

Issue date: December 2005

National cost-impact report

Implementing the NICE clinical guideline
on obsessive-compulsive disorder

NICE Clinical Guideline No. 31



Clinical Guideline 31

National cost impact report to accompany 'Obsessive-compulsive disorder: core interventions in the treatment of obsessive-compulsive disorder and body dysmorphic disorder'

Issue date: December 2005

This report is an assessment of the costs of implementing the recommendations in 'Obsessive-compulsive disorder: core interventions in the treatment of obsessive-compulsive disorder and body dysmorphic disorder'.

The Institute's full guidance on obsessive-compulsive disorder is available from the NICE website (www.nice.org.uk/CG031NICEguideline).

An abridged version of the guidance (a 'quick reference guide') is also available from the NICE website (www.nice.org.uk/CG031quickrefguide). Printed copies of the quick reference guide can be obtained from the NHS Response Line: telephone 0870 1555 455 and quote reference number N0919.

Information for the public is available from the NICE website (www.nice.org.uk/CG031publicinfo) or from the NHS Response Line (quote reference number N0920).

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

Background

This report looks at the cost impact of implementing the NICE guideline 'Obsessive-compulsive disorder: core interventions in the treatment of obsessive-compulsive disorder and body dysmorphic disorder' in England. This report has assessed the impact of the recommendations relating to obsessive compulsive disorder (OCD) but not the component relating to body dysmorphic disorder (BDD). The costing method adopted is outlined in appendix A; it uses the most accurate data available and expert opinion.

Costing methodology

The project followed a structured approach involving:

- background research into the guideline content, current clinical practice, published information and data
- the development of models to identify the clinical and financial impact of the guideline
- the testing of assumptions, models and conclusions
- the production of a final report encompassing research, results and conclusions
- the production of a template that can be used to assess impact locally.

We consider the assessment presented to be reasonable given the limited detailed data regarding diagnosis and treatment paths. It was produced in conjunction with key clinicians and reviewed by people with clinical and financial expertise.

Because of the breadth and complexity of the guideline, the evaluation focuses on areas that are considered to require significant additional resources to implement. We identified these areas in conjunction with the Guideline Development Group (GDG) and key clinicians and include changes to psychological and pharmacological interventions for adults, children and young people.

Total cost impact

The annual revenue changes in costs arising from fully implementing the guideline and increasing the number of adults, young people and children on the care pathway are summarised in table 1.

Table 1 Recurrent annual net cost of fully implemented recommendations with significant resource impact for England.

	Current cost, £000s	Proposed cost, £000s	Change, £000s
Adult interventions			
Current medication	13,809		
Current therapy	35,149		
Future interventions		74,600	
Net costs of adult interventions			25,643
Child and young persons interventions			
Current medication	978		
Current therapy	2,893		
Future interventions		9,878	
Net costs of child and young persons interventions			6,007
Total net cost	52,828	84,479	31,650

Implementation

The NICE clinical guideline on obsessive-compulsive disorder is supported by three implementation tools.

- Costing tools:
 - a national costing report (this document)
 - a local costing template.
- A slide set; outlining key messages for local discussion.
- Implementation advice; practical suggestions on how to address potential barriers to implementation.

A practical 'How to' guide has been developed which will be used by those with responsibility for, or involvement with, implementing NICE guidance. The guide describes the core elements known to be important in establishing

successful processes at organisational level and includes detailed advice on the steps required to implement different types of guidance. The guide also includes a section containing practical information on how commissioners can ensure the services they receive are in line with NICE guidance.

To accompany this report, a local costing template has been produced that enables organisations such as primary care trusts (PCTs) to estimate the impact locally by replacing variables with ones that depict the current local position. A sample calculation using this template showed that a PCT with a population of around 152,000 could expect to incur additional costs of £113,000.

The costing template is designed to assist those assessing the resource impact of the guideline at a local level. NICE clinical guidelines are developmental standards within the Department of Health's document *Standards for Better Health* and therefore full implementation of the guideline may take place over a number of years. The cost-impact data presented here may help inform local action plans demonstrating how implementation of the guideline will be achieved.

One of the key recommendations for implementation is access to a specialist multidisciplinary team. This team is seen as a key driver for change and for the implementation of the guideline as a whole by providing training, supervision, consultancy, assessment and by raising awareness. We have assumed that these specialist teams will be generally drawn from current employees and have not attempted to assess the cost of any additional recruitment. The exact structure of these teams, their position within current services and the population covered will presumably develop in different ways across the country and consequently we have not been able to quantify the cost of forming these specialist teams. However there are foreseeable opportunity costs arising from the formation and running of these teams that should be highlighted when the implementation of this guideline is discussed. These opportunity costs arise due to time away from current responsibilities while the specialist team is being created, changes to current working patterns

once the multidisciplinary team is in place and ongoing demand for consultancy and supervision.

We have estimated that an increase of approximately 680 whole-time equivalent (WTE) therapists will be required nationally to meet the recommendations for psychological intervention; this is equivalent to 2.5 WTE for a PCT with a population of 152,000.

Potential training costs, based on a mixed provision of training that includes short courses for experienced clinicians, have been estimated at values of around £1.08 million nationally and £5,000 for a PCT with a population of 152,000.

1 Background

1.1 Context

1.1.1 Supporting implementation has been identified as a major area of work for NICE. As part of our strategy to support implementation, we are committed to providing tools and resources that enable health service managers to incorporate NICE guidelines into their planning and resource frameworks. An important part of this is providing information about the cost implications of implementing the guidelines.

1.1.2 We have carried out a project to estimate the costs of implementing the NICE guideline 'Obsessive-compulsive disorder: core interventions in the treatment of obsessive-compulsive disorder and body dysmorphic disorder' for England. The project has two main outputs:

- this report, which gives estimates of the national costs involved
- a local cost template that health planners can use to determine the cost of implementing the guideline, by altering the assumptions used to reflect local circumstances. Appendix B provides more details of factors to consider when assessing impact locally.

1.1.3 This report has only assessed the impact of the recommendations relating to obsessive-compulsive disorder (OCD). This report does not reproduce the guideline on OCD and should be read in conjunction with it (see www.nice.org.uk/CG031).

1.1.4 The accompanying costing template is designed to assist those assessing the resource impact of the guideline at a local level. NICE clinical guidelines are developmental standards in *Standards for Better Health* (Department of Health 2002) and therefore full implementation of the guideline may take place over a number of years. The cost-impact data presented here may help inform local action plans demonstrating how implementation of the guideline will be achieved.

1.2 Epidemiology of obsessive compulsive disorder

- 1.2.1 Obsessive-compulsive disorder (OCD) is characterised by the presence of either obsessions or compulsions, but commonly both. An obsession is defined as an unwanted intrusive thought, image or urge that repeatedly enters the person's mind. Compulsions are repetitive behaviours or mental acts that the person feels driven to perform. A compulsion can either be overt and observable by others, such as checking that a door is locked, or a covert mental act that cannot be observed, such as repeating a certain phrase in the mind.
- 1.2.2 According to some studies, OCD is the fourth most common mental disorder after depression, alcohol and substance abuse, and social phobia, with lifetime prevalence in community surveys of 1–2%, though some studies estimate 2–3% (Robins et al. 1984). The most recent adult psychiatric morbidity survey (Office for National Statistics, 2000) found that the prevalence of OCD in adults between 16 and 74 years of age was 1.1%. This figure will be used in the costing model to calculate the number of adults with OCD in England.
- 1.2.3 OCD was thought to be uncommon in young people, but reliable population surveys have revealed an OCD prevalence of about 1% in young people (Heyman et al., 2001; Valleni-Basile et al. 1994). *Mental health of children and young people in Great Britain* (Green et al 2004) interviewed a large sample of children and reported that 0.2% of children aged 5–16 years were diagnosed with OCD. For the purpose of this cost assessment we have assumed that the prevalence of OCD in children and young people in England is 0.5%. The range of prevalence rates will be used in section 4 as part of the sensitivity analysis.

1.3 Models of care

- 1.3.1 The most recent adult psychiatric morbidity survey (Office for National Statistics, 2000) investigated service use among adults identified as having OCD. It gives information on the types of psychological and

drug treatment received by this group of adults in the preceding 12 months. Similarly, the recent survey *Mental health of children and young people in Great Britain* (Green et al. 2004) examined the proportion of children with mental disorders who had contacted health services and the types of NHS service that were contacted. These surveys were used as a starting point for the development of a generalised model of care.

- 1.3.2 In order to establish the model of care, we contacted practitioners from specialist OCD services and general psychological services around England. Discussions with these practitioners reinforced the fact that treatment varies considerably across England.
- 1.3.3 Following these discussions, we created a simplified model of care based on psychological and pharmaceutical treatments. We made assumptions about how this model may change following the implementation of the guideline.

2 Costing methodology

2.1 Process

- 2.1.1 We use a structured approach for costing guidelines (see appendix A).
- 2.1.2 Little information has been systematically collected about OCD, and this led to problems in building a comprehensive bottom-up model for costing.
- 2.1.3 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 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 adults who are suspected of having, or are diagnosed with, OCD and body dysmorphic disorder. However this cost analysis will focus only on

OCD. The scope of the guideline covers the management of OCD across all ages, from the youngest age at which the diagnosis might be reliably made (arguably 4–5 years), through the life span, into old age. For the purposes of this cost-impact analysis we will assess the impact of these guidelines on people aged between 5 and 74 years.

2.2.2 Although the guideline is of relevance to all people with OCD whether or not it is accompanied by other illnesses, it does not address separately or specifically the management of individuals with other physical or psychiatric conditions. It also does not cover treatments that are not normally available on the NHS. Therefore, these issues are also outside the scope of this assessment of the implementation costs.

2.2.3 We initially considered all the recommendations in the guideline. However, because of the breadth and complexity of the guideline, we worked with the GDG and other practitioners to identify the recommendations that would have the most significant impact on resources (see table 2). Costing work has focused on these recommendations.

Table 2 Recommendations that have significant impact on resources

Key areas	Rec number	Key priority
In the initial treatment of adults with OCD, low intensity psychological treatments (including ERP) of up to 10 therapist hours per patient should be offered if the patient's degree of functional impairment is mild and/or the patient expresses a preference for a low intensity approach.	1.5.1.1	✓
Adults with OCD with mild functional impairment who are unable to engage in low intensity CBT (including ERP) or for whom low intensity treatment has proved to be inadequate, should be offered the choice of either a course of an SSRI or more intensive CBT (including ERP) (more than 10 therapist hours per patient), because these treatments appear to be comparably efficacious.	1.5.1.2	✓
Adults with OCD with moderate functional impairment should be offered the choice of either a course of an SSRI or more intensive CBT (including ERP) (more than 10 therapist hours per patient), because these treatments appear to be comparably efficacious.	1.5.1.3	✓
Adults with OCD with severe functional impairment should be offered combined treatment with an SSRI and CBT (including ERP).	1.5.1.4	
For children and young people with OCD with mild functional impairment, guided self-help may be considered in conjunction with support and information for the family or carers.	1.5.1.8	
Children and young people with OCD with moderate to severe functional impairment, and those with OCD with mild functional impairment for whom guided self-help has been ineffective or refused, should be offered CBT (including ERP) involving the family or carers and adapted to suit the developmental age of the child as the treatment of choice.	1.5.1.9	✓
For a child or young person with OCD, if there has not been an adequate response to a full trial of CBT (including ERP) involving the family or carers within 12 weeks, a multidisciplinary review should be carried out	1.5.5.1	
Following multidisciplinary review, for a child (aged 8–11 years) with OCD with moderate to severe functional impairment, if there has not been an adequate response to CBT (including ERP) involving the family or carers, the addition of an SSRI to ongoing psychological treatment may be considered. Careful monitoring should be undertaken, particularly at the beginning of treatment.	1.5.5.2	✓
Following multidisciplinary review, for a young person (aged 12–18 years) with OCD or BDD with moderate to severe functional impairment, if there has not been an adequate response to CBT (including ERP) involving the family or carers, the addition of an SSRI to ongoing psychological treatment should be offered. Careful monitoring should be undertaken, particularly at the beginning of treatment	1.5.5.3	✓

- 2.2.4 Ten of the recommendations in the guideline have been identified as key priorities for implementation, and six of these are also among the nine recommendations considered to have significant resource impact.
- 2.2.5 One of the key recommendations for implementation is access to a specialist multidisciplinary team. This team is seen as a key driver for change and for the implementation of the guideline as a whole by providing training, supervision, consultancy, assessment and by raising awareness. We have assumed that these specialist teams will be generally drawn from among current employees and have not attempted to assess the cost of any additional recruitment.
- 2.2.6 The exact structure of these teams, their position within current services and the population covered will presumably develop in different ways across the country and consequently we have not been able to quantify the cost of forming these specialist teams. However there are foreseeable opportunity costs arising from the formation and running of these teams that should be highlighted when the implementation of this guideline is discussed. These opportunity costs arise due to time away from current responsibilities while the specialist team is being created, changes to current working patterns once the multidisciplinary team is in place and the ongoing demand for consultancy and supervision.
- 2.2.7 We have limited the consideration of costs to direct costs to the NHS that will arise from implementation. We have not included costs to 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 prevalence and population estimates (see table 3).

Table 3 Prevalence of obsessive-compulsive disorder

Population group	Total population (100,000s)	Prevalence of OCD in population (%)	Cases of OCD in population
Adults (aged 16–74 years)	357.9	1.1	393,690
Children and young people (aged 5–15 years)	69.44	0.5	34,721

2.3.2 While we have defined children and young people as being younger than 16 years olds, it is clear that the separation between child and adult services is often not so clear cut. It is recognised that some CAMHS services will treat significant numbers of 16–18 year olds. In order to ensure that the local costing template properly reflects service delivery for these CAMHS, the population figures for children and young people used in the template should be modified to include 16–18 year olds.

2.3.3 One of the key assumptions is that not all patients included in the prevalence figures will be subject to diagnosis and treatment. The adult psychiatric morbidity survey found that the 40% of adult with OCD are given some form of treatment by the NHS (Office for National Statistics 2000). The morbidity survey also established that between 20 and 27% of adults with OCD had used community care services in the preceding 3 to 12 months. Other sources quoted in the full guideline have suggested that between 20 and 33% of adult OCD cases receive treatment. Following discussion with clinicians we have assumed that 20% of adults with OCD currently receive some treatment. The range of values for the proportion of patients receiving treatment will be used in section 4 as part of the sensitivity analysis.

2.3.4 The adult psychiatric morbidity survey found that 20% of all people surveyed with OCD had received only medication, 5% had received only counselling or therapy and 15% had received both medication and counselling or therapy. This means that 88% of those people with OCD who received some sort of care had taken medication and 50% had

received therapy or counselling. These figures will be used to calculate the cost of current adult interventions.

- 2.3.5 One of the recommendations in the guideline is that practitioner awareness and understanding of OCD should be improved and consequently levels of recognition and diagnosis should increase following implementation of the guideline. Implementation events such as conferences and workshops and the dissemination of implementation tools will also raise the profile of OCD and should facilitate presentation and diagnosis.
- 2.3.6 Following implementation of the guideline we assume that the number of people being treated for OCD will increase due to the improvements in recognition and diagnosis. Based on discussions with clinicians, we assume a 5% increase in the number of adults who will seek treatment and who will be diagnosed. The percentage of adults with OCD who will receive treatment following diagnosis in the future will increase from 20% to 25%, and consequently approximately 20,000 more people will enter the care pathway. This is a general assumption that affects all elements of the adult model.
- 2.3.7 The recent survey *Mental health of children and young people in Great Britain* (Green et al., 2004) found that 24% of all children with an emotional disorder had contacted mental health services in the previous year. We assume a similar proportion of OCD cases are on the current care pathway and this means that there are about 3,000 children and young people currently being treated for OCD in England. We have assumed that the number of children and young people being treated will increase from 24% to 34% over time following implementation of the guideline. Consequently approximately 3,500 more children and adolescents will be diagnosed and treated. This is a general assumption that affects all elements of the child and young people's model.

2.3.8 A number of general assumptions have been made about drop-out rates and engagement rates based on a review of the literature and discussion with clinicians. These assumptions have been applied to both the current and future care pathways and are listed in table 4.

Table 4 General assumptions

Assumption	Value
Percentage of adults who engage with therapy but drop out before the end of a complete course of therapy	30%
Percentage of a complete course of therapy attended by patients who drop out	25%
Percentage of adults who receive medication but who do not complete a full course	30%
Percentage of a complete course of medication taken by non-compliant patients	25%

2.3.9 Assumptions made when estimating costs of specific recommendations are detailed in section 3 of this report. Appendix C summarises the main assumptions about the current and future models of care, and the proportion of patients who will have various treatments.

2.4 Basis of unit costs

2.4.1 The way the NHS is funded has recently 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. The guideline recommends the use of cognitive behavioural therapy (CBT) including exposure and response prevention (ERP), and that these therapies are to be provided on an outpatient basis. These therapies are not yet included in the national tariff.

2.4.2 Clinicians highlighted the fact that CBT therapists come from a wide range of professional backgrounds and that it is the training and experience in providing CBT that is most important rather than the professional background. However for the purpose of calculating adult and child therapy costs we have used the average Agenda for Change salary banding for counsellors, community mental health nurses and clinical psychologists. The average grade under Agenda for Change for

these staff groups is Band 7, although it is recognised that locally services may be provided by staff on higher or lower grades.

2.4.3 It is assumed that 4 hours of supervision will be required per month and that the cost of supervision is £45 per hour. This is based on discussions with providers that pay for clinical supervision to be delivered externally. Internal provision (for example, delivered by Band 8A healthcare professionals in their non-patient contact time) will be slightly lower than this.

2.4.4 The children and adolescent mental health service (CAMHS) mapping exercise (Durham University 2002) estimates that nationally, 48% of staff time is spent in direct clinical contact with children and young people. A review of the literature and of sources such as *Unit Costs of Health and Social Care 2004* (Personal Social Services Research Unit 2004) suggested that the percentage of time spent on face-to-face patient contact varied by profession from 40 to 80% (mean 63.3%; median 63.5%). A value of 60% has been assumed for the percentage of time spent with adult patients.

2.4.5 The cost for a course of therapy for children and young people is based on a unit cost of £56 per hour of clinical contact. The cost for a course of therapy for adults is based on a unit cost of £45 per hour of clinical contact. These unit costs have been calculated based on a number of assumptions that are summarised in table 5.

Table 5 Assumptions about therapist hourly rate

	Adults	Children and young people
Agenda for change banding	Band 7	Band 7
Basic mid-point salary plus on-costs	£37,936	£37,936
4 hours supervision x 12 months at £45 per hour	£2,160	£2,160
Cost per therapist	£40,096	£40,096
Working weeks per year	40	40
Working hours per week	37.5	37.5
Percentage of time spent with clients	60%	48%
Total hours per year of patient contact time	900	720
Cost per hour of patient contact	£45	£56

2.4.6 These unit costs only include direct staff costs and do not include indirect costs that may be incurred as a result of implementation activities.

3 Cost of significant resource impact recommendations

3.1 Psychological treatment for adults

Background

3.1.1 The guideline recommends that in the initial treatment of adults with OCD, low intensity psychological treatments (including ERP) of up to 10 therapist hours per patient should be offered if the patient's degree of functional impairment is mild and/or the patient expresses a preference for a low intensity approach. Low intensity treatments include: brief individual CBT (including ERP) using structured self-help materials, brief individual CBT by telephone or group CBT (including ERP; note the patient may be receiving more than 10 hours of therapy in this format). (NICE guideline 1.5.1.1)

- 3.1.2 Adults with OCD with mild functional impairment who are unable to engage in low intensity CBT (including ERP), or for whom low intensity treatment has proved to be inadequate, should be offered the choice of either a course of a selective serotonin re-uptake inhibitor (SSRI) or more intensive CBT (including ERP) (more than 10 therapist hours per patient), because these treatments appear to be comparably efficacious. (NICE guideline 1.5.1.2)
- 3.1.3 Adults with OCD with moderate functional impairment should be offered the choice of either a course of an SSRI or more intensive CBT (including ERP) (more than 10 therapist hours per patient), because these treatments appear to be comparably efficacious. (NICE guideline 1.5.1.3)
- 3.1.4 Adults with OCD with severe functional impairment should be offered combined treatment with an SSRI and CBT (including ERP). (NICE guideline 1.5.1.4)

Assumptions made for current care

- 3.1.5 The psychiatric morbidity study found that 50% of the patients with OCD who were receiving treatment had received psychological therapy in the 12 months preceding the survey, either as the sole treatment or in combination with medication. It was assumed that the same proportion of adults on the current care pathway have received similar therapy; this is about 39,000 patients a year. The precise mode of therapy being offered included psychotherapy, behaviour or cognitive therapy, art therapy, social skills training, family therapy and counselling. The results indicate that one person received on average 1.6 courses of therapy.
- 3.1.6 It is assumed that these therapies are being delivered by counsellors, community mental health nurses and clinical psychologists in equal proportions. It is suggested that a complete course of therapy generally consists of a maximum of 16 1-hour sessions. A drop-out rate of 30% is assumed, with most attrition occurring early in the course of

treatment. It is assumed that individuals dropping out will attend a quarter of the sessions offered. When these drop outs are accounted for the average course of therapy consists of 12.4 sessions.

3.1.7 The psychiatric morbidity study found that 88% of the patients with OCD who were receiving treatment had received medication in the 12 months preceding the survey, either as the sole treatment or in combination with psychological therapy. It was assumed that a similar proportion of adults on the current care pathway have received similar pharmacological therapy; this is more than 69,000 patients a year.

3.1.8 The psychiatric morbidity study found that adults who were diagnosed as having OCD had been prescribed a number of different classes of medication in the preceding 12 months. The precise types of medication prescribed are outlined in table 6. The results indicate that a significant number of participants had received more than one type of medication.

Table 6 Types of medication currently received by adults with OCD – taken from adult psychiatric morbidity survey 2000, Table 5.4

Type of medication	Survey results as a proportion of those adults who receive any type of medication
Hypnotics and anxiolytics	25.7%
Drugs used in psychoses	20.0%
Antidepressants	85.7%

3.1.9 The health economic assessment in the full OCD guideline calculated the cost of SSRI antidepressants, including the cost of initial prescribing and follow-up appointments, to be £289. This is based on a prescription of generic paroxetine in 20-mg doses.

3.1.10 It is assumed that a complete course of antidepressants will last 12 months but that non-compliance will be high; 60% of patients prescribed are assumed to be compliant, with non-compliant patients receiving a 3-month course of medication. When these drop-outs are accounted for the average course of medication includes 8.4 monthly

prescriptions. The average course of medication therefore costs £202.30.

3.1.11 The cost of hypnotic and anxiolytic medication has been calculated using the 50th edition of the *British National Formulary* (BNF50) drug prices for a range of benzodiazepams and ePACT prescribing data to estimate the relative proportion of these drugs that have been dispensed. The weighted average cost of a short-course, 28-day prescription at the highest recommended dose with one prescribing session has been calculated as £33.75.

3.1.12 The cost of drugs used in psychoses has been calculated using BNF drug prices for haloperidol, risperidone, quetiapine and olanzapine. The weighted average cost of a 28-day prescription with one prescribing session has been calculated as £86.09. The total cost of current medication and psychological treatment is summarised in table 7.

Table 7 Summary of current medication and psychological treatment received by adults with OCD

	Unit cost	Number of courses	Cost £000s
Net cost of antidepressants	£202.30	59,391	12,015
Net cost of hypnotics and anxiolytics	£33.75	17,817	601
Net cost of antipsychotic drugs	£86.09	13,858	1,193
All medication		91,066	13,809
All psychological interventions	£558.00	62,990	35,149
Totals		154,056	48,958

Assumptions made for future care

3.1.13 The guideline described four courses of treatment for adults with OCD:

- low intensity CBT (including ERP) (< 10 hours per patient)

- more intensive CBT (including ERP) (> 10 hours per patient) or an SSRI
- combined treatment with CBT (including ERP) and an SSRI
- a different SSRI or clompiramine.

3.1.14 Treatment has been allocated to patients based on initial levels of functional impairment or due to inadequate response to other treatment. We have assumed that the adult OCD population can be divided into the following proportions: 20% severe, 40% moderate and 40% mild functional impairment.

3.1.15 The guideline states that low intensity CBT (including ERP) can be offered in three ways; individual face-to-face therapist-led CBT, individual CBT by telephone, and group CBT. More intensive CBT (including ERP) can also be offered as individual face-to-face therapist-led CBT or group CBT. Provision of these different types of treatment will ultimately depend on patient and therapist preference.

3.1.16 A care pathway diagram used in the Quick Reference Guide has been used to model patient flows. This diagram is shown on the next page. The figures shown on the arrows relate to the percentage of all patients with OCD receiving some form of treatment.

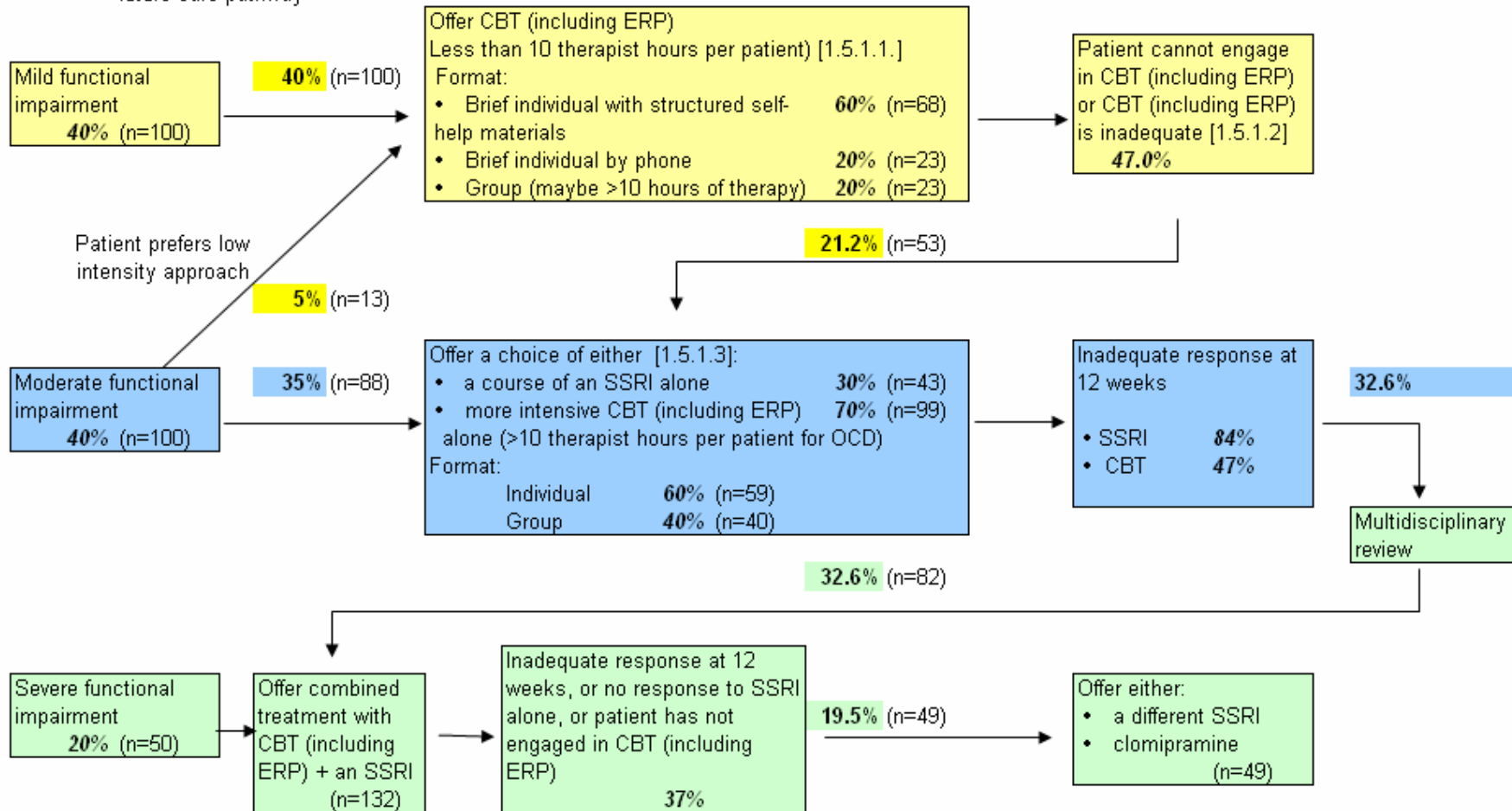
3.1.17 The percentages in boxes refer either to:

- the percentage of all patients with OCD with that particular characteristic
- the proportion of a particular treatment being delivered in a certain format
- the rate of inadequate response to a certain treatment.

Figure 1 future adult care pathway

1000 adults with OCD in the population
 250 adults with OCD on future care pathway

The figures in brackets indicate the number of adults with OCD entering a particular treatment package or engaging with a particular format of therapy. Based on the patient population on the left.



Figures in brackets may not add up due to rounding.

3.1.18 Inadequate response rates to CBT, SSRIs or a combination of CBT and SSRIs have been taken from the health economic assessment in the full OCD guideline.

3.1.19 The assumptions used to calculate the unit costs for the four courses of treatment for adults and the different methods of delivering these courses are based on the cost of clinician hourly rates outlined in section 2.4 and drug costs outlined above. These costs are summarised in appendix C.

Cost summary

3.1.20 The net cost of the recommendations relating to adult OCD psychological therapy and medication is summarised in table 8.

Table 8 Annual net cost of pharmacological and psychological interventions for adults for England

	Current cost (£000s)	Proposed cost (£000s)	Change (£000s)
Current medication	13,809		
Current therapy	35,149		
Future low intensity CBT		12,254	
Future intensive CBT or SSRI		19,091	
Future combined CBT and SSRI		39,378	
Future additional medication		3,877	
Total	48,958	74,600	25,643

Other considerations

3.1.21 In a recent survey 79% of general practitioners described waiting times for clinical psychology services of over 6 months, while 22% indicated that the wait was more than 1 year (Munro et al. 2004). The same survey also suggested that GPs would often refrain from referring to psychological services due to long waiting times, even when this was recognised as being the most effective treatment. Clearly, for early interventions of the kind recommended in the NICE guideline to be successfully implemented, access will have to be improved.

- 3.1.22 As the recommendations lead to an increase in activity, it is sensible to consider the impact in terms of workforce levels and training capacity. In order to calculate the level of current and future workforce required to meet the assumed level of activity, a number of assumptions about working practices have been made. These are listed above in table 6.
- 3.1.23 Using these assumptions, the staffing capacity required to meet current demands for adult psychological services amounts to 868 whole time equivalents (WTEs). Future demand for psychological services will require 1,402 WTE staff members. For a PCT with an adult population of 120,000 this equates to a change from 3.1 to 5.1 WTEs. This is a considerable increase in the number of personnel working in this area.
- 3.1.24 Training capacity may also be insufficient to cope with the increased demand for trained and competent clinicians. It has been estimated that there are 420 places available annually on postgraduate courses in trauma-focused psychological treatment such as CBT. Current training capacity would need to be expanded in order to produce sufficiently trained and competent clinicians in a timely manner.
- 3.1.25 The average postgraduate course costs are around £3,000 and most take up to 1 year to complete with weekly training and supervisory commitments. It may be preferable to develop a stepped approach to training by offering a selection of courses that vary in terms of cost, duration, student capacity and depth of training. Shorter courses on trauma-focused psychological therapy could be commissioned from education providers and offered to groups of clinicians who already have experience of working with cognitive models of therapy. This would substantially reduce the cost per person trained. Examples have been found of 2- and 3-day training programmes for 20 staff that cost £300 per person and 2-week programmes that cost £1,500 per person. Longer, more expensive courses could be offered to clinicians with less experience.

3.1.26 Uncertainty about the precise number of individual staff represented by the 534 new WTEs, the proportion of untrained staff and the types of training required to ensure these therapists are competent makes it extremely difficult to calculate the training costs arising from the increase in workforce. However, a simplistic calculation for non-recurrent training costs will be made. The calculation of training costs assumes that each additional WTE is an individual working full time, and that equal proportions of this new workforce are trained using the three training options listed above. Using this information the potential cost of training additional therapists for adult interventions is £855,000

3.2 Interventions for children and young people

Background

3.2.1 The guideline suggests that for children and young people with OCD with mild functional impairment, guided self-help may be considered in conjunction with support and information for the family or carers (NICE guideline 1.5.1.8).

3.2.2 Children and young people with OCD with moderate to severe functional impairment, and those with OCD with mild functional impairment for whom guided self-help has been ineffective or refused, should be offered CBT (including ERP) involving the family or carers and adapted to suit the developmental age of the child as the treatment of choice. Group or individual formats should be offered depending upon the preference of the child or young person and their family or carers (NICE guideline 1.5.1.9).

3.2.3 For a child or young person with OCD, if there has not been an adequate response to a full trial of CBT (including ERP) involving the family or carers within 12 weeks, a multidisciplinary review should be carried out (NICE guideline 1.5.5.1).

3.2.4 Following multidisciplinary review, for a child (aged 8–11 years) with OCD with moderate to severe functional impairment if there has not

been an adequate response to CBT (including ERP) involving the family or carers, the addition of an SSRI to ongoing psychological treatment may be considered. Careful monitoring should be undertaken, particularly at the beginning of treatment (NICE guideline 1.5.5.2).

3.2.5 Following multidisciplinary review, for a young person (aged 12–18 years) with OCD with moderate to severe functional impairment, if there has not been an adequate response to CBT (including ERP) involving the family or carers, the addition of an SSRI to ongoing psychological treatment should be offered. Careful monitoring should be undertaken, particularly at the beginning of treatment (NICE guideline 1.5.5.3).

Assumptions made for current care

3.2.6 It has been assumed that 50% of the children and young people with OCD currently receiving treatment have some form of psychological therapy; this is just over 4,100 cases a year. A survey by Chowdhury et al (2004) found that only 10% of children and young people were currently receiving CBT (including ERP) therapy. We have used the higher percentage to calculate the current cost of therapy however it should be recognised that the majority of these funds are being used to provide therapies that are not recommended by the NICE guideline. Consequently the implementation of this guideline will require service change from current modes of therapy to those recommended by the guideline.

3.2.7 It has also been assumed that 40% of the children and young people with OCD currently receiving treatment are prescribed medication in the form of SSRIs.

3.2.8 We have assumed that children and young people will receive a 16-hour course of psychological treatment which when weighted for drop out at a rate of 30% means that one course of treatment is 12.4 hours

in length. Using the hourly rates outlined in section 2.4 this means that an average course of psychological treatment costs £694.

3.2.9 We have found that the overall number of appointments will be higher for a child receiving an SSRI than for an adult and that the medication will be initiated and supervised by a specialist. We have calculated drug costs based on nine consultations with a clinical psychiatrist. This includes fortnightly consultations for 3 months and quarterly consultations for the rest of the year. When drop outs are accounted for, this means that an average course of medication costs £293.

3.2.10 The total cost of current medication and psychological treatment is outlined in table 9 below.

Table 9 Summary of current medication and psychological treatment received by children and young people with OCD

	Unit cost, £	Number of courses	Cost (£000s)
Cost of psychological treatment	694.40	4,167	2,893
Cost of medication	293.30	3,333	978

Assumptions made for future care

3.2.11 The guideline described the following four courses of treatment for children and young people with OCD.

- Guided self help.
- CBT (including ERP).
- An SSRI for children and young people who cannot engage with CBT.(including ERP)
- An SSRI combined with ongoing CBT (including ERP).

3.2.12 Children and young people have been allocated to treatment based on initial levels of functional impairment or due to inadequate response to other treatment. We have assumed that the child and young person

OCD population can be divided into the following proportions; 20% mild, 80% moderate and severe.

3.2.13 The guideline states that CBT (including ERP) can be offered in two ways; individual face-to-face therapist-led CBT (including ERP) and group CBT (including ERP). Provision of these different types of treatment will ultimately depend on availability, and patient, parent and therapist preference.

3.2.14 A care pathway diagram used in the Quick Reference Guide has been used to model patient flows (figure 2). The percentage figures shown on the arrows relate to the percentage of all children and young people with OCD who will receive some form of treatment.

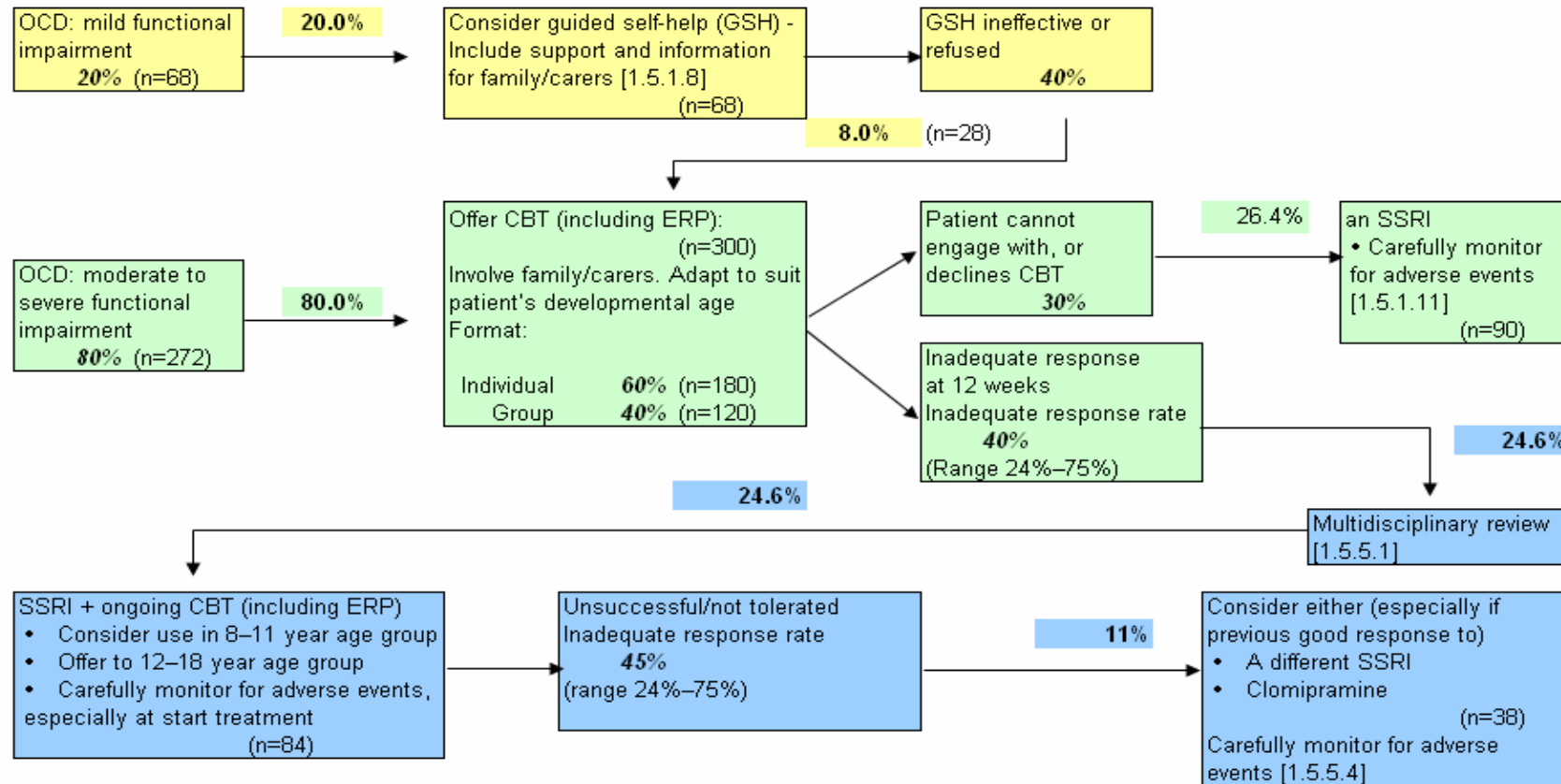
3.2.15 The percentages in the boxes in the diagram refer to:

- the percentage of all children and young people with OCD with that particular characteristic
- the proportion of a particular treatment being delivered in a certain format
- the rate of inadequate response to a certain treatment.

Figure 2 future child and young person care pathway

1000 children and young people with OCD in the population
340 children and young adults with OCD on future care pathway

The figures in brackets indicate the number of children or young people with OCD entering a particular treatment package or engaging with a particular format of therapy. Based on the patient population on the left.



Figures in brackets may not add up due to rounding.

3.2.16 Inadequate response rates to CBT, SSRIs or a combination of CBT (including ERP) and SSRIs have been taken from the health economic assessment in the full OCD guideline.

3.2.17 The assumptions used to calculate the unit costs for the four courses of treatment for children and young people and the different methods of delivering these courses are based on the cost of clinician hourly rates outlined in section 2.4 and drug costs outline above. These costs are summarised in appendix C.

Cost summary

3.2.18 The net cost of the recommendations relating to psychological therapy and medication for children and young people is summarised in table 10.

Table 10 Annual net cost of pharmacological and psychological interventions for children and young people for England.

	Current cost (£000s)	Proposed cost (£000s)	Change (£000s)
Current medication	978		
Current therapy	2,893		
Future guided self-help		433	
Future CBT (including ERP)		5,274	
Future SSRI for those who cannot engage with CBT		914	
Future SSRI with ongoing CBT and ERP		2,873	
Alternative SSRI		384	
Total	3,871	9,878	6,007

Other considerations

3.2.19 Similar concerns about available capacity have been expressed for children's psychological services as outlined in section 3.1. In many ways the capacity issues are more complex for children's services as these services are far less developed and there are fewer clinicians available to provide supervision for trainees.

- 3.2.20 It has been suggested that materials for guided self help for children and young people may not be readily accessible.
- 3.2.21 Using similar assumptions to those listed in table 5 the required increase in capacity resulting from the implementation of these recommendations was calculated.
- 3.2.22 Current demand for psychological services for children and young people amounts to about 57 WTE staff. Future demand for psychological services amounts to about 203 WTE staff. For a PCT with a child and young person population of 30,000, this equates to a change from 0.2 to 0.7 WTEs.
- 3.2.23 Similar training issues are assumed for the new staff working with children and young people as those noted in section 3.1. Using this information, the potential cost of training additional therapists for psychological interventions for children and young people is more than £234,000.

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 practitioners and is therefore subject to a degree of uncertainty.
- 4.1.2 As part of discussions with practitioners, we explored possible minimum and maximum values of variables, and calculated their impact on costs across this range.
- 4.1.3 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 the greatest impact on the calculated total cost.

4.1.4 A table detailing all variables modified is attached as appendix D and the key conclusions drawn are discussed below.

4.2 *Impact of sensitivity analysis on costs*

Adult prevalence

4.2.1 Estimates for OCD prevalence was varied between 1 and 3 %. The value assumed in the model is 1.1% as this value was felt to best represent current levels of need in England. Using the minimum and maximum values in the costing model the total cost of implementing the guideline was found to vary between £29.3 million and £75.9 million.

Child prevalence

4.2.2 Estimates for the OCD prevalence was varied between 0.2 and 1%. The value assumed in the model is 0.5% as this value was felt to best represent current levels of need in England. Using the minimum and maximum values in the costing model the total cost of implementing the guideline was found to vary between £28 million and £37.6 million.

5 Conclusion

5.1 *Identification of key cost areas*

5.1.1 In discussions with the members of the GDG and other clinical practitioners in the NHS, we identified and quantified the recommendations that will have the most significant impact on resources arising from implementing this guideline. These recommendations are noted in table 3.

5.1.2 The assumptions used to calculate costs are based on expert opinion. We applied reality tests against existing data wherever possible, but this was limited by the availability of detailed data.

5.1.3 The accompanying template enables you to update assumptions to reflect local practice and costs (www.nice.org.uk/CG031).

5.2 Total cost

5.2.1 Table 11 summarises the revenue costs of implementing the recommendations in the guideline that we considered to have the most significant impact on resources.

Table 11 Recurrent annual net cost of fully implemented recommendations with significant resource impact for England

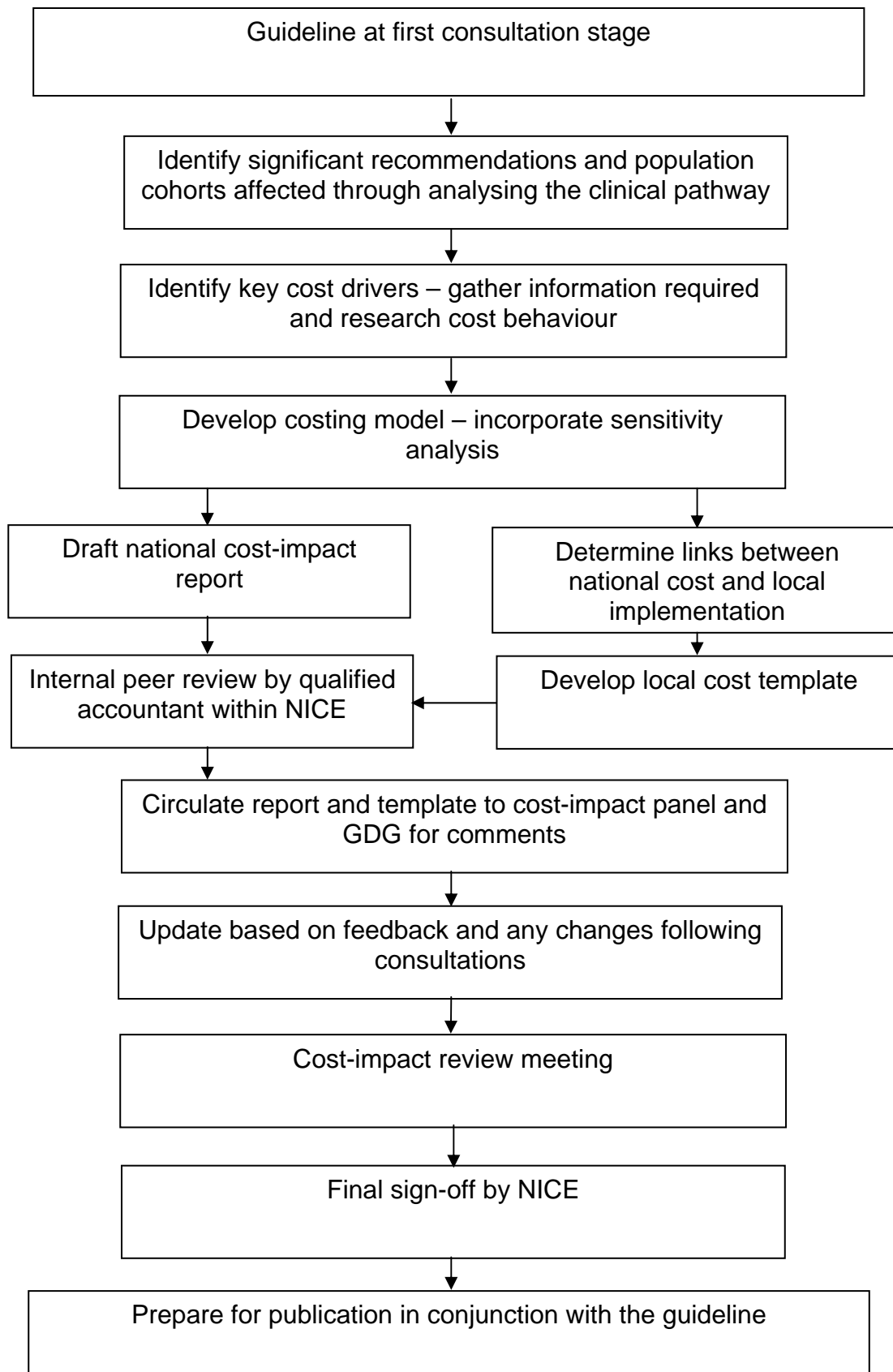
	Current cost £000s	Proposed cost £000s	Change £000s
Adult interventions			
Current medication	13,809		
Current therapy	35,149		
Future interventions		74,600	
Net costs of adult interventions			25,643
Child and young persons interventions			
Current medication	978		
Current therapy	2,893		
Future interventions		9,878	
Net costs of child and young persons interventions			6,007
Total net cost	52,828	84,479	31,650

5.3 Summary

5.3.1 This report gives a national picture of current practice and the potential changes arising from implementation of the NICE guideline on OCD. We produced it by developing a model based on expert opinion and on the detailed data that is available and has been validated by other experts on OCD.

5.3.2 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.

Appendix A: Approach to costing guidelines



Appendix B: Accompanying local cost template

To accompany this report, we developed a Microsoft Excel template that allows local costs to be calculated using data on individual PCT populations and local incidence data. The local impact is calculated using the same methodology as in the national cost-impact assessment. The model has been designed to allow multiple PCTs to be combined to reflect local joint commissioning where applicable.

The organisation of services may vary locally, and we designed the template to assess the impact locally to enable variables reflecting local practice to be entered and used in the calculations.

Unit costs used

Where a national tariff price or indicative price exists for an activity then this has been used as the unit cost. The tariff has been increased by the national average market forces factor. The template provides the option to update unit costs to reflect local costs and it is suggested that the local tariff including local market forces factor is used.

Format of template

The template has three main sheets. The first sheet allows users to select the population area. On the basis of the population, deprivation weighting and prevalence, the template will estimate the number of cases expected in the area. The second sheet allows users to alter the variables used in the national model to reflect local circumstances. Finally, a third sheet summarises the costs for the particular population area selected by the user.

Appendix C: Assumptions and costs of interventions

Adults

Low intensity psychological interventions

Group face-to-face CBT	
Number of sessions	10.00
Length of sessions (hours)	1.5
Number of therapists	2
Lead therapist hourly rate	£45.00
Clinical Assistant hourly rate	£45.00
Clinician cost per hour of patient contact	£90
Cost of group face-to-face session	£1,350

Individual face-to-face CBT	
Number of sessions	10
Length of sessions (hours)	1
Drop out rate	30%
Number of sessions attended by those who drop out	2.5
Weighted average numbers of sessions	7.8
Clinician cost per hour of patient contact	£45.00
Cost of average number of sessions of individual face-to-face CBT	£349

Brief individual telephone CBT	
Number of sessions	10
Length of sessions, hrs	0.5
Drop out rate, %	30%
Number of sessions attended by those who drop out	2.5
Weighted average numbers of sessions	7.8
Clinician cost per hour of patient contact	£45.00
Cost per minute - telephone charges - local calls, pence	2.8
Cost per minute - telephone charges - mobile calls, pence	16
Percentage calls to mobile	20%
Average cost per minute of phone calls, pence	5.44
Average cost per hour of phone calls, £	£3.26
Total cost of average number of sessions of individual telephone CBT, £	£187.02

Intensive psychological interventions

Individual face-to-face CBT	
Number of sessions	16
Length of sessions (hours)	1
Drop out rate	30%
Number of sessions attended by those who drop out	4.0
Weighted average numbers of sessions	12.4
Clinician cost per hour of patient contact	£45.00
Cost of average number of sessions of individual face-to-face CBT	£558.00

Group face-to-face CBT	
Number of sessions	12.00
Length of sessions (hours)	1.5
Number of therapists	2
Clinical psychologist hourly rate	£45.00
Clinical assistant (Band 6) hourly rate	£45.00
Clinician cost per hour of patient contact	£90.00
Cost of group face-to-face session	£1,620.00

SSRI	
Percentage of adults who comply	60%
Average number of months on antidepressants with non-compliant adults	3
Average number of months on antidepressants with compliant adults	12
Weighted average months on antidepressants	8.4
Cost of antidepressant (20 mg generic), 3 GP prescribing sessions and follow-up costs, 1 year	£289.00
Cost of antidepressant (20 mg generic), 3 GP prescribing sessions and follow-up costs, 1 month	£24.08
Cost of weighted course of SSRI	£202.30

Costs of combined SSRI and CBT	
Number of sessions	16
Length of sessions (hours)	1
Drop out rate	30%
Number of sessions attended by those who drop out	4.0
Weighted average numbers of sessions	12.4
Clinician cost per hour of patient contact	£45.00
Cost of average number of sessions of individual face-to-face CBT	£558.00
Percentage of adults who comply	60%
Average number of months on antidepressants with non-compliant adults	3
Average number of months on antidepressants with compliant adults	12
Weighted average months on antidepressants	8.4
Cost of antidepressant (20 mg generic), 3 GP prescribing sessions and follow-up costs, 1 year	£289.00
Cost of antidepressant (20 mg generic), 3 GP prescribing sessions and follow-up costs, 1 month	£24.08
Cost of weighted course of SSRI	£202.30
Cost of combined course	£760.30

Children and young people

Costs of guided self-help	
Length of sessions (minutes)	30
Number of visits per self-help course	8
Percentage who don't complete course	30%
Number of visits these patients made on average	2
Average number of sessions per patient	6.2
Number of treatment hours for self-help course (hours)	3.10
Clinician cost per hour of patient contact	£56.00
Unit cost of self-help booklet	£10.00
Total cost of a self-help course	£183.60

Group face-to-face CBT	
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Number of sessions	12.00
Length of sessions (hours)	1.5
Number of therapists	2
Clinical psychologist hourly rate	£56.00
Clinical assistant (Band 6) hourly rate	£45.00
Clinician cost per hour of patient contact	£101.00
Cost of group face-to-face session	£1,818

Individual face-to-face CBT	
Number of sessions	16
Length of sessions, hrs	1
Drop out rate	30%
Number of sessions attended by those who drop out	4.0
Weighted average numbers of sessions	12.4
Clinician cost per hour of patient contact	£56.00
Cost of average number of sessions of individual face-to-face CBT	£694

Costs of combined SSRI and CBT	
Number of sessions	16
Length of sessions (hrs)	1
Drop out rate	30%
Number of sessions attended by those who drop out	4.0
Weighted average numbers of sessions	12.4
Clinician cost per hour of patient contact	£56.00
Cost of average number of sessions of individual face-to-face CBT	£694.40
Percentage of children and young people who comply	60%
Average number of months on antidepressants with non-compliant patients	3
Average number of months on antidepressants with compliant patients	12
Weighted average months on antidepressants	8.4
Cost of antidepressant (20 mg generic), 3 GP prescribing sessions and follow-up costs, 1 year	£419.00
Cost of antidepressant (20 mg generic), 3 GP prescribing sessions and follow-up costs, 1 month	£34.92
Cost of weighted course of SSRI	£293.30
Cost of combined course	£987.70

Cost of SSRI	
Percentage of children and young people who comply	60%
Average number of months on antidepressants with non-compliant patients	3
Average number of months on antidepressants with compliant patients	12
Weighted average of months on antidepressants	8.4
Cost of antidepressant (20 mg generic), 8 GP prescribing sessions and follow-up costs, 1 year	£419.00
Cost of antidepressant (20 mg generic), 8 GP prescribing sessions and follow-costs, 1 month	£34.92
Cost of weighted course of SSRI	£293.30

Appendix D: Results of sensitivity analysis

Parameter varied	Baseline Value	Minimum Value	Maximum Value	Baseline Cost £000s	Minimum Cost £000s	Maximum Cost £000s	Change £000s
Prevalence of OCD							
Prevalence of OCD in children and young people	1.1%	1.0%	3.0%	31,650	29,318	75,939	46,621
Prevalence of OCD in adults	0.5%	0.2%	1.0%	31,650	28,046	37,655	9,609
Cases subject to the care pathway							
Proportion of children and young people on the current pathway	20%	15%	25%	31,650	28,969	34,330	5,361
Proportion of adults on the current pathway	24%	19%	29%	31,650	31,005	32,295	1,290
Increase in children and young people on the future pathway	5%	3%	8%	31,650	24,189	39,109	14,920
Increase in adults on the future pathway	10%	8%	13%	31,650	30,924	32,376	1,452
Costs							
Variation in the average salaries used to calculate the unit cost of therapy for adults	£45 (Mid-point band 7)	£37.6 (Mid-point band 6)	£53.7 (Mid-point band 8a)	31,650	28,093	35,832	7,739
Variation in the average salaries used to calculate the unit cost of therapy for children and young people	£45 (Mid-point band 7)	£47 (Mid-point band 6)	£67.2 (Mid-point band 8a)	31,650	30,945	32,528	1,583
Variation in the cost of adult anti-depressant medication	£202.3	£182.0	£223.0	31,650	31,079	32,233	1,154
Variation in the cost of anti-depressant medication for children and young people	£293.3	£264.0	£323.0	31,650	31,533	31,769	236

Appendix E: References

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