Inspecting Informing Improving

Healthcare Commission

Review of maternity services provided by North West London Hospitals NHS Trust

July 2005

Investigation

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Contents

The Healthcare Commission

The Healthcare Commission exists to promote improvement in the quality of NHS and independent healthcare across England and Wales. It is a new organisation, which started work on April 1st 2004. The Healthcare Commission's full name is the Commission for Healthcare Audit and Inspection.

The Healthcare Commission was created under the Health and Social Care (Community Health and Standards) Act 2003. It took on a range of new functions and took over certain responsibilities from other Commissions. It:

- replaced the work of the Commission for Health Improvement (CHI), which ceased to exist on March 31st 2004
- took over the functions relating to private and voluntary healthcare functions of the National Care Standards Commission, which also ceased to exist on March 31st 2004
- picked up elements of the Audit Commission's work which relate to efficiency, effectiveness and economy of healthcare

The Healthcare Commission is empowered by section 52(1) of the Health and Social Care (Community Health and Standards) Act 2003 to conduct investigations into the provision of healthcare by, or for, an NHS body in England. We will usually investigate when allegations of serious failings are raised, particularly when there are concerns that the safety of patients might be at risk. The Healthcare Commission's full criteria for deciding to conduct an investigation are set out in appendix E.

The purpose of an investigation is to discover whether there is any foundation to allegations of serious failings and, if there is, to uncover the cause of those failings. Our investigations also aim to help an organisation to improve the quality of care that it provides, to build or restore public confidence in its services, and to help the organisation, as well as the wider NHS, to share learning about how best to ensure the safety of patients.

The Healthcare Commission has full responsibility for this report and for ensuring that an action plan is published by the trust. We will make the action plan available through our website.

Executive summary

What was the problem?

Between April 2002 and December 2003, seven women who were patients at the North West London Hospitals NHS Trust (the trust) died during pregnancy or within 42 days of delivery, miscarriage or termination of pregnancy. There also appeared to be a higher than expected number of babies who died between 24 weeks gestation and the first week of life.

The trust conducted an internal review of its maternity services in February 2004 and agreed a course of action to address the issues that had been identified. In May and June 2004, a further two women died. Although it is accepted that there are risks in childbirth and some maternal deaths do occur, nine deaths in three years is a higher number than would be expected. A further maternal death occurred in March 2005 while this report was being finalised.

Why carry out a review?

The trust, Brent Primary Care Trust and Harrow Primary Care Trust (the PCTs) asked the Healthcare Commission to carry out an external review. Before requesting the help of the Healthcare Commission, the trust conducted its own internal review in February 2004. The trust's review followed the deaths of seven women and a higher than expected number of problems in the maternity services between April 2002 and December 2003.

The trust's internal review focused on events on the labour ward and found that the number of serious incidents had increased over the last two years. It did not, however, address issues such as the management of risks in maternity services or the involvement of women in their own care and treatment.

In July 2004, the Healthcare Commission met representatives of the trust, Brent PCT and Harrow PCT to discuss concerns about the safety of women using the maternity services. The trust and the two PCTs asked us to carry out an external review of antenatal care, care during delivery and postnatal care.

Based on our concerns, and the findings of the internal review, the Commission decided to conduct a review of the trust's maternity services.

About the review

Our review aimed to establish whether the trust was maintaining appropriate standards in the management, provision and quality of maternity care. To achieve this, we examined and assessed the trust's management arrangements for providing healthcare. This included examining the trust's systems and processes of clinical governance, which exist to ensure the safety, effectiveness, quality and appropriateness of its services. The full terms of reference are available, along with the full detailed report, on our website at www.healthcarecommission.org.uk.

Staff from the Healthcare Commission worked with a range of experts with experience in healthcare and specialist knowledge of maternity services, including one member who endeavoured to represent the views of patients. The team analysed more than 750 documents supplied by the trust and other organisations. They met representatives from external agencies, patients' organisations and members of the public, including women who had used the maternity services, their relatives, carers and friends. The team also interviewed past and present staff of the trust.

The team visited the trust's two main hospitals , Central Middlesex Hospital and Northwick Park and St Mark's Hospital, to observe the facilities run by the trust. To get a clearer understanding of the trust's maternity services, we also conducted a survey of women who had used these services. A questionnaire was sent to 400 randomly selected women who had given birth at the trust in the six months leading up to the review.

The trust and its maternity services

The North West London Hospitals NHS Trust provides care to people living in Brent and Harrow. Brent has a population of almost 260,000 while Harrow has a population of 210,000. In the 2004 Healthcare Commission star rating, the trust achieved seven of nine key targets and was awarded two stars. The trust did not achieve the targets for financial management and accident and emergency (A&E) waiting times.

Maternity services were originally part of the women and children's division at the trust. However, in November 2003, the management structure was reorganised and a separate women's directorate was established with its own clinical director, a general manager and a head of midwifery for the maternity services. Antenatal services are provided at Northwick Park Hospital, Central Middlesex Hospital and in the community.

In the year to March 31st 2003, there were 4,647 births at the trust. This increased to 4,787 births by March 2004 and increased to 5,028 births by March 2005.

The experience of women

The Healthcare Commission carried out a survey of women to find out their experiences of the maternity services. Some of the key issues raised by the women who were surveyed related to the poor environment in which mothers were cared for, the lack of information and support, and problems with equipment in the wards.

Women reported that they were often placed in overcrowded wards or, in some cases, were placed in small rooms with only a screen separating them from other women. The overcrowding was a particular problem for bereaved mothers, who were often left on the same ward as new mothers because there were no dedicated areas for them. There was also no midwife with a special interest in bereavement, a general lack of information and no support group.

However, the lack of information and support was not just a problem for bereaved mothers. The women we surveyed said they did not always know who their midwife was – a problem made worse by midwives not always wearing name badges. Women were also left confused after receiving conflicting information from different professionals. For example, women were encouraged to breastfeed, but midwives did not spend enough time explaining the procedure and providing support to women who were experiencing difficulties.

There were some examples of care targeted to meet the specific needs of women. This included the African well woman's group at the Brent birthing centre and a prayer room at Northwick Park Hospital, which was accessible to women using the maternity services. However, there was inadequate support for women whose first language was not English. Women reported that they sometimes had to rely on family members translating for both the patient and staff, especially for patients who went into labour quickly and arrived unexpectedly, or for other maternity emergencies.

Results of tests could sometimes be delayed because of failure of equipment or the lack of available equipment. Time could be spent looking for parts for machines monitoring the heart rate of babies, and on one occasion staff were forced to try four different machines to get an accurate reading of a heart rate. Some machines were out of use for months at a time and, when there was limited access to equipment, staff had to leave the maternity ward to use equipment from the A&E department, causing delays in diagnosis.

Cleanliness was also an issue with some women reporting that areas, especially toilets and bathrooms, were not properly maintained.

What went wrong and why?

Below is a summary of the key findings of this review. These relate to staffing, working relationships, working culture and the recording of information in the maternity services. For more detailed information, please see the full report.

Staffing

There was a shortage of staff in the maternity services. Over the last few years, a large number of midwives had left and few student midwives had joined. In December 2004, a shortfall of 72 midwives was identified by an interim report of staffing requirements at the trust. Senior midwives and the human resources (HR) department attributed this turnover to stressful demands, dissatisfaction with ways of working, lack of support, family commitments, and retirement.

The trust has been unable to provide one midwife per woman during labour and this has led to complaints from patients and relatives. It has also caused low morale among maternity staff, who had been forced to rely on agency staff or on existing staff working extra hours.

Another reason why maternity services were under-staffed was that consultants had been allowed to amend their job plans to specialise in gynaecology. This helped women needing specialist gynaecological services, but the trust did not appear to consider the impact it would have on maternity services, or the subsequent need for additional obstetricians. Also, consultants were not always available on the labour ward because of competing demands for their services and, when they were there, there was a lack of clarity among staff about the consultants' duties.

All doctors reported that it was difficult to attend training and meetings because of their workload. This was because there was a policy of not using temporary staff on the labour ward. So, when one doctor was sick, others had to take on additional duties and work extra hours.

Consultants criticised each other in front of other staff and not all consultants supported the changes introduced by the clinical director. These issues made staff feel uncomfortable and had a detrimental effect on the way in which they worked together. Not all consultants attended relevant meetings about maternity services and most consultants contributed little to decision making in maternity services and to the development of clinical guidelines.

Some staff did not work effectively in multidisciplinary teams and clinical staff reported rigid professional boundaries and a lack of respect across the different groups of staff. Temporary staff are now helping midwives in after surgery care, after an arrangement to use recovery nurses failed due to conflict between the nurses and midwives. The inability to sustain working relationships between the groups of staff appeared to affect midwives, nurses, consultants and doctors alike.

Failure of management to address poor performance

There were inadequate systems in place to manage the performance of staff at work. Also, although appraisals focus on performance development and achievement rather than failure, only 10% of midwives and 49% of medical staff received appraisals of performance between April and October 2004. The trust was unable to provide evidence of the frequency of appraisals in maternity services for the previous 12 months (from April 2003 to March 2004).

An electronic training package for doctors and midwives was purchased by the trust, but no protected time was made available for them to complete the training. Customer care training was also introduced by the trust, but records indicated a poor level of attendance by staff.

There was little evidence of experienced advice, training and support for maternity services from the HR department, although the trust had begun taking steps to address this.

Culture

In July 2004, the maternity services management group presented its proposals for improving maternity services. One of those proposals was to address bullying among staff.

Evidence from interviews confirmed that some senior staff were seen as having an intimidating style of management and some midwives were seen as confrontational and, at times, abrupt. However, some staff did not consider that this was bullying – seeing it instead as a reaction to pressures at work. Some staff reported that heavy workloads and insufficient staff increased their levels of stress and contributed to the poor communication and poor relationships between staff.

Despite the problems with conflicts between staff and the inability of groups of staff to work together, very few complaints about bullying and harassment had reached the HR department. Some staff did, however, fear reprisals for raising concerns about the behaviour of other staff.

The trust also recognised the need to address some racist behaviour. Many staff had reported their concerns about insensitive remarks made by colleagues to other doctors and midwives. Although cultural awareness training was developed for all staff in maternity services, few had attended.

Information and outcomes of care

The trust acknowledged that the information system in maternity services yielded the poorest quality information in the trust. In particular, the poor quality and coding of some information, such as the ethnicity of women, breastfeeding and smoking, created difficulties for PCTs which required this and other information effectively to monitor performance. Steps were taken to address this, however, when the trust established a formal agreement with Brent and Harrow PCTs on the collection and use of relevant information, and the trust's board agreed to purchase and implement a new maternity clinical information system to collect information about births.

Many staff reported a lack of clarity about methods to ensure best practice in maternity services. In particular, many staff reported problems with the development, implementation and monitoring of guidelines. Not all consultants were involved in the development of guidelines and we found evidence of staff using out-of-date guidelines.

Access to clinical guidelines was inconsistent, especially among midwifery staff, and compliance with local and national guidelines was not monitored. We found examples of clinical practice that did not comply with guidelines, such as symptoms of pre-eclampsia not always being identified and communicated at antenatal appointments, and midwives not always monitoring a baby's heartbeat on admission of the mother.

One of the recommendations from the trust's internal review of maternity services was that a full set of clinical guidelines be made available in each delivery room. This action was agreed by the trust's board, but there was no evidence that it had been implemented when follow up interviews were being conducted by the review team in December 2004.

There was no evidence of the provision of specialist services to address the needs of women who were identified as being at high risk. For example, there were no specialist guidelines for high risk mothers and several staff felt that there should have been a midwife to work specifically with pregnant teenagers.

Records showed poor levels of attendance by doctors and midwives at mandatory training, such as lectures on fire and safety, refresher training on how to monitor a baby's heartbeat, and training in infection control. New methods of training had been introduced, including consecutively run day courses, but attendance was still a problem, for reasons such as staff being based offsite, the requirements of rotas, or time not being put aside specifically for training. Monitoring the progress of training was also difficult as the trust's record keeping was not always robust.

What has already been done?

The Healthcare Commission has been working with the trust to give priorities to action required to improve the quality of care in maternity services. Some of this action was immediate and urgent. The following list highlights some of the key areas of progress since the review started:

- key positions have either been filled or advertised
- improving working relations between staff has been made a priority
- new methods of monitoring staff training have been put in place
- a new head of midwifery has successfully reduced the number of midwifery vacancies
- the trust has advertised two new consultant obstetrician posts and two new consultant midwife posts, one of which will specialise in the care of women who are high risk, and the trust has employed a new clinical risk administrator
- the trust has engaged the National Clinical Governance Support Team to improve relationships with and between consultants

- new regular multidisciplinary meetings for the clinical director, the head of midwifery, consultants and midwives have been established
- the trust has approved a new data system, which will help the trust to collect information, provide information about births and the rates and types of delivery – also an electronic training package will enhance the skills of doctors and midwives and record and monitor the mandatory training courses
- the trust's maternity services successfully achieved level one accreditation of the clinical negligence scheme for trusts in February 2005

The Healthcare Commission also asked the trust to take urgent action in a number of areas. These included ensuring that there was appropriate cover by consultants on the labour ward, the immediate recruitment of staff, and the review of operational procedures for women who are overseas visitors or asylum seekers.

Introduction of 'special measures'

The Healthcare Commission is required to report significant failings found in the course of investigations to the Secretary of State for Health and the independent regulator of NHS foundation trusts and may recommend special measures (Health and Social Care Act 2003). Special measures are not defined within the Act, but are intended to ensure improvement. They are recommended only when the offer the most appropriate solution, and where other methods have failed to achieve the necessary improvement, or are considered unlikely to do so.

On April 1st 2005, while this report was being written, the strategic health authority told us that a further maternal death had occurred at the trust. We also discovered that the chief executive was leaving and that a new chief executive had been appointed to take on the post with immediate effect. In response, we carried out an unannounced visit on April 11th 2005 and found serious problems in the provision of maternity services. We also found that the trust had only carried out some of the urgent remedial actions agreed in December.

We were no longer confident that the trust could resolve these problems without external help and felt that special measures were needed urgently to ensure the safety of patients. The Secretary of State for Health responded immediately to our recommendations for special measures and ensured help was provided to the trust to ensure that actions could be urgently implemented. More information about the special measures taken at the trust is provided in section 8.

What happens next?

As well as the progress already listed, the Healthcare Commission has received a copy of the action plan that incorporates the recommendations that resulted from this review. We expect the trust to consider all aspects of our report and the wider NHS to consider the national recommendation. The strategic health authority will monitor the implementation of the action plan, and the Department of Health will review progress of the local health community against special measures and action plans. In addition, the Healthcare Commission will review local progress in implementing the agreed action plans and the outcomes.

Here we highlight some of the key recommendations. The full list of recommendations can be found in the full report, which is available from the Healthcare Commission.

1. The trust's communication with women, and their families, particularly those from black and minority ethnic groups, needs to be improved. The trust must listen to and act upon the views of the women who use maternity services as well as providing appropriate information about care and treatment. All staff in maternity services must attend cultural awareness training within the next six months.
2. All complaints should be responded to appropriately, with regular analysis of themes arising from complaints.
3. Urgent action must be taken in response to the results of the midwifery staffing review to address the identified shortage of midwives. A workforce development plan must be agreed to meet current and future needs of the service.
4. Staff caring for women after surgery in maternity services, or for women who require invasive monitoring, should have specific training and skills.
5. A programme of change should be initiated to eliminate bullying and improve staff's working relationships, attendance at mandatory training must be improved, and associated record keeping must be effective.
6. The new clinical maternity information system for collecting, coding and analysing information about the quality of care must be introduced without delay, and training of staff should be planned to support its introduction.
7. A clinical audit plan for maternity services should be developed with topics identified as a result of learning from incidents, complaints, and national priorities for maternity services, and findings must be widely communicated to help to influence and change practice.
8. The trust should work with its partners in the local health community to commission on a temporary basis, additional capacity from neighbouring providers of healthcare, while the recommendations of this review are acted on.
9. The trust should ensure there are effective systems of communication with PCTs and the strategic health authority regarding the quality of maternity services being provided. This must include the routine reporting of serious untoward incidents.

1 Introduction

On August 26th 2004, the Healthcare Commission's investigation committee agreed to conduct a focussed review of the maternity services provided by North West London Hospitals NHS Trust (the trust) in response to a request from the trust, Brent Primary Care Trust and Harrow Primary Care Trust. The trust was formed as a result of a merger between Central Middlesex Hospital NHS Trust and Northwick Park and St Mark's Hospitals NHS Trust in 1999.

What were the issues?

Between April 2002 and December 2003, seven women who were patients at the trust died during pregnancy or within 42 days of delivery, miscarriage or termination of pregnancy (known as maternal deaths). There also appeared to be a higher than expected number of babies who died between 24 weeks gestation and the first week of life (known as perinatal deaths).

The trust conducted an internal review in February 2004 and agreed a course of action to address the issues that it had identified. However, in May and June 2004, a further two maternal deaths occurred, bringing the total number of maternal deaths to nine in three years. In addition, whilst this report was being written, a tenth maternal death occurred in March 2005. Although it is accepted that there are risks in childbirth and some maternal deaths do occur, this number was higher than expected.

Why did the Healthcare Commission carry out a review?

The trust's internal review in February 2004 mainly focussed on events that had occurred in the labour ward. The review found that the number of serious incidents in the labour ward had increased over the past two years. However, the review did not address issues such as the management of risk in maternity services or the involvement of women in their own care and treatment.

On June 30th 2004, the trust requested help from the Healthcare Commission to look at the wider issues that may have been contributing to problems in maternity services. On July 15th 2004, the Healthcare Commission met representatives from the trust, Brent Primary Care Trust (PCT) and Harrow PCT to discuss concerns about the safety of women who were using the trust's maternity services.

The trust and the PCTs asked the Healthcare Commission to carry out an external review of maternity services covering antenatal care, care during delivery, and postnatal care. The Commission also had concerns about the number of maternal and perinatal deaths, which appeared to be above the national average. Initial information

from the trust suggested that the maternity services were failing to provide effective care and treatment for patients. Based on this information and the findings of the trust's internal review, we decided that an external review was necessary.

The terms of reference for the review

The terms of reference aimed to establish whether the trust was maintaining appropriate standards in the management, provision and quality of maternity care. Within this framework, the review:

1. Examined and assessed the management, provision and quality of healthcare, incorporating clinical governance systems and processes in place in the trust to ensure the safety, effectiveness, quality and appropriateness of maternity services. This included but was not necessarily restricted to:

a) the overall strategic capacity, culture, and managerial effectiveness of the trust in relation to maternity services, including leadership and clinical governance

b) performance management and how clinical information was used to enable this, taking into account evidence from previously conducted reviews

c) an analysis of available information on outcomes information relating to maternal and perinatal events

d) arrangements for the management of risk including learning from incidents, systems for dealing with complaints, and standards of record keeping

e) arrangements to ensure the provision of clinically effective services including compliance with national guidelines: also the existence of local protocols, pathways of care, and clinical audit systems to monitor these

f) staffing and the management of staff including recruitment and retention of staff, culture, equal opportunities, induction, supervision, training, continuing professional development and multidisciplinary working

g) the views of those using maternity services, their relatives, friends, organisations representing users of maternity services, and any other individual or organisation who expressed their views to the Healthcare Commission about the quality of maternity services provided by the trust

h) the physical environment and equipment and facilities providing maternity services

2. Examined historical/cultural and organisational factors in the local health community and in the wider NHS that could have an effect on the management, provision and quality of healthcare provided by the trust, including:

a) arrangements for accountability arrangements in the local health community, to include the commissioning, external performance management and monitoring of quality of the trust

b) the nature of relationships between key stakeholders including the effectiveness of joint working where applicable

c) the impact of national policy

3. Considered any other matters arising during the review that the Healthcare Commission thought was relevant in reaching its conclusions.

What was our approach?

Staff from the Healthcare Commission worked with a team of experts, including two members with specialist knowledge of maternity services and a lay member. Appendix A contains further details of the review team.

The team analysed more than 750 documents supplied by the trust and other organisations. They met representatives from local organisations, including patient's organisations, and members of the public, including women who had used the trust's maternity services, their relatives, carers and friends. The team also interviewed past and present staff, as well as people from external agencies and other individuals. One hundred and sixty five interviews were carried out, along with a survey of women who had recently used the trust's maternity services. The team also visited the trust's two main hospitals, Central Middlesex Hospital and Northwick Park and St Mark's Hospital, to observe the facilities run by the trust. Further details of the people who were interviewed and the documents that were analysed during the review are contained in appendix B and appendix E.

Appendix C provides a summary of the evidence and sources of information used during this investigation.

2 Background

The national context for maternity services

Maternity services have received considerable attention from the Government and various national organisations in the last four years, in order to improve the quality of care offered to women and their babies.

The National Institute for Clinical Health and Excellence (NICE) has published three guidelines for maternity services since June 2001 – for electronic fetal monitoring and induction of labour, antenatal care, and caesarean sections. NICE has also published guidance about the administration of medication to rhesus negative[1] women to reduce the likelihood of stillborn babies.

In 2003, maternity services were the subject of an inquiry by the House of Commons Health Select Committee. The subsequent national report[2] on the provision of maternity services expressed concerns about the rising rates of intervention during birth, including caesarean sections, as well as concerns about insufficient levels of staffing in many maternity units (House of Commons 2003).

The National Service Framework for Children, Young People and Maternity Services was published in September 2004. The framework set out a 10 year strategy for improving services and access to care, and reducing inequalities in these. It applies the NICE guidelines on antenatal, birth and postnatal services to health and social care, and aims to make maternity services more flexible, accessible and appropriate for women.

In November of the same year, the Confidential Enquiry into Maternal and Child Health published *Why mothers die 2000–2002*[3]. The confidential enquiry is a self governing body that aims to improve the health of mothers, babies and children. *Why mothers die* is a review of 391 maternal deaths in the UK over a two year period. It reinforces the importance of maternity services to meet the needs of all women, reporting that "those who are socially disadvantaged are 20 times more likely to die than women from advantaged groups". According to the enquiry, "women living in the

1 Incompatibility between rhesus (Rh) positive and Rh negative blood is an important cause of blood transfusion reactions and haemolytic disease (which causes, is associated with, or results from destruction of red blood cells) of the new born.

2 Select committee enquiry report into maternity services (2003) House of Commons.

3 *Why mothers die 2000-2002*: Report on confidential enquiries into maternal deaths in the United Kingdom (The Confidential Enquiry into Maternal and Child Health 2004).

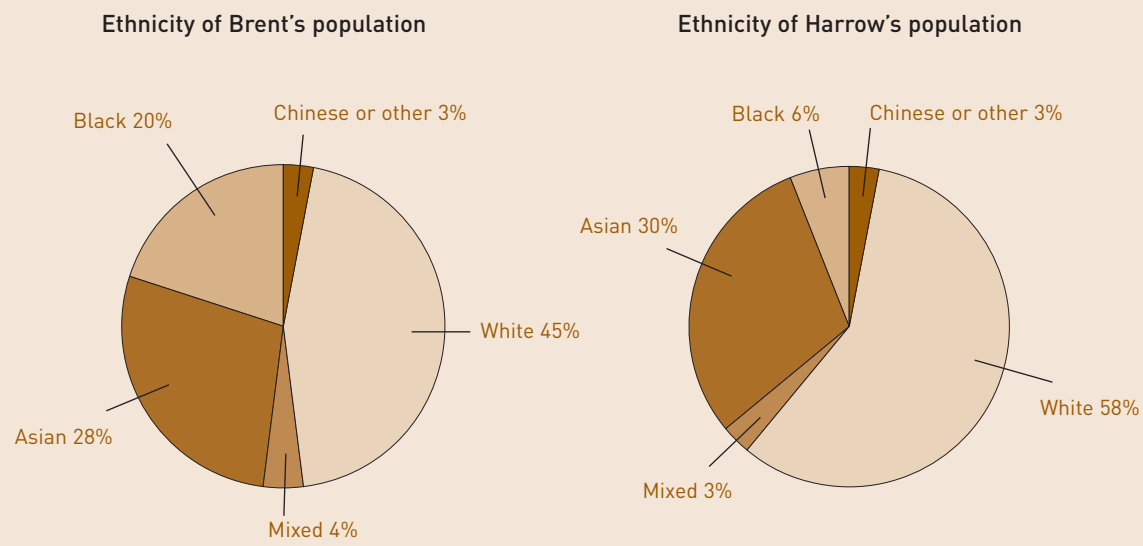
most deprived areas of England had a 45% higher death rate compared to women living in more affluent areas. Women from minority ethnic groups were, on average, three times more likely to die. Black African women, especially including asylum seekers and newly arrived refugees, had a mortality rate seven times higher than white women and had major problems in accessing maternal healthcare".

The trust and the population it serves

North West London Hospitals NHS Trust provides care to people living in Brent and Harrow. The trust has 821 beds, employs more than 4,000 staff and provides a comprehensive range of services in hospitals and in the community. In the 2004 Healthcare Commission star rating, the trust achieved seven of nine key targets and was awarded two stars. The trust did not achieve the targets for financial management and accident and emergency (A&E) waiting times.

It is essential when considering statistics on mortality (incidence of death) at the trust to consider the ethnicity of the local population and levels of deprivation in the area served by the trust (see figure 1). All women are entitled to the same standards of care, but women from a black and minority ethnic groups do not tend to seek maternity services early in pregnancy, and often have poorer health.

Figure 1. Ethnicity of population in Brent and Harrow



Source: www.statistics.gov.uk, based on 2001 census data

Brent has a population of almost 260,000. More than half of the local population is from a black and minority ethnic background, of which 5,000 are identified as asylum seekers. More than half of the households in Brent have an income below the average for London and unemployment is above average at 6.4%. There is an overall high level of deprivation within the borough and it is ranked as the 42nd most deprived authority

in England and Wales. There are high rates of teenage pregnancies and an above average fertility rate when compared with the rest of London.

Harrow has a population of almost 210,000. Nearly 40% of the population is from a black and minority ethnic background, including a small proportion of asylum seekers. There are pockets of deprivation but it is a relatively affluent borough. Harrow has the lowest rate of teenage pregnancies in London, except for Richmond, and a higher than average number of abortions carried out by the NHS.

In the year to March 31st 2003, there were 4,647 births at the trust. This increased to 4,787 births by March 2004 and increased to 5,028 births by March 2005. Low birth weight is a key indicator of a child's health. The number of births of babies with low weight is above average in both Brent and Harrow.

Maternity services at the trust

Maternity services at the trust were shaped by a strategy developed originally in 1999/2000, following the merger of Central Middlesex Hospital and North West London Hospital. The maternity services were originally part of the women and children's division at the trust. In November 2003, this structure was reorganised into a separate women's directorate with its own clinical director, one general manager and one head of midwifery for the maternity services.

Antenatal services are provided at Northwick Park Hospital, Central Middlesex Hospital and in the community. At Central Middlesex Hospital, there is a birthing centre for women who are expected to have a normal, low risk pregnancy. At Northwick Park, there is a labour ward with 11 delivery rooms, four recovery beds and two obstetric theatres. There is also a 12 bed antenatal ward, a day assessment unit attended by 300 women a month, a postnatal ward with 30 beds, and a gynaecological direct referral unit that also functions as an early pregnancy unit. Community midwives run antenatal clinics at general practices across Brent and Harrow and provide parents' education and postnatal care.

Key events leading up to the review

There were seven maternal deaths at the trust between April 2002 and December 2003, as well as what appeared to be a higher than expected rate of perinatal deaths.

In 2002, Professor Steer from the Imperial College's School of Medicine and Consultant Obstetrician at the Chelsea and Westminster NHS Trust, carried out an independent review of the first three maternal deaths that had occurred. The review made a number of recommendations that were implemented by the trust, including:

- developing a set of guidelines to improve the measurement of blood pressure during pregnancy
- carrying out a review of existing guidelines in the trust about the management of pregnant women attending A&E services, and of women suffering massive obstetric haemorrhage

- auditing the recording and management of blood pressure
- providing additional training for staff in the measurement of blood pressure and advanced life support in obstetrics

In February 2003, these three maternal deaths were also reviewed by a risk management consultancy. The review found that no particular feature linked the three deaths. Its findings supported the recommendations made by the external review in 2002.

A further four maternal deaths occurred in 2003. One woman died at another hospital after she had given birth at the trust and returned home, another woman refused blood products, and two women had an infection or a medical condition unrelated to their pregnancy.

In February 2004, the trust carried out an internal (clinical risk) review in response to these maternal deaths, and to concerns about adverse incidents in the maternity services which were raised through the clinical risk and complaints subgroup of the trust's governance committee. The internal review examined staffing profiles at the trust and considered evidence from advisers of the trust and from the management team in maternity services. The review sought to identify any trends or contributing factors and to assess whether maternity services had learnt any lessons from the incidents.

The internal review found that there were increases in both the number of maternal deaths and in other adverse incidents in maternity services. It also found that the following factors had contributed to the adverse incidents:

- poor communication between doctors and midwives
- inadequate assessment and supervision of doctors at staff grade
- failure of clinical staff to follow guidelines
- a small labour ward with insufficient rooms and an insufficient number of staff
- lack of skills in reading heart traces of babies by doctors and midwives
- the need for greater skills and knowledge among clinical staff working in the anaesthetic high dependency recovery area
- a culture of bullying, which affected working relationships between staff
- lack of diagnostic skills and an inability properly to use diagnostic instruments

The internal review highlighted three areas of concern: the need for more effective team-based clinical risk management with particular reference to the interpretation of readings from monitors of babies' heart traces, urgent improvement in the ratio of midwives to births, and a review of the labour ward's capacity. The recommendations focused on staffing and management of staff, education and training, and risk management (see appendix G).

A full report of the internal review was presented to the trust's board in March 2004. An action plan was developed in response to the findings and the trust's board requested, and received, regular updates on its progress.

In May and June 2004, there were another two maternal deaths at the trust. Professor Robson, a Professor of Fetal Medicine at the University of Newcastle upon Tyne and Consultant Obstetrician at the Royal Victoria Infirmary carried out an external review of the maternal death that had occurred in May and stated that the care provided on that occasion was not of an acceptable standard. The report, which was completed in December 2004, recommended that the trust:

- urgently recruit staff for the two vacant consultant posts
- improve communication between midwives and consultants
- ensure that there was clear guidance about blood requirements in the event of a woman haemorrhaging, and for women who have had an anaemia
- review procedures for the involvement of senior medical staff in the care of pregnant women

On June 30th 2004, the trust requested help and support from the Healthcare Commission. On July 15th 2004, the Healthcare Commission met representatives from the trust, Brent PCT and Harrow PCT to discuss their concerns about the safety of women who were using the trust's maternity services. In August, following initial background work, the Healthcare Commission's investigation committee decided to conduct a review in response to these concerns, focusing specifically on the maternity services provided by the trust.

As part of its review, during October 2004, the Healthcare Commission's review team examined the trust's internal review process, analysing documentation and interviewing members of its internal review team. The review team concurred with the findings of the internal review.

This report sets out a summary of evidence and the key findings, addressing the terms of reference.

3 Outcomes of the care and treatment of women and their babies

To determine whether there was evidence of risk to women who use maternity services at North West London NHS Hospitals Trust, the Healthcare Commission's review team examined clinical information held by the trust and information held in national information systems. Our review team examined the reports from the internal and external reviews into the maternal deaths and carried out a statistical analysis of the rates of maternal deaths. This analysis provided evidence on the outcome of care and treatment for women and their babies in relation to rates of maternal and perinatal deaths. Detailed information is contained in appendix D.

Maternal deaths

There were nine maternal deaths between April 2002 and June 2004. The Confidential Enquiry for Maternal and Child Health classifies a maternal death as directly or indirectly related to pregnancy. The trust used this classification to determine what was a maternal death. As a result the trust found that seven of the nine deaths were directly related to pregnancy. Two were indirectly related because the women suffered from an existing disease that was unrelated to their pregnancy.

The internal and external reports into the maternal deaths show no single contributory factor that linked all of them. However, HELLP syndrome (a problem mainly affecting the liver) and pre-eclampsia[4] were the cause of death in four of the cases and haemorrhaging was the cause in two cases (see figure 2). Eight of nine of the maternal deaths were women from a black and minority ethnic background.

[4] High blood pressure during pregnancy

Figure 2 Summary of causes of maternal deaths

Case	Cause of death	Classification by trust using confidential enquiry criteria
1	HELLP syndrome and pre-eclampsia	Direct maternal death
2	Haemorrhage	Direct maternal death
3	HELLP syndrome and pre-eclampsia	Direct maternal death
4	Viral encephalitis	Unrelated infection Indirect death
5	HELLP syndrome developed nine days after delivery (died at Royal Free Hospital), and pre-eclampsia	Direct maternal death
6	HELLP syndrome (refused blood and blood products) and pre-eclampsia	Direct maternal death
7	Myocardial fibrosis	Unrelated medical condition Indirect death
8	Uterine haemorrhage post caesarean section	Direct maternal death
9	Spontaneous rupture of the liver	Undetermined

The average rate of maternal deaths in England is 11.4 per 100,000 births, which equates to one death in every 8,775 deliveries[5]. Our statistical analysis of the maternal deaths at the trust showed that the rate of maternal deaths between April 2002 and March 2004 was significantly higher than the national average. A second analysis, which compared the rate of maternal deaths at the trust with trusts that serve similar populations (in terms of ethnicity and deprivation), also found that the rate was still significantly higher than average. However, the average rate at the trust over a longer period from 2000–2004, was not significantly higher when compared with other trusts that serve similar populations. This suggested that the increase in the rate of maternal deaths at the trust was a recent occurrence.

An external review carried out by Professor Robson in 2004 found evidence that care was not of an acceptable standard in the case of one of the maternal deaths. This was confirmed at the coroner's inquest during February 2005.

Perinatal deaths

Research shows that there are variations in the rate of infant mortality, which are associated with ethnic background. There are a number of underlying, complex causes for these differences, such as deprivation, low birth weight, maternal nutrition and access to high quality healthcare services. Addressing these issues is a challenge for the NHS and other agencies with responsibility for public health.

[5] *Why Mothers Die 2000–2002*: Report on confidential enquiries into maternal deaths in the United Kingdom (The Confidential Enquiry into Maternal and Child Health, 2004).

We analysed the rate of perinatal deaths at the trust using data from the Office of National Statistics from 1998–2003. Data for 2004 was not available at the time of the review. We found that the rate of perinatal deaths at the trust was no higher than the rate at other trusts with similar populations. The rate was higher than the national average for England, but it was comparable with national trends, given the ethnic mix and levels of deprivation in Brent and Harrow. Latest figures for the trust also show that the rate of perinatal deaths had improved in 2003. The rate was closer to the average for England and lower, though not quite significantly lower, than the average rate at other trusts serving similar populations.

We were unable to analyse the statistics by ethnicity because of the poor quality of information recorded by maternity services at the trust. However, problems with the poor quality of data are a national issue.

Findings on the outcome of care and treatment of women and their babies

1. The number of maternal deaths at the trust in the past three years was significantly higher than the national average.
2. The rate of perinatal deaths was within the average range when compared to other trusts with similar populations.

4 Management, leadership and working in partnership

Management and leadership

This section covers the overall strategic capacity, culture, leadership and management of the trust in relation to maternity services.

Summary of evidence on management and leadership

The trust's board did not receive timely and relevant information about maternity services. The board first acknowledged that there were serious operational pressures at Northwick Park in January 2003 and noted that the situation should be monitored carefully. These pressures were due to the increasing number of women using maternity services at the trust while a new birthing centre was built at the Central Middlesex Hospital. The centre eventually opened in September 2004 after a delay of several months.

Evidence from interviews showed that planning for the refurbishment of Northwick Park Hospital maternity services left it with an insufficient number of beds, and inadequate space for clinics and storage. The project had a series of different managers, which also contributed to delays. The project was £2.6 million overspent in December 2004.

The maternity services liaison committee was set up to provide a strong voice for women who use maternity services. The Healthcare Commission was informed that while the committee was represented on the refurbishment project board, women who used the services were not consulted sufficiently about the design of the project. Staff had limited opportunities to contribute to the plans and some felt that their views were not taken into account by the trust.

Staff also said that insufficient capacity was a significant problem at the trust, with too many women giving birth, too few beds and too few staff. Other trusts in the area limited the number of births that they accepted each year. However, maternity services at North West London Hospitals NHS Trust continued to accept an increasing number of births, with no apparent upper limit. At times, additional beds were needed to cope with the number of admissions. For example, at the time of the review, additional beds were created on the labour ward by putting two women in the same room after delivery, separated by a temporary screen.

Senior midwives, some of whom were also supervisors of midwives, appeared to have little influence on the pressures on maternity service. There was no clear guidance for staff about how and when to refuse new admissions, even if they felt the service was stretched to an unsafe level.

The issue of capacity remained on the agenda at meetings of the trust's board. A maternity steering group began providing regular updates to the board from February 2004 on action being taken to address this and other issues arising from the trust's internal review. In particular, the steering group had discussed placing a limit on admissions, but no action could be taken. The local PCTs were unable to place a limit on admissions to the maternity services as there was no spare capacity in other trusts to accept extra admissions.

Differences still existed in the culture and working practices in maternity services at the two hospitals, Northwick Park and the Central Middlesex, despite the merger five years previously. Central Middlesex Hospital had smaller clinics than Northwick Park Hospital, and greater flexibility to respond to urgent referrals. Midwives who work in different parts of the community had different systems of referral and administration, and consultants at Northwick Park Hospital believed that consultants at Central Middlesex Hospital enjoyed lighter workloads.

When asked about the culture in maternity services, the majority of staff reported that there had been some positive changes and that morale was improving. Some staff still felt bullied by a minority of managers, doctors and midwives (particularly senior midwives). Others continued to report that a lack of cultural awareness was affecting working relationships in maternity services.

Staff described the members of the previous management team as visionary people, who worked reasonably well together. However, many staff felt that the style of leadership of the existing team could have been more supportive. Staff also said the team had implemented some changes to services, but they had not delivered effective and sustainable changes to the way in which maternity services operated to ensure that the care being delivered met the specific needs of women.

The Healthcare Commission found there was little evidence of leadership on issues of public health, that specifically affected women who used maternity services at the trust. The trust has taken some steps to address these issues of public health, more generally, such as stopping of smoking, alcohol abuse and domestic violence.

Managers were criticised because the number of midwives working in the community was low, and GPs and community midwives wanted more clinics to be held in local areas. Structures for managing midwives, different working practices, and problems of communication also indicated that services were not sufficiently integrated in hospital and in the community. Women had different carers throughout each stage of care. There was not always a midwife with each woman during labour. Maternity services were isolated from involvement in the rest of the trust because senior staff did not always attend meetings of the trust. And, even when they did attend, staff felt problems in maternity services were not clearly communicated.

The Healthcare Commission found that the clinical director, head of midwifery and general manager required greater support from the trust's executive team effectively to implement changes to the way in which maternity services operated. This was particularly important for the clinical director, who faced some difficult challenges in

changing clinical and working practices. The leadership provided by the clinical director was generally considered effective by staff in the maternity services, and there was support for the new head of midwifery and the need to change the senior structure for managing midwifery.

However, there were concerns about the lack of clinical leadership in the labour ward, which is a vital part of the maternity service. Until December last year, a midwife coordinator ran the ward without the support of a designated consultant in charge of the ward. There was no evidence of collective responsibility for the clinical leadership of maternity services by the consultant obstetricians. This was highlighted by their lack of attendance at team meetings, where joint decisions about the future of maternity services were made.

The trust has tried to protect maternity services from financial concerns, such as the budgetary shortfall and the requirement that all departments contribute to the financial recovery of the trust. However, in December 2004, the trust restricted the use of agency or temporary staff for one month in all departments for financial reasons. As a result, maternity services were unable to provide temporary cover for midwives to attend four days of mandatory training and the training was cancelled. Only a few staff had attended mandatory fire and safety training.

The maternity operational group, which makes decisions about ways of working, has met nine times in the last three years, with generally poor attendance. The minutes from a meeting in October 2003 noted that members were disillusioned by the infrequency of these meetings and suggested that the group be refocused as a monthly forum about the labour ward. The establishment of such a forum was also recommended by the Royal College of Obstetricians and Gynaecologists and by the Royal College of Midwives in 1999. This recommendation had not been implemented by the maternity services, by December 2004.

Findings about management and leadership

1. The trust board and the management team failed to take effective action to ease operational pressures in maternity services.
2. The severe issues of capacity were worsened by the trust's failure to assess and manage effectively the impact of the refurbishment project at Northwick Park Hospital.
3. The trust and the managerial team failed to bring together the different cultures and working practices in maternity services at Northwick Park Hospital and Central Middlesex Hospital.
4. There was a culture of bullying and a lack of cultural awareness among staff.
5. The previous leadership and managerial team for maternity services did not deliver sustained changes in the way in which maternity services operated.

6. There was a lack of clinical leadership on the labour ward.
7. The trust was experiencing severe financial challenges, which affected the operation of maternity services.

Working in partnership with others

PCTs are responsible for improving the health of their local populations and for bringing together all primary care practices in an area. PCTs commission maternity services, and can influence the organisation and delivery of local services to improve the health and wellbeing of women and babies, and to ensure the effective use of NHS resources. Strategic health authorities manage the performance of PCTs and NHS trusts, and lead strategic developments in the NHS. North West London NHS Hospitals Trust has a duty of partnership with Brent and Harrow PCTs and with North West London Strategic Health Authority.

Summary of evidence on working in partnership at the trust

The trust, the PCTs and the strategic health authority recognised that there were different outcomes of care for women and newborn babies, such as low birth weight in infants, as a result of ethnicity and deprivation. There were a small number of joint initiatives under way in maternity services to address these challenges, in particular, the joint appointment of the new head of midwifery by the trust and Brent and Harrow PCTs. A new information technology system was also planned to help address these issues.

We were told that there was tension between the trust and Brent and Harrow PCTs. There did not appear to be systematic sharing of information between the three organisations; the trust, for example, failing routinely to inform the PCTs of serious untoward incidents.

Both PCTs had access to comprehensive public health information about their diverse populations, which linked their commissioning plans more effectively with the trust's plans for the development of maternity services. This information was meant to inform the new 2005–2008 plans of the PCTs to deliver local maternity services.

However, Brent and Harrow PCTs had received inadequate information from the trust on the monitoring of targets in local delivery plans. Details of rates of breastfeeding and the number of women who were smokers were incomplete and it was unclear whether this information related to the population of Brent or the population of Harrow.

There was no up-to-date, agreed vision or strategy for maternity services commissioned by Harrow and Brent PCTs. The last strategic review of maternity services was carried out in 1999, before the formation of the North West London Hospitals NHS Trust. Progress on the 1999 strategy had been reported to the maternity steering group. The strategic health authority was leading a project to

enhance the quality of maternity services across north west London, primarily in response to the growing pressure on these services. The project aimed to develop a vision and strategy for maternity services in the region and set out an implementation plan.

Findings on partnership working with others

1. PCTs had good public health information about the diverse needs of the local population and were using this information to plan maternity services.
2. Poor sharing of information between the trust and the PCTs was worsened by the poor quality of data collected by the trust.
3. The strategic health authority was working to address the significant pressures on maternity services across north west London.
4. The trust failed routinely to inform PCTs of serious untoward incidents.

5 The management of risk and other systems of clinical governance

Every trust should have systems in place to safeguard patients and to ensure they continue to receive a high quality of care. In the NHS, these are known as systems of clinical governance. Clinical governance is the process through which NHS organisations are held accountable for continual improvements in the quality of their services, and safeguard high standards of care by creating an environment in which excellence in clinical care will flourish.

This section considers the systems and processes in place in maternity services to manage risk, use information, harness best practice, and undertake research and audit.

Management of risk

Clinical governance systems should enable managers and clinicians to identify trends and potential risks and take timely action to minimise harm. The management team should be aware of key clinical risks, and be able to learn from mistakes and manage risks effectively.

Summary of evidence on the management of risk

The NHS Litigation Authority's risk pooling scheme for trusts (RPST) established a set of standards to assess the general approach to risk management by NHS organisations. The standards cover factors such as organisational strategy, reporting of incidents, and complaints and management of claims. There are three levels of accreditation awarded to trusts in accordance with the standards, level one being the basic level of accreditation.

The trust failed to achieve the first level of accreditation of the RPST in January 2003. The trust received an overall score of 25%, making it the second worst performing trust in England with regard to the management of risk. The trust's performance was reassessed in March 2004 and successfully achieved level one accreditation.

General standards for managing clinical risk, set out under the clinical negligence scheme for trusts (CNST), also apply to all trusts. These standards assess an organisation's approach to risks in relation to the care of patients. They cover factors such as procedures for obtaining consent, management of health records, control of infection, and induction and training of staff. The trust achieved level one of the CNST accreditation in January 2004.

The CNST also sets standards for the management of clinical risk in maternity services, which apply to trusts providing services on a labour ward. These standards assess the way risk management is organised on a labour ward, focusing on areas such as communication, clinical care and levels of staffing. The trust was one of just six trusts that failed to achieve accreditation at level one in this area prior to November 2003.

The trust's framework for the management of risk in maternity services was changed in 2003, and a maternity clinical risk management group was established. Although it had some links with the trust's risk management committee, the maternity clinical risk management group did not inform the committee of incidents in maternity services in 2003/2004 in a routine, timely manner. There continued to be insufficient mechanisms in place at the time of our review to improve reporting of risk to the risk management committee.

The strength of the links between the framework for risk management in maternity services and the trust's overall framework was unclear. The trust was reviewing its clinical governance framework, including its approach to risk management, at the time of our review. However, an early draft of the revised clinical governance framework failed to address the need for further integration of these processes. Instead, the emphasis was on devolving responsibility for clinical governance, including the management of risk, to the divisional level of the trust. We were informed that the new framework would not be fully funded and staffed if implemented in its current form, because of financial pressures and issues of recruitment.

There was some evidence that serious incidents in maternity services were reported and investigated. However, staff were given very little feedback following these investigations and we found little evidence that recommendations from investigations were routinely implemented or that subsequent changes were made to the way in which the trust operated. Mechanisms for monitoring the implementation of recommendations were weak, with no processes for regular feedback through the clinical governance systems.

There was no evidence of routine or active risk assessments or contingency planning in maternity services. For example, when a ward was relocated during the refurbishment, no arrangements were made for managing controlled drugs. Midwives kept the controlled drugs on their person and passed them on after each shift for 24 hours.

Meetings were held to discuss and learn from adverse events in maternity services which resulted in the death of a baby. However, the meetings were poorly attended; only staff who did not work in maternity services attended regularly. Attendance by staff in maternity services was also poor at meetings on risk management and other issues of clinical governance. There was also evidence of poor attendance by most consultant obstetricians.

Findings on the management of risk

1. Links between systems for managing risks in maternity services and the trustwide systems were weak.
2. Staff received inadequate feedback about incidents that had been reported and investigated.
3. Most serious incidents in the maternity services were reported and investigated, but staff received little feedback.
4. Management of risk in maternity services was not active and there was little evidence that the trust learnt from incidents, implemented changes to its work practices, or implemented action plans to address risks.
5. There was poor attendance by staff from maternity services at important meetings, including those relating to the management of risk.

The use of clinical information to monitor the quality of services

Maternity services are expected to collect and interpret clinical information that can be used to monitor, plan and improve the quality of care for women and their babies. For example, information systems at the trust should have identified that there were higher than expected rates of adverse events in maternity services. This data should have been analysed and appropriate action taken.

Summary of evidence on the use of information

Issues relating to the use of information in maternity services primarily related to the quality and coding of information collected by the trust (in particular, the poor coding of the ethnicity of women).

The trust has a formal agreement with Brent and Harrow PCTs on the collection and use of relevant information in maternity services. However, the trust was still providing incomplete information about rates of breastfeeding and the number of expectant mothers who were smokers. The information collected and used by maternity services was also difficult to analyse because of inconsistencies in its classification. For example, it was not possible to analyse the rate of perinatal deaths by ethnic origin because the ethnicity of infants was not consistently recorded. Activity in the day assessment unit also went unrecorded because although recorded since April 2004, it was deemed too difficult to categorise.

This and other information was required by the PCTs to monitor effectively the trust's performance in the delivery of maternity services.

The trust acknowledged that the information system in maternity services yielded the poorest quality of information in the trust, and was incapable of delivering the information required in its agreement with the PCTs.

In August 2004, the trust's board agreed to purchase and implement a new clinical information system for maternity services. The new system would generate reports on births and the rates of different types of deliveries at the trust, and monitor information about smoking and breastfeeding among women who used maternity services. It would also resolve issues relating to classification of information in maternity services.

Although computers were available in all areas of the trust, not all staff accessed and used the email accounts they were given. Some staff said that they lacked the confidence to use computers and needed IT training. Other staff told us that they did not have sufficient time to read documents on the computers, despite email and intranet being the main methods of internal communication used by the trust.

There were inconsistencies and inaccuracies in record keeping in maternity services. There was some evidence that this was impeding the monitoring of performance by the PCTs. The direct impact on the care of patients was less clear, although we were concerned that information relating to the care plans of patients was consistently missing.

Findings on the use of information

1. There were acknowledged inadequacies with the coding of the ethnicity of women who used maternity services.
2. The quality of information collected by the trust's maternity IT system was poor.
3. Staff did not have sufficient time to have access to computers for information and training.
4. Maternity clinical information was incomplete, which was acknowledged by the trust.
5. Record keeping was inconsistent and documentation of care planning was unsatisfactory.

Use of clinical guidelines and recommended best practice

To ensure compliance with best practice, trusts are required to set standards for providing care based on the latest research. This includes implementing relevant evidence based guidance issued by NICE. Organisations are encouraged to use guidelines that are based on the best clinical evidence available, and to conduct and learn from continual evaluation, measurement and improvement of the work that they carry out.

Summary of evidence on the use of clinical guidelines and recommended best practice

Many staff reported that there was a lack of clarity in methods to ensure clinical effectiveness and best practice in maternity services. In particular, staff reported that there were problems with the development, implementation and monitoring of guidelines. We found evidence that staff were using out of date guidelines, which had not been developed using evidence-based research or ratified by a multidisciplinary committee on guidelines. Not all of the consultants were involved in the development of guidelines and mechanisms for their review were unclear.

The trust's internal review of maternity services recommended that a full set of guidelines be made available in each delivery room. The trust's board agreed this action in March 2004 and a completion date was set for December 2004. When members of the review team visited the maternity services on December 21st 2004, there were no up to date, hard copies (paper based) of the guidelines available in delivery rooms on the labour ward, although electronic copies were available on the trust's intranet.

It was difficult to determine whether clinical guidelines were available and accessible in areas other than the labour ward. Access appeared patchy, especially among midwifery staff, and compliance with national and local guidelines was not monitored. We found some evidence of clinical practice that did not comply with guidelines. For example, symptoms of pre-eclampsia were not always identified and communicated at antenatal appointments, some staff did not follow guidance about screening, and babies' heartbeats were not always monitored on admission in the case of a few midwives.

There was no evidence of the provision of specialist services to address the needs of women who have been identified as being at high risk. For example, there were no specialist guidelines for staff working with women who had been identified as being at high risk and several staff felt that there should have been an designated midwife to work specifically with pregnant teenagers. There were plans for a high dependency unit when the refurbishment project was complete.

There was evidence of some audits being carried out within maternity services. However, there was no plan for the audit of maternity services and no collaboration between doctors and midwives who carried out audits. Consideration of risk, complaints or clinical guidelines did not inform decisions about priorities for audit and there was little evidence that recommendations emerging from audits were implemented or monitored. There was also little administrative support for clinical audit.

An audit of caesarean sections, carried out in 2004, found that 27% of births at the trust were by caesarean in 2003/2004. This figure was significantly higher than the average for England (22%), but similar to the average for London (25%). Staff expressed concerns that NICE guidance on caesarean sections was not being implemented. There was also a lack of evidence that the preferences of women for natural birth were being supported.

Findings on the use of clinical guidelines and recommended best practice

1. The process for developing and using clinical guidelines was unsatisfactory.
2. Compliance with national guidance and clinical guidelines was poor and inadequately monitored.
3. There was no evidence of specialist services for women in the high risk maternity unit.
4. Audit was weak, and findings from audits were not adequately implemented to bring about changes in the way in which the trust operates.

6 Staff in maternity services

Staff at the trust appeared dedicated and hard working. They told us that they wanted to deliver a good service, but found it difficult because of problems in the maternity services. We acknowledge the pressure placed on staff by the adverse incidents in maternity services and subsequent reviews.

For clinical care to be delivered effectively, services need the right number of staff with the right skills working together. This chapter covers the recruitment of staff, different ways of working, and training and education. It also looks at the support available to help staff to carry out their jobs effectively.

Midwifery staff

In July 2004, the trust had resources to employ 125 midwives. However, 28% of midwife posts were vacant – equal to 35 midwives. This shortage affected, in particular, the level of support available to women on the labour ward.

Birthrate Plus is a national assessment tool developed by the NHS Information Authority to calculate requirements for staffing in maternity services. The Healthcare Commission recognises that there is a national shortage of midwives in the UK. In trusts in London, the average shortfall of midwives calculated by Birthrate Plus was 45.

An interim report on the trust's staffing requirements, published in December 2004, identified the need for an additional 72 midwives in maternity services based on calculations using Birthrate Plus. The report indicated that the trust's allocated resources were insufficient to meet the national average for staffing midwifery services.

The trust was forced to rely on staff working additional hours or on agency staff to meet its workload, while midwifery positions remained vacant. However, even with support from temporary staff, the maternity services were unable to maintain the standard of one midwife per woman during labour. This was a major factor in complaints from women and their relatives.

Chronic understaffing in the maternity services also had a negative impact on the morale of midwives. The trust found it difficult to motivate midwives to continue to work in maternity services and, as a result, 60 midwives left the trust in 2001–2004. There was no policy in the trust to support midwives who worked on their own in the community at night, and staff felt that their safety was not valued enough by the trust.

Senior midwives and HR attributed the turnover of midwives to family commitments, retirement, stressful demands, dissatisfaction with ways of working, and lack of support. A national survey carried out in 2002 by the Royal College of Midwives reported similar findings.

Historically, very few student midwives took up employment at the trust, although this has improved since October 2004. There were arrangements for professional supervision for midwives, although work pressures limited access to this supervision. A new head of midwifery began work in August 2004 and there were some early signs of improvement in the morale of midwives. The trust had also had some success in recruiting staff to vacant posts.

Medical staff

Fourteen consultants worked in obstetrics and gynaecology. Nine of these consultants worked in maternity services, although eight work part time in both the obstetrics and the gynaecology service. Only one consultant worked full time in obstetrics, but was a temporary member of staff. Of the 11 consultants working in obstetrics, four have been permitted to amend their job plans in the last three years to specialise in gynaecology. This benefited women who needed specialist gynaecological services, but there was no evidence that the trust considered the potential impact on maternity services or the subsequent need for additional posts in obstetrics.

The Royal College of Obstetricians and Gynaecologists recommend that every maternity service with more than 5,000 births a year have satisfactory arrangements for 60 hours of cover by consultants on the labour ward per week. Trusts usually provide cover between 8am and 8pm Monday to Friday, with on call arrangements outside these hours.

Demand for the trust's maternity services has increased in the last three years, with the number of births at the trust being 5,028 by the end of March 2005. Maternity services would not be able to meet guidelines for good practice on the labour ward because of the limited number of obstetricians.

There was no designated consultant in charge of the labour ward until December 2004 but seven consultants worked on the labour ward's rota, providing 40 hours of cover a week. However, they were not always available. They arrived on the labour ward at various times between 9am and 10am and talked to staff about clinical issues. The expectations of staff differed about the availability of consultants on the labour ward. Not all consultants did a ward round on the labour ward, and there was a lack of clarity among staff about what consultants should do when they were there.

Middle grade doctors and junior doctors did not always approach consultants for advice and guidance, and there was conflicting evidence about the level of supervision and support that they received. Some doctors reported very good supervision and support, others said it was difficult to gain access to supervisors. All expressed concerns about the new rotas introduced as a result of the European Working Time Directive to reduce junior doctors' hours.

There was a policy of not using doctors appointed on a temporary basis in maternity services, which meant that when one doctor was sick, others took on additional duties and worked extra hours. Towards the end of December 2004, five doctors were sick for various periods of time. This placed significant pressure on other doctors who had to take on extra shifts.

Junior doctors who started their six month placement in obstetrics and gynaecology at Northwick Park Hospital on the night shift reported that they were unable to attend the induction programme on their first day because it was only held between 9am and 5pm. All doctors reported that they had difficulty in attending training and meetings because of pressures of work. Trainee doctors were given scheduled free time for training on a Friday afternoon, yet many still reported being unable to attend on a regular basis. Doctors at all levels, including consultants, failed regularly to attend meetings about perinatal deaths or audit.

The Royal College of Obstetricians and Gynaecologists regularly visited maternity services at the trust to examine arrangements for medical staffing. A visiting team's report, dated July 2004, recommended that maternity services should be reassessed in six months, instead of each year, or every two years. This step reflected the visiting team's level of concern about arrangements for medical staffing in maternity services.

The performance of staff and how they work together

The trust promoted an open culture and encouraged staff to report any problems. However, some grievances took a long time to be resolved. One grievance made by a member of staff about problems with another member of staff had been unresolved since January 2004, although formal procedures in this case were not initiated until October 2004.

Some staff raised concerns about the clinical performance of one consultant and about the interpersonal skills of another consultant. One of these concerns was referred to the relevant professional organisation and was dealt with accordingly. A personal development plan was developed for the other consultant and was being monitored by the trust. However, senior staff did not always follow the trust's policy on grievance and discipline. A complaint from one member of staff about the alleged use of intimidating and threatening language by a consultant was never acted upon. There have also been four misconduct proceedings in maternity services since April 2002. Most issues of performance were dealt with through supervision, mentoring and counselling. There was little evidence that the HR department provided experienced advice, training, and support for maternity services, although the trust has taken some steps to address this.

Two consultants were reported to be unsupportive of changes introduced by the clinical director, and there were interpersonal disputes among a small number of consultants, who publicly criticised each other. These issues made staff feel uncomfortable and had a detrimental effect on the way in which they worked together. Not all consultants attended relevant meetings about maternity services, and they contributed little to decision making and to the development of clinical guidelines.

Staff said there was insufficient understanding among some doctors and midwives of the contribution each profession made to maternity services. They also reported that some staff did not work effectively in multidisciplinary teams and clinical staff reported that there were rigid professional boundaries and a lack of respect between the different disciplines.

Evidence from our interviews confirmed that junior staff viewed the style of management of some senior midwives as intimidating and felt that they lacked skills in negotiation. Some midwives were seen as confrontational and, at times, abrupt. Occasionally aggressive comments were exchanged between staff. Many staff commented on the dictatorial style of one consultant in particular. The consultant's approach was perceived as threatening and his behaviour made many people uncomfortable. Two consultants reported that they felt bullied by the clinical director. However, the clinical director was taking steps to address concerns about their performance. Many staff described the approach of the previous director of midwifery as forthright. In fact, 15 midwives took their concerns about the director of midwifery to the new clinical director in January 2004.

There were also staff related issues in relation to the care of women after surgery. The trust's internal review found that the level of care of women after surgery was unsatisfactory. Recovery nurses where introduced in July 2004 to address these concerns. This resulted in a 50% reduction in admissions to the intensive care unit. However, there were significant tensions between the midwives and the recovery nurses that could not be resolved. The recovery nurses were temporarily withdrawn after conflict between the midwives and the recovery nurses escalated in December 2004. The recovery nurses felt that the midwives did not value or listen to them. They asked to be withdrawn from maternity services and threatened to leave the trust rather than continuing to work with the midwives. Their manager acknowledged that working arrangements had become untenable and agreed to their request. Temporary staff had since taken on this role while the trust attempted to recruit permanent recovery nurses to work in the maternity services team.

Some staff feared reprisals for raising concerns about the behaviour of other staff. They reported that heavy workloads and insufficient staff increased levels of stress and contributed to poor communication and poor relationships in maternity services. However, when staff spoke abruptly it was not always considered to be bullying. Some staff believed it was a reaction to pressures at work. Very few complaints about bullying and harassment had reached the HR department, despite the continuing problems in maternity services.

In July 2004, the maternity services management group presented its proposals for improving maternity services at the trust. They identified bullying among staff and management recognised that they needed to address some racist behaviour. Many staff had expressed concern about the insensitive remarks made by one consultant to doctors and midwives. For example, a member of staff was asked to remove a hijab (a type of headscarf worn by Muslim women) in the operating theatre. The clinical director had also received four complaints about the behaviour of one consultant,

which were being dealt with. Cultural awareness training was developed for all staff in maternity services, but few had attended this training.

It was clear from the evidence that there were unresolved problems between staff in the maternity services regarding attitudes to ethnicity. However, it was not clear whether this was racism or a lack of understanding about cultural diversity. It was also not clear if these matters related to staff, to women using maternity services, or to both.

At times, there was confusion about who was responsible and accountable for the provision of care and treatment when there was no named consultant. Women were referred to maternity services in a number of ways – some referrals came directly to named consultants, while others came to the service as generic referrals. A woman who had been assessed as being at low risk should be assigned a named midwife, who was accountable for their care, according to trust procedures but this did not always occur. Women who were being cared for by midwives were referred to the consultant on call if they developed risk factors. This sometimes meant that consultants had to assess women they had never seen before, without knowledge of their medical history. In addition, since the introduction of the new rotas, there were no longer registrars working in consultant teams who could follow up on the care and treatment of women.

Junior doctors at the trust were not given the opportunity to follow the care and treatment of women from admission to discharge, and worked with different women from one shift to the next. This was also due to the introduction of the new rotas under the European Working Time Directive, and the corresponding need to reduce the hours that junior doctors worked.

Training and development of staff

The trust kept some records of mandatory training, but record keeping was not always robust. Records showed poor levels of attendance at mandatory training, such as fire and safety lectures, refresher training on how to monitor the heartbeat of a baby, and infection control training, by doctors and midwives in maternity services. Mandatory training was now provided on four consecutive days, rather than sporadically, to help to improve attendance. However, community midwives still found it difficult to attend because of their clinical commitments in the community and the lack of cover provided by the trust. Brent and Harrow PCTs provided additional funding to help all staff in maternity services attend mandatory training, but attendance was still low.

Evidence from our interviews suggested that all mandatory training in maternity services was cancelled for December 2004, following the introduction of a blanket policy barring the use of temporary staff across the trust. However, we found out later that some mandatory training did in fact take place.

Practice sessions in the management of obstetric emergencies, such as a major haemorrhage, were recently introduced. Staff considered these to be a positive development. An electronic training package for doctors and midwives was also purchased by the trust, but no protected time was allocated to help them to complete

the training. Middle grade and junior doctors reported that they were not able to attend training because of the requirements of rotas.

It was not possible to get information about post-registration education for midwives. The system for approving post-registration education provided incomplete information, with senior midwives making decisions about requests for study leave by midwives in isolation. Training in customer care was introduced by the trust, but records indicated that there was a poor level of attendance by staff.

Only 10% of midwives and 49% of medical staff received appraisals of performance between April and October 2004. The trust was unable to provide evidence of the frequency of appraisals in maternity services for the 12 months prior to our review (from April 2003 to March 2004).

Findings on staff in maternity services

1. The midwifery establishment was chronically understaffed.
2. There were significant difficulties with the recruitment and retention of doctors and midwives.
3. There was inadequate cover by consultants of the labour ward.
4. The trust failed effectively to manage poor performance in maternity services, particularly in relation to the behaviour of some consultants and the management of some staff.
5. There were poor relationships between staff and an absence of effective working in teams.
6. The trust failed to manage conflict between midwives and recovery nurses in maternity services.
7. There was a culture of bullying and harassment.
8. There was a lack of cultural awareness, which affected relationships between staff.
9. The system for referring women to maternity services did not ensure accountability.
10. The rate of appraisals of performance carried out in a six month period was low, particularly among midwives.
11. Attendance at mandatory training was unsatisfactory.
12. The system for recording attendance at training was inadequate.

7 The experiences of women who use the maternity services

NHS trusts have a duty[6] to involve and consult patients and the public about the services they provide, and to have systems to obtain and respond to feedback from patients and carers. Maternity services should be designed to deliver care that meets the specific needs of women, so it is important that providers of these services listen to the views of women about the care that they receive.

We also distributed information, leaflets and posters about how people could participate in the review to relevant general practices, voluntary organisations and community groups. Information was available in different languages on request, and comments were welcome in person, by telephone, e-mail or letter. Press releases were issued to local newspapers and radio stations and 157 organisations received leaflets about listening events.

As a result, 22 people came forward to meet us face to face; we talked to eight people on the telephone, and received e-mails from a further eight people. We also met representatives from the maternity services liaison committee and the African well woman's group. Further detail about their views, the information we examined in documents from the trust, and the observations of the review team are provided in this chapter.

Survey of women who have used maternity services at the trust

We sent 400 questionnaires to a random selection of women who had given birth at the trust in the six months prior to the review. One hundred and four questionnaires were returned. However, six were late and could not be included in our analysis. Twenty one pregnant women attending antenatal classes completed questionnaires. It should be noted that the results of the survey represent only a small proportion of women who have used the maternity services at the trust.

Eight ethnic groups were represented among respondents to the survey – white British (25%), Indian (25%), Caribbean (11%), African (4%), Pakistani (4%), Irish (2%), mixed white and black African (2%), mixed white and Asian (1%). A further 20% of respondents defined themselves as being from another ethnic group. The majority of those were either non-British white Europeans or Sri Lankan.

[6] This duty is set out in section 11 of the Health and Social Care Act 2001

Results of the survey

More than 80% of women said they were happy with the arrangements for their antenatal care. Midwives working at health centres and at general practices primarily provided this care. Some women were unhappy with aspects of their antenatal care, such as the lack of information that they received. Less than half (44%) of women said that they attended parental education classes about childbirth or looking after their baby. The majority (73%) said that they attended hospital classes; the average number of classes attended was three out of seven. Of those who did not attend parental education classes during the antenatal period, 15% said that it was because it was too difficult for them to do so. Other reasons were that classes were not offered, not known about, or thought to be unnecessary because they had already attended antenatal classes.

Forty two percent of women said that they did not meet their doctors or midwives before the birth of their baby, whereas nearly three quarters of them (73%) would have liked to. Eighty one percent of women rated the care that they received during labour and delivery as excellent, very good or good. However, around a quarter of them did not feel that doctors and midwives properly explained what was happening, understood their description of pain, or spent enough time with them.

Thirty five percent of women said that midwives did not spend enough time with them; 26% said that this only happened sometimes. Nearly a quarter (23%) of women said that they received all the advice and support mentioned in the questionnaire, including feeding and bathing, handling, settling and looking after the baby, the baby's health and progress, and the mother's own health and recovery. However, 15% stated that they received none of this advice and support. Overall, 63% of women rated the care that they received in hospital after the birth of their baby as excellent, very good or good. However, 27% of women said that their room or the ward was not cleaned satisfactorily and 38% rated the bathroom facilities similarly. Only 40% of women rated their food in hospital as very good or good.

Fifty two per cent of women said that the midwives spent enough time with them when they returned home after the birth of their baby; 19% said that they did so only sometimes. Nearly a third (32%) of women said that they received all the advice and support mentioned in the questionnaire (as above) when they returned home. However, 18% said that they received none of this advice and support. Overall, 71% of women rated the care they received at home after the birth of their baby as excellent, very good or good.

Summary of evidence on the experiences of women

Many of the comments from women who had used the maternity services at the trust, and from staff who work in these services, related to the environment in which care was delivered.

Concerns were raised about overcrowding and poor standards of cleanliness, particularly in toilets and bathrooms. Women also commented that there was no designated bin to put babies' soiled nappies into on the postnatal ward. There were sometimes insufficient rooms available on the labour ward and additional beds were created for women who had given birth by placing two women in the same room with only a portable screen separating them.

Maternity services at Northwick Park Hospital were being refurbished at the time of the review. This resulted in a temporary reduction in space and consequent problems regarding safety and security. The review team observed various levels of clutter (internally and externally) on some escape routes. The labour ward was on the ground floor. It had closed circuit television cameras and an electronic security lock, but an external fire door was left wide open raising concerns about safety. Wards and clinics in the maternity services at the hospital do not meet the standards for privacy and dignity for women. By contrast, the newly opened Brent birthing centre was clean, light and airy, with only a few minor problems that needed to be addressed.

Some women reported that necessary tests had been delayed because of problems with equipment. Some of the trust's incident reports also noted failures in equipment and the unavailability of some equipment. In March 2004, 14 of 27 machines used to monitor the heart rate of babies were broken. Spare parts were not always available and, on one occasion, some staff found it difficult to get agreement for repairs. Some of these machines were only 18 months old, yet they were already faulty. Other machines were older and needed to be replaced.

There were particular problems reported by women and staff, such as monitors being faulty and staff spending their time looking for equipment that should have been attached to monitors of the baby's heart rate. One woman reported that staff tried to measure the heart rate of her baby using four different machines before getting one that worked correctly. There were also reports of staff not being able to gain access to functioning electrocardiogram (ECG) machines to read a woman's heart rate. On one occasion, staff had to go to the A&E department to obtain a functioning machine to take an ECG reading for a woman. The Commission felt it was possible that these problems contributed to delays in the accurate diagnosis of problems for women in maternity services.

The new Brent birthing centre, which provides services for women with low risk pregnancies, has up to date neonatal resuscitation equipment. New equipment was not available at Northwick Park Hospital, which caters primarily for women with high risk pregnancies. However, the existing resuscitation equipment was effective. Ultrasound machines were working satisfactorily, but there was no capital programme for replacing equipment at the trust that could be used to bid for new machines in maternity services.

Some women said that midwives did not always introduce themselves and not all midwives observed by the review team wore name badges. Women were encouraged to breastfeed, but we were told that midwives do not spend enough time explaining the procedure and providing support to women who experienced difficulties. Women

also said that there was a lack of information and insufficient support on matters such as breastfeeding and bereavement. They also said that they received contradictory information from different professionals in maternity services.

There was no specific area set aside for bereaved mothers. They often had to stay on the postnatal ward with mothers who were looking after their newborn babies. There was no midwife with a special interest in bereavement and no bereavement support group. Multifaith chaplains provided some pastoral support and advice on call and a counsellor for bereavement provided support at a weekly clinic. The trust held an annual service for babies who died and maintained a memorial garden at the Central Middlesex Hospital.

We found some examples of care that was targeted to meet the specific needs of women, including the African well woman's group held at the Brent birthing centre and a prayer room at Northwick Park Hospital which was accessible to women using maternity services. However, staff and women told us that there was inadequate information and support for women (and their families) whose first language was not English. The review team saw very few notices or leaflets printed in languages other than English and no posters publicising the availability of information in different languages on request.

The trust had a contract with a translation service, and could book interpreters for planned appointments. There were particular problems in relation to access to interpreters for women, especially those who go into labour quickly and arrive unexpectedly, or for other maternity emergencies. The service relied on family members to interpret for the patient and staff. *Why mothers die 2000–2002*[7] reported that this was not viewed as good practice and should be avoided whenever possible. The maternity standard of the National Service Framework for Children[8] also stated that trusts should actively design services to help women from disadvantaged and minority groups to gain access to, and maintain contact with, maternity services. This included the provision of services for translation and interpreting. The Commission for Racial Equality's code of practice for maternity services considered qualified interpreters essential in the delivery room when a woman did not understand English well, even if a relative was also present.

Staff reported that there was a lack of clarity about the entitlement to maternity care for overseas visitors, including women described as asylum seekers. This was also included in a record of the views expressed by women kept by the maternity services. On at least two occasions, this lack of clarity resulted in women leaving an antenatal clinic without receiving care and treatment. For example, one of the trust's documents stated that a female asylum seeker was told by the finance department that she would have to pay £2,300 to have her baby. The woman was in the advanced stages of her pregnancy and said that she had no money and could not pay, so would have her baby at home.

7 *Why mothers die 2000–2002*: Report on confidential enquiries into maternal deaths in the United Kingdom (2004) CEMACH p5

8 National Service Framework for Children (2004)

The experience of women in maternity services was also reflected in evidence of complaints from women and their relatives. The trust's policy on complaints stated that all complaints should be acknowledged within two working days and final responses should be provided within 20 working days. In January 2004, the women's directorate was responding to only 60% of complaints within 20 days. Maternity were the second worst performing service in the trust as regards the time taken to respond. The figure had improved to 69% in May 2004. Common themes from complaints about maternity services included:

- lack of support, especially for breastfeeding and following a caesarean
- being left alone too long while in labour, and generally being left waiting
- poor attitude of staff, particularly among night staff, although many complaints were prefaced with positive comments about the majority of staff
- lack of information and conflicting information from midwives and consultants
- poor communication between staff and patients
- a lack of understanding of equality and an inability to meet diverse needs
- poor food (primarily related to the quality of the food, receiving the wrong food, or the lack of food outside mealtimes)
- the standard of facilities (primarily related to poor cleanliness on wards, poor environments and beds being too high to get out of after giving birth)
- poor pain relief
- dissatisfaction with restrictions on visiting times

There was no evidence of effective remedial action to address trends in written and verbal complaints, and there was no regular, formal trend analysis. The role of the patient advice and liaison service (PALS) in maternity services was also not clear. According to a PALS leaflet, the service provided support to patients, relatives and carers throughout the trust. However, there was also a dedicated women's advice and liaison coordinator with a similar role who collected the views of women and presented them to the senior midwifery team.

The trust's board agreed a strategy for involving patients and the public in July 2004, called *Nothing about me without me*. The maternity services liaison coordinator attended trustwide meetings of the patient and public partnership committee and set up a women's council, which helps women to become more involved with the trust's activities. There was also a maternity services liaison committee, which was chaired by a non-executive director of Harrow PCT. This committee had been meeting since the trust was formed and was intended to be a strong voice for women. However, it was unable to influence the décor chosen for the refurbishment of maternity services, despite asking to be involved on several occasions. In addition, few women who have used maternity services at the trust have attended meetings of the liaison committee

or the women's council. Minutes and feedback from these meetings indicated that there was some overlap in the role and functions of the two groups.

Findings on the experience of women

1. The privacy and dignity of women was temporarily undermined by the constraints imposed on the environment by building and refurbishment work.
2. The system for ensuring that equipment was appropriately maintained was ineffective and there was no up to date equipment inventory.
3. Many women experienced limited support when breastfeeding.
4. The provision of bereavement support for women and their families was limited.
5. The provision of translation services for women was inadequate.
6. The quality of care provided by maternity services was affected by the lack of cultural awareness among staff.
7. The management of complaints was poor.
8. Midwives did not always demonstrate that the needs of the women were a priority.
9. The views of women were not influential in the development of maternity services.
10. Mechanisms established to provide a voice to women in maternity services were weak.

8 Conclusions, progress and recommendations

Conclusions

The Healthcare Commission's analysis of clinical information showed that, since 2002, a higher number of women than should have been expected died after using maternity services at North West London Hospitals NHS Trust, either while pregnant or within 42 days of delivery, miscarriage or termination of pregnancy (known as maternal deaths). It was likely that a series of failures in systems and processes contributed to the higher than expected number of maternal deaths.

When we began our review, there were also concerns about the number of babies who had died between 24 weeks gestation and the first week of life (known as perinatal deaths). However, our analysis showed that the rate of perinatal deaths in maternity services at North West London Hospitals NHS Trust was no higher than other maternity services when the level of risk of the local population was taken into account.

The environment of the maternity services suffered from lack of investment and was in need of refurbishment. The constraints placed on facilities while the refurbishment project was underway infringed on the privacy and dignity of women who used these services. Of particular concern was the inability of services to meet the diverse needs of the community. There was poor access to translators and very little written information was available in languages other than English. Generally, women's views were not taken account of by the trust. When women were given the opportunity to have their say, they had little influence on the way care was delivered in maternity services.

There were and still are significant challenges that need to be addressed in relation to the staffing of maternity services, including the chronic shortage of midwives and inadequate cover by consultants on the labour ward. Consultants and midwives did not work together effectively and relationships between staff were generally poor. There was a culture of bullying and a lack of cultural awareness, which also had a negative effect on working relationships.

The poor performance of staff was not well managed. Concerns were not addressed until after they became serious problems. Attendance at mandatory training and record keeping was poor and must be improved.

The management of risk was unsatisfactory in maternity services. Links between the systems of governance at the level of the trusts and of maternity services were weak, risk management was not active, and the service failed to learn from incidents or implement changes in response to these incidents. Meetings about risk and other

important clinical meetings were not well attended. This made it almost impossible for the trust or the maternity services to agree changes to its systems and processes.

The use of information in maternity services was also fraught with problems. The maternity service had the worst information system at the trust. It was incapable of providing useful information to assist in the delivery of care for patients. Data collected by the trust was unreliable and was missing information about ethnicity, smoking, and breastfeeding. These gaps in information limited the ability of maternity services to analyse and learn from information.

There was limited involvement of staff in the development of evidence based clinical guidelines and poor knowledge and use of these guidelines in maternity services. Guidelines were difficult to gain access to in an emergency, with only one out of date file containing the guidelines on the labour ward and other access dependent on the availability of a computer.

Not all staff followed recommended best practice and, while there were occasions when this was clinically appropriate, a clear rationale for the departure from best practice was not, but should be documented in the trust's clinical records. Some audits of practice were carried out, but the maternity services failed to learn from the findings of these audits and did not use them to influence and change the way the service operated.

There was no dedicated service for women who were assessed as at high risk and the care of women after surgery was inadequate.

Senior management at the trust failed to deal effectively with operational pressures in maternity services. In particular, the reduction of the number of beds during the refurbishment was poorly timed and coincided with increasing numbers of women giving birth and decreasing numbers of midwives. Target dates for the completion of refurbishment lapsed, plans were changed and the budget was significantly overspent. This indicated that there was inadequate financial control of this major capital project. Additional pressure was created by the lack of formal clinical leadership on the labour ward until December 2004 and the failure of the group of consultants to work together to lead the maternity services.

Working in partnership across the health community is essential to the delivery of services which meet the needs of the community. Brent and Harrow PCTs require accurate and complete information to monitor effectively what is happening in maternity services. When the new maternity clinical information system is in place, the service should be able to ensure that information is available better to target services to meet the diverse needs of the community. However, maternity services will need help from the trust's board to put this system into practice because it has not shown that it can learn from incidents and implement effective changes to the way it operates. The trust also failed to inform PCTs about adverse incidents in the past.

As a result of the above findings, and the lack of a single identifiable cause for maternal deaths at the trust, our overall conclusion is that a series of failures of systems and processes had contributed to the adverse events in maternity services since April 2002.

Urgent and immediate action

The Healthcare Commission's review team visited the trust in December and asked for urgent action to be taken on the following:

- to ensure that there is 40 hours of cover by consultants on the labour ward each week
- to ensure that funding is available for the use of temporary staff to meet safe levels of staffing
- to immediately recruit staff specifically trained in the postoperative care of women and ensure that temporary arrangements are in place until new staff commence employment
- to identify ways temporarily to reduce demand on the service
- to review operational procedures for the management of women who are overseas visitors or asylum seekers
- to improve access to interpreters, particularly when women require care at short notice or in an emergency
- to provide additional formal support for the team managing the maternity services
- to review fire safety arrangements, particularly fire exits
- to ensure regular reports on progress are provided to the trust's board

Escalation of concerns and implementation of special measures

The Healthcare Commission received a letter from the chief executive of the trust, dated December 16th 2004, stating that the urgent and immediate actions were either complete or were in the process of being completed. However, on April 1st 2005 our level of concern grew. The strategic health authority, not the trust, informed us that a further maternal death had occurred at the trust. In light of this, and upon discovering that the chief executive was leaving (again, the trust did not tell us about this), we carried out an unannounced visit to inspect the maternity services, meet staff and review case notes.

Two investigators from the Healthcare Commission and a consultant obstetrician carried out the unannounced visit on April 11th 2005. They found serious problems in maternity services, which meant we no longer had sufficient confidence that the trust could resolve them without external help.

On the same day, representatives from the strategic health authority and the PCTs met staff from the trust and the Healthcare Commission to develop an action plan (available on the Healthcare Commission's website) to address issues raised by the review. However, information that we received from participants on that day indicated that the trust had not taken forward some of the urgent and immediate actions that we had identified as being necessary in December 2004. Of particular concern was the trust's failure to reduce the workload of staff in maternity services. The strategic health authority had identified an alternative hospital for women to have elective caesareans, but the trust seemed reluctant to refer women there.

Staff from the maternity services expressed their anxiety about the safety of using two of the delivery rooms on the labour ward because they were unable continually to observe and support women in these areas. They recommended that an alternative function be identified for these rooms. It was clear that there were continuing problems with ensuring that faulty equipment was immediately sent for repair. There were also weaknesses in the current system of infection control. In particular, staff did not always adhere to the protocol for washing their hands when working with women and their babies.

Representatives from the Healthcare Commission met the trust's outgoing and incoming chief executives on April 14th 2005 and requested that a further set of urgent actions be undertaken to address these problems. These urgent actions, and the accompanying timescales, were agreed by the trust. However, we still felt that the trust required external help, and that special measures needed to be taken urgently to protect the safety of patients.

On April 21st 2005, the Healthcare Commission wrote to the Secretary of State for Health reporting significant failings in relation to the provision of maternity services by the trust and recommended immediate remedial action be taken. We outlined our concerns about the need for clearly identified leadership by consultants on the labour ward, to ensure that a minimum cover of 40 hours per week was met. We reported that there were longstanding difficulties in relationships between clinical staff and that the trust needed support to help staff work well together. In addition, doctors' ward rounds were not being conducted systematically and did not routinely include reviews to assess the level of risk faced by mothers.

In response to concerns about the ability of the trust to respond effectively to the high volume of women who were currently using the maternity services, we recommended that:

- urgent steps be taken to increase capacity in the maternity services – in particular, that arrangements be made for elective caesarean deliveries to be undertaken elsewhere without delay
- external clinical support be provided to the trust, with the help of the National Clinical Governance Support Team – this should include external clinical staff to provide daily supervision on the wards, external mentoring for the medical director

designate and for the clinical director for maternity services – also, direct support should be provided from the National Clinical Governance Support Team to improve the way in which staff work together

- support be provided to the trust to ensure that they can implement appropriate performance measures where necessary to address the serious difficulties that existed with working relationships between different clinical staff

The Secretary of State for Health responded immediately to all of these recommendations and agreed to provide a package of support so that action could be urgently implemented. The Healthcare Commission is meeting regularly with the trust, strategic health authority and the PCTs to monitor progress in the implementation of special measures and the urgent and immediate actions we identified.

Additional recommendations

The Healthcare Commission expects the trust to consider all aspects of this report. Here we highlight areas where action is particularly important. These actions are additional to the special measures outlined above. The majority of these areas should be addressed within the next 12 months.

Management, leadership and working in partnership with others

1. The trust should work with its partners in the local health community temporarily to commission additional capacity from neighbouring healthcare providers while the recommendations of this review are acted on.
2. The trust's board should be assured of the quality of project management for major capital projects such as the refurbishment of maternity services.
3. Support from within the trust for the current leadership team in maternity services should be provided as well as external mentoring.
4. The trust should ensure that there are effective systems of communication with PCTs and the strategic health authority on the quality of maternity services being provided. This must include the routine reporting of serious untoward incidents.
5. The strategic health authority, PCTs and the trust should work together to engage with the local community and ensure that maternity services reflect the diverse needs of the population.

The management of risk and other systems of clinical governance

6. The trust's board must be assured that effective systems and processes of integrated governance are in place across the trust to share learning both from individual incidents and from emerging themes of incidents.

7. The purpose and frequency of all meetings held in the maternity services should be reviewed to maximise attendance at clinical meetings and to ensure an effective labour ward forum is established.
8. The new clinical maternity information system, approved by the board in August 2004, for collecting, coding and analysing information about the quality of care provided in maternity services must be introduced without delay and the training of staff should be planned to support its introduction.
9. Record keeping, especially records about the plan of care for birth, must be audited and relevant action taken on all the findings of the audit.
10. Up-to-date clinical guidelines should be widely available throughout maternity services, and be regularly reviewed. Awareness of and compliance with guidelines by the staff must be improved and monitored.
11. Staff caring for women after surgery in maternity services, or for women who require invasive monitoring, should have specific training and skills in the post-operative care and treatment of women.
12. An audit plan for maternity services should be developed with topics identified as a result of learning from incidents, complaints, and national priorities for maternity services. Findings from audits must be widely communicated and used to influence and change practice.

Staff in the maternity services

13. Urgent action must be taken in response to the results of the review of midwifery staffing to address the identified shortage of midwives. A workforce development plan must also be agreed to meet current and future needs of the service.
14. A full time consultant obstetrician should provide clinical leadership on the labour ward, particularly for women assessed as being at high risk. Cover by consultants on the labour ward should also be increased to 60 hours per week in accordance with the guidelines of the Royal College of Obstetricians and Gynaecologist.
15. A programme of change should be developed and implemented to eliminate bullying in maternity services and to ensure that staff work effectively together.
16. Attendance at mandatory training must be improved and a service wide system of access to post-registration training implemented with effective record keeping.

Outcomes from care and treatment, and the experiences of women

17. Ways of communicating with women and their families must be improved, especially with the black and minority ethnic population served by the trust. This should include listening to and acting on the views of women as well as providing appropriate information and rapid access to translation services.
18. All staff in maternity services must attend the trust's cultural awareness training within the next six months.

19. All complaints should be responded to in a timely and sensitive way, in line with the trust's existing policy. There should be regular analysis of themes arising from both written and verbal complaints and action plans developed to ensure that the whole of maternity services learns from them.

20. There should be a review of all equipment used in maternity services and effective systems of maintenance put in place.

National recommendation

21. The Healthcare Commission recommends that the Department of Health, in collaboration with the Health and Social Care Information Centre and professional bodies, drives forward the development and implementation of a national dataset for maternity services. This should complement the national programme for the use of information technology in the NHS.

Progress already made by the trust

The Healthcare Commission has been working with North West London Hospitals NHS Trust to give priorities to the actions required to improve the quality of care in the maternity services. Some actions were immediate and urgent. It will take longer to implement other actions and to ensure that significant improvements are made in the quality of care provided by maternity services. We have also been working with the trust to determine key areas for improvement.

The following actions have already been initiated by the trust:

1. The new head of midwifery has successfully reduced the number of vacant midwife posts from 28% to 7% and a new management structure for midwifery has been implemented.
2. Guidelines for the labour ward are being updated and distributed.
3. The National Clinical Governance Support Team is helping to develop effective working relationships between consultants.
4. External and internal mechanisms of support have been established for the clinical director, general manager and head of midwifery.
5. Two new posts for consultant obstetricians have been advertised.
6. Two posts for consultant midwives have been advertised, one to work specifically with women assessed as being at high risk, and a midwife has been appointed to work with women with diabetes.
7. A clinical risk administrator has been employed and a new monthly newsletter with a focus on clinical risk has been introduced.
8. Clerical support for midwives on wards has been increased.

9. A business case for the new data system, with a training package, was approved in August 2004 by the trust's board.
10. A computerised training package has been purchased specifically to enhance the skills of doctors and midwives in reading the heartbeats of babies during labour.
11. A new database has been established to record and monitor mandatory training.
12. Regular multidisciplinary meetings have been established and are attended by the clinical director, head of midwifery, consultant obstetricians, consultant neonatologists and midwives.
13. Regular audit meetings are held along with half day clinical governance meetings to promote joint learning.
14. New rotas for junior doctors were introduced in February 2005.
15. The trust's maternity services successfully achieved level one accreditation of the clinical negligence scheme for trusts in February 2005.

What happens next?

As well as progress already listed in this report, the trust will prepare an action plan to address the recommendations made as a result of this review.

The strategic health authority and the Healthcare Commission will monitor the implementation of the action plan and the outcomes. This will include updates on work done by the PCTs and work carried out by the National Clinical Governance Support Team.

Acknowledgements

The Healthcare Commission wishes to thank the following people for their help and cooperation during this review:

- women patients, their relatives and carers who contributed in person, by telephone and in writing
- staff interviewed by the review team and those who contributed during the course of the review. In particular, Chief Executive John Pope, Deputy Chief Executive Mark Devlin and Hilary Scott (trust's coordinator for the review)
- the agencies and organisations that gave their views and submitted relevant documents
- staff and women patients who welcomed the review team in clinical areas during the visits

Appendices

Appendix A

The review team

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Healthcare Commission

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Non-Executive Director
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Investigation Analysts and Statistician

Lea Pickerill and **Ruth Jennings**
Helpline Manager and Helpline Officer

Adewale Kadiri, Nicola Stewart and **John Illingworth**
Investigation Manager and Investigation Officers

Appendix B

Interviews conducted

The investigation team carried out 165 interviews. The following information is a breakdown of those interviewed.

Interviews of trust and former trust staff during site visits

Chief executive and executive/deputy directors
Chairman and non-executive directors
Senior managers
Non-clinical senior and middle managers
Clinical middle managers
Ward managers and senior midwives
Consultants
Middle grade, junior and other doctors
Local medical committee representative
Midwifes and midwifery care assistants
Staff side members
Administrative staff
Chaplains
Cleaning staff

Other interviews during site visits

Executive/directors from PCTs
Executive/directors from the local strategic health authority
Local midwifery supervising authority officer
GPs

Interviews at stakeholder events

Women and relatives
Trust staff
PCT staff
Maternity services liaison committee
National childbirth trust representatives
Royal College of Midwives officer

Appendix C

Information sources

The table below shows the information sources the Healthcare Commission used when carrying out this investigation. The table shows which sections the information sources relate to.

We also took account of the fact, where appropriate, that relevant information was not available.

Information source	Section
Interviews with staff at the trust and staff from other relevant organisations	4, 5, 6, 7
Records of meetings of the trust including management meetings in the maternity services, risk management records, documentation of clinical governance and meetings of the trust's board	4, 5, 6, 7
Information from previous reviews including reviews by the royal colleges and local supervisory authority	4, 6
Project plans and organisational charts	4
Documentation from the PCTs, including local delivery plans and minutes of meetings	4
Documentation from the strategic health authority on capacity, including the minutes of maternity project meetings and associated papers	4
Reports of serious untoward incidents and internal and external review of particular adverse incidents	5, 7
Reports from NHS Litigation Authority	5
Interviews with, and correspondence from, patients and their relatives	5, 6, 7
Evidence from databases, including the Office of National Statistics and hospital episode statistics	5
Observations made by the review team during visits to the trust	7
Results from the survey of women's experiences of maternity service	7
Information from complaints	7

Appendix D

Analysis of maternal deaths at North West London Hospitals NHS Trust

This analysis has two aims: to compare the rate of maternal deaths at North West London Hospitals NHS Trust to the national rate of maternal deaths, and to compare the rate of maternal deaths at the trust to the rate at a group of seven other trusts with similar population characteristics. The seven trusts were selected on the basis of ethnicity and deprivation, using the methodology outlined in the analysis of perinatal deaths.

A maternal death is defined as a mother's death within 42 days of a delivery episode or death within 42 days of an ICD-10 (the international statistical classification of diseases and related health problems) or O00-O99 code diagnosis (pregnancy, childbirth and the puerperium).

Maternal death rate is expressed as number of deaths per 100,000 deliveries, and as the number of deliveries one would expect to result in one death (for example, one death in every 5,000 deliveries). The numerator is therefore the number of maternal deaths, and the denominator is the number of deliveries. Maternal deaths at individual trusts were identified using the hospital episode statistics (HES) database. The number of deliveries at the eight trusts was obtained from the relevant local supervisory authorities because we could not use HES to get a reliable number of deliveries at all of the trusts. For the national rate of maternal mortality, data was taken from the Confidential Enquiry into Maternal and Child Health report, *Why mothers die 1997–1999*. The national rate is a pooled rate from 1997–1999, and is the most current, definitive rate available for the UK.

Poisson rate confidence intervals are used to assess statistical significance due to the small numbers of maternal deaths involved.

Is the rate of maternal deaths at the trust higher than the national rate?

This analysis uses two data sources:

- data from the Confidential Enquiry into Maternal and Child Health
- data from the London Local Supervisory Authority for the number of deliveries at the trust

During the two financial years beginning April 2002 and ending March 2004, the trust experienced seven maternal deaths that were classified as direct or indirect maternal deaths. During this period, there were 9,434 deliveries at the trust, which gives a rate of maternal death of 74.2 deaths per 100,000 deliveries (95% confidence interval 29.8 to 152.9). Between 1997/1998, the Confidential Enquiry into Maternal and Child Health report identifies 242 direct or indirect maternal deaths out of 2,123,614, yielding a maternal mortality rate of 11.4 deaths per 100,000 maternities (95% confidence

interval 10 to 12.9). These two rates can also be expressed as one death per 1,348 deliveries, and one death per every 8,775 maternities for the trust and the UK respectively.

Table 1: Rate of maternal deaths at the trust and for the UK as a whole

	Time period	Deaths	Deliveries/maternities	Deaths per 100,000 deliveries (95% confidence interval)
North West London Hospitals NHS Trust	2002/2003 – 2003/2004	7	9,434	74.2 (29.8 – 152.9)
UK	1997–1999	242	2,123,614	11.4 (10 – 12.9)

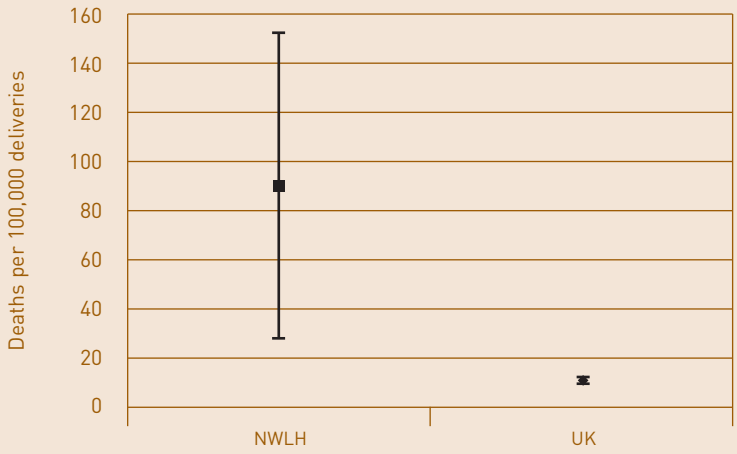
Sources: London Local Supervisory Authority, Confidential Enquiry into Maternal and Child Health

Conclusion:

The rate of maternal death at the trust between April 2002 and March 2004 was significantly higher than the national rate of maternal deaths between 1997 to 1999 (the latest years for which data is available).

Figure 3: Rate of maternal deaths at the trust compared to the UK rate

Trust rate of maternal deaths vs. UK rate, with 95% confidence intervals



Source: North West London Hospital Trust, London Local Supervisory Authority, Confidential Enquiry into Maternal and Child Health

Is the rate of maternal deaths at the trust higher than the rate of maternal deaths at other trusts serving similar populations?

This analysis uses two data sources:

- hospital admissions data taken from HES (2000/2001 to 2003/2004), linked to Office for National Statistics mortality data
- local supervisory authority data on number of maternity episodes at the trust and the seven comparator trusts selected for the analysis of perinatal deaths

Maternal deaths were identified in HES as any death within 42 days of admission to hospital (death within or outside of hospital), where the episode is identified as either a delivery episode, or any other episode where there is at least one diagnosis code in the range O00 to O99 (ICD 10). This means that, while in theory all direct and indirect maternal deaths should be identified (dependent on the completion/quality of the HES data), some consequential, unrelated deaths may also be identified in the trusts' figures. Numbers of maternal deaths by trust were used as the numerator, while the number of deliveries at the trusts (obtained from the local supervisory authorities) was again used as the denominator to calculate the rate of maternal death.

Table 2 presents the rates of maternal death at the eight trusts, calculated as both four and two year pooled rates. Figures 4 and 5 show this data graphically. Using the four year pooled rate, the trust had the second highest mortality rate (31.4 deaths per 100,000 deliveries) among the eight trusts, and was higher than the average rate of the seven other trusts in the group (26.3 deaths per 100,000 deliveries). However, figure 4 shows that the differences were not statistically significant – in fact, none of the eight trusts exhibited significantly higher mortality over the period.

Table 2: Four and two year pooled rates of maternal deaths at the seven comparator trusts and the trust

	Pooled rates of maternal deaths expressed as deaths per 100,000 deliveries (95% confidence interval)			
Trust	2000/2001 to 2003/2004 *		2002/2003 to 2003/2004 #	
1	28.0	(10.3 – 60.9)	18.6	(2.2 – 67.1)
2	9.7	(0.2 – 53.9)	19.2	(0.5 – 107)
3	26.3	(5.4 – 76.9)	33.4	(4.1 – 120.8)
4	30.1	(9.8 – 70.3)	11.8	(0.3 – 65.8)
5	27.0	(7.3 – 69)	12.9	(0.3 – 71.7)
6	22.6	(8.3 – 49.3)	22.7	(4.7 – 66.3)
7	39.0	(12.7 – 91)	45.8	(9.4 – 133.9)
North West London Hospitals NHS Trust	31.4	(11.5 – 68.3)	63.6	(23.3 – 138.4)
Group #	26.3	(17.8 – 37.6)	22.4	(11.9 – 38.3)

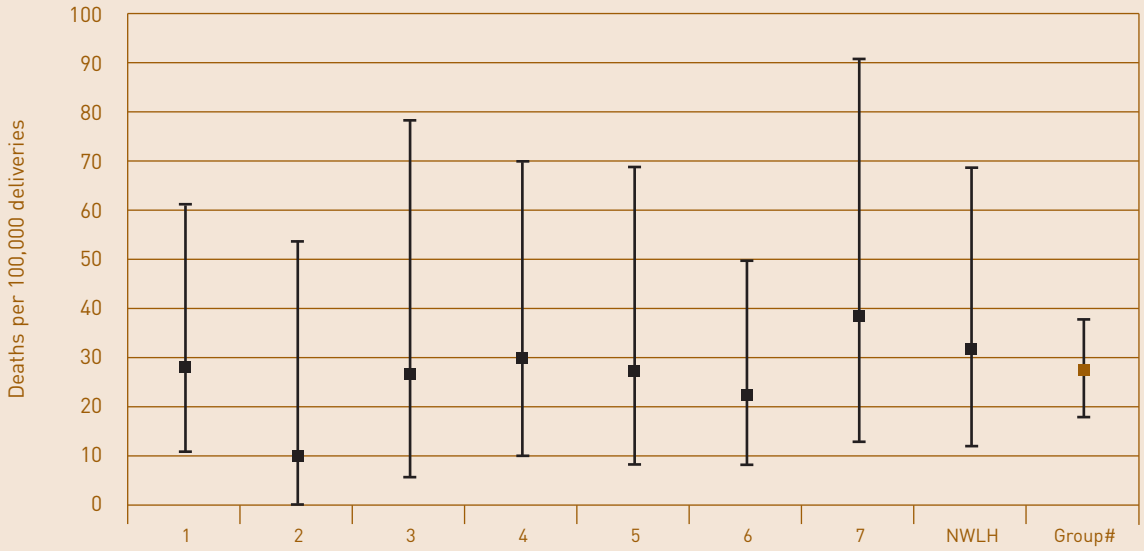
Source: HES, London Local Supervisory Authority, Northern and Yorkshire Local Supervisory Authority, West Midlands Local Supervisory Authority

* Trust 1 data in calendar years from 2001 to 2004

Group rate does not include the trust

Figure 4: Four year pooled rates of maternal deaths by trust, and for the seven comparator trusts grouped together

Four year pooled rates of maternal deaths, 2000/2001 – 2003/2004, with 95% confidence intervals



Source: Hospital Episode Statistic, London LSA, Northern & Yorkshire LSA, West Midlands LSA

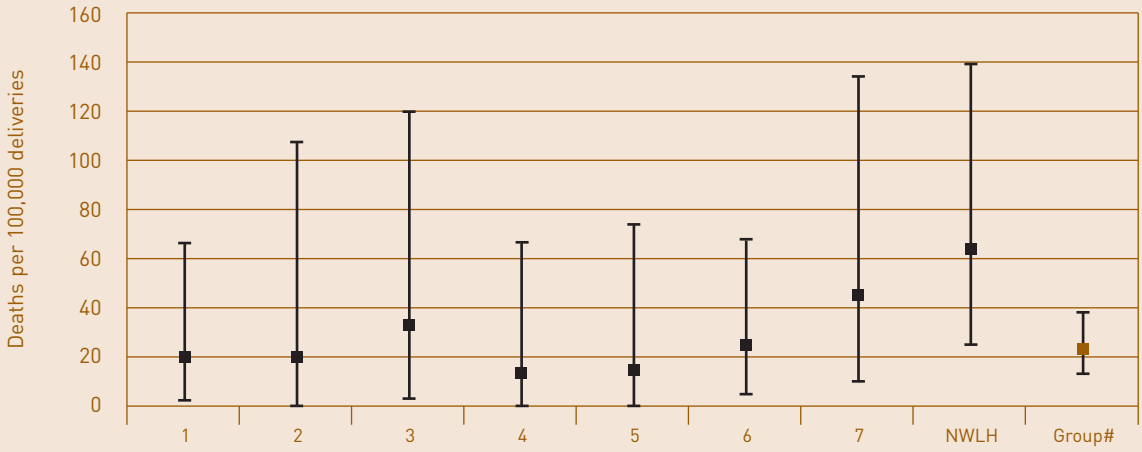
* Trust 1 data in calendar years, from 2001 to 2004

Group rate does not include NWLH

Using the two year pooled rate, the trust had the highest mortality rate at 63.6 deaths per 100,000 deliveries (95% confidence interval 23.3 to 138.4) among the eight trusts, and was higher than the average rate of the seven other trusts in the group (22.4 deaths per 100,000 deliveries). Figure 5 suggests that the rate at the trust was just significantly higher than the group rate, as the 95% confidence interval did not include the group rate of 22.4. An exact significance test using Poisson probability tables confirmed this result; if we observe a group rate of 2.1 deaths per 9,434 deliveries (the number of deliveries at the trust in the two years), then the probability of observing six or more deaths is 0.0204.

Figure 5: Two year pooled rates of maternal deaths by trust and for the seven comparator trusts grouped together

Two year pooled rates of maternal deaths, 2002/2003 – 2003/2004, with 95% confidence intervals



Source: Hospital Episode Statistic, London LSA, Northern & Yorkshire LSA, West Midlands LSA

*Trust 1 data in calendar years, from 2001 to 2004

#Group rate does not include NWLH

Table 3 presents the number of maternal deaths by trust, expressed as one death per xxxx deliveries.

Table 3: Rate of maternal deaths by trust

	Pooled rate of maternal deaths expressed as one death per xxxx deliveries	
Trust	**2000/2001 to 2003/2004 ***	**2002/2003 to 2003/2004 #**
1	3,572	5,387
2	10,345	5,209
3	3,801	2,990
4	3,319	8,462
5	3,708	7,768
6	4,419	4,409
7	2,563	2,183
North West London Hospitals NHS Trust	3,188	1,572
Group #	3,798	4,459

Source: HES, London Local Supervisory Authority, Northern and Yorkshire Local Supervisory Authority, West Midlands Local Supervisory Authority

* Trust 1 data in calendar years, from 2001 to 2004

Group rate does not include north west London hospitals

Conclusion

The four year pooled rate of maternal deaths at the trust did not appear to be significantly higher than the rate exhibited by trusts serving populations with similar ethnic and deprivation characteristics. However, when using the two year pooled rate, the trust did appear to have just significantly higher rates of maternal deaths than the group rate of the other seven trusts. Given that we were primarily concerned with recent changes in the trust's treatment of maternal patients, the two year pooled rate was more appropriate as a marker of recent performance. There were no known maternal deaths in 2000/2001 and 2001/2002, which suggests that the four year pooled rate was a fair reflection of more historical performance. This therefore shows that the increased rate of maternal deaths at the trust was part of a recent trend.

ii) Analysis of rates of perinatal deaths at North West London Hospitals NHS Trust

Perinatal deaths are the sum of stillbirths plus early neonatal deaths (death within seven days of birth). Office for National Statistics (ONS) births and death registrations data were used to calculate number of births by hospital site (including stillbirths), number of stillbirths, and number of early neonatal deaths. The analysis was carried out over the period 1998 to 2003.

Rates of perinatal deaths were known to be higher in areas with high proportions of ethnic minority groups. North West London Hospitals NHS Trust serves a local population with only 54.9% white people, 29% Asian, and 10% black people (see Table 6). Therefore, one might expect the trust to have fairly high rates of perinatal deaths due to the ethnic origin of the population it serves. In order to make a fair judgement about the trust's rate of perinatal deaths, it was more appropriate to compare it to a group of trusts that serve similar populations in terms of ethnicity.

A hierarchical cluster analysis was used to select the trusts to compare to North West London Hospitals NHS Trust. Four variables were derived for each acute trust in England using emergency admissions. By looking at the geographic distribution of emergency admissions to a trust, one can estimate the approximate boundaries of a trust's catchment area. Previous work has shown this to be a fairly robust method of identifying a trust's catchment area. Census ethnicity data at the census output area (coa) geographic unit level were used, along with index of multiple deprivation 2004 data (at the lower super output area level). The proportion of all emergency patients from a given geographic unit going to a given trust was used to calculate the resident population of that area served by that trust, which was then used to aggregate up the deprivation index and ethnic populations to the trust level. The four variables used in the cluster analysis were: index of multiple deprivation 2004 (deprivation); percentage of catchment population who are white; percentage who are Asian or Asian British; and percentage who are black or black British. The cluster analysis led to the identification of three distinct groups of trusts, the characteristics of which are given in Table 1.

Table 4: Characteristics of the three groups

Group	Trusts	Mean index of multiple deprivation	Mean percentage of white people	Mean percentage of black people	Mean percentage of Asian people
1	137	20.7	93.3	1.6	3.2
2	8	30.8	62.4	8.1	24.6
3	5	33.9	65.6	21.4	6.3

The three groups appear to offer a logical separation of the trusts, although group 1 could probably benefit from further disaggregation (it has 137 trusts). All three groups have fairly similar mean deprivation scores, although group 2 and 3 have higher levels of deprivation than group 1. The clustering appears to be dominated more by the ethnic variables, with a clear distinction being made between the three groups. Group 1 has a mean 93% white population, while groups 2 and 3 have 62.4% and 65.6% respectively. Group 2 trusts serve predominately Asian minority ethnic populations, while group 3 trusts serve predominantly black minority ethnic populations.

Table 5: Summary of index of multiple deprivation by group

Group	Mean index of multiple deprivation	Standard deviation	Minimum	Maximum
1	20.7	7.7	7.0	45.5
2	30.8	9.2	17.5	40.0
3	33.9	6.5	27.4	44.0

Table 6: Summary of percentage of white population by group

Group	Mean percentage of white people	Standard deviation	Minimum	Maximum
1	93.3	7.1	67.4	99.0
2	62.4	11.8	41.7	76.6
3	65.6	4.5	59.7	70.3

Table 7: Summary of percentage of Asian population by group

Group	Mean percentage of Asian population	Standard deviation	Minimum	Maximum
1	3.2	3.5	0.3	14.0
2	24.6	4.9	17.4	31.2
3	6.3	2.7	4.0	9.5

Table 8: Summary of percentage of black population by group

Group	Mean percentage of black people	Standard deviation	Minimum	Maximum
1	1.6	2.7	0.1	13.5
2	8.1	6.1	1.2	20.7
3	21.4	2.5	18.1	24.1

The seven trusts selected as comparators for the trust are summarised in Table 11. The spread of deprivation was fairly wide within this group, again indicating that deprivation is outweighed by ethnicity in the clustering, although North West London Hospitals NHS Trust had the lowest deprivation of the eight – its score still puts it in the middle range of deprivation across all English acute trusts. The results from the other seven trusts are anonymised for the purposes of the investigation report.

Table 9: Comparator trusts with demographic data

Trust	Index of mean deprivation	Percentage of white people	Percentage of Asian people	Percentage of black people
T1	36.6	74.4	22.3	1.2
T2	24.2	55.9	28.5	8.5
T3	19.2	69.9	20.9	3.6
T4	40.0	41.7	31.2	20.7
T5	38.9	58.3	26.3	10.0
T6	32.3	76.6	17.4	3.1
T7	37.6	67.5	20.9	7.9
The trust	17.5	54.9	29.0	10.0

Table 12 gives the rate of perinatal deaths (expressed as deaths per 1,000 births) for North West London Hospitals NHS Trusts, the comparator group (the other seven trusts in the group), and the overall national rate. The rates were pooled for the five years from 1998–2003. The data shows that North West London Hospitals NHS Trust actually had a lower rate of perinatal deaths than the comparator group trusts over the five years. The rate of perinatal deaths at North West London Hospitals NHS Trust was significantly higher than the national rate ($p = 0.0006$), but this was what we would expect, and was why we were using the comparator group of trusts to make a judgement.

Table 10: Five year (1998–2003) pooled rates of perinatal deaths by trust group

Trust(s)	Births	Still births	Early neonatal deaths	Rate of perinatal deaths (deaths per 1,000 births)
North West London Hospitals NHS Trust	30,127	201	100	9.99
Comparator group	184,303	1,303	638	10.53
National	3,609,531	19,757	9,818	8.19

Table 13 gives annual rates of perinatal deaths for the different trust groups. These figures are shown in figure 4. Both the comparator group and North West London Hospitals NHS Trust had higher rates than the national figure from 1998 to 2002. North West London Hospitals NHS Trust had very similar rates to its comparator trusts in each of these years. North West London Hospitals NHS Trust did experience an increase in the perinatal death rate between 2000 and 2002. Only in 2002 was the trust perinatal death rate significantly higher than the national rate (p=0.0056). However, in 2003, its rate dropped much closer to the national rate, and was almost significantly lower than the comparator group rate (p=0.56).

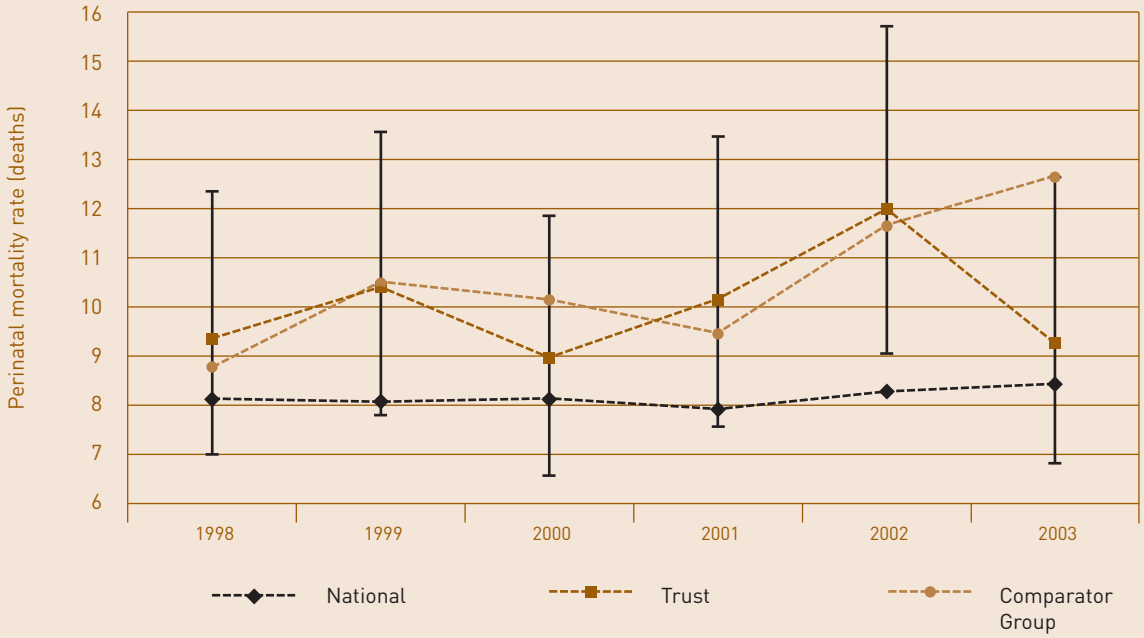
Table 14 gives annual rates of perinatal deaths for each of the trusts within the comparator group, from 1998–2003.

Table 11: Annual rates of perinatal deaths by trust group

	Rate of perinatal deaths (deaths per 1,000 births)		
Year of birth	North West London Hospitals NHS Trust	Comparator group	National
1998	9.38	8.79	8.16
1999	10.38	10.49	8.11
2000	8.91	10.14	8.13
2001	10.14	9.53	7.94
2002	12.00	11.59	8.30
2003	9.32	12.55	8.51

Figure 6: Annual rate of perinatal death, by trust group

Perinatal death rate by year of birth, with 95% confidence interval around the trust rate



Source: ONS births and deaths registrations data 1998–2003

Table 12: Annual rate of perinatal death for trusts within comparator group

Trust		1998	1999	2000	2001	2002	2003
1	**Rate of perinatal death**	**6.36**	**11.05**	**12.16**	**12.02**	**11.47**	**13.47**
	Number of births	5,349	5,428	5,346	5,325	5,317	5,346
	Number of perinatal deaths	34	60	65	64	61	72
2	**Rate of perinatal death**	**3.55**	**6.35**	**6.61**	**7.07**	**7.64**	**6.96**
	Number of births	2,537	2,520	2,572	2,545	2,617	2,588
	Number of perinatal deaths	9	16	17	16	20	18
3	**Rate of perinatal death**	**4.55**	**6.38**	**5.73**	**5.97**	**8.41**	**8.35**
	Number of births	2,636	2,820	2,617	2,681	2,853	2,994
	Number of perinatal deaths	12	18	15	16	24	25
4	**Rate of perinatal death**	**10.01**	**9.62**	**8.53**	**9.02**	**10.48**	**12.15**
	Number of births	4,095	4,158	4,105	3,990	4,103	4,361
	Number of perinatal deaths	41	40	35	36	43	53
5	**Rate of perinatal death**	**13.11**	**12.18**	**9.95**	**8.88**	**10.02**	**12.22**
	Number of births	3,509	3,448	3,518	3,491	3,792	3,929
	Number of perinatal deaths	46	42	35	31	38	48
6	**Rate of perinatal death**	**11.23**	**12.16**	**12.14**	**9.57**	**13.98**	**17.11**
	Number of births	6,854	6,659	6,588	6,586	6,507	6,664
	Number of perinatal deaths	77	81	80	63	91	114
7	**Rate of perinatal death**	**8.88**	**11.49**	**10.87**	**10.71**	**14.28**	**11.69**
	Number of births	5,745	5,481	5,521	5,602	5,601	5,905
	Number of perinatal deaths	51	63	60	60	80	69
The trust	**Rate of perinatal death**	**9.38**	**10.38**	**8.91**	**10.14**	**12.00**	**9.32**
	Number of births	5,439	5,200	5,161	4,833	4,665	4,829
	Number of perinatal deaths	51	54	46	49	56	45
National	**Rate of perinatal death**	**8.16**	**8.11**	**8.13**	**7.94**	**8.30**	**8.51**
	Number of births	622,018	608,023	590,511	581,488	582,644	624,847
	Number of perinatal deaths	5,076	4,929	4,800	4,616	4,837	5,317

Conclusion

The trust and its comparator group trusts exhibited consistently higher perinatal death rates than the English national rate between 1998 and 2003. However, only in one year (2002) did the trust have a statistically significant higher rate (12, England = 8.3) than the rate for England. The trust did experience an increasing perinatal death rate from 2000 to 2002, although a similar trend was also reflected in other comparator trusts. However, unlike the comparator group trusts, the perinatal death rate at the trust decreased significantly in 2003. In no year was the perinatal death rate significantly higher than the rate observed at comparator trusts. Overall, the analysis suggests that the trust performed as expected over the period, given the ethnic and socio-economic characteristics of the population it serves.

Appendix E

Healthcare Commission criteria for an NHS investigation

The Healthcare Commission works to improve the quality of healthcare provided by the NHS and the independent (private and voluntary) sector. One of its functions is to investigate serious failures in NHS services.

What will the Healthcare Commission investigate?

The Healthcare Commission will investigate allegations of serious failings that have a negative impact on the safety of patients, clinical effectiveness or responsiveness to patients. This may include:

- a higher number than anticipated, or unexplained, deaths
- serious injury or permanent harm, whether physical, psychological or emotional
- events that put at risk public confidence in the healthcare provided, or in the NHS more generally
- a pattern of adverse effects or other evidence of high risk activity
- a pattern of failures in service(s) or team(s) or concerns about these
- allegations of abuse, neglect or discrimination against patients

Other failings with less serious effects on the safety of patients may be subject to a review. In determining whether to investigate, the Healthcare Commission will consider the extent to which local resolution, referral to an alternative body, or other action might offer a more effective solution.

The Healthcare Commission will not investigate:

- a complaint that has not been pursued through the NHS complaints procedure or the Healthcare Commission's independent stage, unless it raises an immediate concern
- individual complaints about professional misconduct
- changes to service configurations
- matters being considered by legal process
- specific matters already determined by legal process

This does not preclude the Healthcare Commission from investigating circumstances surrounding such matters, particularly if there are general concerns about patient safety or suggestions that organisational systems are flawed.

Appendix F

Documents received

A summary of the documents received by the Healthcare Commission while conducting the review is provided below. More than 750 documents were submitted as evidence. The majority were received from, and related to:

- North West London Hospitals NHS Trust
- Brent Primary Care Trust
- Harrow Primary Care Trust
- North West London Strategic Health Authority
- other sources

North West London Hospitals NHS Trust

- details/profile of the trust and its services – annual reports and structure charts, including management structure and services across the hospital sites
- minutes and some supporting papers from trust committee and group meetings – these include board minutes, policies/documents between the trust, strategic health authority and PCTs, and clinical governance structures and frameworks
- details regarding information management and technology (IM&T), strategies, audits, training, corporate information group minutes
- information relating to the involvement of women and members of the public, including surveys of patients, forums, patient leaflets and patient data protection
- clinical audit and clinical effectiveness policies, reports and relevant committee and group minutes
- risk management policies, procedures and reports
- staffing policies and strategies, minutes from staff group meetings, staffing figures and monitoring records
- education and training programmes and policies

North West London Strategic Health Authority

- reviews of the capacity of maternity services across its catchment area and initiatives to address this

Brent PCT and Harrow PCT

- local development plans
- information regarding commissioning, public health data, and monitoring procedures
- relevant action/project group minutes, agendas and guidelines

Other sources

- letters and information from stakeholders, women, carers and staff
- reports from external organisations

Appendix G

Trust action plan arising from the maternity clinical risk management review carried out in February 2004

Action plan supplied by the trust in January 2005

North West London Hospitals NHS Trust undertook an internal review of the clinical risk management systems within maternity services in February 2004. This paper outlines the terms of the review, describes the key recommendations arising from it and the actions that have taken place between February and December 2004. The trust continues to work towards implementing all recommendations and its progress continues to be monitored on a monthly basis by the trust board.

The maternity clinical risk review

The review examined the evidence in relation to the number and type of serious clinical incidents within maternity services during 2002/2003, and looked at whether there was evidence of an increase in the number and type of incidents compared with previous years. In addition, it examined whether there were any identifiable factors or trends relating to individuals, teams, processes (clinical practice), systems (staffing/environment/equipment), volume (the number of patients) and whether there was evidence of prevention of incidents. It also examined whether there was learning from the events through the maternity services clinical risk management arrangements and what further steps the trust should be taking to control the risks to women having babies at the trust. It also considered whether an external view should be invited.

Recommendations and action taken

The recommendations and actions arising from the clinical risk review is summarised and grouped under six main headings as detailed below. Many of the actions relate to more than one recommendation within each heading.

Training

Recommendation

1. Fetal heart monitoring (known as cardiotocograph or CTG) training should be mandatory for obstetric and midwifery staff.
2. The trust should invest in a computer assisted learning package, and make this available on computers within the department. This programme will complement traditional training methods, such as study days, that are already available to staff.
3. Arrangements should be made for retraining/support for medical staff found lacking in CTG, and other skills.
4. Midwifery skills in post-operative recovery following caesarean section should be developed. Alternatively, trained recovery nurses should be employed to care for women following caesarean section.
5. Both staff grade post holders and trainees must receive training and development.

Action

In house CTG courses are held three times a year, and 64 staff attended these courses in March and July 2004.

The trust purchased a computerised training package (known as K2) in August 2004, and all midwives were registered on K2 by the end of September 2004. Doctors were registered over the following weeks.

A clinical governance administrator was recruited, and took up post in September 2004. Monitoring and recording all staff training on a specifically designed database forms part of the job description for this post.

Training courses for midwives and maternity assistants have been developed, which incorporate all mandatory training. These courses were held in October and December 2004, and have been scheduled for every month throughout 2005.

Regular skills and drills sessions have been held, where staff responses to obstetric emergencies are rehearsed and evaluated.

A lead midwife and obstetrician have been identified to monitor CTG training.

Five midwives began a training module in care of the high dependency pregnant patient at Thames Valley University in October 2004.

A supervisor/appraiser system has been implemented for junior medical staff.

Interdisciplinary working and access to senior staff support

Recommendation

1. Midwives should be empowered to make decisions on the timely transfer of women to the labour ward.
2. Midwives should be empowered to obtain senior medical advice.
3. Written guidance on obtaining urgent senior advice should be introduced.
4. Effective planning for known high risk cases should be implemented, ensuring that consultants directly supervise such cases.
5. Involvement of other appropriate specialists in complex cases should also be promoted.

Action

In May 2004, 20 staff commenced a training programme aimed at improving clinical risk management through teamwork. This course included team building and empowerment.

Away days were held in June 2004 for senior midwifery staff with management components to their roles. Work undertaken on these days was used to redefine the roles and responsibilities of this grade of staff in August 2004. Written guidance on accessing effective clinical advice was issued to all clinical staff in June 2004.

Consultant cover for the labour ward was increased, so that two consultants provide dedicated cover on seven of the 10 half day sessions from Monday to Friday. One consultant is available to undertake elective caesarean sections, while the other is available for support and supervision of all other cases on the labour ward. Following the appointment of a new consultant in October 2004, a new scheme was introduced, where the consultant is on site and available on labour ward until 8pm on days that they are on call. There are plans to repeat this pattern as new consultants are appointed.

In a new initiative, the neonatologist visits the labour ward on a daily basis for a combined ward round with the obstetrician. Together, they plan the care and management of high risk cases. This began in July 2004.

Caring for women recovering from caesarean section

Recommendation

1. Alternatives to the current method of caring for women following caesarean section operations should be explored while additional permanent staff are recruited, to ensure that appropriately qualified and skilled staff care for such patients.

Action

In July 2004, a team of trained theatre and recovery nurses began working in the maternity services. These nurses were employed by the trust's anaesthetic department, and were deployed to the labour ward on a rotational basis. Between Monday and Friday all shifts, except night shifts, had dedicated theatre and recovery staff.

Unfortunately, this arrangement was not sustainable and, in November 2004, recovery nurses were employed on a temporary basis within maternity services to care for women immediately following a caesarean section. The trust continues to seek a long term solution to this issue.

Clinical risk management

Recommendations

1. Each delivery room on the labour ward should have a full set of clinical guidelines that staff may consult, and every midwife and doctor in the maternity services should have a pocket sized booklet version of the same clinical guidelines.
2. Methods for engaging senior staff (midwives and doctors) in risk management processes should be developed, and a mechanism for giving effective feedback to staff following an adverse incident should be implemented.
3. Consideration should be given to establishing a weekly multidisciplinary meeting so that real time risk discussions may take place, staff may learn from cases throughout the week and the management of anticipated high risk cases may be planned.

Action

Booklets containing clinical guidelines were printed and distributed to staff in June 2004, and files containing clinical guidelines were placed in each delivery room.

A working group developed three new guidelines in September 2004 and reviewed all clinical guidelines by the end of 2004, so that a revised booklet could be printed.

In August 2004, a service model and guideline booklet was developed specifically for the Brent birth centre, a midwifery led birth unit that opened in September 2004.

All staff are encouraged to attend a weekly meeting, where nurses and doctors from the neonatal unit discuss and share learning about individual cases with midwives and doctors of the maternity services.

Regular clinical governance meetings began in June 2004, where midwives and doctors share and learn together, and receive feedback from lessons learned in risk management. The meetings are held every six weeks, and partners from Brent and Harrow PCTs also attend.

A monthly newsletter is circulated to staff, containing key messages about identified risks. Staff briefings have also been used to ensure that clear and consistent information is available to all staff.

Changing culture and team building

Recommendation

1. Maternity services should seek ways of improving working arrangements between obstetricians and midwives.
2. The maternity department should work towards removing a bullying culture.

Action

Informal monthly meetings between consultant obstetricians and senior midwives began in July 2004, where topical issues are discussed. These meetings complement other interdisciplinary meetings.

Twenty members of staff attended TEREMA training – a programme aimed at reducing risk through teamwork – in May 2004.

An independent development consultant was commissioned in May 2004 to support maternity services in improving teamwork and service delivery. This has involved consultations with staff and users of services' representatives. Drawing from these consultations, priorities have been identified for a programme to improve services. Work has begun on this programme with an approach that will build teamwork skills among staff.

The trust also commissioned an external consultant to work with the midwifery team on specific issues relating to management responsibilities, working times, and the provision of senior support throughout the seven day period.

Skill mix and workload

Recommendation

1. The skill mix of staff working on the labour ward should be reviewed, and consideration should be given to introducing appropriately trained nursing staff to support midwives in caring for women, particularly following caesarean section.
2. The trust should negotiate with Brent and Harrow PCTs regarding the implementation of a restriction on the number of women booked to have their babies at North West London Hospitals.

Action

The number of experienced midwives working on the labour ward has been increased and newly qualified midwives have been given the opportunity to gain experience in other areas of maternity services before working on the labour ward.

Birthrate Plus, a nationally recognised audit tool, was introduced on July 1st 2004 to assess the trust's midwifery staffing requirements based on its case mix. The audit ran over a six month period. At the same time, a recruitment drive resulted in 14 new midwives taking up post and six internal promotions by December 2004. A further 14 new members of staff have been appointed and are due to take up post early in 2005. Five additional clerical posts have been established and recruited, providing support to midwives in maternity services.

The trust held meetings with Harrow and Brent PCTs with the aim of negotiating a restriction on the number of women having their babies in the maternity services. As additional capacity could not be found at surrounding hospitals, a restriction on women from Brent and Harrow using the service at the trust was not considered achievable. However, a restriction was placed on Ealing PCT in June 2004, which meant that no referrals were to be accepted from GPs within Ealing PCT.

A midwifery led birth unit, the Brent birth centre, was opened at Central Middlesex Hospital in September 2004. Women who are assessed as being suitable for a midwife led birth are encouraged to have their baby at the birth centre, rather than on the labour ward at Northwick Park Hospital.

A bed management escalation guideline was developed, so that clear guidance is available in the event of a shortage of available beds within the maternity services.

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