

been diagnosed before birth. There were fewer antenatal admissions in the case group than in the control group, and babies were admitted to the neonatal intensive care unit only if there was a specific medical need. All monitoring of babies for opiate withdrawal signs was carried out on the wards using the neonatal opiate withdrawal chart (Figure 10.1).

These findings reinforce the claims made by Broekhuizen *et al.* (1992) that risks could be minimised if women taking opiate drugs could only be identified and given appropriate care and support during pregnancy. However, the study also highlighted some features that might be attributable to drug use itself rather than to the (often associated) economic deprivation. Despite outreach and an effort to provide a 'woman-centred' service, late booking with the maternity services was common – over half the women did not present themselves for antenatal care until well into the second trimester. While this may reflect a reluctance to seek care, it may also be due in part to the menstrual irregularities associated with opiate dependence (Morrison *et al.* 1995).

The higher incidence of low birthweight might be due to illegal drug use, but the results of the study were more suggestive of cigarette smoking as the main causative factor (Siney *et al.* 1995). The increased incidence of preterm delivery was consistent with earlier findings (Klenka 1986) and could have been associated with a greater incidence of infection in drug-using mothers (Marx *et al.* 1991; Lamont & Fisk 1992).

The results of this study underpin the guidance for antenatal, intrapartum and postnatal care of mothers and babies, and also the administration of methadone, in the Liverpool Women's Hospital.

GUIDELINES FOR MIDWIVES

Guidance on the management of pregnant substance abusers

The following is adapted from the guidance drawn up by the Liverpool Women's Hospital and following the results of the Liverpool research (Siney *et al.* 1995).

1. The aim of the management should be to 'normalise' as much as possible. All substance abusers are known by or notified to the drug liaison specialist midwife. The specialist midwife is notified by the prescribing agency (or GP) or directly by the records clerks or the midwives/doctors at booking. Some unregistered women may be known only to her.
2. All known substance abusers are booked under a named consultant. The specialist midwife can book direct to the consultant.
3. Care may be shared with the GP, the specialist midwife or both. Uptake of antenatal care is expected at least monthly.

4. Some women may see only the specialist midwife. If the women are booked in drug clinics, 'drop-ins' or at home, the specialist midwife will arrange for an ultrasound scan and a hospital appointment. The specialist midwife sees substance abusers at least monthly throughout pregnancy if they are not attending antenatal services elsewhere.
5. Registered misusers may receive methadone from drug clinics, GPs, the probation services or the local Drugs Council. The methadone regime advised by the drug prescribing units is stabilisation in the first trimester, reduction (if possible) in the second trimester, by a maximum of 5 mg per week, and maintenance in the third trimester. GPs may decide not to follow this prescribing regime. Some women do reduce intake up to the end of the pregnancy, but this should only be tried if they are stable. It is better not to reduce methadone if they are going to increase heroin. Stability should be encouraged, and neonatal withdrawal symptoms and any treatment for the baby explained.
6. Advice concerning prescribing for unregistered drug users may be obtained during office hours from the local drug dependency unit.
7. The risk from unmonitored or sudden drug withdrawal either in pregnancy or during labour should be explained; stability is more useful. Not only may withdrawal cause the fetus to become distressed, but opiate withdrawal may also make the uterus irritable, thus disguising early or premature labour. It may also precipitate labour.
8. All drug misusers are routinely offered a blood test for hepatitis B and C (HBsAg, Anti-HBc and Anti-HCV should be specifically requested on the test request form). HIV testing is not offered, and drug users who request HIV testing should be referred to the relevant drugs agency (the specialist midwife should have details of this). Most units also have an HIV testing protocol. Urine may only be tested for drugs if the woman gives permission.
9. During labour, methadone is given as prescribed, *together* with any analgesia required. Methadone is prescribed as a daily dose while drug-using women are inpatients. It can be asked for at any time and in a split dose over the 24 hours; women might not ask for all they have been prescribed.
10. The hospital pharmacy should hold a list of methadone users. This list, which should be updated regularly, should also indicate the amount of methadone each person is prescribed and the name of the prescriber. Pharmacy guidelines should be available on each ward/department. Part of the specialist midwife's responsibility is to tell the pharmacy of non-registered opiate addicts and, if it is known, the approximate amount of opiate used.

11. Withdrawal of opiates in labour may be seen as fetal distress on the CTG monitor. It is therefore helpful to ensure that the woman has an adequate amount of methadone throughout labour, so that the opiate withdrawal-induced fetal distress can be excluded from a list of possible obstetric emergencies.
12. The Unit's own research, comparing 103 treated opiate users with controls (Siney *et al.* 1995), has shown that opiate users in labour use 'normal' amounts of analgesia provided that methadone levels are maintained. Unregistered (i.e. untreated) opiate users will usually require larger amounts of opiates for pain relief in labour, unless methadone is given to stabilise their withdrawal.
13. Mothers and babies are kept together and use any bed in the postnatal area. No isolation and no special infection control procedures are required.
14. Discharge is after 72 to 96 hours because of research findings demonstrating that neonatal withdrawal symptoms from methadone (which has a longer half-life than heroin) generally occur (if at all) after 24 hours. If they have not occurred by 72 hours, or if they begin to occur in mild form at that stage, there is generally no problem after discharge (Siney *et al.* 1995). Babies who show no symptoms of opiate withdrawal postnatally have often shown fetal distress *in utero* during labour, often requiring instrumental or operative delivery. Babies with severe symptoms are treated as indicated in Figure 10.1. If mothers are also using benzodiazepines, an extra day is required before review.
15. All substance misusers known to the specialist midwife are reviewed regularly by her, the senior hospital social workers and the health visitor liaison. The need for formal social service input will be decided by them before the birth.

Management of infants of substance abusers

This is adapted from the guidelines drawn up by the Liverpool Women's Hospital and following the results of the Liverpool research (Siney *et al.* 1995).

1. Where a pregnant woman is a known 'substance abuser' (heroin, alcohol, barbiturates, etc.), the midwives or doctors will alert the drug liaison midwife (DLM). The DLM will then inform the relevant agencies and personnel. Urine from a woman who is suspected of drug abuse can only be tested for this with her consent.
2. At birth, a paediatric SHO will attend, and the infant's condition, weight, etc. will be assessed. The paediatric SHO should be informed of

delivery. The social worker must be informed by the ward staff if he or she is involved in the woman's care.

3. Infants of 'substance abusers' should be nursed on the ward with their mother, unless there are medical indications for admission to SCBU. These include major convulsions and birth asphyxia.
4. Severely symptomatic infants of opiate users are treated as outlined in Figure 10.1.
5. Severe signs of withdrawal are generalised convulsions, tremors when undisturbed, a continuous high-pitched cry, sleeping for less than 1 hour after feeding, projectile vomiting, watery stools and a hyperactive Moro reflex.
6. Mild signs of withdrawal include sneezing, frequent yawning, tremors when disturbed, poor feeding, sleeping for less than 3 hours after feeding, respiration rate greater than 60 per minute, sweating, regurgitation, raised temperature, excoriation of the nose, knees or toes, loose stools and nasal stuffiness.
7. The social work department will determine the need for a case conference, informal review, follow-up or supervision with relevant agencies.
8. Discharge is after review at 72 to 96 hours if there are no medical problems. Babies may have mild symptoms on discharge.

Pointers for practice

1. Is there any way to establish links with the drug services in your area in order to see whether there is a service need?
2. Does identification of drug misuse in a pregnant woman mean notification of district social services department and a child protection conference? Does this affect whether mothers identify themselves?
3. Are known or suspected drug misusers automatically offered testing for hepatitis B and C and/or HIV? Are pretest counselling and support available?
4. Are extra or different infection control procedures used for known drug misusers? Does this breach confidentiality?
5. Are babies of known drug misusers separated from their mothers and cared for elsewhere? If so, why? Does it affect whether mothers identify themselves?
6. If your hospital uses a neonatal withdrawal chart, is it a subjective one? What if a midwife has never before cared for the baby of a drug-using mother?
7. Are the expectations of baby care in the postnatal period higher for known drug misusers than for non-drug users?

Conclusion

Drug use in pregnancy is associated with many problems and, even in Liverpool where concerted efforts have been made, by no means all of these have been solved. A number of unregistered women still turn up 'unbooked' in labour (although only one in 1995). The Liverpool approach, however, has considerably contributed towards the improvement of services to this particular group of vulnerable women (Siney *et al.* 1995) and the underlying system of care with others. This service relies very much on non-technological aspects. Indications are that the only way to encourage both registered and non-registered drug users to identify and attend for antenatal care is to develop an attractive, low-key, woman-centred service that guarantees confidentiality and sympathetic care.

This chapter has concentrated on drugs of physical dependence, i.e. opioids, because the maternal dependence, which causes the neonatal dependence, is what leads to the problems and risks. Opioids are, however, not the only drugs that are misused, and the majority of dependent women will probably be using other drugs too, for example, benzodiazepines (usually temazepam and diazepam) amphetamines, cocaine (usually in the form of 'crack'), cannabis and occasionally Ecstasy, although the latter is generally stopped when women realise that they are pregnant.

Other variables that should be considered are cigarette smoking and alcohol use (Plant 1990) and poverty or deprivation (see Chapter 4 in this volume). All of these, even without the use of illegal substances, can affect the outcome of pregnancy.

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Multiple sclerosis and midwifery care

Meg Taylor

INTRODUCTION

For most women, adjusting to pregnancy and motherhood is a challenging experience. Although birth is usually an optimistic and enriching experience, it is not without difficulties and traumas. For women contemplating motherhood who also have a disability such as multiple sclerosis (MS), the journey can be especially difficult. There are sometimes problems in providing sensitive women-centred care for women with disabilities, and these problems may stem from misunderstandings, lack of knowledge and inappropriate attitudes based on stereotypical images of women and disabled people. Midwives and other carers involved in caring for women in childbirth sometimes need to be helped to see the 'normal mother' inside the disabled woman. When this happens the woman can be helped to grow in confidence and competence.

To be pregnant and disabled presents women with the double disadvantage of being female in a world dominated by a male-dominated medical model of care, and negative attitudes towards disability and handicap. To able-bodied midwives and other carers who often cannot see beyond the disability, signs and symptoms such as impaired mobility may seem to be the only issue worthy of consideration and concern. Negative and myopic attitudes from those who offer care may make a complex situation even worse. Midwives are sometimes afraid to, or refuse to, confront the facts and implications of disability, perhaps hoping that if it is ignored it will go away. This often means that the environment is unnecessarily difficult and inaccessible.

These negative attitudes often include a belief that disability implies low intelligence, that it is the same as illness, that disabled people must be dependent on the able bodied, or that a disabled person is somehow not a proper person. More specifically, with regard to childbirth, there may be an unspoken assumption that people with disabilities should not reproduce. There may be distaste or embarrassment that disabled people are sexually active and attractive, and there may be an automatic assumption

that a woman with a disability will need a caesarean section and that the child is at risk. These attitudes exist in a context where there are few if any positive images in the media of people with disabilities and where there is a general awkwardness and embarrassment in the presence of disabled people.

According to Champion (1990), neither being pregnant nor being disabled is an illness, and therefore the expertise for either cannot rest solely with the medical profession. MS is the most common disorder of the central nervous system (CNS) in the UK, and the treatment and care of childbearing women with this condition require the help and support of a multidisciplinary team that might include midwives, obstetricians and neurologists as well as those in the professions allied to medicine.

MS results from episodes of neuritis that cause permanent damage to the myelin, which is the fatty sheath surrounding certain nerves in the CNS. In a healthy state, this sheath improves the efficiency of nerve impulse transmission. 'Sclerosis' refers to the hardened areas or plaques that cover these areas of damage or demyelination, and 'multiple' refers to both the number and location of lesions. Lesions may occur in any part of the CNS and with varying frequency. For this reason, MS is unpredictable and idiosyncratic. Each sufferer will have a unique experience of MS, and lesions may cause a variety of symptoms. These can include visual disturbances, leading in rare cases to blindness, numbness and tingling of the limbs, a sensation of weakness, which may or may not impair movement, spasticity, incontinence of urine, urgency of micturition, impotence in men and loss of sexual sensation in women, inappropriate sensations of heat or cold, and many other symptoms. The degree of impairment experienced by people with MS can vary considerably. In some instances, there are no symptoms, MS only being diagnosed at post mortem and when death has occurred for a quite different reason. In others there is a steady and inevitable decline in function leading to total dependence, death being caused by an opportunistic infection.

MS AND MIDWIFERY CARE

MS is of relevance to midwives for two reasons: women are diagnosed more often than men, in a ratio of 2:1, and the age of diagnosis reaches its peak in the thirties, a time when women are still of reproductive age. However, MS is more than just a physical condition: it is a condition with complex physical, psychological and social components that interweave in a complex way and may mutually influence the course of the condition. Orthodox medicine sees MS primarily and totally as a physical condition, but the experience of someone with MS may involve considerably more than this. To exclude the emotional, psychological and spiritual aspects of care is a mistake. The physical effects of the condition are only one aspect,

and the midwife must consider the woman and her needs in total. For example, to the newly pregnant women who also has MS, living with despair and the grief for the loss of an apparently 'normal' life may be more crippling than her physical symptoms. The effects of social stigmatisation and insensitive social policies that ignore the needs of the disabled are also likely to have a detrimental effect on the quality of life of the woman and her family. These are some of the reasons why MS may be described not only as a physical illness, but also as a psychological or social disorder. This is confirmed in a British Society of Rehabilitation Medicine study (BSRM 1993), which reports that 90 per cent of those questioned described themselves as handicapped even though 1 in 3 of those with MS interviewed showed no sign of physical handicap. It would appear that the experience of MS can be more debilitating than physical signs alone would suggest.

THE CAUSE AND NATURE OF MS

The condition of MS seems even to confuse the charitable organisation established to support those with this illness. The MS Society's advertisements paint a stark black and white picture of MS in terms of dependency and impairment. They describe sufferers as needing someone to pick up the pieces and give them guidance. Words such as 'shattered' are used, and reference is made to blindness. 'Shattered' may indeed be the case as some women are exhausted by the emotional consequences of the condition, but for many it is not the physical symptoms that lead to the adverse emotional effects. According to the Society's own leaflets, 1 in 3 people with MS show no sign of physical disability and fewer than 1 in 5 will need a wheelchair.

The BSRM states that MS occurs in over 1 in 1000 of the UK population (BSRM 1993), but there is little evidence to support the negative stance taken in fundraising advertising literature. It is clear from the medical evidence of the condition that, given the unpredictable and idiosyncratic nature of MS, it is impossible to predict either the course or outcome of the condition. It is this feature that insists that midwives offer women with MS the benefits associated with carefully planned, thoughtful individualised care.

Matthews (1985) describes the typical course of the condition in the following way:

A woman aged approximately thirty will experience an initial attack, most commonly of retrobulbar neuritis, numbness or weakness. She will make a complete recovery after some weeks. No diagnosis will be made at this point. After an interval which may vary from several months to several years she will experience a second attack, usually with different symptoms from the

first. Again she will make a complete recovery. She will have a further attack within the next couple of years which will usually be more severe and leave her often with permanent symptoms or a slight disability. This pattern continues for three to four years, each time with a slightly worse recovery. After about five years the pattern changes. There are no more complete attacks and recoveries, instead her symptoms fluctuate from day to day. This phase may last for years. If the disease is to become chronic and degenerative this phase will be followed by a progressive decline which in the worst cases will leave the sufferer bedridden and helpless. Memory and concentration will go, and death usually occurs as a result of pneumonia or kidney damage due to bladder paralysis. Conversely, if the condition is benign there will be no evident handicap.

MS has traditionally been described as two types: acute (relapsing with the better prognosis) and chronic (degenerative). MacAlpine's 'Multiple Sclerosis' (Matthews *et al.* 1991) uses three terms: remittent, remittent/progressive, and progressive from the outset. However, it is impossible to predict the course the illness will take in any individual, especially at the time of diagnosis, as this is usually made comparatively early in the course of the disorder.

THE GENERAL EFFECTS OF CHILDBEARING ON MS

There is some evidence that MS is affected by the female hormones oestrogen and progesterone. Some women experience worse symptoms in the premenstrual period (Matthews *et al.* 1991). However, the additional hormones of pregnancy seem, on the whole, to induce a feeling of well-being. Forti and Segal (undated) found the relapse rate in the first half of pregnancy to be the same as for a non-pregnant woman, but noted an improvement in the second half of pregnancy.

Women are at a greater risk of relapse in the postnatal period, but this increased risk seems to be compensated for by the reduced risk during pregnancy. Overall, the evidence suggests that childbearing has no adverse effect on the course of the condition, and indeed neurologists do not advise against pregnancy. In the sample of women examined by Forti and Segal, 40–50 per cent experienced relapses in the first 3–6 months following childbirth; of these 80 per cent recovered fully.

Some women report that their experience of their condition can fluctuate even from hour to hour, and not surprisingly some women find that some aspects of pregnancy, labour and the puerperium can lead to a deterioration in some symptoms of MS. For example, the altered carbohydrate metabolism of pregnancy, which often leads to a sense of increased hunger and can contribute to increased feelings of nausea, and the increased blood volume, which in turn increases sensitivity to heat, can also cause

an exacerbation of a wide range of symptoms. Increasing weight and size can lead to problems with balance, which may worsen existing problems in this area. Pressure of the fetal head on the bladder can make urinary control more difficult. Fatigue may become worse, more unpredictable and difficult to control. Labour can be stressful, and stress can also influence the intensity of the symptoms in some women. In the postnatal period fatigue is often the major cause of symptoms; both the immediate fatigue following labour and the chronic fatigue resulting from broken nights' sleep contribute to a time of increased physical and psychological stress to a woman whose health is already compromised by MS. A raised temperature, due to either infection or breast engorgement, can also cause an exacerbation of symptoms.

It is especially important that midwives warn and advise women of these changes and explain that they often relate to pregnancy and are not necessarily due to a decline in the condition.

MS AND THE PROCESS OF CHILDBIRTH

Conception and preconception

According to Matthews *et al.* (1991), MS has no influence on fertility or the rate of spontaneous miscarriage. Forti and Segal (undated) suggest that the effects of MS may influence a woman's desire to conceive. They considered it likely that women with MS may have difficulties in accepting themselves as sexually active, and that their sense of themselves as disabled and abnormal may lead them to think that sex and childbearing are or should be out of the question. Some women with MS experience a reduced or absent sensation in the genital area, but while this has an obvious impact on the experience of sexual pleasure, it does not preclude conception. It is also possible that a woman with MS may want to have a child to demonstrate that, in that aspect of her life at least, she is normal.

However, many women with MS do not want to have children or reluctantly feel that they ought not to have children, or consider themselves physically incapable of caring for a child. Although Matthews *et al.* (1991) give no figures, they describe the rate of termination of pregnancy among women with MS as 'high'.

On the other hand, Campion (1990) defends the right of women with disabilities to have children if they so choose and outlines a series of questions such a woman might ask herself before conception:

How well adjusted do you think you are to your disability?

How active a life are you able to lead?

How much help do you require with daily tasks?

Is your disability likely to deteriorate in the future or result in a shorter life span? If so, is your partner able, and prepared, to take on the additional responsibilities of caring for a child?

Do you have a support network of friends and/or relatives nearby on whom you can call for support, both emotional and practical?

Have you any experience of looking after other people's children?

Do you foresee any major practical problems with looking after a child?

Do you live in accommodation that is suitable, or can be adapted, for you to look after a child?

Do you have a garden for messy play?

Are you reasonably secure financially?

Do you live in a community where you are known and where you know other people with young children? If not, would you consider moving?

Do you feel you would be a burden to your children? Is this a real possibility or a guilty worry?

Do you have a good relationship with your partner and would he be supportive?

Do you have confidence in your own ability to face the challenges that come with looking after a child?

These are generally sensible and practical questions for any woman contemplating a pregnancy but may be especially helpful for a woman with MS.

Heritability

The children of parents with MS are at increased risk of developing MS themselves. This increased risk varies according to the sex of the affected parent and the child. Because women are affected more than men, the daughter of a woman with MS is most at risk: her chance of developing MS is as high as 1 in 100 compared with 1 in 1000 for the general population (Forti and Segal undated). The risk for boys falls somewhere between these two figures.

Pregnancy

In some women, pregnancy is the time when MS can improve, at least temporarily, and it is possible for some symptoms to be milder or at least less frequent; for some, mobility can improve. For others pregnancy and childbirth may lead to a worsening of MS symptoms and an increased rate of relapse. However, the fact that a woman has MS does not mean that the wellbeing of her fetus will be compromised; MS does not necessarily indicate a high-risk pregnancy. Women who take drugs to ameliorate the condition must take special care before and during pregnancy and seek the specialist advice of their neurologist, pharmacist and obstetrician.

According to Fortis and Segal (undated), any drug should be discontinued, including those taken to stop spasm (for example baclofen, diazepam, dantrolene sodium), to control urinary frequency or incontinence (for example flavoxate hydrochloride) or long-term therapies such as azathioprine. These authors argue that because the risk of relapse is reduced, the need for steroids is also reduced. This is not, however, the established medical view, which is that stopping either anticonvulsants or steroids is dangerous. The prospect of pregnancy will necessitate a review of the medication prescribed for people with MS. Risks and benefits will be assessed for each drug. The abrupt withdrawal of some medications, such as anticonvulsants or corticosteroids, could prove dangerous.

The UK and US guidelines for some drugs commonly used in MS are set out in Figure 11.1, Figure 11.2 including more detail on US drug categories. Antenatal care of women taking anticonvulsants is outlined in Figure 11.3. Information on vitamins in pregnancy is summarised in Figure 11.4.

For a women with MS, the normal minor conditions of pregnancy can easily be confused with symptoms of MS. These symptoms include urinary frequency or stress incontinence, increased fatigue, constipation and reduced mobility due to increasing weight and size. These symptoms may be particularly distressing for a woman with MS, who may be perceived as unduly anxious.

To some extent most pregnant women experience episodes of acute and increased anxiety. Not least, the modern array of screening and diagnostic tests tend to promote rather than allay anxiety in the first instance. Pregnancy, like MS, is a condition in which uncertainty is intrinsic. Pregnant women with MS who are well used to uncertainty may weather the uncertainty of pregnancy especially well, but they may also experience some emotional turbulence. Any change in circumstances leads to loss, however small, and these losses can evoke past losses. It is possible that pregnancy can bring about a flashback of the grief that accompanied the diagnosis of MS, and the midwife should be alert and sensitive to seemingly irrational fears and concerns.

Figure 11.1 Pregnancy and drugs used in MS

Muscle relaxants	
Baclofen	Toxicity (developmental and skeletal abnormalities) in the fetus in animal studies (BNF 1995). Safety in pregnancy not established. US category C (Karch 1992)
Diazepam	Toxicity in first trimester reported in some texts (Karch 1992; Medawar 1992). Risks of cardiac or gut defects, cleft palate, microcephaly in the first trimester. Neonatal withdrawal syndrome likely after prolonged use. Avoid during labour and delivery due to risk of 'floppy infant' syndrome (Malseed <i>et al.</i> 1995). US category D
Dantrolene	Safety not established. Little experience with this drug. US category C
Immunosuppressants	
Azathioprine	This crosses the placenta and has shown teratogenicity in animal studies. All patients are carefully monitored for marrow toxicity; the risks and consequences of infection during pregnancy should be borne in mind. Azathioprine therapy is rarely initiated during pregnancy. BNF (1995) advises that azathioprine has not proved teratogenic when used during pregnancy in renal transplant recipients. US category D
Corticosteroids	Neonatal adrenal suppression is a known hazard, particularly with doses over 10 mg per day prednisolone, or equivalent, during the last two trimesters. Close supervision will be required to titrate dose against disease. Any dose adjustments must be made gradually under the guidance of the physician. The risks and benefits will be considered in each individual case. During labour, additional steroids will be required by the mother (BNF 1995). US category C
Anti-muscarinics	
Flavoxate	Only oxybutinin is included in the BNF. This states that toxicity has been demonstrated in animal studies. Flavoxate is US category C, safety not established, use is only recommended if benefits (continence control) outweigh potential risks to fetus (Karch 1992)

Figure 11.2 *US drug categories adapted from Malseed et al. (1995)*

- A** No demonstrated fetal risk in humans during any stage of pregnancy
- B** No demonstrated risk in animal studies but no adequate studies in pregnant women
- C** Animal studies have shown adverse effects on the fetus but there are no adequate human studies
- D** Evidence of human fetal risk but the benefits from use of the drug may be acceptable despite the risks
- X** Animal or human studies have demonstrated fetal abnormalities, or adverse reaction reports give evidence of fetal risk (risk to a pregnant woman clearly outweighs possible benefits)

Figure 11.3 *Anticonvulsants in pregnancy*

Anticonvulsant therapy should be reviewed prior to conception, with a view to:

- Counselling: the risks of fits are greater than the risks of drugs. Sudden withdrawal of anticonvulsants may precipitate fits. Untreated, epilepsy tends to get worse. The risk of fetal abnormality is above that of the general population in people with untreated epilepsy. This may not be greatly increased by the use of monotherapy
- Gradual withdrawal and discontinuation if no fits have occurred for 5 years (Mackay & Evans 1995) or 4 years (Dichter 1991) or even less (Bloomfield 1996). This may take several months. All patients should be on the minimum effective doses possible
- Establishing monotherapy if at all possible
- Therapeutic monitoring and dose adjustment as necessary. If control of epilepsy has been poor before pregnancy, it is likely to worsen during pregnancy (Dichter 1991), due to hormonal changes
- Additional monitoring during pregnancy: alphafetoprotein and ultrasound
- Supplementation:
 - high-dose preconceptual folate
 - vitamin K in last trimester
 - vitamin D and calcium

Figure 11.4 Multivitamins in pregnancy

- Vitamin A is teratogenic in doses at and above 10 000 IU per day (Rothman *et al.* 1995). The threshold for fetal damage is only four times the RDA (Bloomfield 1996)
- Vitamin B₁₂ is US category C. It is, however, an essential requirement
- Vitamin D is teratogenic in animals. Karch (1992) advises avoid doses above 400 IU per day. US category C
- Overdose of folic acid can precipitate convulsions in epileptics. US category A
- Menadiol (water-soluble vitamin K) is contraindicated in pregnancy. Haemolytic anaemia of the newborn has occurred (BNF 1995). Phytomenadione is safe only in recommended doses for prophylaxis of haemorrhagic disease of the newborn. US category C

It is unwise to exceed the recommended RDA for other vitamins, such as niacin. Some substances marketed as 'vitamins' are toxic; for example vitamin B₁₇ (laetrile) contains cyanide (Chetley 1995)

Raphael-Leff (1991) describes the psychological processes of pregnancy. These involve for all women some doubts about their ability to gestate and nourish a fetus. Such doubts may be worse where women live with an awareness that they have MS, and may feel themselves to be abnormal or defective. Women with a history of loss may under – or over – value the fetus. Undervaluing it is an insurance against the pain of further loss. To overvalue it is to invest in it the hopes which one does not invest in oneself. One major psychological task of pregnancy is to find a balance between identifying with the fetus, and thus laying the basis for the love the mother will feel for her child, and differentiating from it. Failure to differentiate can lead to psychological problems in the postnatal period, and such failure is more likely where the mother either over- or undervalues her fetus.

Midwives generally have little experience of disability and may overreact to perceived problems in care. There may be a tendency to overmedicalise, either because the nature of MS is misunderstood or to allay the helplessness staff may feel in the face of the uncontrollable. The pregnancy of a woman with MS is not high risk on account of the MS, although it may be for other reasons. Midwives and others may also disapprove of a woman with a disability having a child, or may feel the common embarrassment that disability evokes in the able bodied. Such feeling may lead to staff curtailing contact with the woman and thereby denying her information and choice. The message, for midwives, is clearly that the woman with MS is first and foremost a woman, second she is pregnant and planning on becoming a mother, and finally she has a condition that may require extra special care. Midwives should offer her continuity of carer, effective

communication, choice in the decisions of childbirth and ultimately a feeling of control over the birth process whatever the medical condition.

A pregnant woman with MS is not necessarily at high risk and therefore needs and is entitled to the same level of information, leading to the same level of choice as any other woman. Care can be provided by a midwife who can take advice from other experts, such as obstetricians, neurologists and pharmacists, as necessary. The woman can be booked for a home birth, domino or hospital delivery. There may be a need for liaison with other health care professionals, for example physiotherapists, occupational therapists and incontinence nurses. Physiotherapists can advise about specific exercise plans to maximise mobility of affected limbs. Occupational therapists can advise about adaptations to either the woman's home or hospital wards. There may also be a need to liaise with an occupational therapist to assess the ergonomics of labour and postnatal wards, and recommend adaptations where necessary. Women with MS can be advised to exercise to their capacity, taking into account their individual mobility and the constraints of a growing pregnancy. Yoga classes take each woman's ability into account, and there is some anecdotal evidence that yoga ameliorates the symptoms of MS (ARMS 1993). If the woman's mobility is restricted, pelvic floor muscle exercises should be taught and advised to optimise the chance of a normal delivery (Campion 1990).

When a woman has chosen a hospital birth, visits to the labour and postnatal wards may be necessary to assess their accessibility and plan adaptations where necessary. This is particularly important if the woman has impaired vision; the more she can familiarise herself with the hospital during the antenatal period, the fewer problems she will have afterwards. If a woman uses a stick or wheelchair, it must be recognised that these aids are often experienced as an extension of her body. Sticks should never be moved away from her and chairs should never be leant on (Campion 1990). A woman in a wheelchair should never be moved without explanation or consent, except in dire emergency. If she is blind or visually impaired, antenatal group leaders should ensure that everyone introduces themselves. She should be given time to handle equipment, illustrations should be described, and she should be given written information that somebody else can read to her.

Women with MS should be given the same dietary advice as other pregnant women, with an emphasis on avoiding saturated fats and including fatty acids. Vegan or gluten-free diets may need to be examined by a nutritionist to check that they are adequate for pregnancy. It may be necessary to obtain a diary of what the woman has eaten for a number of typical days. Generally, when a woman has adopted such a diet, she is well informed about nutrition, often more so than health professionals.

The intrapartum period

There is little evidence available on the likely process and outcome of labour in women with MS. There is some anecdotal evidence that suggests that uncomplicated labours are more common. However, if a woman with MS is to have an uncomplicated labour, she must be given the opportunity to do so. Just as her pregnancy is not high risk on account of MS, neither is her labour, and an assumption of pathology is inappropriate. Each woman's capacity for active labour must be assessed individually, but the fact that a woman has MS does not mean that she needs to be confined to bed. The only form of analgesia that is contraindicated is spinal anaesthesia (Matthews *et al.* 1991), although the literature on the appropriateness of epidural anaesthesia is somewhat unclear. Campion (1990) states that anaesthetists may be reluctant to administer epidurals because the symptoms of certain complications, for example paralysis, tingling and numbness, are not easy to distinguish from the symptoms of MS. Matthews *et al.* (1991) make no mention of epidural anaesthesia in either the section on childbirth or that on surgery and anaesthetics.

Normal delivery is not contraindicated, although the MS Society in their literature consider that an assisted delivery may be necessary if muscle tone is poor. Certainly, MS is no indication for caesarean section, and there is some evidence to suggest that anaesthesia may precipitate a relapse (Matthews *et al.* 1991).

Similarly, MS alone is no indication for a hospital birth. It may be argued that women whose mobility or vision is compromised would be better off at home, where the surroundings are familiar and adapted to their needs, and the stresses of a new and unfamiliar environment are avoided. Infection rates are also lower at home (Campbell & Macfarlane 1994), and infection can be a cause of relapse or exacerbation of symptoms.

A recumbent or semirecumbent position throughout labour is not optimal for any woman, particularly not for a woman with MS, who may be vulnerable to pressure sores. There should not be an assumption that active birth is ruled out for a woman with MS. Alternative positions may be possible using furniture creatively. The woman may need actual physical support from the midwife and/or her partner. If she chooses to use a birthing pool or chair, these should be accessible or appropriately adapted.

The woman's partner is extremely important; he or she is likely to be familiar with her particular needs. But it is also important that midwives do not to fall into a 'Does she take sugar?' collusion with an able-bodied partner (Campion 1990).

Asepsis and prevention of infection are crucial, since infection and pyrexia can possibly induce relapses and certainly exacerbate symptoms.

The postnatal period

This is the time of increased risk of attack for women with MS, but there are measures that can be taken to minimise the risk.

The MS Society, in their unreferenced literature, state that bottlefeeding may be recommended if the woman is getting 'too tired' while breastfeeding. This advice is very misleading as artificial feeding involves the extra work of sterilisation and preparation. When a woman breastfeeds her baby she sits or lies down and is able to rest for the duration of the feed. If the new mother has sufficient help, so that someone else could be feeding the baby, that help might be better used in caring for the mother and enabling her to breastfeed the baby. If the mother wants to breastfeed, and she is not taking any medication where breastfeeding is contraindicated, she should be offered all the support and encouragement necessary for her to do so. Breast milk is rich in essential fatty acids, and a mother with MS may want the reassurance that she is giving her baby, who is at a higher risk of developing MS than the general population, the best possible start. In addition, breastfed babies are generally healthier than bottlefed babies (Palmer 1988), and although while breastfeeding, a mother with MS may be increasing her chances of broken nights, she is reducing the risk of the stress of sickness in her baby. In addition, Smithers (1988) argues that for those mothers with MS with quite extensive physical problems, the importance of breastfeeding (unless precluded by drug therapy) should be emphasised. It is something that only the mother could do for her child, and as such is of vital psychological importance.

Breastfeeding clearly offers both physiological and psychological advantages to the baby; in particular, breastfed babies suffer fewer gastrointestinal infections (Chetley 1995). Human studies on drug safety in breastfeeding are scarce. Some drugs are known to pass into breast milk and cause direct harm or drowsiness, which impairs breastfeeding (BNF 1995). The effects of drugs used in MS are outlined in Figure 11.5.

The postnatal period is one of psychological turbulence, which, like pregnancy, can be influenced by the woman's experience of MS. The diffidence and insecurity of a new mother may be worse if the MS has reduced her general confidence in herself. The midwife has an important role in helping the new mother believe in herself and believe in her ability to mother and nurture her new child.

Parenthood involves losses, including the loss of the lifestyle that existed before the child was born and, as in pregnancy, there is for the woman with MS the risk of past grief becoming an issue. The postnatal period is a time of increased risk of unhappiness, depression and psychological disturbances for all women, and this is especially true for women with MS adjusting to the demands of motherhood.

Figure 11.5 Breastfeeding and the drugs used in MS

Diazepam	All benzodiazepines cause lethargy in the neonate. May impair feeding and weight gain
Baclofen	No consensus in the literature. Amount too small to be considered harmful (BNF 1995). Not recommended (Karch 1992)
Azathioprine	Immunosuppression is likely to be excessively hazardous. No information found in texts
Dantrolene	Contraindicated in breastfeeding (Karch 1992)
Corticosteroids	Corticosteroids are secreted in breast milk. Adrenal suppression in infant may lead to an Addisonian crisis if external steroids are abruptly withdrawn. Karch (1992) advises against breastfeeding
Anticonvulsants	These pass into breast milk. Barbiturates and ethosuximide are too sedating to be used during lactation. Manufacturers advise avoid phenytoin and newer anticonvulsants. Karch (1992) suggests that phenytoin is excessively hazardous. BNF (1995) states that phenytoin, valproate and carbamazepine are given in quantities too small to be harmful. However, hypersensitivity responses to carbamazepine have occurred in infants, making breastfeeding hazardous (Karch 1992)
Multivitamins	Intake should be in line with recommended daily allowances. Some vitamins – vitamin A, vitamin D and menadione – are potentially toxic

The new baby may evoke complex feelings. If it is physically well, there may be tremendous pride and relief, but there may also be feelings that the baby is absolutely perfect, combined with envy that the baby is whole. If the baby is not well, the guilt may be complicated by doubts surrounding the right to have a child in the first place.

Women with MS may be particularly vulnerable to postnatal depression, which may be because the woman may feel herself to be deficient or inadequate. This may be associated with previous feelings towards the baby: as a fetus the child may have been overvalued, but once it is born, the loss and sense of depletion may be overwhelming. If the baby was previously undervalued, the guilt may be overpowering. In any case, the healthy baby's potential for life and growth can be painful to contemplate when the woman's own potential at best is doubtful and at worst severely limited.

For women with MS, common responses to the stresses and strains of parenthood may be met with fear and alarm. For example, it is not unusual for new mothers to be forgetful, have difficulty in concentrating and find themselves preoccupied with their new baby, but for women with MS these symptoms have sinister connections. Women with MS may be confused and fearful of what are essentially normal aspects of the puerperium and the early days of motherhood. The symptoms described do not necessarily mean that the condition is deteriorating but are frequently a normal part of the transition to motherhood.

Some contraceptives may be contraindicated for women with MS. Oral contraception has no deleterious effect on MS, but if the woman's mobility is impaired, it may be inadvisable because of the increased risk of deep vein thrombosis and pulmonary embolus. An intrauterine device may be contraindicated if sensation is impaired, as symptoms of pelvic inflammatory disease might be missed. As previously, the woman should be encouraged to seek the advice of an expert in family planning, who should take a holistic view of the woman's needs.

The midwife may need to help the family in assessing how to reduce fatigue as much as possible. The family may need to consider what help is available and how it can be mobilised. Together they might consider what has worked for the woman in the past to prevent relapses and has helped to reduce the severity of symptoms. The midwife might advise the parents to adopt a contingency plan to deal with any problems that might arise with the care of their baby if the mother were to have a relapse of her illness.

The woman should be warned of the possibility of excessive breast fullness and the temporary rise in temperature that can result, and be advised to take paracetamol.

OTHER SOURCES OF HELP AND ADVICE

If the woman does have problems in handling the baby, there is a residential facility at Mary Marlborough Lodge in Oxford where mothers and babies are assessed with regard to needs and possibilities in terms of practical help with lifting and handling. They accept referrals nationwide. Women are usually referred by doctors, but can be referred by a social worker if the local authority will agree to the funding. Women may also refer themselves if they pay privately. Staff at the Lodge will also assess pregnant women and their partners, preferably during the second or third trimester. Midwives can make referrals provided they have ascertained that funding is available.

The MS Society runs an Advice Line and has offices in London, Edinburgh and Belfast. The Multiple Sclerosis Resource Centre (formerly ARMS – Action for Research into Multiple Sclerosis) offers individualised support and assessment, particularly with reference to physiotherapy,

nutrition and counselling. The MS Unit at the Central Middlesex Hospital in London will take referrals from outside the district if they are accompanied by funding.

CONCLUSIONS

It is difficult to say how a midwife might need to adapt her practice to accommodate a woman with MS, since it is impossible to know in advance what those needs are. Women with MS do have special needs, and because those needs are entirely idiosyncratic they demand an individual and special woman-centred approach.

Campion (1990) describes some attitudes that childbearing women with disabilities often encounter, which can be more distressing than the disability itself. She offers advice to health care professionals, including midwives, saying that midwives should remember that the environment familiar to midwives is alien and frightening for pregnant clients. She warns midwives to make allowances for couples who appear defensive, as they often feel they are being scrutinised and judged as potential parents. She reminds midwives of the importance of working as part of a team and at the same time recognising the expertise of the woman in the management of her disability. Effective communication is, as always, the key to effective care.

MS is of relevance to midwives because it is relevant to childbearing women. It offers a challenge to midwifery practice in subtle and indirect ways. A woman with MS may be indistinguishable from a fit and healthy woman as far as the midwife is concerned, and will therefore have no special needs, or she may be considerably handicapped and require flexibility from the midwife both in the ingenuity needed to adapt the hospital environment and in her attitude. A midwife needs to keep an open mind on hearing that a woman has MS, regard her as the expert on her own condition and draw up with her an individualised care plan, not just for the birth but also for the antenatal and postnatal periods.

REFLECTIONS

A woman with MS, in common with other people with a disability, presents a challenge to the basic assumptions and attitudes of the able bodied. However, the greatest challenge such a woman will pose is the opportunity that arises to deal with the issues of mortality, fear of illness and vulnerability. A man with muscular dystrophy once wrote, 'for the able bodied world we are a representation of many of the things they most fear, tragedy, loss, dark and the unknown. Involuntary we walk, or more often sit, in the valley of the shadow of death. Contact with us throws up in people's faces the fact of sickness and death in the world' (Hunt 1982).

To some extent midwives are used to dealing with these issues, since birth intimately evokes the possibility of death. Menzies-Lyth (1988) states:

It seems that a sizeable component of [the maternal] role concerned death and mourning. The baby may perhaps be regarded as the reminder of mortality, even if not an ugly one. Birth is a reminder of death if only because, in a sense, it is the opposite, the final establishment of a new life. Birth is frequently experienced as a moment of great danger for both mother and child, for which strenuous survival preparations are made. In the ensuing period the realistic facility of the baby, its vulnerability, its lack of capacity for unassisted survival, add to the feeling of hazard. Not is it only a matter of physical survival. The situation is equally fraught on the psychological side. The baby has no more capacity for unassisted survival and effective development psychologically than physically.

Just as the mother assists the physical and psychological survival of her baby, so a midwife does this for the clients in her care. Mothers and midwives normally do this unconsciously, but some clients cause psychological turbulence for midwives. Among these might well be women with MS. If midwives can remain open to their clients' needs and wishes without retreating unduly to counterproductive psychological defences, they will have met and overcome the greatest challenge.

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USEFUL ADDRESSES.

Mary Marlborough Disability Centre
Nuffield Orthopaedic Centre NHS Trust
Windmill Road
Oxford OX3 7LD Tel: (01865) 741155

Multiple Sclerosis Society of Great Britain and Northern Ireland
25 Effie Road
London SW6 1EL (Help line) 0171–610 7171

MS Society in Scotland
2A North Charlotte Street
Edinburgh EH2 4HR Tel: 0131–225 3600

MS Society Northern Ireland Office
34 Annadale Avenue
Belfast BT7 3JJ Tel: (01232) 644914

MS Unit (formerly part of ARMS)

Central Middlesex Hospital

Acton Lane

London NW10 7NS

Tel: 0181-453 2332/2337

Multiple Sclerosis Resource Centre

4a Chapel Hill

Stansted

Essex CM24 8AG

Tel: 01279 817101

National Childbirth Trust: ParentAbility

Alexandra House

Oldham Terrace

Acton

London W3 6NH

Tel: 0181-992 8637

RADAR (Royal Association for Disability and Rehabilitation)

25 Mortimer Street

London W1N 8AB

Tel: 0171-250 3222

SPOD (Sexual and Personal Relationships of the Disabled)

286 Camden Road

London N7 OBJ

Tel: 0171-607 8851

Yoga for Health Foundation

Ickwell Bury

Northill

Biggleswade

Bedfordshire SG18 9BS

Tel: (01767) 627271

The challenge of change in the organisation of midwifery care

Sheila C. Hunt

The aim of this chapter is to help midwives understand, analyse and face changes in the organisation, philosophy and practice of midwifery. The chapter will be divided into two key sections: the analysis of change and the management of change. The analysis section will consider the origins and pressures for change and explore the key change management theories.

The second section will discuss aspects of managing change and consider why individuals and organisations resist change. This section is not for 'managers only' but for all midwives who manage the care of women and their partners, or are themselves managed by professional and other managers. Options in selecting strategies for change will be debated, as will some of the apparently easy answers offered by 'management gurus' and theorists. The final section offers a summary and conclusion.

THE ANALYSIS OF CHANGE

Why does childbirth have to change?

Over many years, midwives have become increasingly aware of the need to keep themselves up to date and be well informed. The explosion in midwifery literature is evidence of the growing complexity and detail associated with what has until recently been a practical skill passed on from one generation to another with the help of a single text book affectionately referred to as 'Maggie Myles'. In this book, 'Challenges in Midwifery Care', each of the chapters has explored aspects of midwifery practice that present those who care with a challenge. Some of the conditions described will be part of the day-to-day practice of midwifery for some midwives, while other conditions are so rare that they will only be encountered by a few. But there is now a new and additional challenge facing midwives: childbirth has to change, and the way in which care is organised must also change. Maternity care must be 'women centred, concentrating on meeting the needs of the women for whom the service is intended' (Department of Health 1993, p 5).

Most midwives will meet poverty, deprivation, illness, disease and sadness in their professional practice, but as we approach the next millennium there is no doubt that all midwives will have to come face to face with the uncertainty, the fear and the challenge of change. Midwives are well equipped to give special care to the special people described in this book, but many will now be seeking someone to understand and care for them, as carers, as they face a period of unprecedented change in the way in which they practise midwifery.

The origins and pressures for change

The policy background to such a major change has been well described by Sandall (1995), who records the impact of government reports, the efforts of consumer groups and pressure groups, as well as the desire of the government to emphasise the so-called 'voice of the consumer' while challenging unacceptable professional power. Sandall describes the new work of midwives as being required to demonstrate post-Fordist flexibility, while Wilson (1992) describes the new 'enterprise culture' as the driving force behind many of the current changes. The Conservative government of the past decade and a half, with the emergence of Thatcherism, is probably the main force for change in all public sector activities. Fordism (c.1930–70) describes the long period of economic growth associated with the type of industrial and economic organisation of the time. For example, organisations were set up to mass produce single products, such as Ford motor cars, technologies focused on single products, semiskilled work forces were represented by large trade unions, and change was seen as a natural process of facilitating even more mass production and consumption of goods.

Post-Fordism, on the other hand, encourages organisations to specialise, produce goods for niche markets, increase competitiveness, decentralise, down-size, adopt lean structures, subcontract, employ multiskilled workers alongside part-time, contracted and temporary workers, probably most importantly recognise the value of the consumer in 'driving up' quality, and finally develop organisational cultures that produce employers who are fanatical followers of the company aim (Atkinson 1984). Charles Handy, in 'The Age of Unreason' (1991), describes his vision of a post-Fordist society in which there are new rules and a constant requirement for change in attitudes and working practices. He could have been writing for midwives in the last decade of the twentieth century. Listening to what customers want and then meeting those needs efficiently and effectively is the message from major international corporations, as well as from providers of public sector services (Drucker 1990; Wille 1992). Midwifery is not immune from these pressures; it operates in a society in which the key message appears to be 'Know your rights and demand your choice'. Virginia Bottomley as Secre-

tary of State for Health, offered a message at the start of 'Changing Childbirth' (Department of Health 1993). She said:

At the heart of the NHS reforms is the need for health authorities to listen more and more to what users feel about the health service they require. The thinking in the group's [Expert Maternity Group] report is totally in keeping with that philosophy.

In each of the four countries of the UK, considerable attention has been directed towards the provision and organisation of maternity care. In Scotland, a policy review was undertaken in 1993, with subsequent recommendations set out in the document 'Provision of Maternity Services in Scotland: A policy review'. In Northern Ireland, a Maternity Unit Study Group's report was accepted by the Department of Health and Social Services and the document 'Delivering Choice: Report of the Northern Ireland Maternity Unit Study Group' was subsequently published in 1994. In Wales, the 'Protocol for Investment in Health Gain for Maternal and Early Child Health' highlighted the importance of providing childbearing women with greater choice, control and continuity of carer. In England, 'Changing Childbirth' was published in August 1993, and changes in the maternity services have become inevitable.

'Changing Childbirth' (p 14) reported that, for many women, continuity of carer was one of the most important aspects of their care. Women felt that meeting the same midwife improved communication between the woman, her partner and the midwife. Oakley *et al.* (1990) provided evidence of the benefits of social support in pregnancy where the woman had the support of a known carer. Hodnett (1993) demonstrated that women who know their carer feel more supported and subsequently feel more in control of their birth experience. Green *et al.* (1990) demonstrate that, even when things go wrong, women are more likely to feel satisfied about their birth experience if they feel in control and involved in the decision-making processes.

So improving continuity of carer improves communication between midwives and the women they care for. A partnership is then more likely to develop in which the woman has greater awareness and understanding of the choices open to her and is able to appreciate the responsibilities associated with her choices. The key to improving women's satisfaction with their birth experience would appear to be organising care so as to provide continuity of carer. This reorganisation is happening in maternity units and community areas all over the UK. Midwives who for many years have worked in the antenatal clinic or in the labour ward, or on night duty, or as community midwives, who have little to do with intrapartum care, are being asked, cajoled or forced to change the ways in which they work.

Other pressures for change

An analysis of the external forces of change in the organisation of the maternity services is relatively straightforward. The major impetus for change comes from government policy, but other factors are also important. Technological changes are continuous and a major pressure for change. Developments in the treatment of infertility, congenital disorders, fetal surgery, ultrasound, prenatal testing and neonatal care technology all have an effect on the demand and supply of maternity services. Demographic changes, especially in relation to the numbers and ages of child-bearing women in an area, alter demand for care, as do geographical issues such as where people live, where they want to give birth and how they travel. Major international events can produce pressure for change although not directly affecting the maternity services; for example, the earthquake in Kobe in Japan led to an acute shortage of computer memory. Computers are an essential part of all technological developments, so even earthquakes in remote countries have an effect on midwifery care. The collapse of the Berlin Wall opened new trading opportunities for many companies, including those selling baby milks and fetal monitoring equipment. New demand leads to economic growth and further technological developments. Finally, there are changes in the law of the country as new case law is established. It is not unreasonable to think that the first successful civil law case suing an obstetrician for an unnecessary caesarean section might change the practice of obstetrics. The world of maternity care may only appear to feel ripples from external events, but public sector organisations such as health care and education are as vulnerable as are large multinational companies. In many large companies, the major triggers for change from outside the organisation are falling profits, increased competition, changing consumer demands, loss of market share and other financial disasters. The economic health of the public sector depends to a large extent on the wealth created by business and industry (Drucker 1990).

Change also comes from inside organisations. Ideas change, policies change and, according to Kotter and Hesketh (1992), major cultural change within large organisations is often created by the appointment of new Chief Executives. They refer to British Airways (Lord King and Sir Colin Marshall), British Leyland (Sir Michael Edwards and Sir Graham Day), General Electric (Jack Welch) and ICI (Sir John Harvey-Jones). Many midwives will recognise the feeling of a 'new broom sweeping clean'.

For some midwives, the job itself changes. Perhaps an elderly friendly GP retires from their patch or the Senior Midwife moves on. Hospitals close, reorganisations happen and change becomes a familiar part of everyday life.

It is very important for midwives to spend time thinking and analysing the change that is around them. It is easy to slip into a belief that today's problems have one simple cause: the government's NHS reforms, but this is far too simplistic and ignores the many external forces that bring about change. Change is not peculiar to this decade, although its pace has certainly accelerated; it was in the fourth century BC that Pliny the Elder was reported to have said, 'The only certainty is that nothing is certain'.

THEORIES AND MODELS OF CHANGE

The most famous process model of change was described by Lewin in 1951. Most subsequent models are variations on this and consist of a series of stages over a period of time. Lewin saw change as passing through three distinct phases: unfreezing, change and refreezing. He argued that any organisation, individual or group that was to change had to be unfrozen or freed from their previous stable and comfortable state, then changed and then refrozen. His assumption was that once a change had happened and been accepted, that would be the end of the matter and no further change would be required of the refrozen organisation. Perhaps that was the case in 1951.

Marris (1986) compares and contrasts change and bereavement. He argues that both loss and change disrupt our ability to find meaning in experience, and it is in periods of recovery that individuals attempt to give meaning to the present. There are many midwives who, when faced with a reorganised maternity service, feel the same symptoms of grief – grief for the loss of the old way of doing things and a great reluctance to accept change. Kubler-Ross (1984), in her seminal work on death, described periods of shock, denial, anger, bargaining, depression and later acceptance. These are not dissimilar to the emotions felt by many as change is forced upon them. Marris argues that rituals and ceremonies can help individuals to adapt to change, as can the support of colleagues who share the experience. He believes that people need time to let go or unfreeze and need time to talk about the loss. He emphasises the importance of valuing the past and not falling into the trap that the new is bound to be better. Mead and Bryar (1992) have also used a theoretical framework of loss and attachment to analyse the changes involved in introducing the nursing process and primary nursing.

In the late 1980s and early 1990s, simple process models to explain and understand change were being rejected. Isabella (1990) argued that the culture and complexity of the organisation have to be understood and interpreted and that, even within organisations, change does not always follow the same pattern. Isabella studied 40 managers from medium-sized financial companies, all of which were undergoing substantial changes. From her interview data, she established four key stages of interpretation.