

## ACPWH CONFERENCE 2007

# Introducing aromatherapy as a form of pain management into a delivery suite

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### Abstract

This paper describes the implementation and audit of aromatherapy in the delivery suite of a busy consultant-led maternity unit. Aromatherapy was introduced with the aims of reducing the need for more invasive and expensive forms of pain management, and maximizing mothers' positive experiences of labour. An audit carried out in the inaugural year of the implementation appears to support the use of this therapeutic intervention.

*Keywords:* aromatherapy, maternity services, pain management.

### Introduction

The use of complementary therapies in mainstream medicine is increasing (Thomas *et al.* 2001). Maternity healthcare providers are responding to this by incorporating these therapies into models of care within their services. One of the most popular forms of complementary therapy is aromatherapy, which is often used in conjunction with massage therapy. Burns *et al.* (2000) published the results of an extensive audit into the use of aromatherapy in labour wards, establishing its safety, as well as its potential to reduce the use of orthodox pain management strategies and increase client satisfaction. This credible evidence base has empowered midwives to incorporate similar models of care into their workplaces.

In the summer of 2003, a group of midwives with training in the use of essential oils who were based at Royal Preston Hospital, Preston, UK, approached the local National Health Service Trust with a proposal to incorporate a similar model of care into the labour ward environment. Some initial groundwork needed to be carried out, and in order to achieve this, the decision was taken to establish a working party of interested midwives to gather and formulate the information required to support the implementation of this therapy. The working party consisted of four midwives with training in the use

of essential oils, and a mixture of hospital and community midwives who expressed a desire to be involved, including two supervisors of midwives.

Women's and midwives' attitudes to the incorporation of such a therapy on the labour ward were canvassed, and positive responses were elicited from both groups. In conjunction with this, a detailed proposal was formulated that described the model of care proposed, the essential oils and the methods of administration, storage and care of the oils, health and safety issues, documentation issues, and the proposed method of training and assessing midwives. All elements of the proposed model of care were closely allied to conform with various guidelines governing midwives' practice (NMC 2004, 2007; RCM 2007).

The proposal was presented to the Trust Board, who sanctioned the present author to present the proposal to the Drugs and Therapeutic Board. The aim of the model of care was similar to that of the study by Burns *et al.* (2000), i.e. the hypothesis was that orthodox methods of pain management could be reduced and the use of aromatherapy could enhance women's experience of labour. The Drugs and Therapeutic Board sanctioned the proposal with the proviso that the audit process included steps to ascertain that the therapy did indeed reduce the need for more-expensive pain management strategies.

In the autumn of 2005, the proposal was presented to and sanctioned by the supervisors

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of midwives, and therefore, the training of midwives, purchasing of essential oils, incorporation of the use of oils into the labour ward guidelines and storage of oils could begin. The implementation of the therapy commenced on 1 January 2005 and it was planned to carry out an audit over the course of the year.

## Materials and methods

### *Essential oils and their effects*

It was decided to use six essential oils, specific choices being dependant upon potential effects. Pain management and relaxation figured heavily in the decision-making process. The following description is not exhaustive, but it does outline the main potential effects.

Lavender and chamomile work well together (synergistically) for pain management and relaxation, and were felt to be the optimum oils to utilize for the first stage of labour. Frankincense is used to aid relaxed breathing in pulmonary conditions and to calm hysteria, and therefore, the obvious use for this oil was felt to be in the transitional phase of labour. Clary sage has a euphoric effect, and therefore, is a potential alternative to pethidine; furthermore, it can also augment uterine activity. Although expensive, jasmine promotes relaxation, is useful in pain management and augmenting contractions, and may help in the event of a retained placenta. Peppermint can ease nausea when applied to the forehead and it is also a mood-uplifting oil.

### *Methods of administration*

The most appropriate methods of administration within a hospital environment were felt to be via massage, in water and by inhalation. By the very nature of essential oil administration, these different methods affect the recipient in a holistic way. Oils topically administered via the skin pathway will also be inhaled, and therefore, affect the recipient via the limbic system of the brain. For massage, oils are diluted to a 1% mix, which is the lowest safe range for pregnancy. Massage is a form of pain management in its own right (McNabb *et al.* 2006) and is popular in the delivery suite environment. Oils added to milk in order to aid dispersion in water can be added to birthing pools or baths, and for those women who are being continuously monitored, into a bowl placed at their feet. Inhalation may be via a tissue, which is especially useful for the use of frankincense in transition, or in a bowl of warm water in the room.

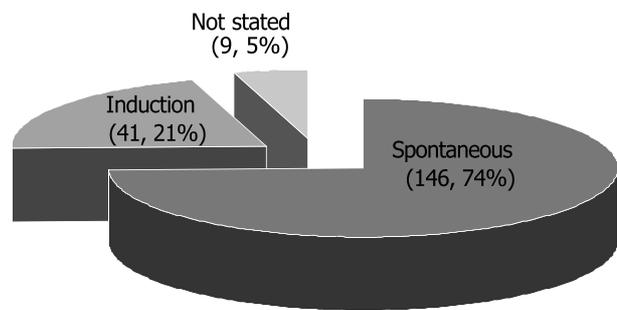


Figure 1. Type of labour.

### *Training and assessment*

Midwives who wished to offer this form of pain management to the women in their care attended a training session and were then assessed over a minimum of five consultations by one of the qualified aromatherapists. A rolling programme of teaching sessions was carried out by the present author. Consultations were sometimes conducted over the phone to ensure that sufficient numbers of midwives could complete the training programme.

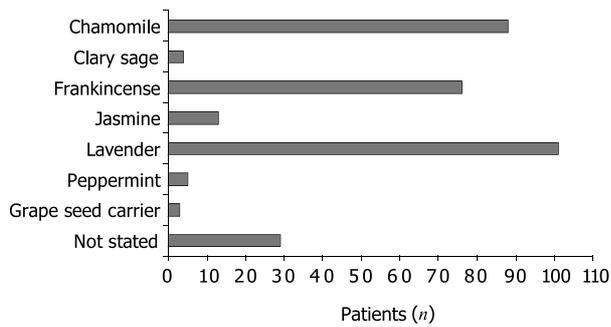
### *Audit objectives, methodology and process*

The objective of the audit was to identify whether aromatherapy reduces the need for pharmacological pain management in labour and whether it has a positive effect on women in labour. Midwife questionnaires were to be completed when aromatherapy was used; these identified pre-labour choices of analgesia and the actual use of analgesia in conjunction with essential oils. A Likert scale was completed at the end of labour that assessed the effectiveness of the essential oils in the opinions of both the women/birth partners and the midwives. In total, 196 completed questionnaires were analysed.

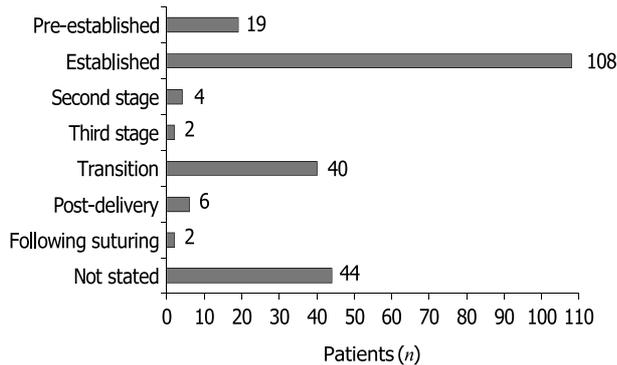
## Results

Spontaneous labour occurred in 74% of cases, 21% of cases were induced, and no details were given regarding the remaining 5% of cases (Fig. 1). These findings indicate that the essential oils were not only used for 'low risk' women and support the significance of the audit findings.

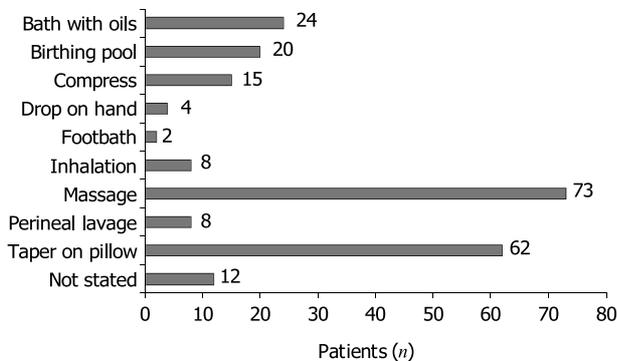
Figures 2–4 show the oils used, the stages of labour when the oils were administered and the methods of use. The findings were as expected. Because the great majority of women were in established labour, chamomile and lavender were used for their pain management and relaxation properties. These oils can be administered via massage and in water (e.g. birthing pool or bath), and these forms of administration proved



**Figure 2.** Types of aromatherapy oils used. (N.B. several patients used more than one oil, and therefore, the total is greater than 196.)



**Figure 3.** Stages of labour when aromatherapy oils were employed. (N.B. some patients used oils during more than one stage, and therefore, the total is greater than 196.)

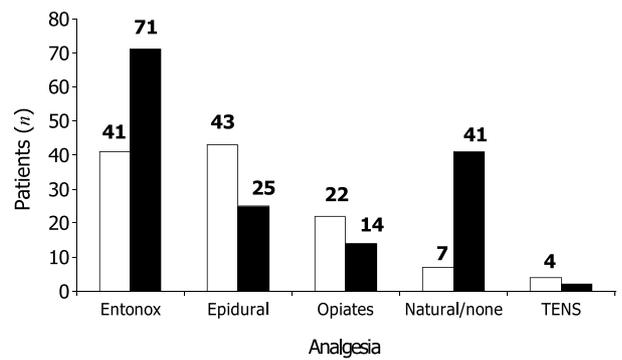


**Figure 4.** Mode of aromatherapy. (N.B. some patients used more than one mode, and therefore, the total is greater than 196.)

popular. The administration of oils in the transitional stage tends to be via inhalation on a tissue or taper, or on the palm of the hand, and frankincense was commonly used at this point.

Figure 5 compares the use of orthodox pain management during birth with pre-labour plans. This graph demonstrates that the use of orthodox pain management was reduced when essential oils were used.

Of the 43 women who expressed a desire for an epidural anaesthetic antenatally, four were recorded as requiring one and there was no



**Figure 5.** Pre-labour plans (□) compared to actual analgesia (■) given after oils: (TENS) transcutaneous electrical nerve stimulation.

**Table 1.** Pre-labour plan: epidural (total n=43)

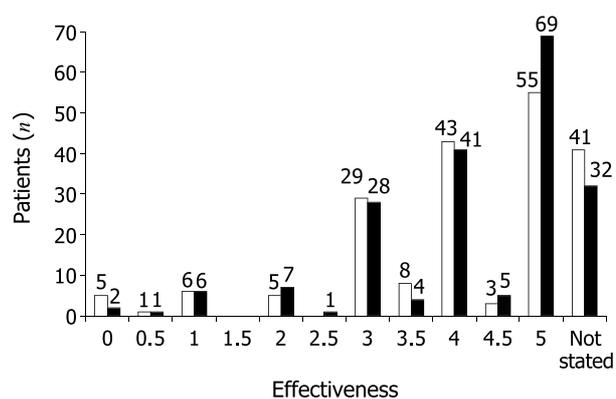
Outcome	Number of patients
Entonox and epidural	2
Entonox and opiates	1
Entonox	15
Epidural	2
Opiates	1
None	12
Not stated	10

record in 10 cases. While bearing in mind that it is possible that the women who were recorded as 'not stated' in the audit forms actually received an epidural anaesthetic for pain management, it is worth noting that 29 others who expressed a preference for epidural pain management prenatally, managed do without it. Twelve women required no other form of pain management than the essential oils (Table 1).

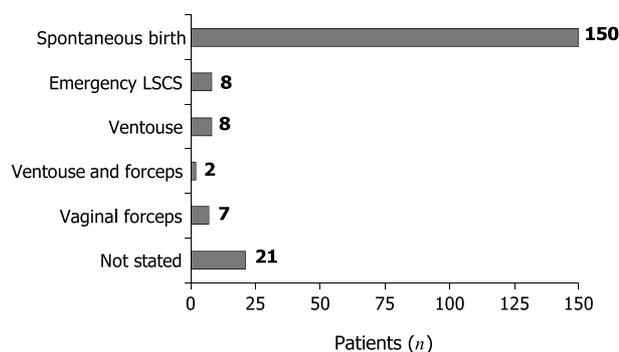
In total, 42 women (21%) were documented as having no other form of orthodox pain management in conjunction with the oils. The administration of oils clearly demonstrates that these subjects were unlikely to have attended the labour ward on the point of giving birth since time must be allowed for the use of aromatherapy.

Side effects of the oils were documented in two cases (1%), which is the same proportion reported in the study by Burns *et al.* (2000). These side effects were skin irritation and headache. No adverse reactions were documented with regard to babies born in the birthing pool.

Figure 6 details what would be the most important feature of the therapy for most midwives, i.e. the satisfaction with the treatment described by the women and those caring for them. This demonstrates that both the women and midwives had a positive reaction to the therapy. Since the number of women comment-



**Figure 6.** Effectiveness of aromatherapy rated on a Likert scale from (0) 'no help' to (5) 'very good': (□) mother; and (■) and midwife.



**Figure 7.** Birth outcome: (LSCS) lower segment Caesarean section.

ing on the effectiveness of aromatherapy equalled the number of audit forms returned, these results have significance.

Figure 7 details the birth outcomes for the women involved in the audit. This demonstrates a lower rate of emergency Caesarean sections than is the norm for the unit involved in the study.

## Discussion

The audit forms that were only partially completed may have skewed the results of present study. A total of 33 forms were incomplete with regard to the types of pain management that were received. If this figure is added to the 17 women who received an epidural anaesthetic, the result exceeds the 43 mothers who stated that they wished to have an epidural anaesthetic antenatally. It could be argued that, if all the women for whom it was not stated which form of analgesia was utilized received an epidural, the initiative did not reduce the use of this form of pain management. However, the present author argues that the higher than average spontaneous birth rate (Birth Choice UK 2007) of 75% indicates that epidural analgesia was not used in this quantity since this form of anaes-

thetic has a tendency to reduce the number of spontaneous births (NICE 2007).

The present author also acknowledges that a potentially large confounding variable could exist. In the initial stages of the introduction of aromatherapy, those midwives who were most keen to utilize the treatment may have been midwives who already had a strong belief in active birth. However, since the introduction of this treatment, a majority of midwives working in the delivery suite now utilize aromatherapy and the present author believes that any further audit would reveal similar findings. The introduction of aromatherapy appears to have enhanced a holistic approach to pain management in labour, increased the available options for helping women to manage the latent phase of labour, and continues to provide a quality service at very low cost.

Readers of the present paper may also wonder if the women who utilized essential oils were, in themselves, another confounding variable. Were they a self-selected audience who were keen to achieve an active birth with low forms of conventional analgesia? Although the audit design did not identify this as a factor, in the present author's experience, essential oils were and are currently offered to most women regardless of their preconceived choices, age, class and ethnicity.

## Audit guidelines

Following the publication of the audit results, the audit group forum recommended the continued use of aromatherapy for women in labour, and highlighted the potential to expand its use into the antenatal and postnatal periods. The design of a future audit would be improved by including information on the demographics of the population utilizing the oils, including parity, age, ethnicity and profession. There is also a great deal of scope to carry out further research in this exciting new area of holistic care.

## Conclusion

The results of the audit support the hypothesis that the introduction of aromatherapy into conventional care within a consultant-led delivery suite reduces the need for more invasive forms of pain management and has a positive effect on client satisfaction. At a cost of £250 for the initial year, the initiative was inexpensive when the potential savings with regard to orthodox pain management are taken into consideration.

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