n	%	n	%	n
Number of women presenting to practice with HMB every year		403,732		403,732	0%	
Proportion of women with HMB who are referred	37.6%	151,803	37.6%	151,803	0%	0
Proportion of women with HMB who have a full blood count performed	39.3%	158,667	84.0%	339,135	44.70%	180,468
Proportion of women with HMB who have an ultrasound scan performed	12.5%	50,467	0.0%	0	-12.50%	-50,467
Proportion of women receiving some form of medication for HMB	36.0%	145,344	36.0%	145,344	0.00%	0
Prescriptions of LNG-IUS as proportion of women with HMB receiving medication	4.1%	5,959	10.3%	14,970	6.20%	9,011
Prescriptions of danazol as proportion of women with HMB receiving medication	0.6%	872	0.0%	0	-0.60%	-872
Prescriptions of etamsylate as proportion of women with HMB receiving medication	1.0%	1,453	0.0%	0	-1.00%	-1,453
Endometrial sampling	16.4%	66,212	15.4%	62,175	-1.00%	-4,037
Hysterectomies	1.2%	4,694	1.0%	4,107	-0.15%	-587

Appendix C: Results of sensitivity analysis

	Baseline value	Minimum value	Maximum value	Baseline cost £000s	Minimum cost £000s	Maximum cost £000s	Change £000s
Annual rate of women with heavy menstrual bleeding presenting to services	2.97%	1.71%	3.10%	8,223	4,222	8,638	4,416
Proportion of women with a diagnosis of heavy menstrual bleeding who have a full blood count	84.0%	75.6%	100.0%	8,223	8,087	8,481	394
Cost of full blood count	£4.00	£3.22	£4.40	8,223	8,082	8,295	213
Cost of levonorgestrel-releasing intrauterine system (LNG-IUS)	£20.91	£18.82	£23.00	8,223	8,204	8,242	38
Cost of tranexamic acid	£13.07	£11.76	£14.38	8,223	8,223	8,223	0
Cost of NSAID (mefenamic acid)	£76.55	£68.90	£84.21	8,223	8,223	8,223	0
Cost of combined oral contraceptive	£91.44	£82.30	£100.58	8,223	8,311	8,135	-176
Cost of norethisterone	£27.37	£24.63	£30.11	8,223	8,223	8,223	0
Cost of injected long acting progestogens (Depo-provera)	£20.04	£18.04	£22.04	8,223	8,217	8,229	12
Cost of danazol	£346.20	£311.58	£380.82	8,223	8,253	8,193	-60
Cost of etamsylate	£26.34	£23.71	£28.97	8,223	8,227	8,219	-8
Current staff cost of providing medication	£73.90	£34.00	£96.80	8,223	8,296	8,197	-99
Future proportion of women receiving medication	36%	31%	41%	8,223	6,347	10,100	3,753
Future staff cost of providing medication	£73.90	£34.00	£96.80	8,223	8,041	8,289	248
Staff cost of providing medication	£43.68	£39.31	£48.05	8,223	8,252	8,194	-58
Cost of a transvaginal ultrasound	£69.64	£41.56	£103.34	8,223	5,380	11,638	6,258
Cost of a hysteroscopy	£277.00	£152.23	£290.66	8,223	6,706	8,389	1,683
Cost of an endometrial sampling	£214.50	£152.00	£277.00	8,223	8,475	7,971	-504
Cost of a hysterectomy	£2,886.00	£2,231.31	£3,454.61	8,223	8,607	7,889	-718
Annual reduction in the number of hysterectomies performed for women with heavy menstrual bleeding	13%	11%	14%	8,223	8,370	8,079	-291
Cost of an elective endometrial ablation (M06)	£822	£739.80	£904.20	8,223	8,175	8,271	96
Levonorgestrel-releasing intrauterine system (LNG-IUS)	10.3%	8.2%	12.4%	8,223	7,954	8,368	414
Tranexamic acid	44.0%	48.4%	44.0%				
NSAID (mefenamic acid)	8.7%	10.9%	10.9%				
Combined oral contraceptive	19.0%	15.2%	19.0%				
Norethisterone	31.8%	31.8%	27.5%				
Injected long acting progestogen	3.7%	3.0%	3.7%				
Danazol	0.0%	0.0%	0.0%				
Etamsylate	0.0%	0.0%	0.0%				

Appendix D: Procedure codes

Mapping of TCRE and endometrial ablation procedure codes

Procedure	HRG	OPCS code	OPCS procedure detail
TCRE - Transcervical resection of endometrium	M06	Q17.1	Endoscopic resection of lesion of uterus
	M06	Q17.8	Other specified therapeutic endoscopic operation
Endometrial ablation	M05	Q16.8	Other specified other vaginal operations on uterus
	M06	Q17.1	Endoscopic resection of lesion of uterus
	M06	Q17.2	Endoscopic cauterisation of lesion of uterus
	M06	Q17.3	Endoscopic cryotherapy to lesion of uterus
	M06	Q17.4	Endoscopic destruction of lesion of uterus NEC
	M06	Q17.8	Other specified therapeutic endoscopic operation...
	M06	Q17.9	Unspecified therapeutic endoscopic operations on uterus unspecified

Appendix E: Unit costs

	Description	Drug/ device costs	Source of unit cost	Description	Staff costs	Source of unit cost
Levonorgestrel intra-uterine device (LNG-IUS)	Mirena®(Schering Health)	£83.16	BNF52: Intra-uterine system, T-shaped plastic frame (impregnated with barium sulphate and with threads attached to base) with polydimethylsiloxane reservoir releasing levonorgestrel 20 micrograms/24 hours. Net price = £83.16. Label: Counselling, see patient info	Consultation for fitting (GP and nurse), 4-6 week follow up (GP and nurse), 3 month follow up (GP)	£127.78	PSSRU 2006
	Sterile pack for insertion	£18.20	NICE long acting reversible contraceptive guideline	Annual follow up with GP	£21.84	PSSRU 2006
Tranexamic acid	Sterile pack for removal	£3.17	NICE long acting reversible contraceptive guideline	Consultation for removal (GP and nurse)	£35.41	PSSRU 2006
	Tranexamic acid (Non-proprietary)	£76.55	BNF 52: Tablets, tranexamic acid 500 mg, net price 60-tab pack = £15.31 Menorrhagia (initiated when menstruation has started), 1 g 3 times daily for up to 4 days; max. 4 g daily	Initial consultation and follow up at 3 months with GP	£43.68	PSSRU 2006
Non steroidal anti-inflammatory drug	Mefenamic Acid (Non-proprietary)	£91.44	BNF 52: Tablets, mefenamic acid 500 mg, net price 28-tab pack = £2.54. Label: 21 500 mg 3 times daily preferably after food.	Initial consultation and follow up at 3 months with GP	£43.68	PSSRU 2006
Combined oral contraceptive	Ethinylestradiol with Levonorgestrel	£13.07	BNF 52: average cost of Logynon®(Schering Health), Microgynon 30®(Schering Health), Ovranette®(Wyeth) and Trinordiol®(Wyeth)	Initial consultation and follow up at 3 months with GP	£43.68	PSSRU 2006
Norethisterone	Norethisterone (Non-proprietary)	£27.37	BNF 52: Dysfunctional uterine bleeding, menorrhagia (but see notes above), 5 mg 3 times daily for 10 days to arrest bleeding; to prevent bleeding 5 mg twice daily from day 19 to 26	Initial consultation and follow up at 3 months with GP	£43.68	PSSRU 2006
Injected long acting progestogens	Depo-Provera®(Pharmacia)	£20.04	BNF 52: Injection (aqueous suspension), medroxyprogesterone acetate 150 mg/mL, net price 1-mL prefilled syringe = £5.01, 1-mL vial = £5.01. Label: Counselling, see patient information leaflet	Initial consultation and follow up at 3 months with GP	£43.68	PSSRU 2006
Danazol	Danazol (Non-proprietary)	£346.20	BNF52: Capsules, danazol 100 mg, net price 28-cap pack = £14.70, 60-cap pack = £17.04; 200 mg, 56-cap pack = £49.16	Initial consultation and follow up at 3 months with GP	£43.68	PSSRU 2006
Etamsylate	Dicycne®(Sanofi-Synthelabo)	£26.34	Tablets, scored, etamsylate 500 mg, net price 100-tab pack = £8.78 500 mg 4 times daily during menstruation	Initial consultation and follow up at 3 months with GP	£43.68	PSSRU 2006

	Sources of unit costs			
	Unit costs		Average	Ranges
	Average	Lower range	Upper range	
Gynaecological outpatient appointment	£83.00	£83.00	£83.00	National tariff 2006/07 for gynaecology outpatient (speciality code 502) adult follow up attendance
Transvaginal ultrasound	£69.64	£41.56	£103.34	Unbundled tariff 2007/08 for RA US2 Ultrasound, scan 0-15 mins inflated by the national market forces factor of 1.1233
Saline infused sonography	£83.00	£83.00	£83.00	National tariff 2006/07 for gynaecology outpatient (speciality code 502) adult follow up attendance
	£41.56	£30.84	£48.61	Indicative tariff 2006/07 for RBB3 (Band B3 - Other Ultrasound) inflated by the national market forces factor of 1.1233
	£41.20	£0.00	£109.76	Information from health economic assessment (2004 prices) inflated to 2006/07 prices using an inflation factor of 9.512%
Total cost of saline	£165.76	£113.84	£241.38	Calculation
Hysteroscopy	£277.00	£152.23	£290.67	National tariff 2006/07 for OPPHYS1 (outpatient procedure hysteroscopy) inflated to 06-07 prices using an inflation factor of 9.512%
MRI scan	£344.56	£204.33	£576.99	Reference costs 2004/05 for RBF1 inflated to 06-07 prices using an inflation factor of 9.512%
Dilation and curettage	£702.34	£700.14	£1,259.31	Reference costs 2004/05 for MD5 (upper genital tract minor procedure) inflated to 06-07 prices using an inflation factor of 9.512%. Weighted cost to account for relative proportions of emergency and elective procedures.

Appendix F: References

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