

## LOTHIAN NHS BOARD

Board Meeting  
26 November 2008

Director of Strategic Planning & Modernisation

### NHS LOTHIAN MATERNITY SERVICES STRATEGY

#### 1 Purpose of the Report

The purpose of this report is to present the NHS Lothian Maternity Services Strategy to the Board for consideration and approval to proceed to public consultation.

#### 2 Recommendations

The Board is invited to:

- 2.1 Agree the strategic direction set out in the attached Maternity Services Strategy and Action Plan to improve women's experience of birth from pre-conceptual advice and support through to post-natal care.
- 2.2 Support in principle the development of a midwife-led Birthing Centre at the Simpson Centre for Reproductive Health and improve the maternity services accommodation at St John's Hospital. This agreement in principle will allow more detailed planning to proceed to the preparation of a Standard Business Case.
- 2.3 Recognise significant changes to the workforce and the implications beyond 2009 and the plans to address this.
- 2.4 Agree that this strategy will proceed to formal public consultation on the proposals at 2.2.

#### 3 Summary of the Issues

- 3.1 There have been some key changes in the requirements for Maternity Services, and in the way they are delivered over the last 7 years, since the previous Maternity Strategy for Lothian was produced:
  - a substantial, rapid and continuing rise in the number of births in Lothian from 2004 onwards due to migration into Lothian of young adults from elsewhere in the UK as well as from overseas.
  - changes in the employment arrangements for much of the workforce, especially doctors.

- mothers and babies from deprived backgrounds continue to have poor health outcomes compared with those from more affluent areas. Poor outcomes are also associated with smoking, drug and alcohol misuse, mental health issues and poor diet.
- Mothers wish to have choice about the type of birth they have and that it should be a positive experience in a homely setting with their partner, supported by the midwife.
- the risk factors for maternal morbidity and mortality are highest for vulnerable women and those from excluded groups<sup>1</sup>. In Lothian the percentage of women from the most deprived areas who give birth to low birth weight babies is double that from the least deprived areas.

- 3.2 The attached Maternity Services Strategy explores each of these issues and maps out the strategic direction to address each, set within the context of national and local policy. The associated Maternity Services Action Plan summarises the key objectives which the strategy addresses, and the necessary actions, lead roles, timescales and funding arrangements required to deliver these.
- 3.3 The 12% increase in births over the past 3 years from 8,810 to 9,850 is so substantial that it requires both service redesign, changing the way Community Midwifery services are delivered to provide more care locally, and service development through the provision of a midwifery-led service (Birthing Centre), adjacent to the Simpson Centre for Reproductive Health, capable of delivering up to 1,500 births per annum.
- 3.4 The changes in the workforce, in particular the impact of Modernising Medical Careers (MMC) and the full implementation of the European Working Time Directive (EWTB), will require a substantial commitment to training and an expansion in the number of clinical staff across all disciplines. Action is required and underway at local, regional and national level to address the specific issues presented for both medical staffing, including obstetricians, paediatricians and anaesthetists and the midwifery and neonatal nursing workforce. Full details are contained in Section 13 of the Strategy document.
- 3.5 The poor health outcomes associated with deprivation and low incomes are most effectively addressed by good joint working with our statutory and voluntary partners at all levels, targeting those families who are most vulnerable using a joint, well co-ordinated approach in each local community.
- 3.6 The strategy has been developed through an extensive process of involvement and engagement with statutory and voluntary sector partners, staff partnership and service users, which is summarised in section 14 of the strategy, with additional details of the engagement and involvement process provided in appendix 2. A range of documentation in plain English and accessible formats will be developed to support communication with the public during the formal three month consultation process which will start in January.

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<sup>1</sup> Saving Mothers Lives : Reviewing maternal deaths to make motherhood safer - 2003-2005. DoH 2007

## **4 Impact on Health Inequalities**

The development of the strategy has particularly focused on the needs of women and families in areas of deprivation and those in other vulnerable groups, including ethnic minorities and those with complex needs. Sections 11 and 12 of the full report set out how the Maternity Services can contribute to addressing these complex social issues, working jointly with our partners. Specific service changes such as the planned Birthing Centre will be subject to an equality and diversity impact assessment as part of the business case to be developed.

## **5 Resource Implications**

- 5.1 If the number of births in Lothian continues to rise at the rate experienced over the past 3 years additional funding will be required to maintain midwifery staffing levels at the national minimum standards of 1:28 midwives to births at the specialist centre, 1:30 at St John's and 1:80 in the community.
- 5.2 There are resource implications associated with the development of a Midwifery-led Birthing Centre, the indicative capital cost for which is about £2.5m. As the Birthing Centre is relatively 'low-tech' the costs per birth are expected to be significantly less than in either of the specialised units in Lothian but there will be some additional capital charges and necessary improvements in ante-natal and post-natal care in-patient care with some mothers being brought in a little sooner and others being kept in hospital a little longer. A business case for this project will be prepared for consideration by the Executive Management Team and Finance and Performance Review Committee in 2009.
- 5.3 There will be significant resource implications of changes in the workforce consequent on the implementation of MMC and EWTD once the regional and national work on workforce planning has been completed. In the meantime the service has drawn up proposals which give indicative figures in what is a rapidly changing and very fluid situation. They are likely to be modified as the clinical workforce is reshaped over the next two years in response to market conditions and the application of the regulations.
- 5.4 It is anticipated that there will require to be additional investment in maternity services to address the service challenges identified, impacting from the beginning of the next financial year. It is anticipated that full year effect of year 1 investments will be in the region of £1.5 million for additional staff. This will be addressed through the annual investment planning and prioritisation process already underway for 2009/10. Increased births in 2008 indicate a need for additional community midwifery staffing of £0.5 million, for which funding is being sought via NRAC allocation process, subject to Scottish Government confirmation.

John Thomas  
Strategic Planning Manager  
20 November 2008

## **List of Appendices**

The following Appendices are attached:

- Appendix 1: NHS Lothian Maternity Strategy
- Appendix 2: Engagement and Involvement Process
- Appendix 3: Tables 1 – 11 providing supporting information.
- Appendix 4: Top 10 Action Points from 'Saving Mothers' Lives'.
- Appendix 5: Anaesthesia Workforce Plan
- Appendix 6: Birthrate Plus Executive Summary 2008 Survey

## **1. BACKGROUND AND PURPOSE**

- 1.1. It is several years since NHS Lothian launched its strategy for maternity services. Since then there have been many changes and developments in the maternity services and in the working arrangements for medical and other staff which are having a profound affect on services alongside significant demographic changes which are increasing demands on the service.
- 1.2. This lays out a high level plan for the maternity services, setting out the vision for these services, outlining the key issues and challenges and how these will be addressed. The plan reflects the unification of the maternity services across Lothian.
- 1.3. It has been developed through an extensive process of user and partner engagement involving focus groups, presentations, meetings with local groups across Lothian. This is detailed in a separate paper.
- 1.4. The plan also meets Quality Improvement Scotland's concern in its report on maternity care in Lothian in 2006 that NHS Lothian should have an up to date strategy.
- 1.5. The plan is set out following the journey of care, beginning with the health improvement agenda, pre-conception, pregnancy and parenthood followed by maternity care and post-natal care. Through the Plan the service aims to :
  - Provide a flexible, individualised service for the mother and her baby in the journey through pregnancy and motherhood, with an emphasis on the needs of vulnerable and disadvantaged women.
  - Support and encourage women to have as normal a pregnancy and birth as possible, with medical interventions recommended to them only if they are of benefit.
  - Provide midwifery and obstetric care based on providing good clinical and psychological outcomes for the woman and baby, and helping new parents prepare for parenthood.
  - Deliver a single service across the whole of Lothian through two specialist sites and comprehensive community services ensuring equality of access and service to all women from all cultural and socio-economic groups.

## 2. EXECUTIVE SUMMARY

- 2.1. There have been some key changes in the need for Maternity Services and in the way they are delivered over the past 7 years since the previous Maternity Strategy was produced :-
- a substantial, rapid and continuing rise in the number of births in Lothian from 2004 onwards due to migration into Lothian of young adults from elsewhere in the UK as well as from overseas;
  - changes in the employment arrangements for much of the workforce, especially doctors,
  - continuing poor outcomes for a significant minority of the population associated with deprivation, disadvantage and low incomes.
- 2.2. The strategy explores each of these issues, setting out the implications for the Maternity Services, and maps out the strategic direction to address each within the context of national and local policy.
- 2.3. The strategy has been developed through an extensive process of involvement and engagement which is reported in an accompanying paper. The process involved users of the service from all parts of Lothian, the Maternity Liaison Committee, Community Health Partnerships and local authorities, professional groups such as the GP Sub-Committee and a wide range of voluntary organisations as well the staff partnership and its representatives.
- 2.4. The existing service is based on a level and model of provision which is no longer sustainable given the increased births, the higher percentage of complex births and the changes in the organisation of the workforce.
- 2.5. The rise in the number of births is so substantial that it requires changing the way Community Midwifery services are delivered to provide more care locally, and a substantial increase in capacity at the Simpson Centre for Reproductive Health (SCRH), where there is great pressure at times on labour ward facilities.
- 2.6. The changes in the workforce, which are already happening, will require a substantial commitment to training and an expansion in numbers.
- 2.7. The poor outcomes associated with deprivation and low incomes can only be effectively addressed by good joint working at all levels targeting those families who are most vulnerable using a joint, well co-ordinated approach in each local community.
- 2.8. To meet current and foreseeable needs over the next 5 to 10 years the maternity services requires significant modernisation and redesign. Some of this work has already begun with :-

- accessible specialist advice and support for expectant and new mothers through the Triage service, preventing avoidable admissions, minimising in-patient care especially for ante-natal patients.
- the development of a Central Booking system which will be in place by 2009.
- the grouping of the Community Midwives into teams based in defined localities

2.9. These initiatives need to be part of a comprehensive programme of improvements the key elements of which are set out in the Recommendations below.

### 3. RECOMMENDATIONS

The key recommendations arising from the Strategy are that :

1. the strategic direction of the Maternity Services Strategy is to improve women's experience of birth from pre-conceptual advice and support through to post-natal care. In pursuing this goal the key issues addressed are the capacity of the service, inequalities in outcomes, ethnic and cultural diversity and ensuring a sustainable workforce.
2. a midwife-led Birthing Centre for up to 1,000 births be established at the Simpson Centre for Reproductive Health and improvements in the accommodation for maternity services at St John's Hospital be undertaken. (10.20 Paragraph nos. in brackets.)
3. action be taken to ensure that changes to the workforce in response to national regulations sustain and support the maternity services and are appropriate in meeting current and future needs. (Section 13)
4. a concerted programme of health improvement be implemented to meet the HEAT targets for :
  - reducing smoking the percentage of women who smoke during pregnancy from 29% to 20%, from 2,842 to 1,960, by 2010 (8.6)
  - achieve 44% (4,300) of all women breast feeding at 6 weeks by 2011.(8.11)
5. the neonatal service at St John's be strengthened under the leadership of Neonatal Nurse Practitioners (13.11)
6. the Triage service at SCRH be consolidated, taking into account the expansion of triage in the community. (13.49 – 13.58)
7. the role of the Community Midwifery Teams within each neighbourhood be developed, building on their skills to support and triage more women locally for minor problems, enabling them to participate fully in local health improvement programmes and providing more support for women experiencing social disadvantage and deprivation. (10.31)
8. suitable accommodation be provided for Community Midwifery Teams, preferably co-located with other community child health services. (13.37)

9. homebirths be increased particularly in more rural areas towards a target of 5% of births at home. (9.30)
10. mothers and families experiencing socio-economic deprivation be targeted, working with them more effectively to reduce the damaging consequences of disadvantage through outreach, extended appointments, holding clinics close to where they live and other similar initiatives. (Section 11)
11. a clear workforce strategy for all professional staff be prepared in partnership with neighbouring SEAT Boards. (13.4)
12. the service be developed to be more culturally competent, capable of responding appropriately to women from diverse cultures, providing written and oral advice in a form and language they can understand. (Section 12)
13. the opportunities for staff to undertake Continuing Professional Development be improved. (13.48)
14. the training of Advanced Neonatal Nurse Practitioners (ANNPs) and Extended Role Midwives (ERMs) be sustained and developed. (13.45)

#### **4. NATIONAL POLICY AND GUIDANCE**

- 4.1. National policy on maternity services is set out in the Framework for Maternity Services in Scotland 2001. This sets out the principles for maternity care emphasising choice and continuity of care delivered as close to home as possible taking into account a rigorous risk assessment in which the woman and her partner are involved and well informed.
- 4.2. As well as the Framework key documents which need to be taken into account are :
  - ‘Better Health, Better Care: Action Plan’, Scottish Government Dec. 2007, which emphasises the importance of prevention and early intervention in addressing some of the underlying health problems of the nation.
  - ‘Safer Childbirth’, Royal Colleges, Oct. 2007, which recommends much higher levels of clinical care including 24/7 consultant cover for Labour Suites
  - ‘Saving Mothers’ Lives’, Review of Maternal Deaths 2003-05, published by the Confidential Enquiry into Maternal and Child Health which found that the lack of decline in maternal mortality in the UK is associated with a lack of consultant supervision during labour especially of mothers from minority ethnic groups and mothers experiencing deprivation.
  - Implementing the Framework for Maternity Services, the EGAMS report, 2004 which considered the implications of changes in the medical workforce on the existing pattern of maternity services.
  - QIS Standards on Maternity Services, which are national standards of care for all maternity services to meet.

## 5. KEY ISSUES

5.1. The key issues affecting the maternity strategy are :-

- the continuing, substantial, rise in the number of births in Lothian, up by 10% (923) in 3 years 06-08, mainly at the Simpson.
- changes in the way doctors are trained coupled with the introduction of the 48 hour week limit by 2009 will result in fewer medical staff available.
- an increasing number of complex births as a result of the rising proportion of caesarean sections, up from 16% in the mid-'90s to over 26 % today; a considerable rise in the proportion of mothers over 35, up from 19% to 25% and more mothers who are considerably overweight or with other risk factors such as a long-term condition like diabetes.
- rising standards of practice e.g. considerably longer periods of consultant cover for Labour suites (recommendations of 'Safer Childbirth', published 2007 by the joint Colleges)
- difficulties in retaining neonatal nurses with the required skills and experience. NHS Lothian, jointly with Napier, trains the required number of neonatal nurses each year but many leave to work abroad on completion of their training.
- enabling all professional staff to meet the requirements for Continuous Professional Development.
- implementing health improvement programmes to reduce inequalities and improve outcomes for the newborn and their families

## 6. POPULATION

6.1. The maternity services are sensitive to changes in the child-bearing population of 16-49 year olds. This age-group is rising in Lothian unlike many other parts of Scotland and looks likely to go on rising for the next 3 to 4 years as a result of net inward migration into Lothian continuing. Migrants are mainly young adults and they include people from within the UK as well as those from overseas.

6.2. In its latest report<sup>1</sup> on the Scottish population the General Register Office (GRO) forecasts the number of women in Lothian between 16 and 49 rising from 208,200 in 2006 to 214,600 in 2011, an increase of 3%, 0.6% per annum, (see Table 1) and continuing at that level through to 2026. The 2006 baseline figure of 208,600 is itself more than 5,000 higher than the previous baseline of 2004, the result of a substantial revision upwards of the estimates for inward migration to Lothian over the past few years.

6.3. The GRO's population projections used in this report are based on what is called the 'principal projection' for migration. A 'high migration' variant would result in an additional 45,000 people in Lothian by 2026, many of them young adults which would further impact on the maternity services.

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<sup>1</sup> GRO Population Projections Scotland (2006 base), Scottish Areas Booklet, Jan 08.

6.4. An increasing number of young women in the population means an increasing number of births, with obvious implications for the Maternity Services as reflected in the birth statistics in section 7.

## **7. THE PUBLIC HEALTH AGENDA – PRE-CONCEPTION, PREGNANCY AND PARENTHOOD**

7.1. About half of the pregnancies in the UK are unplanned.<sup>2</sup> This increases the likelihood of mothers being unprepared for pregnancy and of both parents being unprepared for parenthood. Young people need to be better informed about the implications of becoming a parent and its impact on personal and social relationships.

7.2. A major initiative in Lothian over the past 5 years has been the national demonstration project on sexual health called Healthy Respect. NHS Lothian and its partners have built the principles and approaches developed by Healthy Respect into their sexual health strategies. The number of pregnancies in young women under 16 has remained at 8 per 1,000 for the past 3 years, this is a proxy for unplanned pregnancies as the latter is not collected. The most significant change has been a rise in abortions amongst this age group matched by a fall in births.

7.3. The Better Health Better Care Action Plan (Scottish Government 2007) sets out an ambitious programme of health improvement which includes many measures relevant to mothers and their families. As part of that programme NHS Lothian will help people, especially those in areas of deprivation, to be better prepared for starting a family well through the following measures :

- Health promotion programmes for young people will include information, advice and support on healthy lifestyles, Chlamydia, HIV/AIDS and other sexually transmitted diseases, Smoking, Alcohol and Drugs.
- Prospective parents will be given advice and support on a range of health issues related to pregnancy including folic acid supplementation, rubella immunisation, the importance of a healthy diet and physical activity including brief questions about alcohol consumption and smoking.
- Information on lifestyle, pregnancy, and how and where to access local services will be made readily available to young people.
- Specific pre-conception services will be available to women with a poor obstetric or medical history, a previous poor foetal or obstetric outcome, or where there is a family history of significant illness.
- The impact of current health improvement activities on groups recognised as experiencing health inequalities need strengthening to ensure that the effects of poverty do not disproportionately affect families with children.

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<sup>2</sup> DOH National Framework for Maternity Services 2004

### *Smoking Cessation*

7.4. The Scottish Government deemed pregnant women to be a priority group as stopping smoking in the first trimester of pregnancy has considerable health benefits for the baby and mother.<sup>3</sup> It is estimated about one-third of all perinatal deaths in the UK are caused by smoking<sup>4</sup>.

7.5. The Scottish Government's target is to reduce :

- the percentage of women who smoke during pregnancy from 29% to 20%, that is from 2,842 to 1,960, by the year 2010 (based on 9,800 births in 2008).

7.6. The Maternity Services, Primary Care and the tobacco strategy known as No Ifs, No Butts<sup>5</sup> work in partnership rolling out the 'Stop for Life' campaign for pregnant women across Lothian. In 2007 252 pregnant women in Lothian set a quit date while being supported by Stop Smoking Services.

7.7. The model to be implemented pan Lothian will be early intervention offering :

- Every pregnant woman in Lothian who smokes will be offered the opportunity to access stop smoking support either by their GP or Midwife.
- Stop smoking services pan Lothian will offer an equitable, evidence based service specifically for pregnant women.
- This stop smoking service will be fully integrated with Maternity Services and will be governed by a steering group.

### *Breast Feeding :*

7.8. The strategy requires an increase in the number of mothers breastfeeding across Lothian in order to meet the new HEAT target of 44% of women to be breast feeding at 6 weeks by 2011. The significance of this for Lothian is not the absolute numbers, (44% of new mothers in 2008 is 4,312) but the considerable differences in the levels of breastfeeding between areas. Edinburgh exceeds 44% whilst in West Lothian only 25% of women breastfeed. Achieving this target is being led by Lothian Breastfeeding and Infant Feeding Strategy Implementation Steering Group.

7.9. Improving breast feeding rates will help deliver key objectives for infants and children, vis. lowering the risk of becoming overweight and consequent ill health in adulthood, of suffering from asthma and gastric problems and type 1 diabetes. It will also lower the risk to mothers from breast and ovarian cancer.

7.10. An Infant Feeding Action Plan is being drawn up by the Strategy Group, chaired by Public Health, in line with the national policy and action plan. The local plan will include :-

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No Ifs, No Butts A Tobacco Strategy for NHS Lothian 2006-2010 (2006) Edinburgh NHS Lothian

4 Royal College of Physicians Nicotine Addiction in Britain (2000) London Royal College of Physicians

- the provision of high quality support to women in hospital, especially when initiating breast feeding.
- identifying community staff to provide additional breastfeeding support
- ensuring all women can access a breastfeeding support group,
- peer support initiatives targeting areas with lower breastfeeding prevalence
- breastfeeding problem clinics to enable better access for women with problems that community staff are unable to address.
- consistency of information in a language and form which is easily understood for all women who intend to breast feed

7.11. This HEAT target will impact on the midwifery workforce as midwives will be expected to spend more time helping mothers change their behaviours. There is a comprehensive training programme in place for all staff who support breastfeeding which will continue to develop and change in line with UNICEF guidelines and best practice.

7.12. There is evidence that women in very busy maternity units find it hard to get the support needed to initiate breastfeeding. A review by the maternity services led by the Chief Midwife of the current community midwifery model aims to improve support for breast feeding, including early intervention for women who experience problems in the early stages of breastfeeding and provide ongoing support to help women to continue breast feeding.

#### *Parenting Support*

7.13. Encouraging and enabling better parenting in disadvantaged families will help to bring about the behavioural changes needed to improve outcomes for infants and children in these families, (ref. the Better Health Better Care Action Plan and the experience of the Surestart, Young Mothers 2 Be and Dads programmes). Community midwives make an important contribution in preparing parents for parenthood.

7.14. There are parenting strategies and programmes<sup>6</sup> in each local authority across Lothian. There needs to be greater consistency in the preparation of young people for parenthood whilst recognising local diversity and that some groups need a targeted approach such as that successfully delivered by the Pre-Pare project to women with drug related problems.

7.15. We will identify a lead professional linked to the maternity services in each CHP/CHCP area to work with our partners on parenting, and on smoking and drinking during pregnancy.

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<sup>6</sup> Parenting programmes in use in Lothian :- 'Solihull', 'Incredible Years', 'Triple P', 'Pre-Pare', 'PEACHIE'.

## 8. ACTIVITY

### Births

- 8.1. When the Simpson Centre for Reproductive Health (SCRH) moved to Little France in 2000 the planning assumptions indicated an activity level of up to 5,500 births per year. This was part of a wider strategy which envisaged 2,700 births at St John's and 1,000 births at a Midwifery-led Service (Birth Centre), a total of 9,200 in all. There were 6,500 births at the Simpson's and over 2,900 at St John's in 2007 without the additional capacity of a Midwifery-led Service (see Table 2, Births in SCRH and St. John's 1995-2007). In 2008 births are rising towards 7,000 at the Simpson and just over 3,000 at St. John's. Furthermore the population projections indicate that the population of young adults between 16 and 44 in Lothian will go on rising until 2011 before levelling off.
- 8.2. Table 2 shows the number of births in Lothian at St John's and SCRH between 2004 and 2007. Home births are given separately. The table shows an 9.5% increase across the whole of Lothian from 8,627 to 9,442 births over the 4 year period, which masks a 12% increase at the Simpson in the past 2 years, a rate of increase which shows little sign of slackening.
- 8.3. The General Register Office's projections for births from 2006 – 2026 are given in Table 6, showing 9,100 in 2006/07 rising to 9,672 in 2011-12 and remaining above 9,500 for most of the next 15 years. Alongside them in table 6 are set the actual births in Lothian for 2006/07 and 2007/08. They are rising more rapidly than the forecast with the 2010 level being reached in 2007. Four scenarios are set out above the GRO's estimates. The current rate of increase is closest to the highest estimate labelled 'M'. The expectation is that this will plateau, the difficulty is forecasting when.
- 8.4. The fact that births in Lothian are running above the GRO's projection is to be expected as the cross boundary flow of mothers into Lothian to be delivered at St John's and the Simpson is greater than that from Lothian to other Boards. This results in a net inflow of 200 additional births per annum in Lothian.
- 8.5. This has to be added to the GRO's projections of births which is based on the Lothian population only and peaks at around 9,920 births in 2012 on a medium projection. On the medium projection (see Table 6) the peak in births in Lothian is likely to be around 10,200 in 2012 and remain over 10,000 until 2021/2022. Under the higher projection the peak is likely to be over 10,400 in 2019 and remain close to that level until 2025.
- 8.6. Since 2005 Maternity services in Lothian have operated as a single managed service based at two sites, the Royal Infirmary of Edinburgh and St John's, with St John's as an essential part of that service delivering up to 3,000 births per annum out of a total of 9,500 rising towards 10,000 across Lothian as a whole.

- 8.7. Both sites, St John's and Simpson Centre for Reproductive Health, have a Special Care Baby Unit and there is a single Neonatal Intensive Care Unit at the Simpson, 39 cots, at St John's 12. This is a highly specialised service for very ill neonates from across the South-East of Scotland.
- 8.8. With approaching 7,000 births a year the Simpson Centre for Reproductive Health (SCRH) is the busiest maternity hospital in Scotland and one of the top 5 in the UK. As the tertiary specialist service for the South-East of Scotland it sees the most complex patients from a wide catchment area. The continuing rise in the number of births has put pressure on space and staff so that it is becoming increasingly difficult to provide a relaxed, homely service for low risk mothers.
- 8.9. The service has maximised the capacity available by reducing the average length of stay for spontaneous deliveries to under 12 hours and overall to 1.7 days (see Table 4 Length of Stay). When the Simpson moved to Little France the service was planned on a length of stay for spontaneous deliveries of 6-24 hours and 2.5 days for complex births.
- 8.10. To meet the increasing number of births and maintain a high quality of service an increase in the level of provision is needed. How best to do this was a key issue in the focus group meetings and discussions with mothers.
- 8.11. Whilst the specialist service at SCRH and St John's for higher risk mothers is excellent, many low risk mums at SCRH feel they are not experiencing the homely, flexible environment they should be able to enjoy because of the busy service. In the focus groups there was widespread agreement that the best solution lay with improving facilities for these low risk mothers.
- 8.12. Around a third all births in Lothian are supported by midwives without any medical involvement. This equates to approximately 3,000 per year. At the SCRH last year about 2,100 births were supervised by midwives in the Labour, Delivery, Recovery and Postnatal (LDRP) area. This proportion of women could give birth in a Midwifery-led Service (Birth Centre). The equivalent figure for St John's would be 900.
- 8.13. The rise in births in Lothian will also have a rapid impact on the workload of the Neonatal Services and on the Children's Hospital, where children in their first 2 years of life account for over 40% of the in-patient activity. This is being built into the project activity for the new Children's Hospital.

### **Outcome Measures**

- 8.14. Table 7 shows the still birth rate per 1,000 women aged 15-44 years by Health Board up to 2006. The rate for Lothian was 4.7 stillbirths per 1,000 births, below the all Scotland rate of 5.3. This is an encouraging performance considering that SCRH is a level III highly specialised centre which admits some of the most complex cases from across Scotland.

8.15. Neonatal mortality is shown in Table 8. In the two years 2005 and 2006 the rate per 1,000 live births in Lothian has been above the Scottish average whilst in the previous 3 years it was below the average. Given the small numbers involved, c. 30 in Lothian, fluctuations in the rate are likely to occur. Nevertheless it is part of this strategy to bring this rate of 4 per 1,000 live births back down to the levels previously achieved of under 3 per 1,000.

#### *Maternal Morbidity & Mortality*

8.16. The Scottish Confidential Audit of Severe Maternal Morbidity 4<sup>th</sup> Annual Report (SPCERH) published in 2007, reported that the Scottish rate of severe maternal morbidity in 2006, was 6.4 per 1000 births, equivalent to 60 per year in Lothian, with major obstetric haemorrhage as the commonest cause of severe morbidity. Obstetric haemorrhage has shown a significant and steady upward trend rising from 3.5 per 1,000 births in 2003 to 5 per 1,000 births in 2006. The Confidential Enquiry into Maternal and Child Health (CEMACH)<sup>7</sup> found that women who had undergone a previous delivery by caesarean section had a higher risk of peripartum hysterectomy and the proportion of women having a caesarean has risen considerably. Increases in complications such as these are having a noticeable impact on the workload of both hospitals. Complex deliveries now account for 59% of births at the Simpson.

8.17. The Confidential Enquiry into Maternal and Child Health 2003-5 published December 2007 set out 10 priorities for action which are attached as Appendix 1. NHS Lothian is committed to implementing these priorities as part of the action plan to be drawn up once this plan has been approved.

Ref: Scottish Confidential Audit of Severe Maternal Morbidity: 4th Annual Report 2006 SPCERH 2007

#### *Complex Births*

8.18. The number of complex births are rising, placing a rising workload on staff. This increase is as a result of :-

- More couples delaying family formation until they are in their 30's resulting in a greater risk of complications. The average age of motherhood has risen to almost 30yrs. as the number and percentage of births to mothers over 35 years has increased :-
  - In 2001/02 there were 1,556 births to mothers over 35 years old, 19.6% of total births.
  - In 2007/08 there were 2,213 births to mothers over 35 years old, 25% of the total births.
- An increase in the number of overweight mothers and of mothers with long-term health problems such as diabetes.
- An increase in the number of women presenting with problems related to drug and alcohol use.
- A greater number of women with significant health problems e.g. transplant patients, and with serious long-term conditions, now having

<sup>7</sup> Confidential Enquiry into Maternal and Child Health (CEMACH) - Saving Mothers Lives December 2007

children. The serious maternal morbidity rate for Lothian has risen from 6.0 to 6.8 per 1,000 live births between 2003-5 and 2006.

8.19. Women who fall into one or more of these categories are likely to require more frequent monitoring and support during pregnancy, higher levels of care in labour during which intervention is more likely, and more postnatal support and care. Consequently they are more likely to stay in hospital for longer than most patients.

### *Caesarean Sections*

#### **Caesarean Section Nos. & Rates at SCRH & St John's '06 & '07**

	2006				2007			
	SCRH		St John's		SCRH		St John's	
	No.	%	No.	%	No.	%	No.	%
<b>Total Births</b>	<b>6,168</b>		<b>2,759</b>		<b>6,508</b>		<b>2,948</b>	
<b>Elective</b>	607	9.84	292	10.6	597	9.17	333	11.3
<b>Emergency</b>	1040	16.9	431	15.6	1107	17.0	379	12.9
<b>Total Sections</b>	<b>1,647</b>	<b>26.7</b>	<b>723</b>	<b>26.2</b>	<b>1,704</b>	<b>26.18</b>	<b>712</b>	<b>24.15</b>

8.20. Around 26% of all births are by Caesarean Section at SCRH and a little lower at St John's. This compares with an average of 24% identified by the Healthcare Commission in England in 2007. The higher rate at the Simpson may be accounted for by it being a regional centre with a higher proportion of complex births.

8.21. There is no national standard for the caesarean section rate and the Healthcare Commission's<sup>8</sup> survey in England identified rates of between 14% and 39%. As Caesareans carry a higher risk of complications the service in Lothian is seeking to reduce the rate from 26% to around 22/23%. A Caesarean Management Group has been set up to implement this change using the national toolkit. It requires a high level of commitment from all staff and will take time to achieve.

8.22. When SCRH was planned at Little France it included an assumption that the Caesarean Section Rate at that time of 16% would continue. The rise in the rate since then has had a significant impact on the midwifery workforce and bed capacity.

### *Home Births*

8.23. It will be noted from Table 2 that Home Births (150) have been rising over the past 4 years. However they remain less than 2%.

8.24. The option of planned home birth is available to women across Lothian and is supported by the maternity services management team and NHS Lothian.

<sup>8</sup> 'Towards Better Births' - Healthcare Commission for England & Wales July 08.

8.25. Homebirths are an important aspect of maternity care and play an important role in the maternity strategy. The Maternity Services are committed to offering a home birth as a real choice for women, especially for those who are assessed as low risk. It is proposed that 5% be adopted as the target as this is the level which has already been reached in East Lothian.

## **9. MATERNITY SERVICES – OFFERING GREATER CHOICE**

9.1. In 2000 the Simpson Maternity Hospital moved from its old site in Edinburgh to Little France where it became the Simpson Centre for Reproductive Health (SCRH). As the first service on the new site SCRH opened with 55 beds but this was reduced to 45 antenatal beds and 10 LDRP (labour, delivery, recovery and post-natal) rooms as other specialities moved to Little France. More recently it has been possible to increase the bed complement to 49 antenatal and post-natal beds, and retain the 10 LDRP rooms.

9.2. In-patient Maternity care is provided on two sites in Lothian, the Simpson Centre for Reproductive Health (SCRH) in Edinburgh and St John's Hospital in Livingston. Most of St John's births are drawn from West Lothian and the West side of Edinburgh with around 200 coming from adjacent Health Board areas. SCRH serves the rest of Lothian and is also the main centre for perinatal care in the South East Scotland, from the Borders to Fife. Thus SCRH cares for the most complex births as well as a large volume of 'normal' births. Details on the activity and capacity of both hospitals is given in Table 2.

### **Antenatal Care**

9.3. In accordance with the previous strategy for maternity services in Lothian the majority of care for a woman throughout her pregnancy is undertaken in the community by the community midwifery team. It is only when a woman is designated as being high risk that the care becomes consultant led.

9.4. The "Booking" Visit is generally the first meeting of midwife and a mother. It is when the maternal medical and social history is taken, the plan of care and risk category agreed. If 'high risk' then a Consultant Obstetrician is designated the Lead Professional. There is always a named midwife as well. Normally there are 9 visits in a pregnancy when the expectant mother attends either a local Health Centre or clinic.

9.5. In Lothian we are implementing the Keeping Childbirth Natural<sup>9</sup> and Dynamic (KCND) programme. This is a national programme to maximise the opportunities for women to have as natural a birth experience as possible and reduce unnecessary interventions in childbirth. One of the programme's key

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<sup>9</sup> The KCND programme is a programme drawn up by the midwifery profession aimed at enhancing maternity care for women and their babies. Focusing on midwifery care it reinforces the importance of working within a multi-professional network of care. Key aims are to: introduce a multidisciplinary pregnancy-year pathway for women; and an evidence based midwife managed care programme.

objectives is for the midwife to become the first point of contact for pregnant women once a positive pregnancy test has been achieved

- 9.6. The KCND programme aims to deliver care as close to the mother's home as possible, improve continuity of care during the antenatal period, reduce avoidable admissions and establish the midwife as the lead professional for the provision of low risk care.

#### *Antenatal Screening*

- 9.7. Midwives are being asked to screen for a growing range of conditions. Some of these, such as HIV and underlying infections including Hepatitis and Tuberculosis, result from an increase in the number of pregnant mothers from overseas. Also midwives have to be increasingly aware of problems such as asthma and excess weight and of possible substance misuse in families.
- 9.8. Midwives will be given training as part of their professional development to help them identify these problems. This will include taking a more comprehensive maternal history including a risk assessment of each family in relation to the birth.
- 9.9. The introduction of Foetal Anomaly Scanning in 2008 will also help in identifying problems early in the pregnancy. All women will be offered a second scan at around 18 weeks, regardless of whether or not they are at risk.
- 9.10. Community Midwives have an important part to play in improving health and encouraging healthy lifestyles and good parenting. This area of their work is within the wider national programme known as Getting It Right For Every Child in which early assessment of current or prospective problems is a key element. Community Midwives are uniquely well placed to identify problems at an early stage and to alert their colleagues in community nursing well in advance.

#### **Choice at Birth**

- 9.11. Women have always wanted choice in how they want to give birth, avoiding unnecessary interventions. During labour women want to be able to do what they feel is right for them with the support of the midwives. The service has to be sensitive to personal and cultural differences within a safe and supportive environment for mother and baby.
- 9.12. Women should receive the relevant information to reach an informed choice about what is right for them and their baby.
- 9.13. At the same time women have the right to refuse the care recommended for them by the maternity services in which case they will be supported in their choice through the network of Supervisors of Midwives across Lothian.

- 9.14. As part of the Keeping Childbirth Natural and Dynamic (KCND) programme the maternity services is aiming to maximise the opportunities for women to have as natural a birth experience as possible through:-
- supporting the implementation of midwife managed care-programme to delivery pathways
  - providing evidence based care, reducing unnecessary intervention, ensuring informed choice
  - introducing multi-professional antenatal, intrapartum and postnatal care pathways
  - improving support for vulnerable women and families
- 9.15. At both SCRH and St John's a range of delivery rooms is available in the Labour Suite, including low risk delivery rooms and birthing pool facilities. Low risk care is midwife led. The aim is to make most births, where appropriate, more midwifery led with less medical intervention. The different types of births and their annual frequency is attached at Table 9.
- 9.16. The service promotes Midwife-led care unless a mother is assessed as being 'at risk'. Mothers with no identified risk factors are offered the option of home birth although experience to date shows that a proportion of those who book a home birth opt for to come into hospital when the time comes to give birth. Both St John's and SCRH aim to offer women with low risk pregnancies as much choice and the same quality of experience in hospital as they would have had with a home birth.
- 9.17. However the service is busy as a result of the substantial and continuing rise in births. Whilst the clinical care of complicated births is of the highest standard at St John's and the Simpson the pressure on the service frequently limits the choices available to mothers assessed as low risk and diminishes their experience of childbirth which is often not as good as it should be. On occasions women in established labour are having to wait to be admitted whilst mothers who have given birth with no complications are being discharged in order to make way for the next birth.
- 9.18. Mothers and staff have indicated in their feedback about the service that improvements are needed at both the Simpson and St John's.
- 9.19. The staff at St. John's, with the support of the mothers we involved, have already indicated the improvements they wish to see at St. John's - additional LDRP rooms, en suite facilities in all labour rooms, an obstetric triage/day bed area, and increased theatre capacity plus other smaller improvements.
- 9.20. Mothers and staff have said that what is needed at the Simpson is additional accommodation for low risk births, giving mothers with uncomplicated labour maximum choice and the opportunity to have the best possible experience of childbirth.

*Birthing Centre*

- 9.21. To achieve this it is proposed that a Midwifery-led Birthing Centre be built attached to the existing maternity unit. This is not a novel idea, there are birthing centres in many other Health Board areas except Lothian
- 9.22. Mothers attending the focus groups were very supportive of the proposal for a Midwifery-led Birth Centre and on several occasions they were the first to suggest it as an important service development. They felt it would help reduce unnecessary interventions in normal birth and there is evidence from other Birth Centres in Scotland that the caesarean section rate has decreased following the opening of a Centre. Full details of their feedback is given in the report on the involvement process which accompanies this report.
- 9.23. The best location for the Birthing Centre was carefully considered. The obvious site for this unit was beside the Simpson on the Royal Infirmary site both for geographical reasons as it will draw mothers from Edinburgh, East Lothian and Midlothian and, secondly, the Royal Infirmary is better able to manage the increase in numbers without a knock on effect on supporting services.
- 9.24. One of the user groups involved in developing the maternity plan wished the Birthing Centre to be on separate site of its own. As a 'stand alone' midwifery led facility they felt it would be able to develop its own style and culture away from the distractions of a hospital site. However everyone else involved in developing the plan, including other user groups, considered there were major disadvantages with this alternative :-
- the percentage of mothers suitable for delivery in a midwifery-led, stand alone unit is much lower than in a unit adjacent to a specialist obstetric service. For example the midwifery-led unit in Perth, which is separate from the specialist centre in Dundee, is able to do far fewer deliveries than the birthing centre at Forth Park, which is beside the specialist maternity unit at the Royal Victoria in Kirkcaldy. This is due firstly to the risk stratification of pregnancy with higher thresholds for deliveries at the stand alone unit. Applying the evidence from Perth, where there were 192 births out of 1,100 bookings, to Lothian there would be 340 births from about 2,000 bookings if the Birthing Centre in Lothian were stand alone. In contrast, if the level of activity at Forth Park, which had over 1,000 births from a total of 3,500, were applied to Lothian there could be at least 1,500 births in a Birthing Centre adjacent to the Simpson. Consequently the latter is considerably more cost effective than the former.
  - secondly, some mothers who participated in the involvement process indicated that they would be more likely to choose to go to the Birthing Centre beside the specialist services even if they had been assessed as suitable for the stand alone unit because of the perceived increase in risk in having to travel to the specialist centre in an emergency.
  - staff would be more cautious in encouraging mothers to use a stand alone unit,

- it would leave the small number of women at risk of developing complications at the Centre and put more strain on the Scottish Ambulance Service than if the Centre were co-located with one or other specialist hospital.

9.25. There was a consensus that the Birthing Centre should be sited where it was most needed and where it would be most used and it was agreed that that was at the Simpson where there was considerable pressure on the existing labour rooms.

9.26. Mothers who are 'low risk' account for around 30% of births, which is about 2,000 of all births at the Simpson per annum. It is proposed, therefore, that the Birthing Centre should be able to accommodate 1,500 births. This will still leave 5,500 births taking place in the existing LDRP rooms which is the number of births for which these rooms were originally planned. By removing low risk mothers from the specialist labour wards the Birthing Centre would enable high risk women at any point in their pregnancy to get rapid access to specialist care by freeing up some space for urgently required additional ante and post-natal beds.

9.27. Other options, such as expanding the number of existing LDRP rooms and facilities, would leave low risk mothers in an essentially clinical environment for longer periods. Another option suggested by one group was to increase homebirths. Whilst the Maternity Service wishes to increase homebirths from 150 to over 300, more than doubling the number, it would still have only a small impact on the numbers of births and the resulting pressures being experienced.

9.28. There are 16 Birth Centres in Scotland, situated across the range of hospitals from the community to specialist centres at Aberdeen Maternity Hospital, Crosshouse, and Ninewells.

*Action in Response to Increased Workload*

9.29. In response to the increased workload the Maternity Services have :-

- increased the number of post-natal beds at SCRH by 4 beds from 45 to 49.
- reduced antenatal admissions to a minimum. Women are cared for on a day case basis in Day Assessment and Obstetric Triage provides an immediate access 24 hrs per day for women who experience problems.
- reduced lengths of stay for postnatal women to an average of below 2 days :- 6-12 hrs for low risk women and 24-48 hrs for complicated birth/caesarean section.

9.30. Similar changes in practice will be introduced at St John's during the course of this year to ensure the best use is being made of the facilities and resources available. This is expected to result in a shorter average length of stay and a reduction in short ante-natal admissions.

- 9.31. At times of peak activity the Labour Wards at both SCRH and St John's can come under considerable pressure. In accordance with the recommendations of 'Safer Childbirth' the Maternity Services in Lothian are introducing a Traffic Light system in conjunction with the Scottish Ambulance Services (SAS) to ensure the safe management of births at peak times by flexing maternity capacity across both sites. All women have a detailed telephone consultation before any discussion to transfer between units. Special consideration is given to the complexity of the clinical assessment and account is taken of where an individual lives before a decision is taken to inform SAS of the transfer to the appropriate unit.
- 9.32. The services at SCRH and St John's are part of a single service, sharing rotas and common professional practice and standards. An essential element of the service at St John's is the special care cots enabling most sick babies to remain in St John's.
- 9.33. Transfers between St. John's and SCRH are kept to a minimum by booking high risk mothers in to the Simpson. Over the past year only 50 transfers took place, most of these before birth.

#### *Postnatal Care*

- 9.34. On average there are 8-10 postnatal visits in the first 10 days after birth undertaken as far as possible by the midwife who was involved with the antenatal care. The midwife usually hands over to the Health Visitor at day 10 but can retain responsibility for up to 28 days in the case of babies with complex needs. The model of community midwifery care needs to be reviewed to reflect the need of the women who need additional support in adapting to becoming a parent. A review of skill mix to ensure that midwives are equipped to meet this requirement is essential in modernising the maternity services.

#### *General Practice*

- 9.35. GPs play an important part, during normal working hours, in the care of women who are pregnant. Many women will go to Primary Care for confirmation of their pregnancy and referral to the maternity services.
- 9.36. The Community Midwifery Teams work very closely with the GP practices in their areas assessing the needs of new mothers and addressing those with additional needs. These teams will work across a number of GP practices deploying their time according to the needs of the women on the Team's caseload.
- 9.37. Whilst the KCND programme encourages women to make the midwifery service the first point of contact in a pregnancy they will still have choice as to which professional they wish to access first. For instance, for women who may be considering not progressing with their pregnancy contacting their GP or a specialist may be most appropriate.

9.38. The greatest challenge is to effectively address the needs of women who have additional needs as a result of socio-economic disadvantage, disability or lack of support. This requires close collaboration not just between the community midwifery services and GPs but also joint working with social services and other agencies. This issue is developed further in Section 10.

#### *Assisted Conception*

9.39. Assisted Conception is part of the Maternity Services. The gradual increase in assisted conceptions is accompanied by a greater number of multiple births and other complex births which has implications for the service. The Confidential Enquiry into Maternal and Child Health, Saving Mother's Lives, has drawn attention to the association between poor outcomes and assisted conception in women who have a number of other risk factors for pregnancy and childbirth. The findings from the report are being considered by Maternity Services Quality Improvement Team which is expected to report on this in 2009.

#### *Centralised Booking System*

9.40. A centralised system for mothers to book their first appointment with the maternity services will be introduced with the implementation of the TrakHealth patient administration system to the Simpson by the end of 2008. This will enable referrals to come into the system by 3 routes, direct self-referral by women, GP referral via the SCI Gateway and midwife referral. This will help deliver the Keeping Childbirth Natural and Dynamic objective of the midwife being the first point of contact for women who choose this route..

## **10. EQUALITY and DIVERSITY**

10.1. Deprivation is strongly associated with poor birth outcomes. Whilst Lothian has lower rates of deprivation relative to some other areas of Scotland there are significant pockets of severe economic and social disadvantage. 6.5% of the population of Edinburgh, for example, live in the most deprived 15% of all Scottish 'data zones'.

10.2. Women in vulnerable circumstances and families have significant additional needs and require extra support during pregnancy and childbirth as they are at greater risk of experiencing poor outcomes.

10.3. This is well illustrated by Table 10 and the accompanying charts which show the incidence of Low Birth Weight births by Deprivation Category (DepCat) in Lothian and Scotland between 1998 and 2005.

10.4. Although low birth weight is a good indicator of poor maternal health it is not the only guide. A number of areas in Lothian with poor socio-economic status do not have large numbers of low birth weight babies although experiencing poor health outcomes on other measures. Targeted measures to improve child and maternal health should not be based on low birth-weight alone.

10.5. Staff in the maternity services need to be sensitive to the additional needs of prospective parents in these vulnerable groups :-

- Women with more complex pregnancies who may require multi disciplinary or multi-agency care;
- Women experiencing domestic violence. Domestic violence often becomes more intense during pregnancy and staff need to be alert and responsive to calls for additional help.
- Women with disabilities or with a disabled partner.
- Women and/or partners from a minority ethnic group.
- Prospective parents with a learning disability.
- Women and their partners who request support to stop smoking;
- Prospective parent(s) with mental health problems. There is a growing awareness of the need to address depression around childbirth.
- Families in which substance misuse is an issue.
- Families where there are child protection concerns.

10.6. The current model of midwifery care is not sufficiently flexible to be able to respond to specific social or individual needs e.g. by committing more time and resources to the most disadvantaged and vulnerable. Research by Qickfall and Connelly comparing service provision and uptake between Craigmillar and Ferniehill showed that women who are likely to be amongst the more disadvantaged in Lothian receive less care than their more advantaged counterparts in a context where there is insufficient flexibility and targeting of services to take account of this. Through the development of local midwifery teams the service is able to offer a more flexible and responsive service for socially disadvantaged women.

10.7. Preparations are also being made to pilot the Family Nurse Partnership model in three areas of Lothian. Focussing on teenage mothers experiencing severe social and economic deprivation this initiative, which will provide expert personal support from early pregnancy up to the third year of life, is of national interest and is being supported by the Scottish Government.

10.8. Teenage Pregnancy is one of the measures which is associated with deprivation. Two rates are reported by ISD, delivered and aborted pregnancies. The rates for Lothian compared to the Scottish rates are :

**Teenage Pregnancy Rates in Lothian & Scotland  
2004-2006**

Rates are per 1,000 women between 13 and 19 years old.

	2004 Delivered	Aborted	2005 Delivered	Aborted	2006 Delivered	Aborted
Lothian	30.1	24.6	32.2	25.4	31.1	24.9
Scotland	34.5	21.1	34.8	22.0	35.4	22.5

- 10.9. Lothian consistently has a lower rate of teenage pregnancy but a higher rate of termination.
- 10.10. Unplanned teenage pregnancies can be especially 'at risk' and need to be supported by the maternity service in a non-judgemental way, providing continuity and consistency of care throughout the pregnancy and for an extended period of post-natal care.

*Addressing Health Inequalities*

- 10.11. Through its partnership with each Local Authority NHS Lothian can contribute to the policies and measures which seek to tackle the underlying causes of deprivation.
- 10.12. It is essential to review the community midwifery service model, getting the service to work in partnership with women experiencing social and economic disadvantage and by making it more responsive to their needs at an individual level, for example increasing home visits to vulnerable families and holding clinics in locations and at times that suit these women.
- 10.13. Community Midwifery Teams work with other agencies working with young parents and families in the same locality, providing a multidisciplinary education and support programme from pregnancy through to early years. Sharing their knowledge and skills local midwifery teams, in conjunction with Health Visitors, are an essential part of a joint approach to improving the health and well being of young families in the area.
- 10.14. There is a balance to be struck between developing specialist teams to address specific problems, such as the Pre-Pare team, and taking a more holistic approach to the challenges a deprived community faces. By working with colleagues in Primary Care and the Community Health Services and with colleagues in other agencies such as Social Services the Community Midwifery Teams can support new mothers and help them find the most appropriate support.
- 10.15. The Prepare team has been a very successful model in supporting pregnant women in families where there is drug misuse. NHS Lothian is also implementing the Family Nurse Partnership model of intensive support for vulnerable mothers from ante-natal care through to early childhood<sup>10</sup>. This is a pilot initiative with Scottish Government over 3 years.
- 10.16. Primary Care can play an important part in this community development approach to deprivation but we need to be clearer about how the existing resources (c.£1m) already committed to maternity services in Primary Care can be best used.
- 10.17. In order to address the greater risks to health experienced by vulnerable families Community Midwives will have to give more of their time to working

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<sup>10</sup> David Olds – Nurse Home Visiting Programme, 2006.

with these families. To find that time they may have to spend a little less time with those families who are low risk. In doing this they will be following the change in practice made by Health Visitors with the introduction of the Hall 4 reforms.

#### *Child Protection*

10.18. Child Protection is a key issue for all services and is often closely related to vulnerability and isolation. The Maternity Services in Lothian have close relationships with both the Child Protection Service and Community Child Health. In recent years extensive clinical guidelines on child protection have been developed in the SCRH and at St Johns. These should be available in all patient care areas including being at the cot side on computer in the Neonatal Unit.

10.19. The additional focus on Child Protection issues over the past few years has had workload implications for the Maternity Services, particularly for the Community Midwives, who need to be skilled in initial risk assessment and well informed about child protection procedures. This is an added pressure on this workforce.

#### *Domestic Abuse*

10.20. The Community Midwifery services contribute to the implementation of Domestic Abuse strategies in all 4 Local Authorities in Lothian. Sometimes the Community Midwife will be the first practitioner to pick up signs of abuse and needs to know how to deal with that information appropriately.

10.21. The service will continue its investment in training staff to support women who experience domestic abuse.

#### *Cultural Diversity*

10.22. Lothian has a wide and rich diversity of cultures and languages across its population and the maternity services, like any other part of the Health Service, must be sensitive and responsive to families from different cultural backgrounds.

10.23. The minority ethnic population in Lothian is growing and includes those families who have been here for one or many generations and those who have come here more recently propelled by economic migration, illustrated by the increase in births to mothers from Eastern Europe, up from 25 in 2004 to over 200 in 2007. It also includes those seeking asylum and Gypsy/Travellers.

10.24. The most recent CEMACH report found that the lack of a slowing down in the maternal mortality rate in the UK 'is also almost certainly influenced by the increasing number of deaths in migrant women, whose numbers have risen.' These women 'should have a medical history taken and clinical assessment

made of their overall health.’ The maternity services in Lothian is implementing this recommendation.

- 10.25. Action is also being taken to improve access to interpretation and translation services following a study conducted by NHS Lothian’s Public Health Directorate showing that many of these women had difficulties with language and understanding when seen by the service.
- 10.26. As part of the Centralised Booking System which is being introduced information regarding ethnicity and language will be obtained from women prior to the booking appointment. This will allow for interpreters to be present at the booking appointment ensuring an accurate history is obtained and appropriate risk assessment made at the point of booking.
- 10.27. However the need for interpretation support goes beyond the booking appointment. Women in the minority language groups should be able to access interpretation services throughout their pregnancy and birth and beyond, indeed whenever they are in contact with health services.
- 10.28. There is a very low take-up of preparation for parenthood sessions and breastfeeding preparation sessions amongst minority ethnic women, including second generation South Asian women. The reasons for this differ between groups. In the Public Health study some felt excluded by language, others by the lack of women-only sessions. Some of these sessions will need to be arranged and delivered in more culturally sensitive ways in order to engage successfully with women from these minority groups.
- 10.29. Basing maternity services in local communities is a significant step in improving accessibility by taking services closer to people’s homes. However, the services need to be culturally sensitive and offer non-judgemental care to women from different ethnic and socio-economic backgrounds. A key component in developing such services is to train Community Midwifery staff in how to relate to and work appropriately with women from a range of cultures.
- 10.30. Improving our knowledge of the growing minority ethnic groups will help maternity services develop culturally competent care to meet their needs. Local research is being undertaken in Lothian to investigate the barriers and the facilitating actions to provide such care

## **11. WORKFORCE**

### ***Medical Staff***

- 11.1. The following changes in medical manpower will have a major influence on the way services are organised:
1. The European Working Time Directive which requires the NHS to reduce doctors hours of work to 48 hours per week by 2009.

2. The new Consultant's Contact which makes consultants' workloads more structured and explicit.
3. Modernising Medical Careers which has changed the way in which Doctors in Training are trained resulting in new doctors coming into the middle grades much less experienced in obstetric problems and therefore requiring increased supervision by senior staff. These problems are compounded by expected reductions in the number of trainee doctors and difficulties in recruitment especially to locum positions.
4. Guidance policies and new regulations from statutory bodies will influence services.
5. There are stringent national standards set by Quality Improvement Scotland regarding standards of practice and care which have staffing implications.
6. The future role and career structure for trained medical staff could impact on service delivery as trainees, after completing their training, will have had far less experience of gynaecology and will therefore call on senior staff for advice and support more frequently.

### ***Obstetrics***

- 11.2. Throughout the UK Doctors in Training have made a major contribution to the staffing of Labour Ward areas, particularly out-of-hours. The Royal College of Obstetrics and Gynaecologists document published in 1999, "Towards Safer Childbirth", highlighted the importance of dedicated consultant sessions for the Labour Ward to supervise training and provide leadership. The two Labour Suites in Lothian provide 40 hours of dedicated consultant cover which was the RCOG minimum recommendation. However recent data from the National Patient Safety Agency (NPSA 2006) shows that severe foetal compromise events in labour are more likely to occur between 2000 hours to 0400 hours which is outside the hours of dedicated consultant obstetrician cover for the majority of Services in the UK.
- 11.3. A recent document (October 2007) commissioned by the Royal Colleges of Obstetrician Gynaecologists, Midwives, Anaesthetists and Paediatrics and Child Health<sup>11</sup>, recommends the following consultant staffing levels for the two sites in Lothian. These recommendations are based on consultations with College members :-

**Consultant Presence on the Labour Ward (Year of Adoption)**

Hospital	Births	60 hours	98 hours	168 hours
St. John's	2,500 – 4,000	By 2009	-	-
SCRH	>6,000	Immediate	Immediate	By 2008

11.4. To achieve the 60 / 98 / 168 hour cover as proposed by this Royal Colleges' report, it would require a substantial increase in the number of consultants and other trained medical staff. There is increasing evidence from the National Patient Safety Agency that fully trained experienced clinicians on the Labour Ward result in improved outcomes and fewer adverse incidents. A clear workforce strategy underpinned by the future role of the consultant and other trained medical staff which takes into account the combined role of the two maternity sites in providing care to the women of Lothian and the increasing numbers of complex births is currently underway, see Annexe 4. 2 additional Obstetricians were recruited to the maternity services to work at both St John's and the Simpson.

11.5. These issues are being addressed by the national Workforce Planning Group which is considering the implications of these changes in working arrangements for medical staff across all professions including obstetrics and the other professions listed below.

***Neonatology***

11.6. Neonatology inpatient services are provided on two sites: the Neonatal Unit (NNU) of the Simpson Centre for Reproductive Health (SCRH) which includes a neonatal intensive care, high dependency cots and a Special Care Baby Unit (SCBU), and at St John's Hospital a Special Care Baby Unit. The two Units now work in close partnership, both medically and in nursing/midwifery staff. The Neonatal Unit at the Simpson Centre for Reproductive Health provides tertiary neonatal services for the south-east of Scotland, and is under the supervision of seven trained Neonatologists and a team of senior Neonatal Nurses who provide intensive care, high dependency care and special care for 650 infants per year. There are 39 staffed cots. The SCBU in St John's provides predominantly special care facilities, but also some high dependency and short-term intensive care, especially for stabilisation of sick babies prior to transfer. Around 300 babies are admitted per year. The SCBU is supervised by six general Paediatricians who also provide general inpatient and outpatient care for older children at St John's.

11.7. NHS Scotland has developed a Neonatal Transport Service with 3 hubs across Scotland. One of these is hosted from the SCRH and makes over 330 neonatal transports per year, delivered by trained nursing and medical staff who specialise in Neonatology.

- 11.8. The increasing number of births will result in a modest increase in the number of babies requiring intensive care, high dependency or special care. On average 10% of babies are admitted to the Neonatal Unit. This is a typical figure for Lothian and Scotland. Thus an increase in births in Lothian from 6,000 to 7,000 will result in around 100 more admissions to the Neonatal Unit.
- 11.9. Although St John's has floor-space to care for 3500 births annually, there are potential consequences in the number of babies rising to much above 3,000. The British Association of Perinatal Medicine<sup>12</sup> recommends that maternity units delivering more than 3,000 infants per year should address the possibility of on-site staffed intensive care for babies. Furthermore if more babies were delivered at St John's, more would have to be transported to SCRH with associated increased pressure on ambulances and more babies subject to the small additional risk of being transported. Over a recent 6 month period there were 5 transfers from St. John's to the Simpson of women with more complicated labour than anticipated, and 19 transfers of low risk pregnancies from the Simpson to St. John's to relieve pressure at Little France.
- 11.10. It would be an inefficient use of scarce, highly specialised resources to attempt to create two Neonatal Intensive Care Units relatively close to each other. Indeed, given the difficulties already experienced in recruitment at the Simpson and across the UK it might not prove possible to find staff to provide care in two units. Alternative models of neonatal care such as a service managed by Advanced Neonatal Nurse Practitioners (the Ashington model) would need to be considered if it was proposed that births at St Johns increase by a further 1,000. There are currently 4 Advanced Neonatal Nurse Practitioners in Lothian and a further 4 would be required to provide a full ANNP rota for St Johns.
- 11.11. To maintain the medical cover at St John's until the service has trained sufficient Advanced Neonatal Nurse Practitioners for them to take the lead, which will be 2011 at the earliest, the paediatric service is currently seeking to recruit additional paediatricians. This, will, of course, provide additional cover for the paediatric wards as well. The paediatric staffing is critical to the provision of the neonatal service at the hospital as they provide consultant cover for the Special Care Baby Unit (SCBU).
- 11.12. A robust plan requires to be developed for the care of the expanding number of babies in Lothian, both for those who are well and for those who require the care of a SCBU or NNU. Approximately 10% of babies require to be admitted to Neonatal care, either to a SCBU or a Neonatal Nursing Unit, so the increased number of births will result in a modest increase in the number of babies requiring to be admitted. There is already surface area in the NNU at SCRH to care for these babies but there will need to be an expanded number of Midwives and Neonatal Nurses employed to care for the mothers and babies.

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<sup>12</sup> British Association for Perinatal Medicine, Standards for Hospitals Providing Neonatal Intensive and High Dependency Care

- 11.13. On the question of a Midwifery-led Birth Centre at Little France the Neonatologists and Neonatal Nurses are in favour of this. It would allow an expanded antenatal and postnatal facility in the SCRH with immediate access on site to the Neonatal Unit.
- 11.14. In addition, training of Advanced Neonatal Nurse Practitioners (ANNPs) and investment in training midwives and nurses in advanced Neonatal Resuscitation skills and stabilisation and examination of the newborn would be required. Maternity services in Lothian already run the Maternity Professional Development Programme Course in Neonatal Resuscitation 6 times per year which all nurses and midwives are required to attend on a 3 yearly basis. A joint appointment has just been concluded with Napier University of a Clinical Leader to sustain the Neonatal Nurse training at Napier.
- 11.15. Currently the neonatal service in Lothian provides a robust training and educational programme for doctors with a very high number of applicants and high standards of selection. The neonatal service in Lothian is determined to continue to support the training programmes so that the standards are maintained throughout the forthcoming period of change.
- 11.16. The creation of a Children's and Young People's Hospital on the Little France site in 2012 provides an excellent opportunity for the ongoing improvement in Neonatal Services in Lothian. Closer communication with general and specialist children's services will allow a major sharing of expertise between the Nursing and Medical Staff of the Children's Hospital and the SCRH, with significant benefits to the infants and children in both services e.g. where there are congenital heart or gastro-intestinal abnormalities There is an opportunity for increased Consultant liaison between general paediatric and neonatal staff which will be mutually beneficial. The Consultant Neonatologists at the SCRH will be able to increase their input to neonatal problems when babies have been admitted to the general children's service and it is also a strong advantage to the Neonatal Unit that Paediatric Surgeons, Cardiologists, Neurologists and other disciplines will be on site with the increased accessibility which follows.

### ***Anaesthesia.***

- 11.17. Anaesthetists are required to administer safe anaesthesia to women who require either caesarean section or forceps delivery, often at very short notice. They are also available to provide epidural analgesia when required or requested.
- 11.18. Safe obstetric care requires the immediate availability of a trained anaesthetist or an anaesthetist in training under supervision. This requirement is currently provided at St John's and the Simpson by consultant and trainee anaesthetists. Anaesthetists are also involved in managing women with major illness or requiring resuscitation.

- 11.19. Within the population of mothers of child-bearing age there are women at either extreme of the age range who present challenges to the maternity services both in support and managing maternal illness. There is an increasing prevalence of morbid obesity in the young adult population of Lothian which impacts on maternity anaesthetic services because of the increased frequency of obstetric intervention.
- 11.20. In Lothian and Scotland the data for 2006 are as follows:  
0.15% of women who give birth require intensive care including ventilation  
0.64% of women who give birth have severe maternal morbidity (near misses)  
0.5% of women who give birth have a major obstetric haemorrhage  
Up to 5% of women may require some degree of high dependency care
- 11.21. The “out of hours” obstetric anaesthetic service is provided at SCRH and St John's by resident trainee anaesthetists. Modernising Medical Careers and the reduction in trainee hours of working will mean a phased introduction of more trained career grade staff providing this service from 2009.
- 11.22. From August 2009 there needs to be a reduction in trainee hours providing service in obstetric anaesthesia in SCRH & St John's. This shortfall in service will need to be covered by career grade anaesthetists. All consultant leave during the working week and on-call will need to be covered by consultants and planned well in advance of leave being taken. Evening and weekend Programmed Activities (PAs) for consultants, post-CCT specialists or SAS grade anaesthetists will need to be introduced. “Hybrid” rosters, which mix trainees and career grade posts, will also need to be introduced for out of hours cover by trainees and career grade anaesthetists (consultants, post-CCT specialists or SAS grade).
- 11.23. The rising number of births and operative deliveries is resulting in an increasing workload for the existing Operating Theatres placing a major strain on bed capacity as well as midwifery. There is an interim proposal to transfer 200 elective caesarean sections per annum from SCRH to St John's. This proposal will impact on St John's where there is only one Theatre on the Labour Unit. This will require the use of the emergency operating theatre. A detailed study of current, planned and projected activity is being undertaken before a conclusion can be reached regarding this proposal.
- 11.24. A detailed analysis of the anaesthesia workforce issues in Lothian from Aug 2009 is provided in Appendix 2.

### ***Midwifery & Neonatal Nursing Workforce***

- 11.25. The midwifery workforce is made up of midwives who work predominantly in the hospital or community midwifery teams. The role of the midwife is supported by clinical support workers and Nursery Nurses. The Maternity Services in Lothian has supported 4 clinical support workers to undertake the Maternity Care Assistant course at Robert Gordon University, Grampian and the services hope to continue enabling support workers on the course. The support workers assist midwives in caring for mothers and babies needing

extra support because of ill health, disability and disadvantage and they will help in addressing health inequalities in the future. The role of the maternity care assistant in supporting the changing role of the midwife needs further consideration and will be incorporated into future models of care.

### *Community Midwifery Services*

- 11.26. More than 70% of all antenatal care is provided by community midwifery services. All pregnant women are booked by a community midwife who, following a detailed history and risk assessment, will refer the woman to the appropriate Health Professional or agency. Every woman who books for care in Lothian has a named midwife, irrespective of risk.
- 11.27. The community midwifery service is supported by Consultant Obstetrician out reach clinics which allow women who have moderate to high risk pregnancies to have Consultant input closer to their home. Women with very high risk pregnancies or underlying medical conditions are seen at the hospital based High Risk clinics across Lothian.
- 11.28. The community midwifery teams provide antenatal and postnatal care and are aligned to a specific locality area and the GP practices within that area. Some GP practices continue to provide shared care with midwives, however, this has decreased with the establishment of community based midwifery services over the last 5 years.
- 11.29. There are 5 community midwifery teams in Edinburgh, 1 in East Lothian, 1 in Midlothian and 3 teams in West Lothian. The teams cover both urban and rural populations and the midwives within the teams are aligned with General Practices. Community midwives across Lothian provide antenatal and postnatal care to women in a defined locality which includes the provision of advice and support as well as providing a homebirth service to women who choose this option.
- 11.30. In Lothian the community midwives rotate into the hospital on a regular basis to maintain their skills in intrapartum care for the provision of the homebirth service. This also allows a sharing of experiences between hospital and community midwifery staff. This rotation is undertaken in the Labour/Delivery/Recovery area of the labour ward which more appropriately reflects the type of intrapartum care that will be provided at home births.
- 11.31. To facilitate this rotation and maintain the full range of services hospital staff rotate to the community for a three month period, enabling hospital staff to have an opportunity to gain experience working in the community. This initiative has been welcomed by both community and hospital staff groups and helps to maximise the flexibility of the midwifery workforce. It is important to build on this model in the future to ensure that midwives can work more flexibly between the Simpson and St John's.
- 11.32. Community midwifery services have changed significantly over the last 10 years driven by :-

- health improvement issues – HEAT targets for smoking, weight and breast feeding plus action on physical activity, emotional health and well being, alcohol and drugs, teenage pregnancy.
- national drivers for change in delivery of maternity care – QIS standards, 'Safer Childbirth' report, redesign of the workforce.
- care of children and adults at risk – child protection and domestic abuse.
- antenatal screening, including the introduction of Nuchal Translucency screening – a procedure included in the offer of screening of all pregnancies for foetal abnormalities.
- the implementation of Health for All Children (Hall 4) – concentrating workforce on addressing inequalities e.g. families experiencing socio-economic deprivation, minority ethnic groups, mothers with disabilities.
- changes in the profile of the midwifery workforce with the majority now working part-time and a high proportion over 40 years.

11.33. In the previous maternity strategy the staffing ratio for community midwifery staff was agreed as 1:80 midwives/women. The team leaders were given 0.5 wte. management time in addition to the team staffing establishment. This distribution of community midwives has been almost fully implemented across Lothian.

11.34. The increasing diversity of the Lothian population with higher levels of migration of young adults from Eastern Europe and increased visits within families from a minority ethnic background is having a noticeable impact on community midwifery services. Through the introduction of a Centralised Booking System (see below for details) information regarding ethnicity and language will be obtained before the booking appointment so that interpretation can be arranged.

11.35. Lothian has also seen an increase in the number of vulnerable families and an increase in child protection work, especially associated with drug use during pregnancy.

11.36. The implications on the community midwifery workforce of a range of pressures including greater overseas migration, an increased requirement for counselling related to antenatal screening, child protection issues have implications for the workforce in view of the additional demands they make on the time of qualified staff.

11.37. A major constraint on maximising the potential of the Community Midwifery Teams is the lack of satisfactory accommodation in the community for several of the teams. It is a part of a wider programme in the Women's and Child Health Services to develop better community services and bring care closer to home. Discussions with the Community Health Partnerships regarding this issue are already underway.

*Hospital Midwives - Workforce*

- 11.38. A key objective of the Maternity Services is to provide 1:1 care between midwife and mother during labour and recovery and maintaining continuity throughout the period of the labour as far as is possible. The increasing number of births at both SCRH and St John's is placing greater demands on the workforce. This has reached a level where an increase in the workforce at the Simpson and St John's is now necessary.
- 11.39. The Maternity Services regularly submits its workforce to national review using the national benchmark tool, 'Birth-rate Plus'. see Appendix 3. It will be applied at least every 3 years to reflect rises and falls in activity and provides a comparator following changes in practice and service redesign. At the latest review in early 2008 staffing had come close to the level of births in 2007.
- 11.40. The 2008 Birth-rate Plus review demonstrated some significant differences in practice between St John's and the Simpson, for example in the relatively high number of ante natal day assessments and post natal ward attenders at St John's. This is being addressed by a programme of service review and redesign led by the Chief Midwife who is regularly working from St John's for part of the week. It will be completed by the end of 2009.
- 11.41. New roles as midwife consultants have been developed at both the Simpson and St John's to help maintain highly skilled staff in clinical practice and provide professional career opportunities for midwives.

*Neonatal Nurses*

- 11.42. There are significant challenges to be faced in maintaining the workforce of qualified, experienced neonatal nurses due to
- the difficulty in recruiting neonatally qualified staff, most of whom come as newly qualified children's or general nurses. Because of these difficulties NHS Lothian is collaborating with Napier University to maintain the neonatal education programme in Edinburgh.
  - many neonatal nurses move to better paid jobs overseas or elsewhere in the UK on completing their neonatal training.
- 11.43. A review of the neonatal nursing workforce at the SCRH was undertaken in 2005 and the staffing was increased to reflect the increase in activity. The unit at the Simpson is currently staffed for 39 cots, and the SCBU at St Johns is currently staffed for 12.
- 11.44. At the SCRH the Neonatal service is staffed mainly by Paediatric Nursing staff whereas at St John's the staff are a mixture of midwives and Nurses. Changes to the register for Nursing and Midwifery and differences in pay structures as a result of Agenda for Change has resulted in less midwifery trained staff working in Neonatal units. Combined with the problems listed above Neonatal Units are having to employ newly qualified nurses who

require significant educational input and supervision to become competent and confident in intensive care. This is a significant pressure on the service.

### **Obstetric Triage and Assessment**

- 11.45. Separate Obstetric Triage Departments are a new concept in the delivery of maternity care with many services developing this facility. This work was previously undertaken on labour wards or in an area in close proximity to the labour ward. This close proximity resulted in a higher number of admissions to hospital than was actually necessary. An Obstetric Triage Unit on the ground floor of the SCRH has been in place since the Simpson opened. This service has been in place for the past 5 years during which time it has evolved and developed. There are now 14,000 out-patient attendances to the service, see table 9. It has been a helpful model in managing the increasing numbers of women who access this service during the day and out-of-hours. It has helped to bring down ante-natal admissions to less than 500 per annum, which is well below the benchmark used by Birth Rate +, the national workforce audit tool, for units with over 2,000 births.
- 11.46. During their pregnancy many women seek help and advice directly from SCRH and St John's rather than go to their GP. There is a help line they can use which generates around 90 telephone consultations a day. Each call is a consultation with a midwife. In the main, women only attend the triage and assessment service following a full telephone consultation. It is considered that appropriate investment in telephone triage similar to NHS 24 could further reduce unnecessary attendance at the hospital. SCRH has been a pilot site for the National Perinatal Project on telephone consultations and work to continue to develop this service is progressing. The next stage is to audit the activity and evaluate the outcomes of the service.
- 11.47. The Triage service acts like an Obstetric A&E and is now a key part of the model of care practised at SCRH and St John's, playing a critical role in sustaining women at home, preventing avoidable admission and shortening length of stay. A workforce tool has not yet been applied to this clinical area. The telephone consultations have never been considered in workforce planning for maternity services although they form a significant proportion of the work undertaken in this department. They account for one midwife per shift from 8.00 am until 10 pm.
- 11.48. A significant proportion of attendance is between 1600hrs-2000hrs and reflects the fact that many women work or will wait for partners to come home before seeking advice for a pregnancy related concern. The Triage Service has become the out-of-hours service for maternity care filling the gap in place of primary care.
- 11.49. As this service has evolved, women have become familiar with it as an access point for treatment resulting in the unit now becoming extremely busy with delayed waiting times for assessment and treatment of up to 2 hours. The triage unit is also becoming a holding area with women in established

labour waiting to be admitted due to capacity constraints on postnatal wards and LDRP and on a few occasions has been used for giving birth. This is very unsatisfactory and highlights the need for increased birthing capacity.

### Attendances at SCRH Triage Service 2005-07

2005	2006	Difference 05-06	2007	Difference 06-07
1,2011	1,2870	+ 859 + 7.2%	1,3809	+ 939 + 7.3%

11.50. The reasons for this growth in the hospital Triage service may in part be related to :-

- midwives relative inexperience and lack of training in telephone triage.
- the lack of appropriate facilities in the community in which midwives can see pregnant women and provide a local triage service. Most midwives do not have an examination room on the site where their offices are. Often they use a room in a local doctors' surgery.
- changes in Primary Care including changes in 'out of hours' services and a reducing number of GPs with a special interest in maternity care.
- different expectations amongst minority cultures, especially women from Eastern Europe who expect to attend a specialist hospital centre and self-refer directly to SCRH and St John's.

11.51. One consequence of the Triage Service is that SCRH admits relatively few women for treatment ante-natally, bearing in mind that it sees the highest risk cases in the South-East of Scotland.

11.52. As the number of pregnant women increases the service is inadequately staffed and equipped to see so many. Some of the pressure can be taken off by providing appropriate accommodation in the community e.g. in Leith CTC, for community midwives to triage women in the community rather than them having to come to the hospital.

11.53. There are also two day assessment services in Lothian, one at St Johns and one at the SCRH. The day service is for the planned follow up of mothers assessed by Triage as at risk. There were 9,000 day attendances at the RIE last year and 5,000 at St Johns. The Day Assessment units enable maternal and foetal monitoring to be managed on a day basis thus reducing unnecessary admissions. St John's attendances are high in relation to population reflecting differences in practice. The protocols for access to Day Assessment are being revised as part of the review of maternity services at St. John's so that there is more equitable use of the Triage and Day Assessment services across Lothian.

11.54. Both maternity services in Lothian have Early Pregnancy Units. These are 7 day 9 – 5 services, predominantly nurse led, providing assessment, advice and support for 12 week threatened miscarriages and ectopic pregnancies. The service at the Simpson had about 7,000 attendances last year and the service at St. John's about 1,200. The rising number of births is having a

direct impact on this service which has seen an 8% rise in activity in the last year.

## **12. INVOLVEMENT**

12.1. In developing this plan the experiences and views of various groups were collected through :-

- three focus groups, in Edinburgh, Haddington and Broxburn involving 15 mothers,
- drawing on the feedback from a very recent consultation with users on Foetal Anomaly Scanning which also generated feedback on the maternity services more generally,
- comments and feedback in response to a briefing paper widely circulated to the members of these groups and organisations.

12.2. Another stream of involvement and input to the plan has been the voluntary sector where groups such as the Birth Resource Centre have sent in a detailed set of comments and advice resulting in a dialogue between them and those drawing up the plan which has influenced and informed many aspects of the proposals set out in this report.

12.3. The experiences and views of women from ethnic minorities have been collected through focus group research carried out by the Public Health Directorate. The results of 6 focus groups held in women's first languages about their experiences of pregnancy, delivery and postnatal care, which aspects they had liked and those they had disliked, and what they would like to have been different have helped to inform the preparation of this report.

12.4. Staff have been directly involved and involved through their staff representatives at each stage of the development of this report. There is staff representation on the Maternity Services Liaison and the Maternity and Neonatal Services Working Group and staff and their representatives have participated in several workshops and meetings on the proposals set out here.

12.5. The issues raised and views expressed through this involvement process are reported in a separate paper accompanying this report.

## **13. INFORMATION MANAGEMENT FOR MATERNITY SERVICES**

13.1. MAT TrakHealth, which is a specifically designed maternity information system, is due to be extended to the Maternity Services in December 2008. This will help the introduction of Central Booking Services and provide more up to date and more detailed data in a more flexible form which is essential for managing the service effectively.

13.2. MAT TrakHealth provides an electronic patient record which will address the current short comings when a women presents without her hand held

record. This will allow up to date information to be accessible to hospital staff, improving the quality and safety of care. The system also has an obstetric telephone and direct consultation capacity for recording labour and postnatal care.

13.3. With the extension of TrakHealth to the Children's Hospital as well as the Maternity Services it will be possible to fulfil a long-standing aim to have a single child health record starting at birth as has been planned for a long time. This will enable the services to trace the pathway each baby and child takes through the healthcare system as it happens, not just in retrospect. This will be of considerable value in addressing the problems vulnerable babies and those with additional needs face and in monitoring their progress.

## 14. RESOURCES

### *Revenue.*

14.1. The service received extra funding this year of £600,000 to reflect the increase of 529 more births in 2007 over 2006. If the number of births continues to increase in 2008, as the first 6 months suggests, more midwifery posts will be required in order to avoid the ratio of midwives to births rising above the nationally recognised minimum of 1:30 across the whole service, (1:80 in the community, 1:28 in specialist centres). This risk is reflected in the action plan at the end of this document which sets out the implications of a high, medium and low increase in the number of births.

14.2. In revenue terms Lothian's maternity services compare well with the national benchmark. Table 11 shows the unit costs of Lothian's obstetric service compared to similar services in other Health Boards in Scotland in 2005/06. Lothian's net cost per case was £1,240, 11% below the average unit costs for this group of services despite the high caesarean rate.

14.3. To meet the challenges faced in planning the workforce, (see section 11 above), the maternity services have assessed what staffing they will require to meet the European Working Time Regulations (EWTR), the consequences of Modernising Medical Careers (MMC) and the Royal Colleges' recommendation for 24 hour resident consultant cover for the Simpson and 60 hour cover for St John's. These requirements are now under discussion at a national level as part of a wider consideration of medical staffing post 2008/09 by the Scottish Government and Health Boards.

14.4. The Royal Colleges' recommendations provide a helpful guide for future planning but they are advisory. At the same time we have taken into account the impact of developments in other professions and changes in the service as a consequence of this plan. Currently there are only 40 hours of on site consultant cover per week which is far short of the cover recommended by the Royal College. However the arrangements under which consultants or specialty doctors would provide 24 hour cover for Maternity Units in the future have yet to be settled. They are currently under discussion at a national level.

14.5. Indicative costs for implementing the strategy in its first year, 2009-10, are given in the Action Plan but because of the uncertainty and fluidity of workforce planning particularly regarding future medical staffing the figures are best estimates rather than firm forecasts.

14.6. Funding from the increase in births in 2008 would be sought through the NRAC allocation process subject to Scottish Government confirmation.

### ***Capital***

14.7. The implementation of this plan requires capital investment in the Birthing Centre at the Simpson and the upgrading and redesign of the Labour Suite at St John's to provide accommodation for obstetric triage.

14.8. At St John's further work is needed, involving staff and service users, to plan the changes required to bring the space and accommodation in the maternity unit up to present day standards. Once that has been done a Standard Business Case will be prepared and submitted to the Division. This work will be phased over a period of time and funded through the Division's normal annual capital planning and implementation process.

14.9. At the Simpson outline plans for a Birthing Centre have been drawn up and progressed sufficiently to give an indicative cost. 6 birthing rooms will be required for 1,500 births with a length of stay of not more than 24 hrs. This averages 250 births per birthing room or 1 birth every 1.5 days. The Centre will include a patients' sitting room and appropriate ancillary rooms and toilets. The indicative cost is £2.5m excluding capital charges. A number of options are being considered, all consistent with the master-plan for Little France.

14.10. The next step will be the preparation of a Standard Business Case for the Birthing Centre which will give details of the proposals. The project can only go ahead when the Business Case has been approved by NHS Lothian.

14.11. Whilst many of the actions relating to changes in practice arising from this plan can be implemented by redesigning existing services the major challenges of

- expanding capacity at the Simpson and improving the existing facilities at St John's, and
- maintaining appropriate levels in critical staff groups as they undergo radical change

will require additional investment.

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## MATERNITY SERVICES ACTION PLAN

Objective	Action	Time-scale	Costs & Source	Lead
Health Improvement				
Implement HEAT Health Improvement Targets	To reduce the percentage of women who smoke during pregnancy from 29% to 20%	2010		Health Promotion Smoking Cessation
	To increase the of % of women breast feeding at 6 weeks to 44% across Lothian.	2011		Breast Feeding Strategy Group.
	To work with our local authority and voluntary sector partners in implementing agreed parenting frameworks and programmes in each CHP/CHCP/Local Authority	Ongoing		Children and Young People's Joint Planning Groups
To offer more choice and improve the experience of childbirth for women	Implement the Keeping Childbirth Natural and Dynamic programme.	2008-10		Clinical Manager Inpatients and Labour ward.
To address health inequalities in maternity care.	Develop the community midwifery teams to enable additional support to be targeted at vulnerable and socially disadvantaged women	2009		Clinical Manager Community Midwifery
Improve services for ethnic and cultural minorities	Raise the level of cultural awareness responsiveness through training and staff development. Review information for minorities and vulnerable and disadvantaged groups, making it more easily accessible	2008-09		Chief Midwife and user group
To improve ante-natal care and prevent avoidable complications.	Introduce Foetal Anomaly Scanning across Lothian	2008-09	Funded by SG in 2008	Clinical Manager. Community.

Workforce :

Minimum required to sustain the service in 2009-10.

Objective	Action	Est. Costs	Notes
Obstetrics & Gynaecology :- Implement European Working Time, Modernising Medical Careers and provide 60 hours consultant cover at the Simpson and St John's labour wards,	At the Simpson :- 1 Consultant, (to cover the reduction in ST3 trainee hours, based on detailed assessment) ODPs, (to cover work carried out by ST1&2 trainees) Band 6 Nurse Gynae. Triage (to replace ST1&2 trainees in early pregnancy support)	£120,000 £170,000 £75,000	
	At St John's :- 1 Consultant (to cover the reduction in trainee hours) ODPs (to cover work carried out by ST1&2 trainees)	£120,000 £147,000	
Obstetric Anaesthetics	1 Consultant or Staff Grade Anaesthetist at the Simpson (to cover the reduction in trainee hours)	£120,000	
	1 Consultant or Staff Grade Anaesthetist at St John's. (to cover the reduction in trainee hours)	£120,000	
Neonatology :-	1 Consultant to implement run-through training (to cover the reduction in trainee hours)	£120,000	
Neonatology  Training for Senior and Advanced Nurse Practitioner	7 Advanced Nurse Practitioners (to help cover loss of trainees) 4 trainees per annum for 3 years = 12 in all (to enable midwives and neonatal nurses to extend their roles to lead some services)	£420,000 Backfill - £50,000 per annum = £150,000 over 3 yrs..	Training costs funded by NES. Backfill funded from NHS L non-recurring.
Paediatrics at St. John's	2 Consultants (for the reduction in trainee hours covering the SCBU)	£240,000 less savings in OOH for 3 trainees (£102,000) £138,000	

Indicative total additional recurring full year 2009-10  
 Non-recurring for Training

£1,550,000  
 £150,000 over 3 years.

Note : the workforce development costs are best estimates rather than precise forecasts in view of the continuing development at national and regional level of the future workforce model.

**Capital Investment**

Put in place the proposed Birthing Centre	Draw up a Standard Business Case and secure approval Detailed planning and design Build and Commission	2008 Summer 09 2009-2010	Funded through annual capital allocation, up to £2.5m	Chief Midwife, Capital Planner, Facilities and Assoc. Director.
Improve the accommodation for maternity services at St John's	Draw up a Standard Business Case and secure approval Detailed design and build.	2009-2010	Within Div's annual capital allocation	Chief Midwife, Capital Planner, Facilities and Assoc. Director.
Provide community midwifery teams with appropriate accommodation in community	Identify current gaps in provision, identified what is required. Take forward a plan to meet the identified need	2009-2012		The Care Closer to Home programme

**Increase in Births in 2008**

A rise of 386 births at the Simpson 2007-2008 (6,514 in '07, forecast for '08 is 6,900)	@ 1 midwife:28 births = 13.8 wte midwives	£593,000	Funded through NRAC
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An increase in funding is dependent on a rise in births and the application of the NRAC formula by the Scottish Government.

**Other Actions**

Birthing Centre	Capital Charges on completion..	2010-2011	Recurring charge. NHS LUHD	
Improve information on service activity for clinicians and managers.	Introduce Maternity TRAKHealth	2008-09	Included in IM&T plan	Information Management.
Enable women to contact the midwife directly as the first point of contact on becoming pregnant.	Introduce Central Booking system	2008-09	Included in IM&T plan	Information management
Greater patient and public involvement in the maternity services	Involve users in the design and planning of the Birthing Centre.	2008-2010		Chief Midwife Clinical Manager in-patients St John's Clinical Manager Community.
	Involve users in West Lothian in the improvements at St John's.	2008-2010		
	Involve users in developing the work of the community midwifery teams	Ongoing		
Increase Home Births	Develop community midwives confidence and capacity to take on more home births. Give appropriate mothers more opportunity and encouragement	2008-2010		Clinical Manager Community Midwifery

## GLOSSARY

ANNP and NNP	Advanced Neonatal Nurse Practitioner and Neonatal Nurse Practitioner
Birthrate Plus	National benchmark tool for Workforce Planning
CEMACH	Confidential Enquiry into Maternal and Child Health
CHP	Community Health Partnership
CHCP	Community Health and Care Partnership
CTC	Community Treatment Centre
EWT	European Working Time
Family Nurse Partnership	A model of intensive support for vulnerable mothers from ante-natal care through to early childhood
GRO	General Register Office, the office which collects and reports national population statistics.
KNCD	Keeping Childbirth Natural and Dynamic, national programme to maximise the opportunities for women to have as natural a birth experience as possible.
LDRP	Labour, Delivery, Recovery and Postnatal ward.
NRAC	National Resource Allocation Consortium
PEACHIE	Parents Education and Children's Health in Edinburgh
SCBU	Special Care Baby Unit
SCRH	Simpson Centre for Reproductive Health, which is the Simpson maternity hospital at Little France.
SEAT	South-East and Tayside Regional Planning Group
TrakHealth	Patient administration system well established in the ERI and being rolled out to other parts of the health service.
Triage and Obstetric Triage	Telephone and walk-in consultation service for expectant mothers
Wte	Whole Time Equivalent, a post which would provide full-time employment for one employee.

**Maternity Services Plan 2008-2015****Engagement and Involvement Process and Findings.**

1. This paper reports on the engagement and involvement of a wide range of stakeholders in preparing the Maternity Services Plan and on the findings from that process.
2. There were focus groups and workshops specifically to help inform the report but it also drew on recent work by others who had engaged with users to find out their views on various aspects of the service. The report also reflects feedback from some of the standing mothers groups attached to the maternity services who regularly comment on service issues.
3. The list of meetings, focussed discussions and other processes is as follows :-
  - Engagement with the Maternity Services Liaison Committee from the earliest beginnings on the issues covered. This statutory committee includes representatives from users and the voluntary organisations. Its work has been supported by the Maternity and Neonatal Services Group which also has user representation.
  - Three focus groups, one each in Edinburgh, East Lothian and West Lothian involving 15 mothers in all. A detailed note of these meetings is available.
  - Feedback on the maternity services generally which came from recent consultations with users on Foetal Anomaly Scanning.
  - Comments from voluntary organisations supporting mothers through pregnancy.
  - Meetings with the CHPs and CHCP
  - The involvement of Partnership representatives in meetings on developing the Plan and how best to address the key issues.
  - Meeting with the GP Sub-Committee on a recent draft of the Plan.
  - Research carried out by the Public Health Directorate into the experiences and views of women from ethnic minorities who have used the maternity services.
  - Comments and feedback in response to a mail out to over 60 groups and organisations of a brief summary of the key issues inviting suggestions and comments. Through these groups the invitation reached over 100 stakeholders, many of them recent or current users of the maternity services.

## Feedback and Findings

### Hospital Services

1. Concern at the high pressure atmosphere in the Simpson at peak times. Continuity of care seems to break down when the pressure is on. All mothers wished to have one midwife to be with them through labour. Maria acknowledged that continuity of care was not good and needs to be improved.
2. Mothers receiving too little support during labour from a midwife who might be caring for several women in labour. Women left waiting in a reception area or assessment room.
3. The Simpson can feel rather 'high tech', focussing on clinical technicalities rather than birth as a natural process. It doesn't offer a low risk mother and her partner a homely, domestic setting in which to give birth.
4. Concern about the caesarean section rate. It was explained that the service was aiming to bring it down but there were clinical reasons for it having risen to the current level including an increase in the number of complex births and the recognition that caesarean section now had a lower risk rating with improvements in anaesthetics.
5. The impression that few women are currently having normal births, and the majority have one or more of: inductions, accelerations of labour, pharmaceutical pain relief, continuous monitoring, epidurals, ventouse, forceps, episiotomies, managed second and third stages and caesarean sections. The need to look critically at the level of interventions and ensure that avoidable interventions are not carried out is being addressed.
6. One voluntary organisation reported fewer women attending it than previously who report having spontaneous births and fewer still have undisturbed, natural births. Noted an increase in morbidity among women and babies, and an increase in trauma and distress among women who have had medicated births and births where technology has been used. Most women who attended this voluntary organisation were quite healthy and nearly all wished to have as normal a birth as possible,
7. 'Why so many spectators in theatre ?' one mother asked. Assisted delivery was undignified enough without an audience. It was agreed to follow this up, no mother should experience a crowd of onlookers.
8. Differences in attitudes between other mothers was remarked upon. Some were very supportive of one another around breast feeding, others unsupportive which was very disheartening when trying to breast feed.
9. Post-natal support – yes, mothers could do with more support after the birth, particularly when their new baby comes with 'no instructions'.
10. Role of partners – value of having partner with mother after the birth as well as throughout labour. Making them welcome and having facilities for them to stay was required so that they did not feel out of place and better off at home.

## Maternity Plan

11. Waiting Area at St Johns – single communal area mixes up too many different groups, some uncomfortable to be together e.g. expectant mother alongside a mother waiting to have a termination
12. Breast feeding –
  - sometimes there was conflicting advice re. breastfeeding among professionals.
  - Mothers needed more support after discharge and more information about breastfeeding when they got home.
  - The breastfeeding clinics at St John's and at the Simpson were good but why at the hospitals rather than being more local and so more accessible
  - The idea of peer counseling by other mothers who had breast fed would be helpful, at least for some. It was noted that the Peachie Project on parenting for young mothers included breast feeding and was planning to use experienced mothers
  - The breast feeding clinic at Simpsons was helpful and provided a useful peer support group. It was explained that there were breastfeeding support groups across Edinburgh.
13. A specific deficiency was mentioned at WGH – a lack of breast pumps for when a breast feeding mother was admitted for treatment. Maria agreed to pursue that immediately.
14. Concern at the loss of the tours of the Labour suite. Stopped as a result of the conflict between the work of the hospital, particularly when busy, and those visiting. In a recent survey of mothers this was not raised as an issue.

## **Birthing Centre Proposal.**

15. Mothers supported the proposal to increase capacity. They felt it was needed as soon as possible.
16. Mothers were unclear what a Birthing Centre was. Maria explained it was an alternative to a traditional labour suite, intentionally non-clinical, low tech. and homely. Women, principally low risk mothers, could use it if they chose to. The emphasis was on mothers deciding on how to conduct their own labour with the support of a midwife
17. Once they understood what a Birthing Centre was all the mothers were very supportive of the proposal for a Centre rather than just additional traditional labour rooms. It would provide more support for breast feeding; be more family friendly; provide more support for mothers with no local family support and no local network.
18. Several mothers favoured the idea of the Birthing Centre being on site alongside the specialist unit at the Simpsons. It would be reassuring to know that you could have rapid access to the specialist services. Others, from outside Edinburgh would like it to be situated in their locality - somewhere that feels like home but is safe, ideally not in a large hospital.

## Maternity Plan

### **Triage**

19. Triage – women's experience was of a small service subject to the pressures and stresses of the rest of the Simpson with long waits when the Simpson was very busy.
20. Noted that triage was being used by a growing number of mothers instead of seeing either their GP or their midwife. It was busiest between 4pm and 8pm in the evening with around 12,000 attendances a year.
21. The triage rooms were very spartan which made them rather dismal for mothers and their partners to be in for any length of time. OK for a short, quick consultation but not for longer.

### **Transfers**

22. Concern was expressed about reports of women about to give birth being transferred to St John's when the Simpson was under pressure. It was explained that at peak times low risk mothers may be asked to go to St John's even when booked for the Simpson but this should be done in advance of them arriving at the Simpson although the notice of such a change may be quite short.
23. Mothers from East Lothian were advised that it would rarely be the case that a mother from East Lothian would be redirected to West Lothian and assured them that decisions to redirect are only made following a detailed telephone triage consultation. On occasions staff are also moved between services. Normal practice was to divert low risk mothers resident in Edinburgh to St John's with as much notice as possible. East Lothian mothers could be expected to be delivered at the Simpson; very few went to West Lothian. Only 3 East Lothian mothers went to St John's in 2007.

### **Community Services**

24. Communication – need to get better at informing women what choices are available to them. Leaflet on choice not received by some of the mothers attending the focus groups. The importance of both good information and communicating it effectively to mothers was fully acknowledged. Need to review and improve current arrangements where appropriate.
25. Homebirths was discussed and women asked about this. Maria Wilson explained that she would like to see an increase in homebirths to around 500 across Lothian from the current 150, which was welcomed.
26. Homebirths – concern that some community midwives less than supportive of mothers interested in a homebirth. It was acknowledged that there still needs to be a shift amongst some midwives from the medical model of the 80's and 90's to a much more holistic approach offering homebirth as a real choice to low risk mothers. Midwives would be reminded of the commitment of the service to increase homebirths.
27. Need to encourage more expectant mothers to join a local support group, especially as ante-natal period was a good time to inform mothers about the whole pathway of maternity care.
28. Concern was expressed at the heavy workload midwives carried. It was explained that a complication in maintaining a balanced workload was

## Maternity Plan

related to the pattern of GP practices. Midwifery teams covering several practices were being developed which would help in levelling the workload and also enable more resources to be targeted at those with the greater needs.

29. Concern expressed about the extra help and support needed by mothers who had no family support.
30. Inequalities in health – some mothers and several staff and professional groups drew attention to the need for the community services to target women who were vulnerable, disadvantaged or simply on very low incomes. It was felt that these women needed extra support from the maternity services.
31. The importance of working in partnership with GPs providing access to relevant and at times critical information on mothers.
32. Responding to the proposal to introduce Maternity Care Assistants to help midwives support mothers those participating in the focus groups were comfortable with the role as long as the assistants were well trained, up to date and empathetic. There was general agreement that if used appropriately there were many ways in which they could help a mother both ante-natally and post-natally. Mothers acknowledged that midwives could not be expected to do everything, and would benefit from more help
33. Ante-natal care was felt to be more deficient by some mothers than post-natal care. One of the mothers had had to wait 4 weeks for her first appointment for her first baby. It was difficult and often very difficult to get an appointment and there was a lack of continuity. Not enough advice and attention was given to postnatal care in the antenatal classes The walk-in centre at Sighthill was a good service but it was only open part-time which defeated the purpose of it being on demand. Maria acknowledged she would like to be able to develop it at least to be open during normal working hours
34. Lack of positive antenatal education – some classes informative, excellent, where the midwife has provided practical, positive support. Other women report that classes are not interactive, the information is basic without opportunities to take this further, with a focus on the need for pain relief. The need to achieve a consistent positive approach across the service was recognised.
35. Fragmented, infrequent, brief episodes of care in pregnancy. Some women's care is still divided between midwives and GPs, and that they would often prefer to see a midwife. But they report that because midwife clinics are so busy, it is sometimes difficult to make an appointment with a midwife, especially in late pregnancy
36. More flexible classes where partners could attend, that were focused positively on the birth process – active birth, building women's confidence and that supported parenting
37. Contracting out for Antenatal Education to a voluntary organisation? – it was felt that the voluntary and independent providers of Antenatal Education were delivering a better service than the mainstream NHS classes. Agreed that it would be worth looking at a partnership approach to Antenatal Education

## Maternity Plan

38. Providing ante-natal classes in the evening would help. Quite a number of the mothers went to NCT classes partly because they were the only classes available after work.
39. The possibility of scheduling appointments in advance was raised but Maria felt this would not be practical giving the other demands on midwives and the unpredictability of much of their workload. It was explained that in South-West Edinburgh the next appointment is made whilst attending the clinic.
40. Several mothers said they failed to see the purpose of the visit to their GP. They had found their midwives better informed and more expert.
41. Responding to the proposal that midwives would might follow the 'Hall 4' reforms adopted by Health Visitors in which they target those families with the greatest needs some mothers commented that already if you looked as if you were coping you were left unsupported. The mothers felt that professional staff were not good at recognising the parenting role and the challenges all mothers faced of looking after a new baby.
42. A surgery which had a post-natal class was commended
43. Parenting – it was agreed that the preparation for motherhood and for fatherhood was very inadequate. For those with no parental support nearby it was left for you and your partner to find your own way

**APPENDIX 3 TABLES 1-11**

**TABLE 1  
PROJECTED POPULATION 16-49 YRS WOMEN IN LOTHIAN 2006-26**

	<b>2006</b>	<b>2011</b>	<b>2016</b>	<b>2021</b>	<b>2026</b>	<b>06/26 diff</b>	<b>%</b>
SctlnD Wmn 16-49	1,217,700	1,202,500	1,146,600	1,093,600	1,083,700	-134,000	-11.0
East Lothian	20,400	21,000	20,900	20,600	21,200	800	3.9
Edinburgh	128,200	133,500	133,900	134,100	136,300	8,100	6.3
Midlothian	18,500	18,000	16,800	15,500	15,100	-3,400	-18.4
West Lothian	41,100	42,100	41,700	40,900	41,700	600	1.5
<b>Lothian</b>	<b>208,200</b>	<b>214,600</b>	<b>213,300</b>	<b>211,100</b>	<b>214,300</b>	<b>6,100</b>	<b>2.9</b>

GRO Population Projections (2006-based) by sex, age & admin. area Jan. 2008

**TABLE 2  
Births by Hospital in Lothian 1995, 2000 & 2004-07**

	<b>1995</b>	<b>2000</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Simpsons CRH	5,551	6,420	5,854	6,067	6,168	6,508
St John's, Livingston	2,199	2,394	2,684	2,743	2,759	2,948
<b>Total</b>	<b>7,750</b>	<b>8,814</b>	<b>8,538</b>	<b>8,810</b>	<b>8,927</b>	<b>9,456</b>

Source: SMR02 ISD Scotland & NHS L Info. Services

Home Births	112	125	150	150
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**TABLE 3  
Year on Year Increases & Percentages**

	<b>04 &amp; 05</b>	<b>%</b>	<b>05 &amp; 06</b>	<b>%</b>	<b>06 &amp; 07</b>
Simpsons CRH	213	3.64	101	1.66	340
St John's	59	2.20	16	0.58	189
<b>All</b>	<b>272</b>	<b>3.19</b>	<b>117</b>	<b>1.33</b>	<b>529</b>

**TABLE 4  
Length of Stay**

Spontaneous Vaginal Delivery	6-12 hrs.
Caesarean Section	2 dys
Average Length of Stay	1.7 dys

**TABLE 5  
Bed Numbers**

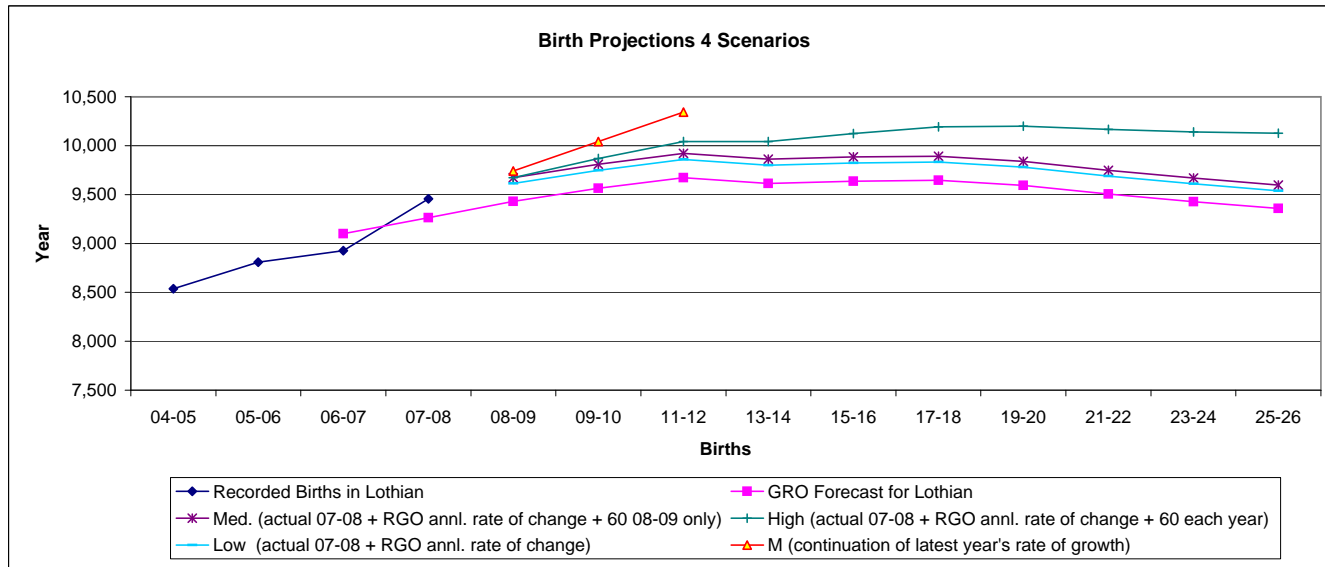
	<b>SCRH</b>	<b>St John's</b>
Antenatal Beds	10	11
Postnatal Beds	49	36
<b>Total</b>	<b>59</b>	<b>47</b>

%  
5.51  
6.85  
5.93

LOTHIAN MATERNITY SERVICES STRATEGY

TABLE 6  
Birth Projections 4 Scenarios

	04-05	05-06	06-07	07-08	08-09	09-10	11-12	13-14	15-16	17-18	19-20	21-22	23-24	25-26
<b>Recorded Births in Lothian GRO</b>	8,538	8,810	8,927	9,456										
<b>Forecast for Lothian</b>			9,100	9,263	9,430	9,563	9,672	9,614	9,636	9,645	9,594	9,505	9,427	9,358
<b>Med.</b> (actual 07-08 + RGO annl. rate of change + 60 08-09 only)					9,672	9,809	9,920	9,861	9,884	9,893	9,840	9,749	9,669	9,598
<b>High</b> (actual 07-08 + RGO annl. rate of change + 60 each year)					9,672	9,869	10,041	10,041	10,124	10,193	10,199	10,165	10,141	10,127
<b>Low</b> (actual 07-08 + RGO annl. rate of change)					9,612	9,748	9,859	9,800	9,822	9,831	9,779	9,689	9,609	9,539
<b>M</b> (continuation of latest year's rate of growth)					9,742	10,042	10,342							



GRO Forecast. Population projection for Scotland, Jan.08, (06 Base)  
Recorded Births from Hospital Records 2004-08

**Table 7**  
**Stillbirth Mortality**  
**by Health Board of Residence: Numbers and Rates<sup>1</sup> : 2002-2006**

	2002		2003		2004		2005		2006	
	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate
<b>Scotland</b>	<b>278</b>	<b>5.4</b>	<b>296</b>	<b>5.6</b>	<b>317</b>	<b>5.8</b>	<b>292</b>	<b>5.3</b>	<b>296</b>	<b>5.3</b>
Argyll & Clyde	31	7.6	29	7.0	42	9.5	27	6.2	21	4.9
Ayrshire & Arran	19	5.4	16	4.4	21	5.6	18	5.0	21	5.5
Borders	3	2.9	5	4.8	3	2.8	6	5.7	5	4.5
Dumfries & Galloway	6	4.4	7	5.3	3	2.1	7	5.0	3	2.0
Fife	19	5.3	23	6.3	13	3.5	21	5.5	24	6.0
Forth Valley	12	4.2	17	5.8	20	6.3	22	7.0	17	5.3
Grampian	26	4.9	24	4.6	25	4.7	24	4.4	31	5.4
Greater Glasgow	58	6.2	62	6.5	71	7.4	61	6.2	60	6.2
Highland	11	5.5	6	2.9	11	5.0	8	3.6	10	4.6
Lanarkshire	29	4.8	45	7.4	35	5.4	33	5.2	38	5.7
Lothian	43	5.2	42	5.0	54	6.3	46	5.2	43	4.7
Orkney	1	6.1	1	5.8	2	11.6	0	0.0	1	4.7
Shetland	-	-	1	4.0	-	-	2	8.7	2	7.4
Tayside	19	5.1	17	4.3	16	4.1	15	3.7	19	4.7
Western Isles	1	4.1	1	3.9	1	4.5	2	8.5	1	3.6

Source: GROS

<sup>1</sup> Rate per 1000 total births

**Table 8**  
**Neonatal Mortality**  
**by Health Board of Residence: Numbers and Rates<sup>1</sup> : 2002-2006**

	2002		2003		2004		2005		2006	
	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate
<b>Scotland</b>	<b>163</b>	<b>3.2</b>	<b>178</b>	<b>3.4</b>	<b>166</b>	<b>3.1</b>	<b>190</b>	<b>3.5</b>	<b>172</b>	<b>3.1</b>
Argyll & Clyde	12	3.0	10	2.4	23	5.2	17	4.0	15	3.5
Ayrshire & Arran	10	2.9	13	3.6	8	2.2	14	3.9	10	2.6
Borders	5	4.9	5	4.8	3	2.9	3	2.9	1	0.9
Dumfries & Galloway	6	4.5	2	1.5	-	-	1	0.7	5	3.4
Fife	19	5.4	13	3.6	18	4.8	12	3.1	17	4.3
Forth Valley	10	3.5	9	3.1	8	2.5	12	3.8	4	1.2
Grampian	8	1.5	23	4.4	20	3.8	15	2.8	22	3.9
Greater Glasgow	38	4.1	27	2.9	38	4.0	31	3.2	19	2.0
Highland	6	3.0	3	1.4	2	0.9	9	4.0	5	2.3
Lanarkshire	15	2.5	34	5.6	11	1.7	23	3.7	24	3.6
Lothian	23	2.8	21	2.5	22	2.6	37	4.2	36	4.0
Orkney	-	-	-	-	-	-	-	-	-	-
Shetland	-	-	3	12.0	3	13.0	-	-	1	3.7
Tayside	10	2.7	15	3.8	9	2.3	15	3.8	10	2.5
Western Isles	1	4.1	-	-	1	4.5	1	4.3	3	10.9

Source: GROS

<sup>1</sup> Rate per 1000 live births

**Table 9****Maternity Strategy Information 26/11/2007****Total number of births:**

	<b>2006</b>	<b>2007 (Jan – Oct)</b>
SCRH	6163	5364
STJ	2759	2400

Taking into account the monthly average of both units, SCRH is on target for 6436 births and STJ is on target for 2880 for 2007.

**Elective Caesarean Sections:**

	<b>2006</b>	<b>2007 (Jan – Oct)</b>
SCRH	607 (9.84%)	497 (6.26%)
STJ	292 (10.58%)	277 (11.54%)

Taking into account the monthly average of both units, SCRH is on target for 597 Elective Caesarean Sections and STJ is on target for 333 for 2007.

**Emergency Caesarean Sections:**

	<b>2006</b>	<b>2007 (Jan – Oct)</b>
SCRH	1040 (16.87%)	923 (17.2%)
STJ	431 (15.62%)	315 (13.12%)

Taking into account the monthly average of both units, SCRH is on target for 1107 Emergency Caesarean Sections and STJ is on target for 379 for 2007.

**Instrumental Deliveries:**

	<b>2006</b>	<b>2007 (Jan – Oct)</b>
SCRH	1146 (18.59%)	998 (18.6%)
STJ	369 (13.37%)	347 (14.45%)

Taking into account the monthly average of both units, SCRH is on target for 1198 Instrumental Deliveries and STJ is on target for 417 for 2007.

**Spontaneous Vaginal Deliveries:**

	<b>2006</b>	<b>2007 (Jan – Oct)</b>
SCRH	3440 (55.81%)	3012 (56.15%)
STJ	1645 (59.62%)	1440 (60%)

Taking into account the monthly average of both units, SCRH is on target for 3614 Spontaneous Vaginal Deliveries and STJ is on target for 1728 for 2007.

**Table 9**

**Water Births:**

	<b>2006</b>	<b>2007 (Jan – Oct)</b>
SCRH	142 (2.3%)	136 (2.5%)
STJ	44 (1.59%)	39 (1.6%)

Taking into account the monthly average of both units, SCRH is on target for 164 Water Births and STJ is on target for 47 for 2007.

**Numbers Via Triage**

	<b>2006</b>	<b>2007 (Jan – Oct)</b>
SCRH	12870	12354
SCRH – Day 08:00 – 20:00	7900	7032
SCRH – Night 20:00 – 08:00	4970	4377

Taking into account the monthly average of both units, SCRH is on target for 14634 Triage visits in 2007.

Destination after Triage visits are as follows:

Home	55.95%	58.37%
Labour Suite / LDRP	31.97%	29.91%
Antenatal Ward	7.61%	6.64%
Home	7201	7211
Labour Suite / LDRP	4114	3695
Antenatal Ward	979	820

TABLE 10

Number of live singleton births<sup>1</sup> and % of LBW babies by deprivation category<sup>2</sup> in NHS Lothian and Scotland year ending 31 March 1998-2005

## Lothian

Year							Babies born LBW (<2500g)					Percentage babies born LBW (<2500g)						
	Total <sup>3</sup>	1 - Least		2	3	4	1 - Least		2	3	4	1 - Least		2	3	4	5 - Most	
		Deprived	5 - Most				Deprived	5 - Most				Total	Deprived					Total
1998	8 597	2 633	1 513	1 268	1 696	1 487	441	92	70	59	103	117	5.1	3.5	4.6	4.7	6.1	7.9
1999	8 526	2 595	1 503	1 275	1 690	1 463	424	89	70	57	104	104	5.0	3.4	4.7	4.5	6.2	7.1
2000	8 316	2 539	1 530	1 254	1 600	1 393	488	98	79	76	113	122	5.9	3.9	5.2	6.1	7.1	8.8
2001	7 959	2 454	1 465	1 143	1 525	1 372	462	79	72	68	111	132	5.8	3.2	4.9	5.9	7.3	9.6
2002	7 778	2 408	1 377	1 181	1 491	1 321	421	84	60	62	115	100	5.4	3.5	4.4	5.2	7.7	7.6
2003	7 699	2 419	1 370	1 151	1 508	1 250	450	100	70	67	110	103	5.8	4.1	5.1	5.8	7.3	8.2
2004	8 100	2 440	1 513	1 194	1 619	1 334	497	95	74	52	139	137	6.1	3.9	4.9	4.4	8.6	10.3
2005	8 012	2 388	1 495	1 127	1 633	1 369	462	101	78	72	89	122	5.8	4.2	5.2	6.4	5.5	8.9

## Scotland

Year							Babies born LBW (<2500g)					Percentage babies born LBW (<2500g)						
	Total <sup>3</sup>	1 - Least		2	3	4	1 - Least		2	3	4	1 - Least		2	3	4	5 - Most	
		Deprived	5 - Most				Deprived	5 - Most				Total	Deprived					Total
1998	56 466	10 100	9 883	10 328	11 319	14 626	3 106	372	418	484	700	1 114	5.5	3.7	4.2	4.7	6.2	7.6
1999	54 699	9 983	9 679	10 161	10 711	13 975	3 083	372	407	503	665	1 114	5.6	3.7	4.2	5.0	6.2	8.0
2000	52 382	9 716	9 387	9 632	10 421	13 035	3 081	400	428	541	660	1 030	5.9	4.1	4.6	5.6	6.3	7.9
2001	50 783	9 507	8 990	9 230	9 892	12 967	2 894	361	381	459	625	1 047	5.7	3.8	4.2	5.0	6.3	8.1
2002	49 066	9 140	8 803	8 928	9 746	12 285	2 813	307	365	446	633	1 042	5.7	3.4	4.1	5.0	6.5	8.5
2003	49 238	9 374	8 802	8 943	9 704	12 217	2 928	385	388	451	627	1 053	5.9	4.1	4.4	5.0	6.5	8.6
2004	50 469	9 322	9 272	9 278	10 013	12 422	3 104	384	445	521	670	1 068	6.2	4.1	4.8	5.6	6.7	8.6
2005	49 447	9 031	8 896	9 235	9 989	12 167	2 844	354	373	488	593	1 021	5.8	3.9	4.2	5.3	5.9	8.4

1 - Excludes home births and births at non-NHS hospitals.

2 - Social indicator of multiple deprivation.

3 - Includes births where deprivation category is unknown.

Source: SMR02

Ref: IR2007-03040

LOTHIAN MATERNITY SERVICES PLAN 2008-15

**TABLE 11**  
**SPECIALTY GROUP COSTS - OBSTETRICS**  
 April 2005 - March 2006

Revised 12th December 2006

Number of Boards: 13

NHS Board	Discharges	Average Length of Stay	Total Allocated Cost per Case £		
				Cost per Case excl.d.ACT £	Group Index
<b>Totals or Averages</b>	<b>95,014</b>	<b>2.0</b>	<b>445</b>	<b>1,399</b>	<b>100</b>
Ayrshire & Arran	7,038	2.2	658	1,669	119
Borders	2,102	1.5	471	1,016	73
Argyll & Clyde	5,643	2.4	414	1,003	72
Fife	7,883	1.4	323	1,140	81
Greater Glasgow	21,477	2.1	451	1,369	98
Highland	3,689	3.1	601	1,884	135
Lanarkshire	10,307	1.5	455	1,253	90
Grampian	12,599	2.0	369	1,342	96
<b>Lothian</b>	<b>11,409</b>	<b>1.8</b>	<b>336</b>	<b>1,240</b>	<b>89</b>
Tayside	5,405	2.1	799	2,418	173
Forth Valley	3,919	2.4	169	1,481	106
Western Isles	276	5.8	2,442	6,067	434
Dumfries & Galloway	3,267	1.4	310	1,095	78

Based on ISD Statistical Information

## **‘Saving Mothers’ Lives’ - The ‘Top Ten’ key recommendations**

### **Pre-conception care**

1. Pre-conception counselling and support, both opportunistic and planned, should be provided for women of childbearing age with pre-existing serious medical or mental health conditions that may be aggravated by pregnancy. This includes obesity. This recommendation especially applies to women prior to having assisted reproduction and other fertility treatments. The commoner conditions that require pre-pregnancy counselling and advice include:

- Epilepsy
- Diabetes
- Congenital or known acquired cardiac disease
- Auto-immune disorders
- Obesity: a BMI of 30 or more
- Severe pre existing or past mental illness.

### **Access to care**

2. Maternity service providers should ensure that antenatal services are accessible and welcoming so that all women, including those who currently find it difficult to access maternity care, can reach them easily and earlier in their pregnancy. Women should also have had their first full booking visit and hand held record completed by 12 completed weeks of pregnancy.

3. Pregnant women who, on referral to maternity services, are already 12 or more weeks pregnant should be seen within two weeks of the referral.

### **Migrant women**

4. All pregnant mothers from countries where women may experience poorer overall general health, and who have not previously had a full medical examination in the United Kingdom, should have a medical history taken and clinical assessment made of their overall health, including a cardio-vascular examination at booking, or as soon as possible thereafter. This should be performed by an appropriately trained doctor, who could be their usual GP. Women from countries where genital mutilation or cutting is prevalent should be sensitively asked about this during their pregnancy and management plans for delivery agreed during the antenatal period.

### **Systolic hypertension requires treatment**

5. All pregnant women with a systolic blood pressure of 160 mm/Hg or more require antihypertensive treatment. Consideration should also be given to initiating treatment at lower pressures if the overall clinical picture suggests rapid deterioration and/or where the development of severe hypertension can be anticipated.

### **Caesarean section**

6. Whilst recognising that for some mothers and/or their babies caesarean section (CS) may be the safest mode of delivery, mothers must be advised that caesarean section is not a risk-free procedure and can cause problems in current and future pregnancies.

Women who have had a previous caesarean section must have placental localisation in their current pregnancy to exclude placenta praevia, but, if present, to enable further investigation to try to identify praevia accreta and enable the development of safe management strategies.

### **Clinical skills**

7. Service providers and clinical directors must ensure that all clinical staff caring for pregnant women actually learn from any critical events and serious untoward incidents (SUIs) occurring in their Trust or practice. How this is planned to be achieved should be documented at the end of each incident report form.

8. All clinical staff must undertake regular, written, documented and audited training for:

1. The identification and management of serious medical and mental health conditions which, although unrelated to pregnancy, may affect pregnant women or recently delivered mothers
2. The early recognition and management of severely ill pregnant women and impending maternal collapse
3. The improvement of basic, immediate and advanced life support skills. A number of courses provide additional training for staff caring for pregnant women and newborn babies.

There is also a need for staff to recognise their limitations and to know when, how and whom to call for assistance.

### **Early warning scoring system**

9. There is an urgent need for the routine use of a national obstetric early warning chart, similar to those in use in other areas of clinical practice, which can be used for all obstetric women which will help in the more timely recognition, treatment and referral of women who have, or are developing, a critical illness. In the meantime all Trusts should adopt one of the existing early warning scoring systems of the type described in the Chapter on Critical Care, which will help in the more timely recognition of women who have, or are developing, critical illness. It is important these charts also be used for pregnant women being cared for outside the obstetric setting for example in Gynaecology, Emergency Departments and in Critical Care Units.

10. **Guidelines are urgently required for the management of:**

1. The obese pregnant woman
2. Sepsis in pregnancy
3. Pain and bleeding in early pregnancy.

## Anaesthesia Workforce Plan: Maternity Services in Lothian: from Aug 2009

Middle grade trainees in anaesthesia currently work 56 hours per week in the Royal Infirmary, Edinburgh and 48 hours per week at St John's Hospital, Livingston. The Royal College of Anaesthetists recommends that all trainees have a minimum of 3 consultant supervised half day sessions per week. Clearly this should be more if they are ST1/2 grade.

There are major implications to this particularly if we are working towards a roster size of a minimum of 8 trainee doctors. Training in obstetric anaesthesia must be maintained by ensuring regular contact between trainees and consultants. The reduction in trainee hours and the absolute necessity to maintain a 24 hour service may threaten this contact. Consideration should be given to providing additional consultant time to allow training and supervision into the evening, on one or more occasions per week. The number of such additional hours should be increased where there is a high turnover of trainees (3-month interval or more frequent).

The resident anaesthetic team at the Royal Infirmary of Edinburgh is likely to lose one roster of resident middle grade trainees in August 2009 at the latest, which will impact on emergency anaesthetic cover for maternity services in the Simpson Centre for Reproductive Health. This will impact on resident anaesthetic back-up cover for maternity services, which will need to be maintained by career grade staff. This will result in increased consultant call-out, out of hours and during the weekend. The availability of consultants for anaesthetic duties in elective surgery in RIE during the working week will consequently be less.

St John's Hospital has currently two rosters of resident anaesthetic trainees (one senior and one junior) covering obstetric anaesthesia, Intensive Care, emergency ENT and plastic surgery. The current workload requires this cover.

St John's Hospital is currently recognized for training in Intensive Care Medicine but since the last Hospital Recognition for Training Inspection the acute service provision at St John's Hospital has changed significantly. Training in ICM at St John's Hospital is not currently counted towards ICM training in the SE Scotland School of Anaesthesia because this training is provided in other hospitals in SE Scotland in blocks of pure ICM training as recommended by the RCA.

However, St John's Hospital cannot function as a consultant-led obstetric service without on site Intensive Care (Clinical Standards for Maternity Services, NHS QIS 2005)

The difficulties for St John's Hospital in providing dedicated resident obstetric anaesthetic cover are appreciated.

However, it is strongly recommended that the resident anaesthetist responsible for covering obstetric anaesthesia should not also be solely responsible for the Intensive Care Unit since that anaesthetist could be urgently required in two places simultaneously.

### **SCRH & St John's**

The resident anaesthetist responsible for covering obstetric anaesthesia must have completed the following competencies:

1. The trainee has progressed to working with distant supervision in adult non-obstetric practice. He/She is appropriately confident and has undergone satisfactory workplace assessments in this role.
2. The trainee has had satisfactory workplace assessments in the following topics:

Pre-operative assessment, premedication, anaesthesia equipment: monitoring and safety, induction of general anaesthesia, intraoperative care, (The CCT in Anaesthesia II Appendix 3 Sections 1,2,3,4,5 and 6)

3. The trainee has an adequate knowledge base (see above for details)
4. The trainee has received an appropriate induction to the obstetric unit, including familiarisation with all relevant equipment, protocols and guidelines.
5. The trainee knows when and how to request more experienced assistance

The trainee is therefore unlikely to be less than ST2 grade in anaesthesia and is unlikely to be on the Acute Care Common Stem (ACCS) programme.

### **Anaesthetists Not In Training**

Any doctors providing anaesthetic cover on the Obstetric Unit must ensure that their own knowledge and skills are kept up to date. Any SAS or other non-training hospital anaesthetist who undertakes anaesthetic duties in the Obstetric Unit must have been assessed by the consultant in charge of obstetric services as competent to perform these duties in accordance with OAA and RCA guidelines. Such a doctor must work regularly in the Obstetric Unit but must also regularly undertake non-obstetric anaesthetic work to ensure maintenance of a broad range of anaesthetic skills. Provision should be made for those who cover the Obstetric Unit on-call, but do not have regular sessions there, to spend time in the Obstetric Unit in a supernumerary capacity with one of the regular obstetric anaesthetic consultants.

**Physicians' Assistants (Anaesthesia)** are unable to participate in the emergency anaesthetic service, which includes maternity services.

### **Proposal to reduce trainee hours providing service in obstetric anaesthesia in SCRH & St John's**

- Full prospective cover by consultants of all consultant leave during the working week and on-call
- Evening Programmed Activities (PAs) for consultant anaesthetists
- All day 8.00 to 18.00 consultant PAs on Saturday
- Half day 8.00 to 13.00 consultant PAs on Sunday
- **Hybrid rosters** for out of hours cover by trainees, SAS grade anaesthetists or post-CCT specialists
  - Likely requirement for career grades to replace some trainee out of hours working in each consultant led unit. This would allow career grades to cover two nights per week and perhaps also occasional part-weekends. The career grades would also contribute to the elective anaesthetic workload of each hospital.

Refs: OAA/AAGBI Guidelines in Obstetric Anaesthetic Services. May 2005  
<http://www.aagbi.org/publications/guidelines/docs/obstetric05.pdf>

Royal College of Anaesthetists CCT in Anaesthesia 2007  
<http://www.rcoa.ac.uk/docs/CCTptii.pdf>

Clinical Standards for Maternity Services, NHS QIS 2005  
[http://www.nhshealthquality.org/nhsqis/CCC\\_FirstPage.jsp](http://www.nhshealthquality.org/nhsqis/CCC_FirstPage.jsp)

APPENDIX 6

Birthrate Plus Staffing Recommendations V Current Establishment 2008

Clinical Area	SCRH WTE Registered Midwives			WLD WTE Registered Midwives		
	Recommended	Current	Variance	Recommended	Current	Variance
Intrapartum Care	71.33			30.72	31.53	+ 0.81
Triage & Assessment (Ground Floor)	14.18					
<b>Total Number</b>	85.51	84.37	-1.14			
An/PN Inpatient	71.39	46.75	-24.64	30.52		
EPU	0	0		2.94		
DAU	5.88			2.94		
Antenatal Outpatient Hospital	4.70			3.59		
<b>Total Number</b>	10.58	9.24	-1.34	39.99	39.28	-0.71
Community Care	77.23	83.14	+5.91	32.3	32.2	
Supervision Role	2.45	0	-2.45	1.03	0	-1.03
Est. for direct Care	247.16	<b>223.5</b>	-23.66	<b>104.04</b>	103.03	-.93
Minimum Safe Staffing is 1:30 as per BR 08	221.6	@ 6,648 births		99.03	@2,971 births	
Complexity 1:28	237.4	@ 6,648 births		106	@2,971 births	
Predicted Birthrate for 2008 at Current Growth	7000			3200		
Minimum Safe Staffing is 1:30	233.3	@ 7,000 births		106.6	@3,200 births	
Complexity 1:28	250	@ 7,000 births		114.28	@3,200 births	

Un-Registered Staff	LUHT WTE Unregistered		WLD WTE Unregistered	
	Band 2	Band 4	Band 2	Band 4
Inpatient Antenatal Post Natal Wards	22.61	13.31	12.58	2
Labour Suite/Triage	24.85		5.2	
Outpatients	3.14		2	
Community	4.13		0	