

The effectiveness in primary care of a computerised decision aid to enhance decision making and improve the quality of life of women with menorrhagia: results of the MENTIP randomised controlled trial

## Key Findings

- Past evidence suggests decision aids help patients share in decision making. However, much of this evidence derives from secondary care.
- A computerised decision aid was delivered in the homes of women with menorrhagia.
- The decision aid improved decision making, knowledge and quality of life without increasing anxiety.
- Women who used the decision aid reported feeling more able to participate in future treatment decisions with their GPs.
- Women from a wide range of socio-economic groups successfully used the decision aid.

## Background

Decision making is a fundamental component of health care. Current policy has highlighted the importance of involving patients in treatment decisions.<sup>2</sup> Guidelines from the Royal College of Obstetricians and Gynaecology for the management of menorrhagia (heavy menstrual flow) state that patients should be involved in decision making about their treatments (<http://www.rcog.org.uk/index.asp?PageID=698>).

However, achieving shared decision making within routine primary care consultations can be difficult. Computerised decision aids have the potential to assist patients become active in the decision making process (see *The Decision Aid* on page 2). Although there is some evidence that decision aids are effective in achieving this potential, much of the evidence derives from secondary care. Unlike previous studies of decision aids in menorrhagia, this trial was conducted in a primary care population, and the results are therefore applicable to the types of patients routinely seen by general practitioners (GPs).



According to evidence-based guidelines for menorrhagia (<http://www.rcog.org.uk/index.asp?PageID=698>), no single treatment option is superior to another, which means patient preferences must be taken into account. There is evidence that health professionals are prescribing inappropriate and ineffective treatments and that women with menorrhagia have limited and inaccurate knowledge of the treatment options.<sup>3,4</sup>

## The Decision Aid

Decision aids are ‘technologies intended to provide information and promote “self-help” in the treatment decision making process which enable the patient to more actively participate in this process, if this is her preference.’<sup>1</sup>

These can take the form of patient information booklets, videos, and/or interactive computer programmes. The Clinical Guidance Tree used in this study is an interactive, computerised decision aid adapted from a model designed by Dowding et al.<sup>4,5</sup>

The Clinical Guidance Tree leads the patient through three stages:

1. The programme gathers information about the patient, which in turn narrows the decision tree. This approach treats the woman as an individual, thereby ensuring the appropriateness of the information delivered. For example, has she completed her family? Information about menorrhagia is then provided as well as making explicit all the different treatment options. The programme details the options and their possible outcomes, including side effects. Additionally, the likelihood of different outcomes is detailed.
2. The patient then rates different outcomes in order of preference by ‘dragging and dropping’ them onto a scale from 0 – to 100. This evaluative scale enables her particular values and beliefs to be taken into account when performing the decision analysis.
3. The programme performs a decision analysis and, on-screen, suggests a treatment based on selected preferences. The session printout gives treatment information, answers to questions, definitions of any of the terms looked up in the programme dictionary and the result of her decision analysis.

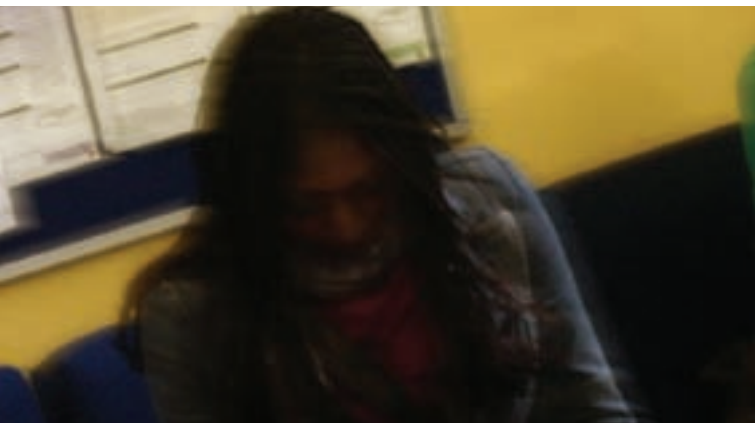
## Aims

We undertook a randomised, controlled trial to evaluate whether adding a computerised decision aid to existing written information reduced decisional conflict (uncertainty over which course of action to take) in women with menorrhagia who consult their GP. Semi-structured interviews were used alongside the trial to examine women’s experience of the intervention and its outcomes.

### Methods

The trial was carried out with two groups:

1. Intervention group: 74 women received the patient information leaflet and also an appointment to use the interactive, computerised decision aid, 'The Clinical Guidance Tree'<sup>5</sup> on a laptop computer. The appointments, which lasted approximately 45 minutes, were conducted at a convenient location (usually at home).
2. Control group: 72 women were given only the patient information leaflet.



Outcome measures (used to show whether the additional decision aid demonstrably reduced decisional conflict and other outcomes)

1. Primary Outcome: Score on the Decisional Conflict Scale two weeks after the intervention. This is a questionnaire that measured the degree of uncertainty about which course of action to take, and is a tool frequently used in trials of decision aids.
2. Secondary outcomes:
  - Anxiety levels measured at two weeks and six months.
  - Menorrhagia Specific Utility Scale, a validated disease-specific and health-related quality of life measure.<sup>6</sup>
  - Knowledge about menorrhagia and its treatments measured at six months.
  - Treatment preferences (e.g. different medical treatments or surgical options).

Process measures (used to see what happened to these women) were collected at six months and included hospital outpatient appointments and details of the treatments received.

Semi-structured interviews were undertaken with women who used the Clinical Guidance Tree computerised decision aid. The women who were selected held a range of educational qualifications and came from a broad spectrum of socio-economic backgrounds. Interviews continued until no new information was forthcoming (18 women).

### Results

**RCT:** Nineteen general practices recruited patients, most of which were situated in deprived areas of Greater Manchester. One hundred and forty-nine women with menorrhagia who consulted their GP agreed to participate. The age range of participants was 30 to 52, and the majority (98%) were white.

At two weeks, there was significantly less decisional conflict in the intervention group (adjusted difference -16.6, 95%CI -21.5 to -11.7,  $p < 0.001$ ) without substantial effect on anxiety levels.

At the six months follow-up, there were no differences in anxiety between the two groups. However, at six months, those in the intervention group showed an improvement in their quality of life in relation to menorrhagia. The use of the decision aid also led to an increase in the women's knowledge of menorrhagia and its treatment options.

Participants who received the intervention were more likely to have formed a treatment preference by the first follow-up at two weeks. At the second follow-up at six months, there were no differences between the groups in terms of the proportion receiving their preferred treatment, being referred to a gynaecologist or receiving any of the alternative treatments of surgery, hormone coil or medical treatment.

**Qualitative study:** Eighteen women who received the Clinical Guidance Tree computerised decision aid were interviewed until no new information was forthcoming.

We found that women lacked knowledge about menorrhagia and its treatment, which appeared to arise from a general reluctance to seek medical help. This was due to three domains of beliefs: the symptoms were 'part of being a woman'; that only 'drastic' treatments were available; or a feeling that discussing symptoms would prove too embarrassing. Interviewees felt that both the information leaflet and the decision aid were legitimate sources of information. This in turn had the effect of legitimising the condition of heavy menstrual bleeding and enabled women to regard seeking medical help as an appropriate course of action. Because of the interactive nature of the decision aid (personalised and containing specific risk information) the women perceived the aid to have a greater impact than the leaflet.

After using the decision aid, the women reported a feeling of empowerment and thus were able to participate more fully in future decisions about their treatment. Some women managed their symptoms with more confidence simply because they knew what they would be able to do or ask for, should the need arise.

### Conclusion

In primary care, a computerised decision aid that incorporates decision analysis is more effective than written information alone in reducing decisional conflict in women with menorrhagia. This decision aid increased women's knowledge about menorrhagia and improved their perceived quality of life. Women in the intervention group felt more able to express a treatment preference. However, women were no more likely to have received their preferred treatment or any of the different treatment options (surgery, hormone coil or medical treatment) at the six-month follow-up. In part this may be due to the finding that many women believed it unnecessary to take immediate action based on the treatment decisions made. Knowing what they would do, should they feel they need to, was sufficient to enable and empower women to manage their own symptoms.

Previous trials of computerised decision aids have been conducted using well-educated, higher socio-economic groups. Our data demonstrate that a computerised decision aid can be used successfully in a wide range of educational or socio-economic groups.

Participation in decisions about treatment for menorrhagia may be achieved through the use of a computerised decision aid outside the primary care consultation. Different methods of providing this intervention (on-line or as a resource in a health centre) require further study.

### Policy Relevance

Guidelines for the management of menorrhagia recommend that women's preferences should be taken into account when deciding among treatment options. The provision of patient decision aids, such as the Clinical Guidance Tree, has an important role in legitimising menorrhagia and enabling women to participate in decision making about their menstrual symptoms. The qualitative research suggests patients appreciate the availability of decision-support material, including interactive decision aids. Due to the importance women placed on the legitimacy of the source of information, they would be more inclined to make use of the decision aid if referred to it by their GP or health professional.



Barriers to the use of patient decision aids need to be addressed if they are to be introduced more widely into practice (see Table 1). This would involve training health professionals in the requisite soft skills of shared decision making and the technical use of patient decision aids, improving access to a comprehensive library of patient decision aids, and developing service models for the delivery of patient decision aids.

In a primary care setting such as health centres, one way to provide access to patient decision aids is through the provision of resource rooms.

Incentives to provide decision aids in primary care could be included in the Quality and Outcomes Framework or as a Directly Enhanced Service in the GP contract. Similar initiatives to reimburse practitioners, who give 'prescription strength' information tailored to individual's needs, are being put forward in the US<sup>7</sup>.

Table 1 Barriers and possible solutions

Barriers to use of decision aids	Policy and practice solutions
Health professionals' lack of knowledge	Skills/retraining in shared decision making and using patient decision aids
No patient access	- Library - Resource room
No model for delivery in NHS	- QOF/DES - Information on prescription

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